*City of Bristol*
*Zoning Commission*

*REGULAR MEETING - MONDAY, NOVEMBER 18, 2024*
*CITY HALL COUNCIL CHAMBERS*
*111 NORTH MAIN STREET*
*6:00 P.M.*

***INFORMATION FOR THE PUBLIC TO ACCESS THIS MEETING:***

***Zoom Meeting link:***
*https://bristolct-gov.zoom.us/j/81475785014?pwd=iwVslb5mIlFDutC6OnXdOtBsSu1A7D.1*

***Meeting ID:***
*814 7578 5014*

***Meeting Passcode:***
*123456*

***Join by phone***
*1-929-205-6099*

**AGENDA**

1. Call to Order

2. Approval of Minutes

   a. Special Meeting - October 10, 2024

   b. Special Meeting - October 17, 2024

   c. Regular Meeting - October 21, 2024

3. Receipt of New Applications

   a. Application #2511 – Special Permit for Motor Vehicle Service and Repair Facility at 200 Terryville Road - Unit B; Assessor's Map 67, Lot 7-1; I (General Industrial) zone; Steven P. Merchant Sr./Ray's Carstar Auto Body, applicants.

4. Public Hearings

   a. Application #2504 – Special Permit for a Civic Facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; R-40 (Single-Family Residential) zone; New Britain Water Department, applicant – Public Hearing continued from October 21, 2024.

b. Application #2505 – Site Plan for a Civic Facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; R-40 (Single-Family Residential) zone; New Britain Water Department, applicant – Public Hearing continued from October 21, 2024.

c. Application #2506 – Special Permit for Earth Removal at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; R-40 (Single-Family Residential) zone; New Britain Water Department, applicant – Public Hearing continued from October 21, 2024.

d. Application #2509 – Special Permit for parking on a separate lot under different ownership at 37 Main Street and 149 Church Street; Assessor's Map 30, Lots 61, 61-1 & 61-3; 49, 50, 61-1A & 61-2; BD-1 & BD-2 (Downtown Business) zones; Gold Coast Properties, LLC, applicant.

e. Application #2510 – Site Plan for a Mixed Use Development and parking on a separate lot under different ownership at 37 Main Street and 149 Church Street; Assessor's Map 30, Lots 61, 61-1 & 61-3; 49, 50, 61-1A & 61-2; BD-1 & BD-2 (Downtown Business) zone; Gold Coast Properties LLC, applicant.

5. Old Business

6. New Business

   a. Discussion on Non-Conformities at 881 Farmington Avenue (formerly Frank's Transmission); Assessor's Map 53, Lot 1; BG (General Business) zone; 881 Farmington Associates Corp., owner; Jonas Lima, agent.

7. Communications

8. Adjournment

REMINDER: The next Regular Meeting of the Zoning Commission is Monday, December 9, 2024

**BRISTOL ZONING COMMISSION**
**MINUTES**
**SPECIAL MEETING OF THURSDAY OCTOBER 10, 2024**
**DRAFT MINUTES NK**

**CALL TO ORDER:**

By: Chairman White Time: 5:07 P.M. Place: City Hall, via Zoom

**ROLL CALL:**

| MEMBERS | NAME | PRESENT | ABSENT |
|---|---|---|---|
| | | | |
| REGULAR MEMBERS: | David White (Chairman) | X | |
| | Thomas Marra (Vice Chairman) | | X |
| | Richard Harlow | | X |
| | Richard Goodwin (Secretary) | X | |
| | John LaFreniere | | X |
| | | | |
| ALTERNATE MEMBERS: | Michael DeRoehn | X | |
| | Sara Mangiafico | X | |
| | Peter Caruso | X | |
| | | | |
| STAFF: | Robert M. Flanagan, AICP, City Planner | X | |
| | | | |

Per the order of Chairman White, the meeting was called to order at 5:00 P.M.

Chairman White designated regular Commissioners Goodwin and White as voting members this evening. Chairman White designated alternate Commissioners DeRoehn, Mangiafico and Caruso as voting members in place of Commissioners Marra, Goodwin and LaFreniere with their absences this evening.

1. Call to Order

2. Public Participation

There was no public participation.

3. New Business

   a. Review Phase 3 schedule

Mr. Gomes will discuss the environmental amendments to the Regulations this evening that would be presented at the Virtual Presentation Meeting at 6:00 P.M., on October 17, 2024. Mr. Gomes needed most of the discussion this evening to be about the Industrial, Commercial and Mixed-Use Districts because this was the next phase of discussion for the Commission.

Mr. Gomes noted the Industrial, Commercial and Mixed-Use Districts would take 3 months to discuss and review. Mr. Gomes announced 73 responses were received from the survey that was on the City's Website. Mr. Gomes hoped to get more responses from the Virtual Meeting and throughout the fall.

   b. Briefly discuss status of recommended environmental amendments and review Public Virtual Meeting presentation.

Mr. Gomes explained the Virtual Meeting slides would the same basic introduction that was presented at the previous presentation. Mr. Gomes wanted to make sure the public understands the entire presentation.

Mr. Gomes commented if the Commission was okay with his review, then the Commission may go forward with the recommendations.

Mr. Gomes reported the Aquifer Protection Area (APA) would be better referenced in the Regulations. Mr. Gomes explained the ground mounted solar should be allowed additional height. Mr. Gomes noted there should be better protection and planting of trees. Mr. Gomes explained the Riparian Corridor Protection area also needed discussion.

Mr. Gomes outlined his discussions with Attorney Peter Olson regarding the Riparian Corridor Protection area. Mr. Gomes explained Attorney Olson said it was appropriate to grandfather existing buildings and structures as a conforming uses.

c. Discuss Commercial, Industrial and Mixed-Use Districts and potential needs across those districts

Mr. Gomes next discussed the Commercial, Industrial and Mixed-Use Districts. Mr. Gomes reviewed the areas on a map that allowed both residential and commercial uses in these districts. Mr. Gomes shared that the City was a 85% residential use now in the districts. Mr. Gomes clarified this represented 14.5% of the City's area because not all the land was usable. Mr. Gomes explained two thirds of the zones are industrial zones. Mr. Gomes noted that one third of the zones are commercial zones. Mr. Gomes pointed out these zones are helpful to the City for employment and as a tax base. Mr. Gomes reviewed the purposes of each of the zones from the Regulations. Mr. Gomes mentioned many of the properties do not have City water and sewer services.

Mr. Gomes outlined his discussion with Staff to reduce the standards of maximum impervious coverage from 90% in the BHC Zone and the I-Zone. Mr. Gomes suggested to reduce the I-Zone maximum impervious coverage from 90% to 80% in the I-Zone without creating non-conformities.

Mr. Gomes thought micro-breweries should be allowed in the BG Zone and the BHC Zone because they are allowed in the BT Zone. Mr. Gomes considered micro-breweries should be treated like brew pubs.

Staff noted the Site Plans may be filed with the Planning Commission to review.

Mr. Gomes inquired about some items from the Accessory Uses for the Commercial, Industrial and Mixed-Use Districts that he wanted the Commission to consider for the Regulations.

Mr. Gomes reviewed a chart of for Accessory Uses in the Commercial, Industrial and Mixed-Use Districts that contained suggestions to considered for the Commission.

Mr. Gomes suggested to allow accessory manufacturing in the BG Zone and the BHC Zone because it was allowed in the BD Zone. Mr. Gomes noted there may be some type of small manufacturing service that may be allowed. Mr. Gomes commented there may be Accessory Retail with a business with possible manufacturing that was not allowed in zones. Mr. Gomes suggested the Accessory Retail be allowed with a Zoning Permit across the zones.

Mr. Gomes discussed the Ground Mounted Solar regulations. Mr. Gomes stated the Ground Mounted Solar was suggested to be prohibited that was in an overlay zone. Mr. Gomes did not want to suggest the Ground Mounted Solar was not allowed if the property was in the R-15/BT zone. Mr. Gomes said this was a conflict of language so this should be revised. Mr. Gomes suggested the Ground Mounted Solar would be allowed by Special Permit.

Mr. Gomes inquiry: Staff reviewed the application process for Changes of Use with the Building Department. If approved, Staff noted the Zoning Enforcement Officer would issue a Zoning Permit. Staff clarified the Change of Uses may be Retail Fit-Outs with administrative reviews.

Mr. Gomes inquiry: Staff shared that an approved Special Permit filed on the Land Records runs with the property. Staff clarified if a Special Permit was required at the time but not filed or approved for the site, a new Special Permit was required. Staff detailed if there was a change of use from retail to fast food restaurant a new special permit was required for the property.

d. Next Steps

Mr. Gomes reminded the Commission the next meeting was on October 17, 2024, at 6:00 P.M. for a Virtual Meeting Presentation and he hoped there would be suggestions from the public audience in order to make adjustments for the November meeting.

e. Adjournment

**MOTION:** Move to adjourn at 6:21 P.M.

By: White Seconded: Goodwin.

For: Goodwin, DeRoehn, Mangiafico, Caruso and White.
Against: None.
Abstained: None.

This meeting was taped.

Respectfully submitted,

Nancy King
Recording Secretary

David White, Chairman

Richard Goodwin, Secretary

DRAFT

**BRISTOL ZONING COMMISSION**
**MINUTES**
**SPECIAL MEETING OF THURSDAY OCTOBER 17, 2024**

1. Call to Order

Per the order of Chairman White, the meeting was called to order at 6:00 P.M.

| MEMBERS | NAME | PRESENT | ABSENT |
|---|---|---|---|
| | | | |
| REGULAR MEMBERS: | David White (Chairman) | X | |
| | Thomas Marra (Vice Chairman) | X | |
| | Richard Harlow | X | |
| | Richard Goodwin (Secretary) | X | |
| | John LaFreniere | | X |
| | | | |
| ALTERNATE MEMBERS: | Michael DeRoehn | X | |
| | Sara Mangiafico | X | |
| | Peter Caruso | X | |
| | | | |
| STAFF: | Robert M. Flanagan, AICP, City Planner | X | |
| | | | |

Chairman White explained the Mr. Gomes would be discussing the recommended Environmental Regulations Amendments to the Zoning Regulations with the Commission.

Mr. Gomes explained currently the Commission is working on the third phase of the updates to the Regulations. Mr. Gomes reviewed the Commission's prior work on Phase One to make the document work better, correct errors and to comply with State Statutes. Mr. Gomes explained Phase One has been adopted and the updates have been effective for the City. Mr. Gomes said the Phase Two would be worked on later to link the Regulations to online resources with the City. Mr. Gomes noted when the updates are done a training video would be available on how to use the Regulations.

2. New Business

a. Presentation of recommended environmental regulation amendments to the Zoning Regulations.

Mr. Gomes notified the public there is an Aquifer Protection Area (APA) in the NE area of the City for the purposes of public drinking water. Mr. Gomes noted currently only the Zoning Map had mention of the APA area. Mr. Gomes said there was limited reference to the APA area in the Regulations. Mr. Gomes pointed out the importance of having the APA amendments in the Regulations because of the limited uses in this area such as gasoline stations.

b. Discussion of recommended amendments including questions and answers

Mr. Gomes next reviewed the solutions line by line for all the concerns in the Regulations he previously discussed this evening. Mr. Gomes explained the process for considering the recommendations and then finalizing the documents with a public hearing.

Mr. Gomes started with describing the recommendations #11 through #18, respectively, and each of the purposes. Mr. Gomes referenced recommendation #11 as the APA map.
Mr. Gomes signified recommendation #12 was to increase the ground mounted solar height to 20 ft. along with the existing Regulations. Mr. Gomes agreed with the ground mounted solar Regulation because this would turn excessive heat into energy.

Mr. Gomes described recommendation #13 of the preservation, replacement of trees or payment in lieu of trees. Mr. Gomes added that a Site Plan would be required for the tree Regulations. Mr. Gomes suggested adding Section 15.9 for Sustainability Incentives based on a point system that would also improve storm water management.

Mr. Gomes gave details for recommendation #14 of the proposed new regulation for the Riparian Corridor Protection just for the Pequabuck River for now. Mr. Gomes said the WestCOG developed a report regarding local pollution control for the protection of the Long Island Sound. Mr. Gomes explained any existing buildings requesting expansion in the Riparian Corridor Protection area required a Special Permit.

Mr. Gomes indicated recommendation #15 of the soil erosion and erosion control recommended to update the reference to the recently approved manual. Mr. Gomes pointed out the removal of earth material and filling of land Regulations needed an updated to reference sections 15.2.3. through 15.2.7. Mr. Gomes mentioned the soil erosion and erosion control applications do not allow temporary permits and that language needed correction. Mr. Gomes stated the removal of earth material and filling of land needed distinct definitions for each operation. Mr. Gomes clarified the removal of earth material and filling of land Regulations needed a correction to state the requirement of a yearly report. Mr. Gomes indicated the filling of land required a Site Plan approval by the Commission versus an approval by the Commission.

Mr. Gomes referenced that the recommendation #18 for storm water management Regulations needed to reference the current storm water management manual. Mr. Gomes specified any Special Permit or Site Plan applications needed for storm water infrastructure required a long-term maintenance plans and authorized inspections by the City. Mr. Gomes explained the language needed clarification for the storm water management to allow any modifications of an application.

c. Next Steps

Mr. Gomes summarized the next steps were to review any recommendations received from the meeting this evening. Mr. Gomes added the Commission had to consider any submitted letters or communications received by the City to Mr. Flanagan. Mr. Gomes concluded later the recommendations would be brought to a public hearing for adoption into the Regulations. Mr. Gomes noted the Commission had previously worked on amendments to the Commercial, Industrial and Mixed-Use District Regulations. Mr. Gomes explained a public hearing would be scheduled for January 2025 for the Commercial, Industrial and Mixed-Use District Regulations.

3. Public Participation

There was no public participation.

Chairman White thanked Mr. Gomes for all his efforts on the amendments for the Regulations. Chairman White reminded the Commission of the next Regular Meeting of the Zoning Commission is Monday, October 21, 2024, at 6:00 P.M.

4. Adjournment

Chairman White designated regular Commissioners Marra, Goodwin, Harlow and White to vote on the adjournment. He also designated alternate Commissioner Mangiafico to vote on the adjournment in place of Commissioner LaFreniere with his absence this evening.

**MOTION:** Move to adjourn at 6:56 P.M.

By: White Seconded: Goodwin.

For: Harlow, Marra, Goodwin, Mangiafico and White.
Against: None.
Abstained: None.

This meeting was taped.

Respectfully submitted,

Nancy King
Recording Secretary

David White, Chairman

Richard Goodwin, Secretary



DRAFT

| For Office Use Only | |
|---|---|
| APPLICATION NO. | 2511 |
| DATE FILED: | 11-6-24 |
| DECISION DATE: | |
| DECISION: | |

**BRISTOL ZONING COMMISSION**
**CITY OF BRISTOL, CONNECTICUT**
**APPLICATION FOR SPECIAL PERMIT**

The undersigned Applicant hereby applies to the Bristol Zoning Commission for approval under Section(s) Article II Section 4.2 of the Bristol Zoning Regulations for the following Special Permit use: Motor Vehicle Repair or Service Facility

Address or Location of the Property: 200 Terryville Road - UNIT B, Bristol, CT 06010

Assessor's Map No.: 67 Assessor's Lot No.(s): 7-2

Zone of the Property: I Size of the Property (in acres or square feet): .87 acres

Reason for the Special Permit: Applicant would like to us this property for the purpose of motor vehicle diagnositc scans.

Diagnostic focus: our main service is to diagnose problems using specialized scanning tools, not to physically repair components

Does this application involve an activity regulated by the Inland Wetlands Agency? [ ] yes [✓] no

If yes, has an application for a permit been submitted to the Inland Wetlands Agency? [ ] yes, on _____ [ ] no

Other comments: _____

NOTE: Section 8-3c(a) of the Connecticut General Statutes requires that, if an application for a Special Permit involves an activity regulated under the Inland Wetlands and Watercourses provisions of the statutes, the applicant shall submit an application for a wetlands permit to the local Inland Wetlands Agency no later than the day the Special Permit application is filed.

APPLICANT (If more than one, list on Page 2)

Name: Steven P. Merchant Sr. / Ray's Carstar Auto Body

Address: 137 Terryville Road City: Bristol State: CT Zip: 06010

Telephone No.: 860-583-9273 E-Mail: smerchsr@yahoo.com

Signature: [signature] *Signature – (Printed/Typed)* Steve Merchant

CHECK ONE: [✓] owner [ ] other (specify): _____

OWNER(S) OF RECORD (If other than Applicant; if more than one, list on Page 2)

Name: Regis Letourneau / RCL Properties, LLC

Address: 87 Buckridge Road City: Harwinton State: CT Zip: 06791

Telephone No.: 860-309-8984 E-Mail: lachancetree@aol.com

Signature: [signature] *Signature – (Printed/Typed)* Regis Letourneau

**THIS APPLICATION MUST BE FILED IN PERSON NO LATER THAN 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!**

For Office Use Only
APPLICATION NO. 2511

## CITY OF BRISTOL, CONNECTICUT
## SUPPLEMENTARY INFORMATION

**Address or location of property:** 200 Terryville Road - UNIT B, Bristol, CT 06010

**ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)**

Applicant is interested in utilizing the above captioned space for the purpose of motor vehicle diagnotic scans. These procedures do not require any physical mechanical work. Procedures are done using specialized computers and electronic diagnostic units to scan motor vehicles for fault codes that need to be corrected. We will not be installing any equipment for the purpose of mechanical labor. The space will contain one or more desk(s) with computer(s) and diagnotic scan devices.
RE: A company that solely performs diagnostic scans on vehicles is generally not considered a full-fledged repair facility because their primary function is to identify issues rather than actively fixing them; however, they are often an importnat part of the repair process as most repair shops require diagnostic scans before undertaking any repairs, making them a critical link in the repair chain.
Key Points To Consider:
Diagnostic Focus:Their main service is to diagnose problems using specialized scanning tools, not to physically repair components.
Collaboration with repair shops: Many diagnostic scan companies work closely with repair facilities, providing them with the information needed to accurately estimate and complete repairs. Please be advised any repairs will take place at 137 Terryville Rd. This location will not service any retail traffic of any kind, consequently no parking spaces are needed.

**ADDITIONAL APPLICANT**

Name: _____ CHECK ONE: [ ] owner [ ] other: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**ADDITIONAL OWNER(S) OF RECORD**

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

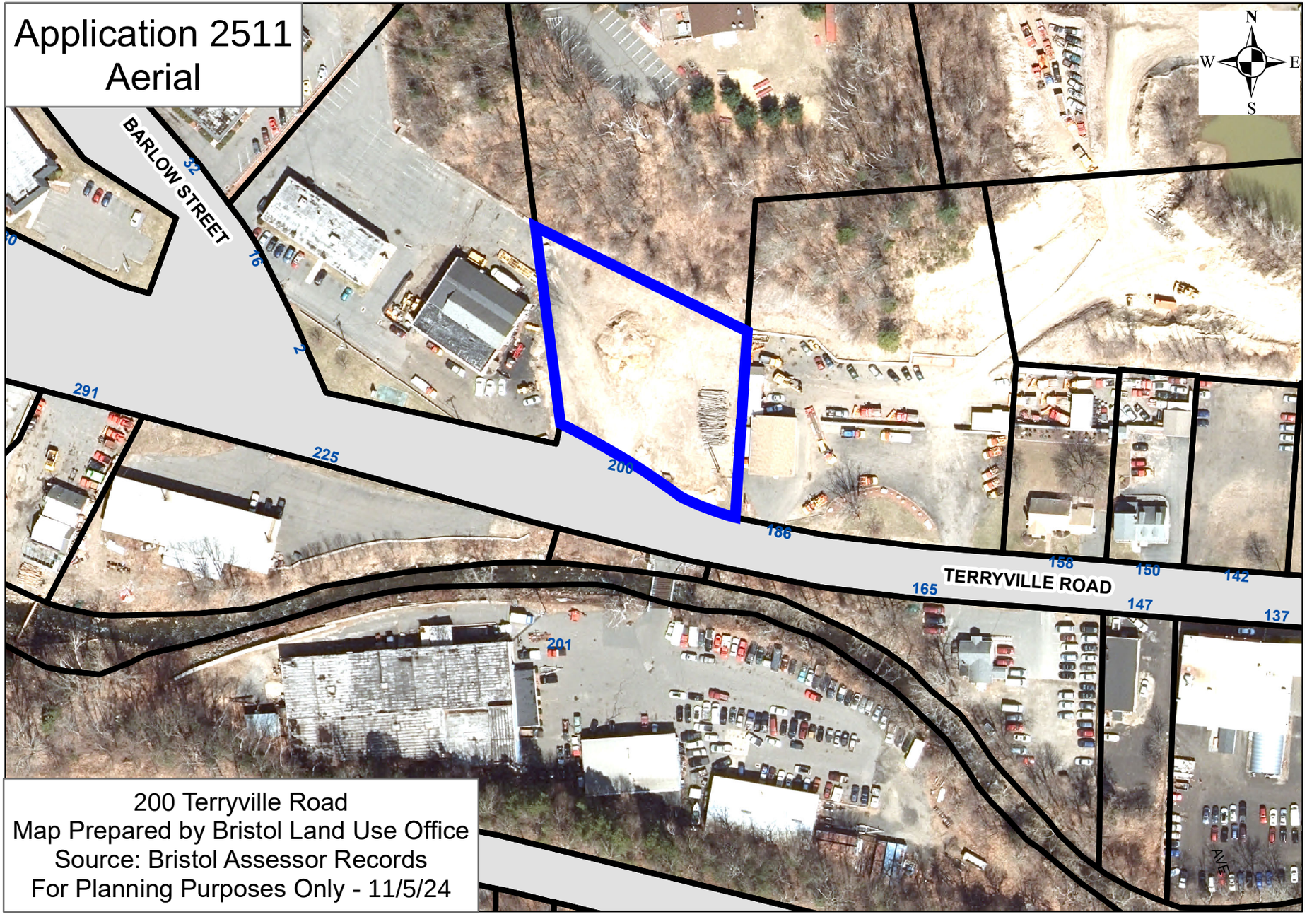
Signature: _____ Signature – (Printed/Typed) _____

**(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:**

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____


Application 2511
Aerial
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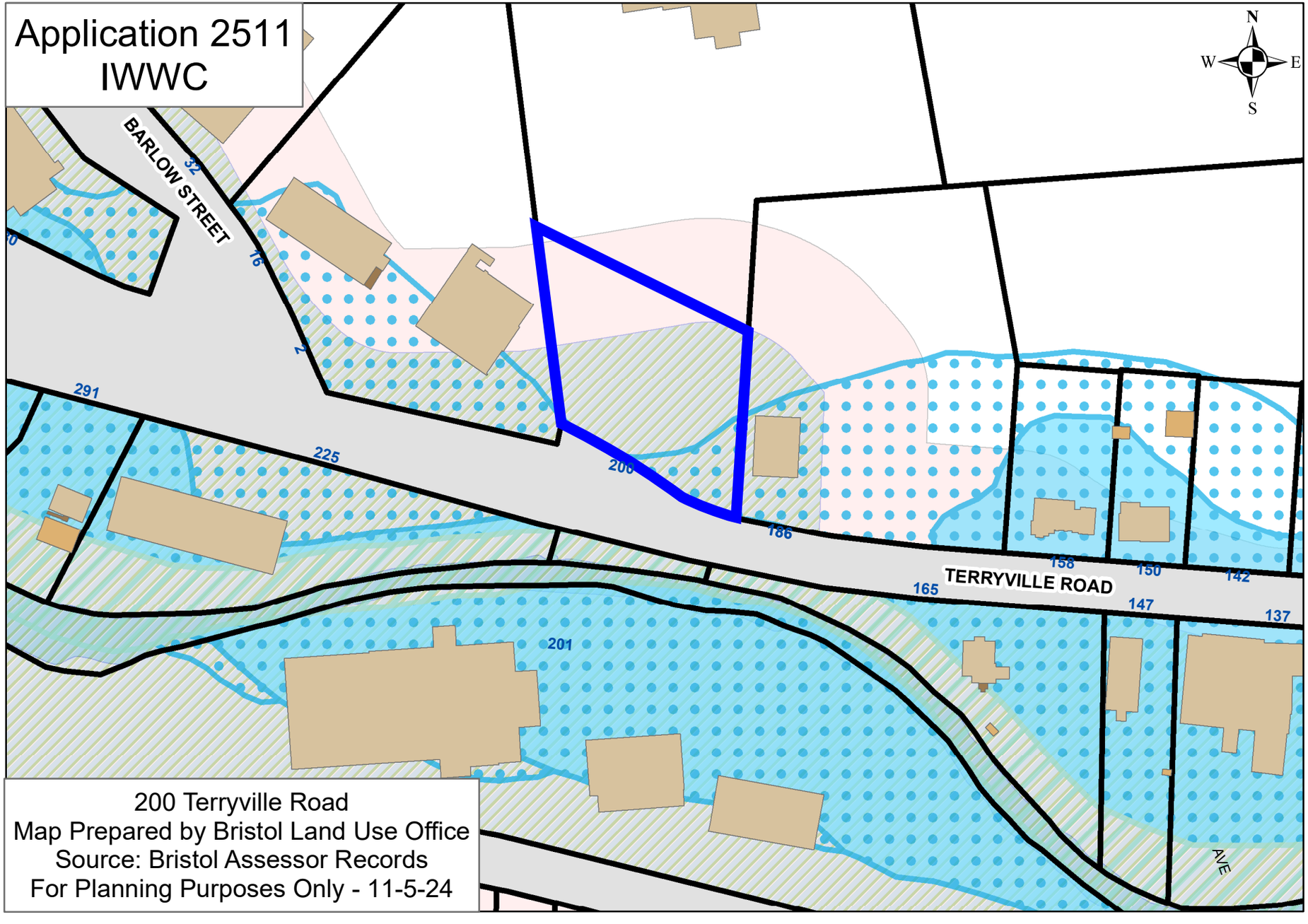
200 Terryville Road
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 11/5/24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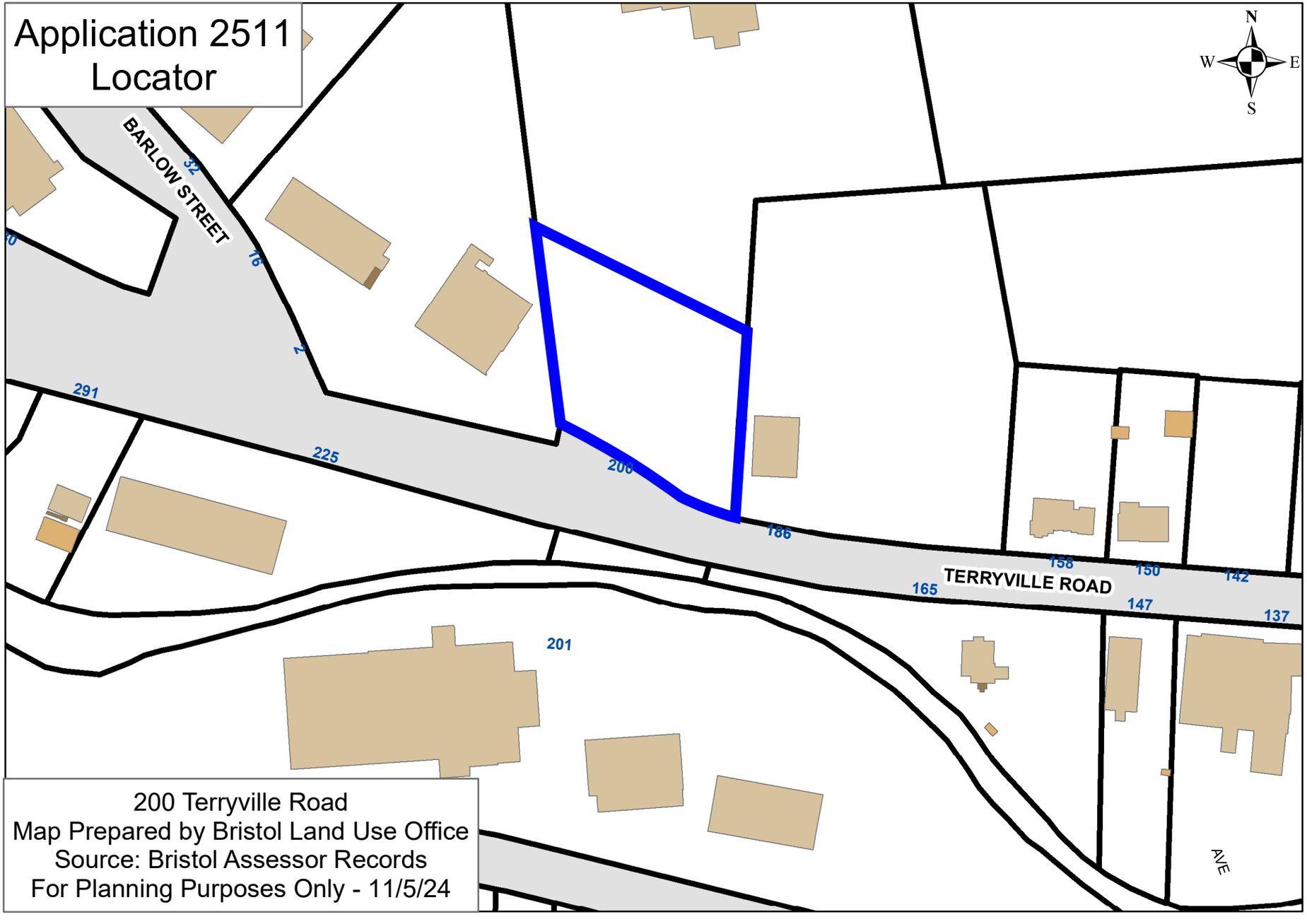
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 11-5-24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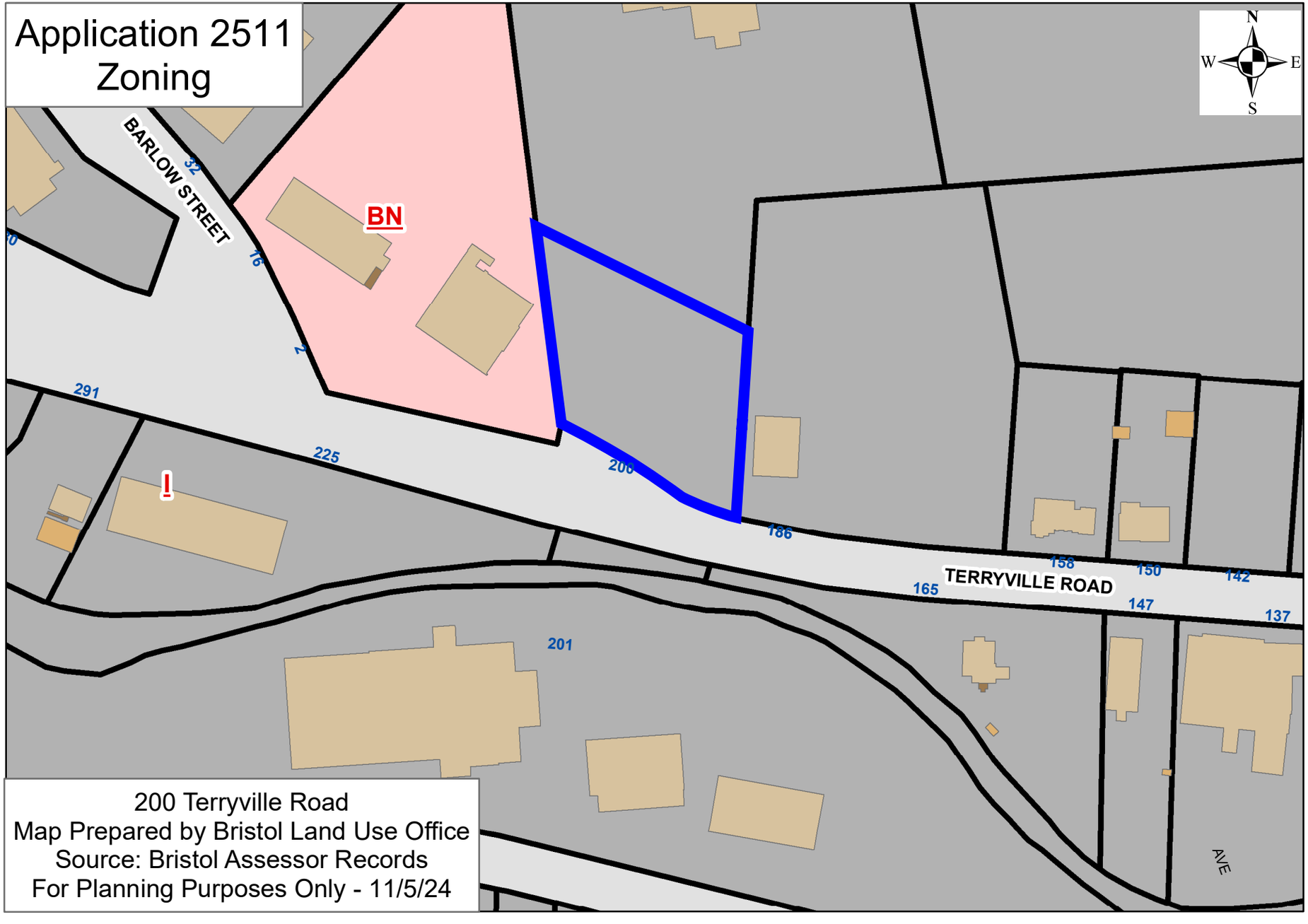
Source: Bristol Assessor Records
For Planning Purposes Only - 11/5/24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Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 11/5/24


Search
Nearmap
Oblique
Mon Apr 22 2024
N

# As-Built

# AS-BUILT

North

## SURVEY NOTES:

1. This map has been prepared pursuant to the Regulations of Connecticut State Agencies Sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26,1996.
2. The type of survey performed is a Zoning Location Survey and is intended to depict the horizontal locations of structural and site improvements with respect to applicable zoning setback requirements.
3. The survey is a Dependent Resurvey.
4. The map conforms to the Horizontal Accuracy of a Class A-2 Survey.
5. Basis for North is Map Reference No. 1.

## MAP REFERENCE:

1. "Improvement Location Survey, Prepared for Regis Letourneau, Terryville Road, Bristol, Connecticut," Scale 1" = 20', Date: April 1, 2022. Prepared By: Dufour Surveying LLC.

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

APPROXIMATE LOCATION OF RE-LOCATED UTILITY POLE (FINAL PLACEMENT AS DETERMINED BY EVERSOURCE)

PROPOSED 27.5' EVERSOURCE EASEMENT

AREA UNDER CONSTRUCTION
BUILDING "A" NOT YET BUILT

ASBUILT BUILDING "B"
3,500 S.F. TOTAL
F.F. - 418.90

UNIT #3 (50'x35')
UNIT #4 (50'x35')

12' OH DOOR
ENTRY DOOR
35.0'
100.0'

PROCESSED GRAVEL STORAGE AREA

BITUMINOUS PAVED PARKING AREA

EXISTING WATER MAIN TO REMAIN
20' WIDE UNDEFINED EASEMENT IN FAVOR OF 38 BARLOW STREET
V:1490 - P:1077

SCREENED CONCRETE DUMPSTER PAD

EXISTING CONCRETE SCREEN WALL INSTALLED BY 2 BARLOW STREET

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

APPROXIMATE C.O.B. WETLANDS LIMIT

EXISTING CONCRETE SCREEN WALL INSTALLED BY 2 BARLOW STREET

APPROXIMATE 1" COPPER "K" WATER LATERALS

EXISTING WATER

CONCRETE APRON

EXIST. WYE

STOP SIGN

H.C. SIGN

SAN. C/O

CONCRETE WALL

CONCRETE GALLEYS
BOTTOM GALLEY = 408.85±

PAVED DRIVEWAY

CATCHBASIN
TF=411.08

SANMH
TF=411.64
INV=404.72

SANMH
TF=412.56

SANMH
TF=413.42
INV=405.71

SANMH
NOT FOUND
INV=406.07

CATCHBASIN
TF=413.52
FL=404.62
FL=404.32

5/8" Iron rod (found)

412 SIGN

C-CB #4
TF - 417.32
FL - 414.12

C-CB #3
TF - 417.44
FL - 414.44 (8")
FL - 413.94 (12" N)
FL - 414.64 (12" SW)

C-CB #2
TF - 414.27
FL - 410.67

C-CB #1
TF - 414.84
FL - 411.04

STMH #1
TF - 414.96
FL - 408.86 (6")
FL - 408.86 (8")
FL - 408.71 (12")

STMH #2
TF - 416.36
FL - 412.86 (12")

STMH #3
TF - 417.76
FL - 412.81 (8" STUB)

SMH
TF - 417.37
INV - 407.47

LIGHT POLE

8" ROOF LEADER

SANITARY LATERAL FOR BUILDING "A"

12" CPP
12" RCP
15" RCP
8" & 6" PVC
6" BLC

S03°44'48"W 180.00'
N01°45'31"W 55.91'
N06°45'31"W 215.00'
S65°29'20"W 232.41'
N55°41'31"W 67.06'
S75°16'31"E 3.43'
N75°16'32"W 62.48'
27.7'
17.5'
10.0'
17.8'
51.1'

15' R.Y.
15' S.Y.
50' R.Y.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP AND SURVEY WERE PREPARED IN ACCORDANCE WITH THE STANDARDS OF A CLASS "A-2" SURVEY AS DEFINED IN THE CODE OF PRACTICE FOR STANDARDS OF ACCURACY OF SURVEYS AND MAPS, ADOPTED SEPT. 26, 1996 AS AMENDED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED.

CARMINE J. MATRASCIA – L.S. # 70219
NOT VALID WITHOUT EMBOSSED SEAL

STATE OF CONNECTICUT LICENSED LAND SURVEYOR

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R. R. HILTBRAND Engineers and Surveyors

**IMPROVEMENT LOCATION SURVEY**
**ASBUILT**
*Assessors Map 67 ~ Lot 7-1*
*Terryville Road*
*Bristol, Connecticut*
*September 5, 2024*

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

# Approved Site Plan 2023

North

# PROPOSED INDUSTRIAL SITE PLAN

## Assessors Map 67 ~ Lot 7-1 Terryville Road
## Bristol, Connecticut




PROJECT LOCATION

ISSUE LOG:

SUBMITTALS / REVISIONS:
Revised 08-18-22; As per Staff Comments Dated 8-01-22 & 8-04-22
Revised 09-26-22; Revised Building Door Locations and Water Laterals

APPROVALS:
Wetlands Boundary Change Application #1987; Approved August 1, 2022
Wetlands Development Application #1988; Approved August 1, 2022
Site Plan Application #432 - Site Plan for Landscape Contractors and Building Services; Approved September 26, 2022.

PREPARED FOR:

Regis Letoutneau
37 Buckridge Road
Harwinton, CT 06791

App 432

CITY OF BRISTOL, CONNECTICUT

This Site Plan has been approved by the Planning Commission of the City of Bristol, CT.

Chairman/~~Secretary~~

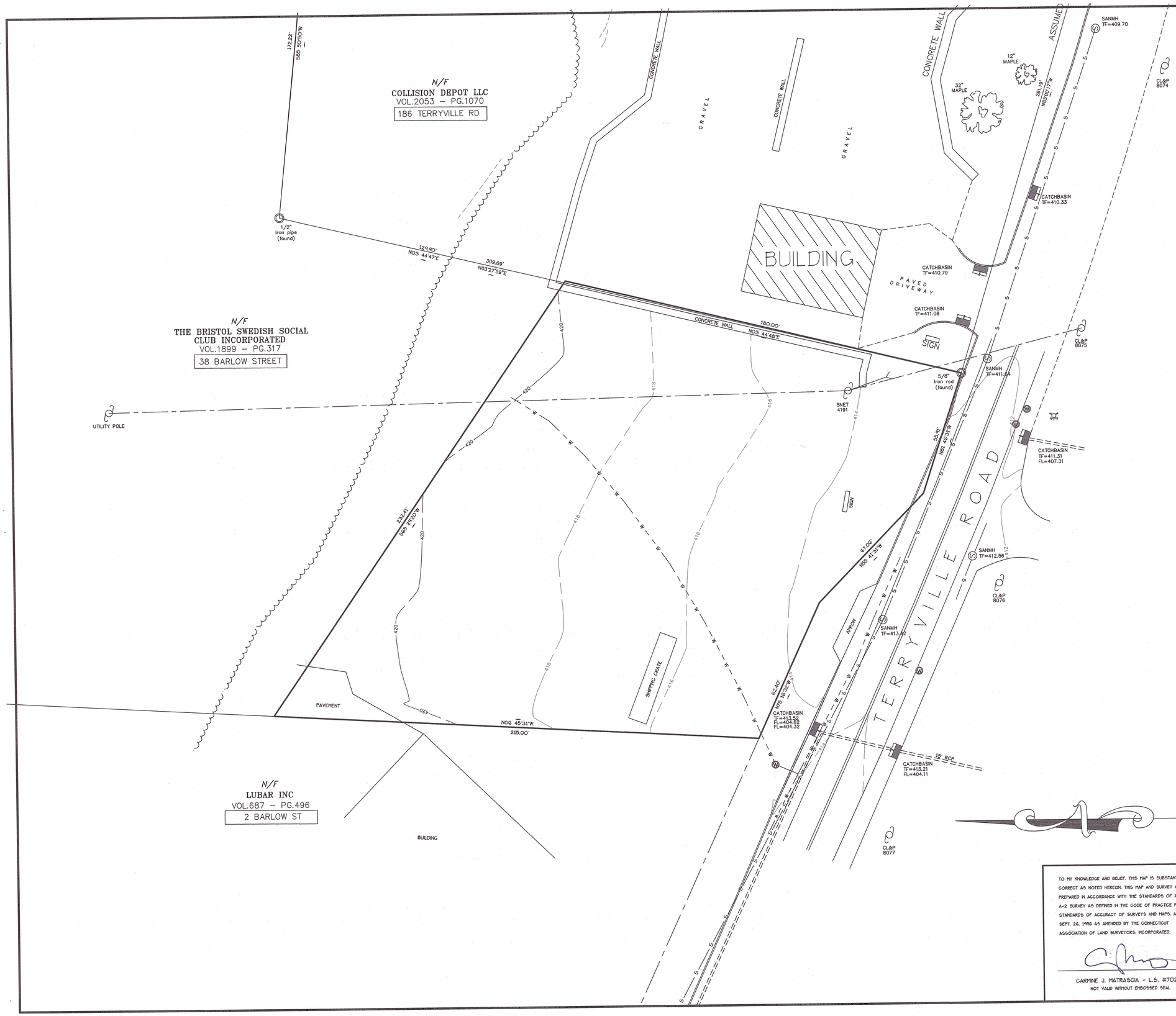
9/26/22 Date

Pursuant to Section 8-3(i) of the Connecticut General Statutes, all work in connection with this Site Plan shall be completed by 9/26/27. Failure to complete all such work by that date shall result in automatic expiration of the approval of this Site Plan.

ENGINEER:

R. R. Hiltbrand Engineers & Surveyors
575 North Main Street
Bristol, Connecticut
06010

APPROVED




## LEGEND

| | |
|---|---|
| SANITARY SEWER | SAN |
| WATER LINE | W |
| GAS LINE | G |
| STORM SEWER | |
| CONTOUR LINE | 100 |
| FOLIAGE LINE | |
| IRON PIN | |
| CURB CATCHBASIN | |
| WATER GATE | |
| UTILITY POLE | |
| UTILITY POLE WITH GUY | |
| HYDRANT | |
| SANITARY MANHOLE | |

## MAP REFERENCES :

1. "IMPROVEMENT LOCATION SURVEY – PREPARED FOR: REDMAN'S TRAILER SALES, INC. – #120 TERRYVILLE ROAD A.K.A. ROUTE 72. BRISTOL, CONNECTICUT", scale 1" = 40', dated 8-28-2015 and prepared by Dufour Surveying, LLC

2. "MAP O FLOT #3 – TERRYVILLE ROAD (S.R. #72) – BRISTOL, CONNECTICUT – OWNED BY – FRANK SCALIA", scale 1" = 40', dated 5-25-93, revised to 6-7-93 and prepared by Lepore Associates, Inc. Civil Engineering and Land Surveying.

3. "PROPERTY SURVEY – MAP OF LOTS #7, #GA AND GB – SHOWING LOTS #7 AND #7-1 – BRISTOL, CONNECTICUT – PREPARED FOR – THE GERMAN AMERICAN SOCIETY OF BRISTOL – #38 BARLOW STREET-REAR", scale 1" = 40', dated Aug 12, 1999 and prepared by Lepore Associates, Inc. Civil Engineering and Land Surveying.

4. "MAP OF LAND OWNED BY – BRISTOL MEMORIAL WORKS INC. – BARLOW STREET AND TERRYVILLE ROAD – BRISTOL, CONN.", scale 1" = 50', dated July, 1962 and prepared by Armand DiMeo, C.E. + Reg. Land Surveyor.

5. "MAP – SHOWING PROPERTY OF – BRISTOL TURN VEREIN – BRISTOL, CONN.", scale 1" = 100', dated Nov. 1939 and prepared by Sperry + Buell, Inc., Engineers

6. "R.O.W. AND TRACK MAP – THE NEW YORK, NEW HAVEN AND HARTFORD RR CO. – OPERATED BY – THE NEW YORK, NEW HAVEN AND HARTFORD RR CO. – FROM BOSTON TO HUDSON RIVER – STATION 7289+20 TO 7342+00 – SHEETS 86 AND 87", scale 1" = 100', dated June 30, 1915 and revised to 06/07/1937

## NOTES :

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED ON SEPTEMBER 26, 1996.

2. TYPE OF SURVEY = LIMITED PROPERTY SURVEY

3. BOUNDARY DETERMINATION CATEGORY = RESURVEY

4. OWNER OF RECORD – COLLISION DEPOT, LLC (Vol.2053 – Pg.1070. VOL.2053 – PG.1061 + Vol.2003 – Pg.1223)

5. UNDERGROUND UTILITIES, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS ARE APPROXIMATE AND OTHER SUCH FEATURES MAY EXIST UNKNOWN TO DUFOUR SURVEYING ASSOCIATES. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455

6. ELEVATIONS BASED ON NAVD88 DATUM.

7. CONTOURS BASED ON FIELD SURVEYS AND CITY OF BRISTOL TOPOGRAPHIC MAPPING.

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP AND SURVEY WERE PREPARED IN ACCORDANCE WITH THE STANDARDS OF A CLASS A-2 SURVEY AS DEFINED IN THE CODE OF PRACTICE FOR STANDARDS OF ACCURACY OF SURVEYS AND MAPS, ADOPTED SEPT. 26, 1996 AS AMENDED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED.

CARMINE J. MATRASCIA – L.S. #70219
NOT VALID WITHOUT EMBOSSED SEAL

DUFOUR SURVEYING LLC

# IMPROVEMENT LOCATION SURVEY

PREPARED FOR: REGIS LETOURNEAU

TERRYVILLE RD. BRISTOL CONNECTICUT

| | | |
|---|---|---|
| SCALE: 1"=20' | APPROVED: CARMINE J. MATRASCIA – L.S. #70219 | |
| DATE: 04-01-2022 | JOB NO.: 18-21 | FILE NO.: 18-21 |

DUFOUR SURVEYING LLC
575 NORTH MAIN STREET
BRISTOL CT
860-314-0502 860-738-0222

APPROVED

North

EXISTING UTILITY LINES TO BE RELOCATED BY OTHERS

EXISTING WATER MAIN TO REMAIN 20' WIDE UNDEFINED EASEMENT IN FAVOR OF 38 BARLOW STREET V:1490 - P:1077

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

232.41'
S65°29'20"W

15' R.Y.

PAVEMENT

EXISTING BITUMINOUS PAVEMENT ENCROACHMENT TO BE REMOVED

15' S.Y.

N06°45'31"W
215.00'

APPROXIMATE C.O.B. WETLANDS LIMIT

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

EXISTING SHIPPING CRATE TO BE REMOVED

EXISTING GRAVEL SURFACE

SHIPPING CRATE

DP 2

DP 1

S03°44'48"W
CONCRETE WALL
180.00'

15' S.Y.

50' F.Y.

EXISTING WATER MAIN TO REMAIN

62.40'
N75°16'32"W

S 75°16'31" E
3.43'

67.06'
N55°41'31"W

55.91'
N81°46'31"W

TF=410.79

PAVED DRIVEWAY

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

CATCHBASIN
TF=411.08

412
SIGN

EXISTING SIGN TO BE REMOVED

SNET
4191

EXISTING UTILITY POLE TO BE RELOCATED BY OTHERS

EXISTING UTILITY LINES TO BE RELOCATED BY OTHERS

5/8"
Iron rod
(found)

SANMH
TF=411.84
INV=404.72

SANMH
TF=412.56

CL&P
8076

SANMH
TF=413.42
INV=405.77

EXIST.
WYE

APRON

EXISTING APRON TO BE REMOVED (NEW APRON TO BE INSTALLED IN SAME LOCATION) (SEE SITE PLAN)

SANMH
NOT FOUND
INV=406.07

CATCHBASIN
TF=413.52
FL=404.62
FL=404.32

413x00

413x40

TERRYVILLE ROAD

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R.R. HILTBRAND
Engineers and Surveyors

# DEMOLITION PLAN
## Assessors Map 67 ~ Lot 7-1
## Terryville Road
## Bristol, Connecticut
June 13, 2022

APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4546

North

| ZONING TABLE (ZONE I) | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| MINIMUM LOT AREA | 25,000 S.F. | 37,678 S.F. |
| MINIMUM LOT WIDTH | 100 FT | 188.80 FT |
| MINIMUM FRONT YARD (STATE HIGHWAY) | 50 FT | 51.0 FT |
| MINIMUM SIDE YARD | 15 FT | 17.6 FT |
| MINIMUM REAR YARD | 15 FT | 22.9 FT |
| MAXIMUM BUILDING HEIGHT | 35 FT | 26 FT |
| MAXIMUM BUILDING COVERAGE | 50% | 18.58% |
| IMPERVIOUS COVERAGE | N/A | 49.80% |

| PARKING REQUIREMENTS TABLE | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| PROPOSED | | |
| CONTRACTORS YARD | AS DETERMINED | |
| | BY COMMISSION | 15 SPACES |
| | | 14 STANDARD |
| | | 1 HANDICAP |

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

PROPOSED 6' X 9' CONCRETE DUMPSTER PAD (SEE DETAIL)

PROPOSED BUILDING "A"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

UNIT #1 (50'x35')
UNIT #2 (50'x35')
UNIT #3 (50'x35')
UNIT #4 (50'x35')

PROPOSED BUILDING "B"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

PROPOSED BITUMINOUS PAVED PARKING AREA

PROPOSED PROCESSED GRAVEL STORAGE AREA

PROPOSED HANDICAP SIGN AND BOLLARD (SEE DETAIL)

PROPOSED 27.5' EVERSOURCE EASEMENT

PROPOSED 12" PAINTED STOP BAR

PROPOSED STOP SIGN (SEE DETAIL)

PROPOSED CONCRETE APRON TO CITY OF BRISTOL SPECIFICATIONS (SEE DETAIL)

APPROXIMATE C.O.B. WETLANDS LIMIT

CONCRETE WALL
15' S.Y.
15' R.Y.
50' F.Y.
PAVED DRIVEWAY
TF=410.79
CATCHBASIN TF=411.08
412 SIGN
5/8" Iron rod (found)
CL&P 8076
TERRYVILLE ROAD
413x00
413x40
NO CURB
6" BLC
CC
ENTRY DOOR
12' OH DOOR

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R. R. HILTBRAND Engineers and Surveyors

SITE LAYOUT PLAN
Assessors Map 67 ~ Lot 7-1
Terryville Road
Bristol, Connecticut
June 13, 2022

APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4546

North

SOIL TEST DATA:
4/11/22

DP #1
0 - 12" TAN FINE-MEDIUM SAND
12 - 58" BROWN FINE-MEDIUM SAND & GRAVEL
58 - 64" IMPORTED FILL
64 - 78" BROWN MEDIUM-COARSE SAND & GRAVEL
NO GROUNDWATER (SOIL SAMPLE TAKEN @ 66")

DP #2
0 - 16" TAN FINE-MEDIUM SAND
16 - 26" BROWN FINE SAND & GRAVEL
26 - 84" BROWN FINE-MEDIUM SAND & GRAVEL (COARSE POCKETS)
NO GROUNDWATER (SOIL SAMPLE TAKEN @ 72")

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

TF=410.79
PAVED DRIVEWAY
PROPOSED 27.5' EVERSOURCE EASEMENT
CATCHBASIN TF=411.08
412 SIGN
10.0'
17.5'
5/8" iron rod (found)
CONCRETE WALL
15' S.Y.
35.0'
100.0'
UNIT #2 (50'x35')
PROPOSED BUILDING "A" 3,500 S.F. TOTAL F.F. ELEV. = 418.50
UNIT #1 (50'x35')
ENTRY DOOR FL - 415.00
12' OH DOOR
ENTRY DOOR
FL - 415.00
EXISTING WATER MAIN TO REMAIN 20' WIDE UNDEFINED EASEMENT IN FAVOR OF 38 BARLOW STREET V:1490 - P:1077
42' - 8" CPP ROOF LEADER @ 3%
PROPOSED INFILTRATION DRAIN TO INTERCEPT UP-SLOPE RUN-OFF 205' 4" PVC SDR-35 (PERFORATED) FL - 418.0 (SEE DETAIL)
12' - 8" CPP ROOF LEADER @ 2%
C-CB #4 TF - 416.75 FL - 413.00 (INSTALL HOOD)
65' - 18" CPP @ 0% (PERFORATED)
DP 2
STMH #3 TF - 417.55 FL - 414.50 (8")
C-CB #3 TF - 416.75 FL - 413.75 (12") FL - 413.00 (18") (INSTALL HOOD)
DP 1
62' - 8" CPP ROOF LEADER @ 2%
FL - 415.00
CONCRETE GALLEYS BOTTOM GALLEY = 408.50
18 - 4' x 4' x 8' CONCRETE GALLEY
FL - 410.25
14' - 12" CPP @ 1.8%
C-CB #2 TF - 414.00 FL - 410.50
25' - 12" CPP @ 5%
42' - 8" CPP ROOF LEADER @ 2%
STMH #2 TF - 415.60 FL - 412.50 (12") FL - 412.50 (6") FL - 409.00 (8")
22' - 12" CPP @ 2.3%
C-CB #1 TF - 414.65 FL - 411.00
ENTRY DOOR
12' OH DOOR
UNIT #3 (50'x35')
PROPOSED BUILDING "B" 3,500 S.F. TOTAL F.F. ELEV. = 418.50
UNIT #4 (50'x35')
100.0'
15' S.Y.
PROPOSED PROCESSED GRAVEL STORAGE AREA
50' - 8" PVC @ 1%
50' - 6" PVC @ 2%
STMH #1 TF - 414.50 FL - 411.50 (6") FL - 408.50 (8") FL - 408.50 (12")
24' - 12" CPP @ 1%
EXISTING WATER MAIN TO REMAIN
FL - 408.25 (12")
INV - 406.25 12" SAN
CATCHBASIN TF=413.52 FL=404.62 FL=404.32
APPROXIMATE C.O.B. WETLANDS LIMIT
N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST
TERRYVILLE ROAD
CL&P 8076

ALL PROPOSED CATCH BASINS SHALL BE FITTED WITH A FLEXSTORM PURE FILTER PERMANENT INLET PROTECTION (SEE DETAIL)

TERRYVILLE ROAD PROJECT:
FLEXSTORM CATCH BASIN INSERT - PART #62LHDPC
PC POST CONSTRUCTION W/ ABSORB-IT FILTER BAG - PART #62RBPC

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R. R. HILTBRAND Engineers and Surveyors

GRADING & DRAINAGE PLAN
Assessors Map 67 ~ Lot 7-1
Terryville Road
Bristol, Connecticut
June 13, 2022
APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

North

APPROXIMATE LOCATION OF RE-LOCATED UTILITY POLE (FINAL PLACEMENT AS DETERMINED BY EVERSOURCE)

APPROXIMATE LOCATION OF PROPOSED TRANSFORMER

EXISTING WATER MAIN TO REMAIN 20' WIDE UNDEFINED EASEMENT IN FAVOR OF 38 BARLOW STREET V:1490 - P:1077

PROPOSED INFILTRATION DRAIN TO INTERCEPT UP-SLOPE RUN-OFF 205' 4" PVC SDR-35 (PERFORATED) FL - 418.0 (SEE DETAIL)

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

TF=410.79

PAVED DRIVEWAY

PROPOSED 27.5' EVERSOURCE EASEMENT

CATCHBASIN TF=411.08

412 SIGN

CONCRETE WALL

15' S.Y.

10.0'

17.5'

5/8" Iron rod (found)

SANMH TF=411.64 INV=404.72

APPROXIMATE LOCATION OF RE-LOCATED UTILITY POLE (FINAL PLACEMENT AS DETERMINED BY EVERSOURCE)

35.0'

100.0'

UNIT #2 (50'x35')

PROPOSED BUILDING "A" 3,500 S.F. TOTAL F.F. ELEV. = 418.50

UNIT #1 (50'x35')

ENTRY DOOR FL - 415.00

12' OH DOOR

ENTRY DOOR SAN. INV. 410.00

PROPOSED 1" COPPER "K" WATER LATERAL (TYPICAL)

42' - 8" CPP ROOF LEADER @ 3%

12' - 8" CPP ROOF LEADER @ 2%

FL - 415.00

SAN. C/O

C-CB #4
TF - 416.75
FL - 413.00
(INSTALL HOOD)

65' - 18" CPP @ 0% (PERFORATED)

STMH #3
TF - 417.55
FL - 414.50 (8")

50' F.Y.

STORM

72' - 6" PVC SDR-35 @ 4.2%

BITUMINOUS PATCH TO CONNDOT SPECIFICATIONS (TYPICAL)

DP 2

C-CB #3
TF - 416.75
FL - 413.75 (12")
FL - 413.00 (18")
(INSTALL HOOD)

DP 1

62' - 8" CPP ROOF LEADER @ 2%

PERFORM TEST PIT

18' - 4' x 4' x 8' CONCRETE GALLEYS BOTTOM GALLEY = 408.50

FL - 410.25

14' - 12" CPP @ 1.8%

C-CB #2
TF - 414.00
FL - 410.50

25' - 12" CPP @ 5%

42' - 8" CPP ROOF LEADER @ 2%

STMH #2
TF - 415.60
FL - 412.50 (12")
FL - 412.50 (6")
FL - 409.00 (8")

413x00

22' - 12" CPP @ 2.3%

SANMH TF=412.56

CL&P 8076

TERRYVILLE ROAD

SANMH TF=413.42 INV=405.77

EXIST. WYE

C-CB #1
TF - 414.65
FL - 411.00

40' - 8" PVC SDR-35 @ 2.3%

413x40

SMH #1
TF - 417.00
INV - 407.00

SAN. C/O

36' - 6" PVC SDR-35 @ 8.3%

PERFORM TEST PIT

50' - 8" PVC @ 1% 50' - 6" PVC @ 2%

CORE BIT DRILL NEW INVERT INTO EXISTING SHELF

SANMH NOT FOUND INV=406.07

STMH #1
TF - 414.50
FL - 411.50 (6")
FL - 408.50 (8")
FL - 408.50 (12")

INV - 406.25
12" SAN

CATCHBASIN TF=413.52 FL=404.62 FL=404.32

FL - 408.25 (12")

24' - 12" CPP @ 1%

EXISTING WATER MAIN TO REMAIN

PROPOSED 1" COPPER "K" WATER LATERAL (TYPICAL)

PROPOSED PROCESSED GRAVEL STORAGE AREA

APPROXIMATE C.O.B. WETLANDS LIMIT

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R. R. HILTBRAND Engineers and Surveyors

# UTILITY PLAN

*Assessors Map 67 ~ Lot 7-1*
*Terryville Road*
*Bristol, Connecticut*
*June 13, 2022*

APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

North

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

PROPOSED BUILDING "A"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

UNIT #1 (50'x35')
UNIT #2 (50'x35')

PROPOSED BUILDING "B"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

UNIT #3 (50'x35')
UNIT #4 (50'x35')

ENTRY DOOR
12' OH DOOR

FL - 415.00

PROPOSED 27.5' EVERSOURCE EASEMENT

CONCRETE WALL

15' S.Y.

15' R.Y.

50' F.Y.

PAVED DRIVEWAY

TF=410.79

CATCHBASIN
TF=411.08

412 SIGN

5/8" Iron rod (found)

CL&P 8076

TERRYVILLE ROAD

PROPOSED INFILTRATION DRAIN TO INTERCEPT UP-SLOPE RUN-OFF
205' 4" PVC SDR-35 (PERFORATED)
FL - 418.0 (SEE DETAIL)

42' - 8" CPP ROOF LEADER @ 3%

62' - 8" CPP ROOF LEADER @ 2%

12' - 8" CPP ROOF LEADER @ 2%

42' - 8" CPP ROOF LEADER @ 2%

C-CB #4
TF - 416.75
FL - 413.00
(INSTALL HOOD)

65' - 18" CPP @ 0% (PERFORATED)

DP 2

DP 1

C-CB #3
TF - 416.75
FL - 413.75 (12")
FL - 413.00 (18")
(INSTALL HOOD)

STMH #3
TF - 417.55
FL - 414.50 (8")

18 - 4' x 4' x 8' CONCRETE GALLEYS
BOTTOM GALLEY = 408.50

FL - 410.25

14' - 12" CPP @ 1.8%

C-CB #2
TF - 414.00
FL - 410.50

25' - 12" CPP @ 5%

STMH #2
TF - 415.60
FL - 412.50 (12")
FL - 412.50 (6")
FL - 409.00 (8")

22' - 12" CPP @ 2.3%

C-CB #1
TF - 414.65
FL - 411.00

50' - 8" PVC @ 1%
50' - 6" PVC @ 2%

STMH #1
TF - 414.50
FL - 411.50 (6")
FL - 408.50 (8")
FL - 408.50 (12")

24' - 12" CPP @ 1%

INV - 406.25
12" SAN

FL - 408.25 (12")

CATCHBASIN
TF=413.52
FL=404.62
FL=404.32

APPROXIMATE C.O.B. WETLANDS LIMIT

INSTALL SILT FENCE OR 8" SEDIMENT LOG

INSTALL SILT FENCE OR 8" SEDIMENT LOG

INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE (SEE DETAIL)

PROPOSED PROCESSED GRAVEL STORAGE AREA

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R. R. HILTBRAND Engineers and Surveyors

# EROSION & SEDIMENTATION CONTROL PLAN

Assessors Map 67 ~ Lot 7-1
Terryville Road
Bristol, Connecticut
June 13, 2022

APPROVE

R. R. HILTBRAND ENGINEERS and SURVEYOR
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4

North

## PLANT SCHEDULE

| MARK | QTY. | BOTANICAL NAME | COMMON NAME | SIZE |
|---|---|---|---|---|
| R | 2 | SCINTILLATION RODODENDRON | RODODENDRON | 24" - 30" |
| L | 3 | GLEDITSIA TRIACANTHOS INERMIS | THORNLESS HONEY LOCUST | 2.5" CAL. |
| Z | 6 | AZALEA | AZALEA | 15" - 18" |
| ⁂ | 48 | | DAYLILLY | |

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

TF=410.79

PAVED DRIVEWAY

PROPOSED 27.5' EVERSOURCE EASEMENT

CATCHBASIN TF=411.08

412

SIGN

CONCRETE WALL

15' S.Y.

10.0'

17.5'

5/8" Iron rod (found)

"GRASS"

35.0'

100.0'

UNIT #2 (50'x35')

PROPOSED BUILDING "A"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

UNIT #1 (50'x35')

ENTRY DOOR
12' OH DOOR
12' OH DOOR
12' OH DOOR
12' OH DOOR
12' OH DOOR
ENTRY DOOR

"GRASS" & INFILTRATION TRENCH (SEE GRADING PLAN)

15' R.Y.

50' F.Y.

"MULCH BED" (TYPICAL)

PROPOSED PROCESSED GRAVEL STORAGE AREA

UNIT #3 (50'x35')

PROPOSED BUILDING "B"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

UNIT #4 (50'x35')

ENTRY DOOR
12' OH DOOR
12' OH DOOR
12' OH DOOR
12' OH DOOR
12' OH DOOR
ENTRY DOOR

100.0'

15' S.Y.

"GRASS"

413x00

413x40

TERRYVILLE ROAD

CL&P 8076

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

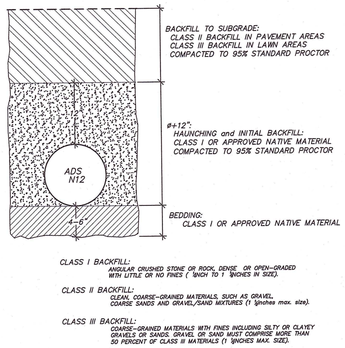
PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R.R. HILTBRAND Engineers and Surveyors

LANDSCAPING PLAN
Assessors Map 67 ~ Lot 7-1
Terryville Road
Bristol, Connecticut
June 13, 2022

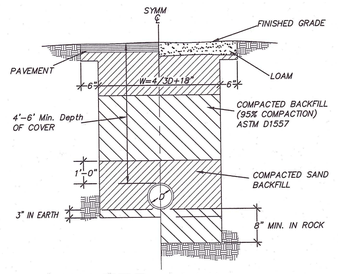
APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 454



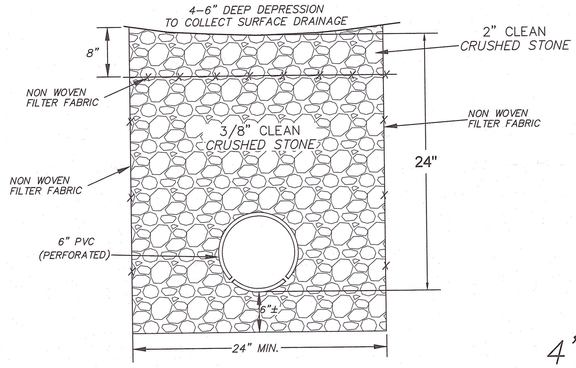

## ADS N-12 (CPP) TRENCH DETAIL

N.T.S.



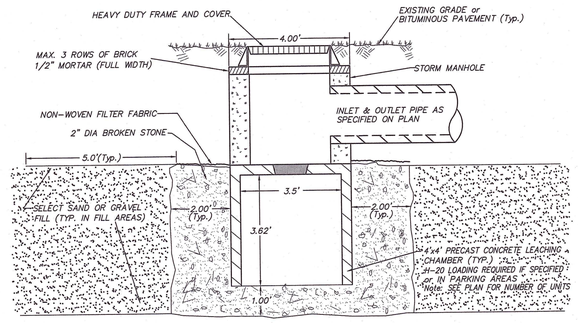

## WATER MAIN TRENCH SECTION

N.T.S.



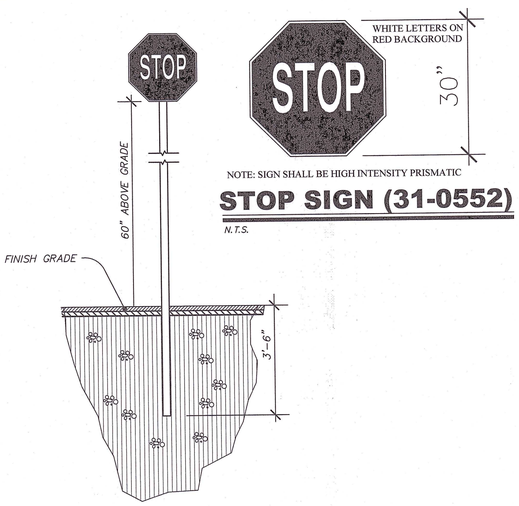

## INFILTRATION TRENCH

N.T.S.




## 4'x4x8' PRECAST CONCRETE LEACHING CHAMBER FOR UNDERGROUND STORAGE

N.T.S.

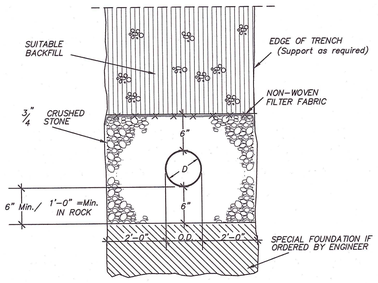



## STOP SIGN (31-0552)

N.T.S.

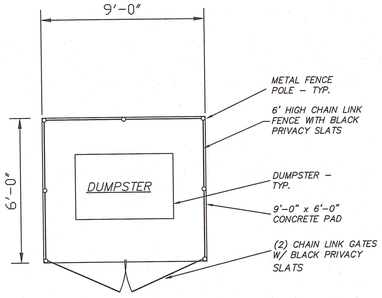
## STOP SIGN (31-0552) AND POST DETAIL

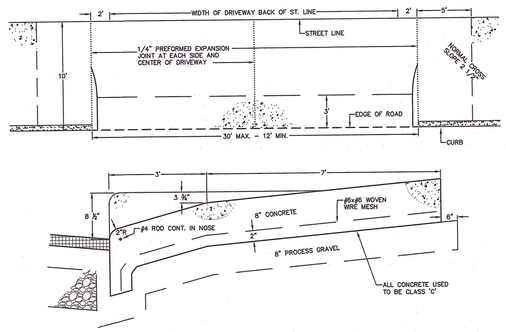
N.T.S.




## SANITARY SEWER TRENCH SECTION

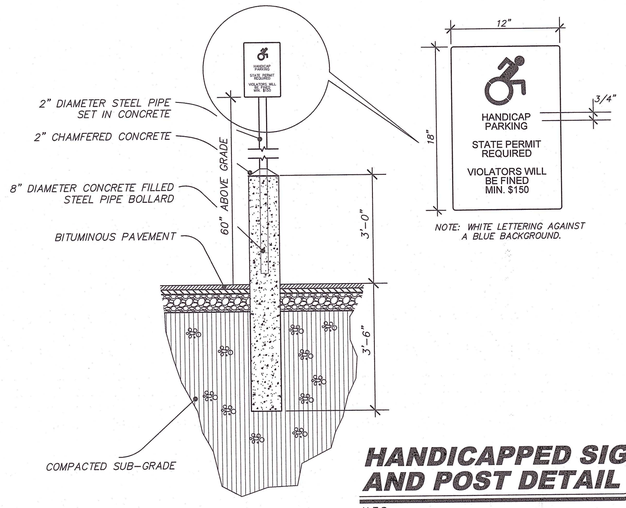
N.T.S.




## TYPICAL COMMERCIAL DRIVEWAY APRON

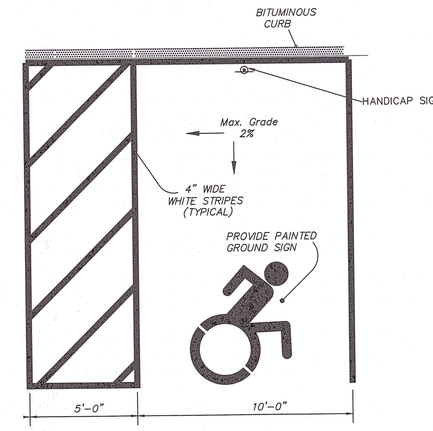
N.T.S.




NOTE: WHITE LETTERING AGAINST A BLUE BACKGROUND.

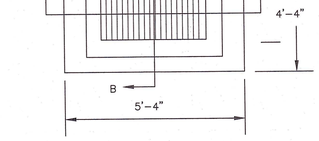
## HANDICAPPED SIGN AND POST DETAIL

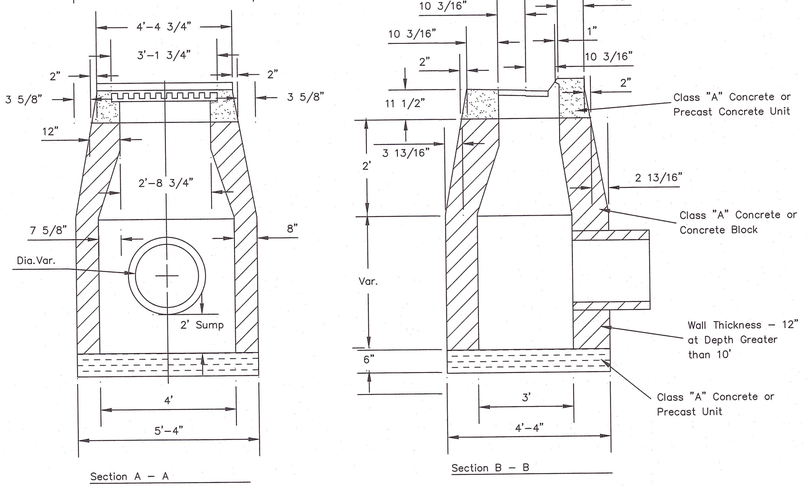
N.T.S.




## HANDICAPPED PARKING STALL DETAIL

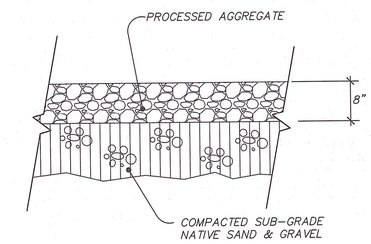
N.T.S.



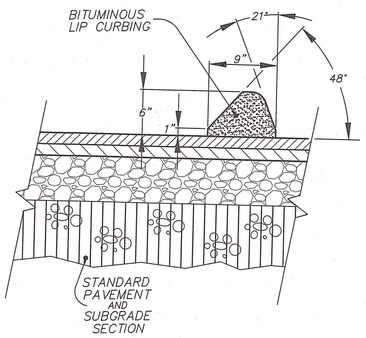

## TYPE "C" CATCH BASIN

n. t. s.



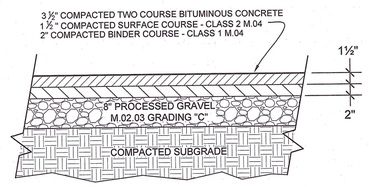

## GRAVEL STORAGE AREA

SCALE: N.T.S.




## BITUMINOUS LIP CURBING

N.T.S.




NOTE:
-ROADWAY MATERIALS AND METHODS TO BE IN CONFORMANCE WITH CONN. D.O.T. STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 814, 1988 WITH RECENT REVISIONS, and/or MUNICIPAL CURRENT STANDARDS.

-CONTRACTOR SHALL CONFIRM SUB-GRADE IS OF ADEQUATE BEARING CAPACITY PRIOR TO PAVING.

## BITUMINOUS PAVEMENT DETAIL

SCALE: N.T.S.

PREPARED FOR:

Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

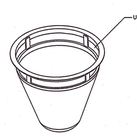
R. R. HILTBRAND Engineers and Surveyors

SITE DETAILS (1 OF 2)
Assessors Map 67 ~ Lot 7-1
Terryville Road
Bristol, Connecticut
June 13, 2022

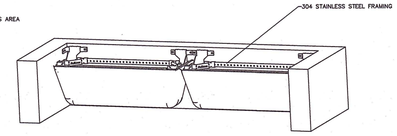
APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 45

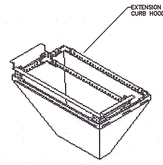
# FLEXSTORM PURE FILTERS FOR PERMANENT INLET PROTECTION
# PRODUCT SELECTION AND SPECIFICATION DRAWING



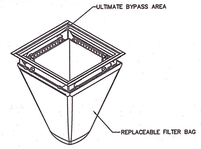

FLEXSTORM PURE INLET FILTERS
FOR ROUND OPENINGS




FLEXSTORM PURE WALL MOUNT INLET
FILTERS FOR OPEN THROAT GUTTERS




FLEXSTORM PURE INLET FILTERS
FOR COMBINATION INLETS




FLEXSTORM PURE INLET FILTERS
FOR RECTANGULAR OPENINGS
WITH GRATES

| For Round Openings with Grates | | Minimum Bypass Flow Rates (CFS)* Based on Nominal Frame Size with minimum 2" Bypass flow gap |
|---|---|---|
| Drop Thru Opening Size Dia | Flexstorm Frame P/N | |
| Small: 10.0" - 18.0" | 62SHDR | 1.6 |
| Medium: 18.1" - 24.0" | 62MHDR | 2.7 |
| Large: 24.1" - 36.0" | 62LHDR | 3.8 |

| For Open Throat Curb Inlets - Mounted to Wall Beneath Curb Opening | |
|---|---|
| Curb Opening Size | Flexstorm Frame P/N |
| Up to 4' curb openings (1 Filter) | 62HDWM1 |
| Between 4' and 8' curb openings (2 Filters) | 62HDWM2 |
| Between 8' and 12' curb openings (3 Filters) | 62HDWM3 |
| Between 12' and 16' curb openings (4 Filters) | 62HDWM4 |

| For Rectangular/Square Openings with Grates | | | Minimum Bypass Flow Rates (CFS)* Based on Nominal Frame Size with minimum 2" Bypass flow gap |
|---|---|---|---|
| Clear Drop Thru Opening Size *(not grate or seat size)* | Flexstorm Frame P/N | Combination P/N | |
| Small: 12" x 12" up to 16" x 16" (or 64" max perimeter) | 62SHD | 62SHDCB | 2.4 |
| Medium: 18" x 18" up to 24" x 24" (or 96" max perimeter) | 62MHD | 62MHDCB | 3.5 |
| Large: 26" x 26" up to 30" x 30" (or 120" max perimeter) | 62LHD | 62LHDCB | 5.0 |
| XL: 32" x 32" up to 48" x 48" (or 192" max perimeter) typ 2 pc set | 62XLHD | 62XLHDCB | 7.2 |

**CREATE YOUR ADS FLEXSTORM PART NUMBER BY COMBINING FRAME P/N AND BAG P/N**

1. IDENTIFY YOUR FLEXSTORM FRAME PART NUMBER FROM TABLES ABOVE
2. SELECT YOUR BAG PART NUMBER BASED ON APPLICATION NEEDS

| FLEXSTORM FILTER BAGS | (22" depth) STD Bag P/N | (12" depth) Short Bag P/N | Clean Water Flow Rate (GPM/SqFt) | Min A.O.S. (US Sieve) |
|---|---|---|---|---|
| FX: Standard Woven Bag | FX | FX-S | 200 | 40 |
| FX+: Woven w/ MyCelx | FXP | FXP-S | 200 | 40 |
| FXO: Woven w/ Oil Boom | FXO | FXO-S | 200 | 40 |
| PC: Post Construction Bag | PC | PC-S | 137 | 140 |
| PC+: PC Bag w/ MyCelx | PCP | PCP-S | 137 | 140 |
| LL: Litter and Leaf Bag | LL | LL-S | High | 3.5 |
| IL: IDOT Non-Woven Bag | IL | IL-S | 145 | 70 |

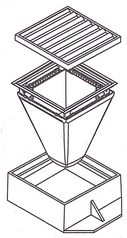
| SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL BAG / FRAME SIZE | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal Bag Size *Matched to Frame Size* | Solids Storage (CuFt) | Filtered Flow Rate at 50% Max (CFS) FX (Woven) | PC (Post Constr) | IL (NonWoven) | * PC Oil Retention (Oz.) | **PC+ Oil Retention (Oz) | **FX+ Oil Retention (Oz) |
| Small | 1.6 | 1.2 | 0.8 | 0.9 | 79 | 168 | 89 |
| Medium | 2.1 | 1.7 | 1.2 | 1.3 | 115 | 204 | 89 |
| Large | 3.8 | 2.7 | 1.8 | 1.9 | 173 | 262 | 89 |
| XL | 4.2 | 3.6 | 2.4 | 2.6 | 230 | 319 | 178 |
| Filtration Efficiency | | 82% | NA | Large scale 3rd party testing per ASTM D 7351 using 7% concentration USDA Sandy Loam | | | |
| TSS (total suspended solids rem) | | NA | 99% | Large Scale testing at 90 GPM using US Silica OK-110 sand at 1750 mg/L measuring TSS per SM 2540D. | | | |
| TPH (tot petroleum hydrocarbons) | | NA | 96% | Large Scale testing at 90 GPM with used motor oil at 243 mg/L measuring per EPA Method 1664A. | | | |
| * PC filter bag at 50% max adsorption capacity | | | | | | | |
| ** PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity | | | | | | | |

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

Frame P/N from Step 1. Filter Bag P/N from Step 2.

TERRYVILLE ROAD PROJECT:

FLEXSTORM CATCH BASIN INSERT - PART #62LHDPC
PC POST CONSTRUCTION W/ ABSORB-IT FILTER BAG - PART #62RBPC



NOTES:

1. ALL FRAMING IS CONSTRUCTED OF 304 STAINLESS STEEL FOR 25 YEAR SERVICE LIFE RATING
2. TOTAL BYPASS CAPACITY: BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE.
3. UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
4. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

INSTALLATION:

1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

MAINTENANCE NOTES:

1. INSPECT FOUR (4) TIMES YEARLY
2. EMPTY FILTER BAG WHEN HALF FULL.
3. REPLACE FILTER BAG AS PER MANUFACTURER'S GUIDELINES.
4. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

## SOLACE MOD/3
Symmetric Asymmetric Bollard



**Applications:** Corporate offices, civic and government, education and healthcare, parks and pathway, urban environments

**PERFORMANCE SUMMARY**

The Solace Mod/3 Series Bollard comes with shielded 180° or 360° distribution designed to direct circular symmetric or one sided illumination to the ground giving a comfortable and well-defined beam

Available in a range of colors this sleek and stylish bollard combines a classic profile with outstanding performances.

**Features**
- Premium driver provides unsurpassed system efficiency, control and protection.
- Surface finished with a proprietary Akzo Nobel treatment, withstanding harsh weather conditions without cracking or peeling
- Corrosion and shock resistant die cast aluminium housing
- Available in a range of lumens packages up to 3,150 lms
- 180° one sided 360° circular symmetric distribution
- Tempered glass lens for added vandal resistance
- Available in marine ambient corrosion resistant option for installation in seaside areas

**Specification**
Volts: AC100-277V
Environment Location: IP65
Average Rated Life: 90,000
CRI: RA80/90
PF: > 0.95
Ambient temp: -20°C to 45°F

**REFLECTOR OPTIONS**

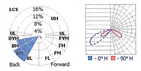


18 180° Asymmetric

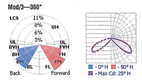


36 90° Symmetric

**PHOTOMETRICS**
Mod3—180°




Mod3—360°




*Dimmable available in 15W/180° or 20W/360°

**PRODUCT CODE**
Example Solace Mod/3 cat. 18 5.32 4 W M

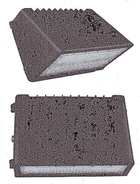
| Model No | Distribution | Wattage | Height | CRI | CCT (°K) | Finish | Options |
|---|---|---|---|---|---|---|---|
| Solace Mod/3 | 18 - 180° | 5 - 5W/450lms | 24 - 24" | 80 - RA80 | 3 - 3000 | B - Black (RAL9011) | M - Marine grade corrosion resistance |
| | | | 32 - 32" | 90 - RA90 | 4 - 4000 | | |
| | | 15 - 15W/1,350lms | 15 - 15" | | 5 - 5000 | W - White (RAL9016) | DIM - 0-10v Dimming |
| | | | 24 - 24" | | | G - Gray (RAL7012) | 0 - None |
| | | | 36 - 36" | | | | |
| | 36 - 360° | 10 - 10W/900lms | 24 - 24" | | | Z - Mineral Bronze | |
| | | | 32 - 32" | | | S - Silver (RAL9006) | |
| | | 20 - 20W/1,800lms | 36 - 36" | | | | |
| | | 35 - 35W/3,150lms | 36 - 36" | | | | |
| | | | 42 - 42" | | | | |

SUNLED Industries
1410 Roosevelt Ave, Rushing NY 11354 . Phone: 917.583.7078 . www.sunledind.com
© 2021 Sunled Industries LLC. All Rights Reserved

EnVisionLED

Project: _____
Part#: _____
Type: _____

## Wall Pack Full Cutoff
### 5-Power + 3CCT Switchable



*Photocell Included (Easily disconnectable)*

**Detail Specifications**
- Operating temperature -4 ~ + 124 F°
- PF >0.9 / Input: .85A/ Output: 36-66V DC

**Why pick the EnVision Wall Pack?:**
- Each wall pack is tested for 120 hours before being packed and shipped
- Optic lens lens provides forward throw light
- Easy installation with twistable screw knock-outs
- 5 year limited warranty. 10 year warranty available.

Light up your outdoor area with the EnVision Bolt Series, a line of outdoor fixtures with high lumen per watt efficacy. The Bolt Wall Packs are available in a variety of different styles: non-cutoff, fully cut-off, semi cut-off, adjustable, and a rotatable up/down light. EnVision's full cut off wall pack is industry leading with a slim architectural design that features an optic lens that provides forward-throw light. Now with 5 different wattages, and 3 different color temperatures, all in one single fixture!

**Applications:**
- General outdoor lighting
- Landscape lighting
- Pathways, streets, loading areas, etc.

**Product Information:**
- Photocell Included (Easily disconnectable)
- Sturdy die-cast aluminum housing finished with corrosion free powder coat
- Suitable for wet location, professionally waterproofed IP67
- Optional photocell available
- Average life (L70) of 70,000 hours with the integration of Philips Lumileds 3030 chips
- Dark sky compliant

*5-Power Selectable*

L.E.D. - W.P.F.C. - [ ] - T.R.I. - Finish - P.C. - Accessories - EMB - Warranty
1 2 3 4 5 6 7

| 1 Product | 2 5-Power Switchable | 3 Color | 4 Finish | 5 Accessories | 6 Emergency | 7 Warranty |
|---|---|---|---|---|---|---|
| LED-WPFC | 5P60 60/45/40/30/24W 11,650lm (80W) / 9,200lm (64W) 6,900lm (48W) / 4,640 (32W) / 3,220 (16W) | TRI 3CCT Switchable | BZ Bronze (Blank) Custom* | None (Blank) BMS | None (Blank) Emergency | None (Blank) 5 Year (Incl.) Backup 10YR 10 Year |
| | 5P150 150/120/90/60/30W 21,750lm (150W) / 17,400lm (120W) 13,050lm (90W) / 8,700 (60W) / 4,350 (30W) | BZ Bronze BLK Black WH White GY Grey CS Custom | | Motion Sensor (Attached) (90 Mins, Internal 20W) | | |

*Custom colors available. Preview lead time, colors include white, black, etc.

*Specs and model numbers are subject to change with or without notice*

EnVision LED Lighting, Inc.
4845 S. Eastern Ave | Bell, CA 90201 | Tel.: 323-604-0066 | www.envisionledlighting.com

EnVisionLED

Project: _____ Part #: _____
Type: _____




## Large Area Lights Gen 2
### 3-Power + 3 CCT Selectable

Light up your outdoor area with the new EnVision Bolt Series, our latest line of Area Light fixtures with high lumen per watt efficacy combined with a stunning finish. The EnVision area flood lights are equipped with a die-cast aluminum housing, finished with a matte bronze powder coat paint, and anti-corrosion priming. The Large BOLT series are available in a trunnion, yoke, slip fitter, or straight arm mount. Enjoy lighting up your outdoor are with over 140-145lm/w+ efficiency.

**Applications:**
- General outdoor lighting
- Landscape lighting
- Pathways, streets, loading areas, etc.
- Stadium lighting
- Ideal for exceptional lighting in car dealerships

**Detail Specifications:**
- Average life (L70) of 70,000 hours with the integration of Philips Lumileds 3030 chips
- Operating temperature -40 ~ 122 F°
- PF >0.9 / Input: .85A/ Output: 36-66V DC
- Built-in 10kv surge protector

**Product Information:**
- Area Light Gen 1 and Shoebox Fixtures combined into one
- Sturdy die-cast aluminum housing finished with corrosion free powder coat
- Suitable for wet location, professionally waterproofed IP67
- Type III optics standard/ Type I, II, IV, & V by request
- Slim and architectural fixture
- 1.5ft power cable cord provided
- 7 year limited warranty (refer to website for more info)

**Certifications:**
- UL Listed for USA and CA
- DLC Listed
- CA T24 Compliant

L.E.D. - A.R.L.2 - Watts - Color - T.R.I. - Finish - Bracket - Voltage - Optics - Controls
1 2 3 4 5 6 7 8

| 1 Product | 2 Watts | 3 Color | 4 Finish | 5 Bracket | 6 Voltage | 7 Optics | 8 Controls |
|---|---|---|---|---|---|---|---|
| LED-ARL2 Large Area Light | 3P100W 100W 80W 11,600lm 10,000lm 14,200lm | TRI 3000K 4000K 5000K | BZ Bronze* BLK Black WH White GY Grey CS Custom | YK Yoke TR Trunnion SA Straight Arm SFA Slip Fitter and Straight Arm | UNV 100-277V HV* 277-480V *only available in 3P150W and 3P200W model | B Type II R Type III (Standard) V Type IV I Type V | (Blank) None BMSDL Daylight Sensor + Motion Sensor Combo (Internal) PC Photocell 120-277V PCHV Photocell 347-480V |
| | 3P150W 150W 120W 17,400lm 19,375lm 21,750lm | | | | | | |
| | 3P240W 240W 210W 30,100lm 30,450lm 34,800lm | | | | | | |
| | 3P300W 360W 300W 37,700lm 49,600lm 43,500lm | | | | | | |

*40K Color only available in 100w*

*Bronze* is in stock. Other colors approx. 7 days
Bronze* in "Quick Ship"*

*Specs and model numbers are subject to change with or without notice*

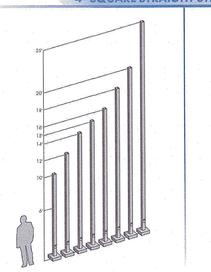
EnVision LED Lighting, Inc.
4845 S. Eastern Ave | Bell, CA 90201 | Tel.: 323-604-0066 | www.envisionledlighting.com

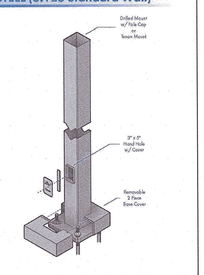
POLES & LIGHTING

## SSS 4-11
### 4" SQUARE STRAIGHT STEEL (0.120 Standard Wall)

Job Name: _____ Client Name: _____
Job Location: _____ Quote: _____
Type: _____ Quote Date: _____

AV POLES & LIGHTING
43537 Trevor Dr.
Temecula, CA 92592
Phone: (951) 296-1570, ext. 1001
Fax: (951) 693-2764
sales@avpltg.com
www.avpltg.com




SHAFT: Commercial-quality, hot-rolled, carbon steel tubing with a minimum yield strength of 48,000 PSI, conforms to ASTM A500 grade A.

GROUNDING: Provision; 3/8-16 Threaded stud welded to inner shaft wall opposite hand hole. Flat washer and hex nut provided.

HARDWARE: S304 stainless steel

FINISH: TGIC thermoset polyester powder coat finish is electrostatically applied at a 3.0 mil minimum thickness. A five stage metal pretreatment process and sealer provide maximum corrosion resistance. The powder top coat is baked in excess of 400 degrees for supreme endurance.

DBZ BLK WHT GRY GRN

**POLE SCHEDULE**

**E.P.A. DATA SCHEDULE**
Calculations based on estimated wind forces plus additional 1.2 mph gust.

| CATALOG NUMBER | POLE HEIGHT | SHAFT SIZE | WALL GAUGE | BOLT CIRCLE | ANCHOR BOLTS | MAX. FIXT. WT. | 70 MPH | 80 MPH | 90 MPH | 100 MPH |
|---|---|---|---|---|---|---|---|---|---|---|
| SSS-104-11 | 10' | 4" x 4" | 11 | 9" | 3/4" x 18" x 3" | 400 | 33.6 | 26.3 | 20.7 | 16.9 |
| SSS-124-11 | 12' | 4" x 4" | 11 | 9" | 3/4" x 18" x 3" | 400 | 26.0 | 20.6 | 16.3 | 12.4 |
| SSS-144-11 | 14' | 4" x 4" | 11 | 9" | 3/4" x 18" x 3" | 400 | 20.4 | 16.3 | 13.0 | 10.1 |
| SSS-154-11 | 15' | 4" x 4" | 11 | 9" | 3/4" x 18" x 3" | 400 | 18.1 | 14.6 | 11.6 | 9.1 |
| SSS-164-11 | 16' | 4" x 4" | 11 | 9" | 3/4" x 18" x 3" | 400 | 16.1 | 13.0 | 10.3 | 8.1 |
| ✓ SSS-184-11 | 18' | 4" x 4" | 11 | 9" | 3/4" x 18" x 3" | 400 | 14.0 | 10.3 | 8.4 | 6.4 |
| SSS-204-11 | 20' | 4" x 4" | 11 | 10" | 3/4" x 24" x 3" | 400 | 11.8 | 8.1 | 6.4 | 5.0 |
| SSS-254-11 | 25' | 4" x 4" | 11 | 11" | 3/4" x 24" x 3" | 350 | 9.0 | 5.7 | 3.4 | 1.8 |

**Wetland Delineations Wetland Impact Evaluations Environmental Planning**

# Soil Resource Consultants

P.O. Box 752 Meriden, CT 06450

June 17, 2022

**SRC Job No. 22-23**

Robert Hiltbrand, P.E.
R.R. Hiltbrand, Engineers & Surveyors, L.L.C.
575 North Main Street
Bristol, CT 06010

Dear Mr. Hiltbrandt:

Re: **Soil Investigation for Wetland Determination - Lot 71 - Terryville Road - Bristol, CT**

At your request, I have completed an onsite investigation of this site. The purpose of my investigation was to identify and delineate any onsite inland wetlands and watercourse boundaries. The field work was completed on May 31, 2022.

The soil investigation was conducted using a spade and or hand auger to identify existing soil conditions on this site. Five (5) test holes were dug throughout all areas of this site.

No indications of inland wetland soil conditions or watercourses were found in any of the test hole locations. Existing soils represent the drainage classes - excessively drained and well drained.

The attached soil map prepared for this site is a refinement of data found in the **Soil Survey of Hartford County**. Each map unit is composed of a unique combination of soils. Areas with the same symbol have a similar soil composition.

The map units described below are based on data collected at this particular site. Soil surveys in Connecticut were originally conducted for primarily agricultural purposes and do not provide site specific information. The minimum area delineated on a soil survey map sheet is approximately 2-3 acres in size. For this reason there may be some differences between the following information **and** that published in the Soil Survey.

**UPLAND NON-WETLAND SOILS**

The non-wetland soils were not studied or mapped in detail. Some observations were made of these soils during the process of determining the lack of any onsite inland wetland areas. Random soil boring locations in upland areas were marked with pink and black stripped flagging. The following map unit descriptions do not constitute a detailed soil investigation of these upland areas, but may be used as a guide in site planning.





**Ud (306)**
The Ud map unit consists of well to excessively drained disturbed soils. It is composed of filled areas and areas consisting of both cut and fill. Soils in this map unit have been extensively disturbed by grading and filling activities associated with the existing developed\altered portions of this site.

Classification into natural soil units is impossible. This map unit is referred to taxonomically as Udorthents. Original diagnostic soil horizons are not present. Soils in this map unit have a wide range of characteristics. Textures are predominantly gravelly sandy loams. Permeability can be variable due to the lack of soil profile structure caused by the grading activities.

If you have any questions regarding this report, or need additional assistance with this site, please contact me. I am available to attend Inland Wetland Commission meetings and site walks.

Sincerely,

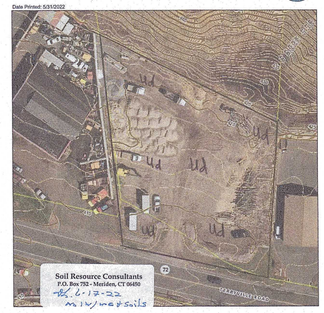
**David H. Lord**
Certified Soil Scientist
& Environmental Consultant



## Lot 71 - Terryville Road
**Bristol, CT**

**City of Bristol**
Geographic Information System (GIS)

Date Printed: 5/31/2022




MAP DISCLAIMER - NOTICE OF LIABILITY
This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of Bristol and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 50 feet.
0 50 Feet
N W E S



PREPARED FOR:

Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R.R. HILTBRAND Engineers and Surveyors

*SITE DETAILS (2 OF 2)*
*Assessors Map 67 ~ Lot 7-1*
*Terryville Road*
*Bristol, Connecticut*
*June 13, 2022*

APPROVED

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4546*

## DESIGN REFERENCE:

SEDIMENT & EROSION CONTROL BASED ON 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL D.E.P. BULLETIN 34 BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.

## Erosion & Sediment Controls and Stabilization Practices

a. Temporary seeding.
b. Mulching.
c. Stone Rip-rap.

During construction, sheet runoff from the site will be filtered through hay bale barriers and silt fences. All storm drain inlets shall be provided with barrier filters. Stone rip-rap shall be provided at the outlets of drainage pipe in which erosive velocities are encountered.

## Off Site Vehicle Tracking

Stabilized construction entrances will be installed at all proposed entrances.

Installation, Maintenance and Inspection Procedures of Erosion & Sediment Controls

### A. General-

These are the general inspection and maintenance practices that will be used to implement the plan.

- The smallest practical portion of the site will be denuded at one time.
- All erosion control measures will be inspected at least once a week and following any storm event of 0.25 inches or greater.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of the report.
- Built up sediment will be removed from the silt fence or hay bale barriers when it has reached one third the height of the of the fence or barrier.
- A maintenance inspection report will be made after each inspection.
- The contractor's site superintendent will be responsible for inspections, maintenance and repair activities, and completing the inspection and maintenance report.
- R.R. Hiltbrand Engineers & Surveyors shall inspect the site on a periodic basis to assure compliance with the plan.

### B. Filters -

1. Straw/ hay bales
   a. Sheet Flow Applications
      1. Bales shall be placed in a single row , lengthwise on the contour, with the ends of the adjacent bales tightly abutting one another.
      2. All bales shall be either wire bound or string tied. Bales shall be installed so that the bindings are oriented around the sides rather than along the tops and bottoms of the bales to prevent deterioration of the bindings.
      3. The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of (4) inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built-up to (4) inches against the uphill side of the barrier. Ideally, bales should be placed ten (10) feet away from the toe of slope.
      4. Each bale shall be securely anchored by at least two (2) stakes or rebars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes and rebars shall be driven deep enough into the ground to securely anchor the bales.
      5. The gaps between bales shall be chinked (filled by wedging) with straw/hay to prevent water from escaping between the bales.
2. Silt Fence
   a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements.

### Physical Property Test Requirements

Filtering Efficiency ASTM 5.41 75% minimum

Grab Tensile Strength ASTM D4632 100lbs.

Elongation & Failure ASTM D4632 15%

Puncture Strength ASTM 4833 50 lbs.

Flow Rate ASTM D4491 0.2gal./ft2/min.

Ultra-Violet Radiation Stability % ASTM D4355 70% after 500 hours of exposure

b. The height of a silt fence shall not exceed thirty (30) inches above grade.

c. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at the support posts, with a min. six (6) inch overlap, and securely sealed.

d. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location and driven securely into the ground (min. of 12 inches).

e. A trench shall be excavated approximately six (6) inches wide and six (6) inches deep along the line of posts and upslope from the barrier.

f. When 'standard strength' filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one inch long, tie wires or hog rings. The wire shall extend no more than 30 inches above the original ground surface.

g. The 'standard strength' filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface.

h. When 'extra strength' filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case the filter fabric is stapled or wired directly to the posts with all other provisions of item 'g' applying.

i. The trench shall be backfilled and the soil compacted over the filter fabric.

j. Silt fences shall be removed when they have served their useful purpose, but not before the upslope areas have been permanently stabilized.

### Sequence of Installation

Sediment barriers shall be installed prior to any soil disturbance of the contributing drainage area above them.

### Maintenance

a. Straw/ hay bale barrier and silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the ends, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.

b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.

c. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately (1/3) the height of the barrier.

d. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

### C. Mulching

1. Timing

In order for mulch to be effective, it must be in place prior to major storm events There are two (2) types of standards which shall be used to assure this.

a. Apply mulch prior to any storm event.

This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Massachusetts (508- 822- 0634 ), to have adequate warning of significant storms.

b. Required mulching within a specified time period.

The time period can range from 14 to 21 days of inactivity on an area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions ( soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc. ) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

2. Guidelines for winter mulch application.

When mulch is applied to provide protection over winter (past the growing season) it shall be at a rate of 6000 lb. of hay or straw per acre. A tackifier may be added to the mulch.

3. Maintenance

All mulches must be inspected periodically, in particular after rain storms, to check for erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

### D. Temporary Grass Cover

1. Seedbed Preparation

Apply fertilizer at the rate of 300 lb. / acre of 10-10-10. Apply limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of (1) tons/ acre.

2. Seeding

a. Utilize annual rye grass at a rate of 40 lb./ acre.

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance

Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface shall be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim ( mulch, filter barriers, check dams, etc. ).

### E. Permanent Grass Cover

1. Seedbed Preparation

Apply fertilizer at the rate of 300 lb. / acre of 10-10-10. Apply limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of (1) tons/ acre.

2. Seeding

| | Lbs./1,000 Sq. Ft. |
|---|---|
| a. Utilize Creeping Red Fescue (Pennlawn, Wintergreen) | .45 |
| Redtop (Streeker, Common) | .10 |
| Tall Fescue (Kentucky 31 or Smooth Bromegrass (Saratoga, Lincoln) | .45 |
| | 1.00 |

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

### F. Storm Drain Inlet Protection

1. Straw Bale Inlet Structure

a. Bales shall be either wire bound or string tied with the bindings oriented around the sides rather than over and under the bales.

b. Bales shall be placed lengthwise in a single row surrounding the inlet, with the ends of adjacent bales pressed together.

c. The filter barrier shall be entrenched and backfilled. A trench shall be excavated around the inlet the width of a bale to a minimum depth of four (4) inches. After the bales are staked, the excavated soil shall be backfilled and compacted against the filter barrier.

d. Each bale shall be securely anchored and held in place by at least two (2) stakes or rebars driven through the bale.

e. Loose straw shall be wedged between bales to prevent water from entering between bales.

F. Stabilized Construction Entrance

1. Specifications

a. Aggregate Size: Use two (2) inch stone. (Gradation Shall Be D.O.T. No. 3)

b. Aggregate thickness: Not less than six (6) inches.

c. Width: Ten (10) foot minimum, but not less than the full width of points where ingress or egress occurs.

d. Length: As required, but not less than one hundred (50) feet.

e. Geotextile: To be placed over the entire area to be covered with aggregate. Piping of surface water under entrance(s) shall be provided as required.

f. Criteria for Geotextile: The fabrics shall be Trevia Spunbound 1135, Mirafi 6000x, or equal.

2. Maintenance

The entrance(s) shall be maintained in a condition which will prevent tracking of sediment onto the public right-of-way. When washing is required, it shall be completed on an area stabilized with aggregate which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches or waterways.

### Timing of Controls/ Measures

As indicated in the sequence of Major Activities the hay bales and silt fences shall be installed prior to commencing any clearing, demolition or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Area(s) where construction activity temporarily ceases for more than twenty one (21) days will be stabilized with a temporary seed and mulch within fourteen (14) days of the last disturbance. Once construction activity ceases permanently in an area, silt fences and hay bale barriers will be removed once permanent measures are established.

### Waste Disposal

A. Waste Materials

All waste materials will be collected and stored in securely lidded receptacles. All trash and construction debris from the site will be deposited into a dumpster. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedure for waste disposal by the superintendent.

B. Hazardous Waste

All hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. Site personnel will be instructed in the practices by the superintendent.

C. Sanitary Waste

All sanitary waste will be collected from the portable units a minimum of once per week by a licensed sanitary waste management contractor.

### Spill Prevention

### A. Material Management Practices

The following are the materials management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances during construction to storm water runoff:

### Good Housekeeping:

The following good housekeeping practices will be followed on site during the construction project:

-An effort will be made to store only sufficient amounts of products to do the job.

-All materials stored on site will be stored in a neat, orderly manner in their proper (original if possible) containers and, if possible, under a roof or other enclosure.

-Manufacturer's recommendations for proper use and disposal will be followed.

-The site superintendent will inspect daily to ensure proper use and disposal of materials.

-Substances will not be mixed with one another unless recommended by the manufacturer.

-When ever possible all of a product will be used up before disposing of the container.

### Hazardous Products:

The following practices will be used to reduce the risks associated with hazardous products:

-Products will be kept in their original containers unless they are not re-sealable

-Original labels and product safety data will be retained for important product information.

-Surplus product that must be disposed of will be discarded according to the manufacturer's recommended methods of disposal.

### B. Product Specific Practices

The following product specific practices will be followed on site:

Petroleum Products:

All on site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt based substances used on site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts directed by the specifications. Once applied, fertilizer will be worked into the soil to limit exposure to storm water Storage will be in a covered shed or enclosed trailers. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be disposed of properly according to manufacturer's instructions or state and local regulations.

Concrete Trucks:

Concrete trucks will discharge and wash out surplus concrete or drum wash water in a contained area on site..

### C. Spill Control Practices

In addition to good housekeeping and material management practices discussed in the previous section the following practices will be followed for spill prevention and cleanup:

-Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.

-Materials and equipment necessary for spill cleanup will be kept in the material storage area on site. Equipment and materials will include but not limited to broomts, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic or metal trash containers specifically for this purpose.

-All spills will be cleaned up immediately after discovery.

-The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

-Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.

-The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to cleanup the spill if it recurs. A description of the spill, its cause, and the cleanup measures will be included.

-The site superintendent responsible for day to day operations will be the spill prevention and cleanup coordinator.

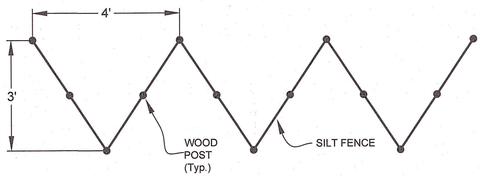
### The General Contractor(s) and/or Project Owner(s)

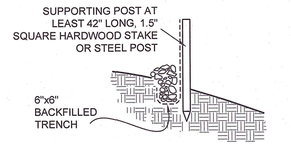
are assigned the responsibility for implementing this erosion and sediment control plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, notifying the Planning and Zoning office of any transfer of this responsibility, and for conveying a copy of the Sediment & Erosion Control Plan if the title to the land is transferred.

**Responsible Person:**
Regis Letourneau
860-309-8984

### Contingency Erosion Plan

Should unforeseen erosion or sedimentation problems arise, the design engineer of record. (R.R. Hiltbrand Engineers & Surveyors ) and the local enforcement agent shall be notified immediately. An inspection of the affected area(s) shall be promptly performed. A remedial action plan shall be formulated with the local enforcement agent's approval. The site contractor shall then implement the recommended course of action which has been determined by both the engineer and local enforcement agent.



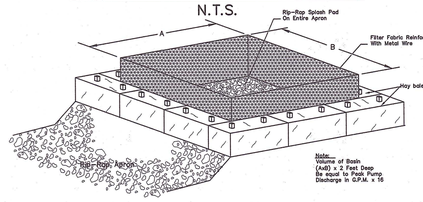




## SAWTOOTH SILT FENCE DETAIL

n.t.s.

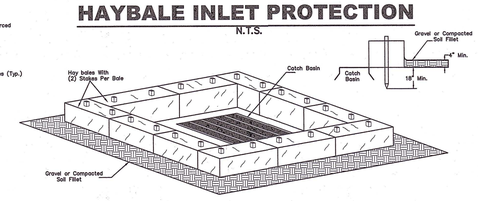
## TEMPORARY SEDIMENT BASIN FOR DEWATERING DISCHARGE

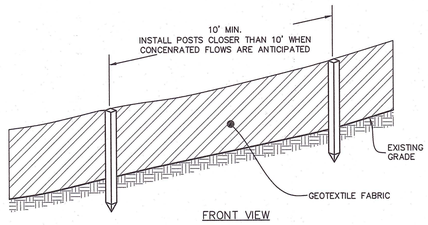
N.T.S.




## HAYBALE INLET PROTECTION

N.T.S.




FRONT VIEW

DETAIL FOR FENCE JOINT

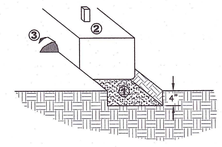


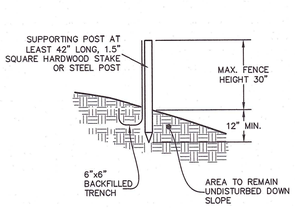

* POSITION POSTS TO OVERLAP AS SHOWN ABOVE, MAKING CERTAIN THAT THE FABRIC FOLDS AROUND EACH POST ONE FULL TURN
* DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OF BUILT-UP SEDIMENT AT JOINT.

## PLACEMENTand CONSTRUCTION OF HAY BALE BARRIER

N.T.S.

1. EXCAVATE TRENCH 4" AND PLACE FILL UP-SLOPE OF TRENCH. PLACE HAYBALE & STAKE FIRST STAKE AT ANGLE TOWARDS
2. FIRST HAYBALE. STAKES ARE 18" MIN. INTO GROUND.
3. BACKFILL & COMPACT EXCAVATED FILL ALONG HAY BALE.
4. WEDGE LOOSE HAY BETWEEN BALES.



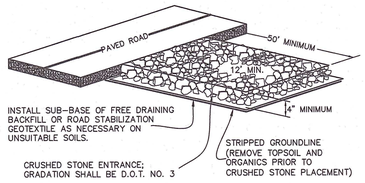




SIDE VIEW

## SILT FENCE

N.T.S.

1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES, OF THE '2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL'.
2. THE HEIGHT OF THE BARRIER SHALL NOT EXCEED 30 INCHES ABOVE GRADE.
3. POSTS SHALL BE SPACED A MAXIMUM OF (10) FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MIN. 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS THE MANUFACTURER RECOMMENDS.
4. A TRENCH SHALL BE EXCAVATED APPROX.. (6) INCHES WIDE BY (6) INCHES DEEP ALONG THE LINE OF THE POSTS AND UPSLOPE FROM THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS.
5. THE FABRIC SHALL NOT EXTEND MORE THAN (30) INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND A MINIMUM OF (8) INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
7. FILTER BARRIERS SHALL BE REMOVED WHEN THE HAVE SERVED THEIR USEFUL PURPOSE. BUT NOT BEFORE THE UPHILL SURFACE HAS BEEN PERMANENTLY STABILIZED.
8. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
10. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.




## CONSTRUCTION ENTRANCE n.t.s.

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R. R. HILTBRAND
Engineers and Surveyors

# EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

Assessors Map 67 ~ Lot 7-1
Terryville Road
Bristol, Connecticut

APPROVED
June 13, 2022

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

North

EXISTING UTILITY LINES TO BE RELOCATED BY OTHERS

EXISTING WATER MAIN TO REMAIN 20' WIDE UNDEFINED EASEMENT IN FAVOR OF 38 BARLOW STREET V:1490 - P:1077

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

S03°44'48"W
CONCRETE WALL
180.00'
15' S.Y.
232.41'
S65°29'20"W
15' R.Y.
50' F.Y.
67.06'
N55°41'31"W
S 75°16'31" E
3.43'
62.40'
N75°16'32"W
55.91'
N81°46'31"W
215.00'
N06°45'31"W
15' S.Y.

EXISTING GRAVEL SURFACE

EXISTING BITUMINOUS PAVEMENT ENCROACHMENT TO BE REMOVED

PAVEMENT

SHIPPING CRATE

APPROXIMATE C.O.B. WETLANDS LIMIT

EXISTING SHIPPING CRATE TO BE REMOVED

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

EXISTING WATER MAIN TO REMAIN

DP 1
DP 2

TF=410.79
PAVED DRIVEWAY

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

CATCHBASIN
TF=411.08

412
SIGN

SNET
4191

5/8" iron rod (found)

EXISTING UTILITY POLE TO BE RELOCATED BY OTHERS

EXISTING UTILITY LINES TO BE RELOCATED BY OTHERS

SIGN
EXISTING SIGN TO BE REMOVED

SAMH
TF=411.64
INV=403.72

SANMH
TF=412.56

CL&P
8076

APRON
EXIST. WYE
EXISTING APRON TO BE REMOVED (NEW APRON TO BE INSTALLED IN SAME LOCATION) (SEE SITE PLAN)

SANMH
TF=413.42
INV=405.77

SANMH
NOT FOUND
INV=406.07

CATCHBASIN
TF=413.52
FL=404.62
FL=404.32

TERRYVILLE ROAD

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

R. R. HILTBRAND Engineers and Surveyors

PRE-DEVELOPED DRAINAGE MAP
Assessors Map 67 ~ Lot 7-1
Terryville Road
Bristol, Connecticut
June 13, 2022
APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

North

N/F
THE BRISTOL SWEDISH SOCIAL CLUB INCORPORATED
VOL.1899 – PG.317
38 BARLOW STREET

N/F
COLLISION DEPOT LLC
VOL.2053 – PG.1070
186 TERRYVILLE RD

N/F
LUBAR INC
VOL.687 – PG.496
2 BARLOW ST

PAVED DRIVEWAY

TF=410.79

PROPOSED 27.5' EVERSOURCE EASEMENT

CATCHBASIN
TF=411.08

10.0'

17.5'

5/8" Iron rod (found)

CONCRETE WALL

15' S.Y.

35.0'

100.0'

PROPOSED BUILDING "A"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

UNIT #2
(50'x35')

UNIT #1
(50'x35')

ENTRY DOOR
FL - 415.00

12' OH DOOR

ENTRY DOOR

FL - 415.00

EXISTING WATER MAIN TO REMAIN
20' WIDE UNDEFINED EASEMENT IN FAVOR OF 38 BARLOW STREET
V:1490 - P:1077

PROPOSED INFILTRATION DRAIN TO INTERCEPT UP-SLOPE RUN-OFF
205' 4" PVC SDR-35
(PERFORATED)
FL - 418.0 (SEE DETAIL)

42' - 8" CPP ROOF LEADER @ 3%

12' - 8" CPP ROOF LEADER @ 2%

C-CB #4
TF - 416.75
FL - 413.00
(INSTALL HOOD)

65' - 18" CPP @ 0%
(PERFORATED)

DP 2

STMH #3
TF - 417.55
FL - 414.50 (8")

50' F.Y.

C-CB #3
TF - 416.75
FL - 413.75 (12")
FL - 413.00 (18")
(INSTALL HOOD)

DP 1

62' - 8" CPP ROOF LEADER @ 2%

FL - 415.00

25' - 12" CPP @ 5%

42' - 8" CPP ROOF LEADER @ 2%

18 - 4' x 4' x 8' CONCRETE GALLEY
BOTTOM GALLEY = 408.50

FL - 410.25

14' - 12" CPP @ 1.8%

C-CB #2
TF - 414.00
FL - 410.50

STMH #2
TF - 415.60
FL - 412.50 (12")
FL - 412.50 (6")
FL - 409.00 (8")

22' - 12" CPP @ 2.3%

C-CB #1
TF - 414.65
FL - 411.00

50' - 8" PVC @ 1%
50' - 6" PVC @ 2%

STMH #1
TF - 414.50
FL - 411.50 (6")
FL - 408.50 (8")
FL - 408.50 (12")

INV - 406.25
12" SAN

24' - 12" CPP @ 1%

FL - 408.25 (12")

EXISTING WATER MAIN TO REMAIN

CATCHBASIN
TF=413.52
FL=404.62
FL=404.32

PROPOSED PROCESSED GRAVEL STORAGE AREA

PROPOSED BUILDING "B"
3,500 S.F. TOTAL
F.F. ELEV. = 418.50

UNIT #3
(50'x35')

UNIT #4
(50'x35')

35.0'

100.0'

15' S.Y.

APPROXIMATE C.O.B. WETLANDS LIMIT

SIGN

TERRYVILLE ROAD

CL&P
8076

ALL PROPOSED CATCH BASINS SHALL BE FITTED WITH A FLEXSTORM PURE FILTER PERMANENT INLET PROTECTION (SEE DETAIL)

TERRYVILLE ROAD PROJECT:

FLEXSTORM CATCH BASIN INSERT - PART #62LHDPC
PC POST CONSTRUCTION W/ ABSORB-IT FILTER BAG - PART #62RBPC

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Regis Letourneau
37 Buckridge Road
Harwinton, CT 06791

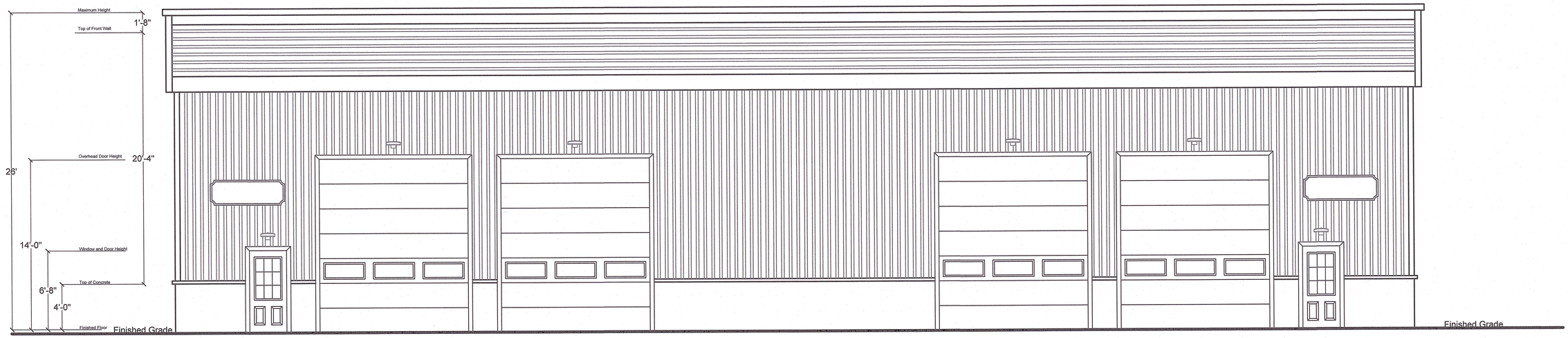
R. R. HILTBRAND Engineers and Surveyors

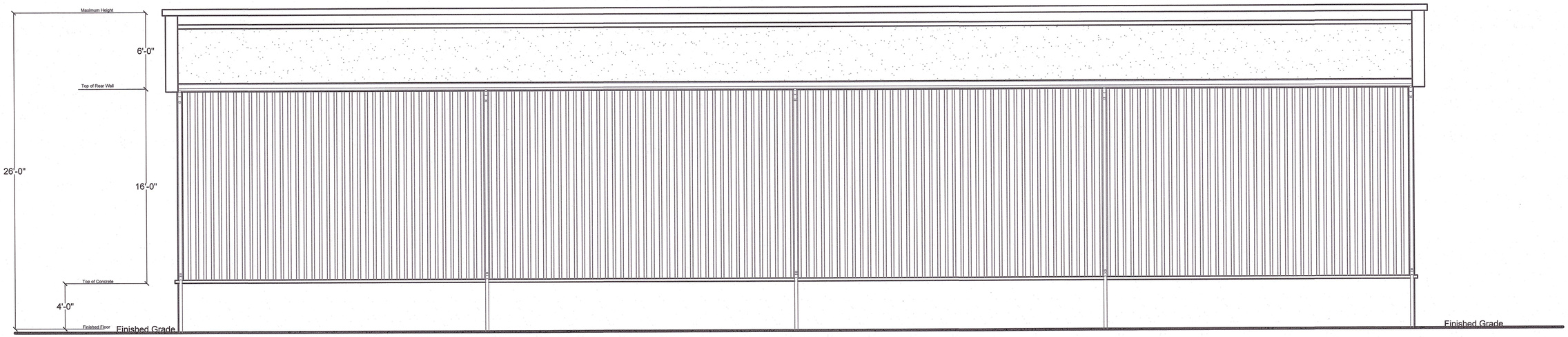
# DEVELOPED DRAINAGE AREA MAP
## Assessors Map 67 ~ Lot 7-1
## Terryville Road
## Bristol, Connecticut
June 13, 2022

APPROVED

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

# Elevation Drawings and Floor Plans

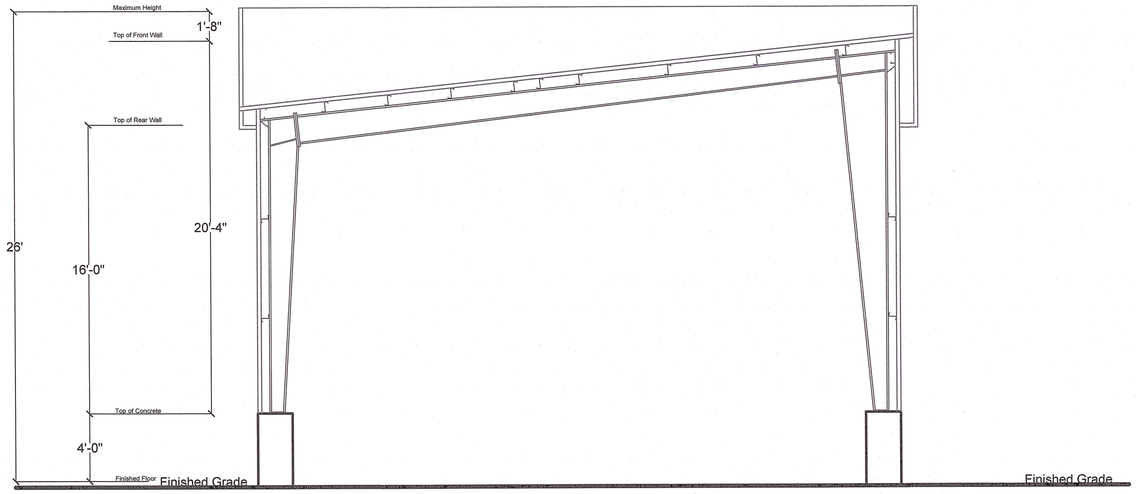


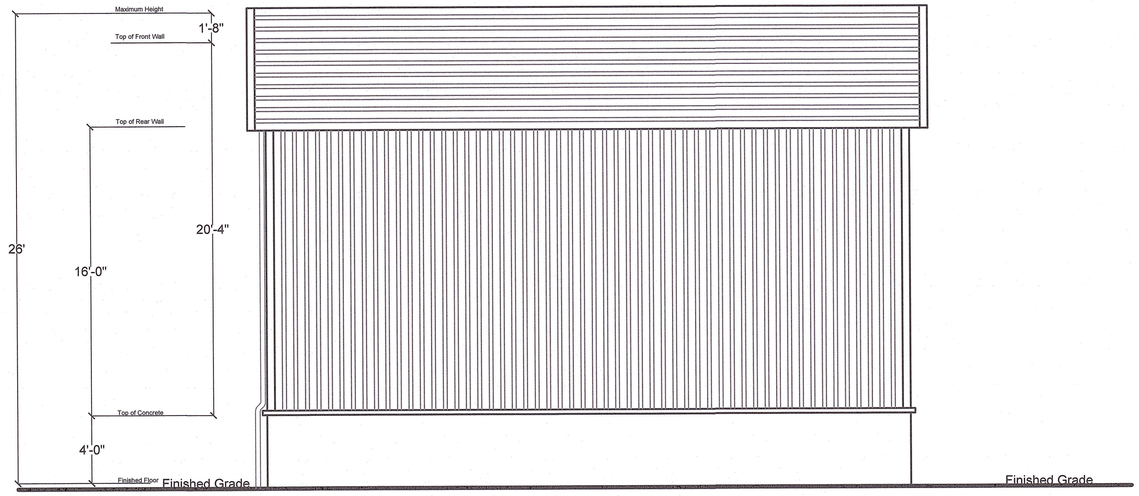




| Drawing Title | Scale | |
|---|---|---|
| FRONT ELEVATION<br>REAR ELEVATION | 1/4" = 1' - 0" | D\|P\|S<br>DEVELOPMENT PLANNING SOLUTIONS LLC<br>225 NORTH MAIN STREET<br>SUITE 207<br>BRISTOL CONNECTICUT<br>(860)506-4268 |
| DPS_CLIENTS_LETORNEAU_BRISTOL_TERRYVILLE ROAD | Project Number 2022-29 | |

APPROVED

SHEET A.1

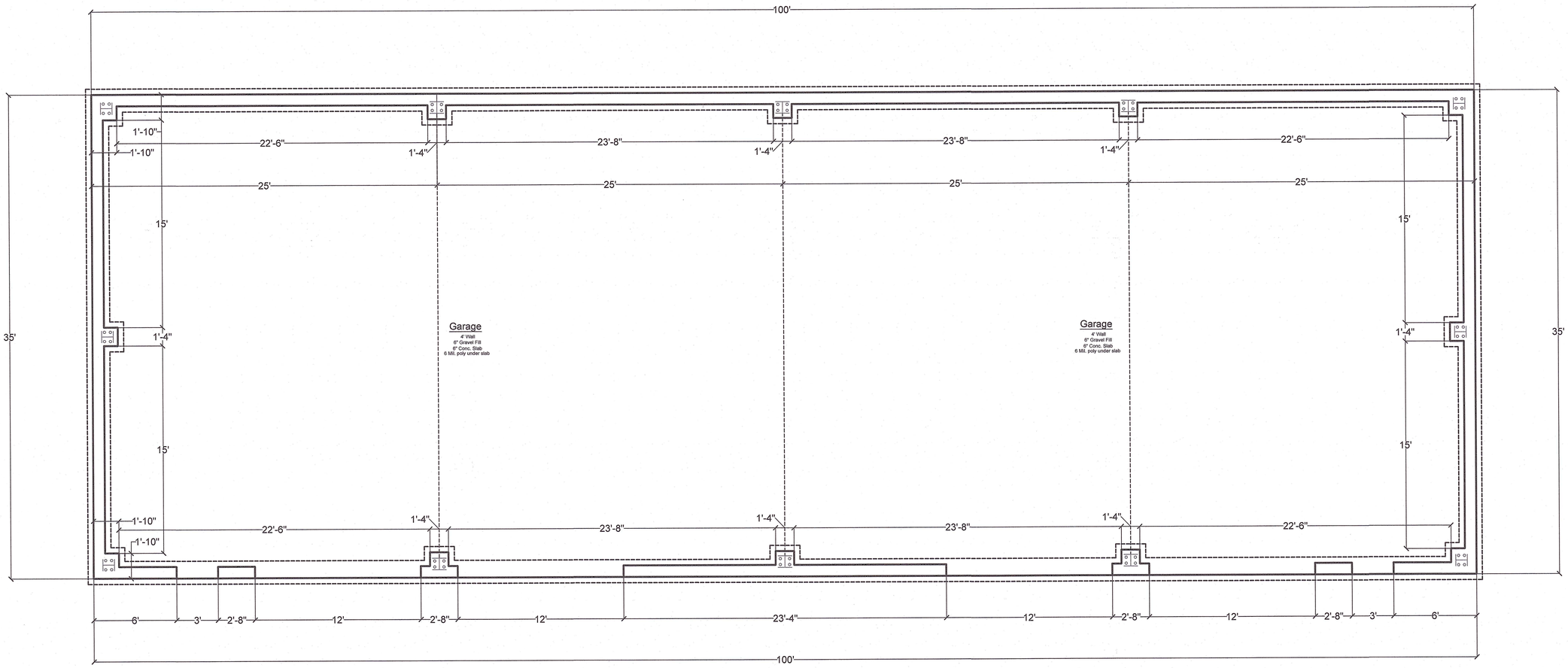



| Drawing Title | Scale | |
|---|---|---|
| SCHEMATIC SECTION<br>TYPICAL SIDE ELEVATION | $\frac{1}{4}$" = 1' - 0" | D\|P\|S<br>DEVELOPMENT PLANNING SOLUTIONS LLC<br>225 NORTH MAIN STREET<br>SUITE 207<br>BRISTOL CONNECTICUT<br>(860)506-4268 |
| DPS_CLIENTS_LETORNEAU_BRISTOL_TERRYVILLE ROAD | Project Number 2022-29 | |

APPROVED

SHEET A.4

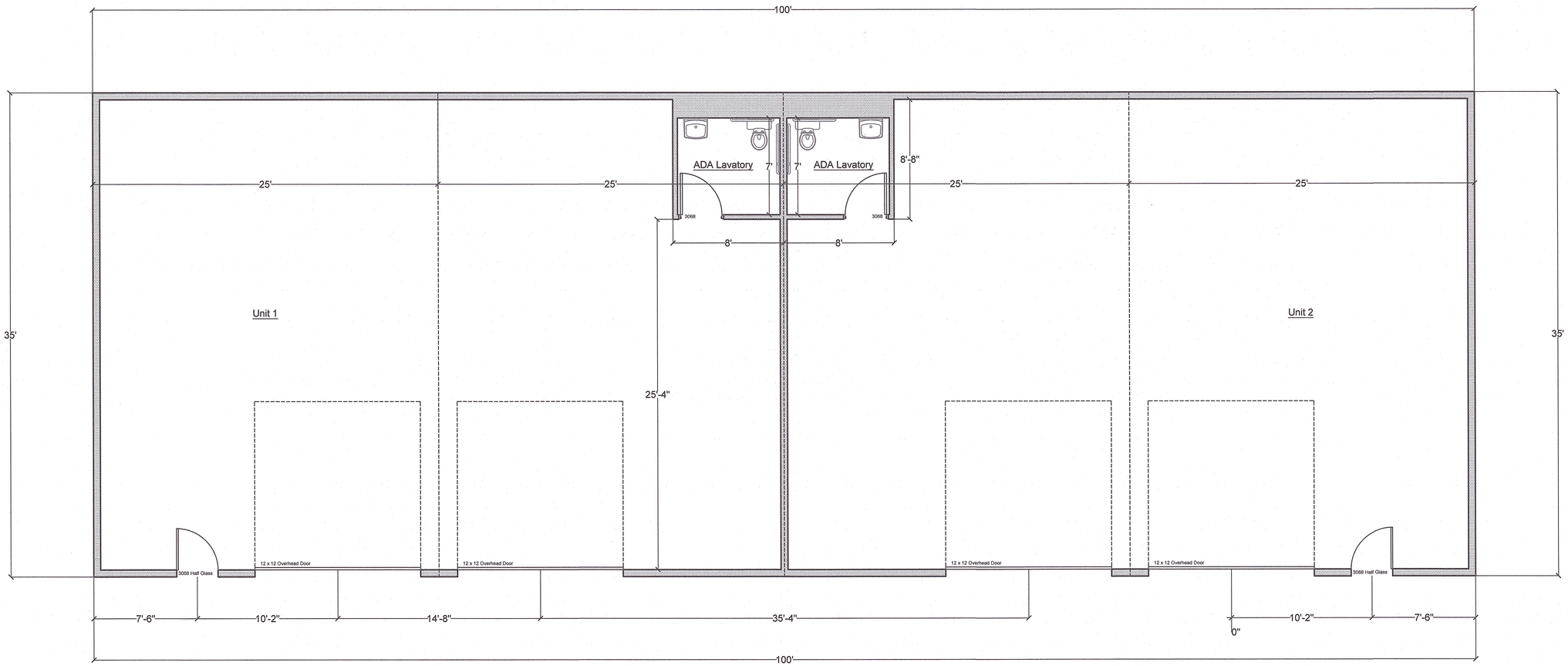



| Drawing Title | Scale |
|---|---|
| FOUNDATION PLAN | $\frac{1}{4}$" = 1' - 0" |
| DPS_CLIENTS_LETORNEAU_BRISTOL_TERRYVILLE ROAD | Project Number 2022-29 |


D | P | S
DEVELOPMENT PLANNING SOLUTIONS LLC
225 NORTH MAIN STREET
SUITE 207
BRISTOL CONNECTICUT
(860)506-4268


APPROVED

SHEET A.2




| Drawing Title | Scale | |
|---|---|---|
| FIRST FLOOR PLAN<br>3,500 SQFT | $\frac{1}{4}$" = 1' - 0" | D\|P\|S<br>DEVELOPMENT PLANNING SOLUTIONS LLC<br>225 NORTH MAIN STREET<br>SUITE 207<br>BRISTOL CONNECTICUT<br>(860)506-4268 |
| DPS_CLIENTS_LETORNEAU_BRISTOL_TERRYVILLE ROAD | Project Number 2022-29 | |

APPROVED

SHEET A.3

| For Office Use Only | |
|---|---|
| APPLICATION NO. | 2504 |
| DATE FILED: | 6/27/24 |
| DECISION DATE: | |
| DECISION: | |

**BRISTOL ZONING COMMISSION**
**CITY OF BRISTOL, CONNECTICUT**
**APPLICATION FOR SPECIAL PERMIT**

The undersigned Applicant hereby applies to the Bristol Zoning Commission for approval under Section(s) Article II, Section 4.2 of the Bristol Zoning Regulations for the following Special Permit use: Civic Facility

Address or Location of the Property: Maltby Street

Assessor's Map No.: 52 & 53 Assessor's Lot No.(s): 11, 15, 16B16A, 17, 145, 147, 149, 150, 151

Zone of the Property: R-40 Size of the Property (in acres or square feet): 303.7 acres (total)

Reason for the Special Permit: Replacement of White Bridge Waterworks Facilitie, including new pump station and wells.

See project narrative, ATTACHED.

Does this application involve an activity regulated by the Inland Wetlands Agency? [✓] yes [ ] no

If yes, has an application for a permit been submitted to the Inland Wetlands Agency? [✓] yes, on 12/26/2023 [ ] no

Other comments: Three applications were submitted to Inland Wetlands Agency (App# 2019, #2020, #23-458F-305)

Approval for all three applications received from Inlands Wetland Agency on June 3, 2024. SEE ATTACHED

NOTE: Section 8-3c(a) of the Connecticut General Statutes requires that, if an application for a Special Permit involves an activity regulated under the Inland Wetlands and Watercourses provisions of the statutes, the applicant shall submit an application for a wetlands permit to the local Inland Wetlands Agency no later than the day the Special Permit application is filed.

APPLICANT (If more than one, list on Page 2)

Name: New Britain Water Department, Ramon Esponda

Address: 1000 Shuttle Meadow Ave City: New Britain State: CT Zip: 06052

Telephone No.: (860) 826-3535 E-Mail: Ray.Esponda@newbritainct.gov

Signature: [signature] *Signature – (Printed/Typed)* Ramon Esponda

CHECK ONE: [✓] owner [ ] other (specify): _____

OWNER(S) OF RECORD (If other than Applicant; if more than one, list on Page 2)

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ *Signature – (Printed/Typed)* _____

**THIS APPLICATION MUST BE FILED IN PERSON NO LATER THAN 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!**

BZC – 08/17

For Office Use Only
APPLICATION NO. 2504

## CITY OF BRISTOL, CONNECTICUT
## SUPPLEMENTARY INFORMATION

**Address or location of property:** Maltby Street

**ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)**

The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street.

See the attached documents for more information.

**ADDITIONAL APPLICANT**

Name: _____ CHECK ONE: [ ] owner [ ] other: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**ADDITIONAL OWNER(S) OF RECORD**

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:**

Name: Vinta Varghese (CDM Smith)

Address: 101 East River Drive, Suite 1A City: East Hartford State: CT Zip: 06108

Telephone No.: Direct: 860-808-2325 E-Mail: vargheseva@cdmsmith.com

08/17 - LUO

# Atty. Hammer Extension of Time

**From:** Joseph Hammer [mailto:jhammer@mrglaw.com]
**Sent:** Tuesday, October 22, 2024 11:42 AM
**To:** Robert Flanagan <RobertFlanagan@bristolct.gov>
**Cc:** Varghese, Vinta A. (vargheseva@cdmsmith.com) <vargheseva@cdmsmith.com>; Sebastian Amenta - Comprehensive Environmental Inc. (samenta@ceiengineers.com) <samenta@ceiengineers.com>; ray.esponda@newbritainct.gov
**Subject:** New Britain Water Department - Application #s 2504, 2505 and 2506

Robert,

As you know, we represent the City of New Britain in connection with its Special Permit and Site Plan applications referenced above.

This is to confirm that the applicant consents to a thirty (30) day extension of time, to November 20, 2024, within which to complete the public hearing.

We understand that the public hearing has been continued by the Commission to November 18.

Thank you.


**MacDermid Reynolds & Glissman, P.C.**
110 Whitney Avenue
New Haven, CT 06510

86 Farmington Avenue
Hartford, CT 06105
www.mrglaw.com

**Joseph L. Hammer**
jhammer@mrglaw.com
Tel: 203-777-1001
Cell: 860-992-3130
Fax: 860-547-1191
Bio V-card



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# Atty. Hammer Extension of Time

**From:** Joseph Hammer [mailto:jhammer@mrglaw.com]
**Sent:** Wednesday, July 3, 2024 3:18 PM
**To:** Robert Flanagan <RobertFlanagan@bristolct.gov>; Nancy Levesque <NancyLevesque@bristolct.gov>; andrewarmstrong@bristolct.org
**Cc:** ray.esponda@newbritainct.gov; Sebastian Amenta - Comprehensive Environmental Inc. (samenta@ceiengineers.com) <samenta@ceiengineers.com>; Varghese, Vinta A. (vargheseva@cdmsmith.com) <vargheseva@cdmsmith.com>; Rachel Fancy <RFancy@mrglaw.com>
**Subject:** Bristol Zoning Commission - Applications #2504, #2505,# 2506; Applicant - City of New Britain, Water Department

Dear Mr. Flanagan,

Our firm represents the City of New Britain in connection with the above-referenced Special Permit and Site Plan applications which were submitted on June 27, 2024.

The applicant understands that due to the holidays and anticipated scheduling of public hearings by the Zoning Commission, the public hearing on the applications will likely be scheduled for September 16, 2024. The 65 day period to open the hearing, following receipt of the applications on July 8, will expire on September 11. The applicant therefore consents to a five-day extension of time, to September 16, 2024, within which to commence the public hearing.

Thank you.


MRG
**MacDermid Reynolds & Glissman, P.C.**
110 Whitney Avenue
New Haven, CT 06510

86 Farmington Avenue
Hartford, CT 06105
www.mrglaw.com

**Joseph L. Hammer**
jhammer@mrglaw.com
Tel: 203-777-1001
Cell: 860-992-3130
Fax: 860-547-1191
Bio V-card



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# Erosion Control Bond Estimate

Engineer's Estimate for E&S Controls at the White Bridge Waterworks Facilities

| Area | Item | Estimate |
|---|---|---|
| LWF | Dewatering Basin | $ 15,000 |
| | Straw Wattles | $ 15,500 |
| | Control Blankets | $ 5,000 |
| Pond Pump Station | Dewatering Basin | $ 10,000 |
| | Straw Wattles | $ 11,000 |
| | Control Blankets | $ 8,000 |
| | Turbidity Curtains | $ 5,000 |
| UWF | Dewatering Basin | $ 7,000 |
| | Straw Wattles | $ 60,000 |
| | Control Blankets | $ 5,000 |
| Wetlands/ Compensatory Storage Creation Areas | Straw Wattles | $ 60,000 |
| | Control Blankets | $ 2,000 |
| Maltby Street Utilities | Straw Wattles | $ 60,000 |
| | Subtotal | $ 263,500 |
| | 15% OHP | $ 39,525 |
| | **Total** | **$ 300,000** |

# Letter

May 16, 2024

Commissioner Katie Dykes
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

RE: "Log" letter consideration request – New Britain Water Dept. - Whitebridge registrations, Bristol CT

Good day, Commissioner Dykes:

This letter is written to request your immediate consideration of concerns regarding the New Britain Water Department upgrade project of the existing wellfields and surface water withdrawal systems, known as Whitebridge, located in Bristol CT. In addition to their other registered diversions within the state, the City of New Britain has 3 registered diversions in the City of Bristol, known as Whitebridge; North wellfield (2.16 MGD), South Wellfield (6.62 MGD), and Surface Water (Copper Mine/Polkville Brooks) (15 MGD)

- Fact: Bristol Water Department also has registered diversions, located near Whitebridge in the same Coppermine Brook watershed.
- Fact: New Britain historically operates the Whitebridge diversions at much much lower than the registration rates, currently approximately 1/5 to 1/7 of the registered rates. Based on the New Britain Water submittal information, DEEP issued a Negative Declaration of Diversion on February 21, 2024 for construction improvements at both wellfield locations for new wells of larger sizes with capacity increases to approximately match the registered diversion rates.
- Fact: The aquifer was assessed for Level A APA in a 2007 Study (Lenard). The study indicated "It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields". The study reassigned "agreed upon" reduced flow rates to simulate a safe yield for each of the wellfields. The surface water diversion was not assessed (Executive summary attached). The City of Bristol administers APA regulations based on the 2007 Level A study boundary.
- Fact: Coppermine Brook, the surface water immediately adjacent to Whitebridge is designated impaired for flow. Coppermine is listed in Connecticut Department of Energy and Environmental Protection's (DEEP) 2022 Integrated Water Quality Report to Congress under Nonpollutant Impairments (EPA Category 4c) for Flow Regime Modification.
- Fact: The City of Bristol Inland Wetlands Commission is currently reviewing the project applications for impact to wetlands and floodplain within the Coppermine Brook (Pequabuck River/Farmington River) watershed basins.

The watershed protection groups, Pequabuck River Watershed Association, Rivers Alliance of Connecticut and Farmington River Watershed Association, along with other concerned citizens, request CT DEEP further investigate the concerns related to this project:

- Due to the past study determination that the "aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields", the Aquifer Protection Area (APA) Level A boundary in Bristol was established based on "agreed

upon" flow rates which were much lower than the "grandfathered" registration rates. Based on inquiry to DEEP, New Britain Water has been operating in accordance with the (lowered) flow rates which established the APA. If New Britain Water is proposing a change which would increase the diversion operations over the Level A study rates, additional study is warranted, prior to construction, to establish safe levels of operation and potential changes to the regulated Level A boundary.

- New Britain is a good neighbor. Both the Bristol and New Britain Water Departments have a right and a responsibility to maintain and protect their water system sources. Watercourse / wetland / and aquifer natural system resources are vital components. The resources have limited capacity.
- Bristol Wetland Commission is currently reviewing the New Britain Whitebridge proposal. The diversion rate issue is central to the wetlands/watercourse review, yet the New Britain Water Department legal representative has instructed the Bristol Wetland Commission that the impacts relative to increases in the groundwater and surface water withdrawal operations, up to the registered diversion rates, cannot be considered in their decision. Our concern is that larger well construction and withdrawal operations will unreasonably impair water resources. The Bristol Inland Wetland Commission decision will be made at a May 22, 2024 “Special Meeting”.

Potential solutions to foreseeable “water wars” between municipalities for water use allocations within the Coppermine Brook (Pequabuck/Farmington) watershed can include:

- New Britain Water Department should update the Level A boundary study to reflect the registration rates, prior to any state agency construction approval. The Level A boundary should be modified, as necessary, for any increased flow rates in order to protect the resources. If, as past studies (Lenard 2007 and others) indicate the aquifer is unable to sustain the registration rates, the model should be updated, and reviewed/approved by DEEP for appropriate diversion allocations between the municipalities, including drought restriction protections, prior to construction.
- DEEP, potentially through adjudication, should intervene for a proposed plan of action to allocate resources and resource protection measures.

Your prompt reviews and actions are appreciated.

Sincerely,

***Alicea Charamut, Executive Director, Rivers Alliance of Connecticut***

***Mary Rydingsward, Executive Director, Pequabuck River Watershed Association***

***Aimee Petras, Executive Director, Farmington River Watershed Association***

cc: Graham J. Stevens, Bureau Chief, Water Protection and Land Resources
Brendan Schain, Esq., CT DEEP Shalyn Zappulla, CT DEEP
Chris Bellucci, CT DEEP Kim Czapla, CT DEEP
Raul Tejada, CT DPH Lori Mathieu, CT DPH
Jack Betkoski, III, Chair, Connecticut Water Planning Council
Roger Reynolds, Senior Legal Director, Save the Sound

# CT DPH - Notification

**From:** Microsoft Power Apps and Power Automate <microsoft@powerapps.com>
**Sent:** Tuesday, July 2, 2024 3:34 PM
**To:** Ray.Esponda <Ray.Esponda@newbritainct.gov>; Gerlach, Kyle T. <gerlachkt@cdmsmith.com>
**Subject:** Acknowledgement of Submission to CTDPH

This email is being sent automatically to confirm the submission of a project notification form to the Connecticut Department of Public Health pursuant to Connecticut General Statutes Section 8-3i and/or 22a-42f.

A project notification form is required to be completed and submitted to the Department of Public Health when an application, petition, request or plan is located in a Drinking Water Source Watershed or Aquifer Protection Area.

Thank you for your submission. If you have any questions, please send an email to dph.sourceprotection@ct.gov.

Please enter the docket number/application ID for this application, petition, request or plan, if applicable:
App 2504 - Special Permit for Civic Facility

What municipal entity is this application, petition, request or plan being submitted to?["Zoning Commission"]

Is the location associated with the proposed application, petition, request or plan in a drinking water watershed?Yes

Is the location associated with the proposed application, petition, request or plan in an Aquifer Protection Area?
The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street.

Does this application include a petition or proposal to change the regulations, boundaries or classifications of zoning districts?No

Please enter a brief description of the project or proposal:
The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street.

Please enter the date of the application, petition, request or plan:
2024-06-27

What is the size of the area to be disturbed?
equal to or greater than 5 acres

Is any part of this project located within 50 feet of a wetland, stream, pond, lake or reservoir?Yes

What type of use is this application, petition, request or plan proposing?Institutional (school, hospital, nursing home, etc,)

How will this project be provided a potable water supply?Connection to existing public water supply

How will domestic waste be handled?
Sanitary Sewer (will be extended to project area as a result of project)

If the proposed project is 1) not located on single family residential property and 2) will utilize a new well for drinking water supply, a Public Water Supply (PWS) Screening Application should be submitted to the Department of Public Health. Was a PWS Screening Application submitted?Yes

Applicant Name:
New Britain Water Department - Ramon Esponda

Applicant email address:
Ray.Esponda@newbritainct.gov

Street address or intersection of application, petition, request or plan:
Maltby Street, Bristol CT

Enter Project Longitude/Latitude:
-72.916330
41.700721

Is there any other information relevant to the Department's review of this application, petition, request or plan? If so, please enter in the space below:
This project is receiving funding by the Department of Public Health and there has been much coordination and collaboration between the City of New Britain, the design team, and the Department. The Department has been kept updated throughout the progress of the project design and has already received site plans and other documentation.

If you would like a confirmation of this submission to be sent to the town, please enter the email address you would like it to be sent to in the field below:
gerlachkt@cdmsmith.com

# Site Plan Comments

CITY OF BRISTOL
SITE PLAN REVIEW COMMITTEE
STAFF COMMENTS - 2505

SITE PLAN & SPECIAL PERMIT: Site Plan for a Civic Facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; R-40 (Single-Family Residential) zone; New Britain Water Department, applicant. *Plans Dated: June 2024; Date of Committee Review: July 31, 2024 (first review); October 21, 2024 (second review); November 14, 2024) (third review)*

**ENGINEERING/PUBLIC WORKS (Anthony Lorenzetti):**
*Engineering Review Comments Application # 2504 and #2505*

1) Section 16.3.5, a Class A-2 survey is required.

   *9/7/24 Applicant Response: The A2 Survey for the work area was provided electronically. Additional A2 survey for the access road on Mix Street for location curb cut/ entrance to work area access is in progress and anticipated to be submitted in October 2024.*

   10/21/24 City Response: Submit copy of stamped sealed survey drawing.

   *11/7/24 Applicant Response: A stamped sealed survey was used as the base layer to create the Drawing Sheets SP-03 and SP-07 for the October 2024 revised drawings. The stamped sealed survey file is provided to the City of Bristol as a separate drawing.*

   11/14/24 City Response: OK.

2) Section 16.3.8 There are several homes and other adjacent facilities that are across Mix Street that are not shown.

   *9/7/24 Applicant Response: The additional homes across Mix Street will be shown on expanded drawings after completion of the additional survey in October 2024.*

   10/21/24 City Response: OK.

   *11/7/24 Applicant Response: Houses on Mix Street across from the new access drive are shown on Sheet SP-03 and SP-07.*

   11/14/24 City Response: Limits south westerly from Maltby Street access drive not shown, left up to contractor. See note 8 on page SP-13 Provide on plan.

3) In review of the Traffic Impact Sketch showing trucking routes, it is stated that the traffic is going to enter and exit the site primarily from Stafford Avenue, other than the compensatory storage construction area on Mix Street. Considering that both driveway access points are located approximately midway between Stafford Avenue and Maltby Street, and utility installation on Maltby Street, Mix Street, and Stafford Avenue along with wetlands creation on Mix Street would likely be utilized more extensively. In addition, what temporary traffic impacts are expected due to the utility construction expected to have on Mix Street and Stafford Avenue? Construction the within the intersections of Maltby Street at Stafford and Maltby Street and Mix Street should be limited to off peak periods. This item can be more thoroughly discussed in the permitting process. Two new Truck warning signs (w11-10) are recommended on Maltby street, due to the very limited current traffic entering from both existing drives that will be increased. The traffic narrative mentions only 15 vehicles per day on site, does this also include trucking materials in and out of the site. What would be the expected total project trip ends per day?

*9/7/24 Applicant Response: Construction at the Maltby Street/Stafford Avenue and Maltby Street/Mix Street intersections will be limited to off-peak hours, avoiding school bus traffic times, as required by the City of Bristol. A more detailed traffic control narrative is in development and will incorporate any additional considerations put forth by the City.*

10/21/24 City Response: Update with commission comments included.

*11/7/24 Applicant Response: The Traffic Control Narrative has been updated to include considerations for other local traffic impacts discussed during the October Zoning Commission meeting. These included the softball and baseball tournaments hosted at the sports complex on Mix Street during August, school drop off times for local schools, events hosted at nearby churches, and the Jerome Avenue Bridge project. Specification Section 011000 - Summary has been updated to require the Contractor to coordinate with the City of Bristol DPW and police department for these specific events and lists these events as work restrictions for the Contractor to include in their Construction Schedule. The updated Specification Section is included as an attachment to this submittal.*

11/14/24 City Response: Acceptable.

4) Provide enhanced mapping for the site access on Mix Street for the Wetlands creation, showing street access required. A City permit will be required for this area.

*9/7/24 Applicant Response: Enhanced mapping for the site access on Mix Street will be shown on expanded drawings after completion of the additional survey in October 2024.*

10/21/24 City Response: Include updated drawings that were provided under separate request with dimensions of modifications in the plan set.

*11/7/24 Applicant Response: Requested updated drawing is included as SP-07, which specifically shows access to the Wetlands Creation and Compensatory Storage area off Mix Street.*

11/14/24 City Response:

5) Recommend storage of all construction equipment in upland areas to minimize risk of pollution.

*9/7/24 Applicant Response: This is good practice and will be covered in the Stormwater Pollution Prevention Plan prepared by the Contractor per Specification Section 312500, Erosion and Sedimentation Controls. Additional language will also be added to the General Notes on Sheet C-1 to enhance this requirement.*

10/21/24 City Response: No updated sheet C-1 was provided.

*11/7/24 Applicant Response: Sheet C-1 was resubmitted as P-ERM sheet in the October 2024 revised drawing set. Note 30 requires the Contractor to comply with the Order of Conditions received from the Bristol Conservation Commission, which has very specific requirements for where construction vehicles and equipment can be stored in relation to the resource areas.*

11/14/24 City Response:

6) Update as needed to the updated 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

   *9/7/24 Applicant Response: Specification Section 312500, Erosion and Sedimentation Controls, as well as relevant Drawings and notes, will be updated to reflect compliance with the 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.*

   10/21/24 City Response: Provide to City.

   *11/7/24 Applicant Response: Specification Section 312500 is included as an attachment for the City of Bristol to review.*

   11/14/24 City Response:

7) While it is understood that the timelines shown in the design report are preliminary and subject to final completion of the contractor(s), the narrative on page 4 and the schedule chart submitted are not consistent with each other.

   *9/7/24 Applicant Response: The overall Construction Sequencing stages presented in the Project Narrative reflects sequencing and interdependence of some activities as well as seasonal constraints; the schedule chart will be reviewed and updated. The utility work in Maltby Street must occur before the new Pumping Station building is completed, but can be arranged to accommodate any specific timing constraints by the City of Bristol.*

   10/21/24 City Response: OK as shown. However, all additional Information should have a cover sheet and be dated stamped and sealed by Engineer.

   *11/7/24 Applicant Response: A revised version of the Construction Sequencing was presented in the Supplemental Information Narrative submitted on October 10, 2024. The final Construction Sequencing Narrative and Figure is included as an attachment to this submission. Final Bid Set Documents will be stamped and sealed and submitted to the City.*

   11/14/24 City Response:

8) Add the most current city road repair details, we can provide them to you.

   *9/7/24 Applicant Response: The Civil Detail sheets will be updated with the City's most current road repair details when provided (it appears that the Details available on the DPW website are sidewalk and curb related).*

   10/21/24 City Response: Include on plans.

   *11/7/24 Applicant Response: A new detail sheet has been created for Standard Bristol Details, and includes the roadway and sidewalk repair details provided by the City of Bristol. It also includes the detail for Mix Street pavement repair.*

   11/14/24 City Response:

9) Where will the staging areas for the utility main construction be?

*9/7/24 Applicant Response: Proposed staging areas (onsite and offsite) are required to be submitted by the Contractor per Specification Section 015000, Temporary Facilities and Controls.*

10/21/24 City Response: Provide to City.

*11/7/24 Applicant Response: The proposed staging area for the Contractor's use is indicated on Sheet SP-13. Specification Section 015000 requires the Contractor to submit a Site Utilization Plan and indicate locations of staging/storage areas and any deviations from locations indicated on Drawings. This Plan will be submitted to the City of Bristol when it is received from the Contractor during construction.*

11/14/24 City Response:

10) The site access off Maltby Street to the lower well field site is being widened, and as part of the widening to the west trees will have to be removed and some tree trimming may be required to provide adequate sightlines from the driveway, add to plans.

*9/7/24 Applicant Response: Additional notes regarding tree removal will be added to Sheet C-7 to reflect this work.*

10/21/24 City Response: Include in C-7 in plan set.

*11/7/24 Applicant Response: The proposed limit of clearing along the driveway entrance to the facility off Maltby Street is included on Sheet SP-13. Sheet Note 8 also provides more clarification on limit of proposed clearing.*

11/14/24 City Response:

11) The access to the upper well field does not show any upgrades on the plans. The driveway currently is gravel with a reveal at the edge of sidewalk. Care must be taken to not break the sidewalk.

*9/7/24 Applicant Response: The upper wellfield access driveway is anticipated to remain with no substantial improvements, other than filling of potholes and restoration of any damage that may occur during construction. Additional notes regarding protection and repair of sidewalk will be added to Sheets C-1 and C-6.*

10/21/24 City Response: Updated C-1 and C-6 are not included.

*11/7/24 Applicant Response: The upper wellfield access driveway is anticipated to remain with no substantial improvements, other than filling of potholes and restoration of any damage that may occur during construction. Additional notes regarding protection and repair of sidewalk will be added to Sheets C-1 and C-6.*

11/14/24 City Response:

**CITY PLANNER (Robert Flanagan/Andrew Armstrong):**

1. Indicate application number, approval date, and nature of Site Plan/Special Permits associated with this project.

*9/7/24 Applicant Response: This information will be added to the Cover sheet for the project prior to bidding.*

10/21/24 City Response: Acknowledged.

2. Indicate application number, approval date, and nature of IWWA approval associated with this project.

   *9/7/24 Applicant Response: This information will be added to the Cover sheet for the project prior to bidding.*

   10/21/24 City Response: Comment addressed.

3. Show/label on Site Plan the location of all proposed building entrances and exits.

   *9/7/24 Applicant Response: This information is shown on Sheet C-10. A simpler overall Site Plan is in development and will be added to the drawing set.*

   10/21/24 City Response: There is no sheet C-10 in the revised plans submitted. Further, the legend on the cover sheet appears to be incorrect. The building entrances and exits were found on Sheet SP-05. Please revise the legend cover sheet to reflect the plan set provided.

   *11/7/24 Applicant Response: This is shown on Drawing Sheet SP-05. The Drawing Sheet Legend on the Cover has been updated to reflect all final sheets in the plan set provided.*

   11/14/24 City Response: Comment addressed.

4. Final As-Built of building required prior to C.O. being issued.

   *9/7/24 Applicant Response: Record drawings will be prepared for the project and are noted in Specification Section 017839. The requirement to submit building record drawings prior to the Certificate of Occupancy will be added to that Specification.*

   10/21/24 City Response: Acknowledged.

5. Indicate dimension of driveway opening, measured at street line.

   *9/7/24 Applicant Response: This information will be added to Sheet C-10.*

   10/21/24 City Response: This appears to be shown as 29’ on Sheet SP-05. Comment addressed.

6. What are the proposed limits of tree clearing for all proposed improvements? Particularly, show the dimension and final landscape condition for proposed compensation and storage area abutting single-family residential properties on the upper and lower wellfields. Provide a landscape sheet showing these conditions and setback dimensions to the property lines not just the floodway line.

   *9/7/24 Applicant Response: Additional drawings to clarify these conditions are in development and will be added to the drawing set.*

   10/21/24 City Response: Comment addressed.

7. The “site plans” for the upper and lower wellfields need to be shown as an actual site plan. The building and site features are not clear. These sheets primarily show underground raceway schedules, charts and other items that are not relevant and should be separate from the site plan. Provide a plan sheet for site plan that clearly shows residential property lines, particularly the properties from Collins Road and parcel boundaries, including the abutting parcel located at Assessor’s Map 53, Lot 147. Plans provided are drawn indicating mostly Wetlands features.

*9/7/24 Applicant Response: Additional drawings to clarify these conditions, including a simpler overall Site Plan, are in development and will be added to the drawing set.*

10/21/24 City Response: Comment addressed.

8. The abbreviated plan set shows many red revision clouds. Was this plan set intended to be submitted? Please make changes and remove notes and revision symbols.

   *9/7/24 Applicant Response: The latest drawings, revised to incorporate comments herein, will be submitted in October 2024.*

   10/21/24 City Response: Comment addressed.

9. The Zoning Table lists the proposed building height as 258.3 feet. Please revise.

   *9/7/24 Applicant Response: The reference to 258.3 feet in the Zoning Table on Sheet C-10 is an elevation, not the building height; this will be revised in the October 2024 submission.*

   10/21/24 City Response: Comment addressed.

10. There are 2 separate Zoning Tables with the same lot numbers and different requirements. Please clarify.

    *9/7/24 Applicant Response: The second table on Sheet C-10 refers to parking requirements; this will be revised in the October 2024 submission.*

    10/21/24 City Response: Comment addressed.

11. This property is located within an Aquifer Protection Area and requires a determination by the Aquifer Protection Agency. When this determination has been completed, please add the approval, date, and application number to the cover sheet.

    *9/7/24 Applicant Response: The Aquifer Protection Agency review is pending; this information will be added to the Cover sheet for the project prior to bidding.*

    10/21/24 City Response: Acknowledged.

12. The “site plans” for the upper and lower wellfields need to be shown as an actual site plan. The building and site features are not clear. These sheets primarily show underground raceway schedules, charts and other items that are not relevant and should be separate from the site plan.

    *9/7/24 Applicant Response: Additional drawings to clarify these conditions, including a simpler overall Site Plan, are in development and will be underground raceway schedules, charts and other items that are not relevant and should be separate from the site plan added to the drawing set.*

    10/21/24 City Response: Comment addressed.

13. What is the height of the retaining walls? Please include this on the plan and details.

    *9/7/24 Applicant Response: The wall is detailed on Sheet C-27; additional information will be provided for wall greater than 3 feet tall.*

    10/21/24 City Response: Comment addressed.

    *11/7/24 Applicant Response: Specification Section 323223 – Segmental Retaining Walls also requires the Contractor to submit stamped and sealed design calculations and drawings for the retaining wall. These will be submitted to the City of Bristol during construction.*

    11/14/24 City Response: What is the proposed height of the wall?

14. Will there be any impacts or protections to the nearby parking area for 815 Stafford Avenue?

    *9/7/24 Applicant Response: There are no anticipated impacts to the parking area for 815 Stafford Avenue.*

    10/21/24 City Response: Comment addressed.

15. Include a plan sheet showing E&S controls. (E&S control details are included in the current set).

    *9/7/24 Applicant Response: Locations of E&S controls are shown on Sheets C-6, C-7, and C-8.*

    10/21/24 City Response: There are no sheets C-6 - C8 in the revised plans submitted. There appears to be the locations of compost sock shown in some locations but not silt fencing. Please indicate the locations of all proposed E&S controls clearly on the plan. There does not appear to be an E&S control plan for the south end abutting properties near Farmington Avenue. Please clarify.

    *11/7/24 Applicant Response: The E&S controls are shown on SP-12 for the UWF area, on SP-13 for the Pond PS, and on SP-14 for the LWF area. E&S controls for the south end abutting properties near Farmington Avenue and Collins Road have been added to resubmitted Sheet SP-07.*

    11/14/24 City Response: Comment addressed.

**BUILDING/ZONING ENFORCEMENT (Richard Brown)**

1. No comments at this time.

**POLICE DEPARTMENT (Lt. Krajewski/Sgt. Ouellette)**

1. No issues with design, does not affect traffic of surrounding roads.

**FIRE MARSHAL (Kristopher Lambert):**

1. On page A-2 there is a double leaf door that leads from/into the "Future Treatment Area" that is part of a 2-hour rated wall assembly. What is the rating of these doors?

    *9/7/24 Applicant Response: This is door D-104C per Sheet A-3; this door has a 90-minute fire rating per the Door Schedule on Sheet A-9.*

    10/21/24 City Response: Comment addressed.

**WATER DEPARTMENT (Paul Keegan/Rob Longo)**

1. Bristol Water and Sewer requires all permits to be pulled by licensed plumbers. A copy of our policies and procedures are given to the plumber when the permit is pulled. All non-emergency work requires a min of 4 days' notice.

   *9/7/24 Applicant Response: This requirement will be added to Division 01 of the project Specifications.*

   10/21/24 City Response: OK

Water:

1. 12 X 8 tapping sleeve and valve requires payment prior to work being done

   *9/7/24 Applicant Response: This requirement will be added to Division 01 of the project Specifications and to the Civil Drawings.*

   10/21/24 City Response: OK

2. All hydrants require a secondary valve.

   *9/7/24 Applicant Response: The hydrant assembly includes a gate valve per Detail D on Sheet C-25.*

   10/21/24 City Response: OK

3. Call the office for a price on the 2" service.

   *9/7/24 Applicant Response: The relevant fees will be included in Division 01 of the project Specifications. Information provided by the City recently indicates an anticipated $4,725 connection fee.*

   10/21/24 City Response: OK

4. 2" service requires a curb stop.

   *9/7/24 Applicant Response: Additional details on the 2" water service connection will be added to Sheet C-18C.*

   10/21/24 City Response: OK

5. Bristol Water and Sewer insects every inch of pipe being installed.

   *9/7/24 Applicant Response: This requirement for full inspection will be added to Division 01 of the project Specifications and to the Civil Drawings.*

   10/21/24 City Response: OK

6. 8" DIP requires pressure test, flushing and Bacteria test.

   *9/7/24 Applicant Response: Pressure test and flushing are included in Sections 221113 and 330519 of the Specifications. Disinfection requirements are included in Section 331300 of the Specifications. City of Bristol requirements are also referenced in Section 331300.*

   10/21/24 City Response: OK

7. Each hydrant requires pressure test, flush and Bacteria sample.

*9/7/24 Applicant Response: Pressure test and flushing of hydrants are included in Sections 221113 and 331219 of the Specifications Disinfection requirements are included in Section 331300 of the Specifications. City of Bristol requirements are also referenced in Sections 331219 and 331300.*

10/21/24 City Response: OK

8. Inspection fees apply to private services.

*9/7/24 Applicant Response: Requirements and anticipated fees for full inspection will be added to Division 01 of the project Specifications and to the Civil Drawings.*

10/21/24 City Response: OK

9. Water and sewer must maintain 10' separation at all times

*9/7/24 Applicant Response: Understood; Maltby Street water and sewer drawings have been submitted to the Water and Sewer Department.*

10/21/24 City Response: OK

Sewer:

1. 8" sewer must extend, no forced main in the city right of way

*9/7/24 Applicant Response: he low-pressure sewer can remain on NBWD property until the edge of the property and then transition to gravity sewer in the street, but there are concerns with storm drain conflict and shallow coverage, so the exact location requires further discussion with the Water and Sewer Department.*

10/21/24 City Response: As discussed OK.

# Project Narrative 11/24

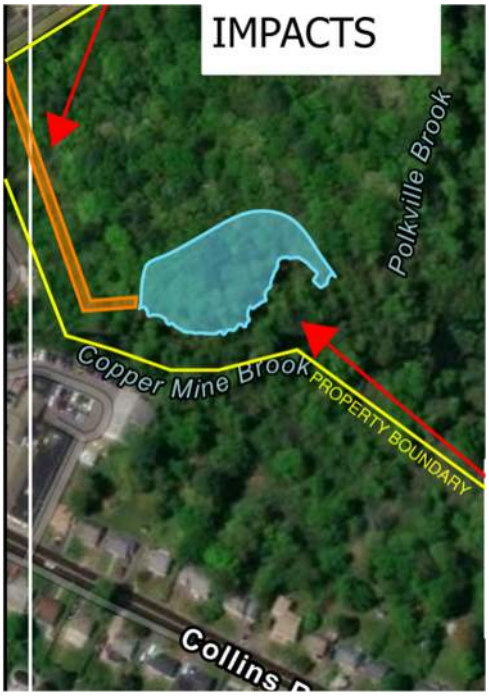
November 7, 2024

# Zoning Commission – Project Narrative Supplemental Information

This document presents revised supplemental information to the Project Narrative submitted with the June 27, 2024 application package for Site Plan and Special Permit Application #2504 and #2505 and Special Permit for Earth Removal Application #2506. Supplemental information was first provided with the October 10, 2024 submission and has since been further revised following discussions at the October 21, 2024 Zoning Commission Meeting and discussions with Bristol City Staff. The original June 27, 2024 Project Narrative is included for informational purposes only and the original Application Submittal Package should be referenced for any Attachment or Drawing Sheet reference made in that document.

## Earth Excavation Activities near Collins Road:

The Drawings have been revised to more clearly show offset distances between the earth excavation activities associated with the wetlands/compensatory flood storage creation area in the southern portion of the site and the adjacent residential properties on Collins Road. The proposed earth excavation activities will be approximately 86-feet from the closest residential property boundary. Article 15.2.5.B(1) of the Bristol Zoning Regulations requires a 100-foot buffer between earth excavations and adjacent residential lots. However, Article 15.2.5.B (3) allows the Commission to reduce the required buffer area if the existing vegetation or topography within the buffer area will effectively screen the earth removal. As seen on the Drawings and the aerial view, below, the buffer area consists of densely wooded area and the Copper Mine Brook. Additionally, the actual dwellings located on the properties adjacent to the earth excavation are approximately 330-feet from the excavation. Excavation in this area is necessary to construct the compensatory flood storage area and the selection of its location is based on the elevations of existing topography and the need to excavate at elevations matching those where fill was added to the site. Following excavation of this area to the required elevations, it will be restored as a wetland.



An access driveway has been included off Mix Street to access this wetlands/compensatory flood storage creation area. The access drive is shown on attached revised Drawing Sheets and features a curb cut; concrete apron; vehicle control gate; stabilized construction entrance to prevent tracking of dirt, dust, and debris from excavation activities; and silt fencing along the limits of clearing to prevent siltation of surrounding areas. A 10-foot vegetated buffer will be left between the proposed access drive and the property boundary. During construction, vehicles will use this access drive to excavate the wetlands/compensatory flood storage creation area. Post-construction, this access drive will only be used for periodic maintenance and surveillance of the new wetlands area and will not be frequently utilized by the New Britain Water Department for operations of the White Bridge Waterworks Facilities.

**We are seeking the Commission make a determination that although the proposed excavation and access drive are within the 100-ft buffer, the existing vegetation and topography provide adequate screening on the activity from adjacent properties.**

## Construction Traffic Control Narrative:

A construction vehicle routing figure was included with the June 2024 application. As indicated in the figure, the main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). Specification Section 011000 "Summary" of the Contract Documents has been updated to require the Contractor to follow this route, to the limits practicable, and to only utilize Mix Street for access to the wetland creation area located off Mix Street. Revised Section 011000 is included as an attachment.

The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The following table presents an estimated number of construction vehicles expected per major construction activity on the site. These estimated values include trucking materials on/off site; however, they do not include personal vehicles of the construction crew. It is assumed Contractor will utilize designated space on the site to provide parking for personal crew vehicles, which will stay on-site for the duration of the workday. The Contractor will have to identify offsite parking for personal crew vehicles that cannot be accommodated onsite.

| Construction Activity | Activity Duration | Estimated Construction Vehicles[1] |
|---|---|---|
| Supply Pond and Canal Restoration | 3 Months | 15-20 vehicles per day |
| UWF and LWF Well Drilling | 17 Months | 2-5 vehicles per day<br>(Large drill rigs will likely remain on site for duration of drilling) |
| Existing Pump Station Demolition & Pond Pump Station Construction | 18 Months | 25 vehicles per day |
| Maltby Street Utility Installation (Water and Sewer) | 3 Months | 5 vehicles per day<br>(10 vehicles per day during paving) |
| Construction of Wetlands and Compensatory Storage Areas | 3 Months | 5-10 vehicles per day |
| Construction of Wetlands and Compensatory Storage Areas (Mix Street) | 1 Month | 5-10 vehicles per day |

Notes:

1) Presented values are estimated and are subject to change depending on the Contractor.

2) Construction activities will not all occur concurrently, so the total number of vehicles entering and exiting the site per day will vary depending on the actual construction activities occurring.

Specification Section 011000 has been updated to also prohibit work in the intersection of Maltby Street and Stafford Avenue during school bus drop off/pick-up hours and to limit utility work in Maltby Street to the hours of 10am to 4 pm, to avoid peak traffic time. Finally, we are requiring the Contractor to coordinate with the Bristol Public Works Department to limit traffic and construction impacts caused by this project and other projects in the area, including the Jerome Avenue Bridge Project.

During the October 21, 2024 Zoning Commission Meeting, several discussion points were brought up about construction traffic impacts and mitigation. These included expanded discussions on school hours, events at nearby schools/churches, and the Little League Baseball and Softball World Series Tournament hosted annually on Mix Street. Specification Section 011000 has been further updated to alert the

Contractor of these traffic considerations and require coordination with the City of Bristol DPW and Police Departments to mitigate construction traffic impacts during these times. See attached updated Section 011000 for these changes.

The drawings have been updated to include new W11-10 Truck sign to warn vehicle traffic for trucks entering and exiting the facility. As shown on the drawings, signs will be installed 250-ft from the site access drives in both directions on Maltby Street. Table 23-C of the Manual on Uniform Traffic Control Devices (MUTCD 11$^{TH}$ Edition) was used to determine the distance for advance placement of warning signs. A speed limit of 35 miles per hour (mph) (30 mph base speed on Maltby Street with an additional 5 mph) was used to determine the distance on the table.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| W11-10 | 41-4837 | Truck Symbol | 30 | 30 | 1 | SL | XI | Yellow |  |

Standard roadway and curb/sidewalk repair details were received from the City and have been incorporated into the Drawings. The standard DPW excavation forms provided to Contractors were also received from the City and will be incorporated into the final Bid Set Specifications. These standard forms are included as an Attachment.

## Construction Sequencing Narrative:

A proposed construction sequencing figure for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project was included as an attachment to the June 2024 permit submission. Some specific sequencing constraints and estimated durations in relation to earth moving were also included in the narrative associated with the June 2024 submission. The list included in the narrative is copied below and annotated with revisions based on comments received from the City. It is important to note that these represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.

Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)

- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**

- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)

- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)

- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

## Aquifer Protection Best Management Practices:

As discussed during the September 16, 2024 Zoning Commission meeting, the CT DEEP Best Management Practices Document is incorporated into the Contract Documents as a requirement and an Attachment to Specification Section 015000 “Temporary Facilities and Controls.” The updated section is included as an Attachment. CT DEEP Best Management Practices will be followed to the extent practicable on the site.

On October 17, 2024, the design team and City of Bristol Staff met with representatives of CT DEEP’s Aquifer Protection Area Program to discuss the project and implementation of Best Management Practices, specifically, the use of containment areas for refueling construction vehicles on the project site. CT DEEP concurred that the requirement for offsite (i.e. outside the aquifer protection area) refueling of construction vehicles like bulldozers, groundwater well drill rigs, excavators, loaders, etc. was not efficient, may cause delays to project schedule, and in the case of the well drill rig, could adversely impact the construction of the groundwater production well. The applicant appreciated the opportunity to speak with CT DEEP on this topic and

## Estimated Quantities of Material Brought On/Off Site:

| Quantity Material Brought On-Site | Quantity Material Taken Off-Site |
|---|---|
| Pond Pump Station Fill = 143,745 cf | Compensatory Flood Storage Areas = 433,855 cf |
| Upper Wellfield Fill = 13,840 cf | Supply Pond/Canal Sediment = 162,000 cf |
| Lower Wellfield Fill = 19,077 cf | |
| **Total = 176,662 cf** | **Total = 595,855 cf** |

It is estimated that 176,662 cubic feet (cf) (or 6,543 cubic yards [cy]) of material will be brought onto the site to fill areas around each of the nine wellheads and around the new Pond Pump Station building. This fill is necessary to comply with CT DPH requirements for infrastructure above flood elevations and to provide a 50-foot radius around wellheads to the nearest high-water mark. Approximately 595,855 cf (or 22,068 cy) of material is expected to be removed from the site. Removal of this material is required to offset necessary fill within the floodplain and will be removed from the designated compensatory flood storage creation areas indicated on the Drawings. A portion of the material removed from the site will be sediment from the supply pond and canal (162,000 cf or 6,000 cy) that has accumulated over the past 20 years. This is a routine maintenance activity for the water utility and will restore the supply pond and canal to their constructed capacities. Depending on sampling and gradation testing, the Contractor may elect to reuse material scheduled for removal from the site as fill material in other areas.

## Changes Made to Drawings Since June 27, 2024 Submittal:

Several changes have been made to the Drawings since the June 2024 submittal package. Please see a summary of the major changes made, below. See the revised Drawings, Attached.

- Site Plans for the different locations of work (Upper Wellfield, Lower Wellfield, Pond Pumping Station, and wetlands/compensatory storage creation sites) have been simplified. Property boundaries, required setback lines, and site features have been clarified.
    - Some sheets were combined and many were renamed with a "Site Plan (SP)" designation. This was done to simplify review of site plan drawings, the site plan drawings will be included as an attachment to Final Bid Set documents along with these Zoning applications. The following provides a list of Simplified Site Plan Sheets and their corresponding Civil Sheet in parentheses from the original June 2024 submittal:
        - Sheet C-1 has been renamed P-ERM to indicate it is the note sheet for the Permitting Set
        - Sheets C-2, C-3, C-4, and C-5 remained the same as they are existing condition sheets
        - Sheet C-23 covers routine maintenance work for sediment removal from the supply pond and canal
        - Sheets C-24 through C-29 remained the same as they are detail sheets
        - Sheet SP-01 (C-14) – Overview of UWF North
        - Sheet SP-02 (C-14A) – Overview of UWF South
        - Sheet SP-03 (C-13) – Overview of LWF
        - Sheet SP-04 (C-9) – Site Plan UWF
        - Sheet SP-05 (C-10 & C-12) – Site Plan Pond Pumping Station
        - Sheet SP-06 (C-11) – Site Plan LWF
        - Sheet SP-07 (New Sheet) – Mix Street Access Road
        - SP-08 (C-18A) – Maltby Street Utilities I
        - SP-09 (C-18B) – Maltby Street Utilities II
        - SP-10 (C-18C) – Maltby Street Utilities III
        - SP-11 (C-19) – Stafford Avenue and Cross Country Utilities
        - SP-12 (C-6) – E&S Controls UWF
        - SP-13 (C-7) – E&S Controls Pond Pumping Station
        - SP-14 (C-8) – E&S Controls LWF
        - SP-15 (New Sheet) – Bristol Standard Details & Mix Street Road Repair Details
- A class A-2 survey was performed for the southern portion of Lot 53-145 along Mix Street and along the property boundary with the lots on Collins Street. Enhanced mapping of these areas are included in the Drawings. All of the Class A-2 survey documents, stamped and sealed by the licensed surveyor are included as an attachment.
- Offsets from earth excavation locations to the nearest property boundary were more clearly depicted.
- As agreed with the Bristol Water and Sewer Department in the October 8, 2024 call, the 8-inch gravity sewer was extended west on Maltby Street to the property boundary between Lot 53-145-2 (Bristol Baseball Field) and Lot 53-145. The slope of the gravity sewer line in Maltby Street was adjusted from 0.01 to 0.004 to provide a minimum 3-foot coverage to pipe along the entire alignment. The alignment of the 1.25-inch force main from the Pond Pump Station was moved

into the New Britain owned property of Lot 53-145 until its lateral connection within a new manhole in Maltby Street.

- Extents of clearing and grubbing were better designated on the Drawings.
- The City of Bristol standard road repair and sidewalk details have been received and incorporated into Drawing Detail Sheets.
- Cover Sheet information has been updated to indicate the application numbers and approvals of the project.
- The Zoning Table has been simplified and values corrected.

## Comment Response Log Between Bristol City Staff and CDM Smith

There have been several rounds of comments and responses between Bristol City Staff and CDM Smith. The following presents a timeline of comments received from the Bristol City Staff and corresponding responses provided by CDM Smith:

- Permit Application forms Submitted – June 27, 2024
- Zoning Commission Meeting – July 8, 2024
- Initial Comments from City Staff provided to CDM Smith – July 31, 2024
- CDM Smith Responses to Initial Comments provided to City – September 7, 2024
- Zoning Commission Meeting – September 16, 2024
- Supplemental Information provided to City Staff – October 10, 2024
- Zoning Commission Meeting – October 21, 2024
- Additional Comments from City Staff provided to CDM Smith – October 28, 2024
- Responses to Additional Comments and Supplemental Information provided to City Staff – November 7, 2024

A comment response log tracking all of the comments and responses between the City of Bristol Staff and CDM Smith is included as an attachment.

# Zoning Commission – Application for Special Permit

**NOTE: THIS DOCUMENT WAS SUBMITTED WITH THE JUNE 27, 2024 APPLICATION PACKAGE AND CONTENTS, INCLUDING ATTACHMENT REFERENCES AND DRAWING SHEET NUMBERS, HAVE NOT BEEN MODIFIED FOR THIS NOVEMBER 7, 2024 SUBMITTAL. THIS DOCUMENT IS INCLUDED IN THE NOVEMBER 7, 2024 SUPPLEMENTAL INFORMATION SUBMITTAL FOR INFORMATIONAL PURPOSES ONLY. SEE ORIGINAL APPLICATION SUBMITTAL FOR ANY ATTACHMENTS REFERENCED IN THIS DOCUMENT.**

## Project Narrative:

The New Britain Water Department (NBWD) has owned and operated groundwater wells as a raw water source at the White Bridge Waterworks Facilities on Maltby Street in Bristol for over one hundred years. The facilities are located in an R-40 designated residential zone across several parcels including 52-11, 52-15, 52-16B16A, 52-17, 53-145, 53-147, 53-149, 53-150, and 53-151. Work is specifically being performed on lot 52-16B16A, 52-17, 53-145, 53-147, and 53-150. Project location figures are included as **Attachment 1** to this application. The Lower Wellfield wells (located south of Maltby Street) were originally constructed in 1921 and have been operated since 1923. These wells have undergone upgrades in the 1940s and 1950s, with the most recent upgrades occurring the 1980s. A pump station at the Lower Wellfield was constructed as part of the 1940s upgrades. The Upper Wellfield wells (located north of Maltby Street) were originally installed in 1940. These were replaced with new wells in 1955 and again in the 1980s. A pump station at the Upper Wellfield was also constructed in the floodway in 1955. In addition to the wells, NBWD has also operated the Supply Pond surface water source at the White Bridge Waterworks Facilities since the 1950s. The existing 1923 pump station, already located on the site, was converted to a surface water pump station in 1950. This building and associated pumping equipment have not received major upgrades since.

Much of the mechanical equipment at the wellfields and existing Pond Pumping Station has reached the end of its useful life or, due to its age, is very difficult or not possible to find the necessary replacement parts for sustained operations. Regulatory requirements and industry standards have also changed over the past 100-years. To redevelop the Upper and Lower Wellfields with new wells that can be used as a potable drinking water source, the Connecticut Department of Public Health (DPH) requires new wells to be located 50-feet from any water body or wetlands boundary. In addition, DPH requires new wells and water infrastructure to be raised to an elevation 2-feet above the 100-year floodplain elevation. As the majority of the NBWD owned property is within the 100-year floodplain with some areas up to 6-feet below the flood elevation, the existing wells and three pump stations cannot be redrilled/rehabilitated in their current locations. This project will rehabilitate the White Bridge Waterworks Facility to bring it up to modern standards and regulations and create a reliable potable drinking water source for the New Britain Water Department and surrounding communities.

The project includes the abandonment of all currently existing wells in accordance with DPH requirements, demolition of existing structures and the three existing pump stations, construction of a single new pump station, filling and grading to achieve DPH flood resiliency requirements, wetlands creation/replication, and creation of compensatory flood storage. A total of three new wells will be drilled at the Upper Wellfield and six new wells drilled at the Lower Wellfield. Based on water quality, the Lower Wellfield wells may but suitable for use as a public potable water supply with minimal

chemical treatment, subject to the ground water under the direct influence of surface water (GWUDI) testing. Both the Upper and Lower Wellfield wells will be equipped with new submersible style pumps within the wells, making it unnecessary to have pump stations at each site. An Aquifer Protection Area Program Registration Form for Regulated Activities will be submitted following this application submittal. A single pump station building will be constructed to house pumping equipment associated with the Supply Pond surface water source and will also include designated space for treatment equipment in the event the Lower Wellfield is used for potable water. This new building will be constructed with a finished floor elevation 2-feet above the 100-year flood elevation and outside the floodway. The project will also install associated yard piping around the wells, pump station building, and connections to the existing New Britain water infrastructure on-site. New water and sewer utilities from Bristol will be constructed in Maltby Street and provide service for the new pump station. Design Drawings for the project are included in **Attachment 2** and a 3D Rendering of the new Pond Pumping Station is included in **Attachment 3**.

As filling of the site is required for the new wells and pump station to meet DPH requirements, compensatory flood storage areas will be constructed so as to not increase the current flood elevation levels, as given by FEMA guidelines. The new structure and wells will add approximately 6,543 cubic yards of fill within the floodplain. Approximately 15,327 cubic yards of material will be removed from the floodplain for the creation of compensatory storage. These compensatory storage areas will also create additional wetland areas. Fill and earth removal on the site is associated with construction activities only and the final use of the site will not include earth removal activities. A Special Permit for Earth Removal in Excess of 400 Cubic Yards is also being filed for approval. The project will impact approximately 24,952 square feet of wetlands. However, wetlands replication will be done at a ratio of three to one, with a total of 75,946 square feet of wetlands replication proposed. In total, the project is expected to disturb approximately 223,000 square feet of land. This includes areas for wetland replication; compensatory storage creation; and disturbances for installing the new wells, associated yard piping, abandoning and decommissioning existing wells, Pond Pump Station building construction, and demolition of the three existing buildings. A Permit for Flood Plain Development (Application #23-458F-305), Form IW-1 (Application for a Wetlands Permit) (Application #2020), and Form IW-2 (Application for a Wetlands Boundary Change) (Application #2019) were approved by the Bristol Inland Wetlands and Watercourses Agency of the Conservation Commission on June 6, 2024 for this project. A Site Plan Permit for this project is also being filed for approval.

An Erosion and Sediment Control Plan has been developed to control accelerated erosion and sedimentation from stormwater runoff on the site during construction based on the best available technologies. The Control Plan narrative is included with this application in accordance with Section 15.1.5. The “Connecticut Guidelines for Soil Erosion and Sedimentation Control (2002)” document was utilized in preparation of the Plan. A Stormwater Management Report for post-construction conditions has also been developed for this project based on the 2004 *Connecticut Stormwater Quality Manual (CSQM)* as required in Section 15.5.3. A copy of the Stormwater Management Report is included as **Attachment 6** to this application.

The new Pond Pump Station and Lower Wellfield area will be enclosed in a 6.5-foot tall chain link fence for security. A double-leaf swing gate will provide access to the site on the driveway. As shown on the Drawings, the fence and access gate are located outside of the 50-foot required front yardage for R-40 residential zones. A double-leaf vehicular control gate will be located at the foot of the driveway to

control vehicular access onto the public utility site. This gate will be less than the 4.5-foot height restriction for fences within front yards and will be more than 50 percent open. A detail for this vehicular control gate is included in the drawings. An existing vehicular access gate for the Upper Wellfield access road (located on the north side of Maltby Street) will remain.

Public utility buildings are not listed as a Use Group in the table included in Section 13.2 of the Zoning Regulations; however, two parking spaces will be provided at the Pond Pumping Station. Each parking space is designed to be 10-feet wide and 18-feet deep, meeting the requirements of perpendicular parking spaces required by Section 13.7.2. As a utility service building, this facility is not open to the public and it will not be continuously manned by NBWD staff. It is not expected that more than two NBWD staff vehicles will be present on-site during operations. The post-construction vehicle traffic from NBWD staff is not expected to increase from their current operations. In the event potable water treatment is implemented for the Lower Wellfield, it is expected that the facility will received 2-3 trucks per month for deliveries.

A construction vehicle routing figure is included as **Attachment 5** to this application. The main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). It is expected that 15-20 construction vehicles (including pickup trucks, trailers, dump trucks, etc.) could be accessing the site during construction. The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The construction vehicles generated by this project will represent less than 1% of traffic in the area. For access to the compensatory storage area located in the south of the site (closest to Harbor Freight), construction vehicle access will be off Mix Street via Stafford Avenue. Additionally, work to install new water and sewer utilities within Maltby Street will require temporary lane closures. Typical traffic management details have been developed and are included in the attached design drawings.

The accompanying plans to this application are based on a Class A-2 survey map prepared by a registered land surveyor licensed to conduct business in the State of Connecticut with the exception of Sheets C-13, Sheet C-14, and Sheet C-14A. These sheets depict the general locations of wetland replication and compensatory storage areas and are currently based on a Class D survey due to the scale and size of the parcels and location of work. We request a Class A-2 survey of these areas to be included as a condition of approval for this application and the final Class A-2 survey will be performed and submitted to the Commission for final issuance of the Special Permit prior to construction. Additionally, the wetlands replication and compensatory storage area in the southernmost part of the site, shown on Sheet C-13, cannot comply with the 100-foot buffer zone to a residential property (as required by Section 15.2.5.B). The closest abutting residential property line is 70-feet from proposed excavation activities for the wetlands replication and compensatory storage area. The location of this earth removal work to create compensatory storage is dictated by the contours of existing grade and the removal of certain volumes at each elevation to offset fill brought to that same elevation. It is important to note that this area of the site is heavily vegetated along with the abutting residential properties. We also note that the closest residential building on these lots are 250-feet away. We believe the dense vegetation, distance to residential dwelling, and nature of this construction (creation of wetlands area without a permanent structure) comply with the intent of requirements in Section 15.2.5.B for screening.

# Supplemental Narrative – Earth Removal 11/24

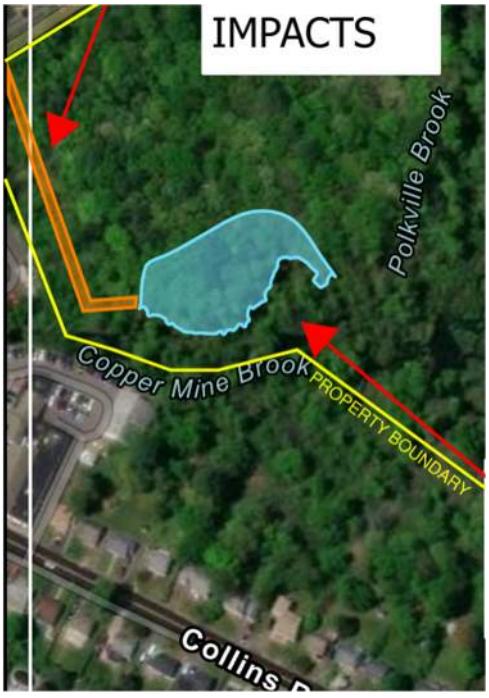
November 7, 2024

# Zoning Commission – Project Narrative Supplemental Information

This document presents revised supplemental information to the Project Narrative submitted with the June 27, 2024 application package for Site Plan and Special Permit Application #2504 and #2505 and Special Permit for Earth Removal Application #2506. Supplemental information was first provided with the October 10, 2024 submission and has since been further revised following discussions at the October 21, 2024 Zoning Commission Meeting and discussions with Bristol City Staff. The original June 27, 2024 Project Narrative is included for informational purposes only and the original Application Submittal Package should be referenced for any Attachment or Drawing Sheet reference made in that document.

## Earth Excavation Activities near Collins Road:

The Drawings have been revised to more clearly show offset distances between the earth excavation activities associated with the wetlands/compensatory flood storage creation area in the southern portion of the site and the adjacent residential properties on Collins Road. The proposed earth excavation activities will be approximately 86-feet from the closest residential property boundary. Article 15.2.5.B(1) of the Bristol Zoning Regulations requires a 100-foot buffer between earth excavations and adjacent residential lots. However, Article 15.2.5.B (3) allows the Commission to reduce the required buffer area if the existing vegetation or topography within the buffer area will effectively screen the earth removal. As seen on the Drawings and the aerial view, below, the buffer area consists of densely wooded area and the Copper Mine Brook. Additionally, the actual dwellings located on the properties adjacent to the earth excavation are approximately 330-feet from the excavation. Excavation in this area is necessary to construct the compensatory flood storage area and the selection of its location is based on the elevations of existing topography and the need to excavate at elevations matching those where fill was added to the site. Following excavation of this area to the required elevations, it will be restored as a wetland.



An access driveway has been included off Mix Street to access this wetlands/compensatory flood storage creation area. The access drive is shown on attached revised Drawing Sheets and features a curb cut; concrete apron; vehicle control gate; stabilized construction entrance to prevent tracking of dirt, dust, and debris from excavation activities; and silt fencing along the limits of clearing to prevent siltation of surrounding areas. A 10-foot vegetated buffer will be left between the proposed access drive and the property boundary. During construction, vehicles will use this access drive to excavate the wetlands/compensatory flood storage creation area. Post-construction, this access drive will only be used for periodic maintenance and surveillance of the new wetlands area and will not be frequently utilized by the New Britain Water Department for operations of the White Bridge Waterworks Facilities.

**We are seeking the Commission make a determination that although the proposed excavation and access drive are within the 100-ft buffer, the existing vegetation and topography provide adequate screening on the activity from adjacent properties.**

## Construction Traffic Control Narrative:

A construction vehicle routing figure was included with the June 2024 application. As indicated in the figure, the main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). Specification Section 011000 "Summary" of the Contract Documents has been updated to require the Contractor to follow this route, to the limits practicable, and to only utilize Mix Street for access to the wetland creation area located off Mix Street. Revised Section 011000 is included as an attachment.

The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The following table presents an estimated number of construction vehicles expected per major construction activity on the site. These estimated values include trucking materials on/off site; however, they do not include personal vehicles of the construction crew. It is assumed Contractor will utilize designated space on the site to provide parking for personal crew vehicles, which will stay on-site for the duration of the workday. The Contractor will have to identify offsite parking for personal crew vehicles that cannot be accommodated onsite.

| Construction Activity | Activity Duration | Estimated Construction Vehicles[1] |
|---|---|---|
| Supply Pond and Canal Restoration | 3 Months | 15-20 vehicles per day |
| UWF and LWF Well Drilling | 17 Months | 2-5 vehicles per day<br>(Large drill rigs will likely remain on site for duration of drilling) |
| Existing Pump Station Demolition & Pond Pump Station Construction | 18 Months | 25 vehicles per day |
| Maltby Street Utility Installation (Water and Sewer) | 3 Months | 5 vehicles per day<br>(10 vehicles per day during paving) |
| Construction of Wetlands and Compensatory Storage Areas | 3 Months | 5-10 vehicles per day |
| Construction of Wetlands and Compensatory Storage Areas (Mix Street) | 1 Month | 5-10 vehicles per day |

Notes:

1) Presented values are estimated and are subject to change depending on the Contractor.

2) Construction activities will not all occur concurrently, so the total number of vehicles entering and exiting the site per day will vary depending on the actual construction activities occurring.

Specification Section 011000 has been updated to also prohibit work in the intersection of Maltby Street and Stafford Avenue during school bus drop off/pick-up hours and to limit utility work in Maltby Street to the hours of 10am to 4 pm, to avoid peak traffic time. Finally, we are requiring the Contractor to coordinate with the Bristol Public Works Department to limit traffic and construction impacts caused by this project and other projects in the area, including the Jerome Avenue Bridge Project.

During the October 21, 2024 Zoning Commission Meeting, several discussion points were brought up about construction traffic impacts and mitigation. These included expanded discussions on school hours, events at nearby schools/churches, and the Little League Baseball and Softball World Series Tournament hosted annually on Mix Street. Specification Section 011000 has been further updated to alert the

Contractor of these traffic considerations and require coordination with the City of Bristol DPW and Police Departments to mitigate construction traffic impacts during these times. See attached updated Section 011000 for these changes.

The drawings have been updated to include new W11-10 Truck sign to warn vehicle traffic for trucks entering and exiting the facility. As shown on the drawings, signs will be installed 250-ft from the site access drives in both directions on Maltby Street. Table 23-C of the Manual on Uniform Traffic Control Devices (MUTCD 11$^{TH}$ Edition) was used to determine the distance for advance placement of warning signs. A speed limit of 35 miles per hour (mph) (30 mph base speed on Maltby Street with an additional 5 mph) was used to determine the distance on the table.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| W11-10 | 41-4837 | Truck Symbol | 30 | 30 | 1 | SL | XI | Yellow |  |

Standard roadway and curb/sidewalk repair details were received from the City and have been incorporated into the Drawings. The standard DPW excavation forms provided to Contractors were also received from the City and will be incorporated into the final Bid Set Specifications. These standard forms are included as an Attachment.

## Construction Sequencing Narrative:

A proposed construction sequencing figure for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project was included as an attachment to the June 2024 permit submission. Some specific sequencing constraints and estimated durations in relation to earth moving were also included in the narrative associated with the June 2024 submission. The list included in the narrative is copied below and annotated with revisions based on comments received from the City. It is important to note that these represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.

Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)

- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**

- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)

- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)

- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

## Aquifer Protection Best Management Practices:

As discussed during the September 16, 2024 Zoning Commission meeting, the CT DEEP Best Management Practices Document is incorporated into the Contract Documents as a requirement and an Attachment to Specification Section 015000 “Temporary Facilities and Controls.” The updated section is included as an Attachment. CT DEEP Best Management Practices will be followed to the extent practicable on the site.

On October 17, 2024, the design team and City of Bristol Staff met with representatives of CT DEEP’s Aquifer Protection Area Program to discuss the project and implementation of Best Management Practices, specifically, the use of containment areas for refueling construction vehicles on the project site. CT DEEP concurred that the requirement for offsite (i.e. outside the aquifer protection area) refueling of construction vehicles like bulldozers, groundwater well drill rigs, excavators, loaders, etc. was not efficient, may cause delays to project schedule, and in the case of the well drill rig, could adversely impact the construction of the groundwater production well. The applicant appreciated the opportunity to speak with CT DEEP on this topic and

## Estimated Quantities of Material Brought On/Off Site:

| Quantity Material Brought On-Site | Quantity Material Taken Off-Site |
|---|---|
| Pond Pump Station Fill = 143,745 cf | Compensatory Flood Storage Areas = 433,855 cf |
| Upper Wellfield Fill = 13,840 cf | Supply Pond/Canal Sediment = 162,000 cf |
| Lower Wellfield Fill = 19,077 cf | |
| **Total = 176,662 cf** | **Total = 595,855 cf** |

It is estimated that 176,662 cubic feet (cf) (or 6,543 cubic yards [cy]) of material will be brought onto the site to fill areas around each of the nine wellheads and around the new Pond Pump Station building. This fill is necessary to comply with CT DPH requirements for infrastructure above flood elevations and to provide a 50-foot radius around wellheads to the nearest high-water mark. Approximately 595,855 cf (or 22,068 cy) of material is expected to be removed from the site. Removal of this material is required to offset necessary fill within the floodplain and will be removed from the designated compensatory flood storage creation areas indicated on the Drawings. A portion of the material removed from the site will be sediment from the supply pond and canal (162,000 cf or 6,000 cy) that has accumulated over the past 20 years. This is a routine maintenance activity for the water utility and will restore the supply pond and canal to their constructed capacities. Depending on sampling and gradation testing, the Contractor may elect to reuse material scheduled for removal from the site as fill material in other areas.

## Changes Made to Drawings Since June 27, 2024 Submittal:

Several changes have been made to the Drawings since the June 2024 submittal package. Please see a summary of the major changes made, below. See the revised Drawings, Attached.

- Site Plans for the different locations of work (Upper Wellfield, Lower Wellfield, Pond Pumping Station, and wetlands/compensatory storage creation sites) have been simplified. Property boundaries, required setback lines, and site features have been clarified.
    - Some sheets were combined and many were renamed with a "Site Plan (SP)" designation. This was done to simplify review of site plan drawings, the site plan drawings will be included as an attachment to Final Bid Set documents along with these Zoning applications. The following provides a list of Simplified Site Plan Sheets and their corresponding Civil Sheet in parentheses from the original June 2024 submittal:
        - Sheet C-1 has been renamed P-ERM to indicate it is the note sheet for the Permitting Set
        - Sheets C-2, C-3, C-4, and C-5 remained the same as they are existing condition sheets
        - Sheet C-23 covers routine maintenance work for sediment removal from the supply pond and canal
        - Sheets C-24 through C-29 remained the same as they are detail sheets
        - Sheet SP-01 (C-14) – Overview of UWF North
        - Sheet SP-02 (C-14A) – Overview of UWF South
        - Sheet SP-03 (C-13) – Overview of LWF
        - Sheet SP-04 (C-9) – Site Plan UWF
        - Sheet SP-05 (C-10 & C-12) – Site Plan Pond Pumping Station
        - Sheet SP-06 (C-11) – Site Plan LWF
        - Sheet SP-07 (New Sheet) – Mix Street Access Road
        - SP-08 (C-18A) – Maltby Street Utilities I
        - SP-09 (C-18B) – Maltby Street Utilities II
        - SP-10 (C-18C) – Maltby Street Utilities III
        - SP-11 (C-19) – Stafford Avenue and Cross Country Utilities
        - SP-12 (C-6) – E&S Controls UWF
        - SP-13 (C-7) – E&S Controls Pond Pumping Station
        - SP-14 (C-8) – E&S Controls LWF
        - SP-15 (New Sheet) – Bristol Standard Details & Mix Street Road Repair Details
- A class A-2 survey was performed for the southern portion of Lot 53-145 along Mix Street and along the property boundary with the lots on Collins Street. Enhanced mapping of these areas are included in the Drawings. All of the Class A-2 survey documents, stamped and sealed by the licensed surveyor are included as an attachment.
- Offsets from earth excavation locations to the nearest property boundary were more clearly depicted.
- As agreed with the Bristol Water and Sewer Department in the October 8, 2024 call, the 8-inch gravity sewer was extended west on Maltby Street to the property boundary between Lot 53-145-2 (Bristol Baseball Field) and Lot 53-145. The slope of the gravity sewer line in Maltby Street was adjusted from 0.01 to 0.004 to provide a minimum 3-foot coverage to pipe along the entire alignment. The alignment of the 1.25-inch force main from the Pond Pump Station was moved

into the New Britain owned property of Lot 53-145 until its lateral connection within a new manhole in Maltby Street.

- Extents of clearing and grubbing were better designated on the Drawings.
- The City of Bristol standard road repair and sidewalk details have been received and incorporated into Drawing Detail Sheets.
- Cover Sheet information has been updated to indicate the application numbers and approvals of the project.
- The Zoning Table has been simplified and values corrected.

## Comment Response Log Between Bristol City Staff and CDM Smith

There have been several rounds of comments and responses between Bristol City Staff and CDM Smith. The following presents a timeline of comments received from the Bristol City Staff and corresponding responses provided by CDM Smith:

- Permit Application forms Submitted – June 27, 2024
- Zoning Commission Meeting – July 8, 2024
- Initial Comments from City Staff provided to CDM Smith – July 31, 2024
- CDM Smith Responses to Initial Comments provided to City – September 7, 2024
- Zoning Commission Meeting – September 16, 2024
- Supplemental Information provided to City Staff – October 10, 2024
- Zoning Commission Meeting – October 21, 2024
- Additional Comments from City Staff provided to CDM Smith – October 28, 2024
- Responses to Additional Comments and Supplemental Information provided to City Staff – November 7, 2024

A comment response log tracking all of the comments and responses between the City of Bristol Staff and CDM Smith is included as an attachment.

# Erosion Control Narrative

# Zoning Commission – Application for Special Permit

## Erosion and Sediment Control Plan- Project Narrative:

This Erosion and Sediment Control Plan is provided in accordance with Section 15.1.5 of the Bristol Zoning Regulations. **This plan has been revised since the June 2024 submission to reflect comments and responses between Bristol City Staff and CDM Smith.** The erosion and sedimentation control measures at the White Bridge facility focus on the protection of wetlands and waterways during and following construction since the work includes land disturbances, excavation dewatering, supply pond and canal sediment removal activities, and other associated construction activities. Several methods are included on the Drawings to slow the flow of runoff and protect disturbed land during construction activities. Please refer to the project plans for typical details of measures to protect wetlands and waterways during and after construction. The following summary presents typical mitigation measures that will be implemented to avoid and minimize wetland impacts during construction.

**Construction Period**

- During construction, the limit of land disturbances will be kept to a minimum, where possible, and the construction will be sequenced so the entire site will not be disturbed at the same time.
- Clearing and grubbing will be limited to only the areas necessary for work to be performed, specifically in areas at the Upper and Lower Wellfields (Sheet SP-04 and SP-06) where wells and piping will be installed, at the Maltby Street 16” pipe crossing (Sheet SP-10), at areas where wetlands and compensatory storage will be created (Sheets SP-01, SP-02, and SP-03), and areas around the Supply Pond for access during sediment removal activities (Sheet C-23).
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed at the down gradient limits of work and construction access roadways prior to the commencement of work to prevent the transport of sediment to the downgradient wetlands and waterways during construction (see Sheets SP-12 thru SP-14). Specifically, at the Upper Wellfield this includes compost logs/straw wattles along the facility driveway from Maltby Street to the existing Pumping Station and down each of the well field laterals. At the Lower Wellfield, this includes along the wetlands to the north and west of proposed work, along the Coppermine Brook to the east, around the Supply Pond, and along both sides of the Canal to the Polkville Avenue Brook. These barriers will be inspected at least once per week and within 24 hours of rainfall events ½-inch or greater and repaired as needed. These barriers will remain in place until all disturbed soils are stabilized. A stockpile of compost logs/straw wattles and silt fence will be maintained on site for routine maintenance and emergency repairs. Barriers will be replaced as necessary due to sediment build-up and degradation.
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed surrounding temporary stockpile areas.
- For all slopes 4:1 or steeper, an erosion control blanket will be required, including at the Upper and Lower Wellfield wells (see Sheets SP-04 and SP-06). Temporary erosion control blankets will be inspected at least once per week and within 24 hours of rainfall events.

- A turbidity curtain will be installed to prevent sedimentation and turbidity disturbances in the Coppermine Brook during canal and supply pond sediment removal activities (see Sheet C-23 and Detail Sheet C-24). Turbidity curtains will be inspected daily during Supply Pond and canal sediment removal activities. The turbidity curtain will not be removed before sediment removal activities have ended and clarity of water has returned.
- Catch basin filters will be installed on catch basins near all excavation work on Maltby Street, Stafford Avenue, and Mix Street (See Sheets SP-08 thru SP-10and Detail Sheet C-24).
- In the event that excavation dewatering is necessary, water will be pumped and discharged to one of the temporary sedimentation basins in designated areas of the site (see Sheets SP-12 thru SP-14 and Detail Sheet C-24). Temporary sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. Temporary portable sediment tanks may also be used to handle significant amounts of excavation dewatering. All water to be discharged from dewatering activities will be filtered or otherwise treated prior to discharge to prevent siltation to adjacent areas. Best management practices will be used by the Contractor in order to prevent siltation to adjacent areas during dewatering activities.
- A temporary sediment dewatering and stockpiling area has been designated within the Supply Pond to dewater removed sediments during restoration activities (see Sheet C-23 and Detail Sheet C-24). Stockpiled materials and containment area will be inspected daily during dewatering activities, weekly during non-dewatering activities, and within 24 hours of rainfall events of ½-inch or greater.
- A stabilized construction entrance is also being required for the site to prevent tire tracked soils to onsite and offsite locations (see Sheet C-23 and Detail Sheet C-24). The stabilized construction entrance will be inspected periodically and additional top dressing or length will be added, as necessary, to continue capturing sediment tracked on vehicles.
- The silt fence and/or compost log/straw wattle barrier will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- The sedimentation barriers will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- Periodic inspections will be made by the applicant to ensure compliance with the permit conditions.

*Spill Control Measures*

- Spill containment equipment (e.g. oil absorbent pads, oil absorbent materials, containment booms, shovels, etc.) will be stored in the equipment storage and refueling area in an easily accessible manner for use in the clean-up of accidental releases of fuel or other hazardous materials. Should there be an accidental release the proper authorities will be notified in accordance with all applicable federal, state, and local laws; and

- To minimize the possibility of leakage of hydraulic fluid, all hydraulic lines on all construction equipment and vehicles will be inspected at the end of each workday. If any excessive wear or leakage is observed, the line will be repaired prior to further use. In addition, a supply of oil absorbent materials (i.e. pads, "speedy dry," and/or booms) will be maintained with the equipment at the work area for immediate deployment in the event of an accidental release of fuel, hydraulic fluid, oil, etc.

*Schedule for Grading and Construction Activities:*

A proposed construction sequencing for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project is included as an attachment to this application. Tasks listed are generally to be performed within each proposed stage, and are not necessarily presented sequentially. As required by Project Specifications, the Contractor is required to submit a detailed Final Construction Schedule for approval by the Engineer. Further, as required by the Specifications, the Contractor is required to submit a detailed Construction Sequencing Plan for review and approval by the Engineer. Both the Construction Schedule and Construction Sequencing Plan submitted by the Contractor will be reviewed for compliance with time of year restrictions imposed by the Natural Diversity Database (NDDB) (no bank disturbance work in/adjacent to wetlands November 1 through March 15) and for the expected Great Blue Heron nesting period (March through May).

Some specific sequencing constraints and estimated durations are listed below. <u>These represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.</u> Some items listed in each "Stage" can/will overlap with items listed in previous stages.

<u>Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)</u>

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at**

**applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)
- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**
- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)
- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)
- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

Construction Methods:
Trench excavations will be used for pipe, valve, and appurtenance installation. Suitable material removed from trenches may be placed back into the excavation and compacted or temporarily stockpiled on site, while material deemed unsuitable for reuse will be removed from the site. Open excavations will be used

to install the foundation and footings for the Pond Pumping Station and the vaults located at each well. Material removed from these excavations will be taken off-site or temporarily stockpiled on the site with proper best management erosion and sedimentation control measures being implemented around the stockpile to prevent sedimentation from stockpiled material. This includes placement of straw wattles/compost socks and a trenched silt fence around the stockpile area in addition to the sedimentation controls along the limits of work.

Alternative construction methods for the yard piping may include trenchless installation of pipe to limit area of disturbed land. Pipe could be installed by horizontal directional drilling, pipe ramming, pipe bursting of existing pipelines, tunneling, or horizontal auger boring. All of these methods would still require excavation for access to the existing pipe or as insertion and receiving pits. None of these methods were selected due to the amount and complexity of existing utilities present at the site, lack of record drawings for most of these utilities, and complexity of new piping connections to be installed.

A temporary stabilized construction entrance will be installed during sediment removal and restoration of the supply pond and canal. This construction entrance will run along the berm between the canal and supply pond to the temporary stabilized pond access point. Sediment removed from the supply pond and canal will be temporarily stored within the supply pond to dewater before being removed from the site.

Backfilling of trenches and excavations will be completed as soon as practicable. Pipe bedding will be placed up to 12-inches above the crown of the pipe and suitable backfill will be placed in 6-inch lifts and compacted by hand or pneumatic ramming with tools weighing at least 20 pounds to finished grade. Disturbed areas will be loamed and seeded to provide vegetated soil cover against sheet runoff and wind erosion. An erosion control blanket will be required for slopped areas until vegetated cover is established.

Typical construction equipment, including heavy machinery, is expected to be used to complete this work. Machinery may include bulldozers, loaders, excavators, backhoe loaders, triaxle dump trucks, and drill rig trucks. Equipment, machinery, and materials will be stored or stockpiled in the designated areas shown on the sequencing drawings.

**Post-Construction Period**

The following summary of mitigation measures will be implemented to restore any areas affected by short-term impacts that occur in or adjacent to wetlands.

- The final site is designed to have a 3-foot wide gravel infiltration trench with 1.5”-3” diameter washed aggregate covered with 6” pea gravel running along the facility driveway to collect and slow the flow of runoff from impervious surfaces (see Sheet SP-05 and Detail Sheet C-26).
- All areas disturbed during construction activities are to be loamed and seeded to provide vegetated soil cover protection against sheet runoff and wind erosion (see Sheets SP-04 thru SP-06). Seeded areas will be inspected at least once per week and within 24 hours of rainfall events of ½-inch or greater.
- Once established, seeded areas will be mowed and maintained as appropriate.

- The Pond Pumping Station building roof drain leader will outlet to a riprap apron (See Sheet SP-05 and Detail Sheet C-26). Riprap used in the roof drain apron will be inspected periodically to determine if high flows have caused scour beneath riprap or if vegetation removal is required. On the northeast side of the Pond Pumping Station building, a retaining wall will be utilized to prevent steep slopes.
- The wetland replication and restoration areas will be planted with trees and shrubs per the planting plans, and seeded with a wetland seed mixture.
- If seeding occurs outside of the growing season, temporary stabilization measures (i.e., mulching or erosion control blankets) will be used to prevent erosion until the area can be seeded during the following growing season.
- Reseeding and mulching disturbed areas. These areas will be maintained and re-seeded to ensure that grass cover is adequate to stabilize the exposed soil, and
- Sedimentation and erosion control barriers will not be removed until a vegetative cover dense enough to prevent erosion is established.

Selections from Figure 3-2 of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control:

**Figure 3-2 Measure Selection Matrix**

| Identify Problem Areas | Identify Control Problems | Identify Strategy | Select Specific Measure | | Plan Key |
|---|---|---|---|---|---|
| | | | Functional Group | Measure | |
| Disturbed Areas | **Control Soil Detachment** | Preserve and Conserve Existing Site Resources | Protect Vegetation | Tree Protection | TP |
| | | | Preserve and Conserve Soil | Topsoiling | TO |
| | Raindrop Splash | | | Land Grading | LG |
| | | | | Surface Roughening | SR |
| Short or Shallow Slopes | Sheet & Rill Erosion | Protect Surface | | Dust Control | DC |
| | | | Vegetative Soil Cover | Temporary Seeding | TS |
| | Wind Erosion | | | Permanent Seeding | PS |
| | | | | Sodding | SO |
| | | | | Landscape Planting | LP |
| Steep Slopes | | | Non-Living Soil Protection | Temporary Soil Protection | TSP |
| | | | | Mulch for Seed | MS |
| Long Slopes | | | | Landscape Mulch | LM |
| | | | | Temporary Erosion Control Blanket | ECB |
| | | | | Permanent Turf Reinforcement Mat | TRM |
| | | | | Stone Slope Protection | SSP |
| Stockpile Areas | | Protect Surface and/or Convey Runoff | Stabilization Structures | Retaining Walls | RW |
| | | | | Riprap | RR |
| | **Control Water Movement** | | | Gabions | G |
| Borrow Areas | | | | Permanent Slope Drain | PSD |
| | Gully Erosion | | | Channel Grade Stabilization Structure | CSS |
| | | | | Temporary Lined Chute | TC |
| | | | | Temporary Pipe Slope Drain | TSD |
| | Channel & Stream Erosion | | Drainageways and Watercourses | Vegetated Waterway | VW |
| Drainage Ways | | Convey Runoff | | Temporary Lined Channel | TLC |
| | | | | Permanent Lined Waterway | PW |
| Wetlands and Watercourses | | | | Temporary Stream Crossing | TSC |
| | | Direct Runoff | Diversions | Temporary Fill Berm | TFB |
| | | | | Water Bar | WB |
| | | | | Temporary Diversion | TD |
| Waterbodies | | | | Permanent Diversion | PD |
| | | Intercept Grnd.Water | Subsurface Drains | Subsurface Drain | SD |
| | | Detain Runoff | Detention Structures | Detention Basin | DB |
| Areas of Flooding and Existing Erosion | Natural Resource Degradation | Diffuse Runoff | Energy Dissipators | Level Spreader | LS |
| | | | | Outlet Protection | OP |
| | | | | Stone Check Dam | SCD |
| | **Control Sediment Deposition** | Detain Sediments | Sediment Impoundments, Barriers, and Filters | Temporary Sediment Basin | SB |
| | | | | Temporary Sediment Trap | TST |
| Drainage Outlets | | | | Hay Bale Barrier | HB |
| | Protect Onsite and Offsite Areas | | | Geotextile Silt Fence | GSF |
| | | | | Turbidity Curtain | TC |
| | | | | Vegetative Filter | VF |
| Travel Areas | | Control Mechanically Moved Waters and Soils | Tire Tracked Soils Dewatering | Construction Entrance | CE |
| | | | | Pump Intake and Outlet Protection | PuP |
| | | | | Pumping Settling Basin | PSB |
| | | | | Portable Sediment Tank | PST |
| Dewatering | | | | Dewatering of Earth Materials | DWM |

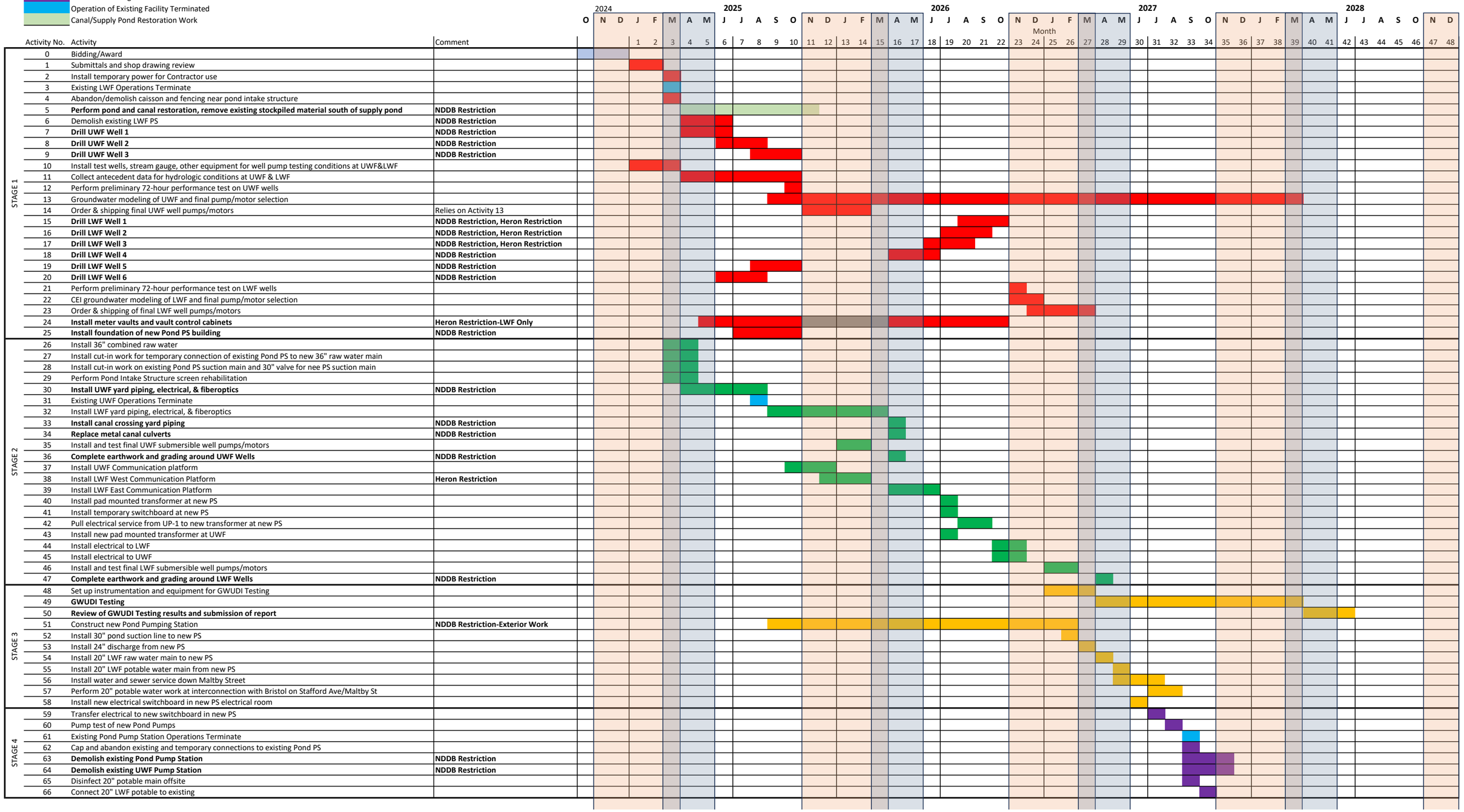
# Proposed Construction Schedule 11/24

**Legend:**

- Construction Stage 1
- Construction Stage 2
- Construction Stage 3
- Construction Stage 4
- Operation of Existing Facility Terminated
- Canal/Supply Pond Restoration Work

- NDDB Restriction - No Wetlands Work
- Heron Restriction - No Work near Rookery

**City of New Britain, CT**
**White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station**
**Project Construction Sequencing**
**Version: 1.5 Date: 2024.05.03**




| | Activity No. | Activity | Comment |
|---|---|---|---|
| STAGE 1 | 0 | Bidding/Award | |
| | 1 | Submittals and shop drawing review | |
| | 2 | Install temporary power for Contractor use | |
| | 3 | Existing LWF Operations Terminate | |
| | 4 | Abandon/demolish caisson and fencing near pond intake structure | |
| | 5 | **Perform pond and canal restoration, remove existing stockpiled material south of supply pond** | **NDDB Restriction** |
| | 6 | Demolish existing LWF PS | **NDDB Restriction** |
| | 7 | **Drill UWF Well 1** | **NDDB Restriction** |
| | 8 | **Drill UWF Well 2** | **NDDB Restriction** |
| | 9 | **Drill UWF Well 3** | **NDDB Restriction** |
| | 10 | Install test wells, stream gauge, other equipment for well pump testing conditions at UWF&LWF | |
| | 11 | Collect antecedent data for hydrologic conditions at UWF & LWF | |
| | 12 | Perform preliminary 72-hour performance test on UWF wells | |
| | 13 | Groundwater modeling of UWF and final pump/motor selection | |
| | 14 | Order & shipping final UWF well pumps/motors | Relies on Activity 13 |
| | 15 | **Drill LWF Well 1** | **NDDB Restriction, Heron Restriction** |
| | 16 | **Drill LWF Well 2** | **NDDB Restriction, Heron Restriction** |
| | 17 | **Drill LWF Well 3** | **NDDB Restriction, Heron Restriction** |
| | 18 | **Drill LWF Well 4** | **NDDB Restriction** |
| | 19 | **Drill LWF Well 5** | **NDDB Restriction** |
| | 20 | **Drill LWF Well 6** | **NDDB Restriction** |
| | 21 | Perform preliminary 72-hour performance test on LWF wells | |
| | 22 | CEI groundwater modeling of LWF and final pump/motor selection | |
| | 23 | Order & shipping of final LWF well pumps/motors | |
| | 24 | **Install meter vaults and vault control cabinets** | **Heron Restriction-LWF Only** |
| | 25 | **Install foundation of new Pond PS building** | **NDDB Restriction** |
| STAGE 2 | 26 | Install 36" combined raw water | |
| | 27 | Install cut-in work for temporary connection of existing Pond PS to new 36" raw water main | |
| | 28 | Install cut-in work on existing Pond PS suction main and 30" valve for nee PS suction main | |
| | 29 | Perform Pond Intake Structure screen rehabilitation | |
| | 30 | **Install UWF yard piping, electrical, & fiberoptics** | **NDDB Restriction** |
| | 31 | Existing UWF Operations Terminate | |
| | 32 | Install LWF yard piping, electrical, & fiberoptics | |
| | 33 | **Install canal crossing yard piping** | **NDDB Restriction** |
| | 34 | **Replace metal canal culverts** | **NDDB Restriction** |
| | 35 | Install and test final UWF submersible well pumps/motors | |
| | 36 | **Complete earthwork and grading around UWF Wells** | **NDDB Restriction** |
| | 37 | Install UWF Communication platform | |
| | 38 | Install LWF West Communication Platform | **Heron Restriction** |
| | 39 | Install LWF East Communication Platform | |
| | 40 | Install pad mounted transformer at new PS | |
| | 41 | Install temporary switchboard at new PS | |
| | 42 | Pull electrical service from UP-1 to new transformer at new PS | |
| | 43 | Install new pad mounted transformer at UWF | |
| | 44 | Install electrical to LWF | |
| | 45 | Install electrical to UWF | |
| | 46 | Install and test final LWF submersible well pumps/motors | |
| | 47 | **Complete earthwork and grading around LWF Wells** | **NDDB Restriction** |
| STAGE 3 | 48 | Set up instrumentation and equipment for GWUDI Testing | |
| | 49 | **GWUDI Testing** | |
| | 50 | **Review of GWUDI Testing results and submission of report** | |
| | 51 | Construct new Pond Pumping Station | **NDDB Restriction-Exterior Work** |
| | 52 | Install 30" pond suction line to new PS | |
| | 53 | Install 24" discharge from new PS | |
| | 54 | Install 20" LWF raw water main to new PS | |
| | 55 | Install 20" LWF potable water main from new PS | |
| | 56 | Install water and sewer service down Maltby Street | |
| | 57 | Perform 20" potable water work at interconnection with Bristol on Stafford Ave/Maltby St | |
| | 58 | Install new electrical switchboard in new PS electrical room | |
| STAGE 4 | 59 | Transfer electrical to new switchboard in new PS | |
| | 60 | Pump test of new Pond Pumps | |
| | 61 | Existing Pond Pump Station Operations Terminate | |
| | 62 | Cap and abandon existing and temporary connections to existing Pond PS | |
| | 63 | **Demolish existing Pond Pump Station** | **NDDB Restriction** |
| | 64 | **Demolish existing UWF Pump Station** | **NDDB Restriction** |
| | 65 | Disinfect 20" potable main offsite | |
| | 66 | Connect 20" LWF potable to existing | |

# Stormwater Management Report Hyperlink:

https://www.bristolct.gov/DocumentCenter/View/47020/NBW-Stormwater-Report

# Geotechnical Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

# Custom Soil Resource Report for State of Connecticut

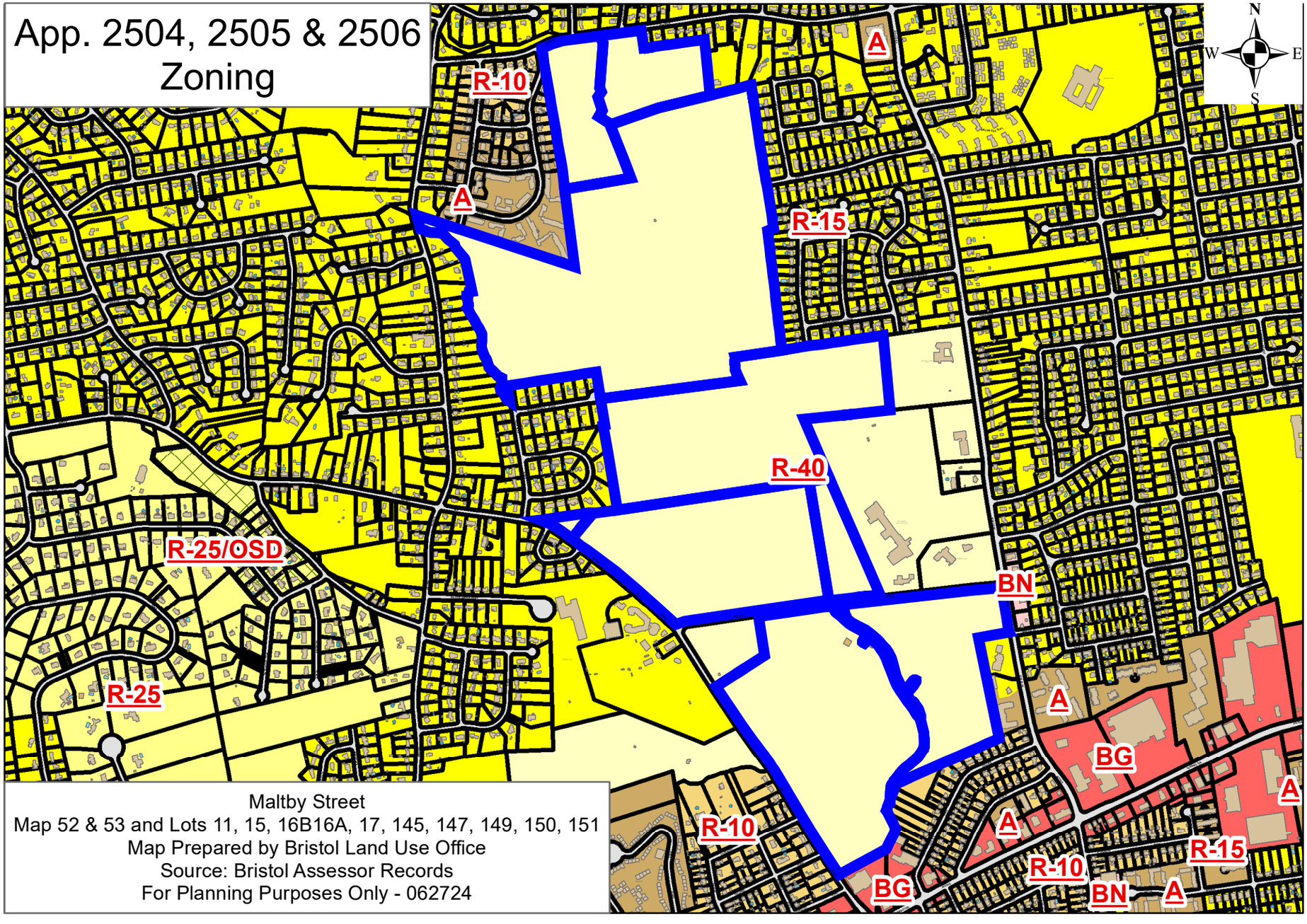
## White Bridge Waterworks Facilities - Pond Pumping Station

**Hyperlink:**

https://www.bristolct.gov/DocumentCenter/View/47021/Geotechnical-Report




September 26, 2022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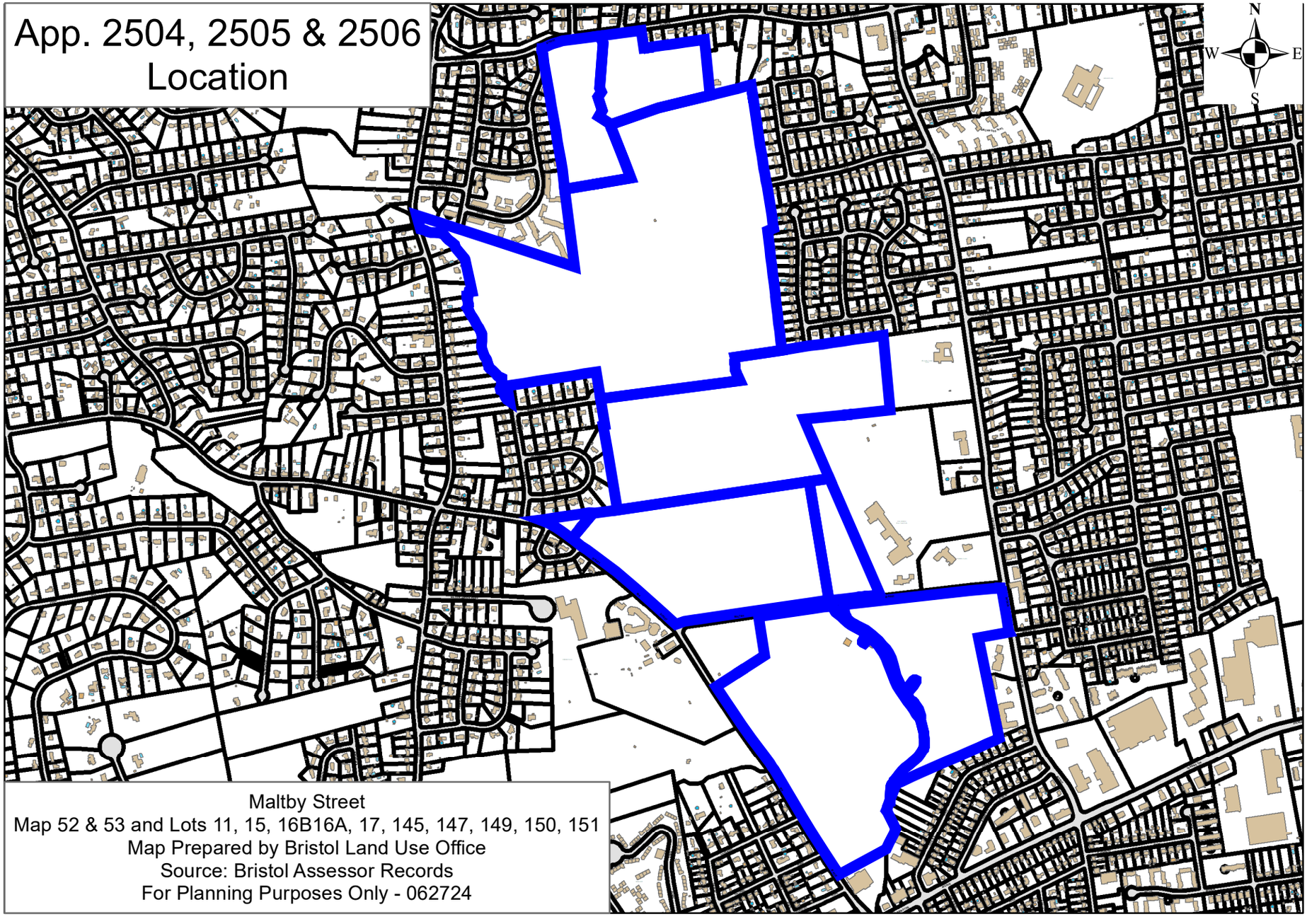
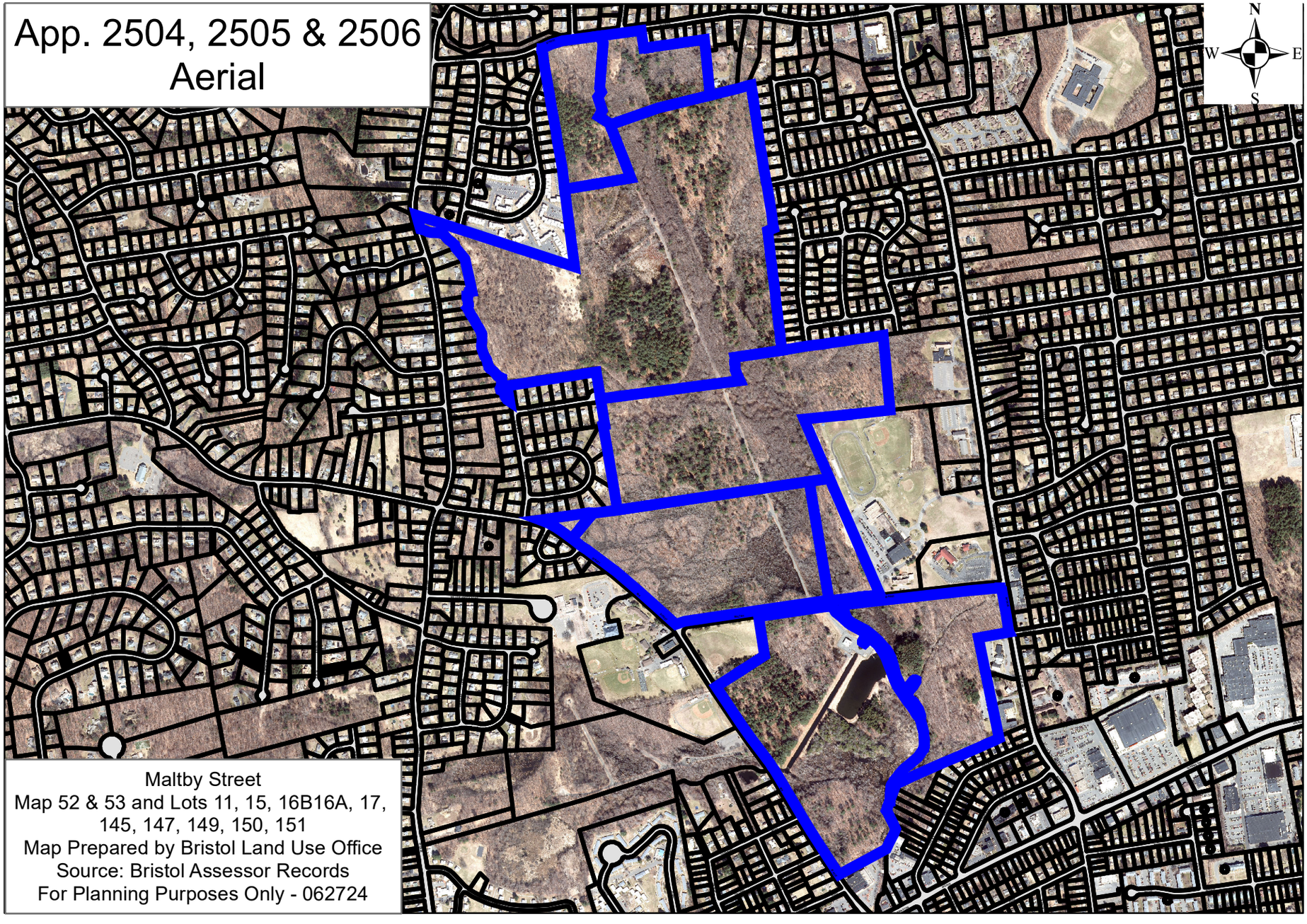
Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# App. 2504, 2505 & 2506 Location

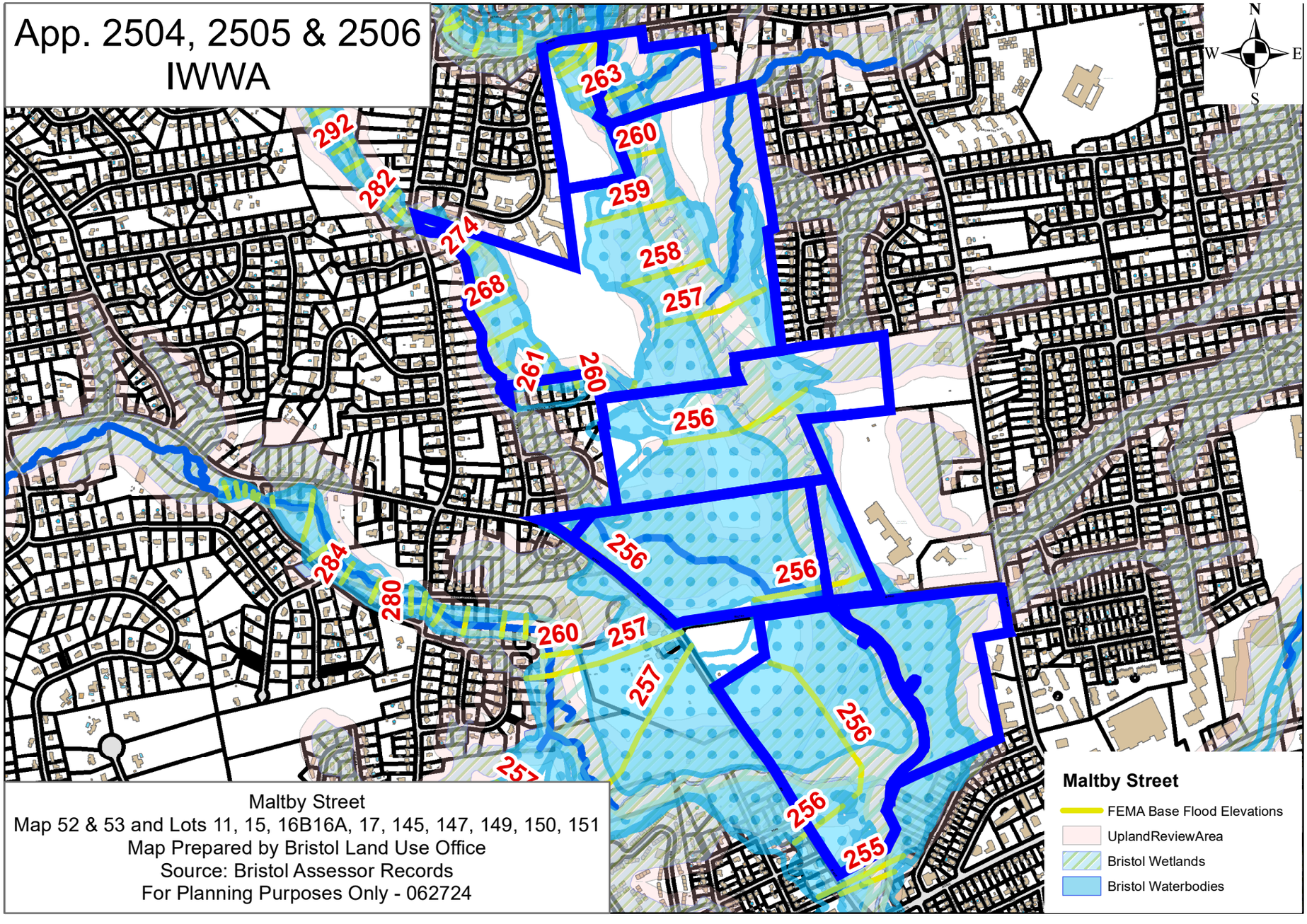



Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# App. 2504, 2505 & 2506
# Aerial




Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724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Maltby Street
FEMA Base Flood Elevations
UplandReviewArea
Bristol Wetlands
Bristol Waterbodies
Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# Google Earth


Copper Mine Brook
Polkville Ave Brook
Layers
2D


Copper Mine Brook
Polkville Ave Brook
Field


Copper Mine Brook
Copper Mine Brook
Copper Mine Brook

# Revised Specification Section 11/24

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# SECTION 011000 - SUMMARY

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Construction Sequencing.
4. Work performed by Owner.
5. Contractor’s use of site and premises.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and Drawing conventions.
9. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
2. Section 017300 “Execution and Construction Sequencing” for sequencing requirements.
3. Appendix G for state, local, and federal requirements and conditions from project permits.

### 1.3 DEFINITIONS

A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

### 1.4 PROJECT INFORMATION

A. Project Identification: White Bridge Waterworks Facilities, City of New Britain, CT.

1. Project Location: Maltby Street, Bristol, CT

B. Owner: City of New Britain, CT

C. Engineer: CDM Smith Inc., East Hartford, CT

D. Engineer's Consultants: Engineer has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Comprehensive Environmental Inc. (CEI)

## 1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Construction of White Bridge Waterworks Facilities including groundwater production wells, Pond Pumping Station, electrical and instrumentation upgrades, and other Work indicated in the Contract Documents.

a. Groundwater production wells:

1) Specifications for the construction and development of gravel packed groundwater production wells and the abandonment and decommissioning of existing wells are included in Appendix A to these Contract Documents.

b. Existing Conditions:

1) Data regarding the geological and geotechnical field testing conducted for the Work are included in Appendix F. The information provided is for general informational purposes only. The subsurface information presented is accurate only at the specific locations and times the subsurface explorations were made. It is the Contractor’s responsibility to review the information contained within these Contract Documents and make their own interpretations and conclusions of the character of materials to be encountered and the impact on the Work based on the Contractor’s expert knowledge of the area and of earthwork techniques. The Contractor, at their own expense, may conduct additional subsurface explorations for their own information after obtaining the Owner’s permission.

2) Parts of the project site are located within Federal, State, and Local protected species habitat, including the Spotted Turtle (Clemmys Guttata), Wood Turtle (Glyptemys Insculpta), and Great Blue Herron. Information on requirements and construction activity limitations are included in the permits included in Appendix G.

3) Test pit excavations were performed to confirm the locations of select existing utilities on the White Bridge Waterworks Facilities site. A memorandum summarizing the test pits is included in Appendix E. Information provided in the memorandum is for general informational purposes only.

2. Demolition of existing White Bridge Waterworks Facilities including the existing Pond Pumping Station, existing Lower Wellfield Pumping Station, existing Upper Wellfield Pumping Station, existing caisson structure located at the Lower Wellfield, and existing production wells at the Upper and Lower Wellfields. Existing equipment to be removed from these locations may include, but is not limited to, the following:

a. Existing Pond Pumping Station:

1) Centrifugal pumps and associated motor
2) Process piping
3) Compressor and air tanks
4) Electrical equipment and controls cabinets

b. Existing Lower Wellfield Pumping Station:

1) Electrical controls and equipment cabinets
2) Wall mounted electrical equipment
3) Bulk liquid chemical storage tanks
4) Compressor and air tanks
5) Pumps and associated motors
6) Process piping
7) HVAC equipment
8) Miscellaneous furniture

c. Existing Upper Wellfield Pumping Station:

1) Electrical controls and equipment cabinets
2) Pumps and associated motors
3) Process piping
4) Compressor and air tanks

d. Data regarding the hazardous material field testing conducted for building demolition Work are included in Appendix C.

3. Cleaning and inspecting of approximately 2,000 LF of existing 12-inch ductile-iron water main in the UWF driveway.

4. Rehabilitation of the Supply Pond and canal, including sediment removal, handling and disposal and rehabilitation of the Intake Structure.

a. Data regarding material field testing conducted for the Supply Pond are included in Appendix D.

5. Extension of the Bristol, CT water and sewer systems with installation of ductile-iron water main and PVC sewer main in Mix Street and Maltby Street.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

## 1.6 CONSTRUCTION SEQUENCING

A. Construct the Work stages, with each stage substantially complete as indicated on Drawings and in Section 017300.

B. Before commencing Work of each stage, submit an updated copy of Contractor's construction schedule and Construction Sequencing Plan, showing the sequence, commencement and completion dates for all stages of the Work.

## 1.7 WORK PERFORMED BY OWNER

A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

B. Future Work Not Part of this Contract: The Contract Documents include requirements that will allow Owner to carry out future work following completion of this Project; provide for the following future work:

1. Treatment of Lower Wellfield water to potable standards and cleaning, lining, and final connections of the 20” potable water main cross country from the White Bridge Waterworks Facilities to Stafford Avenue.

## 1.8 CONTRACTOR’S USE OF SITE AND PREMISES

A. Restricted Use of Site: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Buildings: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period, unless otherwise noted on the Drawings. Repair damage caused by construction operations.

D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

## 1.9 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction or have been decommissioned and demolished as part of the construction sequencing. Cooperate with Owner during construction operations to

minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

## 1.10 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work to between 7:00 a.m. to 7:00 p.m., Monday through Saturday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.

1. Sunday Hours: Work may be permitted on Sunday between 9:00 a.m. and 5:00 p.m.
2. Early Morning Hours: No work shall occur at the site before 7:00 a.m.
3. Hours for Utility Shutdowns: Coordinate with Owner; utility shutdowns and other activities requiring City of New Britain personnel shall be planned between 7:00 a.m. and 2:00 p.m.
4. City of Bristol Noise Ordinance and other work hour restrictions shall be followed at all times.

**C. Work within City of Bristol Roadways:**

**1. Work within the intersection of Maltby Street and Stafford Avenue is prohibited during bus drop off times (7:30 a.m. to 7:40 a.m.) at St. Paul Catholic High School. Work shall not start in this intersection before 8:00 a.m. on weekdays (Monday through Friday) while school is in session.**

**2. Work within the intersection of Maltby Street and Stafford Avenue is prohibited during bus pick up times (2:15 p.m.) at St. Paul Catholic High School. Work shall not be performed in the intersection between 2:00 p.m. and 3:00 p.m. on weekdays (Monday through Friday) while school is in session.**

**a. Roadways shall be made safe and passable for all thru traffic at the end of each day and for the specified periods of no-work within the intersection.**

**3. Utility installation work within Maltby Street is prohibited during peak traffic hours and is limited to the hours of 10:00 a.m. to 4:00 p.m. unless previously approved by the Engineer.**

D. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:

1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Obtain Engineer's written permission before proceeding with utility interruptions.

E. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Engineer not less than two days in advance of proposed disruptive operations.
2. Obtain Engineer's written permission before proceeding with disruptive operations.

F. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Project site is not permitted.

G. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

H. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

I. Local, State, and Federal Requirements: Comply with all local, state, and federal requirements and conditions issued for the project including, but not limited to, time of year work restrictions to protect state-listed species and other restrictions listed in the permits included as Appendix G to these Contract Documents.

**J. Construction Vehicle Access to Site shall be from Maltby Street via Stafford Avenue, to the extent practicable. Construction vehicle access to the site via Mix Street is prohibited except to perform Work associated with the wetlands creation area and/or without prior approval by the Engineer. Contractor's construction vehicles shall avoid residential roadways in the City of Bristol.**

## 1.11 COORDINATION WITH CITY OF BRISTOL, CT

**A. The White Bridge Water Works Facility is owned and operated by the City of New Britain, CT but is located within the City of Bristol, CT and the following coordination is expected between the Contractor and the City of Bristol:**

**1. Bristol Public Works Department:**

**a. Contractor shall coordinate with the City of Bristol Public Works Department for nearby ongoing projects, including but not limited to, the Jerome Avenue Bridge Project to minimize traffic and construction impacts to the Maltby Street area.**

**b. During the months of July and August, the Little League Baseball and Softball World Series Tournaments are hosted annually at the A. Bartlett Giamatti Little League Leadership Training Center located on Mix Street. Contractor is notified that significant traffic is generated on Maltby Street, Mix Street, Stafford Avenue, and the surrounding roadways during this event. Contractor shall coordinate with the City of Bristol Public Works Department to minimize traffic and construction impacts to the Maltby Street and Mix Street areas during this tournament.**

**2. Bristol Water and Sewer Department:**

**a. Contractor shall obtain all necessary permits, policies, and procedures from the Water and Sewer Department. The Water and Sewer Department requires all permits to be obtained by a licensed plumber. Contractor shall provide a minimum of 4 days notice for all non-emergency work on the water and sewer utilities.**

**b. Contractor shall coordinate connection of new water main in Maltby Street to existing water main in Mix Street with the Water and Sewer Department. Payment for the City of Bristol to furnish and install a tapping sleeve for final connection must be made prior to work being completed.**

**c. Contractor shall pay the expected water service connection fee of $4,725.00 to the Water and Sewer Department, which will cover the connection fee, tapping the water main, 2" corporation stop and saddle, 2" curb stop and box, copper tubing to the property line, inspection of copper tubing from the property line to the building, and connections within the building.**

**d. Contractor shall coordinate with the Water and Sewer Department for inspection before final acceptance of water and sewer utilities installed within Maltby Street.**

**3. Bristol Police Department:**

**a. Contractor shall coordinate with the Bristol Police Department for police details during construction. Contractor is notified that Mix Street, Maltby Street, and Stafford Avenue are listed by the Bristol Police Department as streets requiring police details for private traffic duty.**

## 1.12 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011000

# Genral Provisions Erosion and Sedimentation Controls 11/24

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# SECTION 312500 - EROSION AND SEDIMENTATION CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Construction Entrances
2. Turbidity Curtains
3. Filter Bags
4. Erosion Control Blanket
5. Straw Wattle.

B. Related Sections:

1. Section 310515 “Soils and Aggregates for Earthwork”
2. Section 311000 “Site Clearing.”
3. Section 329200 “Turf and Grasses.”

### 1.3 REFERENCE STANDARD

A. EPA document titled: “Stormwater Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices” document number EPA 832-R-92-005, dated 1992, or most recent edition. State or appropriate Conservation Commission standards can be substituted for the EPA standard if the State or Conservation Commission standard is equal to, or more detailed than, the EPA standard.

B. 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

### 1.4 ACTION SUBMITTALS

A. Product Data: Product Data: Submit data on geotextile.

B. Manufacturer's Certificate: Certify Products meet or exceed specified requirements..

### 1.5 INFORMATIONAL SUBMITTALS

A. Stormwater Pollution Prevention Plan (SWPPP) as specified in “Quality Assurance” article.

1.6 CLOSEOUT SUBMITTALS

A. Section 017700 “Closeout Procedures” for requirements for submittals.

1.7 QUALITY ASSURANCE

A. Prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the U.S. Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) General Permit applicable to this work) document number EPA 832-R-92-005, dated 1992, or most recent edition.

B. Perform Work in accordance with requirements of Section 310515 “Soils and Aggregates for Earthwork” and Section 311000 “Site Clearing.”

C. Perform Work according to State of Connecticut DOT standards.

D. Perform Work according to the 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

1.8 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this section.

PART 2 - PRODUCTS

2.1 SILT FENCE

A. Silt fence filter fabric shall be a woven, polypropylene, ultraviolent resistant material meeting minimum requirements below:

| **Fabric Properties** | **Minimum Acceptable Value** | **Test Method** |
|---|---|---|
| Grab Tensile Strength (lbs) | 110 | ASTM D 4632/ D 4632M |
| Elongation at Failure (%) | 20 | ASTM D 4632/ D 4632M |
| Mullen Burst Strength | 300 psi (2.1 MPa) | ASTM D 3786/ D 3796M |
| Puncture Strength (lbs) | 60 | ASTM D 4833/ D 4833M |
| Minimum Trapezoidal Tear Strength (lbs) | 50 | ASTM D 4533/ D 4533M |
| Flow through Rate (gal/min/sf) | 25 | ASTM D 4491/ D 4491M |
| Equivalent Opening Size | 40 – 80 | US Std Sieve ASTM D 4751 |
| Minimum UV Residual (%) | 70 | ASTM D 4355/ D 4355M |

B. Products: Provide one of the following:

1. “Mirafi FW402,” by TenCate Geosynthetics
2. “Carthage 15%,” by Carthage Mills

3. "HSP2." by ACF Environmental, Inc.
4. Or equal.

C. Sediment fence shall be a prefabricated commercial product made of a woven, polypropylene, ultraviolet resistant material such as "Envirofence" by Mirafi Inc., Charlotte, NC or equal.

D. Posts: Constructed of hardwood with minimum diameter thickness of 1.5 inches (38 mm).

E. Tie wires for securing silt fence fabric to wire mesh shall be light gauge metal clips (hog rings), or 1/32 inch (0.79 mm) diameter soft aluminum wire.

## 2.2 TURBIDITY CURTAIN

A. Barrier Material: filter fabric.

B. Barrier height shall be 20 percent greater than the depth of water..

## 2.3 FILTER BAGS

A. Filter Bags: Sized with manufacturer recommendations based on pumped discharge rate.

B. Geotextile Material for Bags: Meet the following minimum requirements:

| | |
|---|---|
| Minimum Grab Tensile Strength | 200 lbs |
| Minimum Grab Tensile Elongation | 50% |
| Minimum Trapezodial Tear Strength | 80 lbs |
| Mullen Burst Strength | 380 psi (2.6 MPa) |
| Minimum Puncture Strength | 130 lbs |
| Apparent Opening Size | 40-80 US Sieve |
| Minimum Flow Through | 70 gpm/square foot |

C. Bag shall have opening large enough to accommodate 4 inch (100 mm) diameter discharge hose.

## 2.4 EROSION CONTROL BLANKET

A. Erosion control blankets: 100 percent agricultural straw fiber matrix, 0.5 lbs. / sq yd, stitch bonded with degradable thread between two photodegradable polypropylene nettings.

1. Product: Provide Model S150 Double Net Short-Term Blanket (12 months) by North American Green, Evansville, IN), or equal.

B. Prior to start of work, provide a certified statement as to the number of pounds of materials to be used per 100 gallons of water. Specify the number of square feet of seeding that can be covered with the quantity of solution in the Contractor's hydroseeder.

2.5 STRAW WATTLE

A. Straw Wattle: Prefabricated commercial product with outside casing made up of organic hessian

1. Effective Height: 12 inches plus or minus 1 inch.
2. Effective Circumference: 3-3/8 inches.

B. Product: Provide products by Phase II Stormwater Products Wrentham MA or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017300 - Execution: Verification of existing conditions before starting work.

3.2 SILT FENCE

A. Position sediment fences as indicated on the Drawings and to prevent off site movement of sediment produced by construction activities as directed by the Engineer. Areas beyond limits of silt fence shall be undisturbed or stabilized.

B. Dig trench approximately 6 inches wide and 6- inch deep along proposed fence lines.

C. Drive stakes, 10 feet on center (maximum) at back edge of trenches. Drive stakes 2 feet (minimum) into ground.

D. Hang filter fabric on posts carrying to bottom of trench with about 4 inches of fabric laid across bottom of trench. Stretch fabric fairly taut along fence length and maintain secure both ways.

E. Backfill trench with excavated material and tamp.

F. Install pre-fabricated silt fence according to manufacturer's instructions.

3.3 CONSTRUCTION ENTRANCE

A. Construct entrance with minimum of 6 inch (150 mm) of course aggregate at all points of ingress/egress.

B. Width: Minimum 24 feet, increased as needed for typical construction vehicles.

C. Minimum Length: 50 feet (15.2 m) (where soils are course grained) or as shown in the Drawings.

D. Install filter fabric below aggregate.

E. Maintain entrance throughout construction, adding more aggregate or increasing length as needed.

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## 3.4 TURBIDITY CURTAIN

A. Install turbidity curtain as indicated on the Drawings, extending beyond lateral limits of construction.

B. Install weights at 10 foot (3 m) intervals, floats at 5 feet (1.5 m) intervals.

C. Inspect turbidity curtain daily and repair/replace worn/torn areas as needed.

D. At end of construction, remove accumulated sediment by hand before removing the turbidity curtain.

## 3.5 FILTER BAG

A. Locate filter bag at least 50 feet from all wetlands, streams or other surface waters.

B. Install bag on a 2 inch (50 mm) gravel bed to allow water to flow in all directions.

C. Bag is full when remaining flow area is reduced by 75%. Replace full bags with new bags.

## 3.6 EROSION CONTROL BLANKETS

A. Install erosion control blankets onto all exposed slopes to be loamed and seeded that are steeper than 4 (Horizontal) to 1 (Vertical) as shown on the Drawings. Erosion control blankets shall also be installed in all seeded drainage swales and ditches, and as directed by the Engineer in accordance with manufacturer's instructions.

B. The area to be covered shall be properly prepared, fertilized and seeded with permanent vegetation before the blanket is applied. When the blanket is unrolled, the netting shall be on top and the fibers in contact with the soil over the entire area. The blankets shall be applied in the direction of water flow and stapled.

C. Place blankets and stapled together in accordance with manufacturer's instructions. Side overlaps shall be 4-inch minimum. The staples shall be made of wire, 0.091 inch in diameter or greater, "U" shaped with legs 10-in in length and a 1-1/2-inch crown. Commercial biodegradable stakes may also be used with prior approval by the Engineer. The staples shall be driven vertically into the ground, spaced approximately two linear feet apart, on each side, and one row in the center alternately spaced between each size. Upper and lower ends of the matting shall be buried to a depth of 4-inch in a trench. In swales and ditches, erosion stops shall be created every 25-feet by making a fold in the fabric and carrying the fold into a silt trench across the full width of the blanket. The bottom of the fold shall be 4-inches below the ground surface. Staple on both sides of fold. Where the matting must be cut or more than one roll length is required in the swale, turn down upper end of downstream roll into a slit trench to a depth of 4-inches. Overlap lower end of upstream roll 4-in past edge of downstream roll and staple

D. To ensure full contact with soil surface, roll matting with a roller weighing 100 lbs. / ft. of width perpendicular to flow direction after seeding, placing matting and stapling. Thoroughly inspect

channel after completion. Correct any areas where matting does not present a smooth surface in full contact with the soil below.

## 3.7 STRAW WATTLE

A. Position straw waddles as indicated on the Drawings and as necessary to prevent off site movement of sediment produced by construction activities as directed by the Engineer.

B. Drive wooden stakes, 5 feet on center (maximum) at back edge of waddle. Drive stakes 2 feet (minimum) into ground.

C. Install pre-fabricated straw waddle according to manufacturer's instructions.

## 3.8 SITE STABILIZATION

A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.

B. Construct, stabilize and activate erosion controls before site disturbance within tributary areas of those controls.

C. Stockpile and waste pile heights shall not exceed 35 feet. Slope stockpile sides at 2:1 or flatter.

D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.

1. During non-germinating periods, apply mulch at recommended rates.

E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

## 3.9 FIELD QUALITY CONTROL

A. Section 017300 "Execution" for field inspecting, testing, adjusting, and balancing.

B. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.

## 3.10 CLEANING

A. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove and dispose of sediment.

B. Do not damage structure or device during cleaning operations.

C. Do not permit sediment to erode into construction or site areas or natural waterways.

D. Clean channels when depth of sediment reaches approximately one-half channel depth.

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3.11 PROTECTION

A. Section 017300 “Execution” for requirements for protecting finished Work.

END OF SECTION 312500

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# SECTION 323223 - SEGMENTAL RETAINING WALLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Foundation.
2. Precast concrete modular units.
3. Foundation drain.
4. Free draining backfill.
5. Delegated design.

B. Related Sections:

1. Section 033010 “Miscellaneous Cast-In-Place Concrete”: Concrete type for footings.
2. Section 312000 “Earthwork”: Excavation for footing and free draining backfill, and backfilling over free draining backfill and geotextile up to finished ground.
3. Section 310515 “Soils and Aggregates for Earthwork”: Soil backfill above free draining aggregate backfill.
4. Section 329200 “Turf and Grasses”: Fertilizer, seed, and mulch at finished ground.

### 1.3 SYSTEM DESCRIPTION

A. Retaining Wall System: Battered wall of stepped height formed from precast concrete modular facing and tieback units in straight configuration on aggregate base footing with foundation drain, backfill, and coping.

### 1.4 DESIGN REQUIREMENTS

A. General

1. Do not change indicated horizontal and vertical alignment of retaining walls, except as specified in this section.
2. Design retaining walls to be within the following specified design parameters and limits of allowable foundation bearing pressure.

B. Design footing wall facing and tieback units in accordance with specified NCMA requirements and the following:

1. External Stability Factor of Safety:

    a. Base Sliding: 1.5.
    b. Overturning: 1.5.
    c. Bearing Capacity: 2.0.
    d. Global Stability: 1.3.

2. Internal Stability Factor of Safety:

    a. Shear Capacity: 1.5.

3. Design Geometry:

    a. Provide length, height, and overall elevations of retaining wall as indicated on Drawings.
    b. Measure structure's design height, H, from top of aggregate base footing to top of wall where ground surface intercepts wall facing.
    c. See Drawings for slopes above and below sections of segmental retaining wall.

4. Minimum Wall Embedment: Greater of height of a modular unit, 0.5 feet, or following minimum embedment required for slope below wall:

    a. Level: H/10.
    b. 3: 1 (18.4 degrees): H/10.
    c. 2: 1 (26.5 degrees): H/7.

5. Surcharges: Apply following surcharges to top of each design cross section based on the following uses above wall.

    a. No Traffic: 0 lb/sq. ft.
    b. Light Traffic: 100 lb/sq. ft.
    c. Heavy Traffic: 250 lb/sq. ft.

6. Lateral Earth Pressure: Calculate lateral earth pressure to be resisted by self weight of retaining wall using Coulomb coefficient of earth pressure, Ka, times vertical stress at base of wall. Use coefficient of active earth pressure, Ka, from top to bottom of wall. Assume coefficient of active earth pressure, Ka, independent of external loads except sloping fills. For sloping fills, use coefficient of active earth pressure, Ka, appropriate for sloping condition, using Coulomb earth pressure in analysis.
7. Inclination of Failure Surface: Assume Coulomb failure surface passing through base of wall behind facing units up to ground surface at or above top of wall in design of wall.
8. Settlement Control: Delegated designer will be responsible to determine if foundation soils will require special treatment to control total and differential settlement.
9. Global Stability: Delegated designer will be responsible to determine if further design considerations must be implemented to ensure adequate global/overall slope stability.
10. Live Loads for Wall:

    a. Vehicle Impact Loading: 10 kip/5 feet.

11. Foundation Data for Wall:

a. Allowable Bearing Pressure: 2.5 ksf.

1.5 ACTION SUBMITTALS

A. Shop Drawings:

**1. Manufactured Modular Wall - Modular Units and Support: Indicate type of wall, location, length, top elevation, bottom of footer elevation, cross-sections including backfill material type and limits, and quantities. Show complete layout plans and fabrication details for precast wall units, and step-by-step erection instructions. Indicate, unit locations, architectural details, support items, dimensions, openings, and relationship to adjacent materials, signed and sealed by professional engineer licensed in the State of Connecticut.**

2. Temporary Support System: Detail specific load bearing falsework, underpinning, needling, or shoring layout and support members appropriate for Project conditions.

B. Samples:

1. Submit one of each cast modular unit illustrating profiles, finish, texture and color.

1.6 INFORMATIONAL SUBMITTALS

A. Submit documentation of experience in list of at least five projects of similar construction and scope which substantiate experience for system. Include brief description of each project and name and phone number of owner's representative knowledgeable in each listed project.

B. Test Reports: Indicate certified tests results for precast concrete at manufacturing facility, cast-in-place concrete in field, and granular backfill.

C. Manufacturer's Installation Instructions: Submit installation instructions including construction sequence and scheme and the following:

1. Excavation and required bracing.
2. Placement of aggregate base footing.
3. Placement of precast concrete facing units and tieback units.
4. Placement of drainage, backfill and geotextile.

D. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

E. Manufacturer's Field Reports: Indicate field observations and conclusions as to compliance to specifications, action items, and resolution of installation issues.

**1.7 DELEGATED-DESIGN SUBMITTAL**

**A. Design Data: Submit the following signed and sealed by professional engineer.**

**1. Calculations for manufactured modular wall including height of precast units, overall wall stability including sliding stability and overturning stability, and forces**

**acting on wall and footing, precast facing and tieback units in accordance with design requirements.**

2. **Submit details and computations for any required temporary shoring, bracing and temporary support of excavation.**

1.8 CLOSEOUT SUBMITTALS

A. Project Record Documents: Record actual elevation of undercut base, if any, and aggregate base foundation elevation and position.

1.9 QUALITY ASSURANCE

A. Perform precast work in accordance with requirements of PCI MNL-116S, PCI MNL-123, PCI MNL-120.

B. Perform required manufactured modular retaining walls work in accordance with NCMA, TR 127A,.

C. Perform Work in accordance with State of Connecticut DOT (CTDOT).

1.10 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing manufactured modular retaining wall systems with minimum five years documented experience.

B. Installer: Company specializing in performing work of this section with minimum five years documented experience approved by manufacturer.

C. Design and construct manufactured modular retaining wall including temporary support under direct supervision of professional engineer experienced in design of this Work and licensed in the State of Connecticut.

1.11 MOCKUP

A. Section 014000 “Quality Requirements” for requirements for mockup.

B. Construct mockup 10 linear feet with units specified including backfill, wall drain, architectural details and finish, and specified wall coatings. Fabricate sample wall unit by same process for production units.

C. Locate where directed by Engineer.

D. Incorporate accepted mockup as part of Work.

1.12 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this Section.

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1.13 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 “Product Requirements” for requirements for transporting, handling, storing, and protecting products.

B. Check materials upon delivery to assure receipt of proper material. Inspect for damage. Replace damaged materials.

C. Handle, store and ship units to avoid chipping, cracking, and fracturing and to prevent contamination that may affect performance.

D. Protect materials from damage during storage and installation. Remove and replace damaged units.

1.14 ENVIRONMENTAL REQUIREMENTS

A. Section 016000 “Product Requirements” for environmental conditions affecting products on site.

B. Do not install foundation when subgrade is wet or frozen.

1.15 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.16 COORDINATION

A. Coordinate work with wall penetrations, connection to storm water system, affected utility companies, and utility adjustments.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design segmental retaining walls.

B. Delegated Designer is responsible for indicating proposed system that considers allowable bearing pressure, external stability and internal stability, including global stability, total and differential settlement.

C. Design walls for locations and to overall dimensions indicated on Drawings utilizing specified backfill and foundation parameters.

D. Use no experimental or demonstration-type design concepts; or products, structures, or elements not preapproved by Engineer, in design.

E. Prepare drawings in accordance with the State of Connecticut DOT (CTDOT).

F. Provide design life of structure of 75 years.

## 2.2 FOUNDATION MATERIALS

A. Coarse Aggregate: As indicated on delegated design drawings

B. Concrete: As specified in Section 033000 “Cast-in-Place Concrete.”

## 2.3 WALL SYSTEM MATERIALS

A. The manufacturer shall be licensed and authorized to produce the retaining wall units by the precast modular block system patent holder/licensor and shall document compliance with the published quality control standards of the proprietary precast modular block system licensor for the previous three years.

B. Concrete used in the production of the precast modular block units shall be first purpose, fresh concrete. Returned, reconstituted, surplus or waste concrete is not acceptable. It shall be an original production mix meeting the requirements of ASTM C94/C94M and exhibit the following:

1. Minimum 28-day Compressive Strength: 4,000 psi
2. Nominal Maximum Aggregate Size: 1 inch
3. Maximum water-soluble Chloride Ion content in concrete, percent by weight of cement: 0.15
4. Maximum Chloride as Chloride Ion concentration in mixing water, parts per million: 1000
5. Alkali-aggregate reactivity mitigation per ACI 201
6. Slump (conventional concrete) per ASTM C143: 5 inches plus or minus 1-1/2 inch
7. Slump flow (Self-consolidating concrete) per ASTM C1611: 18 inches to 32 inches

C. All units shall be wet-cast precast modular retaining wall units conforming to ASTM C1776/C1776M.

D. Each concrete block shall be cast in a single continuous pour without cold joints. With the exception of half-block units, corner units and other special application units, the precast modular block units shall conform to the nominal dimensions listed below, within manufacturer tolerances:

1. 28” Block: H=18”, L=46-1/8”, W=28”
2. 41” Block: H=18”, L=46-1/8”, W=40-1/2”
3. 60” Block: H=18”, L=46-1/8”, W=60”
4. 52” XL Block: H=36”, L=46-1/8”, W=52”
5. 72” XL Block: H=36”, L=46-1/8”, W=72”
6. 96” XL Block: H=36”, L=46-1/8”, W=96”

E. Individual block units shall have a nominal height of 18 inches or 36” for XL blocks.

F. With the exception of half-block units, corner units or other special application units, the precast modular block units shall have two (2) circular dome shear knobs that are sized as per manufacturer's block units.

G. The precast modular block units shall be manufactured with integrally cast shear knobs that establish a standard horizontal set-back for subsequent block courses. The precast modular block system shall be available in the four (4) standard horizontal set-back facing batter options as listed below:

1. 18-inch High Blocks

   a. 3/8" horizontal set-back (1.2" maximum facing batter)
   b. 1-5/8" horizontal set-back (5.2" maximum facing batter)
   c. 9-3/8" horizontal set-back (27.5" maximum facing batter)
   d. 16-5/8" horizontal set-back (42.7" maximum facing batter)

2. 36-inch High Blocks

   a. 3-1/4 inch horizontal set-back (5.2 inch maximum facing batter)

3. The precast modular block units shall be furnished with the required shear knobs that provide the facing batter required in the construction shop drawings.

H. The precast modular block unit face texture shall be selected by Owner from the available range of textures available from the precast modular block manufacturer. Each textured block facing unit shall be a minimum of 5.76 square feet with a unique texture pattern that repeats with a maximum frequency of once in any 15 square feet of wall face.

I. The block color shall be selected by the Owner from the available range of colors available from the precast modular block manufacturer.

J. All precast modular block units shall be sound and free of cracks or other defects that would interfere with the proper installation of the unit, impair the strength or performance of the constructed wall. Blocks shall not exhibit chips or cracks in the exposed face or faces of the unit that are not otherwise permitted by precast modular block manufacturer. Bug holes, water marks, and color variation on non-architectural faces are acceptable.

K. Precast modular block units shall be as manufactured by Redi-Rock Retaining Wall Systems as licensed by Redi-Rock International, LLC, 2940 Parkview Drive, Petoskey, MI 49770, telephone (866) 222-8400, www.redi-rock.com or approved equal.

## 2.4 BACKFILL AND DRAINAGE SYSTEM

A. Aggregate:

1. Coarse Aggregate Backfill: ASTM D448, AASHTO Size No. 57 hard, durable, angular gravel, crushed gravel, or crushed stone, or combination of gravel, crushed gravel, or crushed stone, no slag, with the following particle size distribution requirements per ASTM D6913:

| US Standard Sieve Size | % Passing |
|---|---|
| 1-1/2” | 100 |
| 1” | 95-100 |
| 1/2” | 25-60 |
| No. 4 | 0-10 |
| No. 8 | 0-5 |

B. Leveling Pad:

1. The precast modular block units shall be placed on a leveling pad constructed from crushed stone or unreinforced concrete. The leveling pad shall be constructed to the dimensions and limits shown on the retaining wall design drawings prepared by the delegated designer.
2. Crushed stone used for construction of the granular base leveling pad : In accordance with delegated design drawings.
3. Concrete used for construction of an unreinforced concrete leveling pad shall satisfy the criteria for AASHTO Class B. The concrete shall be cured a minimum of 12 hours prior to placement of the precast modular block wall retaining units and exhibit a minimum 28-day compressive strength of 2,500 psi.

C. Filter Fabric:

1. Manufacturers:

a. Mirafi 140N
b. Propex Geotex 451
c. Skaps GT-142
d. Thrace-Linq 140EX
e. Carthage Mills FX-40HS

D. Foundation Drain Pipe:

1. Drainage collection pipe shall be a 4” diameter, 3-hole perforated, HDPE pipe with a minimum pipe stiffness of 22 psi per ASTM D2412.
2. The drainage pipe shall be manufactured in accordance with ASTM D1248 for HDPE pipe and fittings.

## 2.5 SOURCE QUALITY CONTROL (AND TESTS)

A. Section 014000 “Quality Requirements” for testing, inspection and analysis requirements.

B. Maintain plant records and quality control program during production of cast units. Make records available upon request.

C. Testing and Inspection. Sample and test precast units including slump, unit weight, temperature, entrained air in concrete mixture, and compression.

D. Sample and test concrete units with respect to compressive strength on basis of production lot results. Define production lot as units a single compressive test result represents from one day's

production or 60 units, whichever is less. Select four cylinders per lot AASHTO T141. Cure and test cylinders in accordance with AASHTO T23, and AASHTO T231. Base compression test result on average of 2 cylinders, with no compressive strength result less than 90 percent of design strength.

E. Take one air entrainment test cylinders for each set of concrete test cylinders taken.

F. Visually inspect to detect defects, cracks, and chipping due to imperfect proportioning, mixing or molding; surface defects and excessive voids; and areas beyond repair. Engineer may reject units for color variations on front face due to excess form oil, cracks, chips or other visual appearance defects.

G. Sample and test materials for manufacturing of precast units including cement, aggregates, water, admixture, and steel reinforcement according to this Section. Make results of quality control tests available for Engineer's review, upon request.

H. Test and analyze three random specimens for each 500 cubic feet of fabricated cast modular units:

1. Compressive Strength: In accordance with ASTM C1194.
2. Cold Water Absorption: In accordance with ASTM C1195.
3. Resistance to Freezing and Thawing: In accordance with ASTM C666; maximum cumulative percent mass loss in accordance with ASTM C1364.

I. Visually inspect color differences between fabricated units and approved sample in accordance with ASTM D1729.

J. Make completed (product name) available for inspection at manufacturer's factory prior to shipment. Notify Owner at least seven days before inspection is allowed.

K. Allow witnessing of factory inspections and test at manufacturer's test facility. Notify Owner at least seven days before inspections and tests are scheduled.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Verify site conditions and foundation soil bearing capacity after excavation.

B. Verify with Engineer base of undercut, if any, to complete necessary removal of unsuitable material and replacement of material with coarse aggregate.

### 3.2 DEWATERING

A. Furnish, install, operate and maintain satisfactory dewatering systems as required to maintain excavation in dry and workable condition. Provide equipment and materials and continue as long as necessary.

B. Remove ground water by pumping or other methods to prevent softening of surfaces exposed by excavation without removing fines from subsoil.

C. Lower ground water levels within excavation areas 12 inches, minimum below bottom of excavations.

D. Place dewatering system in operation before excavating below ground water level. Operate system continuously, 24 hours per day, 7 days per week, until construction work below existing ground water levels is complete.

## 3.3 EXCAVATION AND FOOTER

A. Provide temporary support of excavation when required in accordance with Section 312000 “Earthwork” and shop drawings.

B. Proof roll foundation bearing surface in presence of Engineer to meet AASHTO T235 and minimum allowable bearing pressure.

C. Remove and replace foundation soil including unsuitable soils to minimum depth of 12 inches with compacted coarse aggregate material.

D. Provide and properly cure cast-in-place footing, in accordance with Section 033000 “Cast-in-Place Concrete” to dimensions indicated on Delegated Design Drawings.

## 3.4 DRAINAGE AND BACKFILL

A. Set non-woven geotextile against back of first retaining wall unit, over prepared foundation, and extend along bottom towards back of excavation, up excavation face and back over top of free draining coarse aggregate backfill to retaining wall, or as indicated in Delegated Design Drawings.

B. Place perforated structure foundation drainage pipe behind footing as indicated on Delegated Design Drawings . Lay pipe at minimum gradient of 2 percent to ensure drainage to free outlets. Incorporate drain pipe in continuous 1 foot by 1 foot drainage cell encased in geotextile.

C. Place and compact coarse aggregate free draining backfill material in maximum 12 inch lifts.

D. Place and compact soil backfill material above free draining backfill and geotextile from top of wall to finished ground in maximum 8 inch lifts.

E. Maintain optimum or less moisture content of backfill materials to attain required compaction density.

F. Allow no heavy compaction equipment within 3 feet of back of wall facia.

G. Apply rubble-stone riprap from top of wall to existing grade in accordance with Section 310515 “Soils and Aggregates for Earthwork.”

## 3.5 INSTALLATION OF MODULAR UNITS

A. Assemble units as shown on shop drawings and in accordance with manufacturer's recommendations.

B. Place first course of precast concrete modular retaining wall units on concrete or aggregate base footing. Ensure that wall modules are aligned properly, leveled from side to side and front to back and are in complete contact with footer.

C. Place wall modules above bottom course such that shear knob arrangement provides design batter of wall face. Place successive courses to create running bond pattern with edge of units being approximately aligned with middle of unit in course below it.

D. Place units side by side for full length of wall alignment. Ensure correct retaining wall lines, curves, jogs, and steps for first course.

E. Sweep excess material and remove burrs from top of units before placing additional levels to ensure that no dirt, concrete or other foreign materials become lodged between successive lifts of wall modules. Install next course maintaining required vertical alignment as shown on shop drawings. Stagger full bearing of concrete units over vertical joints below. Do not use blocks, wedges, or other devices for permanent shimming of wall units.

F. Place maximum of 3 courses of wall units above level of drainage material at any time.

G. Check level of wall modules with each lift to ensure that no gaps are formed between successive lifts.

H. Repeat erection sequence until grades indicated on Drawings are achieved.

I. Secure coping units to top of wall with two 3/8 inch beads of flexible concrete adhesive positioned 2 inches in front and behind tongue of last course of retaining wall units.

J. Handle and erect concrete units carefully so as to avoid damage to units. Replace any members damaged to extent where their aesthetics or structural integrity is compromised.

## 3.6 COATING

A. Apply concrete protective coating and compatible anti-graffiti coating to precast units.

## 3.7 ERECTION TOLERANCES

A. Section 014000 “Quality Requirements” for tolerances.

B. The following tolerances are maximum allowable deviation from indicated construction:

1. Vertical Control: plus or minus 1.25 inches over a 10 ft distance, plus or minus 3 inches total.
2. Horizontal Control: plus or minus 1.25 inches over a 10 ft distance, plus or minus 3 inches total.
3. Rotation: plus or minus 2 degrees from planned wall batter.

4. Bulging: 1.0 inch over a 10 ft distance.

## 3.8 FIELD QUALITY CONTROL

A. Section 014000 “Quality Requirements” for field inspecting, and testing.

B. Field test concrete in accordance with Section 033000 “Cast-in-Place Concrete.”

C. Compaction Testing: As specified in Section 312000 “Earthwork.”

D. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

E. Frequency of Compaction Testing: One for each lift.

## 3.9 MANUFACTURER'S FIELD SERVICES

A. Section 014000 “Quality Requirements” for requirements for manufacturer's field services.

B. Furnish manufacturer's representative at Project site to assist Contractor, and Engineer until they are familiar with and confident in installation, and construction procedures.

C. Furnish monthly visits to Project site by company representative during wall construction.

END OF SECTION 323223

# Revised Specification Temporary Facilities and Controls 11/24

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# SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, security and protection facilities, and environmental protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

### 1.3 USE CHARGES

A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Engineer, occupants of Project, testing agencies, and authorities having jurisdiction.

B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.

C. Water Service: Pay water-service use charges for water used by all entities for construction operations.

D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

E. Water and Sewer Service from Existing System: There is currently no potable water or sewer service at the site. Obtain and pay for water and sanitary service required for contractor operations until such time as these new utilities are operational.

F. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use with metering. Provide connections and extensions of services and metering as required for construction operations.

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1.4 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

B. Implementation and Termination Schedule: Within **15** days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.

C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

1. Refer to General Conditions Article 52 and Notices to Contractor NTC-41 for specific signage requirements for City of New Britain and Drinking Water State Revolving Fund.

D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
3. Indicate methods to be used to avoid trapping water in finished work.

F. Flood Contingency Plan: Describe procedures and controls for protecting buoyant, hazardous, flammable, explosive, soluble, expansive, or radioactive materials or any other materials that could be injurious to human, animal, or plant life in the event of a flood during construction. Detail such materials expected to be on-site and how such materials will be protected from flood damage, secured or removed from the floodplain to prevent pollution and hazards to life and property. Comply with any local, state, and federal requirements or conditions of Appendix G.

G. State-Listed Species Habitat Protection Plan: Describe procedures and controls for protecting state-listed species and habitat, as detailed in the NDDB Determination included in Appendix G. The State-Listed Species Habitat Protection Plan shall also include the qualifications and any certifications of the qualified professional familiar with habitat requirements and behavior of state-listed species who will perform species relocations, as required herein.

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1.5 QUALITY ASSURANCE

A. Temporary facilities shall comply with all applicable state and local ordinances, codes and regulations.

B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

D. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.

B. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

C. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Engineer from manufacturer's standard colors.

D. Wood Enclosure Fence: Plywood, 6 feet high, framed with four 2-by-4-inch (50-by-100-mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.

E. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.

F. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches (914 by 1524 mm).

G. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

## 2.2 TEMPORARY FACILITIES

A. Field Offices: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Engineer's Field Office: Of sufficient size, but minimum 12-feet by 50-feet, to accommodate needs of Owner, Engineer, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections for duration of project. Keep office clean and orderly. Furnish and equip offices as follows:

1. Field office trailer shall have at least two offices, one conference room, one closet, and two exterior doors.
2. Conference room shall include built-in plan table.
3. Engineer's field office shall be weather-tight construction with floor, walls, and ceiling completely insulated. Each room shall have at least one operating window. Each window shall have a venetian blind and full insect screen. Furnish two sets of keys for each exterior door. Provide fully insulated skirting on all sides of the field office trailer. Provide steps, platforms, handrails, and boot scrapers for each exterior door.
4. Field office trailer shall be Mobile Mini, ModSpace, Williams Scotsman, or equal. Converted storage or box containers will not be acceptable.
5. Furnishings:

    a. Provide the following furnishings for the Engineer's temporary field office for the duration of the project. All furnishings shall be new – or in very good condition – subject to approval of the Engineer.

        1) Four 60-inch by 30-inch desks with file drawer and 5 drawers, all lockable.
        2) Upholstered swivel type chair with arms for each desk.
        3) One 30-inch by 84-inch conference table.
        4) Ten armless side chairs (stacking type).
        5) Two 54-inch by 30-inch folding tables.
        6) Six file cabinet, 4 drawer, legal size, Hon No. HN-315C, or equal.
        7) Four wastebaskets.
        8) One rolling plan storage rack, 10-stick capacity.
        9) One lockable storage cabinet, 72-inch high, 36-inch wide, and 18-inch deep.
        10) Two steel bookcase units, 4 shelves high, Hon No. HN-S48 ABC, or equal.
        11) One digital telephone answering machine.
        12) 24 painted steel coat hangers.
        13) One electric bottled water dispenser with hot and cold outlets and refrigerator unit. Adequate water bottles shall be provided (and paid for by the Contractor) until Final Completion.
        14) One wall-mounted first aid kit, McMaster-Carr 9501T1 or equal.
        15) Two smoke detectors, with batteries.
        16) Two dry erase boards, aluminum frame, 36-inch by 60-inch, markers and eraser, Quartet Model No. TS-S 535 or equal.
        17) One 1000-watt minimum 1.4-cu.ft. microwave oven.
        18) One 6-cf refrigerator.

19) Commercial duty cross-cut shredder with basket, designed for 3 to 5 users, Fellowes Powershred SB-125i, or equal.
20) One first aid kit, OSHA (1910.151.b) and ANSI (Z308.1-2003) compliant, suitable for ten people.
21) Temporary toilet and hand washing facilities.

6. Equipment:

a. Contractor shall provide the following equipment for the Engineer's temporary field office for the duration of the project. All equipment shall be new.

1) A multifunction Photocopier, printer, facsimile and scanner.

b. With 50-sheet auto-feeder, capable of copying and printing
c. Letter-sized, legal-sized, 11-inch by 17-inch, **and 12-inch by 18-inch** documents.
d. Contractor to provide paper and ink cartridges, as required, for the duration of the project.

1) Answering machine with digital recorder.
2) Digital Camera: provide one new digital camera for the Engineer's use for the project duration. Camera shall be a major brand name (e.g., Minolta, Cannon, Olympic, Pentax, etc. – subject to the Engineer's approval) and shall have an automatic date function, 3 Mega pixel or greater, 3x optical zoom or better, and at least one GB of memory (on board or supplemental memory card). The camera shall come complete with carrying case, storage card, rechargeable batteries, battery charger, flash memory reader, USB cables and all necessary software. After completion of project the camera will become the property of the Owner.
3) Four 8-outlet surge protectors with six-foot cord and minimum 1800-joule energy rating or greater; as manufactured by Belkin, or equal.
4) One 4-cup coffeemaker with timer, by Krups, or equal.

7. Services:

a. Provide the following services for the duration of the project. Services shall include all costs for installation, use, maintenance, and removal of all products, services and equipment billed by each provider for each service specified herein.
b. Field office shall have complete and fully functional electrical, plumbing, and HVAC systems. Provide at least two smoke detectors hard-wired into the electrical system. Perform all scheduled and unscheduled maintenance for all systems and as directed by the Engineer.
c. Electrical System: Provide connection to temporary electric service. Comply with the electrical requirements of the furnished office trailer. Provide main circuit panel, sufficient GFCI outlets and lighting in each room, exterior lights at each exterior door, and proper grounding of entire electrical system.
d. Plumbing system: Connect to existing potable water supply if available. Provide hot water heater and hot and cold water to each fixture. Connect waste pipes to existing sanitary system or a waste holding tank. Heat trace and insulate exterior piping to prevent freezing. Where potable water service is not available, Contractor shall provide bottle water service with water chiller/dispenser.

e. HVAC System: Provide central heating and air conditioning system with programmable thermostat. System shall be capable of maintaining an interior temperature of 70 degrees F when the exterior temperature is 0 degrees F and an interior temperature of 75 degrees F when exterior temperature is 100 degrees F.

f. Bottled water service: Provide bottled water service complete with dispenser with hot- and cold-water taps and regular bottle and cup replenishment as directed by the Engineer.

g. Janitorial service: Provide janitorial services (at least weekly) that include dusting, sweeping, vacuuming, mopping, disinfection, and trash removal.

h. Sanitary service: Provide regular pumping of chemical toilets and any other waste holding tank, if applicable, as needed.

i. Communications:

1) Install two telephone lines in the Engineer's field office for the Engineer's exclusive use:

a) one voice grade line with caller ID and call-waiting features.
b) a second line for a dedicated fax line.

j. Internet Access:

1) Provide high-speed Broadband internet access for the duration of the project.
2) Provide one air card for the Engineer's use for the duration of the project (through Final Completion], with unlimited data plans.

k. Pay all costs for installation, maintenance, and removal of the telephone and internet service and instruments, including cellular phone service. The monthly cost of all calls made and received by the Engineer, including toll and long-distance calls, shall be paid for by the Contractor for the duration of the project.

8. Supplies: Provide the following supplies for the duration of the project: copy paper, toner, toilet paper, paper towels, soap, light bulbs, and other consumables as required by the Engineer.

C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

## 2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction and marked for intended location and application.

## 2.4 ENVIRONMENTAL PROTECTION FACILITIES

A. Exclusionary Fencing: Exclusionary fencing shall be provided for protection of state-listed species, as detailed below and required by the NDDB Determination included in Appendix G.

1. Exclusionary fencing shall be at least 20-inches tall and must be secured to and remain in contact with the ground. Fencing shall be regularly maintained to secure any gaps or openings at ground level that may allow animals pass through.
2. Prior to construction activities, Contractor shall search Work area and fencing for the presence of and state-listed species named in the NDDB Determination. Any state-listed species included in the NDDB Determination encountered shall be relocated to suitable habitat outside the area of disturbance. Contractor shall provide a qualified professional familiar with habitat requirements and behavior of the species to perform relocations.

**B. Aquifer Protection Area: Implement best management practices, to the extent practicable, for temporary construction as indicated in the CT DEEP Aquifer Protection Area Guidance document "Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas," included as Attachment A to this specification.**

**1. Refueling of all large construction vehicles and equipment performed on site must be completed within an approved portable spill containment area to prevent the contamination of soils and groundwater by accidental spills within the Aquifer Protection Area. Spill kits must be kept on site at all times. Refueling of cars, pickup trucks, vans, and other commercial or personal vehicles is prohibited on the project site.**

# PART 3 - EXECUTION

## 3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

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## 3.2 INSTALLATION, GENERAL

A. Locate facilities where shown on the Drawings or where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work. Engineer’s trailer shall be set up and ready for occupancy within 30 days of the Notice to Proceed.

1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

B. Provide each facility ready for use within 30 days of the Notice to Proceed and prior to Commencement of Work at the site. Do not remove until approved by Engineer or are replaced by authorized use of completed permanent facilities.

## 3.3 ENGINEER'S OFFICE

A. Engineer's trailer shall be set up and ready for occupancy within 30 days of the Notice to Proceed and prior to commencement of Work at the site. All systems, furnishings, equipment, and services specified herein shall be furnished, installed, and completely operational for the field office to be considered established.

1. Provide regular office cleaning services for the duration of the project.
2. Provide supplies including, but not limited to restroom supplies (toilet tissue paper, paper towel, and soap), as well as light bulbs, air conditioner filters, etc.
3. Provide office supplies for printers and fax machines, etc.
4. Supply all fuel for heating and pay all utility bills.

B. Install field office plumb and level.

C. Engineer's trailer shall be removed, and the site shall be cleaned up and restored before Final Completion of the project.

## 3.4 CONTRACTOR'S FIELD OFFICE

A. Provide a temporary field office(s) for the Contractor's use for the duration of the project. An authorized representative of the Contractor shall be present at all times while the Work is in progress. Instructions received at the Contractors field office from the Engineer shall be considered delivered to the Contractor.

B. Locate field office(s) in accordance with approved shop drawings and as directed by the Owner.

C. Establish and occupy field office within 30 days of the Notice to Proceed, unless otherwise approved by the Engineer or Owner.

## 3.5 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service, if approved by Owner.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. There is currently no potable water or sewer service at the site. Obtain and pay for water and sanitary service required for contractor operations until such time as these new utilities are operational.

C. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities. Provide regular maintenance and cleaning of sanitary facilities.

D. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.

E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Prior to commencing work, isolate the HVAC system in area where work is to be performed.

    a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

F. Temporary Light and Power: Provide by Contractor, including 220 Volt service for welding, complete with wiring, lamps and similar equipment as required to adequately light all work areas and with sufficient power capacity to meet the project needs. Make all necessary arrangements with the local electric company for temporary electric service and pay all expenses in connection therewith.

G. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

H. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

1. Install electric power service overhead unless otherwise indicated.
2. Connect temporary service to Owner's existing power source, as directed by Owner.

I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

J. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment and one land-based telephone line(s) for each field office.

1. At each telephone, post a list of important telephone numbers.

a. Police and fire departments.
b. Ambulance service.
c. Contractor's home office.
d. Contractor's emergency after-hours telephone number.
e. Engineer's offices.
f. Owner's office.
g. Principal subcontractors' field and home offices.

K. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Engineer and Owner.

L. Project Computer: Provide a desktop computer in the primary field office adequate for use by Engineer and Owner to access Project electronic documents and maintain electronic communications. Equip computer with not less than the following:

1. Processor: Intel Core i5 or i7.
2. Memory: 164 gigabyte.
3. Disk Storage: 1 -terabyte hard-disk drive and combination DVD-RW/CD-RW drive.
4. Display: 24 inch (610 mm) LCD monitor with 256-Mb dedicated video RAM.
5. Full-size keyboard and mouse.
6. Operating System: Microsoft Windows 10 Professional.
7. Productivity Software:

a. Microsoft Office Professional, 2013 or higher, including Word, Excel, and Outlook.
b. Adobe Reader DC.
c. WinZip 10 or higher.

8. Printer: "All-in-one" unit equipped with printer server, combining color printing, photocopying, scanning, and faxing, or separate units for each of these three functions.
9. Internet Service: Broadband modem, router and ISP, equipped with hardware firewall, providing minimum 10 Mbps upload and 15 Mbps download speeds at each computer.
10. Internet Security: Integrated software, providing software firewall, virus, spyware, phishing, and spam protection in a combined application.
11. Backup: External hard drive, minimum 2 terrabytes, with automated backup software providing daily backups.

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## 3.6 SUPPORT FACILITIES INSTALLATION

A. Comply with the following:

1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
2. Utilize designated area within existing building for temporary field offices.
3. Maintain support facilities until Engineer schedules Final Completion inspection. Remove just before Final Completion.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
2. Prepare subgrade and install subbase and base for temporary roads and paved areas accordance with Section 312000 "Earthwork."
3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course in accordance with Section 321216 "Asphalt Paving."

D. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

E. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

F. Storage and Staging: Provide temporary offsite area as needed to supplement designated areas of Project site for storage and staging needs.

G. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

H. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings. Signs shall be constructed of A-A Ext – APA grade plywood, 1-in thick. Posts and braces shall be of pressure treated lumber.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

    a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touch up signs, so they are legible at all times.

I. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

J. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

K. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

L. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.

M. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.

N. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

## 3.7 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Section 011000 "Summary."
2. Comply with environmental protection facilities as required in Appendix G.

C. Temporary Erosion and Sedimentation Control: Comply with requirements of authorities having jurisdiction as detailed in approvals and conditions included in Appendix G and requirements specified in Section 312500 "Erosion and Sedimentation Controls."

D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

E. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

F. Tree and Plant Protection: Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."

G. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

H. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals, so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.

I. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

J. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.

K. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

L. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide, install and maintain signage directing occupants to temporary egress.

M. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

N. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition in accordance with requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign, stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

O. Weather protection shall comply with M.G.L. Chapter 149 Section 44G.

## 3.8 MOISTURE AND MOLD CONTROL

A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

    a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
    b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Engineer.
    c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

## 3.9 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
2. Clear snow and ice from all drives, walks and stairs to maintain safe vehicle and pedestrian access to the site and facilities as directed by the Engineer.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Final Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Final Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. Just prior to Final Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

## 3.10 ATTACHMENTS

**A. CT DEEP Aquifer Protection Area Guidance – Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas**

END OF SECTION 015000

# Aquifer Protection Area Guidance: Construction and Stormwater 101024

## AQUIFER PROTECTION AREA GUIDANCE

# Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas

**Issues and Concerns**
Potential groundwater quality concerns include stormwater, fuel, and other maintenance chemicals associated with vehicles, machinery, and equipment.

**Guidance/Recommendations**
For the protection of ground water quality at construction operations in aquifer protection areas, DEEP recommends the following:

**Temporary Construction Measures**

- Significant fuel, chemical or other hazardous materials storage and handling, including fueling of construction vehicles, should be located outside well field area and aquifer protection area.
- No repair or maintenance of construction vehicles or washing of construction vehicles is permitted within the aquifer protection area.
- Any necessary temporary storage should be aboveground, protected from rainfall, and on an impervious containment surface.
- An emergency spill and response plan should be developed, including coordination with the water supplier.
- The site access should be adequately secured at all times to prohibit any unauthorized disposal of waste materials.

**Stormwater Pollution Prevention Measures:**

- Ways to minimize pollutant load (sand, salt, etc.) should be examined.
- Deicing management areas should be established including low salt use areas, alternative chemical or sand methods.
- Wellhead protection signs shall be posted in clear visibility of the highway at the entrance and exit points of the aquifer protection area and at ½ mile intervals.

**Drainage System Design Criteria:**

- Select best management practices from the DEEP stormwater manual based on treatment effectiveness and low groundwater pollution potential.

- Sheetflow and swale collection is encouraged, where possible, outside of immediate well field area.
- Catch basins and curbs should be used in immediate wellhead area to divert and control runoff and spills away from wellhead.
- Dry wells or similar subsurface leaching structures should not be used for stormwater disposal from paved or other areas that have high potential to pollute groundwater; existing structures which have high potential to pollute groundwater should be removed or converted.
- Gross particle/oil separators (swirl concentrator type) may be used for pretreatment of consecutive catch basins. Deep catch basins (minimum 4' deep and tight construction, with baffles, may also be used).
- Stormwater discharge points shall outlet to aboveground land surface or basin type structures. Significant or critical discharge points should have a basin designed with a forebay (tight soil or lined) capable of containing an 8,000-10,000 gallon spill volume and 3-6 feet above water table, 4 feet above bedrock.
- Potential strategic groundwater monitoring should be considered.

For questions or more information, please contact the Aquifer Protection Area Program at 860-424-3040 or visit our website at www.ct.gov/deep/aquiferprotection.

# AQUIFER PROTECTION AREA GUIDANCE

## Best Management Practices for Controlling Stormwater from Parking Lots in Aquifer Protection Areas

(1) Do not use direct infiltration structures (galleries, drywells, trenches) as these do not allow for attenuation of salt or other soluble compounds that may be contained in parking lot runoff.

(2) Non-structural measures to dissipate and treat runoff are encouraged, including sheetflow from uncurbed pavement and vegetated swales/basins. These provide an opportunity for volatilization of volatile organic compounds to the extent possible before the stormwater can infiltrate into the ground.

(3) If a stormwater collection system must be installed, it should discharge to an above-ground outlet point (swales, detention/retention basins or surface waters).

(a) Any catch basins installed should have deep sumps to trap sediments and hoods to trap oil and grease.

(b) If more than 1 acre of pavement drains to a common discharge point, a gross particle separator should also be installed. Advanced designs for gross particle separators have been developed, such as Vortechnics, Downstream Defender and Stormceptor, that the Department believes are very effective in retaining medium to coarse grained sediments as well as floatables. The last type of separator is designed to treat runoff from areas up to approximately 1 acre in size, while the former two can be sized to accommodate flow from larger areas. It is recommended that the appropriate variety of this or similar type of unit with a cyclonic design be installed in conjunction with each outfall, depending on the size of the drainage area.

(4) Provisions should be made for the periodic maintenance that will be required to insure continued effectiveness of these control measures.

**For more information regarding the design of stormwater collection systems, contact Chris Stone of the DEEP's Stormwater Permitting & Enforcement Division at (860) 424-3850**.

# Site Clearing Specifications 11/24

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# SECTION 311000 - SITE CLEARING

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Stripping and stockpiling rock.
6. Removing above- and below-grade site improvements.
7. Disconnecting, capping or sealing, and removing site utilities.

B. Related Requirements:

1. Section 024116 “Structure Demolition” for removal of existing utilities.
2. Section 312500 “Erosion and Sedimentation Controls” for temporary protection of erosion and sedimentation.

### 1.3 DEFINITIONS

A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects larger than 2 inches in diameter; and free of weeds, roots, toxic materials, or other nonsoil materials.

D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

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1.4 MATERIAL OWNERSHIP

A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.

1. Use sufficiently detailed photographs or video recordings.
2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plant designated to remain.

B. Topsoil stripping and stockpiling program.

C. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

**D. Clearing Plan: Identifying and accurately showing locations of trees greater than five inches in caliper measured 3 feet off the ground scheduled for removal. Clearing of trees exceeding this threshold requires final approval by the City of Bristol Zoning Commission.**

1.6 QUALITY ASSURANCE

A. Topsoil Stripping and Stockpiling Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work. Include dimensioned diagrams for placement and protection of stockpiles.

B. Conform to applicable code for environmental requirements and disposal of debris,.

1.7 FIELD CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, adjacent private property and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed roadways if required by Owner or authorities having jurisdiction.

B. Utility Locator Service: Notify Call Before You Dig for area where Project is located before site clearing.

C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

D. Soil Stripping, Handling, and Stockpiling: Perform only when the soil is dry or slightly moist.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earthwork."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

C. Call Local Utility Line Information service not less than three working days before performing Work.

1. Request underground utilities to be located and marked within and surrounding construction areas.

### 3.2 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Arrange with utility companies to shut off indicated utilities.

B. Locate, identify, and disconnect utilities indicated to be abandoned in place.

C. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Engineer’s written permission.

D. Removal of underground utilities is included in earthwork sections; in applicable fire suppression, plumbing, HVAC, electrical, communications, electronic safety and security, and utilities sections; and in Section 024116 "Structure Demolition".

## 3.3 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
2. Use only hand methods or air spade for grubbing within protection zones.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

## 3.4 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.

1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

1. Limit height of topsoil stockpiles to 72 inches.
2. Do not stockpile topsoil within protection zones.
3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

## 3.5 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.

2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

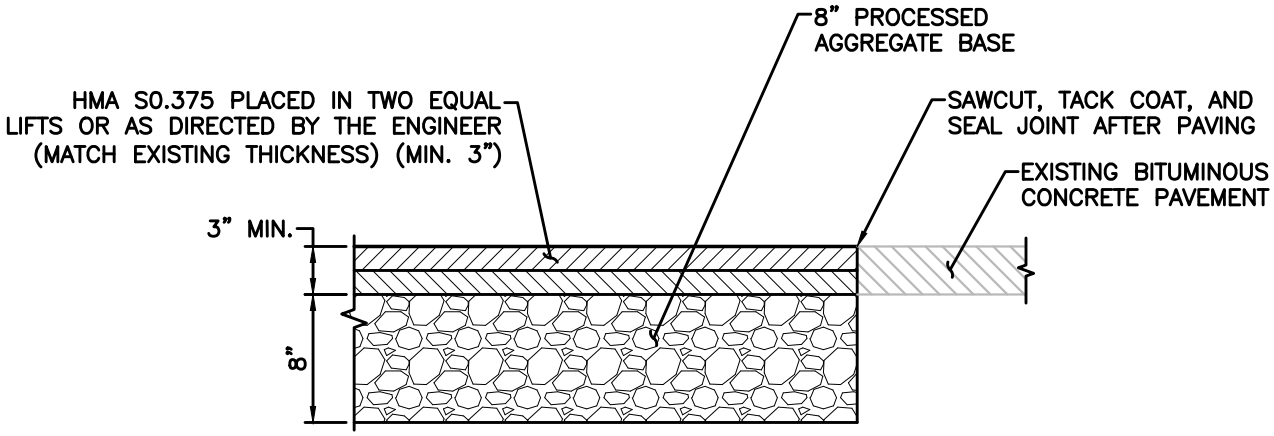
## 3.6 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other project work.

END OF SECTION 311000

# Standard Bristol DPW Roadway, Curb and Sidewalk Repair Details




RECONSTRUCTION OF ROADWAY

SCALE: $1\frac{1}{2}$" = 1'–0"

111 NORTH MAIN STREET
BRISTOL, CONNECTICUT
06010
T: 860.584.6125
www.bristolct.gov

Bristol CONNECTICUT Public Works

**RECONSTRUCTION OF ROADWAY DETAIL**

APPLICANT:
---
---

ON: ---
AT: ---
---
---

**STANDARD ROADWAY DETAILS**

DATE: **JULY 14, 2023**

SCALE: **AS SHOWN**

SHEET: **01**

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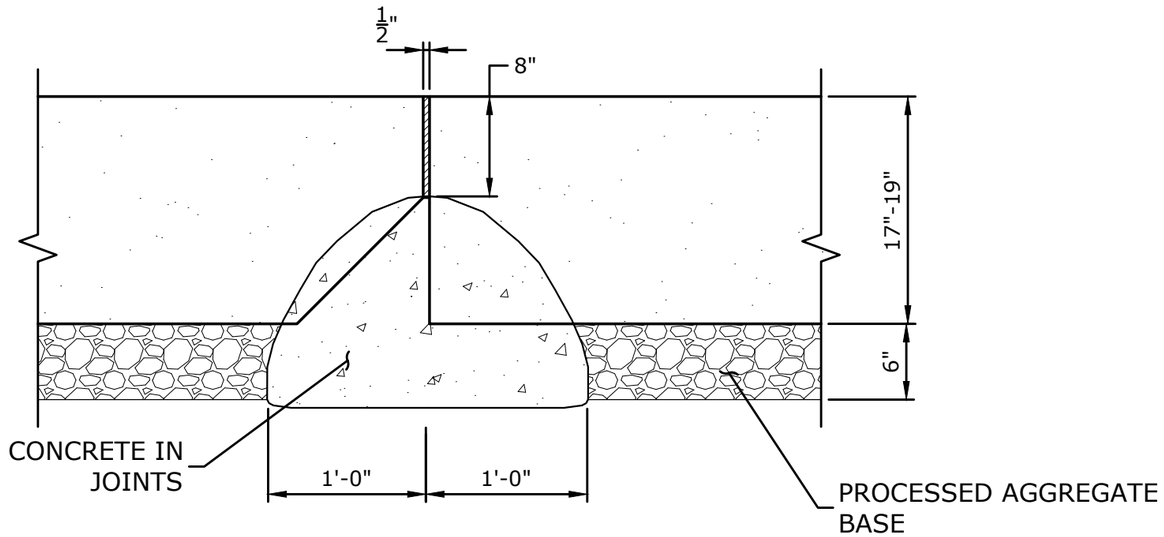


## CURB ELEVATION

NOT TO SCALE

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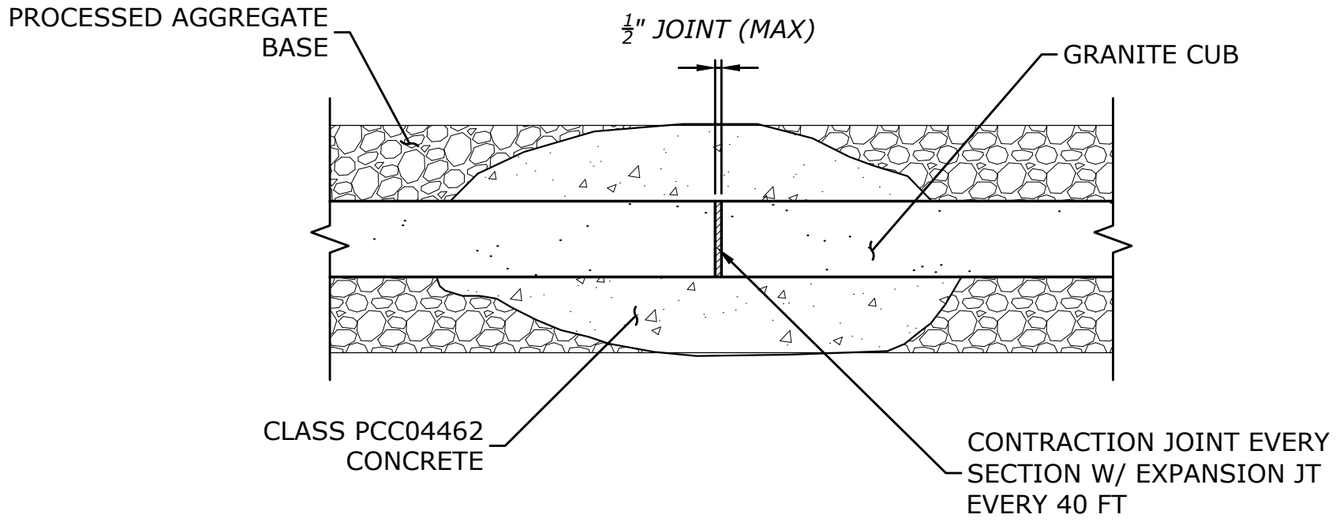


## CURB PLAN VIEW

SCALE: 1" = 1'-0"

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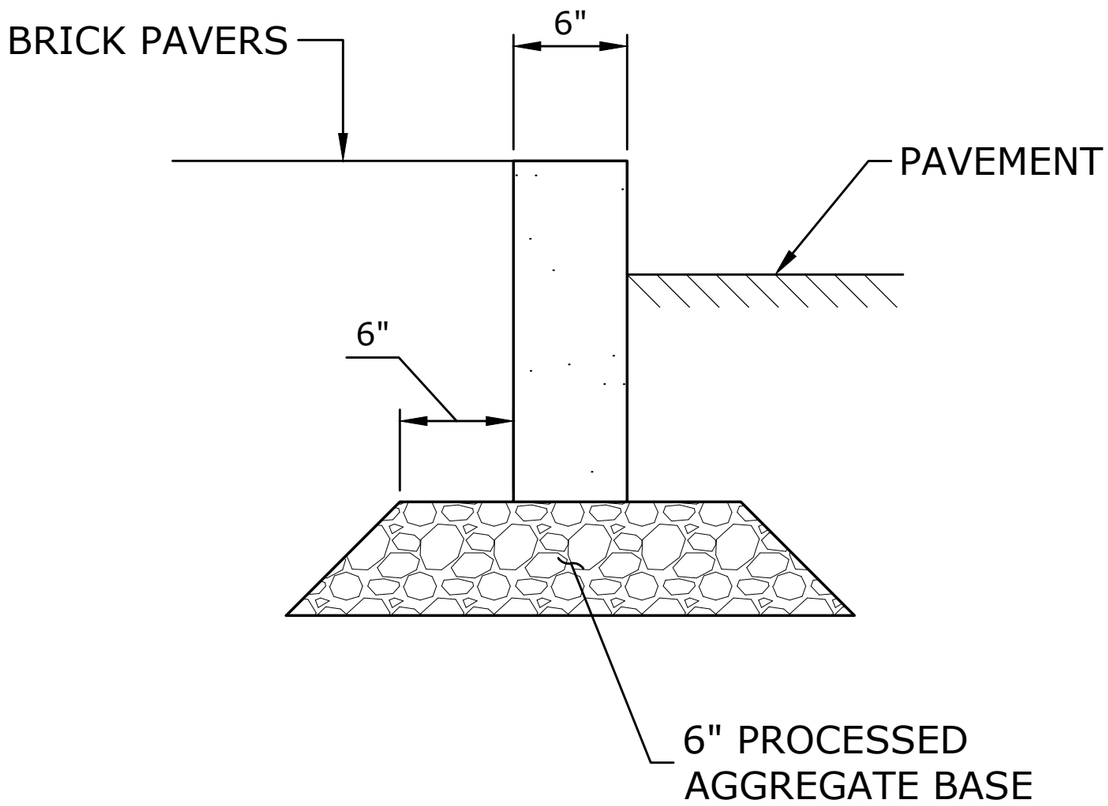


# CURB SECTION

Scale: 1" = 1'-0"

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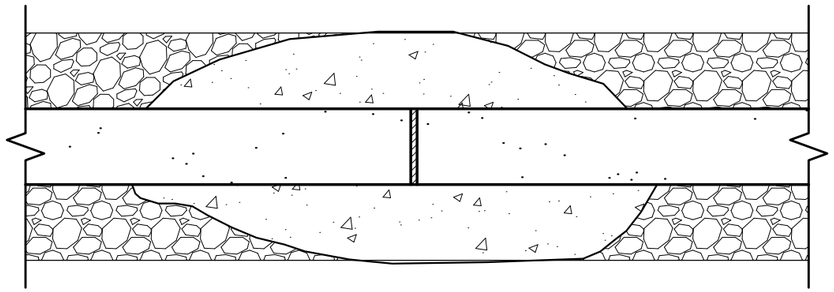
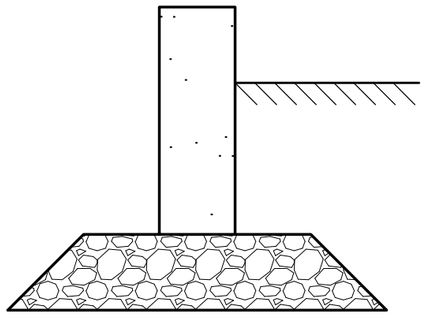
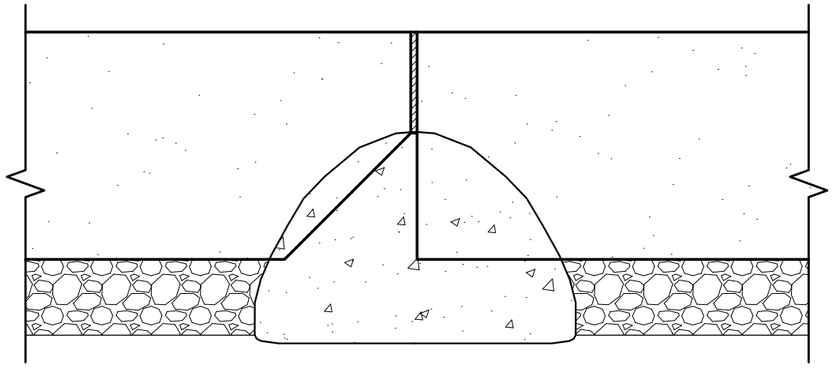
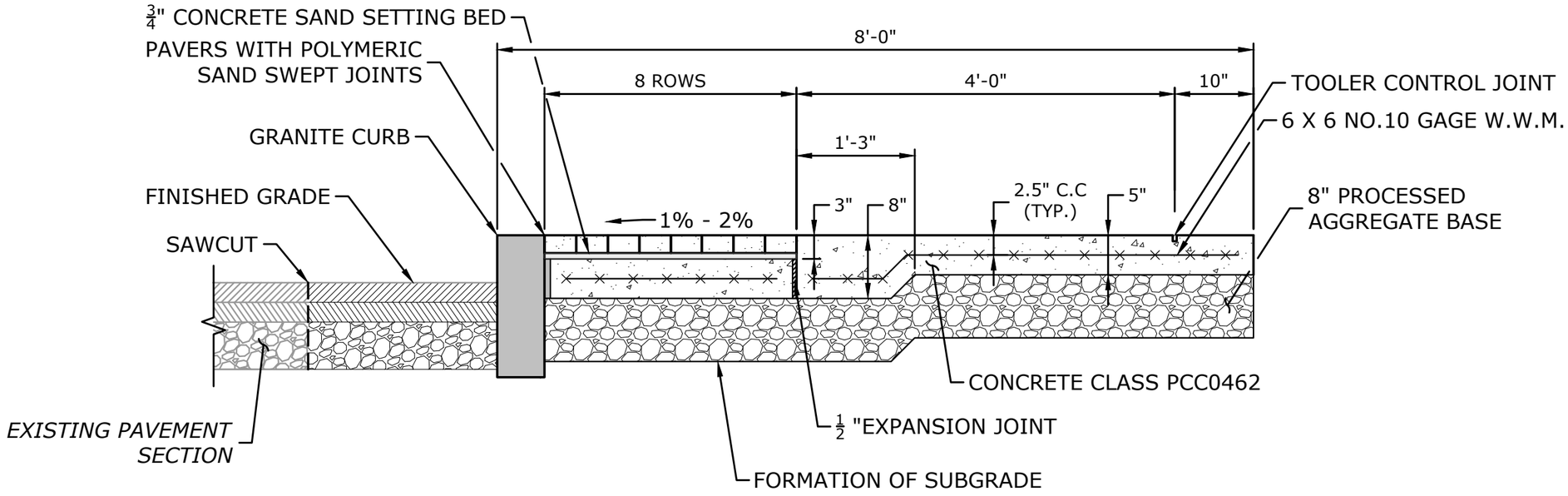


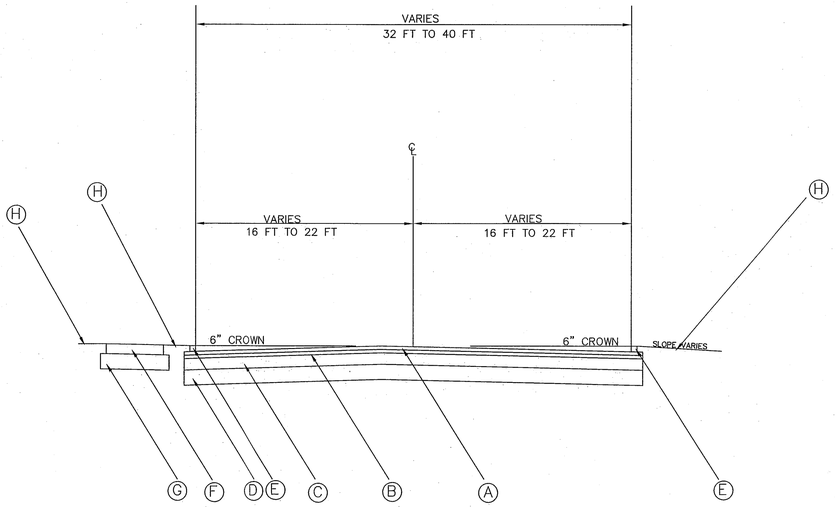







## CONCRETE SIDEWALK WITH BRICK PAVERS

SCALE: ¾" = 1'-0"




# TYPICAL SECTION
## STA. 10+50 TO 31+30

Ⓐ TWO INCH (2") CLASS 2 SURFACE COURSE

Ⓑ TWO INCH (2") CLASS 1 BINDER COURSE

Ⓒ SIX INCH (6") AGGREGATE BASE (M.05.01)

Ⓓ TEN INCH (10") SUBBASE (M.02.02)

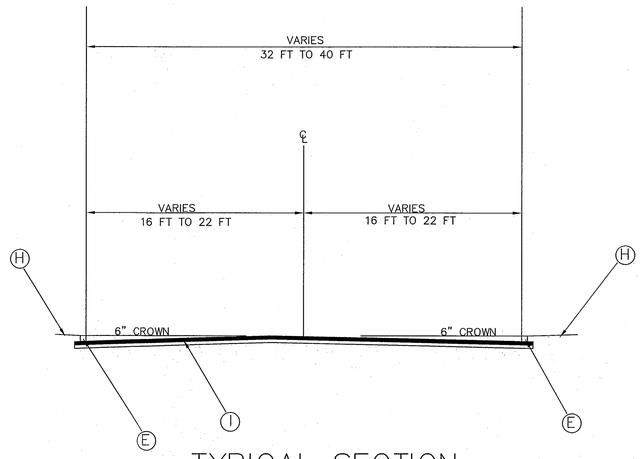
Ⓔ SIX INCH (6") BITUMINOUS LIP CURB (REMOVE EXISTING)

Ⓕ FIVE INCH (5") THICK CONCRETE WALK

Ⓖ EIGHT INCH (8") PROCESS GRAVEL

Ⓗ TURF ESTABLISHMENT (4" MINIMUM OF TOPSOIL)

Ⓘ MILL TWO INCH (2") EXISTING CLASS 2 SURFACE PAVEMENT. OVERLAY WITH NEW CLASS 2 SURFACE PAVEMENT.




# TYPICAL SECTION
## STA. 4+17 TO 10+50

| DESCRIPTION | SHEET. NO. |
|---|---|
| REVISIONS | |

NO SCALE

DESIGNER: AMF
DRAFTER: AMF
CHECKED BY: RAR
DATE CHECKED: 10-9-09

CITY OF BRISTOL, CONNECTICUT

ENGINEER: BRISTOL DPW
APPROVED BY:
DATE: OCTOBER 9, 2009


Bristol Department of Public Works
111 North Main Street
Bristol, CT 06010
(860) 584-6125
(860) 584-3838 Fax


PROJECT TITLE:
MIX STREET ROAD RECONSTRUCTION

CADD:
PLOTTED: BRISTOL DPW

TOWN:
BRISTOL, CONNECTICUT

DRAWING TITLE:
TYPICAL SECTIONS

DOT PROJECT:
DRAWING NO.:
SHEET NO.: 4

# Standard Bristol DPW Contractor Excavation Forms

# City of Bristol

DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

**EXCAVATION**
**CONTRACTOR'S PERMIT BOND**

_____
Name of License Holder

_____
Bond Number

KNOW ALL MEN BY THESE PRESENTS,

That we, _____ of the Town
(Licensee)

of_____County of _____,

and the State of Connecticut, as Principal, and _____,
(Bonding Company)

of the State of _____ having an office and place of business at

_____,

as Surety, are held and firmly bound unto the City of Bristol, in the sum of

_____ Dollars,

lawful money of the United States, to be paid to assure completion of all work for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators and assigns, jointly and severally by these presents, the said bond and surety to be holden to the CITY OF BRISTOL for such time and under such stipulations as hereinafter stated.

The condition of this obligation is such, that:

Whereas, the above named Principal has received, or may, upon his application, receive, a permit or permits from the CITY OF BRISTOL, to perform work on, about or adjacent to a highway or for the use of the highway right of way, on, over, or below, within said CITY OF BRISTOL as is or may be particularly specified in said permit or permits, to which permit or permits reference is hereby made and are made a part hereof: and Whereas, the said Principal has undertaken and does hereby agree to comply with all the rules, regulations and restrictions of said CITY OF BRISTOL in regard to said permit or permits.

NOW, THEREFORE, it is agreed that (a) this bond shall expire one year from date hereof, except that it shall continue in full force and effect as herein provided as to any and all work required under any permit issued to the Principal within one year from date hereof; (b) if the said Principal fails to complete the required work described in each and every permit issued to him, and continues in said failure and/or neglect for more than thirty days after written notice of said failure and/or neglect is mailed by the Director of Public Works of the City of Bristol to the Principal and surety (by certified mail to the address shown hereon) said Director of Public Works shall arrange to complete all unfinished work and charge the same to the Surety to the extent of this bond; and (c) if the said Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements specified in said permit or permits, and shall well and truly save harmless and indemnify the said CITY OF BRISTOL and the DIRECTOR OF PUBLIC WORKS, or either of them, from all damages and costs that the CITY OF BRISTOL or the DIRECTOR OF PUBLIC WORKS may suffer, be liable for, or be compelled to pay, or in fact does pay, for any injuries or damages which may be caused by any action or work being carried on either by the said Principal, his servants, agents or employees, under any permit or permits issued or which may be issued by said CITY OF BRISTOL, or its authorized agent, or by reason of negligence or violation of any law on the part of said Principal, his servants, agents or employees, and shall, further indemnify said CITY OF BRISTOL for any expenses that said CITY OF BRISTOL or the DIRECTOR OF PUBLIC WORKS may suffer, be liable for, or be compelled to pay, or in fact does pay for any required adjustments to the highway and its facilities to a comparable condition, including but not limited to refilling openings or excavations, removing guard railings, removing trees, tree stumps and other obstructions, replacing drainage involving driveways and restoring pavements opened or excavated satisfactory to the CITY or existed prior to the initiation of the work said Principal, his servants, agents or employees, then this obligation shall be void; otherwise to remain in full force and effect.

All of the provisions of the foregoing are to be subject to the present statute laws of the State of Connecticut and ordinances and standards and regulations of the CITY OF BRISTOL and to any change, alteration or repeal of any existing laws as may be enacted by any future session of the Legislature of the State of Connecticut or the City Council of the City of Bristol.

IN WITNESS WHEREOF, we have hereunto set our hands and seal the _____

day of _____, in the year two thousand, and _____.

Witness to Licensee's Signature (2)

_____

_____

_____
Licensee's Signature

_____
Bond Company Name

_____
Bond Company Address

_____
Agent Representing Bond Company

City of Bristol DEPARTMENT
OF PUBLIC WORKS BRISTOL,
CONNECTICUT 06010
860-584-6125 – Front Desk
860-584-6295 – Sanitary Sewer Inspector

# Contractor's License & Bonding Information Package

**License & Bonding Narrative**

This Contractor's License and Bonding Information Package includes the following:

- License & Bonding Narrative
- Excavation Contractor's License Application (to be completed & returned to DPW)
- Excavating Contractor's Permit Bond Form (to be completed & returned to DPW along with bond & Power of Attorney Form)
- List of streets requiring uniformed City of Bristol Police Officer for Traffic Control. Call 860-584-3000 48 hours prior to work to schedule Police Officers. Contractor is responsible for cost of officers.
- Sanitary Sewer Connection fee schedule.

**Requirements and procedures to become a licensed and bonded Excavation Contractor in the City of Bristol**

- Contractor must be licensed by the State of Connecticut as a P1, P7 or W-9 Contractor
- Complete and return the Excavation Contractor's License Application to the Bristol Public Works Department.
- Complete and return to the Bristol Public Works Department the Excavation Contractor's Permit Bond Form and supply a bond for ten thousand dollars ($10,000.00) with a Power of Attorney Form.
- Provide a Certificate of Liability Insurance with the following coverage;
  - Personal Injury - $100,000 Minimum(300,000)
  - Property Damage - $10,000 Minimum(300,000)

Submit the above listed information as one package to the Bristol Department of Public Works office during regular office hours (M-F, 8:00-5:00). This information will be reviewed by the Sanitary Sewer Inspector.

After you become a licensed and bonded Contractor you must obtain an Excavation Permit from the City of Bristol Sanitary Sewer Inspector prior to conducting any work within a City of Bristol street and/or right of way.

City of Bristol DEPARTMENT
OF PUBLIC WORKS BRISTOL,
CONNECTICUT 06010

**License & Bonding Narrative (Continued)**

# Excavation Permit & Permanent Patch Information

All excavation and utility work conducted within any City of Bristol street and/or right of way can only be conducted by Contractors licensed and bonded ***by the City of Bristol***.

To become a licensed and bonded Contractor in the City of Bristol obtain a "Contractor's License & Bonding Information Package" from the City of Bristol Department of Public Works office located in City Hall at 111 North Main Street, Bristol Connecticut.

An excavation permit must be issued by the City of Bristol Sanitary Sewer Inspector (584-6115) a minimum of 48 hours prior to any excavation work within any City of Bristol street and/or right of way.

All ***utility connection fees*** for the subject property must be paid prior to issuance of an excavation permit.

Excavation permits are issued Monday thru Friday from 8:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 4:30 p.m. and at other times as arranged with the Sanitary Sewer Inspector.

**Fees**

**Excavation permit fee** = $40.00 each. Separate excavation permits are required for each utility.

**Permanent Patch fee** – At the time of issuance of an Excavation Permit the Contractor shall pay the estimated cost of the permanent patch to the City of Bristol. During the period between temporary patch and permanent patch, the Contractor shall be responsible for maintaining the patch and shall promptly correct all defects upon order of the Director of Public Works or his designated agent. The intent is that temporary patches shall go through one complete winter season prior to being permanently patched by the City of Bristol. Prior to issuing a Certificate of Occupancy, the City of Bristol with measure the total area of the temporary patch, to assure the funds collected will cover the total permanent patch cost. If additional funds are needed to cover permanent patch cost they will be collected before a Certificate of Occupancy is issued.

Calculation of estimated patch cost will be based on length and width, (width shall be diameter of pipe plus twelve (12) inches, minimum twenty-four (24) inches, plus twelve (12) inches for every foot to depth of trench.) Permanent patch fees are calculated by the City of Bristol and subject to payment by the contractor.

City of Bristol
DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010
860-584-6125 – Front Desk

# PERMANENT PATCHING OF CITY STREETS

The permanent patching of all utility trenches and other excavations in streets maintained by the City of Bristol will be by the public works department or under contract to the city. All utility contractors shall obtain an excavating permit for any trenches in the public street.

**Excavation, backfilling and patching, general requirements.**

Pavement and/or sidewalks shall be cut or sawn to straight neat lines, excavation without cutting or sawing will not be allowed. Cut line shall be parallel and six (6) inches minimum, outside either edge of the proposed trench. Tunneling under pavement or sidewalks will not be allowed. Bituminous material, cement concrete, ledge, rock and boulders over six (6) inches in any dimension shall be removed from the job, together with any clay, silt, or organic material. The public works inspector will check the material excavated and will allow re-use as backfill, sandy and/or gravelly material. Material not approved shall be disposed of off the job. Backfill shall be approved sandy gravelly material with no stones over six (6) inches in any dimension. Backfill shall be compacted in twelve-inch layers using mechanical compaction equipment.

The trench shall be filled to within eleven (11) inches of finished grade, eight (8) inches of approved processed gravel shall be spread and compacted, then three (3) inches of bituminous concrete shall be spread and compacted with the finished material flush with the adjacent existing surface. Bituminous concrete material shall be "hot mix," except during winter season when plants are closed "cold patch" will be used. During the period between temporary patch and permanent patch, the utility contractor shall be responsible for maintaining the patch and shall promptly correct all defects upon order of the director of public works. The contractor is an agent of the utility whose pipe, conduit, etc., is laid in the trench and has ultimate responsibility for the trench. In sanitary sewer laterals this is the serviced property owner. This procedure also includes new sanitary sewer construction and the ultimate responsibility shall be the city public works department.

**Fees, deposits, records and measurements for patches.**

Annually the city may advertise and receive bids for permanent patching of utility trenches. Bids will be taken on repair of bituminous pavement, curbing and sidewalk. The lowest acceptable unit prices will be utilized with a ten (10) per cent escalator for charging utility contractors, that year, for trench permanent patching. Trenches that are temporarily patched this year will be permanently patched next year, the intent is that temporary patches shall go through one complete winter season.

At the time of issuance of an excavation permit, the utility contractor shall deposit a fee equal to the estimated cost of the permanent patch. Upon completion, the actual patch will be measured and the contractor shall be billed for any additional amount or added cost due to increased bid cost, if the amount is less than the prepayment he will receive credit. Calculation of estimated patch will be based on length and width, (width shall be diameter of pipe plus twelve (12) inches, minimum twenty-four (24)inches, plus twelve (12) inches for every foot to depth of trench.) Permits will not be issued to contractors owing the city any excess fee. Responsible persons will be liened if excess fee not paid within ninety (90) days of the due date.
The public works department shall keep a written record of all trenches, with date of excavation, temporary patch and permanent patch, deposit fee and estimate quantity final fee and actual quantity balance or credit due, and exact location, and type of utility. The city shall maintain a separate fund, for permanent patching of all city streets. All payments by utility contractor or others excavating in the public street will be deposited in the fund, and payments for permanent patching completed will be disbursed from the fund.

**Detailed patching requirements**.
Permanent patching shall be performed as follows:
**(a)** ***Sidewalks***. Temporary bituminous material shall be removed. Existing walk faces shall be straight and true with no cracks or breaks, if not, shall be cut at next sound transverse joint. Subgrade material shall be removed to five (5) inches below finish grade one-half inch preformed full depth and width expansion joints shall be placed against existing concrete. Portland cement concrete shall be as specified in Chapter 21 of the City Ordinances. Topsoil and seeding shall be repaired as specified in Chapter 21 of the City Ordinances. Bituminous concrete walks shall be repaired as specified in subsection (c).
**(b)** ***Curbing***. Curbing shall be replaced to conform to existing adjacent curb. Existing curb shall be cut to neat true lines. Concrete and granite curb replacement shall be not less than three (3) feet. Bituminous curb less than twenty-five (25) feet may be hand formed to proper cross section. Curbing shall conform to Chapter 21 of the City Ordinances.
**(c)** ***Pavement***. Existing bituminous material shall be removed, existing pavement shall be cut to reasonably straight longitudinal lines, transverse jogs within ten (10) feet of each other shall not be accepted, transverse cuts shall be perpendicular to the longitudinal cut. Several small excavations shall be widened into one. If existing pavement has cracked due to trench settlement, the edge of the trench shall be cut beyond such cracks to firm true pavement. The subgrade shall be graded and compacted to three (3) inches below finished grade. The contractor shall add any necessary processed gravel to bring trench to subgrade, care shall be taken to keep processed gravel tight under adjacent pavement. Edge of existing bituminous shall be painted with hot liquid asphalt prior to paving. Transverse joints in new patch shall be cut square and painted with hot liquid asphalt. Bituminous material shall be placed in two (2) equal layers of one and one-half inches compacted. Finished surface shall meet existing surface neat and true. Edges of completed patch shall be sealed with an application of hot liquid asphalt three (3) inches minimum wide. Finish surface shall be lightly dusted with cement or fine quarry screenings. Patch shall be barricaded and traffic kept off for at least four (4) hours.

# City of Bristol

DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

## Excavation Contractor's License Application

Date Filed: _____
Approved: _____
Denied: _____

1. **APPLICANT:** (Person completing this application)

   Name: _____ Signature: _____

   Address: _____ City: _____State: _____Zip: _____

   Telephone No.: _____ [ ] home [ ] work

2. **COMPANY:**

   Name: _____

   Address: _____ City: _____State: _____Zip: _____

   Telephone No.: _____ [ ] home [ ] work

3. **STATE LICENSES HELD:**

   Classification & Number:_____

   _____

4. **REFERENCES:** List a minimum of three (3) references (other than material suppliers) who are familiar with your work and the information contained within this application. Attach another sheet if necessary.

---

_____

_____

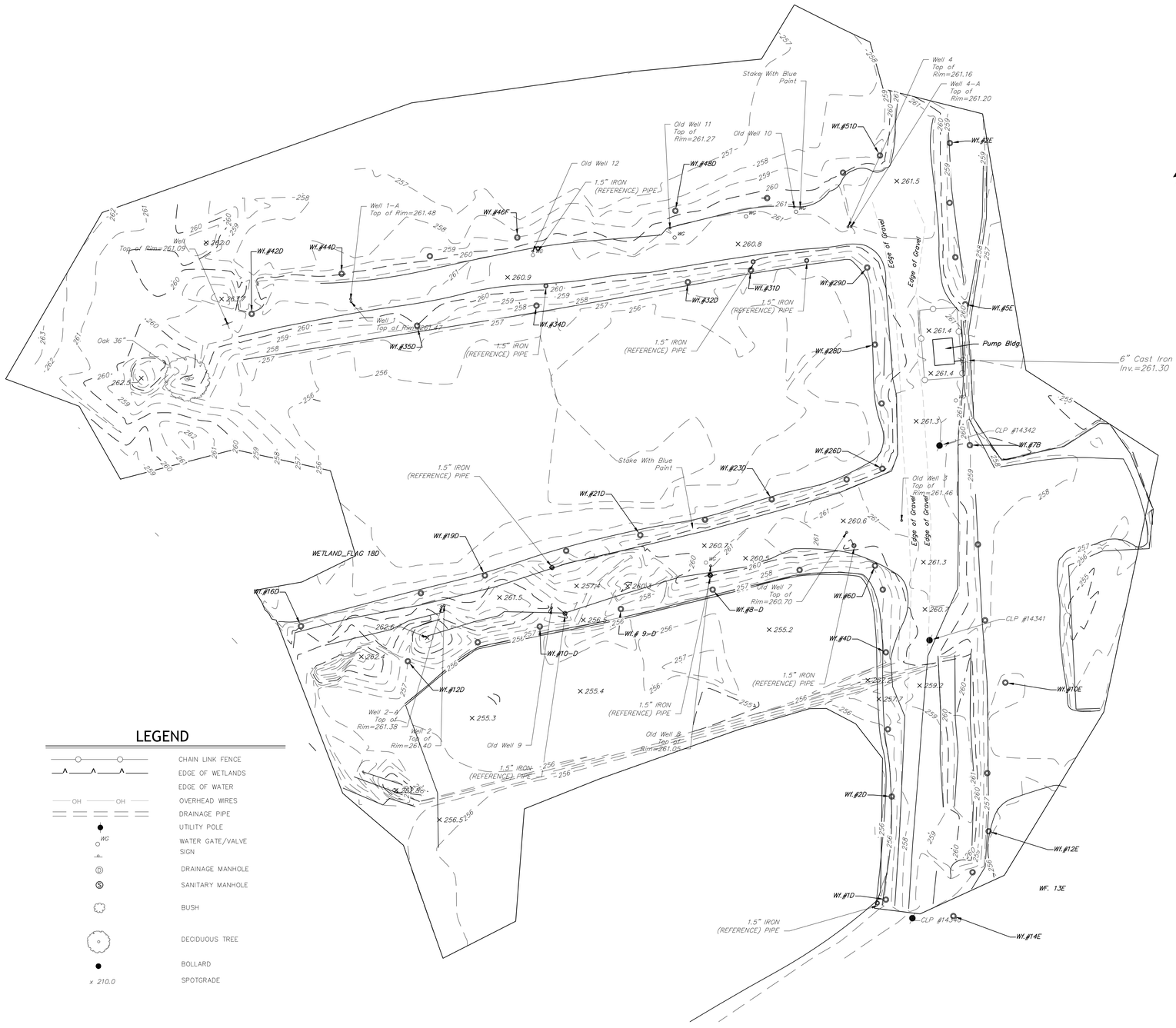
_____

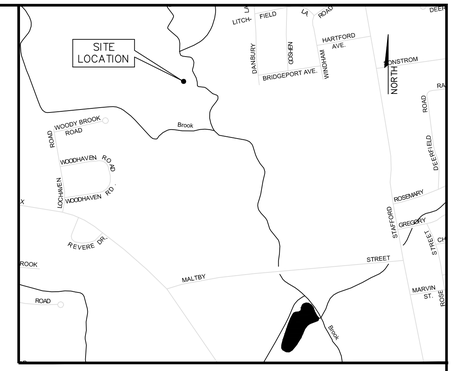
_____

_____

_____

# A-2
# Surveys
# 11/24




## LOCATION MAP

NOT TO SCALE

## LEGEND

- CHAIN LINK FENCE
- EDGE OF WETLANDS
- EDGE OF WATER
- OVERHEAD WIRES (OH)
- DRAINAGE PIPE
- UTILITY POLE
- WATER GATE/VALVE (WG)
- SIGN
- DRAINAGE MANHOLE (D)
- SANITARY MANHOLE (S)
- BUSH
- DECIDUOUS TREE
- BOLLARD
- SPOTGRADE (x 210.0)

GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )
1 inch = 50 ft.

## GENERAL NOTES

1. THIS SURVEY HAS BEEN PREPARED BY FREEMAN COMPANIES, LLC. IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26,1996
   - 1.1. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS T-2.
   - 1.2. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.
2. NORTH ARROW AND BEARINGS REFER TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD83) AND IS BASED UPON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
3. ELEVATIONS REFER TO NAVD88 AND ARE BASED ON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
4. THE UNDERGROUND FEATURES DEPICTED HEREON ARE THE RESULT OF COMPILATION OF EXISTING MAPPING AND LOCATION OF UTILITY PAINT, ACTUAL LOCATION OF UNDERGROUND UTILITIES IS TO BE CONSIDERED TO BE APPROXIMATE AT BEST. OTHER UTILITIES MAY EXIST WHICH FREEMAN COMPANIES ARE UNAWARE OF. VERIFY INFORMATION IN THE FIELD BEFORE ANY DIGGING OR SITE EXCAVATION CALL, "CALL BEFORE YOU DIG" 1800-922-4455.
5. PROJECT AREA IS LOCATED IN FLOOD HAZARD ZONE AE AS DEPICTED ON FIRM MAP NUMBER 09003C0458F, EFFECTIVE DATE SEPTEMBER 26, 2008.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PETER PARIZO, L.S. #14653

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.

STATE OF CONNECTICUT · PETER PARIZO · NO. 14653 · LICENSED LAND SURVEYOR

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | | |

REVISIONS


FREEMAN COMPANIES
LAND DEVELOPMENT · ENGINEERING DESIGN · CONSTRUCTION SERVICES
DBE | SBE | MBE | SBA (8)a CERTIFIED
LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

FREEMAN COMPANIES, LLC
35 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
(860)251-9550
FAX:(860)986-7161


# LAND OF NEW BRITAIN WATER DEPARTMENT UPPER WELL FIELD JEROME AVENUE BRISTOL, CONNECTICUT

| | |
|---|---|
| SURVEYED: | R.A.C. |
| DRAFTED: | R.L.C. |
| APPROVED: | L.K. |
| SCALE: | 1" = 50' |
| PROJECT NO.: | 2019-0901 |
| DATE: | 08/20/2019 |
| CAD FILE: | 2018-0901-SRV |

TITLE:
EXISTING CONDITIONS SURVEY

SHEET NUMBER:
EX-1

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC

## LEGEND

- CHAIN LINK FENCE
- EDGE OF WETLANDS
- EDGE OF WATER
- OH OH — OVERHEAD WIRES
- DRAINAGE PIPE
- UTILITY POLE
- WG — WATER GATE/VALVE
- SIGN
- DRAINAGE MANHOLE
- SANITARY MANHOLE
- BUSH
- DECIDUOUS TREE
- BOLLARD
- x 210.0 — SPOTGRADE

## GENERAL NOTES

1. THIS SURVEY HAS BEEN PREPARED BY FREEMAN COMPANIES, LLC. IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26,1996

   1.1. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS T-2.

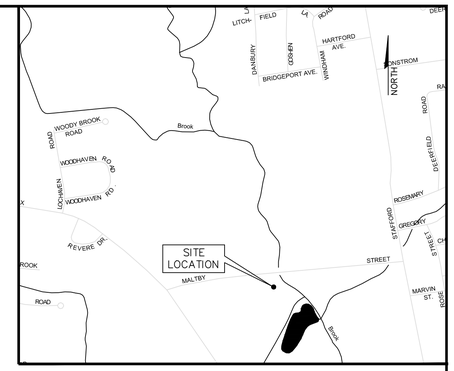
   1.2. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.

2. NORTH ARROW AND BEARINGS REFER TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD83) AND IS BASED UPON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).

3. ELEVATIONS REFER TO NAVD88 AND ARE BASED ON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).

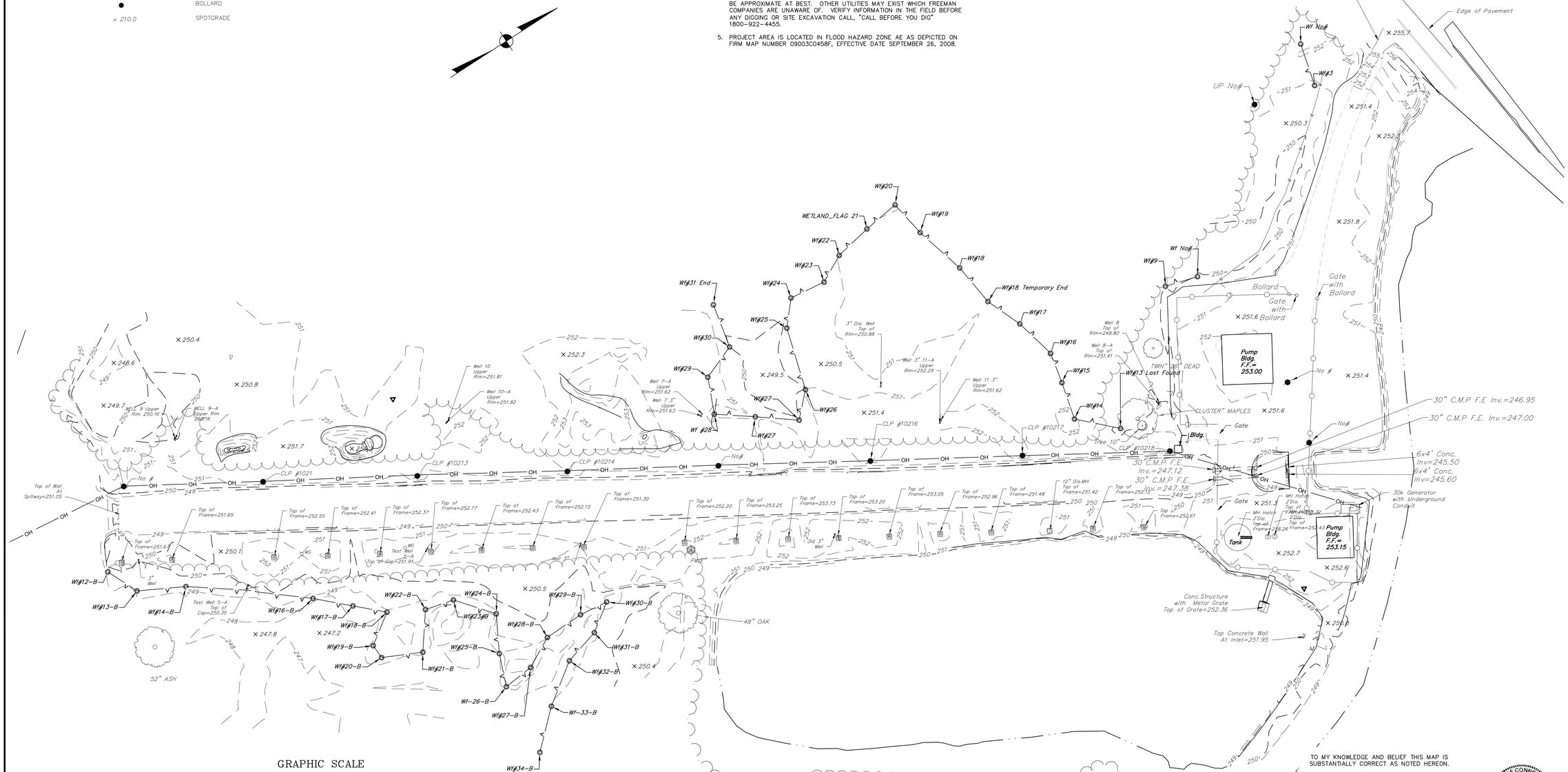
4. THE UNDERGROUND FEATURES DEPICTED HEREON ARE THE RESULT OF COMPILATION OF EXISTING MAPPING AND LOCATION OF UTILITY PAINT, ACTUAL LOCATION OF UNDERGROUND UTILITIES IS TO BE CONSIDERED TO BE APPROXIMATE AT BEST. OTHER UTILITIES MAY EXIST WHICH FREEMAN COMPANIES ARE UNAWARE OF. VERIFY INFORMATION IN THE FIELD BEFORE ANY DIGGING OR SITE EXCAVATION CALL, "CALL BEFORE YOU DIG" 1800-922-4455.

5. PROJECT AREA IS LOCATED IN FLOOD HAZARD ZONE AE AS DEPICTED ON FIRM MAP NUMBER 09003C0458F, EFFECTIVE DATE SEPTEMBER 26, 2008.




## LOCATION MAP

NOT TO SCALE




## GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )

1 inch = 50 ft.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PETER PARIZO, L.S. #14653

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.

STATE OF CONNECTICUT · PETER PARIZO · NO. 14653 · LICENSED LAND SURVEYOR

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | - | - |

REVISIONS

FREEMAN COMPANIES

SITE DEVELOPMENT · ENVIRONMENTAL PERMITTING · SURVEYING

DBE | MBE | SBA (8)a CERTIFIED
LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

FREEMAN COMPANIES, LLC
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
(860)251-9550
FAX:(860)986-7161

LAND OF
NEW BRITAIN WATER DEPARTMENT
LOWER WELL FIELD
MIX STREET
BRISTOL, CONNECTICUT

| | |
|---|---|
| SURVEYED: | R.A.C. |
| DRAFTED: | R.L.C. |
| APPROVED: | L.K. |
| SCALE: | 1" = 50' |
| PROJECT NO.: | 2019-0901 |
| DATE: | 08/20/2019 |
| CAD FILE: | 2018-0901-SRV |

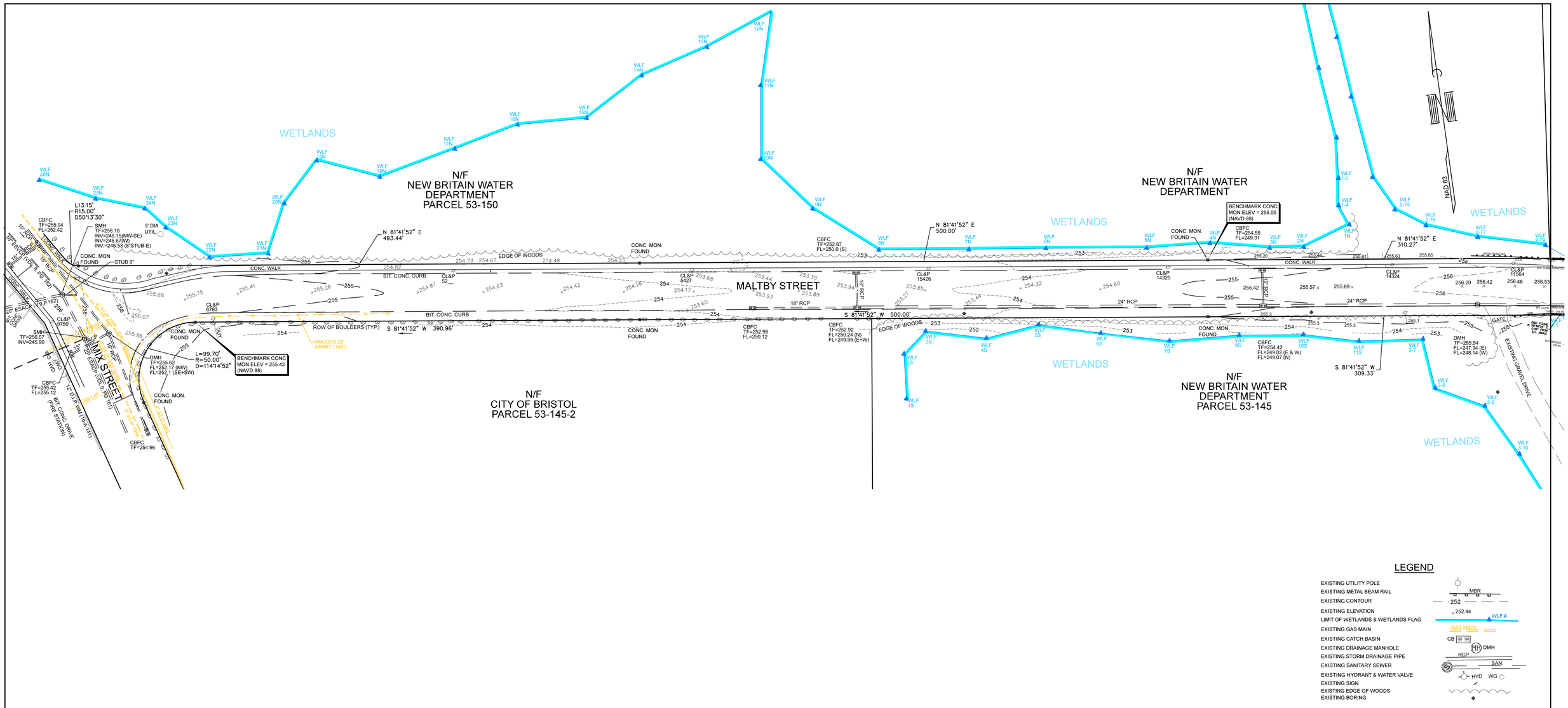
TITLE:

EXISTING CONDITIONS SURVEY

SHEET NUMBER:

EX-1

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC




NOTE: VERIFY ALL UTILITY LOCATIONS IN THE FIELD PRIOR TO START OF ANY WORK (SEE NOTE BELOW).

WARNING: THESE PLANS NOT TO BE USED FOR LOCATION OF UNDERGROUND UTILITIES – CALL BEFORE YOU DIG 1–800–922–4455 OR 811 TWO WORKING DAYS BEFORE YOU DIG.

STREET LINES FROM MAP TITLED:
"CONSTRUCTION OF MALTBY STREET BRIDGE AND APPROACHES SCALE 1"=100'
BRISTOL, CONN. DATE JUNE 1978 SHEET 2 OF 29' PREPARED BY DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING CITY OF BRISTOL CONNECTICUT C. M. PENNIG, CITY ENGINEER (ENG. DEPT. MAP 28-238)

VERTICAL DATUM - NAVD 88.

WETLANDS FLAGGED BY IAN T. COLE, SOIL SCIENTIST

TYPE OF SURVEY: ZONING LOCATION
BOUNDARY DETERMINATION CATEGORY: RESURVEY
CLASS OF ACCURACY: A-2

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH "THE STANDARDS AND SUGGESTED METHODS AND PROCEDURES FOR THE STATE OF CONNECTICUT" PREPARED AND ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC., ON AUGUST 29, 2019.

WILLIAM T. CLARK L.S. #70080

NOT VALID WITHOUT EMBOSSED SEAL

STATE OF CONNECTICUT · WILLIAM T. CLARK · #70600 · LICENSED LAND SURVEYOR

## LEGEND

- EXISTING UTILITY POLE
- EXISTING METAL BEAM RAIL (MBR)
- EXISTING CONTOUR (252)
- EXISTING ELEVATION (252.44)
- LIMIT OF WETLANDS & WETLANDS FLAG (WLF #)
- EXISTING GAS MAIN (GAS MAIN)
- EXISTING CATCH BASIN (CB)
- EXISTING DRAINAGE MANHOLE (DMH)
- EXISTING STORM DRAINAGE PIPE (RCP)
- EXISTING SANITARY SEWER (SAN)
- EXISTING HYDRANT & WATER VALVE (HYD, WG)
- EXISTING SIGN
- EXISTING EDGE OF WOODS
- EXISTING BORING

TOPOGRAPHIC SURVEY

# MALTBY STREET from MIX STREET EASTERLY to COPPER MINE BROOK

PREPARED FOR

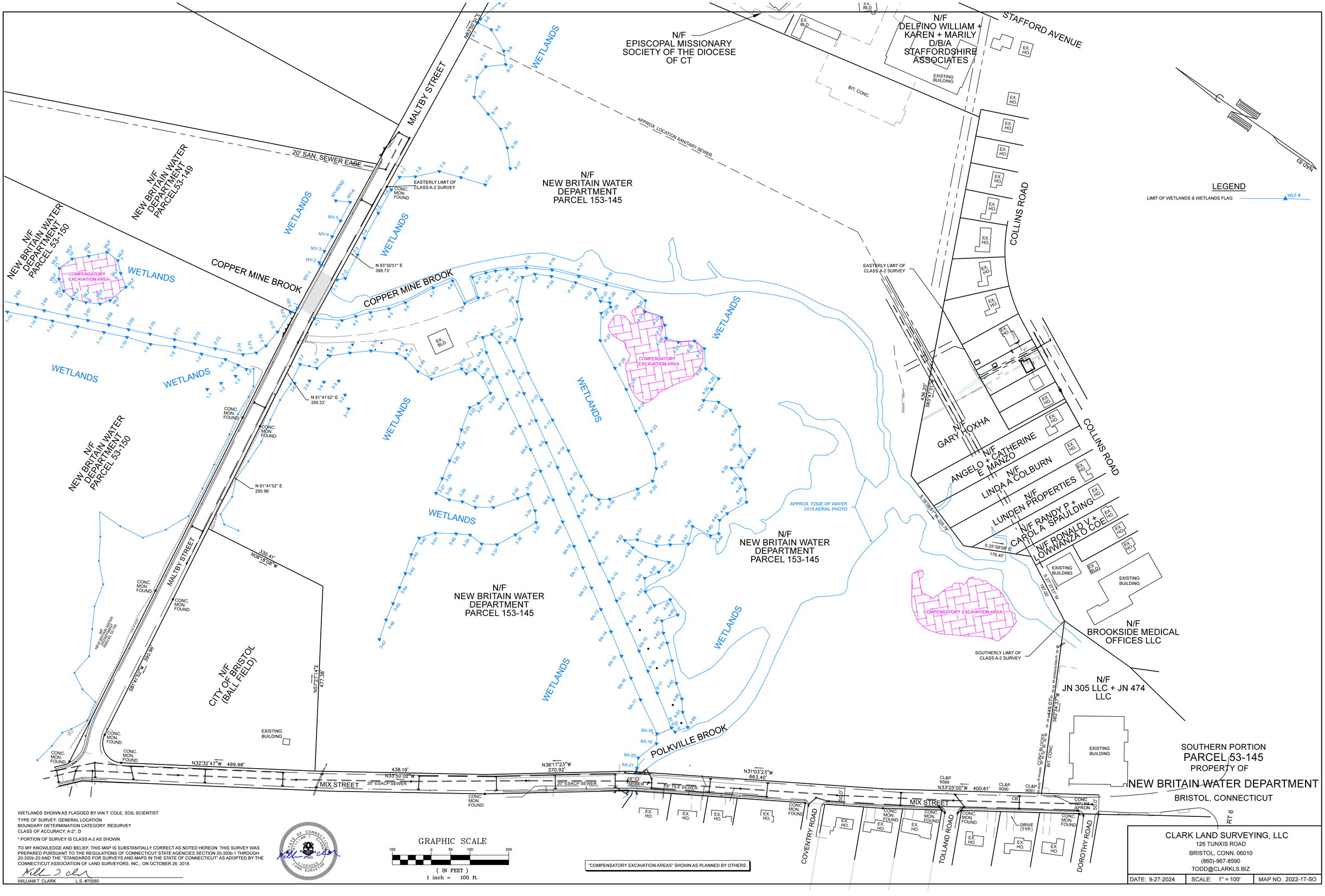
C.E.I.

BRISTOL, CONNECTICUT

REV. 11-9-2023 SEWER INVERTS & STUB FIELD MEASURED


CLARK LAND SURVEYING, LLC
126 TUNXIS ROAD
BRISTOL, CONN. 06010
(860)-967-8590
TODD@CLARKLS.BIZ


| DATE: 11-3-2023 | SCALE: 1" = 40' | MAP NO. 2022-17-MALTBY |
|---|---|---|




WETLANDS SHOWN AS FLAGGED BY IAN T. COLE, SOIL SCIENTIST

TYPE OF SURVEY: GENERAL LOCATION
BOUNDARY DETERMINATION CATEGORY: RESURVEY
CLASS OF ACCURACY: A-2*, D

* PORTION OF SURVEY IS CLASS A-2 AS SHOWN.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS SURVEY WAS PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTION 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC., ON OCTOBER 26, 2018.

WILLIAM T. CLARK L.S. #70080

STATE OF CONNECTICUT
WILLIAM T. CLARK
#70080
LICENSED
LAND SURVEYOR

GRAPHIC SCALE
100 0 50 100 200
( IN FEET )
1 inch = 100 ft.

"COMPENSATORY EXCAVATION AREAS" SHOWN AS PLANNED BY OTHERS

CLARK LAND SURVEYING, LLC
126 TUNXIS ROAD
BRISTOL, CONN. 06010
(860)-967-8590
TODD@CLARKLS.BIZ

| DATE: 9-27-2024 | SCALE: 1" = 100' | MAP NO. 2022-17-SO |
|---|---|---|

# Original Site Plan

# June 2024 (Full Set)

CITY OF NEW BRITAIN, CONNECTICUT

WATER SYSTEM IMPROVEMENTS

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

**BID NO. 4145**

**MAYOR**

HONORABLE ERIN E. STEWART

**DIRECTOR OF PUBLIC WORKS**

MARK E. MORIARTY, P.E.

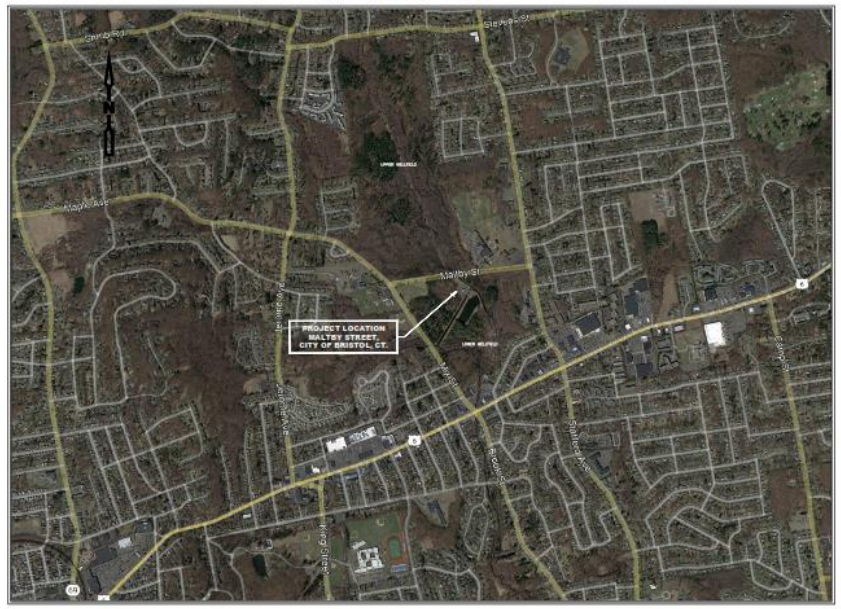
**DIRECTOR OF UTILITIES DIVISION**

RAMON ESPONDA, P.E.

**SUPERINTENDENT OF UTILITIES DIVISION**

CHRIS POLKOWSKI

**JUNE 2024**




LOCATION PLAN

CDM Smith

**REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION**

**EAST HARTFORD, CONNECTICUT**

***Water*** ***Environment*** ***Transportation*** ***Energy*** ***Facilities***

**Full Set of Civil Drawings at this Hyperlink:**

https://www.bristolct.gov/DocumentCenter/View/47022/Full-Set-NBW

# Site Plan 11/24 (Full Set)




**Hyperlink:**
https://www.bristolct.gov/DocumentCenter/View/47861/04A_Attachment---Full-Set-Design-Drawings---Zoning-Review-20241107

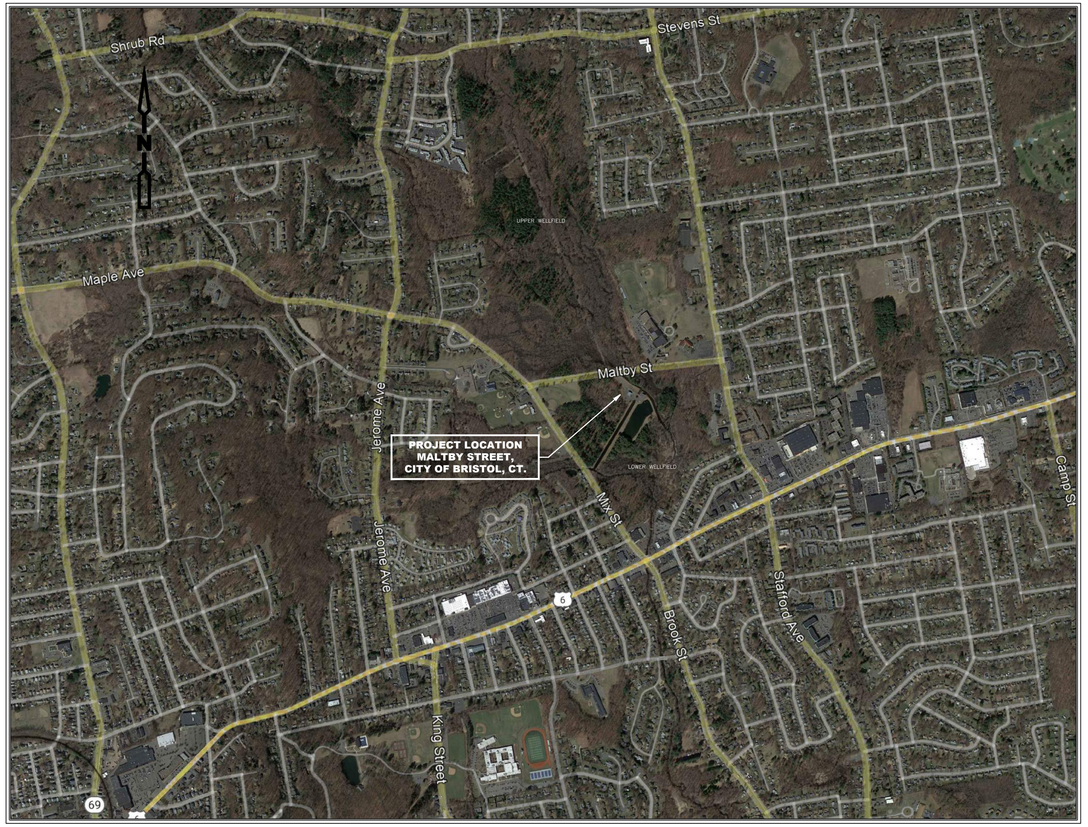
# Revised Site Plan Selected Sheets 10/24

# CITY OF NEW BRITAIN, CONNECTICUT

## WATER SYSTEM IMPROVEMENTS

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

**BID NO. 4145**




LOCATION PLAN
SCALE: 1" = 1000'

**BRISTOL ZONING COMMISSION APPLICATION**
(APPROVED XX):
#2504 – SPECIAL PERMIT FOR CIVIC FACILITY
#2505 – SITE PLAN FOR CIVIC FACILITY
#2506 – SPECIAL PERMIT FOR EARTH REMOVAL

**BRISTOL AQUIFER PROTECTION AGENCY**
(APPROVED XX):
### – DETERMINATION FORM

**BRISTOL IWWA APPLICATIONS**
(APPROVED JUNE 7, 2024):
#2019 – APPLICATION WETLANDS BOUNDARY CHANGE
#2020 – PERMIT TO CONDUCT REGULATED ACTIVITIES
#23-485F-3058 – PERMIT FOR FLOODPLAIN DEVELOPMENT


SP-01 OVERVIEW UWF NORTH
SP-02 OVERVIEW UWF SOUTH
SP-03 OVERVIEW LWF
SP-04 SITE PLAN UPPER WELLFIELD
SP-05 SITE PLAN POND PUMPING STATION
SP-06 SITE PLAN LOWER WELLFIELD
SP-07 MIX STREET ACCESS ROAD
SP-08 MALTBY STREET UTILITIES I
SP-09 MALTBY STREET UTILITIES II
SP-10 MALTBY STREET UTILITIES III
SP-11 STAFFORD AVENUE AND CROSS COUNTRY UTILITIES
SP-12 E&S CONTROLS UWF
SP-13 E&S CONTROLS POND PUMPING STATION
SP-14 E&S CONTROLS LWF


**MAYOR**

HONORABLE ERIN E. STEWART

**DIRECTOR OF PUBLIC WORKS**

MARK E. MORIARTY, P.E.

**DIRECTOR OF UTILITIES DIVISION**

RAMON ESPONDA, P.E.

**SUPERINTENDENT OF UTILITIES DIVISION**

CHRIS POLKOWSKI

**OCTOBER 2024**

CDM Smith

STATE OF CONNECTICUT
STEPHEN GERSLEY WALSH
No. 24384
LICENSED PROFESSIONAL ENGINEER
10-10-24

**REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION**

**EAST HARTFORD, CONNECTICUT**

***Water Environment Transportation Energy Facilities***


IMAGE OBTAINED FROM GOOGLE EARTH PRO DECEMBER, 2021
Plot Stamp – File: C:\USERS\ENGELSB\DC\ACCDOCS\CDM SMITH INC\10739-264571 – NEW BRITAIN CT WHITE BRIDGE WELL FIELDS AND PS\PROJECT FILES\01 GENERAL (G)\10 CADD\PERMIT-GOODNFCV.DWG Saved by: ENGELSB On: 9-Oct-24 Plotted on: 9-Oct-24 10:59 AM

## CIVIL/SITE ABBREVIATIONS

| SYMBOL | DESCRIPTION |
|---|---|
| BC | BOTTOM OF CURB |
| BS | BOTTOM OF STEP |
| BW | BOTTOM OF WALL |
| CB | CATCH BASIN |
| CLF | CHAIN LINK FENCE |
| CS | CRUSHED STONE |
| CW | COLD POTABLE WATER |
| DI | DUCTILE IRON |
| DMH | DRAIN MANHOLE |
| DN | DOWN |
| FES | FLARED END SECTION |
| FFE | FINISHED FLOOR ELEVATION |
| FM | FORCE MAIN |
| FRP | FIBERGLASS REINFORCED PLASTIC |
| GV | GATE VALVE |
| HDPE | HIGH-DENSITY POLYETHYLENE |
| INF | INFLUENT |
| INV. EL. | INVERT ELEVATION |
| MH | MANHOLE |
| MJ | MECHANICAL JOINT |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| SS | STAINLESS STEEL |
| TC | TOP OF CURB |
| TS | TOP OF STEP/SLAB |
| TW | TOP OF WALL |
| UP | UTILITY POLE |
| VGC | VERTICAL GRANITE CURB |
| UWF | UPPER WELLFIELD |
| LWF | LOWER WELLFIELD |

## PROCESS FLOW STREAMS:

| | |
|---|---|
| DR | DRAIN |
| FINW | FINISHED WATER |
| OVF | OVERFLOW |
| RW | RAW WATER |
| SAN | SANITARY |
| SPL | SAMPLE |
| VT | VENT |
| FLUO | SODIUM FLUORIDE |
| HYPO | SODIUM HYPOCHLORITE |
| NAOH | SODIUM HYDROXIDE |
| PHOS | POLYPHOSPHATE |

FOR ADDITIONAL RELATED FLOW STREAMS SEE LEGEND SHEETS P-1 AND I-1

## PIPE MATERIALS:

| | |
|---|---|
| CS | CARBON STEEL |
| CU | COPPER |
| DI(FLG) | DUCTILE IRON (FLANGED JOINT) |
| DI(MJ) | DUCTILE IRON (MECHANICAL JOINT) |
| DI(POJ) | DUCTILE IRON (PUSH ON JOINT) |
| PVC(SCH 40) | POLYVINYL CHLORIDE (SCHEDULE 40) |
| PVC(SCH 80) | POLYVINYL CHLORIDE (SCHEDULE 80) |
| PTFE | POLYTETRAFLUOROETHYLENE |
| SS316 | 316 STAINLESS STEEL |

**YARD PIPING NOTES**

1. THE LOCATION OF EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS IS APPROXIMATE, AND THEIR ACTUAL LOCATIONS MAY VARY FROM THAT SHOWN. FURTHER, IT IS NOT WARRANTED THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FEATURES THAT MAY BE AFFECTED BY THE WORK.
2. NEW WATER MAINS SHALL HAVE A MINIMUM COVER OF 4.5 FEET UNLESS OTHERWISE INDICATED AND SHALL PASS UNDER EXISTING UTILITIES AS NECESSARY TO MEET THIS REQUIREMENT.
3. ALL NEW WATER PIPES, INCLUDING FIRE PROTECTION LINES, AND OTHER PRESSURE PIPES INCLUDING FORCE MAINS, SHALL HAVE RESTRAINED JOINTS AS SPECIFIED.
4. TEST PITS SHALL BE DUG TO LOCATE EXISTING PIPES TO WHICH NEW PIPES ARE TO BE CONNECTED, AND WHERE NECESSARY TO DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO PIPES.
6. ABANDONED PIPES, VALVES AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION MAY BE REMOVED AS REQUIRED. PIPES LEFT IN PLACE SHALL BE PLUGGED AND ABANDONED AS SPECIFIED AND AS APPROVED BY THE ENGINEER.
7. WALKWAYS AND PAVEMENTS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED WITHOUT ADDITIONAL EXPENSE BY OWNER.
8. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION BY DIGGING TEST PITS (WHETHER OR NOT INDICATED ON THE DRAWINGS) WHERE UTILITY INFORMATION IS ESSENTIAL.
9. PRIOR TO ANY EXCAVATION WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE DETAILS OF THE PROJECT AREA. THE CONTRACTOR SHALL COORDINATE WITH DEPARTMENT PERSONNEL AND OWNER AND REVIEW ANY DRAWINGS THAT MAY BE AVAILABLE. CONTRACTOR SHALL ENSURE THAT EXISTING UTILITIES WITHIN THE WORK OF THIS CONTRACT ARE NOT DAMAGED, UTILITIES DAMAGED DURING EXCAVATION SHALL BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COST TO OWNER.
10. PERFORM EXCAVATION CLOSE TO EXISTING UTILITIES BY HAND TO DETERMINE EXACT UTILITY LOCATION PRIOR TO INSTALLING EXCAVATION BRACING OR BEFORE MACHINE EXCAVATION.

**GRADING NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING GRADES AND LOCATION OF UTILITIES. MAJOR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. TO ESTABLISH PROPER GRADES, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF GRADE STAKES. THE NUMBER AND LOCATION SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER.

**GENERAL NOTES**

1. BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE MUST BE NOTIFIED CALL "DIG SAFE" 1 (888) 344-7233 HTTP://WWW.DIGSAFE.COM.
2. FOR BORING INFORMATION AND LOCATIONS SEE EXISTING CONDITIONS DRAWINGS AND APPENDIX TO SPECIFICATIONS.
3. THE CONTRACTOR SHALL PREPARE AN EROSION AND SEDIMENT CONTROL PLAN AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS SPECIFIED TO PROTECT THE SITES FROM EROSION AND PREVENT THE MOVEMENT OF SEDIMENT AND DEBRIS. THE SWPPP SHALL BE PREPARED FOR APPROVAL BY STATE AND FEDERAL PERMIT AUTHORITIES AND FOR INFORMATIONAL PURPOSES ONLY BY THE OWNER AND ENGINEER.
4. ALL AREAS OUTSIDE THE LIMIT OF DISTURBANCE SHALL BE PROTECTED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE OWNER AND/OR ENGINEER.
5. ALL MATERIALS TO BE REMOVED WITHIN THE LIMIT OF DISTURBANCE SHALL BE REMOVED TO A LOCATION ARRANGED BY THE CONTRACTOR AND APPROVED BY THE OWNER AND/OR ENGINEER. THE LOCATION OF STOCKPILED TOPSOIL SHALL BE IN AREAS APPROVED BY THE OWNER AND/OR ENGINEER.
6. CONTRACTOR SHALL PROVIDE SITE SECURITY THROUGHOUT CONSTRUCTION PERIOD.
7. WHEN EXCAVATING AROUND EXISTING STRUCTURES, EXCAVATE SOILS UNIFORMLY AROUND THE STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL EXCAVATION LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
8. WHEN BACKFILLING AROUND STRUCTURES, BRING UP BACKFILL UNIFORMLY AROUND STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL BACKFILL LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
9. GAS MAINS ARE ASSUMED TO HAVE THREE FEET OF COVER UNLESS SHOWN OTHERWISE. LOCAL WATER MAINS ARE ASSUMED TO HAVE 5 FEET OF COVER. IT IS NOT WARRANTED THAT ALL UTILITIES ARE SHOWN OR ARE SHOWN AT THE CORRECT ELEVATION.
10. ALL UNDERGROUND SERVICES TO HOUSES ARE NOT SHOWN.
11. BORING LOGS HAVE BEEN APPENDED TO THE SPECIFICATION DOCUMENTS. BORINGS ARE INCLUDED FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT BE SHOWN AT EXACT LOCATIONS.
12. CONTRACTOR SHALL MINIMIZE CLEARING AND GRUBBING AS MUCH AS POSSIBLE. ALL CROSS-COUNTRY AREAS SHALL BE LOAMED AND SEEDED OR SODDED TO THE LIMITS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE NOTED.
13. CONTRACTOR SHALL NOT DISTURB ANY LAND OUTSIDE THE LIMITS OF WORK.
14. WHEN THE HORIZONTAL SEPARATION BETWEEN THE NEW SEWER AND EXISTING OR RELOCATED WATER MAIN IS LESS THAN 10-FT AND THE VERTICAL SEPARATION IS LESS THAN 18-IN THE NEW SEWER SHALL BE CONSTRUCTED OF RESTRAINED MJ DI OR CONCRETE ENCASED PIPE FOR A MINIMUM OF 10-FT BEYOND WHERE THE SPACING IS LESS THAN 10-FT HORIZONTAL AND 18-IN VERTICAL.
15. IF A WATER MAIN CROSSES UNDER THE NEW SEWER, BOTH PIPES SHALL BE RESTRAINED MJ DI OR CONCRETE ENCASED FOR A MINIMUM OF 10-FT TO EITHER SIDE OF THE RESPECTIVE CENTER LINES.
16. IF NECESSARY TO WORK IN LIVE SEWER MANHOLES CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE AND LOCAL REQUIREMENTS FOR SAFETY WHEN IN CONFINED SPACES. THE CONTRACTOR IS ALSO REFERRED TO RECOMMENDATIONS IN THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH PUBLICATION NO. 80-106, "WORKING IN CONFINED SPACES".
17. CONTRACTOR TO MAINTAIN FLOW IN EXISTING DRAINS AT ALL TIMES.
18. IT IS NOT WARRANTED THAT ALL EXISTING ABOVE GROUND AND UNDERGROUND STRUCTURES, EQUIPMENT, PIPING AND ELECTRICAL CONDUITS ARE SHOWN. NOR IS IT WARRANTED THAT LOCATIONS AND SIZES OF STRUCTURES AND UTILITIES ARE EXACT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SIZES AND LOCATIONS OF EXISTING EQUIPMENT, PIPING, ETC. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
19. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED USGS DATUM NAVD88.
20. THE CONTRACTOR SHALL COORDINATE WORK TO ENSURE CONTINUED ACCESS TO ALL EXISTING FACILITY STRUCTURES. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
21. REMOVE AND DISPOSE OF EXISTING PAVEMENT WITHIN LIMITS SHOWN ON DRAWINGS TAKING CARE NOT TO DAMAGE EXISTING WALLS, CURBS, BUILDINGS OR UTILITY STRUCTURES.
22. STRIP EXISTING VEGETATION AND 6" LAYER TOPSOIL WITHIN AREAS OF DISTURBANCE. GRIND ANY STUMPS TO A MINIMUM OF ONE FOOT BELOW FINISH GRADE AND BACKFILL WITH MAX. 12 INCH COMPACTED LAYERS AS SPECIFIED. CONTRACTOR SHALL STOCKPILE STRIPPED TOPSOIL IN A MANNER APPROVED BY THE ENGINEER.
23. EXISTING VERTICAL OR SLOPED GRANITE CURB DISTURBED FOR CONSTRUCTION SHALL BE STOCKPILED AND REINSTALLED AS APPROVED BY THE ENGINEER.
24. ALL BITUMINOUS ROADWAY AND SIDEWALK PAVEMENT AREAS AND ALL CONCRETE SIDEWALK AND OTHER AREAS DISTURBED BY TRENCHING SHALL BE REPAIRED AS SPECIFIED. SELECTED AREAS TO RECEIVE AN OVERPLAY LEVELING COURSE AS DIRECTED BY THE ENGINEER.
25. COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR LIMITING CONSTRUCTION ACTIVITIES NEAR THE GREAT BLUE HERON ROOKERY AREA AND NATURAL DIVERSITY DATABASE (NDDB) STATE-LISTED SPECIES HABITAT. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
26. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
27. ALL OBSERVATION AND MONITORING WELLS ASSOCIATED WITH THE UPPER AND LOWER WELLFIELDS MAY NOT BE SHOWN ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
28. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.
29. THE CONTRACTOR IS PROHIBITED FROM PERFORMING ANY ACTIVITY THAT MAY CAUSE CONTAMINATION TO SOIL AND/OR GROUNDWATER INCLUDING, BUT NOT LIMITED TO, REFUELING, DEGREASING, OR CHANGING OIL OF EQUIPMENT, MACHINERY, OR OTHER VEHICLES, ON THE PROJECT SITE WITHOUT THE INSTALLATION OF A CONTAINMENT UNIT. CONTAINMENT UNITS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO USE AND SHALL NOT BE LOCATED WITHIN REGULATED AREAS OR THEIR BUFFER ZONE.
30. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS INCLUDED IN THE JUNE 2024 ORDER OF CONDITIONS RECIEVED FROM THE BRISTOL CONSERVATION COMMISSION FOR APPLICATION #2020. REFER TO SPECIFICATIONS FOR FURTHER DETAIL.
31. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE CONCRETE SIDEWALK AT THE UPPER WELLFIELD ACCESS ROADWAY ENTRANCE ON MALTBY STREET. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO EXISTING SIDEWALK DURING CONSTRUCTION.
32. CONTRACTOR SHALL IMPLEMENT PROTECTIVE MEASURES TO LIMIT DUST, NOISE, FLYING ROCK, AND OTHER NUISANCES, AS REQUIRED IN THE SUPPLEMENTAL GENERAL CONDITIONS AND SPECIFICATION SECTION 015000.

**LAYOUT NOTES:**

1. CONTRACTOR SHALL VERIFY ALL PROPERTY AND SURVEY INFORMATION.
2. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND PROTECT ALL ON-SITE STRUCTURES AND VEGETATION TO BE RETAINED ON THE SITE THROUGHOUT THE CONSTRUCTION PROJECT.
3. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS AND ALL UTILITY SERVICES THROUGHOUT THE DURATION OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED.
4. LOCATIONS OF BURIED UTILITIES, VAULTS AND CONCRETE PADS ARE APPROXIMATE ONLY. FINAL LOCATIONS SHALL BE DETERMINED IN THE FIELD AFTER STAKING BY THE CONTRACTOR BASED ON ACTUAL SITE CONDITIONS AS APPROVED BY THE OWNER AND/OR ENGINEER.
5. ALL DISTURBED AREAS NOT COVERED WITH PAVEMENT, PADS, CRUSHED STONE, SOD, OR STRUCTURES SHALL RECEIVE 6" LAYER OF LOAM AND SEED AS SPECIFIED, UNLESS NOTED OTHERWISE.
6. DIMENSIONS FOR STRUCTURES ARE TO OUTSIDE FACE OF WALL. DIMENSIONS TO CONCRETE PADS ARE TO EDGE OF PAD. DIMENSIONS TO FENCES AND GATES ARE ON-CENTER.
7. ALL ITEMS TO BE REMOVED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, SHALL BE DISPOSED OFF SITE IN A LEGAL MANNER.
8. CONTRACTOR SHALL LIMIT CONSTRUCTION ACCESS TO AREAS DESIGNATED ON THE DRAWINGS AND AS INDICATED BY THE OWNER.
9. LOCATIONS OF CONCRETE PADS, PAVEMENTS, BOLLARDS, GATES, AND SIGNS ARE APPROXIMATE ONLY. FINAL LOCATIONS SHALL BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY THE ENGINEER.
10. BOUNDARIES OF AREAS TO RECEIVE LOAM & SEED MIXTURES, WASHED STONE, OVERLAY PAVEMENT OR OTHER SURFICIAL MATERIALS ARE FOR SCHEMATIC PURPOSES ONLY. FINAL LOCATIONS SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY THE ENGINEER.
11. THE EXISTING CONDITIONS SHOWN ON THIS BASEMAP ARE THE RESULT OF A GROUND SURVEY INSTRUMENT PERFORMED BY FREEMAN COMPANIES IN 2020.
12. HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED WITH RTK IN 2020. HORIZONTAL DATUM IS BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM NAD-83 - ENGLISH UNITS. VERTICAL DATUM IS CONNECTICUT STATE PLAN COORDINATE SYSTEM NAVD-88 - ENGLISH UNITS.
13. A PORTION OF THE EASTERN PROPERTY LINE ALONG THE COPPERMINE BROOK WAS TAKEN FROM THE DRAWING TITLED "CONSTRUCTION OF MALTBY STREET BRIDGE AND APPROACHES" BY THE CITY OF BRISTOL DEPARTMENT OF ENGINEERING, DATED JANUARY 1978.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
101 East River Drive, Suite 1A
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Tel: (860) 529-7615

STATE OF CONNECTICUT — KYLE GERSLEY — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LEGEND, ABBREVIATIONS AND GENERAL NOTES

PROJECT NO. 10739-264571
FILE NAME P-ERM.DWG
SHEET NO. P-ERM

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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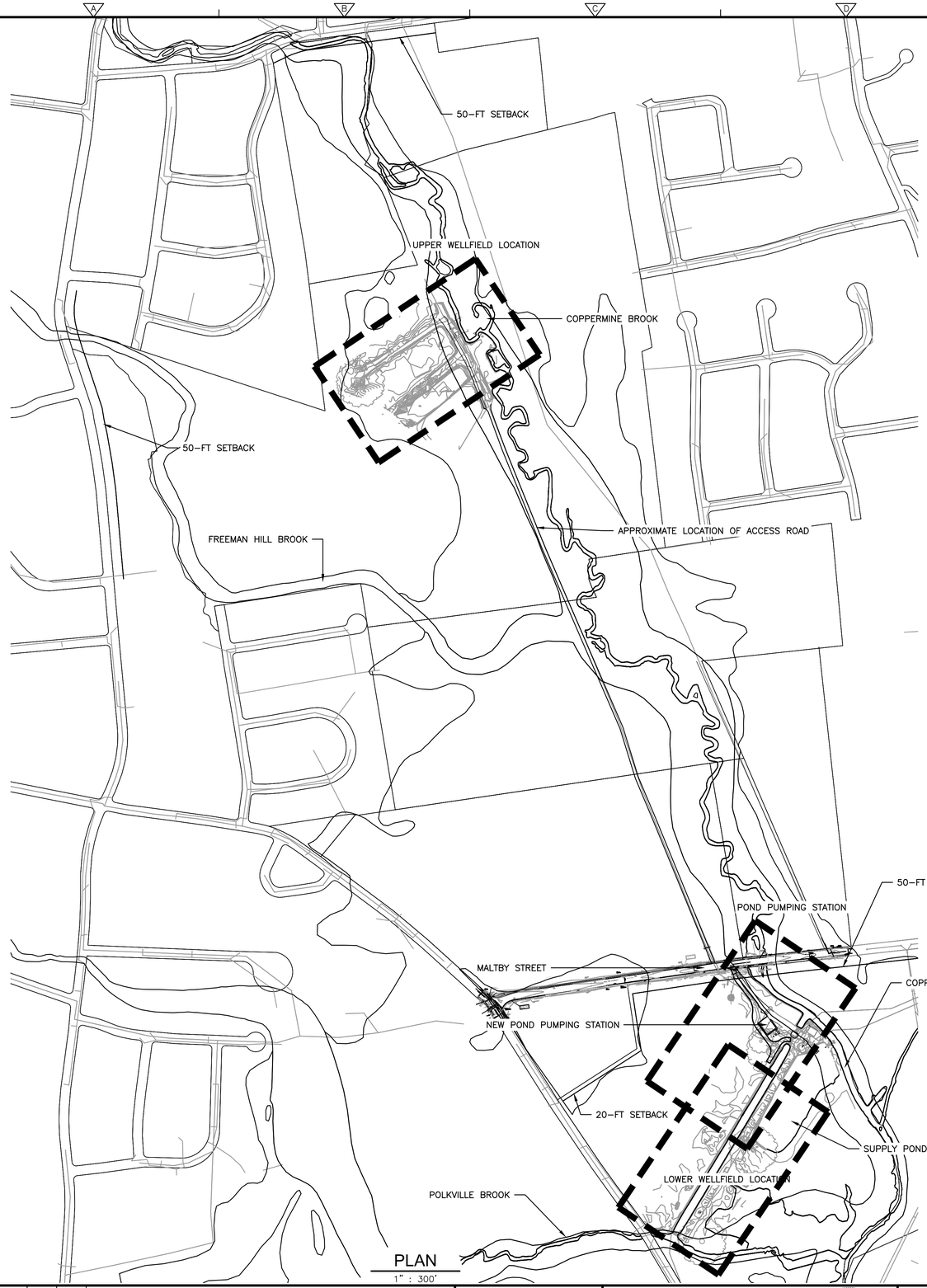


PLAN
1" : 300'




PLAN
N.T.S.

| FLOOD | LOWER WELLFIELD & POND PUMPING STATION ELEVATION (ft) | UPPER WELLFIELD ELEVATION (ft) |
|---|---|---|
| 0.2% ANNUAL CHANCE FLOOD (500 – YR FLOOD) | 256.7 | 259.7 |
| 1% ANNUAL CHANCE FLOOD (100 – YR FLOOD) | 255.9 | 259.0 |
| 2% ANNUAL CHANCE FLOOD (50 – YR FLOOD) | 255.6 | 258.6 |
| 10% ANNUAL CHANCE FLOOD (10 – YR FLOOD) | 253.0 | 258.0 |

NOTE: ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED USGS DATUM NAVD88

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WADE · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

OVERALL SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C002STPL.DWG
SHEET NO.
C-2

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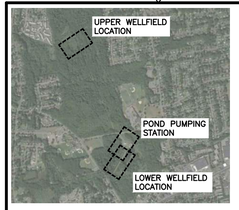


PLAN

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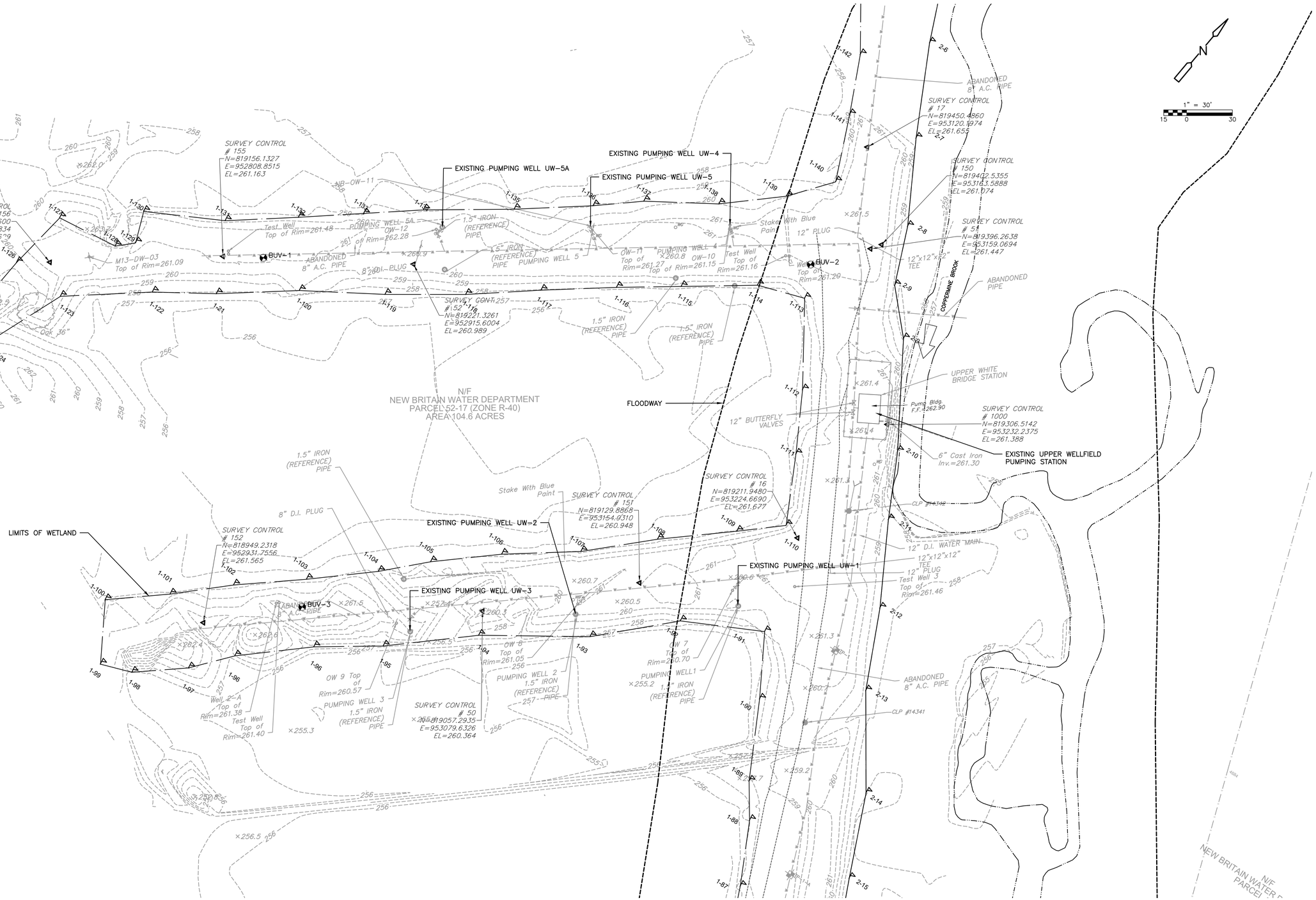


NOTES:

1. AREAS OF THE UPPER WELLFIELD ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

UPPER WELLFIELD
EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C003STPL.DWG
SHEET NO.
C-3

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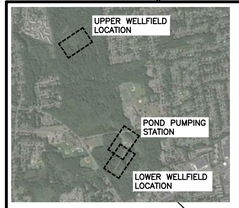


PLAN
N.T.S.

NOTES:

1. AREAS OF THE LOWER WELLFIELD AND POND PUMPING STATION ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G.HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT — JEFFERSLEY WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## POND PUMPING STATIONS EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C004STPL.DWG
SHEET NO. C-4

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION



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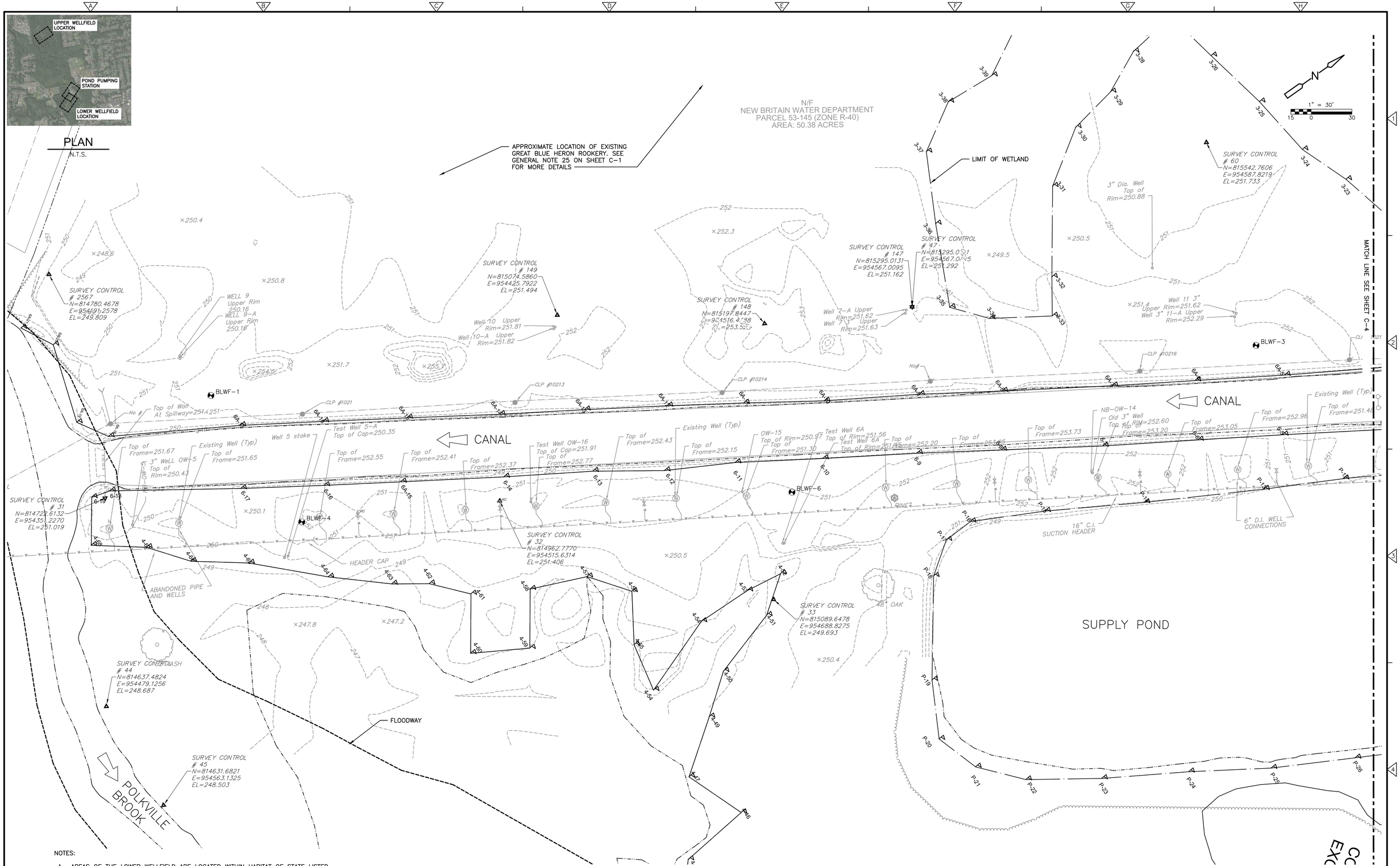


NOTES:

1. AREAS OF THE LOWER WELLFIELD ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WARD · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD
EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C005GDPL.DWG
SHEET NO.
C-5

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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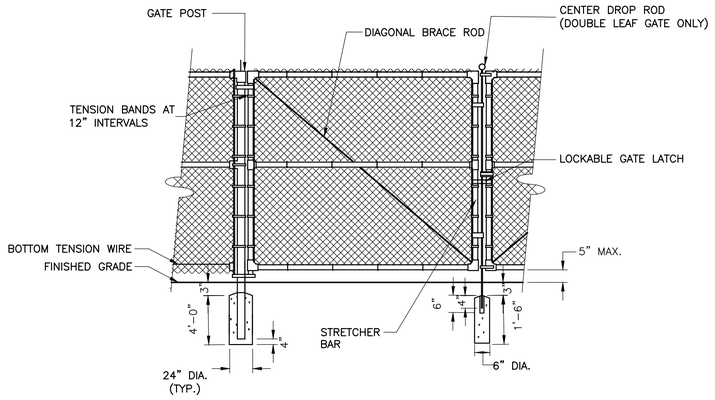
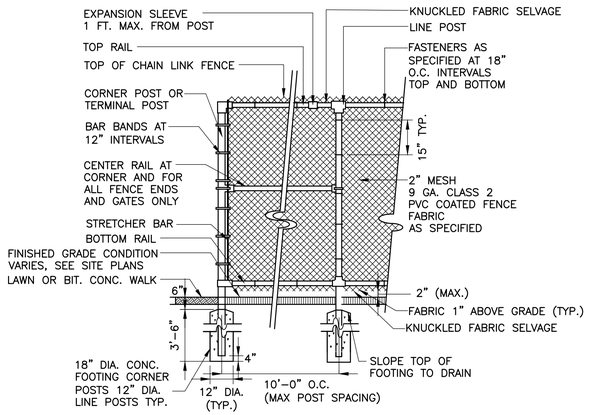



CHAIN LINK DOUBLE LEAF SWING GATE

DETAIL A

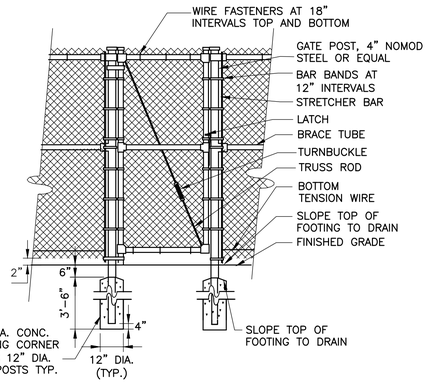
NOT TO SCALE




6.5-FT HIGH CHAIN LINK FENCE

DETAIL B

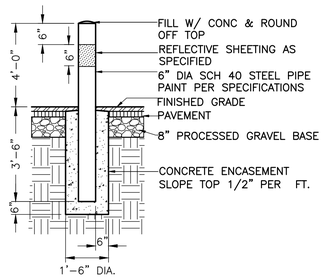
NOT TO SCALE




PEDESTRIAN CHAIN LINK FENCE GATE

DETAIL C

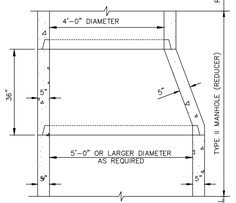
NOT TO SCALE




STEEL BOLLARD

DETAIL D

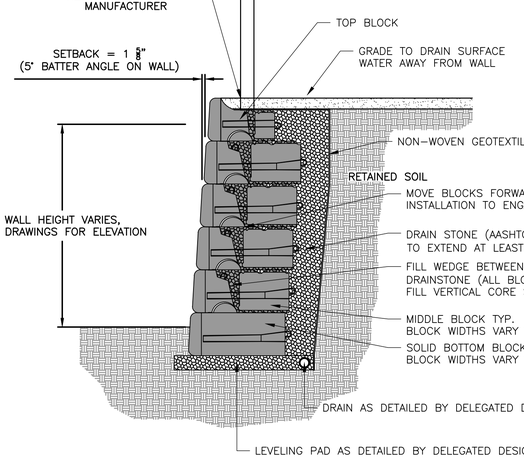
NOT TO SCALE




REDUCER SECTION

NOTES:
1) THIS MANHOLE TO BE USED WHEN TOTAL DEPTH IS GREATER THAN 12' OR ANY PIPE SIZE IS GREATER THAN 18".
2) ALL NEW SANITARY AND STORM SEWER INSTALLATIONS SHALL BE TELEVISED.

**TYPE II MANHOLE**
**(PRECAST WITHOUT STEPS)**



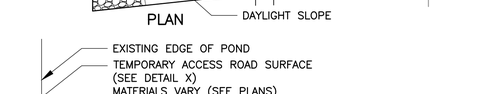

NOTES:

1. SEE SPECIFICATION SECTION 323223 FOR MORE DETAILS. CONTRACTOR TO OBTAIN BUILDING PERMIT FOR SEGMENTAL UNIT RETAINING WALLS GREATER THAN 3 FEET IN HEIGHT.

SEGMENTAL UNIT RETAINING WALL

DETAIL E

SCALE: NTS




PLAN




SECTION

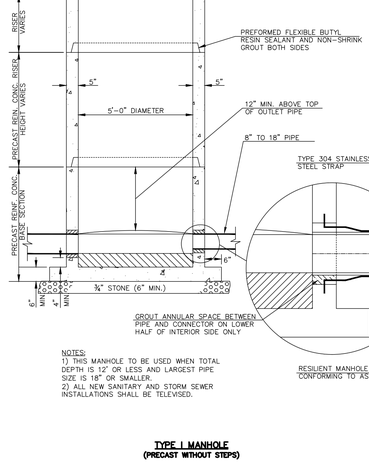
NOTES:

1. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED POND ACCESS/TRUCK OFFLOADING RAMP AND EXISTING GROUND SURFACE
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO GROUND SURFACE.
3. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
4. REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT.
5. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
6. THE SLOPE OF THE POND ACCESS AND OFFLOADING RAMP TO BE DETERMINED BY CONTRACTOR BASED ON SELECTED EQUIPMENT, MEANS AND METHODS, AND APPROVED BY THE ENGINEER.
7. DAYLIGHT SLOPES OF THE RAMP WILL BE INSTALLED AS NEEDED BASED ON THE EXCAVATION DEPTH AND BANK HEIGHT TO MAINTAIN STABILITY OF THE POND ACCESS/OFFLOADING RAMP.
8. ALL MATERIAL FOR POND ACCESS/OFFLOADING RAMP IS TEMPORARY AND WILL BE REMOVED AFTER SEDIMENT REMOVAL COMPLETED. POND BANK TO BE RESTORED PER SPECIFICATIONS.

POND ACCESS AND TRUCK OFFLOADING RAMP

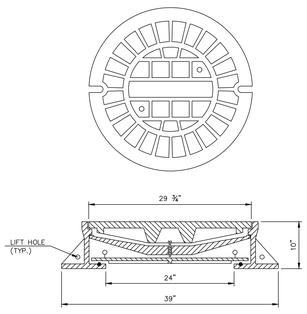
DETAIL F

SCALE: NTS




NOTES:
1) THIS MANHOLE TO BE USED WHEN TOTAL DEPTH IS 12' OR LESS AND LARGEST PIPE SIZE IS 18" OR SMALLER.
2) ALL NEW SANITARY AND STORM SEWER INSTALLATIONS SHALL BE TELEVISED.

**TYPE I MANHOLE**
**(PRECAST WITHOUT STEPS)**




**NEW BRITAIN STANDARD**
**WATERTIGHT MANHOLE CASTING**

MANHOLE

DETAIL G

NOT TO SCALE

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — JEFFREY WARD — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

CIVIL DETAILS IV

PROJECT NO. 10739-264571
FILE NAME: CD004CSDT.DWG
SHEET NO.
C-27

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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NEW BRITAIN WATER DEPARTMENT
LOT 52-15 (ZONE R-40)
AREA: 11.9 ACRES

NEW BRITAIN WATER DEPARTMENT
LOT 52-16B16A (ZONE R-40)
AREA: 13.3 ACRES

NEW BRITAIN WATER DEPARTMENT
LOT 52-17 (ZONE R-40)
AREA: 104.6 ACRES

JEFFERSON AVENUE
SHAWN DRIVE
TIMBER LANE
DEBRA LANE
JEROME AVENUE
DANBURY LANE

PROPERTY LINE
25'
25-FOOT SIDE YARD SETBACK
PROPOSED LIMIT OF CLEARING
PROPOSED WETLAND CREATION AND FLOOD COMPENSATORY STORAGE AREA
15-FT WIDE ACCESS ROAD FOR WETLAND CREATION AND MAINTENANCE
VERNAL POOL (EXISTING)
100-FT BUFFER
163'-0"
325'-0"
FLOODWAY

1" = 100'
50 0 100

NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.
2. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## WETLAND REPLICATION AND COMPENSATORY FLOOD STORAGE PLAN II

PROJECT NO. 10739-264571
FILE NAME: C014STPL.DWG
SHEET NO. SP-01

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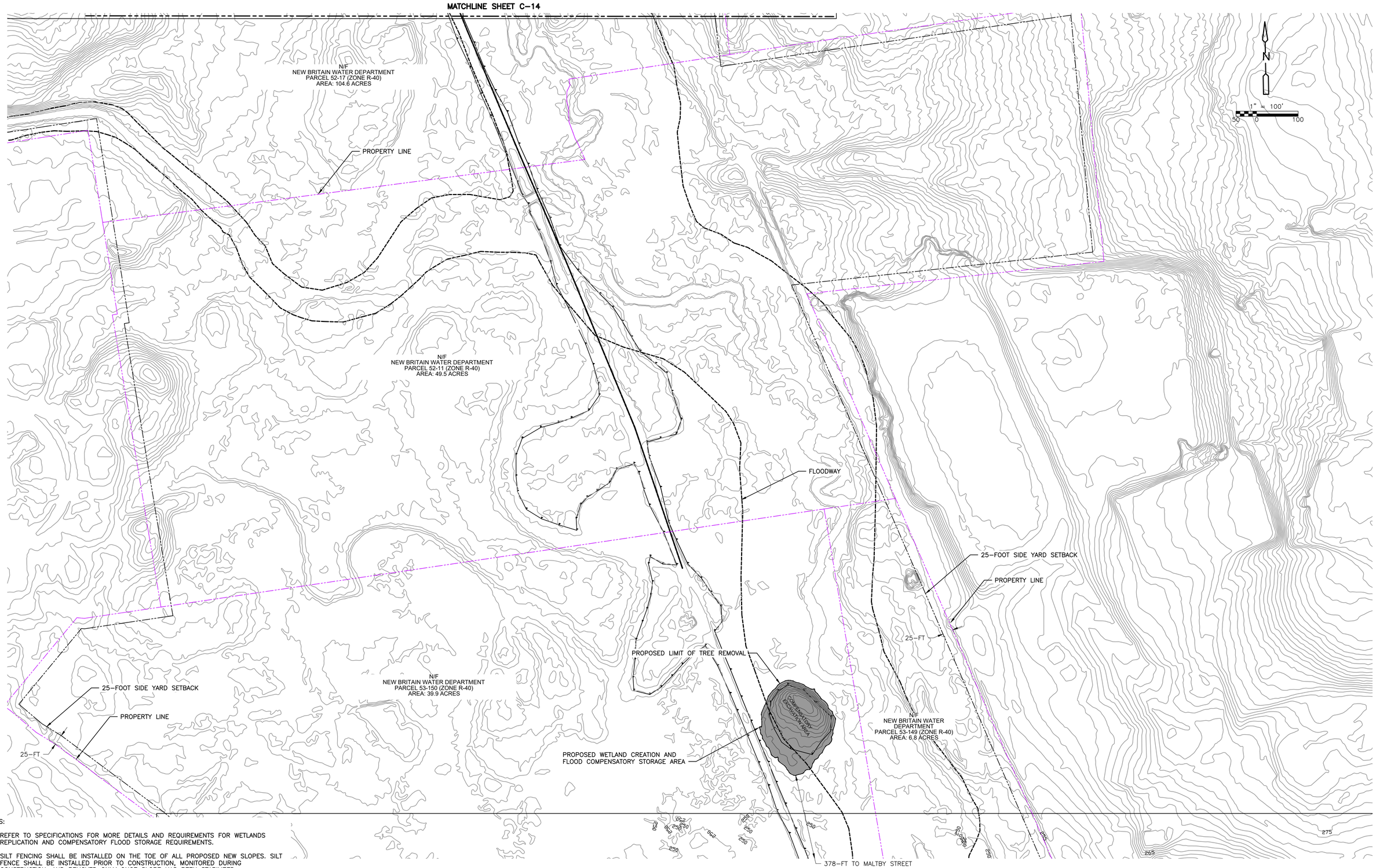


NOTES:

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DATE: OCTOBER 2024

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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION AND
COMPENSATORY FLOOD STORAGE
PLAN III

PROJECT NO. 10739-264571
FILE NAME: C014STPL.DWG
SHEET NO.
SP-02

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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|---|---|---|---|---|

DESIGNED BY: K. GARLACH
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SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT
STEVE GERSLEY WAGNER
No. 24384
LICENSED
PROFESSIONAL ENGINEER
10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION AND
COMPENSATORY FLOOD STORAGE
PLAN I

PROJECT NO. 10739-264571
FILE NAME: C013STPL.DWG
SHEET NO.
SP-03

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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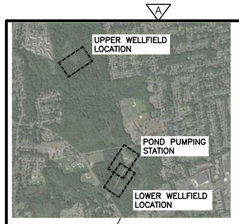


PLAN
N.T.S.

LEGEND

- WETLAND FLAG
- BORING

2,056 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

907 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

UPPER WELLFIELD WELL NO. 1.

1,771 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

UPPER WELLFIELD WELL NO. 2.

851 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

FLOODWAY

3,168 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

UPPER WELLFIELD WELL NO. 3.

1,160 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

EROSION CONTROL BLANKETS ON ALL SLOPES 4:1 OR STEEPER

B C-27 6-FT HIGH CHAIN LINK FENCE

A' C-27 24-FT WIDE DOUBLE-LEAF SWING GATE

922-FT TO NEAREST PROPERTY BOUNDARY

EXISTING UPPER WELLFIELD PUMPING STATION TO BE DEMOLISHED

TRENCH FOR PIPING, AND REPAIR TRENCH TO EXISTING CONDITIONS

902-FT TO NEAREST PROPERTY BOUNDARY

COPPER MINE BROOK

1" = 30'

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — STEVE GERSLEY — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## UPPER WELLFIELD SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C009STPL.DWG
SHEET NO. SP-04

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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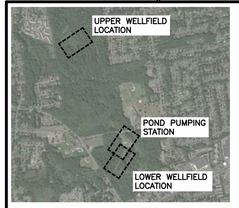
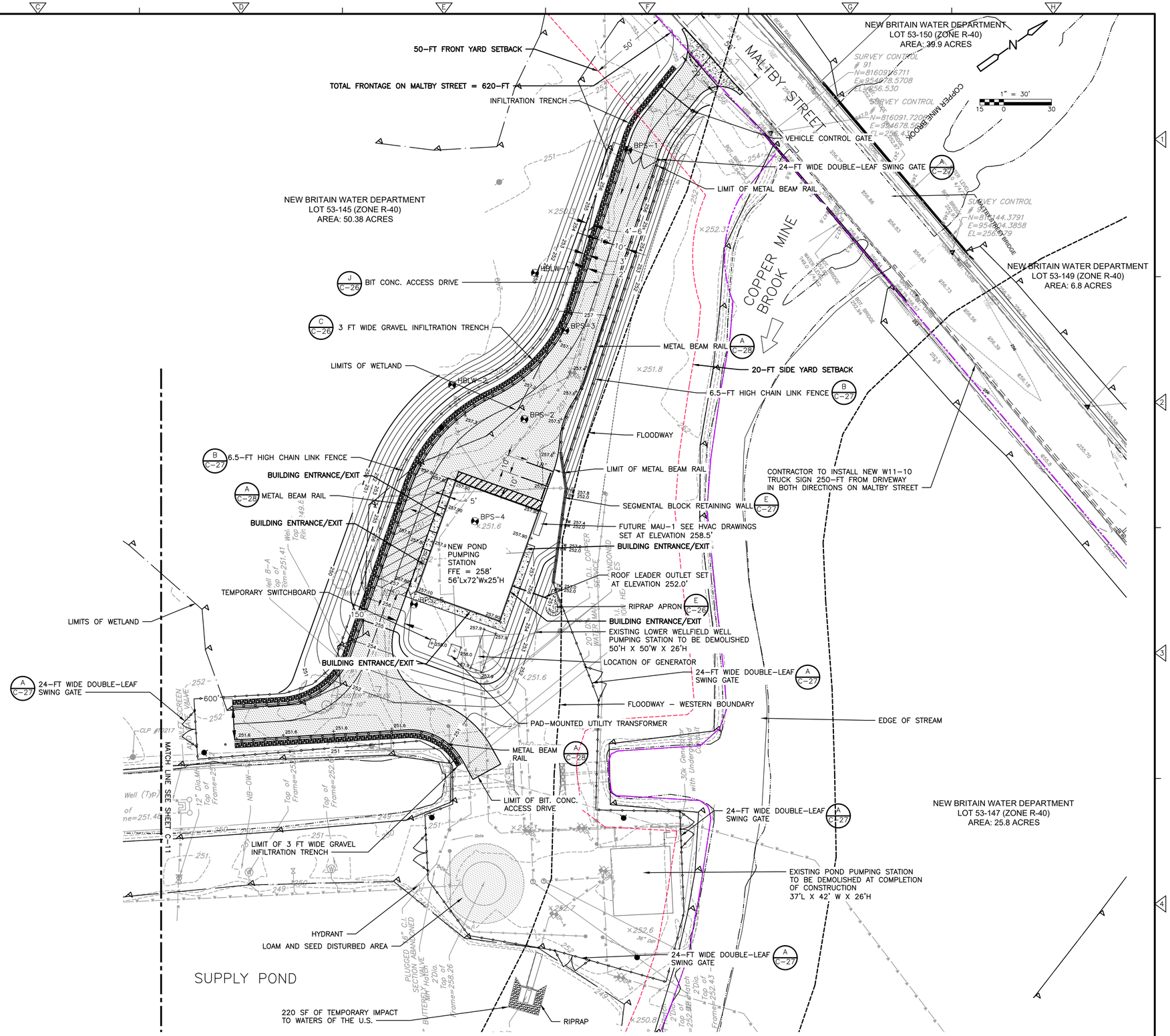



## PLAN

N.T.S.

## LEGEND

- BITUMINOUS CONCRETE
- INFILTRATION TRENCH
- CONCRETE WALKWAY
- DETENTION BASIN
- CHAIN LINK FENCE
- STEEL BEAM GUARDRAIL
- WETLAND FLAG
- BORING




| Location: | (LOT 53-145) MALTBY STREET BRISTOL, CT | | | |
|---|---|---|---|---|
| Zone: | R-40 RESIDENTIAL ZONE | | | |
| Use: | PUBLIC WATER UTILITY FACILITY (SPECIAL PERMIT USE) | | | |
| Item # | Item | Requirements | Proposed | Variance |
| 1 | Minimum Lot Area | 40,000 S.F. | 2,191,068 S.F. | No |
| 2 | Minimum Lot Frontage | 150 feet | 623 feet | No |
| 3 | Minimum Front Yard | 50 feet | 285 feet | No |
| 4 | Minimum Side Yard | 20 feet | 105 feet | No |
| 5 | Minimum Rear Yard | 50 feet | 1,180 feet | No |
| 6 | Maximum Building Height | 35 feet | 25.3 feet | No |
| 7 | Maximum Building Coverage | 20 percent | 0.18 percent | No |
| 8 | Building Size | None Required | 4032 S.F. (Pump Station) | No |
| 9 | Parking Required | N/A[1] | 2 spaces | No |
| 10 | Minimum Parking Dimensions | 9 feet x 18 feet | 10 feet x 18 feet | No |
| 11 | Minimum Aisle Width | 24 feet | 40 feet | No |
| 12 | Minimum Residential Setback | 50 feet | 193 feet | No |
| 13 | Minimum Front Lot Line | 10 feet | 193 feet | No |
| 14 | Minimum Side Setback | 5 feet | 98 feet | No |
| 15 | Minimum Rear Setback | 5 feet | 1,200 feet | No |
| 16 | Landscaping, Curbs, and Islands | N/A (Less than 10 parking spaces) | N/A | N/A |

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

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DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024


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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C010GDPL.DWG
SHEET NO.
SP-05

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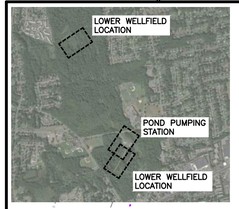


## PLAN
N.T.S.

LEGEND
- WETLAND FLAG
- BORING

N/F
NEW BRITAIN WATER DEPARTMENT
PARCEL 53-145 (ZONE R-40)
AREA: 50.38 ACRES

1" = 30'
15 0 30

50-FT FRONT YARD SETBACK
PROPERTY LINE
LIMIT OF TREE CLEARING
LOWER WELLFIELD WELL NO. 1. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
EROSION CONTROL BLANKETS ON ALL SLOPES 4:1 OR STEEPER
LOWER WELLFIELD WELL NO. 2. TOP OF WELL CAP SET AT ELEVATION 259', SEE SHEET C-16 FOR WELL LOCATION
LOAM AND SEED ALL DISTURBED AREAS
B / C-27 6-FT HIGH CHAIN LINK FENCE
C / C-27 6-FT WIDE PEDESTRIAN SWING GATE
LOWER WELLFIELD WELL NO. 3. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
MATCH LINE SEE PUMPING STATION SHEETS
CANAL
LOWER WELLFIELD WELL NO. 4. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
LOWER WELLFIELD WELL NO. 5. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
LOWER WELLFIELD WELL NO. 6. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
LIMIT OF TREE CLEARING
3,003 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS
LOAM AND SEED ALL WELL BERMS, TYP.
1,320 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS
358 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS
SUPPLY POND
POLKVILLE BROOK
ABANDONED PIPE AND WELLS
HEADER CAP
16" C.I. SUCTION HEADER
6" D.I. WELL CONNECTIONS
52" ASH
48" OAK
BLWF-1
BLWF-2
BLWF-3
BLWF-4
BLWF-5
BLWF-6

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
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APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · JEFFERSLEY WATSON · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## LOWER WELLFIELD SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C011GDPL.DWG
SHEET NO. SP-06

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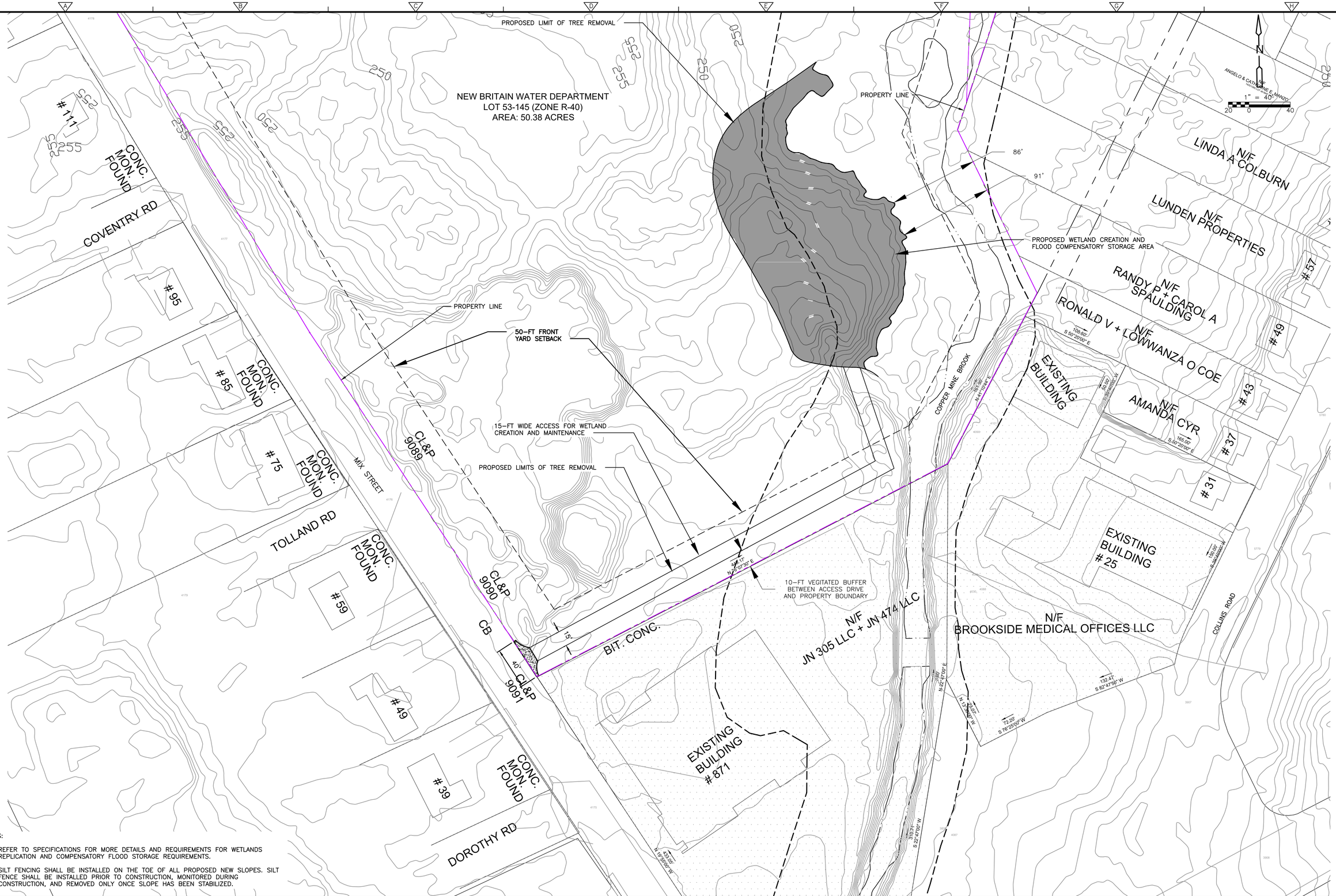


NOTES:

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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION AND
COMPENSATORY FLOOD STORAGE
ENLARGED PLAN I

PROJECT NO. 10739-264571
FILE NAME: C013STPL.DWG
SHEET NO.
SP-07


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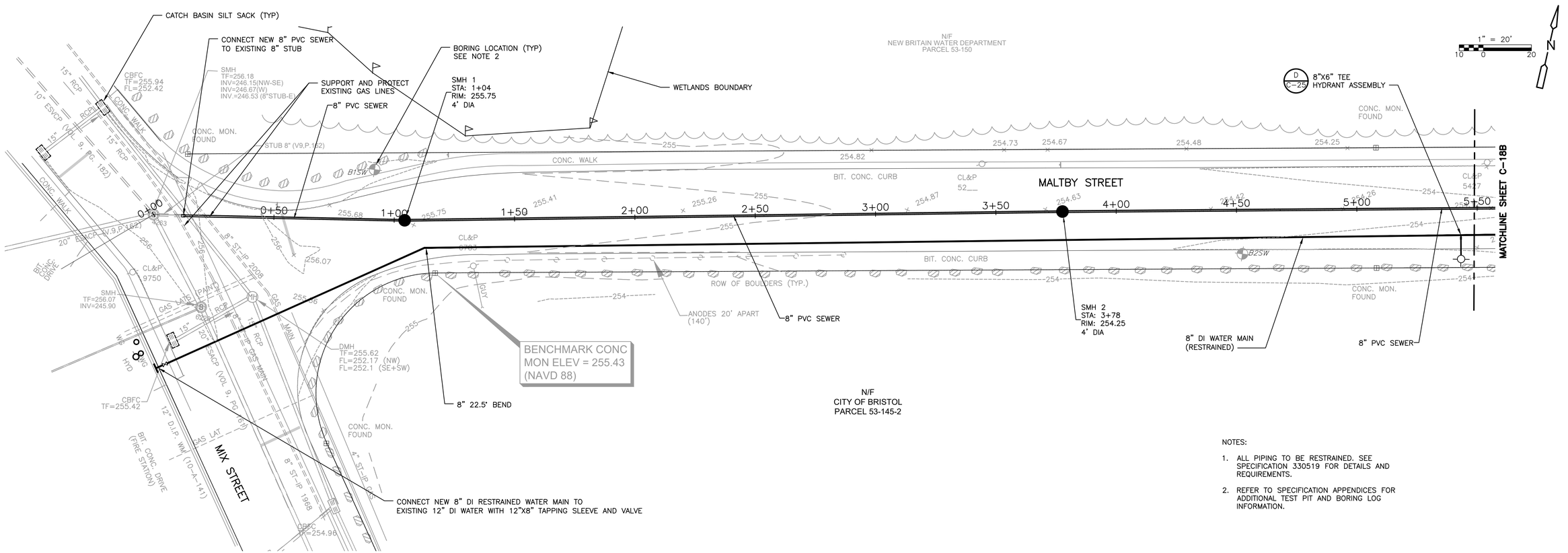
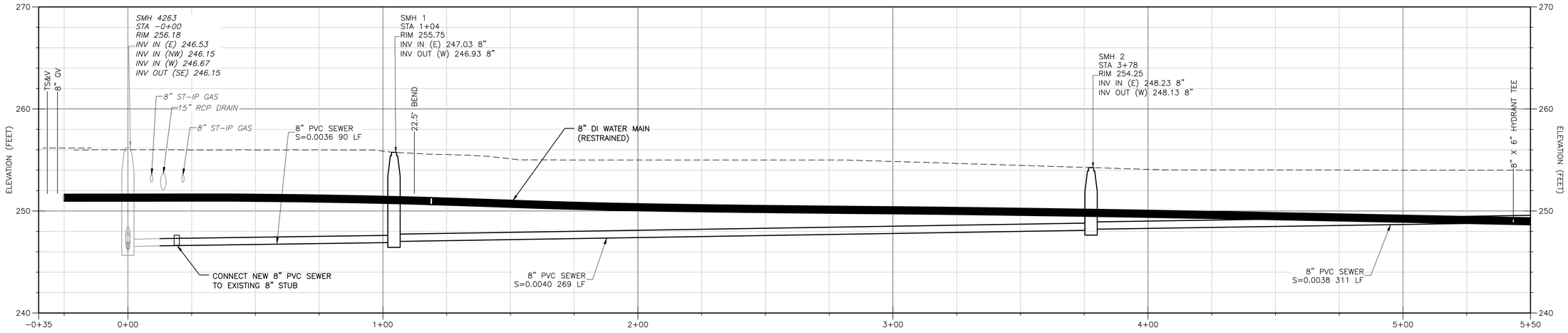



NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.

PLAN
1" = 20'




PROFILE
1" = 20' HORZ:1"=20' VERT:1"=5' 1" = 5'

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

MALTBY STREET
PLAN AND PROFILE I

PROJECT NO. 10739-264571
FILE NAME: C018AYPPL.DWG
SHEET NO.
SP-08

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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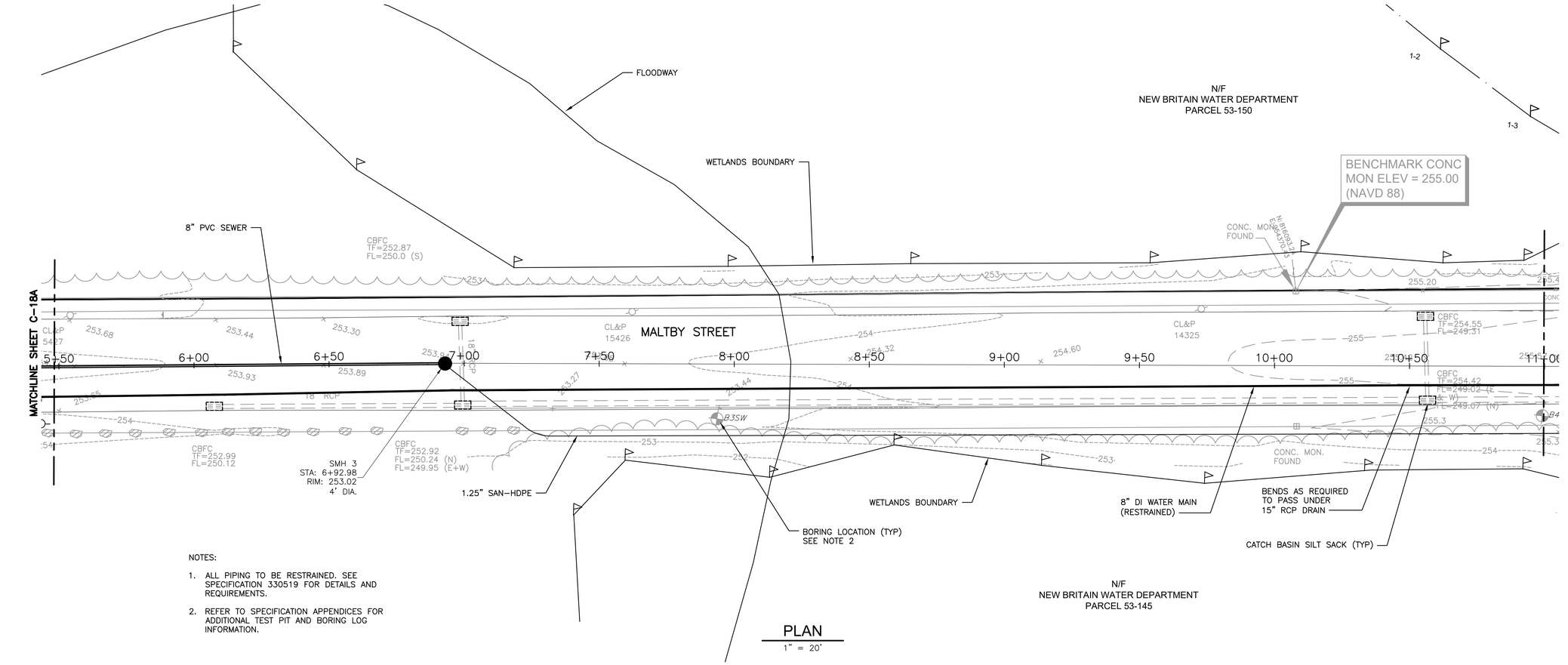
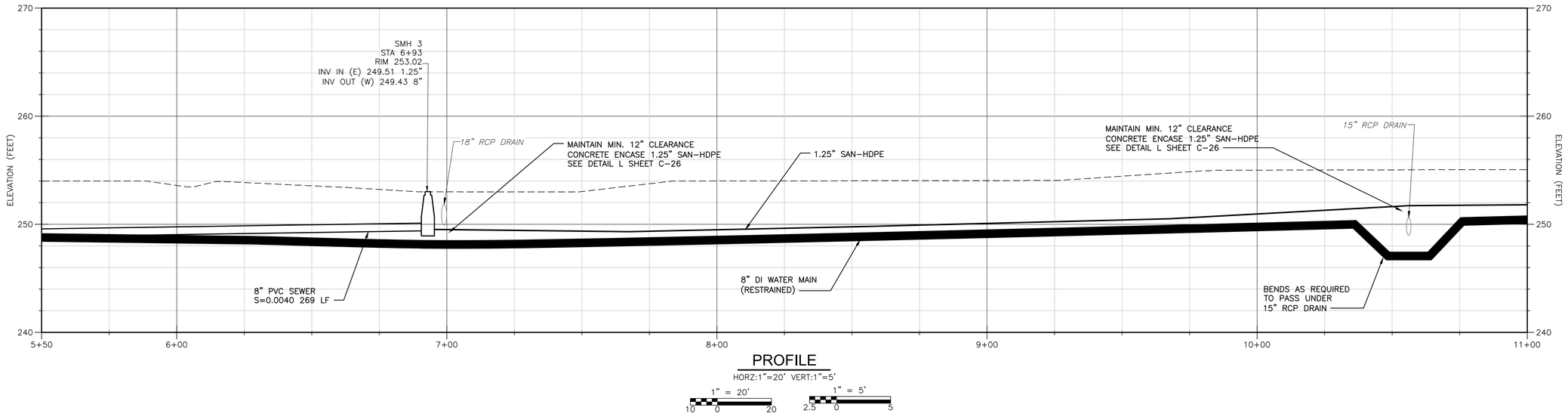



NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.

PLAN
1" = 20'




PROFILE
HORZ:1"=20' VERT:1"=5'
1" = 20' (10 0 20)
1" = 5' (2.5 0 5)

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — JEFFREY S. WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## MALTBY STREET PLAN AND PROFILE II

PROJECT NO. 10739-264571
FILE NAME: C018BYPPL.DWG
SHEET NO.
SP-09

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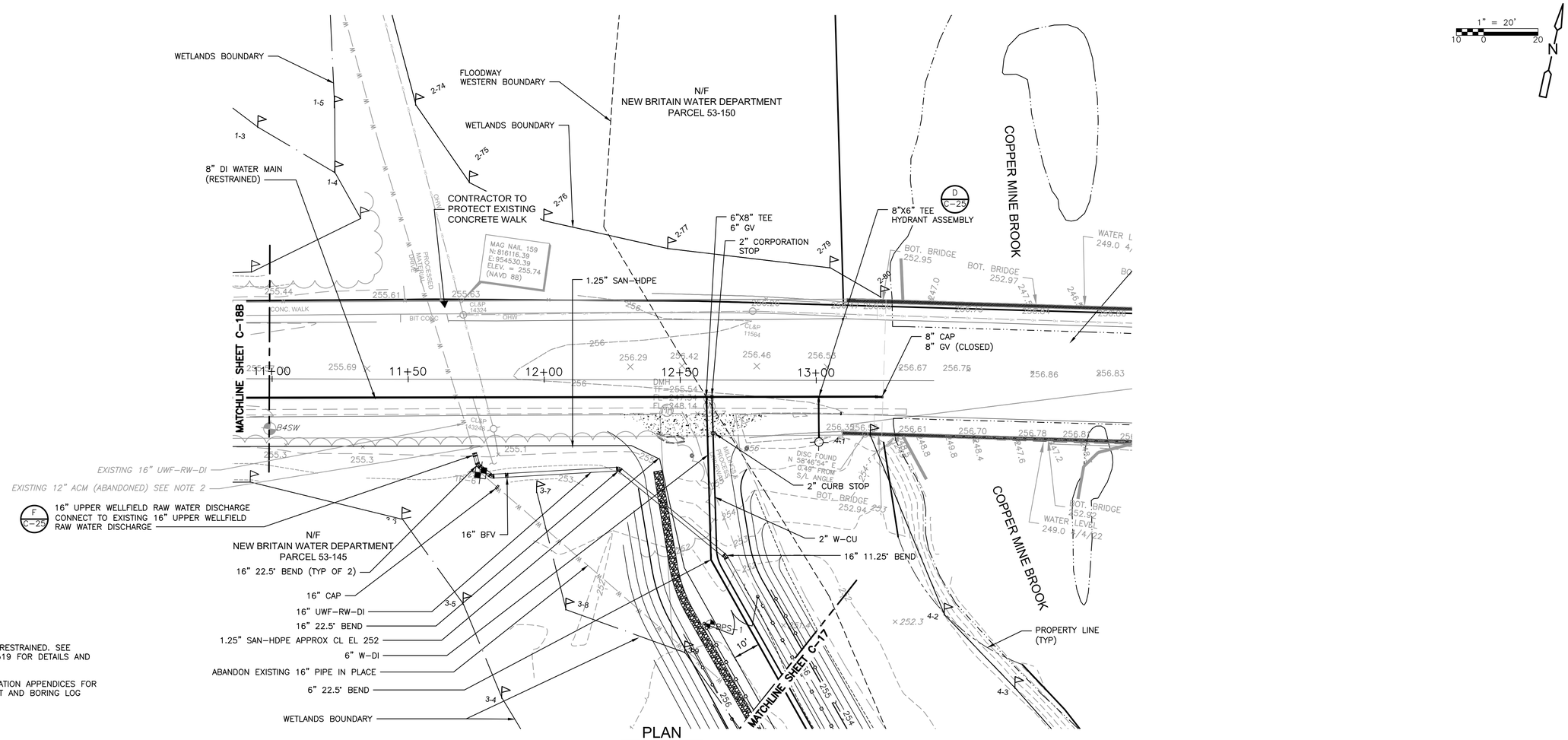
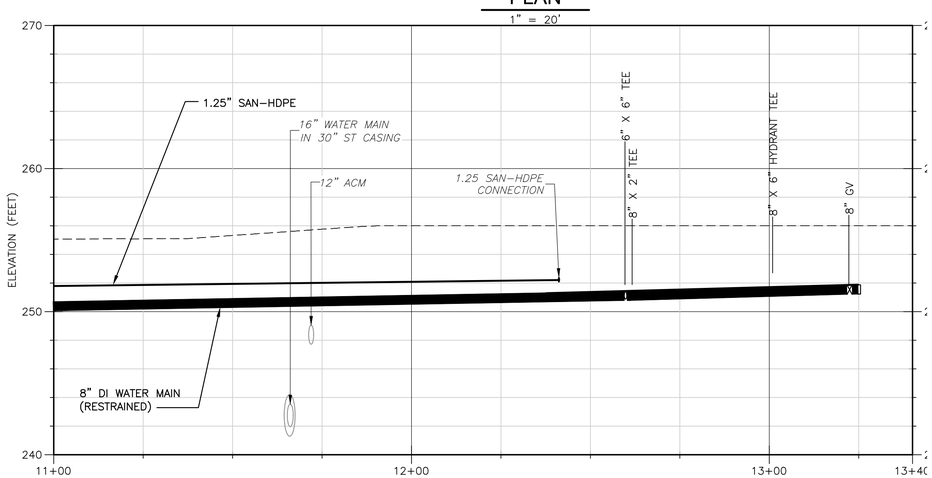



NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.

PLAN
1" = 20'




PROFILE
1" = 20' HORZ:1"=20' VERT:1"=5' 1" = 5'

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WAGNER · No. 24384 · LICENSED · PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

MALTBY STREET
PLAN AND PROFILE III

PROJECT NO. 10739-264571
FILE NAME: C018CYPPL.DWG
SHEET NO.
SP-10

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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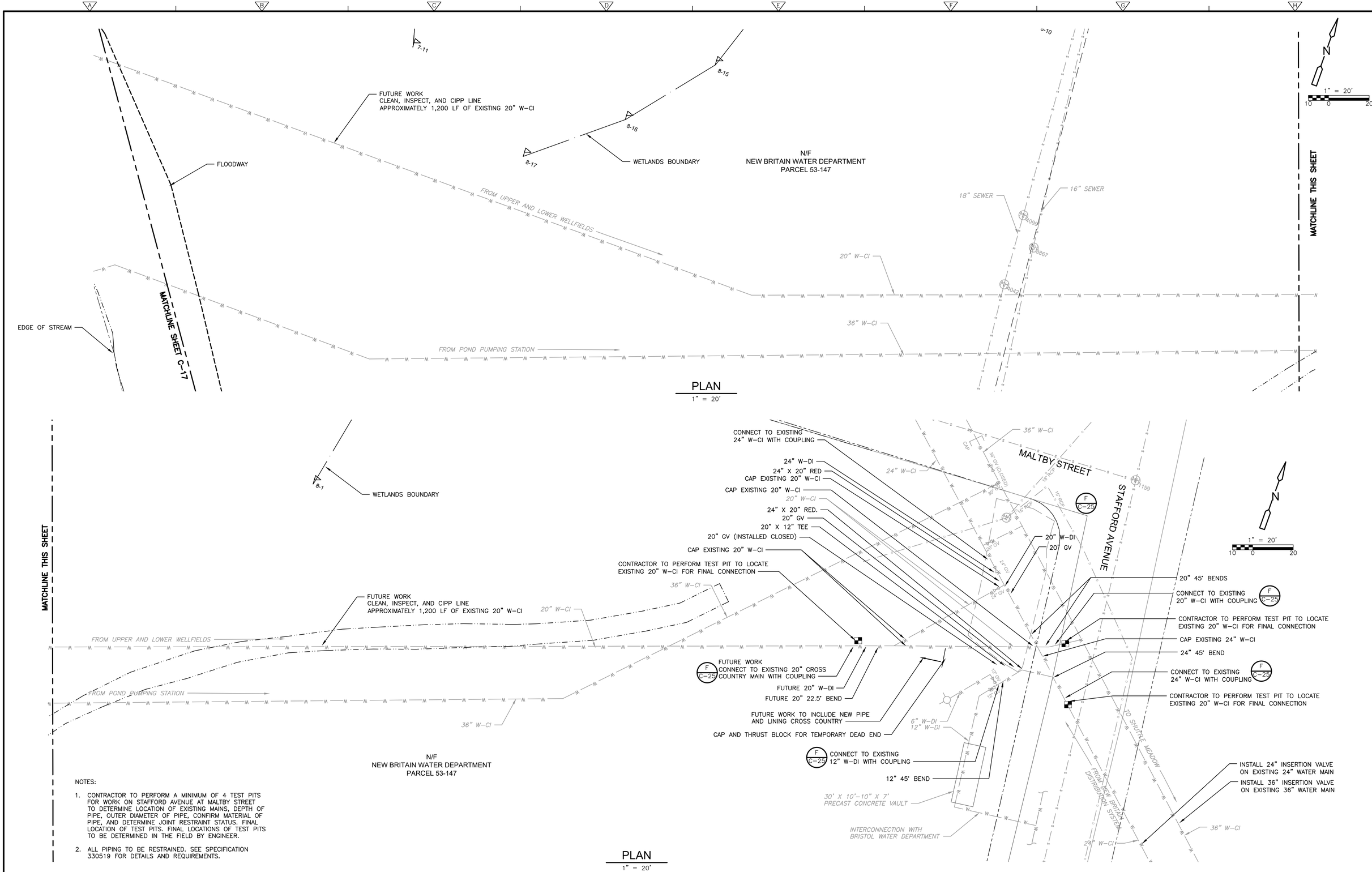


NOTES:

1. CONTRACTOR TO PERFORM A MINIMUM OF 4 TEST PITS FOR WORK ON STAFFORD AVENUE AT MALTBY STREET TO DETERMINE LOCATION OF EXISTING MAINS, DEPTH OF PIPE, OUTER DIAMETER OF PIPE, CONFIRM MATERIAL OF PIPE, AND DETERMINE JOINT RESTRAINT STATUS. FINAL LOCATION OF TEST PITS. FINAL LOCATIONS OF TEST PITS TO BE DETERMINED IN THE FIELD BY ENGINEER.
2. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT · KIMBERLY A. WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## STAFFORD AVENUE AND CROSS COUNTRY PLAN

PROJECT NO. 10739-264571
FILE NAME: C019YPPL.DWG
SHEET NO. SP-11

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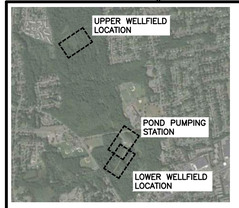


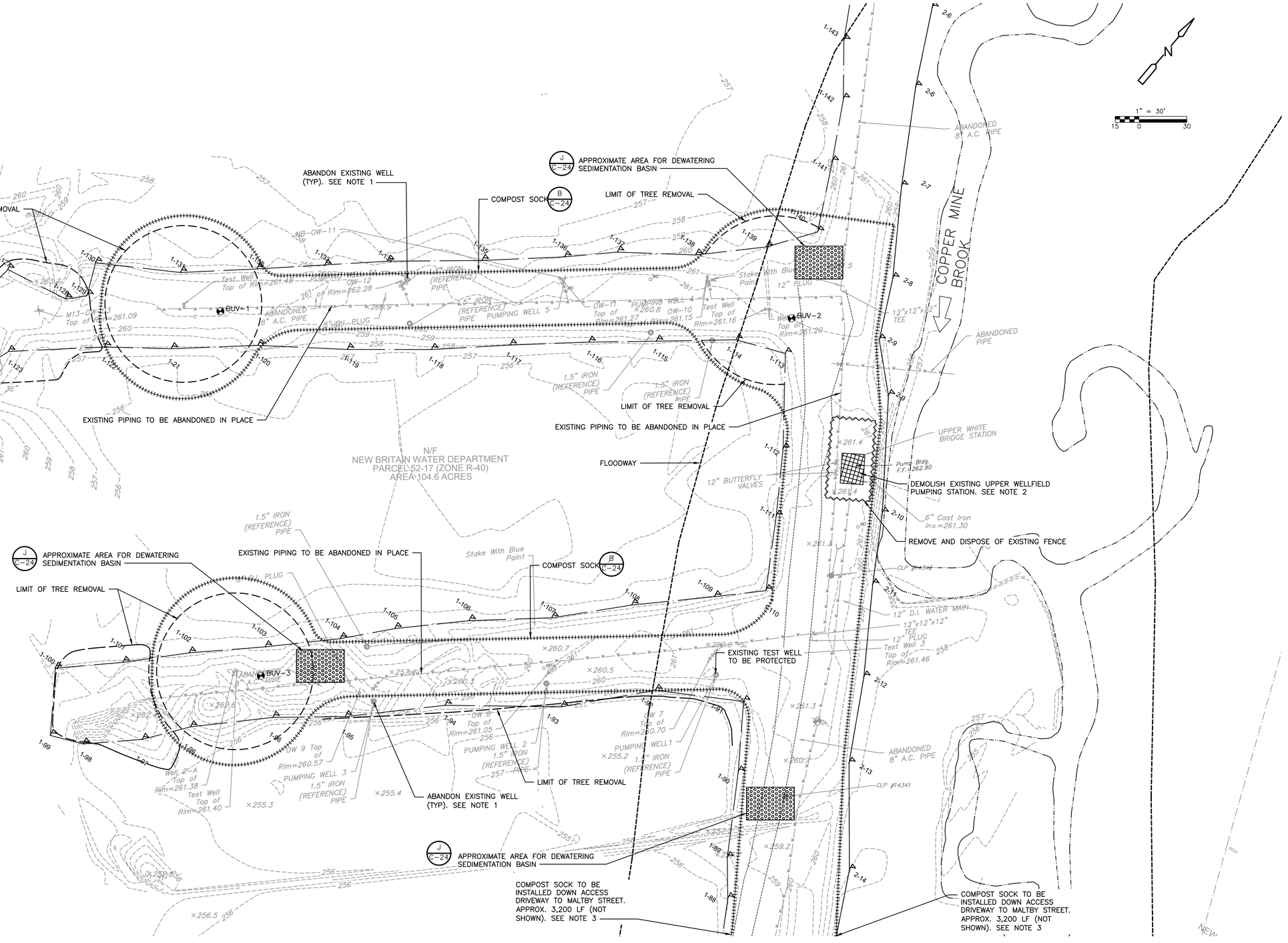

PLAN
N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE HEADER PIPE AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. THE EXISTING UPPER WELLFIELD PUMPING STATION BUILDING TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISHED GRADE. THE WESTERN WALL SHALL REMAIN TO AT LEAST 2 FEET BELOW GRADE. BUILDING FOUNDATION TO BE FILLED AND COMPACTED TO EXISTING GRADE. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE SPECIFICATION SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
3. CONTRACTOR TO INSTALL COMPOST SOCK ON BOTH SIDES OF THE UPPER WELLFIELD ACCESS DRIVEWAY (APPROX. 3,200 LF EACH, NOT SHOWN) TO MALTBY STREET. THE EXISTING ACCESS DRIVEWAY BRIDGE CROSSING OF THE FREEMAN HILL BROOK TO BE PROTECTED DURING CONSTRUCTION.
4. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
5. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.




| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT — KEVIN BERSLEY WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

# UPPER WELLFIELD DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C006STPL.DWG
SHEET NO. SP-12

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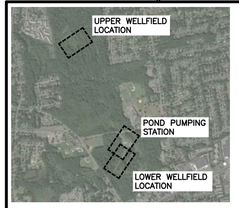


## PLAN

N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. EXISTING WELLS WITH WELL HEAD LOCATED IN A VAULT TO HAVE VAULT DEMOLISHED AND REMOVED, WELL HEAD REMOVED TO 5 FEET BELOW BOTTOM OF VAULT, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
3. THE EXISTING POND PUMPING STATION BUILDING TO BE DEMOLISHED AT COMPLETION OF NEW POND PUMPING STATION TO AT LEAST 2 FEET BELOW FINISHED GRADE. THE WESTERN WALL SHALL REMAIN TO AT LEAST 2 FEET BELOW GRADE. BUILDING FOUNDATION TO BE FILLED AND COMPACTED TO EXISTING GRADE. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE SPECIFICATION SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
4. THE EXISTING LOWER WELLFIELD PUMPING STATION BUILDING AND FOUNDATION TO BE DEMOLISHED TO ELEVATION 241.2 FT. EXCAVATION LIMITS FOR THE NEW POND PUMPING STATION BUILDING TO APPROXIMATE MIN ELEVATION 241.2 FT. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE DETAIL B ON SHEET C-26 AND SPECIFICATIONS SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
5. THE EXISTING CAISSON WELL TO BE DECOMMISSIONED AND ABANDONED IN PLACE. THE CONE OF THE EXISTING CAISSON WELL TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISH GRADE. SEE DETAIL B ON SHEET C-28 AND SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF THE EXISTING CAISSON WELL.
6. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
7. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.
8. CONTRACTOR TO REMOVE TREES TO WIDEN ACCESS DRIVE AND PROVIDE ADEQUATE SITE LINES FROM DRIVEWAY ONTO MALTBY STREET.




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| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — KEVIN WAGNER — No. 24384 — REGISTERED PROFESSIONAL ENGINEER — 10.10.24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C007STPL.DWG
SHEET NO. SP-13

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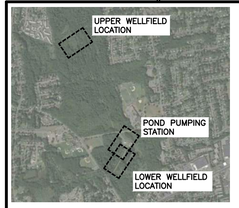



## PLAN

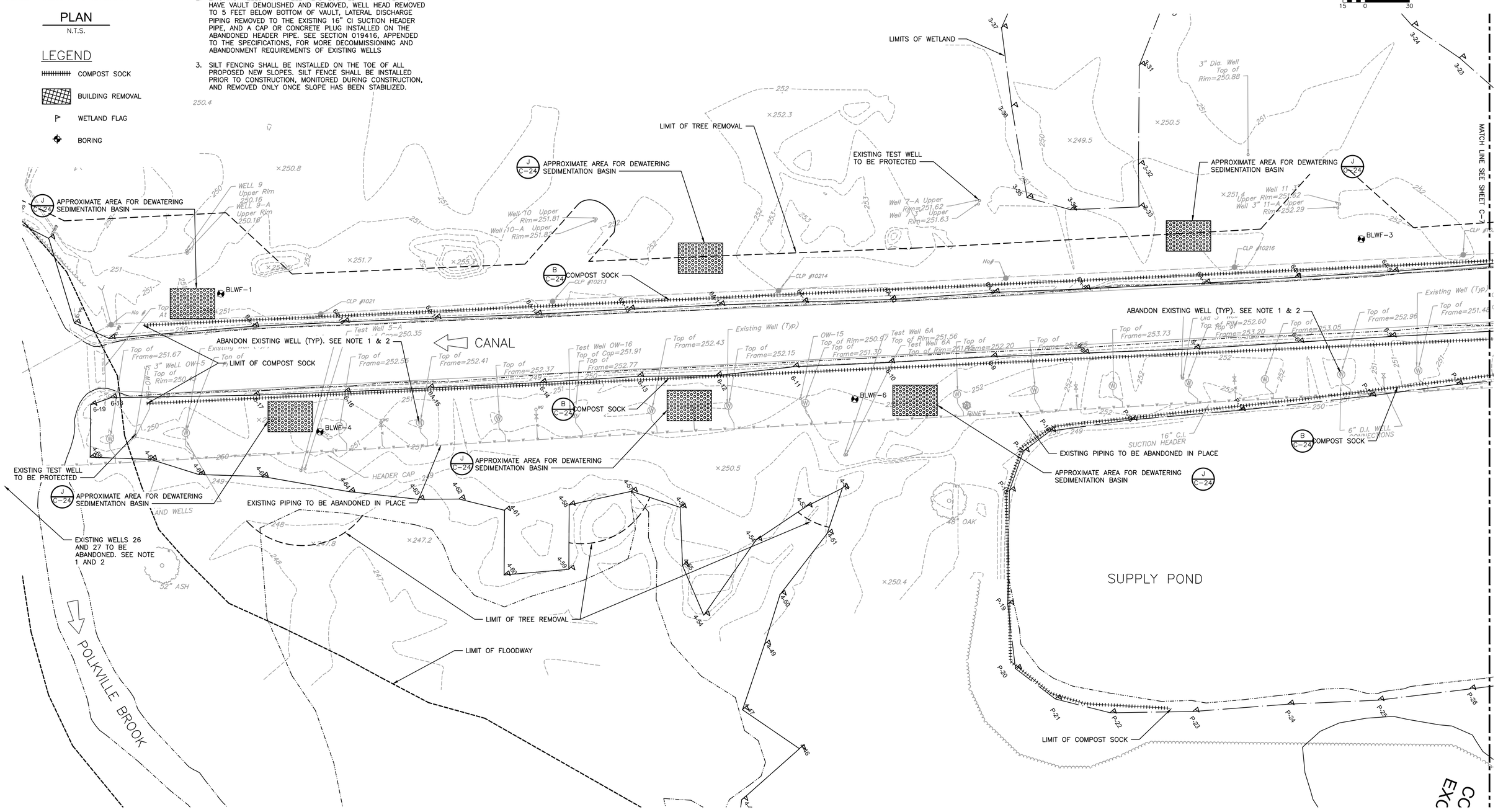
N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. EXISTING WELLS WITH WELL HEAD LOCATED IN A VAULT TO HAVE VAULT DEMOLISHED AND REMOVED, WELL HEAD REMOVED TO 5 FEET BELOW BOTTOM OF VAULT, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS
3. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.




| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WALSH · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD
DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C008GDPL.DWG
SHEET NO.
SP-14

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION


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## NOTES FOR TRAFFIC CONTROL PLANS

1. IF A TRAFFIC STOPPAGE OCCURS IN ADVANCE OF SIGN (A), THEN AN ADDITIONAL SIGN (A) SHALL BE INSTALLED IN ADVANCE OF THE STOPPAGE.
2. SIGNS (AA), (A), AND (D) SHOULD BE OMITTED WHEN THESE SIGNS HAVE ALREADY BEEN INSTALLED TO DESIGNATE A LARGER WORK ZONE THAN THE WORK ZONE THAT IS ENCOMPASSED ON THIS PLAN.
3. SEE TABLE 1 FOR ADJUSTMENT OF TAPERS IF NECESSARY.
4. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN TRAFFIC DRUMS SHALL BE USED IN PLACE OF TRAFFIC CONES.
5. ANY LEGAL SPEED LIMIT SIGNS WITHIN THE LIMITS OF A ROADWAY / LANE CLOSURE AREA SHALL BE COVERED WITH AN OPAQUE MATERIAL WHILE THE CLOSURE IS IN EFFECT, AND UNCOVERED WHEN THE ROADWAY / LANE CLOSURE IS RE-OPENED TO ALL LANES OF TRAFFIC.
6. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN ANY EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED OR COVERED, AND TEMPORARY PAVEMENT MARKINGS THAT DELINEATE THE PROPER TRAVELPATHS SHALL BE INSTALLED.
7. DISTANCES BETWEEN SIGNS IN THE ADVANCE WARNING AREA MAY BE REDUCED TO 100' ON LOW-SPEED URBAN ROADS (SPEED LIMIT < 40 MPH).
8. IF THIS PLAN IS TO REMAIN IN OPERATION DURING THE HOURS OF DARKNESS, INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.
9. A CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE HALF TO ONE MILE IN ADVANCE OF THE LANE CLOSURE TAPER.
10. SIGN (P) SHALL BE MOUNTED A MINIMUM OF 7 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGN.

TABLE 1 - MINIMUM TAPER LENGTHS

| POSTED SPEED LIMIT (MILES PER HOUR) | MINIMUM TAPER LENGTH FOR A SINGLE LANE CLOSURE |
|---|---|
| 30 OR LESS | 180' (55m) |
| 35 | 250' (75m) |
| 40 | 320' (100m) |
| 45 | 540' (165m) |
| 50 | 600' (180m) |
| 55 | 660' (200m) |
| 65 | 780' (240m) |

METRIC CONVERSION CHART (1" = 25mm)

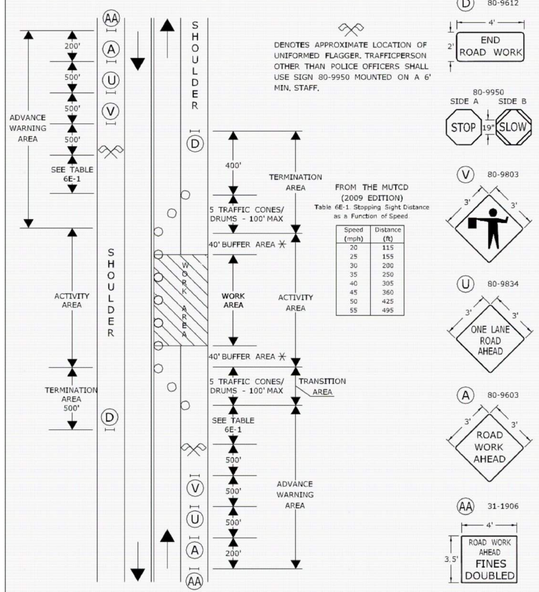
| ENGLISH | METRIC | ENGLISH | METRIC | ENGLISH | METRIC |
|---|---|---|---|---|---|
| 12" | 300mm | 42" | 1050mm | 72" | 1800mm |
| 18" | 450mm | 48" | 1200mm | 78" | 1950mm |
| 24" | 600mm | 54" | 1350mm | 84" | 2100mm |
| 30" | 750mm | 60" | 1500mm | 90" | 2250mm |
| 36" | 900mm | 66" | 1650mm | 96" | 2400mm |

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
NOTES

## WORK IN TRAVEL LANE AND SHOULDER
## TWO LANE HIGHWAY
## ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT (MIN.)




○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 1 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER
## TWO LANE HIGHWAY
## ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT (MIN.)

HAND SIGNAL METHODS TO BE USED BY UNIFORMED FLAGGERS

THE FOLLOWING METHODS FROM SECTION 6E.07, FLAGGER PROCEDURES, IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," SHALL BE USED BY UNIFORMED FLAGGERS WHEN DIRECTING TRAFFIC THROUGH A WORK AREA. THE STOP/SLOW SIGN PADDLE (SIGN NO. 80-9950) SHOWN ON THE TRAFFIC STANDARD SHEET TR-1220 01 ENTITLED, "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" SHALL BE USED.

A. TO STOP TRAFFIC

TO STOP ROAD USERS, THE FLAGGER SHALL FACE ROAD USERS AND AIM THE STOP PADDLE FACE TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FREE ARM SHALL BE HELD WITH THE PALM OF THE HAND ABOVE SHOULDER LEVEL TOWARD APPROACHING TRAFFIC.




B. TO DIRECT TRAFFIC TO PROCEED

TO DIRECT STOPPED ROAD USERS TO PROCEED, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FLAGGER SHALL MOTION WITH THE FREE HAND FOR ROAD USERS TO PROCEED.




C. TO ALERT OR SLOW TRAFFIC

TO ALERT OR SLOW TRAFFIC, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.



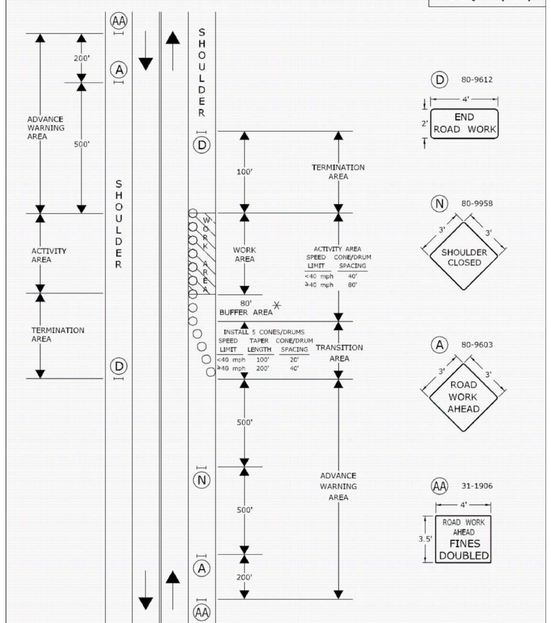

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN SHOULDER - TWO LANE HIGHWAY

SIGN FACE 71 SQ. FT (MIN.)



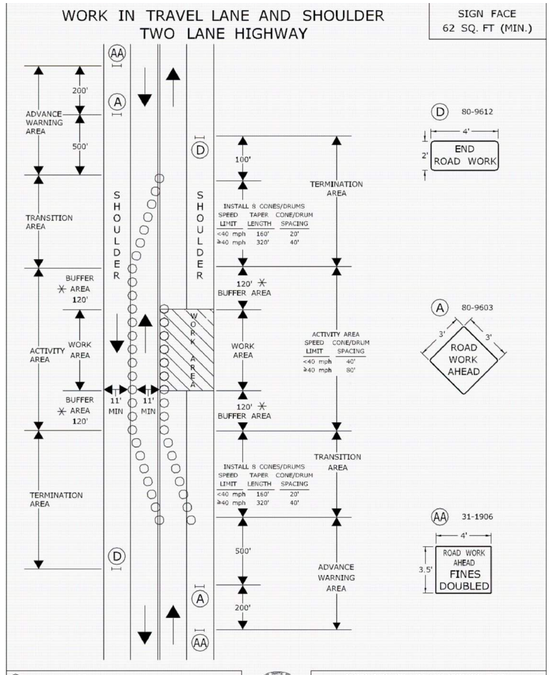

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 14
SEE NOTES 1, 2, 4, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER
## TWO LANE HIGHWAY

SIGN FACE 62 SQ. FT (MIN.)



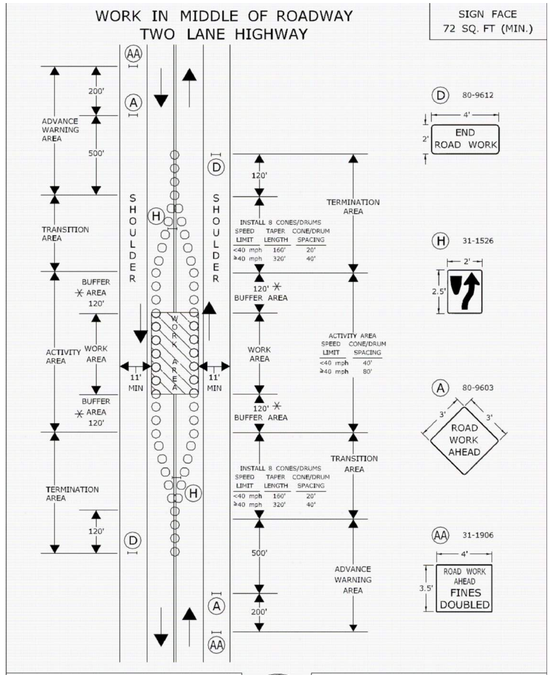

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 15
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN MIDDLE OF ROADWAY
## TWO LANE HIGHWAY

SIGN FACE 72 SQ. FT (MIN.)



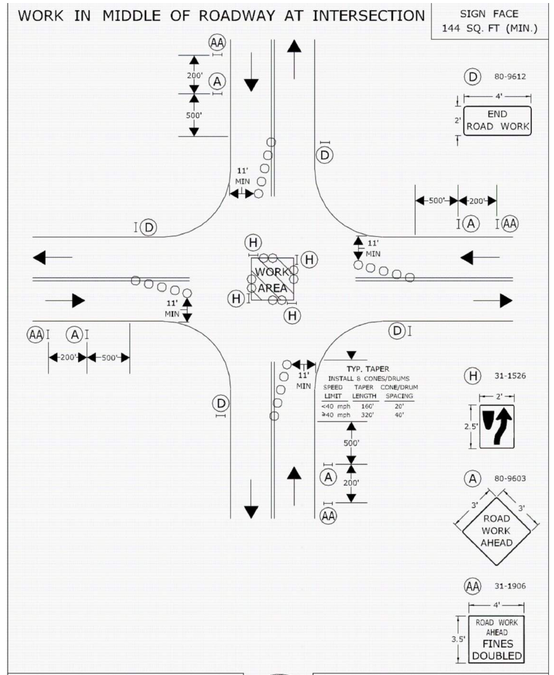

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 16
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN MIDDLE OF ROADWAY AT INTERSECTION

SIGN FACE 144 SQ. FT (MIN.)



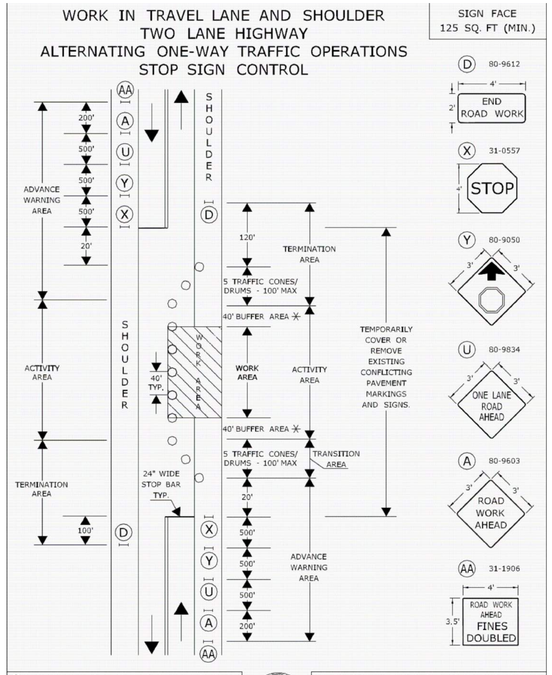

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 17
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER
## TWO LANE HIGHWAY
## ALTERNATING ONE-WAY TRAFFIC OPERATIONS
## STOP SIGN CONTROL

SIGN FACE 125 SQ. FT (MIN.)




○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 18
SEE NOTES 1, 2, 4, 7, 8

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
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APPROVED BY: K. WAGNER
DATE: DECEMBER 2023


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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

TRAFFIC CONTROL
NOTES AND PLANS

PROJECT NO. 10739-264571
FILE NAME: C029TRFC.DWG
SHEET NO. C-29

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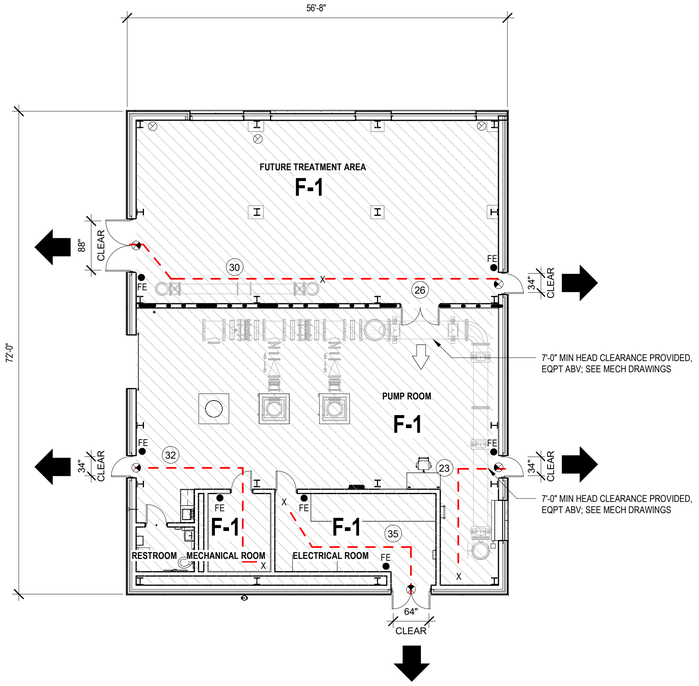
# Elevation Drawings and Floor Plans

Include in hard copy submittal




LIFE SAFETY PLAN

3/32" = 1'-0"

## LIFE SAFETY PLAN LEGEND

- EGRESS PATH
- 2 HOUR FIRE RATING
- EXIT DISCHARGE
- AREA OR SPACE EXIT
- EXIT SIGN
- FE — FIRE EXTINGUISHER - MULTIPURPOSE DRY-CHEMICAL TYPE
- (X) — TRAVEL DISTANCE (FEET)
- [X] — COMMON PATH OF TRAVEL (FEET)
- X — POINT OF ORIGIN
- FACTORY INDUSTRIAL, F-1 OCCUPANCY CLASSIFICATION

| Building Code Summary | | | |
|---|---|---|---|
| **Owner:** | City of New Britain, Connecticut | **Date:** | April 2023 |
| **Project Name:** | White Bridge Waterworks Facilities | **Location:** | New Britain, CT |
| **Project No:** | 10739-264571 | **Architect of Record:** | CDM Architects Inc. |
| **Building Name:** | Pond Pumping Station | | |
| **Work Scope:** | Construction of pump station (New Structure) | | |
| **Applicable Ordinances, Codes, and Standards** | | | |
| **Abbreviations** | **ICC** - International Code Council; **IBC** - International Building Code; **IEBC** - International Existing Building Code; **IECC** - International Energy Conservation Code; **IFC** - International Fire Code; **IMC** - International Mechanical Code; **IPC** - International Plumbing Code; | | |
| **Building Code** | 2022 CT State Building Code - 2021 IBC | | |
| **Mechanical Code** | 2022 CT State Building Code - 2021 IMC | | |
| **Energy Code** | 2022 CT State Building Code - 2021 IECC | | |
| **Plumbing Code** | 2022 CT State Building Code - 2021 IPC | | |
| **Electrical Code** | 2020 National Electrical Code (NFPA 70) | | |
| **Accessibility Code** | 2017 ICC A117.1 | | |
| **Use and Occupancy Classification** | | | |
| *IBC Code Reference* | | | |
| Chapter 3 | | | |
| Section 306 | Factory Group F | | |
| 306.2 | Moderate-hazard factory industrial, Group F-1 | | |
| **General Building Heights and Areas** | | | |
| Chapter 5 | | | |
| Section 504 | Building Height and Number of Stories | | |
| Table 504.3 | Allowable Building Height in Feet Above Grade Plane | Allowable | Proposed |
| | Group F-1 Type IIB - No Sprinklers | 55 Feet | 25 Feet, 10 Inches |
| Table 504.4 | Allowable Number of Stories Above Grade Plane | | |
| | Group F-1 Type IIB - No Sprinklers | 2 Stories | 1 Story |
| Section 506 | Building Area | | |
| Table 506.2 | Allowable Area Factor in Square Feet | | |
| | Group F-1 Type IIB - No Sprinklers | 15,500 SF | 4,085 SF |
| **Types of Construction** | | | |
| Chapter 6 | | | |
| Section 602 | Construction Classification | | |
| 602.2 | Types I and II, Non Combustible | Type IIB Construction | |
| **Fire Protection and Life Safety Systems** | | | |
| Chapter 9 | | | |
| Section 903 | Automatic Sprinkler Systems | Not required for Group F-1 occupancy:<br>1. Fire area under 12,000 square feet.<br>2. Fire area not located more than three stories above grade plane.<br>3. Combined area of all F-1 fire areas under 24,000 square feet. | |
| Section 906 | Portable Fire Extinguishers | Required in accordance to 906.2 and NFPA 10 | |
| Section 907<br>907.2.4 | Fire Alarm and Detection Systems<br>Group F | Not required for Group F-1 occupancy<br>1. F occupancy under two stories in height.<br>2. F occupancy has occupant load under 500. | |
| **Means of Egress** | | | |
| Chapter 10 | | | |
| Section 1004 | Occupant Load | | |
| Table 1004.5 | Maximum Floor Area Allowances per Occupant | | |
| | Function of Space | Occupant Load Factor | Area / Occupant Load Factor |
| | Accessory storage areas, mechanical equipment room | 300 gross | (4,085 / 300) = 14 |
| Section 1010 | Doors, Gates and Turnstiles | Required | Proposed |
| 1010.1.1 | Size of doors | Minimum clear width: 32 inches | 34 inches |
| Section 1017 | Exit Access Travel Distance | | |
| Table 1017.2 | Occupancy | without Sprinklers (feet) | with Sprinklers (feet) |
| | F-1 | 200 | N/A |
| **Accessibility** | | | |
| Chapter 11 | | | |
| Section 1103 | Scoping Requirements | | |
| 1103.2.9 | Equipment spaces are not required to comply with this chapter | | |
| **Energy Efficiency** | | | |
| Chapter 13 | | | |
| Section 1301 | General | | |
| 1301.1.1 | Building designed and constructed in accordnace with the IECC with compliance requirements indicated in COMcheck report | | |

0 4' 8' 12' 20'

SCALE: 3/32" = 1'-0"

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: R. MARSHALL
DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: B. GIORGI
DATE: APRIL 2023

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75 State Street
Boston, Massachusetts 02109

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
BUILDING CODE SUMMARY AND LIFE SAFETY PLAN

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT
SHEET NO. A-2

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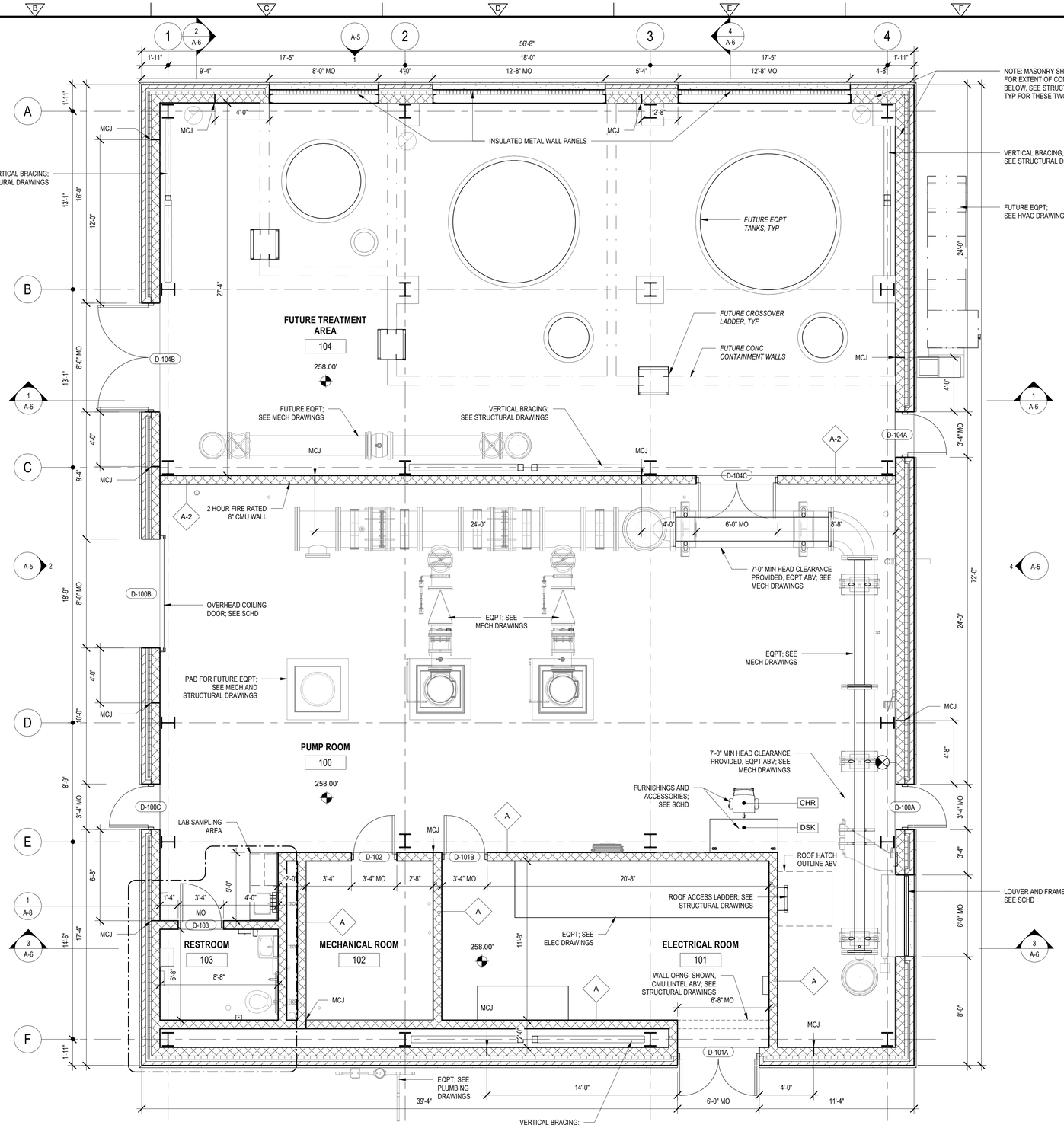


GROUND LEVEL FLOOR PLAN

1/4" = 1'-0"

0 2' 4' 8'

SCALE: 1/4" = 1'-0"

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CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
FLOOR PLAN

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-3

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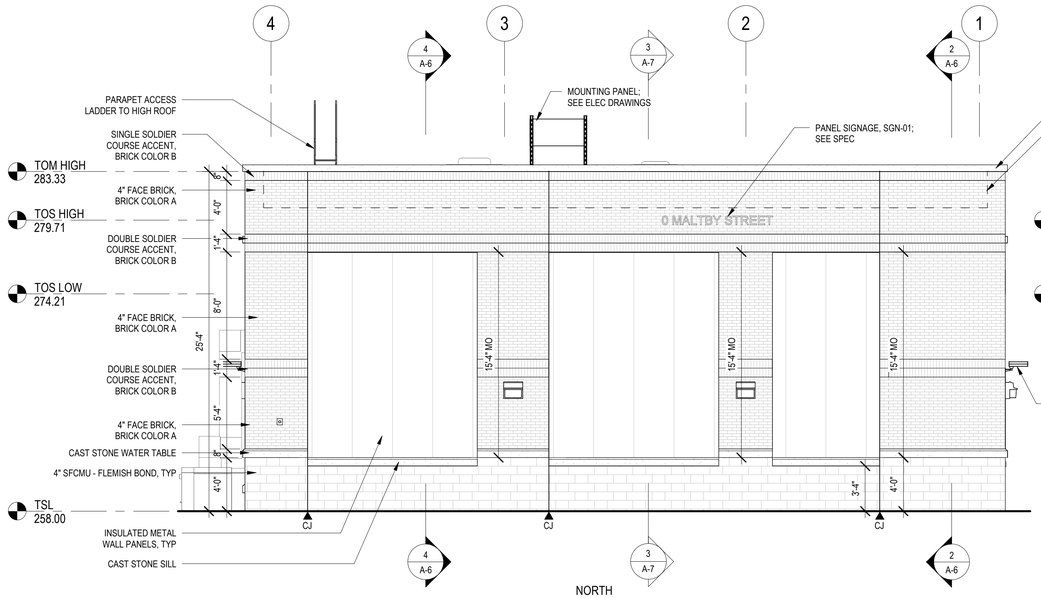
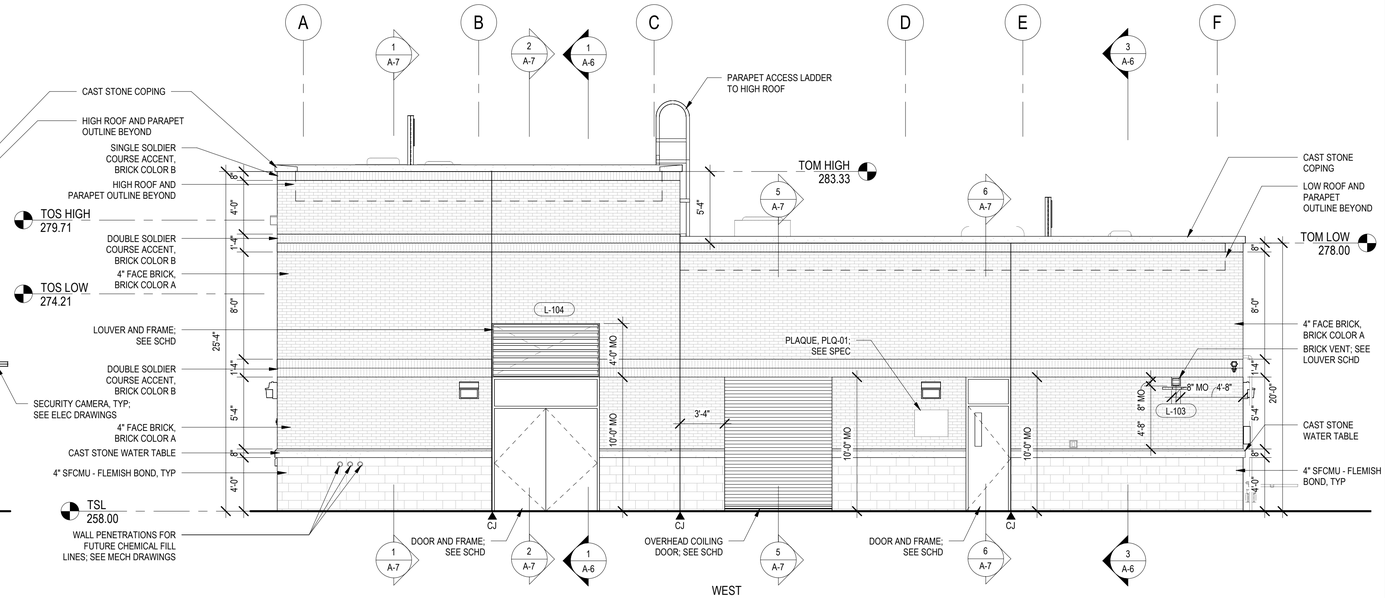
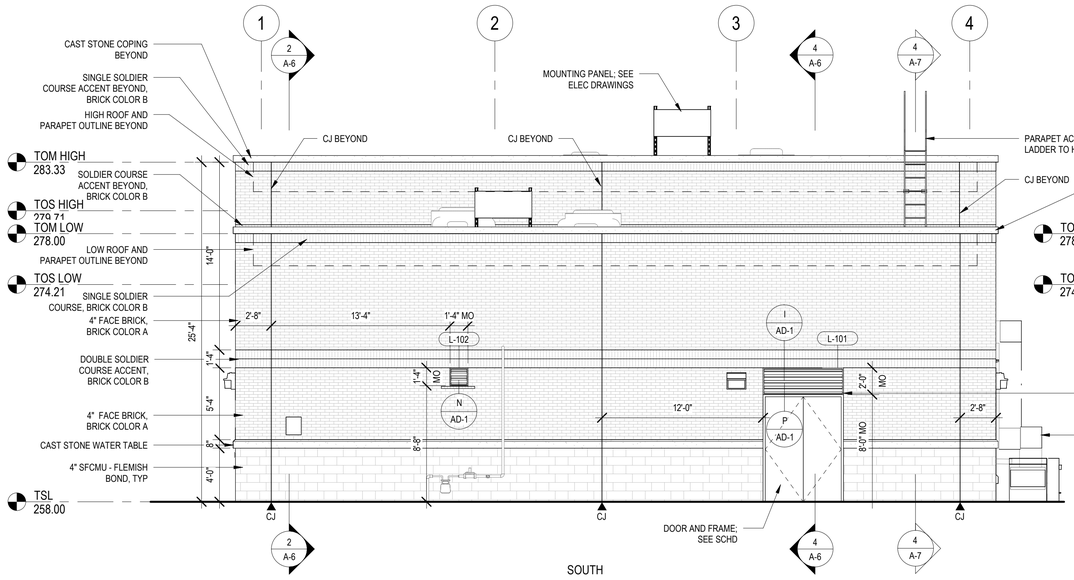


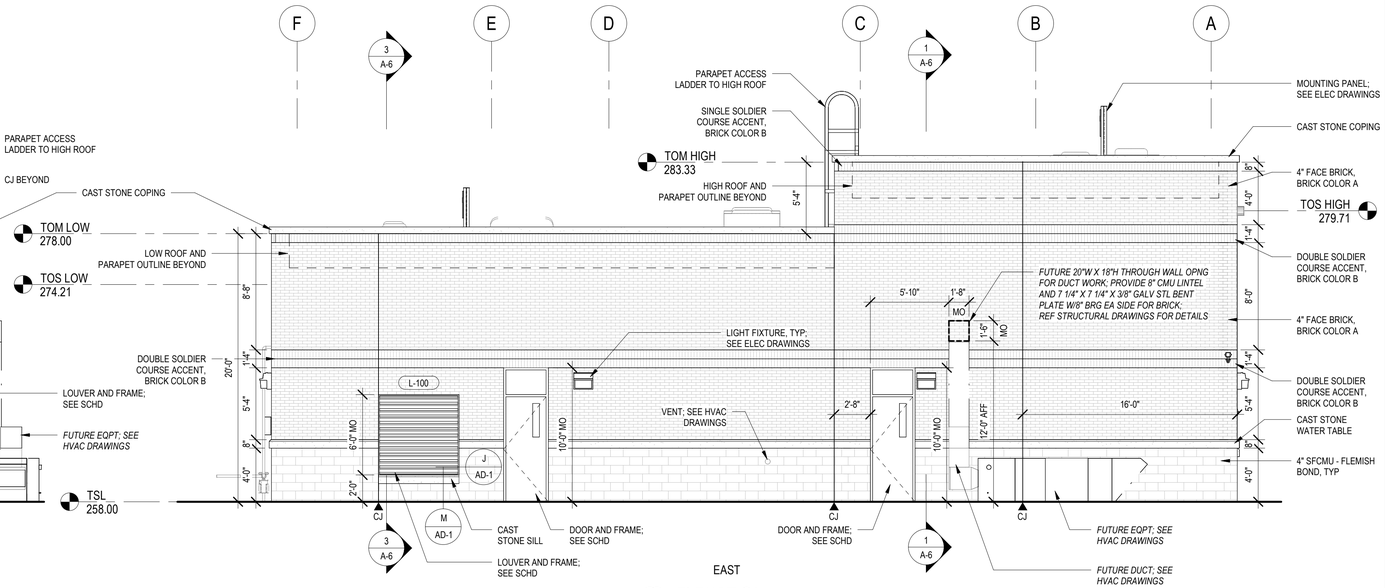

1 A-3 **ELEVATION** 3/16" = 1'-0"




2 A-3 **ELEVATION** 3/16" = 1'-0"




3 A-3 **ELEVATION** 3/16" = 1'-0"




4 A-3 **ELEVATION** 3/16" = 1'-0"

0 2' 4' 6' 10'

SCALE: 3/16" = 1'-0"

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

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CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
EXTERIOR ELEVATIONS

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-5

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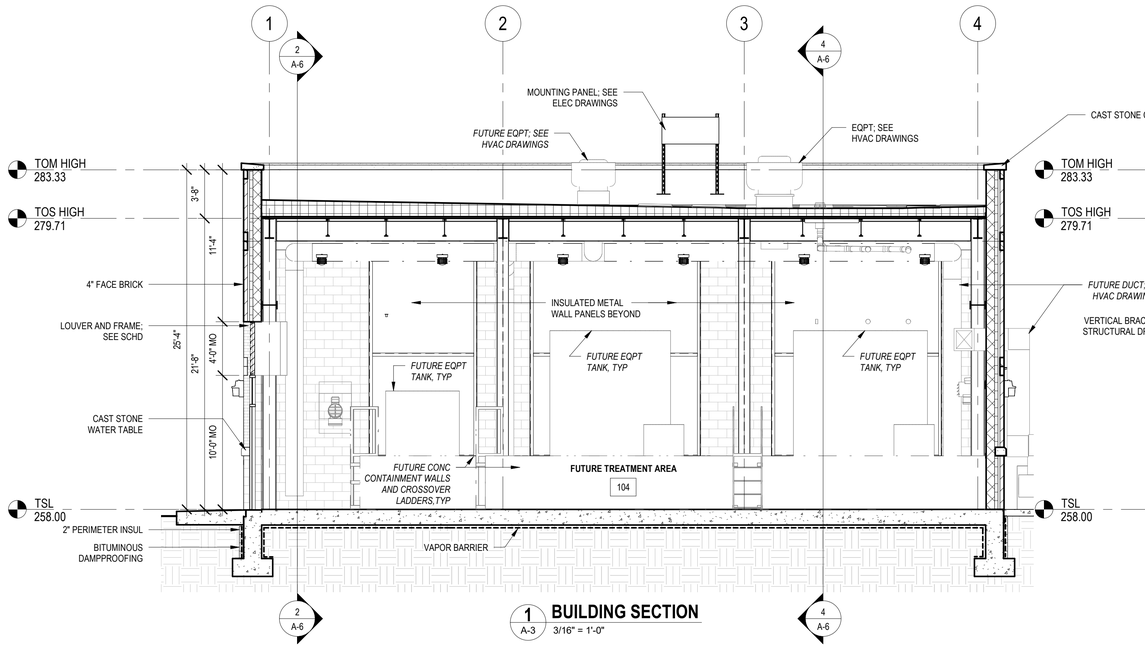
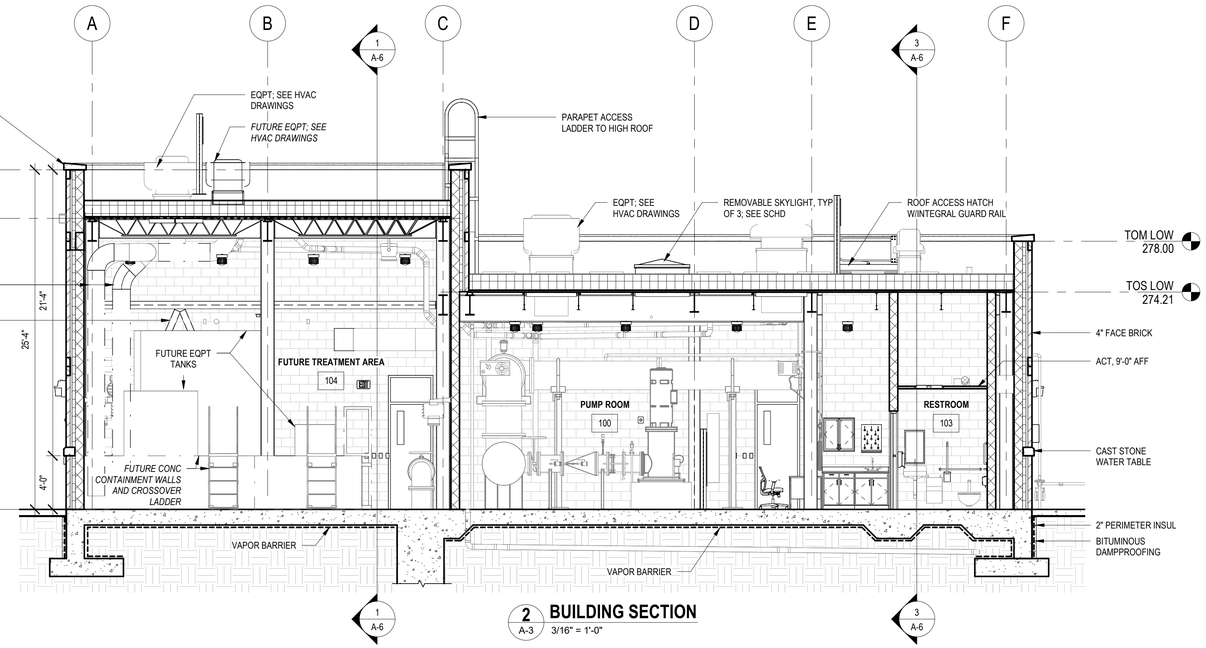
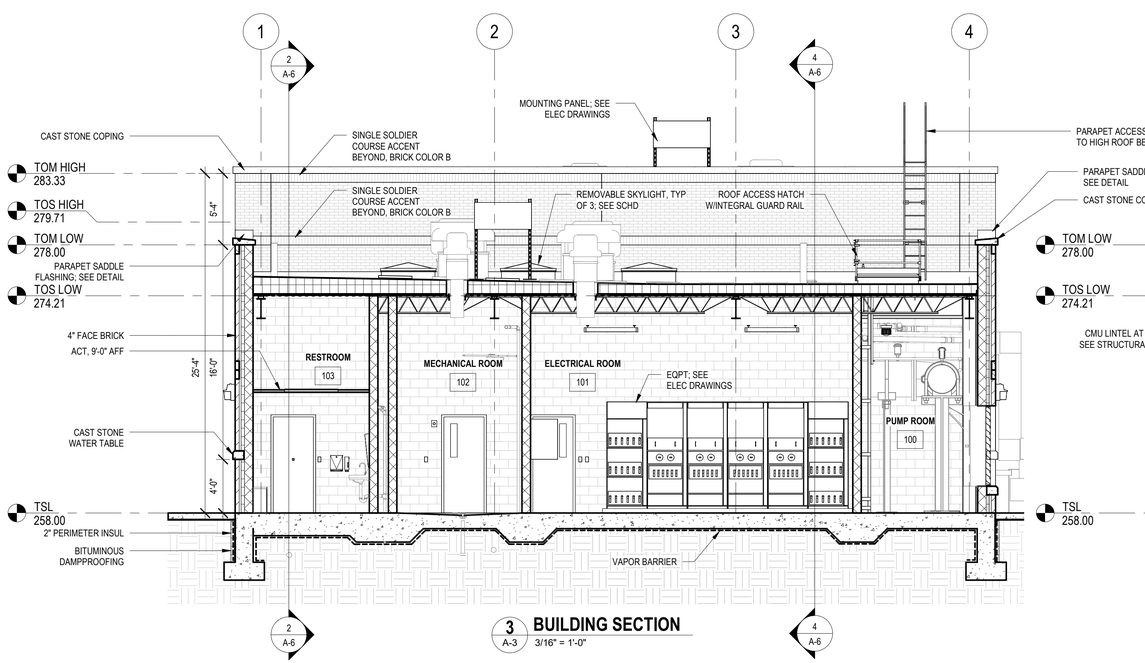


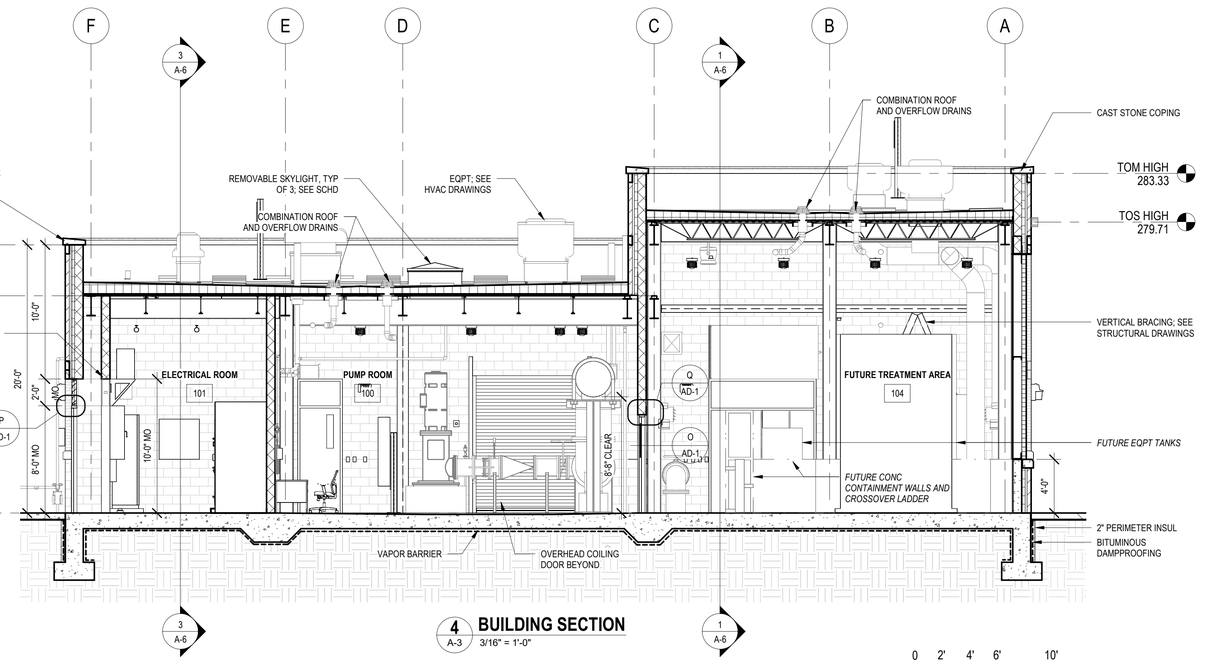

1 BUILDING SECTION
A-3 3/16" = 1'-0"




2 BUILDING SECTION
A-3 3/16" = 1'-0"




3 BUILDING SECTION
A-3 3/16" = 1'-0"




4 BUILDING SECTION
A-3 3/16" = 1'-0"

0 2' 4' 6' 10'

SCALE: 3/16" = 1'-0"

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: R. MARSHALL
DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
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UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
BUILDING SECTIONS

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-6

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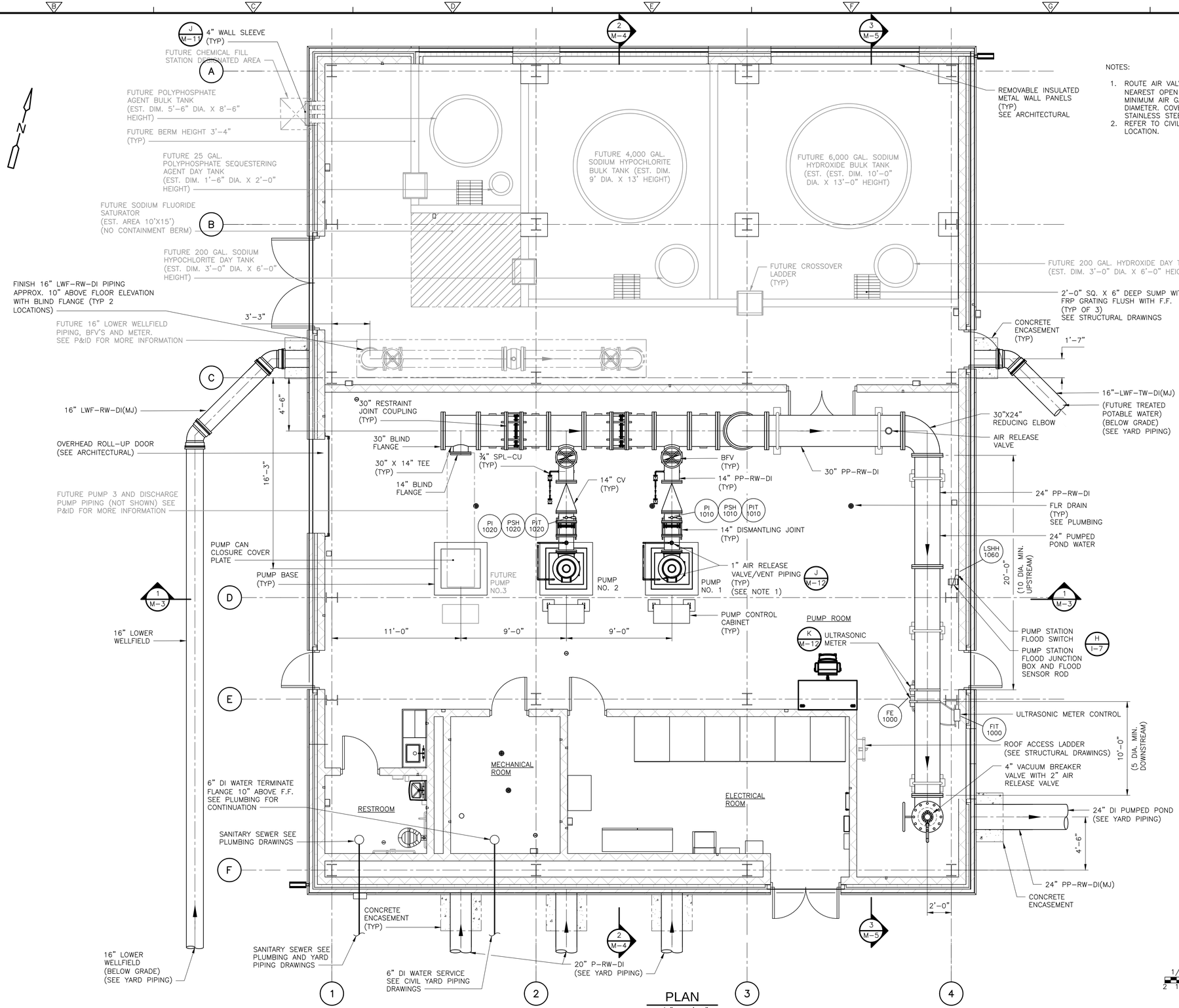


NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. REFER TO CIVIL SHEETS FOR BUILDING LOCATION.


XREFs: [CDMS_2436]
Images: []
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| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023


CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615


CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
FLOOR PLAN

PROJECT NO. 10739-264571
FILE NAME: M002PSPL.DWG

SHEET NO.
M-2

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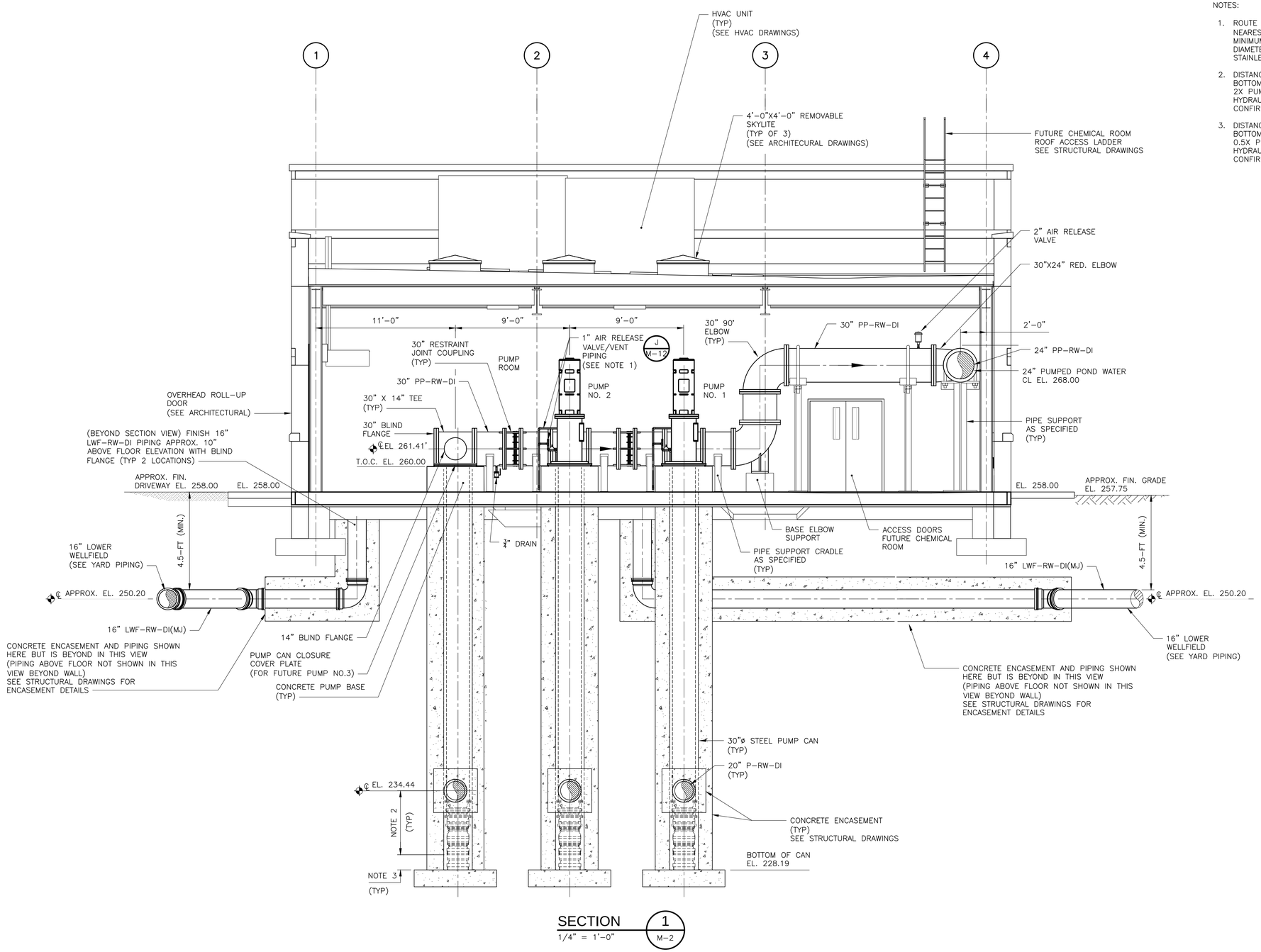
NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BE MINIMUM 2X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.
3. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BEMINIMUM 0.5X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.




SECTION 1 / 1/4" = 1'-0" (M-2)

1/4" = 1'- 0"
2 1 0 2 4

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

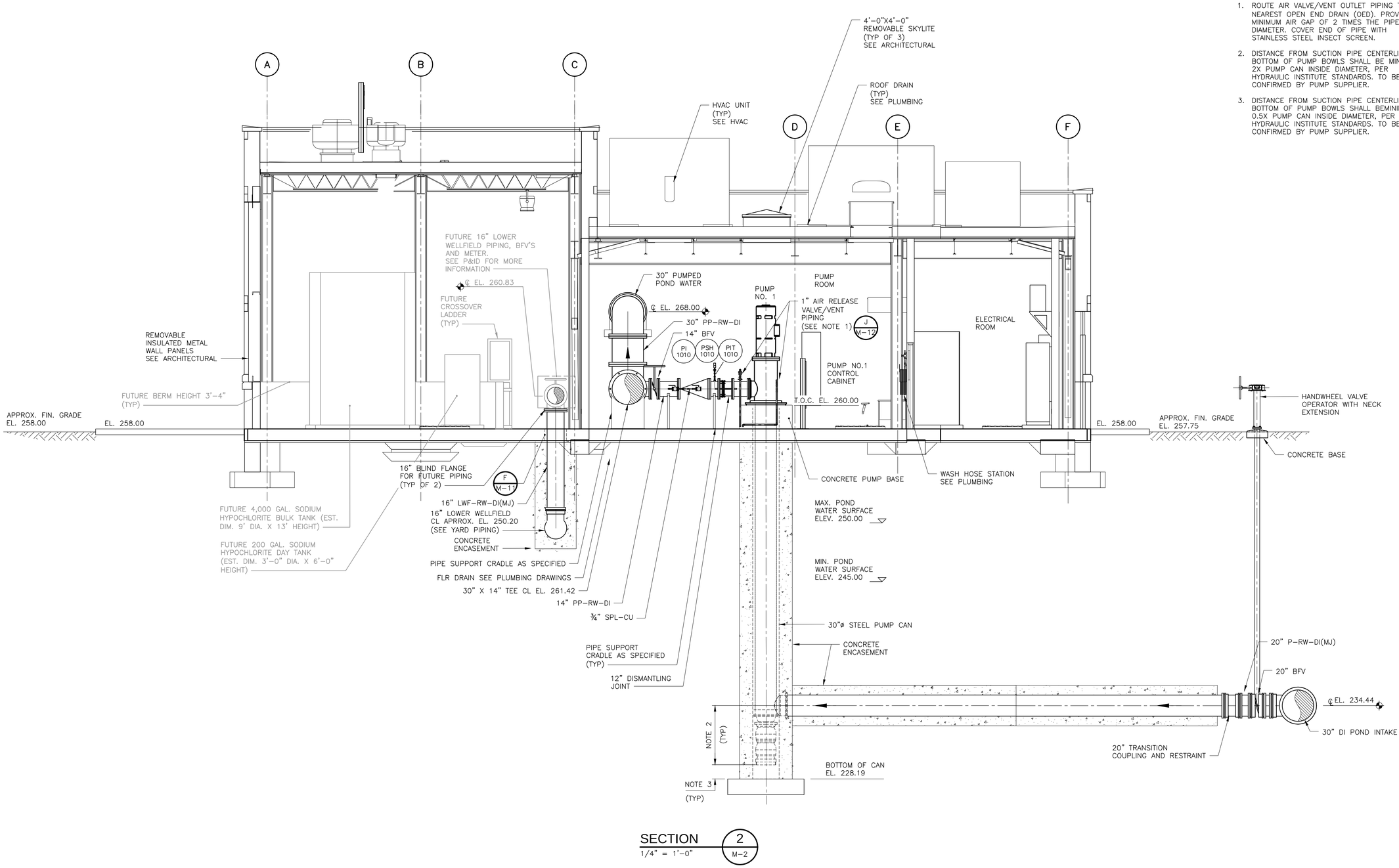
CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SECTIONS I

PROJECT NO. 10739-264571
FILE NAME: M003PSSC.DWG
SHEET NO. M-3

NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BE MINIMUM 2X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.
3. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BEMINIMUM 0.5X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.




SECTION 2 / M-2
1/4" = 1'-0"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| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
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CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023


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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SECTIONS II

PROJECT NO. 10739-264571
FILE NAME: M004PSSC.DWG
SHEET NO. M-4

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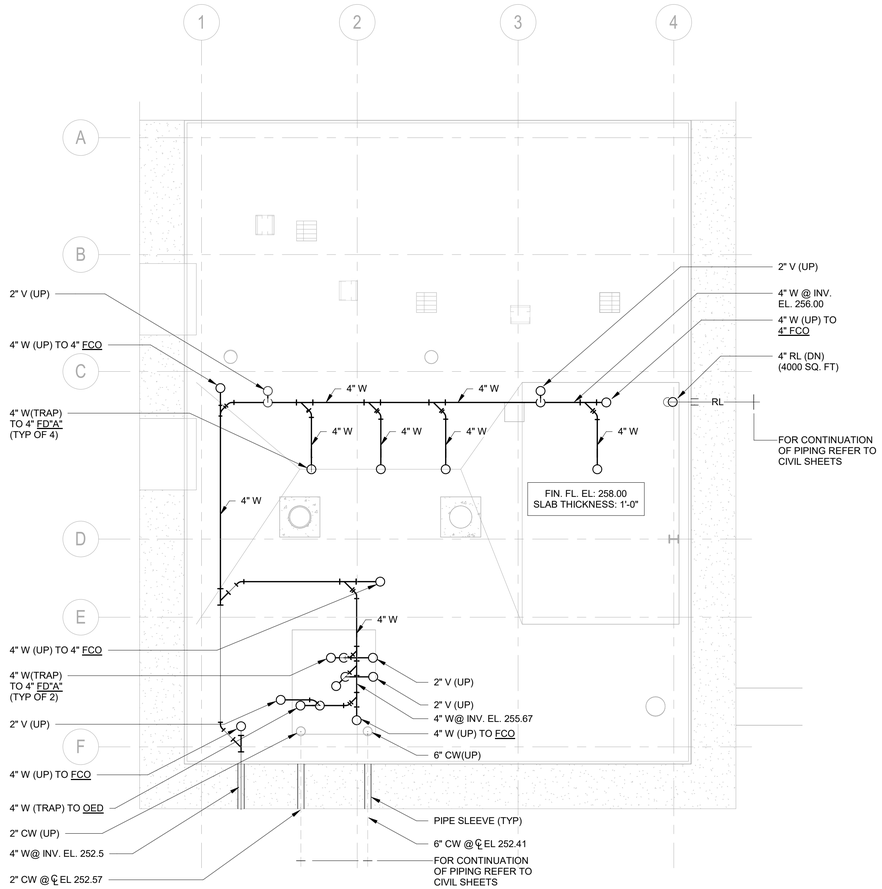
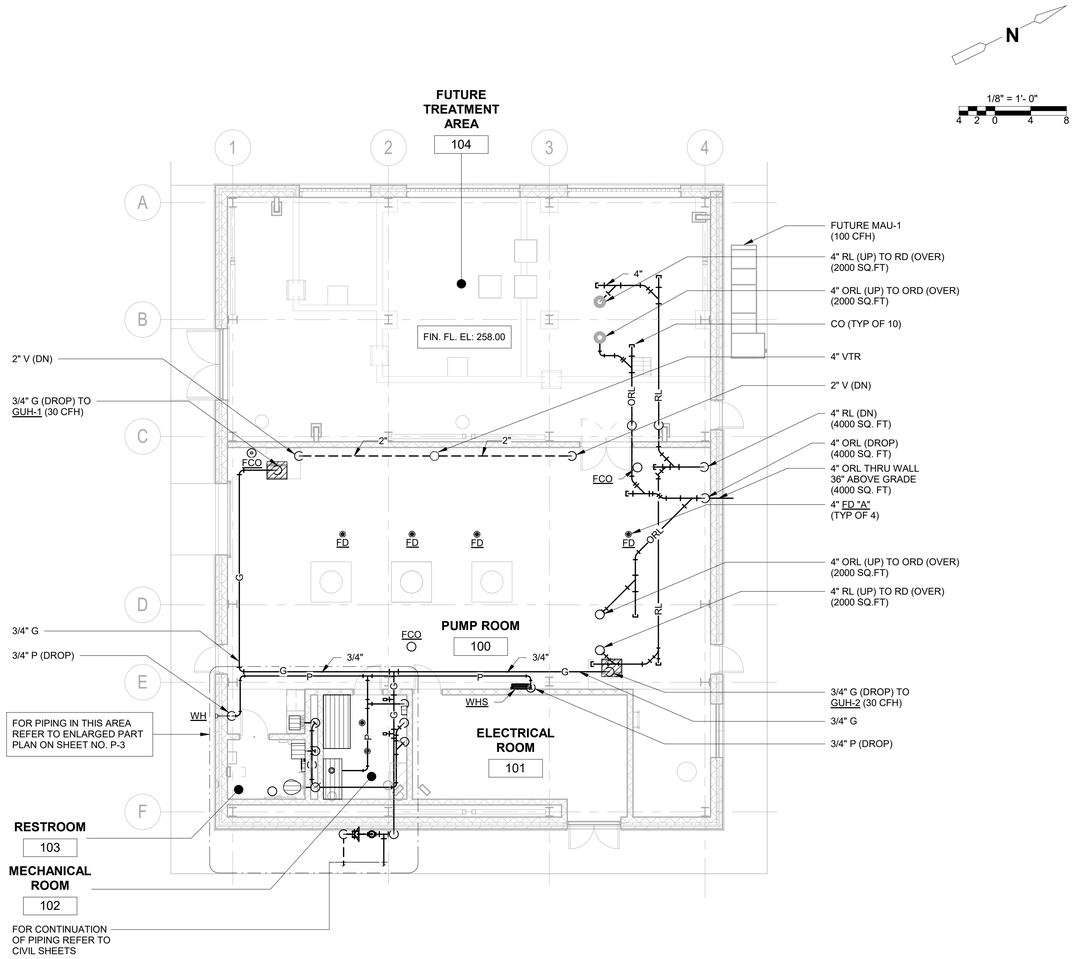



## BURIED PIPING

1/8" = 1'-0"




## FLOOR PLAN

1/8" = 1'-0"

NOTES:

1. ALL PIPES PASSING THROUGH THE FOUNDATION WALL SHALL BE INSTALLED IN A SLEEVE THAT IS 2" IN DIAMETER LARGER THAN THE PIPE AND SHALL EXTEND THOUGH THE WALL 2" ON EITHER SIDE OF THE FOUNDATION WALL IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS.
2. ALL PIPES PASSING UNDERNEATH THE FOUNDATION SHALL BE INSTALLED IN A SLEEVE THAT IS 2" IN DIAMETER LARGER THAN THE PIPE AND SHALL EXTEND 12" BEYOND THE ANGLE OF REPOSE OF THE FOUNDATION FOOTING ON BOTH SIDES OF THE FOOTING.

NOTES:

1. ALL BURIED PIPING WITHIN THE BUILDING SHALL BE ENCASED IN CONCRETE AS SHOWN ON THE DETAIL ON THE STRUCTURAL DETAIL SHEET.
2. IN LIEU OF TRAP PRIMERS WHERE ALLOWED BY CODE, CONTRACTOR SHALL INSTALL A TRAP RESEALER MADE OF ELASTOMERIC MATERIAL.
3. 1/2" SOFT ROLLED COPPER TUBING SHALL BE INSTALLED TO FEED THE WATER FROM THE TRAP PRIMER UNIT TO THE TRAPS FOR THE FLOOR DRAINS WHERE REQUIRED. THE SOFT ROLLED COPPER TUBING SHALL BE WRAPPED WITH ARMAFLEX TO PROTECT IT FROM THE CONCRETE. THE TUBING IS NOT SHOWN ON THE DRAWING FOR CLARITY SAKE. BUT THE PIPING SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.
4. SANITARY PIPING SHALL EXTEND BEYOND THE BUILDING 5'-0" UNDER THE PLUMBING CONTRACTOR'S SCOPE OF WORK.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: J. SHEEHAN
DRAWN BY: P. MANI
SHEET CHK'D BY: B. BUCCHIANERI
CROSS CHK'D BY: K. WAGNER
APPROVED BY: D. FLAHERTY
DATE: JANUARY 2024

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

BURIED PIPING AND FLOOR PLANS

PROJECT NO. 10739-264571
FILE NAME: HPWZ001PS.RVT

SHEET NO.
P-2

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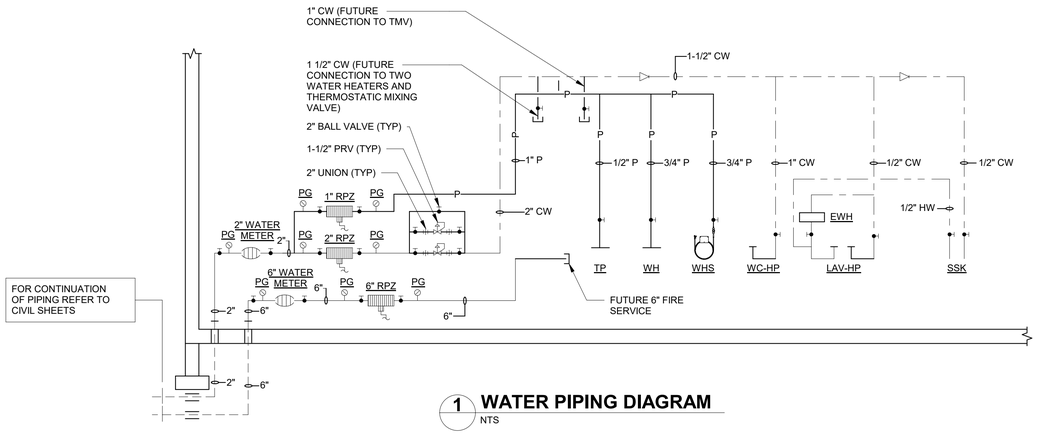
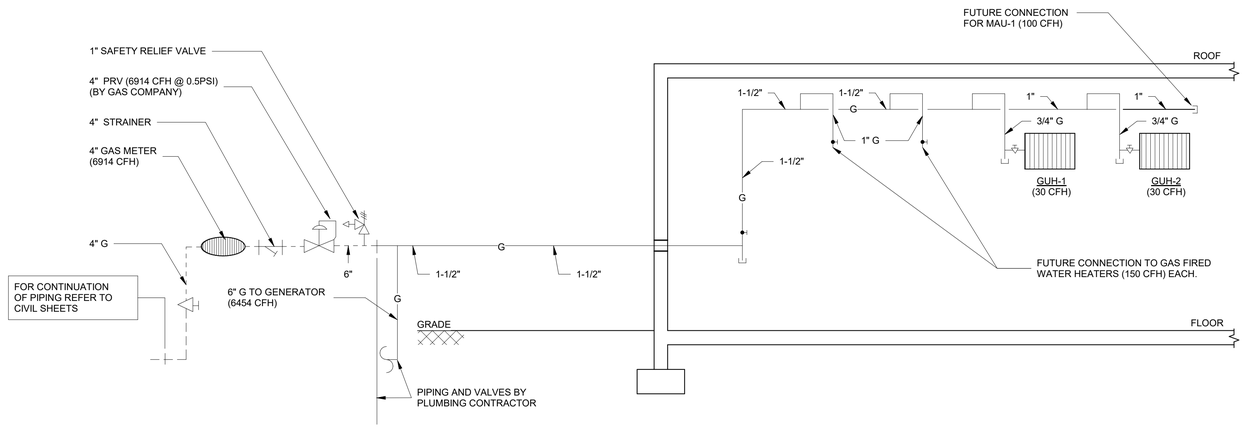


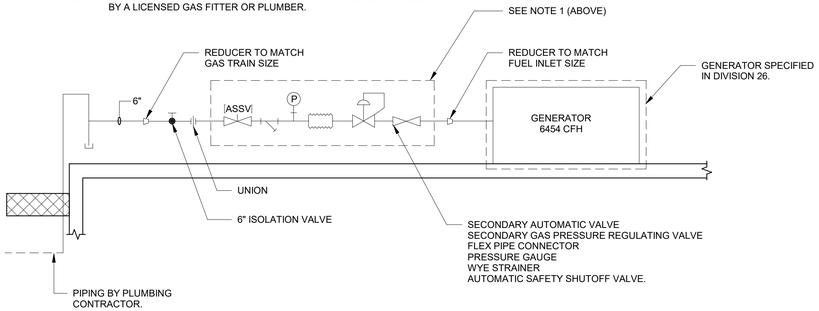

## 1 WATER PIPING DIAGRAM
NTS



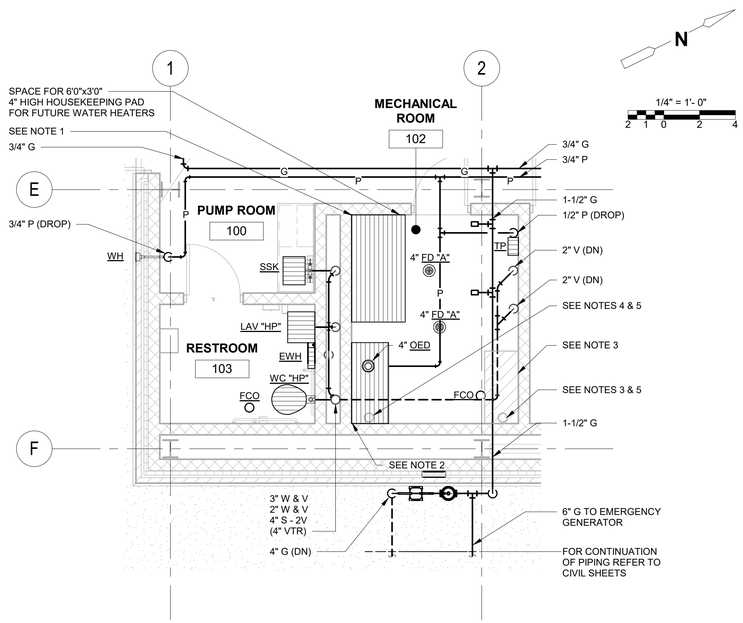

## 2 GAS PIPING DIAGRAM
NTS

NOTES:

1. GAS TRAIN COMPONENTS SHALL BE PROVIDED BY THE GENERATOR MANUFACTURER AND INSTALLED BY THE PLUMBING CONTRACTOR.
2. INSTALL 6" G LINE TO GENERATOR. GAS PIPING SHALL BE INSTALLED BY A LICENSED GAS FITTER OR PLUMBER.




## 3 GAS PIPING DIAGRAM FOR STANDBY GENERATOR
NTS




## 4 ENLARGED FLOOR PLAN
1/4" = 1'-0"

NOTES:

1. SPACE ALLOCATED FOR FUTURE WATER HEATERS, TEPID WATER MIXING VALVE AND TEPID WATER RECIRCULATION PUMP.
2. SPACE ALLOCATED FOR DOMESTIC WATER SERVICE. FOR VALVES AND APPURTENANCES REFER TO THE WATER PIPING DIAGRAM ON SHEET NO. P-3. WATER SERVICE HAS BEEN SIZED TO INCLUDE FUTURE ADDITION OF CHEMICALS AND TEPID WATER HEATING SYSTEM.
3. SPACE ALLOCATED FOR FUTURE FIRE PROTECTION SERVICE SHALL SERVE AN AUTOMATIC FIRE PROTECTION SYSTEM WHEN THE FUTURE CHEMICAL SYSTEMS ARE INSTALLED ON THE PROJECT. 6" FIRE SERVICE SHALL BE BROUGHT INTO THE BUILDING AND LEFT AS A FLANGED CONNNECTION 8"-12" ABOVE FINISHED FLOOR BY GENERAL CONTRACTOR.
4. 2" DOMESTIC WATER SERVICE SHALL BE BROUGHT INTO THE BUILDING AND LEFT AS A FLANGED CONNECTION 8"-12" ABOVE FINISHED FLOOR BY GENERAL CONTRACTOR. A 2" CAPPED WATER CONNECTION SHALL BE LEFT IN THE MECHANICAL ROOM 102.
5. 6" RPZ FOR FUTURE FIRE SERVICE SHALL BE INSTALLED 36" AFF. 2" RPZ FOR DOMESTIC POTABLE WATER SHALL BE INSTALLED 36" AFF AND THE 1" RPZ FOR NON-POTABLE WATER SHALL BE INSTALLED AT 54" AFF.

### PLUMBING FIXTURE SCHEDULE

| FIXTURE | DESCRIPTION | WASTE (INCH) MIN | VENT (INCH) MIN | TRAP (INCH) MIN | CW (INCH) MIN | HW (INCH) MIN | TW (INCH) MIN | REMARKS |
|---|---|---|---|---|---|---|---|---|
| WC-HP | TOILET, FLUSH VALVE, WALL MOUNTED, WALL OUTLET | 4 | 2 | 4 | 1 | - | - | SEE SECTION 224213.13 |
| SSK | SERVICE SINK | 2 | 2 | 2 | 1/2 | 1/2 | - | SEE SECTION 224216.13 |
| LAV-HP | LAVATORY, COUNTER MOUNTED | 2 | 2 | 2 | 1/2 | 1/2 | - | SEE SECTION 224216.13 |
| WHS | WASH HOSE STATION | - | - | - | 3/4 | - | - | SEE SECTION 221119 |
| EWH | ELECTRIC WATER HEATER | - | - | - | 1/2 | 1/2 | - | SEE SECTION 223300 |
| TP | TRAP PRIMER | - | - | - | 1/2 | - | - | SEE SECTION 221119 |

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: J. SHEEHAN
DRAWN BY: P. MANI
SHEET CHK'D BY: B. BUCCHIANERI
CROSS CHK'D BY: K. WAGNER
APPROVED BY: D. FLAHERTY
DATE: JANUARY 2024

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

PIPING DIAGRAMS, ENLARGED FLOOR PLAN AND PLUMBING SCHEDULE

PROJECT NO. 10739-264571
FILE NAME: HPWZ001PS.RVT

SHEET NO.
P-3

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| For Office Use Only | |
|---|---|
| APPLICATION NO. | 2505 |
| DATE FILED: | 6/27/24 |
| DECISION DATE: | |
| DECISION: | |

**CITY OF BRISTOL, CONNECTICUT**
**APPLICATION FOR SITE PLAN APPROVAL**

The undersigned Applicant hereby applies for approval of a Site Plan for the following use:

Civic Facility and Earth Removal, a [ ] permitted use [✓] Special Permit use

under Section(s) Article II, Section 4.2 of the Bristol Zoning Regulations.

Address or Location of the Property: Maltby Street

Assessor's Map No.: 52 & 53 Assessor's Lot No.(s): 11, 15, 16B16A, 17, 145, 147, 149, 150, 151

Zone of the Property: R-40 Size of the Property (in acres or square feet): 303.7

Does this application involve an activity regulated by the Inland Wetlands Agency? [✓] yes [ ] no

If yes, has an application for a permit been submitted to the Inland Wetlands Agency? [✓] yes, on 12/26/2023 [ ] no

Other comments: Three applications were submitted to Inland Wetlands Agency (App# 2019, #2020, #23-458F-305)

Approval for all three applications received from Inlands Wetland Agency on June 3, 2024. SEE ATTACHED

NOTE: Section 8-3c(a) of the Connecticut General Statutes requires that, if an application for a Special Permit involves an activity regulated under the Inland Wetlands and Watercourses provisions of the statutes, the applicant shall submit an application for a wetlands permit to the local Inland Wetlands Agency no later than the day the Special Permit application is filed.

**APPLICANT (If more than one, list on Page 2)**

Name: New Britain Water Department, Ramon Esponda

Address: 1000 Shuttle Meadow Ave City: New Britain State: CT Zip: 06052

Telephone No.: (860) 826-3535 E-Mail: Ray.Esponda@newbritainct.gov

Signature: [signature] *Signature – (Printed/Typed)* Ramon Esponda

CHECK ONE: [X] owner [ ] other (specify):

OWNER(S) OF RECORD (If other than Applicant; if more than one, list on Page 2)

Name:

Address: City: State: Zip:

Telephone No.: E-Mail:

Signature: *Signature – (Printed/Typed)*

**The following shall be included as part of this application:**

- filing fee – $310 (includes $60 State fee) *plus* $50 per dwelling unit *plus* $10 per 1,000 sq. ft. or portion thereof of proposed non-residential building (make checks payable to "City of Bristol")
- six paper copies and one digital copy of a Site Plan containing all information required on the Site Plan Requirements Checklist
- a written narrative and any other data and drawings as may be required (e.g., drainage calculations, exterior building elevations)

**THIS APPLICATION MUST BE FILED IN PERSON NO LATER THAN 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!**

LUO – 01/24

For Office Use Only
APPLICATION NO. 2505

## CITY OF BRISTOL, CONNECTICUT
## SUPPLEMENTARY INFORMATION

**Address or location of property:** Maltby Street

**ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)**

The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street.

See the attached documents for more information.

**ADDITIONAL APPLICANT**

Name: _____ CHECK ONE: [ ] owner [ ] other: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**ADDITIONAL OWNER(S) OF RECORD**

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:**

Name: Vinta Varghese

Address: 101 East River Drive, Suite 1A City: East Hartford State: CT Zip: 06108

Telephone No.: 860-808-2325 E-Mail: vargheseva@cdmsmith.com

# Atty. Hammer Extension of Time

**From:** Joseph Hammer [mailto:jhammer@mrglaw.com]
**Sent:** Tuesday, October 22, 2024 11:42 AM
**To:** Robert Flanagan <RobertFlanagan@bristolct.gov>
**Cc:** Varghese, Vinta A. (vargheseva@cdmsmith.com) <vargheseva@cdmsmith.com>; Sebastian Amenta - Comprehensive Environmental Inc. (samenta@ceiengineers.com) <samenta@ceiengineers.com>; ray.esponda@newbritainct.gov
**Subject:** New Britain Water Department - Application #s 2504, 2505 and 2506

Robert,

As you know, we represent the City of New Britain in connection with its Special Permit and Site Plan applications referenced above.

This is to confirm that the applicant consents to a thirty (30) day extension of time, to November 20, 2024, within which to complete the public hearing.

We understand that the public hearing has been continued by the Commission to November 18.

Thank you.


MacDermid Reynolds & Glissman, P.C.
110 Whitney Avenue
New Haven, CT 06510

86 Farmington Avenue
Hartford, CT 06105
www.mrglaw.com

**Joseph L. Hammer**
jhammer@mrglaw.com
Tel: 203-777-1001
Cell: 860-992-3130
Fax: 860-547-1191
Bio V-card



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# Atty. Hammer Extension of Time

**From:** Joseph Hammer [mailto:jhammer@mrglaw.com]
**Sent:** Wednesday, July 3, 2024 3:18 PM
**To:** Robert Flanagan <RobertFlanagan@bristolct.gov>; Nancy Levesque <NancyLevesque@bristolct.gov>; andrewarmstrong@bristolct.org
**Cc:** ray.esponda@newbritainct.gov; Sebastian Amenta - Comprehensive Environmental Inc. (samenta@ceiengineers.com) <samenta@ceiengineers.com>; Varghese, Vinta A. (vargheseva@cdmsmith.com) <vargheseva@cdmsmith.com>; Rachel Fancy <RFancy@mrglaw.com>
**Subject:** Bristol Zoning Commission - Applications #2504, #2505,# 2506; Applicant - City of New Britain, Water Department

Dear Mr. Flanagan,

Our firm represents the City of New Britain in connection with the above-referenced Special Permit and Site Plan applications which were submitted on June 27, 2024.

The applicant understands that due to the holidays and anticipated scheduling of public hearings by the Zoning Commission, the public hearing on the applications will likely be scheduled for September 16, 2024. The 65 day period to open the hearing, following receipt of the applications on July 8, will expire on September 11. The applicant therefore consents to a five-day extension of time, to September 16, 2024, within which to commence the public hearing.

Thank you.


MRG
**MacDermid Reynolds & Glissman, P.C.**
110 Whitney Avenue
New Haven, CT 06510

86 Farmington Avenue
Hartford, CT 06105
www.mrglaw.com

**Joseph L. Hammer**
jhammer@mrglaw.com
Tel: 203-777-1001
Cell: 860-992-3130
Fax: 860-547-1191
Bio V-card



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# Erosion Control Bond Estimate

Engineer's Estimate for E&S Controls at the White Bridge Waterworks Facilities

| Area | Item | Estimate |
|---|---|---|
| LWF | Dewatering Basin | $ 15,000 |
| | Straw Wattles | $ 15,500 |
| | Control Blankets | $ 5,000 |
| Pond Pump Station | Dewatering Basin | $ 10,000 |
| | Straw Wattles | $ 11,000 |
| | Control Blankets | $ 8,000 |
| | Turbidity Curtains | $ 5,000 |
| UWF | Dewatering Basin | $ 7,000 |
| | Straw Wattles | $ 60,000 |
| | Control Blankets | $ 5,000 |
| Wetlands/ Compensatory Storage Creation Areas | Straw Wattles | $ 60,000 |
| | Control Blankets | $ 2,000 |
| Maltby Street Utilities | Straw Wattles | $ 60,000 |
| | Subtotal | $ 263,500 |
| | 15% OHP | $ 39,525 |
| | **Total** | **$ 300,000** |

# Letter

May 16, 2024

Commissioner Katie Dykes
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

RE: "Log" letter consideration request – New Britain Water Dept. - Whitebridge registrations, Bristol CT

Good day, Commissioner Dykes:

This letter is written to request your immediate consideration of concerns regarding the New Britain Water Department upgrade project of the existing wellfields and surface water withdrawal systems, known as Whitebridge, located in Bristol CT. In addition to their other registered diversions within the state, the City of New Britain has 3 registered diversions in the City of Bristol, known as Whitebridge; North wellfield (2.16 MGD), South Wellfield (6.62 MGD), and Surface Water (Copper Mine/Polkville Brooks) (15 MGD)

- Fact: Bristol Water Department also has registered diversions, located near Whitebridge in the same Coppermine Brook watershed.
- Fact: New Britain historically operates the Whitebridge diversions at much much lower than the registration rates, currently approximately 1/5 to 1/7 of the registered rates. Based on the New Britain Water submittal information, DEEP issued a Negative Declaration of Diversion on February 21, 2024 for construction improvements at both wellfield locations for new wells of larger sizes with capacity increases to approximately match the registered diversion rates.
- Fact: The aquifer was assessed for Level A APA in a 2007 Study (Lenard). The study indicated "It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields". The study reassigned "agreed upon" reduced flow rates to simulate a safe yield for each of the wellfields. The surface water diversion was not assessed (Executive summary attached). The City of Bristol administers APA regulations based on the 2007 Level A study boundary.
- Fact: Coppermine Brook, the surface water immediately adjacent to Whitebridge is designated impaired for flow. Coppermine is listed in Connecticut Department of Energy and Environmental Protection's (DEEP) 2022 Integrated Water Quality Report to Congress under Nonpollutant Impairments (EPA Category 4c) for Flow Regime Modification.
- Fact: The City of Bristol Inland Wetlands Commission is currently reviewing the project applications for impact to wetlands and floodplain within the Coppermine Brook (Pequabuck River/Farmington River) watershed basins.

The watershed protection groups, Pequabuck River Watershed Association, Rivers Alliance of Connecticut and Farmington River Watershed Association, along with other concerned citizens, request CT DEEP further investigate the concerns related to this project:

- Due to the past study determination that the "aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields", the Aquifer Protection Area (APA) Level A boundary in Bristol was established based on "agreed

upon" flow rates which were much lower than the "grandfathered" registration rates. Based on inquiry to DEEP, New Britain Water has been operating in accordance with the (lowered) flow rates which established the APA. If New Britain Water is proposing a change which would increase the diversion operations over the Level A study rates, additional study is warranted, prior to construction, to establish safe levels of operation and potential changes to the regulated Level A boundary.

- New Britain is a good neighbor. Both the Bristol and New Britain Water Departments have a right and a responsibility to maintain and protect their water system sources. Watercourse / wetland / and aquifer natural system resources are vital components. The resources have limited capacity.
- Bristol Wetland Commission is currently reviewing the New Britain Whitebridge proposal. The diversion rate issue is central to the wetlands/watercourse review, yet the New Britain Water Department legal representative has instructed the Bristol Wetland Commission that the impacts relative to increases in the groundwater and surface water withdrawal operations, up to the registered diversion rates, cannot be considered in their decision. Our concern is that larger well construction and withdrawal operations will unreasonably impair water resources. The Bristol Inland Wetland Commission decision will be made at a May 22, 2024 “Special Meeting”.

Potential solutions to foreseeable “water wars” between municipalities for water use allocations within the Coppermine Brook (Pequabuck/Farmington) watershed can include:

- New Britain Water Department should update the Level A boundary study to reflect the registration rates, prior to any state agency construction approval. The Level A boundary should be modified, as necessary, for any increased flow rates in order to protect the resources. If, as past studies (Lenard 2007 and others) indicate the aquifer is unable to sustain the registration rates, the model should be updated, and reviewed/approved by DEEP for appropriate diversion allocations between the municipalities, including drought restriction protections, prior to construction.
- DEEP, potentially through adjudication, should intervene for a proposed plan of action to allocate resources and resource protection measures.

Your prompt reviews and actions are appreciated.

Sincerely,

***Alicea Charamut, Executive Director, Rivers Alliance of Connecticut***

***Mary Rydingsward, Executive Director, Pequabuck River Watershed Association***

***Aimee Petras, Executive Director, Farmington River Watershed Association***

cc: Graham J. Stevens, Bureau Chief, Water Protection and Land Resources
Brendan Schain, Esq., CT DEEP Shalyn Zappulla, CT DEEP
Chris Bellucci, CT DEEP Kim Czapla, CT DEEP
Raul Tejada, CT DPH Lori Mathieu, CT DPH
Jack Betkoski, III, Chair, Connecticut Water Planning Council
Roger Reynolds, Senior Legal Director, Save the Sound

# CT DPH - Notification

**From:** Microsoft Power Apps and Power Automate <microsoft@powerapps.com>
**Sent:** Tuesday, July 2, 2024 3:42 PM
**To:** Ray.Esponda <Ray.Esponda@newbritainct.gov>; Gerlach, Kyle T. <gerlachkt@cdmsmith.com>
**Subject:** Acknowledgement of Submission to CTDPH

This email is being sent automatically to confirm the submission of a project notification form to the Connecticut Department of Public Health pursuant to Connecticut General Statutes Section 8-3i and/or 22a-42f.

A project notification form is required to be completed and submitted to the Department of Public Health when an application, petition, request or plan is located in a Drinking Water Source Watershed or Aquifer Protection Area.

Thank you for your submission. If you have any questions, please send an email to dph.sourceprotection@ct.gov.

Please enter the docket number/application ID for this application, petition, request or plan, if applicable:
App 2505 - Site Plan

What municipal entity is this application, petition, request or plan being submitted to?["Zoning Commission"]

Is the location associated with the proposed application, petition, request or plan in a drinking water watershed?Yes

Is the location associated with the proposed application, petition, request or plan in an Aquifer Protection Area?
The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street. This notification is for the Bristol Zoning Site Plan application.

Does this application include a petition or proposal to change the regulations, boundaries or classifications of zoning districts?No

Please enter a brief description of the project or proposal:
The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street. This notification is for the Bristol Zoning Site Plan application.

Please enter the date of the application, petition, request or plan:
2024-06-27

What is the size of the area to be disturbed?
equal to or greater than 5 acres

Is any part of this project located within 50 feet of a wetland, stream, pond, lake or reservoir?Yes

What type of use is this application, petition, request or plan proposing?Institutional (school, hospital, nursing home, etc,)

How will this project be provided a potable water supply?Connection to existing public water supply

How will domestic waste be handled?
Sanitary Sewer (will be extended to project area as a result of project)

If the proposed project is 1) not located on single family residential property and 2) will utilize a new well for drinking water supply, a Public Water Supply (PWS) Screening Application should be submitted to the Department of Public Health. Was a PWS Screening Application submitted?Yes

Applicant Name:
New Britain Water Department - Ramon Esponda

Applicant email address:
Ray.Esponda@newbritainct.gov

Street address or intersection of application, petition, request or plan:
Maltby Street, Bristol, CT

Enter Project Longitude/Latitude:
-72.916330
41.700721

Is there any other information relevant to the Department's review of this application, petition, request or plan? If so, please enter in the space below:
This project is receiving funding by the Department of Public Health and there has been much coordination and collaboration between the City of New Britain, the design team, and the Department. The Department has been kept updated throughout the progress of the project design and has already received site plans and other documentation.

If you would like a confirmation of this submission to be sent to the town, please enter the email address you would like it to be sent to in the field below:
gerlachkt@cdmsmith.com

# Site Plan Comments

CITY OF BRISTOL
SITE PLAN REVIEW COMMITTEE
STAFF COMMENTS - 2505

SITE PLAN & SPECIAL PERMIT: Site Plan for a Civic Facility at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; R-40 (Single-Family Residential) zone; New Britain Water Department, applicant. *Plans Dated: June 2024; Date of Committee Review: July 31, 2024 (first review); October 21, 2024 (second review); November 14, 2024) (third review)*

**ENGINEERING/PUBLIC WORKS (Anthony Lorenzetti):**
*Engineering Review Comments Application # 2504 and #2505*

1) Section 16.3.5, a Class A-2 survey is required.

   *9/7/24 Applicant Response: The A2 Survey for the work area was provided electronically. Additional A2 survey for the access road on Mix Street for location curb cut/ entrance to work area access is in progress and anticipated to be submitted in October 2024.*

   10/21/24 City Response: Submit copy of stamped sealed survey drawing.

   *11/7/24 Applicant Response: A stamped sealed survey was used as the base layer to create the Drawing Sheets SP-03 and SP-07 for the October 2024 revised drawings. The stamped sealed survey file is provided to the City of Bristol as a separate drawing.*

   11/14/24 City Response: OK.

2) Section 16.3.8 There are several homes and other adjacent facilities that are across Mix Street that are not shown.

   *9/7/24 Applicant Response: The additional homes across Mix Street will be shown on expanded drawings after completion of the additional survey in October 2024.*

   10/21/24 City Response: OK.

   *11/7/24 Applicant Response: Houses on Mix Street across from the new access drive are shown on Sheet SP-03 and SP-07.*

   11/14/24 City Response: Limits south westerly from Maltby Street access drive not shown, left up to contractor. See note 8 on page SP-13 Provide on plan.

3) In review of the Traffic Impact Sketch showing trucking routes, it is stated that the traffic is going to enter and exit the site primarily from Stafford Avenue, other than the compensatory storage construction area on Mix Street. Considering that both driveway access points are located approximately midway between Stafford Avenue and Maltby Street, and utility installation on Maltby Street, Mix Street, and Stafford Avenue along with wetlands creation on Mix Street would likely be utilized more extensively. In addition, what temporary traffic impacts are expected due to the utility construction expected to have on Mix Street and Stafford Avenue? Construction the within the intersections of Maltby Street at Stafford and Maltby Street and Mix Street should be limited to off peak periods. This item can be more thoroughly discussed in the permitting process. Two new Truck warning signs (w11-10) are recommended on Maltby street, due to the very limited current traffic entering from both existing drives that will be increased. The traffic narrative mentions only 15 vehicles per day on site, does this also include trucking materials in and out of the site. What would be the expected total project trip ends per day?

*9/7/24 Applicant Response: Construction at the Maltby Street/Stafford Avenue and Maltby Street/Mix Street intersections will be limited to off-peak hours, avoiding school bus traffic times, as required by the City of Bristol. A more detailed traffic control narrative is in development and will incorporate any additional considerations put forth by the City.*

10/21/24 City Response: Update with commission comments included.

*11/7/24 Applicant Response: The Traffic Control Narrative has been updated to include considerations for other local traffic impacts discussed during the October Zoning Commission meeting. These included the softball and baseball tournaments hosted at the sports complex on Mix Street during August, school drop off times for local schools, events hosted at nearby churches, and the Jerome Avenue Bridge project. Specification Section 011000 - Summary has been updated to require the Contractor to coordinate with the City of Bristol DPW and police department for these specific events and lists these events as work restrictions for the Contractor to include in their Construction Schedule. The updated Specification Section is included as an attachment to this submittal.*

11/14/24 City Response: Acceptable.

4) Provide enhanced mapping for the site access on Mix Street for the Wetlands creation, showing street access required. A City permit will be required for this area.

*9/7/24 Applicant Response: Enhanced mapping for the site access on Mix Street will be shown on expanded drawings after completion of the additional survey in October 2024.*

10/21/24 City Response: Include updated drawings that were provided under separate request with dimensions of modifications in the plan set.

*11/7/24 Applicant Response: Requested updated drawing is included as SP-07, which specifically shows access to the Wetlands Creation and Compensatory Storage area off Mix Street.*

11/14/24 City Response:

5) Recommend storage of all construction equipment in upland areas to minimize risk of pollution.

*9/7/24 Applicant Response: This is good practice and will be covered in the Stormwater Pollution Prevention Plan prepared by the Contractor per Specification Section 312500, Erosion and Sedimentation Controls. Additional language will also be added to the General Notes on Sheet C-1 to enhance this requirement.*

10/21/24 City Response: No updated sheet C-1 was provided.

*11/7/24 Applicant Response: Sheet C-1 was resubmitted as P-ERM sheet in the October 2024 revised drawing set. Note 30 requires the Contractor to comply with the Order of Conditions received from the Bristol Conservation Commission, which has very specific requirements for where construction vehicles and equipment can be stored in relation to the resource areas.*

11/14/24 City Response:

6) Update as needed to the updated 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

   *9/7/24 Applicant Response: Specification Section 312500, Erosion and Sedimentation Controls, as well as relevant Drawings and notes, will be updated to reflect compliance with the 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.*

   10/21/24 City Response: Provide to City.

   *11/7/24 Applicant Response: Specification Section 312500 is included as an attachment for the City of Bristol to review.*

   11/14/24 City Response:

7) While it is understood that the timelines shown in the design report are preliminary and subject to final completion of the contractor(s), the narrative on page 4 and the schedule chart submitted are not consistent with each other.

   *9/7/24 Applicant Response: The overall Construction Sequencing stages presented in the Project Narrative reflects sequencing and interdependence of some activities as well as seasonal constraints; the schedule chart will be reviewed and updated. The utility work in Maltby Street must occur before the new Pumping Station building is completed, but can be arranged to accommodate any specific timing constraints by the City of Bristol.*

   10/21/24 City Response: OK as shown. However, all additional Information should have a cover sheet and be dated stamped and sealed by Engineer.

   *11/7/24 Applicant Response: A revised version of the Construction Sequencing was presented in the Supplemental Information Narrative submitted on October 10, 2024. The final Construction Sequencing Narrative and Figure is included as an attachment to this submission. Final Bid Set Documents will be stamped and sealed and submitted to the City.*

   11/14/24 City Response:

8) Add the most current city road repair details, we can provide them to you.

   *9/7/24 Applicant Response: The Civil Detail sheets will be updated with the City's most current road repair details when provided (it appears that the Details available on the DPW website are sidewalk and curb related).*

   10/21/24 City Response: Include on plans.

   *11/7/24 Applicant Response: A new detail sheet has been created for Standard Bristol Details, and includes the roadway and sidewalk repair details provided by the City of Bristol. It also includes the detail for Mix Street pavement repair.*

   11/14/24 City Response:

9) Where will the staging areas for the utility main construction be?

*9/7/24 Applicant Response: Proposed staging areas (onsite and offsite) are required to be submitted by the Contractor per Specification Section 015000, Temporary Facilities and Controls.*

10/21/24 City Response: Provide to City.

*11/7/24 Applicant Response: The proposed staging area for the Contractor's use is indicated on Sheet SP-13. Specification Section 015000 requires the Contractor to submit a Site Utilization Plan and indicate locations of staging/storage areas and any deviations from locations indicated on Drawings. This Plan will be submitted to the City of Bristol when it is received from the Contractor during construction.*

11/14/24 City Response:

10) The site access off Maltby Street to the lower well field site is being widened, and as part of the widening to the west trees will have to be removed and some tree trimming may be required to provide adequate sightlines from the driveway, add to plans.

*9/7/24 Applicant Response: Additional notes regarding tree removal will be added to Sheet C-7 to reflect this work.*

10/21/24 City Response: Include in C-7 in plan set.

*11/7/24 Applicant Response: The proposed limit of clearing along the driveway entrance to the facility off Maltby Street is included on Sheet SP-13. Sheet Note 8 also provides more clarification on limit of proposed clearing.*

11/14/24 City Response:

11) The access to the upper well field does not show any upgrades on the plans. The driveway currently is gravel with a reveal at the edge of sidewalk. Care must be taken to not break the sidewalk.

*9/7/24 Applicant Response: The upper wellfield access driveway is anticipated to remain with no substantial improvements, other than filling of potholes and restoration of any damage that may occur during construction. Additional notes regarding protection and repair of sidewalk will be added to Sheets C-1 and C-6.*

10/21/24 City Response: Updated C-1 and C-6 are not included.

*11/7/24 Applicant Response: The upper wellfield access driveway is anticipated to remain with no substantial improvements, other than filling of potholes and restoration of any damage that may occur during construction. Additional notes regarding protection and repair of sidewalk will be added to Sheets C-1 and C-6.*

11/14/24 City Response:

**CITY PLANNER (Robert Flanagan/Andrew Armstrong):**

1. Indicate application number, approval date, and nature of Site Plan/Special Permits associated with this project.

*9/7/24 Applicant Response: This information will be added to the Cover sheet for the project prior to bidding.*

10/21/24 City Response: Acknowledged.

2. Indicate application number, approval date, and nature of IWWA approval associated with this project.

   *9/7/24 Applicant Response: This information will be added to the Cover sheet for the project prior to bidding.*

   10/21/24 City Response: Comment addressed.

3. Show/label on Site Plan the location of all proposed building entrances and exits.

   *9/7/24 Applicant Response: This information is shown on Sheet C-10. A simpler overall Site Plan is in development and will be added to the drawing set.*

   10/21/24 City Response: There is no sheet C-10 in the revised plans submitted. Further, the legend on the cover sheet appears to be incorrect. The building entrances and exits were found on Sheet SP-05. Please revise the legend cover sheet to reflect the plan set provided.

   *11/7/24 Applicant Response: This is shown on Drawing Sheet SP-05. The Drawing Sheet Legend on the Cover has been updated to reflect all final sheets in the plan set provided.*

   11/14/24 City Response: Comment addressed.

4. Final As-Built of building required prior to C.O. being issued.

   *9/7/24 Applicant Response: Record drawings will be prepared for the project and are noted in Specification Section 017839. The requirement to submit building record drawings prior to the Certificate of Occupancy will be added to that Specification.*

   10/21/24 City Response: Acknowledged.

5. Indicate dimension of driveway opening, measured at street line.

   *9/7/24 Applicant Response: This information will be added to Sheet C-10.*

   10/21/24 City Response: This appears to be shown as 29’ on Sheet SP-05. Comment addressed.

6. What are the proposed limits of tree clearing for all proposed improvements? Particularly, show the dimension and final landscape condition for proposed compensation and storage area abutting single-family residential properties on the upper and lower wellfields. Provide a landscape sheet showing these conditions and setback dimensions to the property lines not just the floodway line.

   *9/7/24 Applicant Response: Additional drawings to clarify these conditions are in development and will be added to the drawing set.*

   10/21/24 City Response: Comment addressed.

7. The “site plans” for the upper and lower wellfields need to be shown as an actual site plan. The building and site features are not clear. These sheets primarily show underground raceway schedules, charts and other items that are not relevant and should be separate from the site plan. Provide a plan sheet for site plan that clearly shows residential property lines, particularly the properties from Collins Road and parcel boundaries, including the abutting parcel located at Assessor’s Map 53, Lot 147. Plans provided are drawn indicating mostly Wetlands features.

*9/7/24 Applicant Response: Additional drawings to clarify these conditions, including a simpler overall Site Plan, are in development and will be added to the drawing set.*

10/21/24 City Response: Comment addressed.

8. The abbreviated plan set shows many red revision clouds. Was this plan set intended to be submitted? Please make changes and remove notes and revision symbols.

   *9/7/24 Applicant Response: The latest drawings, revised to incorporate comments herein, will be submitted in October 2024.*

   10/21/24 City Response: Comment addressed.

9. The Zoning Table lists the proposed building height as 258.3 feet. Please revise.

   *9/7/24 Applicant Response: The reference to 258.3 feet in the Zoning Table on Sheet C-10 is an elevation, not the building height; this will be revised in the October 2024 submission.*

   10/21/24 City Response: Comment addressed.

10. There are 2 separate Zoning Tables with the same lot numbers and different requirements. Please clarify.

    *9/7/24 Applicant Response: The second table on Sheet C-10 refers to parking requirements; this will be revised in the October 2024 submission.*

    10/21/24 City Response: Comment addressed.

11. This property is located within an Aquifer Protection Area and requires a determination by the Aquifer Protection Agency. When this determination has been completed, please add the approval, date, and application number to the cover sheet.

    *9/7/24 Applicant Response: The Aquifer Protection Agency review is pending; this information will be added to the Cover sheet for the project prior to bidding.*

    10/21/24 City Response: Acknowledged.

12. The “site plans” for the upper and lower wellfields need to be shown as an actual site plan. The building and site features are not clear. These sheets primarily show underground raceway schedules, charts and other items that are not relevant and should be separate from the site plan.

    *9/7/24 Applicant Response: Additional drawings to clarify these conditions, including a simpler overall Site Plan, are in development and will be underground raceway schedules, charts and other items that are not relevant and should be separate from the site plan added to the drawing set.*

    10/21/24 City Response: Comment addressed.

13. What is the height of the retaining walls? Please include this on the plan and details.

    *9/7/24 Applicant Response: The wall is detailed on Sheet C-27; additional information will be provided for wall greater than 3 feet tall.*

    10/21/24 City Response: Comment addressed.

    *11/7/24 Applicant Response: Specification Section 323223 – Segmental Retaining Walls also requires the Contractor to submit stamped and sealed design calculations and drawings for the retaining wall. These will be submitted to the City of Bristol during construction.*

    11/14/24 City Response: What is the proposed height of the wall?

14. Will there be any impacts or protections to the nearby parking area for 815 Stafford Avenue?

    *9/7/24 Applicant Response: There are no anticipated impacts to the parking area for 815 Stafford Avenue.*

    10/21/24 City Response: Comment addressed.

15. Include a plan sheet showing E&S controls. (E&S control details are included in the current set).

    *9/7/24 Applicant Response: Locations of E&S controls are shown on Sheets C-6, C-7, and C-8.*

    10/21/24 City Response: There are no sheets C-6 - C8 in the revised plans submitted. There appears to be the locations of compost sock shown in some locations but not silt fencing. Please indicate the locations of all proposed E&S controls clearly on the plan. There does not appear to be an E&S control plan for the south end abutting properties near Farmington Avenue. Please clarify.

    *11/7/24 Applicant Response: The E&S controls are shown on SP-12 for the UWF area, on SP-13 for the Pond PS, and on SP-14 for the LWF area. E&S controls for the south end abutting properties near Farmington Avenue and Collins Road have been added to resubmitted Sheet SP-07.*

    11/14/24 City Response: Comment addressed.

**BUILDING/ZONING ENFORCEMENT (Richard Brown)**

1. No comments at this time.

**POLICE DEPARTMENT (Lt. Krajewski/Sgt. Ouellette)**

1. No issues with design, does not affect traffic of surrounding roads.

**FIRE MARSHAL (Kristopher Lambert):**

1. On page A-2 there is a double leaf door that leads from/into the "Future Treatment Area" that is part of a 2-hour rated wall assembly. What is the rating of these doors?

    *9/7/24 Applicant Response: This is door D-104C per Sheet A-3; this door has a 90-minute fire rating per the Door Schedule on Sheet A-9.*

    10/21/24 City Response: Comment addressed.

**WATER DEPARTMENT (Paul Keegan/Rob Longo)**

1. Bristol Water and Sewer requires all permits to be pulled by licensed plumbers. A copy of our policies and procedures are given to the plumber when the permit is pulled. All non-emergency work requires a min of 4 days' notice.

   *9/7/24 Applicant Response: This requirement will be added to Division 01 of the project Specifications.*

   10/21/24 City Response: OK

Water:

1. 12 X 8 tapping sleeve and valve requires payment prior to work being done

   *9/7/24 Applicant Response: This requirement will be added to Division 01 of the project Specifications and to the Civil Drawings.*

   10/21/24 City Response: OK

2. All hydrants require a secondary valve.

   *9/7/24 Applicant Response: The hydrant assembly includes a gate valve per Detail D on Sheet C-25.*

   10/21/24 City Response: OK

3. Call the office for a price on the 2" service.

   *9/7/24 Applicant Response: The relevant fees will be included in Division 01 of the project Specifications. Information provided by the City recently indicates an anticipated $4,725 connection fee.*

   10/21/24 City Response: OK

4. 2" service requires a curb stop.

   *9/7/24 Applicant Response: Additional details on the 2" water service connection will be added to Sheet C-18C.*

   10/21/24 City Response: OK

5. Bristol Water and Sewer insects every inch of pipe being installed.

   *9/7/24 Applicant Response: This requirement for full inspection will be added to Division 01 of the project Specifications and to the Civil Drawings.*

   10/21/24 City Response: OK

6. 8" DIP requires pressure test, flushing and Bacteria test.

   *9/7/24 Applicant Response: Pressure test and flushing are included in Sections 221113 and 330519 of the Specifications. Disinfection requirements are included in Section 331300 of the Specifications. City of Bristol requirements are also referenced in Section 331300.*

   10/21/24 City Response: OK

7. Each hydrant requires pressure test, flush and Bacteria sample.

*9/7/24 Applicant Response: Pressure test and flushing of hydrants are included in Sections 221113 and 331219 of the Specifications Disinfection requirements are included in Section 331300 of the Specifications. City of Bristol requirements are also referenced in Sections 331219 and 331300.*

10/21/24 City Response: OK

8. Inspection fees apply to private services.

*9/7/24 Applicant Response: Requirements and anticipated fees for full inspection will be added to Division 01 of the project Specifications and to the Civil Drawings.*

10/21/24 City Response: OK

9. Water and sewer must maintain 10' separation at all times

*9/7/24 Applicant Response: Understood; Maltby Street water and sewer drawings have been submitted to the Water and Sewer Department.*

10/21/24 City Response: OK

Sewer:

1. 8" sewer must extend, no forced main in the city right of way

*9/7/24 Applicant Response: he low-pressure sewer can remain on NBWD property until the edge of the property and then transition to gravity sewer in the street, but there are concerns with storm drain conflict and shallow coverage, so the exact location requires further discussion with the Water and Sewer Department.*

10/21/24 City Response: As discussed OK.

# Project Narrative 11/24

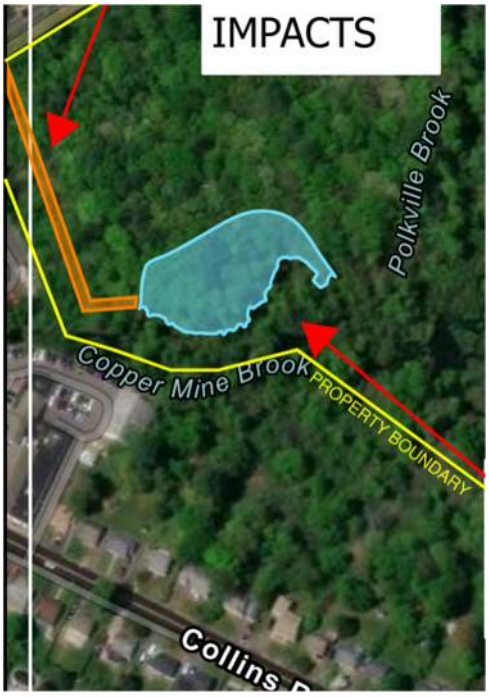
November 7, 2024

# Zoning Commission – Project Narrative Supplemental Information

This document presents revised supplemental information to the Project Narrative submitted with the June 27, 2024 application package for Site Plan and Special Permit Application #2504 and #2505 and Special Permit for Earth Removal Application #2506. Supplemental information was first provided with the October 10, 2024 submission and has since been further revised following discussions at the October 21, 2024 Zoning Commission Meeting and discussions with Bristol City Staff. The original June 27, 2024 Project Narrative is included for informational purposes only and the original Application Submittal Package should be referenced for any Attachment or Drawing Sheet reference made in that document.

## Earth Excavation Activities near Collins Road:

The Drawings have been revised to more clearly show offset distances between the earth excavation activities associated with the wetlands/compensatory flood storage creation area in the southern portion of the site and the adjacent residential properties on Collins Road. The proposed earth excavation activities will be approximately 86-feet from the closest residential property boundary. Article 15.2.5.B(1) of the Bristol Zoning Regulations requires a 100-foot buffer between earth excavations and adjacent residential lots. However, Article 15.2.5.B (3) allows the Commission to reduce the required buffer area if the existing vegetation or topography within the buffer area will effectively screen the earth removal. As seen on the Drawings and the aerial view, below, the buffer area consists of densely wooded area and the Copper Mine Brook. Additionally, the actual dwellings located on the properties adjacent to the earth excavation are approximately 330-feet from the excavation. Excavation in this area is necessary to construct the compensatory flood storage area and the selection of its location is based on the elevations of existing topography and the need to excavate at elevations matching those where fill was added to the site. Following excavation of this area to the required elevations, it will be restored as a wetland.



An access driveway has been included off Mix Street to access this wetlands/compensatory flood storage creation area. The access drive is shown on attached revised Drawing Sheets and features a curb cut; concrete apron; vehicle control gate; stabilized construction entrance to prevent tracking of dirt, dust, and debris from excavation activities; and silt fencing along the limits of clearing to prevent siltation of surrounding areas. A 10-foot vegetated buffer will be left between the proposed access drive and the property boundary. During construction, vehicles will use this access drive to excavate the wetlands/compensatory flood storage creation area. Post-construction, this access drive will only be used for periodic maintenance and surveillance of the new wetlands area and will not be frequently utilized by the New Britain Water Department for operations of the White Bridge Waterworks Facilities.

**We are seeking the Commission make a determination that although the proposed excavation and access drive are within the 100-ft buffer, the existing vegetation and topography provide adequate screening on the activity from adjacent properties.**

## Construction Traffic Control Narrative:

A construction vehicle routing figure was included with the June 2024 application. As indicated in the figure, the main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). Specification Section 011000 "Summary" of the Contract Documents has been updated to require the Contractor to follow this route, to the limits practicable, and to only utilize Mix Street for access to the wetland creation area located off Mix Street. Revised Section 011000 is included as an attachment.

The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The following table presents an estimated number of construction vehicles expected per major construction activity on the site. These estimated values include trucking materials on/off site; however, they do not include personal vehicles of the construction crew. It is assumed Contractor will utilize designated space on the site to provide parking for personal crew vehicles, which will stay on-site for the duration of the workday. The Contractor will have to identify offsite parking for personal crew vehicles that cannot be accommodated onsite.

| Construction Activity | Activity Duration | Estimated Construction Vehicles[1] |
|---|---|---|
| Supply Pond and Canal Restoration | 3 Months | 15-20 vehicles per day |
| UWF and LWF Well Drilling | 17 Months | 2-5 vehicles per day<br>(Large drill rigs will likely remain on site for duration of drilling) |
| Existing Pump Station Demolition & Pond Pump Station Construction | 18 Months | 25 vehicles per day |
| Maltby Street Utility Installation (Water and Sewer) | 3 Months | 5 vehicles per day<br>(10 vehicles per day during paving) |
| Construction of Wetlands and Compensatory Storage Areas | 3 Months | 5-10 vehicles per day |
| Construction of Wetlands and Compensatory Storage Areas (Mix Street) | 1 Month | 5-10 vehicles per day |

Notes:

1) Presented values are estimated and are subject to change depending on the Contractor.

2) Construction activities will not all occur concurrently, so the total number of vehicles entering and exiting the site per day will vary depending on the actual construction activities occurring.

Specification Section 011000 has been updated to also prohibit work in the intersection of Maltby Street and Stafford Avenue during school bus drop off/pick-up hours and to limit utility work in Maltby Street to the hours of 10am to 4 pm, to avoid peak traffic time. Finally, we are requiring the Contractor to coordinate with the Bristol Public Works Department to limit traffic and construction impacts caused by this project and other projects in the area, including the Jerome Avenue Bridge Project.

During the October 21, 2024 Zoning Commission Meeting, several discussion points were brought up about construction traffic impacts and mitigation. These included expanded discussions on school hours, events at nearby schools/churches, and the Little League Baseball and Softball World Series Tournament hosted annually on Mix Street. Specification Section 011000 has been further updated to alert the

Contractor of these traffic considerations and require coordination with the City of Bristol DPW and Police Departments to mitigate construction traffic impacts during these times. See attached updated Section 011000 for these changes.

The drawings have been updated to include new W11-10 Truck sign to warn vehicle traffic for trucks entering and exiting the facility. As shown on the drawings, signs will be installed 250-ft from the site access drives in both directions on Maltby Street. Table 23-C of the Manual on Uniform Traffic Control Devices (MUTCD 11$^{TH}$ Edition) was used to determine the distance for advance placement of warning signs. A speed limit of 35 miles per hour (mph) (30 mph base speed on Maltby Street with an additional 5 mph) was used to determine the distance on the table.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| W11-10 | 41-4837 | Truck Symbol | 30 | 30 | 1 | SL | XI | Yellow |  |

Standard roadway and curb/sidewalk repair details were received from the City and have been incorporated into the Drawings. The standard DPW excavation forms provided to Contractors were also received from the City and will be incorporated into the final Bid Set Specifications. These standard forms are included as an Attachment.

## Construction Sequencing Narrative:

A proposed construction sequencing figure for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project was included as an attachment to the June 2024 permit submission. Some specific sequencing constraints and estimated durations in relation to earth moving were also included in the narrative associated with the June 2024 submission. The list included in the narrative is copied below and annotated with revisions based on comments received from the City. It is important to note that these represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.

Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)

- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**

- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)

- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)

- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

## Aquifer Protection Best Management Practices:

As discussed during the September 16, 2024 Zoning Commission meeting, the CT DEEP Best Management Practices Document is incorporated into the Contract Documents as a requirement and an Attachment to Specification Section 015000 “Temporary Facilities and Controls.” The updated section is included as an Attachment. CT DEEP Best Management Practices will be followed to the extent practicable on the site.

On October 17, 2024, the design team and City of Bristol Staff met with representatives of CT DEEP’s Aquifer Protection Area Program to discuss the project and implementation of Best Management Practices, specifically, the use of containment areas for refueling construction vehicles on the project site. CT DEEP concurred that the requirement for offsite (i.e. outside the aquifer protection area) refueling of construction vehicles like bulldozers, groundwater well drill rigs, excavators, loaders, etc. was not efficient, may cause delays to project schedule, and in the case of the well drill rig, could adversely impact the construction of the groundwater production well. The applicant appreciated the opportunity to speak with CT DEEP on this topic and

## Estimated Quantities of Material Brought On/Off Site:

| Quantity Material Brought On-Site | Quantity Material Taken Off-Site |
|---|---|
| Pond Pump Station Fill = 143,745 cf | Compensatory Flood Storage Areas = 433,855 cf |
| Upper Wellfield Fill = 13,840 cf | Supply Pond/Canal Sediment = 162,000 cf |
| Lower Wellfield Fill = 19,077 cf | |
| **Total = 176,662 cf** | **Total = 595,855 cf** |

It is estimated that 176,662 cubic feet (cf) (or 6,543 cubic yards [cy]) of material will be brought onto the site to fill areas around each of the nine wellheads and around the new Pond Pump Station building. This fill is necessary to comply with CT DPH requirements for infrastructure above flood elevations and to provide a 50-foot radius around wellheads to the nearest high-water mark. Approximately 595,855 cf (or 22,068 cy) of material is expected to be removed from the site. Removal of this material is required to offset necessary fill within the floodplain and will be removed from the designated compensatory flood storage creation areas indicated on the Drawings. A portion of the material removed from the site will be sediment from the supply pond and canal (162,000 cf or 6,000 cy) that has accumulated over the past 20 years. This is a routine maintenance activity for the water utility and will restore the supply pond and canal to their constructed capacities. Depending on sampling and gradation testing, the Contractor may elect to reuse material scheduled for removal from the site as fill material in other areas.

## Changes Made to Drawings Since June 27, 2024 Submittal:

Several changes have been made to the Drawings since the June 2024 submittal package. Please see a summary of the major changes made, below. See the revised Drawings, Attached.

- Site Plans for the different locations of work (Upper Wellfield, Lower Wellfield, Pond Pumping Station, and wetlands/compensatory storage creation sites) have been simplified. Property boundaries, required setback lines, and site features have been clarified.
    - Some sheets were combined and many were renamed with a "Site Plan (SP)" designation. This was done to simplify review of site plan drawings, the site plan drawings will be included as an attachment to Final Bid Set documents along with these Zoning applications. The following provides a list of Simplified Site Plan Sheets and their corresponding Civil Sheet in parentheses from the original June 2024 submittal:
        - Sheet C-1 has been renamed P-ERM to indicate it is the note sheet for the Permitting Set
        - Sheets C-2, C-3, C-4, and C-5 remained the same as they are existing condition sheets
        - Sheet C-23 covers routine maintenance work for sediment removal from the supply pond and canal
        - Sheets C-24 through C-29 remained the same as they are detail sheets
        - Sheet SP-01 (C-14) – Overview of UWF North
        - Sheet SP-02 (C-14A) – Overview of UWF South
        - Sheet SP-03 (C-13) – Overview of LWF
        - Sheet SP-04 (C-9) – Site Plan UWF
        - Sheet SP-05 (C-10 & C-12) – Site Plan Pond Pumping Station
        - Sheet SP-06 (C-11) – Site Plan LWF
        - Sheet SP-07 (New Sheet) – Mix Street Access Road
        - SP-08 (C-18A) – Maltby Street Utilities I
        - SP-09 (C-18B) – Maltby Street Utilities II
        - SP-10 (C-18C) – Maltby Street Utilities III
        - SP-11 (C-19) – Stafford Avenue and Cross Country Utilities
        - SP-12 (C-6) – E&S Controls UWF
        - SP-13 (C-7) – E&S Controls Pond Pumping Station
        - SP-14 (C-8) – E&S Controls LWF
        - SP-15 (New Sheet) – Bristol Standard Details & Mix Street Road Repair Details
- A class A-2 survey was performed for the southern portion of Lot 53-145 along Mix Street and along the property boundary with the lots on Collins Street. Enhanced mapping of these areas are included in the Drawings. All of the Class A-2 survey documents, stamped and sealed by the licensed surveyor are included as an attachment.
- Offsets from earth excavation locations to the nearest property boundary were more clearly depicted.
- As agreed with the Bristol Water and Sewer Department in the October 8, 2024 call, the 8-inch gravity sewer was extended west on Maltby Street to the property boundary between Lot 53-145-2 (Bristol Baseball Field) and Lot 53-145. The slope of the gravity sewer line in Maltby Street was adjusted from 0.01 to 0.004 to provide a minimum 3-foot coverage to pipe along the entire alignment. The alignment of the 1.25-inch force main from the Pond Pump Station was moved

into the New Britain owned property of Lot 53-145 until its lateral connection within a new manhole in Maltby Street.

- Extents of clearing and grubbing were better designated on the Drawings.
- The City of Bristol standard road repair and sidewalk details have been received and incorporated into Drawing Detail Sheets.
- Cover Sheet information has been updated to indicate the application numbers and approvals of the project.
- The Zoning Table has been simplified and values corrected.

## Comment Response Log Between Bristol City Staff and CDM Smith

There have been several rounds of comments and responses between Bristol City Staff and CDM Smith. The following presents a timeline of comments received from the Bristol City Staff and corresponding responses provided by CDM Smith:

- Permit Application forms Submitted – June 27, 2024
- Zoning Commission Meeting – July 8, 2024
- Initial Comments from City Staff provided to CDM Smith – July 31, 2024
- CDM Smith Responses to Initial Comments provided to City – September 7, 2024
- Zoning Commission Meeting – September 16, 2024
- Supplemental Information provided to City Staff – October 10, 2024
- Zoning Commission Meeting – October 21, 2024
- Additional Comments from City Staff provided to CDM Smith – October 28, 2024
- Responses to Additional Comments and Supplemental Information provided to City Staff – November 7, 2024

A comment response log tracking all of the comments and responses between the City of Bristol Staff and CDM Smith is included as an attachment.

# Zoning Commission – Application for Special Permit

**NOTE: THIS DOCUMENT WAS SUBMITTED WITH THE JUNE 27, 2024 APPLICATION PACKAGE AND CONTENTS, INCLUDING ATTACHMENT REFERENCES AND DRAWING SHEET NUMBERS, HAVE NOT BEEN MODIFIED FOR THIS NOVEMBER 7, 2024 SUBMITTAL. THIS DOCUMENT IS INCLUDED IN THE NOVEMBER 7, 2024 SUPPLEMENTAL INFORMATION SUBMITTAL FOR INFORMATIONAL PURPOSES ONLY. SEE ORIGINAL APPLICATION SUBMITTAL FOR ANY ATTACHMENTS REFERENCED IN THIS DOCUMENT.**

## Project Narrative:

The New Britain Water Department (NBWD) has owned and operated groundwater wells as a raw water source at the White Bridge Waterworks Facilities on Maltby Street in Bristol for over one hundred years. The facilities are located in an R-40 designated residential zone across several parcels including 52-11, 52-15, 52-16B16A, 52-17, 53-145, 53-147, 53-149, 53-150, and 53-151. Work is specifically being performed on lot 52-16B16A, 52-17, 53-145, 53-147, and 53-150. Project location figures are included as **Attachment 1** to this application. The Lower Wellfield wells (located south of Maltby Street) were originally constructed in 1921 and have been operated since 1923. These wells have undergone upgrades in the 1940s and 1950s, with the most recent upgrades occurring the 1980s. A pump station at the Lower Wellfield was constructed as part of the 1940s upgrades. The Upper Wellfield wells (located north of Maltby Street) were originally installed in 1940. These were replaced with new wells in 1955 and again in the 1980s. A pump station at the Upper Wellfield was also constructed in the floodway in 1955. In addition to the wells, NBWD has also operated the Supply Pond surface water source at the White Bridge Waterworks Facilities since the 1950s. The existing 1923 pump station, already located on the site, was converted to a surface water pump station in 1950. This building and associated pumping equipment have not received major upgrades since.

Much of the mechanical equipment at the wellfields and existing Pond Pumping Station has reached the end of its useful life or, due to its age, is very difficult or not possible to find the necessary replacement parts for sustained operations. Regulatory requirements and industry standards have also changed over the past 100-years. To redevelop the Upper and Lower Wellfields with new wells that can be used as a potable drinking water source, the Connecticut Department of Public Health (DPH) requires new wells to be located 50-feet from any water body or wetlands boundary. In addition, DPH requires new wells and water infrastructure to be raised to an elevation 2-feet above the 100-year floodplain elevation. As the majority of the NBWD owned property is within the 100-year floodplain with some areas up to 6-feet below the flood elevation, the existing wells and three pump stations cannot be redrilled/rehabilitated in their current locations. This project will rehabilitate the White Bridge Waterworks Facility to bring it up to modern standards and regulations and create a reliable potable drinking water source for the New Britain Water Department and surrounding communities.

The project includes the abandonment of all currently existing wells in accordance with DPH requirements, demolition of existing structures and the three existing pump stations, construction of a single new pump station, filling and grading to achieve DPH flood resiliency requirements, wetlands creation/replication, and creation of compensatory flood storage. A total of three new wells will be drilled at the Upper Wellfield and six new wells drilled at the Lower Wellfield. Based on water quality, the Lower Wellfield wells may but suitable for use as a public potable water supply with minimal

chemical treatment, subject to the ground water under the direct influence of surface water (GWUDI) testing. Both the Upper and Lower Wellfield wells will be equipped with new submersible style pumps within the wells, making it unnecessary to have pump stations at each site. An Aquifer Protection Area Program Registration Form for Regulated Activities will be submitted following this application submittal. A single pump station building will be constructed to house pumping equipment associated with the Supply Pond surface water source and will also include designated space for treatment equipment in the event the Lower Wellfield is used for potable water. This new building will be constructed with a finished floor elevation 2-feet above the 100-year flood elevation and outside the floodway. The project will also install associated yard piping around the wells, pump station building, and connections to the existing New Britain water infrastructure on-site. New water and sewer utilities from Bristol will be constructed in Maltby Street and provide service for the new pump station. Design Drawings for the project are included in **Attachment 2** and a 3D Rendering of the new Pond Pumping Station is included in **Attachment 3**.

As filling of the site is required for the new wells and pump station to meet DPH requirements, compensatory flood storage areas will be constructed so as to not increase the current flood elevation levels, as given by FEMA guidelines. The new structure and wells will add approximately 6,543 cubic yards of fill within the floodplain. Approximately 15,327 cubic yards of material will be removed from the floodplain for the creation of compensatory storage. These compensatory storage areas will also create additional wetland areas. Fill and earth removal on the site is associated with construction activities only and the final use of the site will not include earth removal activities. A Special Permit for Earth Removal in Excess of 400 Cubic Yards is also being filed for approval. The project will impact approximately 24,952 square feet of wetlands. However, wetlands replication will be done at a ratio of three to one, with a total of 75,946 square feet of wetlands replication proposed. In total, the project is expected to disturb approximately 223,000 square feet of land. This includes areas for wetland replication; compensatory storage creation; and disturbances for installing the new wells, associated yard piping, abandoning and decommissioning existing wells, Pond Pump Station building construction, and demolition of the three existing buildings. A Permit for Flood Plain Development (Application #23-458F-305), Form IW-1 (Application for a Wetlands Permit) (Application #2020), and Form IW-2 (Application for a Wetlands Boundary Change) (Application #2019) were approved by the Bristol Inland Wetlands and Watercourses Agency of the Conservation Commission on June 6, 2024 for this project. A Site Plan Permit for this project is also being filed for approval.

An Erosion and Sediment Control Plan has been developed to control accelerated erosion and sedimentation from stormwater runoff on the site during construction based on the best available technologies. The Control Plan narrative is included with this application in accordance with Section 15.1.5. The “Connecticut Guidelines for Soil Erosion and Sedimentation Control (2002)” document was utilized in preparation of the Plan. A Stormwater Management Report for post-construction conditions has also been developed for this project based on the 2004 *Connecticut Stormwater Quality Manual (CSQM)* as required in Section 15.5.3. A copy of the Stormwater Management Report is included as **Attachment 6** to this application.

The new Pond Pump Station and Lower Wellfield area will be enclosed in a 6.5-foot tall chain link fence for security. A double-leaf swing gate will provide access to the site on the driveway. As shown on the Drawings, the fence and access gate are located outside of the 50-foot required front yardage for R-40 residential zones. A double-leaf vehicular control gate will be located at the foot of the driveway to

control vehicular access onto the public utility site. This gate will be less than the 4.5-foot height restriction for fences within front yards and will be more than 50 percent open. A detail for this vehicular control gate is included in the drawings. An existing vehicular access gate for the Upper Wellfield access road (located on the north side of Maltby Street) will remain.

Public utility buildings are not listed as a Use Group in the table included in Section 13.2 of the Zoning Regulations; however, two parking spaces will be provided at the Pond Pumping Station. Each parking space is designed to be 10-feet wide and 18-feet deep, meeting the requirements of perpendicular parking spaces required by Section 13.7.2. As a utility service building, this facility is not open to the public and it will not be continuously manned by NBWD staff. It is not expected that more than two NBWD staff vehicles will be present on-site during operations. The post-construction vehicle traffic from NBWD staff is not expected to increase from their current operations. In the event potable water treatment is implemented for the Lower Wellfield, it is expected that the facility will received 2-3 trucks per month for deliveries.

A construction vehicle routing figure is included as **Attachment 5** to this application. The main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). It is expected that 15-20 construction vehicles (including pickup trucks, trailers, dump trucks, etc.) could be accessing the site during construction. The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The construction vehicles generated by this project will represent less than 1% of traffic in the area. For access to the compensatory storage area located in the south of the site (closest to Harbor Freight), construction vehicle access will be off Mix Street via Stafford Avenue. Additionally, work to install new water and sewer utilities within Maltby Street will require temporary lane closures. Typical traffic management details have been developed and are included in the attached design drawings.

The accompanying plans to this application are based on a Class A-2 survey map prepared by a registered land surveyor licensed to conduct business in the State of Connecticut with the exception of Sheets C-13, Sheet C-14, and Sheet C-14A. These sheets depict the general locations of wetland replication and compensatory storage areas and are currently based on a Class D survey due to the scale and size of the parcels and location of work. We request a Class A-2 survey of these areas to be included as a condition of approval for this application and the final Class A-2 survey will be performed and submitted to the Commission for final issuance of the Special Permit prior to construction. Additionally, the wetlands replication and compensatory storage area in the southernmost part of the site, shown on Sheet C-13, cannot comply with the 100-foot buffer zone to a residential property (as required by Section 15.2.5.B). The closest abutting residential property line is 70-feet from proposed excavation activities for the wetlands replication and compensatory storage area. The location of this earth removal work to create compensatory storage is dictated by the contours of existing grade and the removal of certain volumes at each elevation to offset fill brought to that same elevation. It is important to note that this area of the site is heavily vegetated along with the abutting residential properties. We also note that the closest residential building on these lots are 250-feet away. We believe the dense vegetation, distance to residential dwelling, and nature of this construction (creation of wetlands area without a permanent structure) comply with the intent of requirements in Section 15.2.5.B for screening.

# Erosion Control Narrative

# Supplemental Narrative – Earth Removal 11/24

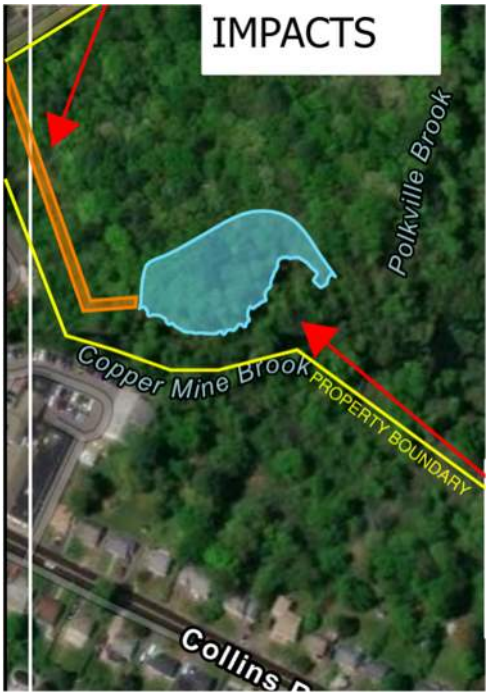
November 7, 2024

# Zoning Commission – Project Narrative Supplemental Information

This document presents revised supplemental information to the Project Narrative submitted with the June 27, 2024 application package for Site Plan and Special Permit Application #2504 and #2505 and Special Permit for Earth Removal Application #2506. Supplemental information was first provided with the October 10, 2024 submission and has since been further revised following discussions at the October 21, 2024 Zoning Commission Meeting and discussions with Bristol City Staff. The original June 27, 2024 Project Narrative is included for informational purposes only and the original Application Submittal Package should be referenced for any Attachment or Drawing Sheet reference made in that document.

## Earth Excavation Activities near Collins Road:

The Drawings have been revised to more clearly show offset distances between the earth excavation activities associated with the wetlands/compensatory flood storage creation area in the southern portion of the site and the adjacent residential properties on Collins Road. The proposed earth excavation activities will be approximately 86-feet from the closest residential property boundary. Article 15.2.5.B(1) of the Bristol Zoning Regulations requires a 100-foot buffer between earth excavations and adjacent residential lots. However, Article 15.2.5.B (3) allows the Commission to reduce the required buffer area if the existing vegetation or topography within the buffer area will effectively screen the earth removal. As seen on the Drawings and the aerial view, below, the buffer area consists of densely wooded area and the Copper Mine Brook. Additionally, the actual dwellings located on the properties adjacent to the earth excavation are approximately 330-feet from the excavation. Excavation in this area is necessary to construct the compensatory flood storage area and the selection of its location is based on the elevations of existing topography and the need to excavate at elevations matching those where fill was added to the site. Following excavation of this area to the required elevations, it will be restored as a wetland.



An access driveway has been included off Mix Street to access this wetlands/compensatory flood storage creation area. The access drive is shown on attached revised Drawing Sheets and features a curb cut; concrete apron; vehicle control gate; stabilized construction entrance to prevent tracking of dirt, dust, and debris from excavation activities; and silt fencing along the limits of clearing to prevent siltation of surrounding areas. A 10-foot vegetated buffer will be left between the proposed access drive and the property boundary. During construction, vehicles will use this access drive to excavate the wetlands/compensatory flood storage creation area. Post-construction, this access drive will only be used for periodic maintenance and surveillance of the new wetlands area and will not be frequently utilized by the New Britain Water Department for operations of the White Bridge Waterworks Facilities.

**We are seeking the Commission make a determination that although the proposed excavation and access drive are within the 100-ft buffer, the existing vegetation and topography provide adequate screening on the activity from adjacent properties.**

## Construction Traffic Control Narrative:

A construction vehicle routing figure was included with the June 2024 application. As indicated in the figure, the main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). Specification Section 011000 "Summary" of the Contract Documents has been updated to require the Contractor to follow this route, to the limits practicable, and to only utilize Mix Street for access to the wetland creation area located off Mix Street. Revised Section 011000 is included as an attachment.

The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The following table presents an estimated number of construction vehicles expected per major construction activity on the site. These estimated values include trucking materials on/off site; however, they do not include personal vehicles of the construction crew. It is assumed Contractor will utilize designated space on the site to provide parking for personal crew vehicles, which will stay on-site for the duration of the workday. The Contractor will have to identify offsite parking for personal crew vehicles that cannot be accommodated onsite.

| Construction Activity | Activity Duration | Estimated Construction Vehicles[1] |
|---|---|---|
| Supply Pond and Canal Restoration | 3 Months | 15-20 vehicles per day |
| UWF and LWF Well Drilling | 17 Months | 2-5 vehicles per day<br>(Large drill rigs will likely remain on site for duration of drilling) |
| Existing Pump Station Demolition & Pond Pump Station Construction | 18 Months | 25 vehicles per day |
| Maltby Street Utility Installation (Water and Sewer) | 3 Months | 5 vehicles per day<br>(10 vehicles per day during paving) |
| Construction of Wetlands and Compensatory Storage Areas | 3 Months | 5-10 vehicles per day |
| Construction of Wetlands and Compensatory Storage Areas (Mix Street) | 1 Month | 5-10 vehicles per day |

Notes:

1) Presented values are estimated and are subject to change depending on the Contractor.

2) Construction activities will not all occur concurrently, so the total number of vehicles entering and exiting the site per day will vary depending on the actual construction activities occurring.

Specification Section 011000 has been updated to also prohibit work in the intersection of Maltby Street and Stafford Avenue during school bus drop off/pick-up hours and to limit utility work in Maltby Street to the hours of 10am to 4 pm, to avoid peak traffic time. Finally, we are requiring the Contractor to coordinate with the Bristol Public Works Department to limit traffic and construction impacts caused by this project and other projects in the area, including the Jerome Avenue Bridge Project.

During the October 21, 2024 Zoning Commission Meeting, several discussion points were brought up about construction traffic impacts and mitigation. These included expanded discussions on school hours, events at nearby schools/churches, and the Little League Baseball and Softball World Series Tournament hosted annually on Mix Street. Specification Section 011000 has been further updated to alert the

Contractor of these traffic considerations and require coordination with the City of Bristol DPW and Police Departments to mitigate construction traffic impacts during these times. See attached updated Section 011000 for these changes.

The drawings have been updated to include new W11-10 Truck sign to warn vehicle traffic for trucks entering and exiting the facility. As shown on the drawings, signs will be installed 250-ft from the site access drives in both directions on Maltby Street. Table 23-C of the Manual on Uniform Traffic Control Devices (MUTCD 11$^{TH}$ Edition) was used to determine the distance for advance placement of warning signs. A speed limit of 35 miles per hour (mph) (30 mph base speed on Maltby Street with an additional 5 mph) was used to determine the distance on the table.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| W11-10 | 41-4837 | Truck Symbol | 30 | 30 | 1 | SL | XI | Yellow |  |

Standard roadway and curb/sidewalk repair details were received from the City and have been incorporated into the Drawings. The standard DPW excavation forms provided to Contractors were also received from the City and will be incorporated into the final Bid Set Specifications. These standard forms are included as an Attachment.

## Construction Sequencing Narrative:

A proposed construction sequencing figure for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project was included as an attachment to the June 2024 permit submission. Some specific sequencing constraints and estimated durations in relation to earth moving were also included in the narrative associated with the June 2024 submission. The list included in the narrative is copied below and annotated with revisions based on comments received from the City. It is important to note that these represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.

Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)

- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**

- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)

- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)

- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

## Aquifer Protection Best Management Practices:

As discussed during the September 16, 2024 Zoning Commission meeting, the CT DEEP Best Management Practices Document is incorporated into the Contract Documents as a requirement and an Attachment to Specification Section 015000 “Temporary Facilities and Controls.” The updated section is included as an Attachment. CT DEEP Best Management Practices will be followed to the extent practicable on the site.

On October 17, 2024, the design team and City of Bristol Staff met with representatives of CT DEEP’s Aquifer Protection Area Program to discuss the project and implementation of Best Management Practices, specifically, the use of containment areas for refueling construction vehicles on the project site. CT DEEP concurred that the requirement for offsite (i.e. outside the aquifer protection area) refueling of construction vehicles like bulldozers, groundwater well drill rigs, excavators, loaders, etc. was not efficient, may cause delays to project schedule, and in the case of the well drill rig, could adversely impact the construction of the groundwater production well. The applicant appreciated the opportunity to speak with CT DEEP on this topic and

## Estimated Quantities of Material Brought On/Off Site:

| Quantity Material Brought On-Site | Quantity Material Taken Off-Site |
|---|---|
| Pond Pump Station Fill = 143,745 cf | Compensatory Flood Storage Areas = 433,855 cf |
| Upper Wellfield Fill = 13,840 cf | Supply Pond/Canal Sediment = 162,000 cf |
| Lower Wellfield Fill = 19,077 cf | |
| **Total = 176,662 cf** | **Total = 595,855 cf** |

It is estimated that 176,662 cubic feet (cf) (or 6,543 cubic yards [cy]) of material will be brought onto the site to fill areas around each of the nine wellheads and around the new Pond Pump Station building. This fill is necessary to comply with CT DPH requirements for infrastructure above flood elevations and to provide a 50-foot radius around wellheads to the nearest high-water mark. Approximately 595,855 cf (or 22,068 cy) of material is expected to be removed from the site. Removal of this material is required to offset necessary fill within the floodplain and will be removed from the designated compensatory flood storage creation areas indicated on the Drawings. A portion of the material removed from the site will be sediment from the supply pond and canal (162,000 cf or 6,000 cy) that has accumulated over the past 20 years. This is a routine maintenance activity for the water utility and will restore the supply pond and canal to their constructed capacities. Depending on sampling and gradation testing, the Contractor may elect to reuse material scheduled for removal from the site as fill material in other areas.

## Changes Made to Drawings Since June 27, 2024 Submittal:

Several changes have been made to the Drawings since the June 2024 submittal package. Please see a summary of the major changes made, below. See the revised Drawings, Attached.

- Site Plans for the different locations of work (Upper Wellfield, Lower Wellfield, Pond Pumping Station, and wetlands/compensatory storage creation sites) have been simplified. Property boundaries, required setback lines, and site features have been clarified.
    - Some sheets were combined and many were renamed with a "Site Plan (SP)" designation. This was done to simplify review of site plan drawings, the site plan drawings will be included as an attachment to Final Bid Set documents along with these Zoning applications. The following provides a list of Simplified Site Plan Sheets and their corresponding Civil Sheet in parentheses from the original June 2024 submittal:
        - Sheet C-1 has been renamed P-ERM to indicate it is the note sheet for the Permitting Set
        - Sheets C-2, C-3, C-4, and C-5 remained the same as they are existing condition sheets
        - Sheet C-23 covers routine maintenance work for sediment removal from the supply pond and canal
        - Sheets C-24 through C-29 remained the same as they are detail sheets
        - Sheet SP-01 (C-14) – Overview of UWF North
        - Sheet SP-02 (C-14A) – Overview of UWF South
        - Sheet SP-03 (C-13) – Overview of LWF
        - Sheet SP-04 (C-9) – Site Plan UWF
        - Sheet SP-05 (C-10 & C-12) – Site Plan Pond Pumping Station
        - Sheet SP-06 (C-11) – Site Plan LWF
        - Sheet SP-07 (New Sheet) – Mix Street Access Road
        - SP-08 (C-18A) – Maltby Street Utilities I
        - SP-09 (C-18B) – Maltby Street Utilities II
        - SP-10 (C-18C) – Maltby Street Utilities III
        - SP-11 (C-19) – Stafford Avenue and Cross Country Utilities
        - SP-12 (C-6) – E&S Controls UWF
        - SP-13 (C-7) – E&S Controls Pond Pumping Station
        - SP-14 (C-8) – E&S Controls LWF
        - SP-15 (New Sheet) – Bristol Standard Details & Mix Street Road Repair Details
- A class A-2 survey was performed for the southern portion of Lot 53-145 along Mix Street and along the property boundary with the lots on Collins Street. Enhanced mapping of these areas are included in the Drawings. All of the Class A-2 survey documents, stamped and sealed by the licensed surveyor are included as an attachment.
- Offsets from earth excavation locations to the nearest property boundary were more clearly depicted.
- As agreed with the Bristol Water and Sewer Department in the October 8, 2024 call, the 8-inch gravity sewer was extended west on Maltby Street to the property boundary between Lot 53-145-2 (Bristol Baseball Field) and Lot 53-145. The slope of the gravity sewer line in Maltby Street was adjusted from 0.01 to 0.004 to provide a minimum 3-foot coverage to pipe along the entire alignment. The alignment of the 1.25-inch force main from the Pond Pump Station was moved

into the New Britain owned property of Lot 53-145 until its lateral connection within a new manhole in Maltby Street.

- Extents of clearing and grubbing were better designated on the Drawings.
- The City of Bristol standard road repair and sidewalk details have been received and incorporated into Drawing Detail Sheets.
- Cover Sheet information has been updated to indicate the application numbers and approvals of the project.
- The Zoning Table has been simplified and values corrected.

## Comment Response Log Between Bristol City Staff and CDM Smith

There have been several rounds of comments and responses between Bristol City Staff and CDM Smith. The following presents a timeline of comments received from the Bristol City Staff and corresponding responses provided by CDM Smith:

- Permit Application forms Submitted – June 27, 2024
- Zoning Commission Meeting – July 8, 2024
- Initial Comments from City Staff provided to CDM Smith – July 31, 2024
- CDM Smith Responses to Initial Comments provided to City – September 7, 2024
- Zoning Commission Meeting – September 16, 2024
- Supplemental Information provided to City Staff – October 10, 2024
- Zoning Commission Meeting – October 21, 2024
- Additional Comments from City Staff provided to CDM Smith – October 28, 2024
- Responses to Additional Comments and Supplemental Information provided to City Staff – November 7, 2024

A comment response log tracking all of the comments and responses between the City of Bristol Staff and CDM Smith is included as an attachment.

November 7, 2024

# Zoning Commission – Application for Special Permit

## Erosion and Sediment Control Plan- Project Narrative:

This Erosion and Sediment Control Plan is provided in accordance with Section 15.1.5 of the Bristol Zoning Regulations. **This plan has been revised since the June 2024 submission to reflect comments and responses between Bristol City Staff and CDM Smith.** The erosion and sedimentation control measures at the White Bridge facility focus on the protection of wetlands and waterways during and following construction since the work includes land disturbances, excavation dewatering, supply pond and canal sediment removal activities, and other associated construction activities. Several methods are included on the Drawings to slow the flow of runoff and protect disturbed land during construction activities. Please refer to the project plans for typical details of measures to protect wetlands and waterways during and after construction. The following summary presents typical mitigation measures that will be implemented to avoid and minimize wetland impacts during construction.

**Construction Period**

- During construction, the limit of land disturbances will be kept to a minimum, where possible, and the construction will be sequenced so the entire site will not be disturbed at the same time.
- Clearing and grubbing will be limited to only the areas necessary for work to be performed, specifically in areas at the Upper and Lower Wellfields (Sheet SP-04 and SP-06) where wells and piping will be installed, at the Maltby Street 16” pipe crossing (Sheet SP-10), at areas where wetlands and compensatory storage will be created (Sheets SP-01, SP-02, and SP-03), and areas around the Supply Pond for access during sediment removal activities (Sheet C-23).
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed at the down gradient limits of work and construction access roadways prior to the commencement of work to prevent the transport of sediment to the downgradient wetlands and waterways during construction (see Sheets SP-12 thru SP-14). Specifically, at the Upper Wellfield this includes compost logs/straw wattles along the facility driveway from Maltby Street to the existing Pumping Station and down each of the well field laterals. At the Lower Wellfield, this includes along the wetlands to the north and west of proposed work, along the Coppermine Brook to the east, around the Supply Pond, and along both sides of the Canal to the Polkville Avenue Brook. These barriers will be inspected at least once per week and within 24 hours of rainfall events ½-inch or greater and repaired as needed. These barriers will remain in place until all disturbed soils are stabilized. A stockpile of compost logs/straw wattles and silt fence will be maintained on site for routine maintenance and emergency repairs. Barriers will be replaced as necessary due to sediment build-up and degradation.
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed surrounding temporary stockpile areas.
- For all slopes 4:1 or steeper, an erosion control blanket will be required, including at the Upper and Lower Wellfield wells (see Sheets SP-04 and SP-06). Temporary erosion control blankets will be inspected at least once per week and within 24 hours of rainfall events.

- A turbidity curtain will be installed to prevent sedimentation and turbidity disturbances in the Coppermine Brook during canal and supply pond sediment removal activities (see Sheet C-23 and Detail Sheet C-24). Turbidity curtains will be inspected daily during Supply Pond and canal sediment removal activities. The turbidity curtain will not be removed before sediment removal activities have ended and clarity of water has returned.
- Catch basin filters will be installed on catch basins near all excavation work on Maltby Street, Stafford Avenue, and Mix Street (See Sheets SP-08 thru SP-10and Detail Sheet C-24).
- In the event that excavation dewatering is necessary, water will be pumped and discharged to one of the temporary sedimentation basins in designated areas of the site (see Sheets SP-12 thru SP-14 and Detail Sheet C-24). Temporary sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. Temporary portable sediment tanks may also be used to handle significant amounts of excavation dewatering. All water to be discharged from dewatering activities will be filtered or otherwise treated prior to discharge to prevent siltation to adjacent areas. Best management practices will be used by the Contractor in order to prevent siltation to adjacent areas during dewatering activities.
- A temporary sediment dewatering and stockpiling area has been designated within the Supply Pond to dewater removed sediments during restoration activities (see Sheet C-23 and Detail Sheet C-24). Stockpiled materials and containment area will be inspected daily during dewatering activities, weekly during non-dewatering activities, and within 24 hours of rainfall events of ½-inch or greater.
- A stabilized construction entrance is also being required for the site to prevent tire tracked soils to onsite and offsite locations (see Sheet C-23 and Detail Sheet C-24). The stabilized construction entrance will be inspected periodically and additional top dressing or length will be added, as necessary, to continue capturing sediment tracked on vehicles.
- The silt fence and/or compost log/straw wattle barrier will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- The sedimentation barriers will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- Periodic inspections will be made by the applicant to ensure compliance with the permit conditions.

*Spill Control Measures*

- Spill containment equipment (e.g. oil absorbent pads, oil absorbent materials, containment booms, shovels, etc.) will be stored in the equipment storage and refueling area in an easily accessible manner for use in the clean-up of accidental releases of fuel or other hazardous materials. Should there be an accidental release the proper authorities will be notified in accordance with all applicable federal, state, and local laws; and

- To minimize the possibility of leakage of hydraulic fluid, all hydraulic lines on all construction equipment and vehicles will be inspected at the end of each workday. If any excessive wear or leakage is observed, the line will be repaired prior to further use. In addition, a supply of oil absorbent materials (i.e. pads, "speedy dry," and/or booms) will be maintained with the equipment at the work area for immediate deployment in the event of an accidental release of fuel, hydraulic fluid, oil, etc.

*Schedule for Grading and Construction Activities:*

A proposed construction sequencing for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project is included as an attachment to this application. Tasks listed are generally to be performed within each proposed stage, and are not necessarily presented sequentially. As required by Project Specifications, the Contractor is required to submit a detailed Final Construction Schedule for approval by the Engineer. Further, as required by the Specifications, the Contractor is required to submit a detailed Construction Sequencing Plan for review and approval by the Engineer. Both the Construction Schedule and Construction Sequencing Plan submitted by the Contractor will be reviewed for compliance with time of year restrictions imposed by the Natural Diversity Database (NDDB) (no bank disturbance work in/adjacent to wetlands November 1 through March 15) and for the expected Great Blue Heron nesting period (March through May).

Some specific sequencing constraints and estimated durations are listed below. <u>These represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.</u> Some items listed in each "Stage" can/will overlap with items listed in previous stages.

<u>Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)</u>

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at**

**applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)
- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**
- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)
- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)
- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

Construction Methods:
Trench excavations will be used for pipe, valve, and appurtenance installation. Suitable material removed from trenches may be placed back into the excavation and compacted or temporarily stockpiled on site, while material deemed unsuitable for reuse will be removed from the site. Open excavations will be used

to install the foundation and footings for the Pond Pumping Station and the vaults located at each well. Material removed from these excavations will be taken off-site or temporarily stockpiled on the site with proper best management erosion and sedimentation control measures being implemented around the stockpile to prevent sedimentation from stockpiled material. This includes placement of straw wattles/compost socks and a trenched silt fence around the stockpile area in addition to the sedimentation controls along the limits of work.

Alternative construction methods for the yard piping may include trenchless installation of pipe to limit area of disturbed land. Pipe could be installed by horizontal directional drilling, pipe ramming, pipe bursting of existing pipelines, tunneling, or horizontal auger boring. All of these methods would still require excavation for access to the existing pipe or as insertion and receiving pits. None of these methods were selected due to the amount and complexity of existing utilities present at the site, lack of record drawings for most of these utilities, and complexity of new piping connections to be installed.

A temporary stabilized construction entrance will be installed during sediment removal and restoration of the supply pond and canal. This construction entrance will run along the berm between the canal and supply pond to the temporary stabilized pond access point. Sediment removed from the supply pond and canal will be temporarily stored within the supply pond to dewater before being removed from the site.

Backfilling of trenches and excavations will be completed as soon as practicable. Pipe bedding will be placed up to 12-inches above the crown of the pipe and suitable backfill will be placed in 6-inch lifts and compacted by hand or pneumatic ramming with tools weighing at least 20 pounds to finished grade. Disturbed areas will be loamed and seeded to provide vegetated soil cover against sheet runoff and wind erosion. An erosion control blanket will be required for slopped areas until vegetated cover is established.

Typical construction equipment, including heavy machinery, is expected to be used to complete this work. Machinery may include bulldozers, loaders, excavators, backhoe loaders, triaxle dump trucks, and drill rig trucks. Equipment, machinery, and materials will be stored or stockpiled in the designated areas shown on the sequencing drawings.

**Post-Construction Period**

The following summary of mitigation measures will be implemented to restore any areas affected by short-term impacts that occur in or adjacent to wetlands.

- The final site is designed to have a 3-foot wide gravel infiltration trench with 1.5”-3” diameter washed aggregate covered with 6” pea gravel running along the facility driveway to collect and slow the flow of runoff from impervious surfaces (see Sheet SP-05 and Detail Sheet C-26).
- All areas disturbed during construction activities are to be loamed and seeded to provide vegetated soil cover protection against sheet runoff and wind erosion (see Sheets SP-04 thru SP-06). Seeded areas will be inspected at least once per week and within 24 hours of rainfall events of ½-inch or greater.
- Once established, seeded areas will be mowed and maintained as appropriate.

- The Pond Pumping Station building roof drain leader will outlet to a riprap apron (See Sheet SP-05 and Detail Sheet C-26). Riprap used in the roof drain apron will be inspected periodically to determine if high flows have caused scour beneath riprap or if vegetation removal is required. On the northeast side of the Pond Pumping Station building, a retaining wall will be utilized to prevent steep slopes.
- The wetland replication and restoration areas will be planted with trees and shrubs per the planting plans, and seeded with a wetland seed mixture.
- If seeding occurs outside of the growing season, temporary stabilization measures (i.e., mulching or erosion control blankets) will be used to prevent erosion until the area can be seeded during the following growing season.
- Reseeding and mulching disturbed areas. These areas will be maintained and re-seeded to ensure that grass cover is adequate to stabilize the exposed soil, and
- Sedimentation and erosion control barriers will not be removed until a vegetative cover dense enough to prevent erosion is established.

Selections from Figure 3-2 of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control:

**Figure 3-2 Measure Selection Matrix**

| Identify Problem Areas | Identify Control Problems | Identify Strategy | Select Specific Measure | | Plan Key |
|---|---|---|---|---|---|
| | | | Functional Group | Measure | |
| Disturbed Areas | **Control Soil Detachment** | Preserve and Conserve Existing Site Resources | Protect Vegetation | Tree Protection | TP |
| | | | Preserve and Conserve Soil | Topsoiling | TO |
| | Raindrop Splash | | | Land Grading | LG |
| | | | | Surface Roughening | SR |
| Short or Shallow Slopes | Sheet & Rill Erosion | Protect Surface | | Dust Control | DC |
| | | | Vegetative Soil Cover | Temporary Seeding | TS |
| | Wind Erosion | | | Permanent Seeding | PS |
| | | | | Sodding | SO |
| | | | | Landscape Planting | LP |
| Steep Slopes | | | Non-Living Soil Protection | Temporary Soil Protection | TSP |
| | | | | Mulch for Seed | MS |
| Long Slopes | | | | Landscape Mulch | LM |
| | | | | Temporary Erosion Control Blanket | ECB |
| | | | | Permanent Turf Reinforcement Mat | TRM |
| | | | | Stone Slope Protection | SSP |
| Stockpile Areas | | Protect Surface and/or Convey Runoff | Stabilization Structures | Retaining Walls | RW |
| | | | | Riprap | RR |
| | **Control Water Movement** | | | Gabions | G |
| Borrow Areas | | | | Permanent Slope Drain | PSD |
| | Gully Erosion | | | Channel Grade Stabilization Structure | CSS |
| | | | | Temporary Lined Chute | TC |
| | | | | Temporary Pipe Slope Drain | TSD |
| | Channel & Stream Erosion | | Drainageways and Watercourses | Vegetated Waterway | VW |
| Drainage Ways | | Convey Runoff | | Temporary Lined Channel | TLC |
| | | | | Permanent Lined Waterway | PW |
| Wetlands and Watercourses | | | | Temporary Stream Crossing | TSC |
| | | Direct Runoff | Diversions | Temporary Fill Berm | TFB |
| | | | | Water Bar | WB |
| | | | | Temporary Diversion | TD |
| Waterbodies | | | | Permanent Diversion | PD |
| | | Intercept Grnd.Water | Subsurface Drains | Subsurface Drain | SD |
| | | Detain Runoff | Detention Structures | Detention Basin | DB |
| Areas of Flooding and Existing Erosion | Natural Resource Degradation | Diffuse Runoff | Energy Dissipators | Level Spreader | LS |
| | | | | Outlet Protection | OP |
| | | | | Stone Check Dam | SCD |
| | **Control Sediment Deposition** | Detain Sediments | Sediment Impoundments, Barriers, and Filters | Temporary Sediment Basin | SB |
| | | | | Temporary Sediment Trap | TST |
| Drainage Outlets | | | | Hay Bale Barrier | HB |
| | Protect Onsite and Offsite Areas | | | Geotextile Silt Fence | GSF |
| | | | | Turbidity Curtain | TC |
| | | | | Vegetative Filter | VF |
| Travel Areas | | Control Mechanically Moved Waters and Soils | Tire Tracked Soils Dewatering | Construction Entrance | CE |
| | | | | Pump Intake and Outlet Protection | PuP |
| | | | | Pumping Settling Basin | PSB |
| | | | | Portable Sediment Tank | PST |
| Dewatering | | | | Dewatering of Earth Materials | DWM |

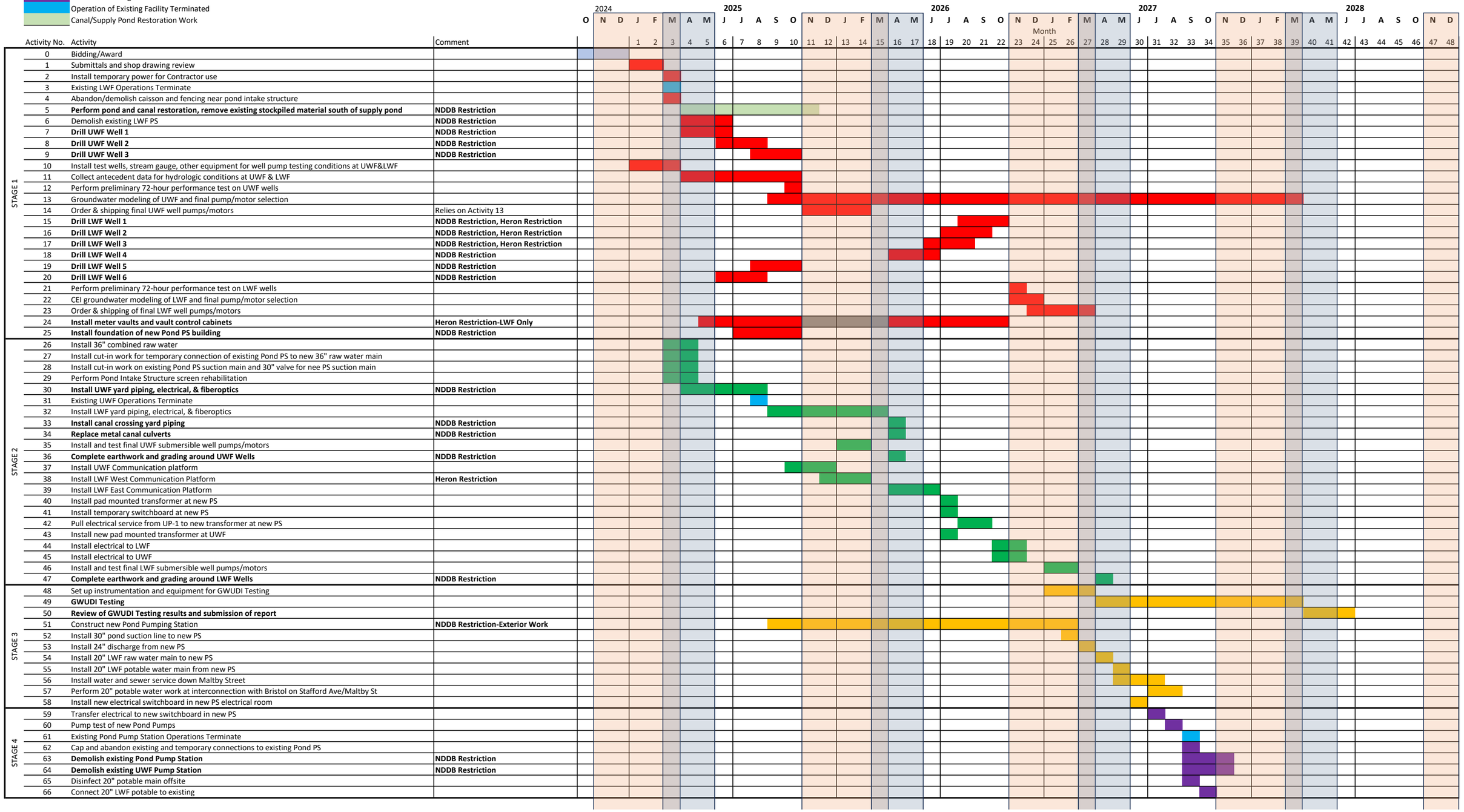
# Proposed Construction Schedule 11/24

**Legend:**

- Construction Stage 1
- Construction Stage 2
- Construction Stage 3
- Construction Stage 4
- Operation of Existing Facility Terminated
- Canal/Supply Pond Restoration Work

- NDDB Restriction - No Wetlands Work
- Heron Restriction - No Work near Rookery

**City of New Britain, CT**
**White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station**
**Project Construction Sequencing**
**Version: 1.5 Date: 2024.05.03**




| Activity No. | Activity | Comment |
|---|---|---|
| 0 | Bidding/Award | |
| 1 | Submittals and shop drawing review | |
| 2 | Install temporary power for Contractor use | |
| 3 | Existing LWF Operations Terminate | |
| 4 | Abandon/demolish caisson and fencing near pond intake structure | |
| 5 | **Perform pond and canal restoration, remove existing stockpiled material south of supply pond** | **NDDB Restriction** |
| 6 | Demolish existing LWF PS | **NDDB Restriction** |
| 7 | **Drill UWF Well 1** | **NDDB Restriction** |
| 8 | **Drill UWF Well 2** | **NDDB Restriction** |
| 9 | **Drill UWF Well 3** | **NDDB Restriction** |
| 10 | Install test wells, stream gauge, other equipment for well pump testing conditions at UWF&LWF | |
| 11 | Collect antecedent data for hydrologic conditions at UWF & LWF | |
| 12 | Perform preliminary 72-hour performance test on UWF wells | |
| 13 | Groundwater modeling of UWF and final pump/motor selection | |
| 14 | Order & shipping final UWF well pumps/motors | Relies on Activity 13 |
| 15 | **Drill LWF Well 1** | **NDDB Restriction, Heron Restriction** |
| 16 | **Drill LWF Well 2** | **NDDB Restriction, Heron Restriction** |
| 17 | **Drill LWF Well 3** | **NDDB Restriction, Heron Restriction** |
| 18 | **Drill LWF Well 4** | **NDDB Restriction** |
| 19 | **Drill LWF Well 5** | **NDDB Restriction** |
| 20 | **Drill LWF Well 6** | **NDDB Restriction** |
| 21 | Perform preliminary 72-hour performance test on LWF wells | |
| 22 | CEI groundwater modeling of LWF and final pump/motor selection | |
| 23 | Order & shipping of final LWF well pumps/motors | |
| 24 | **Install meter vaults and vault control cabinets** | **Heron Restriction-LWF Only** |
| 25 | **Install foundation of new Pond PS building** | **NDDB Restriction** |
| 26 | Install 36" combined raw water | |
| 27 | Install cut-in work for temporary connection of existing Pond PS to new 36" raw water main | |
| 28 | Install cut-in work on existing Pond PS suction main and 30" valve for nee PS suction main | |
| 29 | Perform Pond Intake Structure screen rehabilitation | |
| 30 | **Install UWF yard piping, electrical, & fiberoptics** | **NDDB Restriction** |
| 31 | Existing UWF Operations Terminate | |
| 32 | Install LWF yard piping, electrical, & fiberoptics | |
| 33 | **Install canal crossing yard piping** | **NDDB Restriction** |
| 34 | **Replace metal canal culverts** | **NDDB Restriction** |
| 35 | Install and test final UWF submersible well pumps/motors | |
| 36 | **Complete earthwork and grading around UWF Wells** | **NDDB Restriction** |
| 37 | Install UWF Communication platform | |
| 38 | Install LWF West Communication Platform | **Heron Restriction** |
| 39 | Install LWF East Communication Platform | |
| 40 | Install pad mounted transformer at new PS | |
| 41 | Install temporary switchboard at new PS | |
| 42 | Pull electrical service from UP-1 to new transformer at new PS | |
| 43 | Install new pad mounted transformer at UWF | |
| 44 | Install electrical to LWF | |
| 45 | Install electrical to UWF | |
| 46 | Install and test final LWF submersible well pumps/motors | |
| 47 | **Complete earthwork and grading around LWF Wells** | **NDDB Restriction** |
| 48 | Set up instrumentation and equipment for GWUDI Testing | |
| 49 | **GWUDI Testing** | |
| 50 | **Review of GWUDI Testing results and submission of report** | |
| 51 | Construct new Pond Pumping Station | **NDDB Restriction-Exterior Work** |
| 52 | Install 30" pond suction line to new PS | |
| 53 | Install 24" discharge from new PS | |
| 54 | Install 20" LWF raw water main to new PS | |
| 55 | Install 20" LWF potable water main from new PS | |
| 56 | Install water and sewer service down Maltby Street | |
| 57 | Perform 20" potable water work at interconnection with Bristol on Stafford Ave/Maltby St | |
| 58 | Install new electrical switchboard in new PS electrical room | |
| 59 | Transfer electrical to new switchboard in new PS | |
| 60 | Pump test of new Pond Pumps | |
| 61 | Existing Pond Pump Station Operations Terminate | |
| 62 | Cap and abandon existing and temporary connections to existing Pond PS | |
| 63 | **Demolish existing Pond Pump Station** | **NDDB Restriction** |
| 64 | **Demolish existing UWF Pump Station** | **NDDB Restriction** |
| 65 | Disinfect 20" potable main offsite | |
| 66 | Connect 20" LWF potable to existing | |

# Stormwater Management Report Hyperlink:

https://www.bristolct.gov/DocumentCenter/View/47020/NBW-Stormwater-Report

# Geotechnical Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

# Custom Soil Resource Report for State of Connecticut

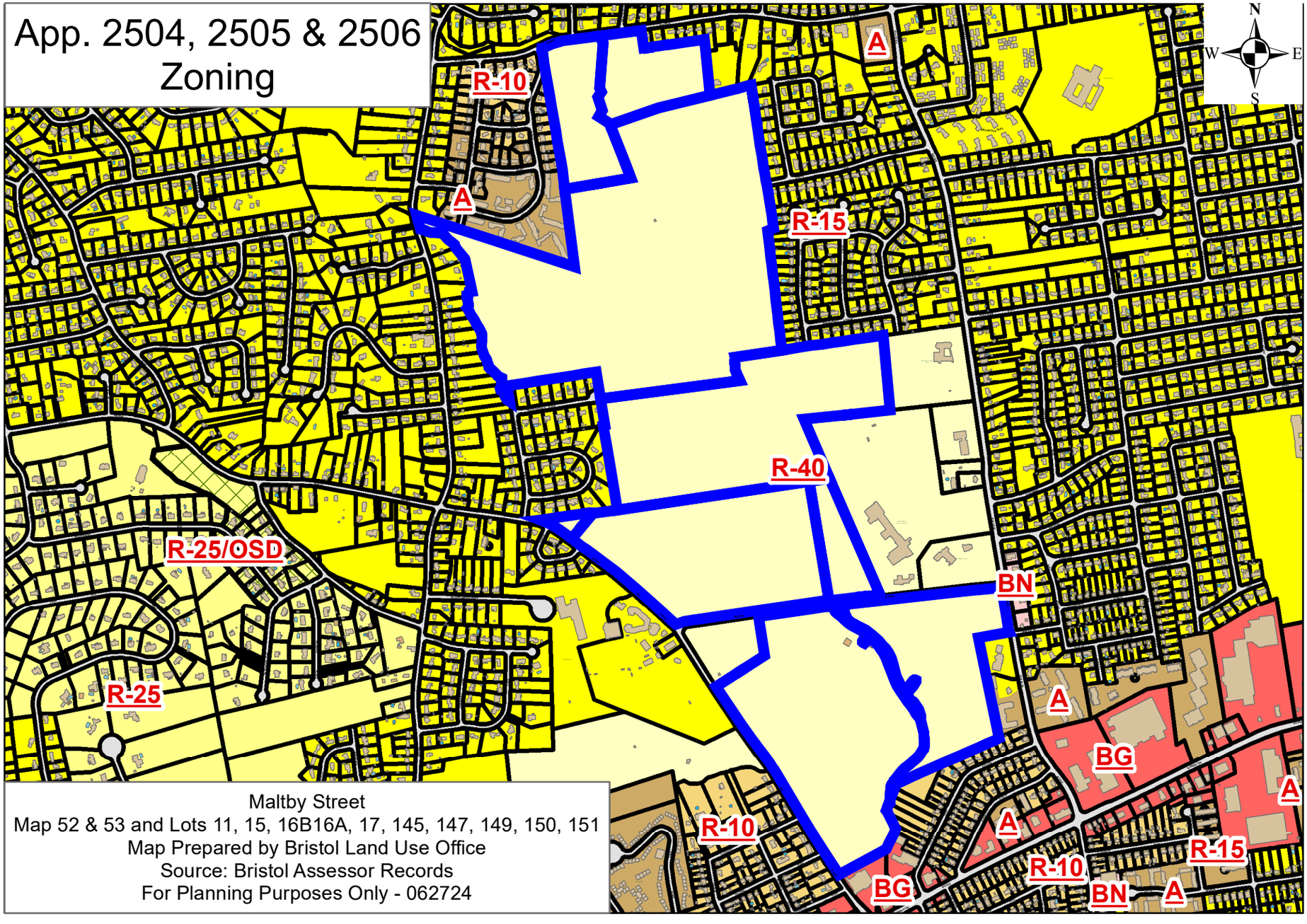
## White Bridge Waterworks Facilities - Pond Pumping Station

**Hyperlink:**
https://www.bristolct.gov/DocumentCenter/View/47021/Geotechnical-Report



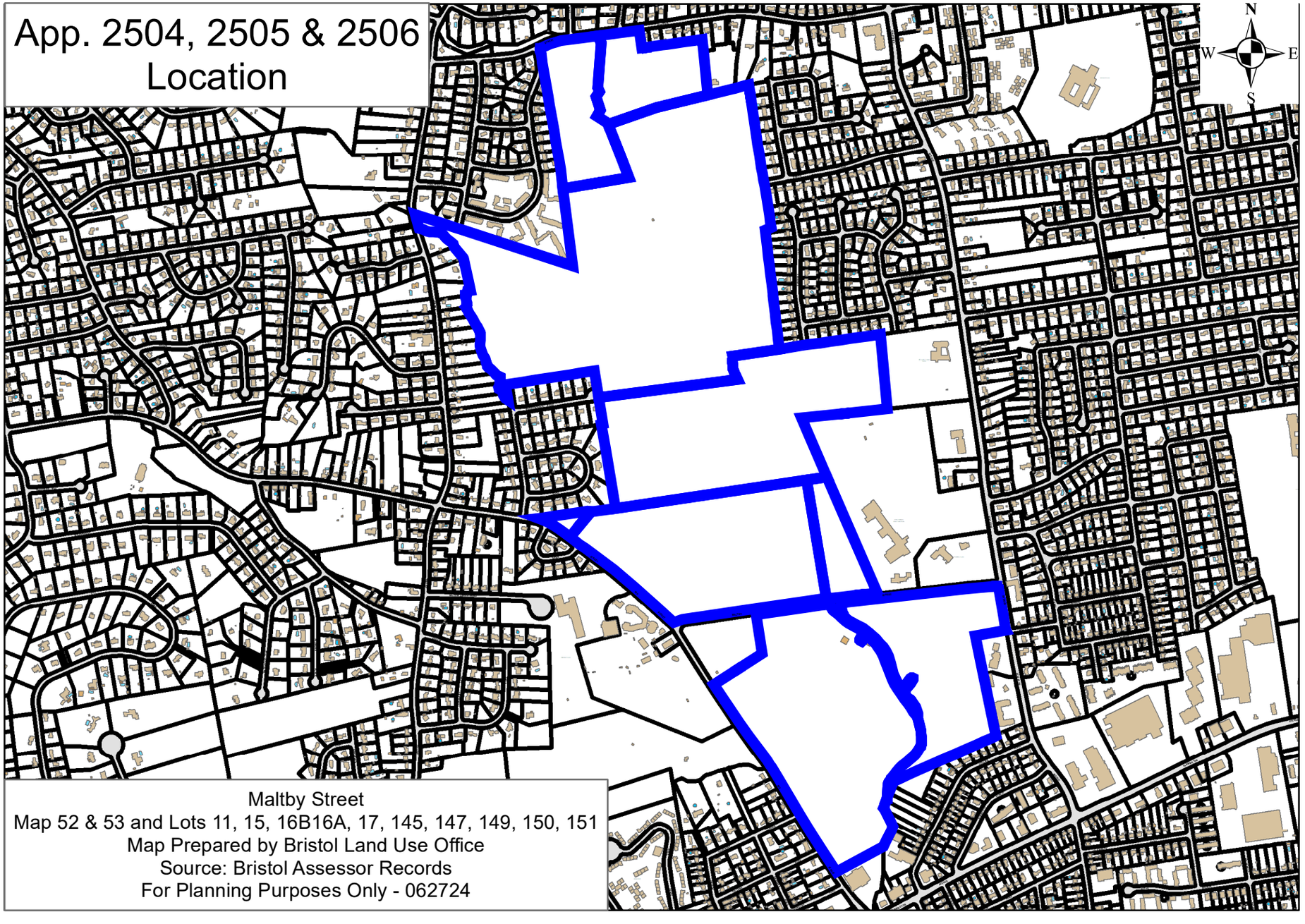

September 26, 2022

# App. 2504, 2505 & 2506 Zoning



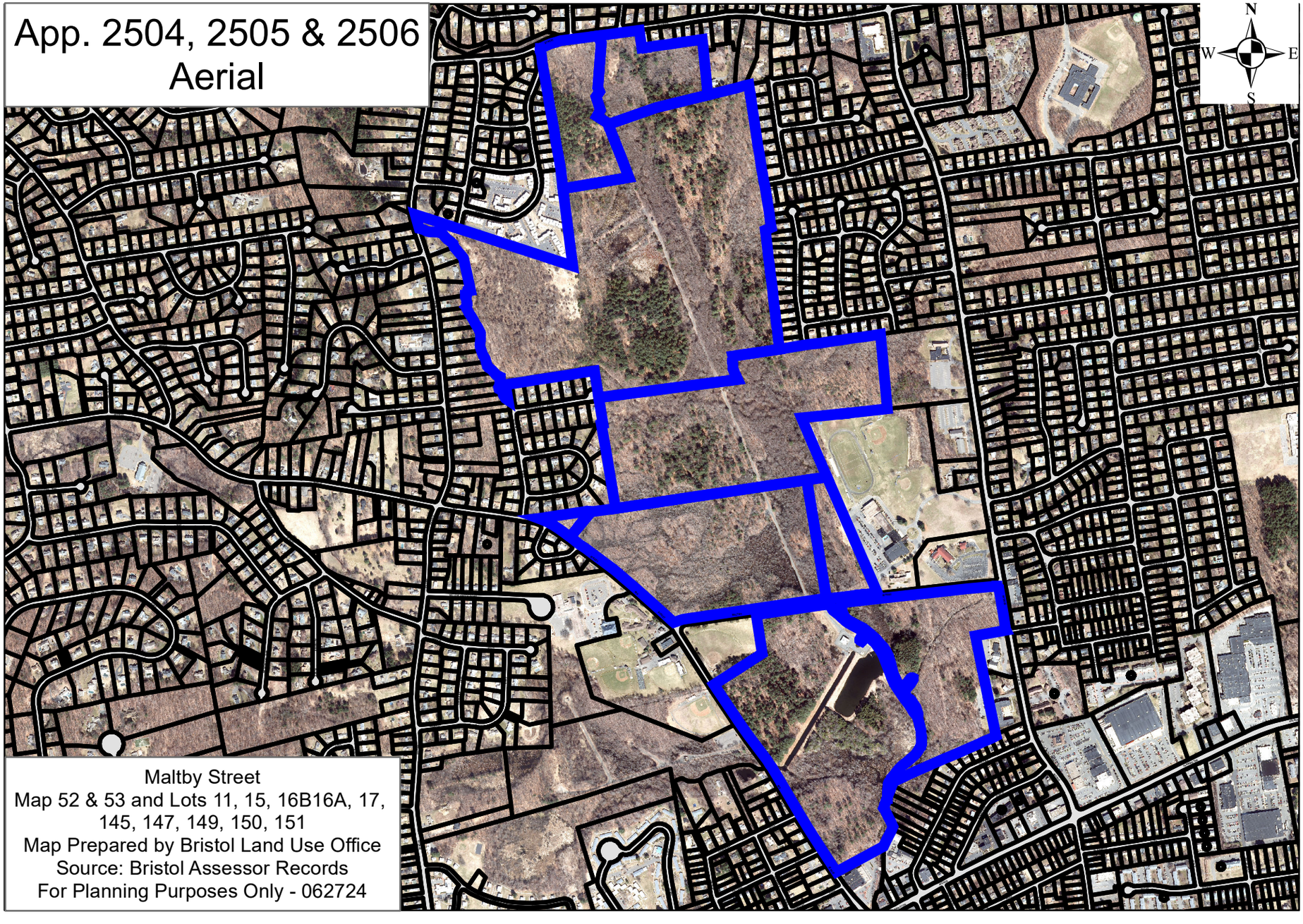

Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# App. 2504, 2505 & 2506 Location

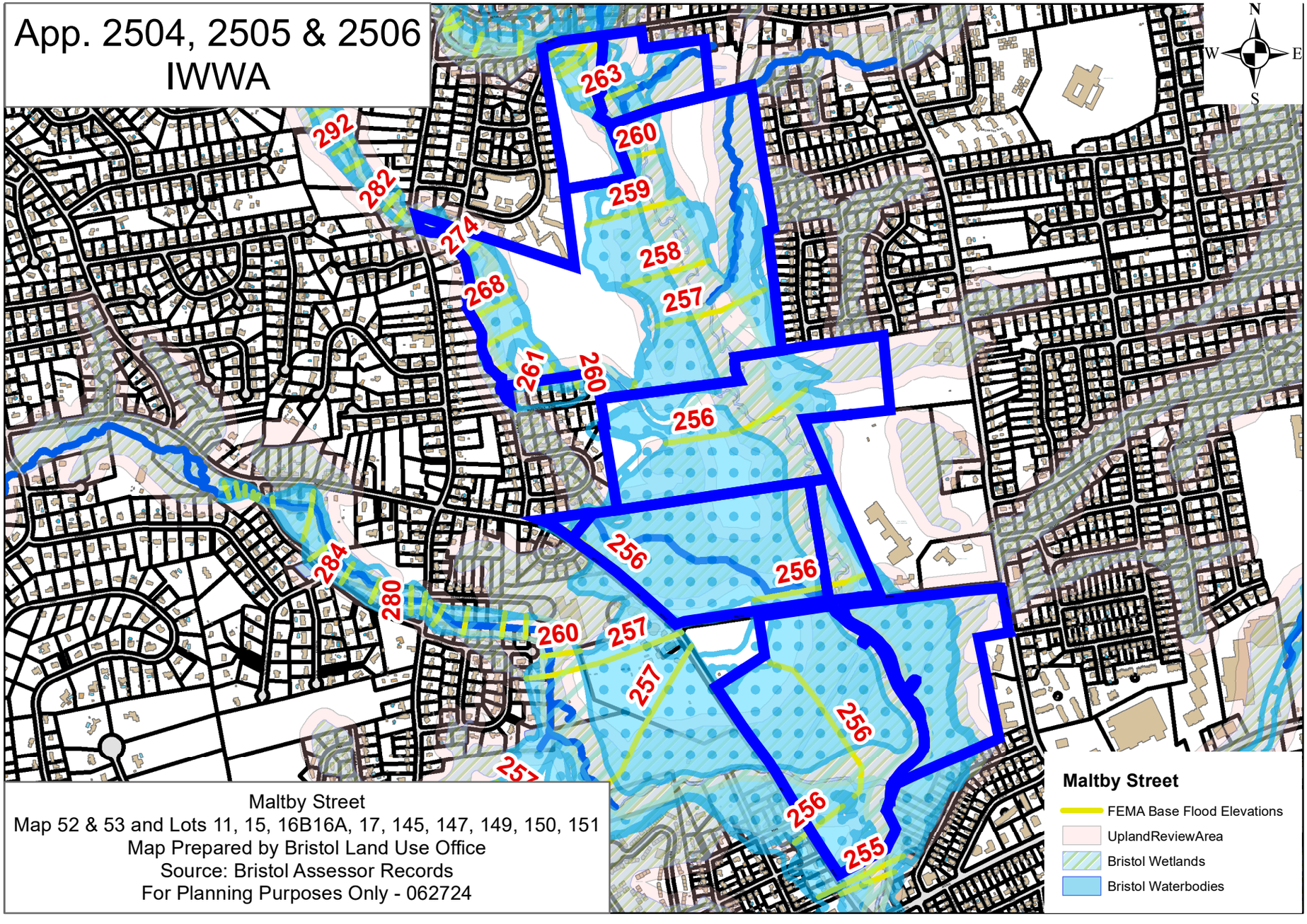



Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# App. 2504, 2505 & 2506
# Aerial




Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724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Maltby Street
FEMA Base Flood Elevations
UplandReviewArea
Bristol Wetlands
Bristol Waterbodies
Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# Google Earth


Copper Mine Brook
Polkville Ave Brook
Layers
2D


Copper Mine Brook
Polkville Ave Brook
Field


Copper Mine Brook
Copper Mine Brook
Copper Mine Brook

# Revised Specification Section 11/24

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# SECTION 011000 - SUMMARY

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Construction Sequencing.
4. Work performed by Owner.
5. Contractor’s use of site and premises.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and Drawing conventions.
9. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
2. Section 017300 “Execution and Construction Sequencing” for sequencing requirements.
3. Appendix G for state, local, and federal requirements and conditions from project permits.

### 1.3 DEFINITIONS

A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

### 1.4 PROJECT INFORMATION

A. Project Identification: White Bridge Waterworks Facilities, City of New Britain, CT.

1. Project Location: Maltby Street, Bristol, CT

B. Owner: City of New Britain, CT

C. Engineer: CDM Smith Inc., East Hartford, CT

D. Engineer's Consultants: Engineer has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Comprehensive Environmental Inc. (CEI)

## 1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Construction of White Bridge Waterworks Facilities including groundwater production wells, Pond Pumping Station, electrical and instrumentation upgrades, and other Work indicated in the Contract Documents.

a. Groundwater production wells:

1) Specifications for the construction and development of gravel packed groundwater production wells and the abandonment and decommissioning of existing wells are included in Appendix A to these Contract Documents.

b. Existing Conditions:

1) Data regarding the geological and geotechnical field testing conducted for the Work are included in Appendix F. The information provided is for general informational purposes only. The subsurface information presented is accurate only at the specific locations and times the subsurface explorations were made. It is the Contractor’s responsibility to review the information contained within these Contract Documents and make their own interpretations and conclusions of the character of materials to be encountered and the impact on the Work based on the Contractor’s expert knowledge of the area and of earthwork techniques. The Contractor, at their own expense, may conduct additional subsurface explorations for their own information after obtaining the Owner’s permission.

2) Parts of the project site are located within Federal, State, and Local protected species habitat, including the Spotted Turtle (Clemmys Guttata), Wood Turtle (Glyptemys Insculpta), and Great Blue Herron. Information on requirements and construction activity limitations are included in the permits included in Appendix G.

3) Test pit excavations were performed to confirm the locations of select existing utilities on the White Bridge Waterworks Facilities site. A memorandum summarizing the test pits is included in Appendix E. Information provided in the memorandum is for general informational purposes only.

2. Demolition of existing White Bridge Waterworks Facilities including the existing Pond Pumping Station, existing Lower Wellfield Pumping Station, existing Upper Wellfield Pumping Station, existing caisson structure located at the Lower Wellfield, and existing production wells at the Upper and Lower Wellfields. Existing equipment to be removed from these locations may include, but is not limited to, the following:

a. Existing Pond Pumping Station:

1) Centrifugal pumps and associated motor
2) Process piping
3) Compressor and air tanks
4) Electrical equipment and controls cabinets

b. Existing Lower Wellfield Pumping Station:

1) Electrical controls and equipment cabinets
2) Wall mounted electrical equipment
3) Bulk liquid chemical storage tanks
4) Compressor and air tanks
5) Pumps and associated motors
6) Process piping
7) HVAC equipment
8) Miscellaneous furniture

c. Existing Upper Wellfield Pumping Station:

1) Electrical controls and equipment cabinets
2) Pumps and associated motors
3) Process piping
4) Compressor and air tanks

d. Data regarding the hazardous material field testing conducted for building demolition Work are included in Appendix C.

3. Cleaning and inspecting of approximately 2,000 LF of existing 12-inch ductile-iron water main in the UWF driveway.

4. Rehabilitation of the Supply Pond and canal, including sediment removal, handling and disposal and rehabilitation of the Intake Structure.

a. Data regarding material field testing conducted for the Supply Pond are included in Appendix D.

5. Extension of the Bristol, CT water and sewer systems with installation of ductile-iron water main and PVC sewer main in Mix Street and Maltby Street.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

## 1.6 CONSTRUCTION SEQUENCING

A. Construct the Work stages, with each stage substantially complete as indicated on Drawings and in Section 017300.

B. Before commencing Work of each stage, submit an updated copy of Contractor's construction schedule and Construction Sequencing Plan, showing the sequence, commencement and completion dates for all stages of the Work.

## 1.7 WORK PERFORMED BY OWNER

A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

B. Future Work Not Part of this Contract: The Contract Documents include requirements that will allow Owner to carry out future work following completion of this Project; provide for the following future work:

1. Treatment of Lower Wellfield water to potable standards and cleaning, lining, and final connections of the 20” potable water main cross country from the White Bridge Waterworks Facilities to Stafford Avenue.

## 1.8 CONTRACTOR’S USE OF SITE AND PREMISES

A. Restricted Use of Site: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Buildings: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period, unless otherwise noted on the Drawings. Repair damage caused by construction operations.

D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

## 1.9 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction or have been decommissioned and demolished as part of the construction sequencing. Cooperate with Owner during construction operations to

minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

## 1.10 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work to between 7:00 a.m. to 7:00 p.m., Monday through Saturday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.

1. Sunday Hours: Work may be permitted on Sunday between 9:00 a.m. and 5:00 p.m.
2. Early Morning Hours: No work shall occur at the site before 7:00 a.m.
3. Hours for Utility Shutdowns: Coordinate with Owner; utility shutdowns and other activities requiring City of New Britain personnel shall be planned between 7:00 a.m. and 2:00 p.m.
4. City of Bristol Noise Ordinance and other work hour restrictions shall be followed at all times.

**C. Work within City of Bristol Roadways:**

**1. Work within the intersection of Maltby Street and Stafford Avenue is prohibited during bus drop off times (7:30 a.m. to 7:40 a.m.) at St. Paul Catholic High School. Work shall not start in this intersection before 8:00 a.m. on weekdays (Monday through Friday) while school is in session.**

**2. Work within the intersection of Maltby Street and Stafford Avenue is prohibited during bus pick up times (2:15 p.m.) at St. Paul Catholic High School. Work shall not be performed in the intersection between 2:00 p.m. and 3:00 p.m. on weekdays (Monday through Friday) while school is in session.**

**a. Roadways shall be made safe and passable for all thru traffic at the end of each day and for the specified periods of no-work within the intersection.**

**3. Utility installation work within Maltby Street is prohibited during peak traffic hours and is limited to the hours of 10:00 a.m. to 4:00 p.m. unless previously approved by the Engineer.**

D. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:

1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Obtain Engineer's written permission before proceeding with utility interruptions.

E. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Engineer not less than two days in advance of proposed disruptive operations.
2. Obtain Engineer's written permission before proceeding with disruptive operations.

F. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Project site is not permitted.

G. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

H. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

I. Local, State, and Federal Requirements: Comply with all local, state, and federal requirements and conditions issued for the project including, but not limited to, time of year work restrictions to protect state-listed species and other restrictions listed in the permits included as Appendix G to these Contract Documents.

**J. Construction Vehicle Access to Site shall be from Maltby Street via Stafford Avenue, to the extent practicable. Construction vehicle access to the site via Mix Street is prohibited except to perform Work associated with the wetlands creation area and/or without prior approval by the Engineer. Contractor's construction vehicles shall avoid residential roadways in the City of Bristol.**

## 1.11 COORDINATION WITH CITY OF BRISTOL, CT

**A. The White Bridge Water Works Facility is owned and operated by the City of New Britain, CT but is located within the City of Bristol, CT and the following coordination is expected between the Contractor and the City of Bristol:**

**1. Bristol Public Works Department:**

**a. Contractor shall coordinate with the City of Bristol Public Works Department for nearby ongoing projects, including but not limited to, the Jerome Avenue Bridge Project to minimize traffic and construction impacts to the Maltby Street area.**

**b. During the months of July and August, the Little League Baseball and Softball World Series Tournaments are hosted annually at the A. Bartlett Giamatti Little League Leadership Training Center located on Mix Street. Contractor is notified that significant traffic is generated on Maltby Street, Mix Street, Stafford Avenue, and the surrounding roadways during this event. Contractor shall coordinate with the City of Bristol Public Works Department to minimize traffic and construction impacts to the Maltby Street and Mix Street areas during this tournament.**

**2. Bristol Water and Sewer Department:**

**a. Contractor shall obtain all necessary permits, policies, and procedures from the Water and Sewer Department. The Water and Sewer Department requires all permits to be obtained by a licensed plumber. Contractor shall provide a minimum of 4 days notice for all non-emergency work on the water and sewer utilities.**

**b. Contractor shall coordinate connection of new water main in Maltby Street to existing water main in Mix Street with the Water and Sewer Department. Payment for the City of Bristol to furnish and install a tapping sleeve for final connection must be made prior to work being completed.**

**c. Contractor shall pay the expected water service connection fee of $4,725.00 to the Water and Sewer Department, which will cover the connection fee, tapping the water main, 2" corporation stop and saddle, 2" curb stop and box, copper tubing to the property line, inspection of copper tubing from the property line to the building, and connections within the building.**

**d. Contractor shall coordinate with the Water and Sewer Department for inspection before final acceptance of water and sewer utilities installed within Maltby Street.**

**3. Bristol Police Department:**

**a. Contractor shall coordinate with the Bristol Police Department for police details during construction. Contractor is notified that Mix Street, Maltby Street, and Stafford Avenue are listed by the Bristol Police Department as streets requiring police details for private traffic duty.**

## 1.12 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011000

# Genral Provisions Erosion and Sedimentation Controls 11/24

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# SECTION 312500 - EROSION AND SEDIMENTATION CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Construction Entrances
2. Turbidity Curtains
3. Filter Bags
4. Erosion Control Blanket
5. Straw Wattle.

B. Related Sections:

1. Section 310515 “Soils and Aggregates for Earthwork”
2. Section 311000 “Site Clearing.”
3. Section 329200 “Turf and Grasses.”

### 1.3 REFERENCE STANDARD

A. EPA document titled: “Stormwater Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices” document number EPA 832-R-92-005, dated 1992, or most recent edition. State or appropriate Conservation Commission standards can be substituted for the EPA standard if the State or Conservation Commission standard is equal to, or more detailed than, the EPA standard.

B. 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

### 1.4 ACTION SUBMITTALS

A. Product Data: Product Data: Submit data on geotextile.

B. Manufacturer's Certificate: Certify Products meet or exceed specified requirements..

### 1.5 INFORMATIONAL SUBMITTALS

A. Stormwater Pollution Prevention Plan (SWPPP) as specified in “Quality Assurance” article.

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1.6 CLOSEOUT SUBMITTALS

A. Section 017700 “Closeout Procedures” for requirements for submittals.

1.7 QUALITY ASSURANCE

A. Prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the U.S. Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) General Permit applicable to this work) document number EPA 832-R-92-005, dated 1992, or most recent edition.

B. Perform Work in accordance with requirements of Section 310515 “Soils and Aggregates for Earthwork” and Section 311000 “Site Clearing.”

C. Perform Work according to State of Connecticut DOT standards.

D. Perform Work according to the 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

1.8 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this section.

PART 2 - PRODUCTS

2.1 SILT FENCE

A. Silt fence filter fabric shall be a woven, polypropylene, ultraviolent resistant material meeting minimum requirements below:

| **Fabric Properties** | **Minimum Acceptable Value** | **Test Method** |
|---|---|---|
| Grab Tensile Strength (lbs) | 110 | ASTM D 4632/ D 4632M |
| Elongation at Failure (%) | 20 | ASTM D 4632/ D 4632M |
| Mullen Burst Strength | 300 psi (2.1 MPa) | ASTM D 3786/ D 3796M |
| Puncture Strength (lbs) | 60 | ASTM D 4833/ D 4833M |
| Minimum Trapezoidal Tear Strength (lbs) | 50 | ASTM D 4533/ D 4533M |
| Flow through Rate (gal/min/sf) | 25 | ASTM D 4491/ D 4491M |
| Equivalent Opening Size | 40 – 80 | US Std Sieve ASTM D 4751 |
| Minimum UV Residual (%) | 70 | ASTM D 4355/ D 4355M |

B. Products: Provide one of the following:

1. “Mirafi FW402,” by TenCate Geosynthetics
2. “Carthage 15%,” by Carthage Mills

3. "HSP2." by ACF Environmental, Inc.
4. Or equal.

C. Sediment fence shall be a prefabricated commercial product made of a woven, polypropylene, ultraviolet resistant material such as "Envirofence" by Mirafi Inc., Charlotte, NC or equal.

D. Posts: Constructed of hardwood with minimum diameter thickness of 1.5 inches (38 mm).

E. Tie wires for securing silt fence fabric to wire mesh shall be light gauge metal clips (hog rings), or 1/32 inch (0.79 mm) diameter soft aluminum wire.

## 2.2 TURBIDITY CURTAIN

A. Barrier Material: filter fabric.

B. Barrier height shall be 20 percent greater than the depth of water..

## 2.3 FILTER BAGS

A. Filter Bags: Sized with manufacturer recommendations based on pumped discharge rate.

B. Geotextile Material for Bags: Meet the following minimum requirements:

| | |
|---|---|
| Minimum Grab Tensile Strength | 200 lbs |
| Minimum Grab Tensile Elongation | 50% |
| Minimum Trapezodial Tear Strength | 80 lbs |
| Mullen Burst Strength | 380 psi (2.6 MPa) |
| Minimum Puncture Strength | 130 lbs |
| Apparent Opening Size | 40-80 US Sieve |
| Minimum Flow Through | 70 gpm/square foot |

C. Bag shall have opening large enough to accommodate 4 inch (100 mm) diameter discharge hose.

## 2.4 EROSION CONTROL BLANKET

A. Erosion control blankets: 100 percent agricultural straw fiber matrix, 0.5 lbs. / sq yd, stitch bonded with degradable thread between two photodegradable polypropylene nettings.

1. Product: Provide Model S150 Double Net Short-Term Blanket (12 months) by North American Green, Evansville, IN), or equal.

B. Prior to start of work, provide a certified statement as to the number of pounds of materials to be used per 100 gallons of water. Specify the number of square feet of seeding that can be covered with the quantity of solution in the Contractor's hydroseeder.

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2.5 STRAW WATTLE

A. Straw Wattle: Prefabricated commercial product with outside casing made up of organic hessian

1. Effective Height: 12 inches plus or minus 1 inch.
2. Effective Circumference: 3-3/8 inches.

B. Product: Provide products by Phase II Stormwater Products Wrentham MA or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017300 - Execution: Verification of existing conditions before starting work.

3.2 SILT FENCE

A. Position sediment fences as indicated on the Drawings and to prevent off site movement of sediment produced by construction activities as directed by the Engineer. Areas beyond limits of silt fence shall be undisturbed or stabilized.

B. Dig trench approximately 6 inches wide and 6- inch deep along proposed fence lines.

C. Drive stakes, 10 feet on center (maximum) at back edge of trenches. Drive stakes 2 feet (minimum) into ground.

D. Hang filter fabric on posts carrying to bottom of trench with about 4 inches of fabric laid across bottom of trench. Stretch fabric fairly taut along fence length and maintain secure both ways.

E. Backfill trench with excavated material and tamp.

F. Install pre-fabricated silt fence according to manufacturer's instructions.

3.3 CONSTRUCTION ENTRANCE

A. Construct entrance with minimum of 6 inch (150 mm) of course aggregate at all points of ingress/egress.

B. Width: Minimum 24 feet, increased as needed for typical construction vehicles.

C. Minimum Length: 50 feet (15.2 m) (where soils are course grained) or as shown in the Drawings.

D. Install filter fabric below aggregate.

E. Maintain entrance throughout construction, adding more aggregate or increasing length as needed.

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## 3.4 TURBIDITY CURTAIN

A. Install turbidity curtain as indicated on the Drawings, extending beyond lateral limits of construction.

B. Install weights at 10 foot (3 m) intervals, floats at 5 feet (1.5 m) intervals.

C. Inspect turbidity curtain daily and repair/replace worn/torn areas as needed.

D. At end of construction, remove accumulated sediment by hand before removing the turbidity curtain.

## 3.5 FILTER BAG

A. Locate filter bag at least 50 feet from all wetlands, streams or other surface waters.

B. Install bag on a 2 inch (50 mm) gravel bed to allow water to flow in all directions.

C. Bag is full when remaining flow area is reduced by 75%. Replace full bags with new bags.

## 3.6 EROSION CONTROL BLANKETS

A. Install erosion control blankets onto all exposed slopes to be loamed and seeded that are steeper than 4 (Horizontal) to 1 (Vertical) as shown on the Drawings. Erosion control blankets shall also be installed in all seeded drainage swales and ditches, and as directed by the Engineer in accordance with manufacturer's instructions.

B. The area to be covered shall be properly prepared, fertilized and seeded with permanent vegetation before the blanket is applied. When the blanket is unrolled, the netting shall be on top and the fibers in contact with the soil over the entire area. The blankets shall be applied in the direction of water flow and stapled.

C. Place blankets and stapled together in accordance with manufacturer's instructions. Side overlaps shall be 4-inch minimum. The staples shall be made of wire, 0.091 inch in diameter or greater, "U" shaped with legs 10-in in length and a 1-1/2-inch crown. Commercial biodegradable stakes may also be used with prior approval by the Engineer. The staples shall be driven vertically into the ground, spaced approximately two linear feet apart, on each side, and one row in the center alternately spaced between each size. Upper and lower ends of the matting shall be buried to a depth of 4-inch in a trench. In swales and ditches, erosion stops shall be created every 25-feet by making a fold in the fabric and carrying the fold into a silt trench across the full width of the blanket. The bottom of the fold shall be 4-inches below the ground surface. Staple on both sides of fold. Where the matting must be cut or more than one roll length is required in the swale, turn down upper end of downstream roll into a slit trench to a depth of 4-inches. Overlap lower end of upstream roll 4-in past edge of downstream roll and staple

D. To ensure full contact with soil surface, roll matting with a roller weighing 100 lbs. / ft. of width perpendicular to flow direction after seeding, placing matting and stapling. Thoroughly inspect

channel after completion. Correct any areas where matting does not present a smooth surface in full contact with the soil below.

## 3.7 STRAW WATTLE

A. Position straw waddles as indicated on the Drawings and as necessary to prevent off site movement of sediment produced by construction activities as directed by the Engineer.

B. Drive wooden stakes, 5 feet on center (maximum) at back edge of waddle. Drive stakes 2 feet (minimum) into ground.

C. Install pre-fabricated straw waddle according to manufacturer's instructions.

## 3.8 SITE STABILIZATION

A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.

B. Construct, stabilize and activate erosion controls before site disturbance within tributary areas of those controls.

C. Stockpile and waste pile heights shall not exceed 35 feet. Slope stockpile sides at 2:1 or flatter.

D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.

1. During non-germinating periods, apply mulch at recommended rates.

E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

## 3.9 FIELD QUALITY CONTROL

A. Section 017300 "Execution" for field inspecting, testing, adjusting, and balancing.

B. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.

## 3.10 CLEANING

A. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove and dispose of sediment.

B. Do not damage structure or device during cleaning operations.

C. Do not permit sediment to erode into construction or site areas or natural waterways.

D. Clean channels when depth of sediment reaches approximately one-half channel depth.

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3.11 PROTECTION

A. Section 017300 “Execution” for requirements for protecting finished Work.

END OF SECTION 312500

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# SECTION 323223 - SEGMENTAL RETAINING WALLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Foundation.
2. Precast concrete modular units.
3. Foundation drain.
4. Free draining backfill.
5. Delegated design.

B. Related Sections:

1. Section 033010 “Miscellaneous Cast-In-Place Concrete”: Concrete type for footings.
2. Section 312000 “Earthwork”: Excavation for footing and free draining backfill, and backfilling over free draining backfill and geotextile up to finished ground.
3. Section 310515 “Soils and Aggregates for Earthwork”: Soil backfill above free draining aggregate backfill.
4. Section 329200 “Turf and Grasses”: Fertilizer, seed, and mulch at finished ground.

### 1.3 SYSTEM DESCRIPTION

A. Retaining Wall System: Battered wall of stepped height formed from precast concrete modular facing and tieback units in straight configuration on aggregate base footing with foundation drain, backfill, and coping.

### 1.4 DESIGN REQUIREMENTS

A. General

1. Do not change indicated horizontal and vertical alignment of retaining walls, except as specified in this section.
2. Design retaining walls to be within the following specified design parameters and limits of allowable foundation bearing pressure.

B. Design footing wall facing and tieback units in accordance with specified NCMA requirements and the following:

1. External Stability Factor of Safety:

    a. Base Sliding: 1.5.
    b. Overturning: 1.5.
    c. Bearing Capacity: 2.0.
    d. Global Stability: 1.3.

2. Internal Stability Factor of Safety:

    a. Shear Capacity: 1.5.

3. Design Geometry:

    a. Provide length, height, and overall elevations of retaining wall as indicated on Drawings.
    b. Measure structure's design height, H, from top of aggregate base footing to top of wall where ground surface intercepts wall facing.
    c. See Drawings for slopes above and below sections of segmental retaining wall.

4. Minimum Wall Embedment: Greater of height of a modular unit, 0.5 feet, or following minimum embedment required for slope below wall:

    a. Level: H/10.
    b. 3: 1 (18.4 degrees): H/10.
    c. 2: 1 (26.5 degrees): H/7.

5. Surcharges: Apply following surcharges to top of each design cross section based on the following uses above wall.

    a. No Traffic: 0 lb/sq. ft.
    b. Light Traffic: 100 lb/sq. ft.
    c. Heavy Traffic: 250 lb/sq. ft.

6. Lateral Earth Pressure: Calculate lateral earth pressure to be resisted by self weight of retaining wall using Coulomb coefficient of earth pressure, Ka, times vertical stress at base of wall. Use coefficient of active earth pressure, Ka, from top to bottom of wall. Assume coefficient of active earth pressure, Ka, independent of external loads except sloping fills. For sloping fills, use coefficient of active earth pressure, Ka, appropriate for sloping condition, using Coulomb earth pressure in analysis.
7. Inclination of Failure Surface: Assume Coulomb failure surface passing through base of wall behind facing units up to ground surface at or above top of wall in design of wall.
8. Settlement Control: Delegated designer will be responsible to determine if foundation soils will require special treatment to control total and differential settlement.
9. Global Stability: Delegated designer will be responsible to determine if further design considerations must be implemented to ensure adequate global/overall slope stability.
10. Live Loads for Wall:

    a. Vehicle Impact Loading: 10 kip/5 feet.

11. Foundation Data for Wall:

a. Allowable Bearing Pressure: 2.5 ksf.

1.5 ACTION SUBMITTALS

A. Shop Drawings:

**1. Manufactured Modular Wall - Modular Units and Support: Indicate type of wall, location, length, top elevation, bottom of footer elevation, cross-sections including backfill material type and limits, and quantities. Show complete layout plans and fabrication details for precast wall units, and step-by-step erection instructions. Indicate, unit locations, architectural details, support items, dimensions, openings, and relationship to adjacent materials, signed and sealed by professional engineer licensed in the State of Connecticut.**

2. Temporary Support System: Detail specific load bearing falsework, underpinning, needling, or shoring layout and support members appropriate for Project conditions.

B. Samples:

1. Submit one of each cast modular unit illustrating profiles, finish, texture and color.

1.6 INFORMATIONAL SUBMITTALS

A. Submit documentation of experience in list of at least five projects of similar construction and scope which substantiate experience for system. Include brief description of each project and name and phone number of owner's representative knowledgeable in each listed project.

B. Test Reports: Indicate certified tests results for precast concrete at manufacturing facility, cast-in-place concrete in field, and granular backfill.

C. Manufacturer's Installation Instructions: Submit installation instructions including construction sequence and scheme and the following:

1. Excavation and required bracing.
2. Placement of aggregate base footing.
3. Placement of precast concrete facing units and tieback units.
4. Placement of drainage, backfill and geotextile.

D. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

E. Manufacturer's Field Reports: Indicate field observations and conclusions as to compliance to specifications, action items, and resolution of installation issues.

**1.7 DELEGATED-DESIGN SUBMITTAL**

**A. Design Data: Submit the following signed and sealed by professional engineer.**

**1. Calculations for manufactured modular wall including height of precast units, overall wall stability including sliding stability and overturning stability, and forces**

**acting on wall and footing, precast facing and tieback units in accordance with design requirements.**

2. **Submit details and computations for any required temporary shoring, bracing and temporary support of excavation.**

1.8 CLOSEOUT SUBMITTALS

A. Project Record Documents: Record actual elevation of undercut base, if any, and aggregate base foundation elevation and position.

1.9 QUALITY ASSURANCE

A. Perform precast work in accordance with requirements of PCI MNL-116S, PCI MNL-123, PCI MNL-120.

B. Perform required manufactured modular retaining walls work in accordance with NCMA, TR 127A,.

C. Perform Work in accordance with State of Connecticut DOT (CTDOT).

1.10 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing manufactured modular retaining wall systems with minimum five years documented experience.

B. Installer: Company specializing in performing work of this section with minimum five years documented experience approved by manufacturer.

C. Design and construct manufactured modular retaining wall including temporary support under direct supervision of professional engineer experienced in design of this Work and licensed in the State of Connecticut.

1.11 MOCKUP

A. Section 014000 “Quality Requirements” for requirements for mockup.

B. Construct mockup 10 linear feet with units specified including backfill, wall drain, architectural details and finish, and specified wall coatings. Fabricate sample wall unit by same process for production units.

C. Locate where directed by Engineer.

D. Incorporate accepted mockup as part of Work.

1.12 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this Section.

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1.13 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 “Product Requirements” for requirements for transporting, handling, storing, and protecting products.

B. Check materials upon delivery to assure receipt of proper material. Inspect for damage. Replace damaged materials.

C. Handle, store and ship units to avoid chipping, cracking, and fracturing and to prevent contamination that may affect performance.

D. Protect materials from damage during storage and installation. Remove and replace damaged units.

1.14 ENVIRONMENTAL REQUIREMENTS

A. Section 016000 “Product Requirements” for environmental conditions affecting products on site.

B. Do not install foundation when subgrade is wet or frozen.

1.15 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.16 COORDINATION

A. Coordinate work with wall penetrations, connection to storm water system, affected utility companies, and utility adjustments.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design segmental retaining walls.

B. Delegated Designer is responsible for indicating proposed system that considers allowable bearing pressure, external stability and internal stability, including global stability, total and differential settlement.

C. Design walls for locations and to overall dimensions indicated on Drawings utilizing specified backfill and foundation parameters.

D. Use no experimental or demonstration-type design concepts; or products, structures, or elements not preapproved by Engineer, in design.

E. Prepare drawings in accordance with the State of Connecticut DOT (CTDOT).

F. Provide design life of structure of 75 years.

## 2.2 FOUNDATION MATERIALS

A. Coarse Aggregate: As indicated on delegated design drawings

B. Concrete: As specified in Section 033000 “Cast-in-Place Concrete.”

## 2.3 WALL SYSTEM MATERIALS

A. The manufacturer shall be licensed and authorized to produce the retaining wall units by the precast modular block system patent holder/licensor and shall document compliance with the published quality control standards of the proprietary precast modular block system licensor for the previous three years.

B. Concrete used in the production of the precast modular block units shall be first purpose, fresh concrete. Returned, reconstituted, surplus or waste concrete is not acceptable. It shall be an original production mix meeting the requirements of ASTM C94/C94M and exhibit the following:

1. Minimum 28-day Compressive Strength: 4,000 psi
2. Nominal Maximum Aggregate Size: 1 inch
3. Maximum water-soluble Chloride Ion content in concrete, percent by weight of cement: 0.15
4. Maximum Chloride as Chloride Ion concentration in mixing water, parts per million: 1000
5. Alkali-aggregate reactivity mitigation per ACI 201
6. Slump (conventional concrete) per ASTM C143: 5 inches plus or minus 1-1/2 inch
7. Slump flow (Self-consolidating concrete) per ASTM C1611: 18 inches to 32 inches

C. All units shall be wet-cast precast modular retaining wall units conforming to ASTM C1776/C1776M.

D. Each concrete block shall be cast in a single continuous pour without cold joints. With the exception of half-block units, corner units and other special application units, the precast modular block units shall conform to the nominal dimensions listed below, within manufacturer tolerances:

1. 28” Block: H=18”, L=46-1/8”, W=28”
2. 41” Block: H=18”, L=46-1/8”, W=40-1/2”
3. 60” Block: H=18”, L=46-1/8”, W=60”
4. 52” XL Block: H=36”, L=46-1/8”, W=52”
5. 72” XL Block: H=36”, L=46-1/8”, W=72”
6. 96” XL Block: H=36”, L=46-1/8”, W=96”

E. Individual block units shall have a nominal height of 18 inches or 36” for XL blocks.

F. With the exception of half-block units, corner units or other special application units, the precast modular block units shall have two (2) circular dome shear knobs that are sized as per manufacturer's block units.

G. The precast modular block units shall be manufactured with integrally cast shear knobs that establish a standard horizontal set-back for subsequent block courses. The precast modular block system shall be available in the four (4) standard horizontal set-back facing batter options as listed below:

1. 18-inch High Blocks

   a. 3/8" horizontal set-back (1.2" maximum facing batter)
   b. 1-5/8" horizontal set-back (5.2" maximum facing batter)
   c. 9-3/8" horizontal set-back (27.5" maximum facing batter)
   d. 16-5/8" horizontal set-back (42.7" maximum facing batter)

2. 36-inch High Blocks

   a. 3-1/4 inch horizontal set-back (5.2 inch maximum facing batter)

3. The precast modular block units shall be furnished with the required shear knobs that provide the facing batter required in the construction shop drawings.

H. The precast modular block unit face texture shall be selected by Owner from the available range of textures available from the precast modular block manufacturer. Each textured block facing unit shall be a minimum of 5.76 square feet with a unique texture pattern that repeats with a maximum frequency of once in any 15 square feet of wall face.

I. The block color shall be selected by the Owner from the available range of colors available from the precast modular block manufacturer.

J. All precast modular block units shall be sound and free of cracks or other defects that would interfere with the proper installation of the unit, impair the strength or performance of the constructed wall. Blocks shall not exhibit chips or cracks in the exposed face or faces of the unit that are not otherwise permitted by precast modular block manufacturer. Bug holes, water marks, and color variation on non-architectural faces are acceptable.

K. Precast modular block units shall be as manufactured by Redi-Rock Retaining Wall Systems as licensed by Redi-Rock International, LLC, 2940 Parkview Drive, Petoskey, MI 49770, telephone (866) 222-8400, www.redi-rock.com or approved equal.

## 2.4 BACKFILL AND DRAINAGE SYSTEM

A. Aggregate:

1. Coarse Aggregate Backfill: ASTM D448, AASHTO Size No. 57 hard, durable, angular gravel, crushed gravel, or crushed stone, or combination of gravel, crushed gravel, or crushed stone, no slag, with the following particle size distribution requirements per ASTM D6913:

| US Standard Sieve Size | % Passing |
|---|---|
| 1-1/2” | 100 |
| 1” | 95-100 |
| 1/2” | 25-60 |
| No. 4 | 0-10 |
| No. 8 | 0-5 |

B. Leveling Pad:

1. The precast modular block units shall be placed on a leveling pad constructed from crushed stone or unreinforced concrete. The leveling pad shall be constructed to the dimensions and limits shown on the retaining wall design drawings prepared by the delegated designer.
2. Crushed stone used for construction of the granular base leveling pad : In accordance with delegated design drawings.
3. Concrete used for construction of an unreinforced concrete leveling pad shall satisfy the criteria for AASHTO Class B. The concrete shall be cured a minimum of 12 hours prior to placement of the precast modular block wall retaining units and exhibit a minimum 28-day compressive strength of 2,500 psi.

C. Filter Fabric:

1. Manufacturers:

a. Mirafi 140N
b. Propex Geotex 451
c. Skaps GT-142
d. Thrace-Linq 140EX
e. Carthage Mills FX-40HS

D. Foundation Drain Pipe:

1. Drainage collection pipe shall be a 4” diameter, 3-hole perforated, HDPE pipe with a minimum pipe stiffness of 22 psi per ASTM D2412.
2. The drainage pipe shall be manufactured in accordance with ASTM D1248 for HDPE pipe and fittings.

## 2.5 SOURCE QUALITY CONTROL (AND TESTS)

A. Section 014000 “Quality Requirements” for testing, inspection and analysis requirements.

B. Maintain plant records and quality control program during production of cast units. Make records available upon request.

C. Testing and Inspection. Sample and test precast units including slump, unit weight, temperature, entrained air in concrete mixture, and compression.

D. Sample and test concrete units with respect to compressive strength on basis of production lot results. Define production lot as units a single compressive test result represents from one day's

production or 60 units, whichever is less. Select four cylinders per lot AASHTO T141. Cure and test cylinders in accordance with AASHTO T23, and AASHTO T231. Base compression test result on average of 2 cylinders, with no compressive strength result less than 90 percent of design strength.

E. Take one air entrainment test cylinders for each set of concrete test cylinders taken.

F. Visually inspect to detect defects, cracks, and chipping due to imperfect proportioning, mixing or molding; surface defects and excessive voids; and areas beyond repair. Engineer may reject units for color variations on front face due to excess form oil, cracks, chips or other visual appearance defects.

G. Sample and test materials for manufacturing of precast units including cement, aggregates, water, admixture, and steel reinforcement according to this Section. Make results of quality control tests available for Engineer's review, upon request.

H. Test and analyze three random specimens for each 500 cubic feet of fabricated cast modular units:

1. Compressive Strength: In accordance with ASTM C1194.
2. Cold Water Absorption: In accordance with ASTM C1195.
3. Resistance to Freezing and Thawing: In accordance with ASTM C666; maximum cumulative percent mass loss in accordance with ASTM C1364.

I. Visually inspect color differences between fabricated units and approved sample in accordance with ASTM D1729.

J. Make completed (product name) available for inspection at manufacturer's factory prior to shipment. Notify Owner at least seven days before inspection is allowed.

K. Allow witnessing of factory inspections and test at manufacturer's test facility. Notify Owner at least seven days before inspections and tests are scheduled.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Verify site conditions and foundation soil bearing capacity after excavation.

B. Verify with Engineer base of undercut, if any, to complete necessary removal of unsuitable material and replacement of material with coarse aggregate.

### 3.2 DEWATERING

A. Furnish, install, operate and maintain satisfactory dewatering systems as required to maintain excavation in dry and workable condition. Provide equipment and materials and continue as long as necessary.

B. Remove ground water by pumping or other methods to prevent softening of surfaces exposed by excavation without removing fines from subsoil.

C. Lower ground water levels within excavation areas 12 inches, minimum below bottom of excavations.

D. Place dewatering system in operation before excavating below ground water level. Operate system continuously, 24 hours per day, 7 days per week, until construction work below existing ground water levels is complete.

## 3.3 EXCAVATION AND FOOTER

A. Provide temporary support of excavation when required in accordance with Section 312000 “Earthwork” and shop drawings.

B. Proof roll foundation bearing surface in presence of Engineer to meet AASHTO T235 and minimum allowable bearing pressure.

C. Remove and replace foundation soil including unsuitable soils to minimum depth of 12 inches with compacted coarse aggregate material.

D. Provide and properly cure cast-in-place footing, in accordance with Section 033000 “Cast-in-Place Concrete” to dimensions indicated on Delegated Design Drawings.

## 3.4 DRAINAGE AND BACKFILL

A. Set non-woven geotextile against back of first retaining wall unit, over prepared foundation, and extend along bottom towards back of excavation, up excavation face and back over top of free draining coarse aggregate backfill to retaining wall, or as indicated in Delegated Design Drawings.

B. Place perforated structure foundation drainage pipe behind footing as indicated on Delegated Design Drawings . Lay pipe at minimum gradient of 2 percent to ensure drainage to free outlets. Incorporate drain pipe in continuous 1 foot by 1 foot drainage cell encased in geotextile.

C. Place and compact coarse aggregate free draining backfill material in maximum 12 inch lifts.

D. Place and compact soil backfill material above free draining backfill and geotextile from top of wall to finished ground in maximum 8 inch lifts.

E. Maintain optimum or less moisture content of backfill materials to attain required compaction density.

F. Allow no heavy compaction equipment within 3 feet of back of wall facia.

G. Apply rubble-stone riprap from top of wall to existing grade in accordance with Section 310515 “Soils and Aggregates for Earthwork.”

## 3.5 INSTALLATION OF MODULAR UNITS

A. Assemble units as shown on shop drawings and in accordance with manufacturer's recommendations.

B. Place first course of precast concrete modular retaining wall units on concrete or aggregate base footing. Ensure that wall modules are aligned properly, leveled from side to side and front to back and are in complete contact with footer.

C. Place wall modules above bottom course such that shear knob arrangement provides design batter of wall face. Place successive courses to create running bond pattern with edge of units being approximately aligned with middle of unit in course below it.

D. Place units side by side for full length of wall alignment. Ensure correct retaining wall lines, curves, jogs, and steps for first course.

E. Sweep excess material and remove burrs from top of units before placing additional levels to ensure that no dirt, concrete or other foreign materials become lodged between successive lifts of wall modules. Install next course maintaining required vertical alignment as shown on shop drawings. Stagger full bearing of concrete units over vertical joints below. Do not use blocks, wedges, or other devices for permanent shimming of wall units.

F. Place maximum of 3 courses of wall units above level of drainage material at any time.

G. Check level of wall modules with each lift to ensure that no gaps are formed between successive lifts.

H. Repeat erection sequence until grades indicated on Drawings are achieved.

I. Secure coping units to top of wall with two 3/8 inch beads of flexible concrete adhesive positioned 2 inches in front and behind tongue of last course of retaining wall units.

J. Handle and erect concrete units carefully so as to avoid damage to units. Replace any members damaged to extent where their aesthetics or structural integrity is compromised.

## 3.6 COATING

A. Apply concrete protective coating and compatible anti-graffiti coating to precast units.

## 3.7 ERECTION TOLERANCES

A. Section 014000 “Quality Requirements” for tolerances.

B. The following tolerances are maximum allowable deviation from indicated construction:

1. Vertical Control: plus or minus 1.25 inches over a 10 ft distance, plus or minus 3 inches total.
2. Horizontal Control: plus or minus 1.25 inches over a 10 ft distance, plus or minus 3 inches total.
3. Rotation: plus or minus 2 degrees from planned wall batter.

4. Bulging: 1.0 inch over a 10 ft distance.

## 3.8 FIELD QUALITY CONTROL

A. Section 014000 “Quality Requirements” for field inspecting, and testing.

B. Field test concrete in accordance with Section 033000 “Cast-in-Place Concrete.”

C. Compaction Testing: As specified in Section 312000 “Earthwork.”

D. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

E. Frequency of Compaction Testing: One for each lift.

## 3.9 MANUFACTURER'S FIELD SERVICES

A. Section 014000 “Quality Requirements” for requirements for manufacturer's field services.

B. Furnish manufacturer's representative at Project site to assist Contractor, and Engineer until they are familiar with and confident in installation, and construction procedures.

C. Furnish monthly visits to Project site by company representative during wall construction.

END OF SECTION 323223

# Revised Specification Temporary Facilities and Controls 11/24

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# SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, security and protection facilities, and environmental protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

### 1.3 USE CHARGES

A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Engineer, occupants of Project, testing agencies, and authorities having jurisdiction.

B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.

C. Water Service: Pay water-service use charges for water used by all entities for construction operations.

D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

E. Water and Sewer Service from Existing System: There is currently no potable water or sewer service at the site. Obtain and pay for water and sanitary service required for contractor operations until such time as these new utilities are operational.

F. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use with metering. Provide connections and extensions of services and metering as required for construction operations.

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1.4 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

B. Implementation and Termination Schedule: Within **15** days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.

C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

1. Refer to General Conditions Article 52 and Notices to Contractor NTC-41 for specific signage requirements for City of New Britain and Drinking Water State Revolving Fund.

D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
3. Indicate methods to be used to avoid trapping water in finished work.

F. Flood Contingency Plan: Describe procedures and controls for protecting buoyant, hazardous, flammable, explosive, soluble, expansive, or radioactive materials or any other materials that could be injurious to human, animal, or plant life in the event of a flood during construction. Detail such materials expected to be on-site and how such materials will be protected from flood damage, secured or removed from the floodplain to prevent pollution and hazards to life and property. Comply with any local, state, and federal requirements or conditions of Appendix G.

G. State-Listed Species Habitat Protection Plan: Describe procedures and controls for protecting state-listed species and habitat, as detailed in the NDDB Determination included in Appendix G. The State-Listed Species Habitat Protection Plan shall also include the qualifications and any certifications of the qualified professional familiar with habitat requirements and behavior of state-listed species who will perform species relocations, as required herein.

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1.5 QUALITY ASSURANCE

A. Temporary facilities shall comply with all applicable state and local ordinances, codes and regulations.

B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

D. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.

B. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

C. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Engineer from manufacturer's standard colors.

D. Wood Enclosure Fence: Plywood, 6 feet high, framed with four 2-by-4-inch (50-by-100-mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.

E. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.

F. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches (914 by 1524 mm).

G. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

## 2.2 TEMPORARY FACILITIES

A. Field Offices: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Engineer's Field Office: Of sufficient size, but minimum 12-feet by 50-feet, to accommodate needs of Owner, Engineer, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections for duration of project. Keep office clean and orderly. Furnish and equip offices as follows:

1. Field office trailer shall have at least two offices, one conference room, one closet, and two exterior doors.
2. Conference room shall include built-in plan table.
3. Engineer's field office shall be weather-tight construction with floor, walls, and ceiling completely insulated. Each room shall have at least one operating window. Each window shall have a venetian blind and full insect screen. Furnish two sets of keys for each exterior door. Provide fully insulated skirting on all sides of the field office trailer. Provide steps, platforms, handrails, and boot scrapers for each exterior door.
4. Field office trailer shall be Mobile Mini, ModSpace, Williams Scotsman, or equal. Converted storage or box containers will not be acceptable.
5. Furnishings:

    a. Provide the following furnishings for the Engineer's temporary field office for the duration of the project. All furnishings shall be new – or in very good condition – subject to approval of the Engineer.

        1) Four 60-inch by 30-inch desks with file drawer and 5 drawers, all lockable.
        2) Upholstered swivel type chair with arms for each desk.
        3) One 30-inch by 84-inch conference table.
        4) Ten armless side chairs (stacking type).
        5) Two 54-inch by 30-inch folding tables.
        6) Six file cabinet, 4 drawer, legal size, Hon No. HN-315C, or equal.
        7) Four wastebaskets.
        8) One rolling plan storage rack, 10-stick capacity.
        9) One lockable storage cabinet, 72-inch high, 36-inch wide, and 18-inch deep.
        10) Two steel bookcase units, 4 shelves high, Hon No. HN-S48 ABC, or equal.
        11) One digital telephone answering machine.
        12) 24 painted steel coat hangers.
        13) One electric bottled water dispenser with hot and cold outlets and refrigerator unit. Adequate water bottles shall be provided (and paid for by the Contractor) until Final Completion.
        14) One wall-mounted first aid kit, McMaster-Carr 9501T1 or equal.
        15) Two smoke detectors, with batteries.
        16) Two dry erase boards, aluminum frame, 36-inch by 60-inch, markers and eraser, Quartet Model No. TS-S 535 or equal.
        17) One 1000-watt minimum 1.4-cu.ft. microwave oven.
        18) One 6-cf refrigerator.

19) Commercial duty cross-cut shredder with basket, designed for 3 to 5 users, Fellowes Powershred SB-125i, or equal.
20) One first aid kit, OSHA (1910.151.b) and ANSI (Z308.1-2003) compliant, suitable for ten people.
21) Temporary toilet and hand washing facilities.

6. Equipment:

a. Contractor shall provide the following equipment for the Engineer's temporary field office for the duration of the project. All equipment shall be new.

1) A multifunction Photocopier, printer, facsimile and scanner.

b. With 50-sheet auto-feeder, capable of copying and printing
c. Letter-sized, legal-sized, 11-inch by 17-inch, **and 12-inch by 18-inch** documents.
d. Contractor to provide paper and ink cartridges, as required, for the duration of the project.

1) Answering machine with digital recorder.
2) Digital Camera: provide one new digital camera for the Engineer's use for the project duration. Camera shall be a major brand name (e.g., Minolta, Cannon, Olympic, Pentax, etc. – subject to the Engineer's approval) and shall have an automatic date function, 3 Mega pixel or greater, 3x optical zoom or better, and at least one GB of memory (on board or supplemental memory card). The camera shall come complete with carrying case, storage card, rechargeable batteries, battery charger, flash memory reader, USB cables and all necessary software. After completion of project the camera will become the property of the Owner.
3) Four 8-outlet surge protectors with six-foot cord and minimum 1800-joule energy rating or greater; as manufactured by Belkin, or equal.
4) One 4-cup coffeemaker with timer, by Krups, or equal.

7. Services:

a. Provide the following services for the duration of the project. Services shall include all costs for installation, use, maintenance, and removal of all products, services and equipment billed by each provider for each service specified herein.
b. Field office shall have complete and fully functional electrical, plumbing, and HVAC systems. Provide at least two smoke detectors hard-wired into the electrical system. Perform all scheduled and unscheduled maintenance for all systems and as directed by the Engineer.
c. Electrical System: Provide connection to temporary electric service. Comply with the electrical requirements of the furnished office trailer. Provide main circuit panel, sufficient GFCI outlets and lighting in each room, exterior lights at each exterior door, and proper grounding of entire electrical system.
d. Plumbing system: Connect to existing potable water supply if available. Provide hot water heater and hot and cold water to each fixture. Connect waste pipes to existing sanitary system or a waste holding tank. Heat trace and insulate exterior piping to prevent freezing. Where potable water service is not available, Contractor shall provide bottle water service with water chiller/dispenser.

e. HVAC System: Provide central heating and air conditioning system with programmable thermostat. System shall be capable of maintaining an interior temperature of 70 degrees F when the exterior temperature is 0 degrees F and an interior temperature of 75 degrees F when exterior temperature is 100 degrees F.

f. Bottled water service: Provide bottled water service complete with dispenser with hot- and cold-water taps and regular bottle and cup replenishment as directed by the Engineer.

g. Janitorial service: Provide janitorial services (at least weekly) that include dusting, sweeping, vacuuming, mopping, disinfection, and trash removal.

h. Sanitary service: Provide regular pumping of chemical toilets and any other waste holding tank, if applicable, as needed.

i. Communications:

1) Install two telephone lines in the Engineer's field office for the Engineer's exclusive use:

a) one voice grade line with caller ID and call-waiting features.
b) a second line for a dedicated fax line.

j. Internet Access:

1) Provide high-speed Broadband internet access for the duration of the project.
2) Provide one air card for the Engineer's use for the duration of the project (through Final Completion], with unlimited data plans.

k. Pay all costs for installation, maintenance, and removal of the telephone and internet service and instruments, including cellular phone service. The monthly cost of all calls made and received by the Engineer, including toll and long-distance calls, shall be paid for by the Contractor for the duration of the project.

8. Supplies: Provide the following supplies for the duration of the project: copy paper, toner, toilet paper, paper towels, soap, light bulbs, and other consumables as required by the Engineer.

C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

## 2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction and marked for intended location and application.

## 2.4 ENVIRONMENTAL PROTECTION FACILITIES

A. Exclusionary Fencing: Exclusionary fencing shall be provided for protection of state-listed species, as detailed below and required by the NDDB Determination included in Appendix G.

1. Exclusionary fencing shall be at least 20-inches tall and must be secured to and remain in contact with the ground. Fencing shall be regularly maintained to secure any gaps or openings at ground level that may allow animals pass through.
2. Prior to construction activities, Contractor shall search Work area and fencing for the presence of and state-listed species named in the NDDB Determination. Any state-listed species included in the NDDB Determination encountered shall be relocated to suitable habitat outside the area of disturbance. Contractor shall provide a qualified professional familiar with habitat requirements and behavior of the species to perform relocations.

**B. Aquifer Protection Area: Implement best management practices, to the extent practicable, for temporary construction as indicated in the CT DEEP Aquifer Protection Area Guidance document "Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas," included as Attachment A to this specification.**

**1. Refueling of all large construction vehicles and equipment performed on site must be completed within an approved portable spill containment area to prevent the contamination of soils and groundwater by accidental spills within the Aquifer Protection Area. Spill kits must be kept on site at all times. Refueling of cars, pickup trucks, vans, and other commercial or personal vehicles is prohibited on the project site.**

# PART 3 - EXECUTION

## 3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

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## 3.2 INSTALLATION, GENERAL

A. Locate facilities where shown on the Drawings or where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work. Engineer’s trailer shall be set up and ready for occupancy within 30 days of the Notice to Proceed.

1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

B. Provide each facility ready for use within 30 days of the Notice to Proceed and prior to Commencement of Work at the site. Do not remove until approved by Engineer or are replaced by authorized use of completed permanent facilities.

## 3.3 ENGINEER'S OFFICE

A. Engineer's trailer shall be set up and ready for occupancy within 30 days of the Notice to Proceed and prior to commencement of Work at the site. All systems, furnishings, equipment, and services specified herein shall be furnished, installed, and completely operational for the field office to be considered established.

1. Provide regular office cleaning services for the duration of the project.
2. Provide supplies including, but not limited to restroom supplies (toilet tissue paper, paper towel, and soap), as well as light bulbs, air conditioner filters, etc.
3. Provide office supplies for printers and fax machines, etc.
4. Supply all fuel for heating and pay all utility bills.

B. Install field office plumb and level.

C. Engineer's trailer shall be removed, and the site shall be cleaned up and restored before Final Completion of the project.

## 3.4 CONTRACTOR'S FIELD OFFICE

A. Provide a temporary field office(s) for the Contractor's use for the duration of the project. An authorized representative of the Contractor shall be present at all times while the Work is in progress. Instructions received at the Contractors field office from the Engineer shall be considered delivered to the Contractor.

B. Locate field office(s) in accordance with approved shop drawings and as directed by the Owner.

C. Establish and occupy field office within 30 days of the Notice to Proceed, unless otherwise approved by the Engineer or Owner.

## 3.5 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service, if approved by Owner.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. There is currently no potable water or sewer service at the site. Obtain and pay for water and sanitary service required for contractor operations until such time as these new utilities are operational.

C. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities. Provide regular maintenance and cleaning of sanitary facilities.

D. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.

E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Prior to commencing work, isolate the HVAC system in area where work is to be performed.

    a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

F. Temporary Light and Power: Provide by Contractor, including 220 Volt service for welding, complete with wiring, lamps and similar equipment as required to adequately light all work areas and with sufficient power capacity to meet the project needs. Make all necessary arrangements with the local electric company for temporary electric service and pay all expenses in connection therewith.

G. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

H. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

1. Install electric power service overhead unless otherwise indicated.
2. Connect temporary service to Owner's existing power source, as directed by Owner.

I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

J. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment and one land-based telephone line(s) for each field office.

1. At each telephone, post a list of important telephone numbers.

a. Police and fire departments.
b. Ambulance service.
c. Contractor's home office.
d. Contractor's emergency after-hours telephone number.
e. Engineer's offices.
f. Owner's office.
g. Principal subcontractors' field and home offices.

K. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Engineer and Owner.

L. Project Computer: Provide a desktop computer in the primary field office adequate for use by Engineer and Owner to access Project electronic documents and maintain electronic communications. Equip computer with not less than the following:

1. Processor: Intel Core i5 or i7.
2. Memory: 164 gigabyte.
3. Disk Storage: 1 -terabyte hard-disk drive and combination DVD-RW/CD-RW drive.
4. Display: 24 inch (610 mm) LCD monitor with 256-Mb dedicated video RAM.
5. Full-size keyboard and mouse.
6. Operating System: Microsoft Windows 10 Professional.
7. Productivity Software:

a. Microsoft Office Professional, 2013 or higher, including Word, Excel, and Outlook.
b. Adobe Reader DC.
c. WinZip 10 or higher.

8. Printer: "All-in-one" unit equipped with printer server, combining color printing, photocopying, scanning, and faxing, or separate units for each of these three functions.
9. Internet Service: Broadband modem, router and ISP, equipped with hardware firewall, providing minimum 10 Mbps upload and 15 Mbps download speeds at each computer.
10. Internet Security: Integrated software, providing software firewall, virus, spyware, phishing, and spam protection in a combined application.
11. Backup: External hard drive, minimum 2 terrabytes, with automated backup software providing daily backups.

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## 3.6 SUPPORT FACILITIES INSTALLATION

A. Comply with the following:

1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
2. Utilize designated area within existing building for temporary field offices.
3. Maintain support facilities until Engineer schedules Final Completion inspection. Remove just before Final Completion.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
2. Prepare subgrade and install subbase and base for temporary roads and paved areas accordance with Section 312000 "Earthwork."
3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course in accordance with Section 321216 "Asphalt Paving."

D. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

E. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

F. Storage and Staging: Provide temporary offsite area as needed to supplement designated areas of Project site for storage and staging needs.

G. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

H. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings. Signs shall be constructed of A-A Ext – APA grade plywood, 1-in thick. Posts and braces shall be of pressure treated lumber.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

    a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touch up signs, so they are legible at all times.

I. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

J. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

K. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

L. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.

M. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.

N. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

## 3.7 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Section 011000 "Summary."
2. Comply with environmental protection facilities as required in Appendix G.

C. Temporary Erosion and Sedimentation Control: Comply with requirements of authorities having jurisdiction as detailed in approvals and conditions included in Appendix G and requirements specified in Section 312500 "Erosion and Sedimentation Controls."

D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

E. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

F. Tree and Plant Protection: Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."

G. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

H. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals, so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.

I. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

J. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.

K. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

L. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide, install and maintain signage directing occupants to temporary egress.

M. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

N. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition in accordance with requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign, stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

O. Weather protection shall comply with M.G.L. Chapter 149 Section 44G.

## 3.8 MOISTURE AND MOLD CONTROL

A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

    a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
    b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Engineer.
    c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

## 3.9 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
2. Clear snow and ice from all drives, walks and stairs to maintain safe vehicle and pedestrian access to the site and facilities as directed by the Engineer.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Final Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Final Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. Just prior to Final Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

## 3.10 ATTACHMENTS

**A. CT DEEP Aquifer Protection Area Guidance – Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas**

END OF SECTION 015000

# Aquifer Protection Area Guidance: Construction and Stormwater 101024

## AQUIFER PROTECTION AREA GUIDANCE

# Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas

**Issues and Concerns**
Potential groundwater quality concerns include stormwater, fuel, and other maintenance chemicals associated with vehicles, machinery, and equipment.

**Guidance/Recommendations**
For the protection of ground water quality at construction operations in aquifer protection areas, DEEP recommends the following:

**Temporary Construction Measures**

- Significant fuel, chemical or other hazardous materials storage and handling, including fueling of construction vehicles, should be located outside well field area and aquifer protection area.
- No repair or maintenance of construction vehicles or washing of construction vehicles is permitted within the aquifer protection area.
- Any necessary temporary storage should be aboveground, protected from rainfall, and on an impervious containment surface.
- An emergency spill and response plan should be developed, including coordination with the water supplier.
- The site access should be adequately secured at all times to prohibit any unauthorized disposal of waste materials.

**Stormwater Pollution Prevention Measures:**

- Ways to minimize pollutant load (sand, salt, etc.) should be examined.
- Deicing management areas should be established including low salt use areas, alternative chemical or sand methods.
- Wellhead protection signs shall be posted in clear visibility of the highway at the entrance and exit points of the aquifer protection area and at ½ mile intervals.

**Drainage System Design Criteria:**

- Select best management practices from the DEEP stormwater manual based on treatment effectiveness and low groundwater pollution potential.

- Sheetflow and swale collection is encouraged, where possible, outside of immediate well field area.
- Catch basins and curbs should be used in immediate wellhead area to divert and control runoff and spills away from wellhead.
- Dry wells or similar subsurface leaching structures should not be used for stormwater disposal from paved or other areas that have high potential to pollute groundwater; existing structures which have high potential to pollute groundwater should be removed or converted.
- Gross particle/oil separators (swirl concentrator type) may be used for pretreatment of consecutive catch basins. Deep catch basins (minimum 4' deep and tight construction, with baffles, may also be used).
- Stormwater discharge points shall outlet to aboveground land surface or basin type structures. Significant or critical discharge points should have a basin designed with a forebay (tight soil or lined) capable of containing an 8,000-10,000 gallon spill volume and 3-6 feet above water table, 4 feet above bedrock.
- Potential strategic groundwater monitoring should be considered.

For questions or more information, please contact the Aquifer Protection Area Program at 860-424-3040 or visit our website at www.ct.gov/deep/aquiferprotection.

# AQUIFER PROTECTION AREA GUIDANCE

## Best Management Practices for Controlling Stormwater from Parking Lots in Aquifer Protection Areas

(1) Do not use direct infiltration structures (galleries, drywells, trenches) as these do not allow for attenuation of salt or other soluble compounds that may be contained in parking lot runoff.

(2) Non-structural measures to dissipate and treat runoff are encouraged, including sheetflow from uncurbed pavement and vegetated swales/basins. These provide an opportunity for volatilization of volatile organic compounds to the extent possible before the stormwater can infiltrate into the ground.

(3) If a stormwater collection system must be installed, it should discharge to an above-ground outlet point (swales, detention/retention basins or surface waters).

(a) Any catch basins installed should have deep sumps to trap sediments and hoods to trap oil and grease.

(b) If more than 1 acre of pavement drains to a common discharge point, a gross particle separator should also be installed. Advanced designs for gross particle separators have been developed, such as Vortechnics, Downstream Defender and Stormceptor, that the Department believes are very effective in retaining medium to coarse grained sediments as well as floatables. The last type of separator is designed to treat runoff from areas up to approximately 1 acre in size, while the former two can be sized to accommodate flow from larger areas. It is recommended that the appropriate variety of this or similar type of unit with a cyclonic design be installed in conjunction with each outfall, depending on the size of the drainage area.

(4) Provisions should be made for the periodic maintenance that will be required to insure continued effectiveness of these control measures.

**For more information regarding the design of stormwater collection systems, contact Chris Stone of the DEEP's Stormwater Permitting & Enforcement Division at (860) 424-3850**.

# Site Clearing Specifications 11/24

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# SECTION 311000 - SITE CLEARING

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Stripping and stockpiling rock.
6. Removing above- and below-grade site improvements.
7. Disconnecting, capping or sealing, and removing site utilities.

B. Related Requirements:

1. Section 024116 “Structure Demolition” for removal of existing utilities.
2. Section 312500 “Erosion and Sedimentation Controls” for temporary protection of erosion and sedimentation.

### 1.3 DEFINITIONS

A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects larger than 2 inches in diameter; and free of weeds, roots, toxic materials, or other nonsoil materials.

D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

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1.4 MATERIAL OWNERSHIP

A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.

1. Use sufficiently detailed photographs or video recordings.
2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plant designated to remain.

B. Topsoil stripping and stockpiling program.

C. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

**D. Clearing Plan: Identifying and accurately showing locations of trees greater than five inches in caliper measured 3 feet off the ground scheduled for removal. Clearing of trees exceeding this threshold requires final approval by the City of Bristol Zoning Commission.**

1.6 QUALITY ASSURANCE

A. Topsoil Stripping and Stockpiling Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work. Include dimensioned diagrams for placement and protection of stockpiles.

B. Conform to applicable code for environmental requirements and disposal of debris,.

1.7 FIELD CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, adjacent private property and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed roadways if required by Owner or authorities having jurisdiction.

B. Utility Locator Service: Notify Call Before You Dig for area where Project is located before site clearing.

C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

D. Soil Stripping, Handling, and Stockpiling: Perform only when the soil is dry or slightly moist.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earthwork."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

C. Call Local Utility Line Information service not less than three working days before performing Work.

1. Request underground utilities to be located and marked within and surrounding construction areas.

### 3.2 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Arrange with utility companies to shut off indicated utilities.

B. Locate, identify, and disconnect utilities indicated to be abandoned in place.

C. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Engineer’s written permission.

D. Removal of underground utilities is included in earthwork sections; in applicable fire suppression, plumbing, HVAC, electrical, communications, electronic safety and security, and utilities sections; and in Section 024116 "Structure Demolition".

## 3.3 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
2. Use only hand methods or air spade for grubbing within protection zones.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

## 3.4 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.

1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

1. Limit height of topsoil stockpiles to 72 inches.
2. Do not stockpile topsoil within protection zones.
3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

## 3.5 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.

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2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

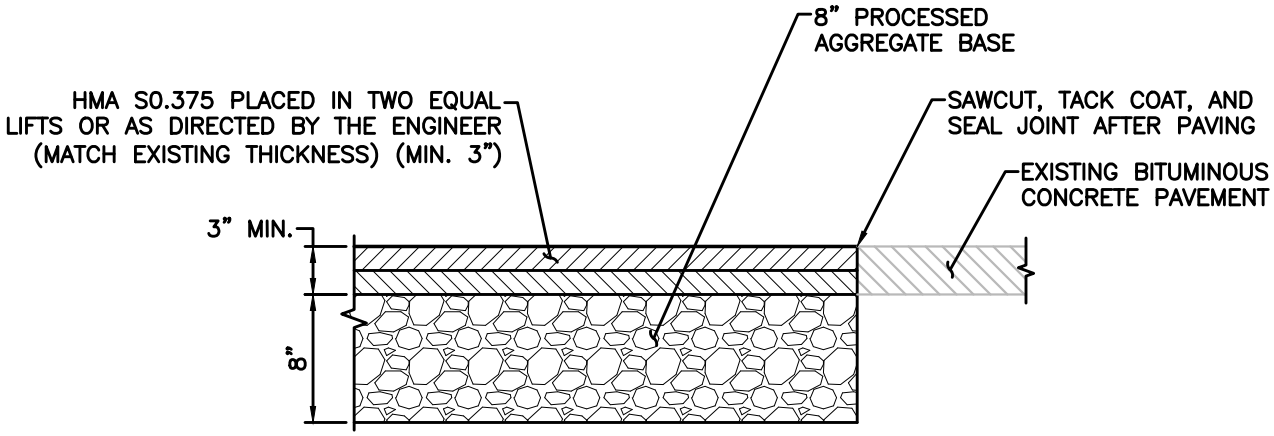
## 3.6 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other project work.

END OF SECTION 311000

# Standard Bristol DPW Roadway, Curb and Sidewalk Repair Details




RECONSTRUCTION OF ROADWAY

SCALE: $1\frac{1}{2}$" = 1'–0"

111 NORTH MAIN STREET
BRISTOL, CONNECTICUT
06010
T: 860.584.6125
www.bristolct.gov

Bristol CONNECTICUT Public Works

**RECONSTRUCTION OF ROADWAY DETAIL**

APPLICANT:
---
---

ON: ---
AT: ---
---
---

**STANDARD ROADWAY DETAILS**

DATE: **JULY 14, 2023**

SCALE: **AS SHOWN**

SHEET: **01**

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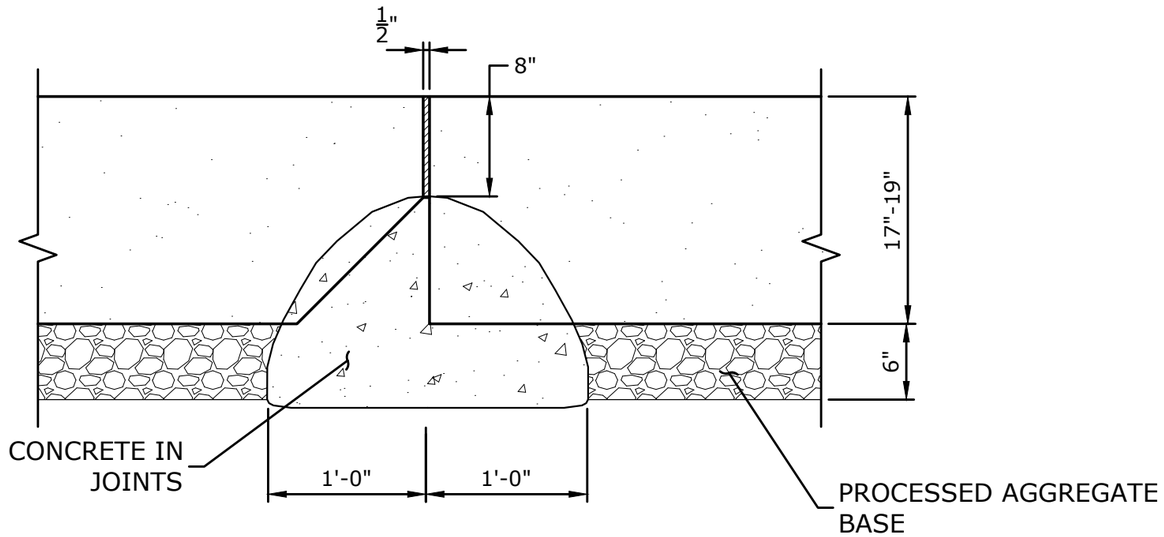


## CURB ELEVATION

NOT TO SCALE

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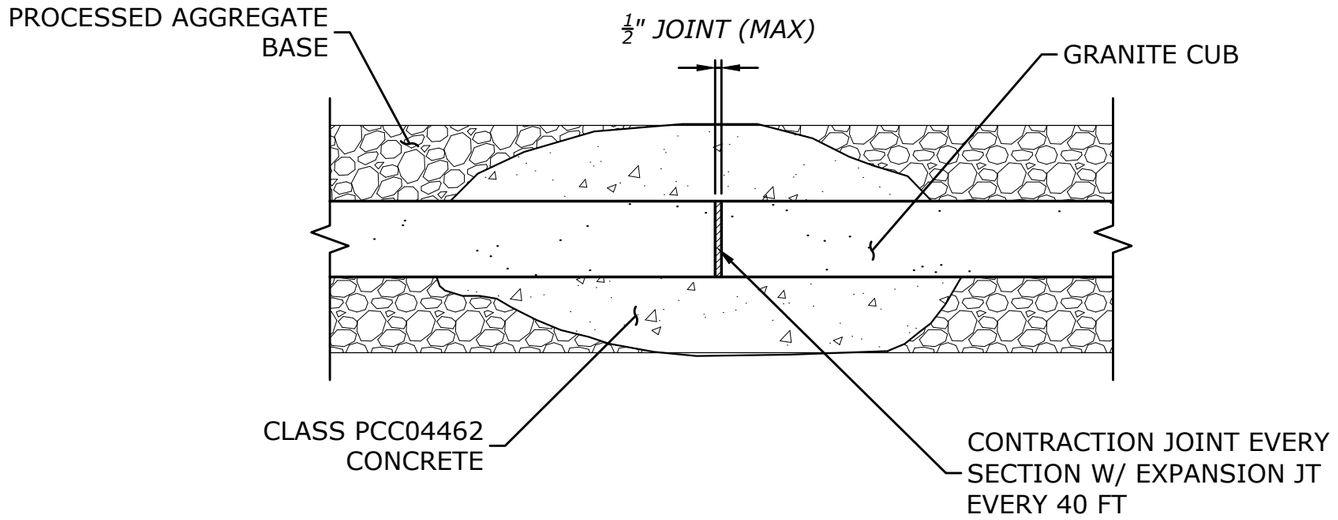


## CURB PLAN VIEW

SCALE: 1" = 1'-0"

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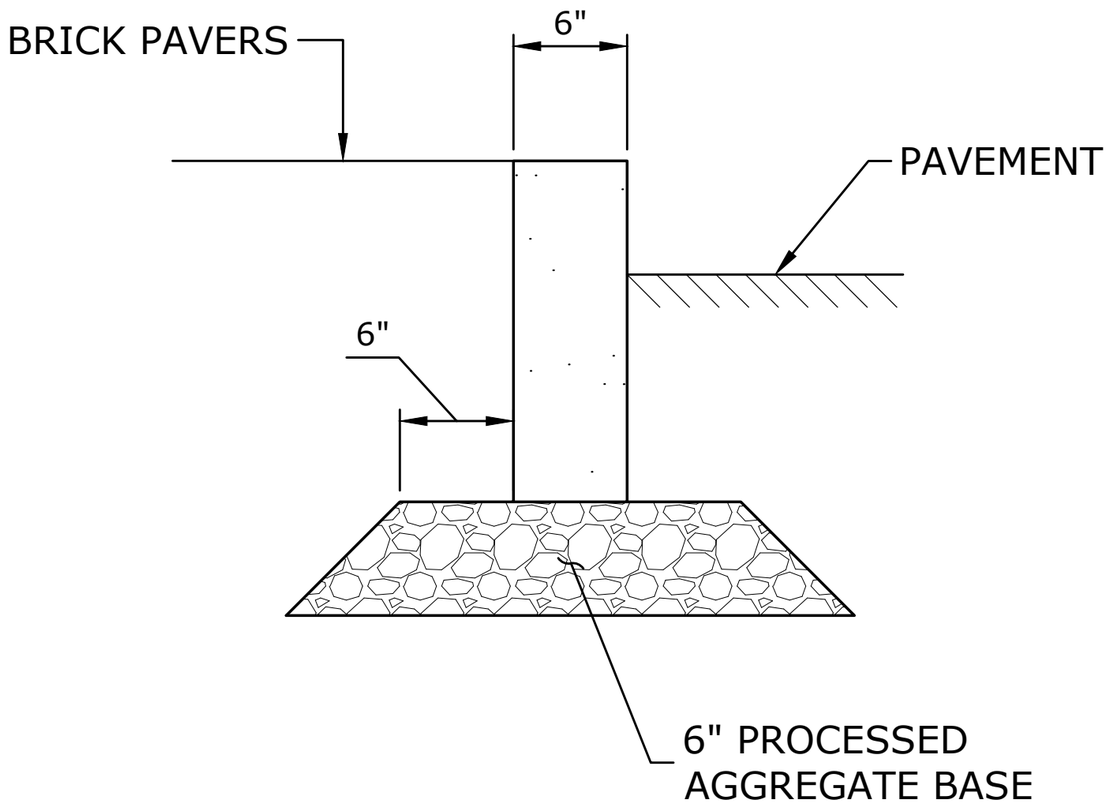


# CURB SECTION

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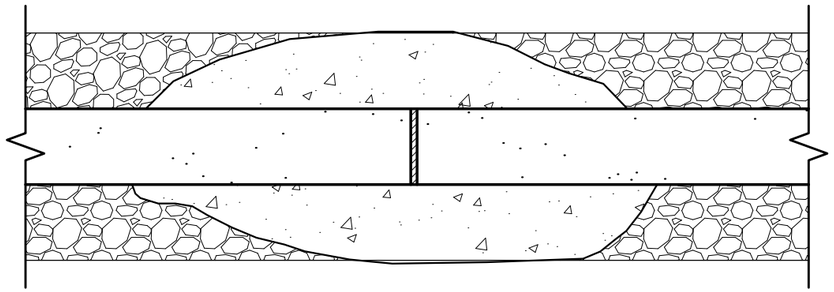
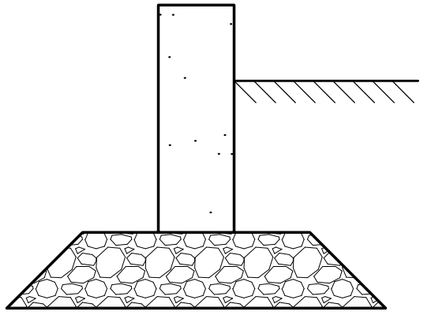
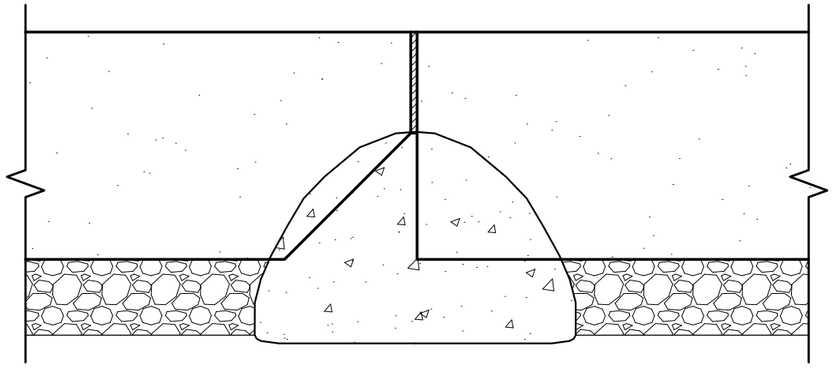
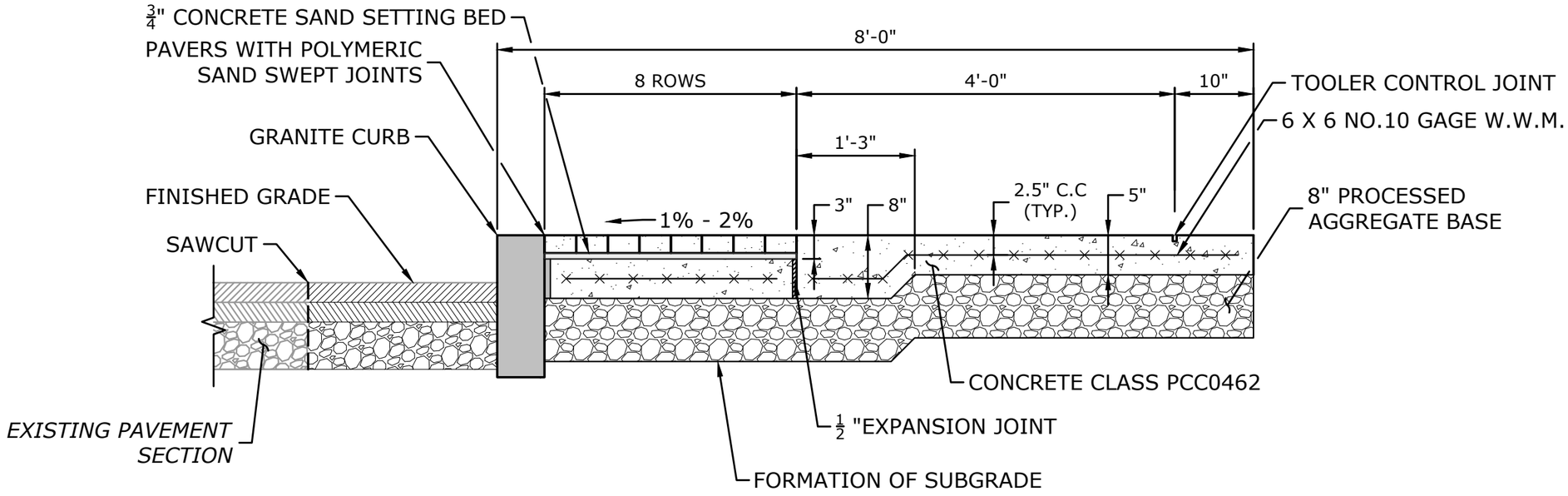


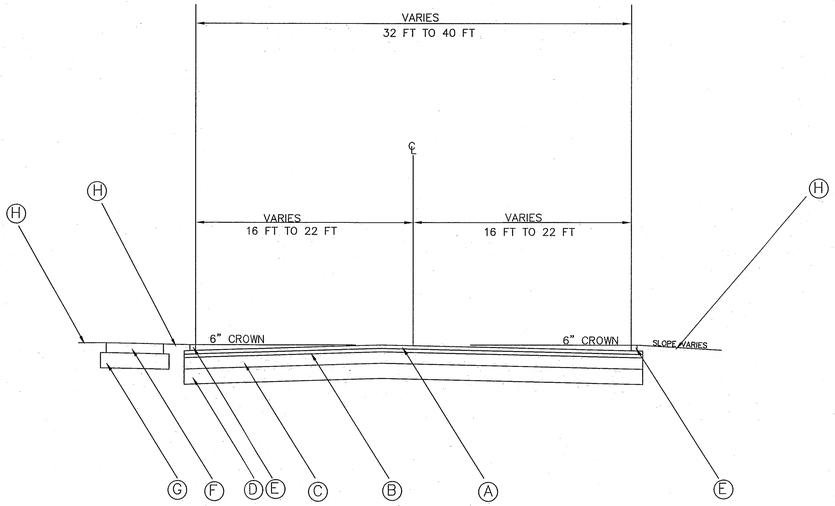







## CONCRETE SIDEWALK WITH BRICK PAVERS

SCALE: ¾" = 1'-0"




# TYPICAL SECTION
## STA. 10+50 TO 31+30

Ⓐ TWO INCH (2") CLASS 2 SURFACE COURSE

Ⓑ TWO INCH (2") CLASS 1 BINDER COURSE

Ⓒ SIX INCH (6") AGGREGATE BASE (M.05.01)

Ⓓ TEN INCH (10") SUBBASE (M.02.02)

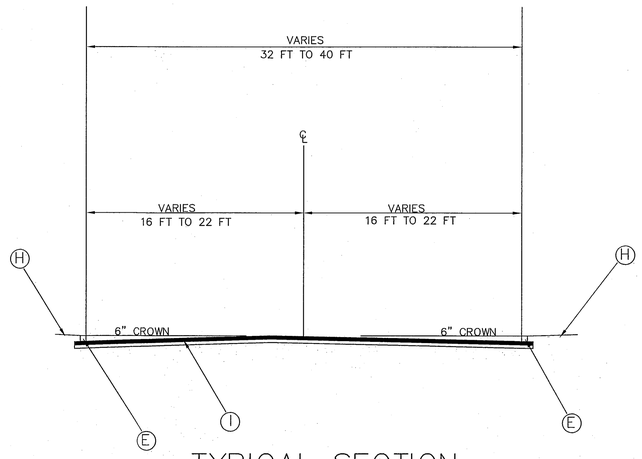
Ⓔ SIX INCH (6") BITUMINOUS LIP CURB (REMOVE EXISTING)

Ⓕ FIVE INCH (5") THICK CONCRETE WALK

Ⓖ EIGHT INCH (8") PROCESS GRAVEL

Ⓗ TURF ESTABLISHMENT (4" MINIMUM OF TOPSOIL)

Ⓘ MILL TWO INCH (2") EXISTING CLASS 2 SURFACE PAVEMENT. OVERLAY WITH NEW CLASS 2 SURFACE PAVEMENT.




# TYPICAL SECTION
## STA. 4+17 TO 10+50

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|---|---|---|---|---|---|---|---|
| DESCRIPTION | SHEET. NO. | NO SCALE | DESIGNER: AMF | CITY OF BRISTOL, CONNECTICUT | Bristol Department of Public Works<br>111 North Main Street<br>Bristol, CT 06010<br>(860) 584-6125<br>(860) 584-3838 Fax | PROJECT TITLE:<br>MIX STREET ROAD RECONSTRUCTION | TOWN:<br>BRISTOL, CONNECTICUT | DOT PROJECT: |
| REVISIONS | | | DRAFTER: AMF | | | | | DRAWING NO.: |
| | | | CHECKED BY: RAR | ENGINEER: BRISTOL DPW | | | DRAWING TITLE:<br>TYPICAL SECTIONS | SHEET NO.: 4 |
| | | | DATE CHECKED: 10-9-09 | APPROVED BY: DATE: OCTOBER 9, 2009 | | CADD: PLOTTED: BRISTOL DPW | | |

# Standard Bristol DPW Contractor Excavation Forms

# City of Bristol

DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

**EXCAVATION**
**CONTRACTOR'S PERMIT BOND**

_____
Name of License Holder

_____
Bond Number

KNOW ALL MEN BY THESE PRESENTS,

That we, _____ of the Town
(Licensee)

of_____County of _____,

and the State of Connecticut, as Principal, and _____,
(Bonding Company)

of the State of _____ having an office and place of business at

_____,

as Surety, are held and firmly bound unto the City of Bristol, in the sum of

_____ Dollars,

lawful money of the United States, to be paid to assure completion of all work for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators and assigns, jointly and severally by these presents, the said bond and surety to be holden to the CITY OF BRISTOL for such time and under such stipulations as hereinafter stated.

The condition of this obligation is such, that:

Whereas, the above named Principal has received, or may, upon his application, receive, a permit or permits from the CITY OF BRISTOL, to perform work on, about or adjacent to a highway or for the use of the highway right of way, on, over, or below, within said CITY OF BRISTOL as is or may be particularly specified in said permit or permits, to which permit or permits reference is hereby made and are made a part hereof: and Whereas, the said Principal has undertaken and does hereby agree to comply with all the rules, regulations and restrictions of said CITY OF BRISTOL in regard to said permit or permits.

NOW, THEREFORE, it is agreed that (a) this bond shall expire one year from date hereof, except that it shall continue in full force and effect as herein provided as to any and all work required under any permit issued to the Principal within one year from date hereof; (b) if the said Principal fails to complete the required work described in each and every permit issued to him, and continues in said failure and/or neglect for more than thirty days after written notice of said failure and/or neglect is mailed by the Director of Public Works of the City of Bristol to the Principal and surety (by certified mail to the address shown hereon) said Director of Public Works shall arrange to complete all unfinished work and charge the same to the Surety to the extent of this bond; and (c) if the said Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements specified in said permit or permits, and shall well and truly save harmless and indemnify the said CITY OF BRISTOL and the DIRECTOR OF PUBLIC WORKS, or either of them, from all damages and costs that the CITY OF BRISTOL or the DIRECTOR OF PUBLIC WORKS may suffer, be liable for, or be compelled to pay, or in fact does pay, for any injuries or damages which may be caused by any action or work being carried on either by the said Principal, his servants, agents or employees, under any permit or permits issued or which may be issued by said CITY OF BRISTOL, or its authorized agent, or by reason of negligence or violation of any law on the part of said Principal, his servants, agents or employees, and shall, further indemnify said CITY OF BRISTOL for any expenses that said CITY OF BRISTOL or the DIRECTOR OF PUBLIC WORKS may suffer, be liable for, or be compelled to pay, or in fact does pay for any required adjustments to the highway and its facilities to a comparable condition, including but not limited to refilling openings or excavations, removing guard railings, removing trees, tree stumps and other obstructions, replacing drainage involving driveways and restoring pavements opened or excavated satisfactory to the CITY or existed prior to the initiation of the work said Principal, his servants, agents or employees, then this obligation shall be void; otherwise to remain in full force and effect.

All of the provisions of the foregoing are to be subject to the present statute laws of the State of Connecticut and ordinances and standards and regulations of the CITY OF BRISTOL and to any change, alteration or repeal of any existing laws as may be enacted by any future session of the Legislature of the State of Connecticut or the City Council of the City of Bristol.

IN WITNESS WHEREOF, we have hereunto set our hands and seal the _____

day of _____, in the year two thousand, and _____.

Witness to Licensee's Signature (2)

_____

_____

_____
Licensee's Signature

_____
Bond Company Name

_____
Bond Company Address

_____
Agent Representing Bond Company

City of Bristol DEPARTMENT
OF PUBLIC WORKS BRISTOL,
CONNECTICUT 06010
860-584-6125 – Front Desk
860-584-6295 – Sanitary Sewer Inspector

# Contractor's License & Bonding Information Package

**License & Bonding Narrative**

This Contractor's License and Bonding Information Package includes the following:

- License & Bonding Narrative
- Excavation Contractor's License Application (to be completed & returned to DPW)
- Excavating Contractor's Permit Bond Form (to be completed & returned to DPW along with bond & Power of Attorney Form)
- List of streets requiring uniformed City of Bristol Police Officer for Traffic Control. Call 860-584-3000 48 hours prior to work to schedule Police Officers. Contractor is responsible for cost of officers.
- Sanitary Sewer Connection fee schedule.

**Requirements and procedures to become a licensed and bonded Excavation Contractor in the City of Bristol**

- Contractor must be licensed by the State of Connecticut as a P1, P7 or W-9 Contractor
- Complete and return the Excavation Contractor's License Application to the Bristol Public Works Department.
- Complete and return to the Bristol Public Works Department the Excavation Contractor's Permit Bond Form and supply a bond for ten thousand dollars ($10,000.00) with a Power of Attorney Form.
- Provide a Certificate of Liability Insurance with the following coverage;
  - Personal Injury - $100,000 Minimum(300,000)
  - Property Damage - $10,000 Minimum(300,000)

Submit the above listed information as one package to the Bristol Department of Public Works office during regular office hours (M-F, 8:00-5:00). This information will be reviewed by the Sanitary Sewer Inspector.

After you become a licensed and bonded Contractor you must obtain an Excavation Permit from the City of Bristol Sanitary Sewer Inspector prior to conducting any work within a City of Bristol street and/or right of way.

City of Bristol DEPARTMENT
OF PUBLIC WORKS BRISTOL,
CONNECTICUT 06010

**License & Bonding Narrative (Continued)**

# Excavation Permit & Permanent Patch Information

All excavation and utility work conducted within any City of Bristol street and/or right of way can only be conducted by Contractors licensed and bonded ***by the City of Bristol***.

To become a licensed and bonded Contractor in the City of Bristol obtain a "Contractor's License & Bonding Information Package" from the City of Bristol Department of Public Works office located in City Hall at 111 North Main Street, Bristol Connecticut.

An excavation permit must be issued by the City of Bristol Sanitary Sewer Inspector (584-6115) a minimum of 48 hours prior to any excavation work within any City of Bristol street and/or right of way.

All ***utility connection fees*** for the subject property must be paid prior to issuance of an excavation permit.

Excavation permits are issued Monday thru Friday from 8:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 4:30 p.m. and at other times as arranged with the Sanitary Sewer Inspector.

**Fees**

**Excavation permit fee** = $40.00 each. Separate excavation permits are required for each utility.

**Permanent Patch fee** – At the time of issuance of an Excavation Permit the Contractor shall pay the estimated cost of the permanent patch to the City of Bristol. During the period between temporary patch and permanent patch, the Contractor shall be responsible for maintaining the patch and shall promptly correct all defects upon order of the Director of Public Works or his designated agent. The intent is that temporary patches shall go through one complete winter season prior to being permanently patched by the City of Bristol. Prior to issuing a Certificate of Occupancy, the City of Bristol with measure the total area of the temporary patch, to assure the funds collected will cover the total permanent patch cost. If additional funds are needed to cover permanent patch cost they will be collected before a Certificate of Occupancy is issued.

Calculation of estimated patch cost will be based on length and width, (width shall be diameter of pipe plus twelve (12) inches, minimum twenty-four (24) inches, plus twelve (12) inches for every foot to depth of trench.) Permanent patch fees are calculated by the City of Bristol and subject to payment by the contractor.

City of Bristol
DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010
860-584-6125 – Front Desk

# PERMANENT PATCHING OF CITY STREETS

The permanent patching of all utility trenches and other excavations in streets maintained by the City of Bristol will be by the public works department or under contract to the city. All utility contractors shall obtain an excavating permit for any trenches in the public street.

**Excavation, backfilling and patching, general requirements.**

Pavement and/or sidewalks shall be cut or sawn to straight neat lines, excavation without cutting or sawing will not be allowed. Cut line shall be parallel and six (6) inches minimum, outside either edge of the proposed trench. Tunneling under pavement or sidewalks will not be allowed. Bituminous material, cement concrete, ledge, rock and boulders over six (6) inches in any dimension shall be removed from the job, together with any clay, silt, or organic material. The public works inspector will check the material excavated and will allow re-use as backfill, sandy and/or gravelly material. Material not approved shall be disposed of off the job. Backfill shall be approved sandy gravelly material with no stones over six (6) inches in any dimension. Backfill shall be compacted in twelve-inch layers using mechanical compaction equipment.

The trench shall be filled to within eleven (11) inches of finished grade, eight (8) inches of approved processed gravel shall be spread and compacted, then three (3) inches of bituminous concrete shall be spread and compacted with the finished material flush with the adjacent existing surface. Bituminous concrete material shall be "hot mix," except during winter season when plants are closed "cold patch" will be used. During the period between temporary patch and permanent patch, the utility contractor shall be responsible for maintaining the patch and shall promptly correct all defects upon order of the director of public works. The contractor is an agent of the utility whose pipe, conduit, etc., is laid in the trench and has ultimate responsibility for the trench. In sanitary sewer laterals this is the serviced property owner. This procedure also includes new sanitary sewer construction and the ultimate responsibility shall be the city public works department.

**Fees, deposits, records and measurements for patches.**

Annually the city may advertise and receive bids for permanent patching of utility trenches. Bids will be taken on repair of bituminous pavement, curbing and sidewalk. The lowest acceptable unit prices will be utilized with a ten (10) per cent escalator for charging utility contractors, that year, for trench permanent patching. Trenches that are temporarily patched this year will be permanently patched next year, the intent is that temporary patches shall go through one complete winter season.

At the time of issuance of an excavation permit, the utility contractor shall deposit a fee equal to the estimated cost of the permanent patch. Upon completion, the actual patch will be measured and the contractor shall be billed for any additional amount or added cost due to increased bid cost, if the amount is less than the prepayment he will receive credit. Calculation of estimated patch will be based on length and width, (width shall be diameter of pipe plus twelve (12) inches, minimum twenty-four (24)inches, plus twelve (12) inches for every foot to depth of trench.) Permits will not be issued to contractors owing the city any excess fee. Responsible persons will be liened if excess fee not paid within ninety (90) days of the due date.
The public works department shall keep a written record of all trenches, with date of excavation, temporary patch and permanent patch, deposit fee and estimate quantity final fee and actual quantity balance or credit due, and exact location, and type of utility. The city shall maintain a separate fund, for permanent patching of all city streets. All payments by utility contractor or others excavating in the public street will be deposited in the fund, and payments for permanent patching completed will be disbursed from the fund.

**Detailed patching requirements**.
Permanent patching shall be performed as follows:
**(a)** ***Sidewalks***. Temporary bituminous material shall be removed. Existing walk faces shall be straight and true with no cracks or breaks, if not, shall be cut at next sound transverse joint. Subgrade material shall be removed to five (5) inches below finish grade one-half inch preformed full depth and width expansion joints shall be placed against existing concrete. Portland cement concrete shall be as specified in Chapter 21 of the City Ordinances. Topsoil and seeding shall be repaired as specified in Chapter 21 of the City Ordinances. Bituminous concrete walks shall be repaired as specified in subsection (c).
**(b)** ***Curbing***. Curbing shall be replaced to conform to existing adjacent curb. Existing curb shall be cut to neat true lines. Concrete and granite curb replacement shall be not less than three (3) feet. Bituminous curb less than twenty-five (25) feet may be hand formed to proper cross section. Curbing shall conform to Chapter 21 of the City Ordinances.
**(c)** ***Pavement***. Existing bituminous material shall be removed, existing pavement shall be cut to reasonably straight longitudinal lines, transverse jogs within ten (10) feet of each other shall not be accepted, transverse cuts shall be perpendicular to the longitudinal cut. Several small excavations shall be widened into one. If existing pavement has cracked due to trench settlement, the edge of the trench shall be cut beyond such cracks to firm true pavement. The subgrade shall be graded and compacted to three (3) inches below finished grade. The contractor shall add any necessary processed gravel to bring trench to subgrade, care shall be taken to keep processed gravel tight under adjacent pavement. Edge of existing bituminous shall be painted with hot liquid asphalt prior to paving. Transverse joints in new patch shall be cut square and painted with hot liquid asphalt. Bituminous material shall be placed in two (2) equal layers of one and one-half inches compacted. Finished surface shall meet existing surface neat and true. Edges of completed patch shall be sealed with an application of hot liquid asphalt three (3) inches minimum wide. Finish surface shall be lightly dusted with cement or fine quarry screenings. Patch shall be barricaded and traffic kept off for at least four (4) hours.

# City of Bristol

DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

## Excavation Contractor's License Application

Date Filed: _____
Approved: _____
Denied: _____

1. **APPLICANT:** (Person completing this application)

   Name: _____ Signature: _____

   Address: _____ City: _____State: _____Zip: _____

   Telephone No.: _____ [ ] home [ ] work

2. **COMPANY:**

   Name: _____

   Address: _____ City: _____State: _____Zip: _____

   Telephone No.: _____ [ ] home [ ] work

3. **STATE LICENSES HELD:**

   Classification & Number:_____

   _____

4. **REFERENCES:** List a minimum of three (3) references (other than material suppliers) who are familiar with your work and the information contained within this application. Attach another sheet if necessary.

---

_____

_____

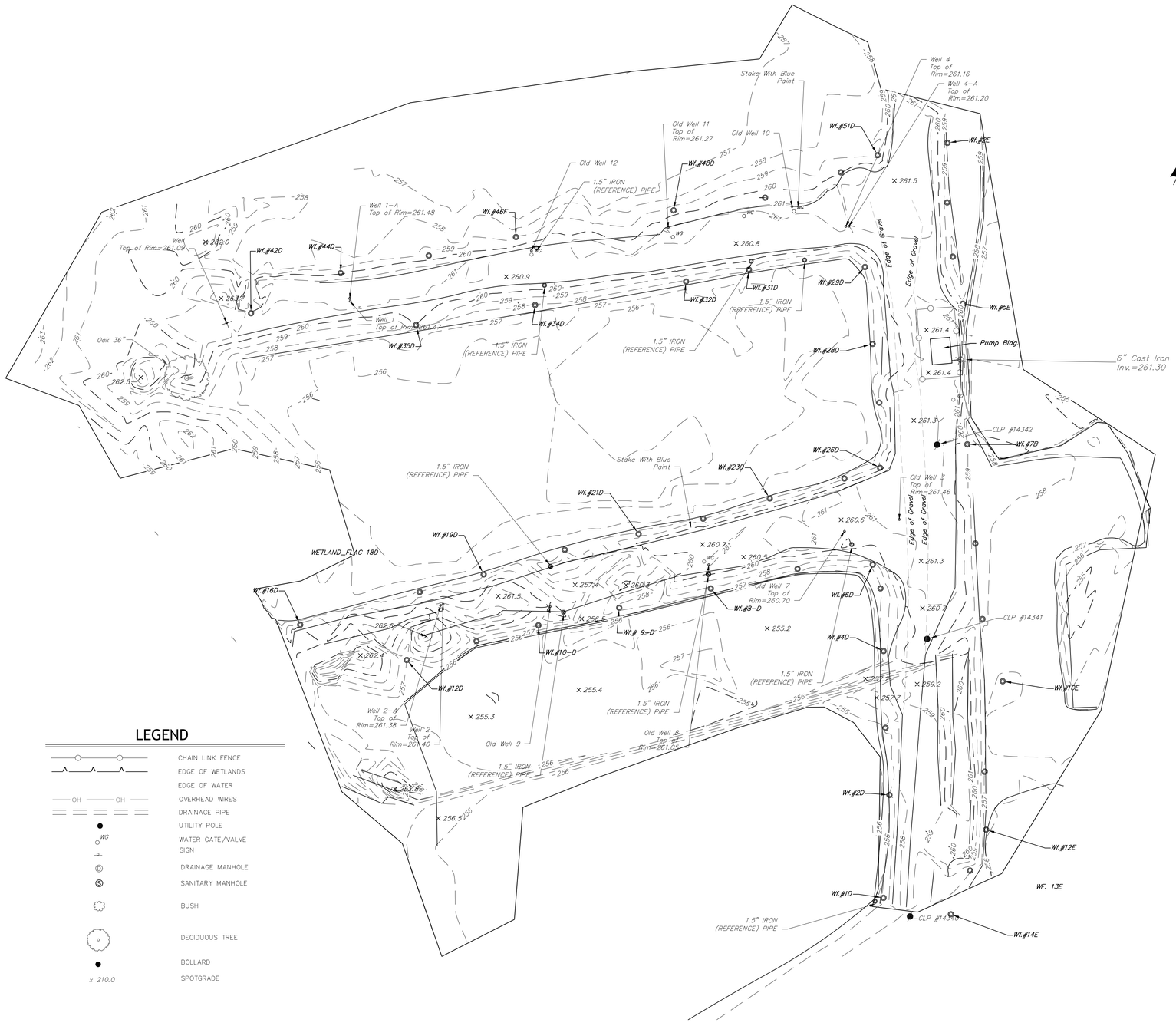
_____

_____

_____

_____

# A-2
# Surveys
# 11/24



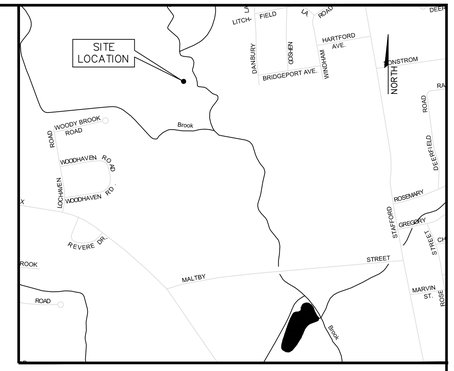

## LEGEND

- CHAIN LINK FENCE
- EDGE OF WETLANDS
- EDGE OF WATER
- OH OH — OVERHEAD WIRES
- DRAINAGE PIPE
- UTILITY POLE
- WG — WATER GATE/VALVE
- SIGN
- DRAINAGE MANHOLE
- SANITARY MANHOLE
- BUSH
- DECIDUOUS TREE
- BOLLARD
- x 210.0 — SPOTGRADE

GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )
1 inch = 50 ft.




## LOCATION MAP

NOT TO SCALE

## GENERAL NOTES

1. THIS SURVEY HAS BEEN PREPARED BY FREEMAN COMPANIES, LLC. IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26,1996
   - 1.1. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS T-2.
   - 1.2. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.
2. NORTH ARROW AND BEARINGS REFER TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD83) AND IS BASED UPON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
3. ELEVATIONS REFER TO NAVD88 AND ARE BASED ON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
4. THE UNDERGROUND FEATURES DEPICTED HEREON ARE THE RESULT OF COMPILATION OF EXISTING MAPPING AND LOCATION OF UTILITY PAINT, ACTUAL LOCATION OF UNDERGROUND UTILITIES IS TO BE CONSIDERED TO BE APPROXIMATE AT BEST. OTHER UTILITIES MAY EXIST WHICH FREEMAN COMPANIES ARE UNAWARE OF. VERIFY INFORMATION IN THE FIELD BEFORE ANY DIGGING OR SITE EXCAVATION CALL, "CALL BEFORE YOU DIG" 1800-922-4455.
5. PROJECT AREA IS LOCATED IN FLOOD HAZARD ZONE AE AS DEPICTED ON FIRM MAP NUMBER 09003C0458F, EFFECTIVE DATE SEPTEMBER 26, 2008.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PETER PARIZO, L.S. #14653

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.

STATE OF CONNECTICUT · PETER PARIZO · NO. 14653 · LICENSED LAND SURVEYOR

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | | |


FREEMAN COMPANIES
LAND DEVELOPMENT · ENGINEERING DESIGN · CONSTRUCTION SERVICES
DBE | SBE | MBE | SBA (8)a CERTIFIED
LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

FREEMAN COMPANIES, LLC
35 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
(860)251-9550
FAX:(860)986-7161


# LAND OF NEW BRITAIN WATER DEPARTMENT UPPER WELL FIELD JEROME AVENUE BRISTOL, CONNECTICUT

| | |
|---|---|
| SURVEYED: | R.A.C. |
| DRAFTED: | R.L.C. |
| APPROVED: | L.K. |
| SCALE: | 1" = 50' |
| PROJECT NO.: | 2019-0901 |
| DATE: | 08/20/2019 |
| CAD FILE: | 2018-0901-SRV |

TITLE:
EXISTING CONDITIONS SURVEY

SHEET NUMBER:
EX-1

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC

## LEGEND

- CHAIN LINK FENCE
- EDGE OF WETLANDS
- EDGE OF WATER
- OVERHEAD WIRES (OH)
- DRAINAGE PIPE
- UTILITY POLE
- WATER GATE/VALVE (WG)
- SIGN
- DRAINAGE MANHOLE (D)
- SANITARY MANHOLE (S)
- BUSH
- DECIDUOUS TREE
- BOLLARD
- SPOTGRADE (x 210.0)

## GENERAL NOTES

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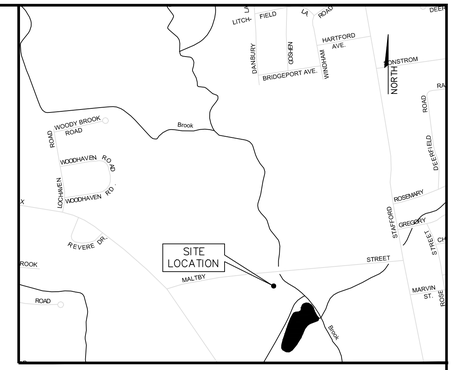
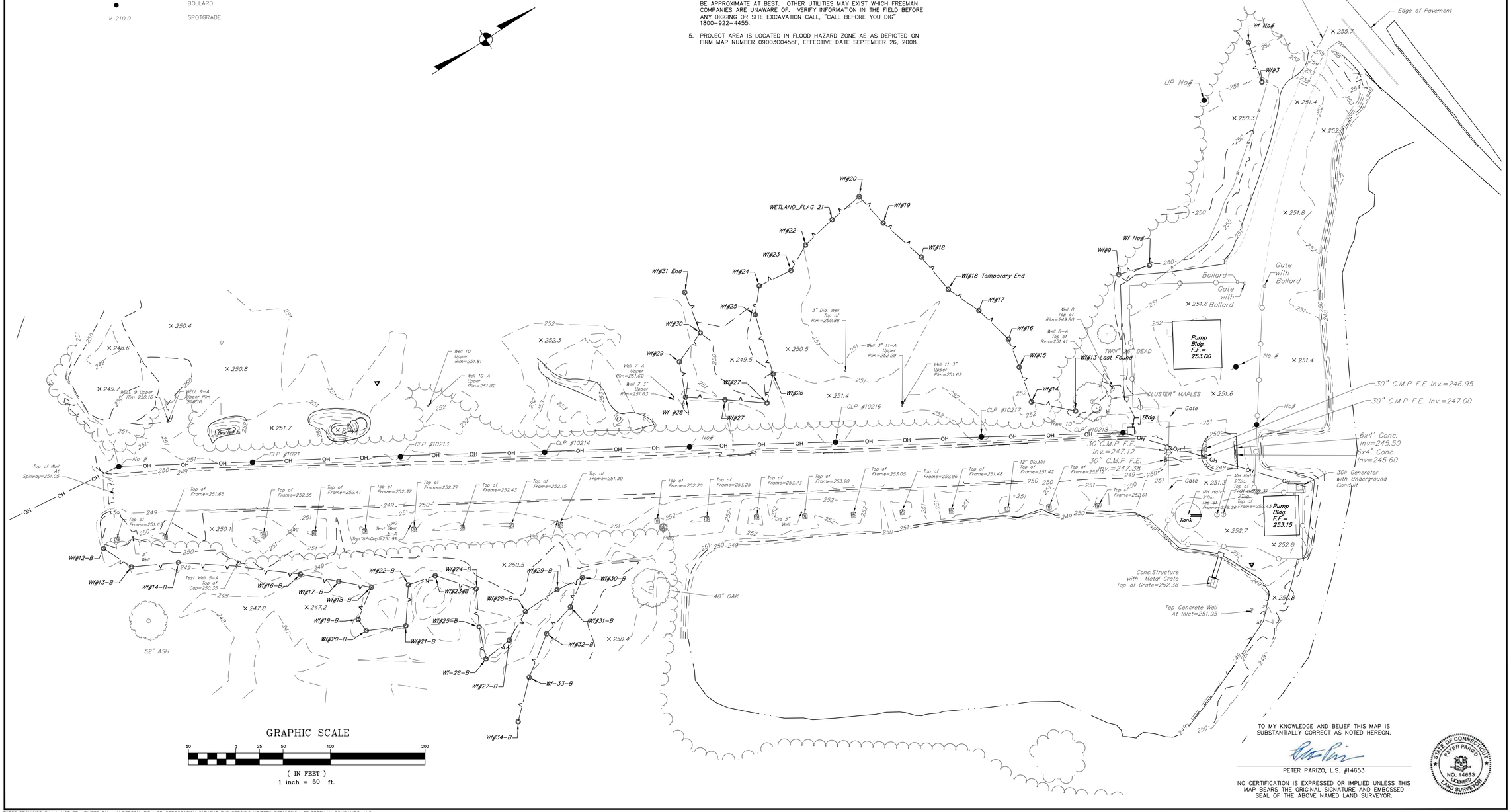
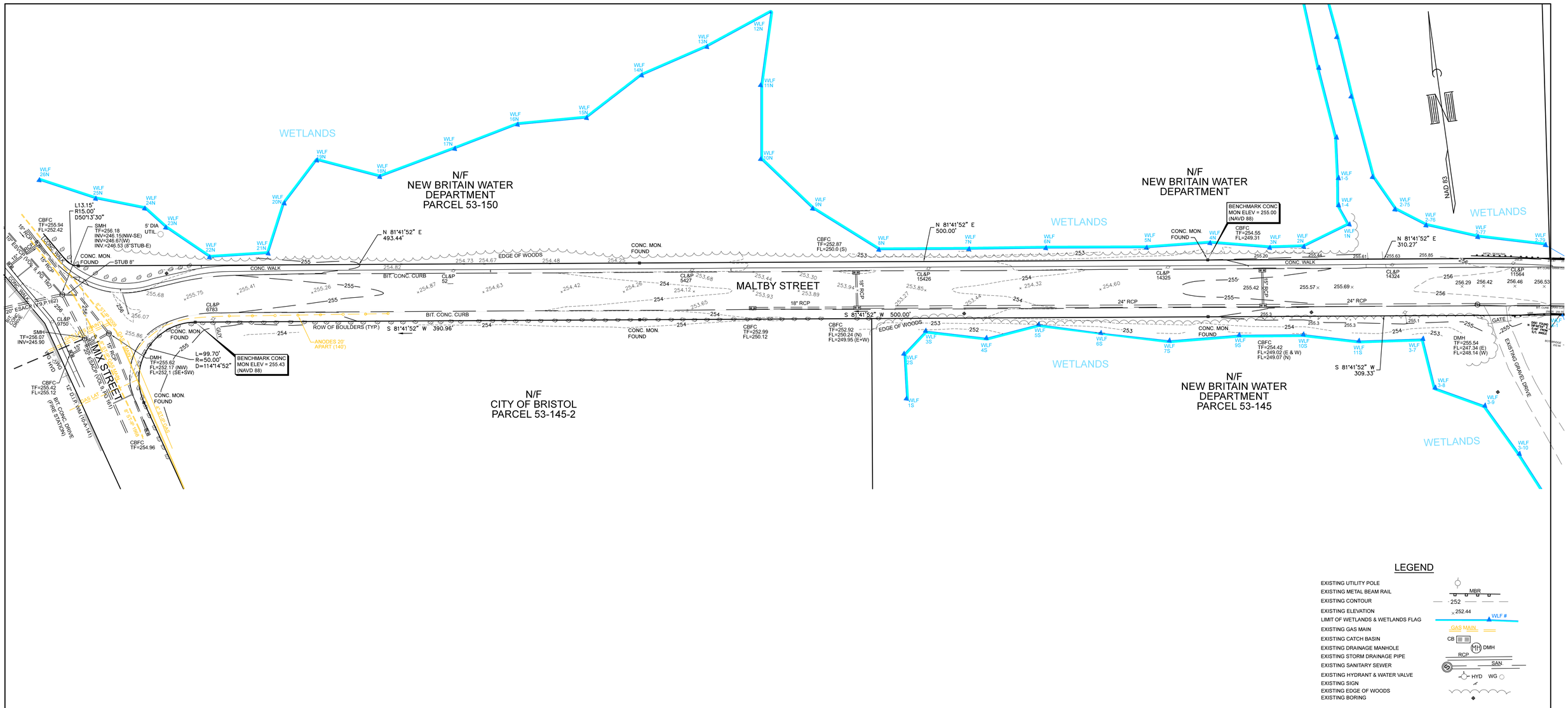
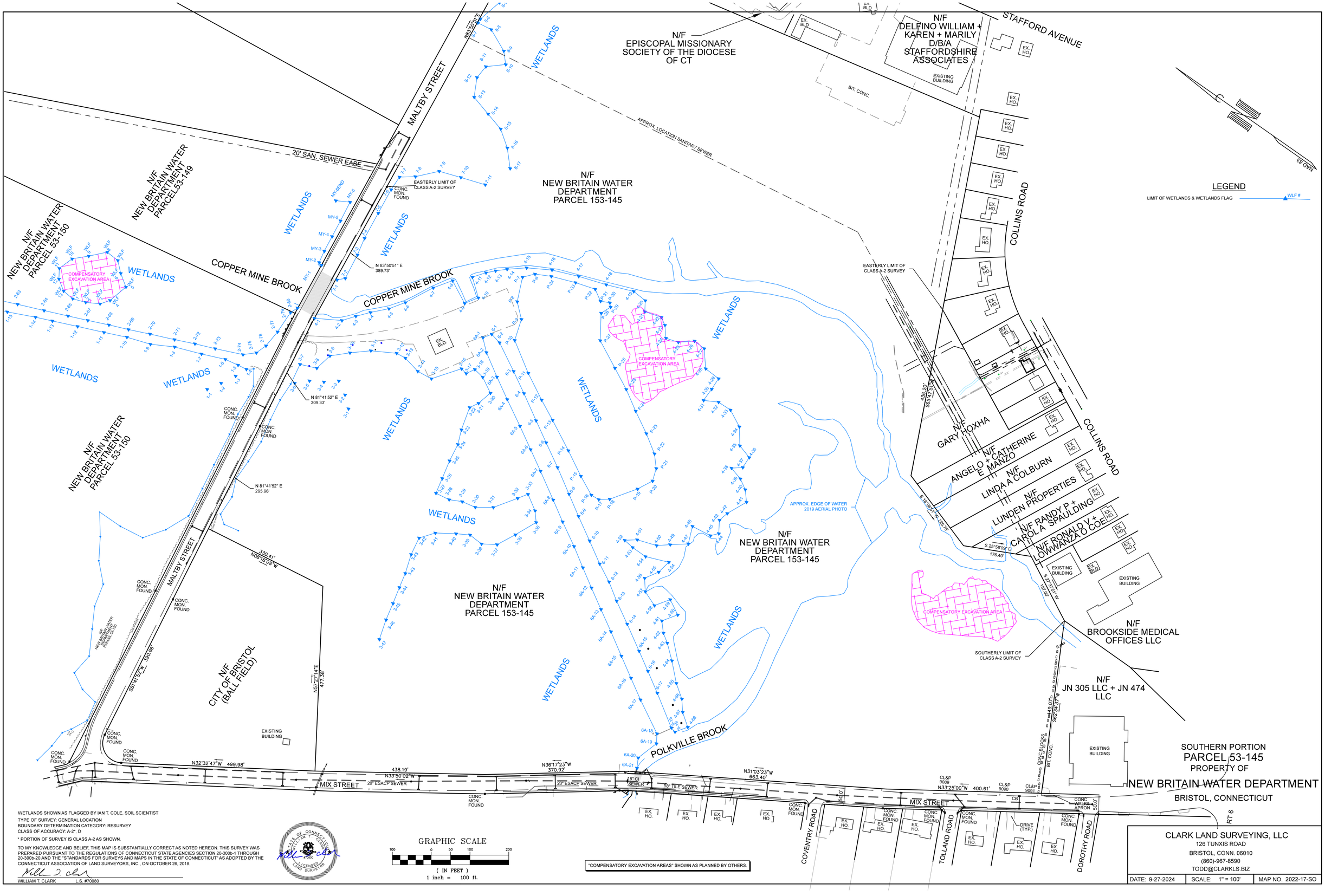



## LOCATION MAP

NOT TO SCALE


Wf#20
WETLAND_FLAG 21
Wf#19
Wf#22
Wf#23
Wf#18
Wf#18 Temporary End
Wf#24
Wf#31 End
Wf#25
Wf#30
Wf#29
Wf#17
Wf#16
Wf#15
Wf#14
Wf#27
Wf#26
Wf #28
Wf#9
Wf#13 Lost Found
Wf#3
UP No#
Edge of Pavement
Edge of Pavement
Gate with Bollard
Gate with Bollard
Pump Bldg. F.F.= 253.00
Pump Bldg. F.F.= 253.15
Tank
Bldg.
Gate
TWIN "46" DEAD CLUSTER" MAPLES
Well 10 Upper Rim=251.81
Well 10-A Upper Rim=251.82
Well 7-A Upper Rim=251.62
Well 7 3" Upper Rim=251.63
3" Dia. Well Top of Rim=250.88
Well 3" 11-A Upper Rim=252.29
Well 11 3" Upper Rim=251.62
Well 8 Top of Rim=249.80
Well 8-A Top of Rim=251.41
WELL 9 Upper Rim 250.16
WELL 9-A Upper Rim 250.16
CLP #10213
CLP #1021
CLP #10214
CLP #10216
CLP #10217
CLP #10218
30" C.M.P F.E Inv.=246.95
30" C.M.P F.E. Inv.=247.00
30" C.M.P F.E. Inv.=247.12
30" C.M.P F.E. Inv.=247.38
6x4' Conc. Inv=245.50
6x4' Conc. Inv=245.60
30k Generator with Underground Conduit
Conc.Structure with Metal Grate Top of Grate=252.36
Top Concrete Wall At Inlet=251.95
48" OAK
52" ASH
Top of Wall At Spillway=251.05
Wf#12-B
Wf#13-B
Wf#14-B
Wf#16-B
Wf#17-B
Wf#18-B
Wf#19-B
Wf#20-B
Wf#21-B
Wf#22-B
Wf#23-B
Wf#24-B
Wf#25-B
Wf#26-B
Wf#27-B
Wf#28-B
Wf#29-B
Wf#30-B
Wf#31-B
Wf#32-B
Wf#33-B
Wf#34-B
Test Well 5-A Top of Cap=250.35
Test Well 2-A Top of Cap=251.91
Old 3" Well
Plate
Wall 3"
3" Well
MH Hatch 2'Dia. Top of Frame=252.43
MH Hatch 2'Dia. Top of Frame=252.26
MH Hatch 2'Dia. Top of Frame=252.32
12" Dia.MH Top of Frame=251.42
Top of Frame=251.65
Top of Frame=252.55
Top of Frame=252.41
Top of Frame=252.37
Top of Frame=252.77
Top of Frame=252.43
Top of Frame=252.15
Top of Frame=251.30
Top of Frame=252.20
Top of Frame=253.25
Top of Frame=253.73
Top of Frame=253.20
Top of Frame=253.05
Top of Frame=252.96
Top of Frame=251.48
Top of Frame=252.61
Top of Frame=251.61
Tree 10"
No#
WG
Top of Frame=252.43
Top of Frame=252.61
Top of Frame=252.32
Top of Frame=252.43
Top of Frame=252.26
Top of Frame=252.43


WETLANDS
N/F
NEW BRITAIN WATER
DEPARTMENT
PARCEL 53-150
MALTBY STREET
MIX STREET
N/F
CITY OF BRISTOL
PARCEL 53-145-2
N/F
NEW BRITAIN WATER
DEPARTMENT
PARCEL 53-145
BENCHMARK CONC
MON ELEV = 255.43
(NAVD 88)
BENCHMARK CONC
MON ELEV = 255.00
(NAVD 88)
NAD 83
EXISTING GRAVEL DRIVE
GATE
ROW OF BOULDERS (TYP.)
ANODES 20'
APART (140')
EDGE OF WOODS
CONC. WALK
BIT. CONC. CURB
CONC. MON.
FOUND
GUY
S 81°41'52" W 390.96'
S 81°41'52" W 500.00'
S 81°41'52" W
309.33'
N 81°41'52" E
493.44'
N 81°41'52" E
500.00'
N 81°41'52" E
310.27'
L13.15'
R15.00'
D50°13'30"
L=99.70'
R=50.00'
D=114°14'52"
18" RCP
24" RCP
15" RCP
10" RCP
8" PVC
20' ESMT
49-P.162
CBFC
TF=255.94
FL=252.42
SMH
TF=256.18
INV=246.15(NW-SE)
INV=246.67(W)
INV.=246.53 (8"STUB-E)
5' DIA
UTIL
CONC. MON.
FOUND
STUB 8"
CL&P
6783
CL&P
9750
SMH
TF=256.07
INV=245.90
DMH
TF=255.62
FL=252.17 (NW)
FL=252.1 (SE+SW)
CBFC
TF=255.42
FL=255.12
CBFC
TF=254.96
CBFC
TF=252.87
FL=250.0 (S)
CBFC
TF=252.92
FL=250.24 (N)
FL=249.95 (E+W)
CBFC
TF=252.99
FL=250.12
CL&P
5427
CL&P
52__
CL&P
15426
CL&P
14325
CL&P
14324
CL&P
11564
CBFC
TF=254.55
FL=249.31
CBFC
TF=254.42
FL=249.02 (E & W)
FL=249.07 (N)
DMH
TF=255.54
FL=247.34 (E)
FL=248.14 (W)
WLF 1S
WLF 2S
WLF 3S
WLF 4S
WLF 5S
WLF 6S
WLF 7S
WLF 9S
WLF 10S
WLF 11S
WLF 3-7
WLF 3-8
WLF 3-9
WLF 3-10
WLF 1N
WLF 2N
WLF 3N
WLF 4N
WLF 5N
WLF 6N
WLF 7N
WLF 8N
WLF 9N
WLF 10N
WLF 11N
WLF 12N
WLF 13N
WLF 14N
WLF 15N
WLF 16N
WLF 17N
WLF 18N
WLF 19N
WLF 20N
WLF 21N
WLF 22N
WLF 23N
WLF 24N
WLF 25N
WLF 26N
WLF 1-4
WLF 1-5
WLF 2-75
WLF 2-76
WLF 2-77
WLF 2-78
CONC. MON.
FOUND
CONC. MON.
FOUND
CONC. MON.
FOUND




WETLANDS SHOWN AS FLAGGED BY IAN T. COLE, SOIL SCIENTIST

TYPE OF SURVEY: GENERAL LOCATION
BOUNDARY DETERMINATION CATEGORY: RESURVEY
CLASS OF ACCURACY: A-2*, D

* PORTION OF SURVEY IS CLASS A-2 AS SHOWN.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS SURVEY WAS PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTION 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC., ON OCTOBER 26, 2018.

WILLIAM T. CLARK L.S. #70080

STATE OF CONNECTICUT
WILLIAM T. CLARK
#70080
LICENSED
LAND SURVEYOR

GRAPHIC SCALE
100 0 50 100 200
( IN FEET )
1 inch = 100 ft.

"COMPENSATORY EXCAVATION AREAS" SHOWN AS PLANNED BY OTHERS

SOUTHERN PORTION
PARCEL 153-145
PROPERTY OF
NEW BRITAIN WATER DEPARTMENT
BRISTOL, CONNECTICUT

CLARK LAND SURVEYING, LLC
126 TUNXIS ROAD
BRISTOL, CONN. 06010
(860)-967-8590
TODD@CLARKLS.BIZ

| DATE: 9-27-2024 | SCALE: 1" = 100' | MAP NO. 2022-17-SO |
|---|---|---|

# Original Site Plan

# June 2024 (Full Set)

CITY OF NEW BRITAIN, CONNECTICUT

WATER SYSTEM IMPROVEMENTS

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

**BID NO. 4145**

**MAYOR**

HONORABLE ERIN E. STEWART

**DIRECTOR OF PUBLIC WORKS**

MARK E. MORIARTY, P.E.

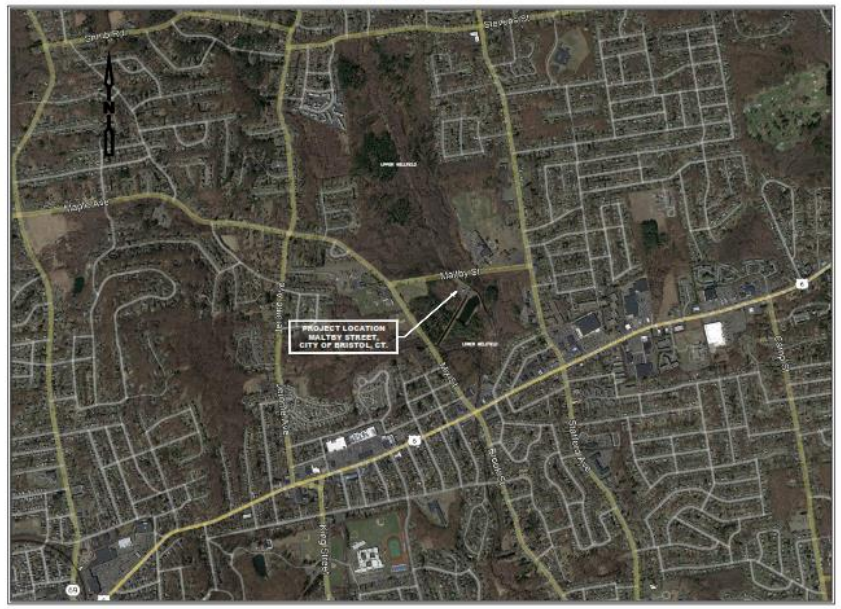
**DIRECTOR OF UTILITIES DIVISION**

RAMON ESPONDA, P.E.

**SUPERINTENDENT OF UTILITIES DIVISION**

CHRIS POLKOWSKI

**JUNE 2024**




LOCATION PLAN

CDM Smith

**REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION**

**EAST HARTFORD, CONNECTICUT**

*Water* *Environment* *Transportation* *Energy* *Facilities*

**Full Set of Civil Drawings at this Hyperlink:**

https://www.bristolct.gov/DocumentCenter/View/47022/Full-Set-NBW

# Site Plan 11/24 (Full Set)




**Hyperlink:**
https://www.bristolct.gov/DocumentCenter/View/47861/04A_Attachment---Full-Set-Design-Drawings---Zoning-Review-20241107

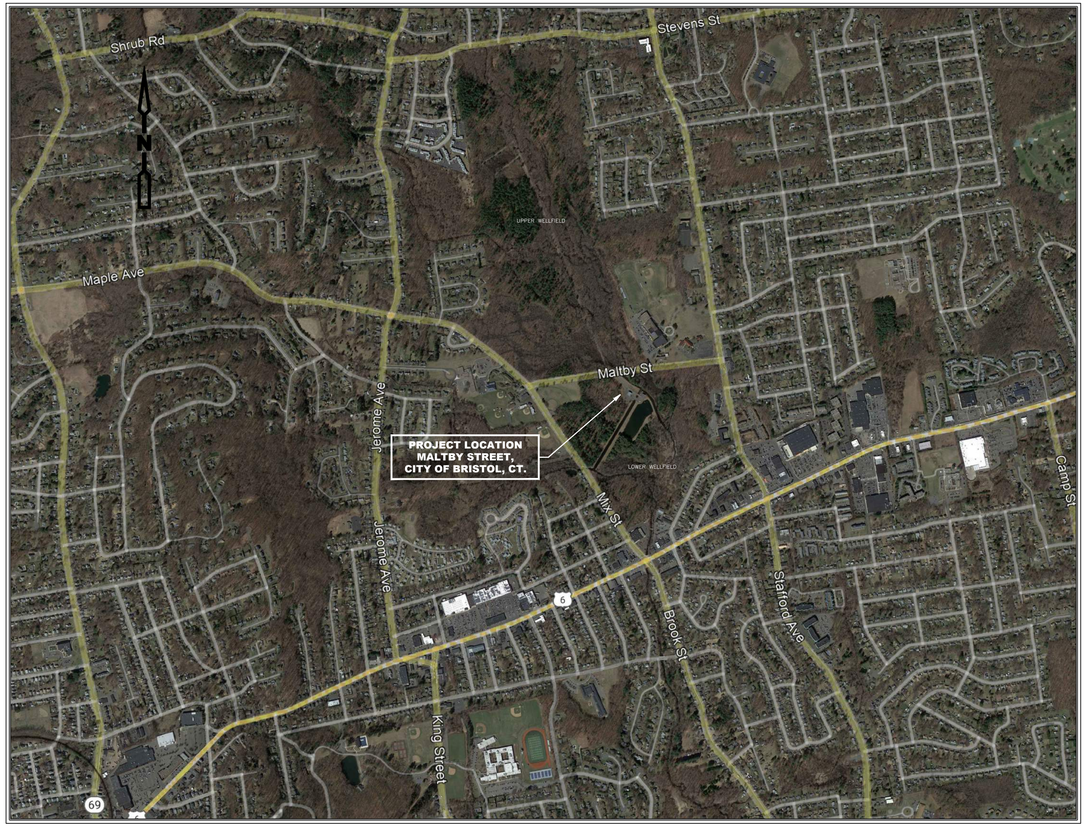
# Revised Site Plan Selected Sheets 10/24

# CITY OF NEW BRITAIN, CONNECTICUT

## WATER SYSTEM IMPROVEMENTS

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

**BID NO. 4145**




LOCATION PLAN
SCALE: 1" = 1000'

**BRISTOL ZONING COMMISSION APPLICATION**
(APPROVED XX):
#2504 – SPECIAL PERMIT FOR CIVIC FACILITY
#2505 – SITE PLAN FOR CIVIC FACILITY
#2506 – SPECIAL PERMIT FOR EARTH REMOVAL

**BRISTOL AQUIFER PROTECTION AGENCY**
(APPROVED XX):
### – DETERMINATION FORM

**BRISTOL IWWA APPLICATIONS**
(APPROVED JUNE 7, 2024):
#2019 – APPLICATION WETLANDS BOUNDARY CHANGE
#2020 – PERMIT TO CONDUCT REGULATED ACTIVITIES
#23-485F-3058 – PERMIT FOR FLOODPLAIN DEVELOPMENT


SP-01 OVERVIEW UWF NORTH
SP-02 OVERVIEW UWF SOUTH
SP-03 OVERVIEW LWF
SP-04 SITE PLAN UPPER WELLFIELD
SP-05 SITE PLAN POND PUMPING STATION
SP-06 SITE PLAN LOWER WELLFIELD
SP-07 MIX STREET ACCESS ROAD
SP-08 MALTBY STREET UTILITIES I
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CHRIS POLKOWSKI

**OCTOBER 2024**

CDM Smith

STATE OF CONNECTICUT
STEVE GERSLEY
No. 24384
LICENSED PROFESSIONAL ENGINEER
10-10-24

**REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION**

**EAST HARTFORD, CONNECTICUT**

***Water Environment Transportation Energy Facilities***


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## CIVIL/SITE ABBREVIATIONS

| SYMBOL | DESCRIPTION |
|---|---|
| BC | BOTTOM OF CURB |
| BS | BOTTOM OF STEP |
| BW | BOTTOM OF WALL |
| CB | CATCH BASIN |
| CLF | CHAIN LINK FENCE |
| CS | CRUSHED STONE |
| CW | COLD POTABLE WATER |
| DI | DUCTILE IRON |
| DMH | DRAIN MANHOLE |
| DN | DOWN |
| FES | FLARED END SECTION |
| FFE | FINISHED FLOOR ELEVATION |
| FM | FORCE MAIN |
| FRP | FIBERGLASS REINFORCED PLASTIC |
| GV | GATE VALVE |
| HDPE | HIGH-DENSITY POLYETHYLENE |
| INF | INFLUENT |
| INV. EL. | INVERT ELEVATION |
| MH | MANHOLE |
| MJ | MECHANICAL JOINT |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| SS | STAINLESS STEEL |
| TC | TOP OF CURB |
| TS | TOP OF STEP/SLAB |
| TW | TOP OF WALL |
| UP | UTILITY POLE |
| VGC | VERTICAL GRANITE CURB |
| UWF | UPPER WELLFIELD |
| LWF | LOWER WELLFIELD |

## PROCESS FLOW STREAMS:

| | |
|---|---|
| DR | DRAIN |
| FINW | FINISHED WATER |
| OVF | OVERFLOW |
| RW | RAW WATER |
| SAN | SANITARY |
| SPL | SAMPLE |
| VT | VENT |
| FLUO | SODIUM FLUORIDE |
| HYPO | SODIUM HYPOCHLORITE |
| NAOH | SODIUM HYDROXIDE |
| PHOS | POLYPHOSPHATE |

FOR ADDITIONAL RELATED FLOW STREAMS SEE LEGEND SHEETS P-1 AND I-1

## PIPE MATERIALS:

| | |
|---|---|
| CS | CARBON STEEL |
| CU | COPPER |
| DI(FLG) | DUCTILE IRON (FLANGED JOINT) |
| DI(MJ) | DUCTILE IRON (MECHANICAL JOINT) |
| DI(POJ) | DUCTILE IRON (PUSH ON JOINT) |
| PVC(SCH 40) | POLYVINYL CHLORIDE (SCHEDULE 40) |
| PVC(SCH 80) | POLYVINYL CHLORIDE (SCHEDULE 80) |
| PTFE | POLYTETRAFLUOROETHYLENE |
| SS316 | 316 STAINLESS STEEL |

**YARD PIPING NOTES**

1. THE LOCATION OF EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS IS APPROXIMATE, AND THEIR ACTUAL LOCATIONS MAY VARY FROM THAT SHOWN. FURTHER, IT IS NOT WARRANTED THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FEATURES THAT MAY BE AFFECTED BY THE WORK.
2. NEW WATER MAINS SHALL HAVE A MINIMUM COVER OF 4.5 FEET UNLESS OTHERWISE INDICATED AND SHALL PASS UNDER EXISTING UTILITIES AS NECESSARY TO MEET THIS REQUIREMENT.
3. ALL NEW WATER PIPES, INCLUDING FIRE PROTECTION LINES, AND OTHER PRESSURE PIPES INCLUDING FORCE MAINS, SHALL HAVE RESTRAINED JOINTS AS SPECIFIED.
4. TEST PITS SHALL BE DUG TO LOCATE EXISTING PIPES TO WHICH NEW PIPES ARE TO BE CONNECTED, AND WHERE NECESSARY TO DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO PIPES.
6. ABANDONED PIPES, VALVES AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION MAY BE REMOVED AS REQUIRED. PIPES LEFT IN PLACE SHALL BE PLUGGED AND ABANDONED AS SPECIFIED AND AS APPROVED BY THE ENGINEER.
7. WALKWAYS AND PAVEMENTS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED WITHOUT ADDITIONAL EXPENSE BY OWNER.
8. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION BY DIGGING TEST PITS (WHETHER OR NOT INDICATED ON THE DRAWINGS) WHERE UTILITY INFORMATION IS ESSENTIAL.
9. PRIOR TO ANY EXCAVATION WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE DETAILS OF THE PROJECT AREA. THE CONTRACTOR SHALL COORDINATE WITH DEPARTMENT PERSONNEL AND OWNER AND REVIEW ANY DRAWINGS THAT MAY BE AVAILABLE. CONTRACTOR SHALL ENSURE THAT EXISTING UTILITIES WITHIN THE WORK OF THIS CONTRACT ARE NOT DAMAGED, UTILITIES DAMAGED DURING EXCAVATION SHALL BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COST TO OWNER.
10. PERFORM EXCAVATION CLOSE TO EXISTING UTILITIES BY HAND TO DETERMINE EXACT UTILITY LOCATION PRIOR TO INSTALLING EXCAVATION BRACING OR BEFORE MACHINE EXCAVATION.

**GRADING NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING GRADES AND LOCATION OF UTILITIES. MAJOR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. TO ESTABLISH PROPER GRADES, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF GRADE STAKES. THE NUMBER AND LOCATION SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER.

**GENERAL NOTES**

1. BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE MUST BE NOTIFIED CALL "DIG SAFE" 1 (888) 344-7233 HTTP://WWW.DIGSAFE.COM.
2. FOR BORING INFORMATION AND LOCATIONS SEE EXISTING CONDITIONS DRAWINGS AND APPENDIX TO SPECIFICATIONS.
3. THE CONTRACTOR SHALL PREPARE AN EROSION AND SEDIMENT CONTROL PLAN AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS SPECIFIED TO PROTECT THE SITES FROM EROSION AND PREVENT THE MOVEMENT OF SEDIMENT AND DEBRIS. THE SWPPP SHALL BE PREPARED FOR APPROVAL BY STATE AND FEDERAL PERMIT AUTHORITIES AND FOR INFORMATIONAL PURPOSES ONLY BY THE OWNER AND ENGINEER.
4. ALL AREAS OUTSIDE THE LIMIT OF DISTURBANCE SHALL BE PROTECTED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE OWNER AND/OR ENGINEER.
5. ALL MATERIALS TO BE REMOVED WITHIN THE LIMIT OF DISTURBANCE SHALL BE REMOVED TO A LOCATION ARRANGED BY THE CONTRACTOR AND APPROVED BY THE OWNER AND/OR ENGINEER. THE LOCATION OF STOCKPILED TOPSOIL SHALL BE IN AREAS APPROVED BY THE OWNER AND/OR ENGINEER.
6. CONTRACTOR SHALL PROVIDE SITE SECURITY THROUGHOUT CONSTRUCTION PERIOD.
7. WHEN EXCAVATING AROUND EXISTING STRUCTURES, EXCAVATE SOILS UNIFORMLY AROUND THE STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL EXCAVATION LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
8. WHEN BACKFILLING AROUND STRUCTURES, BRING UP BACKFILL UNIFORMLY AROUND STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL BACKFILL LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
9. GAS MAINS ARE ASSUMED TO HAVE THREE FEET OF COVER UNLESS SHOWN OTHERWISE. LOCAL WATER MAINS ARE ASSUMED TO HAVE 5 FEET OF COVER. IT IS NOT WARRANTED THAT ALL UTILITIES ARE SHOWN OR ARE SHOWN AT THE CORRECT ELEVATION.
10. ALL UNDERGROUND SERVICES TO HOUSES ARE NOT SHOWN.
11. BORING LOGS HAVE BEEN APPENDED TO THE SPECIFICATION DOCUMENTS. BORINGS ARE INCLUDED FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT BE SHOWN AT EXACT LOCATIONS.
12. CONTRACTOR SHALL MINIMIZE CLEARING AND GRUBBING AS MUCH AS POSSIBLE. ALL CROSS-COUNTRY AREAS SHALL BE LOAMED AND SEEDED OR SODDED TO THE LIMITS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE NOTED.
13. CONTRACTOR SHALL NOT DISTURB ANY LAND OUTSIDE THE LIMITS OF WORK.
14. WHEN THE HORIZONTAL SEPARATION BETWEEN THE NEW SEWER AND EXISTING OR RELOCATED WATER MAIN IS LESS THAN 10-FT AND THE VERTICAL SEPARATION IS LESS THAN 18-IN THE NEW SEWER SHALL BE CONSTRUCTED OF RESTRAINED MJ DI OR CONCRETE ENCASED PIPE FOR A MINIMUM OF 10-FT BEYOND WHERE THE SPACING IS LESS THAN 10-FT HORIZONTAL AND 18-IN VERTICAL.
15. IF A WATER MAIN CROSSES UNDER THE NEW SEWER, BOTH PIPES SHALL BE RESTRAINED MJ DI OR CONCRETE ENCASED FOR A MINIMUM OF 10-FT TO EITHER SIDE OF THE RESPECTIVE CENTER LINES.
16. IF NECESSARY TO WORK IN LIVE SEWER MANHOLES CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE AND LOCAL REQUIREMENTS FOR SAFETY WHEN IN CONFINED SPACES. THE CONTRACTOR IS ALSO REFERRED TO RECOMMENDATIONS IN THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH PUBLICATION NO. 80-106, "WORKING IN CONFINED SPACES".
17. CONTRACTOR TO MAINTAIN FLOW IN EXISTING DRAINS AT ALL TIMES.
18. IT IS NOT WARRANTED THAT ALL EXISTING ABOVE GROUND AND UNDERGROUND STRUCTURES, EQUIPMENT, PIPING AND ELECTRICAL CONDUITS ARE SHOWN. NOR IS IT WARRANTED THAT LOCATIONS AND SIZES OF STRUCTURES AND UTILITIES ARE EXACT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SIZES AND LOCATIONS OF EXISTING EQUIPMENT, PIPING, ETC. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
19. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED USGS DATUM NAVD88.
20. THE CONTRACTOR SHALL COORDINATE WORK TO ENSURE CONTINUED ACCESS TO ALL EXISTING FACILITY STRUCTURES. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
21. REMOVE AND DISPOSE OF EXISTING PAVEMENT WITHIN LIMITS SHOWN ON DRAWINGS TAKING CARE NOT TO DAMAGE EXISTING WALLS, CURBS, BUILDINGS OR UTILITY STRUCTURES.
22. STRIP EXISTING VEGETATION AND 6" LAYER TOPSOIL WITHIN AREAS OF DISTURBANCE. GRIND ANY STUMPS TO A MINIMUM OF ONE FOOT BELOW FINISH GRADE AND BACKFILL WITH MAX. 12 INCH COMPACTED LAYERS AS SPECIFIED. CONTRACTOR SHALL STOCKPILE STRIPPED TOPSOIL IN A MANNER APPROVED BY THE ENGINEER.
23. EXISTING VERTICAL OR SLOPED GRANITE CURB DISTURBED FOR CONSTRUCTION SHALL BE STOCKPILED AND REINSTALLED AS APPROVED BY THE ENGINEER.
24. ALL BITUMINOUS ROADWAY AND SIDEWALK PAVEMENT AREAS AND ALL CONCRETE SIDEWALK AND OTHER AREAS DISTURBED BY TRENCHING SHALL BE REPAIRED AS SPECIFIED. SELECTED AREAS TO RECEIVE AN OVERPLAY LEVELING COURSE AS DIRECTED BY THE ENGINEER.
25. COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR LIMITING CONSTRUCTION ACTIVITIES NEAR THE GREAT BLUE HERON ROOKERY AREA AND NATURAL DIVERSITY DATABASE (NDDB) STATE-LISTED SPECIES HABITAT. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
26. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
27. ALL OBSERVATION AND MONITORING WELLS ASSOCIATED WITH THE UPPER AND LOWER WELLFIELDS MAY NOT BE SHOWN ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
28. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.
29. THE CONTRACTOR IS PROHIBITED FROM PERFORMING ANY ACTIVITY THAT MAY CAUSE CONTAMINATION TO SOIL AND/OR GROUNDWATER INCLUDING, BUT NOT LIMITED TO, REFUELING, DEGREASING, OR CHANGING OIL OF EQUIPMENT, MACHINERY, OR OTHER VEHICLES, ON THE PROJECT SITE WITHOUT THE INSTALLATION OF A CONTAINMENT UNIT. CONTAINMENT UNITS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO USE AND SHALL NOT BE LOCATED WITHIN REGULATED AREAS OR THEIR BUFFER ZONE.
30. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS INCLUDED IN THE JUNE 2024 ORDER OF CONDITIONS RECIEVED FROM THE BRISTOL CONSERVATION COMMISSION FOR APPLICATION #2020. REFER TO SPECIFICATIONS FOR FURTHER DETAIL.
31. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE CONCRETE SIDEWALK AT THE UPPER WELLFIELD ACCESS ROADWAY ENTRANCE ON MALTBY STREET. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO EXISTING SIDEWALK DURING CONSTRUCTION.
32. CONTRACTOR SHALL IMPLEMENT PROTECTIVE MEASURES TO LIMIT DUST, NOISE, FLYING ROCK, AND OTHER NUISANCES, AS REQUIRED IN THE SUPPLEMENTAL GENERAL CONDITIONS AND SPECIFICATION SECTION 015000.

**LAYOUT NOTES:**

1. CONTRACTOR SHALL VERIFY ALL PROPERTY AND SURVEY INFORMATION.
2. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND PROTECT ALL ON-SITE STRUCTURES AND VEGETATION TO BE RETAINED ON THE SITE THROUGHOUT THE CONSTRUCTION PROJECT.
3. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS AND ALL UTILITY SERVICES THROUGHOUT THE DURATION OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED.
4. LOCATIONS OF BURIED UTILITIES, VAULTS AND CONCRETE PADS ARE APPROXIMATE ONLY. FINAL LOCATIONS SHALL BE DETERMINED IN THE FIELD AFTER STAKING BY THE CONTRACTOR BASED ON ACTUAL SITE CONDITIONS AS APPROVED BY THE OWNER AND/OR ENGINEER.
5. ALL DISTURBED AREAS NOT COVERED WITH PAVEMENT, PADS, CRUSHED STONE, SOD, OR STRUCTURES SHALL RECEIVE 6" LAYER OF LOAM AND SEED AS SPECIFIED, UNLESS NOTED OTHERWISE.
6. DIMENSIONS FOR STRUCTURES ARE TO OUTSIDE FACE OF WALL. DIMENSIONS TO CONCRETE PADS ARE TO EDGE OF PAD. DIMENSIONS TO FENCES AND GATES ARE ON-CENTER.
7. ALL ITEMS TO BE REMOVED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, SHALL BE DISPOSED OFF SITE IN A LEGAL MANNER.
8. CONTRACTOR SHALL LIMIT CONSTRUCTION ACCESS TO AREAS DESIGNATED ON THE DRAWINGS AND AS INDICATED BY THE OWNER.
9. LOCATIONS OF CONCRETE PADS, PAVEMENTS, BOLLARDS, GATES, AND SIGNS ARE APPROXIMATE ONLY. FINAL LOCATIONS SHALL BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY THE ENGINEER.
10. BOUNDARIES OF AREAS TO RECEIVE LOAM & SEED MIXTURES, WASHED STONE, OVERLAY PAVEMENT OR OTHER SURFICIAL MATERIALS ARE FOR SCHEMATIC PURPOSES ONLY. FINAL LOCATIONS SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY THE ENGINEER.
11. THE EXISTING CONDITIONS SHOWN ON THIS BASEMAP ARE THE RESULT OF A GROUND SURVEY INSTRUMENT PERFORMED BY FREEMAN COMPANIES IN 2020.
12. HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED WITH RTK IN 2020. HORIZONTAL DATUM IS BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM NAD-83 - ENGLISH UNITS. VERTICAL DATUM IS CONNECTICUT STATE PLAN COORDINATE SYSTEM NAVD-88 - ENGLISH UNITS.
13. A PORTION OF THE EASTERN PROPERTY LINE ALONG THE COPPERMINE BROOK WAS TAKEN FROM THE DRAWING TITLED "CONSTRUCTION OF MALTBY STREET BRIDGE AND APPROACHES" BY THE CITY OF BRISTOL DEPARTMENT OF ENGINEERING, DATED JANUARY 1978.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT — JEFFREY S. GERSLEY — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LEGEND, ABBREVIATIONS AND GENERAL NOTES

PROJECT NO. 10739-264571
FILE NAME P-ERM-C001GELG.DWG
SHEET NO. P-ERM

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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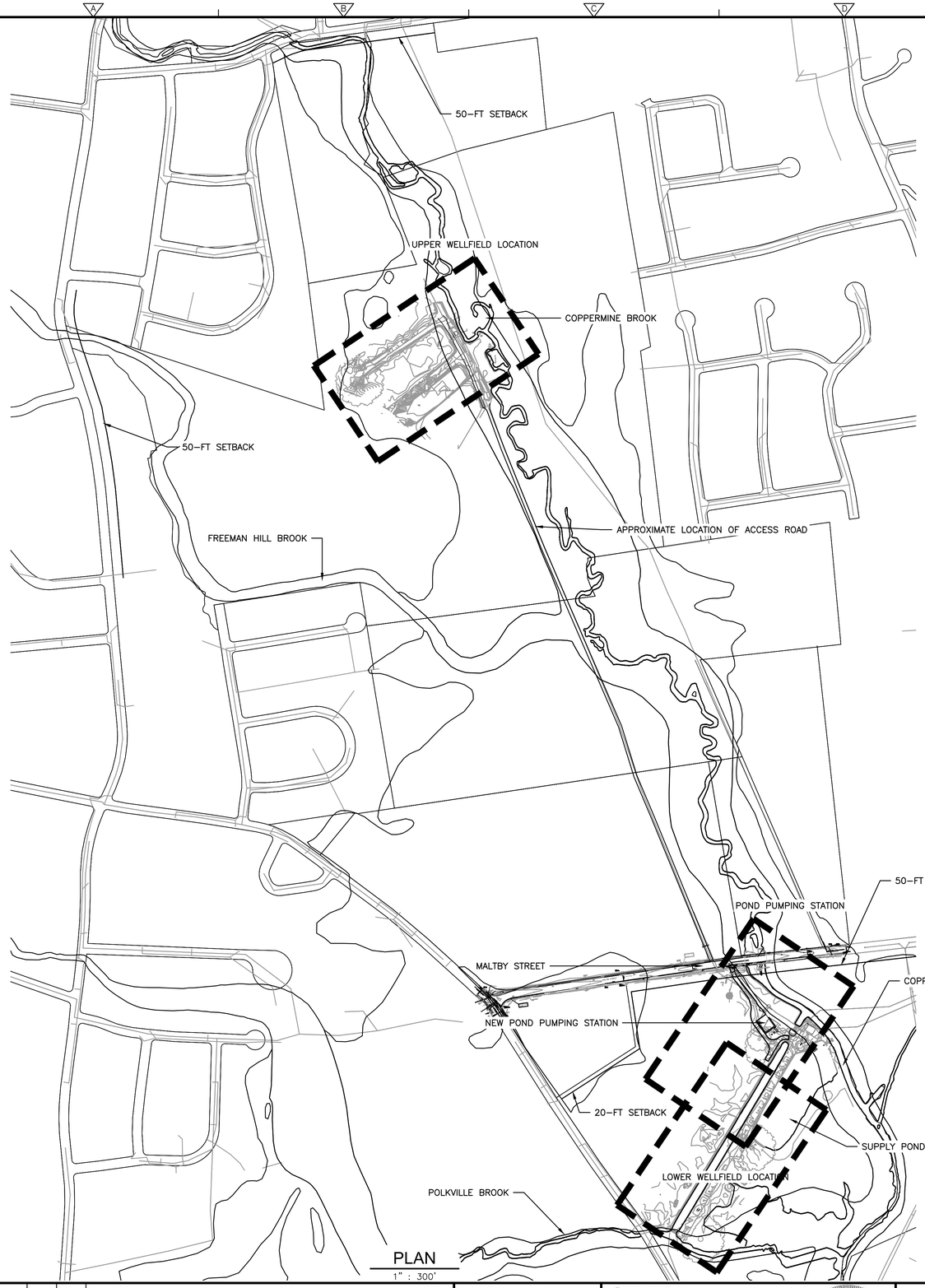


PLAN
1" : 300'




PLAN
N.T.S.

| FLOOD | LOWER WELLFIELD & POND PUMPING STATION ELEVATION (ft) | UPPER WELLFIELD ELEVATION (ft) |
|---|---|---|
| 0.2% ANNUAL CHANCE FLOOD (500 – YR FLOOD) | 256.7 | 259.7 |
| 1% ANNUAL CHANCE FLOOD (100 – YR FLOOD) | 255.9 | 259.0 |
| 2% ANNUAL CHANCE FLOOD (50 – YR FLOOD) | 255.6 | 258.6 |
| 10% ANNUAL CHANCE FLOOD (10 – YR FLOOD) | 253.0 | 258.0 |

NOTE: ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED USGS DATUM NAVD88

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WARD · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

OVERALL SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C002STPL.DWG
SHEET NO.
C-2

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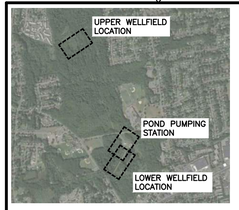


PLAN

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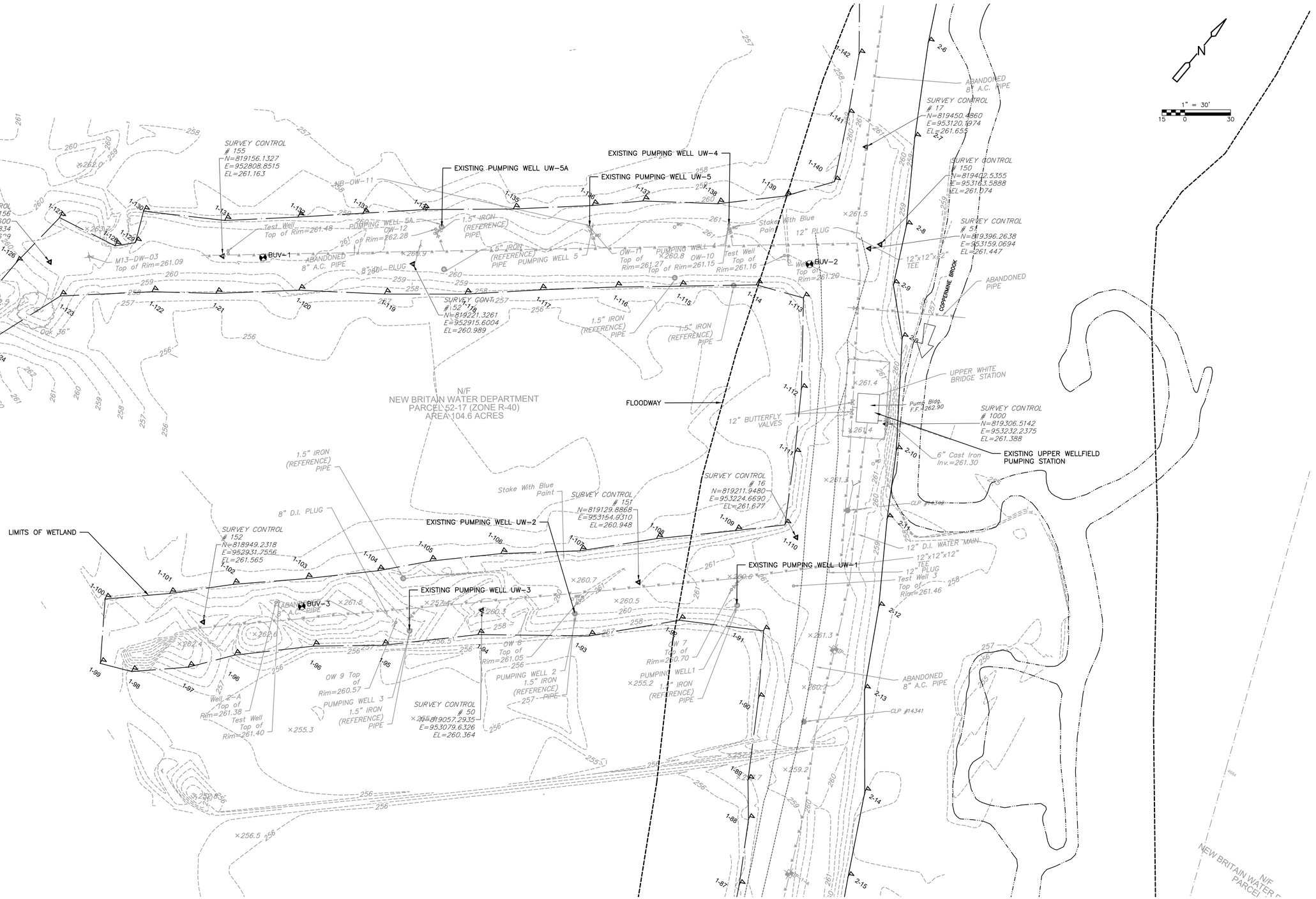


NOTES:

1. AREAS OF THE UPPER WELLFIELD ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
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STATE OF CONNECTICUT · STEVE GERSLEY WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

UPPER WELLFIELD
EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C003STPL.DWG
SHEET NO.
C-3

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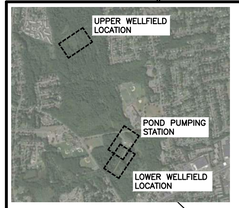


PLAN
N.T.S.

NOTES:

1. AREAS OF THE LOWER WELLFIELD AND POND PUMPING STATION ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G.HOWARD
CROSS CHK'D BY: K. WAGNER
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STATE OF CONNECTICUT — JEFFERSLEY WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## POND PUMPING STATIONS EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C004STPL.DWG
SHEET NO. C-4

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION



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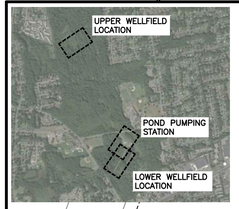
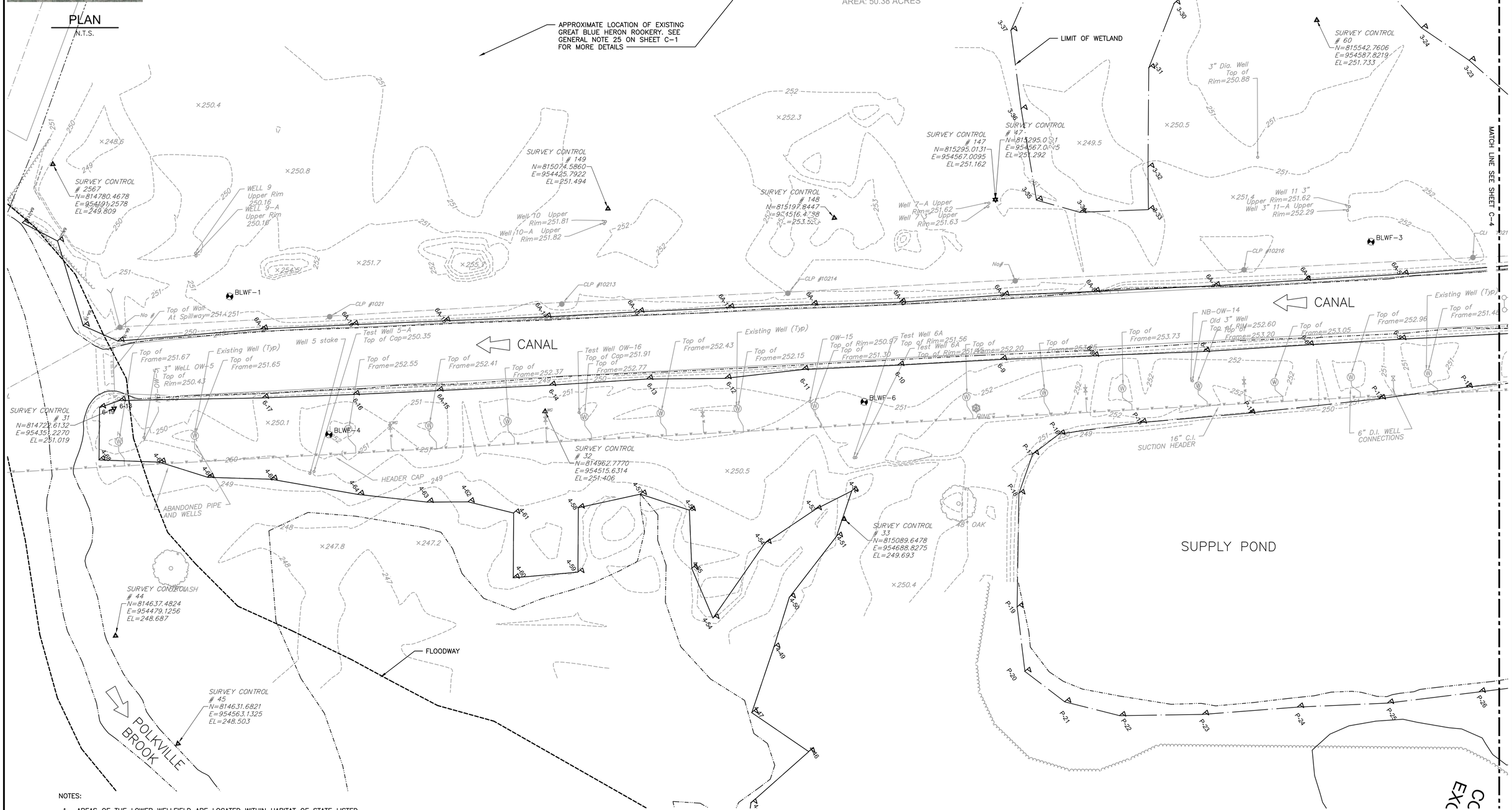



PLAN
N.T.S.




NOTES:

1. AREAS OF THE LOWER WELLFIELD ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT · STEVE GERSLEY WARD · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD
EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C005GDPL.DWG
SHEET NO.
C-5

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

XREFs: [CDMS_2436, CWP000ST, Floodway_Floodplain, AWZ001PS - 2D Process Export, CEP000ST, XSVPL000, BORING LOCATIONS, 2022-17] Images: [Base Image]
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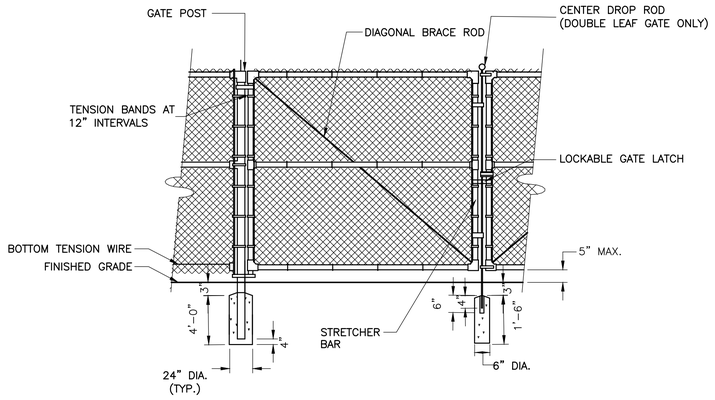
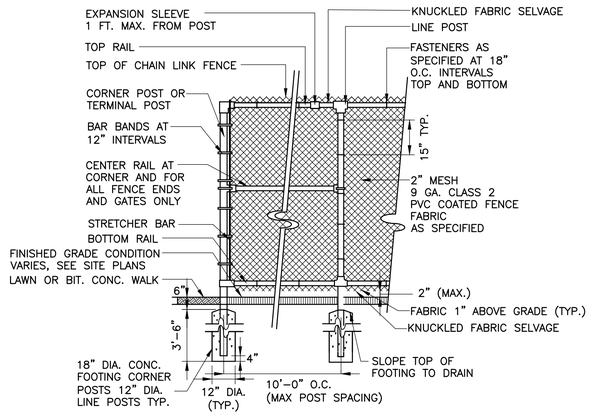



CHAIN LINK DOUBLE LEAF SWING GATE

DETAIL A

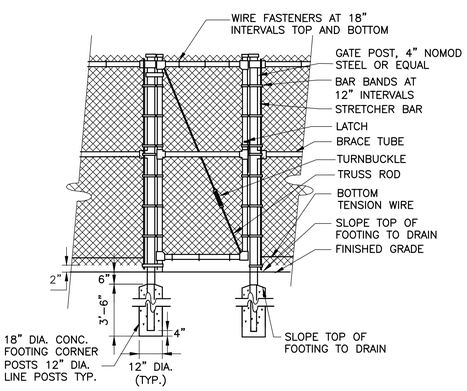
NOT TO SCALE




6.5-FT HIGH CHAIN LINK FENCE

DETAIL B

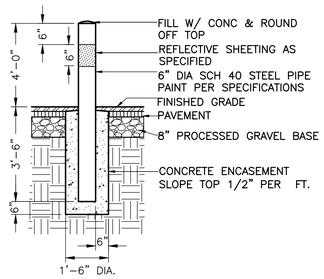
NOT TO SCALE




PEDESTRIAN CHAIN LINK FENCE GATE

DETAIL C

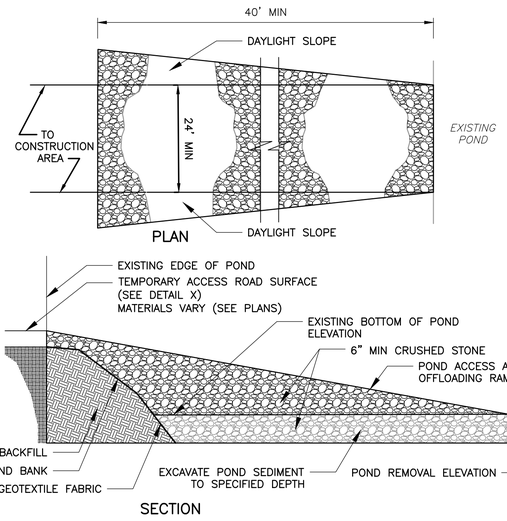
NOT TO SCALE




STEEL BOLLARD

DETAIL D

NOT TO SCALE




SECTION

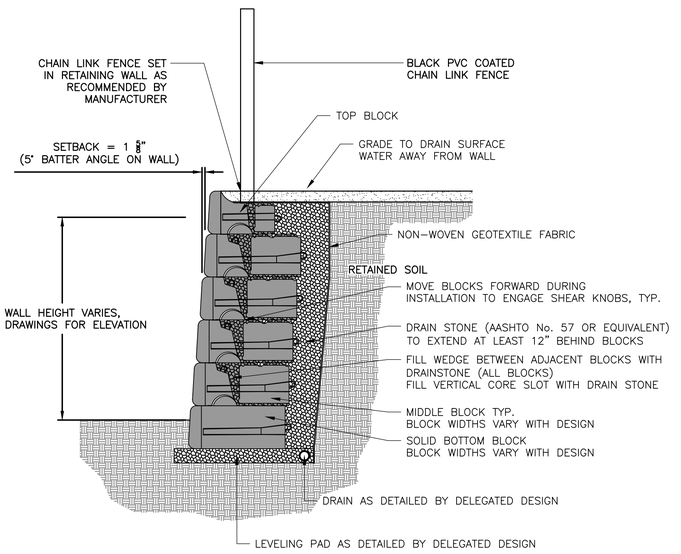
NOTES:

1. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED POND ACCESS/TRUCK OFFLOADING RAMP AND EXISTING GROUND SURFACE
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO GROUND SURFACE.
3. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
4. REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT.
5. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
6. THE SLOPE OF THE POND ACCESS AND OFFLOADING RAMP TO BE DETERMINED BY CONTRACTOR BASED ON SELECTED EQUIPMENT, MEANS AND METHODS, AND APPROVED BY THE ENGINEER.
7. DAYLIGHT SLOPES OF THE RAMP WILL BE INSTALLED AS NEEDED BASED ON THE EXCAVATION DEPTH AND BANK HEIGHT TO MAINTAIN STABILITY OF THE POND ACCESS/OFFLOADING RAMP.
8. ALL MATERIAL FOR POND ACCESS/OFFLOADING RAMP IS TEMPORARY AND WILL BE REMOVED AFTER SEDIMENT REMOVAL COMPLETED. POND BANK TO BE RESTORED PER SPECIFICATIONS.

POND ACCESS AND TRUCK OFFLOADING RAMP

DETAIL F

SCALE: NTS



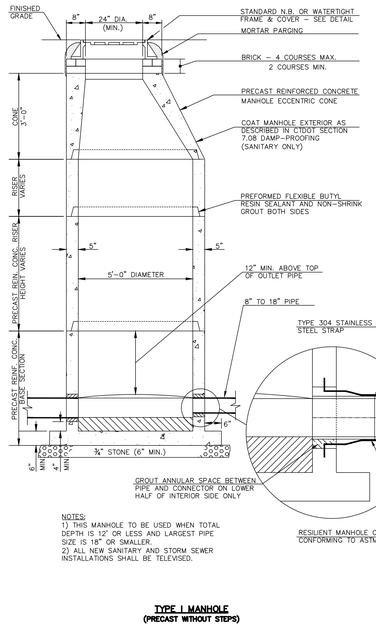

NOTES:

1. SEE SPECIFICATION SECTION 323223 FOR MORE DETAILS. CONTRACTOR TO OBTAIN BUILDING PERMIT FOR SEGMENTAL UNIT RETAINING WALLS GREATER THAN 3 FEET IN HEIGHT.

SEGMENTAL UNIT RETAINING WALL

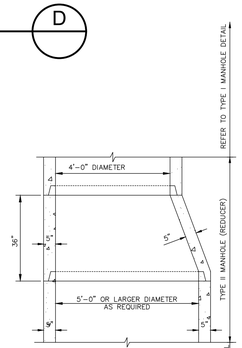
DETAIL E

SCALE: NTS




NOTES:
1) THIS MANHOLE TO BE USED WHEN TOTAL DEPTH IS 12' OR LESS AND LARGEST PIPE SIZE IS 18" OR SMALLER.
2) ALL NEW SANITARY AND STORM SEWER INSTALLATIONS SHALL BE TELEVISED.

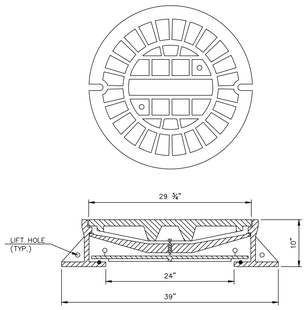
TYPE I MANHOLE
(PRECAST WITHOUT STEPS)




REDUCER SECTION

NOTES:
1) THIS MANHOLE TO BE USED WHEN TOTAL DEPTH IS GREATER THAN 12' OR ANY PIPE SIZE IS GREATER THAN 18".
2) ALL NEW SANITARY AND STORM SEWER INSTALLATIONS SHALL BE TELEVISED.

TYPE II MANHOLE
(PRECAST WITHOUT STEPS)




NEW BRITAIN STANDARD
WATERTIGHT MANHOLE CASTING

MANHOLE

DETAIL G

NOT TO SCALE

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT — JEFFREY WARD — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

CIVIL DETAILS IV

PROJECT NO. 10739-264571
FILE NAME: CD004CSDT.DWG
SHEET NO.
C-27

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.
2. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY KOCH · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION AND COMPENSATORY FLOOD STORAGE PLAN II

PROJECT NO. 10739-264571
FILE NAME: C014STPL.DWG
SHEET NO. SP-01

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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MATCHLINE SHEET C-14

N/F
NEW BRITAIN WATER DEPARTMENT
PARCEL 52-17 (ZONE R-40)
AREA: 104.6 ACRES

PROPERTY LINE

N/F
NEW BRITAIN WATER DEPARTMENT
PARCEL 52-11 (ZONE R-40)
AREA: 49.5 ACRES

FLOODWAY

25-FOOT SIDE YARD SETBACK

PROPERTY LINE

25-FT

PROPOSED LIMIT OF TREE REMOVAL

N/F
NEW BRITAIN WATER DEPARTMENT
PARCEL 53-150 (ZONE R-40)
AREA: 39.9 ACRES

COMPENSATORY FLOOD STORAGE AREA

N/F
NEW BRITAIN WATER DEPARTMENT
PARCEL 53-149 (ZONE R-40)
AREA: 6.8 ACRES

25-FOOT SIDE YARD SETBACK

PROPERTY LINE

25-FT

PROPOSED WETLAND CREATION AND
FLOOD COMPENSATORY STORAGE AREA

378-FT TO MALTBY STREET

N

1" = 100'
50 0 100

NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.
2. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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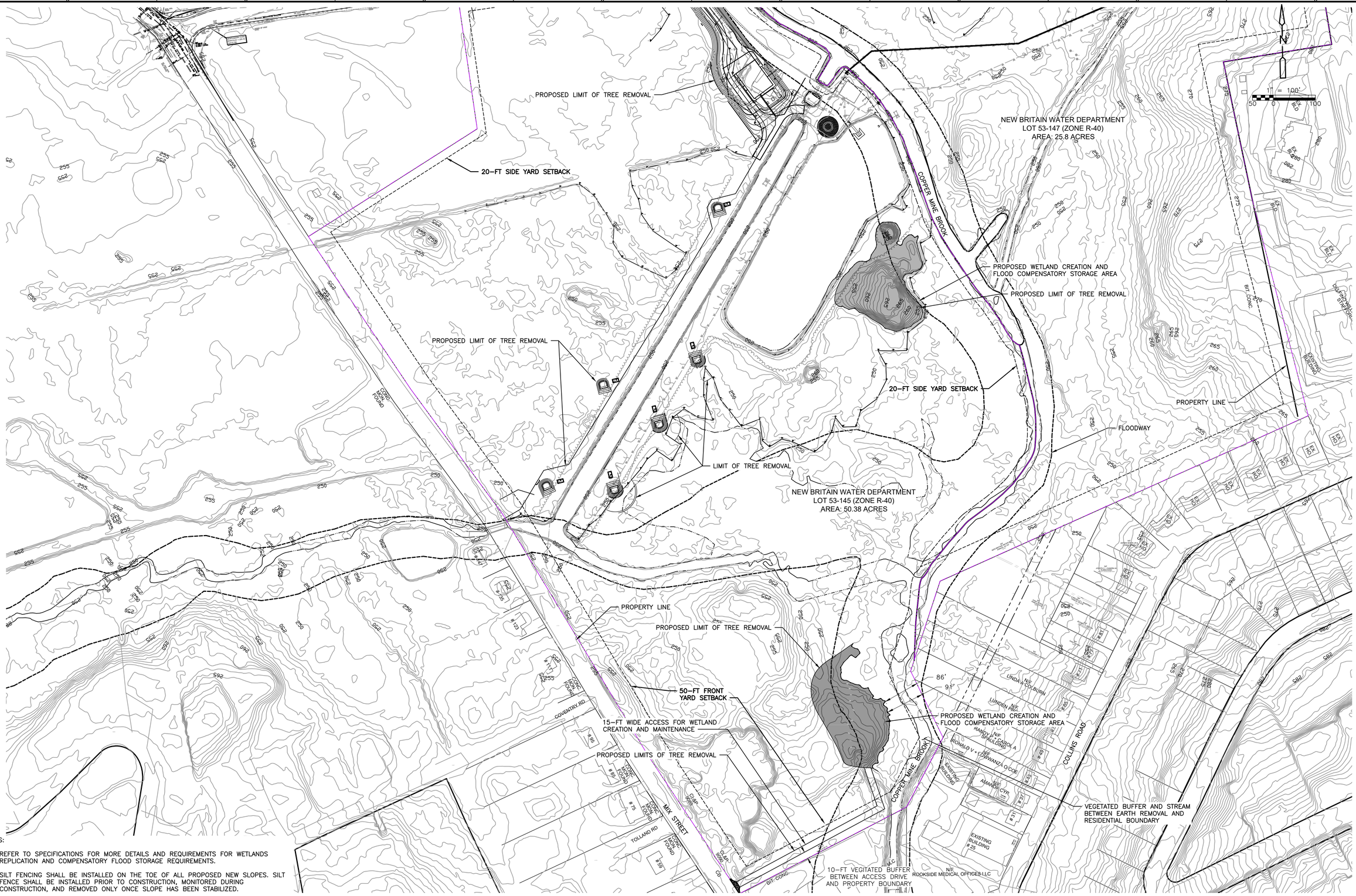
STATE OF CONNECTICUT · BRIAN GERSLEY ROSS · No. 24384 · LICENSED PROFESSIONAL ENGINEER
10-10-24

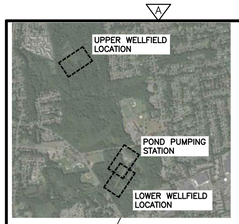
CITY OF NEW BRITAIN, CONNECTICUT
# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

# WETLAND REPLICATION AND COMPENSATORY FLOOD STORAGE PLAN III

PROJECT NO. 10739-264571
FILE NAME: C014STPL.DWG
SHEET NO.
SP-02

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION


PROPOSED LIMIT OF TREE REMOVAL
20-FT SIDE YARD SETBACK
NEW BRITAIN WATER DEPARTMENT
LOT 53-147 (ZONE R-40)
AREA: 25.8 ACRES
COPPER MINE BROOK
PROPOSED WETLAND CREATION AND
FLOOD COMPENSATORY STORAGE AREA
PROPOSED LIMIT OF TREE REMOVAL
PROPOSED LIMIT OF TREE REMOVAL
20-FT SIDE YARD SETBACK
PROPERTY LINE
FLOODWAY
LIMIT OF TREE REMOVAL
NEW BRITAIN WATER DEPARTMENT
LOT 53-145 (ZONE R-40)
AREA: 50.38 ACRES
PROPERTY LINE
PROPOSED LIMIT OF TREE REMOVAL
50-FT FRONT
YARD SETBACK
15-FT WIDE ACCESS FOR WETLAND
CREATION AND MAINTENANCE
PROPOSED WETLAND CREATION AND
FLOOD COMPENSATORY STORAGE AREA
PROPOSED LIMITS OF TREE REMOVAL
COVENTRY RD
MIX STREET
TOLLAND RD
COPPER MINE BROOK
COLLINS ROAD
VEGETATED BUFFER AND STREAM
BETWEEN EARTH REMOVAL AND
RESIDENTIAL BOUNDARY
10-FT VEGITATED BUFFER
BETWEEN ACCESS DRIVE
AND PROPERTY BOUNDARY
ROOKSIDE MEDICAL OFFICES LLC
N/F LINDA A COLBURN
N/F LUNDEN PEG
N/F RANDY L & CAROL A MAULDING
N/F RONALD V + EDWANDA Q COE
N/F AMANDA CYR
EXISTING BUILDING
EXISTING BUILDING
EXISTING BUILDING

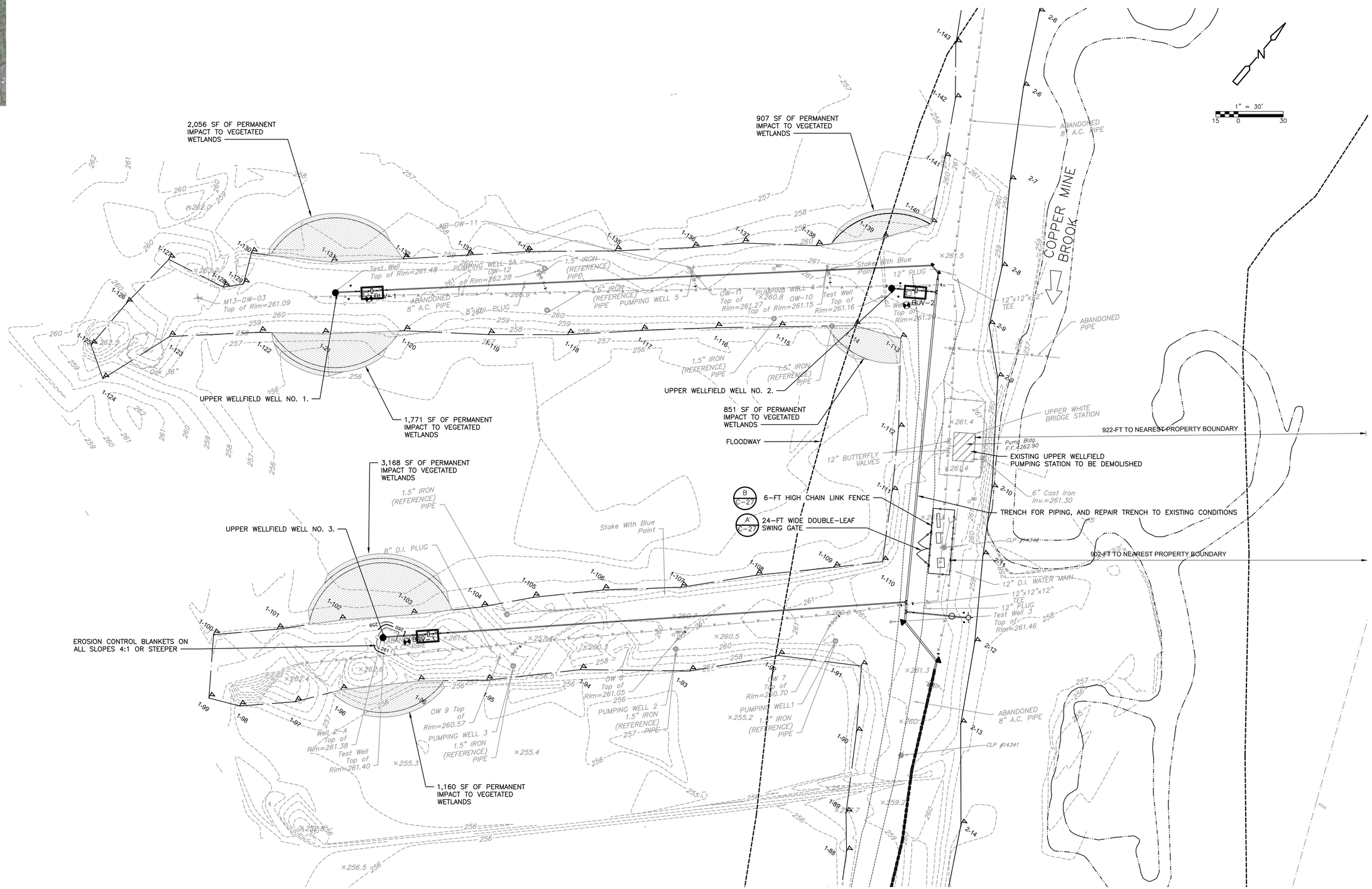



PLAN
N.T.S.

LEGEND

WETLAND FLAG

BORING




| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT · STATE GERSLEY WARD · No. 24384 · LICENSED · PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

UPPER WELLFIELD
SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C009STPL.DWG
SHEET NO.
SP-04

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

XREFs: [CDMS_2436, XSVPL000, Floodway_Floodplain, 2022-17, BORING LOCATIONS, CWP000ST, AWZ001PS - 2D Process Export, CYPWP001] Images: [Base Image]
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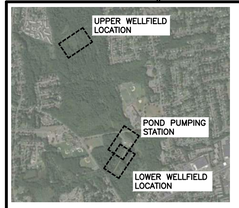


PLAN
N.T.S.

## LEGEND

- BITUMINOUS CONCRETE
- INFILTRATION TRENCH
- CONCRETE WALKWAY
- DETENTION BASIN
- CHAIN LINK FENCE
- STEEL BEAM GUARDRAIL
- WETLAND FLAG
- BORING

| | |
|---|---|
| **Location:** | **(LOT 53-145) MALTBY STREET BRISTOL, CT** |
| **Zone:** | **R-40 RESIDENTIAL ZONE** |
| **Use:** | **PUBLIC WATER UTILITY FACILITY (SPECIAL PERMIT USE)** |

| Item # | Item | Requirements | Proposed | Variance |
|---|---|---|---|---|
| 1 | Minimum Lot Area | 40,000 S.F. | 2,191,068 S.F. | No |
| 2 | Minimum Lot Frontage | 150 feet | 623 feet | No |
| 3 | Minimum Front Yard | 50 feet | 285 feet | No |
| 4 | Minimum Side Yard | 20 feet | 105 feet | No |
| 5 | Minimum Rear Yard | 50 feet | 1,180 feet | No |
| 6 | Maximum Building Height | 35 feet | 25.3 feet | No |
| 7 | Maximum Building Coverage | 20 percent | 0.18 percent | No |
| 8 | Building Size | None Required | 4032 S.F. (Pump Station) | No |
| 9 | Parking Required | N/A[1] | 2 spaces | No |
| 10 | Minimum Parking Dimensions | 9 feet x 18 feet | 10 feet x 18 feet | No |
| 11 | Minimum Aisle Width | 24 feet | 40 feet | No |
| 12 | Minimum Residential Setback | 50 feet | 193 feet | No |
| 13 | Minimum Front Lot Line | 10 feet | 193 feet | No |
| 14 | Minimum Side Setback | 5 feet | 98 feet | No |
| 15 | Minimum Rear Setback | 5 feet | 1,200 feet | No |
| 16 | Landscaping, Curbs, and Islands | N/A (Less than 10 parking spaces) | N/A | N/A |

XREFs: [CDMS_2436, CWP000ST, Floodway, Floodplain, AWZ001PS – 2D Process Export, CEP000ST, XSVPL000, BORING LOCATIONS, 2022-17, CYPWP001] Images: [Base Image]
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|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT — KEVIN M. WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10.10.24

CITY OF NEW BRITAIN, CONNECTICUT
# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## POND PUMPING STATION SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C010GDPL.DWG
SHEET NO. SP-05

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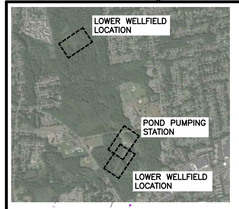


## PLAN
N.T.S.

LEGEND
- WETLAND FLAG
- BORING

N/F
NEW BRITAIN WATER DEPARTMENT
PARCEL 53-145 (ZONE R-40)
AREA: 50.38 ACRES

1" = 30'
15 0 30

N

50-FT FRONT YARD SETBACK
PROPERTY LINE
LIMIT OF TREE CLEARING
LOWER WELLFIELD WELL NO. 1. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
LOWER WELLFIELD WELL NO. 2. TOP OF WELL CAP SET AT ELEVATION 259', SEE SHEET C-16 FOR WELL LOCATION
EROSION CONTROL BLANKETS ON ALL SLOPES 4:1 OR STEEPER
LOAM AND SEED ALL DISTURBED AREAS
B / C-27 6-FT HIGH CHAIN LINK FENCE
C / C-27 6-FT WIDE PEDESTRIAN SWING GATE
LIMIT OF TREE CLEARING
LOWER WELLFIELD WELL NO. 3. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
MATCH LINE SEE PUMPING STATION SHEETS
CANAL
C / C-27 6-FT WIDE PEDESTRIAN SWING GATE
6-FT HIGH CHAIN LINK FENCE B / C-27
LOWER WELLFIELD WELL NO. 6. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
LOWER WELLFIELD WELL NO. 4. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
LOWER WELLFIELD WELL NO. 5. TOP OF WELL CAP SET AT ELEVATION 259'. SEE SHEET C-16 FOR WELL LOCATION
LIMIT OF TREE CLEARING
3,003 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS
LOAM AND SEED ALL WELL BERMS, TYP.
1,320 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS
358 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS
SUPPLY POND
POLKVILLE BROOK
ABANDONED PIPE AND WELLS
HEADER CAP
16" C.I. SUCTION HEADER
6" D.I. WELL CONNECTIONS
52" ASH
48" OAK
3" Dia. Well Top of Rim=250.88
Well 9 Upper Rim 250.16
Well 9-A Upper Rim
Well 10-A Upper Rim=251.42
Well 7-A Upper Rim=251.62
Well 7 Upper Rim=251.63
Well 11-A Upper Rim=252.29
CLP #10213
CLP #10214
CLP #10216
CLP #1021
Test Well 5-A Top of Cap=250.35
Test Well OW-16 Top of Cap=251.91
Test Well 6A Top of Rim=251.56
OW-15 Top of Rim=250.97
3" WELL OW-5 Top of Rim=250.43
NB-OW-14 Old 3" Well Top of Rim=252.60
Top of Wall At Spillway=251.4
Well 5 stake
Existing Well (Typ)
Top of Frame=251.67
Top of Frame=251.65
Top of Frame=252.55
Top of Frame=252.41
Top of Frame=252.37
Top of Frame=252.43
Top of Frame=252.15
Top of Frame=251.30
Top of Frame=252.20
Top of Frame=253.73
Top of Frame=253.05
Top of Frame=252.96
Top of Frame=251.42
Top of Frame=252.77
BLWF-1
BLWF-2
BLWF-3
BLWF-4
BLWF-5
BLWF-6

XREFs: [CDMS_2436_CWP000ST, Floodway_Floodplain, AWZ001PS - 2D Process Export, CEP000ST, XSVPL000, BORING LOCATIONS, 2022-17, CYPWP001, EWP001ST] Images: [Base Image]
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| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

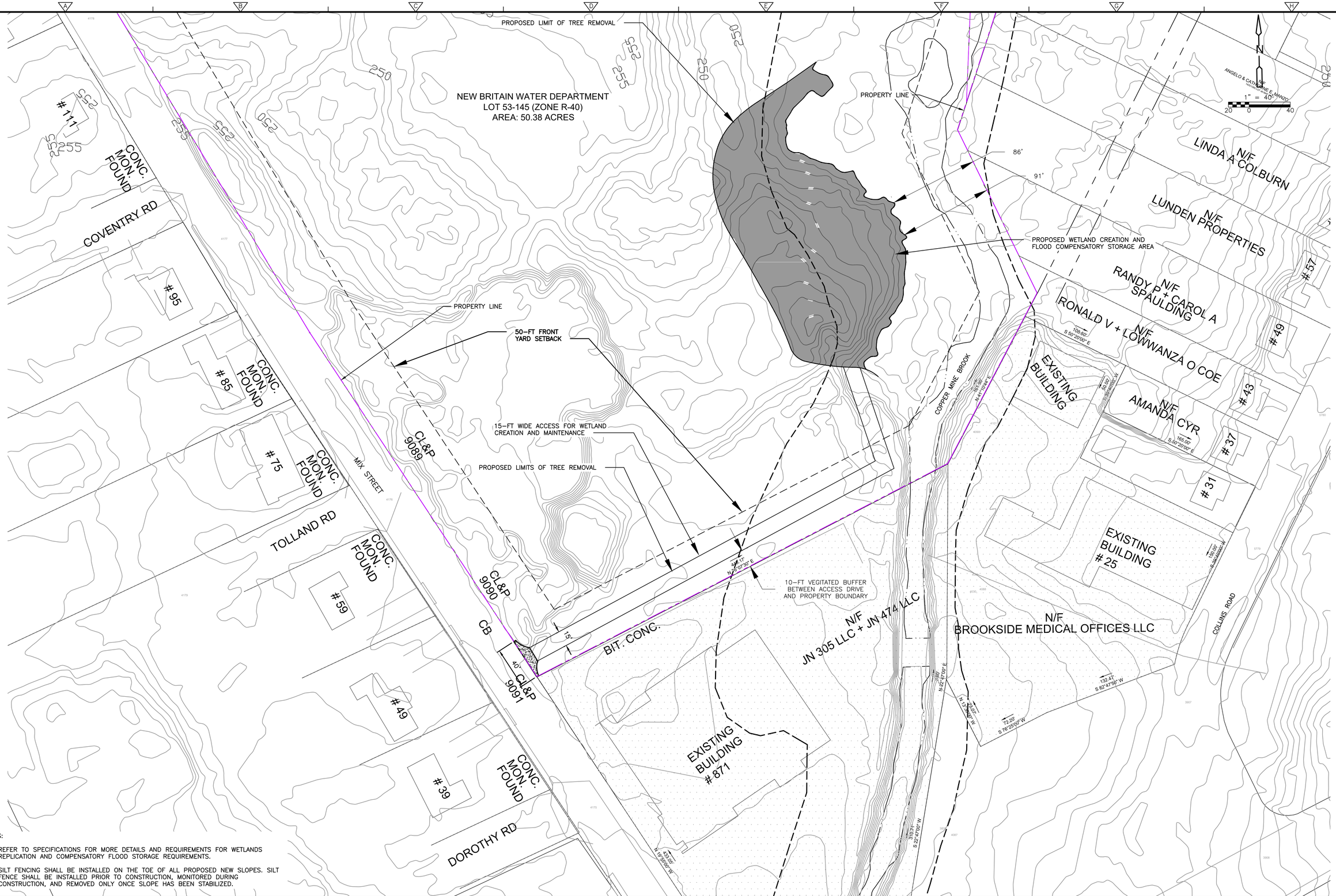
STATE OF CONNECTICUT JEFFERSLEY WATSON No. 24384 LICENSED PROFESSIONAL ENGINEER
10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## LOWER WELLFIELD SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C011GDPL.DWG
SHEET NO. SP-06

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION




NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.
2. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GARLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION AND
COMPENSATORY FLOOD STORAGE
ENLARGED PLAN I

PROJECT NO. 10739-264571
FILE NAME: C013STPL.DWG
SHEET NO.
SP-07

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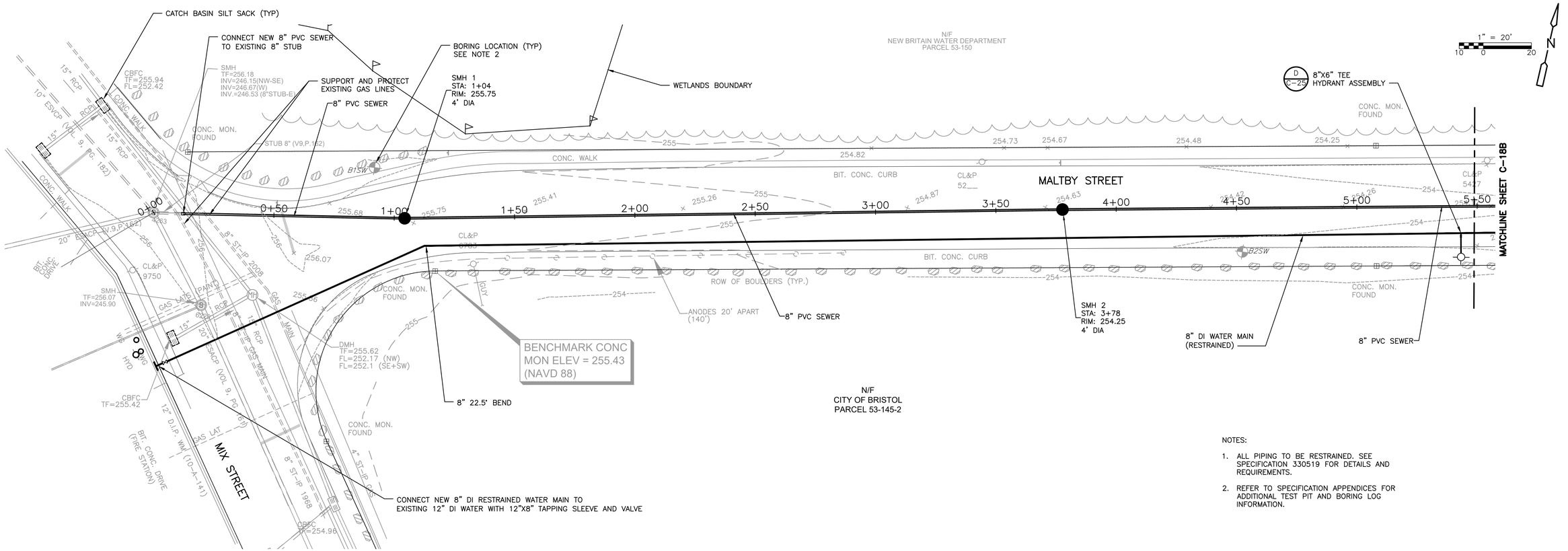
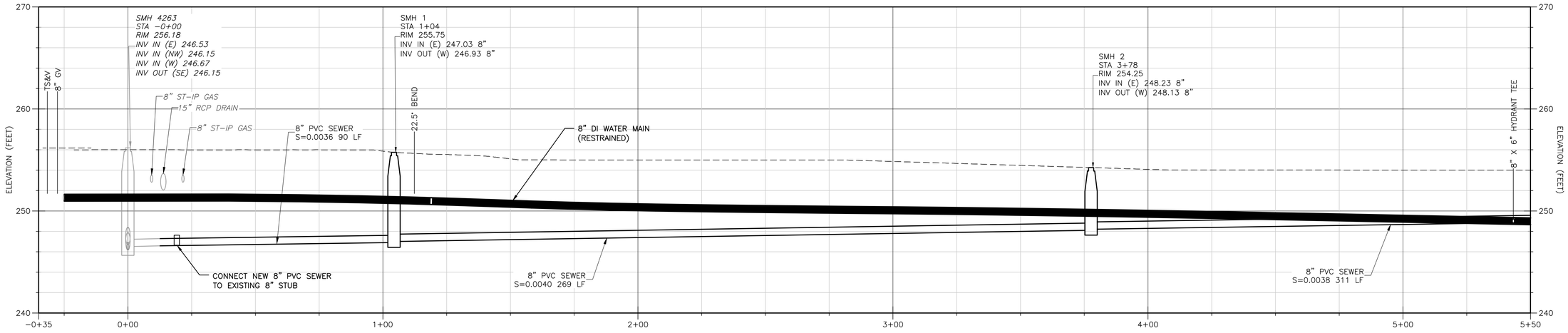



NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.

PLAN
1" = 20'




PROFILE
1" = 20' HORZ:1"=20' VERT:1"=5' 1" = 5'

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

MALTBY STREET
PLAN AND PROFILE I

PROJECT NO. 10739-264571
FILE NAME: C018AYPPL.DWG
SHEET NO.
SP-08

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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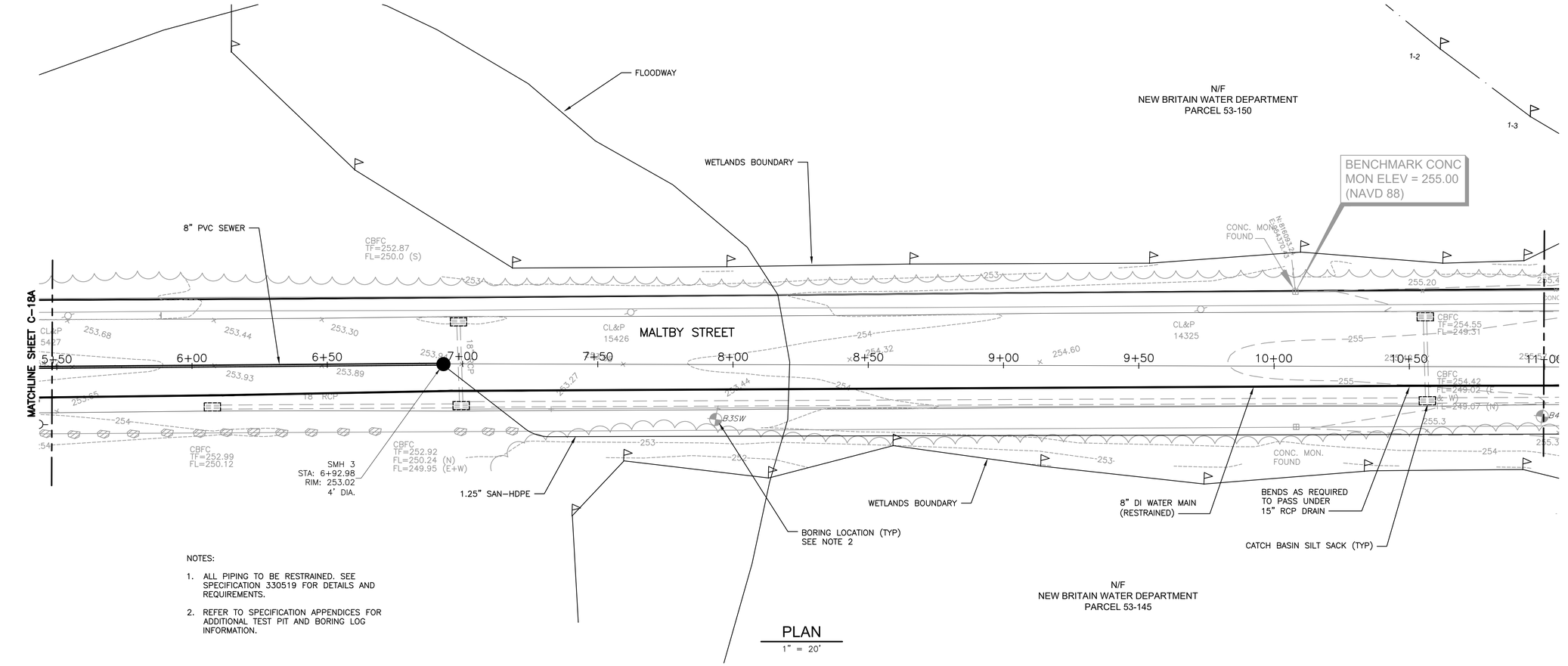
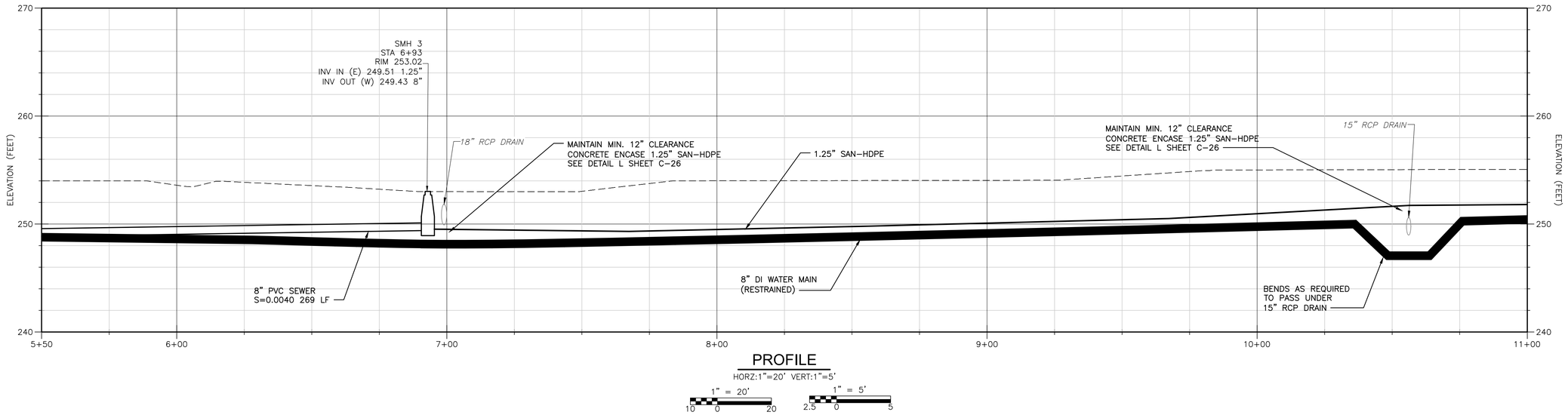



NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.

PLAN
1" = 20'




PROFILE
HORZ:1"=20' VERT:1"=5'
1" = 20' (10 0 20)
1" = 5' (2.5 0 5)

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — JEFFERSLEY WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## MALTBY STREET PLAN AND PROFILE II

PROJECT NO. 10739-264571
FILE NAME: C018BYPPL.DWG
SHEET NO.
SP-09

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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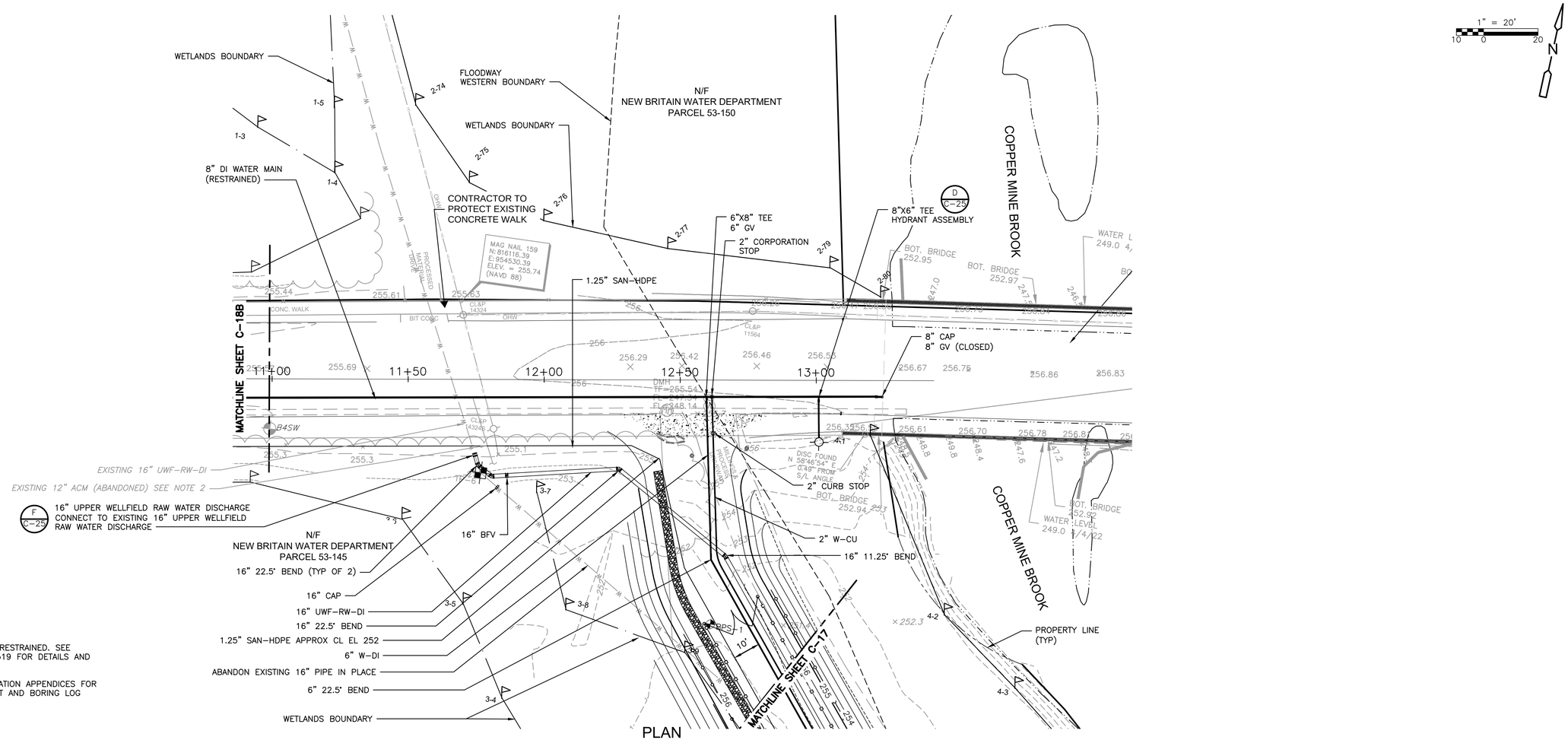
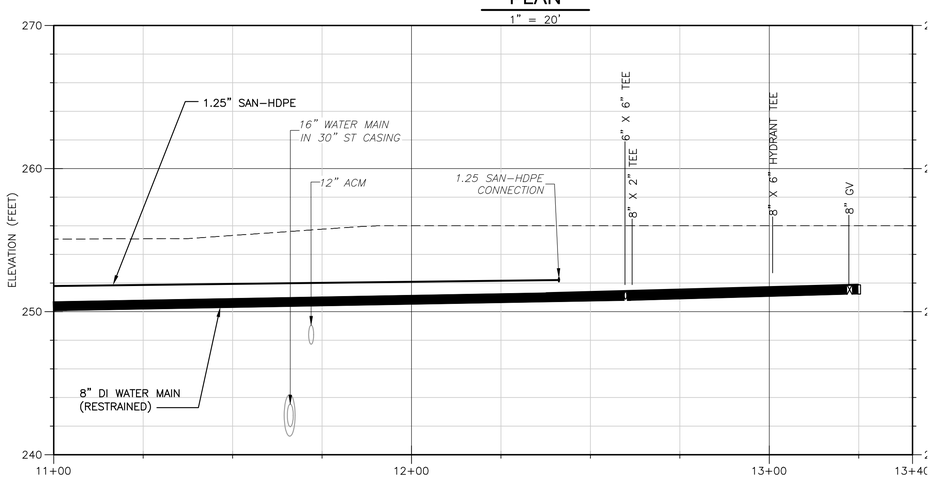



NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.

PLAN

1" = 20'




PROFILE

1" = 20' HORZ:1"=20' VERT:1"=5' 1" = 5'

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

MALTBY STREET
PLAN AND PROFILE III

PROJECT NO. 10739-264571
FILE NAME: C018CYPPL.DWG
SHEET NO.
SP-10

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

XREFs: [CDMS_2436, XSVPL000, CWP000ST, AWZ001PS - 2D Process Export, 2022-17, BORING LOCATIONS-CEI Edits, Floodway_Floodplain, CYPWP002] Images: []
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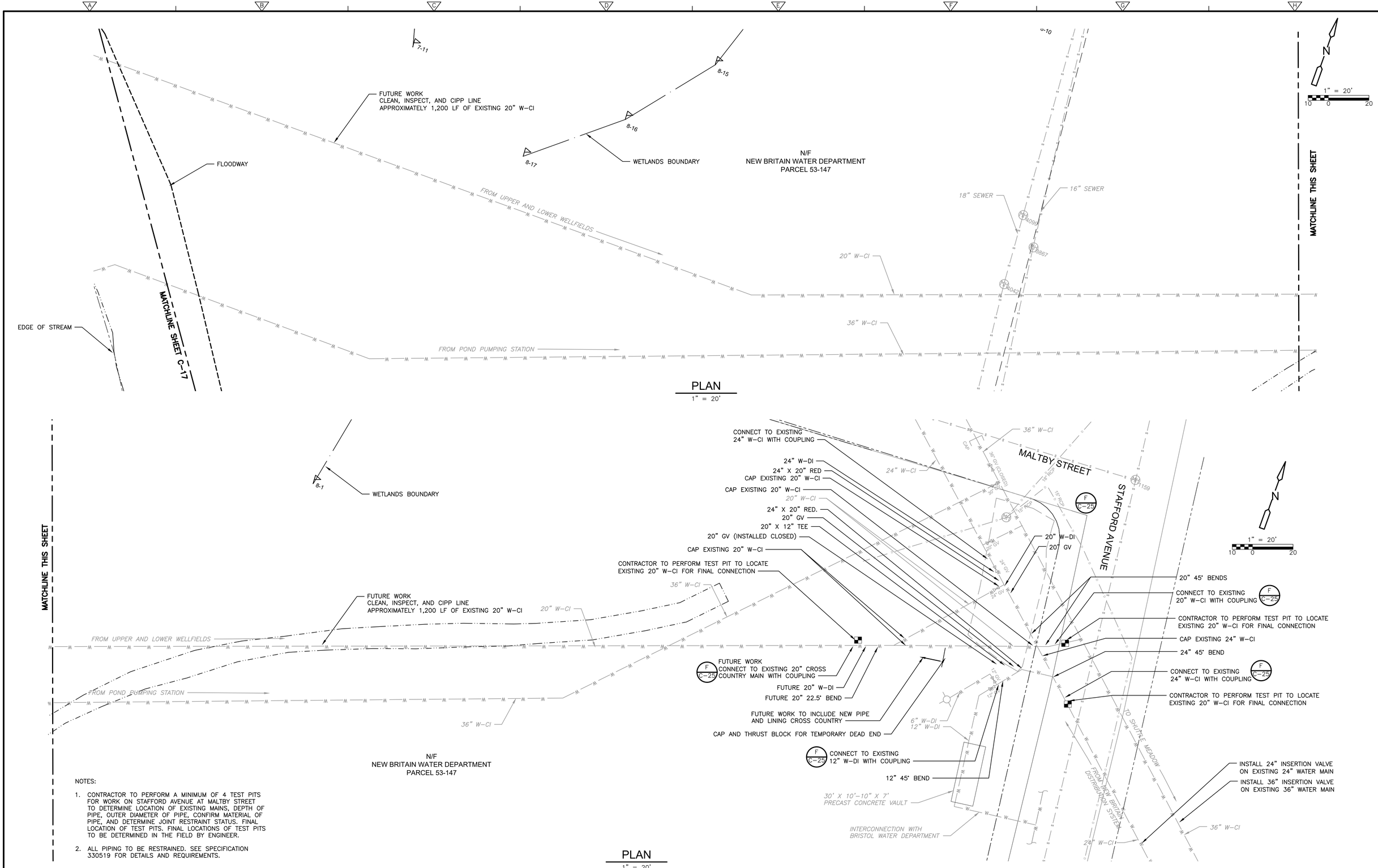


NOTES:

1. CONTRACTOR TO PERFORM A MINIMUM OF 4 TEST PITS FOR WORK ON STAFFORD AVENUE AT MALTBY STREET TO DETERMINE LOCATION OF EXISTING MAINS, DEPTH OF PIPE, OUTER DIAMETER OF PIPE, CONFIRM MATERIAL OF PIPE, AND DETERMINE JOINT RESTRAINT STATUS. FINAL LOCATION OF TEST PITS. FINAL LOCATIONS OF TEST PITS TO BE DETERMINED IN THE FIELD BY ENGINEER.
2. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · KIMBERLY A. WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER
10-10-24

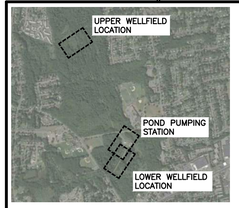
CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## STAFFORD AVENUE AND CROSS COUNTRY PLAN

PROJECT NO. 10739-264571
FILE NAME: C019YPPL.DWG
SHEET NO.
SP-11

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION




PLAN
N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE HEADER PIPE AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. THE EXISTING UPPER WELLFIELD PUMPING STATION BUILDING TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISHED GRADE. THE WESTERN WALL SHALL REMAIN TO AT LEAST 2 FEET BELOW GRADE. BUILDING FOUNDATION TO BE FILLED AND COMPACTED TO EXISTING GRADE. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE SPECIFICATION SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
3. CONTRACTOR TO INSTALL COMPOST SOCK ON BOTH SIDES OF THE UPPER WELLFIELD ACCESS DRIVEWAY (APPROX. 3,200 LF EACH, NOT SHOWN) TO MALTBY STREET. THE EXISTING ACCESS DRIVEWAY BRIDGE CROSSING OF THE FREEMAN HILL BROOK TO BE PROTECTED DURING CONSTRUCTION.
4. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
5. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.



| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — KEVIN BERSLEY WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## UPPER WELLFIELD DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C006STPL.DWG
SHEET NO. SP-12

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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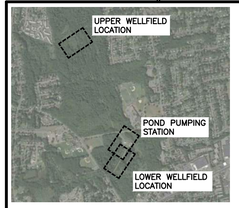


PLAN

N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. EXISTING WELLS WITH WELL HEAD LOCATED IN A VAULT TO HAVE VAULT DEMOLISHED AND REMOVED, WELL HEAD REMOVED TO 5 FEET BELOW BOTTOM OF VAULT, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
3. THE EXISTING POND PUMPING STATION BUILDING TO BE DEMOLISHED AT COMPLETION OF NEW POND PUMPING STATION TO AT LEAST 2 FEET BELOW FINISHED GRADE. THE WESTERN WALL SHALL REMAIN TO AT LEAST 2 FEET BELOW GRADE. BUILDING FOUNDATION TO BE FILLED AND COMPACTED TO EXISTING GRADE. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE SPECIFICATION SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
4. THE EXISTING LOWER WELLFIELD PUMPING STATION BUILDING AND FOUNDATION TO BE DEMOLISHED TO ELEVATION 241.2 FT. EXCAVATION LIMITS FOR THE NEW POND PUMPING STATION BUILDING TO APPROXIMATE MIN ELEVATION 241.2 FT. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE DETAIL B ON SHEET C-26 AND SPECIFICATIONS SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
5. THE EXISTING CAISSON WELL TO BE DECOMMISSIONED AND ABANDONED IN PLACE. THE CONE OF THE EXISTING CAISSON WELL TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISH GRADE. SEE DETAIL B ON SHEET C-28 AND SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF THE EXISTING CAISSON WELL.
6. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
7. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.
8. CONTRACTOR TO REMOVE TREES TO WIDEN ACCESS DRIVE AND PROVIDE ADEQUATE SITE LINES FROM DRIVEWAY ONTO MALTBY STREET.




XREFs: [CDMS_2436, XSVPL000, CEP000ST, CWP000ST, AWZ001PS - 2D Process Export, 2022-17, BORING LOCATIONS, Floodway_Floodplain] Images: [Base Image]
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|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT KEVIN WAGNER No. 24384 LICENSED PROFESSIONAL ENGINEER 10.10.24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C007STPL.DWG
SHEET NO. SP-13

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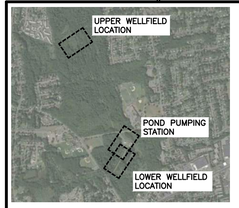



## PLAN

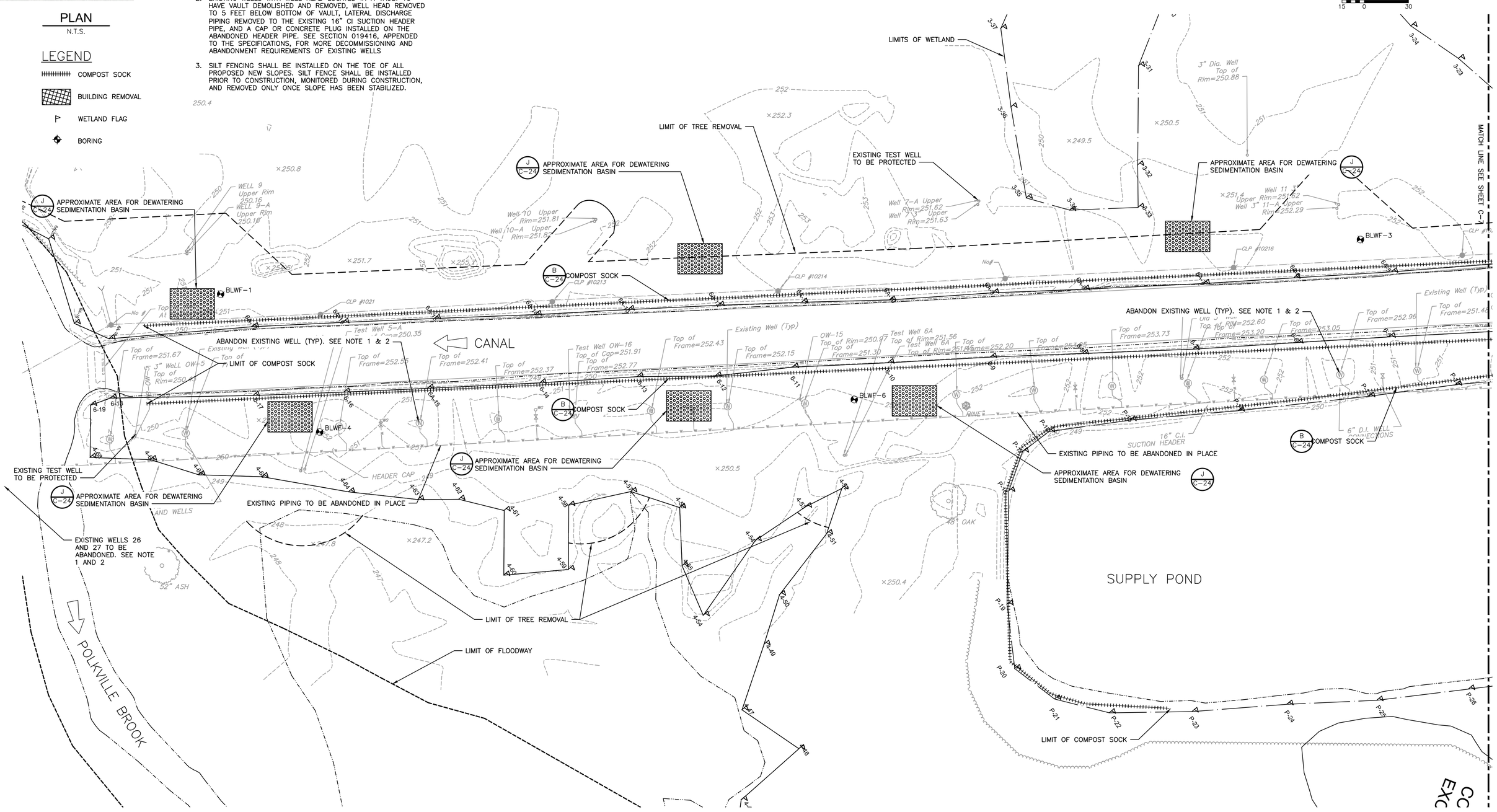
N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. EXISTING WELLS WITH WELL HEAD LOCATED IN A VAULT TO HAVE VAULT DEMOLISHED AND REMOVED, WELL HEAD REMOVED TO 5 FEET BELOW BOTTOM OF VAULT, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS
3. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.




| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
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DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WALSH · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD
DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C008GDPL.DWG
SHEET NO.
SP-14

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION


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## NOTES FOR TRAFFIC CONTROL PLANS

1. IF A TRAFFIC STOPPAGE OCCURS IN ADVANCE OF SIGN (A), THEN AN ADDITIONAL SIGN (A) SHALL BE INSTALLED IN ADVANCE OF THE STOPPAGE.
2. SIGNS (AA), (A), AND (D) SHOULD BE OMITTED WHEN THESE SIGNS HAVE ALREADY BEEN INSTALLED TO DESIGNATE A LARGER WORK ZONE THAN THE WORK ZONE THAT IS ENCOMPASSED ON THIS PLAN.
3. SEE TABLE 1 FOR ADJUSTMENT OF TAPERS IF NECESSARY.
4. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN TRAFFIC DRUMS SHALL BE USED IN PLACE OF TRAFFIC CONES.
5. ANY LEGAL SPEED LIMIT SIGNS WITHIN THE LIMITS OF A ROADWAY / LANE CLOSURE AREA SHALL BE COVERED WITH AN OPAQUE MATERIAL WHILE THE CLOSURE IS IN EFFECT, AND UNCOVERED WHEN THE ROADWAY / LANE CLOSURE IS RE-OPENED TO ALL LANES OF TRAFFIC.
6. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN ANY EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED OR COVERED, AND TEMPORARY PAVEMENT MARKINGS THAT DELINEATE THE PROPER TRAVELPATHS SHALL BE INSTALLED.
7. DISTANCES BETWEEN SIGNS IN THE ADVANCE WARNING AREA MAY BE REDUCED TO 100' ON LOW-SPEED URBAN ROADS (SPEED LIMIT < 40 MPH).
8. IF THIS PLAN IS TO REMAIN IN OPERATION DURING THE HOURS OF DARKNESS, INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.
9. A CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE HALF TO ONE MILE IN ADVANCE OF THE LANE CLOSURE TAPER.
10. SIGN (P) SHALL BE MOUNTED A MINIMUM OF 7 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGN.

TABLE 1 - MINIMUM TAPER LENGTHS

| POSTED SPEED LIMIT (MILES PER HOUR) | MINIMUM TAPER LENGTH FOR A SINGLE LANE CLOSURE |
|---|---|
| 30 OR LESS | 180' (55m) |
| 35 | 250' (75m) |
| 40 | 320' (100m) |
| 45 | 540' (165m) |
| 50 | 600' (180m) |
| 55 | 660' (200m) |
| 65 | 780' (240m) |

METRIC CONVERSION CHART (1" = 25mm)

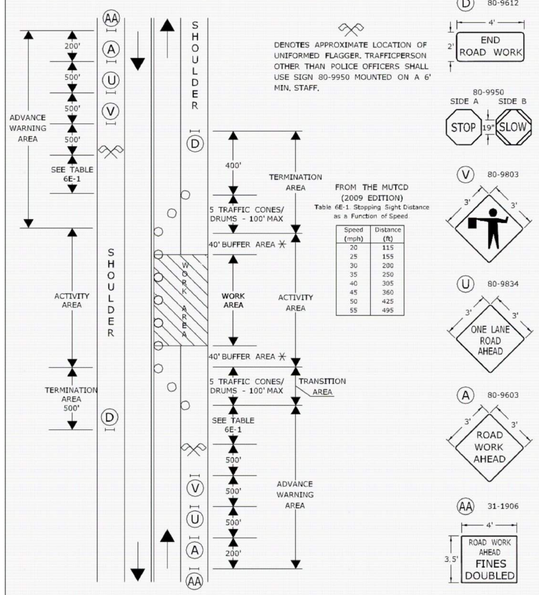
| ENGLISH | METRIC | ENGLISH | METRIC | ENGLISH | METRIC |
|---|---|---|---|---|---|
| 12" | 300mm | 42" | 1050mm | 72" | 1800mm |
| 18" | 450mm | 48" | 1200mm | 78" | 1950mm |
| 24" | 600mm | 54" | 1350mm | 84" | 2100mm |
| 30" | 750mm | 60" | 1500mm | 90" | 2250mm |
| 36" | 900mm | 66" | 1650mm | 96" | 2400mm |

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
NOTES

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT (MIN.)




TRAFFIC CONE **OR** TRAFFIC DRUM
OPTIONAL TRAFFIC DRUM PORTABLE SIGN SUPPORT
HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 1 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT (MIN.)

HAND SIGNAL METHODS TO BE USED BY UNIFORMED FLAGGERS

THE FOLLOWING METHODS FROM SECTION 6E.07, FLAGGER PROCEDURES, IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," SHALL BE USED BY UNIFORMED FLAGGERS WHEN DIRECTING TRAFFIC THROUGH A WORK AREA. THE STOP/SLOW SIGN PADDLE (SIGN NO. 80-9950) SHOWN ON THE TRAFFIC STANDARD SHEET TR-1220 01 ENTITLED, "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" SHALL BE USED.

A. TO STOP TRAFFIC

TO STOP ROAD USERS, THE FLAGGER SHALL FACE ROAD USERS AND AIM THE STOP PADDLE FACE TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FREE ARM SHALL BE HELD WITH THE PALM OF THE HAND ABOVE SHOULDER LEVEL TOWARD APPROACHING TRAFFIC.




B. TO DIRECT TRAFFIC TO PROCEED

TO DIRECT STOPPED ROAD USERS TO PROCEED, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FLAGGER SHALL MOTION WITH THE FREE HAND FOR ROAD USERS TO PROCEED.




C. TO ALERT OR SLOW TRAFFIC

TO ALERT OR SLOW TRAFFIC, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.



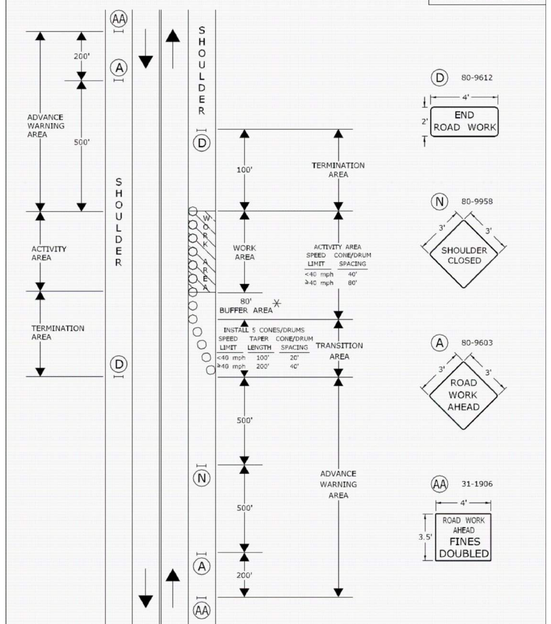

TRAFFIC CONE **OR** TRAFFIC DRUM
OPTIONAL TRAFFIC DRUM PORTABLE SIGN SUPPORT
HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN SHOULDER - TWO LANE HIGHWAY

SIGN FACE 71 SQ. FT (MIN.)



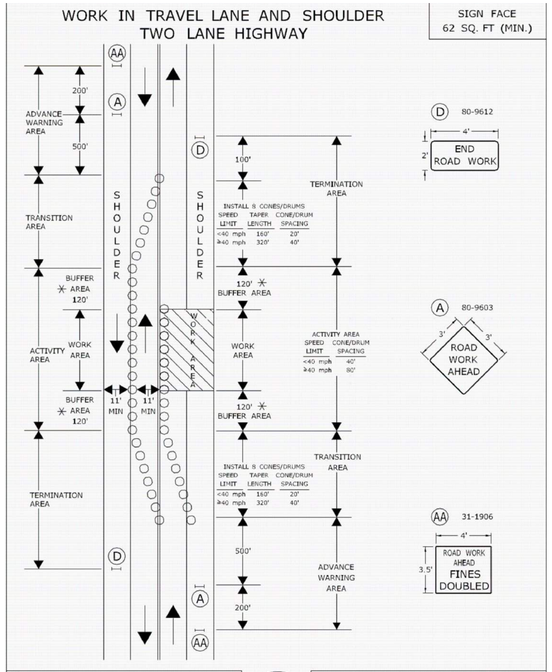

TRAFFIC CONE **OR** TRAFFIC DRUM
OPTIONAL TRAFFIC DRUM PORTABLE SIGN SUPPORT
HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 14
SEE NOTES 1, 2, 4, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY

SIGN FACE 62 SQ. FT (MIN.)



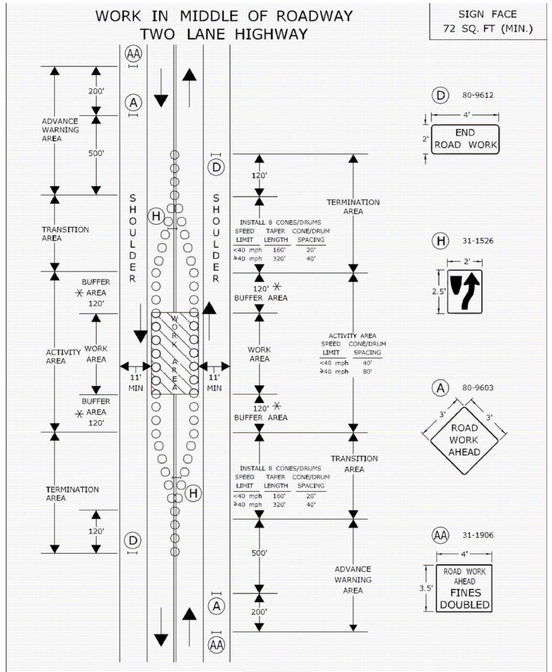

TRAFFIC CONE **OR** TRAFFIC DRUM
OPTIONAL TRAFFIC DRUM PORTABLE SIGN SUPPORT
HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 15
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN MIDDLE OF ROADWAY TWO LANE HIGHWAY

SIGN FACE 72 SQ. FT (MIN.)



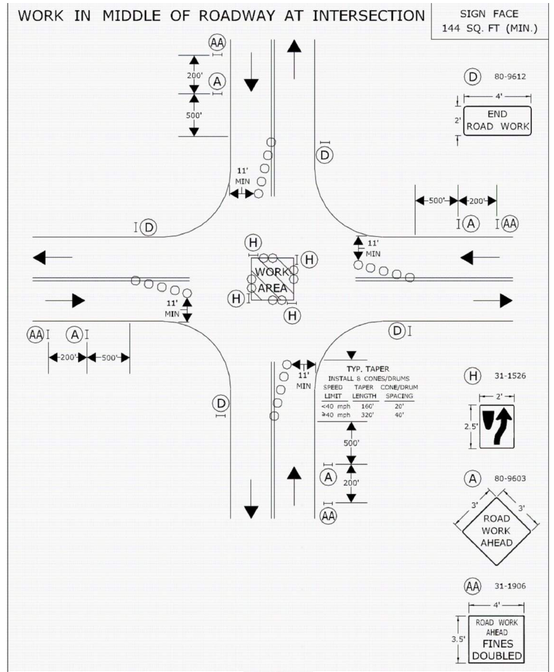

TRAFFIC CONE **OR** TRAFFIC DRUM
OPTIONAL TRAFFIC DRUM PORTABLE SIGN SUPPORT
HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 16
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN MIDDLE OF ROADWAY AT INTERSECTION

SIGN FACE 144 SQ. FT (MIN.)



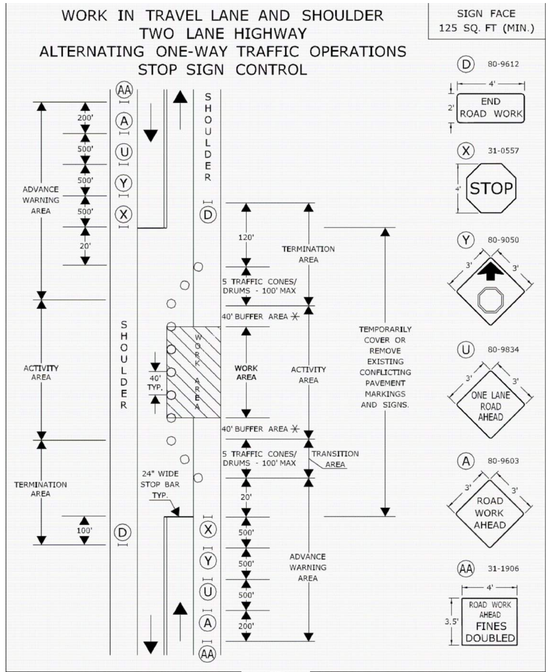

TRAFFIC CONE **OR** TRAFFIC DRUM
OPTIONAL TRAFFIC DRUM PORTABLE SIGN SUPPORT
HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 17
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS STOP SIGN CONTROL

SIGN FACE 125 SQ. FT (MIN.)




TRAFFIC CONE **OR** TRAFFIC DRUM
OPTIONAL TRAFFIC DRUM PORTABLE SIGN SUPPORT
HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 18
SEE NOTES 1, 2, 4, 7, 8

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
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DATE: DECEMBER 2023


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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

TRAFFIC CONTROL NOTES AND PLANS

PROJECT NO. 10739-264571
FILE NAME: C029TRFC.DWG
SHEET NO. C-29

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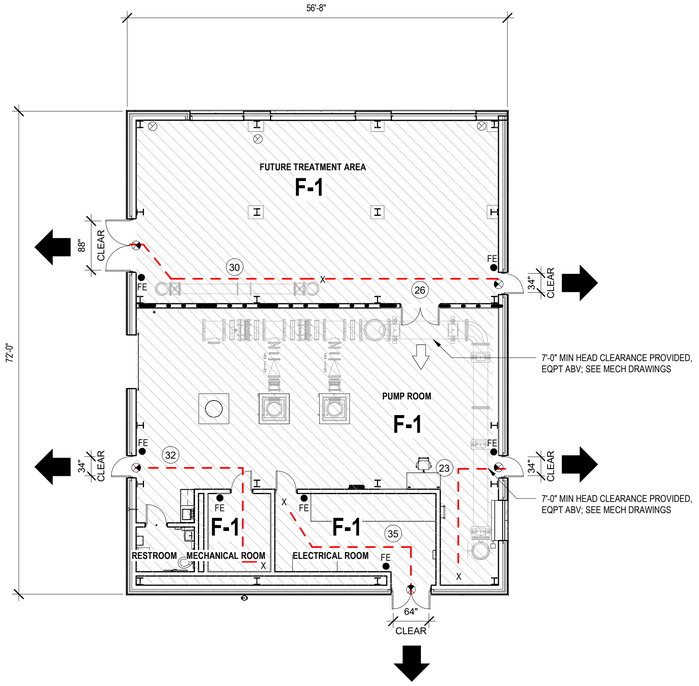
# Elevation Drawings and Floor Plans

Include in hard copy submittal




LIFE SAFETY PLAN

3/32" = 1'-0"

## LIFE SAFETY PLAN LEGEND

- EGRESS PATH
- 2 HOUR FIRE RATING
- EXIT DISCHARGE
- AREA OR SPACE EXIT
- EXIT SIGN
- FE — FIRE EXTINGUISHER - MULTIPURPOSE DRY-CHEMICAL TYPE
- (X) — TRAVEL DISTANCE (FEET)
- [X] — COMMON PATH OF TRAVEL (FEET)
- X — POINT OF ORIGIN
- FACTORY INDUSTRIAL, F-1 OCCUPANCY CLASSIFICATION

| Building Code Summary | | | |
|---|---|---|---|
| **Owner:** | City of New Britain, Connecticut | **Date:** | April 2023 |
| **Project Name:** | White Bridge Waterworks Facilities | **Location:** | New Britain, CT |
| **Project No:** | 10739-264571 | **Architect of Record:** | CDM Architects Inc. |
| **Building Name:** | Pond Pumping Station | | |
| **Work Scope:** | Construction of pump station (New Structure) | | |
| **Applicable Ordinances, Codes, and Standards** | | | |
| **Abbreviations** | **ICC** - International Code Council; **IBC** - International Building Code; **IEBC** - International Existing Building Code; **IECC** - International Energy Conservation Code; **IFC** - International Fire Code; **IMC** - International Mechanical Code; **IPC** - International Plumbing Code; | | |
| **Building Code** | 2022 CT State Building Code - 2021 IBC | | |
| **Mechanical Code** | 2022 CT State Building Code - 2021 IMC | | |
| **Energy Code** | 2022 CT State Building Code - 2021 IECC | | |
| **Plumbing Code** | 2022 CT State Building Code - 2021 IPC | | |
| **Electrical Code** | 2020 National Electrical Code (NFPA 70) | | |
| **Accessibility Code** | 2017 ICC A117.1 | | |
| **Use and Occupancy Classification** | | | |
| *IBC Code Reference* | | | |
| Chapter 3 | | | |
| Section 306 | Factory Group F | | |
| 306.2 | Moderate-hazard factory industrial, Group F-1 | | |
| **General Building Heights and Areas** | | | |
| Chapter 5 | | | |
| Section 504 | Building Height and Number of Stories | | |
| Table 504.3 | Allowable Building Height in Feet Above Grade Plane | Allowable | Proposed |
| | Group F-1 Type IIB - No Sprinklers | 55 Feet | 25 Feet, 10 Inches |
| Table 504.4 | Allowable Number of Stories Above Grade Plane | | |
| | Group F-1 Type IIB - No Sprinklers | 2 Stories | 1 Story |
| Section 506 | Building Area | | |
| Table 506.2 | Allowable Area Factor in Square Feet | | |
| | Group F-1 Type IIB - No Sprinklers | 15,500 SF | 4,085 SF |
| **Types of Construction** | | | |
| Chapter 6 | | | |
| Section 602 | Construction Classification | | |
| 602.2 | Types I and II, Non Combustible | Type IIB Construction | |
| **Fire Protection and Life Safety Systems** | | | |
| Chapter 9 | | | |
| Section 903 | Automatic Sprinkler Systems | Not required for Group F-1 occupancy:<br>1. Fire area under 12,000 square feet.<br>2. Fire area not located more than three stories above grade plane.<br>3. Combined area of all F-1 fire areas under 24,000 square feet. | |
| Section 906 | Portable Fire Extinguishers | Required in accordance to 906.2 and NFPA 10 | |
| Section 907<br>907.2.4 | Fire Alarm and Detection Systems<br>Group F | Not required for Group F-1 occupancy<br>1. F occupancy under two stories in height.<br>2. F occupancy has occupant load under 500. | |
| **Means of Egress** | | | |
| Chapter 10 | | | |
| Section 1004 | Occupant Load | | |
| Table 1004.5 | Maximum Floor Area Allowances per Occupant | | |
| | Function of Space | Occupant Load Factor | Area / Occupant Load Factor |
| | Accessory storage areas, mechanical equipment room | 300 gross | (4,085 / 300) = 14 |
| Section 1010 | Doors, Gates and Turnstiles | Required | Proposed |
| 1010.1.1 | Size of doors | Minimum clear width: 32 inches | 34 inches |
| Section 1017 | Exit Access Travel Distance | | |
| Table 1017.2 | Occupancy | without Sprinklers (feet) | with Sprinklers (feet) |
| | F-1 | 200 | N/A |
| **Accessibility** | | | |
| Chapter 11 | | | |
| Section 1103 | Scoping Requirements | | |
| 1103.2.9 | Equipment spaces are not required to comply with this chapter | | |
| **Energy Efficiency** | | | |
| Chapter 13 | | | |
| Section 1301 | General | | |
| 1301.1.1 | Building designed and constructed in accordnace with the IECC with compliance requirements indicated in COMcheck report | | |

0 4' 8' 12' 20'

SCALE: 3/32" = 1'-0"

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

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DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: B. GIORGI
DATE: APRIL 2023

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75 State Street
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CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
BUILDING CODE SUMMARY AND LIFE SAFETY PLAN

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT
SHEET NO. A-2

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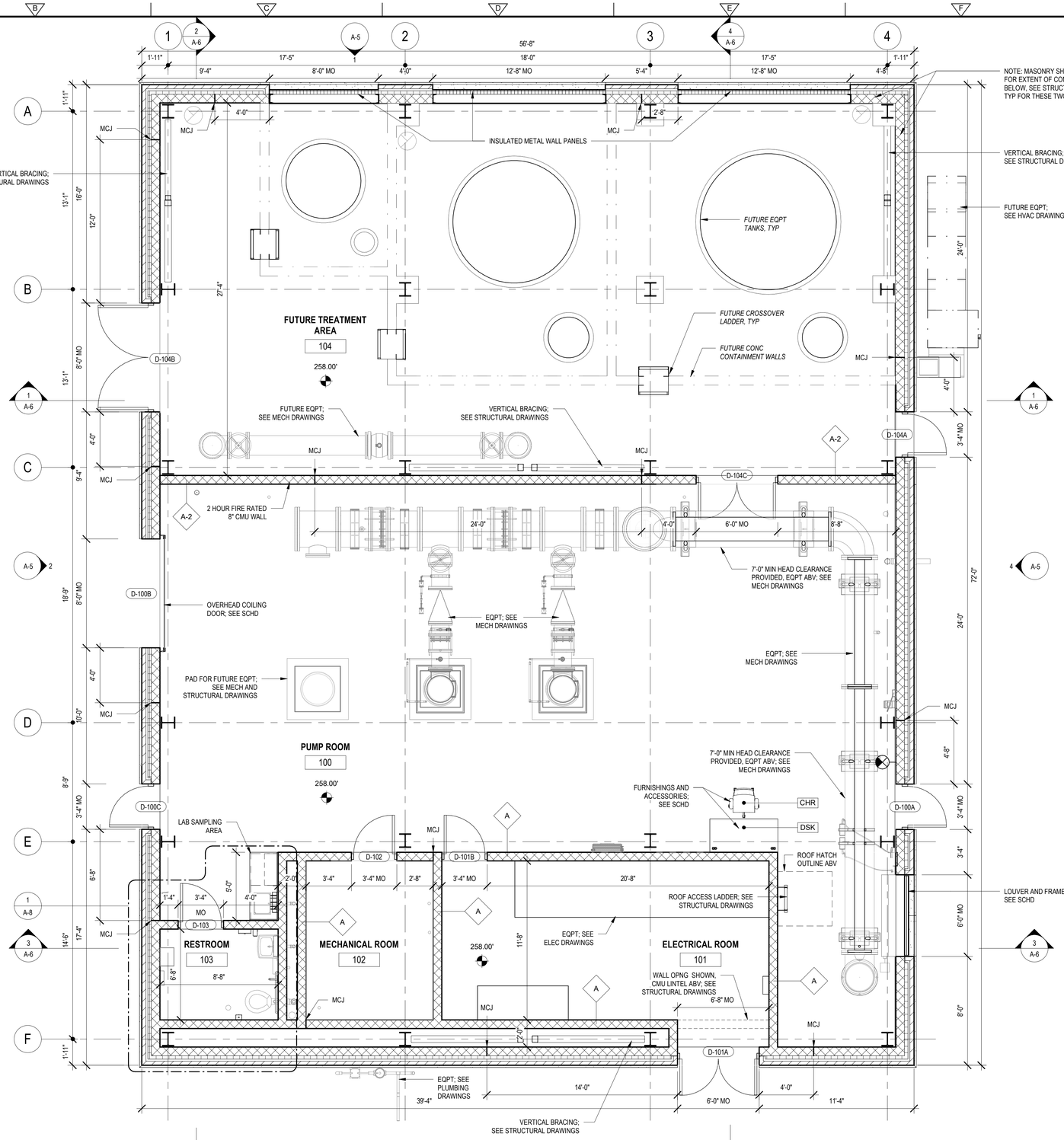


GROUND LEVEL FLOOR PLAN

1/4" = 1'-0"

0 2' 4' 8'

SCALE: 1/4" = 1'-0"

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CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
FLOOR PLAN

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-3

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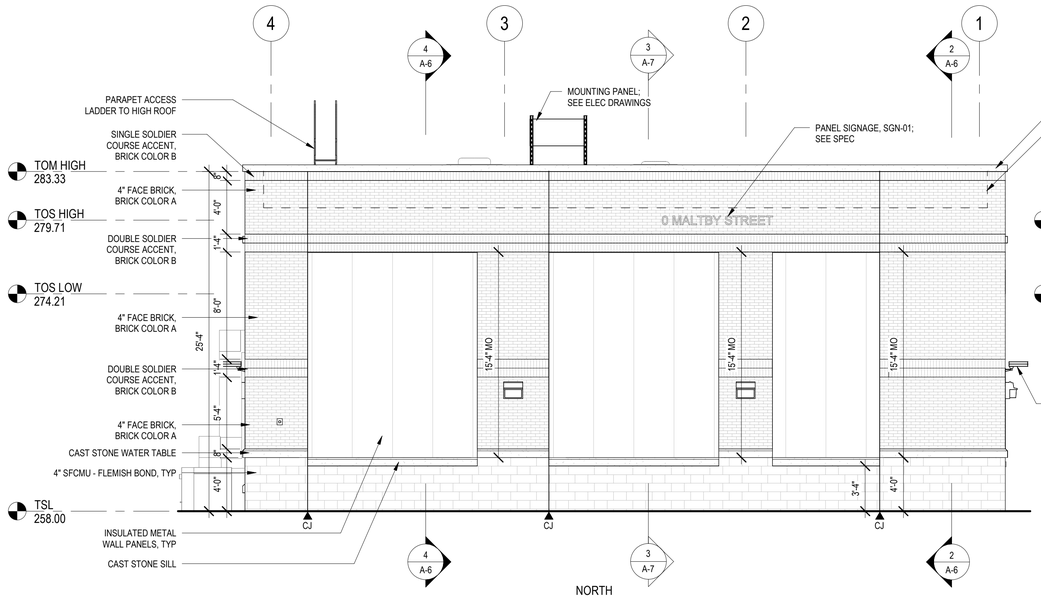
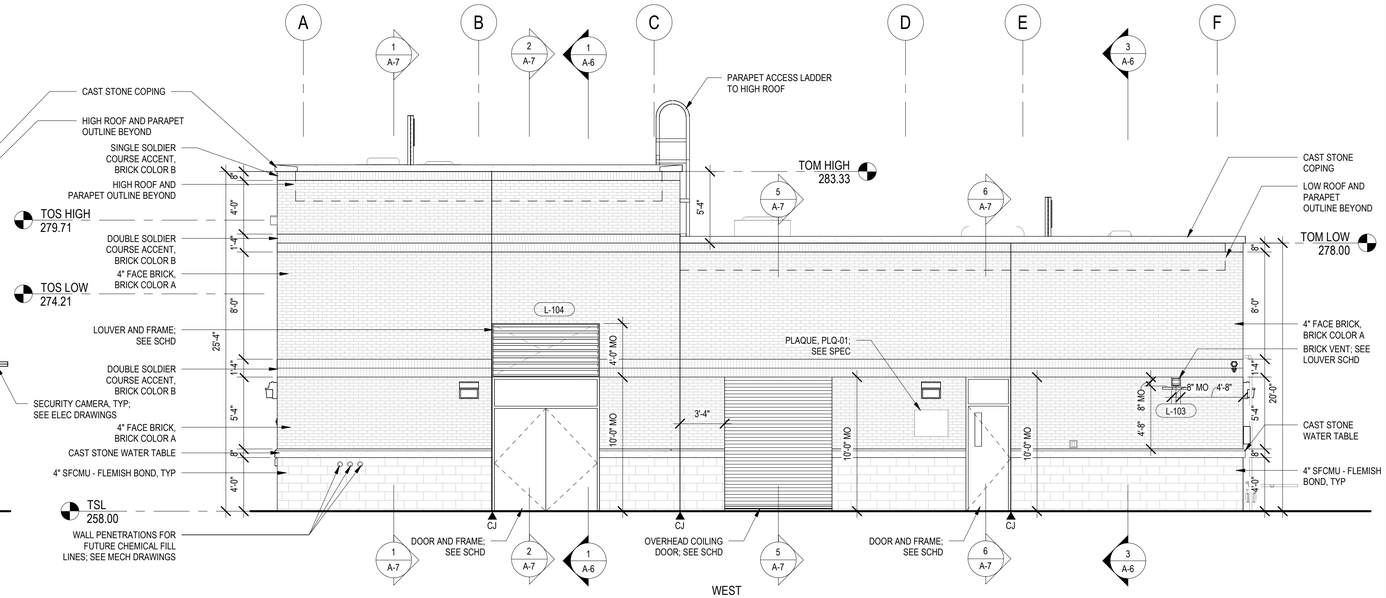
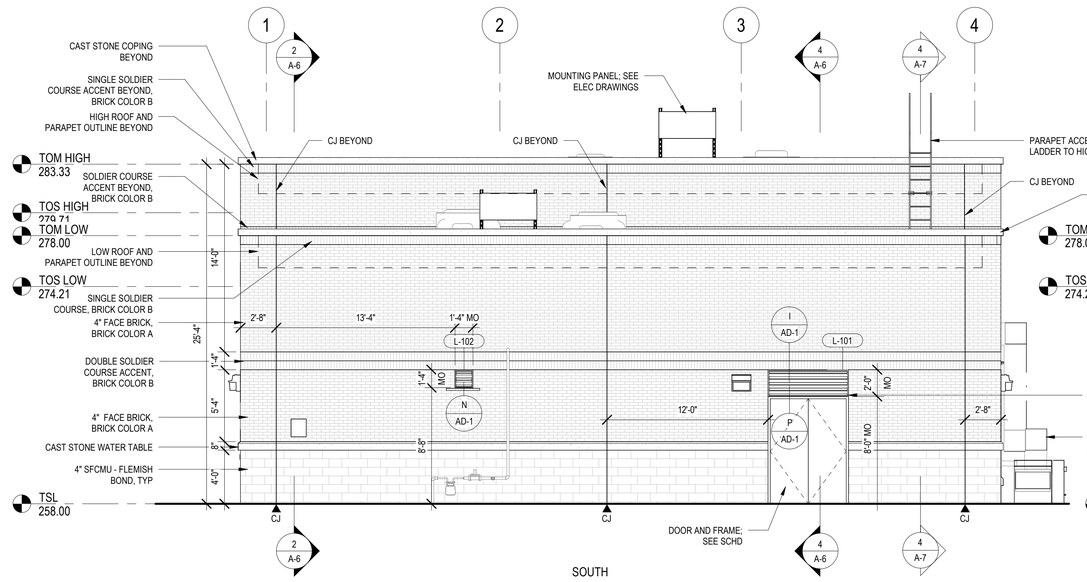


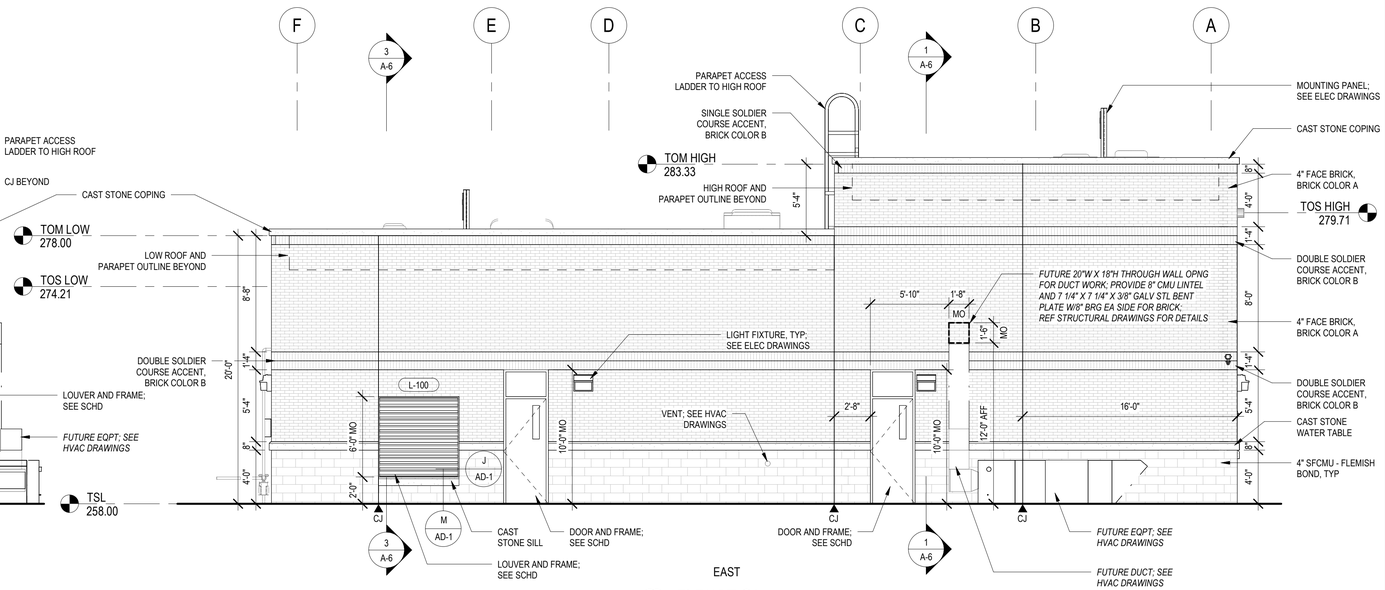

1 ELEVATION
A-3 3/16" = 1'-0"




2 ELEVATION
A-3 3/16" = 1'-0"




3 ELEVATION
A-3 3/16" = 1'-0"




4 ELEVATION
A-3 3/16" = 1'-0"

0 2' 4' 6' 10'
SCALE: 3/16" = 1'-0"

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: R. MARSHALL
DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: B. GIORGI
DATE: APRIL 2023


CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CDM Architects Inc.
75 State Street
Boston, Massachusetts 02109


CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
EXTERIOR ELEVATIONS

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-5

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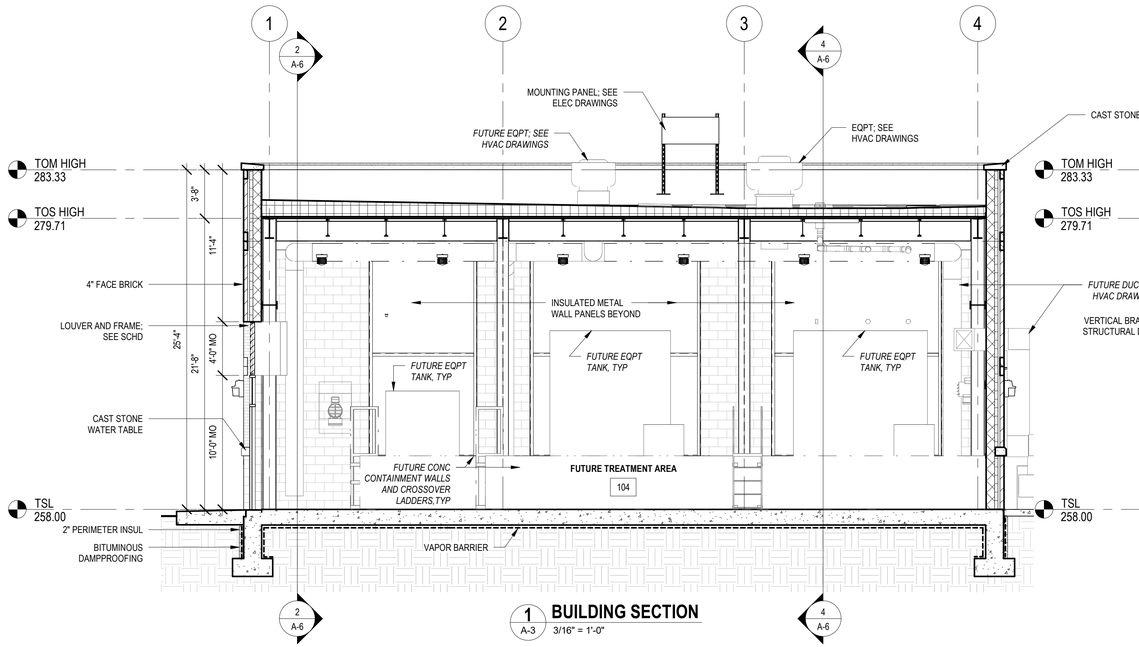
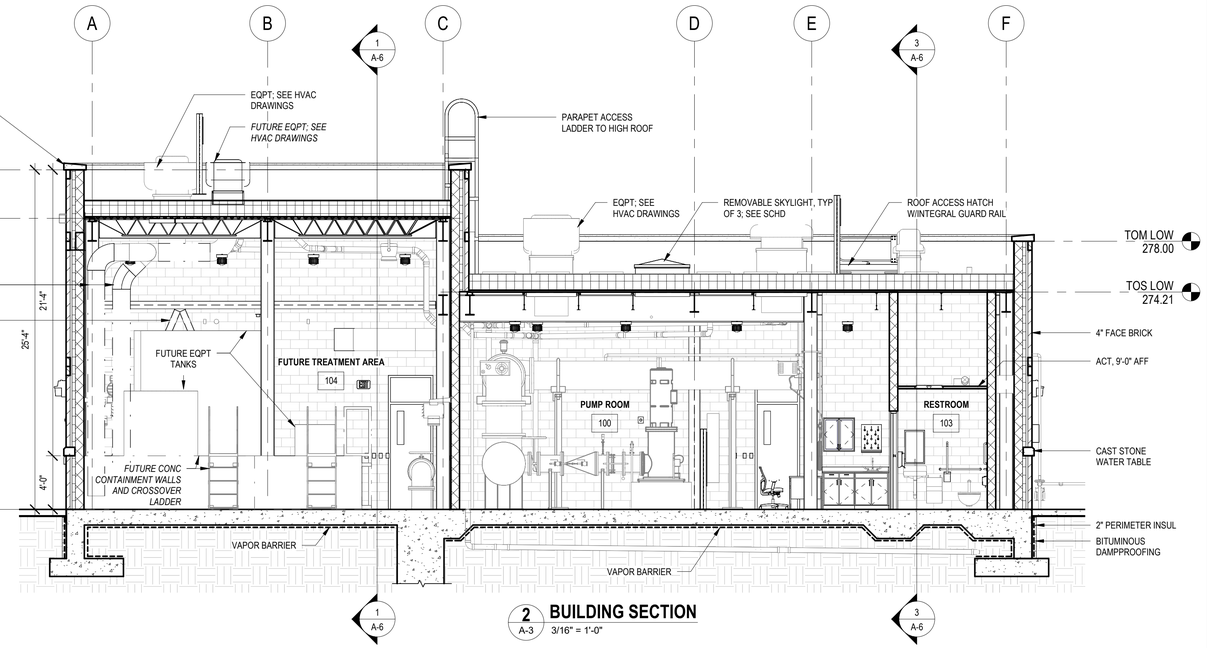
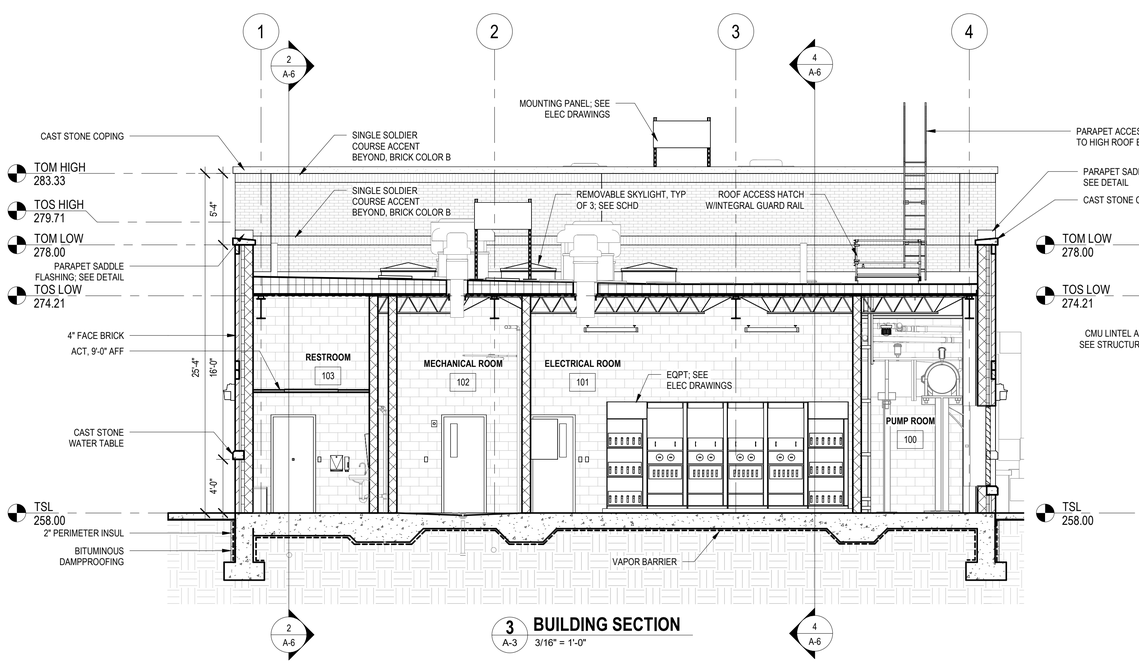
Include in hard copy submittal



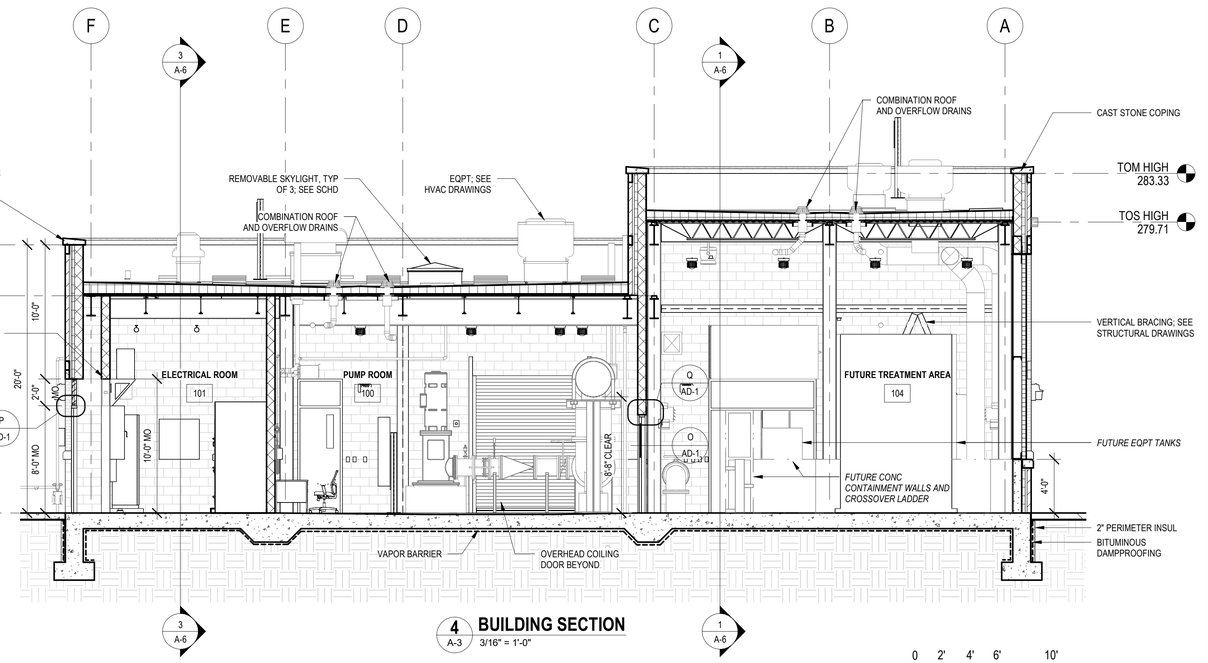

1 BUILDING SECTION
A-3 3/16" = 1'-0"




2 BUILDING SECTION
A-3 3/16" = 1'-0"




3 BUILDING SECTION
A-3 3/16" = 1'-0"




4 BUILDING SECTION
A-3 3/16" = 1'-0"

0 2' 4' 6' 10'
SCALE: 3/16" = 1'-0"

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: R. MARSHALL
DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: B. GIORGI
DATE: APRIL 2023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Tel: (860) 529-7615

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75 State Street
Boston, Massachusetts 02109


CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
BUILDING SECTIONS

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-6

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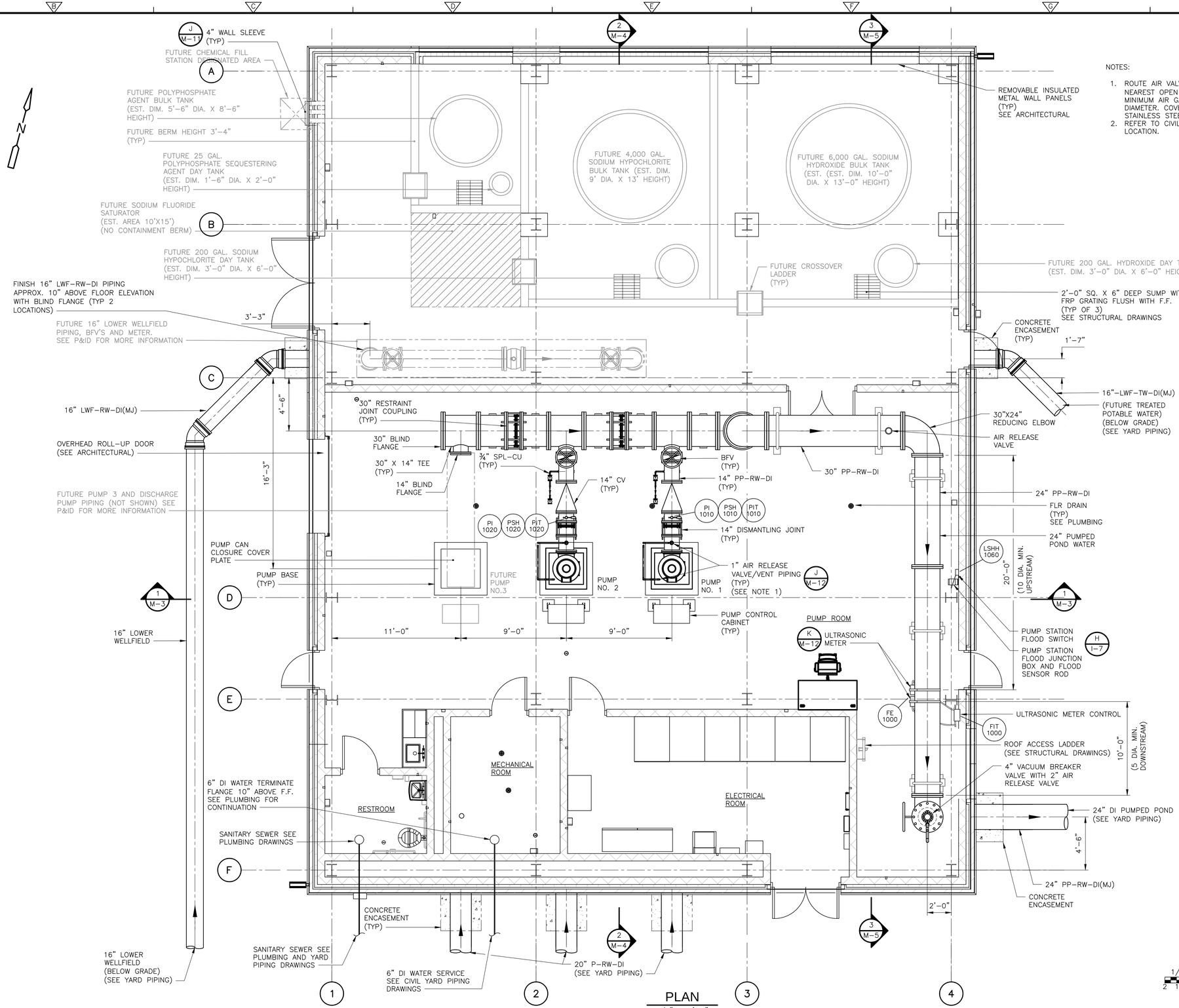


NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. REFER TO CIVIL SHEETS FOR BUILDING LOCATION.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith
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East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
FLOOR PLAN

PROJECT NO. 10739-264571
FILE NAME: M002PSPL.DWG

SHEET NO.
M-2

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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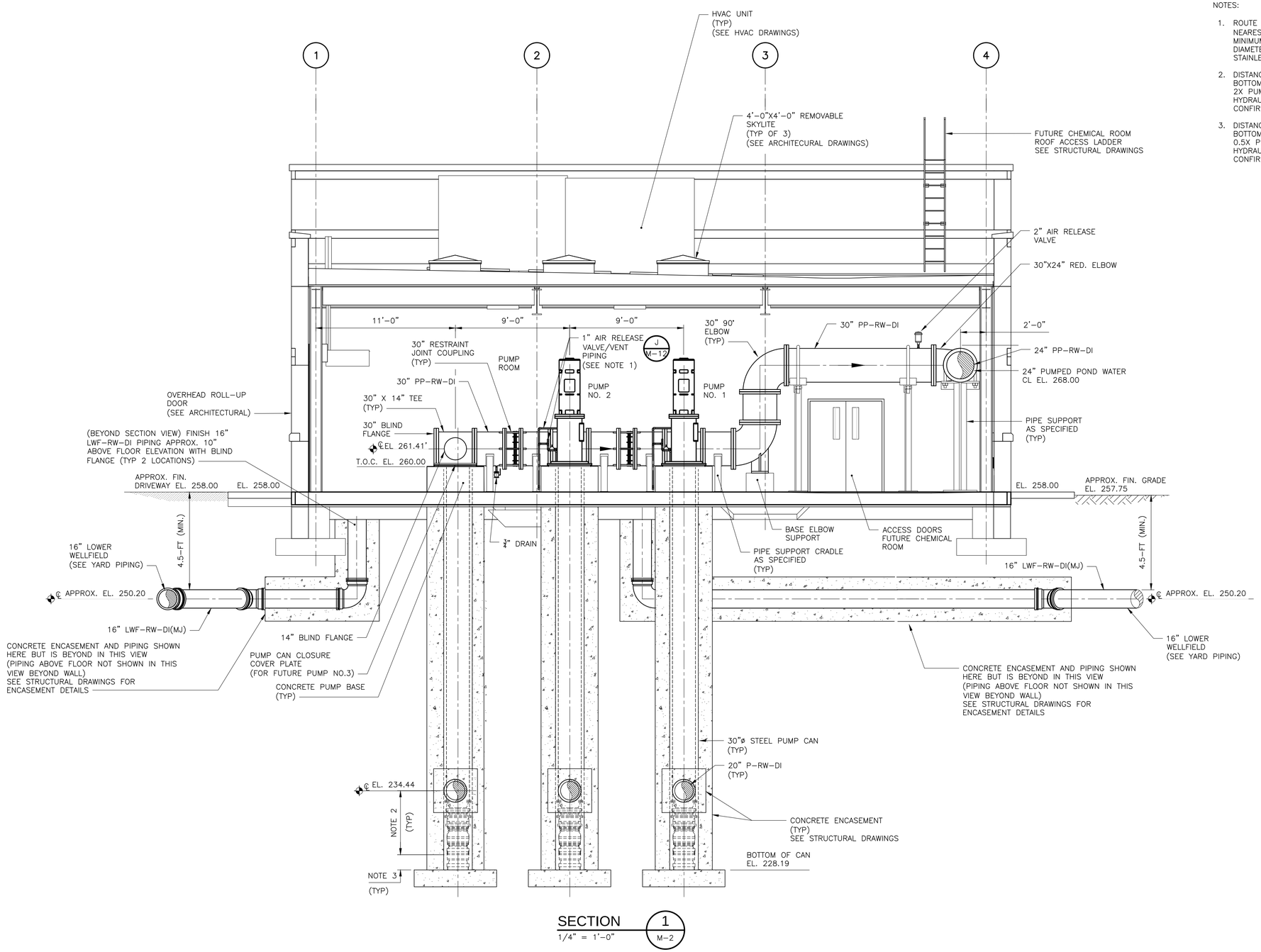


SECTION 1
1/4" = 1'-0"
M-2

NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BE MINIMUM 2X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.
3. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BEMINIMUM 0.5X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.

1/4" = 1'- 0"
2 1 0 2 4

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

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77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SECTIONS I

PROJECT NO. 10739-264571
FILE NAME: M003PSSC.DWG
SHEET NO.
M-3

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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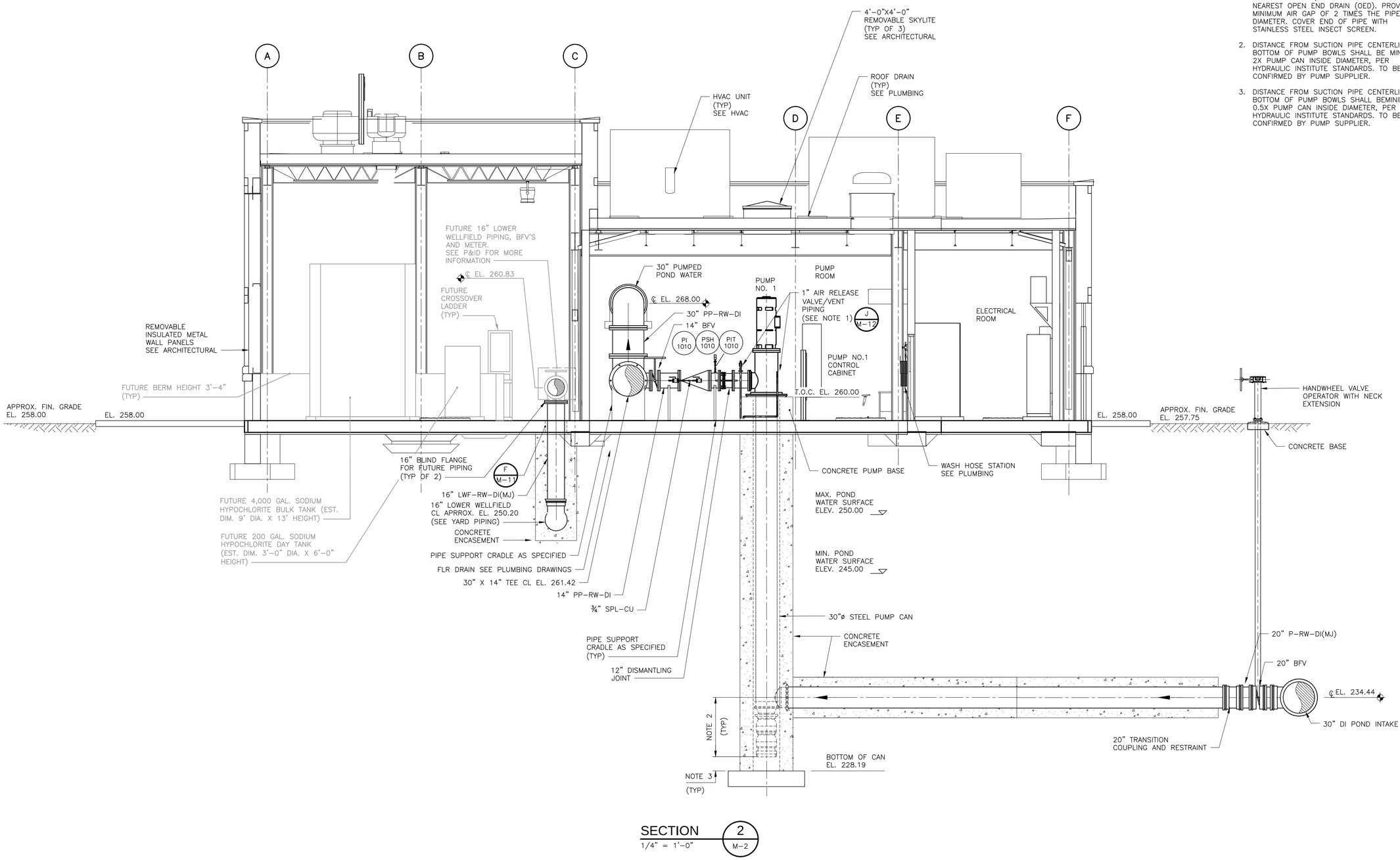
NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BE MINIMUM 2X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.
3. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BEMINIMUM 0.5X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.




SECTION 2 / M-2
1/4" = 1'-0"

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| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith
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East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SECTIONS II

PROJECT NO. 10739-264571
FILE NAME: M004PSSC.DWG
SHEET NO. M-4

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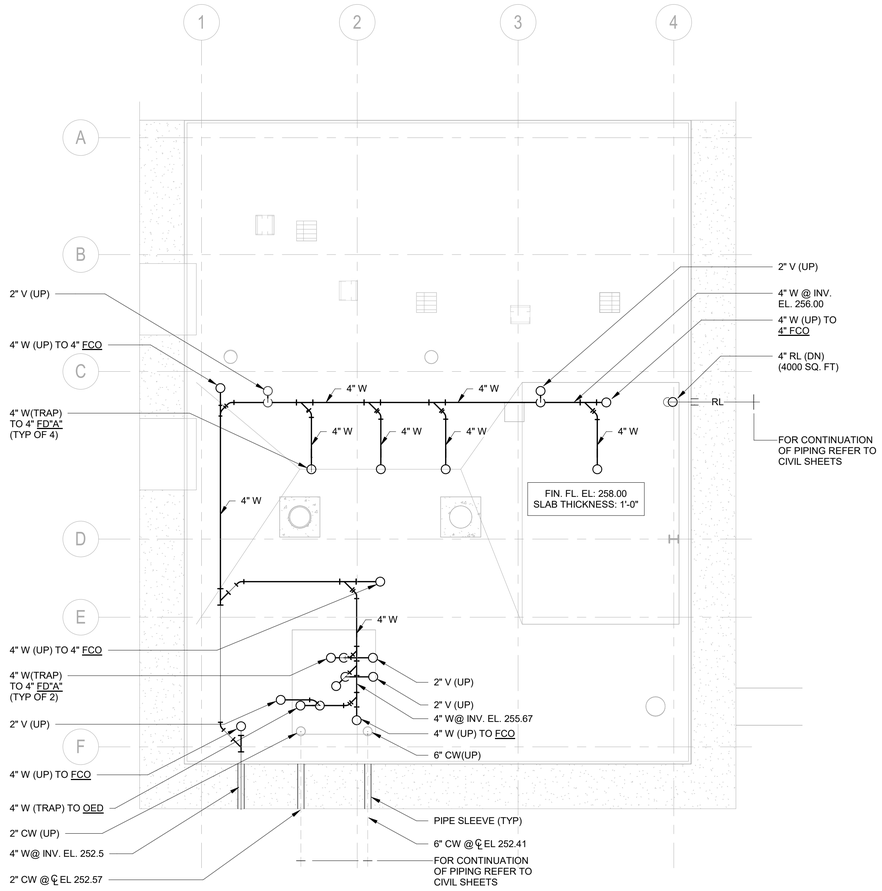
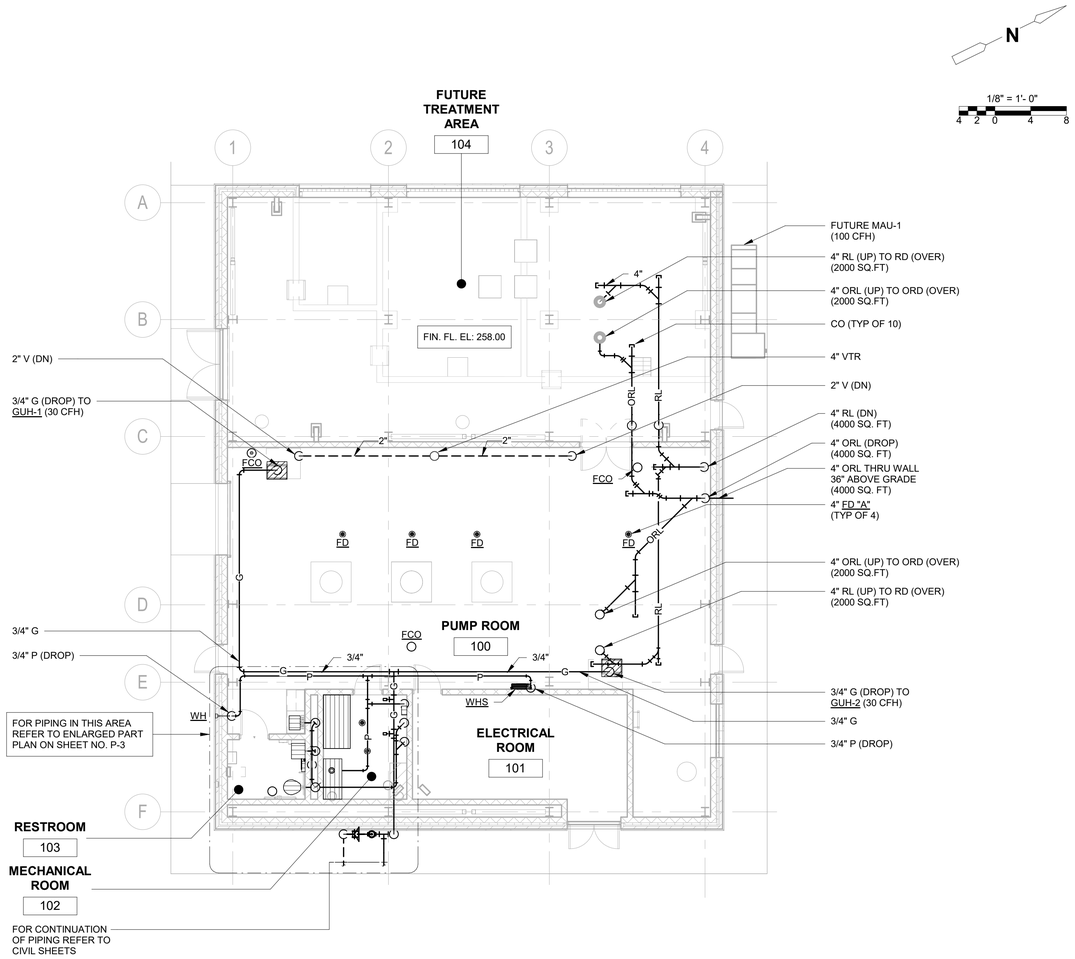



## BURIED PIPING

1/8" = 1'-0"




## FLOOR PLAN

1/8" = 1'-0"

NOTES:

1. ALL PIPES PASSING THROUGH THE FOUNDATION WALL SHALL BE INSTALLED IN A SLEEVE THAT IS 2" IN DIAMETER LARGER THAN THE PIPE AND SHALL EXTEND THOUGH THE WALL 2" ON EITHER SIDE OF THE FOUNDATION WALL IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS.
2. ALL PIPES PASSING UNDERNEATH THE FOUNDATION SHALL BE INSTALLED IN A SLEEVE THAT IS 2" IN DIAMETER LARGER THAN THE PIPE AND SHALL EXTEND 12" BEYOND THE ANGLE OF REPOSE OF THE FOUNDATION FOOTING ON BOTH SIDES OF THE FOOTING.

NOTES:

1. ALL BURIED PIPING WITHIN THE BUILDING SHALL BE ENCASED IN CONCRETE AS SHOWN ON THE DETAIL ON THE STRUCTURAL DETAIL SHEET.
2. IN LIEU OF TRAP PRIMERS WHERE ALLOWED BY CODE, CONTRACTOR SHALL INSTALL A TRAP RESEALER MADE OF ELASTOMERIC MATERIAL.
3. 1/2" SOFT ROLLED COPPER TUBING SHALL BE INSTALLED TO FEED THE WATER FROM THE TRAP PRIMER UNIT TO THE TRAPS FOR THE FLOOR DRAINS WHERE REQUIRED. THE SOFT ROLLED COPPER TUBING SHALL BE WRAPPED WITH ARMAFLEX TO PROTECT IT FROM THE CONCRETE. THE TUBING IS NOT SHOWN ON THE DRAWING FOR CLARITY SAKE. BUT THE PIPING SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.
4. SANITARY PIPING SHALL EXTEND BEYOND THE BUILDING 5'-0" UNDER THE PLUMBING CONTRACTOR'S SCOPE OF WORK.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: J. SHEEHAN
DRAWN BY: P. MANI
SHEET CHK'D BY: B. BUCCHIANERI
CROSS CHK'D BY: K. WAGNER
APPROVED BY: D. FLAHERTY
DATE: JANUARY 2024

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

BURIED PIPING AND FLOOR PLANS

PROJECT NO. 10739-264571
FILE NAME: HPWZ001PS.RVT

SHEET NO.
P-2

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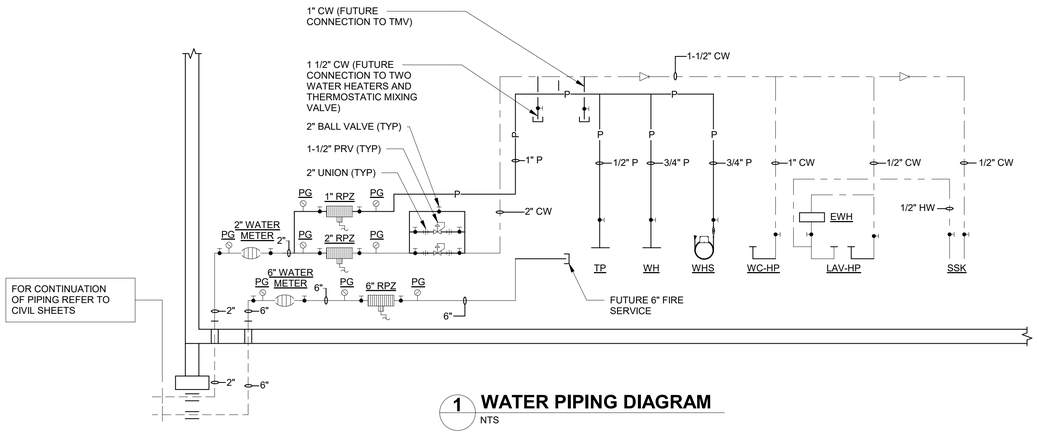
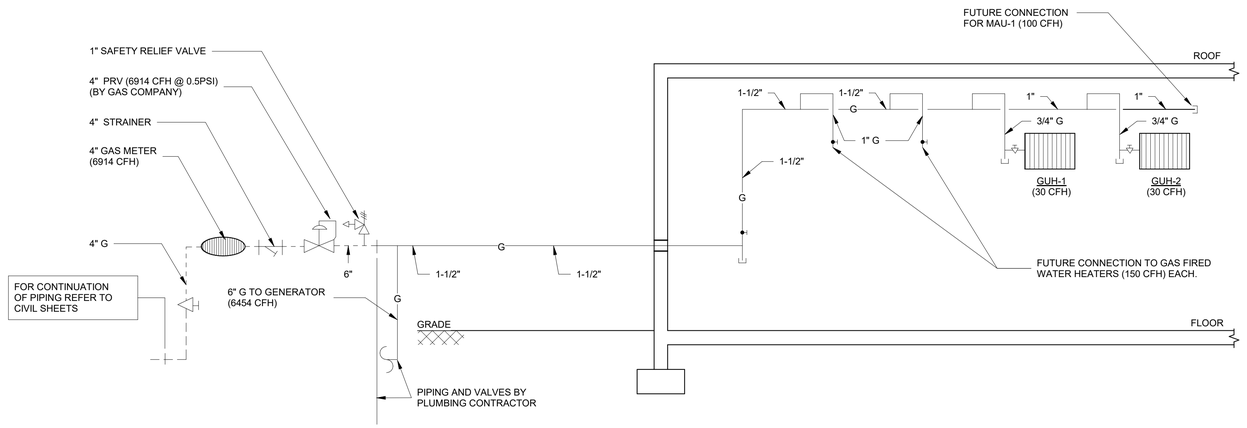


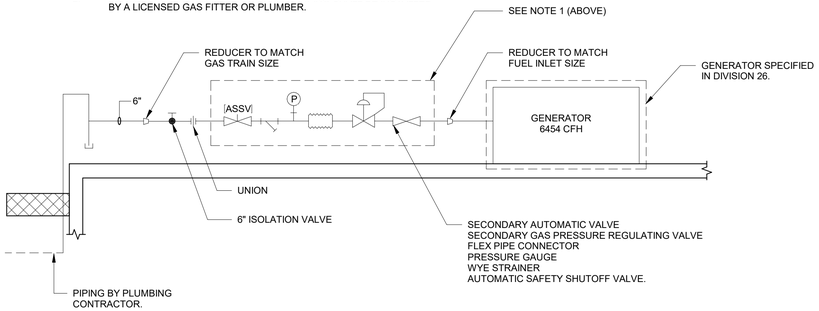

## 1 WATER PIPING DIAGRAM
NTS



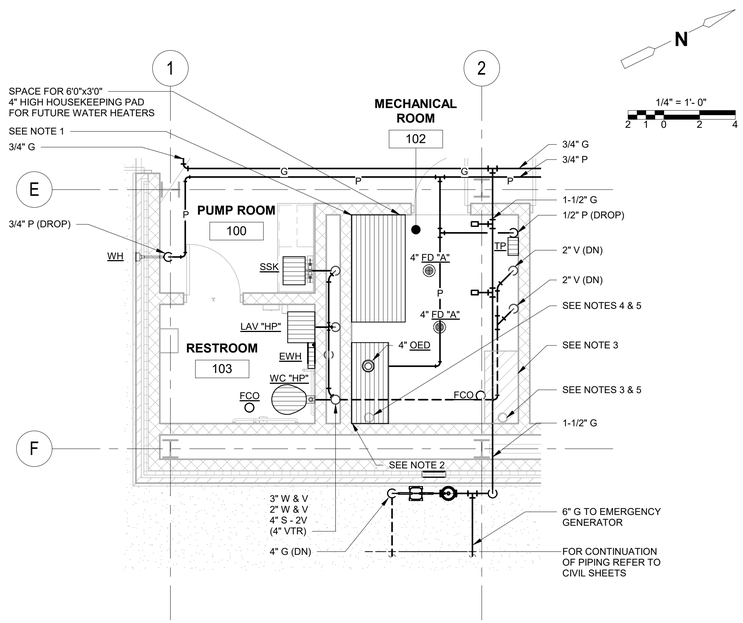

## 2 GAS PIPING DIAGRAM
NTS

NOTES:

1. GAS TRAIN COMPONENTS SHALL BE PROVIDED BY THE GENERATOR MANUFACTURER AND INSTALLED BY THE PLUMBING CONTRACTOR.
2. INSTALL 6" G LINE TO GENERATOR. GAS PIPING SHALL BE INSTALLED BY A LICENSED GAS FITTER OR PLUMBER.




## 3 GAS PIPING DIAGRAM FOR STANDBY GENERATOR
NTS




## 4 ENLARGED FLOOR PLAN
1/4" = 1'-0"

NOTES:

1. SPACE ALLOCATED FOR FUTURE WATER HEATERS, TEPID WATER MIXING VALVE AND TEPID WATER RECIRCULATION PUMP.
2. SPACE ALLOCATED FOR DOMESTIC WATER SERVICE. FOR VALVES AND APPURTENANCES REFER TO THE WATER PIPING DIAGRAM ON SHEET NO. P-3. WATER SERVICE HAS BEEN SIZED TO INCLUDE FUTURE ADDITION OF CHEMICALS AND TEPID WATER HEATING SYSTEM.
3. SPACE ALLOCATED FOR FUTURE FIRE PROTECTION SERVICE SHALL SERVE AN AUTOMATIC FIRE PROTECTION SYSTEM WHEN THE FUTURE CHEMICAL SYSTEMS ARE INSTALLED ON THE PROJECT. 6" FIRE SERVICE SHALL BE BROUGHT INTO THE BUILDING AND LEFT AS A FLANGED CONNNECTION 8"-12" ABOVE FINISHED FLOOR BY GENERAL CONTRACTOR.
4. 2" DOMESTIC WATER SERVICE SHALL BE BROUGHT INTO THE BUILDING AND LEFT AS A FLANGED CONNECTION 8"-12" ABOVE FINISHED FLOOR BY GENERAL CONTRACTOR. A 2" CAPPED WATER CONNECTION SHALL BE LEFT IN THE MECHANICAL ROOM 102.
5. 6" RPZ FOR FUTURE FIRE SERVICE SHALL BE INSTALLED 36" AFF. 2" RPZ FOR DOMESTIC POTABLE WATER SHALL BE INSTALLED 36" AFF AND THE 1" RPZ FOR NON-POTABLE WATER SHALL BE INSTALLED AT 54" AFF.

### PLUMBING FIXTURE SCHEDULE

| FIXTURE | DESCRIPTION | WASTE (INCH) MIN | VENT (INCH) MIN | TRAP (INCH) MIN | CW (INCH) MIN | HW (INCH) MIN | TW (INCH) MIN | REMARKS |
|---|---|---|---|---|---|---|---|---|
| WC-HP | TOILET, FLUSH VALVE, WALL MOUNTED, WALL OUTLET | 4 | 2 | 4 | 1 | - | - | SEE SECTION 224213.13 |
| SSK | SERVICE SINK | 2 | 2 | 2 | 1/2 | 1/2 | - | SEE SECTION 224216.13 |
| LAV-HP | LAVATORY, COUNTER MOUNTED | 2 | 2 | 2 | 1/2 | 1/2 | - | SEE SECTION 224216.13 |
| WHS | WASH HOSE STATION | - | - | - | 3/4 | - | - | SEE SECTION 221119 |
| EWH | ELECTRIC WATER HEATER | - | - | - | 1/2 | 1/2 | - | SEE SECTION 223300 |
| TP | TRAP PRIMER | - | - | - | 1/2 | - | - | SEE SECTION 221119 |

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: J. SHEEHAN
DRAWN BY: P. MANI
SHEET CHK'D BY: B. BUCCHIANERI
CROSS CHK'D BY: K. WAGNER
APPROVED BY: D. FLAHERTY
DATE: JANUARY 2024

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

PIPING DIAGRAMS, ENLARGED FLOOR PLAN AND PLUMBING SCHEDULE

PROJECT NO. 10739-264571
FILE NAME: HPWZ001PS.RVT

SHEET NO.
P-3

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| For Office Use Only | |
|---|---|
| APPLICATION NO. | 2506 |
| DATE FILED: | 6/27/24 |
| DECISION DATE: | |
| DECISION: | |

**BRISTOL ZONING COMMISSION**
**CITY OF BRISTOL, CONNECTICUT**
**APPLICATION FOR SPECIAL PERMIT**

The undersigned Applicant hereby applies to the Bristol Zoning Commission for approval under Section(s) Article III, Section 15.2.4.A.2 of the Bristol Zoning Regulations for the following Special Permit use: Special Permit for Earth Removal in excess of 400 cubic yards

Address or Location of the Property: Maltby Street

Assessor's Map No.: 52 & 53 Assessor's Lot No.(s): 11, 15, 16B16A, 17, 145, 147, 149, 150, 151

Zone of the Property: R-40 Size of the Property (in acres or square feet): 303.7 acres (total)

Reason for the Special Permit: To add approximately 6,500 cubic yards and remove approximately 15,500 cubic yards of material within the floodplain in order to facilitate the renovation and construction of the White Bridge Waterworks Facilities

Does this application involve an activity regulated by the Inland Wetlands Agency? [✓] yes [ ] no

If yes, has an application for a permit been submitted to the Inland Wetlands Agency? [✓] yes, on 12/26/2023 [ ] no

Other comments: Three applications were submitted to Inland Wetlands Agency (App# 2019, #2020, #23-458F-305)

Approval for all three applications received from Inlands Wetland Agency on June 3, 2024. SEE ATTACHED

NOTE: Section 8-3c(a) of the Connecticut General Statutes requires that, if an application for a Special Permit involves an activity regulated under the Inland Wetlands and Watercourses provisions of the statutes, the applicant shall submit an application for a wetlands permit to the local Inland Wetlands Agency no later than the day the Special Permit application is filed.

APPLICANT (If more than one, list on Page 2)

Name: New Britain Water Department, Ramon Esponda

Address: 1000 Shuttle Meadow Ave City: New Britain State: CT Zip: 06052

Telephone No.: (860) 826-3535 E-Mail: Ray.Esponda@newbritainct.gov

Signature: _____ *Signature – (Printed/Typed)* Ramon Esponda

CHECK ONE: [✓] owner [ ] other (specify): _____

OWNER(S) OF RECORD (If other than Applicant; if more than one, list on Page 2)

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ *Signature – (Printed/Typed)* _____

**THIS APPLICATION MUST BE FILED IN PERSON NO LATER THAN 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!**

BZC – 08/17

For Office Use Only
APPLICATION NO. 2506

## CITY OF BRISTOL, CONNECTICUT
## SUPPLEMENTARY INFORMATION

**Address or location of property:** Maltby Street

**ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)**

**ADDITIONAL APPLICANT**

Name: _____ CHECK ONE: [ ] owner [ ] other: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**ADDITIONAL OWNER(S) OF RECORD**

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:**

Name: Vinta Varghese (CDM Smith)

Address: 101 East River Drive, Suite 1A City: East Hartford State: CT Zip: 06108

Telephone No.: 860-808-2325 E-Mail: vargheseva@cdmsmith.com

08/17 - LUO

# Atty. Hammer Extension of Time

**From:** Joseph Hammer [mailto:jhammer@mrglaw.com]
**Sent:** Tuesday, October 22, 2024 11:42 AM
**To:** Robert Flanagan <RobertFlanagan@bristolct.gov>
**Cc:** Varghese, Vinta A. (vargheseva@cdmsmith.com) <vargheseva@cdmsmith.com>; Sebastian Amenta - Comprehensive Environmental Inc. (samenta@ceiengineers.com) <samenta@ceiengineers.com>; ray.esponda@newbritainct.gov
**Subject:** New Britain Water Department - Application #s 2504, 2505 and 2506

Robert,

As you know, we represent the City of New Britain in connection with its Special Permit and Site Plan applications referenced above.

This is to confirm that the applicant consents to a thirty (30) day extension of time, to November 20, 2024, within which to complete the public hearing.

We understand that the public hearing has been continued by the Commission to November 18.

Thank you.


**MacDermid Reynolds & Glissman, P.C.**
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New Haven, CT 06510

86 Farmington Avenue
Hartford, CT 06105
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# Atty. Hammer Extension of Time

**From:** Joseph Hammer [mailto:jhammer@mrglaw.com]
**Sent:** Wednesday, July 3, 2024 3:18 PM
**To:** Robert Flanagan <RobertFlanagan@bristolct.gov>; Nancy Levesque <NancyLevesque@bristolct.gov>; andrewarmstrong@bristolct.org
**Cc:** ray.esponda@newbritainct.gov; Sebastian Amenta - Comprehensive Environmental Inc. (samenta@ceiengineers.com) <samenta@ceiengineers.com>; Varghese, Vinta A. (vargheseva@cdmsmith.com) <vargheseva@cdmsmith.com>; Rachel Fancy <RFancy@mrglaw.com>
**Subject:** Bristol Zoning Commission - Applications #2504, #2505,# 2506; Applicant - City of New Britain, Water Department

Dear Mr. Flanagan,

Our firm represents the City of New Britain in connection with the above-referenced Special Permit and Site Plan applications which were submitted on June 27, 2024.

The applicant understands that due to the holidays and anticipated scheduling of public hearings by the Zoning Commission, the public hearing on the applications will likely be scheduled for September 16, 2024. The 65 day period to open the hearing, following receipt of the applications on July 8, will expire on September 11. The applicant therefore consents to a five-day extension of time, to September 16, 2024, within which to commence the public hearing.

Thank you.


MRG
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# Letter

May 16, 2024

Commissioner Katie Dykes
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

RE: "Log" letter consideration request – New Britain Water Dept. - Whitebridge registrations, Bristol CT

Good day, Commissioner Dykes:

This letter is written to request your immediate consideration of concerns regarding the New Britain Water Department upgrade project of the existing wellfields and surface water withdrawal systems, known as Whitebridge, located in Bristol CT. In addition to their other registered diversions within the state, the City of New Britain has 3 registered diversions in the City of Bristol, known as Whitebridge; North wellfield (2.16 MGD), South Wellfield (6.62 MGD), and Surface Water (Copper Mine/Polkville Brooks) (15 MGD)

- Fact: Bristol Water Department also has registered diversions, located near Whitebridge in the same Coppermine Brook watershed.
- Fact: New Britain historically operates the Whitebridge diversions at much much lower than the registration rates, currently approximately 1/5 to 1/7 of the registered rates. Based on the New Britain Water submittal information, DEEP issued a Negative Declaration of Diversion on February 21, 2024 for construction improvements at both wellfield locations for new wells of larger sizes with capacity increases to approximately match the registered diversion rates.
- Fact: The aquifer was assessed for Level A APA in a 2007 Study (Lenard). The study indicated "It was determined that the aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields". The study reassigned "agreed upon" reduced flow rates to simulate a safe yield for each of the wellfields. The surface water diversion was not assessed (Executive summary attached). The City of Bristol administers APA regulations based on the 2007 Level A study boundary.
- Fact: Coppermine Brook, the surface water immediately adjacent to Whitebridge is designated impaired for flow. Coppermine is listed in Connecticut Department of Energy and Environmental Protection's (DEEP) 2022 Integrated Water Quality Report to Congress under Nonpollutant Impairments (EPA Category 4c) for Flow Regime Modification.
- Fact: The City of Bristol Inland Wetlands Commission is currently reviewing the project applications for impact to wetlands and floodplain within the Coppermine Brook (Pequabuck River/Farmington River) watershed basins.

The watershed protection groups, Pequabuck River Watershed Association, Rivers Alliance of Connecticut and Farmington River Watershed Association, along with other concerned citizens, request CT DEEP further investigate the concerns related to this project:

- Due to the past study determination that the "aquifer could not support the maximum registered diversion of the New Britain upper, lower and Bristol Mix Street wellfields", the Aquifer Protection Area (APA) Level A boundary in Bristol was established based on "agreed

upon" flow rates which were much lower than the "grandfathered" registration rates. Based on inquiry to DEEP, New Britain Water has been operating in accordance with the (lowered) flow rates which established the APA. If New Britain Water is proposing a change which would increase the diversion operations over the Level A study rates, additional study is warranted, prior to construction, to establish safe levels of operation and potential changes to the regulated Level A boundary.

- New Britain is a good neighbor. Both the Bristol and New Britain Water Departments have a right and a responsibility to maintain and protect their water system sources. Watercourse / wetland / and aquifer natural system resources are vital components. The resources have limited capacity.
- Bristol Wetland Commission is currently reviewing the New Britain Whitebridge proposal. The diversion rate issue is central to the wetlands/watercourse review, yet the New Britain Water Department legal representative has instructed the Bristol Wetland Commission that the impacts relative to increases in the groundwater and surface water withdrawal operations, up to the registered diversion rates, cannot be considered in their decision. Our concern is that larger well construction and withdrawal operations will unreasonably impair water resources. The Bristol Inland Wetland Commission decision will be made at a May 22, 2024 “Special Meeting”.

Potential solutions to foreseeable “water wars” between municipalities for water use allocations within the Coppermine Brook (Pequabuck/Farmington) watershed can include:

- New Britain Water Department should update the Level A boundary study to reflect the registration rates, prior to any state agency construction approval. The Level A boundary should be modified, as necessary, for any increased flow rates in order to protect the resources. If, as past studies (Lenard 2007 and others) indicate the aquifer is unable to sustain the registration rates, the model should be updated, and reviewed/approved by DEEP for appropriate diversion allocations between the municipalities, including drought restriction protections, prior to construction.
- DEEP, potentially through adjudication, should intervene for a proposed plan of action to allocate resources and resource protection measures.

Your prompt reviews and actions are appreciated.

Sincerely,

***Alicea Charamut, Executive Director, Rivers Alliance of Connecticut***

***Mary Rydingsward, Executive Director, Pequabuck River Watershed Association***

***Aimee Petras, Executive Director, Farmington River Watershed Association***

cc: Graham J. Stevens, Bureau Chief, Water Protection and Land Resources
Brendan Schain, Esq., CT DEEP Shalyn Zappulla, CT DEEP
Chris Bellucci, CT DEEP Kim Czapla, CT DEEP
Raul Tejada, CT DPH Lori Mathieu, CT DPH
Jack Betkoski, III, Chair, Connecticut Water Planning Council
Roger Reynolds, Senior Legal Director, Save the Sound

# CT DPH - Notification

**From:** Microsoft Power Apps and Power Automate <microsoft@powerapps.com>
**Sent:** Tuesday, July 2, 2024 3:45 PM
**To:** Ray.Esponda <Ray.Esponda@newbritainct.gov>; Gerlach, Kyle T. <gerlachkt@cdmsmith.com>
**Subject:** Acknowledgement of Submission to CTDPH

This email is being sent automatically to confirm the submission of a project notification form to the Connecticut Department of Public Health pursuant to Connecticut General Statutes Section 8-3i and/or 22a-42f.

A project notification form is required to be completed and submitted to the Department of Public Health when an application, petition, request or plan is located in a Drinking Water Source Watershed or Aquifer Protection Area.

Thank you for your submission. If you have any questions, please send an email to dph.sourceprotection@ct.gov.

Please enter the docket number/application ID for this application, petition, request or plan, if applicable:
App 2506 - Special Permit for Earth Removal

What municipal entity is this application, petition, request or plan being submitted to?["Zoning Commission"]

Is the location associated with the proposed application, petition, request or plan in a drinking water watershed?Yes

Is the location associated with the proposed application, petition, request or plan in an Aquifer Protection Area?
The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street. This notification is for the Bristol Zoning Earth Removal special permit.

Does this application include a petition or proposal to change the regulations, boundaries or classifications of zoning districts?No

Please enter a brief description of the project or proposal:
The White Bridge Waterworks Facilities Upper and Lower Wellfield Improvements Project is intended to bring this 100-year old drinking water facility up to modern standards so it can continue to be a viable drinking water source for the City of New Britain and surrounding communities. The project includes the replacement and restoration of the wellfields, demolition and removal of existing structures, and construction of new groundwater wells, a new pump house, and underground piping. It also includes the addition of water and sewer utilities in Maltby Street. This notification is for the Bristol Zoning Earth Removal special permit.

Please enter the date of the application, petition, request or plan:
2024-06-27

What is the size of the area to be disturbed?
equal to or greater than 5 acres

Is any part of this project located within 50 feet of a wetland, stream, pond, lake or reservoir?Yes

What type of use is this application, petition, request or plan proposing?Institutional (school, hospital, nursing home, etc,)

How will this project be provided a potable water supply?Connection to existing public water supply

How will domestic waste be handled?
Sanitary Sewer (will be extended to project area as a result of project)

If the proposed project is 1) not located on single family residential property and 2) will utilize a new well for drinking water supply, a Public Water Supply (PWS) Screening Application should be submitted to the Department of Public Health. Was a PWS Screening Application submitted?Yes

Applicant Name:
New Britain Water Department - Ramon Esponda

Applicant email address:
Ray.Esponda@newbritainct.gov

Street address or intersection of application, petition, request or plan:
Maltby Street, Bristol CT

Enter Project Longitude/Latitude:
-72.916330
41.700721

Is there any other information relevant to the Department's review of this application, petition, request or plan? If so, please enter in the space below:
This project is receiving funding by the Department of Public Health and there has been much coordination and collaboration between the City of New Britain, the design team, and the Department. The Department has been kept updated throughout the progress of the project design and has already received site plans and other documentation.

If you would like a confirmation of this submission to be sent to the town, please enter the email address you would like it to be sent to in the field below:
gerlachkt@cdmsmith.com

# Site Plan Comments - Earth Removal

CITY OF BRISTOL
SITE PLAN REVIEW COMMITTEE
STAFF COMMENTS - 2506

SPECIAL PERMIT: Application #2506 – Special Permit for Earth Removal at Maltby Street; Assessor's Map 52 & 53, Lots 11, 15, 16B16A, 17, 145, 147, 149, 150 & 151; R-40 (Single- Family Residential) zone; New Britain Water Department, applicant. *Plans Dated: June 2024; Date of Committee Review: July 24, 2024 (first review); September 16, 2024 (second review); November 14, 2024 (third review)*

**ENGINEERING/PUBLIC WORKS (Anthony Lorenzetti):**

1. Section 15.2.5 B 1, provide mapping that shows the 100-foot buffer location from residential property, and the abutting property that is located 70 feet from the proposed excavation as stated on page 3 the project narrative.

   *9/7/24 Applicant Response: The additional properties will be shown on expanded drawings after completion of the additional survey in October 2024.*

   *11/7/24 Applicant Response: 11/07/24 Applicant Response: A stamped sealed survey was used as the base layer to create the Drawing Sheets SP-03 and SP-07 for the October 2024 revised drawings. The stamped sealed survey file will be provided to the City of Bristol as a separate drawing.*

   11/24/24 City Response: OK.

2. Section 15.2.5 E, provide a narrative and plans showing areas of tree removal.

   *9/7/24 Applicant Response: Additional notes regarding tree removal will be added to Sheet C-7 to reflect this work and a narrative will be developed.*

   10/21/24 City Response: No revised sheet C-7 was submitted only received only received C-2, C-4, C-5 and C-27.

   *11/7/24 Applicant Response: Sheet C-7 was resubmitted as Sheet SP-13. Callouts indicating proposed limit of clearing included on Sheets SP-01, SP-02, SP-03, SP-06, SP-07, SP-12, SP-13, and SP-14.*

   11/14/24 City Response: Limits south westerly from Maltby Street access drive not shown, left up to contractor. See note 8 on page SP-13 Provide on plan.

3. See comment above regarding traffic.

   *9/7/24 Applicant Response: A more detailed traffic control narrative is in development and will incorporate any additional considerations put forth by the City, as well as estimated number of trucks associated with material removal.*

   10/21/24 City Response: Update still required.

   *11/7/24 Applicant Response: A revised Detailed Traffic Control Narrative was submitted with the Supplement Information on October 10, 2024. Items discussed with the Commission at the October 21, 2024 Hearing included coordination with softball and baseball tournaments throughout the summer, ongoing construction on Jerome Avenue, and operating hours of nearby schools/churches. The Supplemental General Conditions included as an attachment to the Contract within the Contract Documents requires the Contractor to coordinate with the Bristol Police Department to establish police detail requirements for any work required in the right-of-way. An excerpt of the Supplemental General Conditions is included as an attachment to this submission. Specification Section 011000 – Summary has also been updated to require coordination with the City of Bristol Police Department for police details on Maltby Street, Mix Street, and Stafford Avenue during construction.*

   11/14/24 City Response: Acceptable.

**CITY PLANNER (Robert Flanagan/Andrew Armstrong):**

1. What are the proposed limits of tree clearing for all proposed improvements? Particularly, show the dimension and final landscape condition for proposed compensation and storage area abutting single-family residential properties on the upper and lower wellfields. Provide a landscape sheet showing these conditions and setback dimensions to the property lines not just the floodway line. How will limits of clearing be marked in the field?

   *9/7/24 Applicant Response: Additional notes regarding tree removal will be added to Sheet C-7 to reflect this work. Further, additional drawings to clarify these conditions are in development and will be added to the drawing set.*

   10/21/24 City Response: Comment addressed.

2. Provide a plan sheet that clearly shows residential property lines, particularly the properties from Collins Road and parcel boundaries, including the abutting parcel located at Assessor's Map 53, Lot 147. Plans provided are drawn indicating mostly Wetlands features.

   *9/7/24 Applicant Response: Additional drawings to clarify these conditions are in development and will be added to the drawing set.*

   10/21/24 City Response: Comment addressed.

3. How will limits of clearing be marked in the field? Applicant should develop a plan for review by staff that shows limits of clearing marked in the field. These limits will need to be inspected prior to and during Earth Removal activities occurring on site.

   *9/7/24 Applicant Response: Additional drawings to clarify these conditions are in development and will be added to the drawing set.*

   10/21/24 City Response: Comment addressed.

4. What are the proposed hours of operation for earth removal?

   *9/7/24 Applicant Response: Specification Section 011000 includes work hours limitations of 7:00 am to 7:00 pm Mondays through Saturdays, and 9:00 am to 5:00 pm Sundays, and a reference to the City of Bristol Noise Ordinance.*

   10/21/24 City Response: Comment addressed.

5. Notes should be added to the plan related to measures to control dust and noise associated with the operation.

   *9/7/24 Applicant Response: Additional notes will be added to the Civil Drawings. Noise pollution is also addressed in the Contract Supplemental General Conditions and Special Provisions; Dust control is also included in Specification Sections 015000 and various technical specifications.*

   10/21/24 City Response: Comment addressed.

6. Applicant should define the protective measures used to minimize the nuisance of noise, dust and flying rock.

   *9/7/24 Applicant Response: Additional notes will be added to the Civil Drawings. Noise pollution is also addressed in the Contract Supplemental General Conditions and Special Provisions; Dust control is also included in Specification Sections 015000 and various technical specifications.*

10/21/24 City Response: Comment addressed.

7. Applicant should provide an engineering estimate for the posting of a Sedimentation and Erosion Control Performance Bond for the project. Engineer should "show the work" in how the bond amount was calculated.

   *9/7/24 Applicant Response: This is in development.*

   10/21/24 City Response: Comment remains.

   *11/07/24 Applicant Response: The Engineer's estimate for E&S controls is approximately $300,000. An engineering estimate for the project is included as an attachment.*

   11/14/24 City Response: Provide quantities and unit prices for all items proposed, not just totals.

8. The abbreviated plan set shows many red revision clouds. Was this plan set intended to be submitted? Please make changes and remove notes and revision symbols.

   *9/7/24 Applicant Response: The latest drawings, revised to incorporate comments herein, will be submitted in October 2024.*

   10/21/24 City Response: Comment addressed.

9. The Zoning Table lists the proposed building height as 258.3 feet. Please revise.

   *9/7/24 Applicant Response: The reference to 258.3 feet in the Zoning Table on Sheet C-10 is an elevation, not the building height; this will be revised in the October 2024 submission.*

   10/21/24 City Response: Comment addressed.

10. There are 2 separate Zoning Tables with the same lot numbers and different requirements. Please clarify.

    *9/7/24 Applicant Response: The second table on Sheet C-10 refers to parking requirements; this will be revised in the October 2024 submission.*

    10/21/24 City Response: Comment addressed.

11. The erosion and sediment control narrative references protecting waterways, wetlands, etc. What steps are being taken to reduce the impacts on abutting residential neighbors? What steps will be taken to protect existing properties from the newly created temporary accessway from Mix Street, such as 871 Farmington Avenue and others?

    *9/7/24 Applicant Response: Locations of E&S controls are shown on Sheets C-6, C-7, and C-8. Additional measures to protect adjacent properties are under review and will be included in the revised drawings to be submitted in October 2024.*

    10/21/24 City Response: There are no Sheets labeled C-6, C-7 and C-8 in the most recent submission. Please clarify.

    *11/07/24 Applicant Response: The E&S controls are shown on SP-12 for the UWF area, on SP-13 for the Pond PS, and on SP-14 for the LWF area. E&S controls for the south end abutting properties near Farmington Avenue and Collins Road have been added to resubmitted Sheet SP-07.*

11/14/24 City Response: Comment addressed.

12. Include the proposed E&S control measures outlined in the narrative in the site plan set.

*9/7/24 Applicant Response: Locations of E&S controls are shown on Sheets C-6, C-7, and C-8. Additional drawings are in development and will be added to the drawing set.*

10/21/24 City Response: No revised plan sheets labeled "C-6, C-7 or C-8" were submitted. E&S Control sheets submitted include well fields and pumping station but not the area near Farmington Avenue.

*11/07/24 Applicant Response: The E&S controls are shown on SP-12 for the UWF area, on SP-13 for the Pond PS, and on SP-14 for the LWF area. E&S controls for the south end abutting properties near Farmington Avenue and Collins Road have been added to resubmitted Sheet SP-07.*

11/14/24 City Response: Comment addressed.

13. Include a plan sheet showing E&S controls. (E&S control details are included in the current set).

*9/7/24 Applicant Response: Locations of E&S controls are shown on Sheets C-6, C-7, and C-8. Additional drawings are in development and will be added to the drawing set.*

10/21/24 City Response: Comment remains. No plan sheet showing E&S controls was included.

*11/07/24 Applicant Response: The E&S controls are shown on SP-12 for the UWF area, on SP-13 for the Pond PS, and on SP-14 for the LWF area. E&S controls for the south end abutting properties near Farmington Avenue and Collins Road have been added to resubmitted Sheet SP-07.*

11/14/24 City Response: Comment addressed.

14. The "site plans" for the upper and lower wellfields need to be shown as an actual site plan. The building and site features are not clear. These sheets primarily show underground raceway schedules, charts and other items that are not relevant and should be separate from the site plan.

*9/7/24 Applicant Response: Additional drawings to clarify these conditions, including a simpler overall Site Plan, are in development and will be added to the drawing set.*

10/21/24 City Response: Comment addressed.

15. Show the required 100-foot buffer for excavation to properties per Article II, Section 15.2.5A.1.

*9/7/24 Applicant Response: Expanded drawings will be provided after completion of the additional survey in October 2024.*

10/21/24 City Response: It appears the proposed excavation at the south end of the project will be 86 feet from the nearest residential property. Buffers less than 100 feet will be a Commission determination.

*11/07/24 Applicant Response: A determination from the Commission was requested at the October 2024 Commission Meeting. We recognize the buffer area between the proposed excavation and residential property boundary is less than the required 100-feet; however, we feel there is sufficient existing vegetation within this buffer area to provide adequate screening of the excavation activity.*

11/14/24 City Response: Acknowledged. This will be a Commission determination.

16. Vehicular access to the site within the 100-foot buffer requires Commission approval.

    *9/7/24 Applicant Response: Enhanced mapping and site access will be shown on expanded drawings after completion of the additional survey in October 2024.*

    10/21/24 City Response: Comment remains.

    *11/07/24 Applicant Response: We request the Commission make a determination to allow the access roadway off Mix Street to be within the 100-foot buffer area to residential and business property boundaries. This access drive will not be frequently used beyond periodic checks on the progress of wetlands establishment in the constructed area. It will also not be regularly accessed for the normal operations of the White Bridge Waterworks Facilities. Offset dimensions between the proposed access drive and adjacent properties are shown on Sheet SP-07.*

    11/14/24 City Response: Acknowledged. This will be a Commission determination.

17. No trees greater than five inches in caliper measured 3 feet off the ground shall be removed unless approved by the Commission. Is there documentation showing the limits of tree clearing?

    *9/7/24 Applicant Response: Additional notes regarding tree removal will be added to Sheet C-7 to reflect this work.*

    10/21/24 City Response: There is no Sheet C-7. Comment remains.

    *11/07/24 Applicant Response: Sheet C-7 was resubmitted as Sheet SP-13. Callouts indicating proposed limit of clearing included on Sheets SP-01, SP-02, SP-03, SP-06, SP-07, SP-12, SP-13, and SP-14. Specification Section 311000 – Site Clearing has been updated to require a Clearing Plan be submitted for review, indicating location of trees that exceed listed diameter threshold. The updated specification is included as an attachment to this submittal. Contractor's Clearing Plan will be submitted during construction.*

    11/14/24 City Response: Provide limits of clearing plan within the plan set.

**BUILDING/ZONING ENFORCEMENT (Richard Brown)**

1. No comments at this time.

**POLICE DEPARTMENT (Lt. Krajewski/Sgt. Ouellette)**

1. No comments at this time.

**FIRE MARSHAL (Kristopher Lambert):**

1. On page A-2 there is a double leaf door that leads from/into the "Future Treatment Area" that is part of a 2-hour rated wall assembly. What is the rating of these doors?

    *9/7/24 Applicant Response: This is door D-104C per Sheet A-3; this door has a 90 minute fire rating per the Door Schedule on Sheet A-9.*

    10/21/24 City Response:

**WATER DEPARTMENT (Paul Keegan/Rob Longo)**

1. No comments at this time.

# Project Narrative 11/24

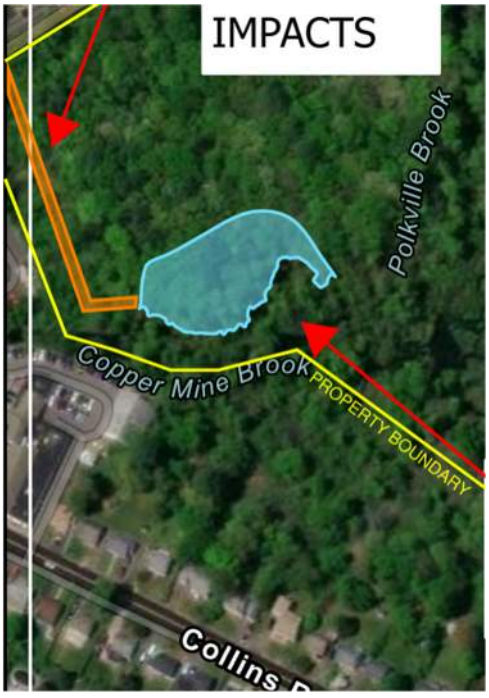
November 7, 2024

# Zoning Commission – Project Narrative Supplemental Information

This document presents revised supplemental information to the Project Narrative submitted with the June 27, 2024 application package for Site Plan and Special Permit Application #2504 and #2505 and Special Permit for Earth Removal Application #2506. Supplemental information was first provided with the October 10, 2024 submission and has since been further revised following discussions at the October 21, 2024 Zoning Commission Meeting and discussions with Bristol City Staff. The original June 27, 2024 Project Narrative is included for informational purposes only and the original Application Submittal Package should be referenced for any Attachment or Drawing Sheet reference made in that document.

## Earth Excavation Activities near Collins Road:

The Drawings have been revised to more clearly show offset distances between the earth excavation activities associated with the wetlands/compensatory flood storage creation area in the southern portion of the site and the adjacent residential properties on Collins Road. The proposed earth excavation activities will be approximately 86-feet from the closest residential property boundary. Article 15.2.5.B(1) of the Bristol Zoning Regulations requires a 100-foot buffer between earth excavations and adjacent residential lots. However, Article 15.2.5.B (3) allows the Commission to reduce the required buffer area if the existing vegetation or topography within the buffer area will effectively screen the earth removal. As seen on the Drawings and the aerial view, below, the buffer area consists of densely wooded area and the Copper Mine Brook. Additionally, the actual dwellings located on the properties adjacent to the earth excavation are approximately 330-feet from the excavation. Excavation in this area is necessary to construct the compensatory flood storage area and the selection of its location is based on the elevations of existing topography and the need to excavate at elevations matching those where fill was added to the site. Following excavation of this area to the required elevations, it will be restored as a wetland.



An access driveway has been included off Mix Street to access this wetlands/compensatory flood storage creation area. The access drive is shown on attached revised Drawing Sheets and features a curb cut; concrete apron; vehicle control gate; stabilized construction entrance to prevent tracking of dirt, dust, and debris from excavation activities; and silt fencing along the limits of clearing to prevent siltation of surrounding areas. A 10-foot vegetated buffer will be left between the proposed access drive and the property boundary. During construction, vehicles will use this access drive to excavate the wetlands/compensatory flood storage creation area. Post-construction, this access drive will only be used for periodic maintenance and surveillance of the new wetlands area and will not be frequently utilized by the New Britain Water Department for operations of the White Bridge Waterworks Facilities.

**We are seeking the Commission make a determination that although the proposed excavation and access drive are within the 100-ft buffer, the existing vegetation and topography provide adequate screening on the activity from adjacent properties.**

## Construction Traffic Control Narrative:

A construction vehicle routing figure was included with the June 2024 application. As indicated in the figure, the main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). Specification Section 011000 "Summary" of the Contract Documents has been updated to require the Contractor to follow this route, to the limits practicable, and to only utilize Mix Street for access to the wetland creation area located off Mix Street. Revised Section 011000 is included as an attachment.

The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The following table presents an estimated number of construction vehicles expected per major construction activity on the site. These estimated values include trucking materials on/off site; however, they do not include personal vehicles of the construction crew. It is assumed Contractor will utilize designated space on the site to provide parking for personal crew vehicles, which will stay on-site for the duration of the workday. The Contractor will have to identify offsite parking for personal crew vehicles that cannot be accommodated onsite.

| Construction Activity | Activity Duration | Estimated Construction Vehicles[1] |
|---|---|---|
| Supply Pond and Canal Restoration | 3 Months | 15-20 vehicles per day |
| UWF and LWF Well Drilling | 17 Months | 2-5 vehicles per day<br>(Large drill rigs will likely remain on site for duration of drilling) |
| Existing Pump Station Demolition & Pond Pump Station Construction | 18 Months | 25 vehicles per day |
| Maltby Street Utility Installation (Water and Sewer) | 3 Months | 5 vehicles per day<br>(10 vehicles per day during paving) |
| Construction of Wetlands and Compensatory Storage Areas | 3 Months | 5-10 vehicles per day |
| Construction of Wetlands and Compensatory Storage Areas (Mix Street) | 1 Month | 5-10 vehicles per day |

Notes:

1) Presented values are estimated and are subject to change depending on the Contractor.

2) Construction activities will not all occur concurrently, so the total number of vehicles entering and exiting the site per day will vary depending on the actual construction activities occurring.

Specification Section 011000 has been updated to also prohibit work in the intersection of Maltby Street and Stafford Avenue during school bus drop off/pick-up hours and to limit utility work in Maltby Street to the hours of 10am to 4 pm, to avoid peak traffic time. Finally, we are requiring the Contractor to coordinate with the Bristol Public Works Department to limit traffic and construction impacts caused by this project and other projects in the area, including the Jerome Avenue Bridge Project.

During the October 21, 2024 Zoning Commission Meeting, several discussion points were brought up about construction traffic impacts and mitigation. These included expanded discussions on school hours, events at nearby schools/churches, and the Little League Baseball and Softball World Series Tournament hosted annually on Mix Street. Specification Section 011000 has been further updated to alert the

Contractor of these traffic considerations and require coordination with the City of Bristol DPW and Police Departments to mitigate construction traffic impacts during these times. See attached updated Section 011000 for these changes.

The drawings have been updated to include new W11-10 Truck sign to warn vehicle traffic for trucks entering and exiting the facility. As shown on the drawings, signs will be installed 250-ft from the site access drives in both directions on Maltby Street. Table 23-C of the Manual on Uniform Traffic Control Devices (MUTCD 11$^{TH}$ Edition) was used to determine the distance for advance placement of warning signs. A speed limit of 35 miles per hour (mph) (30 mph base speed on Maltby Street with an additional 5 mph) was used to determine the distance on the table.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| W11-10 | 41-4837 | Truck Symbol | 30 | 30 | 1 | SL | XI | Yellow |  |

Standard roadway and curb/sidewalk repair details were received from the City and have been incorporated into the Drawings. The standard DPW excavation forms provided to Contractors were also received from the City and will be incorporated into the final Bid Set Specifications. These standard forms are included as an Attachment.

## Construction Sequencing Narrative:

A proposed construction sequencing figure for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project was included as an attachment to the June 2024 permit submission. Some specific sequencing constraints and estimated durations in relation to earth moving were also included in the narrative associated with the June 2024 submission. The list included in the narrative is copied below and annotated with revisions based on comments received from the City. It is important to note that these represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.

Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)

- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**

- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)

- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)

- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

## Aquifer Protection Best Management Practices:

As discussed during the September 16, 2024 Zoning Commission meeting, the CT DEEP Best Management Practices Document is incorporated into the Contract Documents as a requirement and an Attachment to Specification Section 015000 “Temporary Facilities and Controls.” The updated section is included as an Attachment. CT DEEP Best Management Practices will be followed to the extent practicable on the site.

On October 17, 2024, the design team and City of Bristol Staff met with representatives of CT DEEP’s Aquifer Protection Area Program to discuss the project and implementation of Best Management Practices, specifically, the use of containment areas for refueling construction vehicles on the project site. CT DEEP concurred that the requirement for offsite (i.e. outside the aquifer protection area) refueling of construction vehicles like bulldozers, groundwater well drill rigs, excavators, loaders, etc. was not efficient, may cause delays to project schedule, and in the case of the well drill rig, could adversely impact the construction of the groundwater production well. The applicant appreciated the opportunity to speak with CT DEEP on this topic and

## Estimated Quantities of Material Brought On/Off Site:

| Quantity Material Brought On-Site | Quantity Material Taken Off-Site |
|---|---|
| Pond Pump Station Fill = 143,745 cf | Compensatory Flood Storage Areas = 433,855 cf |
| Upper Wellfield Fill = 13,840 cf | Supply Pond/Canal Sediment = 162,000 cf |
| Lower Wellfield Fill = 19,077 cf | |
| **Total = 176,662 cf** | **Total = 595,855 cf** |

It is estimated that 176,662 cubic feet (cf) (or 6,543 cubic yards [cy]) of material will be brought onto the site to fill areas around each of the nine wellheads and around the new Pond Pump Station building. This fill is necessary to comply with CT DPH requirements for infrastructure above flood elevations and to provide a 50-foot radius around wellheads to the nearest high-water mark. Approximately 595,855 cf (or 22,068 cy) of material is expected to be removed from the site. Removal of this material is required to offset necessary fill within the floodplain and will be removed from the designated compensatory flood storage creation areas indicated on the Drawings. A portion of the material removed from the site will be sediment from the supply pond and canal (162,000 cf or 6,000 cy) that has accumulated over the past 20 years. This is a routine maintenance activity for the water utility and will restore the supply pond and canal to their constructed capacities. Depending on sampling and gradation testing, the Contractor may elect to reuse material scheduled for removal from the site as fill material in other areas.

## Changes Made to Drawings Since June 27, 2024 Submittal:

Several changes have been made to the Drawings since the June 2024 submittal package. Please see a summary of the major changes made, below. See the revised Drawings, Attached.

- Site Plans for the different locations of work (Upper Wellfield, Lower Wellfield, Pond Pumping Station, and wetlands/compensatory storage creation sites) have been simplified. Property boundaries, required setback lines, and site features have been clarified.
    - Some sheets were combined and many were renamed with a "Site Plan (SP)" designation. This was done to simplify review of site plan drawings, the site plan drawings will be included as an attachment to Final Bid Set documents along with these Zoning applications. The following provides a list of Simplified Site Plan Sheets and their corresponding Civil Sheet in parentheses from the original June 2024 submittal:
        - Sheet C-1 has been renamed P-ERM to indicate it is the note sheet for the Permitting Set
        - Sheets C-2, C-3, C-4, and C-5 remained the same as they are existing condition sheets
        - Sheet C-23 covers routine maintenance work for sediment removal from the supply pond and canal
        - Sheets C-24 through C-29 remained the same as they are detail sheets
        - Sheet SP-01 (C-14) – Overview of UWF North
        - Sheet SP-02 (C-14A) – Overview of UWF South
        - Sheet SP-03 (C-13) – Overview of LWF
        - Sheet SP-04 (C-9) – Site Plan UWF
        - Sheet SP-05 (C-10 & C-12) – Site Plan Pond Pumping Station
        - Sheet SP-06 (C-11) – Site Plan LWF
        - Sheet SP-07 (New Sheet) – Mix Street Access Road
        - SP-08 (C-18A) – Maltby Street Utilities I
        - SP-09 (C-18B) – Maltby Street Utilities II
        - SP-10 (C-18C) – Maltby Street Utilities III
        - SP-11 (C-19) – Stafford Avenue and Cross Country Utilities
        - SP-12 (C-6) – E&S Controls UWF
        - SP-13 (C-7) – E&S Controls Pond Pumping Station
        - SP-14 (C-8) – E&S Controls LWF
        - SP-15 (New Sheet) – Bristol Standard Details & Mix Street Road Repair Details
- A class A-2 survey was performed for the southern portion of Lot 53-145 along Mix Street and along the property boundary with the lots on Collins Street. Enhanced mapping of these areas are included in the Drawings. All of the Class A-2 survey documents, stamped and sealed by the licensed surveyor are included as an attachment.
- Offsets from earth excavation locations to the nearest property boundary were more clearly depicted.
- As agreed with the Bristol Water and Sewer Department in the October 8, 2024 call, the 8-inch gravity sewer was extended west on Maltby Street to the property boundary between Lot 53-145-2 (Bristol Baseball Field) and Lot 53-145. The slope of the gravity sewer line in Maltby Street was adjusted from 0.01 to 0.004 to provide a minimum 3-foot coverage to pipe along the entire alignment. The alignment of the 1.25-inch force main from the Pond Pump Station was moved

into the New Britain owned property of Lot 53-145 until its lateral connection within a new manhole in Maltby Street.

- Extents of clearing and grubbing were better designated on the Drawings.
- The City of Bristol standard road repair and sidewalk details have been received and incorporated into Drawing Detail Sheets.
- Cover Sheet information has been updated to indicate the application numbers and approvals of the project.
- The Zoning Table has been simplified and values corrected.

## Comment Response Log Between Bristol City Staff and CDM Smith

There have been several rounds of comments and responses between Bristol City Staff and CDM Smith. The following presents a timeline of comments received from the Bristol City Staff and corresponding responses provided by CDM Smith:

- Permit Application forms Submitted – June 27, 2024
- Zoning Commission Meeting – July 8, 2024
- Initial Comments from City Staff provided to CDM Smith – July 31, 2024
- CDM Smith Responses to Initial Comments provided to City – September 7, 2024
- Zoning Commission Meeting – September 16, 2024
- Supplemental Information provided to City Staff – October 10, 2024
- Zoning Commission Meeting – October 21, 2024
- Additional Comments from City Staff provided to CDM Smith – October 28, 2024
- Responses to Additional Comments and Supplemental Information provided to City Staff – November 7, 2024

A comment response log tracking all of the comments and responses between the City of Bristol Staff and CDM Smith is included as an attachment.

# Zoning Commission – Application for Special Permit

**NOTE: THIS DOCUMENT WAS SUBMITTED WITH THE JUNE 27, 2024 APPLICATION PACKAGE AND CONTENTS, INCLUDING ATTACHMENT REFERENCES AND DRAWING SHEET NUMBERS, HAVE NOT BEEN MODIFIED FOR THIS NOVEMBER 7, 2024 SUBMITTAL. THIS DOCUMENT IS INCLUDED IN THE NOVEMBER 7, 2024 SUPPLEMENTAL INFORMATION SUBMITTAL FOR INFORMATIONAL PURPOSES ONLY. SEE ORIGINAL APPLICATION SUBMITTAL FOR ANY ATTACHMENTS REFERENCED IN THIS DOCUMENT.**

## Project Narrative:

The New Britain Water Department (NBWD) has owned and operated groundwater wells as a raw water source at the White Bridge Waterworks Facilities on Maltby Street in Bristol for over one hundred years. The facilities are located in an R-40 designated residential zone across several parcels including 52-11, 52-15, 52-16B16A, 52-17, 53-145, 53-147, 53-149, 53-150, and 53-151. Work is specifically being performed on lot 52-16B16A, 52-17, 53-145, 53-147, and 53-150. Project location figures are included as **Attachment 1** to this application. The Lower Wellfield wells (located south of Maltby Street) were originally constructed in 1921 and have been operated since 1923. These wells have undergone upgrades in the 1940s and 1950s, with the most recent upgrades occurring the 1980s. A pump station at the Lower Wellfield was constructed as part of the 1940s upgrades. The Upper Wellfield wells (located north of Maltby Street) were originally installed in 1940. These were replaced with new wells in 1955 and again in the 1980s. A pump station at the Upper Wellfield was also constructed in the floodway in 1955. In addition to the wells, NBWD has also operated the Supply Pond surface water source at the White Bridge Waterworks Facilities since the 1950s. The existing 1923 pump station, already located on the site, was converted to a surface water pump station in 1950. This building and associated pumping equipment have not received major upgrades since.

Much of the mechanical equipment at the wellfields and existing Pond Pumping Station has reached the end of its useful life or, due to its age, is very difficult or not possible to find the necessary replacement parts for sustained operations. Regulatory requirements and industry standards have also changed over the past 100-years. To redevelop the Upper and Lower Wellfields with new wells that can be used as a potable drinking water source, the Connecticut Department of Public Health (DPH) requires new wells to be located 50-feet from any water body or wetlands boundary. In addition, DPH requires new wells and water infrastructure to be raised to an elevation 2-feet above the 100-year floodplain elevation. As the majority of the NBWD owned property is within the 100-year floodplain with some areas up to 6-feet below the flood elevation, the existing wells and three pump stations cannot be redrilled/rehabilitated in their current locations. This project will rehabilitate the White Bridge Waterworks Facility to bring it up to modern standards and regulations and create a reliable potable drinking water source for the New Britain Water Department and surrounding communities.

The project includes the abandonment of all currently existing wells in accordance with DPH requirements, demolition of existing structures and the three existing pump stations, construction of a single new pump station, filling and grading to achieve DPH flood resiliency requirements, wetlands creation/replication, and creation of compensatory flood storage. A total of three new wells will be drilled at the Upper Wellfield and six new wells drilled at the Lower Wellfield. Based on water quality, the Lower Wellfield wells may but suitable for use as a public potable water supply with minimal

chemical treatment, subject to the ground water under the direct influence of surface water (GWUDI) testing. Both the Upper and Lower Wellfield wells will be equipped with new submersible style pumps within the wells, making it unnecessary to have pump stations at each site. An Aquifer Protection Area Program Registration Form for Regulated Activities will be submitted following this application submittal. A single pump station building will be constructed to house pumping equipment associated with the Supply Pond surface water source and will also include designated space for treatment equipment in the event the Lower Wellfield is used for potable water. This new building will be constructed with a finished floor elevation 2-feet above the 100-year flood elevation and outside the floodway. The project will also install associated yard piping around the wells, pump station building, and connections to the existing New Britain water infrastructure on-site. New water and sewer utilities from Bristol will be constructed in Maltby Street and provide service for the new pump station. Design Drawings for the project are included in **Attachment 2** and a 3D Rendering of the new Pond Pumping Station is included in **Attachment 3**.

As filling of the site is required for the new wells and pump station to meet DPH requirements, compensatory flood storage areas will be constructed so as to not increase the current flood elevation levels, as given by FEMA guidelines. The new structure and wells will add approximately 6,543 cubic yards of fill within the floodplain. Approximately 15,327 cubic yards of material will be removed from the floodplain for the creation of compensatory storage. These compensatory storage areas will also create additional wetland areas. Fill and earth removal on the site is associated with construction activities only and the final use of the site will not include earth removal activities. A Special Permit for Earth Removal in Excess of 400 Cubic Yards is also being filed for approval. The project will impact approximately 24,952 square feet of wetlands. However, wetlands replication will be done at a ratio of three to one, with a total of 75,946 square feet of wetlands replication proposed. In total, the project is expected to disturb approximately 223,000 square feet of land. This includes areas for wetland replication; compensatory storage creation; and disturbances for installing the new wells, associated yard piping, abandoning and decommissioning existing wells, Pond Pump Station building construction, and demolition of the three existing buildings. A Permit for Flood Plain Development (Application #23-458F-305), Form IW-1 (Application for a Wetlands Permit) (Application #2020), and Form IW-2 (Application for a Wetlands Boundary Change) (Application #2019) were approved by the Bristol Inland Wetlands and Watercourses Agency of the Conservation Commission on June 6, 2024 for this project. A Site Plan Permit for this project is also being filed for approval.

An Erosion and Sediment Control Plan has been developed to control accelerated erosion and sedimentation from stormwater runoff on the site during construction based on the best available technologies. The Control Plan narrative is included with this application in accordance with Section 15.1.5. The “Connecticut Guidelines for Soil Erosion and Sedimentation Control (2002)” document was utilized in preparation of the Plan. A Stormwater Management Report for post-construction conditions has also been developed for this project based on the 2004 *Connecticut Stormwater Quality Manual (CSQM)* as required in Section 15.5.3. A copy of the Stormwater Management Report is included as **Attachment 6** to this application.

The new Pond Pump Station and Lower Wellfield area will be enclosed in a 6.5-foot tall chain link fence for security. A double-leaf swing gate will provide access to the site on the driveway. As shown on the Drawings, the fence and access gate are located outside of the 50-foot required front yardage for R-40 residential zones. A double-leaf vehicular control gate will be located at the foot of the driveway to

control vehicular access onto the public utility site. This gate will be less than the 4.5-foot height restriction for fences within front yards and will be more than 50 percent open. A detail for this vehicular control gate is included in the drawings. An existing vehicular access gate for the Upper Wellfield access road (located on the north side of Maltby Street) will remain.

Public utility buildings are not listed as a Use Group in the table included in Section 13.2 of the Zoning Regulations; however, two parking spaces will be provided at the Pond Pumping Station. Each parking space is designed to be 10-feet wide and 18-feet deep, meeting the requirements of perpendicular parking spaces required by Section 13.7.2. As a utility service building, this facility is not open to the public and it will not be continuously manned by NBWD staff. It is not expected that more than two NBWD staff vehicles will be present on-site during operations. The post-construction vehicle traffic from NBWD staff is not expected to increase from their current operations. In the event potable water treatment is implemented for the Lower Wellfield, it is expected that the facility will received 2-3 trucks per month for deliveries.

A construction vehicle routing figure is included as **Attachment 5** to this application. The main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). It is expected that 15-20 construction vehicles (including pickup trucks, trailers, dump trucks, etc.) could be accessing the site during construction. The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The construction vehicles generated by this project will represent less than 1% of traffic in the area. For access to the compensatory storage area located in the south of the site (closest to Harbor Freight), construction vehicle access will be off Mix Street via Stafford Avenue. Additionally, work to install new water and sewer utilities within Maltby Street will require temporary lane closures. Typical traffic management details have been developed and are included in the attached design drawings.

The accompanying plans to this application are based on a Class A-2 survey map prepared by a registered land surveyor licensed to conduct business in the State of Connecticut with the exception of Sheets C-13, Sheet C-14, and Sheet C-14A. These sheets depict the general locations of wetland replication and compensatory storage areas and are currently based on a Class D survey due to the scale and size of the parcels and location of work. We request a Class A-2 survey of these areas to be included as a condition of approval for this application and the final Class A-2 survey will be performed and submitted to the Commission for final issuance of the Special Permit prior to construction. Additionally, the wetlands replication and compensatory storage area in the southernmost part of the site, shown on Sheet C-13, cannot comply with the 100-foot buffer zone to a residential property (as required by Section 15.2.5.B). The closest abutting residential property line is 70-feet from proposed excavation activities for the wetlands replication and compensatory storage area. The location of this earth removal work to create compensatory storage is dictated by the contours of existing grade and the removal of certain volumes at each elevation to offset fill brought to that same elevation. It is important to note that this area of the site is heavily vegetated along with the abutting residential properties. We also note that the closest residential building on these lots are 250-feet away. We believe the dense vegetation, distance to residential dwelling, and nature of this construction (creation of wetlands area without a permanent structure) comply with the intent of requirements in Section 15.2.5.B for screening.

# Erosion Control Narrative

# Supplemental Narrative – Earth Removal 11/24

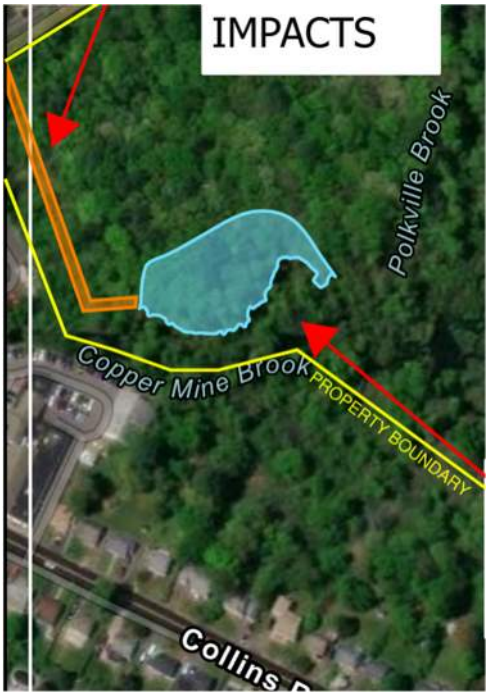
November 7, 2024

# Zoning Commission – Project Narrative Supplemental Information

This document presents revised supplemental information to the Project Narrative submitted with the June 27, 2024 application package for Site Plan and Special Permit Application #2504 and #2505 and Special Permit for Earth Removal Application #2506. Supplemental information was first provided with the October 10, 2024 submission and has since been further revised following discussions at the October 21, 2024 Zoning Commission Meeting and discussions with Bristol City Staff. The original June 27, 2024 Project Narrative is included for informational purposes only and the original Application Submittal Package should be referenced for any Attachment or Drawing Sheet reference made in that document.

## Earth Excavation Activities near Collins Road:

The Drawings have been revised to more clearly show offset distances between the earth excavation activities associated with the wetlands/compensatory flood storage creation area in the southern portion of the site and the adjacent residential properties on Collins Road. The proposed earth excavation activities will be approximately 86-feet from the closest residential property boundary. Article 15.2.5.B(1) of the Bristol Zoning Regulations requires a 100-foot buffer between earth excavations and adjacent residential lots. However, Article 15.2.5.B (3) allows the Commission to reduce the required buffer area if the existing vegetation or topography within the buffer area will effectively screen the earth removal. As seen on the Drawings and the aerial view, below, the buffer area consists of densely wooded area and the Copper Mine Brook. Additionally, the actual dwellings located on the properties adjacent to the earth excavation are approximately 330-feet from the excavation. Excavation in this area is necessary to construct the compensatory flood storage area and the selection of its location is based on the elevations of existing topography and the need to excavate at elevations matching those where fill was added to the site. Following excavation of this area to the required elevations, it will be restored as a wetland.



An access driveway has been included off Mix Street to access this wetlands/compensatory flood storage creation area. The access drive is shown on attached revised Drawing Sheets and features a curb cut; concrete apron; vehicle control gate; stabilized construction entrance to prevent tracking of dirt, dust, and debris from excavation activities; and silt fencing along the limits of clearing to prevent siltation of surrounding areas. A 10-foot vegetated buffer will be left between the proposed access drive and the property boundary. During construction, vehicles will use this access drive to excavate the wetlands/compensatory flood storage creation area. Post-construction, this access drive will only be used for periodic maintenance and surveillance of the new wetlands area and will not be frequently utilized by the New Britain Water Department for operations of the White Bridge Waterworks Facilities.

**We are seeking the Commission make a determination that although the proposed excavation and access drive are within the 100-ft buffer, the existing vegetation and topography provide adequate screening on the activity from adjacent properties.**

## Construction Traffic Control Narrative:

A construction vehicle routing figure was included with the June 2024 application. As indicated in the figure, the main route for construction vehicle access to the site on Maltby Street will be via Stafford Avenue, south to Farmington Avenue (Route 6). Vehicles can than access other State Roadways, including Route 69 (to the west) and Route 177 (to the east). Specification Section 011000 "Summary" of the Contract Documents has been updated to require the Contractor to follow this route, to the limits practicable, and to only utilize Mix Street for access to the wetland creation area located off Mix Street. Revised Section 011000 is included as an attachment.

The Annual Average Daily Traffic (AADT) for Stafford Avenue is 8,300 vehicles per day, 19,300 vehicles per day for Route 6 (west of Stafford Avenue), and 23,200 vehicles per day for Route 6 (east of Stafford Avenue). The following table presents an estimated number of construction vehicles expected per major construction activity on the site. These estimated values include trucking materials on/off site; however, they do not include personal vehicles of the construction crew. It is assumed Contractor will utilize designated space on the site to provide parking for personal crew vehicles, which will stay on-site for the duration of the workday. The Contractor will have to identify offsite parking for personal crew vehicles that cannot be accommodated onsite.

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| Construction of Wetlands and Compensatory Storage Areas | 3 Months | 5-10 vehicles per day |
| Construction of Wetlands and Compensatory Storage Areas (Mix Street) | 1 Month | 5-10 vehicles per day |

Notes:

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2) Construction activities will not all occur concurrently, so the total number of vehicles entering and exiting the site per day will vary depending on the actual construction activities occurring.

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During the October 21, 2024 Zoning Commission Meeting, several discussion points were brought up about construction traffic impacts and mitigation. These included expanded discussions on school hours, events at nearby schools/churches, and the Little League Baseball and Softball World Series Tournament hosted annually on Mix Street. Specification Section 011000 has been further updated to alert the

Contractor of these traffic considerations and require coordination with the City of Bristol DPW and Police Departments to mitigate construction traffic impacts during these times. See attached updated Section 011000 for these changes.

The drawings have been updated to include new W11-10 Truck sign to warn vehicle traffic for trucks entering and exiting the facility. As shown on the drawings, signs will be installed 250-ft from the site access drives in both directions on Maltby Street. Table 23-C of the Manual on Uniform Traffic Control Devices (MUTCD 11$^{TH}$ Edition) was used to determine the distance for advance placement of warning signs. A speed limit of 35 miles per hour (mph) (30 mph base speed on Maltby Street with an additional 5 mph) was used to determine the distance on the table.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| W11-10 | 41-4837 | Truck Symbol | 30 | 30 | 1 | SL | XI | Yellow |  |

Standard roadway and curb/sidewalk repair details were received from the City and have been incorporated into the Drawings. The standard DPW excavation forms provided to Contractors were also received from the City and will be incorporated into the final Bid Set Specifications. These standard forms are included as an Attachment.

## Construction Sequencing Narrative:

A proposed construction sequencing figure for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project was included as an attachment to the June 2024 permit submission. Some specific sequencing constraints and estimated durations in relation to earth moving were also included in the narrative associated with the June 2024 submission. The list included in the narrative is copied below and annotated with revisions based on comments received from the City. It is important to note that these represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.

Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)

- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**

- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)

- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)

- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

## Aquifer Protection Best Management Practices:

As discussed during the September 16, 2024 Zoning Commission meeting, the CT DEEP Best Management Practices Document is incorporated into the Contract Documents as a requirement and an Attachment to Specification Section 015000 “Temporary Facilities and Controls.” The updated section is included as an Attachment. CT DEEP Best Management Practices will be followed to the extent practicable on the site.

On October 17, 2024, the design team and City of Bristol Staff met with representatives of CT DEEP’s Aquifer Protection Area Program to discuss the project and implementation of Best Management Practices, specifically, the use of containment areas for refueling construction vehicles on the project site. CT DEEP concurred that the requirement for offsite (i.e. outside the aquifer protection area) refueling of construction vehicles like bulldozers, groundwater well drill rigs, excavators, loaders, etc. was not efficient, may cause delays to project schedule, and in the case of the well drill rig, could adversely impact the construction of the groundwater production well. The applicant appreciated the opportunity to speak with CT DEEP on this topic and

## Estimated Quantities of Material Brought On/Off Site:

| Quantity Material Brought On-Site | Quantity Material Taken Off-Site |
|---|---|
| Pond Pump Station Fill = 143,745 cf | Compensatory Flood Storage Areas = 433,855 cf |
| Upper Wellfield Fill = 13,840 cf | Supply Pond/Canal Sediment = 162,000 cf |
| Lower Wellfield Fill = 19,077 cf | |
| **Total = 176,662 cf** | **Total = 595,855 cf** |

It is estimated that 176,662 cubic feet (cf) (or 6,543 cubic yards [cy]) of material will be brought onto the site to fill areas around each of the nine wellheads and around the new Pond Pump Station building. This fill is necessary to comply with CT DPH requirements for infrastructure above flood elevations and to provide a 50-foot radius around wellheads to the nearest high-water mark. Approximately 595,855 cf (or 22,068 cy) of material is expected to be removed from the site. Removal of this material is required to offset necessary fill within the floodplain and will be removed from the designated compensatory flood storage creation areas indicated on the Drawings. A portion of the material removed from the site will be sediment from the supply pond and canal (162,000 cf or 6,000 cy) that has accumulated over the past 20 years. This is a routine maintenance activity for the water utility and will restore the supply pond and canal to their constructed capacities. Depending on sampling and gradation testing, the Contractor may elect to reuse material scheduled for removal from the site as fill material in other areas.

## Changes Made to Drawings Since June 27, 2024 Submittal:

Several changes have been made to the Drawings since the June 2024 submittal package. Please see a summary of the major changes made, below. See the revised Drawings, Attached.

- Site Plans for the different locations of work (Upper Wellfield, Lower Wellfield, Pond Pumping Station, and wetlands/compensatory storage creation sites) have been simplified. Property boundaries, required setback lines, and site features have been clarified.
    - Some sheets were combined and many were renamed with a "Site Plan (SP)" designation. This was done to simplify review of site plan drawings, the site plan drawings will be included as an attachment to Final Bid Set documents along with these Zoning applications. The following provides a list of Simplified Site Plan Sheets and their corresponding Civil Sheet in parentheses from the original June 2024 submittal:
        - Sheet C-1 has been renamed P-ERM to indicate it is the note sheet for the Permitting Set
        - Sheets C-2, C-3, C-4, and C-5 remained the same as they are existing condition sheets
        - Sheet C-23 covers routine maintenance work for sediment removal from the supply pond and canal
        - Sheets C-24 through C-29 remained the same as they are detail sheets
        - Sheet SP-01 (C-14) – Overview of UWF North
        - Sheet SP-02 (C-14A) – Overview of UWF South
        - Sheet SP-03 (C-13) – Overview of LWF
        - Sheet SP-04 (C-9) – Site Plan UWF
        - Sheet SP-05 (C-10 & C-12) – Site Plan Pond Pumping Station
        - Sheet SP-06 (C-11) – Site Plan LWF
        - Sheet SP-07 (New Sheet) – Mix Street Access Road
        - SP-08 (C-18A) – Maltby Street Utilities I
        - SP-09 (C-18B) – Maltby Street Utilities II
        - SP-10 (C-18C) – Maltby Street Utilities III
        - SP-11 (C-19) – Stafford Avenue and Cross Country Utilities
        - SP-12 (C-6) – E&S Controls UWF
        - SP-13 (C-7) – E&S Controls Pond Pumping Station
        - SP-14 (C-8) – E&S Controls LWF
        - SP-15 (New Sheet) – Bristol Standard Details & Mix Street Road Repair Details
- A class A-2 survey was performed for the southern portion of Lot 53-145 along Mix Street and along the property boundary with the lots on Collins Street. Enhanced mapping of these areas are included in the Drawings. All of the Class A-2 survey documents, stamped and sealed by the licensed surveyor are included as an attachment.
- Offsets from earth excavation locations to the nearest property boundary were more clearly depicted.
- As agreed with the Bristol Water and Sewer Department in the October 8, 2024 call, the 8-inch gravity sewer was extended west on Maltby Street to the property boundary between Lot 53-145-2 (Bristol Baseball Field) and Lot 53-145. The slope of the gravity sewer line in Maltby Street was adjusted from 0.01 to 0.004 to provide a minimum 3-foot coverage to pipe along the entire alignment. The alignment of the 1.25-inch force main from the Pond Pump Station was moved

into the New Britain owned property of Lot 53-145 until its lateral connection within a new manhole in Maltby Street.

- Extents of clearing and grubbing were better designated on the Drawings.
- The City of Bristol standard road repair and sidewalk details have been received and incorporated into Drawing Detail Sheets.
- Cover Sheet information has been updated to indicate the application numbers and approvals of the project.
- The Zoning Table has been simplified and values corrected.

## Comment Response Log Between Bristol City Staff and CDM Smith

There have been several rounds of comments and responses between Bristol City Staff and CDM Smith. The following presents a timeline of comments received from the Bristol City Staff and corresponding responses provided by CDM Smith:

- Permit Application forms Submitted – June 27, 2024
- Zoning Commission Meeting – July 8, 2024
- Initial Comments from City Staff provided to CDM Smith – July 31, 2024
- CDM Smith Responses to Initial Comments provided to City – September 7, 2024
- Zoning Commission Meeting – September 16, 2024
- Supplemental Information provided to City Staff – October 10, 2024
- Zoning Commission Meeting – October 21, 2024
- Additional Comments from City Staff provided to CDM Smith – October 28, 2024
- Responses to Additional Comments and Supplemental Information provided to City Staff – November 7, 2024

A comment response log tracking all of the comments and responses between the City of Bristol Staff and CDM Smith is included as an attachment.

November 7, 2024

# Zoning Commission – Application for Special Permit

## Erosion and Sediment Control Plan- Project Narrative:

This Erosion and Sediment Control Plan is provided in accordance with Section 15.1.5 of the Bristol Zoning Regulations. **This plan has been revised since the June 2024 submission to reflect comments and responses between Bristol City Staff and CDM Smith.** The erosion and sedimentation control measures at the White Bridge facility focus on the protection of wetlands and waterways during and following construction since the work includes land disturbances, excavation dewatering, supply pond and canal sediment removal activities, and other associated construction activities. Several methods are included on the Drawings to slow the flow of runoff and protect disturbed land during construction activities. Please refer to the project plans for typical details of measures to protect wetlands and waterways during and after construction. The following summary presents typical mitigation measures that will be implemented to avoid and minimize wetland impacts during construction.

**Construction Period**

- During construction, the limit of land disturbances will be kept to a minimum, where possible, and the construction will be sequenced so the entire site will not be disturbed at the same time.
- Clearing and grubbing will be limited to only the areas necessary for work to be performed, specifically in areas at the Upper and Lower Wellfields (Sheet SP-04 and SP-06) where wells and piping will be installed, at the Maltby Street 16” pipe crossing (Sheet SP-10), at areas where wetlands and compensatory storage will be created (Sheets SP-01, SP-02, and SP-03), and areas around the Supply Pond for access during sediment removal activities (Sheet C-23).
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed at the down gradient limits of work and construction access roadways prior to the commencement of work to prevent the transport of sediment to the downgradient wetlands and waterways during construction (see Sheets SP-12 thru SP-14). Specifically, at the Upper Wellfield this includes compost logs/straw wattles along the facility driveway from Maltby Street to the existing Pumping Station and down each of the well field laterals. At the Lower Wellfield, this includes along the wetlands to the north and west of proposed work, along the Coppermine Brook to the east, around the Supply Pond, and along both sides of the Canal to the Polkville Avenue Brook. These barriers will be inspected at least once per week and within 24 hours of rainfall events ½-inch or greater and repaired as needed. These barriers will remain in place until all disturbed soils are stabilized. A stockpile of compost logs/straw wattles and silt fence will be maintained on site for routine maintenance and emergency repairs. Barriers will be replaced as necessary due to sediment build-up and degradation.
- Sedimentation barriers (i.e., silt fence and/or compost logs/straw wattles installed per industry standards) will be installed surrounding temporary stockpile areas.
- For all slopes 4:1 or steeper, an erosion control blanket will be required, including at the Upper and Lower Wellfield wells (see Sheets SP-04 and SP-06). Temporary erosion control blankets will be inspected at least once per week and within 24 hours of rainfall events.

- A turbidity curtain will be installed to prevent sedimentation and turbidity disturbances in the Coppermine Brook during canal and supply pond sediment removal activities (see Sheet C-23 and Detail Sheet C-24). Turbidity curtains will be inspected daily during Supply Pond and canal sediment removal activities. The turbidity curtain will not be removed before sediment removal activities have ended and clarity of water has returned.
- Catch basin filters will be installed on catch basins near all excavation work on Maltby Street, Stafford Avenue, and Mix Street (See Sheets SP-08 thru SP-10and Detail Sheet C-24).
- In the event that excavation dewatering is necessary, water will be pumped and discharged to one of the temporary sedimentation basins in designated areas of the site (see Sheets SP-12 thru SP-14 and Detail Sheet C-24). Temporary sedimentation basins will be inspected at least once per week and cleaned as needed to remove accumulated sediments. Temporary portable sediment tanks may also be used to handle significant amounts of excavation dewatering. All water to be discharged from dewatering activities will be filtered or otherwise treated prior to discharge to prevent siltation to adjacent areas. Best management practices will be used by the Contractor in order to prevent siltation to adjacent areas during dewatering activities.
- A temporary sediment dewatering and stockpiling area has been designated within the Supply Pond to dewater removed sediments during restoration activities (see Sheet C-23 and Detail Sheet C-24). Stockpiled materials and containment area will be inspected daily during dewatering activities, weekly during non-dewatering activities, and within 24 hours of rainfall events of ½-inch or greater.
- A stabilized construction entrance is also being required for the site to prevent tire tracked soils to onsite and offsite locations (see Sheet C-23 and Detail Sheet C-24). The stabilized construction entrance will be inspected periodically and additional top dressing or length will be added, as necessary, to continue capturing sediment tracked on vehicles.
- The silt fence and/or compost log/straw wattle barrier will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- The sedimentation barriers will not be removed until the site areas are vegetated, paved or otherwise permanently stabilized to prevent erosion of exposed soils. Work will proceed as rapidly as possible, limiting the exposure time of disturbed soils to wind and precipitation.
- Periodic inspections will be made by the applicant to ensure compliance with the permit conditions.

*Spill Control Measures*

- Spill containment equipment (e.g. oil absorbent pads, oil absorbent materials, containment booms, shovels, etc.) will be stored in the equipment storage and refueling area in an easily accessible manner for use in the clean-up of accidental releases of fuel or other hazardous materials. Should there be an accidental release the proper authorities will be notified in accordance with all applicable federal, state, and local laws; and

- To minimize the possibility of leakage of hydraulic fluid, all hydraulic lines on all construction equipment and vehicles will be inspected at the end of each workday. If any excessive wear or leakage is observed, the line will be repaired prior to further use. In addition, a supply of oil absorbent materials (i.e. pads, "speedy dry," and/or booms) will be maintained with the equipment at the work area for immediate deployment in the event of an accidental release of fuel, hydraulic fluid, oil, etc.

*Schedule for Grading and Construction Activities:*

A proposed construction sequencing for critical path items in the White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station Project is included as an attachment to this application. Tasks listed are generally to be performed within each proposed stage, and are not necessarily presented sequentially. As required by Project Specifications, the Contractor is required to submit a detailed Final Construction Schedule for approval by the Engineer. Further, as required by the Specifications, the Contractor is required to submit a detailed Construction Sequencing Plan for review and approval by the Engineer. Both the Construction Schedule and Construction Sequencing Plan submitted by the Contractor will be reviewed for compliance with time of year restrictions imposed by the Natural Diversity Database (NDDB) (no bank disturbance work in/adjacent to wetlands November 1 through March 15) and for the expected Great Blue Heron nesting period (March through May).

Some specific sequencing constraints and estimated durations are listed below. <u>These represent a suggested sequencing for critical path items or items that will require earth excavation and disturbance of soils. The final Construction Sequence will be developed by the Contractor.</u> Some items listed in each "Stage" can/will overlap with items listed in previous stages.

<u>Construction Sequencing - Stage 1 (Fall 2024 – Fall 2026)</u>

- Terminate operation of existing Lower Wellfield (LWF) Wells
- **Install Erosion and Sedimentation control measures around the Lower Wellfield, Lower Wellfield Pump Station, Supply Pond, and Canal areas**
- Demolish existing LWF Pumping Station (3 months)
- Demolish existing caisson and fencing near intake pond (1 month)
- Perform canal and pond restoration (to be completed following demolition of the caisson and prior to replacement of the canal culverts) (3 months – **not to be performed between November 1 and March 15**) [Shown on figure to occupy 8 months, will depend on Contractor's methods but 3 month duration anticipated]
- Install test wells, stream gauges, and other equipment required for well pump testing at Upper Wellfield (UWF) and LWF (2 months) [Shown on figure to occupy 3 months, will depend on Contractor's methods but 2 month duration anticipated]
- **Install Erosion and Sedimentation control measures around the Upper Wellfield and access driveway**
- Drill UWF Wells. Order final UWF pumps/motors (3 months each, 7 months total – **not to be performed between November 1 and March 15 at applicable wells**)
- Drill LWF Wells. Order final LWF pumps/motors (3 months each, 13 months total – **not to be performed between November 1 and March 15 at applicable wells, not to be performed between March and May**)
- Install well meter vault, vault control cabinets, meter, and electrical equipment (18 months total, to follow each well drilled – **not to be performed between November 1 and March 15 at**

**applicable wells**) [Shown on figure to occupy 13 months with a 5 month downtime for NDDB restrictions, will depend on well drilling sequence and proximity to wetlands]
- Install foundation of new Pond Pumping Station building (3 months – **not to be performed between March and May**) [Shown on figure to occupy 4 months, will depend on Contractor's methods but 3 month duration anticipated]

Construction Sequencing - Stage 2 (Spring 2025 – Fall 2026)
- Install yard piping from UWF and LWF for raw water transmission to Shuttle Meadow during Groundwater Under Direct Influence of Surface Water (GWUDI) testing. Install temporary connection to existing Pond Pumping Station. Install fiber optic cabling (6 months – **not to be performed between November 1 and March 15**
- Install final LWF yard piping, electrical conduit, fiber optic cabling (6 months – **not to be performed between November 1 and March 15 in applicable areas, not to be performed between March and May in applicable areas**)
- **Final stabilization of UWF and LWF wellhead areas**
- Perform canal crossing work for yard piping and restore canal culverts (1 month – **not to be performed between November 1 and March 15**)
- Install new gas service from Mix Street to Pond Pumping Station building (2 months – **not to be performed between March and May**)
- Install new sewer force main and water service to Maltby Street (3 months)
- Install fiber optic cables and Well Pump Communication/VFD Platforms (3 months each, 9 months total)
- Terminate operation of existing UWF Wells. **Install Erosion and Sedimentation control measures around the UWF Pump Station**
- Demolish existing UWF Pump Station
- Install and test UWF submersible well pumps and motors (2 months)
- Install and test LWF submersible well pumps and motors (2 months)
- Install electrical service and equipment at the new Pond Pumping Station, UWF, and LWF (3 months)

Construction Sequencing - Stage 3 (Summer 2025 – Spring 2028)
- Setup instrumentation and perform GWUDI Testing on new UWF and LWF wells (12 months). UWF and LWF pumped via raw water main to Shuttle Meadow Reservoir
- Construct new Pond Pumping Station Building (18 months total - **exterior construction not to be performed between March and May**)
- Install yard piping to complete final connections to Pond Pumping Station (1 month)

Construction Sequencing – Stage 4 (Summer 2027 – Fall 2027)
- GWUDI testing completed
- Completion of new Pond Pumping Station building. Terminate operation of existing Pond Pumping Station
- Abandon/demolish existing Pond Pumping Station building, electrical shed, and UWF Pumping Station. Cap and abandon temporary connections (3 months)

Construction Methods:
Trench excavations will be used for pipe, valve, and appurtenance installation. Suitable material removed from trenches may be placed back into the excavation and compacted or temporarily stockpiled on site, while material deemed unsuitable for reuse will be removed from the site. Open excavations will be used

to install the foundation and footings for the Pond Pumping Station and the vaults located at each well. Material removed from these excavations will be taken off-site or temporarily stockpiled on the site with proper best management erosion and sedimentation control measures being implemented around the stockpile to prevent sedimentation from stockpiled material. This includes placement of straw wattles/compost socks and a trenched silt fence around the stockpile area in addition to the sedimentation controls along the limits of work.

Alternative construction methods for the yard piping may include trenchless installation of pipe to limit area of disturbed land. Pipe could be installed by horizontal directional drilling, pipe ramming, pipe bursting of existing pipelines, tunneling, or horizontal auger boring. All of these methods would still require excavation for access to the existing pipe or as insertion and receiving pits. None of these methods were selected due to the amount and complexity of existing utilities present at the site, lack of record drawings for most of these utilities, and complexity of new piping connections to be installed.

A temporary stabilized construction entrance will be installed during sediment removal and restoration of the supply pond and canal. This construction entrance will run along the berm between the canal and supply pond to the temporary stabilized pond access point. Sediment removed from the supply pond and canal will be temporarily stored within the supply pond to dewater before being removed from the site.

Backfilling of trenches and excavations will be completed as soon as practicable. Pipe bedding will be placed up to 12-inches above the crown of the pipe and suitable backfill will be placed in 6-inch lifts and compacted by hand or pneumatic ramming with tools weighing at least 20 pounds to finished grade. Disturbed areas will be loamed and seeded to provide vegetated soil cover against sheet runoff and wind erosion. An erosion control blanket will be required for slopped areas until vegetated cover is established.

Typical construction equipment, including heavy machinery, is expected to be used to complete this work. Machinery may include bulldozers, loaders, excavators, backhoe loaders, triaxle dump trucks, and drill rig trucks. Equipment, machinery, and materials will be stored or stockpiled in the designated areas shown on the sequencing drawings.

**Post-Construction Period**

The following summary of mitigation measures will be implemented to restore any areas affected by short-term impacts that occur in or adjacent to wetlands.

- The final site is designed to have a 3-foot wide gravel infiltration trench with 1.5”-3” diameter washed aggregate covered with 6” pea gravel running along the facility driveway to collect and slow the flow of runoff from impervious surfaces (see Sheet SP-05 and Detail Sheet C-26).
- All areas disturbed during construction activities are to be loamed and seeded to provide vegetated soil cover protection against sheet runoff and wind erosion (see Sheets SP-04 thru SP-06). Seeded areas will be inspected at least once per week and within 24 hours of rainfall events of ½-inch or greater.
- Once established, seeded areas will be mowed and maintained as appropriate.

- The Pond Pumping Station building roof drain leader will outlet to a riprap apron (See Sheet SP-05 and Detail Sheet C-26). Riprap used in the roof drain apron will be inspected periodically to determine if high flows have caused scour beneath riprap or if vegetation removal is required. On the northeast side of the Pond Pumping Station building, a retaining wall will be utilized to prevent steep slopes.
- The wetland replication and restoration areas will be planted with trees and shrubs per the planting plans, and seeded with a wetland seed mixture.
- If seeding occurs outside of the growing season, temporary stabilization measures (i.e., mulching or erosion control blankets) will be used to prevent erosion until the area can be seeded during the following growing season.
- Reseeding and mulching disturbed areas. These areas will be maintained and re-seeded to ensure that grass cover is adequate to stabilize the exposed soil, and
- Sedimentation and erosion control barriers will not be removed until a vegetative cover dense enough to prevent erosion is established.

Selections from Figure 3-2 of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control:

**Figure 3-2 Measure Selection Matrix**

| Identify Problem Areas | Identify Control Problems | Identify Strategy | Select Specific Measure | | Plan Key |
|---|---|---|---|---|---|
| | | | Functional Group | Measure | |
| Disturbed Areas | **Control Soil Detachment** | Preserve and Conserve Existing Site Resources | Protect Vegetation | Tree Protection | TP |
| | | | Preserve and Conserve Soil | Topsoiling | TO |
| | Raindrop Splash | | | Land Grading | LG |
| | | | | Surface Roughening | SR |
| Short or Shallow Slopes | Sheet & Rill Erosion | Protect Surface | | Dust Control | DC |
| | | | Vegetative Soil Cover | Temporary Seeding | TS |
| | Wind Erosion | | | Permanent Seeding | PS |
| | | | | Sodding | SO |
| | | | | Landscape Planting | LP |
| Steep Slopes | | | Non-Living Soil Protection | Temporary Soil Protection | TSP |
| | | | | Mulch for Seed | MS |
| Long Slopes | | | | Landscape Mulch | LM |
| | | | | Temporary Erosion Control Blanket | ECB |
| | | | | Permanent Turf Reinforcement Mat | TRM |
| | | | | Stone Slope Protection | SSP |
| Stockpile Areas | | Protect Surface and/or Convey Runoff | Stabilization Structures | Retaining Walls | RW |
| | | | | Riprap | RR |
| | **Control Water Movement** | | | Gabions | G |
| Borrow Areas | | | | Permanent Slope Drain | PSD |
| | Gully Erosion | | | Channel Grade Stabilization Structure | CSS |
| | | | | Temporary Lined Chute | TC |
| | | | | Temporary Pipe Slope Drain | TSD |
| | Channel & Stream Erosion | | Drainageways and Watercourses | Vegetated Waterway | VW |
| Drainage Ways | | Convey Runoff | | Temporary Lined Channel | TLC |
| | | | | Permanent Lined Waterway | PW |
| Wetlands and Watercourses | | | | Temporary Stream Crossing | TSC |
| | | Direct Runoff | Diversions | Temporary Fill Berm | TFB |
| | | | | Water Bar | WB |
| | | | | Temporary Diversion | TD |
| Waterbodies | | | | Permanent Diversion | PD |
| | | Intercept Grnd.Water | Subsurface Drains | Subsurface Drain | SD |
| | | Detain Runoff | Detention Structures | Detention Basin | DB |
| Areas of Flooding and Existing Erosion | Natural Resource Degradation | Diffuse Runoff | Energy Dissipators | Level Spreader | LS |
| | | | | Outlet Protection | OP |
| | | | | Stone Check Dam | SCD |
| | **Control Sediment Deposition** | Detain Sediments | Sediment Impoundments, Barriers, and Filters | Temporary Sediment Basin | SB |
| | | | | Temporary Sediment Trap | TST |
| Drainage Outlets | | | | Hay Bale Barrier | HB |
| | Protect Onsite and Offsite Areas | | | Geotextile Silt Fence | GSF |
| | | | | Turbidity Curtain | TC |
| | | | | Vegetative Filter | VF |
| Travel Areas | | Control Mechanically Moved Waters and Soils | Tire Tracked Soils Dewatering | Construction Entrance | CE |
| | | | | Pump Intake and Outlet Protection | PuP |
| | | | | Pumping Settling Basin | PSB |
| | | | | Portable Sediment Tank | PST |
| Dewatering | | | | Dewatering of Earth Materials | DWM |

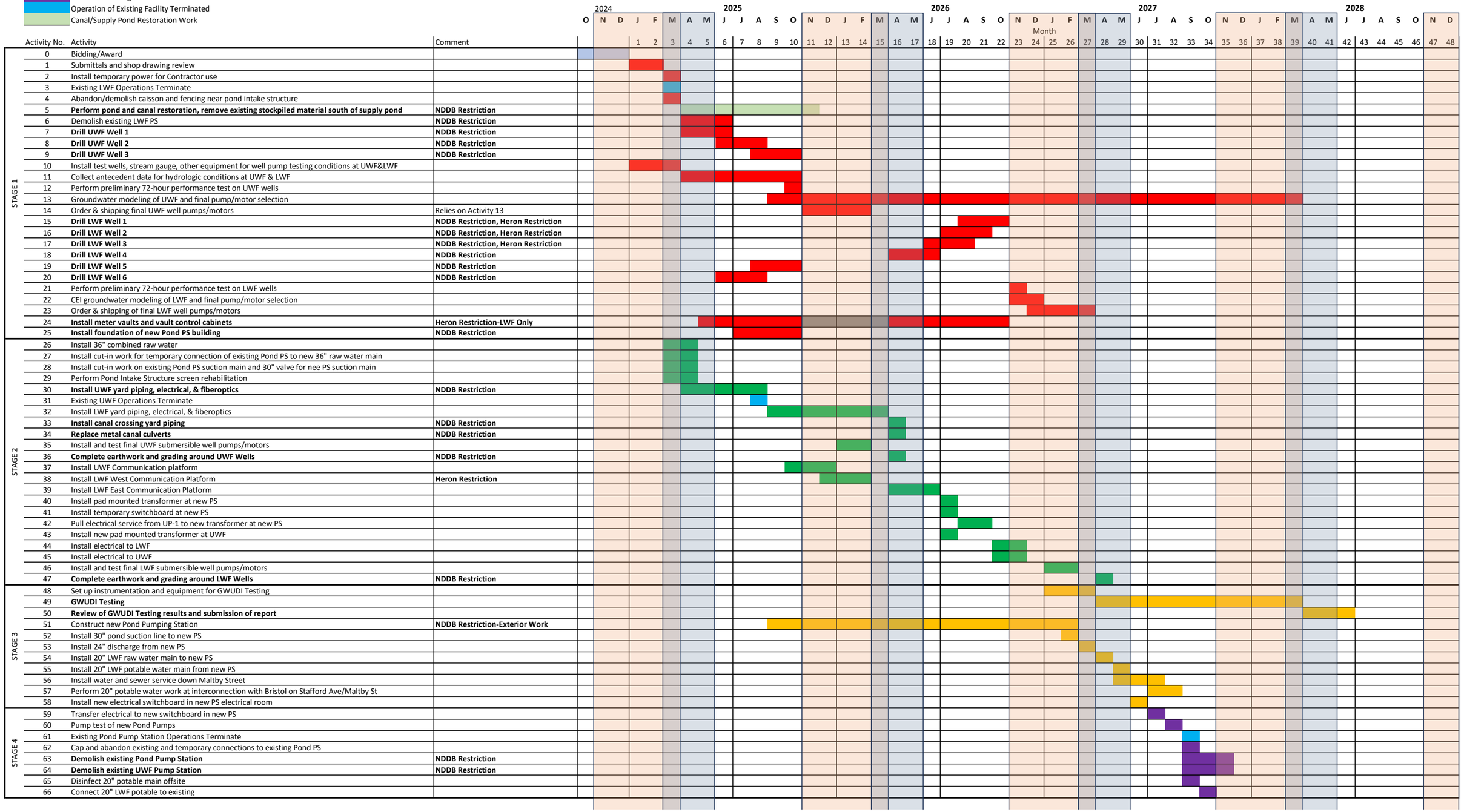
# Proposed Construction Schedule 11/24

**Legend:**

- Construction Stage 1
- Construction Stage 2
- Construction Stage 3
- Construction Stage 4
- Operation of Existing Facility Terminated
- Canal/Supply Pond Restoration Work

- NDDB Restriction - No Wetlands Work
- Heron Restriction - No Work near Rookery

**City of New Britain, CT**
**White Bridge Waterworks Facilities Upper and Lower Wellfields and Pond Pumping Station**
**Project Construction Sequencing**
**Version: 1.5 Date: 2024.05.03**




| Activity No. | Activity | Comment |
|---|---|---|
| 0 | Bidding/Award | |
| 1 | Submittals and shop drawing review | |
| 2 | Install temporary power for Contractor use | |
| 3 | Existing LWF Operations Terminate | |
| 4 | Abandon/demolish caisson and fencing near pond intake structure | |
| 5 | **Perform pond and canal restoration, remove existing stockpiled material south of supply pond** | **NDDB Restriction** |
| 6 | Demolish existing LWF PS | **NDDB Restriction** |
| 7 | **Drill UWF Well 1** | **NDDB Restriction** |
| 8 | **Drill UWF Well 2** | **NDDB Restriction** |
| 9 | **Drill UWF Well 3** | **NDDB Restriction** |
| 10 | Install test wells, stream gauge, other equipment for well pump testing conditions at UWF&LWF | |
| 11 | Collect antecedent data for hydrologic conditions at UWF & LWF | |
| 12 | Perform preliminary 72-hour performance test on UWF wells | |
| 13 | Groundwater modeling of UWF and final pump/motor selection | |
| 14 | Order & shipping final UWF well pumps/motors | Relies on Activity 13 |
| 15 | **Drill LWF Well 1** | **NDDB Restriction, Heron Restriction** |
| 16 | **Drill LWF Well 2** | **NDDB Restriction, Heron Restriction** |
| 17 | **Drill LWF Well 3** | **NDDB Restriction, Heron Restriction** |
| 18 | **Drill LWF Well 4** | **NDDB Restriction** |
| 19 | **Drill LWF Well 5** | **NDDB Restriction** |
| 20 | **Drill LWF Well 6** | **NDDB Restriction** |
| 21 | Perform preliminary 72-hour performance test on LWF wells | |
| 22 | CEI groundwater modeling of LWF and final pump/motor selection | |
| 23 | Order & shipping of final LWF well pumps/motors | |
| 24 | **Install meter vaults and vault control cabinets** | **Heron Restriction-LWF Only** |
| 25 | **Install foundation of new Pond PS building** | **NDDB Restriction** |
| 26 | Install 36" combined raw water | |
| 27 | Install cut-in work for temporary connection of existing Pond PS to new 36" raw water main | |
| 28 | Install cut-in work on existing Pond PS suction main and 30" valve for nee PS suction main | |
| 29 | Perform Pond Intake Structure screen rehabilitation | |
| 30 | **Install UWF yard piping, electrical, & fiberoptics** | **NDDB Restriction** |
| 31 | Existing UWF Operations Terminate | |
| 32 | Install LWF yard piping, electrical, & fiberoptics | |
| 33 | **Install canal crossing yard piping** | **NDDB Restriction** |
| 34 | **Replace metal canal culverts** | **NDDB Restriction** |
| 35 | Install and test final UWF submersible well pumps/motors | |
| 36 | **Complete earthwork and grading around UWF Wells** | **NDDB Restriction** |
| 37 | Install UWF Communication platform | |
| 38 | Install LWF West Communication Platform | **Heron Restriction** |
| 39 | Install LWF East Communication Platform | |
| 40 | Install pad mounted transformer at new PS | |
| 41 | Install temporary switchboard at new PS | |
| 42 | Pull electrical service from UP-1 to new transformer at new PS | |
| 43 | Install new pad mounted transformer at UWF | |
| 44 | Install electrical to LWF | |
| 45 | Install electrical to UWF | |
| 46 | Install and test final LWF submersible well pumps/motors | |
| 47 | **Complete earthwork and grading around LWF Wells** | **NDDB Restriction** |
| 48 | Set up instrumentation and equipment for GWUDI Testing | |
| 49 | **GWUDI Testing** | |
| 50 | **Review of GWUDI Testing results and submission of report** | |
| 51 | Construct new Pond Pumping Station | **NDDB Restriction-Exterior Work** |
| 52 | Install 30" pond suction line to new PS | |
| 53 | Install 24" discharge from new PS | |
| 54 | Install 20" LWF raw water main to new PS | |
| 55 | Install 20" LWF potable water main from new PS | |
| 56 | Install water and sewer service down Maltby Street | |
| 57 | Perform 20" potable water work at interconnection with Bristol on Stafford Ave/Maltby St | |
| 58 | Install new electrical switchboard in new PS electrical room | |
| 59 | Transfer electrical to new switchboard in new PS | |
| 60 | Pump test of new Pond Pumps | |
| 61 | Existing Pond Pump Station Operations Terminate | |
| 62 | Cap and abandon existing and temporary connections to existing Pond PS | |
| 63 | **Demolish existing Pond Pump Station** | **NDDB Restriction** |
| 64 | **Demolish existing UWF Pump Station** | **NDDB Restriction** |
| 65 | Disinfect 20" potable main offsite | |
| 66 | Connect 20" LWF potable to existing | |

# Stormwater Management Report Hyperlink:

https://www.bristolct.gov/DocumentCenter/View/47020/NBW-Stormwater-Report

# Geotechnical Report

USDA United States Department of Agriculture

NRCS Natural Resources Conservation Service

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

# Custom Soil Resource Report for State of Connecticut

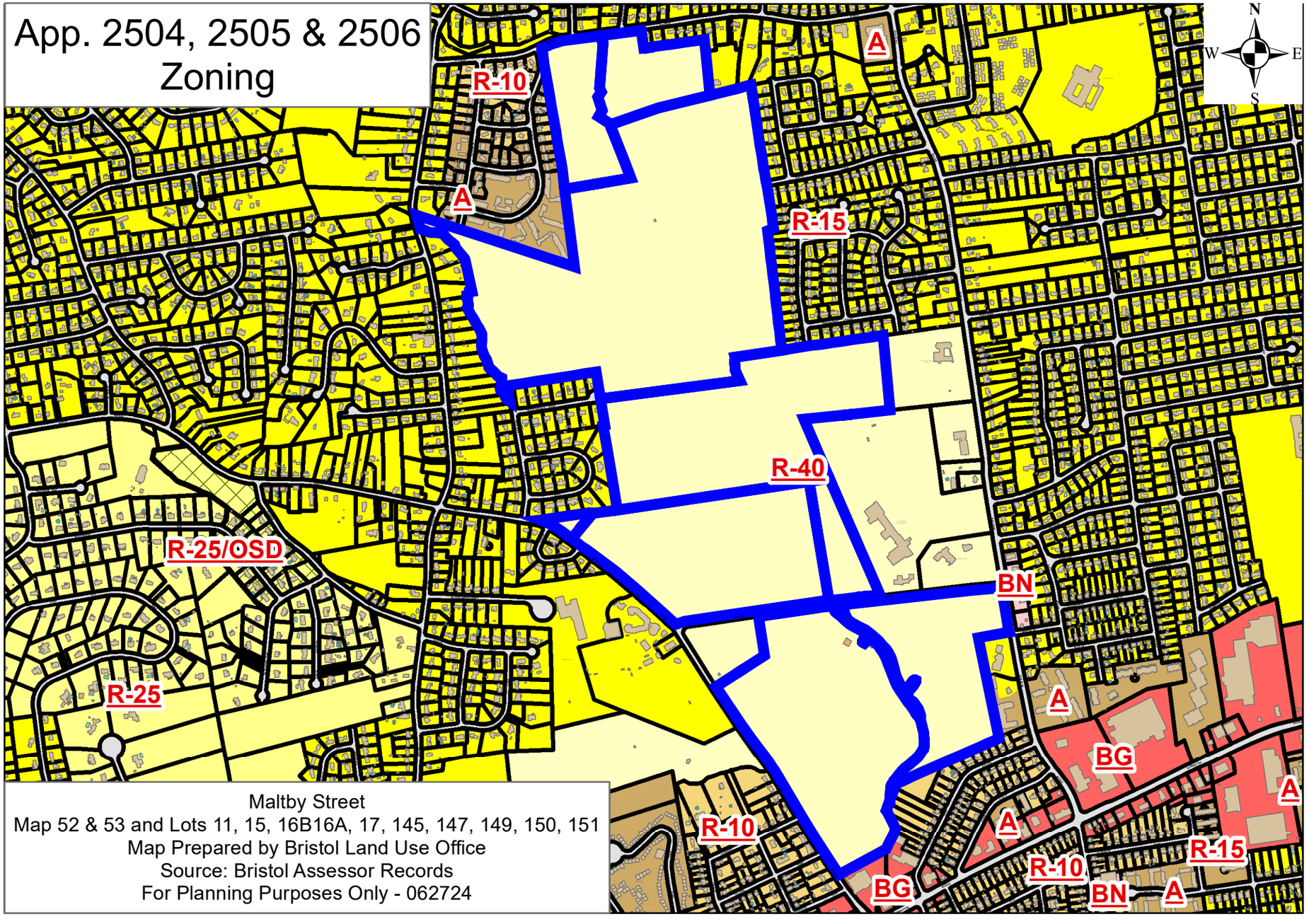
## White Bridge Waterworks Facilities - Pond Pumping Station

**Hyperlink:**
https://www.bristolct.gov/DocumentCenter/View/47021/Geotechnical-Report



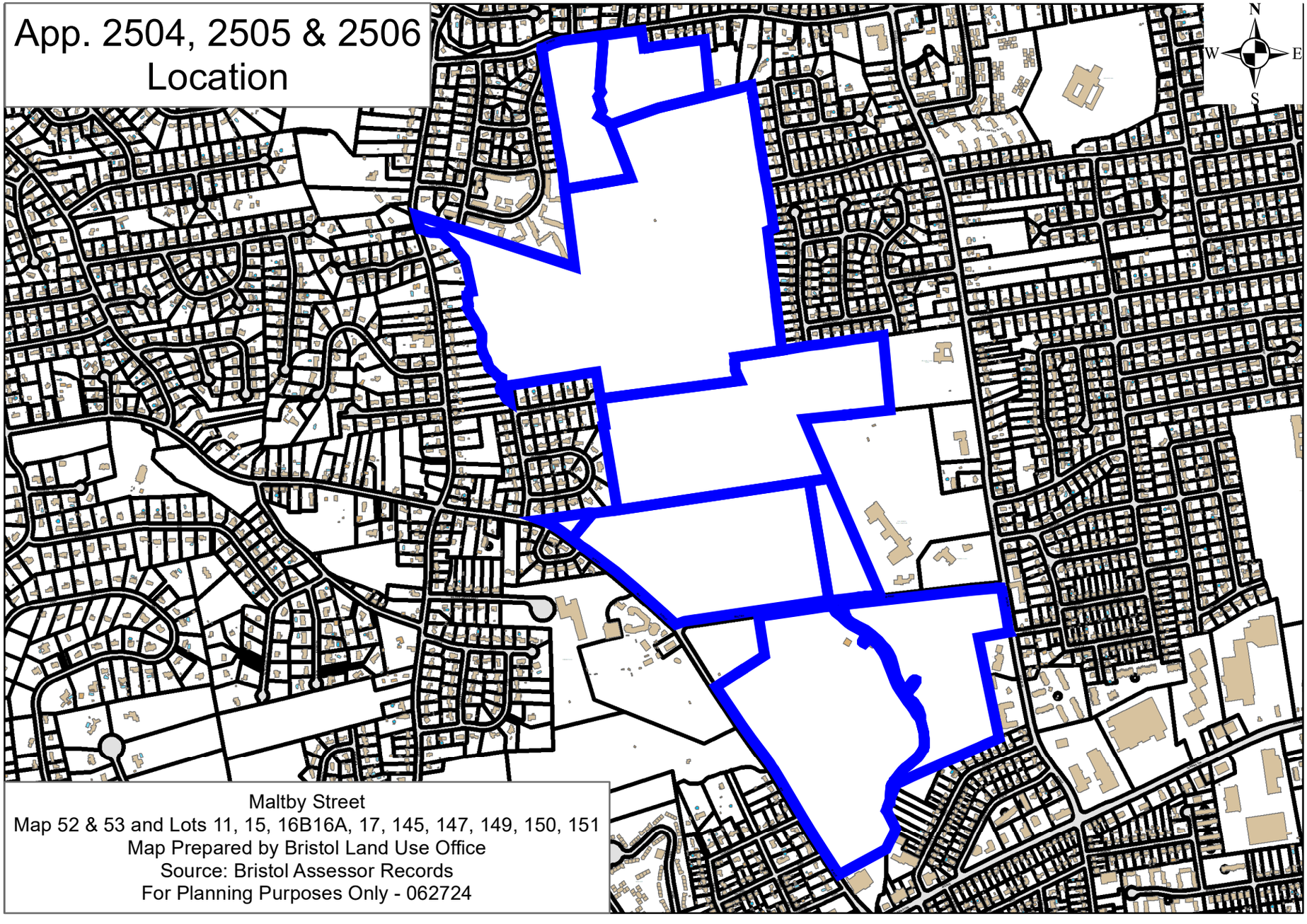

September 26, 2022

# App. 2504, 2505 & 2506 Zoning



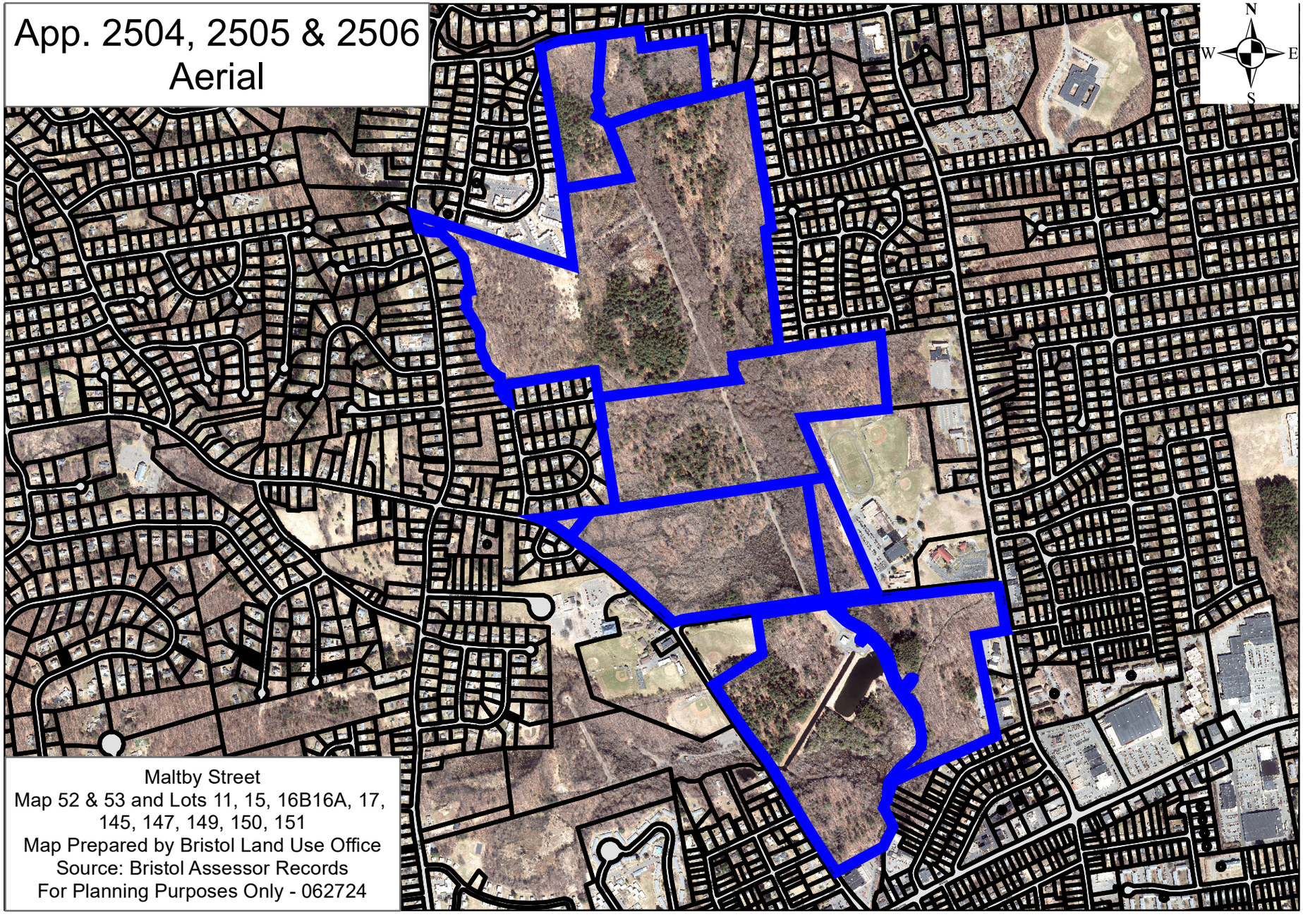

Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# App. 2504, 2505 & 2506
# Location

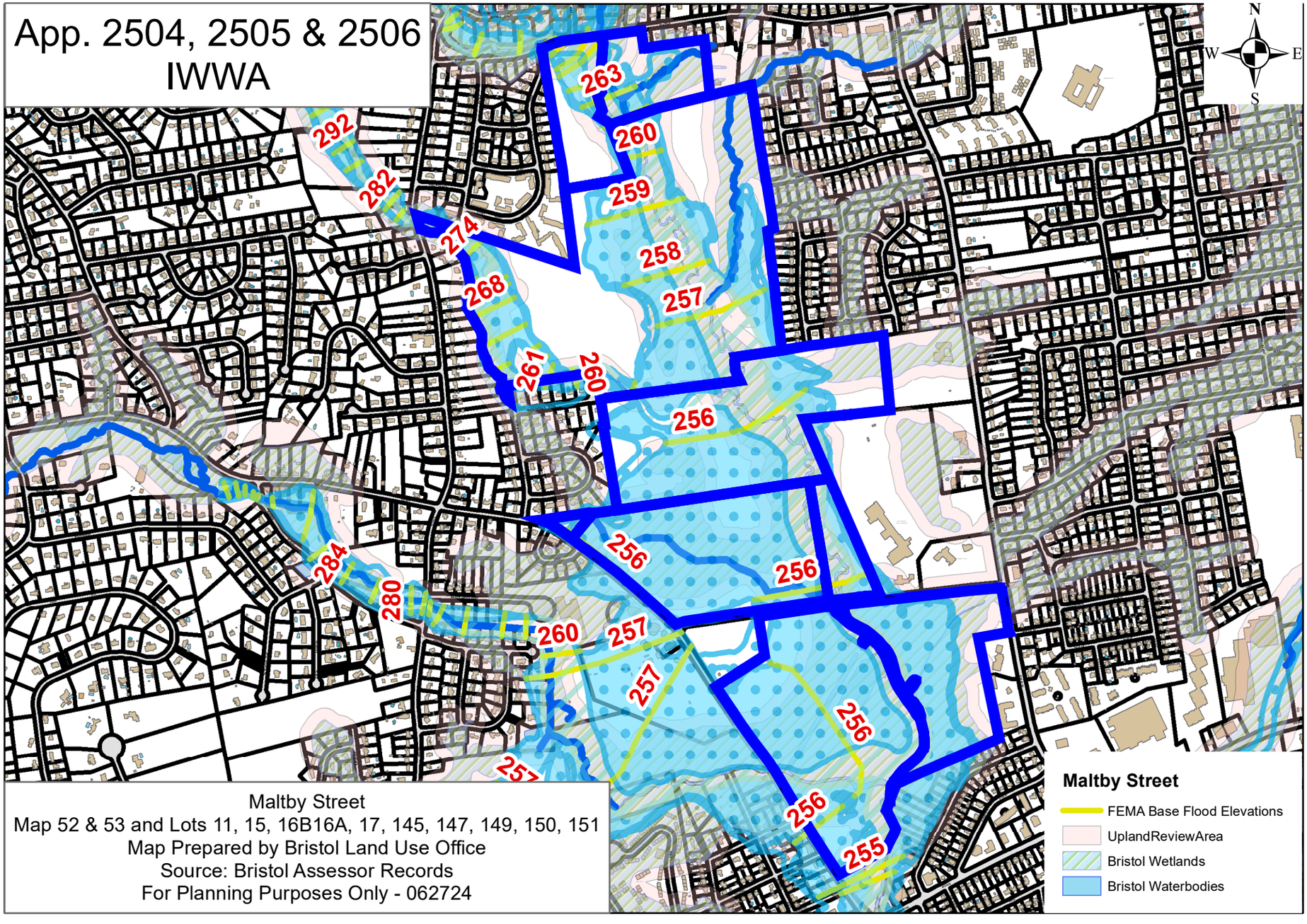



Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# App. 2504, 2505 & 2506
# Aerial




Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724


App. 2504, 2505 & 2506
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Maltby Street
FEMA Base Flood Elevations
UplandReviewArea
Bristol Wetlands
Bristol Waterbodies
Maltby Street
Map 52 & 53 and Lots 11, 15, 16B16A, 17, 145, 147, 149, 150, 151
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 062724

# Google Earth


Copper Mine Brook
Polkville Ave Brook
Layers
2D


Copper Mine Brook
Polkville Ave Brook
Field


Copper Mine Brook
Copper Mine Brook
Copper Mine Brook

# Revised Specification Section 11/24

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# SECTION 011000 - SUMMARY

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Construction Sequencing.
4. Work performed by Owner.
5. Contractor’s use of site and premises.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and Drawing conventions.
9. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
2. Section 017300 “Execution and Construction Sequencing” for sequencing requirements.
3. Appendix G for state, local, and federal requirements and conditions from project permits.

### 1.3 DEFINITIONS

A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

### 1.4 PROJECT INFORMATION

A. Project Identification: White Bridge Waterworks Facilities, City of New Britain, CT.

1. Project Location: Maltby Street, Bristol, CT

B. Owner: City of New Britain, CT

C. Engineer: CDM Smith Inc., East Hartford, CT

D. Engineer's Consultants: Engineer has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Comprehensive Environmental Inc. (CEI)

## 1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Construction of White Bridge Waterworks Facilities including groundwater production wells, Pond Pumping Station, electrical and instrumentation upgrades, and other Work indicated in the Contract Documents.

a. Groundwater production wells:

1) Specifications for the construction and development of gravel packed groundwater production wells and the abandonment and decommissioning of existing wells are included in Appendix A to these Contract Documents.

b. Existing Conditions:

1) Data regarding the geological and geotechnical field testing conducted for the Work are included in Appendix F. The information provided is for general informational purposes only. The subsurface information presented is accurate only at the specific locations and times the subsurface explorations were made. It is the Contractor’s responsibility to review the information contained within these Contract Documents and make their own interpretations and conclusions of the character of materials to be encountered and the impact on the Work based on the Contractor’s expert knowledge of the area and of earthwork techniques. The Contractor, at their own expense, may conduct additional subsurface explorations for their own information after obtaining the Owner’s permission.

2) Parts of the project site are located within Federal, State, and Local protected species habitat, including the Spotted Turtle (Clemmys Guttata), Wood Turtle (Glyptemys Insculpta), and Great Blue Herron. Information on requirements and construction activity limitations are included in the permits included in Appendix G.

3) Test pit excavations were performed to confirm the locations of select existing utilities on the White Bridge Waterworks Facilities site. A memorandum summarizing the test pits is included in Appendix E. Information provided in the memorandum is for general informational purposes only.

2. Demolition of existing White Bridge Waterworks Facilities including the existing Pond Pumping Station, existing Lower Wellfield Pumping Station, existing Upper Wellfield Pumping Station, existing caisson structure located at the Lower Wellfield, and existing production wells at the Upper and Lower Wellfields. Existing equipment to be removed from these locations may include, but is not limited to, the following:

a. Existing Pond Pumping Station:

1) Centrifugal pumps and associated motor
2) Process piping
3) Compressor and air tanks
4) Electrical equipment and controls cabinets

b. Existing Lower Wellfield Pumping Station:

1) Electrical controls and equipment cabinets
2) Wall mounted electrical equipment
3) Bulk liquid chemical storage tanks
4) Compressor and air tanks
5) Pumps and associated motors
6) Process piping
7) HVAC equipment
8) Miscellaneous furniture

c. Existing Upper Wellfield Pumping Station:

1) Electrical controls and equipment cabinets
2) Pumps and associated motors
3) Process piping
4) Compressor and air tanks

d. Data regarding the hazardous material field testing conducted for building demolition Work are included in Appendix C.

3. Cleaning and inspecting of approximately 2,000 LF of existing 12-inch ductile-iron water main in the UWF driveway.

4. Rehabilitation of the Supply Pond and canal, including sediment removal, handling and disposal and rehabilitation of the Intake Structure.

a. Data regarding material field testing conducted for the Supply Pond are included in Appendix D.

5. Extension of the Bristol, CT water and sewer systems with installation of ductile-iron water main and PVC sewer main in Mix Street and Maltby Street.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

## 1.6 CONSTRUCTION SEQUENCING

A. Construct the Work stages, with each stage substantially complete as indicated on Drawings and in Section 017300.

B. Before commencing Work of each stage, submit an updated copy of Contractor's construction schedule and Construction Sequencing Plan, showing the sequence, commencement and completion dates for all stages of the Work.

## 1.7 WORK PERFORMED BY OWNER

A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

B. Future Work Not Part of this Contract: The Contract Documents include requirements that will allow Owner to carry out future work following completion of this Project; provide for the following future work:

1. Treatment of Lower Wellfield water to potable standards and cleaning, lining, and final connections of the 20” potable water main cross country from the White Bridge Waterworks Facilities to Stafford Avenue.

## 1.8 CONTRACTOR’S USE OF SITE AND PREMISES

A. Restricted Use of Site: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Buildings: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period, unless otherwise noted on the Drawings. Repair damage caused by construction operations.

D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

## 1.9 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction or have been decommissioned and demolished as part of the construction sequencing. Cooperate with Owner during construction operations to

minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

## 1.10 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work to between 7:00 a.m. to 7:00 p.m., Monday through Saturday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.

1. Sunday Hours: Work may be permitted on Sunday between 9:00 a.m. and 5:00 p.m.
2. Early Morning Hours: No work shall occur at the site before 7:00 a.m.
3. Hours for Utility Shutdowns: Coordinate with Owner; utility shutdowns and other activities requiring City of New Britain personnel shall be planned between 7:00 a.m. and 2:00 p.m.
4. City of Bristol Noise Ordinance and other work hour restrictions shall be followed at all times.

**C. Work within City of Bristol Roadways:**

**1. Work within the intersection of Maltby Street and Stafford Avenue is prohibited during bus drop off times (7:30 a.m. to 7:40 a.m.) at St. Paul Catholic High School. Work shall not start in this intersection before 8:00 a.m. on weekdays (Monday through Friday) while school is in session.**

**2. Work within the intersection of Maltby Street and Stafford Avenue is prohibited during bus pick up times (2:15 p.m.) at St. Paul Catholic High School. Work shall not be performed in the intersection between 2:00 p.m. and 3:00 p.m. on weekdays (Monday through Friday) while school is in session.**

**a. Roadways shall be made safe and passable for all thru traffic at the end of each day and for the specified periods of no-work within the intersection.**

**3. Utility installation work within Maltby Street is prohibited during peak traffic hours and is limited to the hours of 10:00 a.m. to 4:00 p.m. unless previously approved by the Engineer.**

D. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:

1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Obtain Engineer's written permission before proceeding with utility interruptions.

E. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Engineer not less than two days in advance of proposed disruptive operations.
2. Obtain Engineer's written permission before proceeding with disruptive operations.

F. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Project site is not permitted.

G. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

H. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

I. Local, State, and Federal Requirements: Comply with all local, state, and federal requirements and conditions issued for the project including, but not limited to, time of year work restrictions to protect state-listed species and other restrictions listed in the permits included as Appendix G to these Contract Documents.

**J. Construction Vehicle Access to Site shall be from Maltby Street via Stafford Avenue, to the extent practicable. Construction vehicle access to the site via Mix Street is prohibited except to perform Work associated with the wetlands creation area and/or without prior approval by the Engineer. Contractor's construction vehicles shall avoid residential roadways in the City of Bristol.**

## 1.11 COORDINATION WITH CITY OF BRISTOL, CT

**A. The White Bridge Water Works Facility is owned and operated by the City of New Britain, CT but is located within the City of Bristol, CT and the following coordination is expected between the Contractor and the City of Bristol:**

**1. Bristol Public Works Department:**

**a. Contractor shall coordinate with the City of Bristol Public Works Department for nearby ongoing projects, including but not limited to, the Jerome Avenue Bridge Project to minimize traffic and construction impacts to the Maltby Street area.**

**b. During the months of July and August, the Little League Baseball and Softball World Series Tournaments are hosted annually at the A. Bartlett Giamatti Little League Leadership Training Center located on Mix Street. Contractor is notified that significant traffic is generated on Maltby Street, Mix Street, Stafford Avenue, and the surrounding roadways during this event. Contractor shall coordinate with the City of Bristol Public Works Department to minimize traffic and construction impacts to the Maltby Street and Mix Street areas during this tournament.**

**2. Bristol Water and Sewer Department:**

**a. Contractor shall obtain all necessary permits, policies, and procedures from the Water and Sewer Department. The Water and Sewer Department requires all permits to be obtained by a licensed plumber. Contractor shall provide a minimum of 4 days notice for all non-emergency work on the water and sewer utilities.**

**b. Contractor shall coordinate connection of new water main in Maltby Street to existing water main in Mix Street with the Water and Sewer Department. Payment for the City of Bristol to furnish and install a tapping sleeve for final connection must be made prior to work being completed.**

**c. Contractor shall pay the expected water service connection fee of $4,725.00 to the Water and Sewer Department, which will cover the connection fee, tapping the water main, 2" corporation stop and saddle, 2" curb stop and box, copper tubing to the property line, inspection of copper tubing from the property line to the building, and connections within the building.**

**d. Contractor shall coordinate with the Water and Sewer Department for inspection before final acceptance of water and sewer utilities installed within Maltby Street.**

**3. Bristol Police Department:**

**a. Contractor shall coordinate with the Bristol Police Department for police details during construction. Contractor is notified that Mix Street, Maltby Street, and Stafford Avenue are listed by the Bristol Police Department as streets requiring police details for private traffic duty.**

## 1.12 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011000

# Genral Provisions Erosion and Sedimentation Controls 11/24

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# SECTION 312500 - EROSION AND SEDIMENTATION CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Construction Entrances
2. Turbidity Curtains
3. Filter Bags
4. Erosion Control Blanket
5. Straw Wattle.

B. Related Sections:

1. Section 310515 “Soils and Aggregates for Earthwork”
2. Section 311000 “Site Clearing.”
3. Section 329200 “Turf and Grasses.”

### 1.3 REFERENCE STANDARD

A. EPA document titled: “Stormwater Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices” document number EPA 832-R-92-005, dated 1992, or most recent edition. State or appropriate Conservation Commission standards can be substituted for the EPA standard if the State or Conservation Commission standard is equal to, or more detailed than, the EPA standard.

B. 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

### 1.4 ACTION SUBMITTALS

A. Product Data: Product Data: Submit data on geotextile.

B. Manufacturer's Certificate: Certify Products meet or exceed specified requirements..

### 1.5 INFORMATIONAL SUBMITTALS

A. Stormwater Pollution Prevention Plan (SWPPP) as specified in “Quality Assurance” article.

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1.6 CLOSEOUT SUBMITTALS

A. Section 017700 “Closeout Procedures” for requirements for submittals.

1.7 QUALITY ASSURANCE

A. Prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the U.S. Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) General Permit applicable to this work) document number EPA 832-R-92-005, dated 1992, or most recent edition.

B. Perform Work in accordance with requirements of Section 310515 “Soils and Aggregates for Earthwork” and Section 311000 “Site Clearing.”

C. Perform Work according to State of Connecticut DOT standards.

D. Perform Work according to the 2024 Connecticut Guidelines for Soil Erosion and Sediment Control and Connecticut Stormwater Quality Manual.

1.8 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this section.

PART 2 - PRODUCTS

2.1 SILT FENCE

A. Silt fence filter fabric shall be a woven, polypropylene, ultraviolent resistant material meeting minimum requirements below:

| **Fabric Properties** | **Minimum Acceptable Value** | **Test Method** |
|---|---|---|
| Grab Tensile Strength (lbs) | 110 | ASTM D 4632/ D 4632M |
| Elongation at Failure (%) | 20 | ASTM D 4632/ D 4632M |
| Mullen Burst Strength | 300 psi (2.1 MPa) | ASTM D 3786/ D 3796M |
| Puncture Strength (lbs) | 60 | ASTM D 4833/ D 4833M |
| Minimum Trapezoidal Tear Strength (lbs) | 50 | ASTM D 4533/ D 4533M |
| Flow through Rate (gal/min/sf) | 25 | ASTM D 4491/ D 4491M |
| Equivalent Opening Size | 40 – 80 | US Std Sieve ASTM D 4751 |
| Minimum UV Residual (%) | 70 | ASTM D 4355/ D 4355M |

B. Products: Provide one of the following:

1. “Mirafi FW402,” by TenCate Geosynthetics
2. “Carthage 15%,” by Carthage Mills

3. "HSP2." by ACF Environmental, Inc.
4. Or equal.

C. Sediment fence shall be a prefabricated commercial product made of a woven, polypropylene, ultraviolet resistant material such as "Envirofence" by Mirafi Inc., Charlotte, NC or equal.

D. Posts: Constructed of hardwood with minimum diameter thickness of 1.5 inches (38 mm).

E. Tie wires for securing silt fence fabric to wire mesh shall be light gauge metal clips (hog rings), or 1/32 inch (0.79 mm) diameter soft aluminum wire.

## 2.2 TURBIDITY CURTAIN

A. Barrier Material: filter fabric.

B. Barrier height shall be 20 percent greater than the depth of water..

## 2.3 FILTER BAGS

A. Filter Bags: Sized with manufacturer recommendations based on pumped discharge rate.

B. Geotextile Material for Bags: Meet the following minimum requirements:

| | |
|---|---|
| Minimum Grab Tensile Strength | 200 lbs |
| Minimum Grab Tensile Elongation | 50% |
| Minimum Trapezodial Tear Strength | 80 lbs |
| Mullen Burst Strength | 380 psi (2.6 MPa) |
| Minimum Puncture Strength | 130 lbs |
| Apparent Opening Size | 40-80 US Sieve |
| Minimum Flow Through | 70 gpm/square foot |

C. Bag shall have opening large enough to accommodate 4 inch (100 mm) diameter discharge hose.

## 2.4 EROSION CONTROL BLANKET

A. Erosion control blankets: 100 percent agricultural straw fiber matrix, 0.5 lbs. / sq yd, stitch bonded with degradable thread between two photodegradable polypropylene nettings.

1. Product: Provide Model S150 Double Net Short-Term Blanket (12 months) by North American Green, Evansville, IN), or equal.

B. Prior to start of work, provide a certified statement as to the number of pounds of materials to be used per 100 gallons of water. Specify the number of square feet of seeding that can be covered with the quantity of solution in the Contractor's hydroseeder.

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2.5 STRAW WATTLE

A. Straw Wattle: Prefabricated commercial product with outside casing made up of organic hessian

1. Effective Height: 12 inches plus or minus 1 inch.
2. Effective Circumference: 3-3/8 inches.

B. Product: Provide products by Phase II Stormwater Products Wrentham MA or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017300 - Execution: Verification of existing conditions before starting work.

3.2 SILT FENCE

A. Position sediment fences as indicated on the Drawings and to prevent off site movement of sediment produced by construction activities as directed by the Engineer. Areas beyond limits of silt fence shall be undisturbed or stabilized.

B. Dig trench approximately 6 inches wide and 6- inch deep along proposed fence lines.

C. Drive stakes, 10 feet on center (maximum) at back edge of trenches. Drive stakes 2 feet (minimum) into ground.

D. Hang filter fabric on posts carrying to bottom of trench with about 4 inches of fabric laid across bottom of trench. Stretch fabric fairly taut along fence length and maintain secure both ways.

E. Backfill trench with excavated material and tamp.

F. Install pre-fabricated silt fence according to manufacturer's instructions.

3.3 CONSTRUCTION ENTRANCE

A. Construct entrance with minimum of 6 inch (150 mm) of course aggregate at all points of ingress/egress.

B. Width: Minimum 24 feet, increased as needed for typical construction vehicles.

C. Minimum Length: 50 feet (15.2 m) (where soils are course grained) or as shown in the Drawings.

D. Install filter fabric below aggregate.

E. Maintain entrance throughout construction, adding more aggregate or increasing length as needed.

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## 3.4 TURBIDITY CURTAIN

A. Install turbidity curtain as indicated on the Drawings, extending beyond lateral limits of construction.

B. Install weights at 10 foot (3 m) intervals, floats at 5 feet (1.5 m) intervals.

C. Inspect turbidity curtain daily and repair/replace worn/torn areas as needed.

D. At end of construction, remove accumulated sediment by hand before removing the turbidity curtain.

## 3.5 FILTER BAG

A. Locate filter bag at least 50 feet from all wetlands, streams or other surface waters.

B. Install bag on a 2 inch (50 mm) gravel bed to allow water to flow in all directions.

C. Bag is full when remaining flow area is reduced by 75%. Replace full bags with new bags.

## 3.6 EROSION CONTROL BLANKETS

A. Install erosion control blankets onto all exposed slopes to be loamed and seeded that are steeper than 4 (Horizontal) to 1 (Vertical) as shown on the Drawings. Erosion control blankets shall also be installed in all seeded drainage swales and ditches, and as directed by the Engineer in accordance with manufacturer's instructions.

B. The area to be covered shall be properly prepared, fertilized and seeded with permanent vegetation before the blanket is applied. When the blanket is unrolled, the netting shall be on top and the fibers in contact with the soil over the entire area. The blankets shall be applied in the direction of water flow and stapled.

C. Place blankets and stapled together in accordance with manufacturer's instructions. Side overlaps shall be 4-inch minimum. The staples shall be made of wire, 0.091 inch in diameter or greater, "U" shaped with legs 10-in in length and a 1-1/2-inch crown. Commercial biodegradable stakes may also be used with prior approval by the Engineer. The staples shall be driven vertically into the ground, spaced approximately two linear feet apart, on each side, and one row in the center alternately spaced between each size. Upper and lower ends of the matting shall be buried to a depth of 4-inch in a trench. In swales and ditches, erosion stops shall be created every 25-feet by making a fold in the fabric and carrying the fold into a silt trench across the full width of the blanket. The bottom of the fold shall be 4-inches below the ground surface. Staple on both sides of fold. Where the matting must be cut or more than one roll length is required in the swale, turn down upper end of downstream roll into a slit trench to a depth of 4-inches. Overlap lower end of upstream roll 4-in past edge of downstream roll and staple

D. To ensure full contact with soil surface, roll matting with a roller weighing 100 lbs. / ft. of width perpendicular to flow direction after seeding, placing matting and stapling. Thoroughly inspect

channel after completion. Correct any areas where matting does not present a smooth surface in full contact with the soil below.

## 3.7 STRAW WATTLE

A. Position straw waddles as indicated on the Drawings and as necessary to prevent off site movement of sediment produced by construction activities as directed by the Engineer.

B. Drive wooden stakes, 5 feet on center (maximum) at back edge of waddle. Drive stakes 2 feet (minimum) into ground.

C. Install pre-fabricated straw waddle according to manufacturer's instructions.

## 3.8 SITE STABILIZATION

A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.

B. Construct, stabilize and activate erosion controls before site disturbance within tributary areas of those controls.

C. Stockpile and waste pile heights shall not exceed 35 feet. Slope stockpile sides at 2:1 or flatter.

D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.

1. During non-germinating periods, apply mulch at recommended rates.

E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

## 3.9 FIELD QUALITY CONTROL

A. Section 017300 "Execution" for field inspecting, testing, adjusting, and balancing.

B. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.

## 3.10 CLEANING

A. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove and dispose of sediment.

B. Do not damage structure or device during cleaning operations.

C. Do not permit sediment to erode into construction or site areas or natural waterways.

D. Clean channels when depth of sediment reaches approximately one-half channel depth.

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3.11 PROTECTION

A. Section 017300 “Execution” for requirements for protecting finished Work.

END OF SECTION 312500

# Retaining Walls 11/24

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# SECTION 323223 - SEGMENTAL RETAINING WALLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Foundation.
2. Precast concrete modular units.
3. Foundation drain.
4. Free draining backfill.
5. Delegated design.

B. Related Sections:

1. Section 033010 “Miscellaneous Cast-In-Place Concrete”: Concrete type for footings.
2. Section 312000 “Earthwork”: Excavation for footing and free draining backfill, and backfilling over free draining backfill and geotextile up to finished ground.
3. Section 310515 “Soils and Aggregates for Earthwork”: Soil backfill above free draining aggregate backfill.
4. Section 329200 “Turf and Grasses”: Fertilizer, seed, and mulch at finished ground.

### 1.3 SYSTEM DESCRIPTION

A. Retaining Wall System: Battered wall of stepped height formed from precast concrete modular facing and tieback units in straight configuration on aggregate base footing with foundation drain, backfill, and coping.

### 1.4 DESIGN REQUIREMENTS

A. General

1. Do not change indicated horizontal and vertical alignment of retaining walls, except as specified in this section.
2. Design retaining walls to be within the following specified design parameters and limits of allowable foundation bearing pressure.

B. Design footing wall facing and tieback units in accordance with specified NCMA requirements and the following:

1. External Stability Factor of Safety:

    a. Base Sliding: 1.5.
    b. Overturning: 1.5.
    c. Bearing Capacity: 2.0.
    d. Global Stability: 1.3.

2. Internal Stability Factor of Safety:

    a. Shear Capacity: 1.5.

3. Design Geometry:

    a. Provide length, height, and overall elevations of retaining wall as indicated on Drawings.
    b. Measure structure's design height, H, from top of aggregate base footing to top of wall where ground surface intercepts wall facing.
    c. See Drawings for slopes above and below sections of segmental retaining wall.

4. Minimum Wall Embedment: Greater of height of a modular unit, 0.5 feet, or following minimum embedment required for slope below wall:

    a. Level: H/10.
    b. 3: 1 (18.4 degrees): H/10.
    c. 2: 1 (26.5 degrees): H/7.

5. Surcharges: Apply following surcharges to top of each design cross section based on the following uses above wall.

    a. No Traffic: 0 lb/sq. ft.
    b. Light Traffic: 100 lb/sq. ft.
    c. Heavy Traffic: 250 lb/sq. ft.

6. Lateral Earth Pressure: Calculate lateral earth pressure to be resisted by self weight of retaining wall using Coulomb coefficient of earth pressure, Ka, times vertical stress at base of wall. Use coefficient of active earth pressure, Ka, from top to bottom of wall. Assume coefficient of active earth pressure, Ka, independent of external loads except sloping fills. For sloping fills, use coefficient of active earth pressure, Ka, appropriate for sloping condition, using Coulomb earth pressure in analysis.
7. Inclination of Failure Surface: Assume Coulomb failure surface passing through base of wall behind facing units up to ground surface at or above top of wall in design of wall.
8. Settlement Control: Delegated designer will be responsible to determine if foundation soils will require special treatment to control total and differential settlement.
9. Global Stability: Delegated designer will be responsible to determine if further design considerations must be implemented to ensure adequate global/overall slope stability.
10. Live Loads for Wall:

    a. Vehicle Impact Loading: 10 kip/5 feet.

11. Foundation Data for Wall:

a. Allowable Bearing Pressure: 2.5 ksf.

1.5 ACTION SUBMITTALS

A. Shop Drawings:

**1. Manufactured Modular Wall - Modular Units and Support: Indicate type of wall, location, length, top elevation, bottom of footer elevation, cross-sections including backfill material type and limits, and quantities. Show complete layout plans and fabrication details for precast wall units, and step-by-step erection instructions. Indicate, unit locations, architectural details, support items, dimensions, openings, and relationship to adjacent materials, signed and sealed by professional engineer licensed in the State of Connecticut.**

2. Temporary Support System: Detail specific load bearing falsework, underpinning, needling, or shoring layout and support members appropriate for Project conditions.

B. Samples:

1. Submit one of each cast modular unit illustrating profiles, finish, texture and color.

1.6 INFORMATIONAL SUBMITTALS

A. Submit documentation of experience in list of at least five projects of similar construction and scope which substantiate experience for system. Include brief description of each project and name and phone number of owner's representative knowledgeable in each listed project.

B. Test Reports: Indicate certified tests results for precast concrete at manufacturing facility, cast-in-place concrete in field, and granular backfill.

C. Manufacturer's Installation Instructions: Submit installation instructions including construction sequence and scheme and the following:

1. Excavation and required bracing.
2. Placement of aggregate base footing.
3. Placement of precast concrete facing units and tieback units.
4. Placement of drainage, backfill and geotextile.

D. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

E. Manufacturer's Field Reports: Indicate field observations and conclusions as to compliance to specifications, action items, and resolution of installation issues.

**1.7 DELEGATED-DESIGN SUBMITTAL**

**A. Design Data: Submit the following signed and sealed by professional engineer.**

**1. Calculations for manufactured modular wall including height of precast units, overall wall stability including sliding stability and overturning stability, and forces**

**acting on wall and footing, precast facing and tieback units in accordance with design requirements.**

2. **Submit details and computations for any required temporary shoring, bracing and temporary support of excavation.**

1.8 CLOSEOUT SUBMITTALS

A. Project Record Documents: Record actual elevation of undercut base, if any, and aggregate base foundation elevation and position.

1.9 QUALITY ASSURANCE

A. Perform precast work in accordance with requirements of PCI MNL-116S, PCI MNL-123, PCI MNL-120.

B. Perform required manufactured modular retaining walls work in accordance with NCMA, TR 127A,.

C. Perform Work in accordance with State of Connecticut DOT (CTDOT).

1.10 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing manufactured modular retaining wall systems with minimum five years documented experience.

B. Installer: Company specializing in performing work of this section with minimum five years documented experience approved by manufacturer.

C. Design and construct manufactured modular retaining wall including temporary support under direct supervision of professional engineer experienced in design of this Work and licensed in the State of Connecticut.

1.11 MOCKUP

A. Section 014000 “Quality Requirements” for requirements for mockup.

B. Construct mockup 10 linear feet with units specified including backfill, wall drain, architectural details and finish, and specified wall coatings. Fabricate sample wall unit by same process for production units.

C. Locate where directed by Engineer.

D. Incorporate accepted mockup as part of Work.

1.12 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this Section.

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1.13 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 “Product Requirements” for requirements for transporting, handling, storing, and protecting products.

B. Check materials upon delivery to assure receipt of proper material. Inspect for damage. Replace damaged materials.

C. Handle, store and ship units to avoid chipping, cracking, and fracturing and to prevent contamination that may affect performance.

D. Protect materials from damage during storage and installation. Remove and replace damaged units.

1.14 ENVIRONMENTAL REQUIREMENTS

A. Section 016000 “Product Requirements” for environmental conditions affecting products on site.

B. Do not install foundation when subgrade is wet or frozen.

1.15 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.16 COORDINATION

A. Coordinate work with wall penetrations, connection to storm water system, affected utility companies, and utility adjustments.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design segmental retaining walls.

B. Delegated Designer is responsible for indicating proposed system that considers allowable bearing pressure, external stability and internal stability, including global stability, total and differential settlement.

C. Design walls for locations and to overall dimensions indicated on Drawings utilizing specified backfill and foundation parameters.

D. Use no experimental or demonstration-type design concepts; or products, structures, or elements not preapproved by Engineer, in design.

E. Prepare drawings in accordance with the State of Connecticut DOT (CTDOT).

F. Provide design life of structure of 75 years.

## 2.2 FOUNDATION MATERIALS

A. Coarse Aggregate: As indicated on delegated design drawings

B. Concrete: As specified in Section 033000 “Cast-in-Place Concrete.”

## 2.3 WALL SYSTEM MATERIALS

A. The manufacturer shall be licensed and authorized to produce the retaining wall units by the precast modular block system patent holder/licensor and shall document compliance with the published quality control standards of the proprietary precast modular block system licensor for the previous three years.

B. Concrete used in the production of the precast modular block units shall be first purpose, fresh concrete. Returned, reconstituted, surplus or waste concrete is not acceptable. It shall be an original production mix meeting the requirements of ASTM C94/C94M and exhibit the following:

1. Minimum 28-day Compressive Strength: 4,000 psi
2. Nominal Maximum Aggregate Size: 1 inch
3. Maximum water-soluble Chloride Ion content in concrete, percent by weight of cement: 0.15
4. Maximum Chloride as Chloride Ion concentration in mixing water, parts per million: 1000
5. Alkali-aggregate reactivity mitigation per ACI 201
6. Slump (conventional concrete) per ASTM C143: 5 inches plus or minus 1-1/2 inch
7. Slump flow (Self-consolidating concrete) per ASTM C1611: 18 inches to 32 inches

C. All units shall be wet-cast precast modular retaining wall units conforming to ASTM C1776/C1776M.

D. Each concrete block shall be cast in a single continuous pour without cold joints. With the exception of half-block units, corner units and other special application units, the precast modular block units shall conform to the nominal dimensions listed below, within manufacturer tolerances:

1. 28” Block: H=18”, L=46-1/8”, W=28”
2. 41” Block: H=18”, L=46-1/8”, W=40-1/2”
3. 60” Block: H=18”, L=46-1/8”, W=60”
4. 52” XL Block: H=36”, L=46-1/8”, W=52”
5. 72” XL Block: H=36”, L=46-1/8”, W=72”
6. 96” XL Block: H=36”, L=46-1/8”, W=96”

E. Individual block units shall have a nominal height of 18 inches or 36” for XL blocks.

F. With the exception of half-block units, corner units or other special application units, the precast modular block units shall have two (2) circular dome shear knobs that are sized as per manufacturer's block units.

G. The precast modular block units shall be manufactured with integrally cast shear knobs that establish a standard horizontal set-back for subsequent block courses. The precast modular block system shall be available in the four (4) standard horizontal set-back facing batter options as listed below:

1. 18-inch High Blocks

   a. 3/8" horizontal set-back (1.2" maximum facing batter)
   b. 1-5/8" horizontal set-back (5.2" maximum facing batter)
   c. 9-3/8" horizontal set-back (27.5" maximum facing batter)
   d. 16-5/8" horizontal set-back (42.7" maximum facing batter)

2. 36-inch High Blocks

   a. 3-1/4 inch horizontal set-back (5.2 inch maximum facing batter)

3. The precast modular block units shall be furnished with the required shear knobs that provide the facing batter required in the construction shop drawings.

H. The precast modular block unit face texture shall be selected by Owner from the available range of textures available from the precast modular block manufacturer. Each textured block facing unit shall be a minimum of 5.76 square feet with a unique texture pattern that repeats with a maximum frequency of once in any 15 square feet of wall face.

I. The block color shall be selected by the Owner from the available range of colors available from the precast modular block manufacturer.

J. All precast modular block units shall be sound and free of cracks or other defects that would interfere with the proper installation of the unit, impair the strength or performance of the constructed wall. Blocks shall not exhibit chips or cracks in the exposed face or faces of the unit that are not otherwise permitted by precast modular block manufacturer. Bug holes, water marks, and color variation on non-architectural faces are acceptable.

K. Precast modular block units shall be as manufactured by Redi-Rock Retaining Wall Systems as licensed by Redi-Rock International, LLC, 2940 Parkview Drive, Petoskey, MI 49770, telephone (866) 222-8400, www.redi-rock.com or approved equal.

## 2.4 BACKFILL AND DRAINAGE SYSTEM

A. Aggregate:

1. Coarse Aggregate Backfill: ASTM D448, AASHTO Size No. 57 hard, durable, angular gravel, crushed gravel, or crushed stone, or combination of gravel, crushed gravel, or crushed stone, no slag, with the following particle size distribution requirements per ASTM D6913:

| US Standard Sieve Size | % Passing |
|---|---|
| 1-1/2” | 100 |
| 1” | 95-100 |
| 1/2” | 25-60 |
| No. 4 | 0-10 |
| No. 8 | 0-5 |

B. Leveling Pad:

1. The precast modular block units shall be placed on a leveling pad constructed from crushed stone or unreinforced concrete. The leveling pad shall be constructed to the dimensions and limits shown on the retaining wall design drawings prepared by the delegated designer.
2. Crushed stone used for construction of the granular base leveling pad : In accordance with delegated design drawings.
3. Concrete used for construction of an unreinforced concrete leveling pad shall satisfy the criteria for AASHTO Class B. The concrete shall be cured a minimum of 12 hours prior to placement of the precast modular block wall retaining units and exhibit a minimum 28-day compressive strength of 2,500 psi.

C. Filter Fabric:

1. Manufacturers:

a. Mirafi 140N
b. Propex Geotex 451
c. Skaps GT-142
d. Thrace-Linq 140EX
e. Carthage Mills FX-40HS

D. Foundation Drain Pipe:

1. Drainage collection pipe shall be a 4” diameter, 3-hole perforated, HDPE pipe with a minimum pipe stiffness of 22 psi per ASTM D2412.
2. The drainage pipe shall be manufactured in accordance with ASTM D1248 for HDPE pipe and fittings.

## 2.5 SOURCE QUALITY CONTROL (AND TESTS)

A. Section 014000 “Quality Requirements” for testing, inspection and analysis requirements.

B. Maintain plant records and quality control program during production of cast units. Make records available upon request.

C. Testing and Inspection. Sample and test precast units including slump, unit weight, temperature, entrained air in concrete mixture, and compression.

D. Sample and test concrete units with respect to compressive strength on basis of production lot results. Define production lot as units a single compressive test result represents from one day's

production or 60 units, whichever is less. Select four cylinders per lot AASHTO T141. Cure and test cylinders in accordance with AASHTO T23, and AASHTO T231. Base compression test result on average of 2 cylinders, with no compressive strength result less than 90 percent of design strength.

E. Take one air entrainment test cylinders for each set of concrete test cylinders taken.

F. Visually inspect to detect defects, cracks, and chipping due to imperfect proportioning, mixing or molding; surface defects and excessive voids; and areas beyond repair. Engineer may reject units for color variations on front face due to excess form oil, cracks, chips or other visual appearance defects.

G. Sample and test materials for manufacturing of precast units including cement, aggregates, water, admixture, and steel reinforcement according to this Section. Make results of quality control tests available for Engineer's review, upon request.

H. Test and analyze three random specimens for each 500 cubic feet of fabricated cast modular units:

1. Compressive Strength: In accordance with ASTM C1194.
2. Cold Water Absorption: In accordance with ASTM C1195.
3. Resistance to Freezing and Thawing: In accordance with ASTM C666; maximum cumulative percent mass loss in accordance with ASTM C1364.

I. Visually inspect color differences between fabricated units and approved sample in accordance with ASTM D1729.

J. Make completed (product name) available for inspection at manufacturer's factory prior to shipment. Notify Owner at least seven days before inspection is allowed.

K. Allow witnessing of factory inspections and test at manufacturer's test facility. Notify Owner at least seven days before inspections and tests are scheduled.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Verify site conditions and foundation soil bearing capacity after excavation.

B. Verify with Engineer base of undercut, if any, to complete necessary removal of unsuitable material and replacement of material with coarse aggregate.

### 3.2 DEWATERING

A. Furnish, install, operate and maintain satisfactory dewatering systems as required to maintain excavation in dry and workable condition. Provide equipment and materials and continue as long as necessary.

B. Remove ground water by pumping or other methods to prevent softening of surfaces exposed by excavation without removing fines from subsoil.

C. Lower ground water levels within excavation areas 12 inches, minimum below bottom of excavations.

D. Place dewatering system in operation before excavating below ground water level. Operate system continuously, 24 hours per day, 7 days per week, until construction work below existing ground water levels is complete.

## 3.3 EXCAVATION AND FOOTER

A. Provide temporary support of excavation when required in accordance with Section 312000 “Earthwork” and shop drawings.

B. Proof roll foundation bearing surface in presence of Engineer to meet AASHTO T235 and minimum allowable bearing pressure.

C. Remove and replace foundation soil including unsuitable soils to minimum depth of 12 inches with compacted coarse aggregate material.

D. Provide and properly cure cast-in-place footing, in accordance with Section 033000 “Cast-in-Place Concrete” to dimensions indicated on Delegated Design Drawings.

## 3.4 DRAINAGE AND BACKFILL

A. Set non-woven geotextile against back of first retaining wall unit, over prepared foundation, and extend along bottom towards back of excavation, up excavation face and back over top of free draining coarse aggregate backfill to retaining wall, or as indicated in Delegated Design Drawings.

B. Place perforated structure foundation drainage pipe behind footing as indicated on Delegated Design Drawings . Lay pipe at minimum gradient of 2 percent to ensure drainage to free outlets. Incorporate drain pipe in continuous 1 foot by 1 foot drainage cell encased in geotextile.

C. Place and compact coarse aggregate free draining backfill material in maximum 12 inch lifts.

D. Place and compact soil backfill material above free draining backfill and geotextile from top of wall to finished ground in maximum 8 inch lifts.

E. Maintain optimum or less moisture content of backfill materials to attain required compaction density.

F. Allow no heavy compaction equipment within 3 feet of back of wall facia.

G. Apply rubble-stone riprap from top of wall to existing grade in accordance with Section 310515 “Soils and Aggregates for Earthwork.”

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## 3.5 INSTALLATION OF MODULAR UNITS

A. Assemble units as shown on shop drawings and in accordance with manufacturer's recommendations.

B. Place first course of precast concrete modular retaining wall units on concrete or aggregate base footing. Ensure that wall modules are aligned properly, leveled from side to side and front to back and are in complete contact with footer.

C. Place wall modules above bottom course such that shear knob arrangement provides design batter of wall face. Place successive courses to create running bond pattern with edge of units being approximately aligned with middle of unit in course below it.

D. Place units side by side for full length of wall alignment. Ensure correct retaining wall lines, curves, jogs, and steps for first course.

E. Sweep excess material and remove burrs from top of units before placing additional levels to ensure that no dirt, concrete or other foreign materials become lodged between successive lifts of wall modules. Install next course maintaining required vertical alignment as shown on shop drawings. Stagger full bearing of concrete units over vertical joints below. Do not use blocks, wedges, or other devices for permanent shimming of wall units.

F. Place maximum of 3 courses of wall units above level of drainage material at any time.

G. Check level of wall modules with each lift to ensure that no gaps are formed between successive lifts.

H. Repeat erection sequence until grades indicated on Drawings are achieved.

I. Secure coping units to top of wall with two 3/8 inch beads of flexible concrete adhesive positioned 2 inches in front and behind tongue of last course of retaining wall units.

J. Handle and erect concrete units carefully so as to avoid damage to units. Replace any members damaged to extent where their aesthetics or structural integrity is compromised.

## 3.6 COATING

A. Apply concrete protective coating and compatible anti-graffiti coating to precast units.

## 3.7 ERECTION TOLERANCES

A. Section 014000 “Quality Requirements” for tolerances.

B. The following tolerances are maximum allowable deviation from indicated construction:

1. Vertical Control: plus or minus 1.25 inches over a 10 ft distance, plus or minus 3 inches total.
2. Horizontal Control: plus or minus 1.25 inches over a 10 ft distance, plus or minus 3 inches total.
3. Rotation: plus or minus 2 degrees from planned wall batter.

4. Bulging: 1.0 inch over a 10 ft distance.

## 3.8 FIELD QUALITY CONTROL

A. Section 014000 “Quality Requirements” for field inspecting, and testing.

B. Field test concrete in accordance with Section 033000 “Cast-in-Place Concrete.”

C. Compaction Testing: As specified in Section 312000 “Earthwork.”

D. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

E. Frequency of Compaction Testing: One for each lift.

## 3.9 MANUFACTURER'S FIELD SERVICES

A. Section 014000 “Quality Requirements” for requirements for manufacturer's field services.

B. Furnish manufacturer's representative at Project site to assist Contractor, and Engineer until they are familiar with and confident in installation, and construction procedures.

C. Furnish monthly visits to Project site by company representative during wall construction.

END OF SECTION 323223

# Revised Specification Temporary Facilities and Controls 11/24

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# SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, security and protection facilities, and environmental protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

### 1.3 USE CHARGES

A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Engineer, occupants of Project, testing agencies, and authorities having jurisdiction.

B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.

C. Water Service: Pay water-service use charges for water used by all entities for construction operations.

D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

E. Water and Sewer Service from Existing System: There is currently no potable water or sewer service at the site. Obtain and pay for water and sanitary service required for contractor operations until such time as these new utilities are operational.

F. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use with metering. Provide connections and extensions of services and metering as required for construction operations.

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1.4 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

B. Implementation and Termination Schedule: Within **15** days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.

C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

1. Refer to General Conditions Article 52 and Notices to Contractor NTC-41 for specific signage requirements for City of New Britain and Drinking Water State Revolving Fund.

D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
3. Indicate methods to be used to avoid trapping water in finished work.

F. Flood Contingency Plan: Describe procedures and controls for protecting buoyant, hazardous, flammable, explosive, soluble, expansive, or radioactive materials or any other materials that could be injurious to human, animal, or plant life in the event of a flood during construction. Detail such materials expected to be on-site and how such materials will be protected from flood damage, secured or removed from the floodplain to prevent pollution and hazards to life and property. Comply with any local, state, and federal requirements or conditions of Appendix G.

G. State-Listed Species Habitat Protection Plan: Describe procedures and controls for protecting state-listed species and habitat, as detailed in the NDDB Determination included in Appendix G. The State-Listed Species Habitat Protection Plan shall also include the qualifications and any certifications of the qualified professional familiar with habitat requirements and behavior of state-listed species who will perform species relocations, as required herein.

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1.5 QUALITY ASSURANCE

A. Temporary facilities shall comply with all applicable state and local ordinances, codes and regulations.

B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

D. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.

B. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

C. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Engineer from manufacturer's standard colors.

D. Wood Enclosure Fence: Plywood, 6 feet high, framed with four 2-by-4-inch (50-by-100-mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.

E. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.

F. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches (914 by 1524 mm).

G. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

## 2.2 TEMPORARY FACILITIES

A. Field Offices: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Engineer's Field Office: Of sufficient size, but minimum 12-feet by 50-feet, to accommodate needs of Owner, Engineer, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections for duration of project. Keep office clean and orderly. Furnish and equip offices as follows:

1. Field office trailer shall have at least two offices, one conference room, one closet, and two exterior doors.
2. Conference room shall include built-in plan table.
3. Engineer's field office shall be weather-tight construction with floor, walls, and ceiling completely insulated. Each room shall have at least one operating window. Each window shall have a venetian blind and full insect screen. Furnish two sets of keys for each exterior door. Provide fully insulated skirting on all sides of the field office trailer. Provide steps, platforms, handrails, and boot scrapers for each exterior door.
4. Field office trailer shall be Mobile Mini, ModSpace, Williams Scotsman, or equal. Converted storage or box containers will not be acceptable.
5. Furnishings:

    a. Provide the following furnishings for the Engineer's temporary field office for the duration of the project. All furnishings shall be new – or in very good condition – subject to approval of the Engineer.

        1) Four 60-inch by 30-inch desks with file drawer and 5 drawers, all lockable.
        2) Upholstered swivel type chair with arms for each desk.
        3) One 30-inch by 84-inch conference table.
        4) Ten armless side chairs (stacking type).
        5) Two 54-inch by 30-inch folding tables.
        6) Six file cabinet, 4 drawer, legal size, Hon No. HN-315C, or equal.
        7) Four wastebaskets.
        8) One rolling plan storage rack, 10-stick capacity.
        9) One lockable storage cabinet, 72-inch high, 36-inch wide, and 18-inch deep.
        10) Two steel bookcase units, 4 shelves high, Hon No. HN-S48 ABC, or equal.
        11) One digital telephone answering machine.
        12) 24 painted steel coat hangers.
        13) One electric bottled water dispenser with hot and cold outlets and refrigerator unit. Adequate water bottles shall be provided (and paid for by the Contractor) until Final Completion.
        14) One wall-mounted first aid kit, McMaster-Carr 9501T1 or equal.
        15) Two smoke detectors, with batteries.
        16) Two dry erase boards, aluminum frame, 36-inch by 60-inch, markers and eraser, Quartet Model No. TS-S 535 or equal.
        17) One 1000-watt minimum 1.4-cu.ft. microwave oven.
        18) One 6-cf refrigerator.

19) Commercial duty cross-cut shredder with basket, designed for 3 to 5 users, Fellowes Powershred SB-125i, or equal.
20) One first aid kit, OSHA (1910.151.b) and ANSI (Z308.1-2003) compliant, suitable for ten people.
21) Temporary toilet and hand washing facilities.

6. Equipment:

a. Contractor shall provide the following equipment for the Engineer's temporary field office for the duration of the project. All equipment shall be new.

1) A multifunction Photocopier, printer, facsimile and scanner.

b. With 50-sheet auto-feeder, capable of copying and printing
c. Letter-sized, legal-sized, 11-inch by 17-inch, **and 12-inch by 18-inch** documents.
d. Contractor to provide paper and ink cartridges, as required, for the duration of the project.

1) Answering machine with digital recorder.
2) Digital Camera: provide one new digital camera for the Engineer's use for the project duration. Camera shall be a major brand name (e.g., Minolta, Cannon, Olympic, Pentax, etc. – subject to the Engineer's approval) and shall have an automatic date function, 3 Mega pixel or greater, 3x optical zoom or better, and at least one GB of memory (on board or supplemental memory card). The camera shall come complete with carrying case, storage card, rechargeable batteries, battery charger, flash memory reader, USB cables and all necessary software. After completion of project the camera will become the property of the Owner.
3) Four 8-outlet surge protectors with six-foot cord and minimum 1800-joule energy rating or greater; as manufactured by Belkin, or equal.
4) One 4-cup coffeemaker with timer, by Krups, or equal.

7. Services:

a. Provide the following services for the duration of the project. Services shall include all costs for installation, use, maintenance, and removal of all products, services and equipment billed by each provider for each service specified herein.
b. Field office shall have complete and fully functional electrical, plumbing, and HVAC systems. Provide at least two smoke detectors hard-wired into the electrical system. Perform all scheduled and unscheduled maintenance for all systems and as directed by the Engineer.
c. Electrical System: Provide connection to temporary electric service. Comply with the electrical requirements of the furnished office trailer. Provide main circuit panel, sufficient GFCI outlets and lighting in each room, exterior lights at each exterior door, and proper grounding of entire electrical system.
d. Plumbing system: Connect to existing potable water supply if available. Provide hot water heater and hot and cold water to each fixture. Connect waste pipes to existing sanitary system or a waste holding tank. Heat trace and insulate exterior piping to prevent freezing. Where potable water service is not available, Contractor shall provide bottle water service with water chiller/dispenser.

e. HVAC System: Provide central heating and air conditioning system with programmable thermostat. System shall be capable of maintaining an interior temperature of 70 degrees F when the exterior temperature is 0 degrees F and an interior temperature of 75 degrees F when exterior temperature is 100 degrees F.

f. Bottled water service: Provide bottled water service complete with dispenser with hot- and cold-water taps and regular bottle and cup replenishment as directed by the Engineer.

g. Janitorial service: Provide janitorial services (at least weekly) that include dusting, sweeping, vacuuming, mopping, disinfection, and trash removal.

h. Sanitary service: Provide regular pumping of chemical toilets and any other waste holding tank, if applicable, as needed.

i. Communications:

1) Install two telephone lines in the Engineer's field office for the Engineer's exclusive use:

a) one voice grade line with caller ID and call-waiting features.
b) a second line for a dedicated fax line.

j. Internet Access:

1) Provide high-speed Broadband internet access for the duration of the project.
2) Provide one air card for the Engineer's use for the duration of the project (through Final Completion], with unlimited data plans.

k. Pay all costs for installation, maintenance, and removal of the telephone and internet service and instruments, including cellular phone service. The monthly cost of all calls made and received by the Engineer, including toll and long-distance calls, shall be paid for by the Contractor for the duration of the project.

8. Supplies: Provide the following supplies for the duration of the project: copy paper, toner, toilet paper, paper towels, soap, light bulbs, and other consumables as required by the Engineer.

C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

## 2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction and marked for intended location and application.

## 2.4 ENVIRONMENTAL PROTECTION FACILITIES

A. Exclusionary Fencing: Exclusionary fencing shall be provided for protection of state-listed species, as detailed below and required by the NDDB Determination included in Appendix G.

1. Exclusionary fencing shall be at least 20-inches tall and must be secured to and remain in contact with the ground. Fencing shall be regularly maintained to secure any gaps or openings at ground level that may allow animals pass through.
2. Prior to construction activities, Contractor shall search Work area and fencing for the presence of and state-listed species named in the NDDB Determination. Any state-listed species included in the NDDB Determination encountered shall be relocated to suitable habitat outside the area of disturbance. Contractor shall provide a qualified professional familiar with habitat requirements and behavior of the species to perform relocations.

**B. Aquifer Protection Area: Implement best management practices, to the extent practicable, for temporary construction as indicated in the CT DEEP Aquifer Protection Area Guidance document "Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas," included as Attachment A to this specification.**

**1. Refueling of all large construction vehicles and equipment performed on site must be completed within an approved portable spill containment area to prevent the contamination of soils and groundwater by accidental spills within the Aquifer Protection Area. Spill kits must be kept on site at all times. Refueling of cars, pickup trucks, vans, and other commercial or personal vehicles is prohibited on the project site.**

# PART 3 - EXECUTION

## 3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

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## 3.2 INSTALLATION, GENERAL

A. Locate facilities where shown on the Drawings or where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work. Engineer’s trailer shall be set up and ready for occupancy within 30 days of the Notice to Proceed.

1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

B. Provide each facility ready for use within 30 days of the Notice to Proceed and prior to Commencement of Work at the site. Do not remove until approved by Engineer or are replaced by authorized use of completed permanent facilities.

## 3.3 ENGINEER'S OFFICE

A. Engineer's trailer shall be set up and ready for occupancy within 30 days of the Notice to Proceed and prior to commencement of Work at the site. All systems, furnishings, equipment, and services specified herein shall be furnished, installed, and completely operational for the field office to be considered established.

1. Provide regular office cleaning services for the duration of the project.
2. Provide supplies including, but not limited to restroom supplies (toilet tissue paper, paper towel, and soap), as well as light bulbs, air conditioner filters, etc.
3. Provide office supplies for printers and fax machines, etc.
4. Supply all fuel for heating and pay all utility bills.

B. Install field office plumb and level.

C. Engineer's trailer shall be removed, and the site shall be cleaned up and restored before Final Completion of the project.

## 3.4 CONTRACTOR'S FIELD OFFICE

A. Provide a temporary field office(s) for the Contractor's use for the duration of the project. An authorized representative of the Contractor shall be present at all times while the Work is in progress. Instructions received at the Contractors field office from the Engineer shall be considered delivered to the Contractor.

B. Locate field office(s) in accordance with approved shop drawings and as directed by the Owner.

C. Establish and occupy field office within 30 days of the Notice to Proceed, unless otherwise approved by the Engineer or Owner.

## 3.5 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service, if approved by Owner.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. There is currently no potable water or sewer service at the site. Obtain and pay for water and sanitary service required for contractor operations until such time as these new utilities are operational.

C. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities. Provide regular maintenance and cleaning of sanitary facilities.

D. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.

E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Prior to commencing work, isolate the HVAC system in area where work is to be performed.

    a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

F. Temporary Light and Power: Provide by Contractor, including 220 Volt service for welding, complete with wiring, lamps and similar equipment as required to adequately light all work areas and with sufficient power capacity to meet the project needs. Make all necessary arrangements with the local electric company for temporary electric service and pay all expenses in connection therewith.

G. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

H. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

1. Install electric power service overhead unless otherwise indicated.
2. Connect temporary service to Owner's existing power source, as directed by Owner.

I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

J. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment and one land-based telephone line(s) for each field office.

1. At each telephone, post a list of important telephone numbers.

a. Police and fire departments.
b. Ambulance service.
c. Contractor's home office.
d. Contractor's emergency after-hours telephone number.
e. Engineer's offices.
f. Owner's office.
g. Principal subcontractors' field and home offices.

K. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Engineer and Owner.

L. Project Computer: Provide a desktop computer in the primary field office adequate for use by Engineer and Owner to access Project electronic documents and maintain electronic communications. Equip computer with not less than the following:

1. Processor: Intel Core i5 or i7.
2. Memory: 164 gigabyte.
3. Disk Storage: 1 -terabyte hard-disk drive and combination DVD-RW/CD-RW drive.
4. Display: 24 inch (610 mm) LCD monitor with 256-Mb dedicated video RAM.
5. Full-size keyboard and mouse.
6. Operating System: Microsoft Windows 10 Professional.
7. Productivity Software:

a. Microsoft Office Professional, 2013 or higher, including Word, Excel, and Outlook.
b. Adobe Reader DC.
c. WinZip 10 or higher.

8. Printer: "All-in-one" unit equipped with printer server, combining color printing, photocopying, scanning, and faxing, or separate units for each of these three functions.
9. Internet Service: Broadband modem, router and ISP, equipped with hardware firewall, providing minimum 10 Mbps upload and 15 Mbps download speeds at each computer.
10. Internet Security: Integrated software, providing software firewall, virus, spyware, phishing, and spam protection in a combined application.
11. Backup: External hard drive, minimum 2 terrabytes, with automated backup software providing daily backups.

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## 3.6 SUPPORT FACILITIES INSTALLATION

A. Comply with the following:

1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
2. Utilize designated area within existing building for temporary field offices.
3. Maintain support facilities until Engineer schedules Final Completion inspection. Remove just before Final Completion.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
2. Prepare subgrade and install subbase and base for temporary roads and paved areas accordance with Section 312000 "Earthwork."
3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course in accordance with Section 321216 "Asphalt Paving."

D. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

E. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

F. Storage and Staging: Provide temporary offsite area as needed to supplement designated areas of Project site for storage and staging needs.

G. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

H. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings. Signs shall be constructed of A-A Ext – APA grade plywood, 1-in thick. Posts and braces shall be of pressure treated lumber.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

    a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touch up signs, so they are legible at all times.

I. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

J. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

K. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

L. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.

M. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.

N. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

## 3.7 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Section 011000 "Summary."
2. Comply with environmental protection facilities as required in Appendix G.

C. Temporary Erosion and Sedimentation Control: Comply with requirements of authorities having jurisdiction as detailed in approvals and conditions included in Appendix G and requirements specified in Section 312500 "Erosion and Sedimentation Controls."

D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

E. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

F. Tree and Plant Protection: Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."

G. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

H. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals, so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.

I. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

J. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.

K. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

L. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide, install and maintain signage directing occupants to temporary egress.

M. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

N. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition in accordance with requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign, stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

O. Weather protection shall comply with M.G.L. Chapter 149 Section 44G.

## 3.8 MOISTURE AND MOLD CONTROL

A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

    a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
    b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Engineer.
    c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

## 3.9 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
2. Clear snow and ice from all drives, walks and stairs to maintain safe vehicle and pedestrian access to the site and facilities as directed by the Engineer.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Final Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Final Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. Just prior to Final Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

## 3.10 ATTACHMENTS

**A. CT DEEP Aquifer Protection Area Guidance – Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas**

END OF SECTION 015000

# Aquifer Protection Area Guidance: Construction and Stormwater 101024

## AQUIFER PROTECTION AREA GUIDANCE

# Best Management Practices for Temporary Construction and Reconstruction Operations in Aquifer Protection Areas

**Issues and Concerns**
Potential groundwater quality concerns include stormwater, fuel, and other maintenance chemicals associated with vehicles, machinery, and equipment.

**Guidance/Recommendations**
For the protection of ground water quality at construction operations in aquifer protection areas, DEEP recommends the following:

**Temporary Construction Measures**

- Significant fuel, chemical or other hazardous materials storage and handling, including fueling of construction vehicles, should be located outside well field area and aquifer protection area.
- No repair or maintenance of construction vehicles or washing of construction vehicles is permitted within the aquifer protection area.
- Any necessary temporary storage should be aboveground, protected from rainfall, and on an impervious containment surface.
- An emergency spill and response plan should be developed, including coordination with the water supplier.
- The site access should be adequately secured at all times to prohibit any unauthorized disposal of waste materials.

**Stormwater Pollution Prevention Measures:**

- Ways to minimize pollutant load (sand, salt, etc.) should be examined.
- Deicing management areas should be established including low salt use areas, alternative chemical or sand methods.
- Wellhead protection signs shall be posted in clear visibility of the highway at the entrance and exit points of the aquifer protection area and at ½ mile intervals.

**Drainage System Design Criteria:**

- Select best management practices from the DEEP stormwater manual based on treatment effectiveness and low groundwater pollution potential.

- Sheetflow and swale collection is encouraged, where possible, outside of immediate well field area.
- Catch basins and curbs should be used in immediate wellhead area to divert and control runoff and spills away from wellhead.
- Dry wells or similar subsurface leaching structures should not be used for stormwater disposal from paved or other areas that have high potential to pollute groundwater; existing structures which have high potential to pollute groundwater should be removed or converted.
- Gross particle/oil separators (swirl concentrator type) may be used for pretreatment of consecutive catch basins. Deep catch basins (minimum 4' deep and tight construction, with baffles, may also be used).
- Stormwater discharge points shall outlet to aboveground land surface or basin type structures. Significant or critical discharge points should have a basin designed with a forebay (tight soil or lined) capable of containing an 8,000-10,000 gallon spill volume and 3-6 feet above water table, 4 feet above bedrock.
- Potential strategic groundwater monitoring should be considered.

For questions or more information, please contact the Aquifer Protection Area Program at 860-424-3040 or visit our website at www.ct.gov/deep/aquiferprotection.

# AQUIFER PROTECTION AREA GUIDANCE

## Best Management Practices for Controlling Stormwater from Parking Lots in Aquifer Protection Areas

(1) Do not use direct infiltration structures (galleries, drywells, trenches) as these do not allow for attenuation of salt or other soluble compounds that may be contained in parking lot runoff.

(2) Non-structural measures to dissipate and treat runoff are encouraged, including sheetflow from uncurbed pavement and vegetated swales/basins. These provide an opportunity for volatilization of volatile organic compounds to the extent possible before the stormwater can infiltrate into the ground.

(3) If a stormwater collection system must be installed, it should discharge to an above-ground outlet point (swales, detention/retention basins or surface waters).

(a) Any catch basins installed should have deep sumps to trap sediments and hoods to trap oil and grease.

(b) If more than 1 acre of pavement drains to a common discharge point, a gross particle separator should also be installed. Advanced designs for gross particle separators have been developed, such as Vortechnics, Downstream Defender and Stormceptor, that the Department believes are very effective in retaining medium to coarse grained sediments as well as floatables. The last type of separator is designed to treat runoff from areas up to approximately 1 acre in size, while the former two can be sized to accommodate flow from larger areas. It is recommended that the appropriate variety of this or similar type of unit with a cyclonic design be installed in conjunction with each outfall, depending on the size of the drainage area.

(4) Provisions should be made for the periodic maintenance that will be required to insure continued effectiveness of these control measures.

**For more information regarding the design of stormwater collection systems, contact Chris Stone of the DEEP's Stormwater Permitting & Enforcement Division at (860) 424-3850**.

# Site Clearing Specifications 11/24

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# SECTION 311000 - SITE CLEARING

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Stripping and stockpiling rock.
6. Removing above- and below-grade site improvements.
7. Disconnecting, capping or sealing, and removing site utilities.

B. Related Requirements:

1. Section 024116 “Structure Demolition” for removal of existing utilities.
2. Section 312500 “Erosion and Sedimentation Controls” for temporary protection of erosion and sedimentation.

### 1.3 DEFINITIONS

A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects larger than 2 inches in diameter; and free of weeds, roots, toxic materials, or other nonsoil materials.

D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

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1.4 MATERIAL OWNERSHIP

A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.

1. Use sufficiently detailed photographs or video recordings.
2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plant designated to remain.

B. Topsoil stripping and stockpiling program.

C. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

**D. Clearing Plan: Identifying and accurately showing locations of trees greater than five inches in caliper measured 3 feet off the ground scheduled for removal. Clearing of trees exceeding this threshold requires final approval by the City of Bristol Zoning Commission.**

1.6 QUALITY ASSURANCE

A. Topsoil Stripping and Stockpiling Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work. Include dimensioned diagrams for placement and protection of stockpiles.

B. Conform to applicable code for environmental requirements and disposal of debris,.

1.7 FIELD CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, adjacent private property and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed roadways if required by Owner or authorities having jurisdiction.

B. Utility Locator Service: Notify Call Before You Dig for area where Project is located before site clearing.

C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

D. Soil Stripping, Handling, and Stockpiling: Perform only when the soil is dry or slightly moist.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earthwork."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

C. Call Local Utility Line Information service not less than three working days before performing Work.

1. Request underground utilities to be located and marked within and surrounding construction areas.

### 3.2 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Arrange with utility companies to shut off indicated utilities.

B. Locate, identify, and disconnect utilities indicated to be abandoned in place.

C. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Engineer’s written permission.

D. Removal of underground utilities is included in earthwork sections; in applicable fire suppression, plumbing, HVAC, electrical, communications, electronic safety and security, and utilities sections; and in Section 024116 "Structure Demolition".

## 3.3 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
2. Use only hand methods or air spade for grubbing within protection zones.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

## 3.4 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.

1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

1. Limit height of topsoil stockpiles to 72 inches.
2. Do not stockpile topsoil within protection zones.
3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

## 3.5 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.

2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

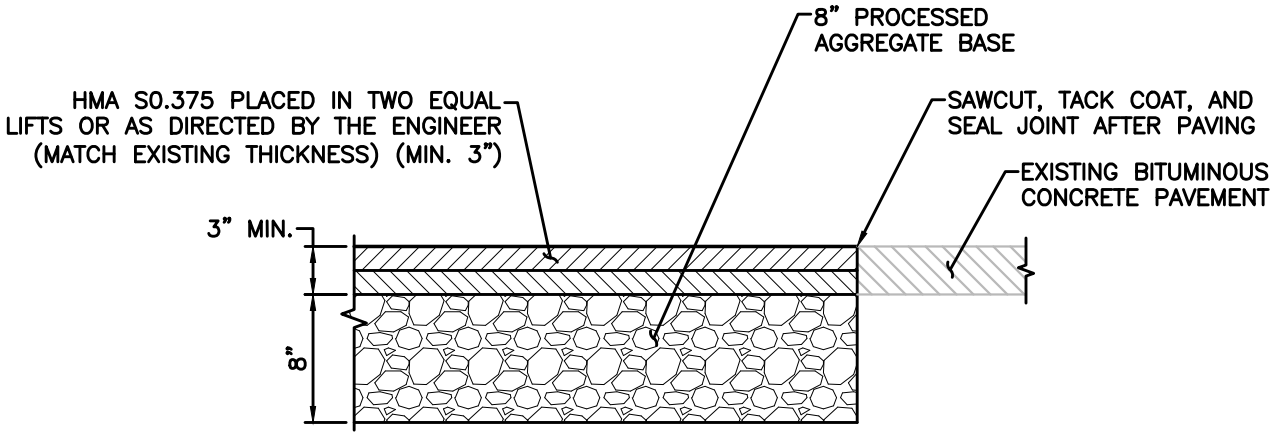
## 3.6 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other project work.

END OF SECTION 311000

# Standard Bristol DPW Roadway, Curb and Sidewalk Repair Details




RECONSTRUCTION OF ROADWAY

SCALE: $1\frac{1}{2}$" = 1'–0"

111 NORTH MAIN STREET
BRISTOL, CONNECTICUT
06010
T: 860.584.6125
www.bristolct.gov

Bristol CONNECTICUT Public Works

**RECONSTRUCTION OF ROADWAY DETAIL**

APPLICANT:
---
---

ON: ---
AT: ---
---
---

**STANDARD ROADWAY DETAILS**

DATE: **JULY 14, 2023**

SCALE: **AS SHOWN**

SHEET: **01**

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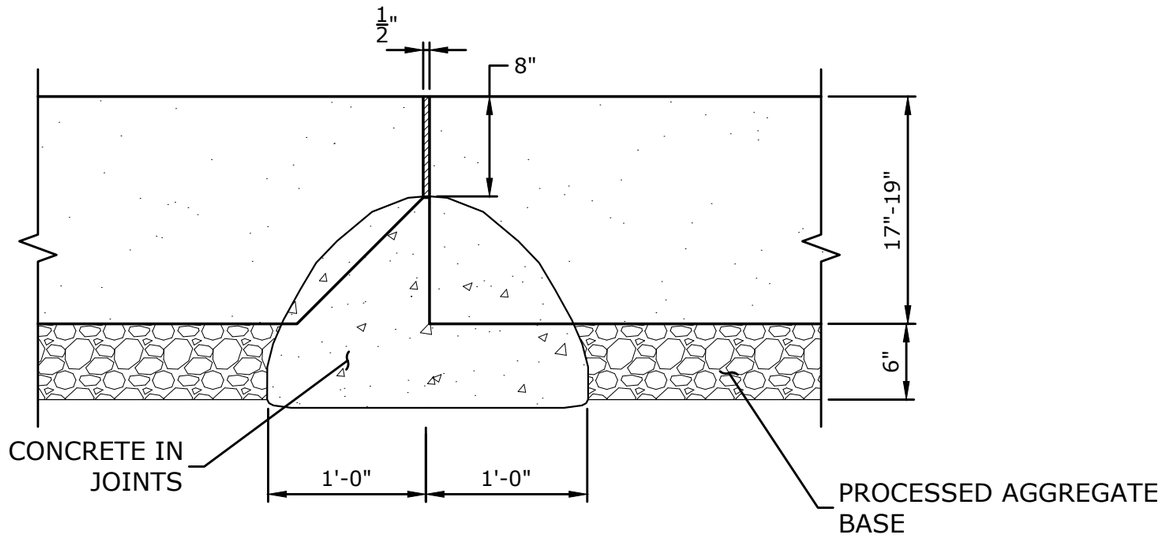


## CURB ELEVATION

NOT TO SCALE

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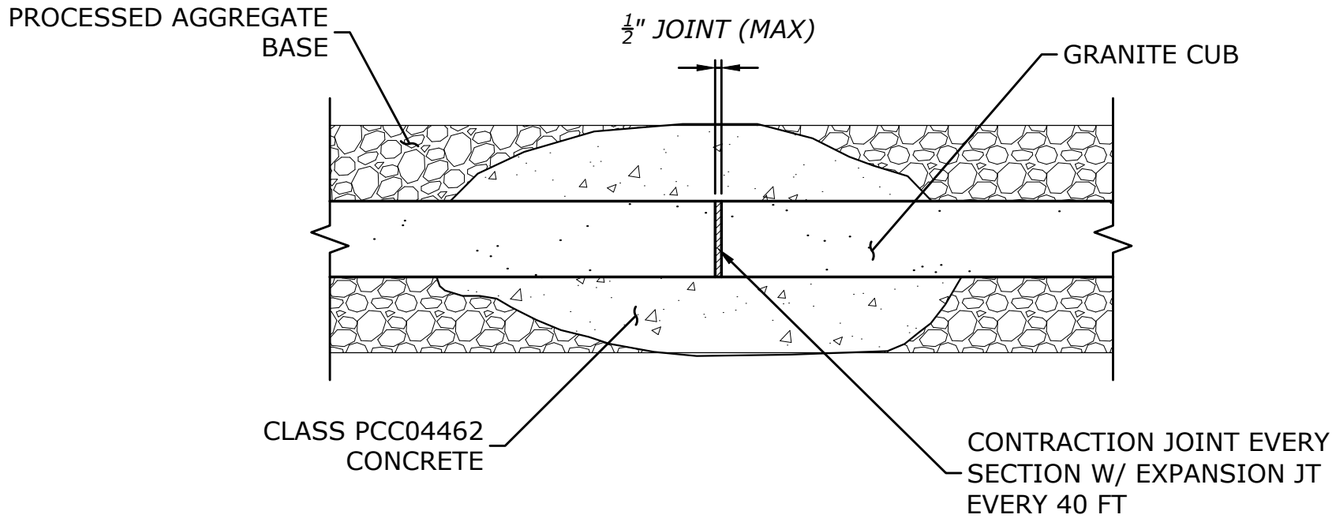


## CURB PLAN VIEW

SCALE: 1" = 1'-0"

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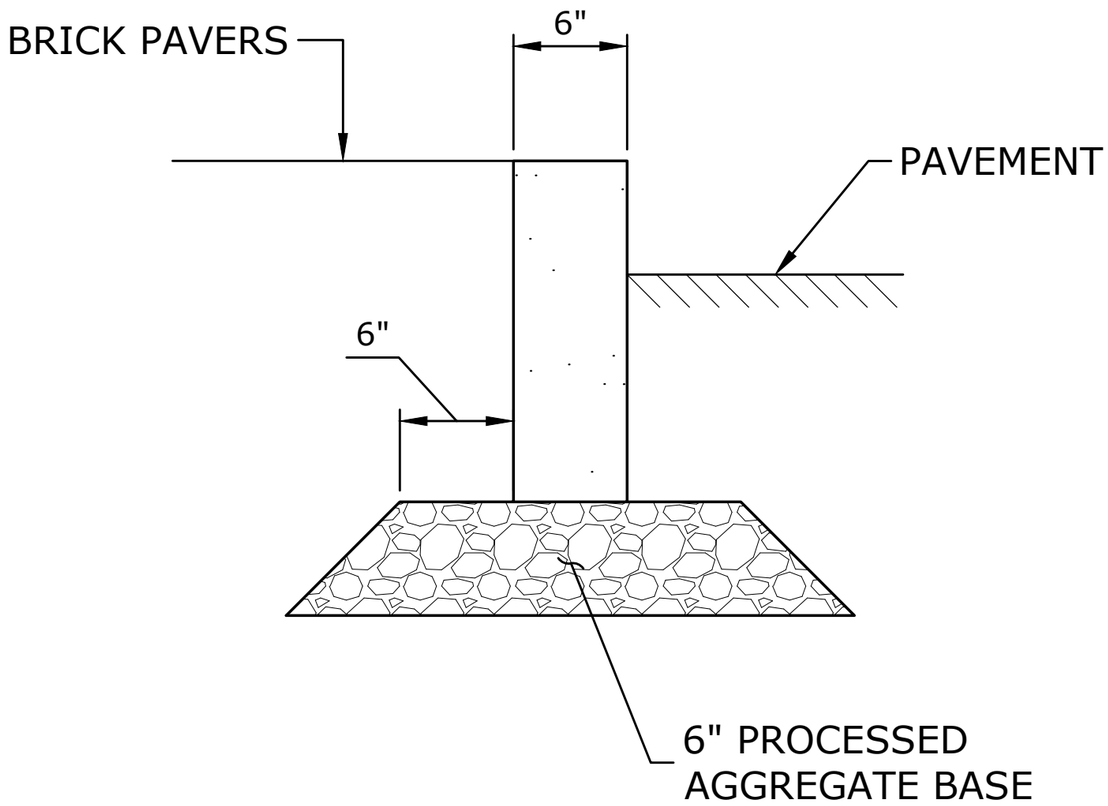


# CURB SECTION

Scale: 1" = 1'-0"

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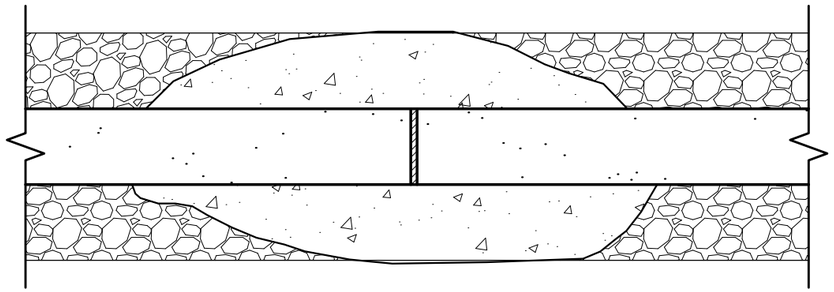
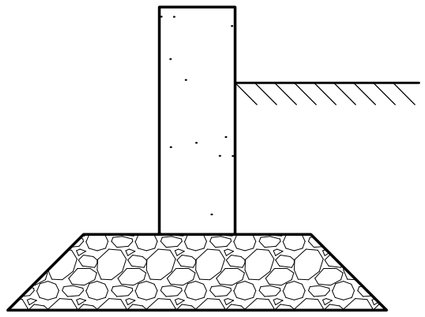
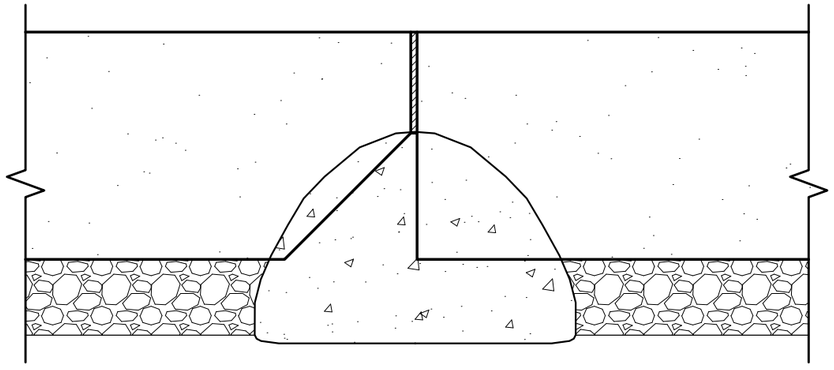
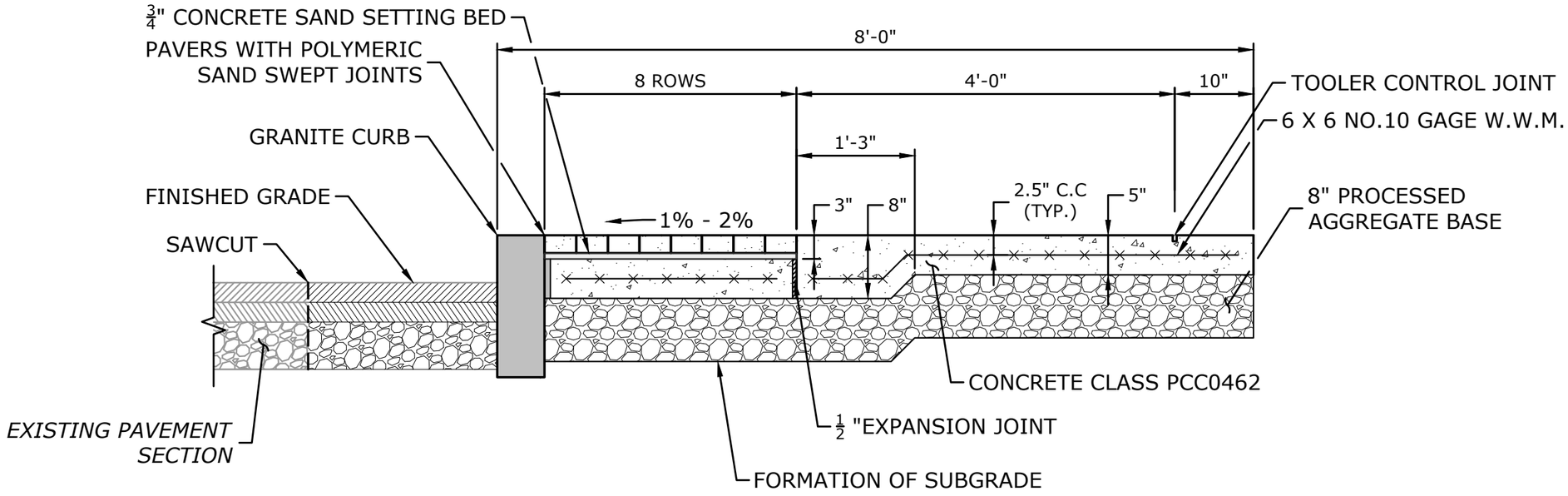


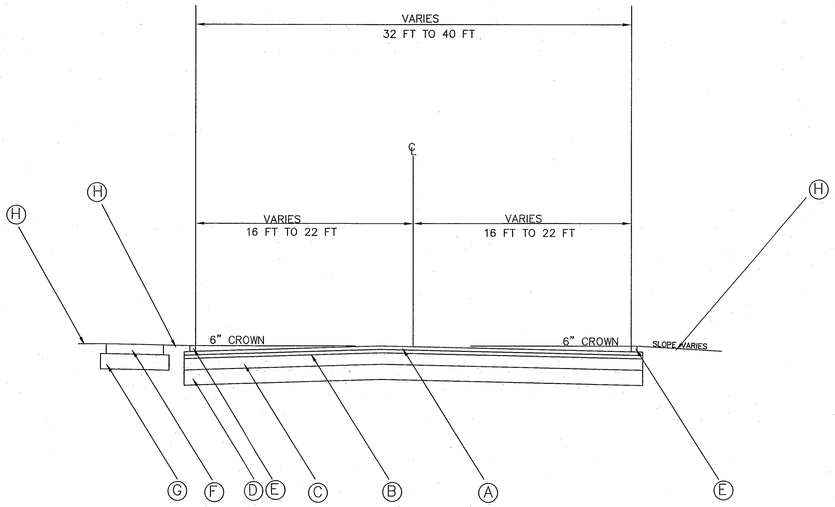







## CONCRETE SIDEWALK WITH BRICK PAVERS

SCALE: ¾" = 1'-0"




# TYPICAL SECTION
## STA. 10+50 TO 31+30

Ⓐ TWO INCH (2") CLASS 2 SURFACE COURSE

Ⓑ TWO INCH (2") CLASS 1 BINDER COURSE

Ⓒ SIX INCH (6") AGGREGATE BASE (M.05.01)

Ⓓ TEN INCH (10") SUBBASE (M.02.02)

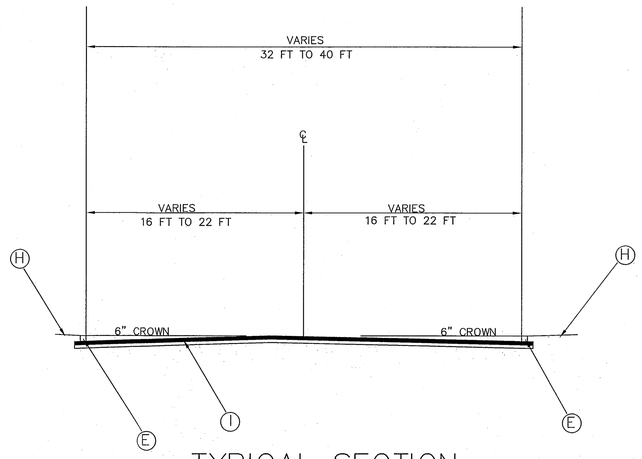
Ⓔ SIX INCH (6") BITUMINOUS LIP CURB (REMOVE EXISTING)

Ⓕ FIVE INCH (5") THICK CONCRETE WALK

Ⓖ EIGHT INCH (8") PROCESS GRAVEL

Ⓗ TURF ESTABLISHMENT (4" MINIMUM OF TOPSOIL)

Ⓘ MILL TWO INCH (2") EXISTING CLASS 2 SURFACE PAVEMENT. OVERLAY WITH NEW CLASS 2 SURFACE PAVEMENT.




# TYPICAL SECTION
## STA. 4+17 TO 10+50

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DESCRIPTION | SHEET. NO. | NO SCALE | DESIGNER: AMF | CITY OF BRISTOL, CONNECTICUT | Bristol Department of Public Works<br>111 North Main Street<br>Bristol, CT 06010<br>(860) 584-6125<br>(860) 584-3838 Fax | PROJECT TITLE:<br>MIX STREET ROAD RECONSTRUCTION | TOWN:<br>BRISTOL, CONNECTICUT | DOT PROJECT: |
| REVISIONS | | | DRAFTER: AMF | | | | | DRAWING NO.: |
| | | | CHECKED BY: RAR | ENGINEER: BRISTOL DPW | | | DRAWING TITLE:<br>TYPICAL SECTIONS | SHEET NO.: 4 |
| | | | DATE CHECKED: 10-9-09 | APPROVED BY: DATE: OCTOBER 9, 2009 | | CADD: PLOTTED: BRISTOL DPW | | |

# Standard Bristol DPW Contractor Excavation Forms

# City of Bristol

DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

**EXCAVATION**
**CONTRACTOR'S PERMIT BOND**

_____
Name of License Holder

_____
Bond Number

KNOW ALL MEN BY THESE PRESENTS,

That we, _____ of the Town
(Licensee)

of_____County of _____,

and the State of Connecticut, as Principal, and _____,
(Bonding Company)

of the State of _____ having an office and place of business at

_____,

as Surety, are held and firmly bound unto the City of Bristol, in the sum of

_____ Dollars,

lawful money of the United States, to be paid to assure completion of all work for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators and assigns, jointly and severally by these presents, the said bond and surety to be holden to the CITY OF BRISTOL for such time and under such stipulations as hereinafter stated.

The condition of this obligation is such, that:

Whereas, the above named Principal has received, or may, upon his application, receive, a permit or permits from the CITY OF BRISTOL, to perform work on, about or adjacent to a highway or for the use of the highway right of way, on, over, or below, within said CITY OF BRISTOL as is or may be particularly specified in said permit or permits, to which permit or permits reference is hereby made and are made a part hereof: and Whereas, the said Principal has undertaken and does hereby agree to comply with all the rules, regulations and restrictions of said CITY OF BRISTOL in regard to said permit or permits.

NOW, THEREFORE, it is agreed that (a) this bond shall expire one year from date hereof, except that it shall continue in full force and effect as herein provided as to any and all work required under any permit issued to the Principal within one year from date hereof; (b) if the said Principal fails to complete the required work described in each and every permit issued to him, and continues in said failure and/or neglect for more than thirty days after written notice of said failure and/or neglect is mailed by the Director of Public Works of the City of Bristol to the Principal and surety (by certified mail to the address shown hereon) said Director of Public Works shall arrange to complete all unfinished work and charge the same to the Surety to the extent of this bond; and (c) if the said Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements specified in said permit or permits, and shall well and truly save harmless and indemnify the said CITY OF BRISTOL and the DIRECTOR OF PUBLIC WORKS, or either of them, from all damages and costs that the CITY OF BRISTOL or the DIRECTOR OF PUBLIC WORKS may suffer, be liable for, or be compelled to pay, or in fact does pay, for any injuries or damages which may be caused by any action or work being carried on either by the said Principal, his servants, agents or employees, under any permit or permits issued or which may be issued by said CITY OF BRISTOL, or its authorized agent, or by reason of negligence or violation of any law on the part of said Principal, his servants, agents or employees, and shall, further indemnify said CITY OF BRISTOL for any expenses that said CITY OF BRISTOL or the DIRECTOR OF PUBLIC WORKS may suffer, be liable for, or be compelled to pay, or in fact does pay for any required adjustments to the highway and its facilities to a comparable condition, including but not limited to refilling openings or excavations, removing guard railings, removing trees, tree stumps and other obstructions, replacing drainage involving driveways and restoring pavements opened or excavated satisfactory to the CITY or existed prior to the initiation of the work said Principal, his servants, agents or employees, then this obligation shall be void; otherwise to remain in full force and effect.

All of the provisions of the foregoing are to be subject to the present statute laws of the State of Connecticut and ordinances and standards and regulations of the CITY OF BRISTOL and to any change, alteration or repeal of any existing laws as may be enacted by any future session of the Legislature of the State of Connecticut or the City Council of the City of Bristol.

IN WITNESS WHEREOF, we have hereunto set our hands and seal the _____

day of _____, in the year two thousand, and _____.

Witness to Licensee's Signature (2)

_____

_____

_____
Licensee's Signature

_____
Bond Company Name

_____
Bond Company Address

_____
Agent Representing Bond Company

City of Bristol DEPARTMENT
OF PUBLIC WORKS BRISTOL,
CONNECTICUT 06010
860-584-6125 – Front Desk
860-584-6295 – Sanitary Sewer Inspector

# Contractor's License & Bonding Information Package

**License & Bonding Narrative**

This Contractor's License and Bonding Information Package includes the following:

- License & Bonding Narrative
- Excavation Contractor's License Application (to be completed & returned to DPW)
- Excavating Contractor's Permit Bond Form (to be completed & returned to DPW along with bond & Power of Attorney Form)
- List of streets requiring uniformed City of Bristol Police Officer for Traffic Control. Call 860-584-3000 48 hours prior to work to schedule Police Officers. Contractor is responsible for cost of officers.
- Sanitary Sewer Connection fee schedule.

**Requirements and procedures to become a licensed and bonded Excavation Contractor in the City of Bristol**

- Contractor must be licensed by the State of Connecticut as a P1, P7 or W-9 Contractor
- Complete and return the Excavation Contractor's License Application to the Bristol Public Works Department.
- Complete and return to the Bristol Public Works Department the Excavation Contractor's Permit Bond Form and supply a bond for ten thousand dollars ($10,000.00) with a Power of Attorney Form.
- Provide a Certificate of Liability Insurance with the following coverage;
  - Personal Injury - $100,000 Minimum(300,000)
  - Property Damage - $10,000 Minimum(300,000)

Submit the above listed information as one package to the Bristol Department of Public Works office during regular office hours (M-F, 8:00-5:00). This information will be reviewed by the Sanitary Sewer Inspector.

After you become a licensed and bonded Contractor you must obtain an Excavation Permit from the City of Bristol Sanitary Sewer Inspector prior to conducting any work within a City of Bristol street and/or right of way.

City of Bristol DEPARTMENT
OF PUBLIC WORKS BRISTOL,
CONNECTICUT 06010

**License & Bonding Narrative (Continued)**

# Excavation Permit & Permanent Patch Information

All excavation and utility work conducted within any City of Bristol street and/or right of way can only be conducted by Contractors licensed and bonded ***by the City of Bristol***.

To become a licensed and bonded Contractor in the City of Bristol obtain a "Contractor's License & Bonding Information Package" from the City of Bristol Department of Public Works office located in City Hall at 111 North Main Street, Bristol Connecticut.

An excavation permit must be issued by the City of Bristol Sanitary Sewer Inspector (584-6115) a minimum of 48 hours prior to any excavation work within any City of Bristol street and/or right of way.

All ***utility connection fees*** for the subject property must be paid prior to issuance of an excavation permit.

Excavation permits are issued Monday thru Friday from 8:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 4:30 p.m. and at other times as arranged with the Sanitary Sewer Inspector.

**Fees**

**Excavation permit fee** = $40.00 each. Separate excavation permits are required for each utility.

**Permanent Patch fee** – At the time of issuance of an Excavation Permit the Contractor shall pay the estimated cost of the permanent patch to the City of Bristol. During the period between temporary patch and permanent patch, the Contractor shall be responsible for maintaining the patch and shall promptly correct all defects upon order of the Director of Public Works or his designated agent. The intent is that temporary patches shall go through one complete winter season prior to being permanently patched by the City of Bristol. Prior to issuing a Certificate of Occupancy, the City of Bristol with measure the total area of the temporary patch, to assure the funds collected will cover the total permanent patch cost. If additional funds are needed to cover permanent patch cost they will be collected before a Certificate of Occupancy is issued.

Calculation of estimated patch cost will be based on length and width, (width shall be diameter of pipe plus twelve (12) inches, minimum twenty-four (24) inches, plus twelve (12) inches for every foot to depth of trench.) Permanent patch fees are calculated by the City of Bristol and subject to payment by the contractor.

City of Bristol
DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010
860-584-6125 – Front Desk

# PERMANENT PATCHING OF CITY STREETS

The permanent patching of all utility trenches and other excavations in streets maintained by the City of Bristol will be by the public works department or under contract to the city. All utility contractors shall obtain an excavating permit for any trenches in the public street.

**Excavation, backfilling and patching, general requirements.**

Pavement and/or sidewalks shall be cut or sawn to straight neat lines, excavation without cutting or sawing will not be allowed. Cut line shall be parallel and six (6) inches minimum, outside either edge of the proposed trench. Tunneling under pavement or sidewalks will not be allowed. Bituminous material, cement concrete, ledge, rock and boulders over six (6) inches in any dimension shall be removed from the job, together with any clay, silt, or organic material. The public works inspector will check the material excavated and will allow re-use as backfill, sandy and/or gravelly material. Material not approved shall be disposed of off the job. Backfill shall be approved sandy gravelly material with no stones over six (6) inches in any dimension. Backfill shall be compacted in twelve-inch layers using mechanical compaction equipment.

The trench shall be filled to within eleven (11) inches of finished grade, eight (8) inches of approved processed gravel shall be spread and compacted, then three (3) inches of bituminous concrete shall be spread and compacted with the finished material flush with the adjacent existing surface. Bituminous concrete material shall be "hot mix," except during winter season when plants are closed "cold patch" will be used. During the period between temporary patch and permanent patch, the utility contractor shall be responsible for maintaining the patch and shall promptly correct all defects upon order of the director of public works. The contractor is an agent of the utility whose pipe, conduit, etc., is laid in the trench and has ultimate responsibility for the trench. In sanitary sewer laterals this is the serviced property owner. This procedure also includes new sanitary sewer construction and the ultimate responsibility shall be the city public works department.

**Fees, deposits, records and measurements for patches.**

Annually the city may advertise and receive bids for permanent patching of utility trenches. Bids will be taken on repair of bituminous pavement, curbing and sidewalk. The lowest acceptable unit prices will be utilized with a ten (10) per cent escalator for charging utility contractors, that year, for trench permanent patching. Trenches that are temporarily patched this year will be permanently patched next year, the intent is that temporary patches shall go through one complete winter season.

At the time of issuance of an excavation permit, the utility contractor shall deposit a fee equal to the estimated cost of the permanent patch. Upon completion, the actual patch will be measured and the contractor shall be billed for any additional amount or added cost due to increased bid cost, if the amount is less than the prepayment he will receive credit. Calculation of estimated patch will be based on length and width, (width shall be diameter of pipe plus twelve (12) inches, minimum twenty-four (24)inches, plus twelve (12) inches for every foot to depth of trench.) Permits will not be issued to contractors owing the city any excess fee. Responsible persons will be liened if excess fee not paid within ninety (90) days of the due date.
The public works department shall keep a written record of all trenches, with date of excavation, temporary patch and permanent patch, deposit fee and estimate quantity final fee and actual quantity balance or credit due, and exact location, and type of utility. The city shall maintain a separate fund, for permanent patching of all city streets. All payments by utility contractor or others excavating in the public street will be deposited in the fund, and payments for permanent patching completed will be disbursed from the fund.

**Detailed patching requirements**.
Permanent patching shall be performed as follows:
**(a)** ***Sidewalks***. Temporary bituminous material shall be removed. Existing walk faces shall be straight and true with no cracks or breaks, if not, shall be cut at next sound transverse joint. Subgrade material shall be removed to five (5) inches below finish grade one-half inch preformed full depth and width expansion joints shall be placed against existing concrete. Portland cement concrete shall be as specified in Chapter 21 of the City Ordinances. Topsoil and seeding shall be repaired as specified in Chapter 21 of the City Ordinances. Bituminous concrete walks shall be repaired as specified in subsection (c).
**(b)** ***Curbing***. Curbing shall be replaced to conform to existing adjacent curb. Existing curb shall be cut to neat true lines. Concrete and granite curb replacement shall be not less than three (3) feet. Bituminous curb less than twenty-five (25) feet may be hand formed to proper cross section. Curbing shall conform to Chapter 21 of the City Ordinances.
**(c)** ***Pavement***. Existing bituminous material shall be removed, existing pavement shall be cut to reasonably straight longitudinal lines, transverse jogs within ten (10) feet of each other shall not be accepted, transverse cuts shall be perpendicular to the longitudinal cut. Several small excavations shall be widened into one. If existing pavement has cracked due to trench settlement, the edge of the trench shall be cut beyond such cracks to firm true pavement. The subgrade shall be graded and compacted to three (3) inches below finished grade. The contractor shall add any necessary processed gravel to bring trench to subgrade, care shall be taken to keep processed gravel tight under adjacent pavement. Edge of existing bituminous shall be painted with hot liquid asphalt prior to paving. Transverse joints in new patch shall be cut square and painted with hot liquid asphalt. Bituminous material shall be placed in two (2) equal layers of one and one-half inches compacted. Finished surface shall meet existing surface neat and true. Edges of completed patch shall be sealed with an application of hot liquid asphalt three (3) inches minimum wide. Finish surface shall be lightly dusted with cement or fine quarry screenings. Patch shall be barricaded and traffic kept off for at least four (4) hours.

# City of Bristol

DEPARTMENT OF PUBLIC WORKS
BRISTOL, CONNECTICUT 06010

## Excavation Contractor's License Application

Date Filed: _____
Approved: _____
Denied: _____

1. **APPLICANT:** (Person completing this application)

   Name: _____ Signature: _____

   Address: _____ City: _____State: _____Zip: _____

   Telephone No.: _____ [ ] home [ ] work

2. **COMPANY:**

   Name: _____

   Address: _____ City: _____State: _____Zip: _____

   Telephone No.: _____ [ ] home [ ] work

3. **STATE LICENSES HELD:**

   Classification & Number:_____

   _____

4. **REFERENCES:** List a minimum of three (3) references (other than material suppliers) who are familiar with your work and the information contained within this application. Attach another sheet if necessary.

---

_____

_____

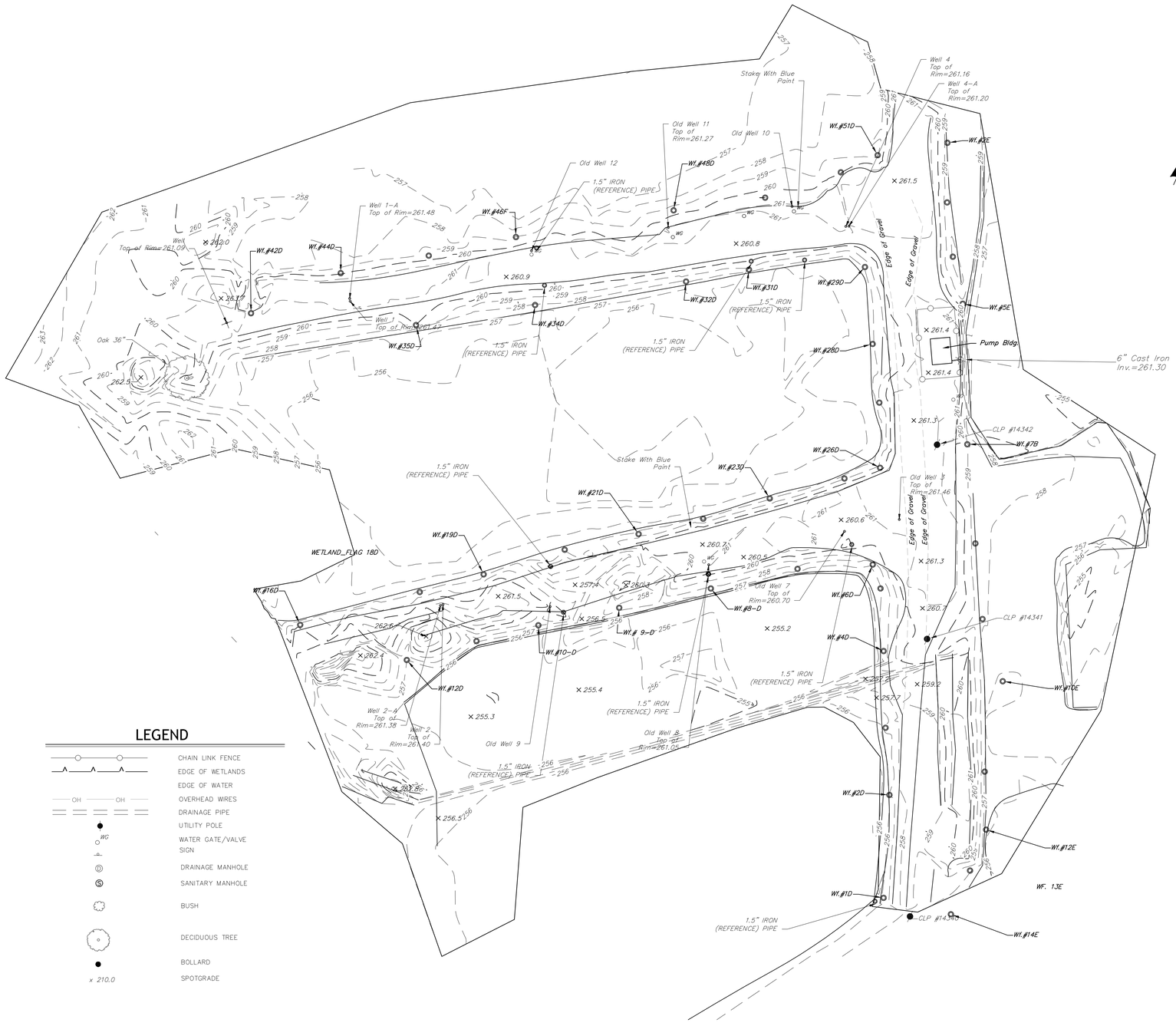
_____

_____

_____

_____

# A-2
# Surveys
# 11/24



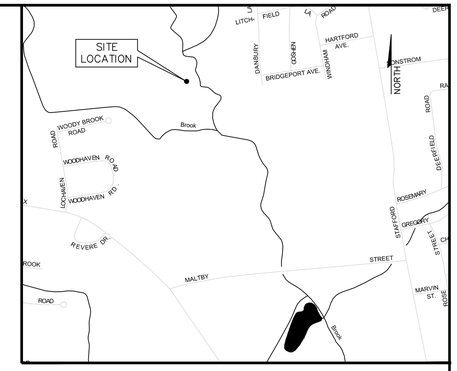

## LEGEND

- CHAIN LINK FENCE
- EDGE OF WETLANDS
- EDGE OF WATER
- OH OH — OVERHEAD WIRES
- DRAINAGE PIPE
- UTILITY POLE
- WG — WATER GATE/VALVE
- SIGN
- D — DRAINAGE MANHOLE
- S — SANITARY MANHOLE
- BUSH
- DECIDUOUS TREE
- BOLLARD
- x 210.0 — SPOTGRADE

GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )
1 inch = 50 ft.




## LOCATION MAP

NOT TO SCALE

## GENERAL NOTES

1. THIS SURVEY HAS BEEN PREPARED BY FREEMAN COMPANIES, LLC. IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26,1996
   - 1.1. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS T-2.
   - 1.2. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.
2. NORTH ARROW AND BEARINGS REFER TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD83) AND IS BASED UPON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
3. ELEVATIONS REFER TO NAVD88 AND ARE BASED ON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).
4. THE UNDERGROUND FEATURES DEPICTED HEREON ARE THE RESULT OF COMPILATION OF EXISTING MAPPING AND LOCATION OF UTILITY PAINT, ACTUAL LOCATION OF UNDERGROUND UTILITIES IS TO BE CONSIDERED TO BE APPROXIMATE AT BEST. OTHER UTILITIES MAY EXIST WHICH FREEMAN COMPANIES ARE UNAWARE OF. VERIFY INFORMATION IN THE FIELD BEFORE ANY DIGGING OR SITE EXCAVATION CALL, "CALL BEFORE YOU DIG" 1800-922-4455.
5. PROJECT AREA IS LOCATED IN FLOOD HAZARD ZONE AE AS DEPICTED ON FIRM MAP NUMBER 09003C0458F, EFFECTIVE DATE SEPTEMBER 26, 2008.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PETER PARIZO, L.S. #14653

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.

STATE OF CONNECTICUT · PETER PARIZO · NO. 14653 · LICENSED LAND SURVEYOR

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | | |


FREEMAN COMPANIES
LAND DEVELOPMENT · ENGINEERING DESIGN · CONSTRUCTION SERVICES
DBE | SBE | MBE | SBA (8)a CERTIFIED
LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

FREEMAN COMPANIES, LLC
35 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
(860)251-9550
FAX:(860)986-7161


# LAND OF NEW BRITAIN WATER DEPARTMENT UPPER WELL FIELD JEROME AVENUE BRISTOL, CONNECTICUT

| | |
|---|---|
| SURVEYED: | R.A.C. |
| DRAFTED: | R.L.C. |
| APPROVED: | L.K. |
| SCALE: | 1" = 50' |
| PROJECT NO.: | 2019-0901 |
| DATE: | 08/20/2019 |
| CAD FILE: | 2018-0901-SRV |

TITLE:
EXISTING CONDITIONS SURVEY

SHEET NUMBER:
EX-1

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC

## LEGEND

- CHAIN LINK FENCE
- EDGE OF WETLANDS
- EDGE OF WATER
- OH OH — OVERHEAD WIRES
- DRAINAGE PIPE
- UTILITY POLE
- WG — WATER GATE/VALVE
- SIGN
- DRAINAGE MANHOLE
- SANITARY MANHOLE
- BUSH
- DECIDUOUS TREE
- BOLLARD
- x 210.0 — SPOTGRADE

## GENERAL NOTES

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   1.1. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TOPOGRAPHIC ACCURACY CLASS T-2.

   1.2. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.

2. NORTH ARROW AND BEARINGS REFER TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD83) AND IS BASED UPON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).

3. ELEVATIONS REFER TO NAVD88 AND ARE BASED ON GPS OBSERVATIONS PERFORMED BY FREEMAN COMPANIES).

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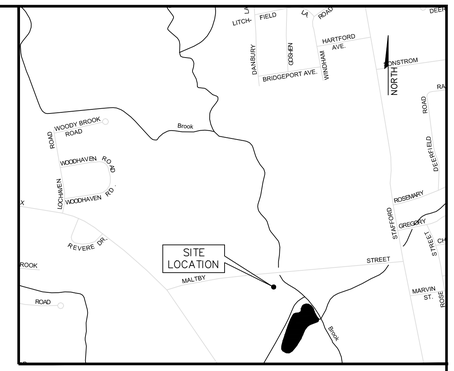
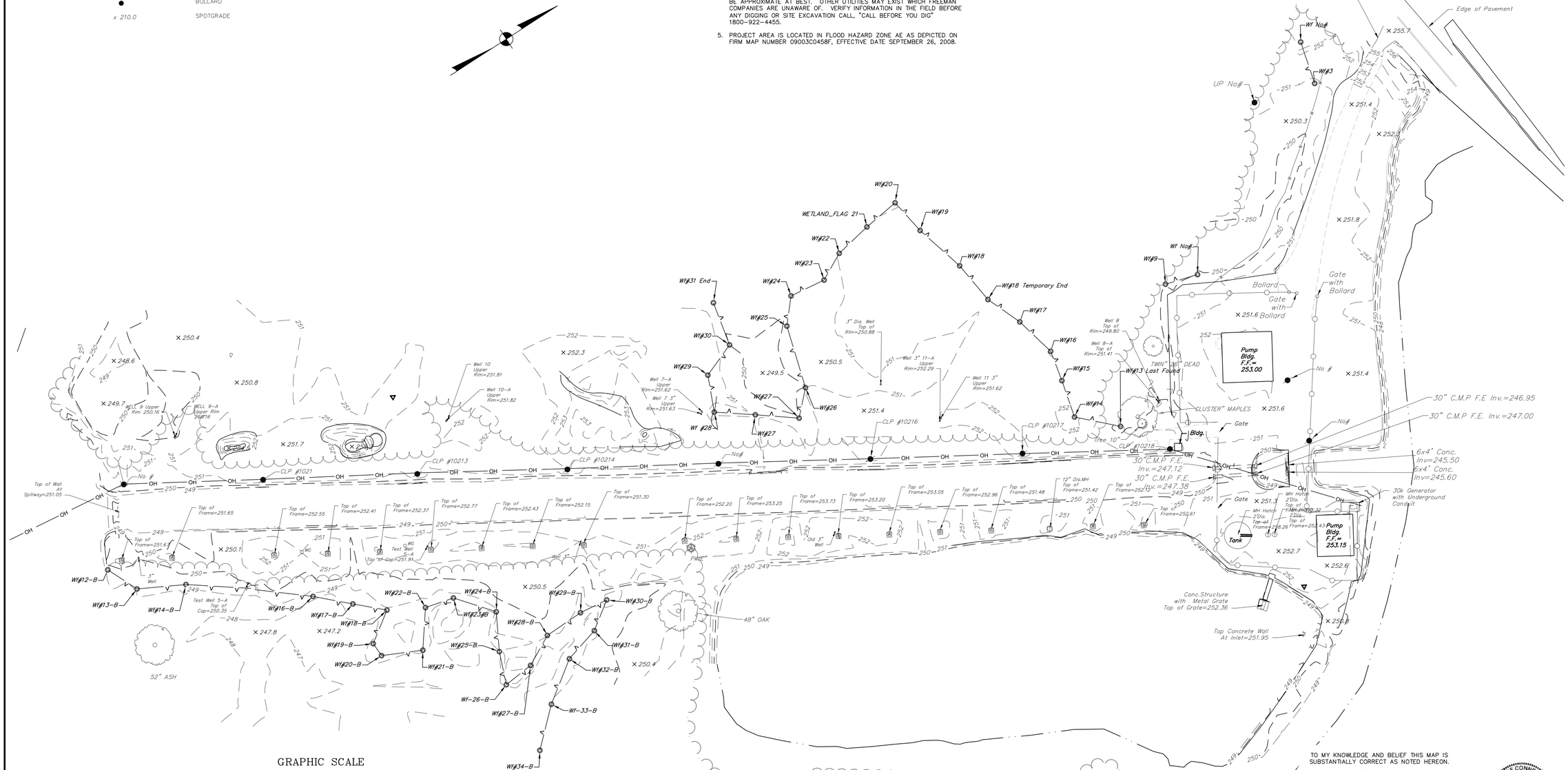
5. PROJECT AREA IS LOCATED IN FLOOD HAZARD ZONE AE AS DEPICTED ON FIRM MAP NUMBER 09003C0458F, EFFECTIVE DATE SEPTEMBER 26, 2008.




## LOCATION MAP

NOT TO SCALE




GRAPHIC SCALE

50 0 25 50 100 200

( IN FEET )

1 inch = 50 ft.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

PETER PARIZO, L.S. #14653

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.

STATE OF CONNECTICUT PETER PARIZO NO. 14653 LICENSED LAND SURVEYOR

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | - | - |

REVISIONS


FREEMAN COMPANIES

DBE | MBE | SBA (8)a CERTIFIED
LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

FREEMAN COMPANIES, LLC
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
(860)251-9550
FAX:(860)986-7161


LAND OF
NEW BRITAIN WATER DEPARTMENT
LOWER WELL FIELD
MIX STREET
BRISTOL, CONNECTICUT

| | |
|---|---|
| SURVEYED: | R.A.C. |
| DRAFTED: | R.L.C. |
| APPROVED: | L.K. |
| SCALE: | 1" = 50' |
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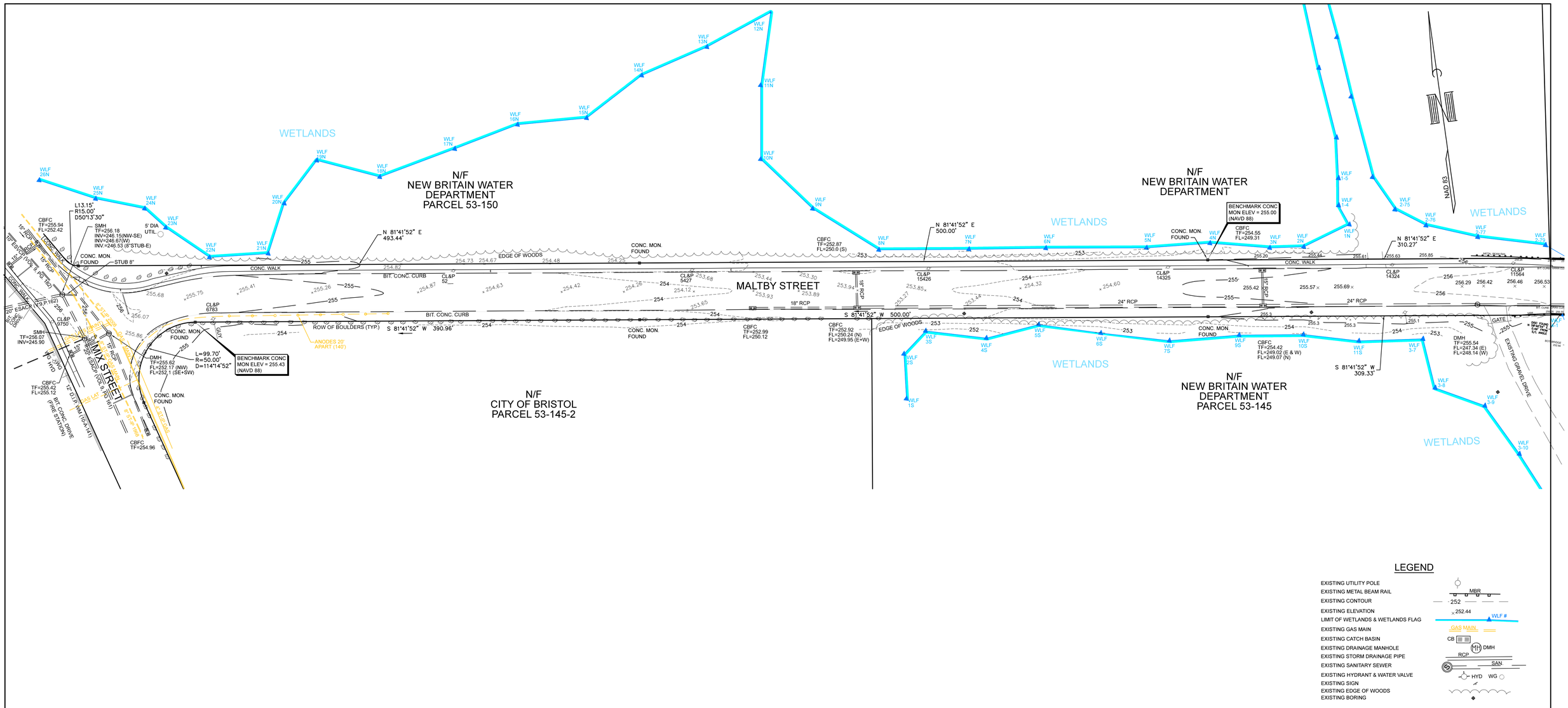



NOTE: VERIFY ALL UTILITY LOCATIONS IN THE FIELD PRIOR TO START OF ANY WORK (SEE NOTE BELOW).

WARNING: THESE PLANS NOT TO BE USED FOR LOCATION OF UNDERGROUND UTILITIES – CALL BEFORE YOU DIG 1–800–922–4455 OR 811 TWO WORKING DAYS BEFORE YOU DIG.

STREET LINES FROM MAP TITLED:
"CONSTRUCTION OF MALTBY STREET BRIDGE AND APPROACHES SCALE 1"=100'
BRISTOL, CONN. DATE JUNE 1978 SHEET 2 OF 29' PREPARED BY DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING CITY OF BRISTOL CONNECTICUT C. M. PENNIG, CITY ENGINEER (ENG. DEPT. MAP 28-238)

VERTICAL DATUM - NAVD 88.

WETLANDS FLAGGED BY IAN T. COLE, SOIL SCIENTIST

TYPE OF SURVEY: ZONING LOCATION
BOUNDARY DETERMINATION CATEGORY: RESURVEY
CLASS OF ACCURACY: A-2

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH "THE STANDARDS AND SUGGESTED METHODS AND PROCEDURES FOR THE STATE OF CONNECTICUT" PREPARED AND ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC., ON AUGUST 29, 2019.

WILLIAM T. CLARK L.S. #70080

NOT VALID WITHOUT EMBOSSED SEAL

STATE OF CONNECTICUT · WILLIAM T. CLARK · #70600 · LICENSED LAND SURVEYOR

## LEGEND

- EXISTING UTILITY POLE
- EXISTING METAL BEAM RAIL (MBR)
- EXISTING CONTOUR (252)
- EXISTING ELEVATION (252.44)
- LIMIT OF WETLANDS & WETLANDS FLAG (WLF #)
- EXISTING GAS MAIN (GAS MAIN)
- EXISTING CATCH BASIN (CB)
- EXISTING DRAINAGE MANHOLE (DMH)
- EXISTING STORM DRAINAGE PIPE (RCP)
- EXISTING SANITARY SEWER (SAN)
- EXISTING HYDRANT & WATER VALVE (HYD, WG)
- EXISTING SIGN
- EXISTING EDGE OF WOODS
- EXISTING BORING

TOPOGRAPHIC SURVEY

# MALTBY STREET from MIX STREET EASTERLY to COPPER MINE BROOK

PREPARED FOR

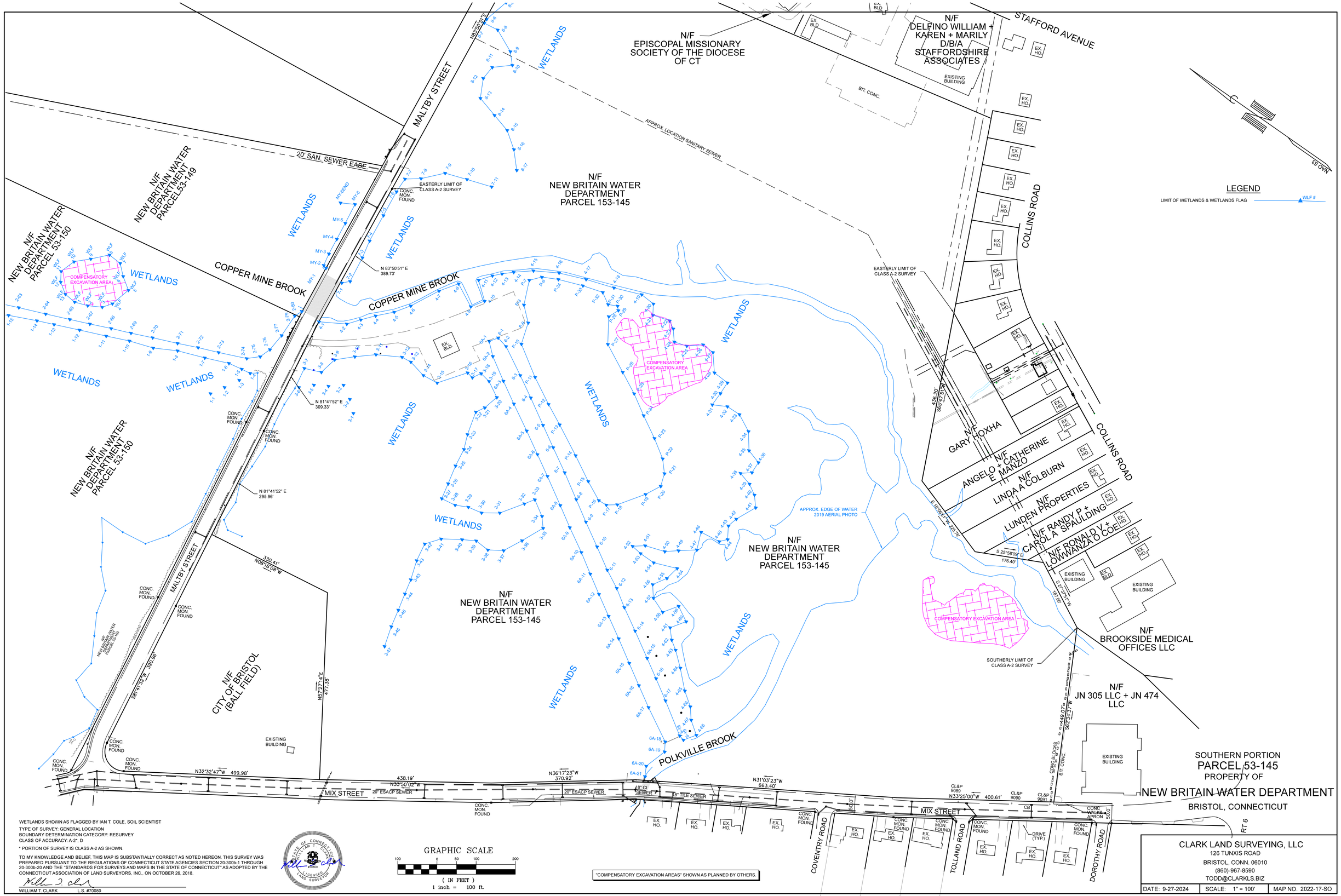
C.E.I.

BRISTOL, CONNECTICUT

REV. 11-9-2023 SEWER INVERTS & STUB FIELD MEASURED


CLARK LAND SURVEYING, LLC
126 TUNXIS ROAD
BRISTOL, CONN. 06010
(860)-967-8590
TODD@CLARKLS.BIZ


| DATE: 11-3-2023 | SCALE: 1" = 40' | MAP NO. 2022-17-MALTBY |
|---|---|---|




WETLANDS SHOWN AS FLAGGED BY IAN T. COLE, SOIL SCIENTIST

TYPE OF SURVEY: GENERAL LOCATION
BOUNDARY DETERMINATION CATEGORY: RESURVEY
CLASS OF ACCURACY: A-2*, D

* PORTION OF SURVEY IS CLASS A-2 AS SHOWN.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS SURVEY WAS PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTION 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC., ON OCTOBER 26, 2018.

WILLIAM T. CLARK L.S. #70080

CLARK LAND SURVEYING, LLC
126 TUNXIS ROAD
BRISTOL, CONN. 06010
(860)-967-8590
TODD@CLARKLS.BIZ

| DATE: 9-27-2024 | SCALE: 1" = 100' | MAP NO. 2022-17-SO |
|---|---|---|

# Original Site Plan

# June 2024 (Full Set)

CITY OF NEW BRITAIN, CONNECTICUT

WATER SYSTEM IMPROVEMENTS

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

**BID NO. 4145**

**MAYOR**

HONORABLE ERIN E. STEWART

**DIRECTOR OF PUBLIC WORKS**

MARK E. MORIARTY, P.E.

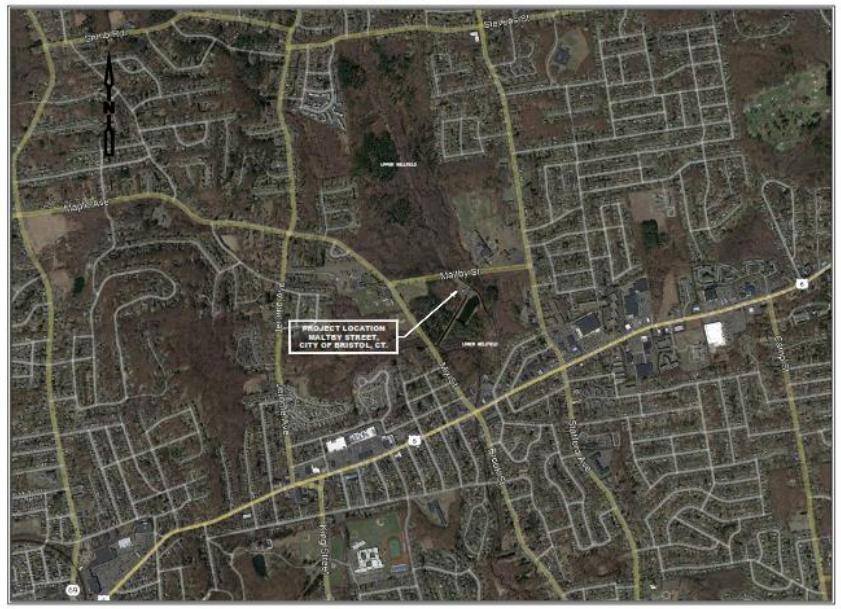
**DIRECTOR OF UTILITIES DIVISION**

RAMON ESPONDA, P.E.

**SUPERINTENDENT OF UTILITIES DIVISION**

CHRIS POLKOWSKI

**JUNE 2024**




LOCATION PLAN

CDM Smith

**REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION**

**EAST HARTFORD, CONNECTICUT**

***Water*** ***Environment*** ***Transportation*** ***Energy*** ***Facilities***

**Full Set of Civil Drawings at this Hyperlink:**

https://www.bristolct.gov/DocumentCenter/View/47022/Full-Set-NBW

# Site Plan
# 11/24
# (Full Set)




**Hyperlink:**
https://www.bristolct.gov/DocumentCenter/View/47861/04A_Attachment---Full-Set-Design-Drawings---Zoning-Review-20241107

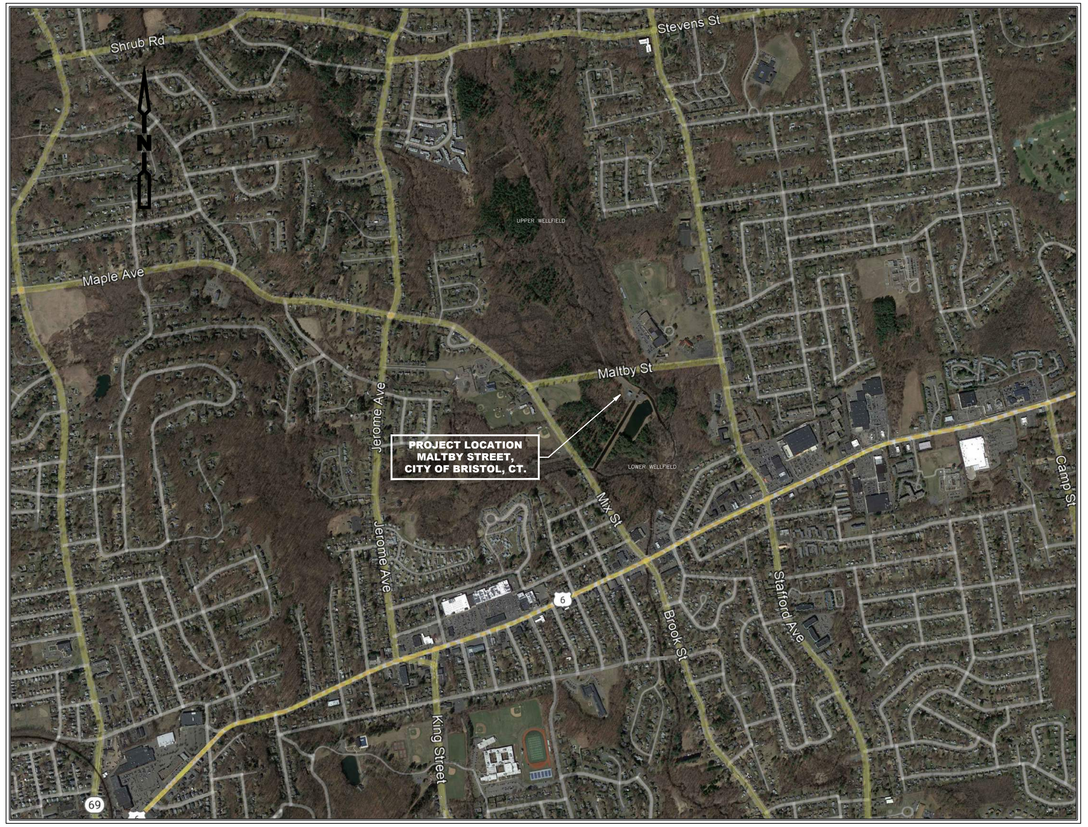
# Revised Site Plan Selected Sheets 10/24

# CITY OF NEW BRITAIN, CONNECTICUT

## WATER SYSTEM IMPROVEMENTS

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

**BID NO. 4145**




LOCATION PLAN

SCALE: 1" = 1000'


**MAYOR**

HONORABLE ERIN E. STEWART

**DIRECTOR OF PUBLIC WORKS**

MARK E. MORIARTY, P.E.

**DIRECTOR OF UTILITIES DIVISION**

RAMON ESPONDA, P.E.

**SUPERINTENDENT OF UTILITIES DIVISION**

CHRIS POLKOWSKI


**OCTOBER 2024**

**BRISTOL ZONING COMMISSION APPLICATION**
(APPROVED XX):
#2504 – SPECIAL PERMIT FOR CIVIC FACILITY
#2505 – SITE PLAN FOR CIVIC FACILITY
#2506 – SPECIAL PERMIT FOR EARTH REMOVAL

**BRISTOL AQUIFER PROTECTION AGENCY**
(APPROVED XX):
### – DETERMINATION FORM

**BRISTOL IWWA APPLICATIONS**
(APPROVED JUNE 7, 2024):
#2019 – APPLICATION WETLANDS BOUNDARY CHANGE
#2020 – PERMIT TO CONDUCT REGULATED ACTIVITIES
#23-485F-3058 – PERMIT FOR FLOODPLAIN DEVELOPMENT


SP-01 OVERVIEW UWF NORTH
SP-02 OVERVIEW UWF SOUTH
SP-03 OVERVIEW LWF
SP-04 SITE PLAN UPPER WELLFIELD
SP-05 SITE PLAN POND PUMPING STATION
SP-06 SITE PLAN LOWER WELLFIELD
SP-07 MIX STREET ACCESS ROAD
SP-08 MALTBY STREET UTILITIES I
SP-09 MALTBY STREET UTILITIES II
SP-10 MALTBY STREET UTILITIES III
SP-11 STAFFORD AVENUE AND CROSS COUNTRY UTILITIES
SP-12 E&S CONTROLS UWF
SP-13 E&S CONTROLS POND PUMPING STATION
SP-14 E&S CONTROLS LWF


CDM Smith

STATE OF CONNECTICUT
STEVE GERSLEY
No. 24384
LICENSED PROFESSIONAL ENGINEER
10-10-24

**REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION**

**EAST HARTFORD, CONNECTICUT**

***Water Environment Transportation Energy Facilities***


IMAGE OBTAINED FROM GOOGLE EARTH PRO DECEMBER, 2021
Plot Stamp – File: C:\USERS\ENGELSB\DC\ACCDOCS\CDM SMITH INC\10739-264571 – NEW BRITAIN CT WHITE BRIDGE WELL FIELDS AND PS\PROJECT FILES\01 GENERAL (G)\10 CADD\PERMIT-GOODNFCV.DWG Saved by: ENGELSB On: 9-Oct-24 Plotted on: 9-Oct-24 10:59 AM

## CIVIL/SITE ABBREVIATIONS

| SYMBOL | DESCRIPTION |
|---|---|
| BC | BOTTOM OF CURB |
| BS | BOTTOM OF STEP |
| BW | BOTTOM OF WALL |
| CB | CATCH BASIN |
| CLF | CHAIN LINK FENCE |
| CS | CRUSHED STONE |
| CW | COLD POTABLE WATER |
| DI | DUCTILE IRON |
| DMH | DRAIN MANHOLE |
| DN | DOWN |
| FES | FLARED END SECTION |
| FFE | FINISHED FLOOR ELEVATION |
| FM | FORCE MAIN |
| FRP | FIBERGLASS REINFORCED PLASTIC |
| GV | GATE VALVE |
| HDPE | HIGH-DENSITY POLYETHYLENE |
| INF | INFLUENT |
| INV. EL. | INVERT ELEVATION |
| MH | MANHOLE |
| MJ | MECHANICAL JOINT |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| SS | STAINLESS STEEL |
| TC | TOP OF CURB |
| TS | TOP OF STEP/SLAB |
| TW | TOP OF WALL |
| UP | UTILITY POLE |
| VGC | VERTICAL GRANITE CURB |
| UWF | UPPER WELLFIELD |
| LWF | LOWER WELLFIELD |

## PROCESS FLOW STREAMS:

| | |
|---|---|
| DR | DRAIN |
| FINW | FINISHED WATER |
| OVF | OVERFLOW |
| RW | RAW WATER |
| SAN | SANITARY |
| SPL | SAMPLE |
| VT | VENT |
| FLUO | SODIUM FLUORIDE |
| HYPO | SODIUM HYPOCHLORITE |
| NAOH | SODIUM HYDROXIDE |
| PHOS | POLYPHOSPHATE |

FOR ADDITIONAL RELATED FLOW STREAMS SEE LEGEND SHEETS P-1 AND I-1

## PIPE MATERIALS:

| | |
|---|---|
| CS | CARBON STEEL |
| CU | COPPER |
| DI(FLG) | DUCTILE IRON (FLANGED JOINT) |
| DI(MJ) | DUCTILE IRON (MECHANICAL JOINT) |
| DI(POJ) | DUCTILE IRON (PUSH ON JOINT) |
| PVC(SCH 40) | POLYVINYL CHLORIDE (SCHEDULE 40) |
| PVC(SCH 80) | POLYVINYL CHLORIDE (SCHEDULE 80) |
| PTFE | POLYTETRAFLUOROETHYLENE |
| SS316 | 316 STAINLESS STEEL |

**YARD PIPING NOTES**

1. THE LOCATION OF EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS IS APPROXIMATE, AND THEIR ACTUAL LOCATIONS MAY VARY FROM THAT SHOWN. FURTHER, IT IS NOT WARRANTED THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FEATURES THAT MAY BE AFFECTED BY THE WORK.
2. NEW WATER MAINS SHALL HAVE A MINIMUM COVER OF 4.5 FEET UNLESS OTHERWISE INDICATED AND SHALL PASS UNDER EXISTING UTILITIES AS NECESSARY TO MEET THIS REQUIREMENT.
3. ALL NEW WATER PIPES, INCLUDING FIRE PROTECTION LINES, AND OTHER PRESSURE PIPES INCLUDING FORCE MAINS, SHALL HAVE RESTRAINED JOINTS AS SPECIFIED.
4. TEST PITS SHALL BE DUG TO LOCATE EXISTING PIPES TO WHICH NEW PIPES ARE TO BE CONNECTED, AND WHERE NECESSARY TO DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS TO PIPES.
6. ABANDONED PIPES, VALVES AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION MAY BE REMOVED AS REQUIRED. PIPES LEFT IN PLACE SHALL BE PLUGGED AND ABANDONED AS SPECIFIED AND AS APPROVED BY THE ENGINEER.
7. WALKWAYS AND PAVEMENTS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED WITHOUT ADDITIONAL EXPENSE BY OWNER.
8. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION BY DIGGING TEST PITS (WHETHER OR NOT INDICATED ON THE DRAWINGS) WHERE UTILITY INFORMATION IS ESSENTIAL.
9. PRIOR TO ANY EXCAVATION WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE DETAILS OF THE PROJECT AREA. THE CONTRACTOR SHALL COORDINATE WITH DEPARTMENT PERSONNEL AND OWNER AND REVIEW ANY DRAWINGS THAT MAY BE AVAILABLE. CONTRACTOR SHALL ENSURE THAT EXISTING UTILITIES WITHIN THE WORK OF THIS CONTRACT ARE NOT DAMAGED, UTILITIES DAMAGED DURING EXCAVATION SHALL BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COST TO OWNER.
10. PERFORM EXCAVATION CLOSE TO EXISTING UTILITIES BY HAND TO DETERMINE EXACT UTILITY LOCATION PRIOR TO INSTALLING EXCAVATION BRACING OR BEFORE MACHINE EXCAVATION.

**GRADING NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING GRADES AND LOCATION OF UTILITIES. MAJOR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. TO ESTABLISH PROPER GRADES, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF GRADE STAKES. THE NUMBER AND LOCATION SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER.

**GENERAL NOTES**

1. BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE MUST BE NOTIFIED CALL "DIG SAFE" 1 (888) 344-7233 HTTP://WWW.DIGSAFE.COM.
2. FOR BORING INFORMATION AND LOCATIONS SEE EXISTING CONDITIONS DRAWINGS AND APPENDIX TO SPECIFICATIONS.
3. THE CONTRACTOR SHALL PREPARE AN EROSION AND SEDIMENT CONTROL PLAN AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS SPECIFIED TO PROTECT THE SITES FROM EROSION AND PREVENT THE MOVEMENT OF SEDIMENT AND DEBRIS. THE SWPPP SHALL BE PREPARED FOR APPROVAL BY STATE AND FEDERAL PERMIT AUTHORITIES AND FOR INFORMATIONAL PURPOSES ONLY BY THE OWNER AND ENGINEER.
4. ALL AREAS OUTSIDE THE LIMIT OF DISTURBANCE SHALL BE PROTECTED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE OWNER AND/OR ENGINEER.
5. ALL MATERIALS TO BE REMOVED WITHIN THE LIMIT OF DISTURBANCE SHALL BE REMOVED TO A LOCATION ARRANGED BY THE CONTRACTOR AND APPROVED BY THE OWNER AND/OR ENGINEER. THE LOCATION OF STOCKPILED TOPSOIL SHALL BE IN AREAS APPROVED BY THE OWNER AND/OR ENGINEER.
6. CONTRACTOR SHALL PROVIDE SITE SECURITY THROUGHOUT CONSTRUCTION PERIOD.
7. WHEN EXCAVATING AROUND EXISTING STRUCTURES, EXCAVATE SOILS UNIFORMLY AROUND THE STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL EXCAVATION LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
8. WHEN BACKFILLING AROUND STRUCTURES, BRING UP BACKFILL UNIFORMLY AROUND STRUCTURE UNLESS INDICATED OTHERWISE. CONTROL BACKFILL LEVELS AROUND THE ENTIRE PERIMETER OF THE STRUCTURE SUCH THAT THE GRADE DIFFERENTIAL DOES NOT EXCEED 2 FT.
9. GAS MAINS ARE ASSUMED TO HAVE THREE FEET OF COVER UNLESS SHOWN OTHERWISE. LOCAL WATER MAINS ARE ASSUMED TO HAVE 5 FEET OF COVER. IT IS NOT WARRANTED THAT ALL UTILITIES ARE SHOWN OR ARE SHOWN AT THE CORRECT ELEVATION.
10. ALL UNDERGROUND SERVICES TO HOUSES ARE NOT SHOWN.
11. BORING LOGS HAVE BEEN APPENDED TO THE SPECIFICATION DOCUMENTS. BORINGS ARE INCLUDED FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT BE SHOWN AT EXACT LOCATIONS.
12. CONTRACTOR SHALL MINIMIZE CLEARING AND GRUBBING AS MUCH AS POSSIBLE. ALL CROSS-COUNTRY AREAS SHALL BE LOAMED AND SEEDED OR SODDED TO THE LIMITS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE NOTED.
13. CONTRACTOR SHALL NOT DISTURB ANY LAND OUTSIDE THE LIMITS OF WORK.
14. WHEN THE HORIZONTAL SEPARATION BETWEEN THE NEW SEWER AND EXISTING OR RELOCATED WATER MAIN IS LESS THAN 10-FT AND THE VERTICAL SEPARATION IS LESS THAN 18-IN THE NEW SEWER SHALL BE CONSTRUCTED OF RESTRAINED MJ DI OR CONCRETE ENCASED PIPE FOR A MINIMUM OF 10-FT BEYOND WHERE THE SPACING IS LESS THAN 10-FT HORIZONTAL AND 18-IN VERTICAL.
15. IF A WATER MAIN CROSSES UNDER THE NEW SEWER, BOTH PIPES SHALL BE RESTRAINED MJ DI OR CONCRETE ENCASED FOR A MINIMUM OF 10-FT TO EITHER SIDE OF THE RESPECTIVE CENTER LINES.
16. IF NECESSARY TO WORK IN LIVE SEWER MANHOLES CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE AND LOCAL REQUIREMENTS FOR SAFETY WHEN IN CONFINED SPACES. THE CONTRACTOR IS ALSO REFERRED TO RECOMMENDATIONS IN THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH PUBLICATION NO. 80-106, "WORKING IN CONFINED SPACES".
17. CONTRACTOR TO MAINTAIN FLOW IN EXISTING DRAINS AT ALL TIMES.
18. IT IS NOT WARRANTED THAT ALL EXISTING ABOVE GROUND AND UNDERGROUND STRUCTURES, EQUIPMENT, PIPING AND ELECTRICAL CONDUITS ARE SHOWN. NOR IS IT WARRANTED THAT LOCATIONS AND SIZES OF STRUCTURES AND UTILITIES ARE EXACT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SIZES AND LOCATIONS OF EXISTING EQUIPMENT, PIPING, ETC. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
19. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED USGS DATUM NAVD88.
20. THE CONTRACTOR SHALL COORDINATE WORK TO ENSURE CONTINUED ACCESS TO ALL EXISTING FACILITY STRUCTURES. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
21. REMOVE AND DISPOSE OF EXISTING PAVEMENT WITHIN LIMITS SHOWN ON DRAWINGS TAKING CARE NOT TO DAMAGE EXISTING WALLS, CURBS, BUILDINGS OR UTILITY STRUCTURES.
22. STRIP EXISTING VEGETATION AND 6" LAYER TOPSOIL WITHIN AREAS OF DISTURBANCE. GRIND ANY STUMPS TO A MINIMUM OF ONE FOOT BELOW FINISH GRADE AND BACKFILL WITH MAX. 12 INCH COMPACTED LAYERS AS SPECIFIED. CONTRACTOR SHALL STOCKPILE STRIPPED TOPSOIL IN A MANNER APPROVED BY THE ENGINEER.
23. EXISTING VERTICAL OR SLOPED GRANITE CURB DISTURBED FOR CONSTRUCTION SHALL BE STOCKPILED AND REINSTALLED AS APPROVED BY THE ENGINEER.
24. ALL BITUMINOUS ROADWAY AND SIDEWALK PAVEMENT AREAS AND ALL CONCRETE SIDEWALK AND OTHER AREAS DISTURBED BY TRENCHING SHALL BE REPAIRED AS SPECIFIED. SELECTED AREAS TO RECEIVE AN OVERPLAY LEVELING COURSE AS DIRECTED BY THE ENGINEER.
25. COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR LIMITING CONSTRUCTION ACTIVITIES NEAR THE GREAT BLUE HERON ROOKERY AREA AND NATURAL DIVERSITY DATABASE (NDDB) STATE-LISTED SPECIES HABITAT. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
26. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
27. ALL OBSERVATION AND MONITORING WELLS ASSOCIATED WITH THE UPPER AND LOWER WELLFIELDS MAY NOT BE SHOWN ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
28. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.
29. THE CONTRACTOR IS PROHIBITED FROM PERFORMING ANY ACTIVITY THAT MAY CAUSE CONTAMINATION TO SOIL AND/OR GROUNDWATER INCLUDING, BUT NOT LIMITED TO, REFUELING, DEGREASING, OR CHANGING OIL OF EQUIPMENT, MACHINERY, OR OTHER VEHICLES, ON THE PROJECT SITE WITHOUT THE INSTALLATION OF A CONTAINMENT UNIT. CONTAINMENT UNITS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO USE AND SHALL NOT BE LOCATED WITHIN REGULATED AREAS OR THEIR BUFFER ZONE.
30. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS INCLUDED IN THE JUNE 2024 ORDER OF CONDITIONS RECIEVED FROM THE BRISTOL CONSERVATION COMMISSION FOR APPLICATION #2020. REFER TO SPECIFICATIONS FOR FURTHER DETAIL.
31. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE CONCRETE SIDEWALK AT THE UPPER WELLFIELD ACCESS ROADWAY ENTRANCE ON MALTBY STREET. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO EXISTING SIDEWALK DURING CONSTRUCTION.
32. CONTRACTOR SHALL IMPLEMENT PROTECTIVE MEASURES TO LIMIT DUST, NOISE, FLYING ROCK, AND OTHER NUISANCES, AS REQUIRED IN THE SUPPLEMENTAL GENERAL CONDITIONS AND SPECIFICATION SECTION 015000.

**LAYOUT NOTES:**

1. CONTRACTOR SHALL VERIFY ALL PROPERTY AND SURVEY INFORMATION.
2. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND PROTECT ALL ON-SITE STRUCTURES AND VEGETATION TO BE RETAINED ON THE SITE THROUGHOUT THE CONSTRUCTION PROJECT.
3. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS AND ALL UTILITY SERVICES THROUGHOUT THE DURATION OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED.
4. LOCATIONS OF BURIED UTILITIES, VAULTS AND CONCRETE PADS ARE APPROXIMATE ONLY. FINAL LOCATIONS SHALL BE DETERMINED IN THE FIELD AFTER STAKING BY THE CONTRACTOR BASED ON ACTUAL SITE CONDITIONS AS APPROVED BY THE OWNER AND/OR ENGINEER.
5. ALL DISTURBED AREAS NOT COVERED WITH PAVEMENT, PADS, CRUSHED STONE, SOD, OR STRUCTURES SHALL RECEIVE 6" LAYER OF LOAM AND SEED AS SPECIFIED, UNLESS NOTED OTHERWISE.
6. DIMENSIONS FOR STRUCTURES ARE TO OUTSIDE FACE OF WALL. DIMENSIONS TO CONCRETE PADS ARE TO EDGE OF PAD. DIMENSIONS TO FENCES AND GATES ARE ON-CENTER.
7. ALL ITEMS TO BE REMOVED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, SHALL BE DISPOSED OFF SITE IN A LEGAL MANNER.
8. CONTRACTOR SHALL LIMIT CONSTRUCTION ACCESS TO AREAS DESIGNATED ON THE DRAWINGS AND AS INDICATED BY THE OWNER.
9. LOCATIONS OF CONCRETE PADS, PAVEMENTS, BOLLARDS, GATES, AND SIGNS ARE APPROXIMATE ONLY. FINAL LOCATIONS SHALL BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY THE ENGINEER.
10. BOUNDARIES OF AREAS TO RECEIVE LOAM & SEED MIXTURES, WASHED STONE, OVERLAY PAVEMENT OR OTHER SURFICIAL MATERIALS ARE FOR SCHEMATIC PURPOSES ONLY. FINAL LOCATIONS SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY THE ENGINEER.
11. THE EXISTING CONDITIONS SHOWN ON THIS BASEMAP ARE THE RESULT OF A GROUND SURVEY INSTRUMENT PERFORMED BY FREEMAN COMPANIES IN 2020.
12. HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED WITH RTK IN 2020. HORIZONTAL DATUM IS BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM NAD-83 – ENGLISH UNITS. VERTICAL DATUM IS CONNECTICUT STATE PLAN COORDINATE SYSTEM NAVD-88 – ENGLISH UNITS.
13. A PORTION OF THE EASTERN PROPERTY LINE ALONG THE COPPERMINE BROOK WAS TAKEN FROM THE DRAWING TITLED "CONSTRUCTION OF MALTBY STREET BRIDGE AND APPROACHES" BY THE CITY OF BRISTOL DEPARTMENT OF ENGINEERING, DATED JANUARY 1978.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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Tel: (860) 529-7615

STATE OF CONNECTICUT — GERSLEY K. WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LEGEND, ABBREVIATIONS AND GENERAL NOTES

PROJECT NO. 10739-264571
FILE NAME P-ERM-C001GELG.DWG
SHEET NO. P-ERM

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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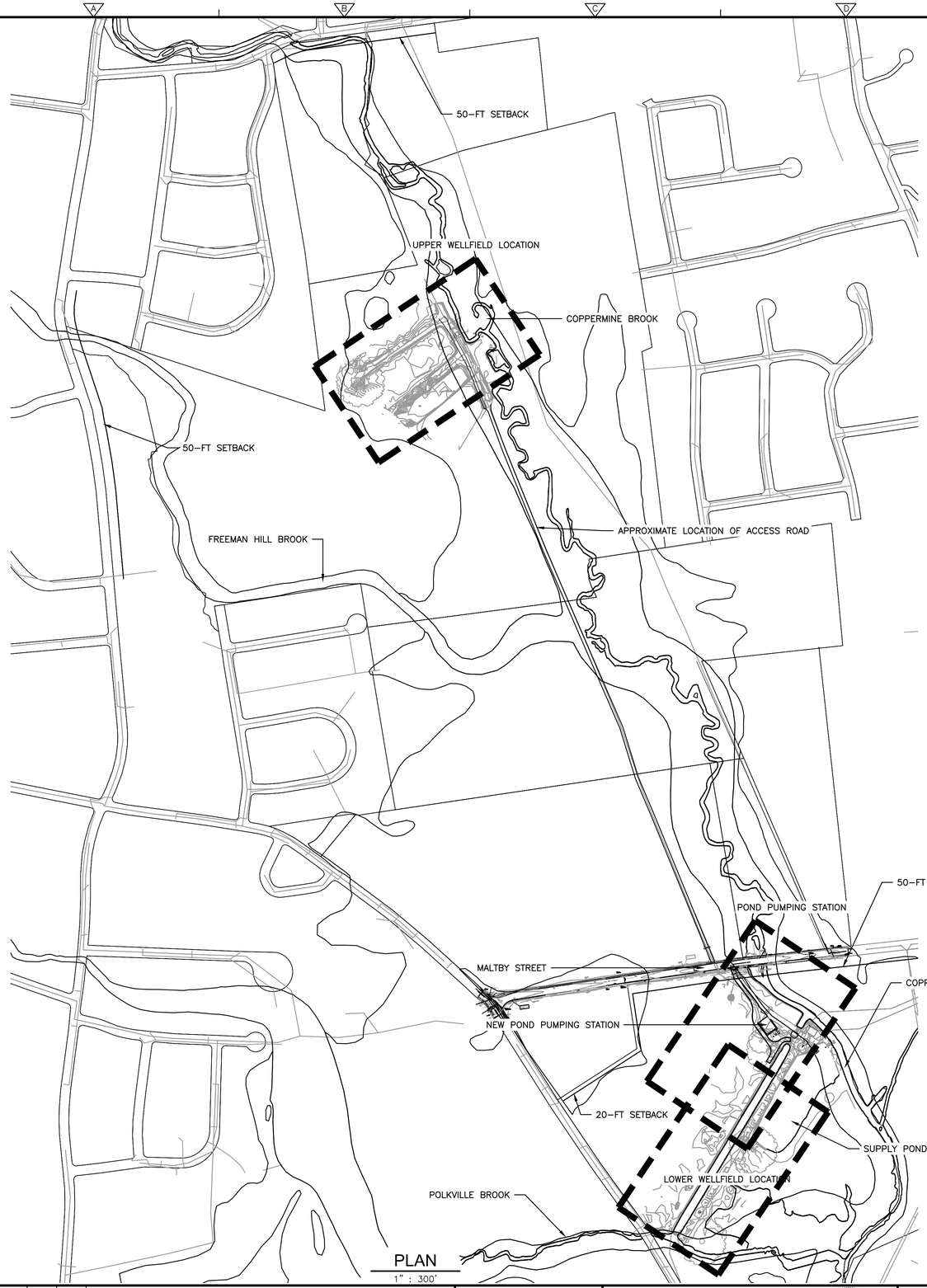


PLAN
1" : 300'




PLAN
N.T.S.

| FLOOD | LOWER WELLFIELD & POND PUMPING STATION ELEVATION (ft) | UPPER WELLFIELD ELEVATION (ft) |
|---|---|---|
| 0.2% ANNUAL CHANCE FLOOD (500 – YR FLOOD) | 256.7 | 259.7 |
| 1% ANNUAL CHANCE FLOOD (100 – YR FLOOD) | 255.9 | 259.0 |
| 2% ANNUAL CHANCE FLOOD (50 – YR FLOOD) | 255.6 | 258.6 |
| 10% ANNUAL CHANCE FLOOD (10 – YR FLOOD) | 253.0 | 258.0 |

NOTE: ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED USGS DATUM NAVD88

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WADE · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

OVERALL SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C002STPL.DWG
SHEET NO.
C-2

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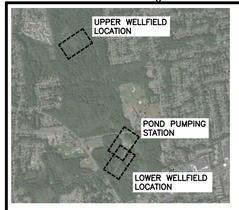
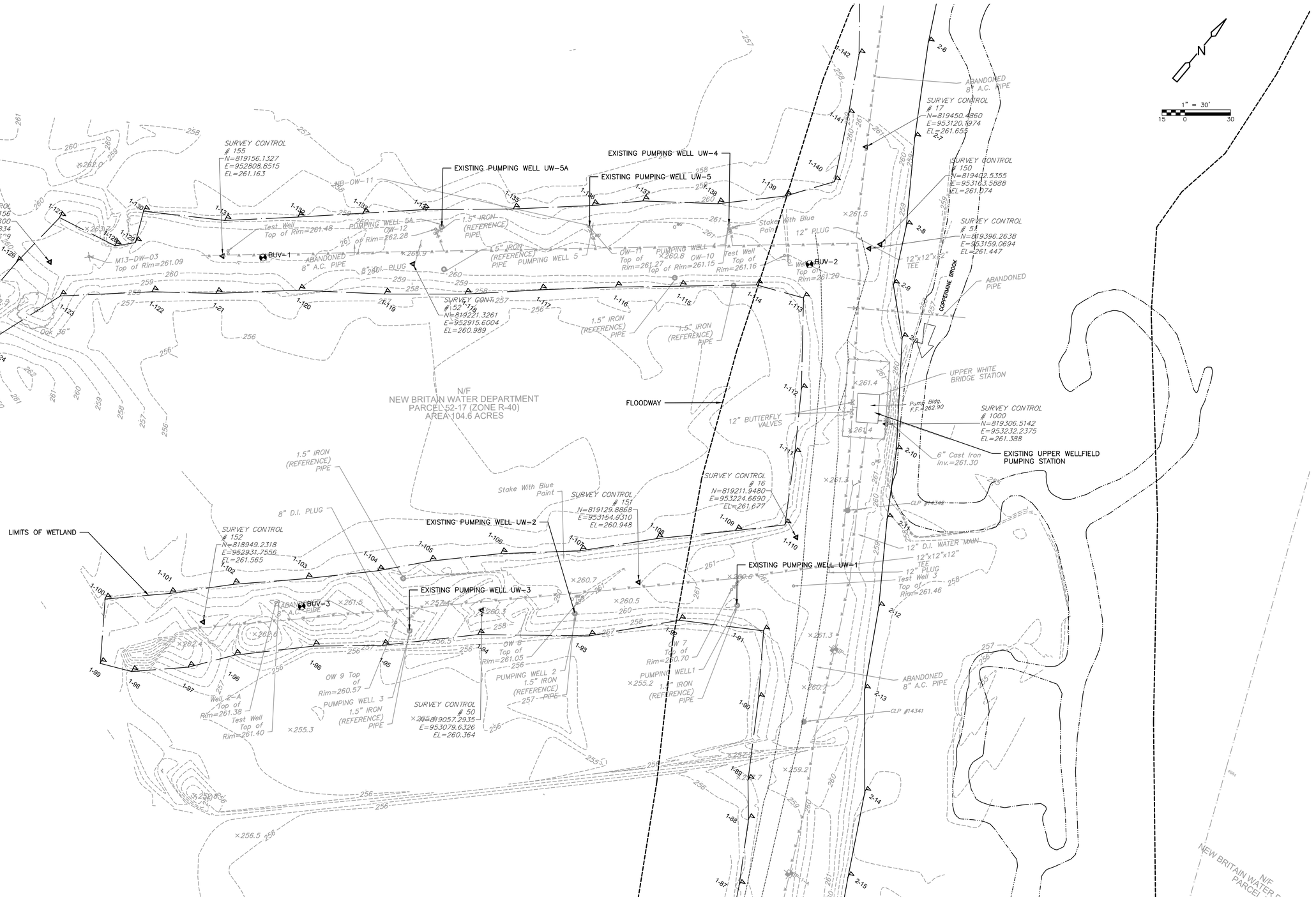



PLAN

N.T.S.




NOTES:

1. AREAS OF THE UPPER WELLFIELD ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
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STATE OF CONNECTICUT · STATE GERSLEY WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

UPPER WELLFIELD
EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C003STPL.DWG
SHEET NO.
C-3

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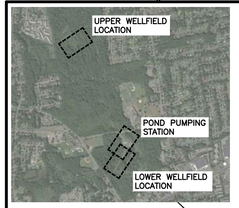


PLAN
N.T.S.

NOTES:

1. AREAS OF THE LOWER WELLFIELD AND POND PUMPING STATION ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G.HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT — JEFFERSLEY WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## POND PUMPING STATIONS EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C004STPL.DWG
SHEET NO. C-4

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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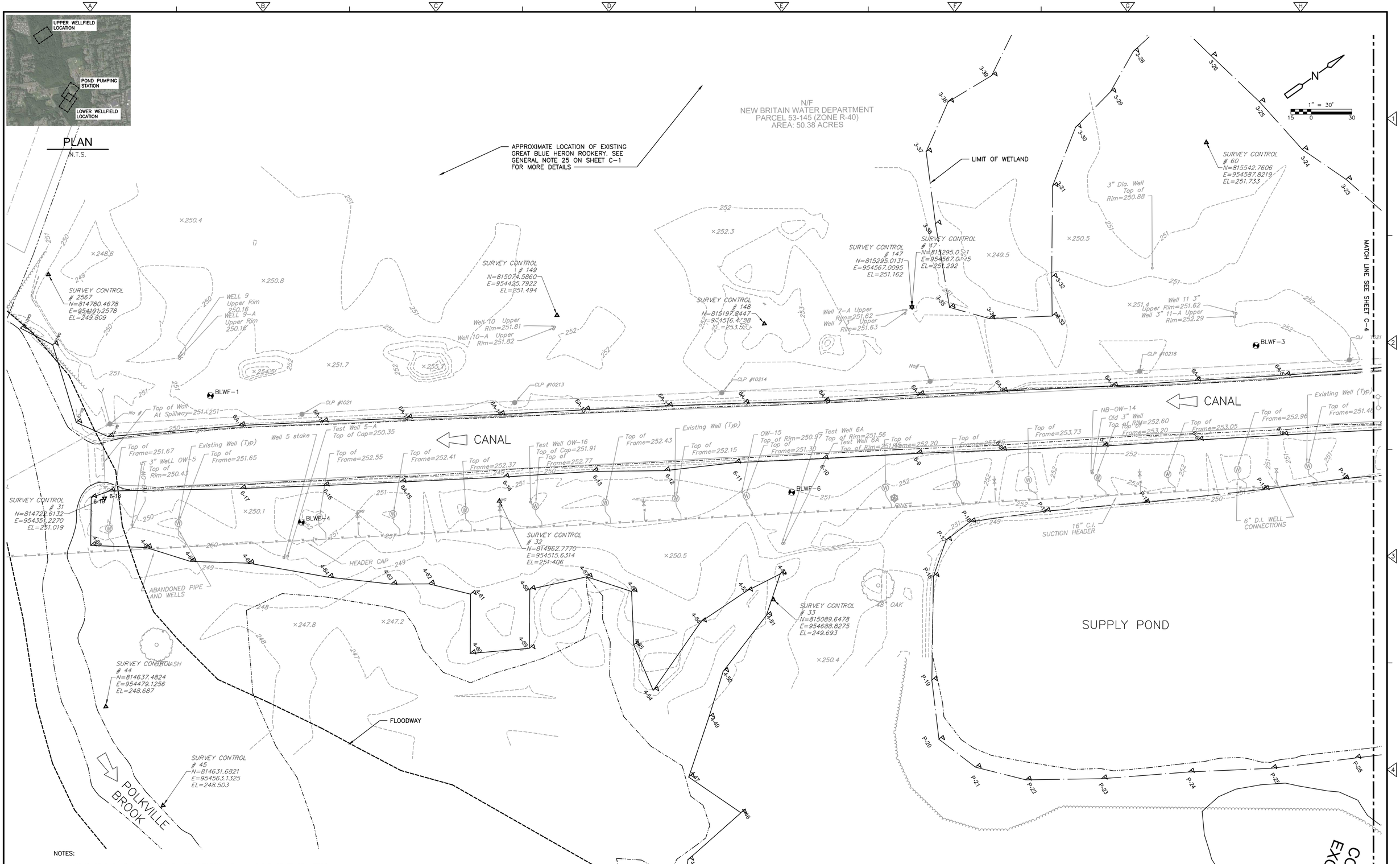


NOTES:

1. AREAS OF THE LOWER WELLFIELD ARE LOCATED WITHIN HABITAT OF STATE LISTED SPECIES. REFER TO GENERAL NOTE 25 ON SHEET C-1 FOR MORE DETAILS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STATE GERSLEY WARD · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD
EXISTING CONDITIONS PLAN

PROJECT NO. 10739-264571
FILE NAME: C005GDPL.DWG
SHEET NO.
C-5

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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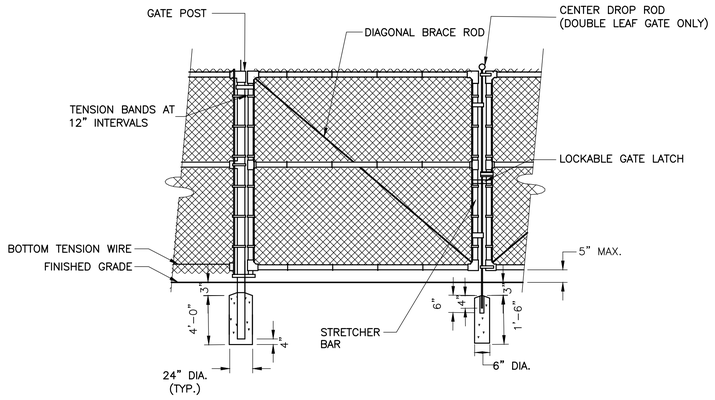
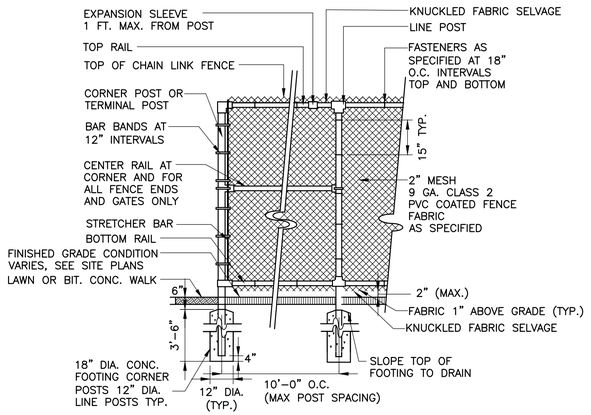



CHAIN LINK DOUBLE LEAF SWING GATE

DETAIL A

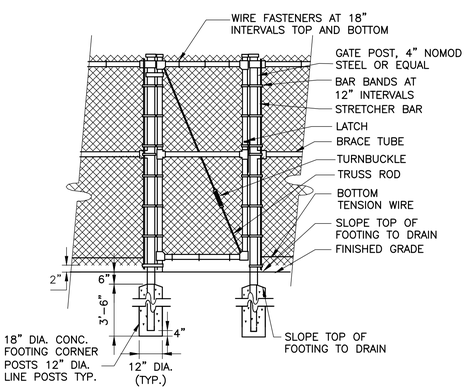
NOT TO SCALE




6.5-FT HIGH CHAIN LINK FENCE

DETAIL B

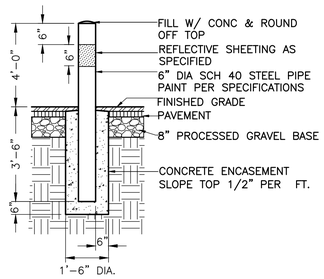
NOT TO SCALE




PEDESTRIAN CHAIN LINK FENCE GATE

DETAIL C

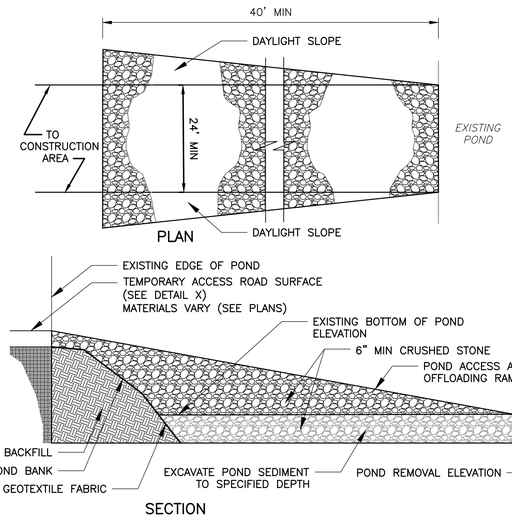
NOT TO SCALE




STEEL BOLLARD

DETAIL D

NOT TO SCALE




SECTION

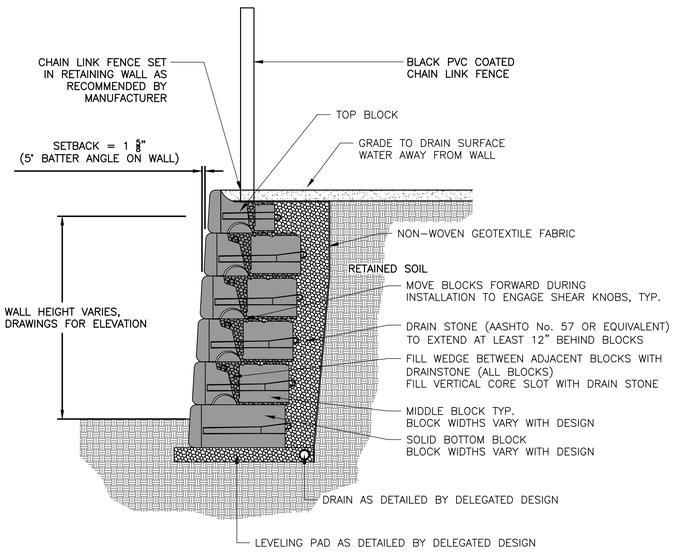
NOTES:

1. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED POND ACCESS/TRUCK OFFLOADING RAMP AND EXISTING GROUND SURFACE
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO GROUND SURFACE.
3. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
4. REPAIR AND CLEANOUT MEASURES USED TO TRAP SEDIMENT.
5. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
6. THE SLOPE OF THE POND ACCESS AND OFFLOADING RAMP TO BE DETERMINED BY CONTRACTOR BASED ON SELECTED EQUIPMENT, MEANS AND METHODS, AND APPROVED BY THE ENGINEER.
7. DAYLIGHT SLOPES OF THE RAMP WILL BE INSTALLED AS NEEDED BASED ON THE EXCAVATION DEPTH AND BANK HEIGHT TO MAINTAIN STABILITY OF THE POND ACCESS/OFFLOADING RAMP.
8. ALL MATERIAL FOR POND ACCESS/OFFLOADING RAMP IS TEMPORARY AND WILL BE REMOVED AFTER SEDIMENT REMOVAL COMPLETED. POND BANK TO BE RESTORED PER SPECIFICATIONS.

POND ACCESS AND TRUCK OFFLOADING RAMP

DETAIL F

SCALE: NTS



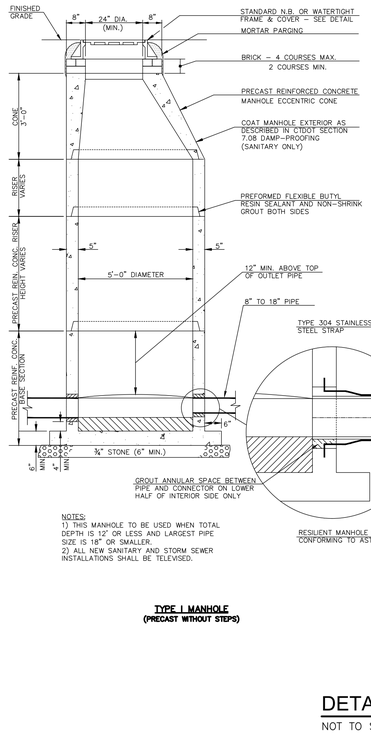

NOTES:

1. SEE SPECIFICATION SECTION 323223 FOR MORE DETAILS. CONTRACTOR TO OBTAIN BUILDING PERMIT FOR SEGMENTAL UNIT RETAINING WALLS GREATER THAN 3 FEET IN HEIGHT.

SEGMENTAL UNIT RETAINING WALL

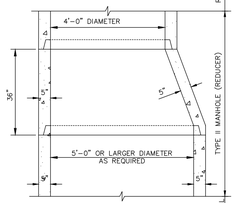
DETAIL E

SCALE: NTS




NOTES:
1) THIS MANHOLE TO BE USED WHEN TOTAL DEPTH IS 12' OR LESS AND LARGEST PIPE SIZE IS 18" OR SMALLER.
2) ALL NEW SANITARY AND STORM SEWER INSTALLATIONS SHALL BE TELEVISED.

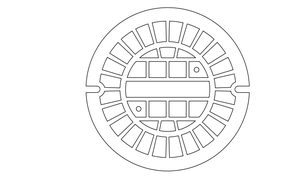
**TYPE I MANHOLE**
**(PRECAST WITHOUT STEPS)**

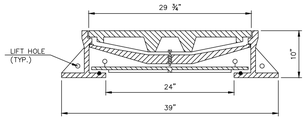



REDUCER SECTION

NOTES:
1) THIS MANHOLE TO BE USED WHEN TOTAL DEPTH IS GREATER THAN 12' OR ANY PIPE SIZE IS GREATER THAN 18".
2) ALL NEW SANITARY AND STORM SEWER INSTALLATIONS SHALL BE TELEVISED.

**TYPE II MANHOLE**
**(PRECAST WITHOUT STEPS)**






**NEW BRITAIN STANDARD**
**WATERTIGHT MANHOLE CASTING**

MANHOLE

DETAIL G

NOT TO SCALE

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — JEFFREY WARD — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

CIVIL DETAILS IV

PROJECT NO. 10739-264571
FILE NAME: CD004CSDT.DWG
SHEET NO. C-27

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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NEW BRITAIN WATER DEPARTMENT
LOT 52-15 (ZONE R-40)
AREA: 11.9 ACRES

NEW BRITAIN WATER DEPARTMENT
LOT 52-16B16A (ZONE R-40)
AREA: 13.3 ACRES

NEW BRITAIN WATER DEPARTMENT
LOT 52-17 (ZONE R-40)
AREA: 104.6 ACRES

JEFFERSON AVENUE
SHAWN DRIVE
TIMBER LANE
DEBRA LANE
JEROME AVENUE
DANBURY LANE

PROPERTY LINE
25'-FOOT SIDE YARD SETBACK
25'
PROPOSED LIMIT OF CLEARING
PROPOSED WETLAND CREATION AND FLOOD COMPENSATORY STORAGE AREA
15-FT WIDE ACCESS ROAD FOR WETLAND CREATION AND MAINTENANCE
VERNAL POOL (EXISTING)
100-FT BUFFER
163'-0"
325'-0"
FLOODWAY

1" = 100'
50 0 100

NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.
2. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## WETLAND REPLICATION AND COMPENSATORY FLOOD STORAGE PLAN II

PROJECT NO. 10739-264571
FILE NAME: C014STPL.DWG
SHEET NO. SP-01

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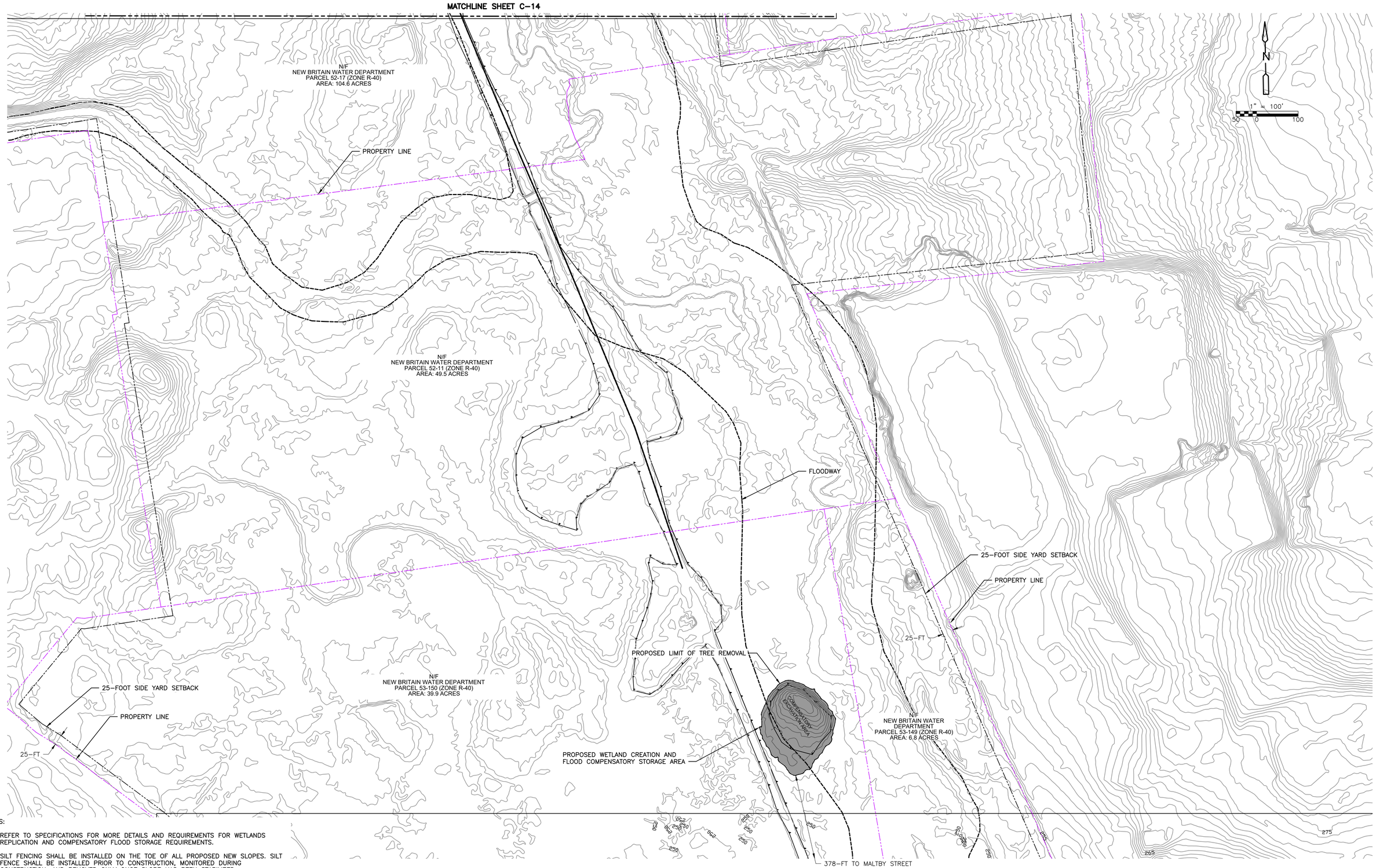


NOTES:

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| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024


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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION AND
COMPENSATORY FLOOD STORAGE
PLAN III

PROJECT NO. 10739-264571
FILE NAME: C014STPL.DWG
SHEET NO.
SP-02

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION


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PROPOSED LIMIT OF TREE REMOVAL

20-FT SIDE YARD SETBACK

NEW BRITAIN WATER DEPARTMENT
LOT 53-147 (ZONE R-40)
AREA: 25.8 ACRES

COPPER MINE BROOK

PROPOSED WETLAND CREATION AND
FLOOD COMPENSATORY STORAGE AREA

PROPOSED LIMIT OF TREE REMOVAL

PROPOSED LIMIT OF TREE REMOVAL

20-FT SIDE YARD SETBACK

PROPERTY LINE

FLOODWAY

LIMIT OF TREE REMOVAL

NEW BRITAIN WATER DEPARTMENT
LOT 53-145 (ZONE R-40)
AREA: 50.38 ACRES

PROPERTY LINE

PROPOSED LIMIT OF TREE REMOVAL

50-FT FRONT
YARD SETBACK

15-FT WIDE ACCESS FOR WETLAND
CREATION AND MAINTENANCE

PROPOSED WETLAND CREATION AND
FLOOD COMPENSATORY STORAGE AREA

PROPOSED LIMITS OF TREE REMOVAL

COPPER MINE BROOK

COLLINS ROAD

VEGETATED BUFFER AND STREAM
BETWEEN EARTH REMOVAL AND
RESIDENTIAL BOUNDARY

10-FT VEGITATED BUFFER
BETWEEN ACCESS DRIVE
AND PROPERTY BOUNDARY

N/F ROOKSIDE MEDICAL OFFICES LLC

MIX STREET

TOLLAND RD

COVENTRY RD

NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.
2. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GARLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT · JEFFREY S. WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

# WETLAND REPLICATION AND COMPENSATORY FLOOD STORAGE PLAN I

PROJECT NO. 10739-264571
FILE NAME: C013STPL.DWG
SHEET NO. SP-03

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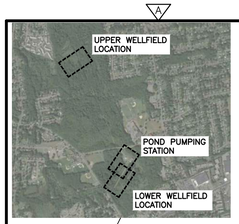
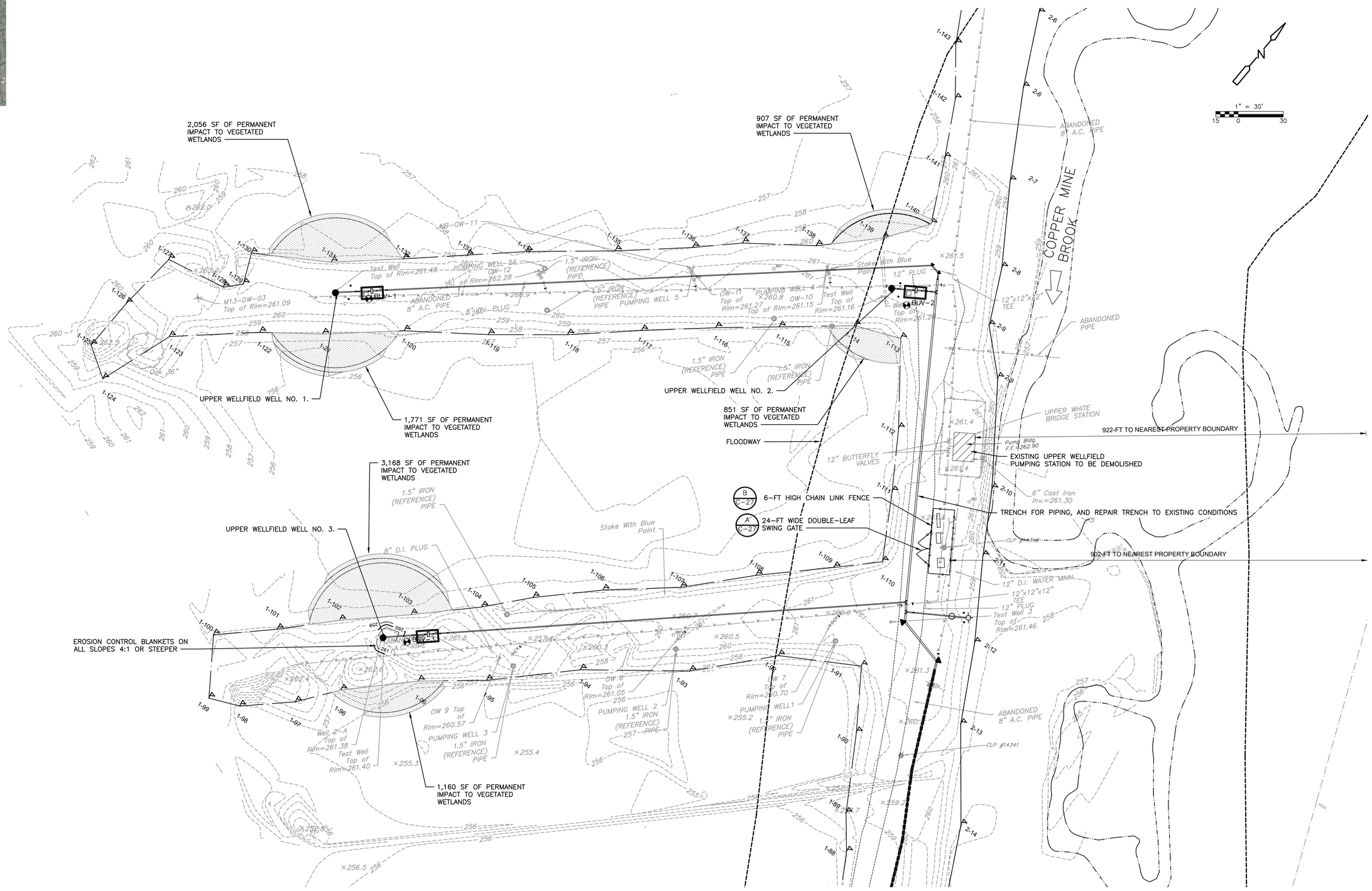



PLAN
N.T.S.

LEGEND

WETLAND FLAG

BORING




| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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Tel: (860) 529-7615

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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

UPPER WELLFIELD
SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C009STPL.DWG
SHEET NO.
SP-04

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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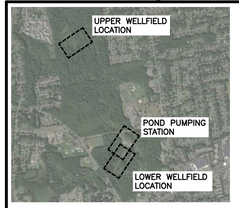
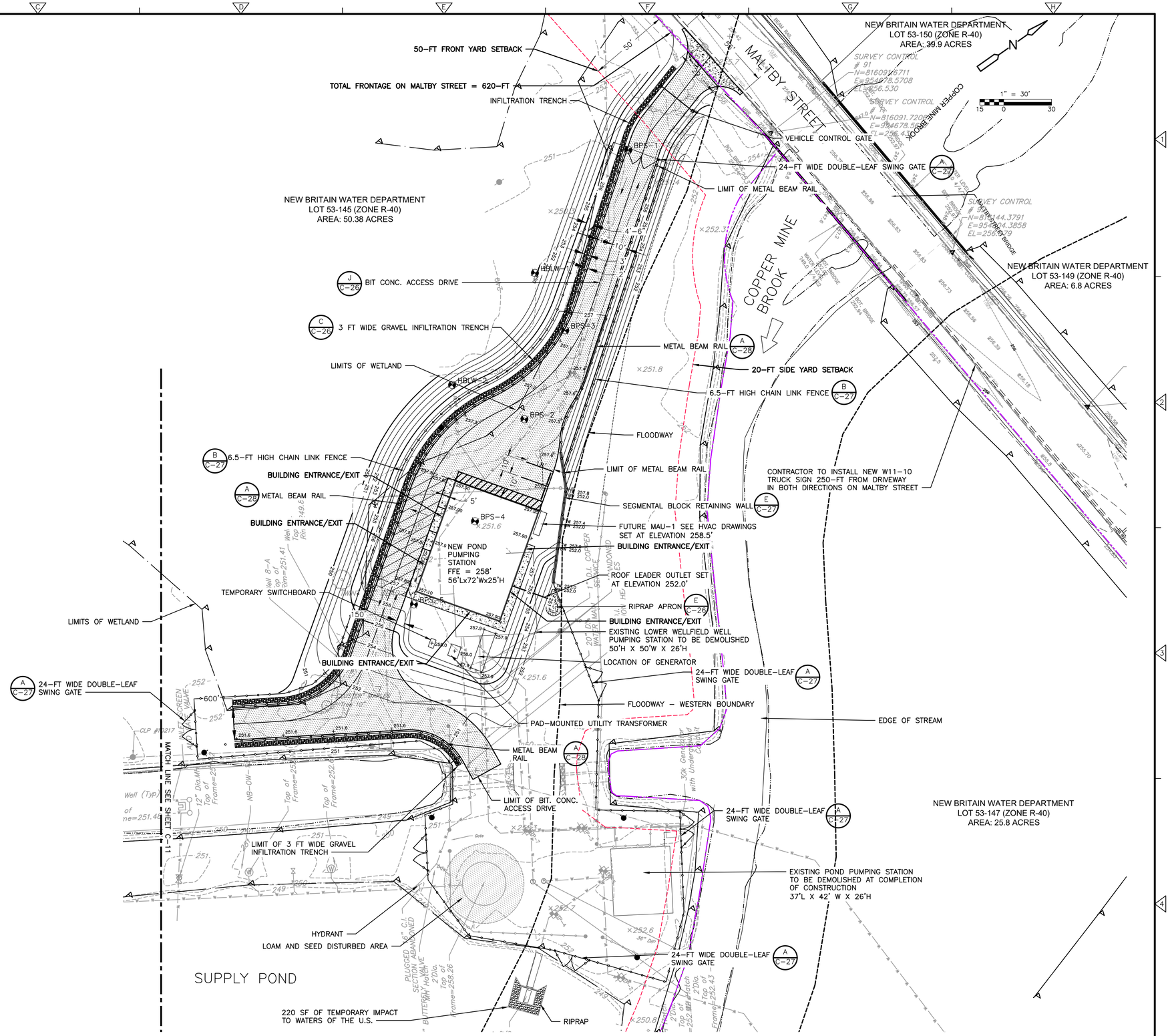



## PLAN

N.T.S.

## LEGEND

- BITUMINOUS CONCRETE
- INFILTRATION TRENCH
- CONCRETE WALKWAY
- DETENTION BASIN
- CHAIN LINK FENCE
- STEEL BEAM GUARDRAIL
- WETLAND FLAG
- BORING




| Location: | (LOT 53-145) MALTBY STREET BRISTOL, CT | | | |
|---|---|---|---|---|
| Zone: | R-40 RESIDENTIAL ZONE | | | |
| Use: | PUBLIC WATER UTILITY FACILITY (SPECIAL PERMIT USE) | | | |
| Item # | Item | Requirements | Proposed | Variance |
| 1 | Minimum Lot Area | 40,000 S.F. | 2,191,068 S.F. | No |
| 2 | Minimum Lot Frontage | 150 feet | 623 feet | No |
| 3 | Minimum Front Yard | 50 feet | 285 feet | No |
| 4 | Minimum Side Yard | 20 feet | 105 feet | No |
| 5 | Minimum Rear Yard | 50 feet | 1,180 feet | No |
| 6 | Maximum Building Height | 35 feet | 25.3 feet | No |
| 7 | Maximum Building Coverage | 20 percent | 0.18 percent | No |
| 8 | Building Size | None Required | 4032 S.F. (Pump Station) | No |
| 9 | Parking Required | N/A[1] | 2 spaces | No |
| 10 | Minimum Parking Dimensions | 9 feet x 18 feet | 10 feet x 18 feet | No |
| 11 | Minimum Aisle Width | 24 feet | 40 feet | No |
| 12 | Minimum Residential Setback | 50 feet | 193 feet | No |
| 13 | Minimum Front Lot Line | 10 feet | 193 feet | No |
| 14 | Minimum Side Setback | 5 feet | 98 feet | No |
| 15 | Minimum Rear Setback | 5 feet | 1,200 feet | No |
| 16 | Landscaping, Curbs, and Islands | N/A (Less than 10 parking spaces) | N/A | N/A |

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
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CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C010GDPL.DWG
SHEET NO.
SP-05

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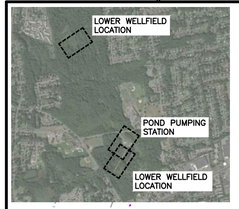


## PLAN
N.T.S.

## LEGEND
- WETLAND FLAG
- BORING

N/F
NEW BRITAIN WATER DEPARTMENT
PARCEL 53-145 (ZONE R-40)
AREA: 50.38 ACRES

1" = 30'
15 0 30

N

50-FT FRONT YARD SETBACK

PROPERTY LINE

LIMIT OF TREE CLEARING

LOWER WELLFIELD WELL NO. 1.
TOP OF WELL CAP SET AT ELEVATION 259'.
SEE SHEET C-16 FOR WELL LOCATION

LIMIT OF TREE CLEARING

EROSION CONTROL BLANKETS ON ALL SLOPES 4:1 OR STEEPER

LOWER WELLFIELD WELL NO. 2.
TOP OF WELL CAP SET AT ELEVATION 259',
SEE SHEET C-16 FOR WELL LOCATION

LOAM AND SEED ALL DISTURBED AREAS

B / C-27 6-FT HIGH CHAIN LINK FENCE

C / C-27 6-FT WIDE PEDESTRIAN SWING GATE

LIMIT OF TREE CLEARING

LOWER WELLFIELD WELL NO. 3.
TOP OF WELL CAP SET AT ELEVATION 259'.
SEE SHEET C-16 FOR WELL LOCATION

MATCH LINE SEE PUMPING STATION SHEETS

CANAL

C / C-27 6-FT WIDE PEDESTRIAN SWING GATE

6-FT HIGH CHAIN LINK FENCE B / C-27

LOWER WELLFIELD WELL NO. 6.
TOP OF WELL CAP SET AT ELEVATION 259'.
SEE SHEET C-16 FOR WELL LOCATION

LOWER WELLFIELD WELL NO. 4.
TOP OF WELL CAP SET AT ELEVATION 259'.
SEE SHEET C-16 FOR WELL LOCATION

LOWER WELLFIELD WELL NO. 5.
TOP OF WELL CAP SET AT ELEVATION 259'.
SEE SHEET C-16 FOR WELL LOCATION

LIMIT OF TREE CLEARING

LIMIT OF TREE CLEARING

3,003 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

LOAM AND SEED ALL WELL BERMS, TYP.

1,320 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

LIMIT OF TREE CLEARING

358 SF OF PERMANENT IMPACT TO VEGETATED WETLANDS

SUPPLY POND

POLKVILLE BROOK

ABANDONED PIPE AND WELLS

52" ASH

48" OAK

16" C.I. SUCTION HEADER

6" D.I. WELL CONNECTIONS

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD
SITE PLAN

PROJECT NO. 10739-264571
FILE NAME: C011GDPL.DWG
SHEET NO.
SP-06

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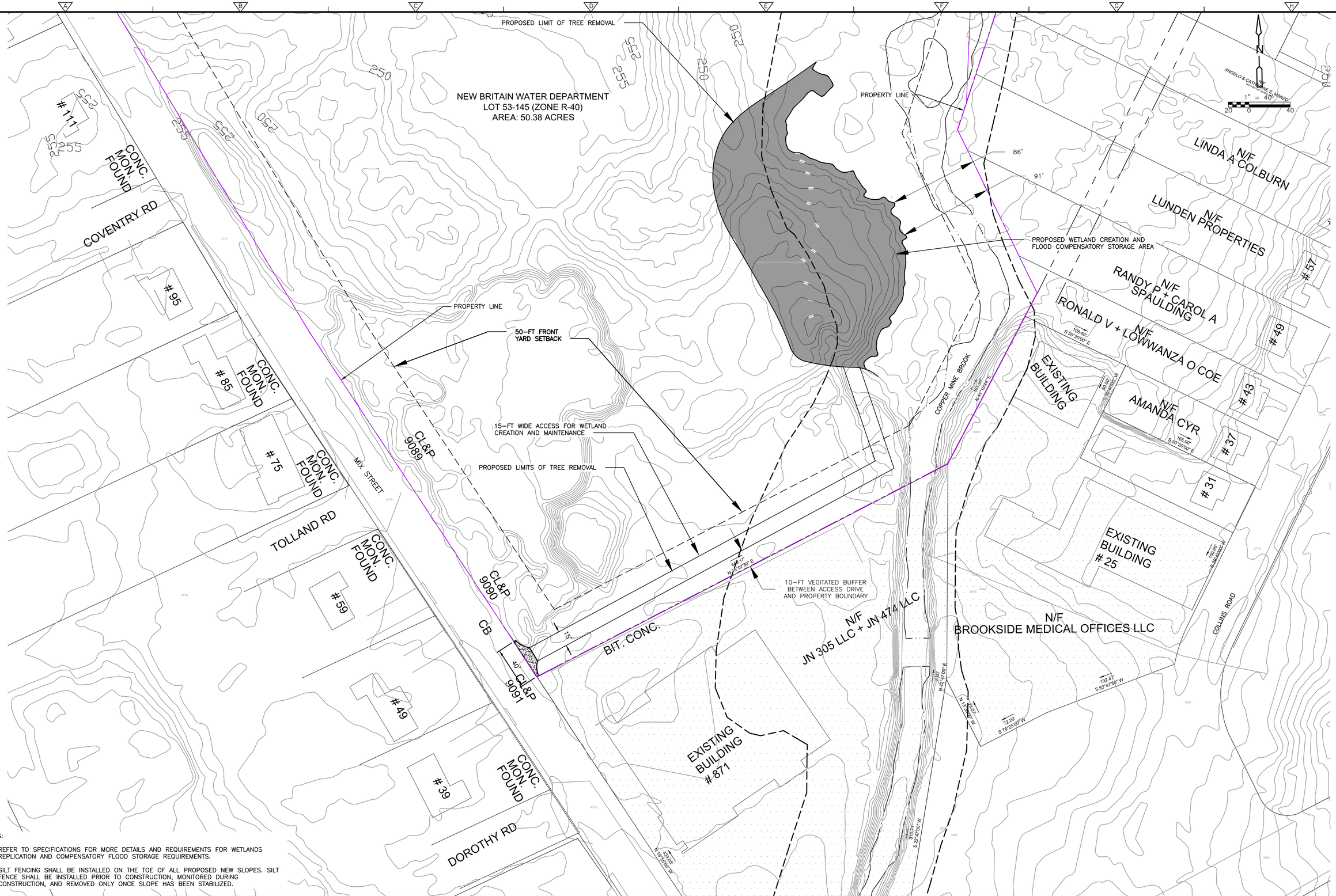


NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS AND REQUIREMENTS FOR WETLANDS REPLICATION AND COMPENSATORY FLOOD STORAGE REQUIREMENTS.
2. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GARLACH
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: K. GERLACH
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024


CDM Smith
101 East River Drive, Suite 1A
East Hartford, CT 06108
Tel: (860) 529-7615


STATE OF CONNECTICUT · STEVE GERSLEY WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

WETLAND REPLICATION AND
COMPENSATORY FLOOD STORAGE
ENLARGED PLAN I

PROJECT NO. 10739-264571
FILE NAME: C013STPL.DWG
SHEET NO.
SP-07


XREFs: [CDMS_2436, XSVPL000, Floodway_Floodplain, CEP000ST, CWP000ST, AWZ001PS - 2D Process Export, 2022-17, BORING LOCATIONS, BristolTopo, CYPWP001] Images: []
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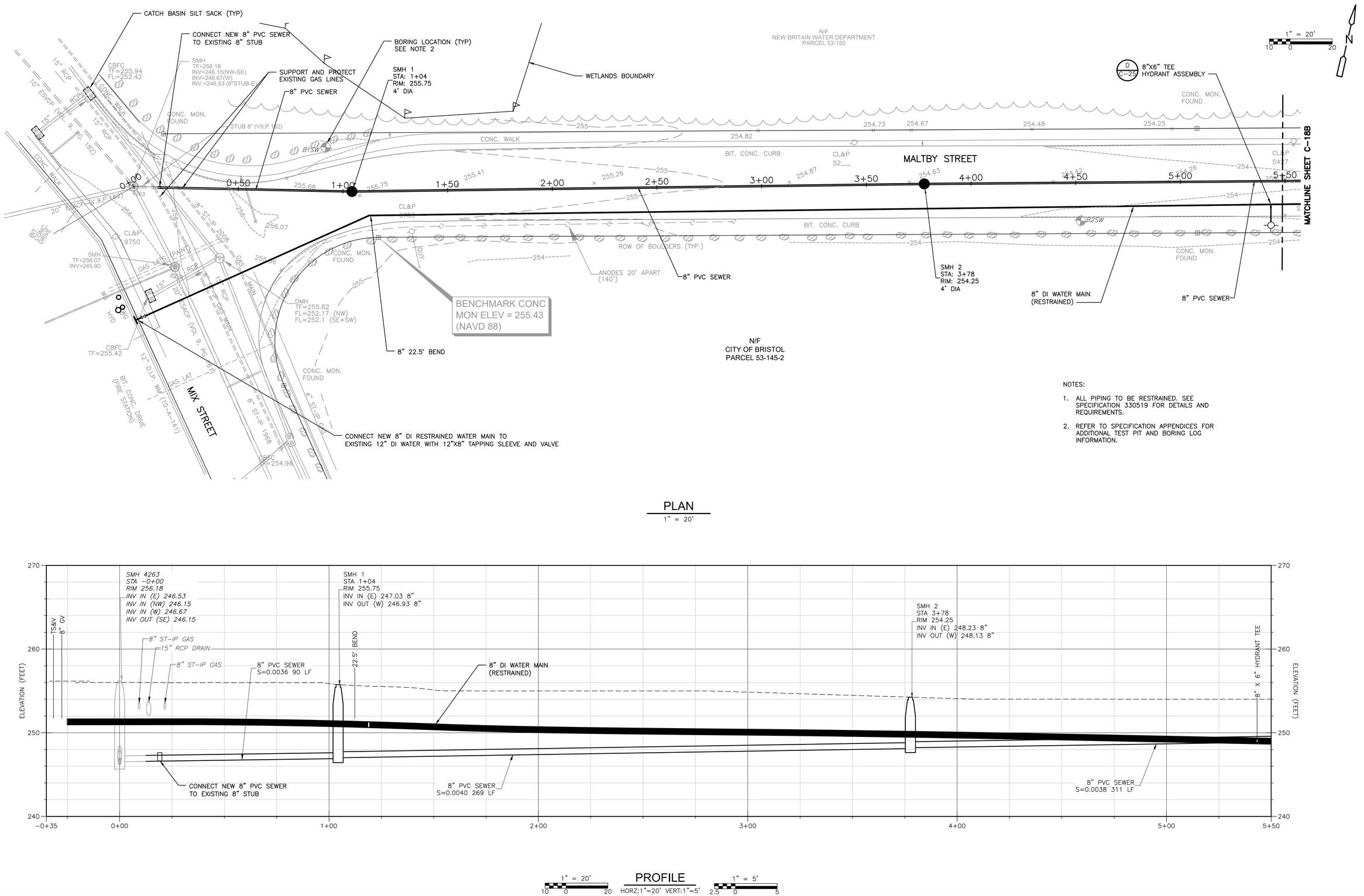


PLAN
1" = 20'




1" = 20' (10 0 20) PROFILE 1" = 5' (2.5 0 5)
HORZ:1"=20' VERT:1"=5'

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · KERRI L. WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

MALTBY STREET
PLAN AND PROFILE I

PROJECT NO. 10739-264571
FILE NAME: C018AYPPL.DWG
SHEET NO.
SP-08

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

XREFs: [CDMS_2436, XSVPL000, CWP000ST, AWZ001PS - 2D Process Export, 2022-17, BORING LOCATIONS-CEI Edits, Floodway_Floodplain, CYPWP002] Images: []
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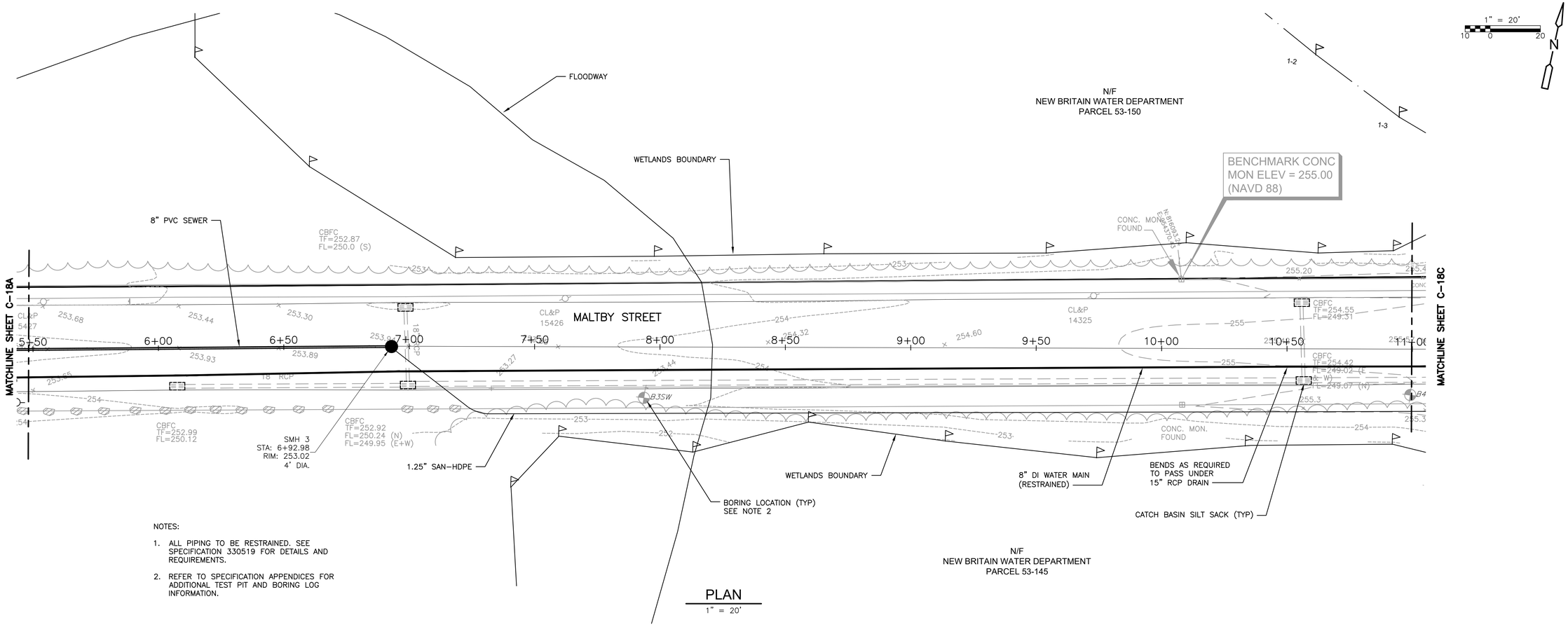
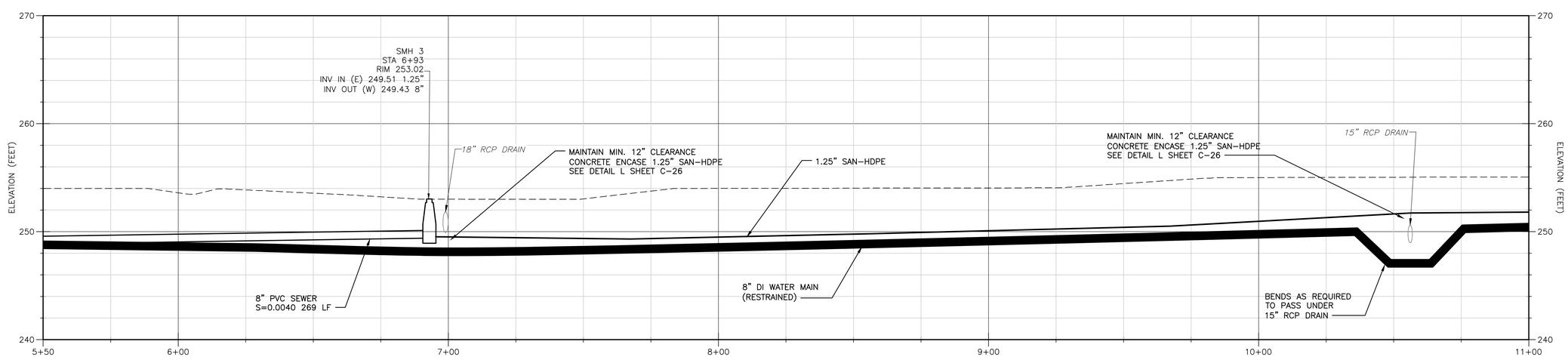



NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.

PLAN
1" = 20'




PROFILE
HORZ:1"=20' VERT:1"=5'

1" = 20' 10 0 20
1" = 5' 2.5 0 5

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY WAGNER · No. 24384 · LICENSED PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

MALTBY STREET
PLAN AND PROFILE II

PROJECT NO. 10739-264571
FILE NAME: C018BYPPL.DWG
SHEET NO.
SP-09

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

XREFs: [CDMS_2436, XSVPL000, CWP000ST, AWZ001PS - 2D Process Export, 2022-17, BORING LOCATIONS-CEI Edits, Floodway_Floodplain, CYPWP002] Images: []
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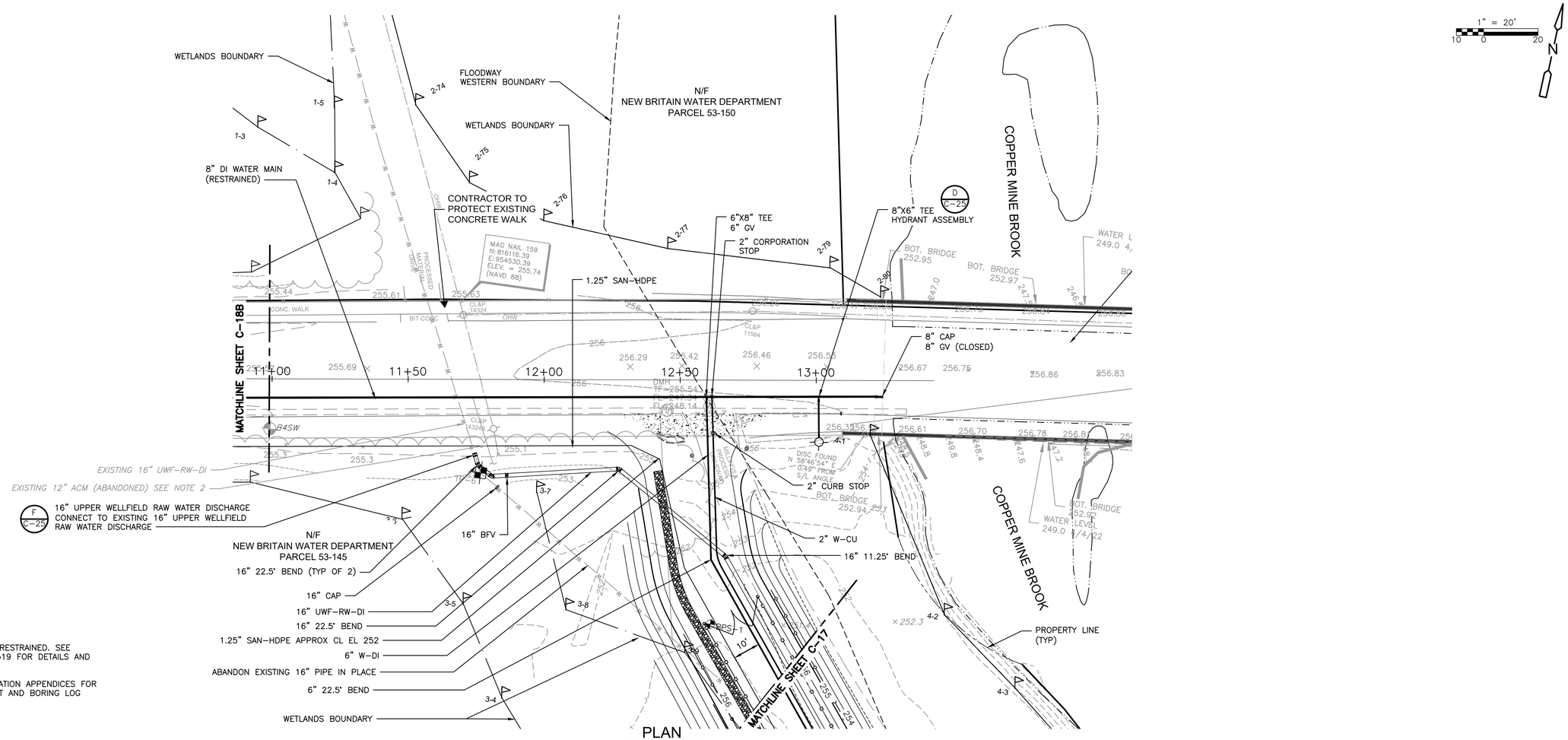
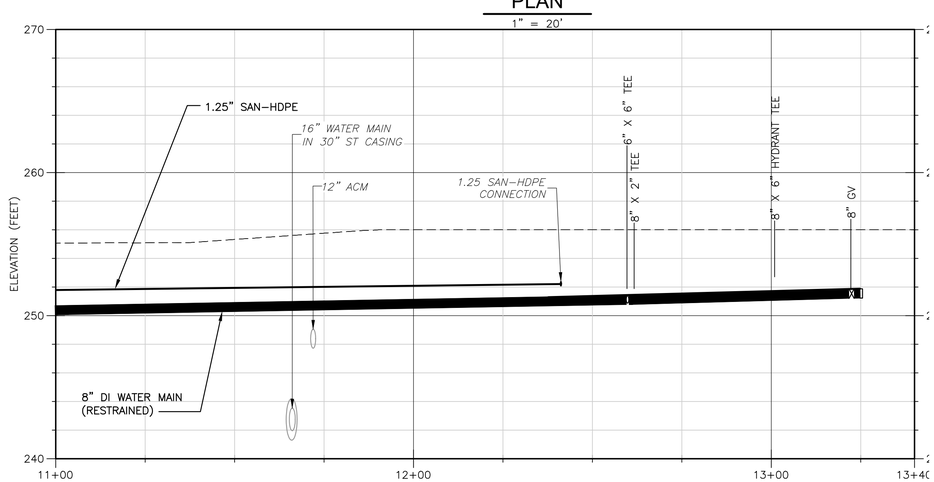



PLAN
1" = 20'

NOTES:

1. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.
2. REFER TO SPECIFICATION APPENDICES FOR ADDITIONAL TEST PIT AND BORING LOG INFORMATION.




PROFILE
1" = 20'
HORZ:1"=20' VERT:1"=5'
1" = 5'

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT · STEVE GERSLEY WAGNER · No. 24384 · LICENSED · PROFESSIONAL ENGINEER · 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

MALTBY STREET
PLAN AND PROFILE III

PROJECT NO. 10739-264571
FILE NAME: C018CYPPL.DWG
SHEET NO.
SP-10

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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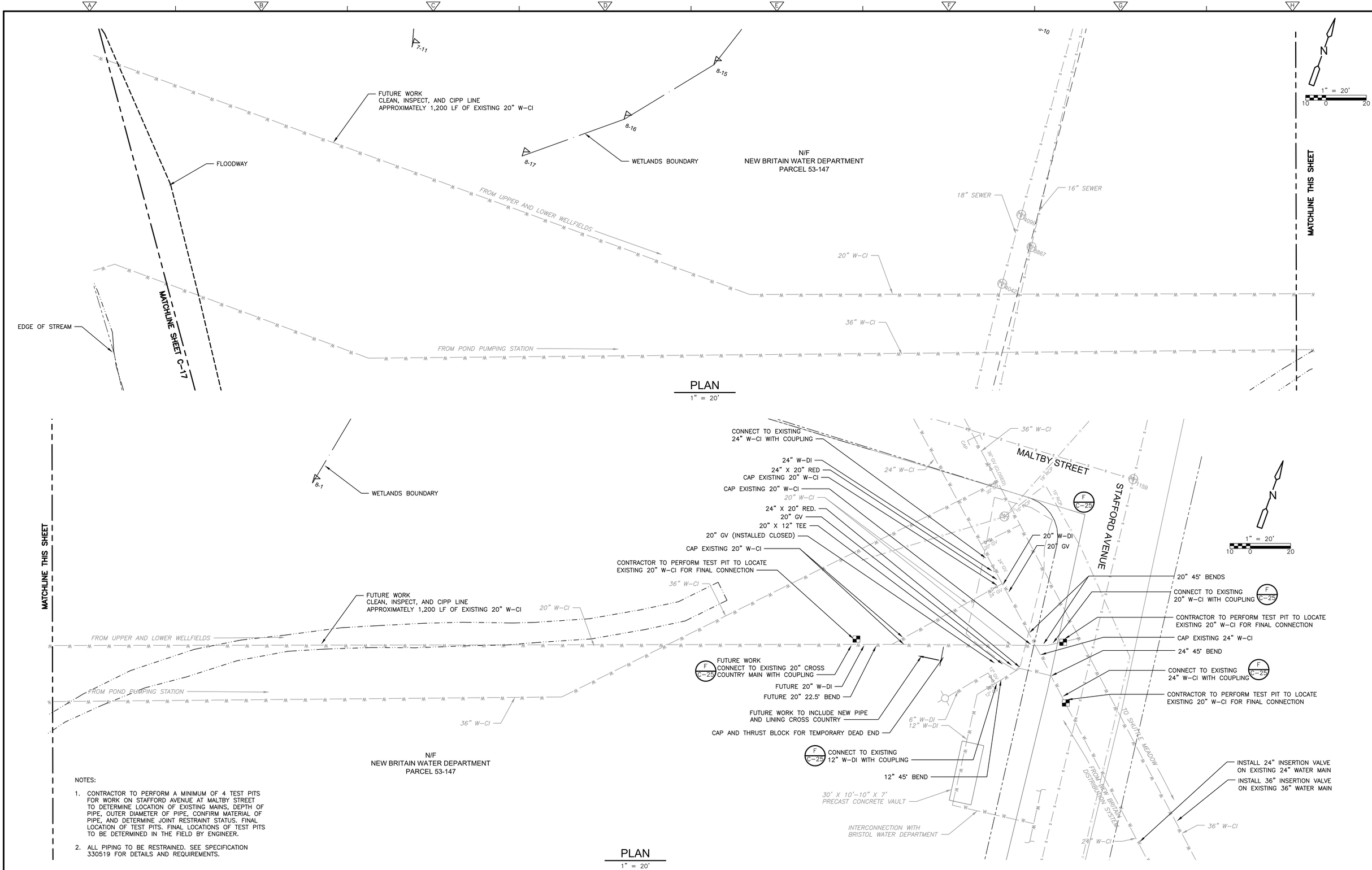


NOTES:

1. CONTRACTOR TO PERFORM A MINIMUM OF 4 TEST PITS FOR WORK ON STAFFORD AVENUE AT MALTBY STREET TO DETERMINE LOCATION OF EXISTING MAINS, DEPTH OF PIPE, OUTER DIAMETER OF PIPE, CONFIRM MATERIAL OF PIPE, AND DETERMINE JOINT RESTRAINT STATUS. FINAL LOCATION OF TEST PITS. FINAL LOCATIONS OF TEST PITS TO BE DETERMINED IN THE FIELD BY ENGINEER.
2. ALL PIPING TO BE RESTRAINED. SEE SPECIFICATION 330519 FOR DETAILS AND REQUIREMENTS.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT
STEVE GERSLEY WAGNER
No. 24384
LICENSED
PROFESSIONAL ENGINEER
10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

STAFFORD AVENUE
AND CROSS COUNTRY
PLAN

PROJECT NO. 10739-264571
FILE NAME: C019YPPL.DWG
SHEET NO.
SP-11

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

XREFs: [CDMS_2436, CYPWP001, XSVPL000, CWP000ST, AWZ001PS - 2D Process Export, 2022-17, BORING LOCATIONS-CEI Edits, Floodway_Floodplain] Images: []
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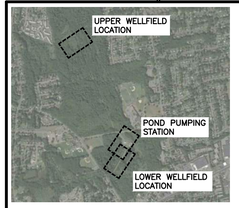


PLAN
N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE HEADER PIPE AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. THE EXISTING UPPER WELLFIELD PUMPING STATION BUILDING TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISHED GRADE. THE WESTERN WALL SHALL REMAIN TO AT LEAST 2 FEET BELOW GRADE. BUILDING FOUNDATION TO BE FILLED AND COMPACTED TO EXISTING GRADE. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE SPECIFICATION SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
3. CONTRACTOR TO INSTALL COMPOST SOCK ON BOTH SIDES OF THE UPPER WELLFIELD ACCESS DRIVEWAY (APPROX. 3,200 LF EACH, NOT SHOWN) TO MALTBY STREET. THE EXISTING ACCESS DRIVEWAY BRIDGE CROSSING OF THE FREEMAN HILL BROOK TO BE PROTECTED DURING CONSTRUCTION.
4. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
5. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.



| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — KEVIN BERSLEY WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

# UPPER WELLFIELD DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C006STPL.DWG
SHEET NO. SP-12

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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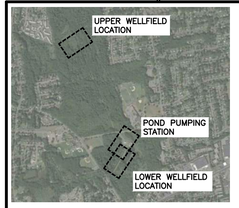


PLAN

N.T.S.

## LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. EXISTING WELLS WITH WELL HEAD LOCATED IN A VAULT TO HAVE VAULT DEMOLISHED AND REMOVED, WELL HEAD REMOVED TO 5 FEET BELOW BOTTOM OF VAULT, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
3. THE EXISTING POND PUMPING STATION BUILDING TO BE DEMOLISHED AT COMPLETION OF NEW POND PUMPING STATION TO AT LEAST 2 FEET BELOW FINISHED GRADE. THE WESTERN WALL SHALL REMAIN TO AT LEAST 2 FEET BELOW GRADE. BUILDING FOUNDATION TO BE FILLED AND COMPACTED TO EXISTING GRADE. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE SPECIFICATION SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
4. THE EXISTING LOWER WELLFIELD PUMPING STATION BUILDING AND FOUNDATION TO BE DEMOLISHED TO ELEVATION 241.2 FT. EXCAVATION LIMITS FOR THE NEW POND PUMPING STATION BUILDING TO APPROXIMATE MIN ELEVATION 241.2 FT. OWNER TO TAG ITEMS AND EQUIPMENT TO BE SAVED PRIOR TO DEMOLITION. CONTRACTOR TO REMOVE AND RETURN TO OWNER ANY TAGGED ITEM OR EQUIPMENT. SEE DETAIL B ON SHEET C-26 AND SPECIFICATIONS SECTION 024116 FOR ADDITIONAL BUILDING DEMOLITION REQUIREMENTS.
5. THE EXISTING CAISSON WELL TO BE DECOMMISSIONED AND ABANDONED IN PLACE. THE CONE OF THE EXISTING CAISSON WELL TO BE DEMOLISHED TO AT LEAST 2 FEET BELOW FINISH GRADE. SEE DETAIL B ON SHEET C-28 AND SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF THE EXISTING CAISSON WELL.
6. HAZARDOUS BUILDING MATERIALS WERE FOUND IN SAMPLES TAKEN FROM SELECT LOCATIONS IN EXISTING BUILDINGS. PRIOR TO COMMENCING WITH ANY MODIFICATIONS OR DEMOLITION WORK, REFER TO SPECIFICATIONS FOR KNOW LOCATIONS OF HAZARDOUS BUILDING MATERIALS AND EQUIPMENT, PROPOSED ABATEMENT AND DISTURBANCE WORK, REQUIREMENTS FOR ADDITIONAL SAMPLING AND TESTING TO BE PERFORMED AS PART OF THE WORK, MONITORING REQUIREMENTS, AND WASTE HANDLING AND DISPOSAL REQUIREMENTS.
7. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.
8. CONTRACTOR TO REMOVE TREES TO WIDEN ACCESS DRIVE AND PROVIDE ADEQUATE SITE LINES FROM DRIVEWAY ONTO MALTBY STREET.




| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: G. HOWARD
DRAWN BY: J. BRONENKANT
SHEET CHK'D BY: G. HOWARD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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East Hartford, CT 06108
Tel: (860) 529-7615

STATE OF CONNECTICUT — KERSTIN WAGNER — No. 24384 — LICENSED PROFESSIONAL ENGINEER — 10.10.24

CITY OF NEW BRITAIN, CONNECTICUT

# WHITE BRIDGE WATERWORKS FACILITIES UPPER AND LOWER WELLFIELDS AND POND PUMPING STATION

## POND PUMPING STATION DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C007STPL.DWG
SHEET NO. SP-13

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

XREFs: [CDMS_2436, XSVPL000, CEP000ST, CWP000ST, AWZ001PS - 2D Process Export, 2022-17, BORING LOCATIONS, Floodway_Floodplain] Images: [Base Image]
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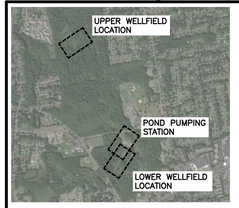


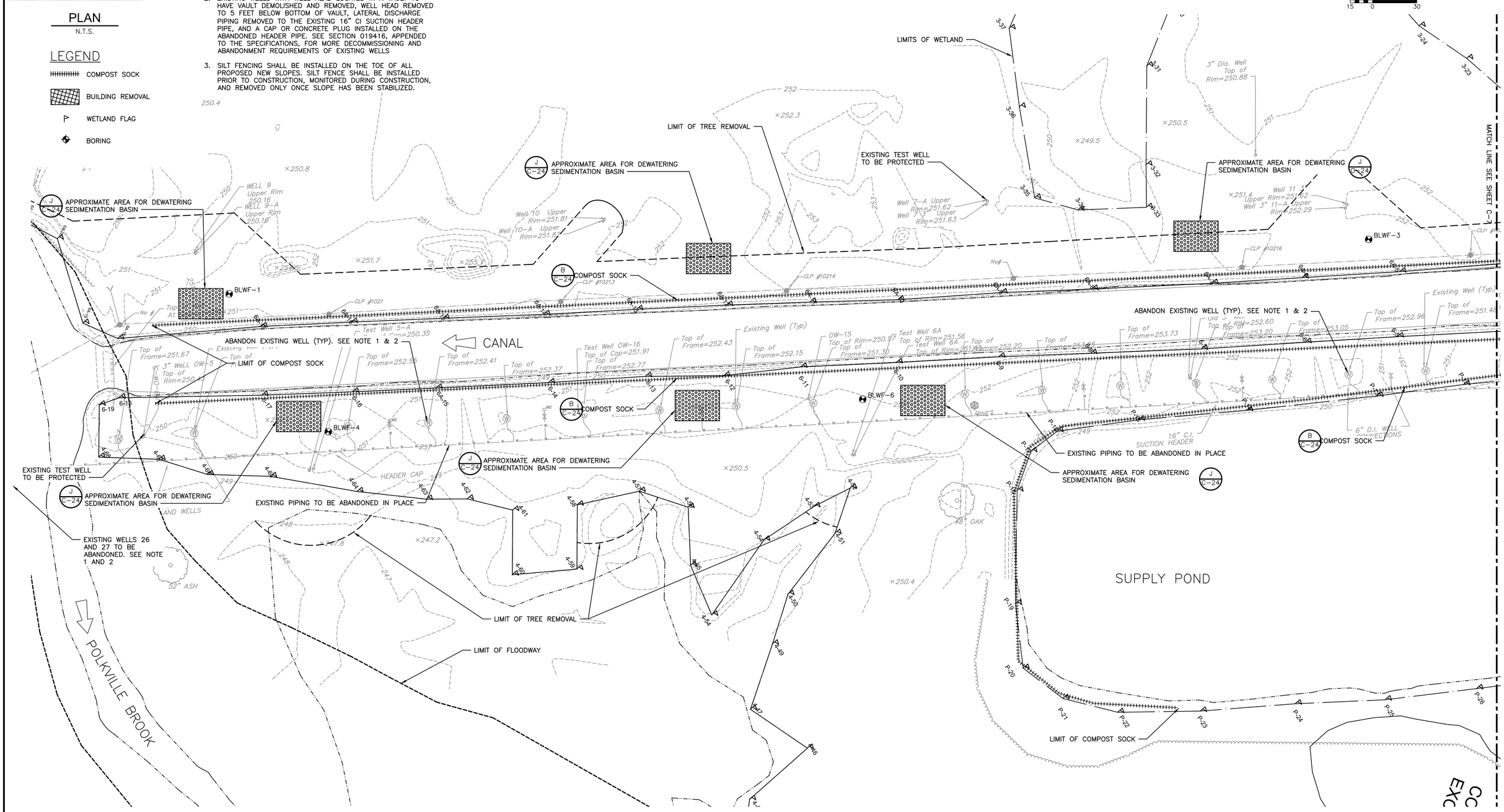

PLAN
N.T.S.

NOTES:

1. EXISTING WELLS TO HAVE THE WELL HEAD REMOVED TO 5 FEET BELOW FINISHED GRADE, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS.
2. EXISTING WELLS WITH WELL HEAD LOCATED IN A VAULT TO HAVE VAULT DEMOLISHED AND REMOVED, WELL HEAD REMOVED TO 5 FEET BELOW BOTTOM OF VAULT, LATERAL DISCHARGE PIPING REMOVED TO THE EXISTING 16" CI SUCTION HEADER PIPE, AND A CAP OR CONCRETE PLUG INSTALLED ON THE ABANDONED HEADER PIPE. SEE SECTION 019416, APPENDED TO THE SPECIFICATIONS, FOR MORE DECOMMISSIONING AND ABANDONMENT REQUIREMENTS OF EXISTING WELLS
3. SILT FENCING SHALL BE INSTALLED ON THE TOE OF ALL PROPOSED NEW SLOPES. SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MONITORED DURING CONSTRUCTION, AND REMOVED ONLY ONCE SLOPE HAS BEEN STABILIZED.

LEGEND

- COMPOST SOCK
- BUILDING REMOVAL
- WETLAND FLAG
- BORING

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APPROVED BY: K. WAGNER
DATE: OCTOBER 2024

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STATE OF CONNECTICUT — KEVIN SERBLE WAGNER — No. 24084 — LICENSED PROFESSIONAL ENGINEER — 10-10-24

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

LOWER WELLFIELD
DEMOLITION AND E&S CONTROLS

PROJECT NO. 10739-264571
FILE NAME: C008GDPL.DWG
SHEET NO.
SP-14

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION

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## NOTES FOR TRAFFIC CONTROL PLANS

1. IF A TRAFFIC STOPPAGE OCCURS IN ADVANCE OF SIGN (A), THEN AN ADDITIONAL SIGN (A) SHALL BE INSTALLED IN ADVANCE OF THE STOPPAGE.
2. SIGNS (AA), (A), AND (D) SHOULD BE OMITTED WHEN THESE SIGNS HAVE ALREADY BEEN INSTALLED TO DESIGNATE A LARGER WORK ZONE THAN THE WORK ZONE THAT IS ENCOMPASSED ON THIS PLAN.
3. SEE TABLE 1 FOR ADJUSTMENT OF TAPERS IF NECESSARY.
4. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN TRAFFIC DRUMS SHALL BE USED IN PLACE OF TRAFFIC CONES.
5. ANY LEGAL SPEED LIMIT SIGNS WITHIN THE LIMITS OF A ROADWAY / LANE CLOSURE AREA SHALL BE COVERED WITH AN OPAQUE MATERIAL WHILE THE CLOSURE IS IN EFFECT, AND UNCOVERED WHEN THE ROADWAY / LANE CLOSURE IS RE-OPENED TO ALL LANES OF TRAFFIC.
6. IF THIS PLAN REMAINS IN CONTINUOUS OPERATION FOR MORE THAN 36 HOURS, THEN ANY EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED OR COVERED, AND TEMPORARY PAVEMENT MARKINGS THAT DELINEATE THE PROPER TRAVELPATHS SHALL BE INSTALLED.
7. DISTANCES BETWEEN SIGNS IN THE ADVANCE WARNING AREA MAY BE REDUCED TO 100' ON LOW-SPEED URBAN ROADS (SPEED LIMIT < 40 MPH).
8. IF THIS PLAN IS TO REMAIN IN OPERATION DURING THE HOURS OF DARKNESS, INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POST-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.
9. A CHANGEABLE MESSAGE SIGN SHALL BE INSTALLED ONE HALF TO ONE MILE IN ADVANCE OF THE LANE CLOSURE TAPER.
10. SIGN (P) SHALL BE MOUNTED A MINIMUM OF 7 FEET FROM THE PAVEMENT SURFACE TO THE BOTTOM OF THE SIGN.

TABLE 1 - MINIMUM TAPER LENGTHS

| POSTED SPEED LIMIT (MILES PER HOUR) | MINIMUM TAPER LENGTH FOR A SINGLE LANE CLOSURE |
|---|---|
| 30 OR LESS | 180' (55m) |
| 35 | 250' (75m) |
| 40 | 320' (100m) |
| 45 | 540' (165m) |
| 50 | 600' (180m) |
| 55 | 660' (200m) |
| 65 | 780' (240m) |

METRIC CONVERSION CHART (1" = 25mm)

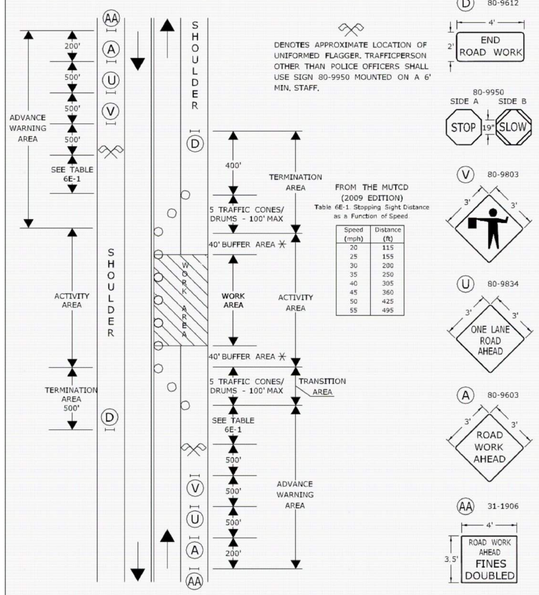
| ENGLISH | METRIC | ENGLISH | METRIC | ENGLISH | METRIC |
|---|---|---|---|---|---|
| 12" | 300mm | 42" | 1050mm | 72" | 1800mm |
| 18" | 450mm | 48" | 1200mm | 78" | 1950mm |
| 24" | 600mm | 54" | 1350mm | 84" | 2100mm |
| 30" | 750mm | 60" | 1500mm | 90" | 2250mm |
| 36" | 900mm | 66" | 1650mm | 96" | 2400mm |

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
NOTES

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT (MIN.)




○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 1 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS

SIGN FACE 108 SQ. FT (MIN.)

HAND SIGNAL METHODS TO BE USED BY UNIFORMED FLAGGERS

THE FOLLOWING METHODS FROM SECTION 6E.07, FLAGGER PROCEDURES, IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," SHALL BE USED BY UNIFORMED FLAGGERS WHEN DIRECTING TRAFFIC THROUGH A WORK AREA. THE STOP/SLOW SIGN PADDLE (SIGN NO. 80-9950) SHOWN ON THE TRAFFIC STANDARD SHEET TR-1220 01 ENTITLED, "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" SHALL BE USED.

A. TO STOP TRAFFIC

TO STOP ROAD USERS, THE FLAGGER SHALL FACE ROAD USERS AND AIM THE STOP PADDLE FACE TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FREE ARM SHALL BE HELD WITH THE PALM OF THE HAND ABOVE SHOULDER LEVEL TOWARD APPROACHING TRAFFIC.




B. TO DIRECT TRAFFIC TO PROCEED

TO DIRECT STOPPED ROAD USERS TO PROCEED, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. THE FLAGGER SHALL MOTION WITH THE FREE HAND FOR ROAD USERS TO PROCEED.




C. TO ALERT OR SLOW TRAFFIC

TO ALERT OR SLOW TRAFFIC, THE FLAGGER SHALL FACE ROAD USERS WITH THE SLOW PADDLE FACE AIMED TOWARD ROAD USERS IN A STATIONARY POSITION WITH THE ARM EXTENDED HORIZONTALLY AWAY FROM THE BODY. TO FURTHER ALERT OR SLOW TRAFFIC, THE FLAGGER HOLDING THE SLOW PADDLE FACE TOWARD ROAD USERS MAY MOTION UP AND DOWN WITH THE FREE HAND, PALM DOWN.



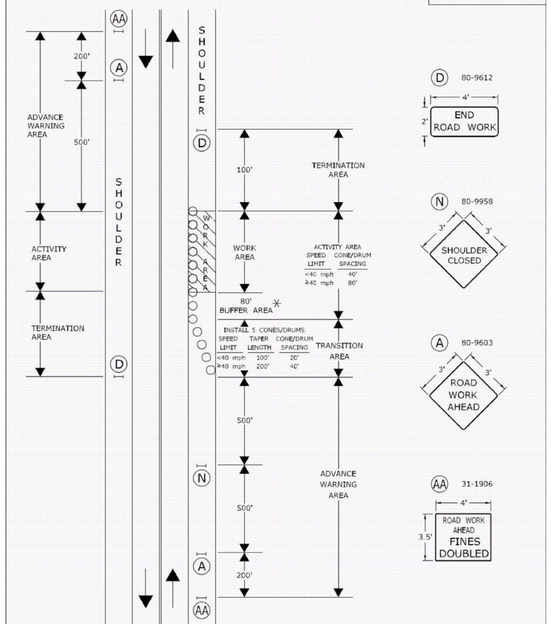

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN SHOULDER - TWO LANE HIGHWAY

SIGN FACE 71 SQ. FT (MIN.)



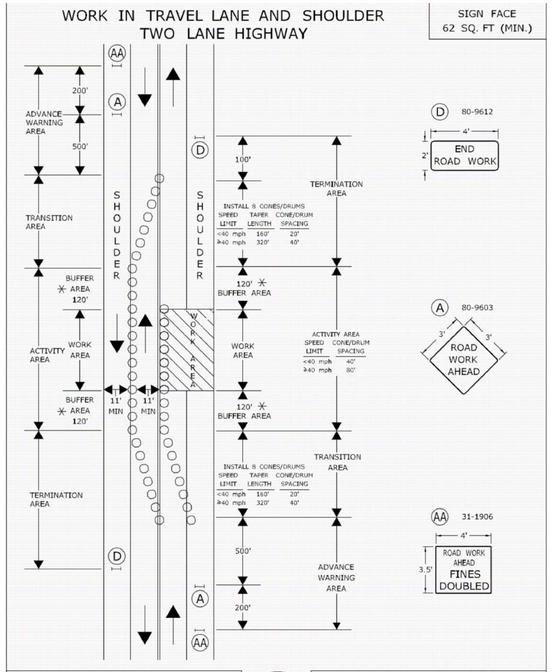

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 14
SEE NOTES 1, 2, 4, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY

SIGN FACE 62 SQ. FT (MIN.)



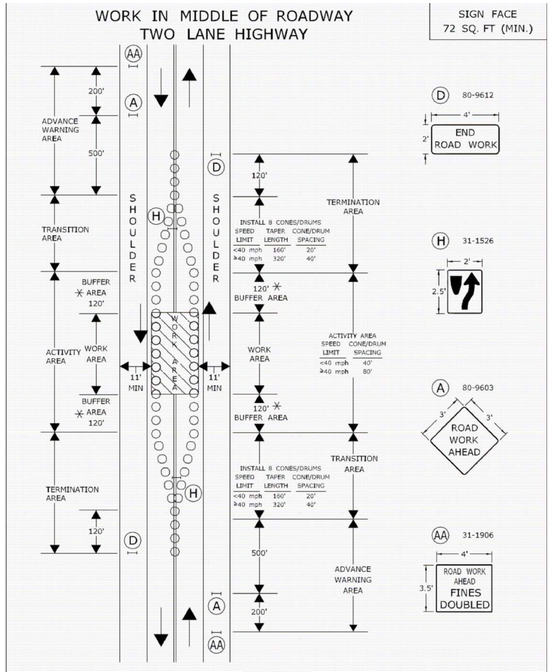

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 15
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN MIDDLE OF ROADWAY TWO LANE HIGHWAY

SIGN FACE 72 SQ. FT (MIN.)



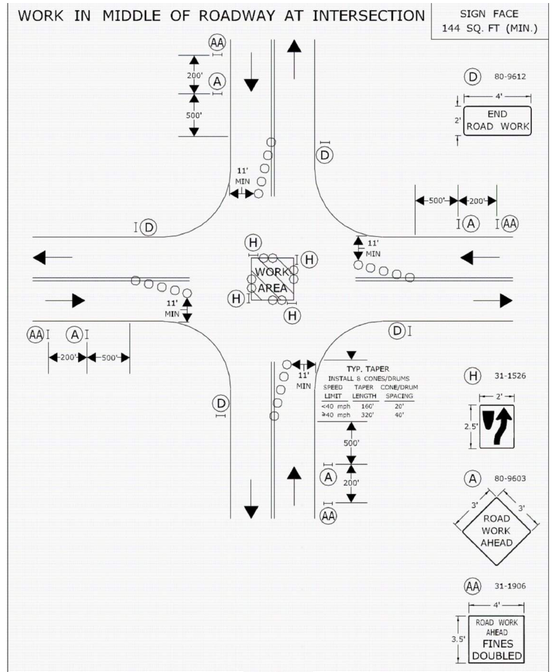

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 16
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN MIDDLE OF ROADWAY AT INTERSECTION

SIGN FACE 144 SQ. FT (MIN.)



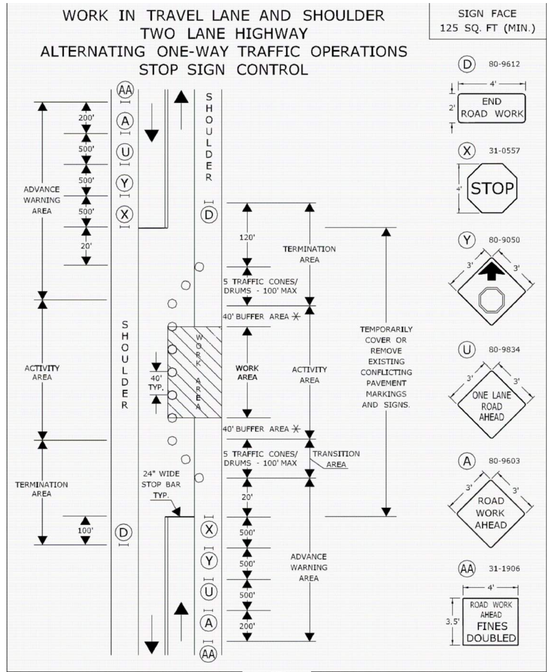

○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 17
SEE NOTES 1, 2, 4, 6, 7, 8

## WORK IN TRAVEL LANE AND SHOULDER TWO LANE HIGHWAY ALTERNATING ONE-WAY TRAFFIC OPERATIONS STOP SIGN CONTROL

SIGN FACE 125 SQ. FT (MIN.)




○ TRAFFIC CONE **OR** TRAFFIC DRUM
✳ OPTIONAL ⊗ TRAFFIC DRUM ⟼ PORTABLE SIGN SUPPORT
⟸ HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW

SCALE: NONE

CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 18
SEE NOTES 1, 2, 4, 7, 8

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

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DRAWN BY: S. ENGEL
SHEET CHK'D BY: K. WAGNER
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DATE: DECEMBER 2023


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CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

TRAFFIC CONTROL
NOTES AND PLANS

PROJECT NO. 10739-264571
FILE NAME: C029TRFC.DWG
SHEET NO. C-29

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION


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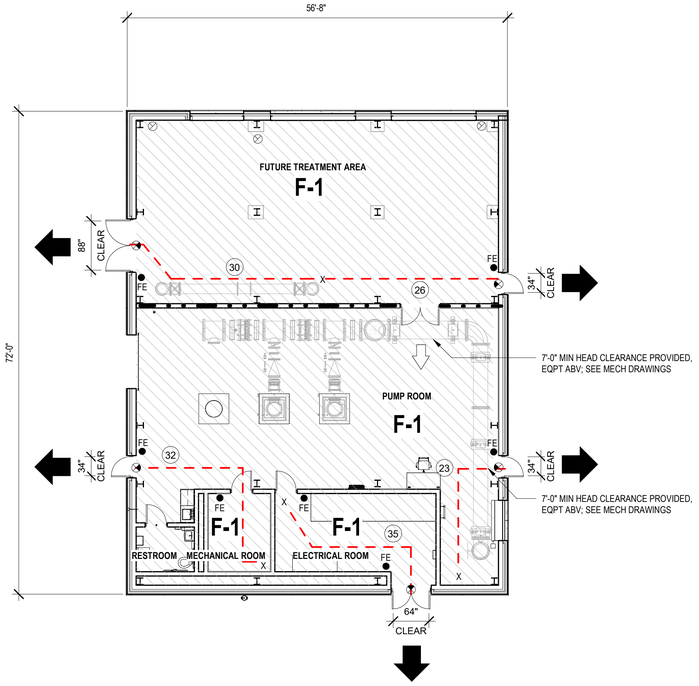
# Elevation Drawings and Floor Plans

Include in hard copy submittal




LIFE SAFETY PLAN

3/32" = 1'-0"

## LIFE SAFETY PLAN LEGEND

- EGRESS PATH
- 2 HOUR FIRE RATING
- EXIT DISCHARGE
- AREA OR SPACE EXIT
- EXIT SIGN
- FE — FIRE EXTINGUISHER - MULTIPURPOSE DRY-CHEMICAL TYPE
- (X) — TRAVEL DISTANCE (FEET)
- [X] — COMMON PATH OF TRAVEL (FEET)
- X — POINT OF ORIGIN
- FACTORY INDUSTRIAL, F-1 OCCUPANCY CLASSIFICATION

| Building Code Summary | | | |
|---|---|---|---|
| **Owner:** | City of New Britain, Connecticut | **Date:** | April 2023 |
| **Project Name:** | White Bridge Waterworks Facilities | **Location:** | New Britain, CT |
| **Project No:** | 10739-264571 | **Architect of Record:** | CDM Architects Inc. |
| **Building Name:** | Pond Pumping Station | | |
| **Work Scope:** | Construction of pump station (New Structure) | | |
| **Applicable Ordinances, Codes, and Standards** | | | |
| **Abbreviations** | **ICC** - International Code Council; **IBC** - International Building Code; **IEBC** - International Existing Building Code; **IECC** - International Energy Conservation Code; **IFC** - International Fire Code; **IMC** - International Mechanical Code; **IPC** - International Plumbing Code; | | |
| **Building Code** | 2022 CT State Building Code - 2021 IBC | | |
| **Mechanical Code** | 2022 CT State Building Code - 2021 IMC | | |
| **Energy Code** | 2022 CT State Building Code - 2021 IECC | | |
| **Plumbing Code** | 2022 CT State Building Code - 2021 IPC | | |
| **Electrical Code** | 2020 National Electrical Code (NFPA 70) | | |
| **Accessibility Code** | 2017 ICC A117.1 | | |
| **Use and Occupancy Classification** | | | |
| *IBC Code Reference* | | | |
| Chapter 3 | | | |
| Section 306 | Factory Group F | | |
| 306.2 | Moderate-hazard factory industrial, Group F-1 | | |
| **General Building Heights and Areas** | | | |
| Chapter 5 | | | |
| Section 504 | Building Height and Number of Stories | | |
| Table 504.3 | Allowable Building Height in Feet Above Grade Plane | Allowable | Proposed |
| | Group F-1 Type IIB - No Sprinklers | 55 Feet | 25 Feet, 10 Inches |
| Table 504.4 | Allowable Number of Stories Above Grade Plane | | |
| | Group F-1 Type IIB - No Sprinklers | 2 Stories | 1 Story |
| Section 506 | Building Area | | |
| Table 506.2 | Allowable Area Factor in Square Feet | | |
| | Group F-1 Type IIB - No Sprinklers | 15,500 SF | 4,085 SF |
| **Types of Construction** | | | |
| Chapter 6 | | | |
| Section 602 | Construction Classification | | |
| 602.2 | Types I and II, Non Combustible | Type IIB Construction | |
| **Fire Protection and Life Safety Systems** | | | |
| Chapter 9 | | | |
| Section 903 | Automatic Sprinkler Systems | Not required for Group F-1 occupancy:<br>1. Fire area under 12,000 square feet.<br>2. Fire area not located more than three stories above grade plane.<br>3. Combined area of all F-1 fire areas under 24,000 square feet. | |
| Section 906 | Portable Fire Extinguishers | Required in accordance to 906.2 and NFPA 10 | |
| Section 907<br>907.2.4 | Fire Alarm and Detection Systems<br>Group F | Not required for Group F-1 occupancy<br>1. F occupancy under two stories in height.<br>2. F occupancy has occupant load under 500. | |
| **Means of Egress** | | | |
| Chapter 10 | | | |
| Section 1004 | Occupant Load | | |
| Table 1004.5 | Maximum Floor Area Allowances per Occupant | | |
| | Function of Space | Occupant Load Factor | Area / Occupant Load Factor |
| | Accessory storage areas, mechanical equipment room | 300 gross | (4,085 / 300) = 14 |
| Section 1010 | Doors, Gates and Turnstiles | Required | Proposed |
| 1010.1.1 | Size of doors | Minimum clear width: 32 inches | 34 inches |
| Section 1017 | Exit Access Travel Distance | | |
| Table 1017.2 | Occupancy | without Sprinklers (feet) | with Sprinklers (feet) |
| | F-1 | 200 | N/A |
| **Accessibility** | | | |
| Chapter 11 | | | |
| Section 1103 | Scoping Requirements | | |
| 1103.2.9 | Equipment spaces are not required to comply with this chapter | | |
| **Energy Efficiency** | | | |
| Chapter 13 | | | |
| Section 1301 | General | | |
| 1301.1.1 | Building designed and constructed in accordnace with the IECC with compliance requirements indicated in COMcheck report | | |

0 4' 8' 12' 20'

SCALE: 3/32" = 1'-0"

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|---|---|---|---|---|

DESIGNED BY: R. MARSHALL
DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: B. GIORGI
DATE: APRIL 2023

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CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
BUILDING CODE SUMMARY AND LIFE SAFETY PLAN

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT
SHEET NO. A-2

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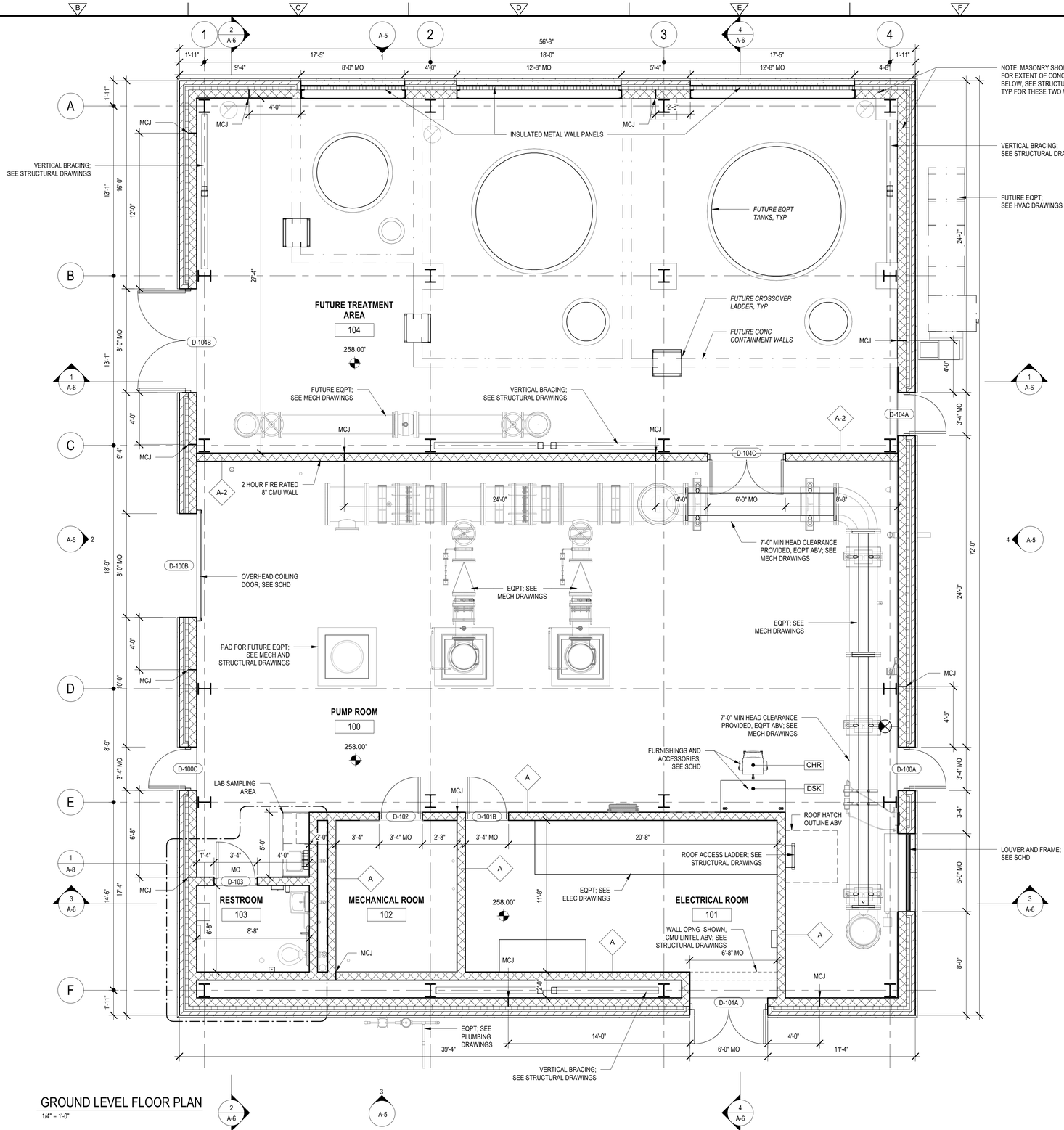


GROUND LEVEL FLOOR PLAN
1/4" = 1'-0"

0 2' 4' 8'
SCALE: 1/4" = 1'-0"

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WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
FLOOR PLAN

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT
SHEET NO.
A-3

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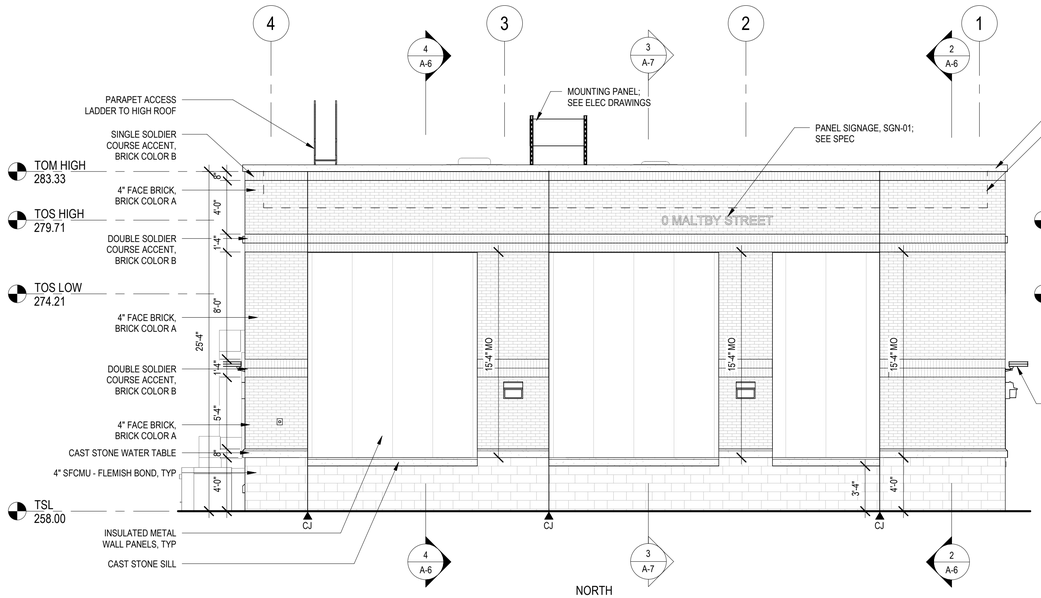
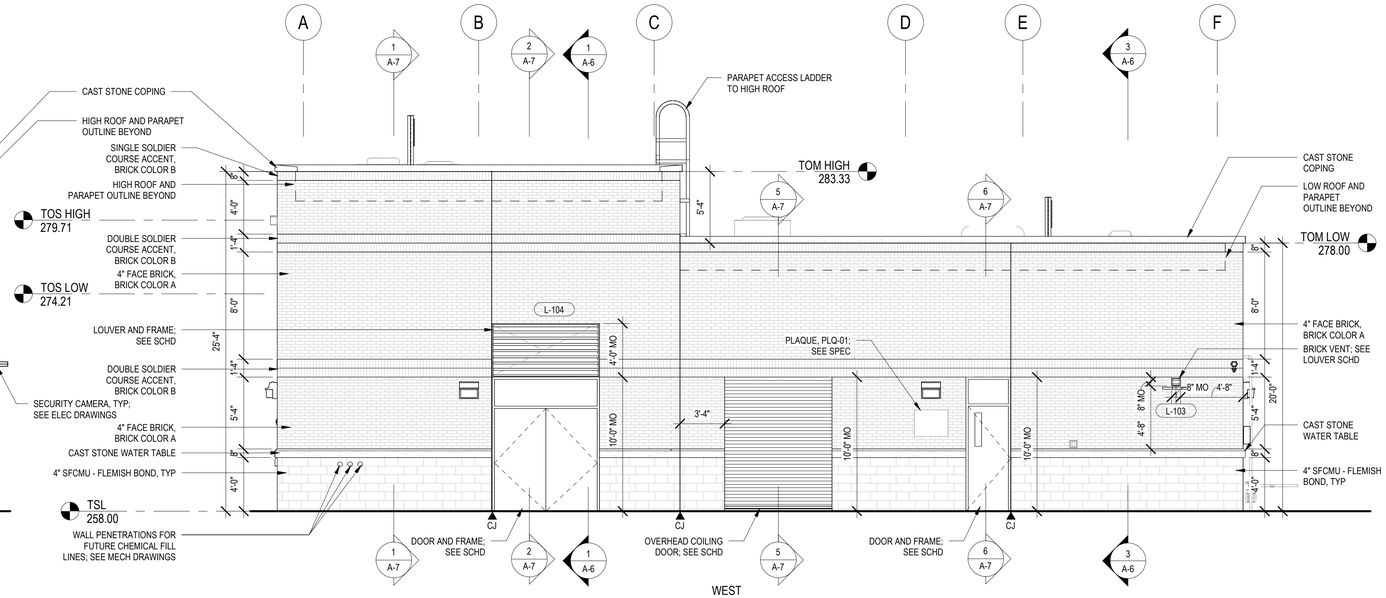
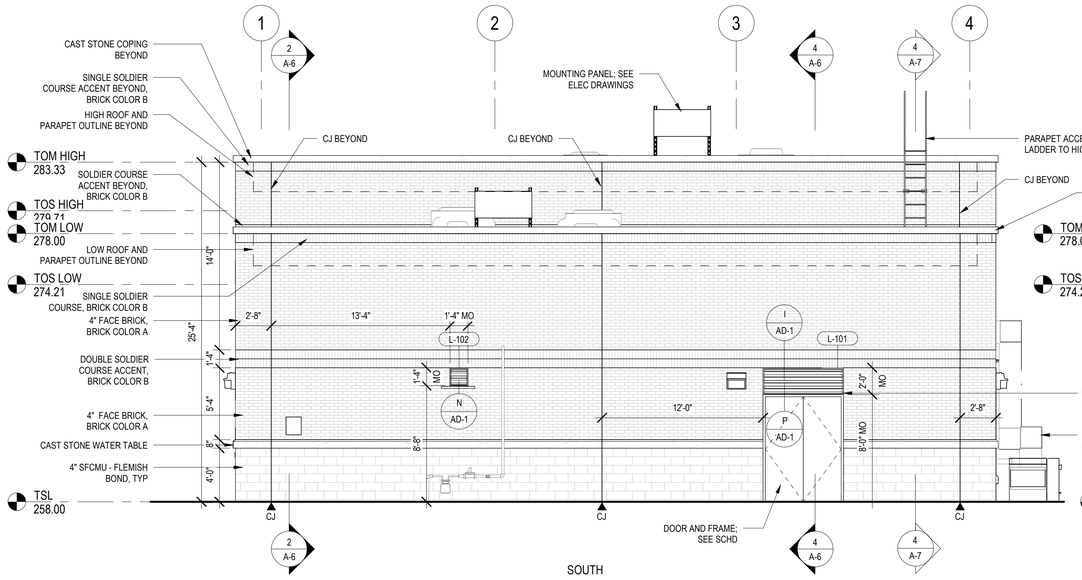


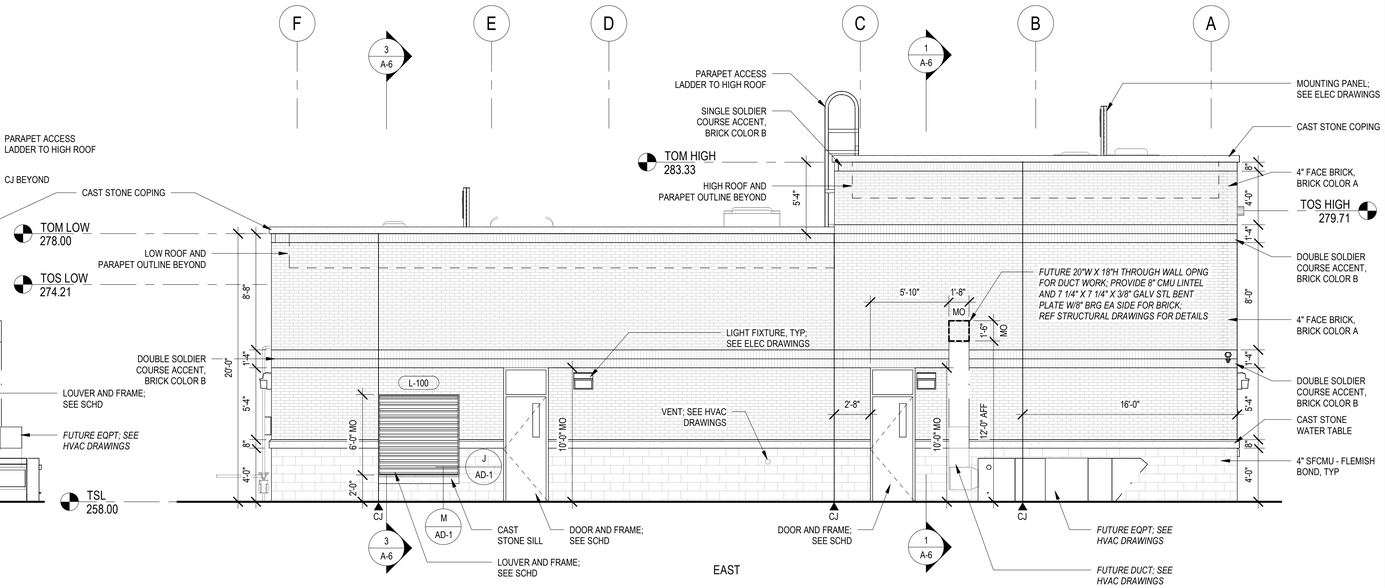

1 A-3 **ELEVATION** 3/16" = 1'-0"




2 A-3 **ELEVATION** 3/16" = 1'-0"




3 A-3 **ELEVATION** 3/16" = 1'-0"




4 A-3 **ELEVATION** 3/16" = 1'-0"

0 2' 4' 6' 10'

SCALE: 3/16" = 1'-0"

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|---|---|---|---|---|

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WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
EXTERIOR ELEVATIONS

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-5

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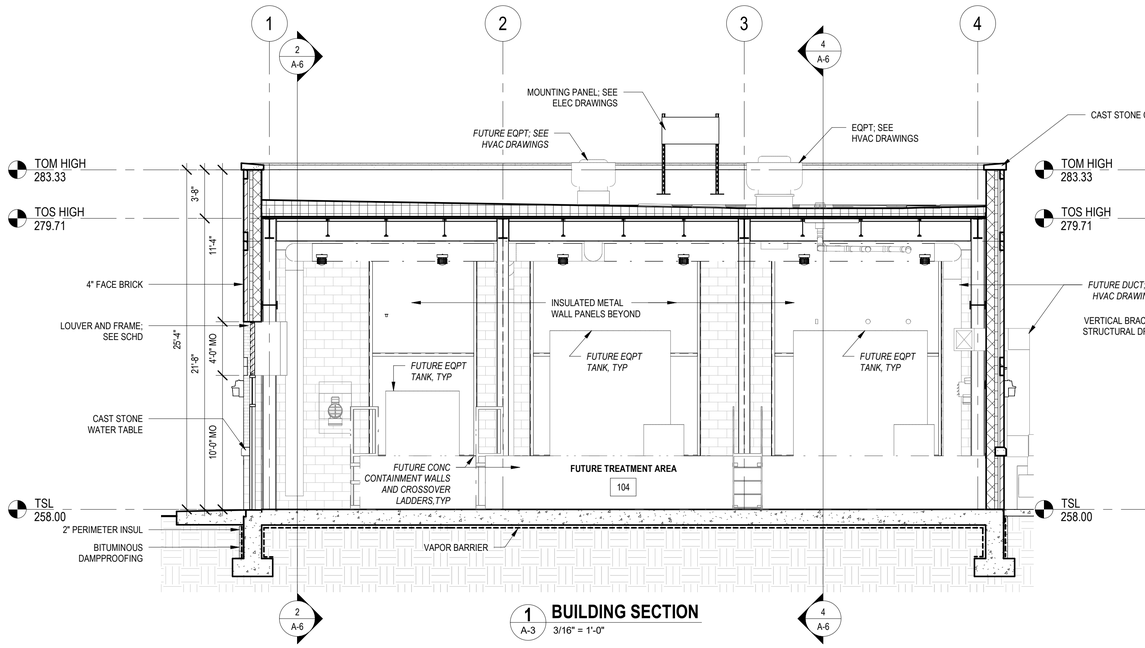
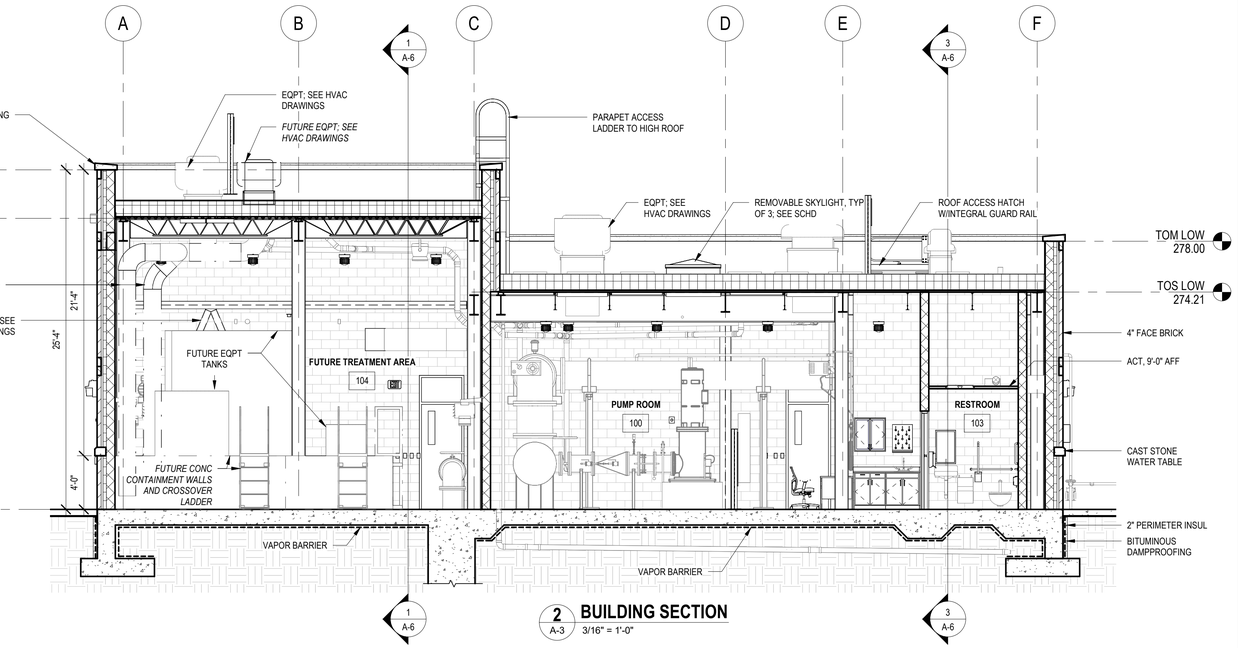
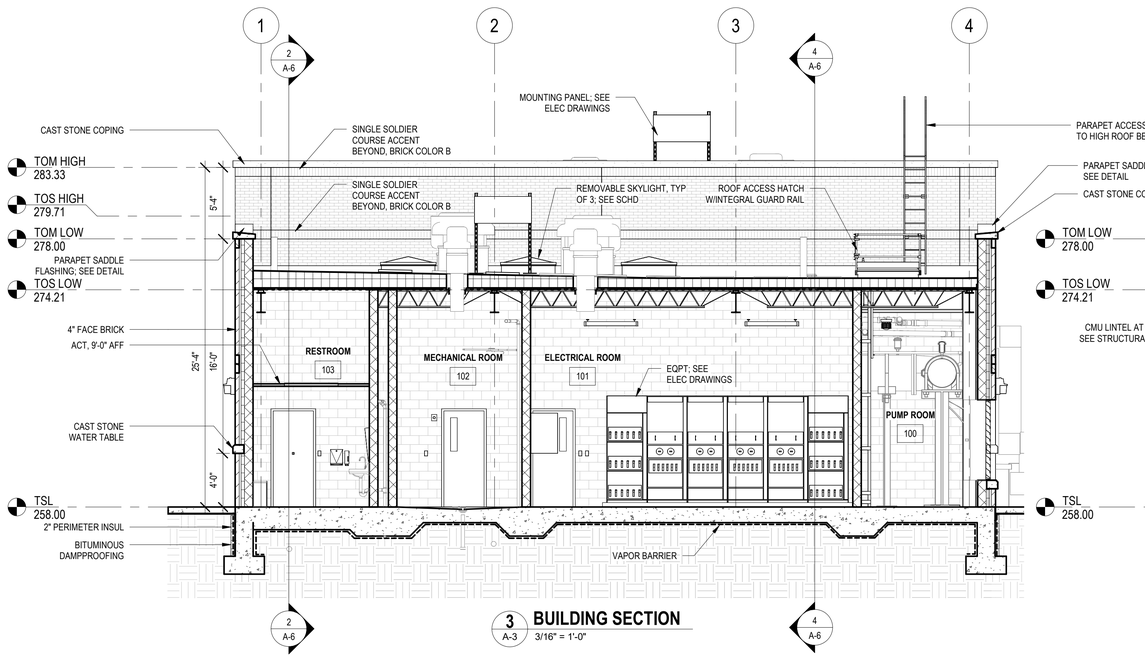


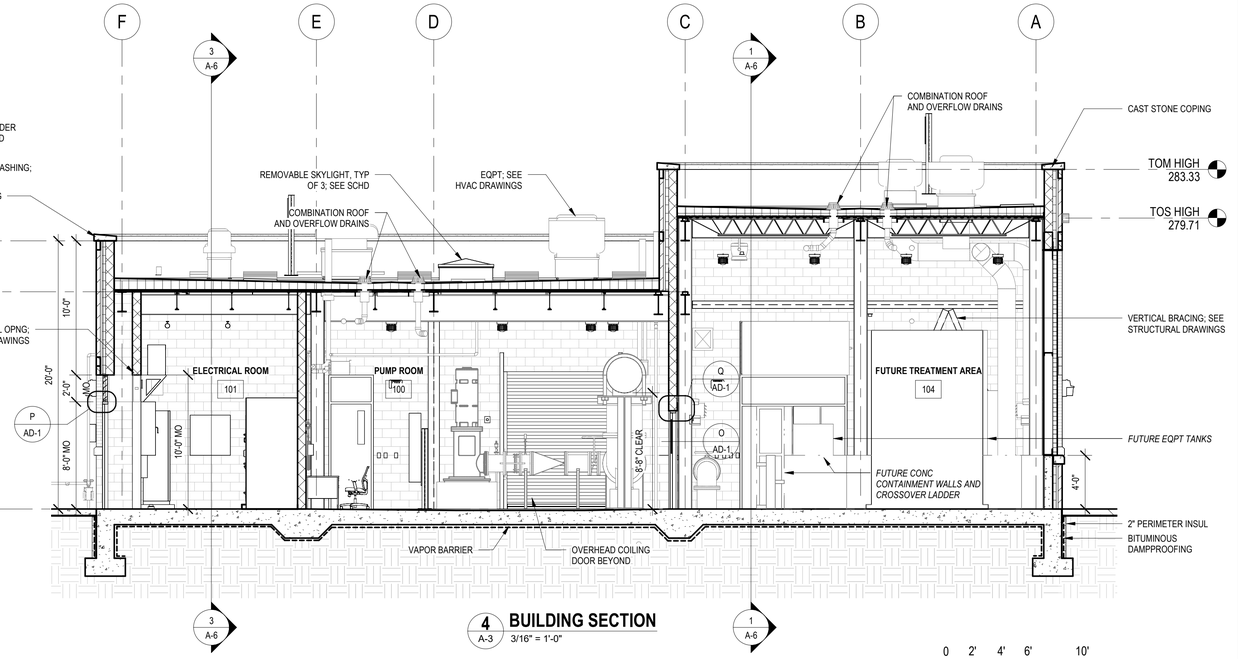

1 **BUILDING SECTION** A-3 3/16" = 1'-0"




2 **BUILDING SECTION** A-3 3/16" = 1'-0"




3 **BUILDING SECTION** A-3 3/16" = 1'-0"




4 **BUILDING SECTION** A-3 3/16" = 1'-0"

0 2' 4' 6' 10'

SCALE: 3/16" = 1'-0"

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: R. MARSHALL
DRAWN BY: R. MARSHALL
SHEET CHK'D BY: S. BRADFORD
CROSS CHK'D BY: K. WAGNER
APPROVED BY: B. GIORGI
DATE: APRIL 2023


CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CDM Architects Inc.
75 State Street
Boston, Massachusetts 02109


CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

POND PUMPING STATION
BUILDING SECTIONS

PROJECT NO. 10739-264571
FILE NAME: AWZ001PS.RVT

SHEET NO.
A-6

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION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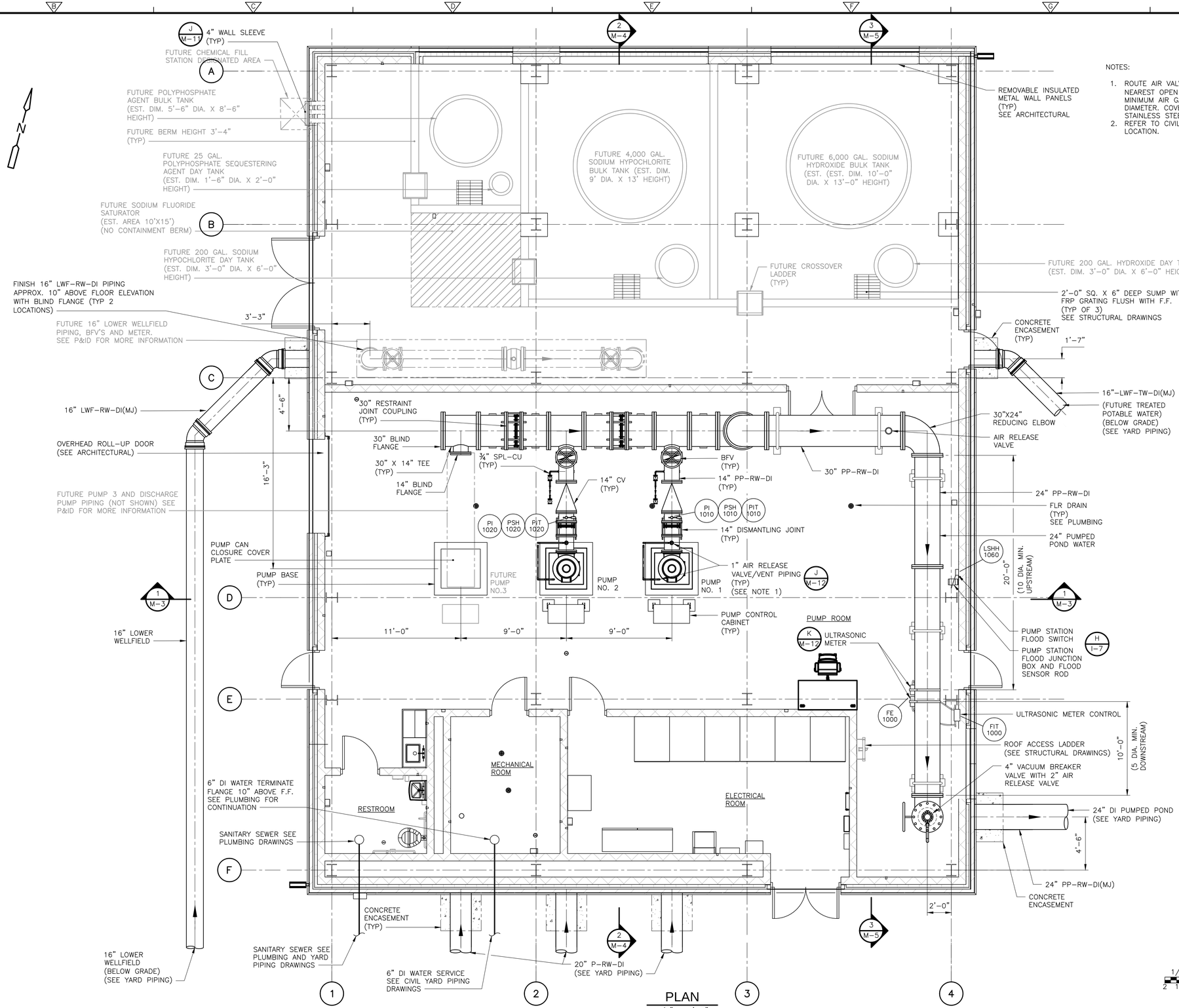


NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. REFER TO CIVIL SHEETS FOR BUILDING LOCATION.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
FLOOR PLAN

PROJECT NO. 10739-264571
FILE NAME: M002PSPL.DWG

SHEET NO.
M-2

REGULATORY REVIEW SUBMITTAL - NOT FOR CONSTRUCTION



XREFs: [CDMS_2436] Images: []
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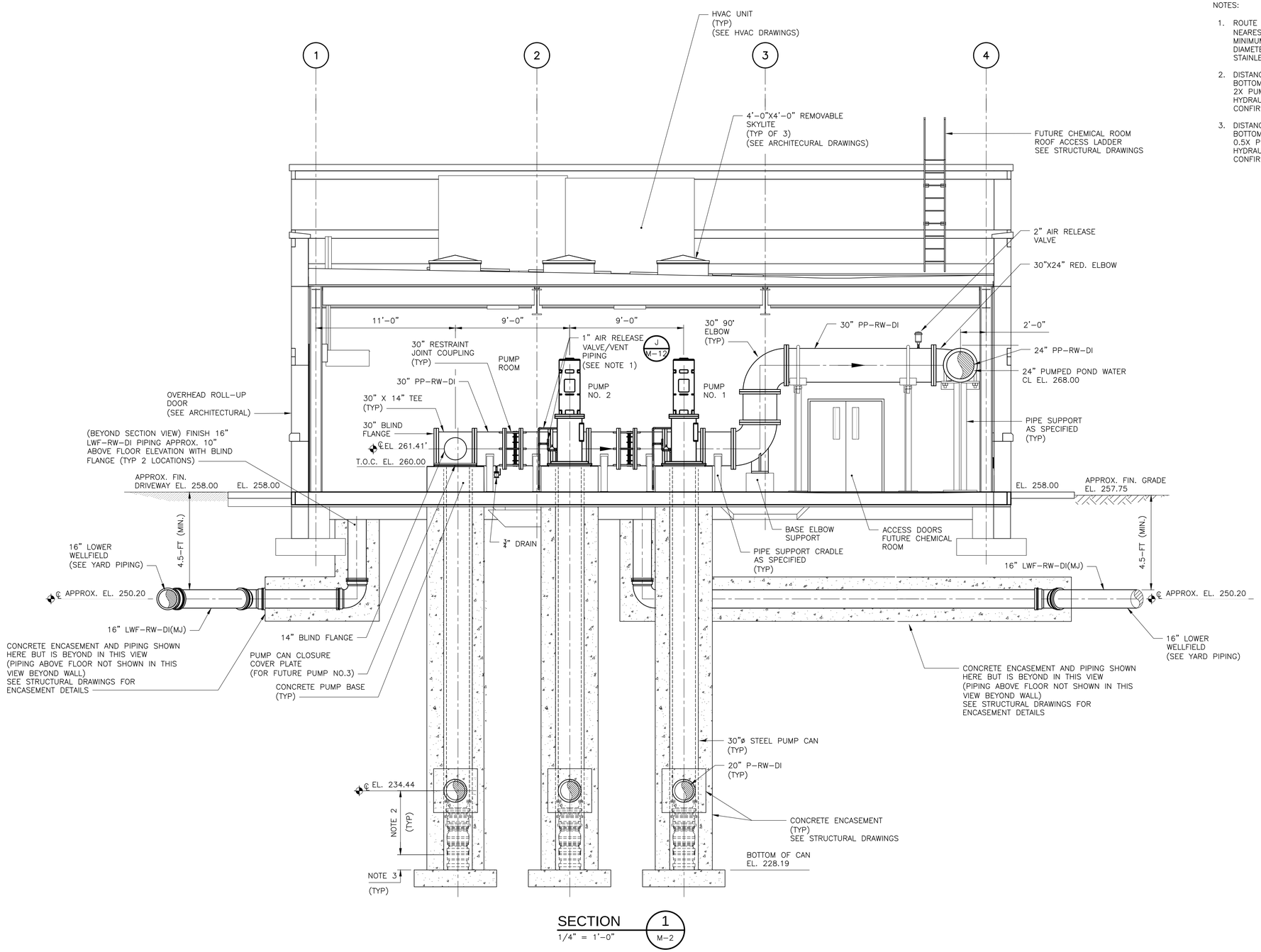
NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BE MINIMUM 2X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.
3. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BEMINIMUM 0.5X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.




SECTION 1 / M-2
1/4" = 1'-0"

1/4" = 1'- 0"
2 1 0 2 4

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

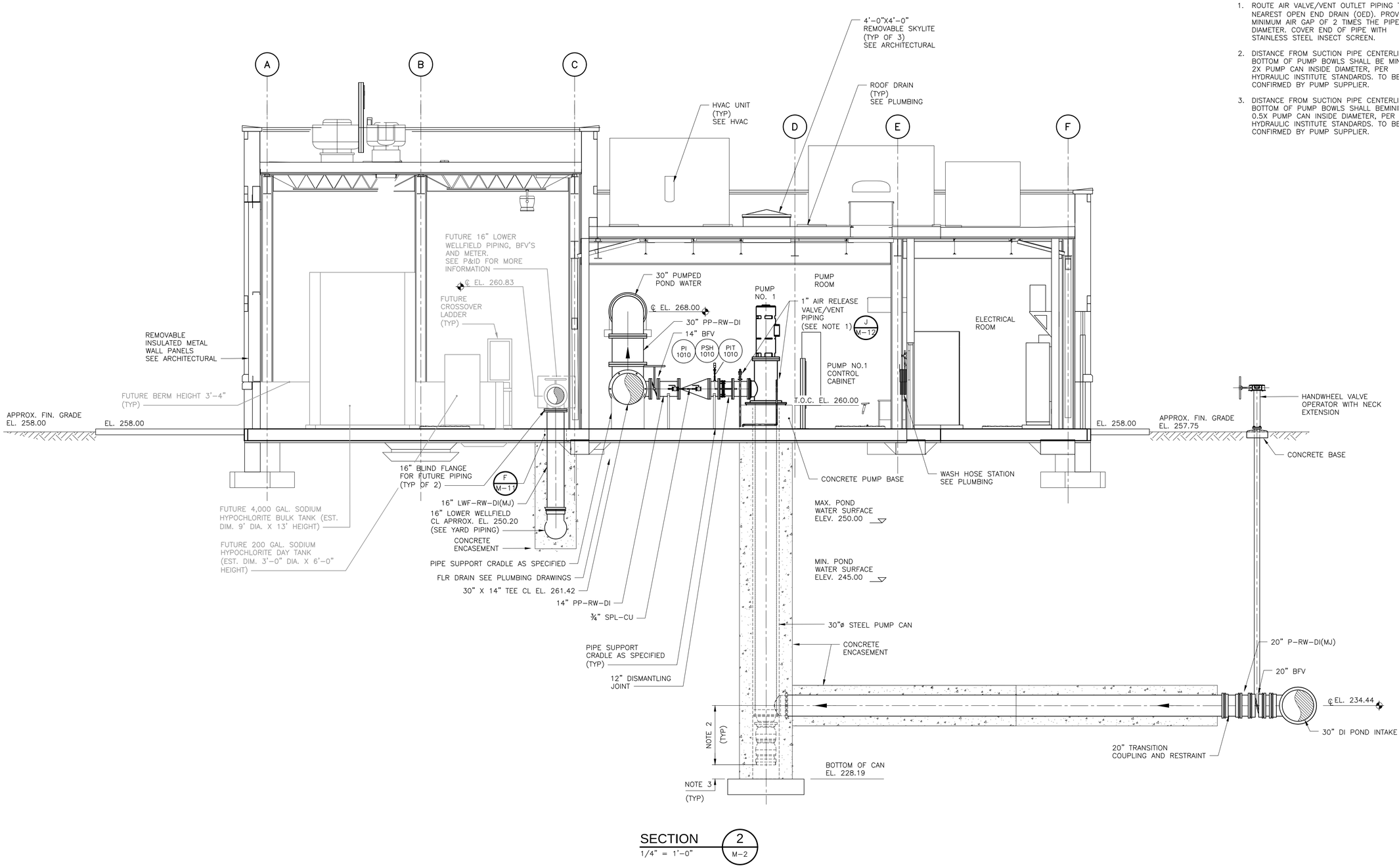
CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SECTIONS I

PROJECT NO. 10739-264571
FILE NAME: M003PSSC.DWG
SHEET NO. M-3

NOTES:

1. ROUTE AIR VALVE/VENT OUTLET PIPING TO THE NEAREST OPEN END DRAIN (OED). PROVIDE MINIMUM AIR GAP OF 2 TIMES THE PIPE DIAMETER. COVER END OF PIPE WITH STAINLESS STEEL INSECT SCREEN.
2. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BE MINIMUM 2X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.
3. DISTANCE FROM SUCTION PIPE CENTERLINE TO BOTTOM OF PUMP BOWLS SHALL BEMINIMUM 0.5X PUMP CAN INSIDE DIAMETER, PER HYDRAULIC INSTITUTE STANDARDS. TO BE CONFIRMED BY PUMP SUPPLIER.




SECTION 2 / M-2
1/4" = 1'-0"

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| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: K. GERLACH
DRAWN BY: V. BITTO
SHEET CHK'D BY: K. WAGNER
CROSS CHK'D BY: K. GERLACH
APPROVED BY: K. WAGNER
DATE: APRIL 2023

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT
WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS
AND POND PUMPING STATION

POND PUMPING STATION
SECTIONS II

PROJECT NO. 10739-264571
FILE NAME: M004PSSC.DWG
SHEET NO. M-4

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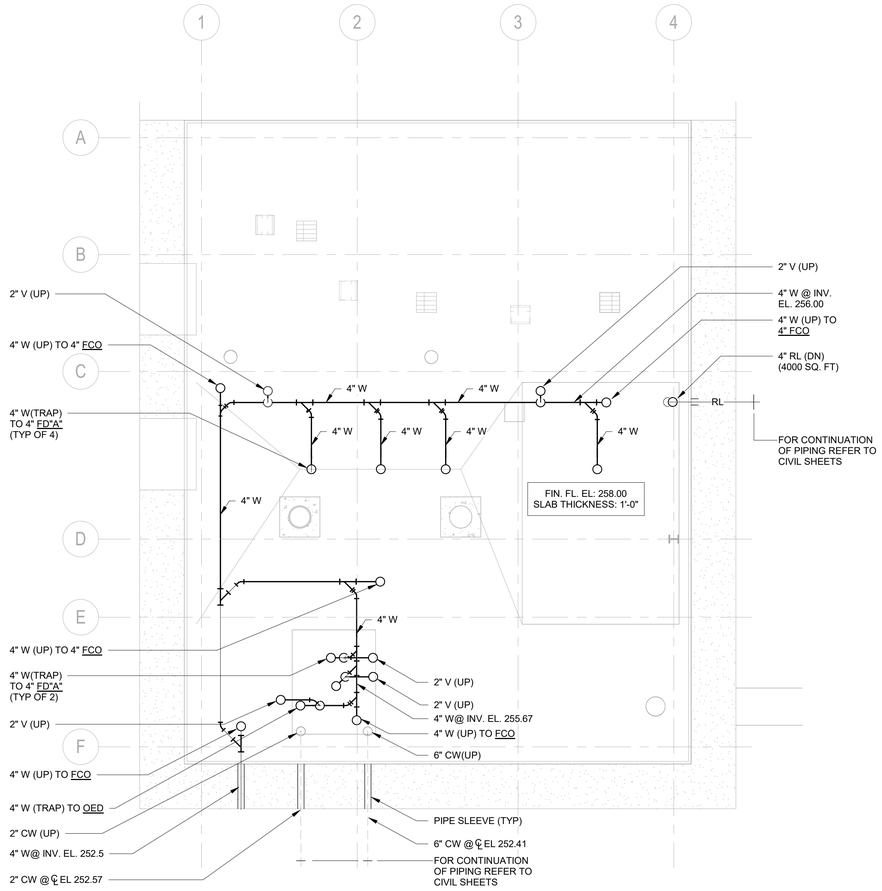
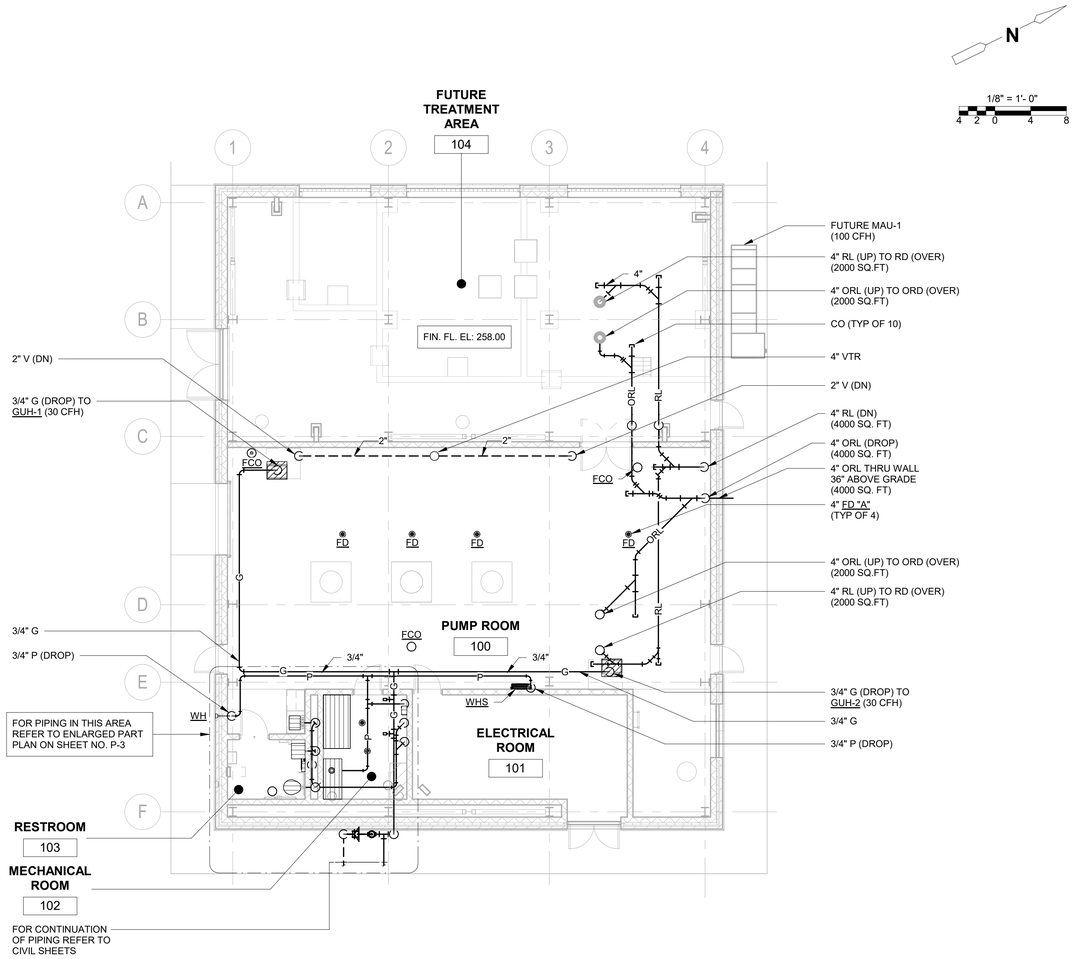



## BURIED PIPING

1/8" = 1'-0"




## FLOOR PLAN

1/8" = 1'-0"

NOTES:

1. ALL PIPES PASSING THROUGH THE FOUNDATION WALL SHALL BE INSTALLED IN A SLEEVE THAT IS 2" IN DIAMETER LARGER THAN THE PIPE AND SHALL EXTEND THOUGH THE WALL 2" ON EITHER SIDE OF THE FOUNDATION WALL IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS.
2. ALL PIPES PASSING UNDERNEATH THE FOUNDATION SHALL BE INSTALLED IN A SLEEVE THAT IS 2" IN DIAMETER LARGER THAN THE PIPE AND SHALL EXTEND 12" BEYOND THE ANGLE OF REPOSE OF THE FOUNDATION FOOTING ON BOTH SIDES OF THE FOOTING.

NOTES:

1. ALL BURIED PIPING WITHIN THE BUILDING SHALL BE ENCASED IN CONCRETE AS SHOWN ON THE DETAIL ON THE STRUCTURAL DETAIL SHEET.
2. IN LIEU OF TRAP PRIMERS WHERE ALLOWED BY CODE, CONTRACTOR SHALL INSTALL A TRAP RESEALER MADE OF ELASTOMERIC MATERIAL.
3. 1/2" SOFT ROLLED COPPER TUBING SHALL BE INSTALLED TO FEED THE WATER FROM THE TRAP PRIMER UNIT TO THE TRAPS FOR THE FLOOR DRAINS WHERE REQUIRED. THE SOFT ROLLED COPPER TUBING SHALL BE WRAPPED WITH ARMAFLEX TO PROTECT IT FROM THE CONCRETE. THE TUBING IS NOT SHOWN ON THE DRAWING FOR CLARITY SAKE. BUT THE PIPING SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.
4. SANITARY PIPING SHALL EXTEND BEYOND THE BUILDING 5'-0" UNDER THE PLUMBING CONTRACTOR'S SCOPE OF WORK.

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: J. SHEEHAN
DRAWN BY: P. MANI
SHEET CHK'D BY: B. BUCCHIANERI
CROSS CHK'D BY: K. WAGNER
APPROVED BY: D. FLAHERTY
DATE: JANUARY 2024

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

BURIED PIPING AND FLOOR PLANS

PROJECT NO. 10739-264571
FILE NAME: HPWZ001PS.RVT

SHEET NO.
P-2

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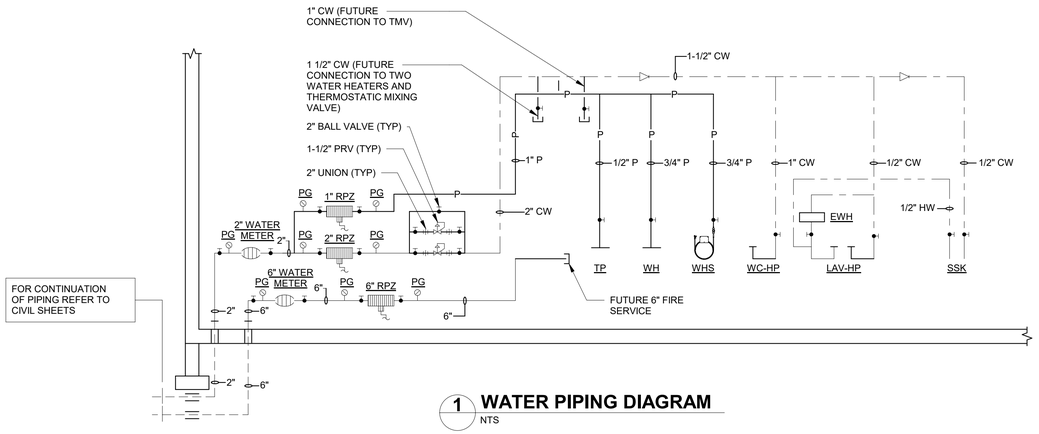
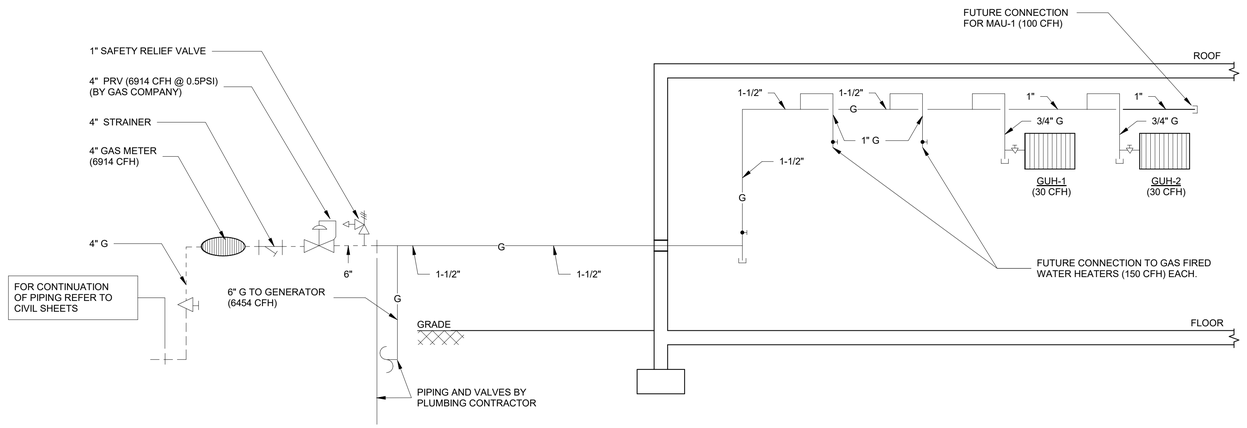


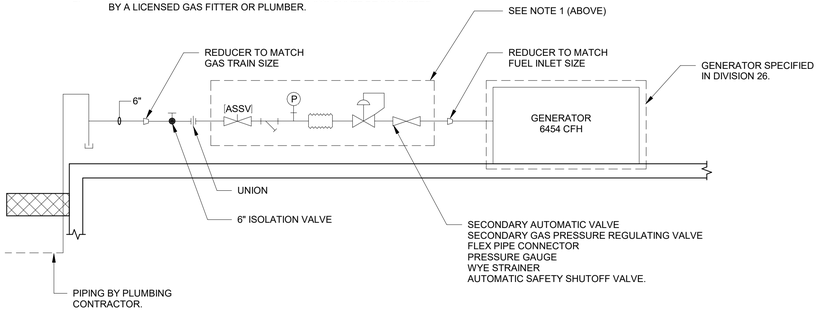

## 1 WATER PIPING DIAGRAM
NTS



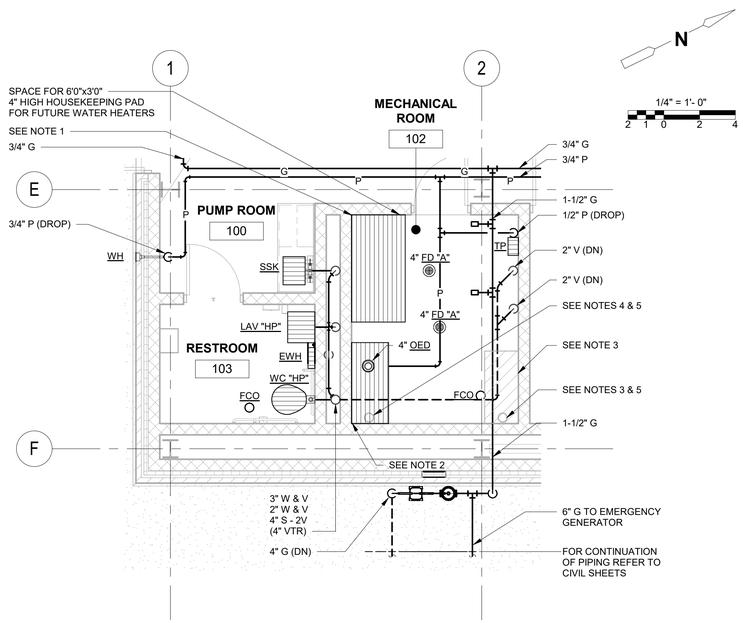

## 2 GAS PIPING DIAGRAM
NTS

NOTES:

1. GAS TRAIN COMPONENTS SHALL BE PROVIDED BY THE GENERATOR MANUFACTURER AND INSTALLED BY THE PLUMBING CONTRACTOR.
2. INSTALL 6" G LINE TO GENERATOR. GAS PIPING SHALL BE INSTALLED BY A LICENSED GAS FITTER OR PLUMBER.




## 3 GAS PIPING DIAGRAM FOR STANDBY GENERATOR
NTS




## 4 ENLARGED FLOOR PLAN
1/4" = 1'-0"

NOTES:

1. SPACE ALLOCATED FOR FUTURE WATER HEATERS, TEPID WATER MIXING VALVE AND TEPID WATER RECIRCULATION PUMP.
2. SPACE ALLOCATED FOR DOMESTIC WATER SERVICE. FOR VALVES AND APPURTENANCES REFER TO THE WATER PIPING DIAGRAM ON SHEET NO. P-3. WATER SERVICE HAS BEEN SIZED TO INCLUDE FUTURE ADDITION OF CHEMICALS AND TEPID WATER HEATING SYSTEM.
3. SPACE ALLOCATED FOR FUTURE FIRE PROTECTION SERVICE SHALL SERVE AN AUTOMATIC FIRE PROTECTION SYSTEM WHEN THE FUTURE CHEMICAL SYSTEMS ARE INSTALLED ON THE PROJECT. 6" FIRE SERVICE SHALL BE BROUGHT INTO THE BUILDING AND LEFT AS A FLANGED CONNNECTION 8"-12" ABOVE FINISHED FLOOR BY GENERAL CONTRACTOR.
4. 2" DOMESTIC WATER SERVICE SHALL BE BROUGHT INTO THE BUILDING AND LEFT AS A FLANGED CONNECTION 8"-12" ABOVE FINISHED FLOOR BY GENERAL CONTRACTOR. A 2" CAPPED WATER CONNECTION SHALL BE LEFT IN THE MECHANICAL ROOM 102.
5. 6" RPZ FOR FUTURE FIRE SERVICE SHALL BE INSTALLED 36" AFF. 2" RPZ FOR DOMESTIC POTABLE WATER SHALL BE INSTALLED 36" AFF AND THE 1" RPZ FOR NON-POTABLE WATER SHALL BE INSTALLED AT 54" AFF.

### PLUMBING FIXTURE SCHEDULE

| FIXTURE | DESCRIPTION | WASTE (INCH) MIN | VENT (INCH) MIN | TRAP (INCH) MIN | CW (INCH) MIN | HW (INCH) MIN | TW (INCH) MIN | REMARKS |
|---|---|---|---|---|---|---|---|---|
| WC-HP | TOILET, FLUSH VALVE, WALL MOUNTED, WALL OUTLET | 4 | 2 | 4 | 1 | - | - | SEE SECTION 224213.13 |
| SSK | SERVICE SINK | 2 | 2 | 2 | 1/2 | 1/2 | - | SEE SECTION 224216.13 |
| LAV-HP | LAVATORY, COUNTER MOUNTED | 2 | 2 | 2 | 1/2 | 1/2 | - | SEE SECTION 224216.13 |
| WHS | WASH HOSE STATION | - | - | - | 3/4 | - | - | SEE SECTION 221119 |
| EWH | ELECTRIC WATER HEATER | - | - | - | 1/2 | 1/2 | - | SEE SECTION 223300 |
| TP | TRAP PRIMER | - | - | - | 1/2 | - | - | SEE SECTION 221119 |

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|---|---|---|---|---|

DESIGNED BY: J. SHEEHAN
DRAWN BY: P. MANI
SHEET CHK'D BY: B. BUCCHIANERI
CROSS CHK'D BY: K. WAGNER
APPROVED BY: D. FLAHERTY
DATE: JANUARY 2024

CDM Smith
77 Hartland Street, Suite 200
East Hartford, CT 06108
Tel: (860) 529-7615

CITY OF NEW BRITAIN, CONNECTICUT

WHITE BRIDGE WATERWORKS FACILITIES
UPPER AND LOWER WELLFIELDS AND
POND PUMPING STATION

PIPING DIAGRAMS, ENLARGED FLOOR PLAN AND PLUMBING SCHEDULE

PROJECT NO. 10739-264571
FILE NAME: HPWZ001PS.RVT

SHEET NO.
P-3

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|---|---|
| APPLICATION NO. | 2509 |
| DATE FILED: | 10/3/24 |
| DECISION DATE: | |
| DECISION: | |

**BRISTOL ZONING COMMISSION**
**CITY OF BRISTOL, CONNECTICUT**
**APPLICATION FOR SPECIAL PERMIT**

The undersigned Applicant hereby applies to the Bristol Zoning Commission for approval under Section(s) Article III Section 13.6.B of the Bristol Zoning Regulations for the following Special Permit use: Location of parking on a separate lot under different ownership

Address or Location of the Property: 37 Main Street & 149 Church Street

Assessor's Map No.: 30 Assessor's Lot No.(s): 61, 61-1 & 61-3; 49; 50; 61-1A; 61-2;

Zone of the Property: BD-1 & BD-2 Size of the Property (in acres or square feet): 27,123 s.f. & 57, 934 s.f.

Reason for the Special Permit: To offer additonal parking for the proposed mixed use development.

Does this application involve an activity regulated by the Inland Wetlands Agency? [✓] yes [ ] no

If yes, has an application for a permit been submitted to the Inland Wetlands Agency? [✓] yes, on 9/9/24 [ ] no

Other comments: IWWA App. #2040

NOTE: Section 8-3c(a) of the Connecticut General Statutes requires that, if an application for a Special Permit involves an activity regulated under the Inland Wetlands and Watercourses provisions of the statutes, the applicant shall submit an application for a wetlands permit to the local Inland Wetlands Agency no later than the day the Special Permit application is filed.

APPLICANT (If more than one, list on Page 2)

Name: Gold Coast Properties, LLC

Address: 303 Linwood Ave. Suite 2B City: Fairfield State: CT Zip: 06824

Telephone No.: 203-610-1545 E-Mail: goldcoasthouse@gmail.com

Signature: [signature] *Signature – (Printed/Typed)* Stephen Shapiro

CHECK ONE: [ ] owner [✓] other (specify): under contract

OWNER(S) OF RECORD (If other than Applicant; if more than one, list on Page 2)

Name: 37 Main Street, LLC

Address: 108 River Road City: Deep River State: CT Zip: 06417

Telephone No.: E-Mail:

Signature: [signature] *Signature – (Printed/Typed)* Rich Lemieux

**THIS APPLICATION MUST BE FILED IN PERSON NO LATER THAN 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!**

BZC – 08/17

*For Office Use Only*
APPLICATION NO. 2059

## CITY OF BRISTOL, CONNECTICUT
## SUPPLEMENTARY INFORMATION

**Address or location of property:** 37 Main Street & 149 Church Street

**ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)**

**ADDITIONAL APPLICANT**

Name: _____ CHECK ONE: [ ] owner [ ] other: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**ADDITIONAL OWNER(S) OF RECORD**

Name: City of Bristol, CT

Address: 111 North Main Street City: Bristol State: CT Zip: 06010

Telephone No.: 860-584-6252 E-Mail: mayorsoffice@britolct.gov

Signature: _____ Signature – (Printed/Typed) Mayor Jeffrey Caggiano

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:**

Name: Attorney James Ziogas

Address: 104 Bellevue Ave. City: Bristol State: CT Zip: 06010

Telephone No.: _____ E-Mail: _____

08/17 - LUO

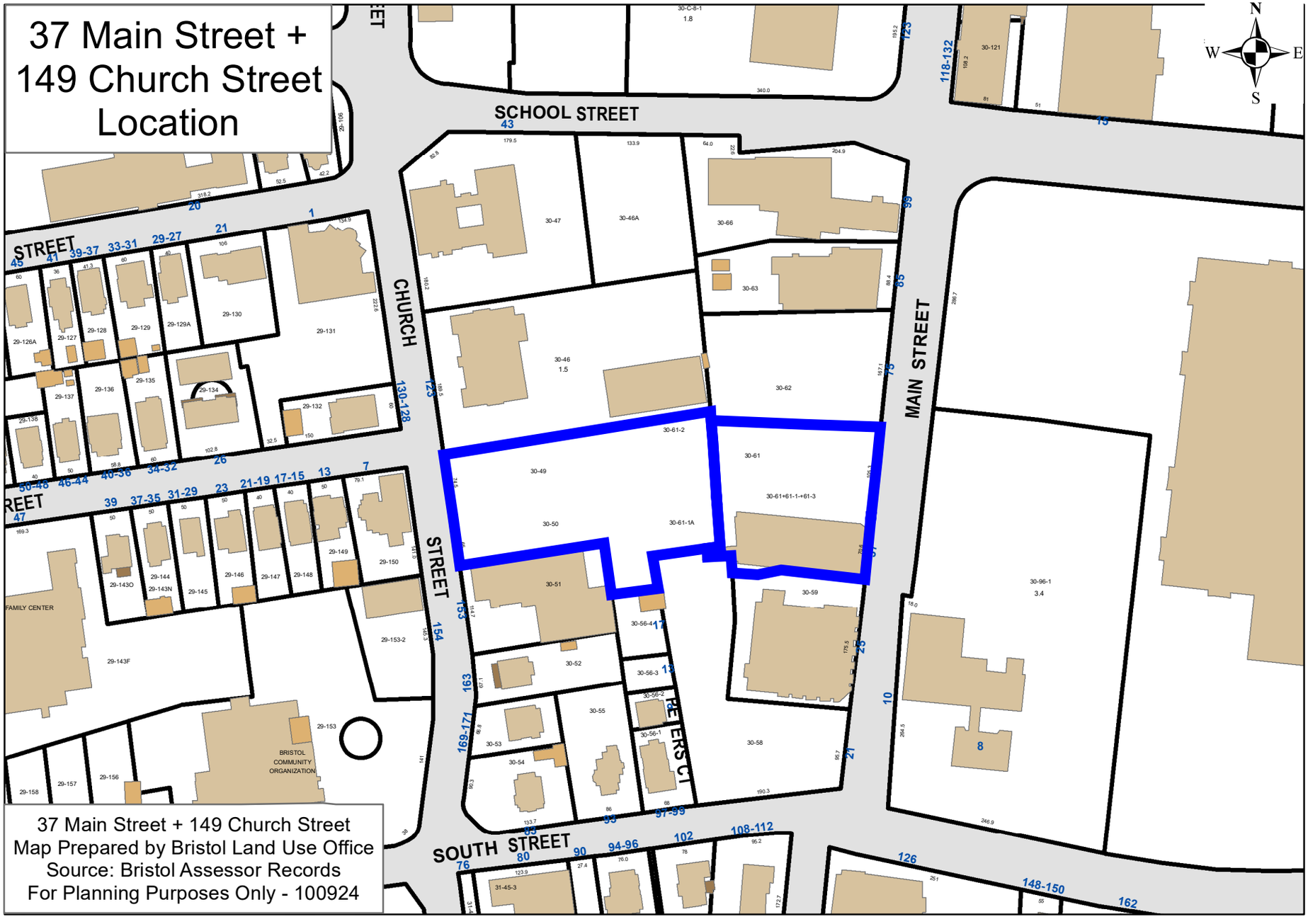
# Narrative

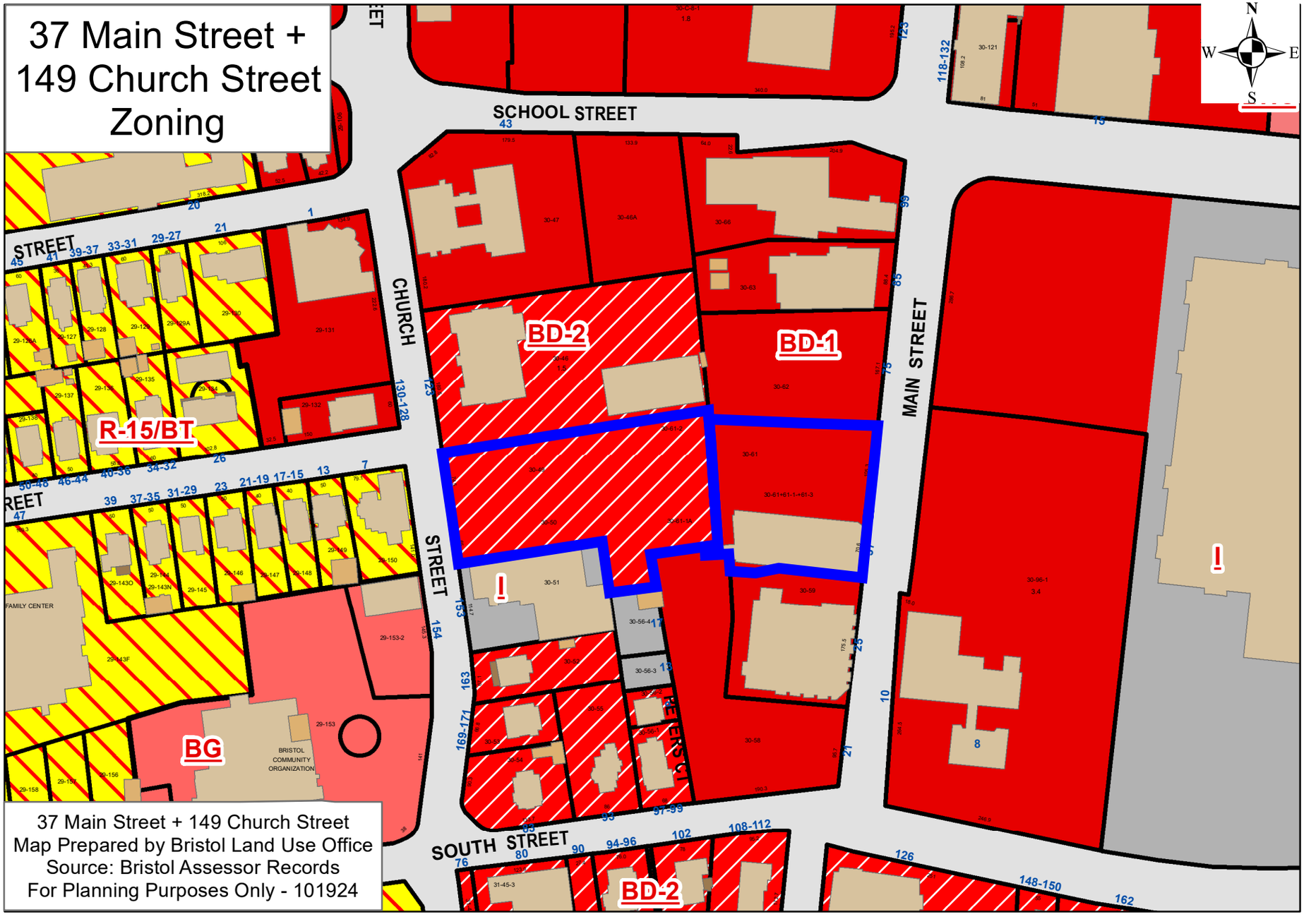
## Project Narrative

The project is the re-development of 37 Main Street (Mafles Plaza). The existing site is 27,123 s.f. (0.623 Acres) and is bordered by Main Street to the east, Former \\algreens Pharmacy to the south, City of Bristol public parking to the west and SNET to the north. An existing sidewalk connects the subject property to the public parking lot. The northern property line comprises sections of existing concrete retaining walls which contain an unnamed brook in a depressed section. The area between the walls would be flagged as inland wetlands, but the area was inaccessible due to chain link fence enclosures. The portion of these inland wetlands on the subject property would equate to 936 s.f. The remaining site is uplands comprising of bituminous pavement, concrete sidewalk and a recently demolished building subject *to* a fire in 2022. The entire existing site is made up of impervious surfaces. Additionally, 19,336 s.f. of the subject property is within the 100' upland review area. The site does not contain any storm drainage features and the entire site sheet flows to Main Street.

The proposed project is a 4-story mixed use building with a footprint of 7,035 s.f. The building will consist of 3,083 s.f. of retail space and 28 residential units (mix of 1 and 2 bedroom units). The site will include 21 off-street parking spaces to the rear of the building and 6 on-street parking spaces along the west side of Main Street. Additional parking will be available on the east side of Main Street (to be developed by others) and the City of Bristol public parking lot to the west of the site contains 55 spaces. The site is serviced by sanitary sewer, public water, underground electric, telephone and cable, and gas services. The east side of the building will have an open-air patio/entrance area along the entire building frontage.

On-site storm drainage consists of a conventional pipe and catch basin system, hydro-dynamic oil/grit separator and an underground storage/infiltration system that treats on-site storm water quality and reduces peak flows to the City of Bristol storm drainage system in Main Street. Proposed impervious is 18,916 s.f. (69.7%) vs 27,123 s.f. (100%) existing, which results in a significant reduction in impervious cover.


37 Main Street +
149 Church Street
Location
SCHOOL STREET
CHURCH STREET
MAIN STREET
SOUTH STREET
PETERS CT
BRISTOL COMMUNITY ORGANIZATION
FAMILY CENTER
N
S
E
W
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 100924


37 Main Street +
149 Church Street
Zoning
SCHOOL STREET
CHURCH STREET
MAIN STREET
SOUTH STREET
BD-1
BD-2
R-15/BT
BG
I
N
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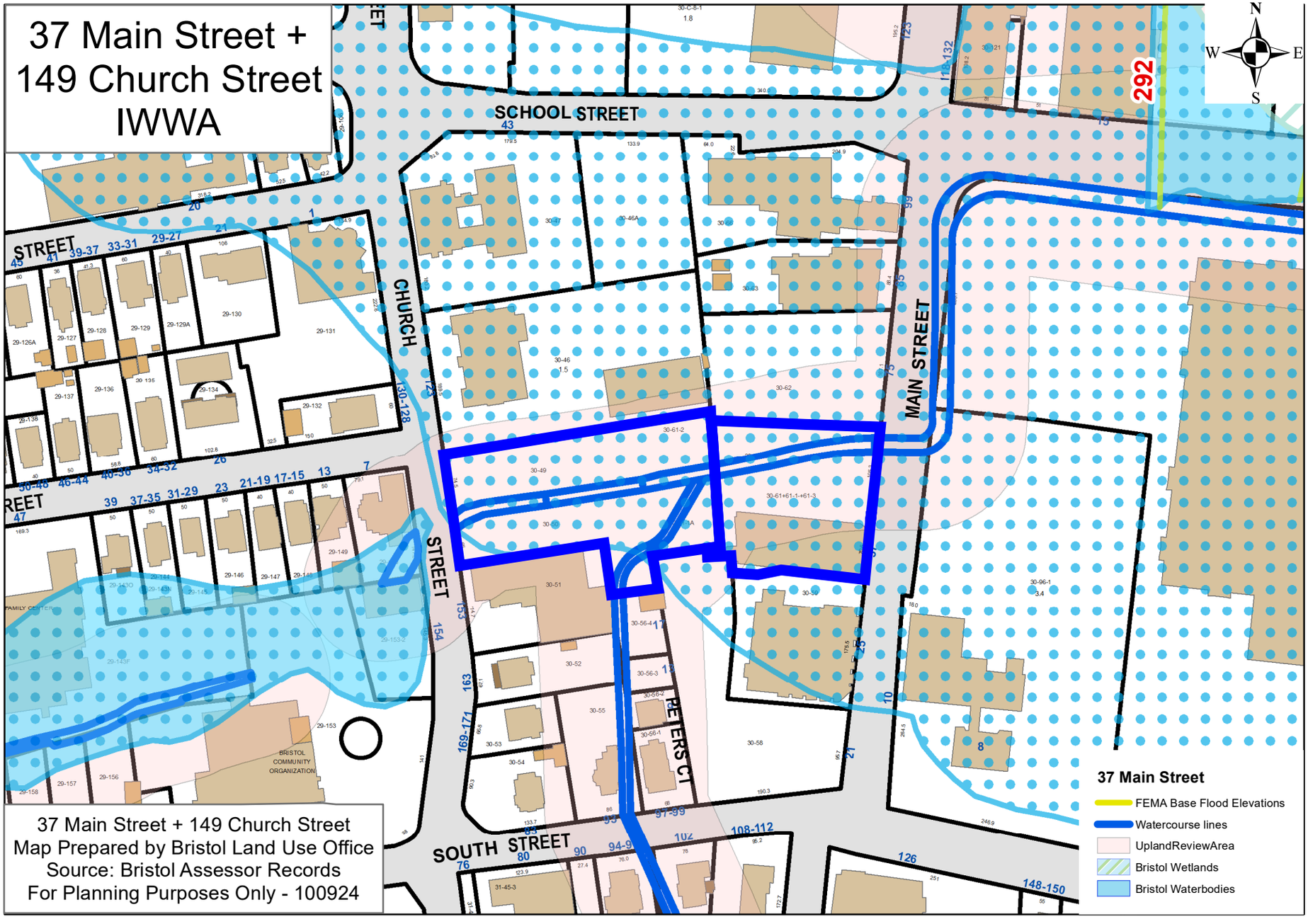
S
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 101924


37 Main Street +
149 Church Street
IWWA
SCHOOL STREET
CHURCH STREET
MAIN STREET
PETERS CT
SOUTH STREET
BRISTOL COMMUNITY ORGANIZATION
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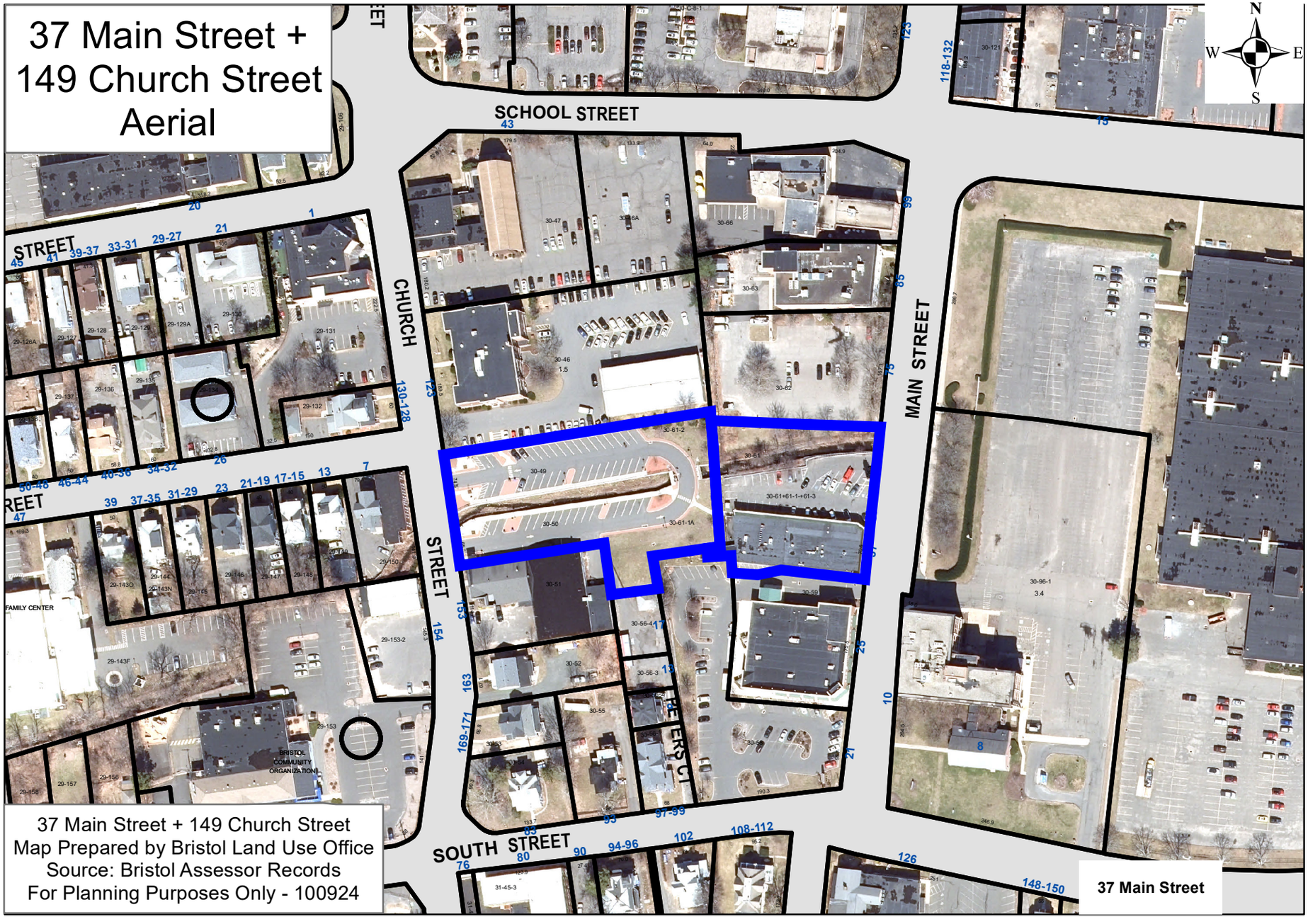
S
37 Main Street
FEMA Base Flood Elevations
Watercourse lines
UplandReviewArea
Bristol Wetlands
Bristol Waterbodies
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 100924


37 Main Street + 149 Church Street Aerial
SCHOOL STREET
CHURCH STREET
MAIN STREET
SOUTH STREET
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 100924
37 Main Street
N
S
E
W

# Site Plan Comments

CITY OF BRISTOL
SITE PLAN REVIEW COMMITTEE
STAFF COMMENTS - 2510

SITE PLAN: Site Plan for a Mixed-Use Building and 28 dwelling units with parking on another lot under different ownership at 37 Main Street and 163 Church Street Gold Coast Realty, LLC, applicant.
*Plans Dated: August 27, 2024; Date of Committee Review: November 5 & 14, 2024 (first review)*

**ENGINEERING/PUBLIC WORKS (Anthony Lorenzetti):**

1. Verify that the illumination plan proposed is in compliance with section 11.2 of the regulations.
2. Confirm that the landscaping plan and project details conform to section 11.1.2 of the regulations.
3. The sign installed within the accessible space reduces the effective size of the parking space, the space should be lengthened or the sign should be relocated.
4. There are existing curb cuts on Main Street that need to be removed. Sidewalks and granite curbing would also need to be installed and or replaced.
5. The southern boundary the site along the dollar store property has cracked bituminous concrete along the border. Provide a detail of how that will be repaired.
6. Recommend driveway apron of 22 feet for two-way traffic and verify that vehicles can turn in and out without going over the curb, sidewalk. Five- foot radii are required on the driveway aprons.
7. Provide grading to all property lines.
8. The northerly grading of the site shows up to a 2 foot fill along the northerly edge of the proposed building show how the grading to the existing wall along the watercourse at the sidewalk will work. What will be the effect upon the existing concrete/gabion wall as previously constructed? Sections may be required.
9. Provide grades showing that sedimentation control along the unnamed brook is not required as shown on the plans.
10. This site has one proposed accessible parking space. The continuous accessible path should not be with the parking space. Consider a sidewalk outside the space.
11. We recommend that the proposed wall on the eastern property line be moved back from street line, a detail and section should also be provided for the wall.
12. What is the quantity of fill being brought onto the site?
13. Provide complete structural plans.
14. If the building will have a basement, explain how the subsurface stormwater system will affect it.
15. The stop sign should be installed 7 feet to the bottom due to its proximity to the sidewalk, rather than the five feet show on the plans.
16. Provide additional detail on the two ramps proposed for the southeast building corner. One would be 18 feet long and a second would be 22. These ramps would be required to have railings on them. The max rise of a sidewalk ramp is 6 inches without rail. Detectable warning strips should be installed.
17. The proposed sidewalk on the northerly side of the parking lot is proposed to be constructed over the guiderail and possibly the fencing. Clarify what items are to be removed and replaced as necessary.

18. Revise details on the plans using current city standard details.
19. Eliminate parking on the frontage as necessary to provide adequate intersectional sightlines in conformance with section 12.4 B.
20. No loading zone is shown. Section 13.10
21. The public works department supports off-site improvements to Main St., however final approval is required by the Director of Public Works and Board of Public Works.
22. The proposed plan shows a request reduce parking to from the required 51, if more than 30 spaces are constructed EV charging infrastructure is required. Section 13.3
23. The commission by regulation may reduce the required parking on-site provide information provided the information in the regulations is submitted per section 13.4 and section 8.4.5.

**CITY PLANNER (Robert Flanagan/Andrew Armstrong):**

1. The previous Variance approvals (Application #3791) for this property will be applicable to the new plans. This is item will be reviewed by the Commission.
2. Indicate application number, approval date, and nature of Site Plan and Special Permit associated with this project.
3. Indicate application number, approval date, and nature of any Inland Wetlands and Watercourses Agency permits associated with this project
4. Label building entrances/exits.
5. Are there any electric vehicle (EV) charging stations proposed?
6. Can the person utilizing the handicap parking space use the side building entry or would they be required to access from the front entry?
7. Provide a sheet for Landscaping & Lighting improvements. Provide photometric diagram and luminaire details; details for pole heights and placement of poles should be added to site plan and landscaping plan. Add notation to plan that all parking lot lighting will be properly shielded to prevent light trespass onto adjoining properties and adjoining streets.
8. The Zoning Table says the building is 3 stories and the Building Form Standards Table and Plan cover sheet states it is 4 stories. Please clarify. All items in the Zoning Table should be reviewed for accuracy with the plan.
9. Show traffic directional arrows on site plan.
10. Will there be dedicated employee and/or visitor parking?
11. Provide hours and days of operation for the ground floor businesses.
12. How was the amount of landscaping determined? Parking areas containing between 20 and 99 parking spaces shall contain a minimum of 15 square feet of interior landscaping area per parking space, distributed among the end islands, interior islands and planting strips required by Section 11.1.3. Provide calculation for landscaping.
13. The applicant should provide a listing of the LID (Low Impact Development) features that have been incorporated into the Site Plan design, and in doing so, demonstrate compliance with Section 15.5.5.1.D.

14. Final As-Built required prior to C.O. being issued.

15. Sidewalks separating parking areas from buildings must have a minimum width of 6' ft.

16. The proposed parking on-site does not meet the parking requirements. A Special Permit is required to allow for additional off-street parking spaces. Provide details of off-street parking proposed in a new table in relation to the overall requirement and show the location within the plan. Update the handicap parking requirement based off the total proposed number of parking spaces.

**BUILDING/ZONING ENFORCEMENT (Richard Brown/ Brandon Peate)**

1. No comments at this time.

**POLICE DEPARTMENT (Lt. Krajewski/Sgt. Ouellette)**

1. Roadside public street parking does not constitute parking assigned to this project and would be open to anyone. If retail is expected to utilize public street parking, a handicap space should be included, which has special circumstances, see: https://cslib.contentdm.oclc.org/digital/collection/p128501coll2/id/726330/rec/7

2. Restriping of the roadway would also need public works approval.

**FIRE MARSHAL (Kristopher Lambert):**

1. No questions or comments regarding the fire code at this time.

**WATER DEPARTMENT (Paul Keegan/Rob Longo)**

1. All non –emergency work must be scheduled. A minimum of 4 days' notice required.

2. All water and sewer work require a permit, which can be accessed on our web site.

3. Any work not inspected, will require to be excavated and inspected – NO exceptions

4. All work to Water and Sewer work must be performed by a licensed person or apprentice

5. Any changes to the plan must be reviewed

6. Prior to CO a cross connection inspection must be done by the meter shop

**Sewer**

1. Sewer connection fees are based off the water meter size.

2. All grease interceptors need to be submitted for review.

3. lateral to be abandoned can be cut and capped behind the curb.

4. The new lateral to be tapped on Main, it can also be corded into the Southern manhole as an inside drop if possible.

**Water**

1. Call for pricing for 6 inch and 4-inch services

2. Fees must be paid to order material and schedule

3. Both services must follow policy on MJ restraints

4. Both services require pressure test, bacteria test and flush

5. Old 2-inch service must be disconnected at the main

**DRAINAGE REPORT**
37 Main Street
Bristol, CT
August 27, 2024

# Hyperlink:

https://www.bristolct.gov/DocumentCenter/View/47617/Complete-Drainage-Analysis-8-27-24-

Prepared For:
Gold Coast Properties, LLC
303 Linwood Avenue Suite 2D
Fairfield, CT 06824

Prepared by:
R.R. Hiltbrand Engineers & Surveyors, LLC
575 North Main Street
Bristol, CT 06010
rrhilt@aol.com

# Zoning Board of Appeals App. #3791 Hyperlink:

https://www.bristolct.gov/DocumentCenter/View/47862/App-3791_ForAgenda-Previous-Variances

**Variances Granted in 2022:**

1. Build to Line
2. Building Fenestration

# Google Earth


Layers



# Site Plan 8/27/24 Updated: 11/13/24

# PROPOSED 4-STORY MULTI-USE BUILDING
# FORMER MAFALES PLAZA

## #37 Main Street
## Bristol, Connecticut




**Project Narrative**

The project is the re-development of 37 Main Street (Mafles Plaza). The existing site is 27,123 s.f. (0.623 Acres) and is bordered by Main Street to the east, Former Walgreens Pharmacy to the south, City of Bristol public parking to the west and SNET to the north. An existing sidewalk connects the subject property to the public parking lot. The northern property line comprises sections of existing concrete retaining walls which contain an unnamed brook in a depressed section. The area between the walls would be flagged as inland wetlands, but the area was inaccessible due to chain link fence enclosures. The portion of these inland wetlands on the subject property would equate to 936 s.f. The remaining site is uplands comprising of bituminous pavement, concrete sidewalk and a recently demolished building subject to a fire in 2022. The entire existing site is made up of impervious surfaces. Additionally, 19,336 s.f. of the subject property is within the 100' upland review area. The site does not contain any storm drainage features and the entire site sheetflows to Main Street.

The proposed project is a 4-story mixed use building with a footprint of 7,035 s.f. The building will consist of 3,083 s.f. of retail space and 28 residential units (mix of 1 and 2 bedroom units). The site will include 21 off-street parking spaces to the rear of the building and 6 on-street parking spaces along the west side of Main Street. Additional parking will be available on the east side of Main Street (to be developed by others) and the City of Bristol public parking lot to the west of the site contains 55 spaces. The site is serviced by sanitary sewer, public water, underground electric, telephone and cable, and gas services. The east side of the building will have an open-air patio/entrance area along the entire building frontage.

On-site storm drainage consists of a conventional pipe and catch basin system, hydro-dynamic oil/grit separator and an underground storage/infiltration system that treats on-site storm water quality and reduces peak flows to the City of Bristol storm drainage system in Main Street. Proposed impervious is 18,916 s.f. (69.7%) vs 27,123 s.f. (100%) existing, which results in a significant reduction in impervious cover.

AS-BUILT SURVEY SHALL BE PROVIDED PRIOR TO ISSUANCE OF C.O.

*ISSUE LOG:*

*SUBMITTALS / REVISIONS:*
*Wetlands Submittal; 08-27-24*

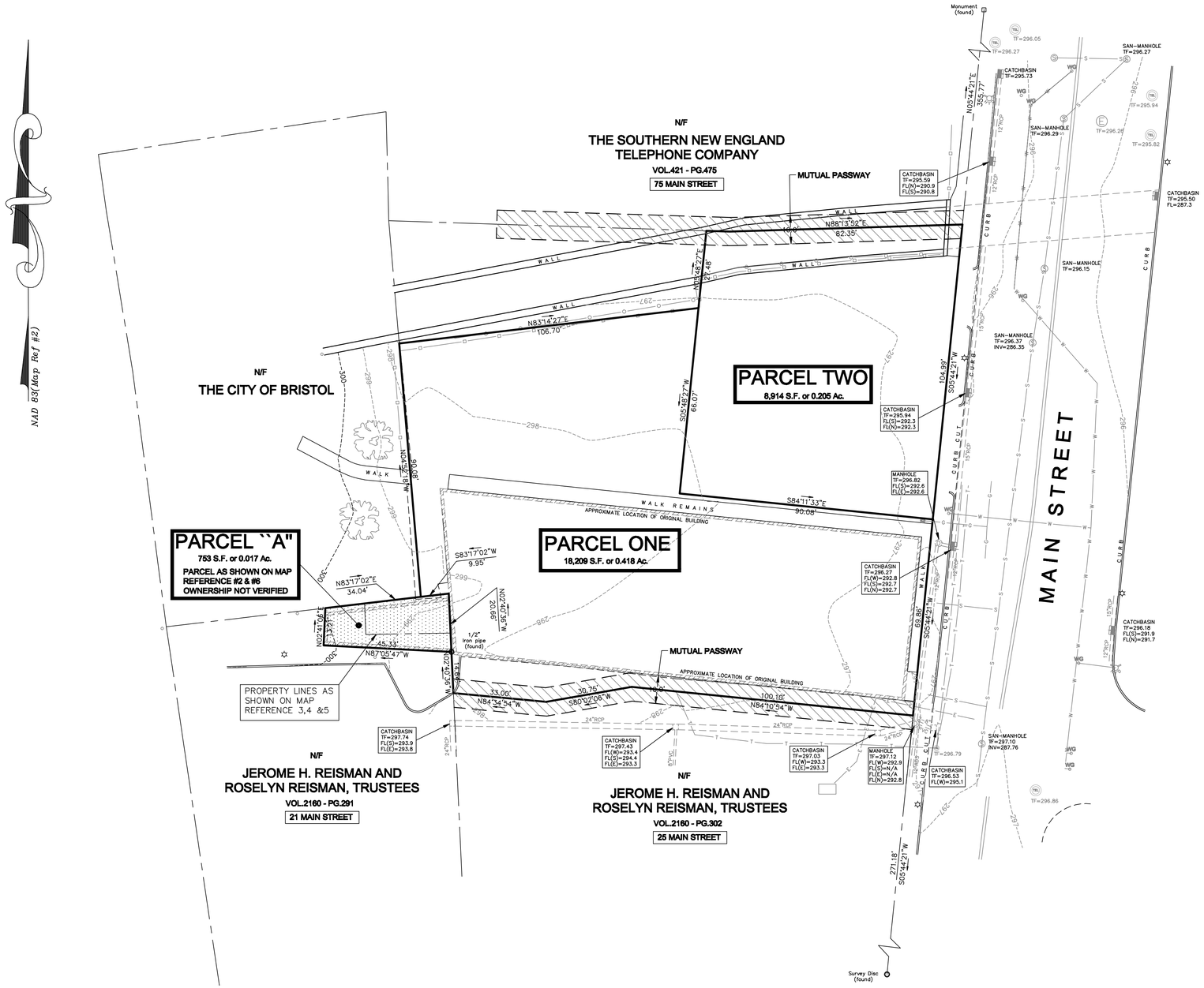
*APPROVALS:*
*Wetlands Application #xxx; Approved xxx*
*Zoning Application #xxx - xxx; Approved xxx*

*PREPARED FOR:*

*Gold Coast Properties*
*303 Linwood Avenue - Suite 2D*
*Fairfield, CT 06824*
*Primary Contact: Stephen Shapiro*

*ENGINEER:*

*R. R. Hiltbrand Engineers & Surveyors*
*575 North Main Street*
*Bristol, Connecticut*
*06010*




## L E G E N D

| | |
|---|---|
| STONE WALL | |
| SANITARY SEWER | S S |
| STORM SEWER | |
| CONTOUR LINE | 100 |
| WATER LINE | W W |
| ELECTRIC LINE | E E |
| TELEPHONE LINE | T T |
| GAS LINE | G G |
| FOLIAGE LINE | |
| CHAINLINK FENCE | |
| GUARDRAIL | |
| IRON PIN | |
| SURVEY MONUMENT | |
| DRILL HOLE | |
| CURB CATCHBASIN | |
| CURBLESS CATCHBASIN | |
| UTILITY POLE | |
| UTILITY POLE WITH GUY | |
| SANITARY MANHOLE | |
| DRAINAGE MANHOLE | |
| WATER GATE VALVE | |
| ELECTRIC MANHOLE | |
| TELEPHONE MANHOLE | |
| LIGHT STAND | |

## NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-20 AND THE ``STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT'' AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED ON SEPTEMBER 26, 1996.

2. TYPE OF SURVEY = LIMITED PROPERTY SURVEY

3. BOUNDARY DETERMINATION CATEGORY = DEPENDENT RE-SURVEY

4. OWNERS OF RECORD - 37 MAIN STREET, LLC (Vol.1432 - Pg.330)

5. TOTAL AREA - 27,876 S.F. or 0.640 Ac.

6. ZONE - C

7. ELEVATIONS BASED ON MAP REFERENCE #2

8. BEARINGS BASED ON N.A.D. 83 AS ESTABLISHED BY MAP REFERENCE #2

9. UNDERGROUND UTILITIES, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS ARE APPROXIMATE AND OTHER SUCH FEATURES MAY EXIST UNKNOWN TO DUFOUR SURVEYING ASSOCIATES. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455

## MAP REFERENCES :


1.``MAP OF PROPERTY - OF - VETRANO BROTHERS - INCORPORATED - BRISTOL, CONN.'', scale 1" = 20', dated March 1961, revised to 2/1/57 and prepared by W.C.Lefevre, P.E. & L.S.

2. ``DEPARTMENT OF PUBLIC WORKS - DIVISION OF ENGINEERING - CITY OF BRISTOL - CONNECTICUT - MAP OF LOTS - 49-51, 61-1A AND 61-2 - OWNED BY THE CITY OF BRISTOL - CHURCH STREET BRISTOL, CT'', scale 1" = 20', dated Jan. 2010 and prepared by Peter W. Forrest, L.S.

3. ``PROPERTY MAP - FOR - WALGREENS - STORE #1-203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 9/27/05 and prepared by Kratzert, Jones & Associates, Inc.

4. ``REVISED PROPERTY - MAP - FOR - WALGREENS - STORE #10203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 9/27/05 and prepared by Kratzert, Jones & Associated, Inc.

5. ``LOT LINE - REVISION - MAP - FOR - WALGREENS - STORE #10203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 9/27/05 and prepared by Kratzert, Jones & Associates, Inc.

6. ``LOT LINE - REVISION - MAP - FOR - WALGREENS - STORE #10203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 6/21/06 and prepared by Kratzert, Jones & Associates, Inc.


GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP AND SURVEY WERE PREPARED IN ACCORDANCE WITH THE STANDARDS OF A CLASS A-2 & T-2 SURVEY AS DEFINED IN THE CODE OF PRACTICE FOR STANDARDS OF ACCURACY OF SURVEYS AND MAPS, ADOPTED SEPT. 26, 1996 AS AMENDED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED.

CARMINE J. MATRASCIA - L.S. #70219

DUFOUR SURVEYING LLC

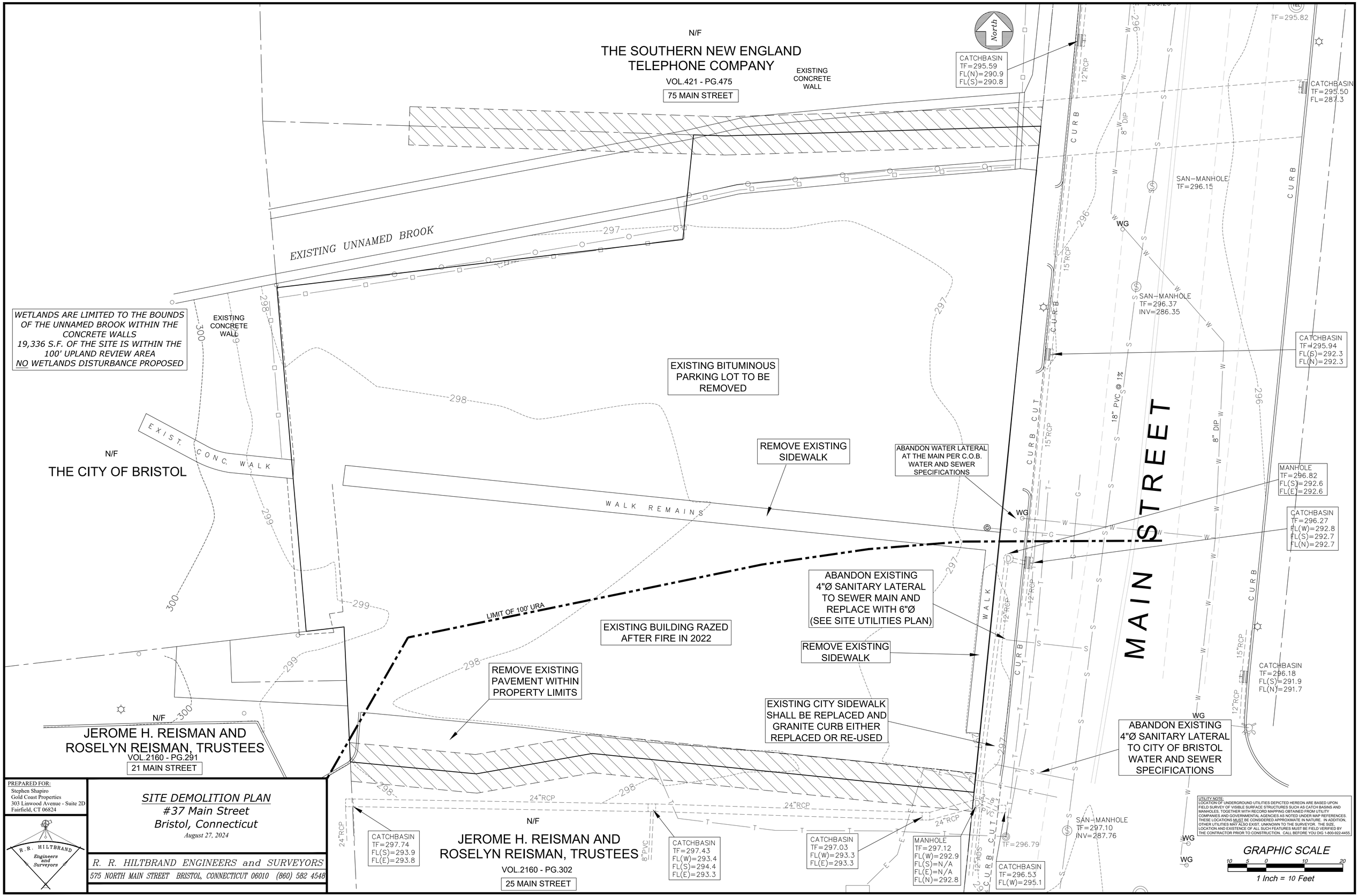
# IMPROVEMENT LOCATION SURVEY

PREPARED FOR: 37 MAIN STREET LLC

37 MAIN STREET, BRISTOL, CONNECTICUT

| | | |
|---|---|---|
| SCALE: 1" = 20' | APPROVED: CARMINE J. MATRASCIA - L.S. #70219 | |
| DATE: 08-05-2022 | JOB NO.: 22-37 | FILE NO.: \22-37 |


DUFOUR SURVEYING LLC
575 NORTH MAIN STREET
BRISTOL, CONNECTICUT
860-314-0502 860-738-0222




PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R.R. HILTBRAND Engineers and Surveyors

*SITE DEMOLITION PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

| ZONING TABLE (ZONE BD-1) | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| MINIMUM LOT AREA | N/A | 27,123 S.F. |
| MINIMUM LOT WIDTH | N/A | 174.85 Ft |
| MINIMUM FRONT YARD | N/A | 13.00 Ft |
| MINIMUM SIDE YARD | N/A | 12.00 Ft |
| MINIMUM REAR YARD | N/A | 90.30 Ft |
| MAXIMUM BUILDING HEIGHT | N/A | 3 STORY |
| MAXIMUM BUILDING COVERAGE | N/A | 25.94% |

| BUILDING FORM STANDARDS TABLE (ZONE BD-1) | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| MINIMUM FLOOR AREA RATIO | 0.6 | 1.04 |
| MAXIMUM BUILD-TO LINE | 10 FT | 15.50 Ft |
| MINIMUM BUILDING HEIGHT | 18 FT | 4 STORY (40'±) |
| NUMBER OF STORIES | 2 FULL (MIN.) | 4 FULL |
| AREA OF BUILDING FENESTRATION | 65% (MIN.) (593 S.F. MIN.) | 585.0 S.F. = 64.1%* |
| BUILDING FRONTAGE - LOT FRONTAGE RATIO | 65% = 113.7 FT (174.85' x 65%) | 65.2% (114.0 FT/174.85 FT) |
| ORIENTATION OF BUILDING ENTRANCES | 2 STREET ENTRANCES | 3 STREET ENTRANCES |

*VARIANCE APPLICATION #XXXX - APPROVED XXXXX*

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

*WETLANDS ARE LIMITED TO THE BOUNDS OF THE UNNAMED BROOK WITHIN THE CONCRETE WALLS*
*19,336 S.F. OF THE SITE IS WITHIN THE 100' UPLAND REVIEW AREA*
*NO WETLANDS DISTURBANCE PROPOSED*

**City of Bristol - Downtown Compliance Chart**

| | | Main Street |
|---|---|---|
| Sec. VI.C.6.b.(1) | floor area ratio (.6 min) | |
| | gross floor area of buildings (sq. ft.) | 28,140 |
| | total lot area (sq. ft.) | 27,123 |
| | ratio of floor area to lot area (.60 required) | 103.7% |
| Sec. VI.C.6.b.(2) | build-to line (10 ft. min.; 25 ft. max for up to 50% of building wall) | |
| | total length of building wall (ft.) | 114 |
| | portion of building wall up to 10-ft. build-to-line (ft.) | 0 |
| | portion of building wall up to 10-ft. build-to-line (%) | 0% |
| | portion of building wall between 10-ft. build-to-line and 25ft. (ft.) | 114 |
| | portion of building wall between 10-ft. build-to-line and 25ft. (%) | 100% |
| | greatest setback from front lot line (ft.) | 15.5 |
| Sec. VI.C.6.b.(5) | building fenestration ("glazing")* (65% min) | |
| | total area of building wall* (sq. ft.) | 912 |
| | portion of building wall cotaining glazing* (sq. ft.) | 585 |
| | portion of building wall cotaining glazing* (%) | 64.1% |
| | ** measured between 2 ft. and 10 ft. above street grade* | |
| Sec. VI.C.6.b.(6) | building frontage to lot frontage (65% min) | |
| | total length of building wall (building frontage) (ft.) | 114' |
| | total length of front lot line (ft.) | 174.85' |
| | ratio of building frontage to lot frontage | 65.2% |

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

EXISTING CONCRETE WALL

EXISTING UNNAMED BROOK

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

PROPOSED HANDICAP SPACE WITH BOLLARD SIGN

PROPOSED BITUMINOUS PARKING LOT

PROPOSED BITUMINOUS DRIVEWAY

PROPOSED 5' CONCRETE SIDEWALK

PROPOSED CONCRETE PATIO/ENTRANCE AREA

PROPOSED CURB WALL (HEIGHT VARIES ±24")

PROPOSED RE-BUILT CONCRETE WALKS ALONG FRONTAGE

10' BUILD TO LINE

25' BUILD TO LINE

LIMIT OF 100' URA

PROPOSED RE-STRIPING OF MAIN STREET BY OTHERS

MAIN STREET

CURB

EXIST. CONC. WALK

N/F
THE CITY OF BRISTOL

| PARKING REQUIREMENTS TABLE | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| RESIDENTIAL DWELLING UNIT | | |
| 28 TOTAL UNITS | | |
| 1.5 SPACES PER UNIT | 42 SPACES | |
| | | |
| PROPOSED RETAIL - 3,083 S.F. | | |
| 3 SPACES PER 1,000 S.F. | 9.25 SPACES | |
| | | |
| TOTAL: | = 51.25 SPACES | 21 SPACES |
| | | 20 STANDARD |
| | | 1 HANDICAP |

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

PROPOSED 10' x 10' CONCRETE DUMPSTER PAD ENCLOSURE (SEE DETAIL)

PROPOSED 12" WIDE WHITE STOP BAR AND STOP SIGN

PROPOSED CONCRETE APRON TO CITY OF BRISTOL SPECIFICATIONS

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*SITE LAYOUT PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

North

*TEST PIT DATA:*

DP #1 (PARKING LOT AREA)

0 - 3" BITUMINOUS CONCRETE
3 - 15" TAN MEDIUM-FINE SAND SUB-BASE
15 - 34" MIXED FILL
34 - 38" ORIGINAL GRADE (ORGANICS)
38 - 90" BROWN MEDIUM-FINE SAND AND GRAVEL (6" COBBLES)

NO GROUNDWATER MOTTLING @ 84"

DP #2 (BUILDING DEMO AREA)

0 - 36" MIXED FILL
36 - 40" ORIGINAL GRADE (ORGANICS)
40 - 99" BROWN MEDIUM-FINE SAND AND GRAVEL (6" COBBLES)

GROUNDWATER @ 96" MOTTLING @ 86"

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

N/F
THE CITY OF BRISTOL

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

EXISTING UNNAMED BROOK
EXISTING CONCRETE WALL
EXIST. CONC. WALK
LIMIT OF 100' URA
PROPOSED 5' CONCRETE SIDEWALK
PROPOSED CONCRETE PATIO/ENTRANCE AREA
PROPOSED CURB WALL (HEIGHT VARIES ±24")
MAIN STREET
CURB

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00
SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

PROPOSED STMH #1
TF - 298.40
FL - 295.00

PROPOSED 24"Ø YD #3
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #2
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #1
TF - 297.50
FL - 293.50

100' - 12" CPP @ 1%

PROPOSED C-CB #4
TF - 295.88±
FL - 292.50

CATCHBASIN
TF=295.59
FL(N)=290.9
FL(S)=290.8

CATCHBASIN
TF=295.50
FL=287.3

CATCHBASIN
TF=295.94
FL(S)=292.3
FL(N)=292.3

MANHOLE
TF=296.82
FL(S)=292.6
FL(E)=292.6

CATCHBASIN
TF=296.27
FL(W)=292.8
FL(S)=292.7
FL(N)=292.7

CATCHBASIN
TF=296.18
FL(S)=291.9
FL(N)=291.7

32' - 12" CPP @ 1%

22' - 12" CPP @ 5.5%

8"Ø CPP ROOF LEADER
FL - 296.40

40' - 8" CPP @ 1%

PROPOSED C-CB #3
TF - 297.50
FL - 294.50

STORAGE AND INFILTRATION SYSTEM
BOTTOM OF UNIT - 293.00
4 ROWS - 6 UNITS EACH ROW
STORMTECH SC-740

DP 1

52' - 12" CPP @ 1%

PROPOSED 24"Ø YD #4
TF - 297.50
FL - 294.75

12"Ø CPP ROOF LEADER OUTLET
FL - 296.40

PROPOSED C-CB #2
TF - 297.50
FL - 293.95

34' - 12" CPP (RL)

DP 2

36' - 12" CPP @ 1%

PROPOSED 4'Ø DOWNSTREAM DEFENDER S4
TF - 298.17
FL - 293.60 (IN)
FL - 293.60 (OUT)

75' - 12" CPP @ 1%

PROPOSED C-CB #1
TF - 297.50
FL - 294.70

7/8"/FT DN

H.P.

CATCHBASIN
TF=297.74
FL(S)=293.9
FL(E)=293.8

CATCHBASIN
TF=297.43
FL(W)=293.4
FL(S)=294.4
FL(E)=293.3

CATCHBASIN
TF=297.03
FL(W)=293.3
FL(E)=293.3

MANHOLE
TF=297.12
FL(W)=292.9
FL(S)=N/A
FL(E)=N/A
FL(N)=292.8

CATCHBASIN
TF=296.53
FL(W)=295.1

24"RCP
15"RCP
12"RCP
8"PVC
12"ABS

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

# *SITE GRADING & DRAINAGE PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

R. R. HILTBRAND Engineers and Surveyors

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

North

N/F

THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY

VOL.421 - PG.475

75 MAIN STREET

EXISTING CONCRETE WALL

POSSIBLE GAS LATERAL LOCATION. FINAL LOCATION SHALL BE DETERMINED BY EVERSOURCE GAS

CATCHBASIN
TF=295.59
FL(N)=290.9
FL(S)=290.8

TF=295.62

CATCHBASIN
TF=295.50
FL=287.3

EXISTING UNNAMED BROOK

PROPOSED STMH #1
TF - 298.40
FL - 295.00

PROPOSED 24"Ø YD #3
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #2
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #1
TF - 297.50
FL - 293.50

100' - 12" CPP @ 1%

GAS

WAT

PROPOSED 4" DIP CL-52 DOMESTIC

PROPOSED C-CB #4
TF - 295.88±
FL - 292.50

SAN-MANHOLE
TF=296.15

PROPOSED 8" x 4" TSV & 4" GATE VALVE

WG

PROPOSED 8" x 6" TSV & 6" GATE VALVE

PROPOSED 6" DIP CL-52 FIRE SERVICE

BITUMINOUS PATCH TRENCHES TO CITY OF BRISTOL SPECIFICATIONS (TYPICAL)

SAN-MANHOLE
TF=296.37
INV=286.35

CATCHBASIN
TF=295.94
FL(S)=292.3
FL(N)=292.3

EXISTING CONCRETE WALL

7/8"/FT DN

22" 12" CPP @ 5.5%

32' - 12" CPP @ 1%

8"Ø CPP ROOF LEADER
FL - 296.40

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

PROPOSED CONCRETE PATIO/ENTRANCE AREA

PROPOSED CURB WALL (HEIGHT VARIES ±24")

EXIST. CONC. WALK

N/F

THE CITY OF BRISTOL

PROPOSED 5' CONCRETE SIDEWALK

PROPOSED C-CB #3
TF - 297.50
FL - 294.50

DP 1

STORAGE AND INFILTRATION SYSTEM

4 ROWS - 6 UNITS EACH ROW

BOTTOM OF UNIT = 293.00

STORMTECH SC-740

40' - 8" CPP @ 1%

PROPOSED 24"Ø YD #4
TF - 297.50
FL - 294.75

52' - 12" CPP @ 1%

12"Ø CPP ROOF LEADER OUTLET
FL - 296.40

PROPOSED C-CB #2
TF - 297.50
FL - 293.95

34' - 12" CPP (RL)

DP 2

36' - 12" CPP @ 1%

PROPOSED 4'Ø DOWNSTREAM DEFENDER S4
TF - 298.17
FL - 293.60 (IN)
FL - 293.60 (OUT)

REPLACE EXISTING 4"Ø SANITARY TO MAIN WITH NEW 6"Ø PVC SDR-35 WITH BACKFLOW PREVENTER WITHIN BUILDING

SAN

7/8"/FT DN

LIMIT OF 100' URA

75' - 12" CPP @ 1%

PROPOSED C-CB #1
TF - 297.50
FL - 294.70

D

N/F

JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES

VOL.2160 - PG.291

21 MAIN STREET

MAIN STREET

18" PVC @ 1%

15"RCP

8" DIP

12"RCP

ABANDON WATER LATERAL AT THE MAIN PER C.O.B. WATER AND SEWER SPECIFICATIONS

CATCHBASIN
TF=296.18
FL(S)=291.9
FL(N)=291.7

ABANDON SEWER LATERAL AND CAP OFF PER C.O.B. WATER AND SEWER SPECIFICATIONS

BITUMINOUS PATCH TRENCHES TO CITY OF BRISTOL SPECIFICATIONS (TYPICAL)

MANHOLE
TF=296.82
FL(S)=292.6
FL(E)=292.6

CATCHBASIN
TF=296.27
FL(W)=292.8
FL(S)=292.7
FL(N)=292.7

WATER NOTES:
1. 6" FIRE SERVICE HAS NO CONNECTION FEES, BUT MUST BE PRESSURE TESTED, BACTERIA TESTED AND FLUSHED.

2. MINIMUM 3" SEPARATION REQUIRED BETWEEN 6" FIRE SERVICE AND 4" DOMESTIC SERVICE.

24"RCP

CATCHBASIN
TF=297.74
FL(S)=293.9
FL(E)=293.8

8"PVC

CATCHBASIN
TF=297.43
FL(W)=293.4
FL(S)=294.4
FL(E)=293.3

CATCHBASIN
TF=297.03
FL(W)=293.3
FL(E)=293.3

MANHOLE
TF=297.12
FL(W)=292.9
FL(S)=N/A
FL(E)=N/A
FL(N)=292.8

12"ADS

CATCHBASIN
TF=296.53
FL(W)=295.1

TF=296.79

SAN-MANHOLE
TF=297.10
INV=287.76

N/F

JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES

VOL.2160 - PG.302

25 MAIN STREET

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

# *SITE UTILITIES PLAN*
## *#37 Main Street*
## *Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

North

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

EXISTING CONCRETE WALL WILL PREVENT ANY SEDIMENT/RUN-OFF FROM ENTERING THE BROOK

EXISTING CONCRETE WALL

CATCHBASIN
TF=295.59
FL(N)=290.9
FL(S)=290.8

CATCHBASIN
TF=295.50
FL=287.3

EXISTING CONCRETE WALL WILL PREVENT ANY SEDIMENT/RUN-OFF FROM ENTERING THE BROOK

EXISTING UNNAMED BROOK

PROPOSED STMH #1
TF - 298.40
FL - 295.00

PROPOSED 24"Ø YD #3
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #2
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #1
TF - 297.50
FL - 293.50

100' - 12" CPP @ 1%

PROPOSED C-CB #4
TF - 295.88±
FL - 292.50

PROPOSED 8"Ø SEDIMENT LOG (SEE DETAIL) (TYPICAL)

EXISTING CONCRETE WALL

22' - 12" CPP @ 5.5%

32' - 12" CPP @ 1%

8"Ø CPP ROOF LEADER
FL - 296.40

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

PROPOSED CONCRETE PATIO/ENTRANCE AREA

PROPOSED CURB WALL (HEIGHT VARIES ±24")

CATCHBASIN
TF=295.94
FL(S)=292.3
FL(N)=292.3

MAIN STREET

PROPOSED C-CB #3
TF - 297.50
FL - 294.50

PROPOSED 5' CONCRETE SIDEWALK

STORAGE AND INFILTRATION SYSTEM

BOTTOM OF UNIT - 293.00

4 ROWS - 6 UNITS EACH ROW

STORMTECH SC-740

40' - 8" CPP @ 1%

PROPOSED 24"Ø YD #4
TF - 297.50
FL - 294.75

12"Ø CPP ROOF LEADER OUTLET
FL - 296.40

PROPOSED 4'Ø DOWNSTREAM DEFENDER S4
TF - 298.17
FL - 293.60 (IN)
FL - 293.60 (OUT)

52' - 12" CPP @ 1%

PROPOSED C-CB #2
TF - 297.50
FL - 293.95

34' - 12" CPP (RL)

36' - 12" CPP @ 1%

LIMIT OF 100' URA

75' - 12" CPP @ 1%

PROPOSED C-CB #1
TF - 297.50
FL - 294.70

EXIST. CONC. WALK

N/F
THE CITY OF BRISTOL

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE (SEE DETAIL)

MANHOLE
TF=296.82
FL(S)=292.6
FL(E)=292.6

CATCHBASIN
TF=296.27
FL(W)=292.8
FL(S)=292.7
FL(N)=292.7

CATCHBASIN
TF=296.18
FL(S)=291.9
FL(N)=291.7

CATCHBASIN
TF=297.74
FL(S)=293.9
FL(E)=293.8

CATCHBASIN
TF=297.43
FL(W)=293.4
FL(S)=294.4
FL(E)=293.3

PROPOSED 8"Ø SEDIMENT LOG (SEE DETAIL) (TYPICAL)

CATCHBASIN
TF=297.03
FL(W)=293.3
FL(E)=293.3

MANHOLE
TF=297.12
FL(W)=292.9
FL(S)=N/A
FL(E)=N/A
FL(N)=292.8

CATCHBASIN
TF=296.53
FL(W)=295.1

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

# *EROSION & SEDIMENTATION CONTROL PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

*INTERIOR LANSDSCAPING*
21 SPACES @ 15 S.F. PER SPACE
315 S.F. REQUIRED
395 S.F. PROVIDED

## PLANT SCHEDULE

| MARK | QTY. | BOTANICAL NAME | COMMON NAME | SIZE |
|---|---|---|---|---|
| R | 5 | SCINTILLATION RODODENDRON | RODODENDRON | 24" - 30" |
| L | 5 | GLEDITSIA TRIACANTHOS INERMIS | THORNLESS HONEY LOCUST | 2.5" CAL. |
| Z | 9 | AZALEA | AZALEA | 15" - 18" |
| ☘ | 24 | | DAYLILLY | |

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

EXISTING CONCRETE WALL

73 S.F. INTERIOR LANDSCAPING

EXISTING UNNAMED BROOK

GRASS

RESIDENT ENTRANCE

UTILITY ENTRANCE

EXISTING CONCRETE WALL

7/8"/FT DN

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

BUSINESS ENTRANCES

PROPOSED CONCRETE PATIO/ENTRANCE AREA

PROPOSED CURB WALL (HEIGHT VARIES ±24")

PROPOSED 5' CONCRETE SIDEWALK

EXIST. CONC. WALK

N/F
THE CITY OF BRISTOL

322 S.F. INTERIOR LANDSCAPING

LIMIT OF 100' URA

MULCH

BUSINESS ENTRANCE

RESIDENT ENTRANCE

6' WALK

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

MAIN STREET

CURB

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

*SITE LANDSCAPING PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*November 13, 2024*

R. R. HILTBRAND Engineers and Surveyors

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

UTILITY NOTE:
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*GRAPHIC SCALE*
10 5 0 10 20
*1 Inch = 10 Feet*

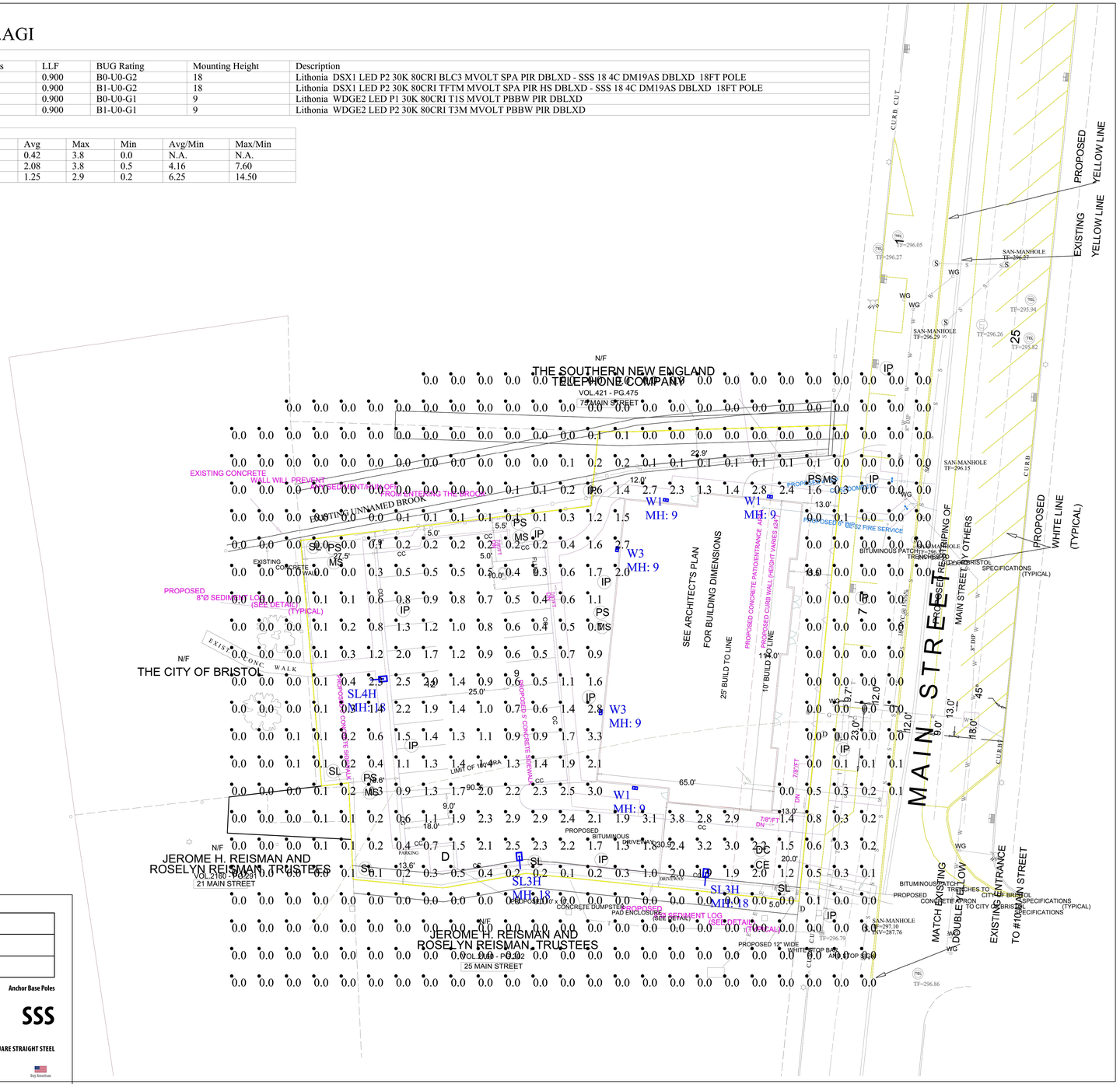
# Filename: 37 Main Street - Site Lighting - Bristol.AGI

| Luminaire Schedule | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Symbol | Qty | Label | Luminaire Lumens | Luminaire Watts | LLF | BUG Rating | Mounting Height | Description |
| | 2 | SL3H | 6185 | 67.79 | 0.900 | B0-U0-G2 | 18 | Lithonia DSX1 LED P2 30K 80CRI BLC3 MVOLT SPA PIR DBLXD - SSS 18 4C DM19AS DBLXD 18FT POLE |
| | 1 | SL4H | 7288 | 67.7927 | 0.900 | B1-U0-G2 | 18 | Lithonia DSX1 LED P2 30K 80CRI TFTM MVOLT SPA PIR HS DBLXD - SSS 18 4C DM19AS DBLXD 18FT POLE |
| | 3 | W1 | 1157 | 11.1658 | 0.900 | B0-U0-G1 | 9 | Lithonia WDGE2 LED P1 30K 80CRI T1S MVOLT PBBW PIR DBLXD |
| | 2 | W3 | 1964 | 18.9815 | 0.900 | B1-U0-G1 | 9 | Lithonia WDGE2 LED P2 30K 80CRI T3M MVOLT PBBW PIR DBLXD |

| Calculation Summary | | | | | | | |
|---|---|---|---|---|---|---|---|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| SITE | Illuminance | Fc | 0.42 | 3.8 | 0.0 | N.A. | N.A. |
| DRIVEWAY | Illuminance | Fc | 2.08 | 3.8 | 0.5 | 4.16 | 7.60 |
| PARKING | Illuminance | Fc | 1.25 | 2.9 | 0.2 | 6.25 | 14.50 |


Greg Loda / Evan White
Lighting Affiliates
1208 Cromwell Ave
Rocky Hill, CT 06067

Website : www.lightingaffiliates.com
Voice Number : (860) 721-1171 x 219
Email Address : gloda@lightingaffiliates.com


ALL LIGHTING SHALL BE SHIELDED TO PREVENT LIGHT TRESPASS ON NEIGHBORING PROPERTIES

## FEATURES & SPECIFICATIONS

**INTENDED USE — These specifications are for USA standards only.** Square Straight Steel is a general purpose light pole for up to 39-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

**CONSTRUCTION —**

**Pole Shaft:** The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, 0.120"), or 50 KSI (7-gauge, 0.179"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5" and 6".

**Pole Top:** Options include tenon top, drilled for side mount fixture, tenon with drilling (includes extra handhole) and open top. Side drilled and open top poles include a removable top cap.

**Handhole:** A reinforced handhole with grounding provision is provided at 18" from the base on side A. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

**Base Cover:** A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

**Anchor Base/Bolts:** Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (nominal 12") is hot-dipped galvanized per ASTM A-153.

**HARDWARE** — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

**FINISH** — Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets SA and SB classifications of ASTM D3359. Powder-coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Paint over Hot-dipped Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes.

**BUY AMERICAN** — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

**INSTALLATION** — **Do not** erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for the foundation design.

**WARRANTY** — 1-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

**NOTE:** Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

Catalog Number
Notes
Type

**Anchor Base Poles**

**SSS**

**SQUARE STRAIGHT STEEL**

Buy American



# D-Series Size 1
## LED Area Luminaire

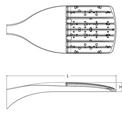
d^series

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

### Specifications

| | |
|---|---|
| EPA: | 0.69 ft² (0.06 m²) |
| Length: | 32.71" (83.1 cm) |
| Width: | 14.26" (36.2 cm) |
| Height H1: | 7.88" (20.0 cm) |
| Height H2: | 2.73" (6.9 cm) |
| Weight: | 34 lbs (15.4 kg) |



### Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

### Ordering Information

**EXAMPLE:** DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

| Series | LEDs | Color temperature[1] | Color Rendering Index[1] | Distribution | | Voltage | Mounting |
|---|---|---|---|---|---|---|---|
| DSX1 LED | **Forward optics**<br>P1 P6<br>P2 P7<br>P3 P8<br>P4 P9<br>P5<br>**Rotated optics**<br>P10[2] P12[2]<br>P11[2] P13[2] | (this section 70CRI only)<br>30K 3000K<br>40K 4000K<br>50K 5000K<br>(this section 80CRI only, extended lead times apply)<br>27K 2700K<br>30K 3000K<br>35K 3500K<br>40K 4000K<br>50K 5000K | 70CRI<br>70CRI<br>70CRI<br><br>80CRI<br>80CRI<br>80CRI<br>80CRI<br>80CRI | AFR Automotive front row<br>T1S Type I short<br>T2M Type II medium<br>T3M Type III medium<br>T3LG Type III low glare[3]<br>T4M Type IV medium<br>T4LG Type IV low glare[3]<br>TFTM Forward throw medium<br><br>T5M Type V medium<br>T5LG Type V low glare<br>T5W Type V wide<br>BLC3 Type III backlight control[3]<br>BLC4 Type IV backlight control[3]<br>LCCO Left corner cutoff[3]<br>RCCO Right corner cutoff[3] | MVOLT (120V-277V)[4]<br>HVOLT (347V-480V)[4,5]<br>XVOLT (277V - 480V)[4,5]<br><br>120[4,5]<br>208[4,5]<br>240[4,5]<br>277[4,5]<br>347[4,5]<br>480[4,5] | **Shipped included**<br>SPA Square pole mounting (4ft drilling)<br>RPA Round pole mounting (4ft drilling)<br>SPAS Square pole mounting (4" drilling)[6]<br>RPAS Round pole mounting (4" drilling)[6]<br>SPABN Square narrow pole mounting (4ft drilling)<br>WBA Wall bracket[6]<br>MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon) |

| Control options | | Other options | | Finish (required) | |
|---|---|---|---|---|---|
| **Shipped installed**<br>NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[7,8,9]<br>PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[7,8,9]<br>PER NEMA twist-lock receptacle only (controls ordered separately)[10]<br>PERS Five-pin receptacle only (controls ordered separately)[10,11] | PERT Seven-pin receptacle only (controls ordered separately)[10,11]<br>FAO Field adjustable output[12,13]<br>BL30 Bi-level switched dimming, 30%[12,13]<br>BL50 Bi-level switched dimming, 50%[12,13]<br>DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[12]<br>DS Dual switching[12,13] | **Shipped included**<br>SPD20KV 20KV surge protection<br>HS Houseside shield (black finish standard)[14]<br>L90 Left rotated optics[15]<br>R90 Right rotated optics[15]<br>CCE Coastal Construction[16]<br>HA 50°C ambient operation[16]<br>BAA Buy America(n) Act Compliant<br>SF Single fuse (120, 277, 347V)[4]<br>DF Double fuse (208, 240, 480V)[4]<br>**Shipped separately**<br>EGSR External Glare Shield (reversible, field install required, matches housing finish)<br>BSDB Bird Spikes (field install required) | DDBXD Dark Bronze<br>DBLXD Black<br>DNAXD Natural Aluminum<br>DWHXD White<br>DDBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white<br>DSSTXD Textured sandstone | DSSXD Sandstone |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# WDGE2 LED
## Architectural Wall Sconce
## Precision Refractive Optic



Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

### Specifications

| | |
|---|---|
| Depth (D1): | 7" |
| Depth (D2): | 1.5" |
| Height: | 9" |
| Width: | 11.5" |
| Weight: (without options) | 13.5 lbs |



### Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

design select — Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect *See ordering tree for details

### WDGE LED Family Overview

| Luminaire | Optics | Standard EM, 0°C | Cold EM, -20°C | Sensor | Approximate Lumens (4000K, 80CRI) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | P0 | P1 | P2 | P3 | P4 | P5 |
| WDGE1 LED | Visual Comfort | 4W | | -- | 750 | 1,200 | 2,000 | -- | -- | -- |
| WDGE2 LED | Visual Comfort | 10W | 18W | Standalone / nLight | -- | 1,200 | 2,000 | 3,000 | 4,500 | 6,000 |
| WDGE2 LED | Precision Refractive | 10W | 18W | Standalone / nLight | 700 | 1,200 | 2,000 | 3,200 | 4,200 | -- |
| WDGE3 LED | Precision Refractive | 15W | 18W | Standalone / nLight | -- | 7,500 | 8,500 | 10,000 | 12,000 | -- |
| WDGE4 LED | Precision Refractive | | | Standalone / nLight | -- | 12,000 | 16,000 | 18,000 | 20,000 | 22,000 |

### Ordering Information

**EXAMPLE:** WDGE2 LED P3 40K 80CRI T3M MVOLT SRM DDBXD

| Series | Package | Color Temperature | CRI | Distribution | Voltage | Mounting |
|---|---|---|---|---|---|---|
| WDGE2 LED | P0[1]<br>P1[1]<br>P2[1]<br>P3[1]<br>P4[1] | 27K 2700K<br>30K 3000K<br>40K 4000K<br>50K 5000K<br>AMB[2] Amber | 70CRI[3]<br>80CRI<br>LW[4] Limited Wavelength | T1S Type I Short<br>T2M Type II Medium<br>T3M Type III Medium<br>T4M Type IV Medium<br>TFTM Forward Throw Medium | MVOLT<br>347[5]<br>480[5] | **Shipped included**<br>SRM Surface mounting bracket<br>KW Indirect Canopy/Ceiling Washer bracket (dry damp locations only)[6]<br><br>**Shipped separately**<br>AWS 3/8inch Architectural wall spacer<br>PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available |

| Options | | | Finish |
|---|---|---|---|
| E10WH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 0°C min)<br>E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)<br>PE Photocell, Button Type<br>DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)<br>BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.<br>CCE Coastal Construction | **Standalone Sensors/Controls**<br>PIR Bi-level (100%/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.<br>PIRH Bi-level (100%/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.<br>PIRTFC3V Bi-level (100%/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.<br>PIRHTFC3V Bi-level (100%/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.<br>**Networked Sensors/Controls**<br>NLTAIR2 PIR Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.<br>NLTAIR2 PIRH Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.<br>NLTAIRHA2 Embedded wireless controls by nLight with ULSLH listed emergency operation, Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights<br>PIRH<br>See page 4 for out of box functionality | DDBXD Dark bronze<br>DBLXD Black<br>DNAXD Natural aluminum<br>DWHXD White<br>DDBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white<br>DSSTXD Textured sandstone |


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PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*SITE LIGHTING PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*November 13, 2024*


*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

*DESIGN REFERENCE:*

SEDIMENT & EROSION CONTROL BASED ON 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL D.E.P. BULLETIN 34 BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.

*Erosion & Sediment Controls and Stabilization Practices*

a. Temporary seeding.
b. Mulching.
c. Stone Rip-rap.

During construction, sheet runoff from the site will be filtered through hay bale barriers and silt fences. All storm drain inlets shall be provided with barrier filters. Stone rip-rap shall be provided at the outlets of drainage pipe in which erosive velocities are encountered.

*Off Site Vehicle Tracking*

Stabilized construction entrances will be installed at all proposed entrances.

Installation, Maintenance and Inspection Procedures of Erosion & Sediment Controls

*A. General-*

These are the general inspection and maintenance practices that will be used to implement the plan.

- The smallest practical portion of the site will be denuded at one time.

- All erosion control measures will be inspected at least once a week and following any storm event of 0.25 inches or greater.

- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of the report.

- Built up sediment will be removed from the silt fence or hay bale barriers when it has reached one third the height of the of the fence or barrier.

- A maintenance inspection report will be made after each inspection.

- The contractor's site superintendent will be responsible for inspections, maintenance and repair activities, and completing the inspection and maintenance report.

- R.R. Hiltbrand Engineers & Surveyors shall inspect the site on a periodic basis to assure compliance with the plan.

*B. Filters -*

1. Straw/ hay bales
   a. Sheet Flow Applications
      1. Bales shall be placed in a single row , lengthwise on the contour, with the ends of the adjacent bales tightly abutting one another.
      2. All bales shall be either wire bound or string tied. Bales shall be installed so that the bindings are oriented around the sides rather than along the tops and bottoms of the bales to prevent deterioration of the bindings.
      3. The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of (4) inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built-up to (4) inches against the uphill side of the barrier. Ideally, bales should be placed ten (10) feet away from the toe of slope.
      4. Each bale shall be securely anchored by at least two (2) stakes or rebars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes and rebars shall be driven deep enough into the ground to securely anchor the bales.
      5. The gaps between bales shall be chinked (filled by wedging) with straw/hay to prevent water from escaping between the bales.
2. Silt Fence
   a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements.

*Physical Property Test Requirements*

Filtering Efficiency ASTM 5,41 75% minimum

Grab Tensile Strength ASTM D4632 100lbs.
Elongation & Failure ASTM D4632 15%
Puncture Strength
ASTM 4833 50 lbs.
Flow Rate ASTM D4491 0.2gal./ft2/min.

Ultra-Violet Radiation Stability % ASTM D4355 70% after 500 hours of exposure

b. The height of a silt fence shall not exceed thirty (30) inches above grade.

c. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at the support posts, with a min. six (6) inch overlap, and securely sealed.

d. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location and driven securely into the ground (min. of 12 inches).

e. A trench shall be excavated approximately six (6) inches wide and six (6) inches deep along the line of posts and upslope from the barrier.

f. When 'standard strength' filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one inch long, tie wires or hog rings. The wire shall extend no more than 30 inches above the original ground surface.

g. The 'standard strength' filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface.

h. When 'extra strength' filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case the filter fabric is stapled or wired directly to the posts with all other provisions of item 'g' applying.

i. The trench shall be backfilled and the soil compacted over the filter fabric.

j. Silt fences shall be removed when they have served their useful purpose, but not before the upslope areas have been permanently stabilized.

*Sequence of Installation*

Sediment barriers shall be installed prior to any soil disturbance of the contributing drainage area above them.

*Maintenance*

a. Straw/ hay bale barrier and silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the ends, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.

b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.

c. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately (1/3) the height of the barrier.

d. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

*C. Mulching*

1. Timing

In order for mulch to be effective, it must be in place prior to major storm events There are two (2) types of standards which shall be used to assure this.

a. Apply mulch prior to any storm event.

This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Massachusetts (508- 822- 0634 ), to have adequate warning of significant storms.

b. Required mulching within a specified time period.

The time period can range from 14 to 21 days of inactivity on an area, the length of time varying with site conditions, Professional judgment shall be used to evaluate the interaction of site conditions ( soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc. ) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

2. Guidelines for winter mulch application.

When mulch is applied to provide protection over winter (past the growing season) it shall be at a rate of 6000 lb. of hay or straw per acre. A tackifier may be added to the mulch.

3. Maintenance

All mulches must be inspected periodically, in particular after rain storms, to check for erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

*D. Temporary Grass Cover*

1. Seedbed Preparation

Apply fertilizer at the rate of 300 lb. / acre of 10-10-10. Apply limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of (1) tons/ acre.

2. Seeding

a. Utilize annual rye grass at a rate of 40 lb./ acre.

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer), Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance

Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface shall be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim ( mulch, filter barriers, check dams, etc. ).

*E. Permanent Grass Cover*

1. Seedbed Preparation

Apply fertilizer at the rate of 300 lb. / acre of 10-10-10. Apply limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of (1) tons/ acre.

2. Seeding

| | Lbs./1,000 Sq. Ft. |
|---|---|
| a. Utilize Creeping Red Fescue (Pennlawn, Wintergreen) | .45 |
| Redtop (Streeker, Common) | .10 |
| Tall Fescue (Kentucky 31 or Smooth Bromegrass (Saratoga, Lincoln) | .45 |
| | 1.00 |

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer), Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

*F. Storm Drain Inlet Protection*

1. Straw Bale Inlet Structure

a. Bales shall be either wire bound or string tied with the bindings oriented around the sides rather than over and under the bales.

b. Bales shall be placed lengthwise in a single row surrounding the inlet, with the ends of adjacent bales pressed together.

c. The filter barrier shall be entrenched and backfilled. A trench shall be excavated around the inlet the width of a bale to a minimum depth of four (4) inches. After the bales are staked, the excavated soil shall be backfilled and compacted against the filter barrier.

d. Each bale shall be securely anchored and held in place by at least two (2) stakes or rebars driven through the bale.

e. Loose straw shall be wedged between bales to prevent water from entering between bales.

F. Stabilized Construction Entrance

1. Specifications

a. Aggregate Size: Use two (2) inch stone, (Gradation Shall Be D.O.T. No. 3)

b. Aggregate thickness: Not less than six (6) inches.

c. Width: Ten (10) foot minimum, but not less than the full width of points where ingress or egress occurs.

d. Length: As required, but not less than one hundred (50) feet.

e. Geotextile: To be placed over the entire area to be covered with aggregate. Piping of surface water under entrance(s) shall be provided as required.

f. Criteria for Geotextile: The fabrics shall be Trevia Spunbound 1135, Mirafi 6000x, or equal.

2. Maintenance

The entrance(s) shall be maintained in a condition which will prevent tracking of sediment onto the public right-of-way. When washing is required, it shall be completed on an area stabilized with aggregate which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches or waterways.

*Timing of Controls/ Measures*

As indicated in the sequence of Major Activities the hay bales and silt fences shall be installed prior to commencing any clearing, demolition or grading of the site. Structural controls shall be installed concurrently with the applicable activity, Area(s) where construction activity temporarily ceases for more than twenty one (21) days will be stabilized with a temporary seed and mulch within fourteen (14) days of the last disturbance. Once construction activity ceases permanently in an area, silt fences and hay bale barriers will be removed once permanent measures are established.

*Waste Disposal*

A. Waste Materials

All waste materials will be collected and stored in securely lidded receptacles. All trash and construction debris from the site will be deposited into a dumpster. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedure for waste disposal by the superintendent.

B. Hazardous Waste

All hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. Site personnel will be instructed in the practices by the superintendent.

C. Sanitary Waste

All sanitary waste will be collected from the portable units a minimum of once per week by a licensed sanitary waste management contractor.

*Spill Prevention*

*A. Material Management Practices*

The following are the materials management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances during construction to storm water runoff:

*Good Housekeeping:*

The following good housekeeping practices will be followed on site during the construction project:

-An effort will be made to store only sufficient amounts of products to do the job.

-All materials stored on site will be stored in a neat, orderly manner in their proper (original if possible) containers and, if possible, under a roof or other enclosure.

-Manufacturer's recommendations for proper use and disposal will be followed.

-The site superintendent will inspect daily to ensure proper use and disposal of materials.

-Substances will not be mixed with one another unless recommended by the manufacturer.

-When ever possible all of a product will be used up before disposing of the container.

*Hazardous Products:*

The following practices will be used to reduce the risks associated with hazardous products:

-Products will be kept in their original containers unless they are not re-sealable

-Original labels and product safety data will be retained for important product information.

-Surplus product that must be disposed of will be discarded according to the manufacturer's recommended methods of disposal.

*B. Product Specific Practices*

The following product specific practices will be followed on site:

Petroleum Products:

All on site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt based substances used on site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts directed by the specifications. Once applied, fertilizer will be worked into the soil to limit exposure to storm water Storage will be in a covered shed or enclosed trailers. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be disposed of properly according to manufacturer's instructions or state and local regulations.

Concrete Trucks:

Concrete trucks will discharge and wash out surplus concrete or drum wash water in a contained area on site..

*C. Spill Control Practices*

In addition to good housekeeping and material management practices discussed in the previous section the following practices will be followed for spill prevention and cleanup:

-Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnnel will be made aware of the procedures and the location of the information and cleanup supplies.

-Materials and equipment necessary for spill cleanup will be kept in the material storage area on site. Equipment and materials will include but not limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic or metal trash containers specifically for this purpose.

-All spills will be cleaned up immediately after discovery.

-The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

-Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.

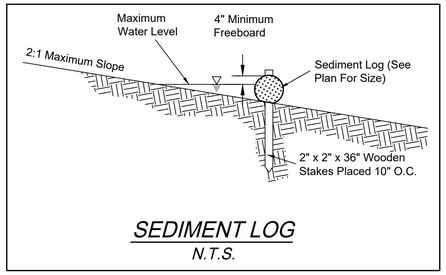
-The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to cleanup the spill if it recurs. A description of the spill, its cause, and the cleanup measures will be included.

-The site superintendent responsible for day to day operations will be the spill prevention and cleanup coordinator.

*The General Contractor(s) and/or Project Owner(s)*
are assigned the responsibility for implementing this erosion and sediment control plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, notifying the Planning and Zoning office of any transfer of this responsibility, and for conveying a copy of the Sediment & Erosion Control Plan if the title to the land is transferred.

*Responsible Person:*
GOLD COAST PROPERTIES
Stephen Shapiro
203-610-1545

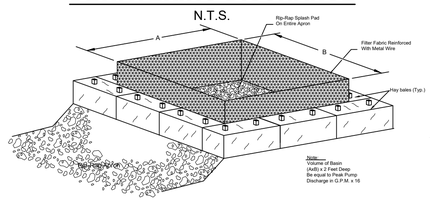
*Contingency Erosion Plan*
Should unforeseen erosion or sedimentation problems arise, the design engineer of record. (R.R. Hiltbrand Engineers & Surveyors ) and the local enforcement agent shall be notified immediately. An inspection of the affected area(s) shall be promptly performed. A remedial action plan shall be formulated with the local enforcement agent's approval. The site contractor shall then implement the recommended course of action which has been determined by both the engineer and local enforcement agent.




## SEDIMENT LOG
N.T.S.

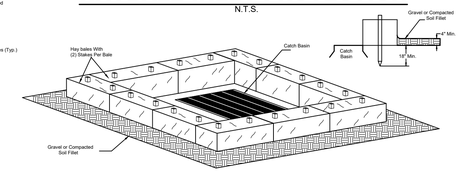
## TEMPORARY SEDIMENT BASIN FOR DEWATERING DISCHARGE

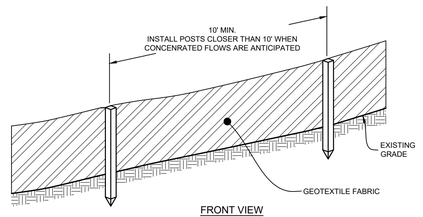
N.T.S.




## HAYBALE INLET PROTECTION

N.T.S.




FRONT VIEW

DETAIL FOR FENCE JOINT



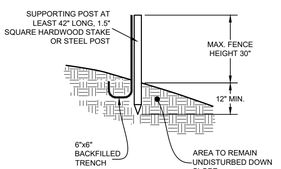

* POSITION POSTS TO OVERLAP AS SHOWN ABOVE, MAKING CERTAIN THAT THE FABRIC FOLDS AROUND EACH POST ONE FULL TURN

* DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OF BULK-UP SEDIMENT AT JOINT.

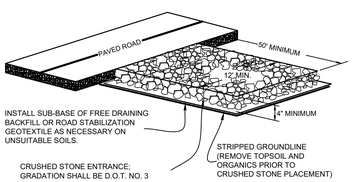
## SILT FENCE

N.T.S.

1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES, OF THE '2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL'.
2. THE HEIGHT OF THE BARRIER SHALL NOT EXCEED 30 INCHES ABOVE GRADE.
3. POSTS SHALL BE SPACED A MAXIMUM OF (10) FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MIN. 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS THE MANUFACTURER RECOMMENDS.
4. A TRENCH SHALL BE EXCAVATED APPROX., (6) INCHES WIDE BY (6) INCHES DEEP ALONG THE LINE OF THE POSTS AND UPSLOPE FROM THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS.
5. THE FABRIC SHALL NOT EXTEND MORE THAN (30) INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND A MINIMUM OF (8) INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
7. FILTER BARRIERS SHALL BE REMOVED WHEN THE HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPHILL SURFACE HAS BEEN PERMANENTLY STABILIZED.
8. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL, ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
10. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.




SIDE VIEW

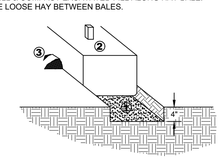



## CONSTRUCTION ENTRANCE n.t.s.

## PLACEMENTand CONSTRUCTION OF HAY BALE BARRIER

N.T.S.

1. EXCAVATE TRENCH 4" AND PLACE FILL UP-SLOPE OF TRENCH. PLACE HAYBALE & STAKE FIRST STAKE AT ANGLE TOWARDS
2. FIRST HAYBALE. STAKES ARE 18" MIN. INTO GROUND.
3. BACKFILL & COMPACT EXCAVATED FILL ALONG HAY BALE.
4. WEDGE LOOSE HAY BETWEEN BALES.




SEDIMENT AND EROSION CONTROL SEQUENCE:

1. CALL BEFORE YOU DID - 1-800-922-4455.
2. PRE-CONSTRUCTION MEETING WITH BRISTOL WETLANDS AND ZONING STAFF.
3. UTILIZE EXISTING NORTHEASTERN SIDEWALK RAMP ENTRANCE TO SITE FOR AS LONG AS POSSIBLE.
4. ONCE EXISTING ENTRANCE IS NO LONGER PRACTICAL, INSTALL STONE CONSTRUCTION ENTRANCE.
5. COMPLETE DEMOLITION OF BITUMINOUS SURFACES AND REMOVE OFF-SITE.
6. INSTALL PERIMETER EROSION CONTROLS AS SHOWN INCLUDING AN 8"Ø SEDIMENT LOG ALONG MAIN STREET FRONTAGE.
7. CONTACT TOWN STAFF FOR INSPECTION 24 HOURS PRIOR TO EXCAVATION OF BUILDING FOUNDATION.
8. COMPLETE EXISTING UTILITY DISCONNECTS FOR EXISTING WATER AND SEWER LATERALS.
9. EXTEND NEW WATER AND SEWER LATERALS TO BUILDING FOOTPRINT.
10. EXCAVATE FOR BUILDING FOOTINGS AND WALLS
11. BACKFILL FOOTINGS AND WALLS.
12. INSTALL SITE STORM DRAINAGE.
13. CONSTRUCT ACCESS DRIVEWAY AND PARKING LOT TO PROCESS GRAVEL SURFACE FOR PROJECT STAGING.
14. CONSTRUCT BUILDING.
15. REMOVE CURBING AND SIDEWALKS ALONG MAIN STREET.
16. CONSTRUCT CONCRETE OPEN-AIR PATIO/ENTRANCE AREA.
17. INSTALL GRANITE CURB ALONG PROJECT FRONTAGE.
18. CONSTRUCT NEW CONCRETE WALKS AND ENTRANCE RAMP TO SITE.
19. BITUMINOUS PAVE ACCESS DRIVE AND PARKING LOT.
20. INSTALL EXTRUDED CONCRETE IN AREAS WITHOUT MONOLITHIC CURB
21. COMPLETE PROJECT RESTORATION, LANDSCAPING AND LIGHTING.
22. MAINTAIN ALL EROSION CONTROLS ON PROPERTY AS NEEDED. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED BASED ON SITE CONDITIONS.

**Maintenance of Erosion and Sediment Controls**

(CE) 1. **Construction Entrance (CE)**
Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces. Provide periodic top dressing with additional stone or additional length as conditions demand. Repair any measures used to trap sediment as needed. Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces. Roads adjacent to a construction site shall be left clean at the end of each day. If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then either (1) increase the length of the construction entrance, (2) modify the construction entrance road surface, or (3) install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

(GSF) 2. **Geo-textile Silt Fence (GSF)**
Inspect the silt fence at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater. Inspection of silt fence prior to large anticipated storms is also recommended.

(PS) 3. **Permanent Seeding (PS)**
Inspect permanent seeding at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater during the first growing season. Repair eroded areas as needed to control erosion with existing erosion controls or add additional erosion controls.

(DC) 4. **Entrance and Dust Control Maintenance**
a. Sweep paved apron at entrance to site weekly or as required. Any spillage on the Farmington River Turnpike by truck wheels shall be removed daily.
b. Dust control measures will be a daily activity when required. Water will be used to suppress dust from the haul road and general work area.
c. Clear drywells of silt and debris as needed.
d. To prevent airborne dust, excavation face area will be kept to a minimum. Topsoil to be stripped as excavation progresses and areas reclaimed immediately.

(MS) 5. **Mulch for Seed (MS)**
Application of mulch to protect soil surface and promote the establishment of seeding. See Maintenance Notes for inspection requirements.

(IP) 6. **Inlet Protection (IP)**
a. Inspect the structure after each major rainfall for damage and deterioration. Repair damage immediately. (See Erosion and Sedimentation Control Details Sheet ES7).

(SL) 7. **Sediment Log (SL)**
Inspect the sediment log at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater. Inspection of sediment log prior to large anticipated storms is also recommended.

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

| PROJECT INFORMATION | |
|---|---|
| ENGINEERED PRODUCT MANAGER: | AARON CHEEVER<br>978-302-0966<br>ACHEEVER@ADSPIPE.COM |
| ADS SALES REP: | JOHN STELMOKAS<br>413-519-2036<br>JOHN.STELMOKAS@ADSPIPE.COM |
| PROJECT NO: | 5438866 |

Advanced Drainage Systems, Inc.

# 37 MAIN ST. - PROPOSED RETAIL PLAZA

BRISTOL, CT

## SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN, THE ASC IS DEFINED IN SECTION 8.2.6 OF ASTM F2418, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE EVALUATION SHALL DEMONSTRATE THAT WHEN LOADED WITH THE MINIMUM REQUIRED DEPTH (NOT LESS THAN OR EQUAL TO) 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTION 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 8.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

## IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS SHOWN IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 9" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #0, 357, 4, 467, 5, 56, OR 57.
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

## NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

**USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.**

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

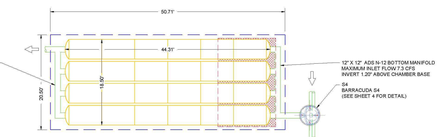
800A ADS, INC.

## PROPOSED LAYOUT

| | |
|---|---|
| 24 | STORMTECH SC-740 CHAMBERS |
| 8 | STORMTECH SC-740 END CAPS |
| 6 | STONE ABOVE (in) |
| 6 | STONE BELOW (in) |
| 40 | % STONE VOID |
| 1040 | SYSTEM AREA (ft²) |
| 140 | SYSTEM PERIMETER (ft) |

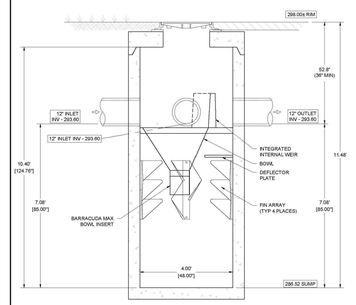
## PROPOSED ELEVATIONS

| | |
|---|---|
| 304.00 | MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED) |
| 298.00 | MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC) |
| 297.50 | MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC) |
| 297.50 | MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT) |
| 297.50 | MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT) |
| 296.50 | TOP OF STONE |
| 296.00 | TOP OF SC-740 CHAMBER |
| 295.80 | 12" BOTTOM MANIFOLD INVERT |
| 293.50 | BOTTOM OF SC-740 CHAMBER |
| 293.00 | BOTTOM OF STONE |

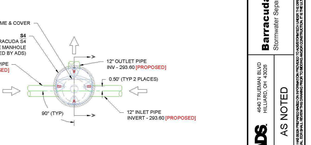









**SECTION VIEW A-A**
SCALE: 1" = 1'




**SITE SPECIFIC PLAN VIEW**
SCALE: 1" = 5'

BARRACUDA MAX S4

| | |
|---|---|
| UNIT ID: | S4 |
| PEAK FLOW RATE (CFS) | |
| TREATMENT FLOW RATE (CFS) | 1.52 |

### PRODUCT SPECIFICATIONS

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
  - OR -
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH $d_{50}$=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.
  - OR -
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER CURRENT NJDEP/NJCAT HDS PROTOCOL.

| | |
|---|---|
| 37 MAIN ST. - PROPOSED RETAIL PLAZA | BRISTOL, CT |
| DATE: | 02/20/2025 |
| PROJECT # | 5438866 |
| DRAWN BY: | JTS |
| CHECKED | JTS |

StormTech® CHAMBER SYSTEMS | 1-800-821-6710 | WWW.STORMTECH.COM

ADS | 4640 TRUEMAN BLVD HILLIARD, OH 43026 | AS NOTED

SHEET 3 OF 6

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| PROJECT INFORMATION | |
|---|---|
| ENGINEERED PRODUCT MANAGER: | NICHOLAS BEDDINGFIELD<br>713-559-5811<br>NICHOLAS.BEDDINGFIELD@ADSPIPE.COM |
| ADS SALES REP: | JOHN STELMOKAS<br>413-519-2036<br>JOHN.STELMOKAS@ADSPIPE.COM |
| PROJECT NO: | 5438866 |

Advanced Drainage Systems, Inc.

# 37 MAIN ST. - PROPOSED RETAIL PLAZA

BRISTOL, CT

## BAYSAVER BARRACUDA SPECIFICATIONS

**MATERIALS AND DESIGN**

CONCRETE STRUCTURES: DESIGNED FOR H-20 AND/OR HS-20 TRAFFIC LOADING AND APPLICABLE SOIL LOADS OR AS OTHERWISE DETERMINED BY A LICENSED PROFESSIONAL ENGINEER. THE MATERIALS AND STRUCTURAL DESIGN OF THE DEVICES SHALL BE PER ASTM C857 AND ASTM C858.

48" HP MANHOLE STRUCTURES: MADE FROM AN IMPACT MODIFIED COPOLYMER POLYPROPYLENE MEETING THE MATERIAL REQUIREMENTS OF ASTM F2764. THE ECCENTRIC CONE REDUCER SHALL BE MANUFACTURED FROM POLYETHYLENE MATERIAL MEETING ASTM D3350 CELL CLASS 315320C. GASKETS SHALL BE MADE OF MATERIAL MEETING THE REQUIREMENTS OF ASTM F477.

SEPARATOR INTERNALS SHALL BE SUBSTANTIALLY CONSTRUCTED OF STAINLESS STEEL, POLYETHYLENE, OR OTHER THERMOPLASTIC MATERIAL APPROVED BY THE MANUFACTURER.

**PERFORMANCE**

THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.

THE STORMWATER TREATMENT UNIT INTERNALS SHALL CONSIST OF(1)SEPARATOR CONE ASSEMBLY, AND (1)SUMP ASSEMBLY WHICH INCLUDES(4) LEGS WITH "TEETH".

THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
- OR -
THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH $d_{50}$=75 MICRON AND 200 MSG, INFLUENT CONCENTRATION.
- OR -
THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER CURRENT NJDEP/NJCAT HDS PROTOCOL.

**MANUFACTURER**

EACH STORMWATER TREATMENT SYSTEM SHALL BE A BARRACUDA SYSTEM AS MANUFACTURED BY BAYSAVER, LLC. 1030 DEER HOLLOW DR., MOUNT AIRY, MD 21771, PHONE (301) 829-8470, FAX (301) 829-3747, TOLL FREE 1-800-229-7283 (1-800-BAYSAVER), EMAIL INFO@BAYSAVER.COM

## BARRACUDA MAINTENANCE

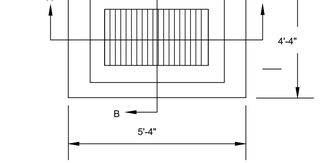
BARRACUDA SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EXCEEDS 20 INCHES. MINIMUM INSPECTION IS RECOMMENDED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF THE UNIT.

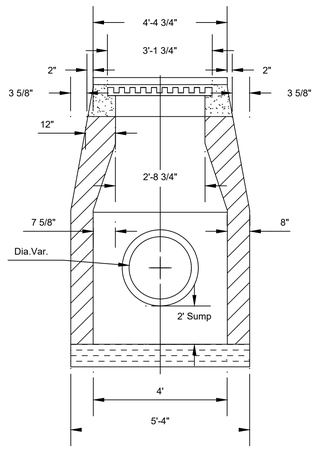
**MAINTENANCE INSTRUCTIONS**

1. REMOVE THE MANHOLE COVER TO PROVIDE ACCESS TO THE POLLUTANT STORAGE. POLLUTANTS ARE STORED IN THE SUMP, BELOW THE BOWL ASSEMBLY VISIBLE FROM THE SURFACE. YOU'LL ACCESS THIS AREA THROUGH THE 10" DIAMETER ACCESS CYLINDER.
2. USE A VACUUM TRUCK OR OTHER SIMILAR EQUIPMENT TO REMOVE ALL WATER, DEBRIS, OILS AND SEDIMENT.
3. USE A HIGH PRESSURE HOSE TO CLEAN THE MANHOLE OF ALL THE REMAINING SEDIMENT AND DEBRIS. THEN, USE THE VACUUM TRUCK TO REMOVE THE WATER.
4. FILL THE CLEANED MANHOLE WITH WATER UNTIL THE LEVEL REACHES THE INVERT OF THE OUTLET PIPE.
5. REPLACE THE MANHOLE COVER.
6. DISPOSE OF THE POLLUTED WATER, OILS, SEDIMENT AND TRASH AT AN APPROVED FACILITY.
   - LOCAL REGULATIONS PROHIBIT THE DISCHARGE OF SOLID MATERIAL INTO THE SANITARY SYSTEM. CHECK WITH THE LOCAL SEWER AUTHORITY FOR AUTHORITY TO DISCHARGE THE LIQUID.
   - SOME LOCALITIES TREAT THE POLLUTANTS AS LEACHATE. CHECK WITH LOCAL REGULATORS ABOUT DISPOSAL REQUIREMENTS.
   - ADDITIONAL LOCAL REGULATIONS MAY APPLY TO THE MAINTENANCE PROCEDURE.

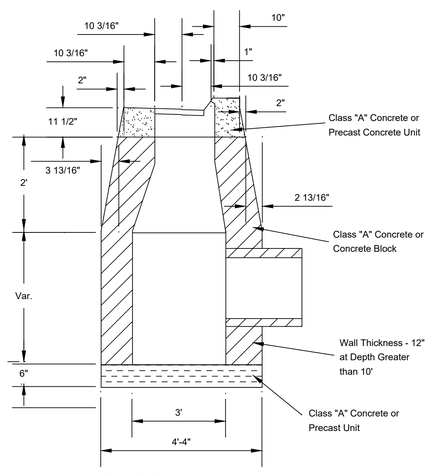
## BARRACUDA INSTALLATION NOTES

INSTALLATION OF THE STORMWATER TREATMENT UNIT(S) SHALL BE PERFORMED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH INSTRUCTIONS CAN BE OBTAINED BY CALLING ADVANCED DRAINAGE SYSTEMS AT (800) 821-6710 OR BY LOGGING ON TO WWW.ADS-PIPE.COM OR WWW.BAYSAVER.COM.



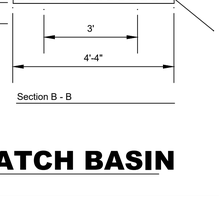

Section A - A




Section B - B

# TYPE "C" CATCH BASIN

n. t. s.




*BACKFILL TO SUBGRADE:*
*CLASS II BACKFILL IN PAVEMENT AREAS*
*CLASS III BACKFILL IN LAWN AREAS*
*COMPACTED TO 95% STANDARD PROCTOR*

*Ø+12"*
*HAUNCHING and INITIAL BACKFILL:*
*CLASS I OR APPROVED NATIVE MATERIAL*
*COMPACTED TO 95% STANDARD PROCTOR*

*BEDDING:*
*CLASS I OR APPROVED NATIVE MATERIAL*

*CLASS I BACKFILL:*
*ANGULAR CRUSHED STONE OR ROCK, DENSE OR OPEN-GRADED WITH LITTLE OR NO FINES (NOTED 1 INCHES IN SIZE)*

*CLASS II BACKFILL:*
*CLEAN, COARSE-GRAINED MATERIALS, SUCH AS GRAVEL, COARSE SANDS AND GRAVEL-SAND MIXTURES (1 inches (max. size).*

*CLASS III BACKFILL:*
*COARSE-GRAINED MATERIALS WITH FINES INCLUDING SILTY OR CLAYEY GRAVELS OR SANDS. GRAVEL OR SAND MUST COMPRISE MORE THAN 50 PERCENT OF CLASS III MATERIALS (1 INCHES MAX. SIZE)*

# ADS N-12 (CPP) TRENCH DETAIL

*N.T.S.*

## ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

| | MATERIAL LOCATION | DESCRIPTION | AASHTO MATERIAL CLASSIFICATIONS | COMPACTION / DENSITY REQUIREMENT |
|---|---|---|---|---|
| D | **FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR RIGID PAVEMENT SUBBASE OR TOP OF SUBGRADE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER. | ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. | N/A | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS. |
| C | **INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER. | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. | AASHTO M145[2]<br>A-1, A-2-4, A-3<br>OR<br>AASHTO M43[2]<br>3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 | BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% RELATIVE DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN). |
| B | **EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[1] | AASHTO M43[2]<br>3, 357, 4, 467, 5, 56, 57 | NO COMPACTION REQUIRED. |
| A | **FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[1] | AASHTO M43[2]<br>3, 357, 4, 467, 5, 56, 57 | PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[3] |

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. CAICL5,LAYER 'C' MATERIALS MAY SOILMATERIAL CAN BE PLACED IN LAYER 'C' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".




## NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 8.2.6 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

| | |
|---|---|
| 37 MAIN ST. - PROPOSED RETAIL PLAZA | BRISTOL, CT |
| DATE: | 02/20/2025 |
| PROJECT # | 5438866 |
| DRAWN BY: | JTS |
| CHECKED | JTS |

StormTech® CHAMBER SYSTEMS | 1-800-821-6710 | WWW.STORMTECH.COM

ADS | 4640 TRUEMAN BLVD HILLIARD, OH 43026 | AS NOTED

SHEET 5 OF 6

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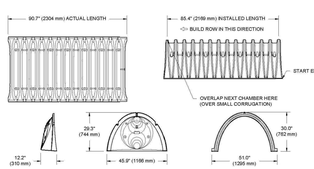
## SC-740 TECHNICAL SPECIFICATION

NTS



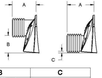

**NOMINAL CHAMBER SPECIFICATIONS**

| | | |
|---|---|---|
| SIZE (W X H X INSTALLED LENGTH) | 51.0" X 30.0" X 85.4" | (1295 mm X 762 mm X 2169 mm) |
| CHAMBER STORAGE | 45.9 CUBIC FEET | (1.30 m³) |
| MINIMUM INSTALLED STORAGE* | 74.9 CUBIC FEET | (2.12 m³) |
| WEIGHT | 75.0 lbs. | (33.4 kg) |

**NOMINAL END CAP SPECIFICATIONS**

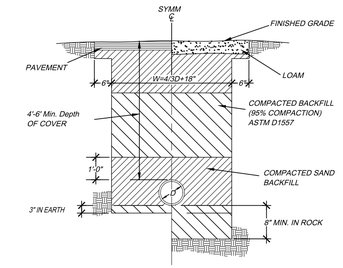
| | | |
|---|---|---|
| SIZE (W X H X INSTALLED LENGTH) | 45.9" X 29.3" X 0.9" | (1166 mm X 744 mm X 244 mm) |
| END CAP STORAGE | 2.6 CUBIC FEET | (0.07 m³) |
| MINIMUM INSTALLED STORAGE** | 13.5 CUBIC FEET | (0.38 m³) |
| WEIGHT | 11.7 lbs. | (5.3 kg) |

* ASSUMES 9" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS
**ASSUMES 9" (152 mm) STONE ABOVE AND BELOW END CAPS, 6" (152 mm) BETWEEN ROWS, 12" (305 mm) BEYOND END CAPS



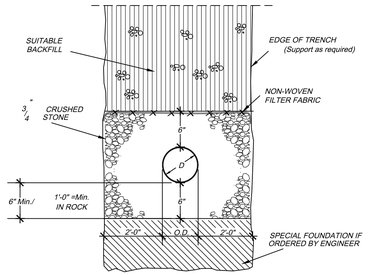

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

| PART # | STUB | A | B | C |
|---|---|---|---|---|
| SC740EPE06T / SC740EPE06TPC | 6" (150 mm) | 10.9" (277 mm) | 16.5" (419 mm) | — |
| SC740EPE06B / SC740EPE06BPC | | | — | 0.3" (13 mm) |
| SC740EPE08T / SC740EPE08TPC | 8" (200 mm) | 12.2" (310 mm) | 16.5" (419 mm) | — |
| SC740EPE08B / SC740EPE08BPC | | | — | 0.8" (15 mm) |
| SC740EP




## WATER MAIN TRENCH SECTION

N.T.S.




## SANITARY SEWER TRENCH SECTION

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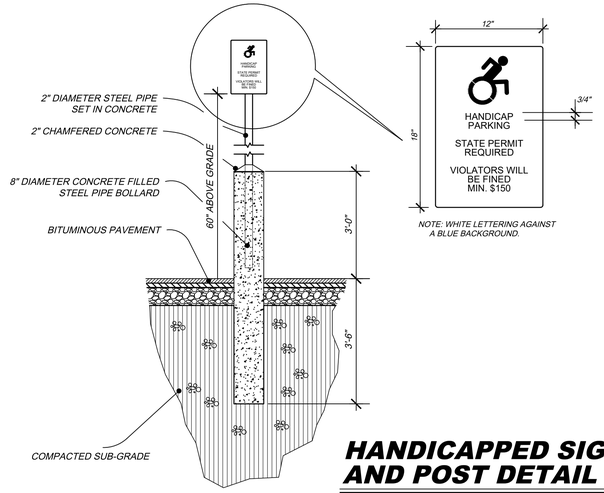
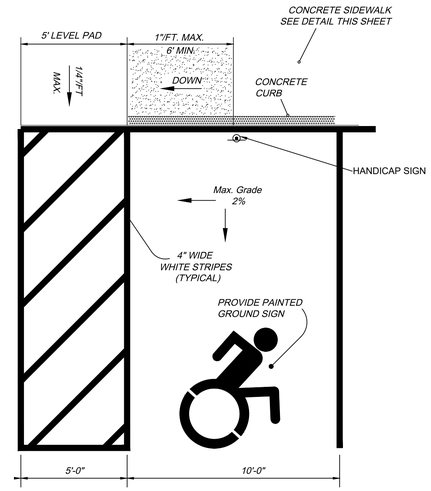


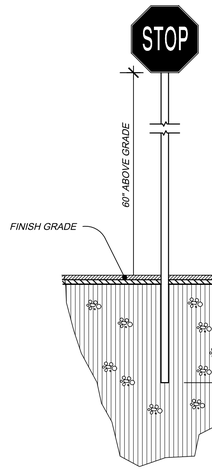

## HANDICAPPED SIGN AND POST DETAIL

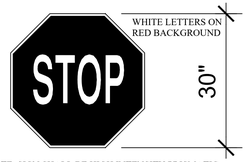
N.T.S.




## HANDICAPPED PARKING STALL DETAIL

N.T.S.



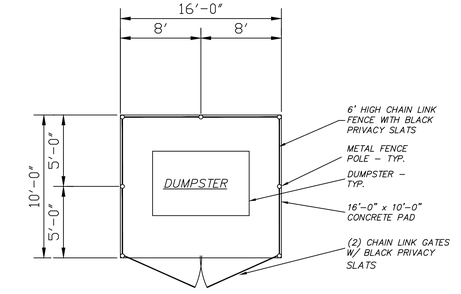




## STOP SIGN (31-0552)

N.T.S.

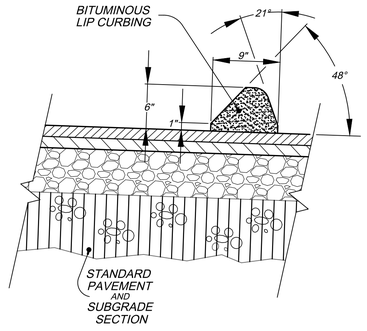
## STOP SIGN (31-0552) AND POST DETAIL

N.T.S.



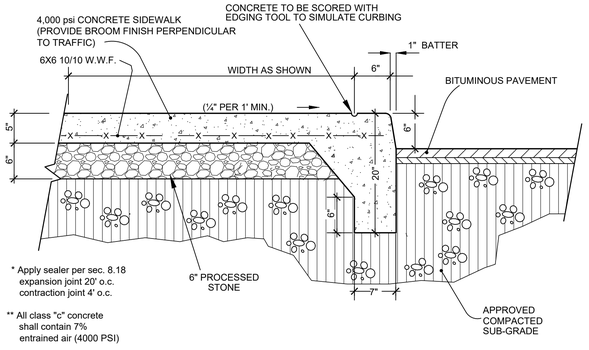

## SCREENED DUMPSTER PAD DETAIL

N.T.S.



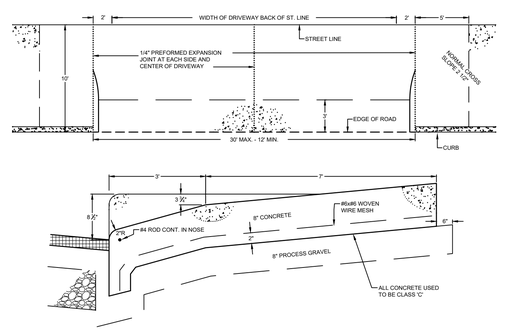

## BITUMINOUS LIP CURBING

N.T.S.



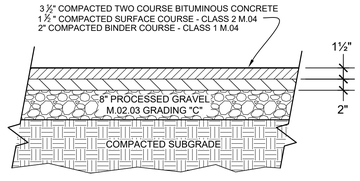

## CONCRETE CURB and SIDEWALK

N.T.S.




## TYPICAL COMMERCIAL DRIVEWAY APRON

N.T.S.




NOTE:
-ROADWAY MATERIALS AND METHODS TO BE IN CONFORMANCE WITH CONN. D.O.T. STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 814, 1988 WITH RECENT REVISIONS, and/or MUNICIPAL CURRENT STANDARDS.

-CONTRACTOR SHALL CONFIRM SUB-GRADE IS OF ADEQUATE BEARING CAPACITY PRIOR TO PAVING.

## BITUMINOUS PAVEMENT DETAIL

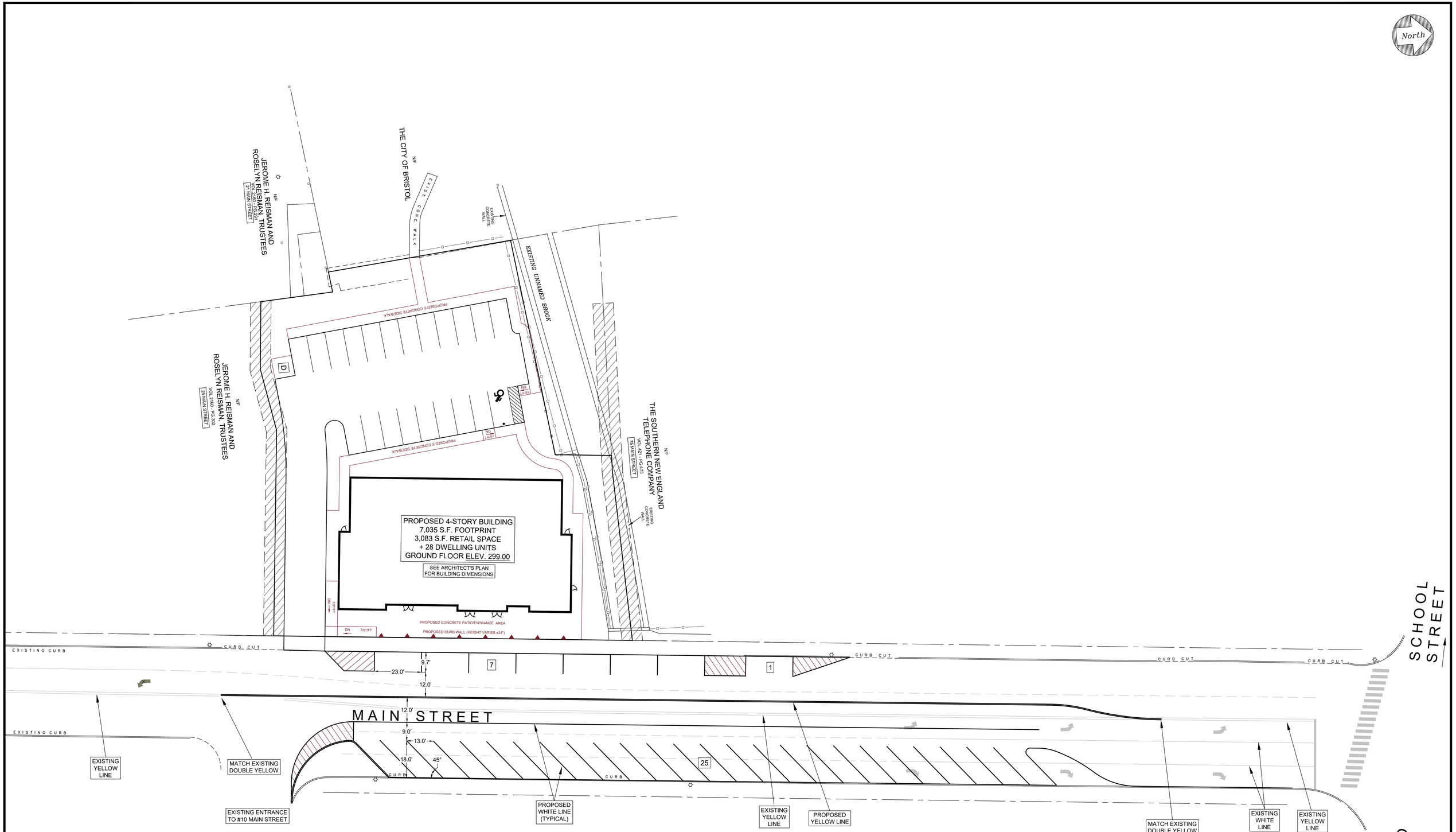
SCALE: N.T.S.

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*SITE DETAILS*
*Sheet 2 OF XXX*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548




UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R.R. HILTBRAND
Engineers and Surveyors

# PROPOSED RE-STRIPING OF A PORTION OF MAIN STREET PLAN (BY OTHERS)

Bristol, Connecticut

*August 27, 2024*

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

# Elevation Drawings, Fenestration Calculations and Floor Plans

# BRISTOL COMMONS ON MAIN

## 37 MAIN STREET

## BRISTOL CT.



| SHEET LIST | |
|---|---|
| SHEET NUMBER | SHEET NAME |
| A-000 | TITLE SHEET |
| A-101 | FIRST FLOOR PLAN |
| A-102 | SECOND FLOOR PLAN |
| A-103 | THIRD FLOOR PALN |
| A-104 | FOURTH FLOOR PLAN |
| A-201 | ELEVATIONS |
| A-202 | ELEVATIONS |

### OWNER:

GOLD COAST PROPERTIES
STEPHEN SHAPIRO
EASTON, CONNECTICUT, 06612

### ARCHITECT:

SCHADLER SELNAU ASSOCIATES P.C.
5 WATERVILLE ROAD
FARMINGTON, CONNECTICUT 06032

### STRUCTURAL ENGINEER:

TO BE DETERMINED

### MEP ENGINEERS:

TO BE DETERMINED

### CIVIL ENGINEER:

R.R. HILTBRAND ENGINEERS AND SURVEYORS
575 NORTH MAIN STREET
BRISTOL, CONNECTICUT, 06010

Job.No. yyyy-xxxx

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Bristol Commons on Main

37 MAIN STREET BRISTOL CT

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|---|---|---|

NOT FOR CONSTRUCTION

TITLE SHEET

SCALE: 12" = 1'-0"

DATE ISSUED: Issue Date

A-000

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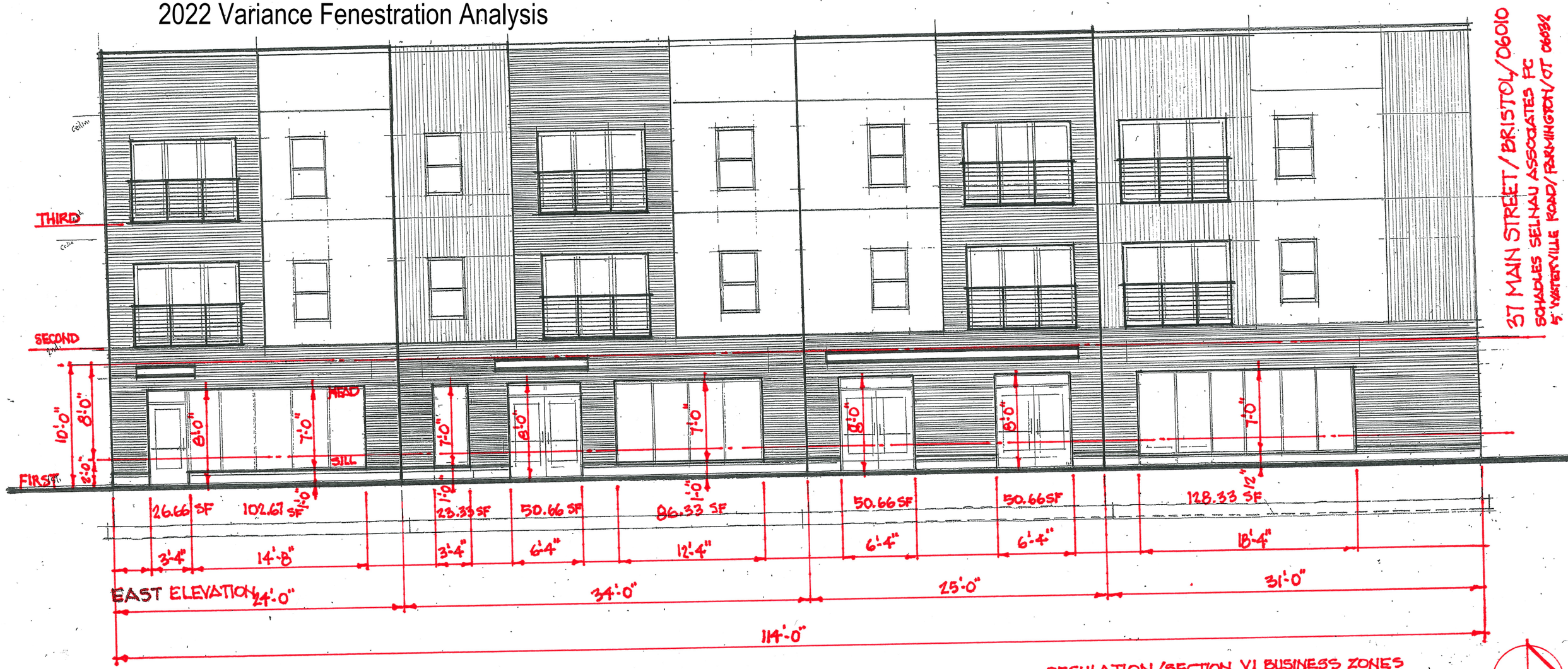
# 2022 Variance Fenestration Analysis




EAST ELEVATION

37 MAIN STREET / BRISTOL / 06010
SCHADLER SELINAU ASSOCIATES PC
5 WATERVILLE ROAD / FARMINGTON / CT 06032

REQUIRED WINDOW FENESTRATION
MEASURED @ 10'-0" TO HEAD AND 2'-0" TO SILL
OR 8'-0" X LENGTH OF BUILDING STREET FACING
FASCADE OR 8'-0" x 114' BUILDING LENGTH OF
8' x 114' = 912 SF @ 65% REQUIRED OR 593 SF REQUIRED

WINDOW FENESTRATION PROVIDED
519.33 SF PROVIDED SHORT FALL 73.67 SF
593.00 SF REQUIRED

REGULATION / SECTION VI BUSINESS ZONES
V.C. - DOWNTOWN BUSINESS ZONE
V.C.1.a BD1 - MAIN STREET
V.C.BD.6 BUILDING FORM STANDARDS
V.C. BD.6 (5) BUILDING ELEMENT
BD-1 65% MIN OF WALL AREA
WALL MEASURED BETWEEN 2' AND 10'
FROM TOP OF FOUNDATION WALL

SCALE : 1/8" = 1'-0"
DATE : 10 OCTOBER 2022

2024 Revised Window Configuration



37 MAIN STREET
FIRST FLOOR
21 AUGUST 2024

114'-0"
104'-0"
5'-0"
5'-0"
26'-6"
25'-6"
25'-6"
26'-6"
65'-0"
38'-6"
26'-6"
21 RISERS @ 6.85" = 144"/12'-0" FLR. TO FLR.
19 TREADS @ 11"

ADA
one bedroom
ONE BEDROOM
ONE BEDROOM
ONE BEDROOM

STAIR NO. 1
STAIR NO. 2
T.
T.
T.
3500# = 8'-8" ELEV. OTIS - ELEC.
7'-0"
18'-0"
9'-2"
12"
12"
8'-0"
12"

WINDOW FENESTRATION
REQUIRED
Measured @ 10' HEAD and 2'-0" to SILL or 8'-0" x Length of Building Street Facing Façade or 8'-0" x 114' = 912 SF @ 65% REQUIRED or 593 SF REQUIRED

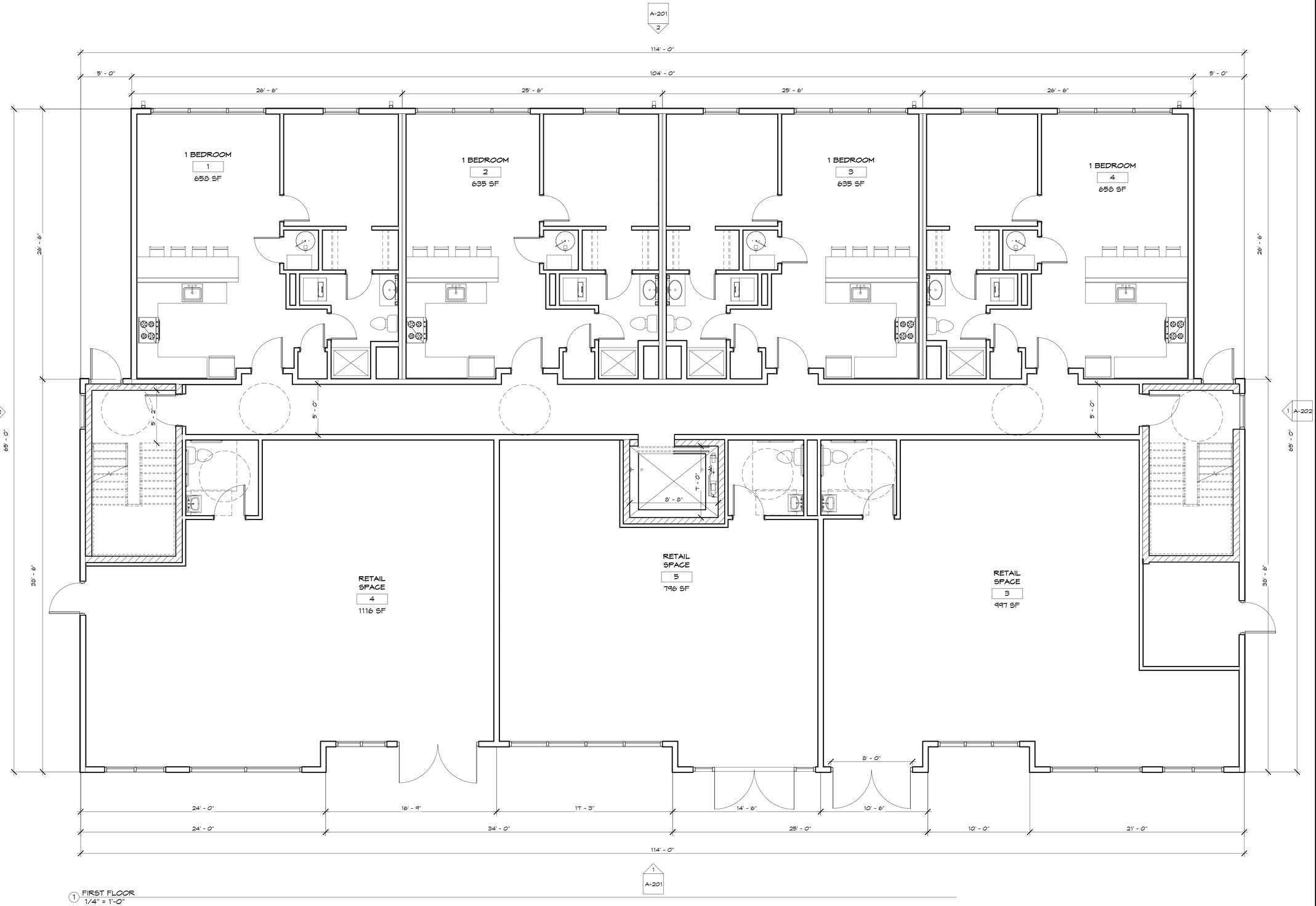
RETAIL
PROVIDED 585 SF
REQ'D 593SF - 585SF = 8SF shortfall
RETAIL
RETAIL
WATER
MECH.
ELECTRICAL

2'-0" 6'-0" 3'-0" 11'-0" 2'-0" 1'-0" 5'-0" 2'-0" 6'-0" 4'-0" 14'-0" 2'-0" 2'-0" 6'-0" 5'-0" 6'-0" 2'-6" 1'-0" 8'-0" 1'-0" 9'-0" 6'-0" 2'-0" 3'-0" 11'-0"

7x6=42SF
7x11=77SF
7x5=35SF
8x6=48SF
14x7=98SF
7x2=14SF
8x6=48SF
7x2=14SF
8x6=48SF
7x8=56SF
7x9=63SF
7x6=42SF

24'-0"
34'-0"
25'-0"
10'-0"
21'-0"
114'-0"

42SF 77SF 35SF 48SF 98SF 14SF 8'x6'-4" 14SF 8'x6'-4" 48SF 56SF 63SF 42SF

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Bristol Commons on Main

37 MAIN STREET BRISTOL CT

REVISION

| NO | DESC | DATE |
|---|---|---|

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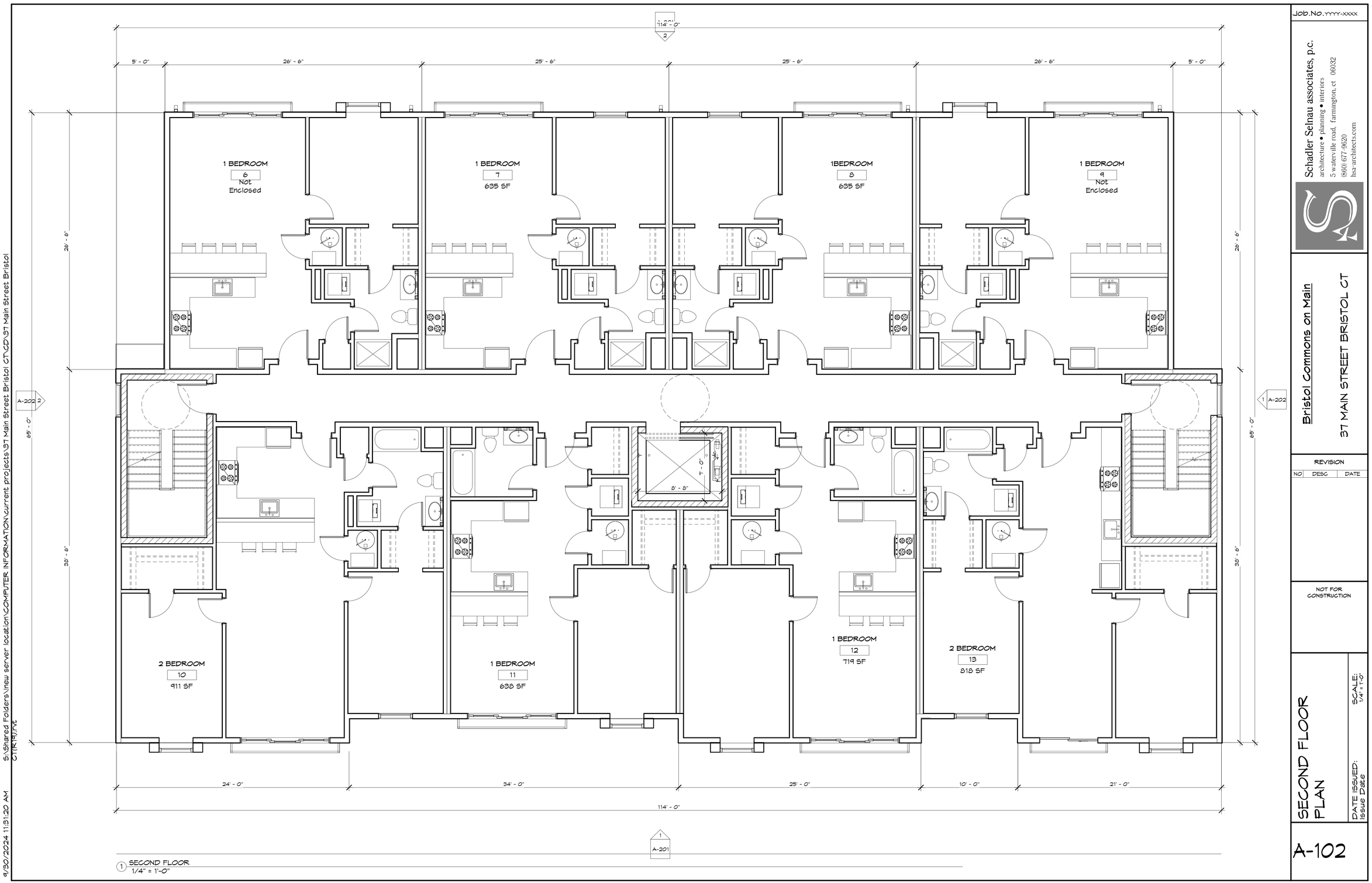
FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-101




1 SECOND FLOOR
1/4" = 1'-0"

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37 MAIN STREET BRISTOL CT

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|---|---|---|

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SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-102




1 THIRD FLOOR
1/4" = 1'-0"

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37 MAIN STREET BRISTOL CT

REVISION

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|---|---|---|

NOT FOR CONSTRUCTION

THIRD FLOOR PALN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-103




1 FOURTH FLOOR
1/4" = 1'-0"

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Bristol Commons on Main

37 MAIN STREET BRISTOL CT

REVISION

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|---|---|---|

NOT FOR CONSTRUCTION

FOURTH FLOOR PLAN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-104




1 EAST ELEVATION
3/16" = 1'-0"




2 WEST ELEVATION
3/16" = 1'-0"

Job.No. yyyy-xxxx

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architecture • planning • interiors
5 waterville road, farmington, ct 06032
(860) 677-9620
hsa-architects.com

Bristol Commons on Main

37 MAIN STREET BRISTOL CT

| REVISION | | |
|---|---|---|
| NO | DESC | DATE |

NOT FOR CONSTRUCTION

ELEVATIONS

SCALE: 3/16" = 1'-0"

DATE ISSUED: Issue Date

A-201

9/30/2024 11:31:28 AM S:\Shared Folders\new server location\COMPUTER INFORMATION\current projects\37 Main Street Bristol CT\CD\37 Main Street Bristol CT(R14).rvt

1 NORTH ELEVATION 1
3/16" = 1'-0"




2 SOUTH ELEVATION
3/16" = 1'-0"

9/30/2024 11:31:36 AM S:\Shared Folders\new server location\COMPUTER INFORMATION\current projects\37 Main Street Bristol CT\CD\37 Main Street Bristol CT(R19).rvt

Job.No. yyyy-xxxx

Schadler Selnau associates, p.c.
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(860) 677-9620
hsa-architects.com

Bristol Commons on Main

37 MAIN STREET BRISTOL CT

REVISION

| NO | DESC | DATE |
|---|---|---|

NOT FOR CONSTRUCTION

ELEVATIONS

SCALE: 3/16" = 1'-0"

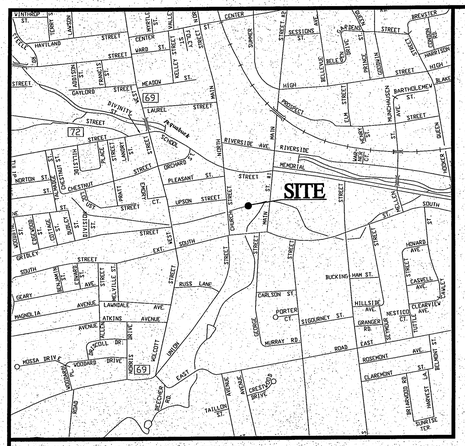
DATE ISSUED: Issue Date

A-202

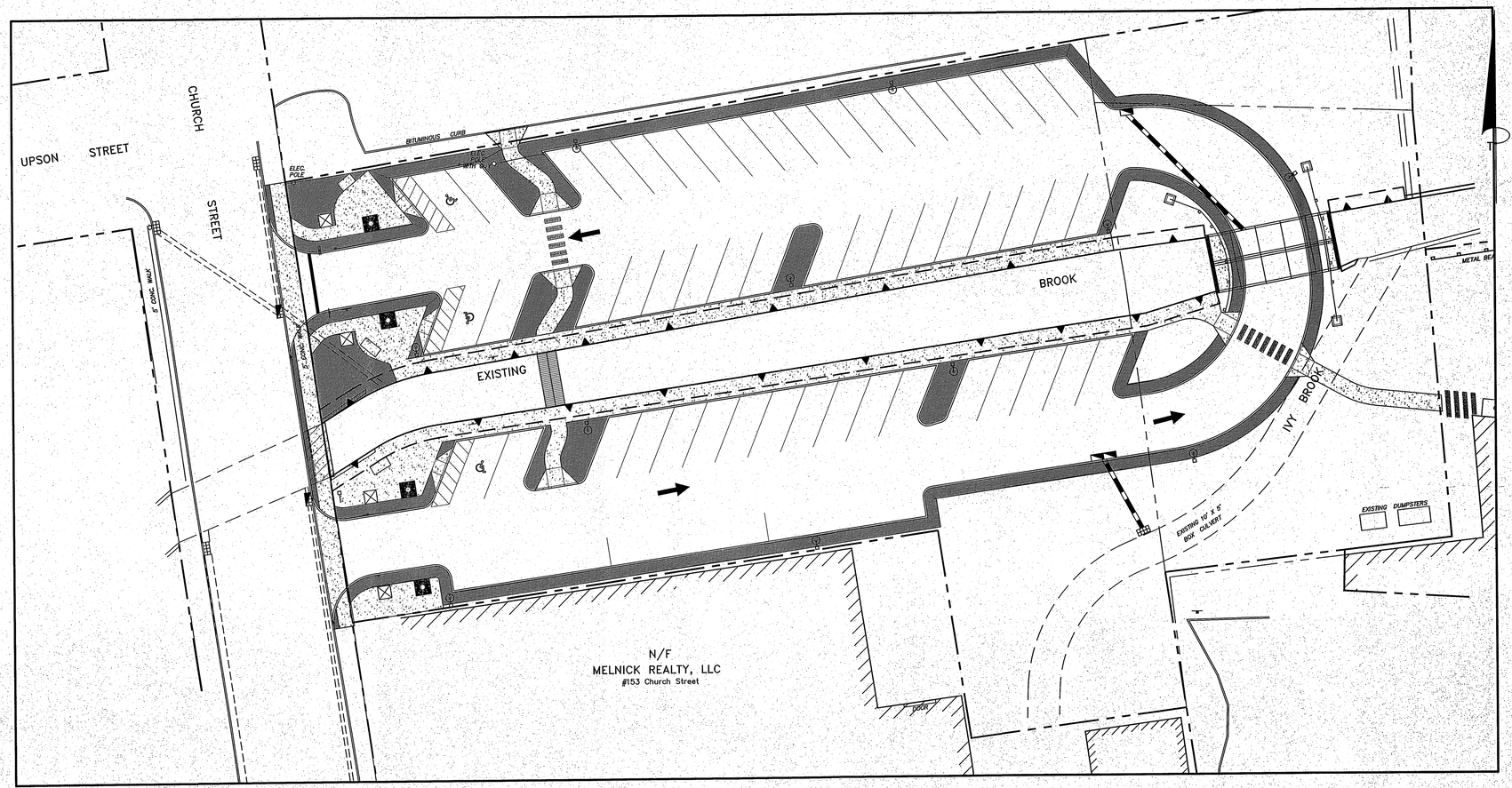
# Site Plan for: 149 Church Street

# Municipal Parking

# CITY OF BRISTOL
# PLAN
FOR
# SITE REMEDIATION AND CONSTRUCTION OF PARKING FACILITY
# 149 CHURCH STREET
IN THE TOWN OF
# BRISTOL, CONNECTICUT




LOCATION MAP
Scale: 1"=1000'




Approved by the Conservation Commission acting as the Inland-Wetlands Agency for the City of Bristol
X With Conditions ____ Without Condition
8/25/10 Date
1677 Permit Number
Signature

CITY OF BRISTOL, CONNECTICUT
This Site Plan has been approved by the Zoning Commission of the City of Bristol, CT.
Chairman/Secretary
9/15/10 Date
Pursuant to Section 8-3(i) of the Connecticut General Statutes, all work in connection with this Site Plan shall be completed by 9/15/15. Failure to complete all such work by that date shall result in automatic expiration of the approval of this Site Plan.

## LIST OF DRAWINGS


SHEET NO.
1 - TITLE SHEET/PROJECT LOCATION MAP
2 - EXISTING CONDITIONS PLAN
3 - NON-REMEDIAL DEMOLITION PLAN
4 - SITE & LAYOUT PLAN
5 - GRADING & EROSION CONTROL PLAN
6 - LIGHTING PLAN
7 - LANDSCAPE, SIGNAGE & PAVEMENT MARKING PLAN
8 - MISCELLANEOUS CONSTRUCTION DETAILS
9 - MISCELLANEOUS CONSTRUCTION DETAILS (2)
10 - REMEDIATION EXCAVATION AREAS


BOARD OF PUBLIC WORKS
MAYOR ARTHUR T. WARD, CHMN.

DIRECTOR OF PUBLIC WORKS
W.E. VESELKA, P.E.

CITY ENGINEER
PAUL A. STRAWDERMAN, P.E.

AUGUST, 2010 Contract :

**"THIS DOCUMENT HAS BEEN PREPARED A PART OF THE CITY OF BRISTOL (I.W.W.C., T.P.Z., OR Z.B.A.) APPLICATION PROCESS AND CAN NOT BE CONSIDERED FINAL NOR USED FOR CONSTRUCITON PURPOSES UNTIL ALL NECESSARY APPROVALS HAVE BEEN ATTAINED"**

Inland Wetlands Permit No. 1677
Approval Date: 8/25/2010

FORM 816 (2004) STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION SHALL GOVERN INCLUDING ALL SUPPLEMENTAL SECIFICATIONS (LATEST REVISION).


PREPARED BY:
City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax 860-584-3838
ci.bristol.ct.us

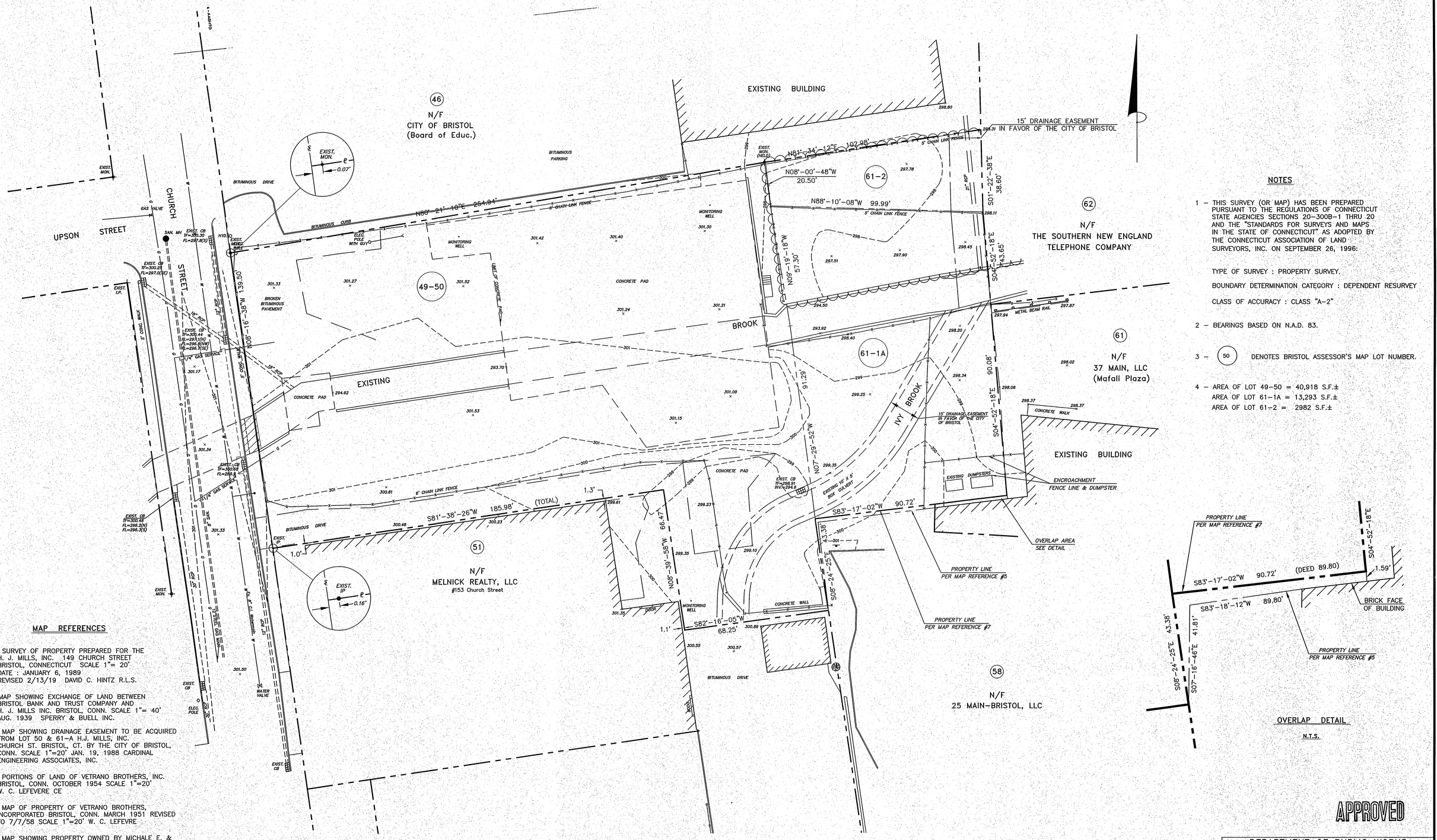

| No. | DATE | COMMENTS |
|---|---|---|
| 1. | 8/14/2010 | City Staff Comments |
| 2. | 10/15/2010 | City Staff Comments |

DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Title Sheet

DRAWING NUMBER:
1




OVERLAP DETAIL

N.T.S.

## NOTES

1 – THIS SURVEY (OR MAP) HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300B-1 THRU 20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996:

TYPE OF SURVEY : PROPERTY SURVEY.

BOUNDARY DETERMINATION CATEGORY : DEPENDENT RESURVEY

CLASS OF ACCURACY : CLASS "A-2"

2 – BEARINGS BASED ON N.A.D. 83.

3 – (50) DENOTES BRISTOL ASSESSOR'S MAP LOT NUMBER.

4 – AREA OF LOT 49-50 = 40,918 S.F.±
AREA OF LOT 61-1A = 13,293 S.F.±
AREA OF LOT 61-2 = 2982 S.F.±

## MAP REFERENCES

1 – SURVEY OF PROPERTY PREPARED FOR THE H. J. MILLS, INC. 149 CHURCH STREET BRISTOL, CONNECTICUT SCALE 1"= 20' DATE : JANUARY 6, 1989 REVISED 2/13/19 DAVID C. HINTZ R.L.S.

2 – MAP SHOWING EXCHANGE OF LAND BETWEEN BRISTOL BANK AND TRUST COMPANY AND H. J. MILLS INC. BRISTOL, CONN. SCALE 1"= 40' AUG. 1939 SPERRY & BUELL INC.

3 – MAP SHOWING DRAINAGE EASEMENT TO BE ACQUIRED FROM LOT 50 & 61-A H.J. MILLS, INC. CHURCH ST. BRISTOL, CT. BY THE CITY OF BRISTOL, CONN. SCALE 1"=20' JAN. 19, 1988 CARDINAL ENGINEERING ASSOCIATES, INC.

4 – PORTIONS OF LAND OF VETRANO BROTHERS, INC. BRISTOL, CONN. OCTOBER 1954 SCALE 1"=20' W. C. LEFEVERE CE

5 – MAP OF PROPERTY OF VETRANO BROTHERS, INCORPORATED BRISTOL, CONN. MARCH 1951 REVISED TO 7/7/58 SCALE 1"=20' W. C. LEFEVRE

6 – MAP SHOWING PROPERTY OWNED BY MICHALE E. & DANIEL E. LAURENTANO AND AMELIA DESMOND CHURCH STREET BRISTOL, CONN. SCALE : 1" = 20' JANUARY 28, 1980

7 – LOT LINE REVISION MAP FOR WALGREENS STORE #10203 DEVELOPER/OWNER 107 SOUTH STREET CORP. #25 MAIN STREET BRISTOL, CT. SCALE : 1" = 20' DATE : JULY 1, 2005 REVISED TO 12/5/05 KRATZERT JONES & ASSOCIATES, INC.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON

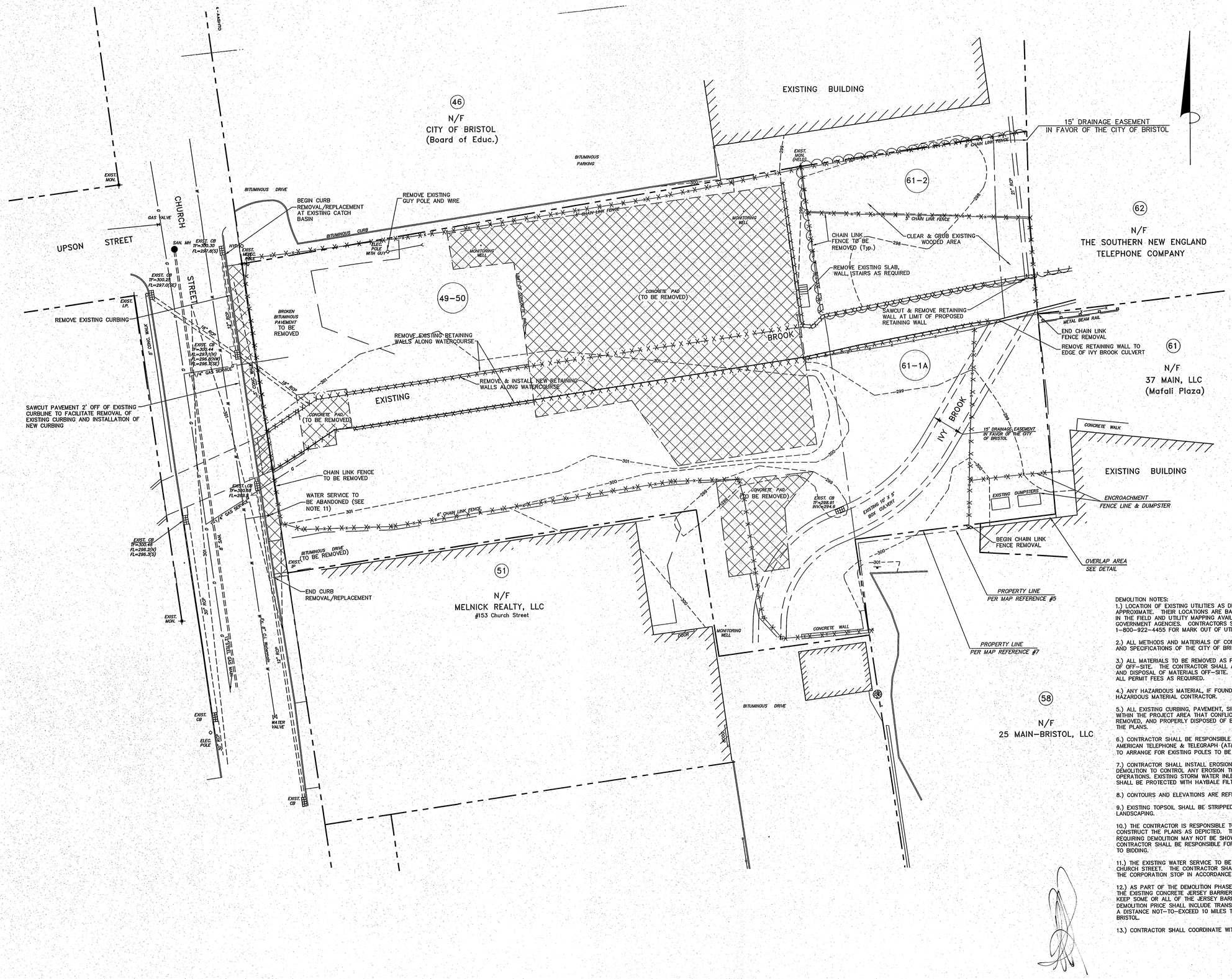
PETER W. FORREST L.S. 11344 DATE

APPROVED

DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING
CITY OF BRISTOL
CONNECTICUT

MAP OF LOTS
49-50, 61-1A AND 61-2
OWNED BY THE CITY OF BRISTOL
CHURCH STREET BRISTOL, CT.

| | | | |
|---|---|---|---|
| DESIGNED | | CONTRACT NO. | DATE JAN. 2010 |
| DRAWN | DRB | FIELD BOOK NB-431 | SCALE 1" = 20' |
| CHECKED | PWF | | SHEET 1 OF 1 |




DEMOLITION NOTES:

1.) LOCATION OF EXISTING UTILITIES AS DEPICTED HEREON SHALL BE CONSIDERED APPROXIMATE. THEIR LOCATIONS ARE BASED UPON A COMBINATION OF STRUCTURES VISIBLE IN THE FIELD AND UTILITY MAPPING AVAILABLE FROM LOCAL UTILITY COMPANIES AND GOVERNMENT AGENCIES. CONTRACTORS SHALL CONTACT CALL- BEFORE-U-DIG AT 1-800-922-4455 FOR MARK OUT OF UTILITIES 72 hrs. PRIOR TO ANY EXCAVATION.

2.) ALL METHODS AND MATERIALS OF CONSTRUCTION SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF BRISTOL.

3.) ALL MATERIALS TO BE REMOVED AS PART OF THIS PLAN SHALL BE PROPERLY DISPOSED OF OFF-SITE. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FOR DEMOLITION AND DISPOSAL OF MATERIALS OFF-SITE. THE CONTRACTOR SHALL POST BONDS AND PAY ALL PERMIT FEES AS REQUIRED.

4.) ANY HAZARDOUS MATERIAL, IF FOUND ON-SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.

5.) ALL EXISTING CURBING, PAVEMENT, SIDEWALKS, CONCRETE, SIGNAGE, EARTH MATERIAL, ETC. WITHIN THE PROJECT AREA THAT CONFLICT WITH PROPOSED WORK SHALL BE DEMOLISHED, REMOVED, AND PROPERLY DISPOSED OF BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE IN THE PLANS.

6.) CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING WITH AMERICAN TELEPHONE & TELEGRAPH (AT&T) AND/OR CONNECTICUT LIGHT & POWER (CL&P) TO ARRANGE FOR EXISTING POLES TO BE REMOVED/RELOCATED AS NECESSARY.

7.) CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS NECESSARY DURING DEMOLITION TO CONTROL ANY EROSION THAT MAY TAKE PLACE DURING DEMOLITION OPERATIONS. EXISTING STORM WATER INLETS SUCH AS CATCH BASINS, YARD DRAINS, ETC. SHALL BE PROTECTED WITH HAYBALE FILTERS.

8.) CONTOURS AND ELEVATIONS ARE REFERENCED TO NGVD OF 1929.

9.) EXISTING TOPSOIL SHALL BE STRIPPED AND STOCK PILED FOR USE IN LATER LANDSCAPING.

10.) THE CONTRACTOR IS RESPONSIBLE TO DEMOLISH AND REMOVE ALL ITEMS AS REQUIRED TO CONSTRUCT THE PLANS AS DEPICTED. THE CONTRACTOR SHALL BE AWARE THAT ALL ITEMS REQUIRING DEMOLITION MAY NOT BE SHOWN AND/OR DEPICTED ON THE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE PROPERTY PRIOR TO BIDDING.

11.) THE EXISTING WATER SERVICE TO BE ABANDONED SHALL BE TERMINATED AT THE MAIN IN CHURCH STREET. THE CONTRACTOR SHALL EXCAVATE AND REMOVE THE EXISTING SERVICE TO THE CORPORATION STOP IN ACCORDANCE WITH BRISTOL WATER DEPARTMENT REQUIREMENTS.

12.) AS PART OF THE DEMOLITION PHASE, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING CONCRETE JERSEY BARRIERS. THE CITY OF BRISTOL RESERVES THE RIGHT TO KEEP SOME OR ALL OF THE JERSEY BARRIERS IF THEY SO DESIRE. THE CONTRACTORS DEMOLITION PRICE SHALL INCLUDE TRANSPORTING AND DELIVERING THE BARRIER(S) ONE-WAY A DISTANCE NOT-TO-EXCEED 10 MILES TO A LOCATION TO BE DETERMINED BY THE CITY OF BRISTOL.

13.) CONTRACTOR SHALL COORDINATE WITH CL&P TO REMOVE EXISTING GUY POLE AND WIRE.

APPROVED

PREPARED BY:


City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax. 860-584-3838
ci.bristol.ct.us

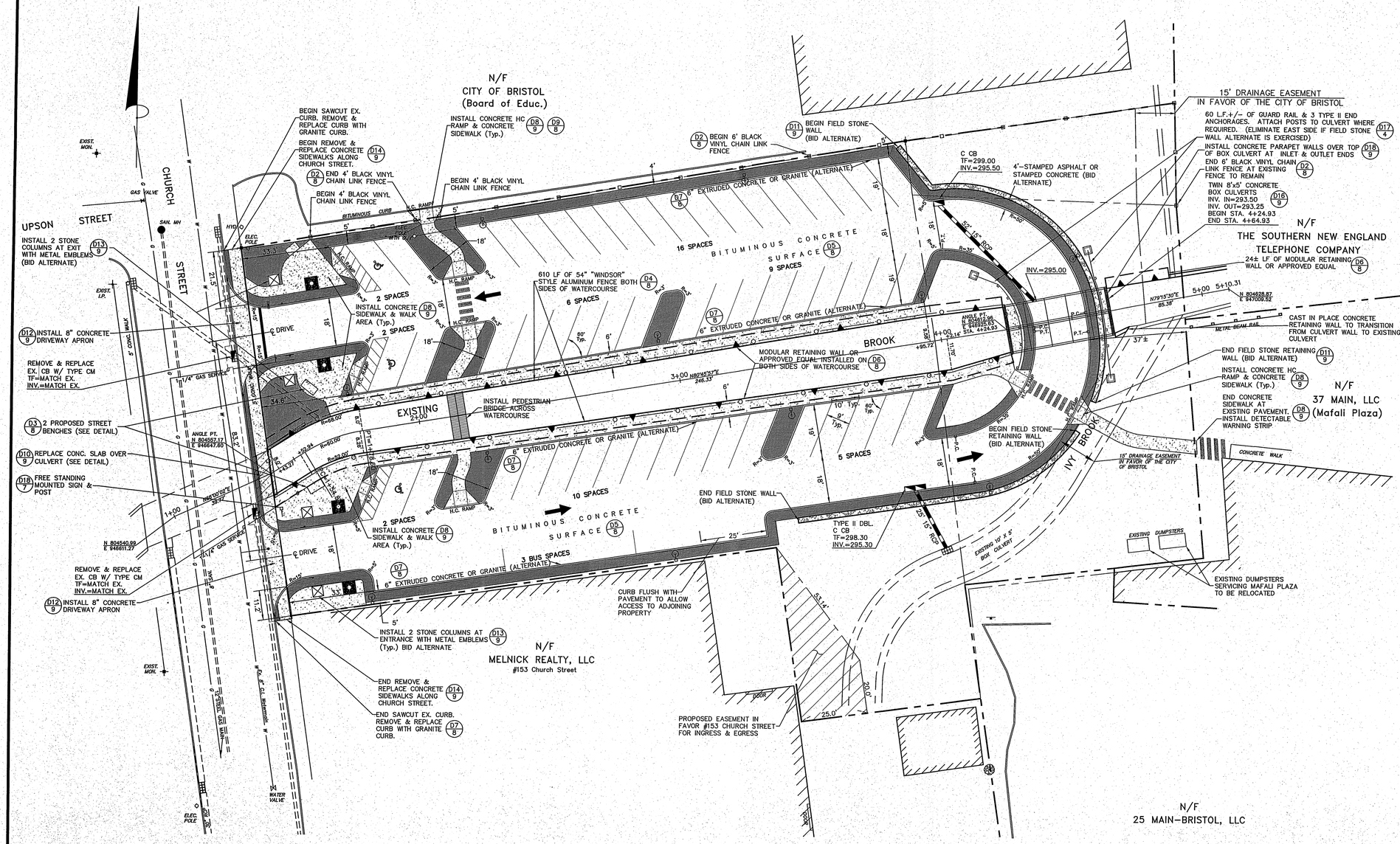

| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

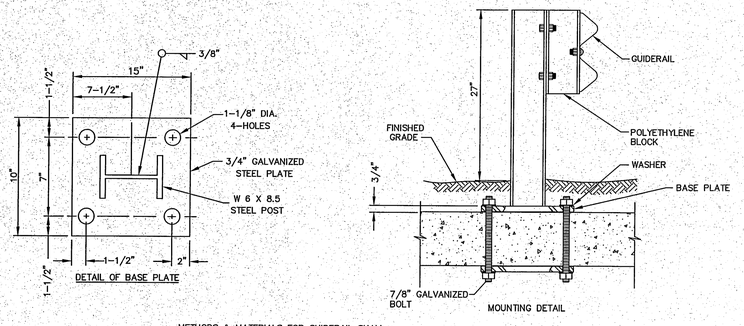
DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

# Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Non-Remedial Demolition Plan

DRAWING NUMBER:
3




METHODS & MATERIALS FOR GUIDERAIL SHALL COMFORM TO CONN. D.O.T. STANDARDS.

D17 CONNECTION DETAIL
GUIDE RAIL POST TO CONCRETE BOX CULVERT
N.T.S.

SITE PLAN NOTES:

1.) LOCATION OF EXISTING UTILITIES AS DEPICTED HEREON SHALL BE CONSIDERED APPROXIMATE. THEIR LOCATIONS ARE BASED UPON A COMBINATION OF STRUCTURES VISIBLE IN THE FIELD AND UTILITY MAPPING AVAILABLE FROM LOCAL UTILITY COMPANIES AND GOVERNMENT AGENCIES. CONTRACTORS SHALL CONTACT CALL–BEFORE–U–DIG AT 1–800–922–4455 FOR MARK OUT OF UTILITIES 72 hrs. PRIOR TO ANY EXCAVATION.

2.) ALL METHODS AND MATERIALS OF CONSTRUCTION SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF BRISTOL.

3.) PROPERTY LINE AND TOPOGRAPHIC INFORMATION ARE BASED UPON A FIELD SURVEY CONDUCTED BY THE CITY OF BRISTOL DEPARTMENT OF PUBLIC WORKS.

4.) ELEVATIONS AS DEPICTED HEREON ARE BASED UPON NGVD OF 1929.

5.) THE CONTRACTOR SHALL PAY ALL UTILITY COMPANY FEES AND COORDINATE ALL WORK WITH AMERICAN TELEPHONE & TELEGRAPH (AT&T), AND OTHER UTILITIES AS REQUIRED. THE OWNER SHALL REIMBURSE THE CONTRACTOR FOR ALL FEES THAT ARE NOT COVERED UNDER A SEPARATE OWNER/UTILITY COMPANY AGREEMENTS.

6.) THE CONTRACTOR SHALL ARRANGE FOR RESETTING OF CURB BOXES, VALVE BOXES, AND REMOVAL AND/OR RELOCATION OF UTILITY POLES AND OVERHEAD WIRES WITH THE APPROPRIATE UTILITY COMPANIES.

7.) THE CONTRACTOR SHALL EMPLOY ALL NECESSARY MEANS TO CONTROL AND PREVENT WATER POLLUTION AND EROSION, THROUGH THE USE OF SILTATION FENCES, HAYBALES, AND RELATED MEASURES, AS DEPICTED IN THESE CONTRACT DOCUMENTS AND AS ORDERED BY THE ENGINEER.

8.) THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, TRAFFIC CONES, TRAFFIMEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY THE CITY OF BRISTOL.

9.) THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS AND PROPERTY CORNERS DURING CONSTRUCTION. THE CITY OF BRISTOL DEPARTMENT OF PUBLIC WORKS SHALL RESET ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION AND THE CONTRACTOR SHALL REIMBURSE THE CITY FOR THE TOTAL COSTS INCURRED.

10.) NO INTERRUPTION OF EXISTING UTILITIES SERVICING ADJACENT STRUCTURES SHALL OCCUR UNLESS AUTHORIZED IN WRITING BY THE ENGINEER. INTERRUPTIONS SHALL ONLY OCCUR AFTER APPROVAL IN WRITING FROM THE ENGINEER AND TEMPORARY SERVICES HAVE BEEN PROVIDED.

11.) ALL SITE DIMENSIONS DEPICTED ARE REFERENCED TO THE FACE OF CURB OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

12.) THE CONTRACTOR SHALL RESTORE ANY DAMAGED CURBS, PAVEMENT, STRUCTURES, SIDEWALKS, ETC., DAMAGED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS DIRECTED BY THE ENGINEER.

13.) A STORM SEWER CONNECTION PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONNECTING THE PROPOSED DRAINAGE SYSTEM INTO THE CITY SYSTEM AND/OR INSTALLING STORM DRAINAGE WITHIN THE CITY R.O.W. THE CONTRACTOR MAKING THE STORM SEWER CONNECTION AND/OR INSTALLING STORM DRAINAGE WITHIN THE CITY R.O.W. SHALL NOTIFY THE CITY SEWER INSPECTOR 48 HOURS PRIOR TO ANY SUCH INSTALLATION AND/OR CONNECTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF THE STORM SEWER INSTALLATION. NO STORM SEWER SHALL BE BACK FILLED PRIOR TO AN INSPECTION OF THE COMPLETE PIPE INSTALLATION BY THE CITY SEWER INSPECTOR.

14.) A DRIVEWAY APRON AND/OR SIDEWALK PERMIT OBTAINED FROM THE PUBLIC WORKS DEPARTMENT, WILL BE REQUIRED PRIOR TO CONSTRUCTING ANY DRIVEWAY APRON AND/OR SIDEWALK WITHIN THE CITY R.O.W. THE CONTRACTOR CONSTRUCTION THE DRIVEWAY APRON AND/OR SIDEWALK WITHIN THE CITY R.O.W. SHALL NOTIFY THE CITY HIGHWAY INSPECTOR 48 HOURS PRIOR TO ANY SUCH CONSTRUCTION TO MAKE ARRANGEMENTS FOR AN INSPECTION OF ANY DRIVEWAY APRON AND/OR SIDEWALK INSTALLATION. NO CONCRETE (PORTLAND CEMENT AND/OR BITUMINOUS) SHALL BE PLACED PRIOR TO AN INSPECTION BY THE CITY HIGHWAY INSPECTOR.

15.) SEDIMENTATION AND SILTATION CONTROLS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEERING DIVISION/WEO.

16.) GRADING AROUND THE PROPOSED IMPROVEMENTS SHALL BE PERFORMED IN A MANNER WHICH PREVENTS ALL RUNOFF FROM BEING DIRECTED ONTO ADJACENT PROPERTIES; BOTH DURING AND AFTER CONSTRUCTION.

17.) STORM DRAINAGE PIPE SHALL BE CLASS IV REINFORCED CONCRETE PIPE, MEETING STANDARDS AND SPECIFICATIONS OF THE CITY OF BRISTOL.

18.) CATCH BASINS, MANHOLES, FRAMES, ETC. SHALL MEET THE REQUIREMENTS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR CONSTRUCTION.

19.) PRECAST DRAINAGE STRUCTURES HAVE BEEN SPECIFIED ON THE PLANS. FIELD CONDITIONS AND DESIGN OFTEN DICTATE MINOR ELEVATION ADJUSTMENTS THAT MAY MAKE THE USE OF PRECAST STRUCTURES UNFEASIBLE. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY AND EXPENSE FOR INSTALLING AND CONSTRUCTING THE DRAINAGE STRUCTURES AS DEPICTED ON THE PLANS.

20.) THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY COST ASSOCIATED WITH DEWATERING THAT MAY BE NECESSARY TO CONSTRUCT THE PROJECT AS DEPICTED ON THE PLANS.

21.) FAILURE TO SPECIFICALLY MENTION WORK WHICH IS REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.

ZONING DATA
Zone: (BD) Downtown Business Zone

| Description | Required/Permitted | Provided |
|---|---|---|
| Minimum Lot Area (Sq. Ft.)-BD Zone | N/A | 57,193 Sq. Ft. |
| Minimum Lot Width (BD Zone) | N/A | 139.50' |
| Minimum Front Yard Parking Setback | 30' | 33' |
| Minimum Side Yard Parking Setback | 5' | 5' |
| Minimum Rear Yard Parking Setback | 5' | 94' |
| Maximum Building Coverage (%) | N/A | 0% |
| Maximum Building Height (Stories/feet) | N/A | N/A |
| Parking Requirements: Use: Parking Facility | N/A | 52 Spaces + 3 Bus Spaces |

APPROVED

PREPARED BY:
City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax. 860-584-3838
ci.bristol.ct.us

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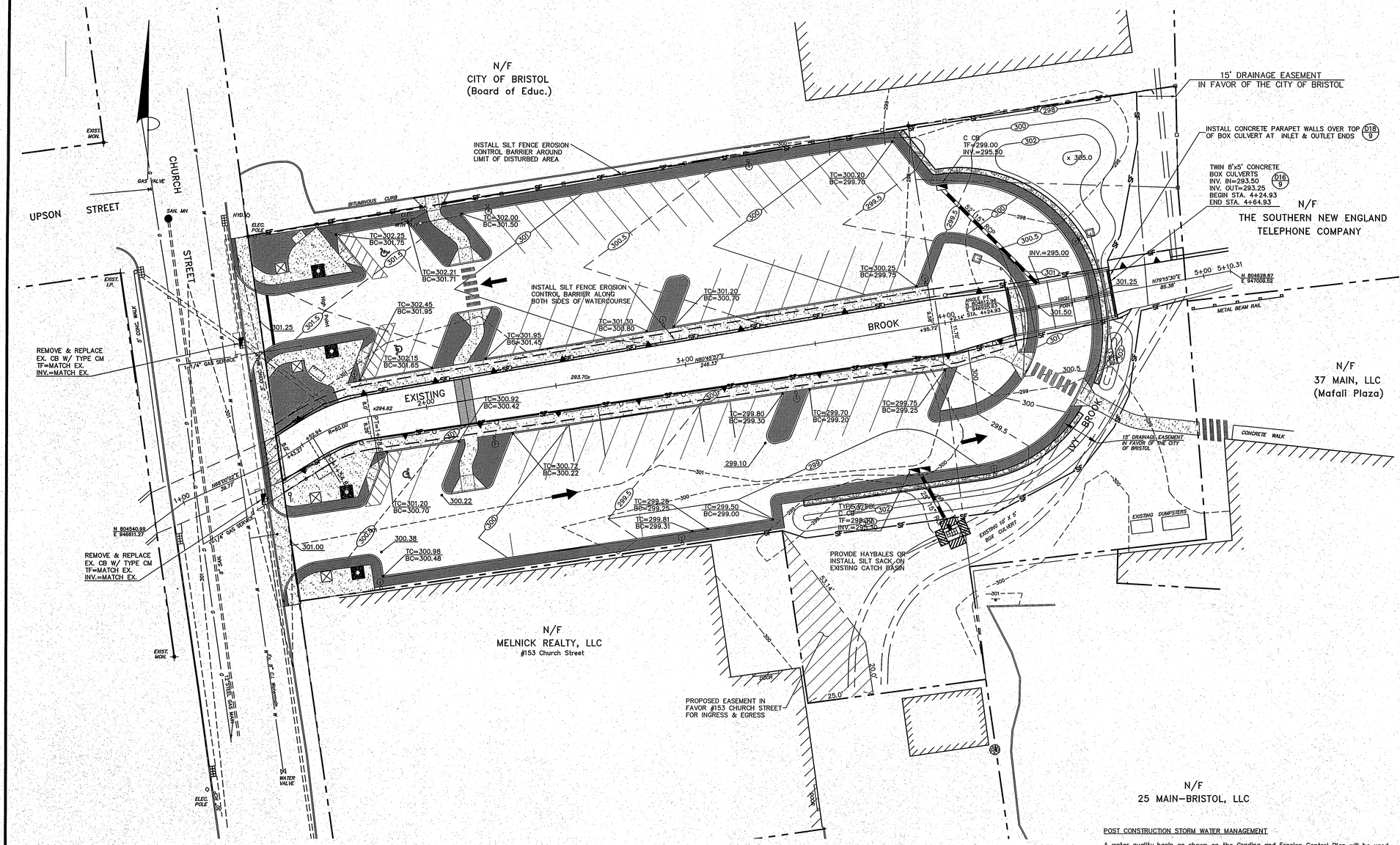
Site Remediation and Construction of Parking Facility
149 Church Street
Bristol Connecticut

Site, Layout & Utility Plan

DRAWING NUMBER:
4




CONSTRUCTION SEQUENCE:

1. Install sedimentation and erosion control barriers.
2. Conduct demolition of existing features as required.
3. Remove existing retaining walls along watercourse.
4. Install proposed box culvert.
5. Install proposed retaining walls along watercourse.
6. Bring site to subgrade. Install granite curbing.
7. Install bituminous pavement binder course.
8. Final grade site. Establish vegetation. Install concrete sidewalks and other site improvements.
9. Install finish course of bituminous concrete.

1. All disturbed areas shall have erosion control provided in accordance with the "Connecticut Guidelines for Erosion and Sediment Control" and the Town. Erosion control measures are to be accomplished prior to any other construction on the site.
2. Temporary erosion control shall be directed toward and have the purpose of controlling soil erosion at its potential source. Downstream sediment entrapment measures (proposed channel and infiltration basins) shall be employed, but only as a backup to primary control at the source.
3. A continuing program of installation and maintenance of sediment control shall be employed during the construction period. The contractor shall inspect and maintain sediment control devices on a weekly basis and immediately after each rainfall event.
4. Temporary erosion control construction shall be employed until such time as permanent paving, planting, and restoration of natural areas is effective in control of erosion from the site.
5. Temporary silt fences shall be located at all points where surface water can leave the construction area. Silt fences shall be constructed to remove sediments from flowing water through filtration and sedimentation. Silt fences shall be arranged to create ponding behind them. Provisions shall be made for removing accumulated sediments and maintaining ponding capacity. Stockpiles shall be encircled with silt fence. Silt and unusable material shall be disposed of in area approved by owner's engineer. Contractor to contact engineer prior to placement.
6. Grading operations shall be scheduled so that the ground surface will be disturbed for the shortest possible time before permanent construction is installed. Large areas shall be maintained as flat as possible to minimize soil transport through surface flow. Wherever steeper slopes or abrupt changes in grade are required, a diversion ditch or berm shall be constructed at the top of the slope to cause the surface water to flow along the diversion to a control point to be transported downslope in a slope drain. In no case shall surface water be allowed to flow uncontrolled down slopes.
7. Concentrated storm runoff shall not be permitted to flow uncontrolled down unprotected slopes. Temporary slope drains shall be provided to convey surface water down slopes until the permanent drainage system is in place and permanent ground cover is established. Slope drains shall be provided with an apron at their tops to anchor them and properly direct water into them. Stone or hay bales shall be placed at slope drain outlets to prevent scour at these points.
8. As much of the permanent storm drainage system as is practicable shall be initially installed and surface water diverted into the system. The remainder of the storm drainage system shall be installed as soon as conditions will allow. Temporary sediment barriers shall be maintained around drainage structures until final subgrade preparation is begun.
9. All disturbed areas except those designated to receive pavement shall be grassed or covered with vegetative materials in accordance with the Landscape Plans. All grade break slopes shall be protected by application of ground cover or terracing until construction of permanent surfaces begins. Temporary ground cover may consist of any effective erosion preventative treatment such as straw or other mulches, stone base, plastic sheets, fiber mats, plantings, etc. All grassing or planting operations shall include mulching as stabilization until ground cover by planting is effective. Any stockpiled top soil, if left undisturbed for more than 30 days, shall be grassed.
10. At the time that permanent erosion control is effective, temporary devices and their accumulated sediments shall be removed.
11. Hazardous or pollutant materials shall be stored at least 25 feet from any wetland/watercourse or storm drainage inlet. Contractor's equipment when parked shall follow same criteria.
12. The schedule on interim stabilization is as follows: Immediately upon reaching final grades or work has temporarily been suspended for more than 30 days, hay shall be spread on all disturbed area to provide a uniform blanket of protection. Hay shall be removed only when conditions are appropriate for growing grass.

POST CONSTRUCTION STORM WATER MANAGEMENT

A water quality basin as shown on the Grading and Erosion Control Plan will be used as a post construction filtering device to control pollutants and storm water discharges. Also, a grass swale along the easterly portion of the site shall be maintained to direct surface water into the detention/sedimentation pond.

Waste disposal: No litter, debris, building materials or similar materials are to be discharged into the waters of the State. Also, offsite vehicle tracking of sediment and generation of dust shall be minimized.

INSPECTION

Qualified personnel (provided by the developer) shall inspect disturbed areas of the construction activity that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. Where sites have been temporarily or finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least once every month for three months.

1. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are assessable, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off–site sediment tracking.
2. Based on the results of the inspection, the description of potential sources and pollution prevention measures identified in the plan shall be revised as appropriate as soon as practicable after such inspection. Such modification shall provide for timely implementation of any changes to the plan within 7 calendar days following he inspection.

APPROVED

PREPARED BY:

City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax. 860-584-3838
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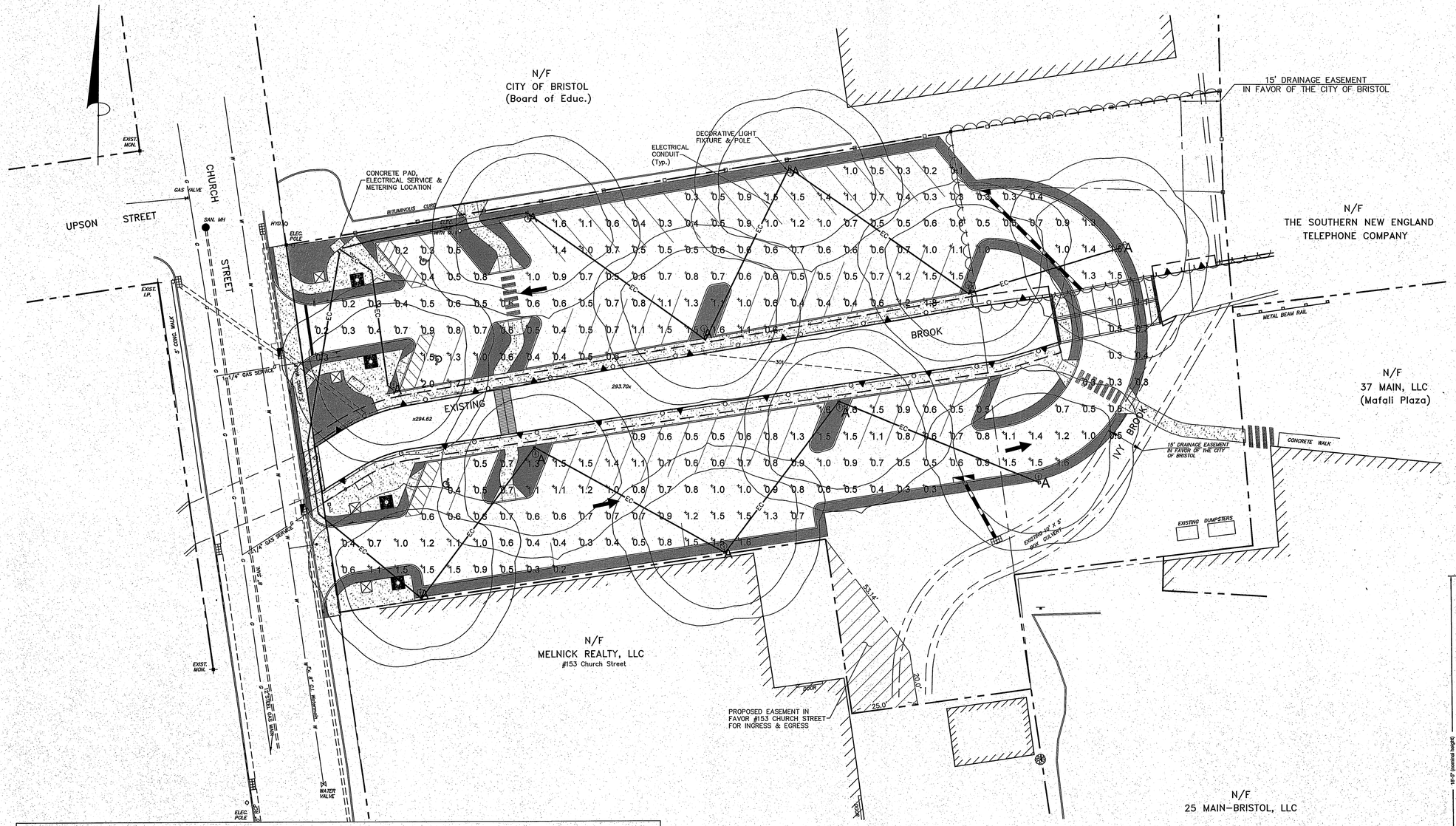
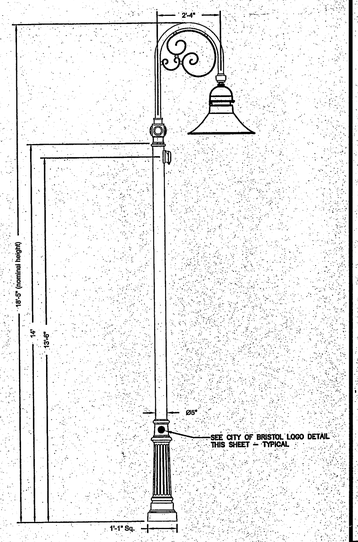
Site Remediation and Construction of Parking Facility
149 Church Street
Bristol Connecticut

Grading & Erosion Control Plan

DRAWING NUMBER:
5




CITY OF BRISTOL
LOGO DETAIL




FIXTURE TYPE 'A' DETAIL

## STATISTICS

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| Parking & Drive | + | 0.8 fc | 2.0 fc | 0.1 fc | 20.0:1 | 8.0:1 |

## LUMINAIRE SCHEDULE

| Symbol | Label | Qty | Catalog Number | Description | Lamp | File | Lumens | LLF | Watts |
|---|---|---|---|---|---|---|---|---|---|
| | A | 11 | GP10DMH000XS1 AN | GLASWERKS II PRAGUE | 100W CLEAR PULSE PROTECTED MH | 105642.IES | 9000 | 0.72 | 130 |

## NOTES

1. Fixture mounting height at 14'6"
2. All calculations shown are maintained after 4000hr burn in period.

APPROVED

PREPARED BY:

City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax 860-584-3838
ci.bristol.ct.us

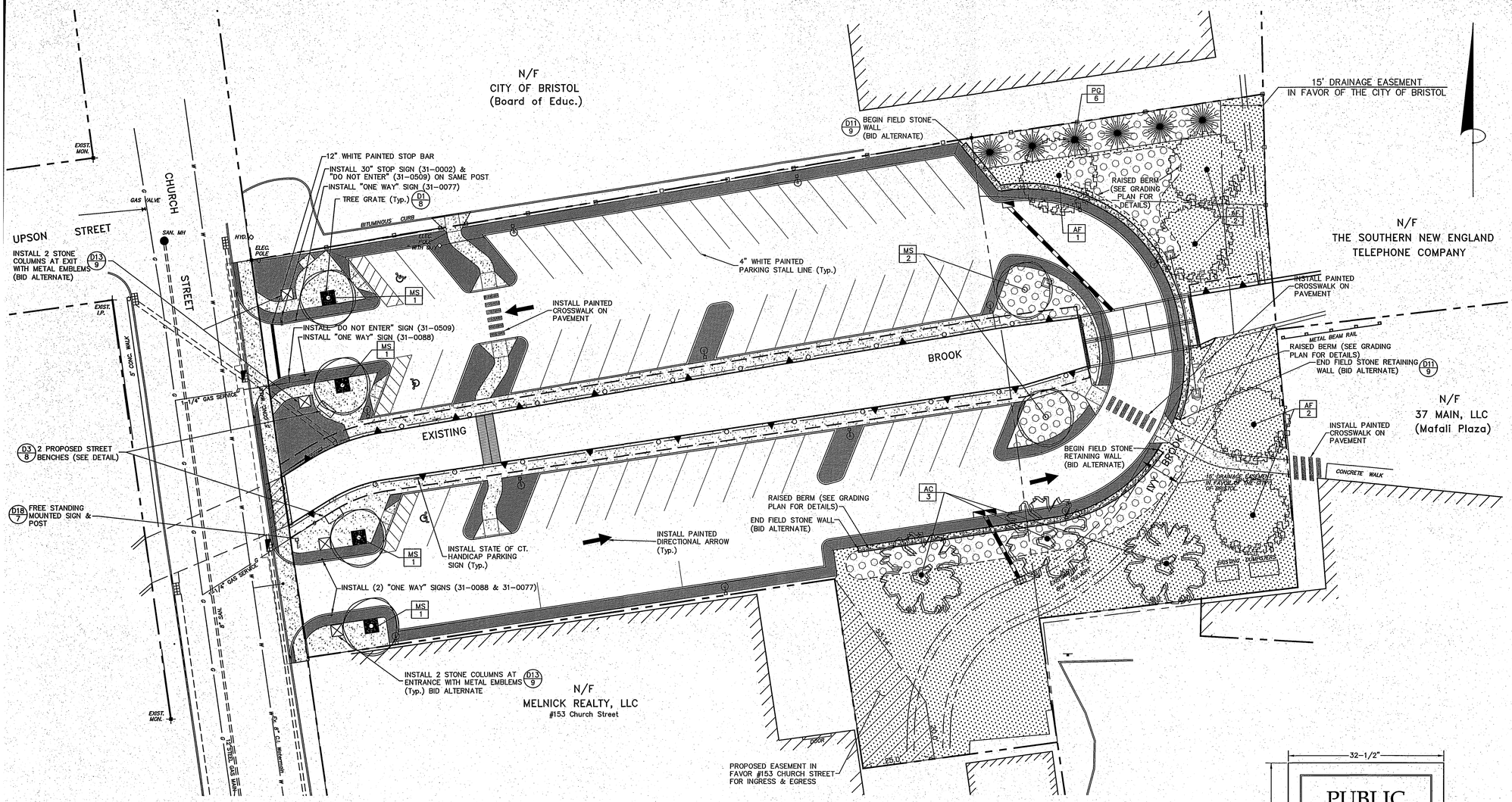
| No. | DATE | COMMENTS |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Lighting Plan

DRAWING NUMBER:
6




LANDSCAPE NOTES:

1.) THE CONTRACTOR SHALL GUARANTEE THAT ALL PLANTS, TREES, AND SHRUBS SHALL BE HEALTHY AND FREE OF DISEASE FOR A PERIOD OF TWO YEARS AFTER INSTALLATION. CONTRACTOR SHALL REPLACE ANY DEAD OR DISEASED PLANTS AT THE CONTRACTOR'S EXPENSE.

2.) THE CONTRACTOR SHALL SUPPLY ALL MATERIALS, PLANTS, AND LABOR NECESSARY TO COMPLETE THE WORK DEPICTED ON THE DRAWINGS AND LISTED IN THE PLANT SCHEDULE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY.

3.) THE LOCATIONS FOR PLANT MATERIAL SHALL BE CONSIDERED APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO SLOPE, VEGETATION, AND SITE FACTORS SUCH AS ROCK OUTCROPS, ETC. PRIOR TO PLANTING THE CONTRACTOR SHALL GET APPROVAL FROM THE OWNER FOR ANY ADJUSTMENTS OF THE PLANT MATERIALS AND OR LOCATIONS.

4.) LANDSCAPE PLANTING PITS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, AND BLASTED ROCK SHALL BE REMOVED FROM WITHIN ISLANDS TO BE LANDSCAPED TO A DEPTH OF 2' OR A GREATER DEPTH IF REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS. REPLACE SOIL WITHIN ISLANDS WITH LOAM OR SANDY LOAM FREE OF RUBBISH AND STONES GREATER THAN 1" IN DIAMETER AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT.

5.) ALL SLOPES GREATER THAN 3:1 RECEIVING A GRASS SEEDING MIXTURE SHALL BE COVERED WITH AN EROSION CONTROL BLANKET.

6.) UNLESS NOTED OTHERWISE, ALL DISTURBED AREAS NOT COVERED BY OTHER SITE IMPROVEMENTS SHALL BE RECEIVE A MINIMUM OF 6" OF TOPSOIL AND TURF ESTABLISHED.

7.) ALL PLANTING BEDS SHALL BE MULCHED WITH 3" OF SHREDDED BARK OVER A WEED BARRIER.

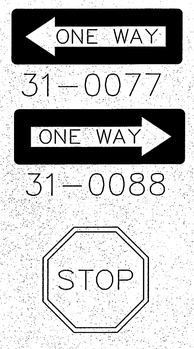
8.) PLANT MATERIALS AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE CONNECTICUT LANDSCAPE CONTRACTORS ASSOCIATION STANDARDS.

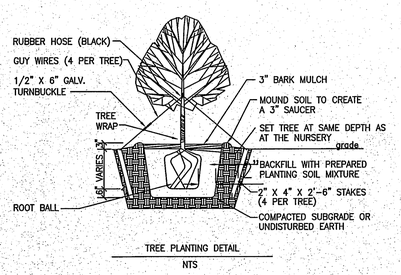
9.) PARKING SPACES SHALL BE STRIPED WITH 4" SINGLE WHITE LINES. PAINTED STOP BARS SHALL BE 12" SINGLE WHITE LINES. HATCHING AREA FOR HANDICAPPED SPACES SHALL BE 4" SINGLE WHITE LINES AT A 45-DEGREE ANGLE, 2' ON CENTER.

10.) WILDFLOWER SEED MIX SHALL BE A MIX CONSISTING OF ONLY NATIVE PLANTS SUITED FOR THE NORTHEAST REGION. APPLICATION RATE SHALL BE 20 lbs./ACRE.

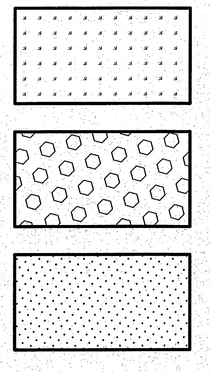
11.) PAVEMENT MARKINGS SHALL BE EPOXY IN ACCORDANCE WITH CONNECTICUT D.O.T. SPECIFICATIONS.

12.) SIGN DIMENSIONS, COLORS, SIZES, HEIGHTS, AND INSTALLATION DETAILS SHALL BE IN ACCORDANCE WITH THE STATE TRAFFIC COMMISSION STANDARDS AND THE "MANUAL OF TRAFFIC CONTROL DEVICES."



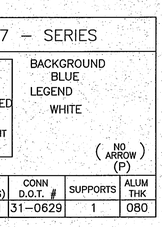

TREE PLANTING DETAIL
NTS



TURF ESTABLISHMENT (6" TOPSOIL & SEED OR SOD)

6" OF CEDAR MULCH OVER LANDSCAPE FABRIC

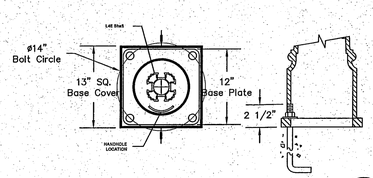
AREA TO BE TOPSOILED (6") AND SEEDED WITH WILDFLOWER MIX



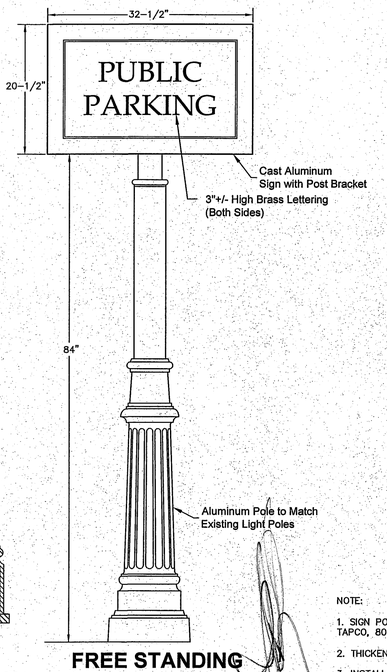

HANDICAPPED SIGN

PLANT SCHEDULE

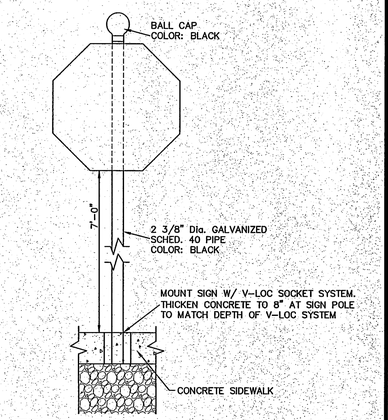
| SYMBOL | LATIN NAME | COMMON NAME | SIZE | QTY | NOTES |
|---|---|---|---|---|---|
| EVERGREEN TREES | | | | | |
| PG | PICEA GLAUCA | WHITE SPRUCE | 5-6' | 6 | B&B |
| DECIDUOUS TREES | | | | | |
| AC | AMELANCHIAR CANADENSIS | SHADBLOW | 5-6' | 3 | B&B |
| AF | ACER x FREEMANII 'AUTUMN FANTASY' | AUTUMN FANTASY MAPLE | 5-6' | 5 | B&B |
| MS | MALUS 'VELVET PILLAR' | VELVET PILLAR FLOWERING CRABAPPLE | 2 1/2"-3" CAL. | 6 | B&B |




POST ANCHOR DETAIL
N.T.S.




D18 FREE STANDING MOUNTED SIGN & POST
N.T.S.




TRAFFIC SIGN POST
N.T.S.

APPROVED

NOTE:

1. SIGN POST SHALL BE MOUNTED WITH A V-LOC SOCKET SYSTEM MODEL 23-VRI MF'D. BY TAPCO, 800 WALL ST. ELM GROVE, WI 53122, WWW.TAPCONET.COM
2. THICKEN CONC. SIDEWALK TO 8" AT SIGN POST TO ACCOMODATE THE V-LOC SYSTEM.
3. INSTALL THE V-LOC SYSTEM PLUMB & LEVEL & DO NOT MATCH THE SIDEWALK PITCH.
4. USE THIS SIGN POST FOR ALL TRAFFIC SIGNS & HANDICAP PARKING SIGNS.


City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax 860-584-3838


PREPARED BY:

| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'

Site Remediation and Construction of Parking Facility
149 Church Street
Bristol Connecticut

DRAWING NUMBER
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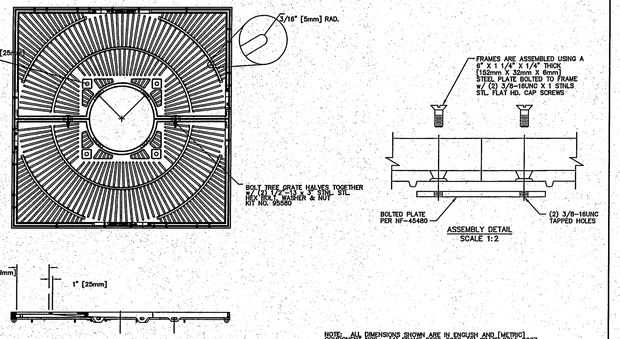
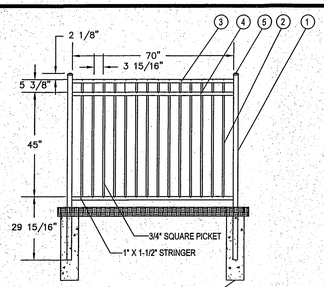



D1 **TREE GRATE DETAIL**

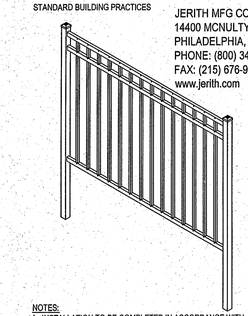
NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND [METRIC] CONVERSIONS. CONFORMS TO ADA REQUIREMENTS PER ASTM A-536 GRADE 60-40-18 DUCTILE IRON CASTINGS. FINISH: NO PAINT. WEIGHT: FRAME 25# EACH, GRATE23# EACH

| | | | |
|---|---|---|---|
| DR. KMH | SCALE 1"=1'-0" | TITLE R-8714-A 60" x 60" TREE GRATE AND FRAME | |
| CK. | | | |
| APP. | DW. DWG. | NEENAH FOUNDRY COMPANY | NF- 8714 115 B |
| DATE 11-22-99 | | | |

CAD DWG. REF: 8714115.DWG-



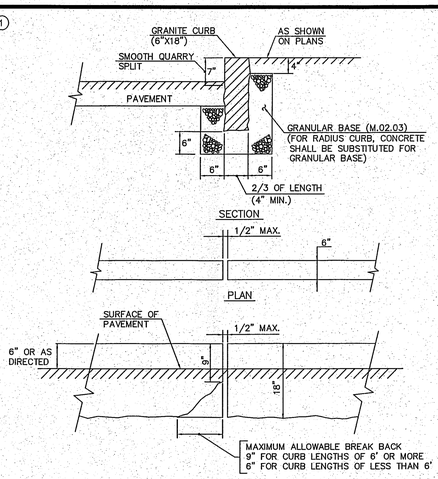

JERITH MFG CO., INC.
14400 MCNULTY ROAD
PHILADELPHIA, PA 19154
PHONE: (800) 344-2242
FAX: (215) 676-9756
www.jerith.com



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.

D4 **WINDSOR FENCE**

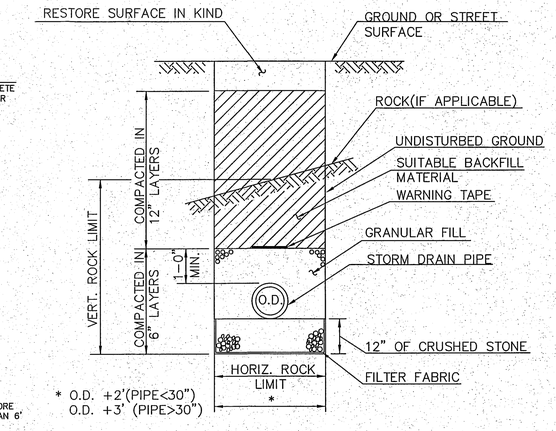
54" HEIGHT




NOTE: GRANITE CURBING TO BE INSTALLED ALONG CHURCH STREET SHALL INCLUDE COST FOR SAW CUTTING BACK OF CURB TO FACILITATE INSTALLATION OF BRICK PAVERS.

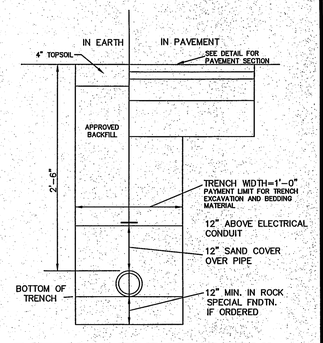
D7 **GRANITE STONE CURBING**

(BID ALTERNATE)



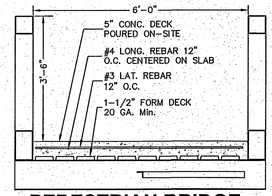

* O.D. +2'(PIPE<30")
O.D. +3' (PIPE>30")

STORM DRAIN




**ELECTRICAL TRENCH DETAIL**

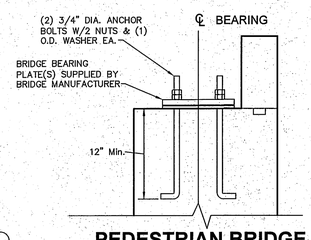
N.T.S.




**PEDESTRIAN BRIDGE**

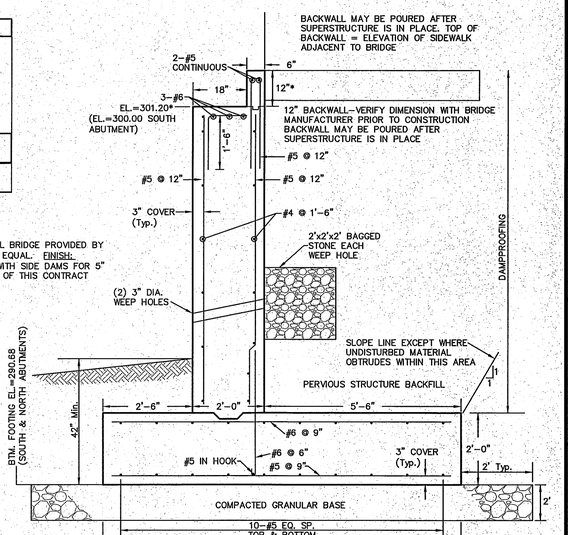
N.T.S.

PEDESTRIAN BRIDGE SHALL BE 20'x6' PRATT TRUSS TUBULAR STEEL BRIDGE PROVIDED BY EXCEL BRIDGE MANUFACTURING Co. (800)548-0054 OR APPROVED EQUAL. FINISH: PAINTED STEEL. COLOR: BLACK. DECK: GALVANIZED FORM PAN WITH SIDE DAMS FOR 5" CONCRETE WALK TO BE INSTALLED BY SITE CONTRACTOR AS PART OF THIS CONTRACT




**PEDESTRIAN BRIDGE ANCHOR BOLTS**

N.T.S.

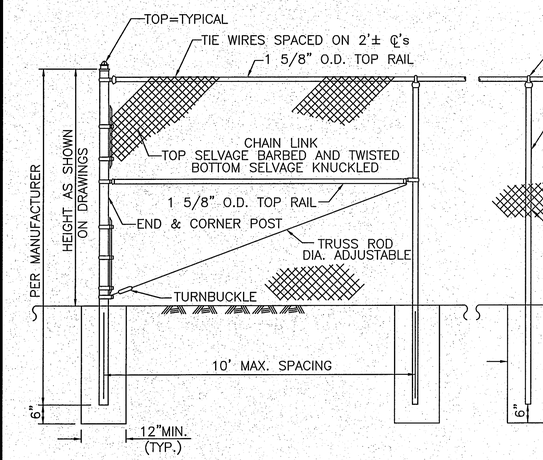



*CONTRACTOR SHALL BE RESPONSIBLE TO MODIFY BRIDGE ABUTMENT(S) BEARING PLATE ELEVATION(S) & BOTTOM OF FOOTING ELEVATIONS TO MATCH FINAL BRIDGE SHOP DRAWINGS & FIELD CONDITIONS.

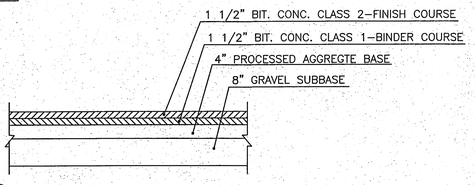
SOUTHERLY ABUTMENT SHALL BE CONSTRUCTED THE SAME AS NORTHERLY ABUTMENT EXCEPT FOR BOTTOM OF FOOTING & BEARING PLATE ELEVATIONS AS NOTED.

**NORTH PEDESTRIAN BRIDGE ABUTMENT**

N.T.S.

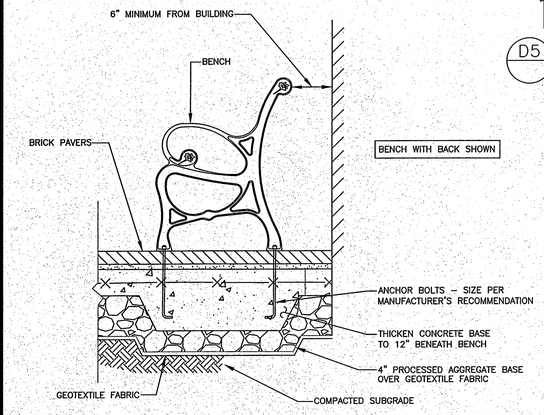



D2 **CHAIN LINK FENCE**




D5 **PAVEMENT SECTION**

(PARKING)




NOTE:
1. BENCH (WITH BACK) SHALL BE TIMBERFORM RESTORATION SERIES MODEL NO. 2118-8 EIGHT FEET LONG MANUFACTURED BY COLUMBIA CASCADE.

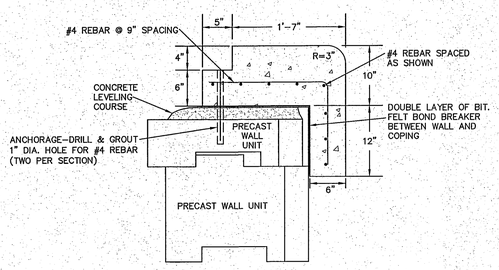
D3 **STREET BENCH**

N.T.S.

RETAINING WALL NOTES:

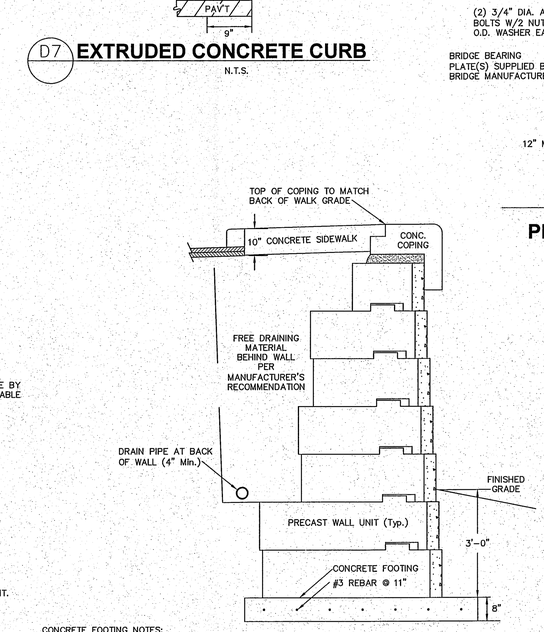
1. PRECAST CONCRETE WALL UNITS SHALL BE RECON 50 SERIES, NORTH SHORE GRANITE TEXTURE BY RECON RETAINING WALL SYSTEMS OR ACCEPTABLE EQUAL. RECON RETAINING WALL SYSTEM AVAILABLE FROM ATLAS CONCRETE PRODUCTS, 65 BURRITT STREET, NEW BRITAIN, CT 06053.

2. A SIX FOOT BAND OF CONCRETE SIDEWALK BEHIND RETAINING WALLS SHALL BE 10" THICK.




D6 **CONCRETE COPING DETAIL**

NOT TO SCALE




D7 **EXTRUDED CONCRETE CURB**

N.T.S.




CONCRETE FOOTING NOTES:

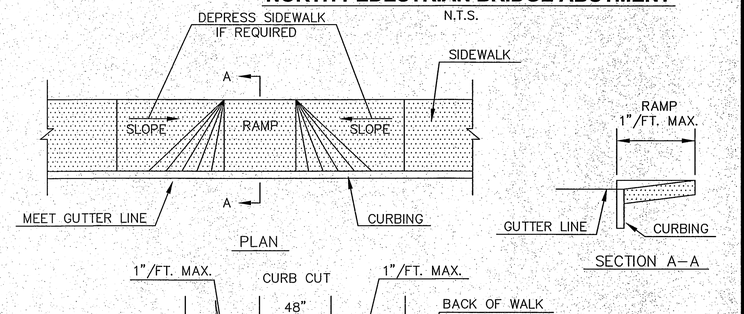
1. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I. CEMENT USED SHALL BE CLASS F AND MEET THE REQUIREMENTS OF CONNDOT FORM 816 M.03.01.

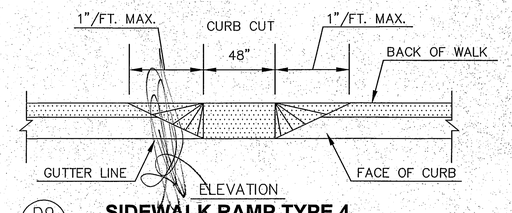
2. REINFORCING SHALL MEET THE REQUIREMENTS OF ASTM A-615M GRADE 60 DEFORMED STEEL BARS FOR CONCRETE REINFORCING. ALL BARS SHALL BE BENT COLD. UNLESS NOTED OTHERWISE NOTED, REINFORCING SPLICE LENGTHS SHALL BE 15" FOR #3 BARS.

DISCLAIMER:
These typical details are preliminary and conceptual in nature. They are provided for general information purposes only. Prior to construction the contractor shall submit a shop drawing of the proposed retaining wall system for approval. The shop drawing shall be a site specific design performed by a licensed Professional Engineer who is familiar with the actual site conditions, materials, and local practices.

D6 **BLOCK RETAINING WALL**

NOT TO SCALE




D9 **SIDEWALK RAMP TYPE 4**

APPROVED

PREPARED BY:

City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax 860-584-3838
ci.bristol.ct.us

| No. | DATE | COMMENTS: |
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| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

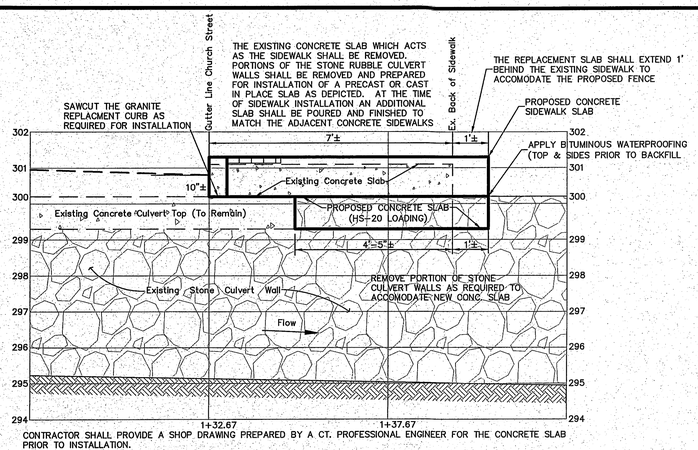
DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Miscellaneous Construction Details

DRAWING NUMBER:

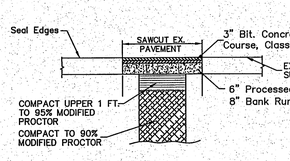
8




CONTRACTOR SHALL PROVIDE A SHOP DRAWING PREPARED BY A CT. PROFESSIONAL ENGINEER FOR THE CONCRETE SLAB PRIOR TO INSTALLATION.

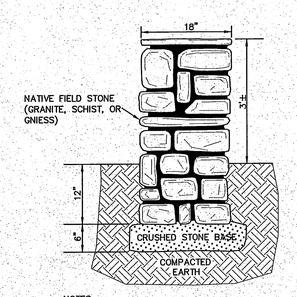
## D10 CONCRETE SLAB REPLACEMENT OVER CULVERT DETAIL

N.T.S.




### TYPICAL PAVEMENT CUT & REPAIR

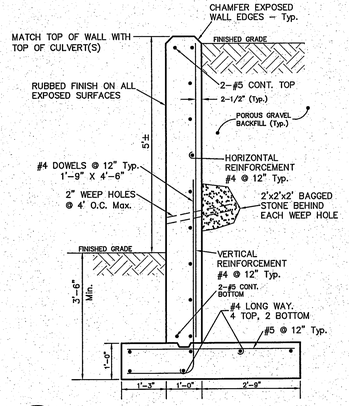
N.T.S.




NOTES:
1. CAP SHALL BE A Min. OF 3" THICK.
2. ALL MORTAR JOINTS SHALL BE DEEPLY RAKED TO AVOID MORTAR BEING EXPOSED ALONG ANY WALL FACE.
3. USE NATIVE FIELD STONE FOR EXPOSED FACE STONES.

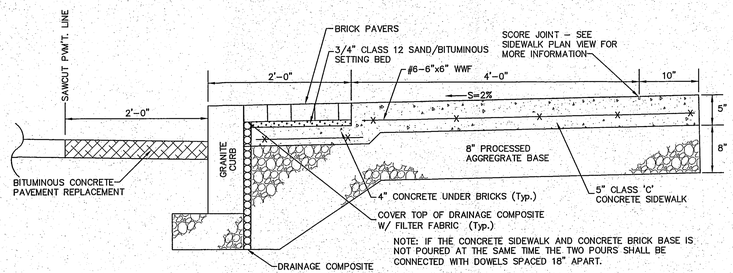
## D11 FIELD STONE WALL

N.T.S. (BID ALTERNATE)




## D15 CONCRETE TRANSITION WALL

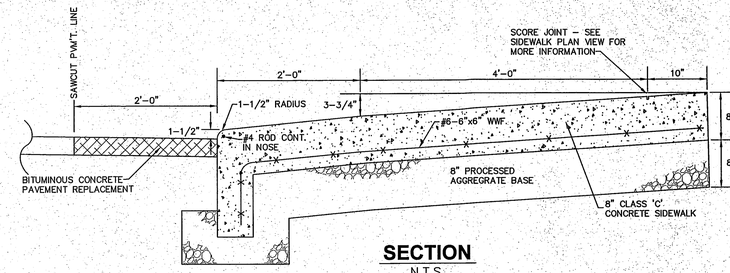
Scale: 1"=2'




NOTE: IF THE CONCRETE SIDEWALK AND CONCRETE BRICK BASE IS NOT POURED AT THE SAME TIME THE TWO POURS SHALL BE CONNECTED WITH DOWELS SPACED 18" APART.

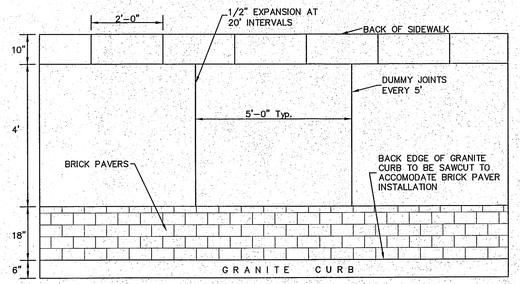
### SECTION

N.T.S.




### SECTION

N.T.S.

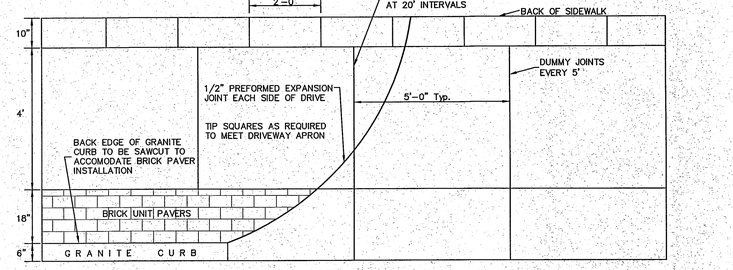



### PLAN

N.T.S.

## D14 CHURCH STREET SIDEWALK REPLACEMENT

N.T.S.




### PLAN

N.T.S.

## D12 CHURCH STREET SIDEWALK REPLACEMENT AT DRIVEWAY

N.T.S.

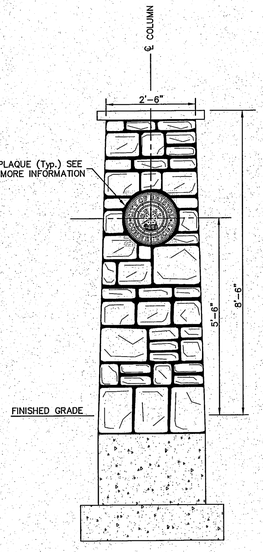



FONT: TIMES ROMAN

### BRONZE PLAQUE DETAIL

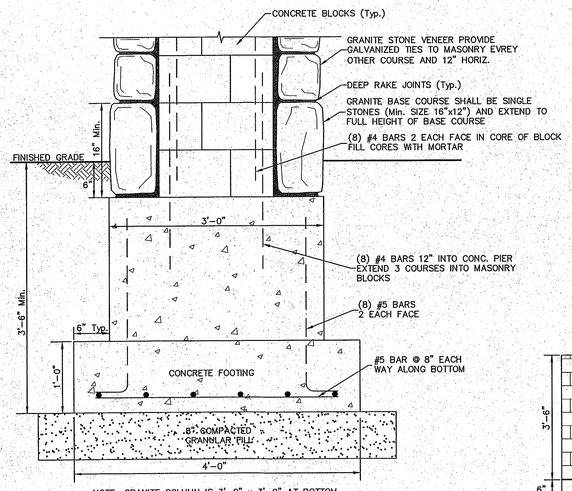
N.T.S.

NOTES:
1. PLAQUES SHALL BE INSTALLED ON BOTH ENTRANCE & EXIT DRIVE STONE COLUMNS FACING THE STREET. CITY SEAL SHALL BE INSTALLED ON NORTHERLY COLUMNS. "PUBLIC PARKING" PLAQUE SHALL BE INSTALLED ON SOUTHERLY COLUMNS.
2. PLAQUES SHALL BE CAST BRONZE WITH PEBBLE FINISH FROM ARCHITECTURAL BRONZE ALUMINUM CORPORATION. 1-800-339-6581 OR APPROVED EQUAL.
3. CONTRACTOR SHALL PROVIDE A SHOP DRAWING OF PROPOSED CASTING FROM THE MANUFACTURER FOR APPROVAL BY THE ENGINEER PRIOR TO CASTING.




## D13 STONE COLUMN

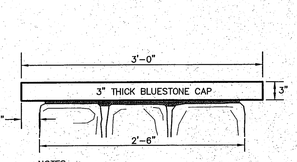
N.T.S. (BID ALTERNATE)




NOTE: GRANITE COLUMN IS 3'–0" x 3'–0" AT BOTTOM AND 2'–6" x 2'–6" AT TOP

## D13 STONE COLUMN

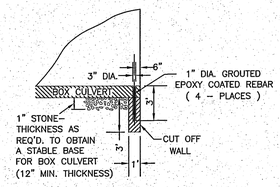
N.T.S. (BID ALTERNATE)




NOTES:
1. CAP SHALL BE ONE PIECE BLUESTONE
2. PROVIDE WASH ON CAPSTONES
3. TOP AND 4 EDGES OF CAPSTONE ARE TO BE THERMAL FINISHED
4. MORTAR CAPSTONE IN PLACE

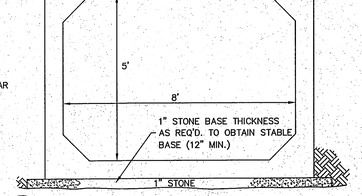
### STONE COLUMN CAP

N.T.S.




### CUT OFF WALL

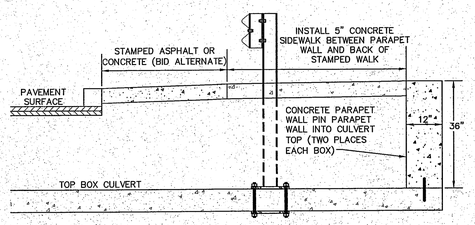
NOT TO SCALE




## D16 TYPICAL CULVERT SECTION

NOT TO SCALE

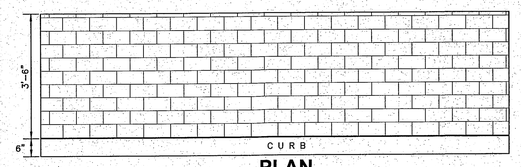
NOTES:
1. DESIGN BOX SECTIONS FOR LESS THAN 2 FEET OF COVER IN ACCORDANCE WITH ASTM C1433 (AASHTO M273)
2. INSTALL CUT OFF WALLS AT THE INLET AND OUTLET OF THE PROPOSED CULVERT




NOTES:
1. PARAPET WALL SHALL BE CAST IN PLACE OR PRE-CAST CONCRETE.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF PARAPET WALL FOR APPROVAL PRIOR TO INSTALLATION.

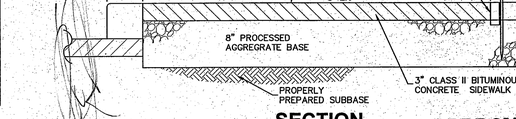
## D18 CONCRETE PARAPET WALL

N.T.S.




### PLAN

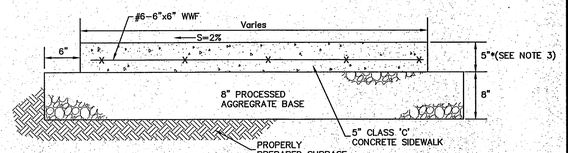
N.T.S.




NOTE: STAMPED CONCRETE SIDEWALKS SHALL NOT HAVE THE 2'x10" SCORE PATTERN AT THE BACK OF WALK AND SHALL HAVE EXPANSION JOINTS AND SAWCUT JOINTS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS

### PLAN

N.T.S.




### SECTION

N.T.S.

## D8 INTERIOR SIDEWALK DETAILS

N.T.S.

NOTE:
1. STAMPED CONCRETE PATTERN AND COLOR SHALL BE PATTERN: OFFSET BRICK, COLOR: TERRACOTTA. SHOP DRAWING SHALL BE SUBMITTED OF BOTH PATTERN & COLOR FOR APPROVAL PRIOR TO SIDEWALK INSTALLATION.

2. CONCRETE SIDEWALKS NOT STAMPED & COLORED SHALL BE BROOM FINISHED AND WINDOW PANED.

3. A SIX FOOT BAND OF CONCRETE SIDEWALK BEHIND THE MODULAR RETAINING WALL ALONG THE RIVER SHALL BE 10" THICK

NOTE:
1. STAMPED ASPHALT PATTERN SHALL BE OFFSET BRICK PATTERN AND ASPHALT COATING SHALL BE COLOR TERRACOTTA.

2. LIMITS OF ASPHALT SHALL BE FORMED TO PROVIDE SHARP EDGE AND EVEN PAVEMENT DIMENSIONS




### SECTION

N.T.S.

## D8 STAMPED ASPHALT DETAILS

N.T.S.

APPROVED


PREPARED BY:
City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax. 860-584-3838
ci.Bristol.ct.us

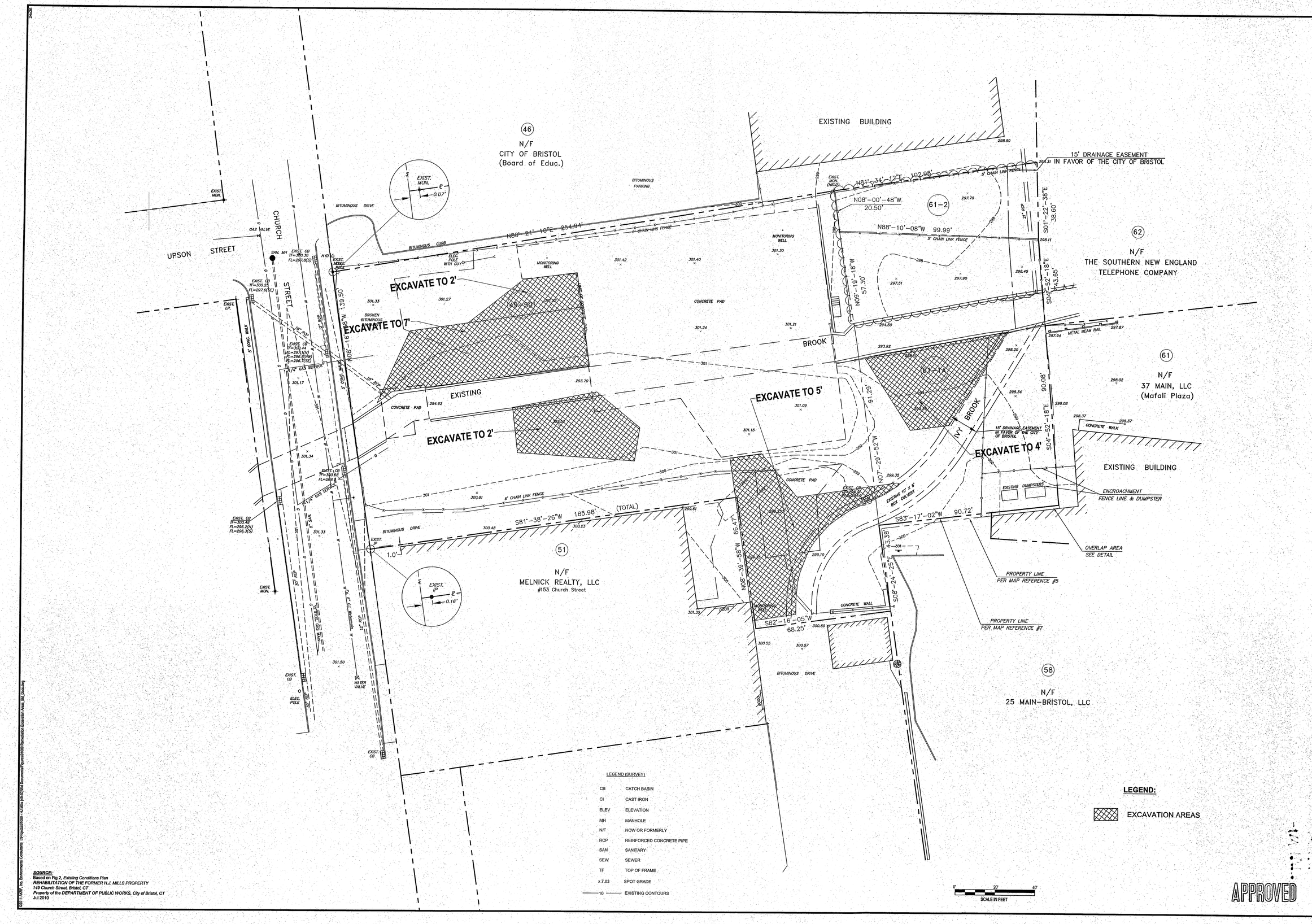

| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

# Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

## Miscellaneous Construction Details

DRAWING NUMBER:
9




SOURCE:
Based on Fig 2, Existing Conditions Plan
REHABILITATION OF THE FORMER H.J. MILLS PROPERTY
149 Church Street, Bristol, CT
Property of the DEPARTMENT OF PUBLIC WORKS, City of Bristol, CT
Jul 2010

AKRF
Environmental Consultants
700 Main Street Suite C, Willimantic, CT 06226

FORMER H.J. MILLS SITE
149-151 CHURCH STREET
BRISTOL, CT

REMEDIATION EXCAVATION AREAS

DATE
4.18.11

SCALE
as shown

PROJECT No.
91089

FIGURE
1

| For Office Use Only | |
|---|---|
| APPLICATION NO. | 2510 |
| DATE FILED: | 10/3/24 |
| DECISION DATE: | |
| DECISION: | |

**CITY OF BRISTOL, CONNECTICUT**
**APPLICATION FOR SITE PLAN APPROVAL**

The undersigned Applicant hereby applies for approval of a Site Plan for the following use:

Mixed Use Development and Location of parking on a seperate lot under different ownership, a ☑ permitted use ☑ Special Permit use

under Section(s) Article II Section 4.2 and Article III Section 13.6.b of the Bristol Zoning Regulations.

Address or Location of the Property: 37 Main Street & 149 Church Street

Assessor's Map No.: 30 Assessor's Lot No.(s): 61, 61-1 & 61-3; 49; 50; 61-1A; 61-2;

Zone of the Property: BD-1 & BD-2 Size of the Property (in acres or square feet): 27,123 sq. ft. & 57,934 sq. ft

Does this application involve an activity regulated by the Inland Wetlands Agency? ☑ yes [ ] no

If yes, has an application for a permit been submitted to the Inland Wetlands Agency? ☑ yes, on 9/9/24 [ ] no

Other comments: IWWA App. #2040

NOTE: Section 8-3c(a) of the Connecticut General Statutes requires that, if an application for a Special Permit involves an activity regulated under the Inland Wetlands and Watercourses provisions of the statutes, the applicant shall submit an application for a wetlands permit to the local Inland Wetlands Agency no later than the day the Special Permit application is filed.

**APPLICANT (If more than one, list on Page 2)**

Name: Gold Coast Properties, LLC

Address: 303 Linwood Ave. Suite 2B City: Fairfield State: CT Zip: 06824

Telephone No.: 203-610-1545 E-Mail: goldcoasthouse@gmail.com

Signature: _____ *Signature – (Printed/Typed)* Stephen Shapiro

CHECK ONE: [ ] owner ☑ other (specify): under contract

OWNER(S) OF RECORD (If other than Applicant; if more than one, list on Page 2)

Name: 37 Main Street, LLC

Address: 108 River Road City: Deep River State: CT Zip: 06417

Telephone No.: _____ E-Mail: _____

Signature: _____ *Signature – (Printed/Typed)* Rich Lemieux

**The following shall be included as part of this application:**

- filing fee – $310 (includes $60 State fee) *plus* $50 per dwelling unit *plus* $10 per 1,000 sq. ft. or portion thereof of proposed non-residential building (make checks payable to "City of Bristol")
- six paper copies and one digital copy of a Site Plan containing all information required on the Site Plan Requirements Checklist
- a written narrative and any other data and drawings as may be required (e.g., drainage calculations, exterior building elevations)

**THIS APPLICATION MUST BE FILED IN PERSON NO LATER THAN 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!**

LUO – 01/24

For Office Use Only
APPLICATION NO. 2510

## CITY OF BRISTOL, CONNECTICUT
## SUPPLEMENTARY INFORMATION

**Address or location of property:** 37 Main Street & 149 Church Street

**ADDITIONAL INFORMATION/COMMENTS (click inside the box below and begin typing)**

**ADDITIONAL APPLICANT**

Name: _____ CHECK ONE: [ ] owner [ ] other: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**ADDITIONAL OWNER(S) OF RECORD**

Name: City of Bristol, CT

Address: 111 North Main Street City: Bristol State: CT Zip: 06010

Telephone No.: 860-584-6252 E-Mail: mayorsoffice@britolct.gov

Signature: _____ Signature – (Printed/Typed) Mayor Jeffrey Caggiano

Name: _____

Address: _____ City: _____ State: ____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature – (Printed/Typed) _____

**(OPTIONAL) SEND COPIES OF ALL CORRESPONDENCE TO:**

Name: Attorney James Ziogas

Address: 104 Bellevue Ave. City: Bristol State: CT Zip: 06010

Telephone No.: _____ E-Mail: _____

1/24 - LUO

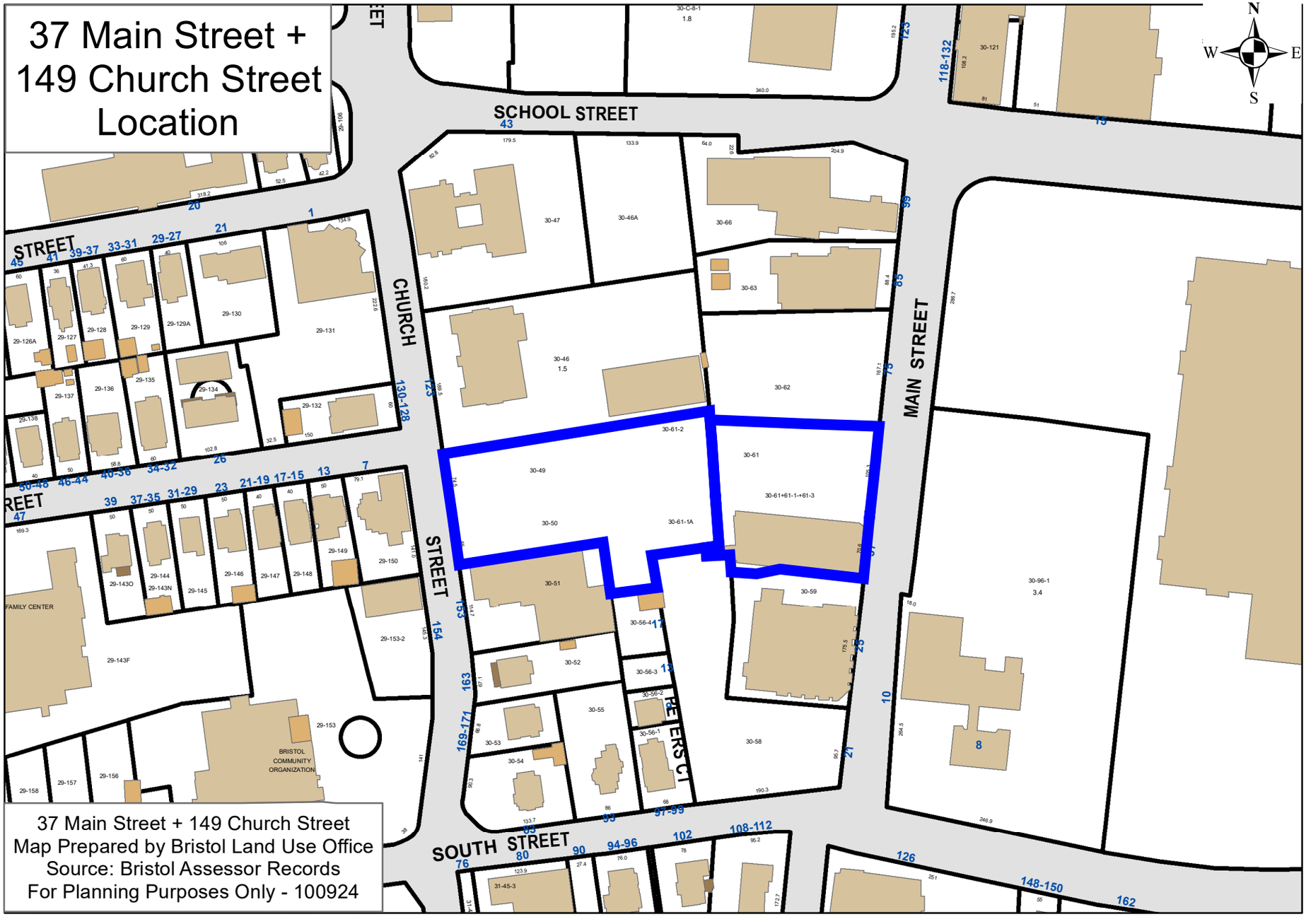
# Narrative

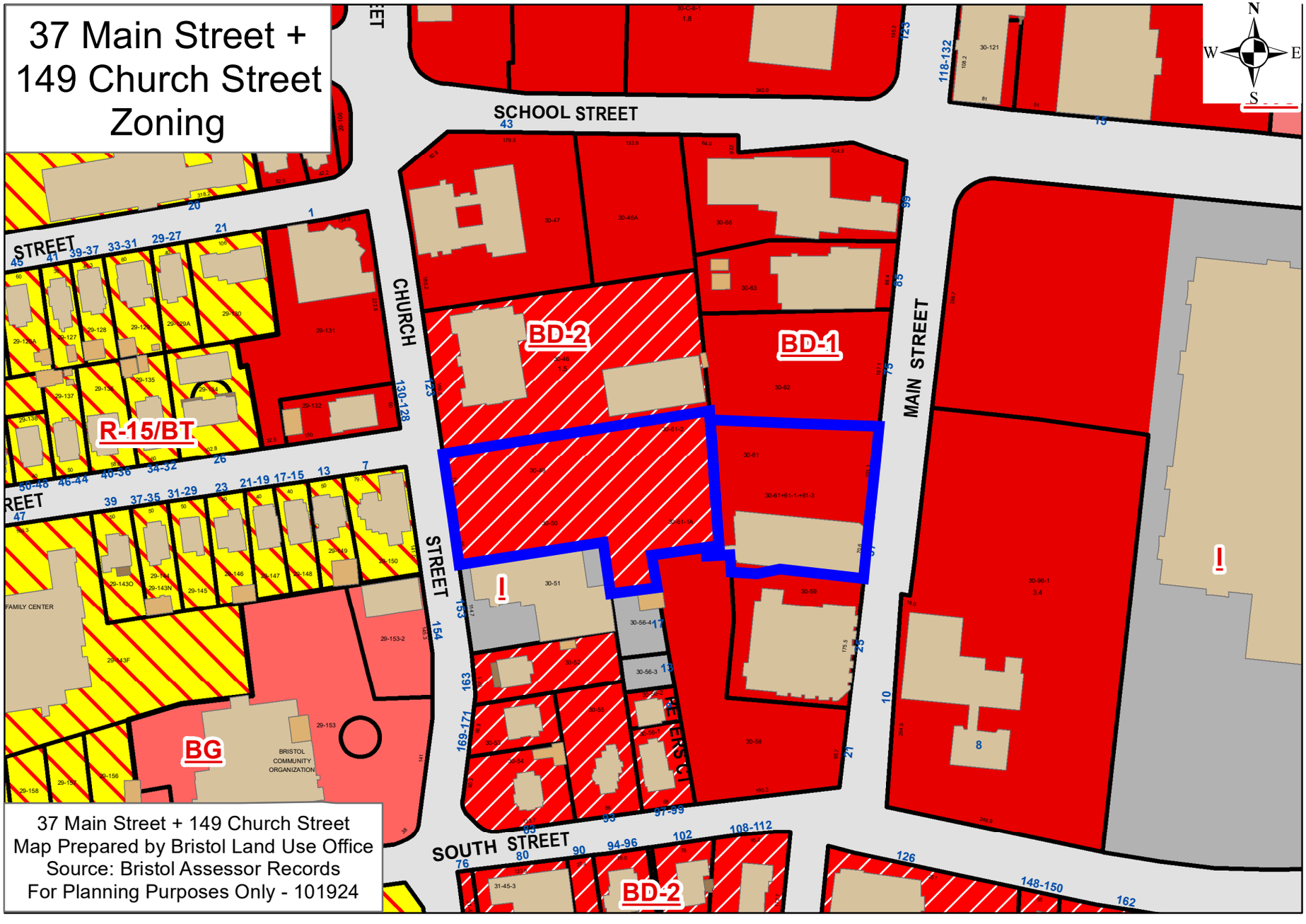
## Project Narrative

The project is the re-development of 37 Main Street (Mafles Plaza). The existing site is 27,123 s.f. (0.623 Acres) and is bordered by Main Street to the east, Former \\algreens Pharmacy to the south, City of Bristol public parking to the west and SNET to the north. An existing sidewalk connects the subject property to the public parking lot. The northern property line comprises sections of existing concrete retaining walls which contain an unnamed brook in a depressed section. The area between the walls would be flagged as inland wetlands, but the area was inaccessible due to chain link fence enclosures. The portion of these inland wetlands on the subject property would equate to 936 s.f. The remaining site is uplands comprising of bituminous pavement, concrete sidewalk and a recently demolished building subject *to* a fire in 2022. The entire existing site is made up of impervious surfaces. Additionally, 19,336 s.f. of the subject property is within the 100' upland review area. The site does not contain any storm drainage features and the entire site sheet flows to Main Street.

The proposed project is a 4-story mixed use building with a footprint of 7,035 s.f. The building will consist of 3,083 s.f. of retail space and 28 residential units (mix of 1 and 2 bedroom units). The site will include 21 off-street parking spaces to the rear of the building and 6 on-street parking spaces along the west side of Main Street. Additional parking will be available on the east side of Main Street (to be developed by others) and the City of Bristol public parking lot to the west of the site contains 55 spaces. The site is serviced by sanitary sewer, public water, underground electric, telephone and cable, and gas services. The east side of the building will have an open-air patio/entrance area along the entire building frontage.

On-site storm drainage consists of a conventional pipe and catch basin system, hydro-dynamic oil/grit separator and an underground storage/infiltration system that treats on-site storm water quality and reduces peak flows to the City of Bristol storm drainage system in Main Street. Proposed impervious is 18,916 s.f. (69.7%) vs 27,123 s.f. (100%) existing, which results in a significant reduction in impervious cover.


37 Main Street + 149 Church Street Location
SCHOOL STREET
CHURCH STREET
MAIN STREET
SOUTH STREET
PETERS CT
FAMILY CENTER
BRISTOL COMMUNITY ORGANIZATION
N
S
E
W
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 100924


37 Main Street +
149 Church Street
Zoning
SCHOOL STREET
CHURCH STREET
MAIN STREET
SOUTH STREET
BD-1
BD-2
R-15/BT
BG
I
N
W
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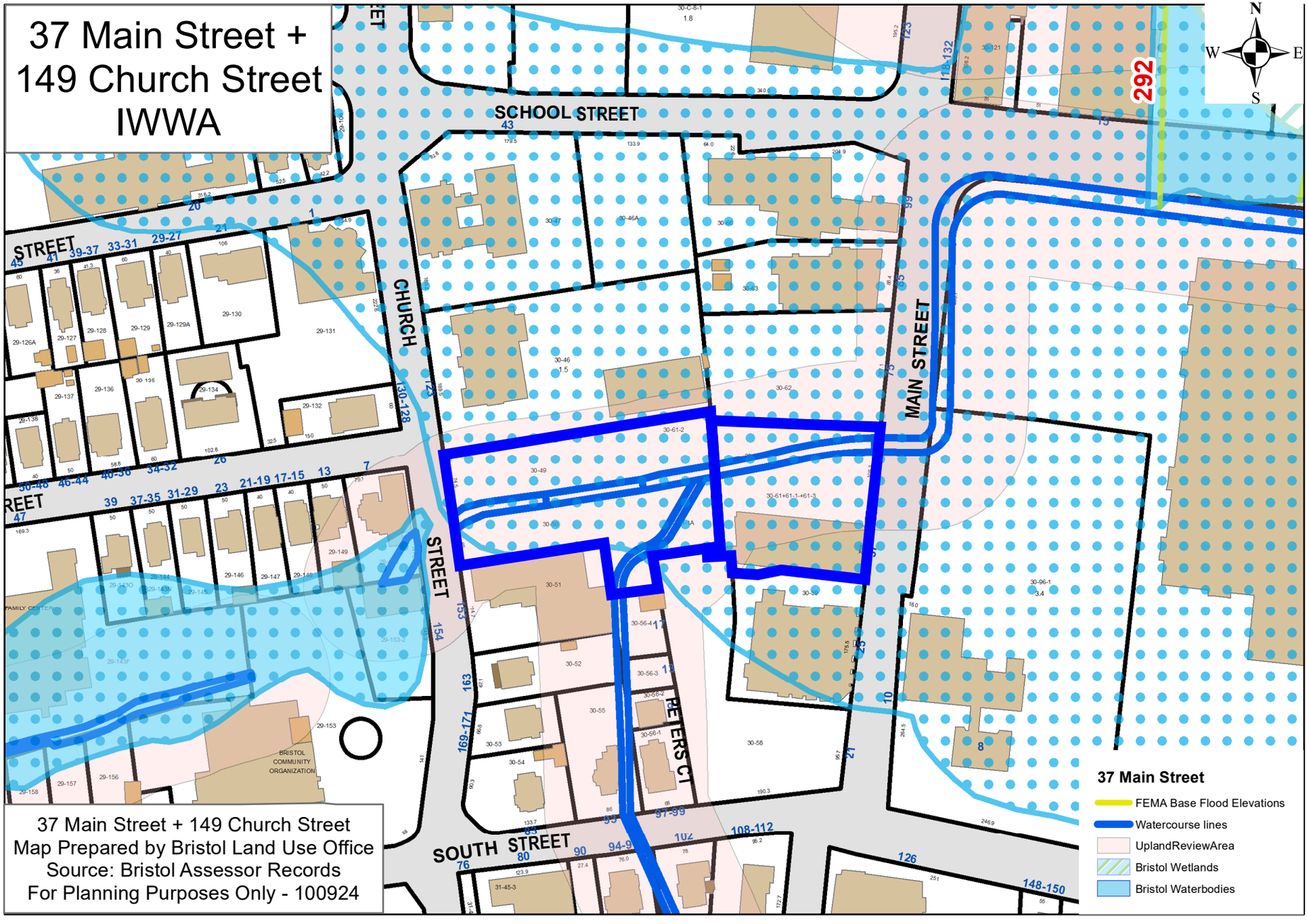
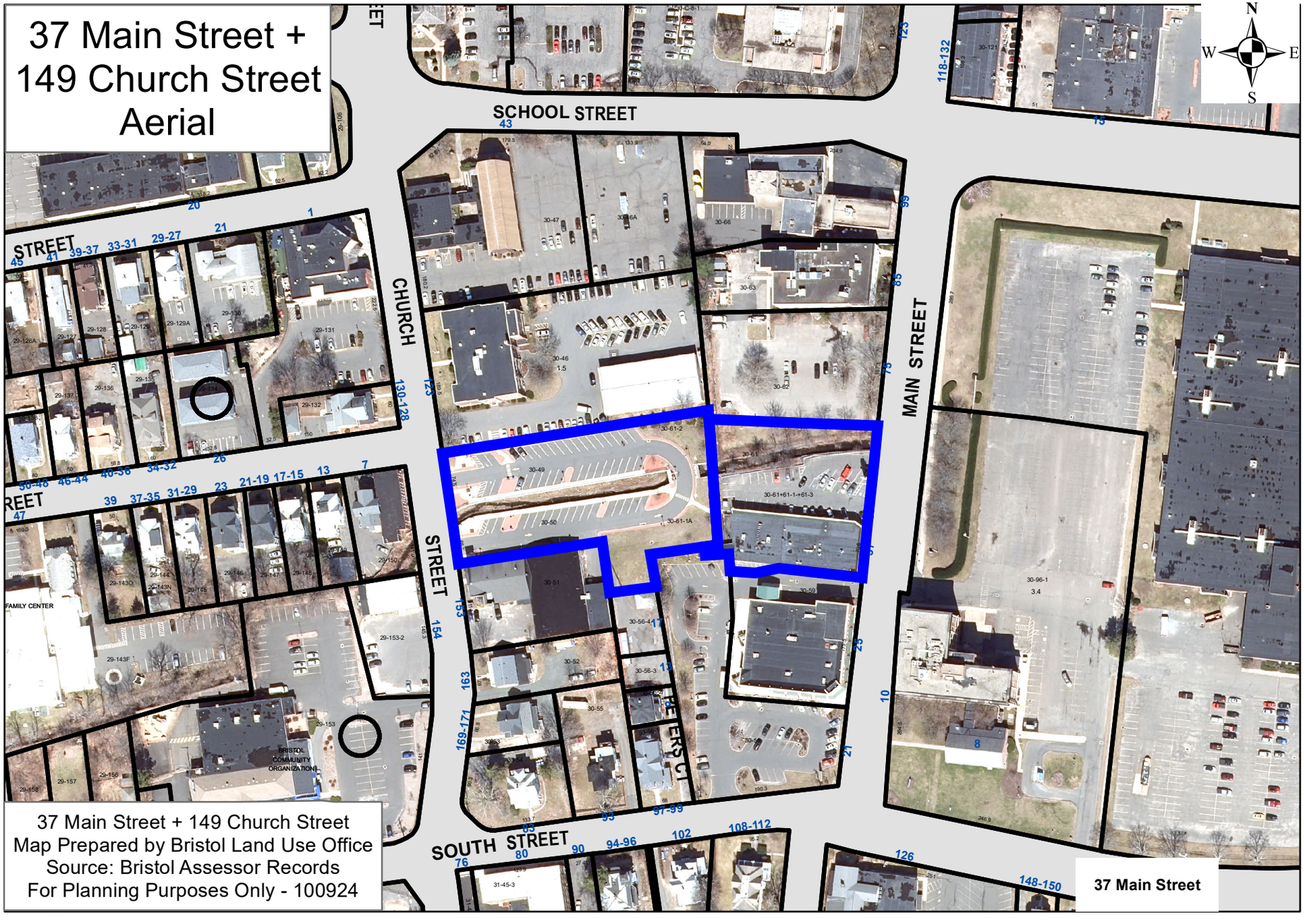
S
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 101924


37 Main Street +
149 Church Street
IWWA
SCHOOL STREET
CHURCH STREET
MAIN STREET
PETERS CT
SOUTH STREET
BRISTOL COMMUNITY ORGANIZATION
292
N
W
E
S
37 Main Street
FEMA Base Flood Elevations
Watercourse lines
UplandReviewArea
Bristol Wetlands
Bristol Waterbodies
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 100924


37 Main Street +
149 Church Street
Aerial
SCHOOL STREET
CHURCH STREET
MAIN STREET
SOUTH STREET
37 Main Street + 149 Church Street
Map Prepared by Bristol Land Use Office
Source: Bristol Assessor Records
For Planning Purposes Only - 100924
37 Main Street

# Site Plan Comments

CITY OF BRISTOL
SITE PLAN REVIEW COMMITTEE
STAFF COMMENTS - 2510

SITE PLAN: Site Plan for a Mixed-Use Building and 28 dwelling units with parking on another lot under different ownership at 37 Main Street and 163 Church Street Gold Coast Realty, LLC, applicant.
*Plans Dated: August 27, 2024; Date of Committee Review: November 5 & 14, 2024 (first review)*

**ENGINEERING/PUBLIC WORKS (Anthony Lorenzetti):**

1. Verify that the illumination plan proposed is in compliance with section 11.2 of the regulations.
2. Confirm that the landscaping plan and project details conform to section 11.1.2 of the regulations.
3. The sign installed within the accessible space reduces the effective size of the parking space, the space should be lengthened or the sign should be relocated.
4. There are existing curb cuts on Main Street that need to be removed. Sidewalks and granite curbing would also need to be installed and or replaced.
5. The southern boundary the site along the dollar store property has cracked bituminous concrete along the border. Provide a detail of how that will be repaired.
6. Recommend driveway apron of 22 feet for two-way traffic and verify that vehicles can turn in and out without going over the curb, sidewalk. Five- foot radii are required on the driveway aprons.
7. Provide grading to all property lines.
8. The northerly grading of the site shows up to a 2 foot fill along the northerly edge of the proposed building show how the grading to the existing wall along the watercourse at the sidewalk will work. What will be the effect upon the existing concrete/gabion wall as previously constructed? Sections may be required.
9. Provide grades showing that sedimentation control along the unnamed brook is not required as shown on the plans.
10. This site has one proposed accessible parking space. The continuous accessible path should not be with the parking space. Consider a sidewalk outside the space.
11. We recommend that the proposed wall on the eastern property line be moved back from street line, a detail and section should also be provided for the wall.
12. What is the quantity of fill being brought onto the site?
13. Provide complete structural plans.
14. If the building will have a basement, explain how the subsurface stormwater system will affect it.
15. The stop sign should be installed 7 feet to the bottom due to its proximity to the sidewalk, rather than the five feet show on the plans.
16. Provide additional detail on the two ramps proposed for the southeast building corner. One would be 18 feet long and a second would be 22. These ramps would be required to have railings on them. The max rise of a sidewalk ramp is 6 inches without rail. Detectable warning strips should be installed.
17. The proposed sidewalk on the northerly side of the parking lot is proposed to be constructed over the guiderail and possibly the fencing. Clarify what items are to be removed and replaced as necessary.

18. Revise details on the plans using current city standard details.
19. Eliminate parking on the frontage as necessary to provide adequate intersectional sightlines in conformance with section 12.4 B.
20. No loading zone is shown. Section 13.10
21. The public works department supports off-site improvements to Main St., however final approval is required by the Director of Public Works and Board of Public Works.
22. The proposed plan shows a request reduce parking to from the required 51, if more than 30 spaces are constructed EV charging infrastructure is required. Section 13.3
23. The commission by regulation may reduce the required parking on-site provide information provided the information in the regulations is submitted per section 13.4 and section 8.4.5.

**CITY PLANNER (Robert Flanagan/Andrew Armstrong):**

1. The previous Variance approvals (Application #3791) for this property will be applicable to the new plans. This is item will be reviewed by the Commission.
2. Indicate application number, approval date, and nature of Site Plan and Special Permit associated with this project.
3. Indicate application number, approval date, and nature of any Inland Wetlands and Watercourses Agency permits associated with this project
4. Label building entrances/exits.
5. Are there any electric vehicle (EV) charging stations proposed?
6. Can the person utilizing the handicap parking space use the side building entry or would they be required to access from the front entry?
7. Provide a sheet for Landscaping & Lighting improvements. Provide photometric diagram and luminaire details; details for pole heights and placement of poles should be added to site plan and landscaping plan. Add notation to plan that all parking lot lighting will be properly shielded to prevent light trespass onto adjoining properties and adjoining streets.
8. The Zoning Table says the building is 3 stories and the Building Form Standards Table and Plan cover sheet states it is 4 stories. Please clarify. All items in the Zoning Table should be reviewed for accuracy with the plan.
9. Show traffic directional arrows on site plan.
10. Will there be dedicated employee and/or visitor parking?
11. Provide hours and days of operation for the ground floor businesses.
12. How was the amount of landscaping determined? Parking areas containing between 20 and 99 parking spaces shall contain a minimum of 15 square feet of interior landscaping area per parking space, distributed among the end islands, interior islands and planting strips required by Section 11.1.3. Provide calculation for landscaping.
13. The applicant should provide a listing of the LID (Low Impact Development) features that have been incorporated into the Site Plan design, and in doing so, demonstrate compliance with Section 15.5.5.1.D.

14. Final As-Built required prior to C.O. being issued.

15. Sidewalks separating parking areas from buildings must have a minimum width of 6' ft.

16. The proposed parking on-site does not meet the parking requirements. A Special Permit is required to allow for additional off-street parking spaces. Provide details of off-street parking proposed in a new table in relation to the overall requirement and show the location within the plan. Update the handicap parking requirement based off the total proposed number of parking spaces.

**BUILDING/ZONING ENFORCEMENT (Richard Brown/ Brandon Peate)**

1. No comments at this time.

**POLICE DEPARTMENT (Lt. Krajewski/Sgt. Ouellette)**

1. Roadside public street parking does not constitute parking assigned to this project and would be open to anyone. If retail is expected to utilize public street parking, a handicap space should be included, which has special circumstances, see: https://cslib.contentdm.oclc.org/digital/collection/p128501coll2/id/726330/rec/7

2. Restriping of the roadway would also need public works approval.

**FIRE MARSHAL (Kristopher Lambert):**

1. No questions or comments regarding the fire code at this time.

**WATER DEPARTMENT (Paul Keegan/Rob Longo)**

1. All non –emergency work must be scheduled. A minimum of 4 days' notice required.

2. All water and sewer work require a permit, which can be accessed on our web site.

3. Any work not inspected, will require to be excavated and inspected – NO exceptions

4. All work to Water and Sewer work must be performed by a licensed person or apprentice

5. Any changes to the plan must be reviewed

6. Prior to CO a cross connection inspection must be done by the meter shop

**Sewer**

1. Sewer connection fees are based off the water meter size.

2. All grease interceptors need to be submitted for review.

3. lateral to be abandoned can be cut and capped behind the curb.

4. The new lateral to be tapped on Main, it can also be corded into the Southern manhole as an inside drop if possible.

**Water**

1. Call for pricing for 6 inch and 4-inch services

2. Fees must be paid to order material and schedule

3. Both services must follow policy on MJ restraints

4. Both services require pressure test, bacteria test and flush

5. Old 2-inch service must be disconnected at the main

**DRAINAGE REPORT**
37 Main Street
Bristol, CT
August 27, 2024

# Hyperlink:

https://www.bristolct.gov/DocumentCenter/View/47617/Complete-Drainage-Analysis-8-27-24-

Prepared For:
Gold Coast Properties, LLC
303 Linwood Avenue Suite 2D
Fairfield, CT 06824

Prepared by:
R.R. Hiltbrand Engineers & Surveyors, LLC
575 North Main Street
Bristol, CT 06010
rrhilt@aol.com

# Zoning Board of Appeals App. #3791 Hyperlink:

https://www.bristolct.gov/DocumentCenter/View/47862/App-3791_ForAgenda-Previous-Variances

**Variances Granted in 2022:**

1. Build to Line
2. Building Fenestration

# Google Earth


Layers



# Site Plan 8/27/24 Updated: 11/13/24

# PROPOSED 4-STORY MULTI-USE BUILDING
# FORMER MAFALES PLAZA

## #37 Main Street
## Bristol, Connecticut




**Project Narrative**

The project is the re-development of 37 Main Street (Mafles Plaza). The existing site is 27,123 s.f. (0.623 Acres) and is bordered by Main Street to the east, Former Walgreens Pharmacy to the south, City of Bristol public parking to the west and SNET to the north. An existing sidewalk connects the subject property to the public parking lot. The northern property line comprises sections of existing concrete retaining walls which contain an unnamed brook in a depressed section. The area between the walls would be flagged as inland wetlands, but the area was inaccessible due to chain link fence enclosures. The portion of these inland wetlands on the subject property would equate to 936 s.f. The remaining site is uplands comprising of bituminous pavement, concrete sidewalk and a recently demolished building subject to a fire in 2022. The entire existing site is made up of impervious surfaces. Additionally, 19,336 s.f. of the subject property is within the 100' upland review area. The site does not contain any storm drainage features and the entire site sheetflows to Main Street.

The proposed project is a 4-story mixed use building with a footprint of 7,035 s.f. The building will consist of 3,083 s.f. of retail space and 28 residential units (mix of 1 and 2 bedroom units). The site will include 21 off-street parking spaces to the rear of the building and 6 on-street parking spaces along the west side of Main Street. Additional parking will be available on the east side of Main Street (to be developed by others) and the City of Bristol public parking lot to the west of the site contains 55 spaces. The site is serviced by sanitary sewer, public water, underground electric, telephone and cable, and gas services. The east side of the building will have an open-air patio/entrance area along the entire building frontage.

On-site storm drainage consists of a conventional pipe and catch basin system, hydro-dynamic oil/grit separator and an underground storage/infiltration system that treats on-site storm water quality and reduces peak flows to the City of Bristol storm drainage system in Main Street. Proposed impervious is 18,916 s.f. (69.7%) vs 27,123 s.f. (100%) existing, which results in a significant reduction in impervious cover.

AS-BUILT SURVEY SHALL BE PROVIDED PRIOR TO ISSUANCE OF C.O.

*ISSUE LOG:*

*SUBMITTALS / REVISIONS:*
*Wetlands Submittal; 08-27-24*

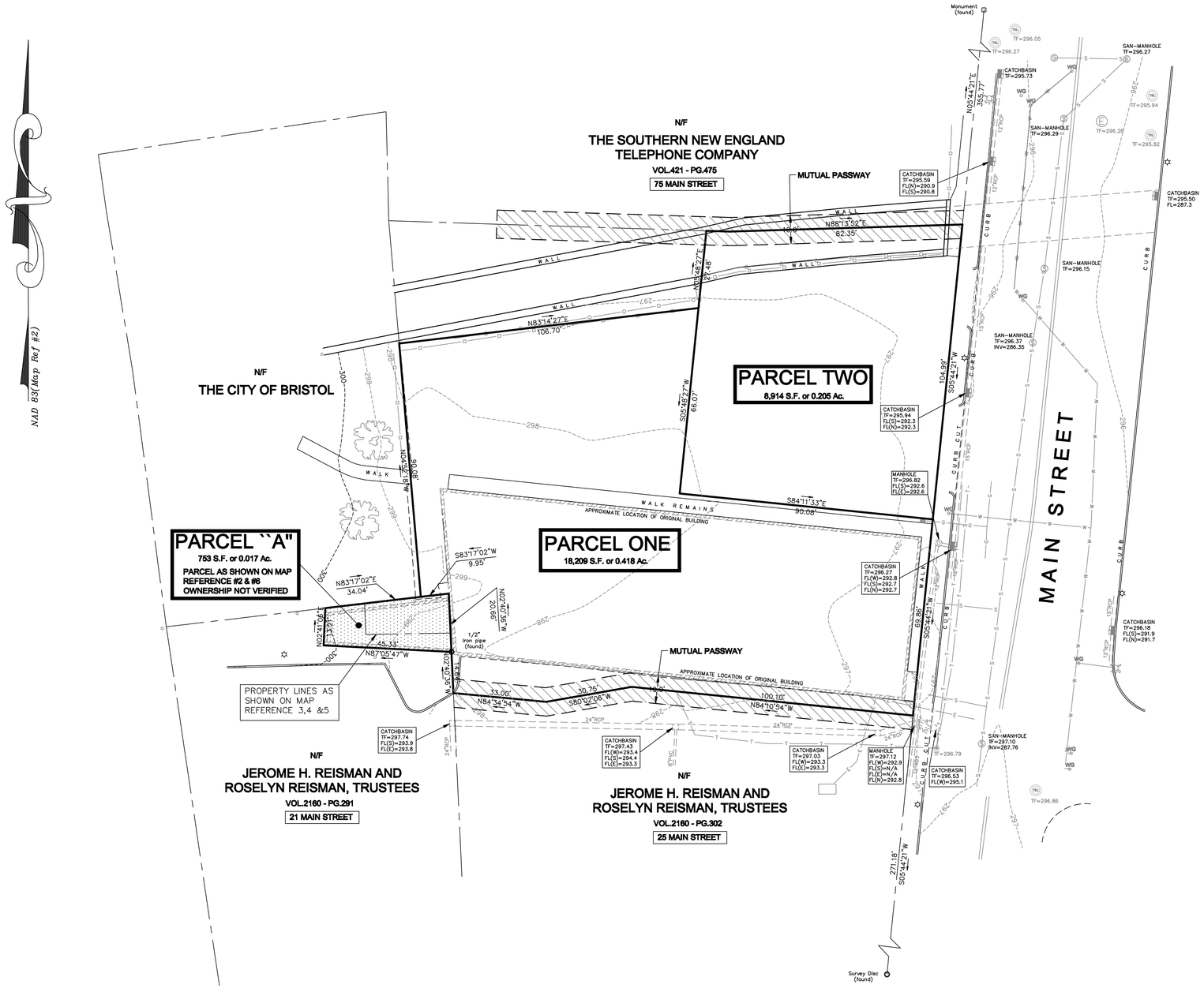
*APPROVALS:*
*Wetlands Application #xxx; Approved xxx*
*Zoning Application #xxx - xxx; Approved xxx*

*PREPARED FOR:*

*Gold Coast Properties*
*303 Linwood Avenue - Suite 2D*
*Fairfield, CT 06824*
*Primary Contact: Stephen Shapiro*

*ENGINEER:*

*R. R. Hiltbrand Engineers & Surveyors*
*575 North Main Street*
*Bristol, Connecticut*
*06010*




## LEGEND

- STONE WALL
- SANITARY SEWER
- STORM SEWER
- CONTOUR LINE
- WATER LINE
- ELECTRIC LINE
- TELEPHONE LINE
- GAS LINE
- FOLIAGE LINE
- CHAINLINK FENCE
- GUARDRAIL
- IRON PIN
- SURVEY MONUMENT
- DRILL HOLE
- CURB CATCHBASIN
- CURBLESS CATCHBASIN
- UTILITY POLE
- UTILITY POLE WITH GUY
- SANITARY MANHOLE
- DRAINAGE MANHOLE
- WATER GATE VALVE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- LIGHT STAND

## NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-20 AND THE ``STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT'' AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED ON SEPTEMBER 26, 1996.

2. TYPE OF SURVEY = LIMITED PROPERTY SURVEY

3. BOUNDARY DETERMINATION CATEGORY = DEPENDENT RE-SURVEY

4. OWNERS OF RECORD - 37 MAIN STREET, LLC (Vol.1432 - Pg.330)

5. TOTAL AREA - 27,876 S.F. or 0.640 Ac.

6. ZONE - C

7. ELEVATIONS BASED ON MAP REFERENCE #2

8. BEARINGS BASED ON N.A.D. 83 AS ESTABLISHED BY MAP REFERENCE #2

9. UNDERGROUND UTILITIES, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS ARE APPROXIMATE AND OTHER SUCH FEATURES MAY EXIST UNKNOWN TO DUFOUR SURVEYING ASSOCIATES. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455

## MAP REFERENCES :


1.``MAP OF PROPERTY - OF - VETRANO BROTHERS - INCORPORATED - BRISTOL, CONN.'', scale 1" = 20', dated March 1961, revised to 2/1/57 and prepared by W.C.Lefevre, P.E. & L.S.

2. ``DEPARTMENT OF PUBLIC WORKS - DIVISION OF ENGINEERING - CITY OF BRISTOL - CONNECTICUT - MAP OF LOTS - 49-51, 61-1A AND 61-2 - OWNED BY THE CITY OF BRISTOL - CHURCH STREET BRISTOL, CT'', scale 1" = 20', dated Jan. 2010 and prepared by Peter W. Forrest, L.S.

3. ``PROPERTY MAP - FOR - WALGREENS - STORE #1-203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 9/27/05 and prepared by Kratzert, Jones & Associates, Inc.

4. ``REVISED PROPERTY - MAP - FOR - WALGREENS - STORE #10203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 9/27/05 and prepared by Kratzert, Jones & Associated, Inc.

5. ``LOT LINE - REVISION - MAP - FOR - WALGREENS - STORE #10203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 9/27/05 and prepared by Kratzert, Jones & Associates, Inc.

6. ``LOT LINE - REVISION - MAP - FOR - WALGREENS - STORE #10203 - DEVELOPER/OWNER - 107 SOUTH STREET CORP. - #25 MAIN STREET - BRISTOL, CT'', scale 1" = 20', dated July 1, 2005, revised to 6/21/06 and prepared by Kratzert, Jones & Associates, Inc.


GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP AND SURVEY WERE PREPARED IN ACCORDANCE WITH THE STANDARDS OF A CLASS A-2 & T-2 SURVEY AS DEFINED IN THE CODE OF PRACTICE FOR STANDARDS OF ACCURACY OF SURVEYS AND MAPS, ADOPTED SEPT. 26, 1996 AS AMENDED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INCORPORATED.

CARMINE J. MATRASCIA - L.S. #70219

DUFOUR SURVEYING LLC

# IMPROVEMENT LOCATION SURVEY

PREPARED FOR: 37 MAIN STREET LLC

37 MAIN STREET, BRISTOL, CONNECTICUT

| SCALE: 1" = 20' | APPROVED: CARMINE J. MATRASCIA - L.S. #70219 | |
|---|---|---|
| DATE: 08-05-2022 | JOB NO.: 22-37 | FILE NO.: \22-37 |


DUFOUR SURVEYING LLC
575 NORTH MAIN STREET
BRISTOL, CONNECTICUT
860-314-0502 860-738-0222

N/F

THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY

VOL.421 - PG.475

75 MAIN STREET

EXISTING CONCRETE WALL

North

CATCHBASIN
TF=295.59
FL(N)=290.9
FL(S)=290.8

TF=295.82

CATCHBASIN
TF=295.50
FL=287.3

SAN-MANHOLE
TF=296.15

SAN-MANHOLE
TF=296.37
INV=286.35

CATCHBASIN
TF=295.94
FL(S)=292.3
FL(N)=292.3

EXISTING UNNAMED BROOK

297

WETLANDS ARE LIMITED TO THE BOUNDS OF THE UNNAMED BROOK WITHIN THE CONCRETE WALLS
19,336 S.F. OF THE SITE IS WITHIN THE 100' UPLAND REVIEW AREA
NO WETLANDS DISTURBANCE PROPOSED

EXISTING CONCRETE WALL

EXISTING BITUMINOUS PARKING LOT TO BE REMOVED

EXIST. CONC. WALK

N/F

THE CITY OF BRISTOL

REMOVE EXISTING SIDEWALK

ABANDON WATER LATERAL AT THE MAIN PER C.O.B. WATER AND SEWER SPECIFICATIONS

WALK REMAINS

MANHOLE
TF=296.82
FL(S)=292.6
FL(E)=292.6

CATCHBASIN
TF=296.27
FL(W)=292.8
FL(S)=292.7
FL(N)=292.7

LIMIT OF 100' URA

EXISTING BUILDING RAZED AFTER FIRE IN 2022

ABANDON EXISTING 4"Ø SANITARY LATERAL TO SEWER MAIN AND REPLACE WITH 6"Ø (SEE SITE UTILITIES PLAN)

REMOVE EXISTING SIDEWALK

REMOVE EXISTING PAVEMENT WITHIN PROPERTY LIMITS

EXISTING CITY SIDEWALK SHALL BE REPLACED AND GRANITE CURB EITHER REPLACED OR RE-USED

CATCHBASIN
TF=296.18
FL(S)=291.9
FL(N)=291.7

ABANDON EXISTING 4"Ø SANITARY LATERAL TO CITY OF BRISTOL WATER AND SEWER SPECIFICATIONS

N/F

JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES

VOL.2160 - PG.291

21 MAIN STREET

N/F

JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES

VOL.2160 - PG.302

25 MAIN STREET

CATCHBASIN
TF=297.74
FL(S)=293.9
FL(E)=293.8

CATCHBASIN
TF=297.43
FL(W)=293.4
FL(S)=294.4
FL(E)=293.3

CATCHBASIN
TF=297.03
FL(W)=293.3
FL(E)=293.3

MANHOLE
TF=297.12
FL(W)=292.9
FL(S)=N/A
FL(E)=N/A
FL(N)=292.8

CATCHBASIN
TF=296.53
FL(W)=295.1

SAN-MANHOLE
TF=297.10
INV=287.76

TF=296.79

MAIN STREET

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

# SITE DEMOLITION PLAN
## #37 Main Street
## Bristol, Connecticut
August 27, 2024

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

| ZONING TABLE (ZONE BD-1) | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| MINIMUM LOT AREA | N/A | 27,123 S.F. |
| MINIMUM LOT WIDTH | N/A | 174.85 Ft |
| MINIMUM FRONT YARD | N/A | 13.00 Ft |
| MINIMUM SIDE YARD | N/A | 12.00 Ft |
| MINIMUM REAR YARD | N/A | 90.30 Ft |
| MAXIMUM BUILDING HEIGHT | N/A | 3 STORY |
| MAXIMUM BUILDING COVERAGE | N/A | 25.94% |

| BUILDING FORM STANDARDS TABLE (ZONE BD-1) | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| MINIMUM FLOOR AREA RATIO | 0.6 | 1.04 |
| MAXIMUM BUILD-TO LINE | 10 FT | 15.50 Ft |
| MINIMUM BUILDING HEIGHT | 18 FT | 4 STORY (40'±) |
| NUMBER OF STORIES | 2 FULL (MIN.) | 4 FULL |
| AREA OF BUILDING FENESTRATION | 65% (MIN.) (593 S.F. MIN.) | 585.0 S.F. = 64.1%* |
| BUILDING FRONTAGE - LOT FRONTAGE RATIO | 65% = 113.7 FT (174.85' x 65%) | 65.2% (114.0 FT/174.85 FT) |
| ORIENTATION OF BUILDING ENTRANCES | 2 STREET ENTRANCES | 3 STREET ENTRANCES |

*VARIANCE APPLICATION #XXXX - APPROVED XXXXX*

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

*WETLANDS ARE LIMITED TO THE BOUNDS OF THE UNNAMED BROOK WITHIN THE CONCRETE WALLS*
*19,336 S.F. OF THE SITE IS WITHIN THE 100' UPLAND REVIEW AREA*
*NO WETLANDS DISTURBANCE PROPOSED*

**City of Bristol - Downtown Compliance Chart**

| | | Main Street |
|---|---|---|
| Sec. VI.C.6.b.(1) | floor area ratio (.6 min) | |
| | gross floor area of buildings (sq. ft.) | 28,140 |
| | total lot area (sq. ft.) | 27,123 |
| | ratio of floor area to lot area (.60 required) | 103.7% |
| Sec. VI.C.6.b.(2) | build-to line (10 ft. min.; 25 ft. max for up to 50% of building wall) | |
| | total length of building wall (ft.) | 114 |
| | portion of building wall up to 10-ft. build-to-line (ft.) | 0 |
| | portion of building wall up to 10-ft. build-to-line (%) | 0% |
| | portion of building wall between 10-ft. build-to-line and 25ft. (ft.) | 114 |
| | portion of building wall between 10-ft. build-to-line and 25ft. (%) | 100% |
| | greatest setback from front lot line (ft.) | 15.5 |
| Sec. VI.C.6.b.(5) | building fenestration ("glazing")* (65% min) | |
| | total area of building wall* (sq. ft.) | 912 |
| | portion of building wall cotaining glazing* (sq. ft.) | 585 |
| | portion of building wall cotaining glazing* (%) | 64.1% |
| | ** measured between 2 ft. and 10 ft. above street grade* | |
| Sec. VI.C.6.b.(6) | building frontage to lot frontage (65% min) | |
| | total length of building wall (building frontage) (ft.) | 114' |
| | total length of front lot line (ft.) | 174.85' |
| | ratio of building frontage to lot frontage | 65.2% |

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

N/F
THE CITY OF BRISTOL

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

| PARKING REQUIREMENTS TABLE | | |
|---|---|---|
| | REQUIRED | PROPOSED |
| RESIDENTIAL DWELLING UNIT | | |
| 28 TOTAL UNITS | | |
| 1.5 SPACES PER UNIT | 42 SPACES | |
| | | |
| PROPOSED RETAIL - 3,083 S.F. | | |
| 3 SPACES PER 1,000 S.F. | 9.25 SPACES | |
| | | |
| TOTAL: | = 51.25 SPACES | 21 SPACES |
| | | 20 STANDARD |
| | | 1 HANDICAP |

EXISTING UNNAMED BROOK
EXISTING CONCRETE WALL
EXIST. CONC. WALK
EXISTING CONCRETE WALL
PROPOSED HANDICAP SPACE WITH BOLLARD SIGN
PROPOSED BITUMINOUS PARKING LOT
PROPOSED 5' CONCRETE SIDEWALK
PROPOSED 5' CONCRETE SIDEWALK
PROPOSED BITUMINOUS DRIVEWAY
LIMIT OF 100' URA
PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00
SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS
PROPOSED CONCRETE PATIO/ENTRANCE AREA
PROPOSED CURB WALL (HEIGHT VARIES ±24")
PROPOSED RE-BUILT CONCRETE WALKS ALONG FRONTAGE
10' BUILD TO LINE
25' BUILD TO LINE
PROPOSED 10' x 10' CONCRETE DUMPSTER PAD ENCLOSURE (SEE DETAIL)
PROPOSED 12" WIDE WHITE STOP BAR AND STOP SIGN
PROPOSED CONCRETE APRON TO CITY OF BRISTOL SPECIFICATIONS
PROPOSED RE-STRIPING OF MAIN STREET BY OTHERS
PROPOSED RE-STRIPING OF MAIN STREET BY OTHERS
MAIN STREET
CURB
CURB
CURB
CURB
22.9'
12.0'
13.0'
15.5'
114.0'
5.5'
5.0'
7.9'
27.5'
5.0'
10.0'
25.0'
18.6'
90.3'
9.0'
18.0'
13.6'
65.0'
13.0'
30.9'
20.0'
5.0'
7/8"/FT DN
CC
FLUSH
12
9
D

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*SITE LAYOUT PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

North

*TEST PIT DATA:*

DP #1 (PARKING LOT AREA)

0 - 3" BITUMINOUS CONCRETE
3 - 15" TAN MEDIUM-FINE SAND SUB-BASE
15 - 34" MIXED FILL
34 - 38" ORIGINAL GRADE (ORGANICS)
38 - 90" BROWN MEDIUM-FINE SAND AND GRAVEL (6" COBBLES)

NO GROUNDWATER MOTTLING @ 84"

DP #2 (BUILDING DEMO AREA)

0 - 36" MIXED FILL
36 - 40" ORIGINAL GRADE (ORGANICS)
40 - 99" BROWN MEDIUM-FINE SAND AND GRAVEL (6" COBBLES)

GROUNDWATER @ 96" MOTTLING @ 86"

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

N/F
THE CITY OF BRISTOL

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

EXISTING UNNAMED BROOK
EXISTING CONCRETE WALL
EXIST. CONC. WALK
LIMIT OF 100' URA
PROPOSED 5' CONCRETE SIDEWALK
PROPOSED CONCRETE PATIO/ENTRANCE AREA
PROPOSED CURB WALL (HEIGHT VARIES ±24")
MAIN STREET
CURB

PROPOSED STMH #1
TF - 298.40
FL - 295.00

PROPOSED 24"Ø YD #3
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #2
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #1
TF - 297.50
FL - 293.50

PROPOSED C-CB #3
TF - 297.50
FL - 294.50

PROPOSED C-CB #2
TF - 297.50
FL - 293.95

PROPOSED C-CB #1
TF - 297.50
FL - 294.70

PROPOSED C-CB #4
TF - 295.88±
FL - 292.50

100' - 12" CPP @ 1%
32' - 12" CPP @ 1%
22' - 12" CPP @ 5.5%
40' - 8" CPP @ 1%
52' - 12" CPP @ 1%
34' - 12" CPP (RL)
36' - 12" CPP @ 1%
75' - 12" CPP @ 1%

8"Ø CPP ROOF LEADER
FL - 296.40

12"Ø CPP ROOF LEADER OUTLET
FL - 296.40

PROPOSED 24"Ø YD #4
TF - 297.50
FL - 294.75

PROPOSED 4'Ø DOWNSTREAM DEFENDER S4
TF - 298.17
FL - 293.60 (IN)
FL - 293.60 (OUT)

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

STORAGE AND INFILTRATION SYSTEM
4 ROWS - 6 UNITS EACH ROW
STORMTECH SC-740
BOTTOM OF UNIT - 293.00

DP 1
DP 2

7/8"/FT DN

CATCHBASIN
TF=295.59
FL(N)=290.9
FL(S)=290.8

CATCHBASIN
TF=295.50
FL=287.3

CATCHBASIN
TF=295.94
FL(S)=292.3
FL(N)=292.3

MANHOLE
TF=296.82
FL(S)=292.6
FL(E)=292.6

CATCHBASIN
TF=296.27
FL(W)=292.8
FL(S)=292.7
FL(N)=292.7

CATCHBASIN
TF=296.18
FL(S)=291.9
FL(N)=291.7

CATCHBASIN
TF=297.74
FL(S)=293.9
FL(E)=293.8

CATCHBASIN
TF=297.43
FL(W)=293.4
FL(S)=294.4
FL(E)=293.3

CATCHBASIN
TF=297.03
FL(W)=293.3
FL(E)=293.3

MANHOLE
TF=297.12
FL(W)=292.9
FL(S)=N/A
FL(E)=N/A
FL(N)=292.8

CATCHBASIN
TF=296.53
FL(W)=295.1

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

*SITE GRADING & DRAINAGE PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

R. R. HILTBRAND Engineers and Surveyors

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

North

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

EXISTING CONCRETE WALL

POSSIBLE GAS LATERAL LOCATION. FINAL LOCATION SHALL BE DETERMINED BY EVERSOURCE GAS

CATCHBASIN
TF=295.59
FL(N)=290.9
FL(S)=290.8

TF=295.62

CATCHBASIN
TF=295.50
FL=287.3

EXISTING UNNAMED BROOK

PROPOSED STMH #1
TF - 298.40
FL - 295.00

PROPOSED 24"Ø YD #3
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #2
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #1
TF - 297.50
FL - 293.50

100' - 12" CPP @ 1%

PROPOSED C-CB #4
TF - 295.88±
FL - 292.50

SAN-MANHOLE
TF=296.15

PROPOSED 4" DIP CL-52 DOMESTIC

PROPOSED 8" x 4" TSV & 4" GATE VALVE

PROPOSED 6" DIP CL-52 FIRE SERVICE

PROPOSED 8" x 6" TSV & 6" GATE VALVE

WG

BITUMINOUS PATCH TRENCHES TO CITY OF BRISTOL SPECIFICATIONS (TYPICAL)

SAN-MANHOLE
TF=296.37
INV=286.35

CATCHBASIN
TF=295.94
FL(S)=292.3
FL(N)=292.3

7/8"/FT DN

22" 12" CPP @ 5.5%

32' - 12" CPP @ 1%

8"Ø CPP ROOF LEADER
FL - 296.40

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

PROPOSED CONCRETE PATIO/ENTRANCE AREA

PROPOSED CURB WALL (HEIGHT VARIES ±24")

EXIST. CONC. WALK

N/F
THE CITY OF BRISTOL

PROPOSED 5' CONCRETE SIDEWALK

PROPOSED C-CB #3
TF - 297.50
FL - 294.50

DP 1

STORAGE AND INFILTRATION SYSTEM

BOTTOM OF UNIT = 293.00

4 ROWS - 6 UNITS EACH ROW

STORMTECH SC-740

40' - 8" CPP @

PROPOSED 24"Ø YD #4
TF - 297.50
FL - 294.75

52' - 12" CPP @ 1%

12"Ø CPP ROOF LEADER OUTLET
FL - 296.40

PROPOSED C-CB #2
TF - 297.50
FL - 293.95

34' - 12" CPP (RL)

DP 2

36' - 12" CPP @ 1%

PROPOSED 4'Ø DOWNSTREAM DEFENDER S4
TF - 298.17
FL - 293.60 (IN)
FL - 293.60 (OUT)

REPLACE EXISTING 4"Ø SANITARY TO MAIN WITH NEW 6"Ø PVC SDR-35 WITH BACKFLOW PREVENTER WITHIN BUILDING

LIMIT OF 100' URA

75' - 12" CPP @ 1%

PROPOSED C-CB #1
TF - 297.50
FL - 294.70

7/8"/FT DN

D

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

MAIN STREET

CATCHBASIN
TF=296.18
FL(S)=291.9
FL(N)=291.7

ABANDON WATER LATERAL AT THE MAIN PER C.O.B. WATER AND SEWER SPECIFICATIONS

ABANDON SEWER LATERAL AND CAP OFF PER C.O.B. WATER AND SEWER SPECIFICATIONS

MANHOLE
TF=296.82
FL(S)=292.6
FL(E)=292.6

CATCHBASIN
TF=296.27
FL(W)=292.8
FL(S)=292.7
FL(N)=292.7

WATER NOTES:
1. 6" FIRE SERVICE HAS NO CONNECTION FEES, BUT MUST BE PRESSURE TESTED, BACTERIA TESTED AND FLUSHED.

2. MINIMUM 3" SEPARATION REQUIRED BETWEEN 6" FIRE SERVICE AND 4" DOMESTIC SERVICE.

24"RCP

CATCHBASIN
TF=297.74
FL(S)=293.9
FL(E)=293.8

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

8"PVC

CATCHBASIN
TF=297.43
FL(W)=293.4
FL(S)=294.4
FL(E)=293.3

CATCHBASIN
TF=297.03
FL(W)=293.3
FL(E)=293.3

MANHOLE
TF=297.12
FL(W)=292.9
FL(S)=N/A
FL(E)=N/A
FL(N)=292.8

CATCHBASIN
TF=296.53
FL(W)=295.1

TF=296.79

SAN-MANHOLE
TF=297.10
INV=287.76

BITUMINOUS PATCH TRENCHES TO CITY OF BRISTOL SPECIFICATIONS (TYPICAL)

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*SITE UTILITIES PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

North

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

EXISTING CONCRETE WALL WILL PREVENT ANY SEDIMENT/RUN-OFF FROM ENTERING THE BROOK

EXISTING CONCRETE WALL

CATCHBASIN
TF=295.59
FL(N)=290.9
FL(S)=290.8

CATCHBASIN
TF=295.50
FL=287.3

EXISTING CONCRETE WALL WILL PREVENT ANY SEDIMENT/RUN-OFF FROM ENTERING THE BROOK

EXISTING UNNAMED BROOK

PROPOSED STMH #1
TF - 298.40
FL - 295.00

PROPOSED 24"Ø YD #3
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #2
TF - 297.50
FL - 293.80

PROPOSED 24"Ø YD #1
TF - 297.50
FL - 293.50

PROPOSED C-CB #4
TF - 295.88±
FL - 292.50

100' - 12" CPP @ 1%

PROPOSED 8"Ø SEDIMENT LOG (SEE DETAIL) (TYPICAL)

22' - 12" CPP @ 5.5%

32' - 12" CPP @ 1%

8"Ø CPP ROOF LEADER
FL - 296.40

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

PROPOSED CONCRETE PATIO/ENTRANCE AREA

PROPOSED CURB WALL (HEIGHT VARIES ±24")

MAIN STREET

CURB

CATCHBASIN
TF=295.94
FL(S)=292.3
FL(N)=292.3

MANHOLE
TF=296.82
FL(S)=292.6
FL(E)=292.6

CATCHBASIN
TF=296.27
FL(W)=292.8
FL(S)=292.7
FL(N)=292.7

CATCHBASIN
TF=296.18
FL(S)=291.9
FL(N)=291.7

EXIST. CONC. WALK

N/F
THE CITY OF BRISTOL

PROPOSED 5' CONCRETE SIDEWALK

PROPOSED C-CB #3
TF - 297.50
FL - 294.50

52' - 12" CPP @ 1%

STORAGE AND INFILTRATION SYSTEM

BOTTOM OF UNIT - 293.00

4 ROWS - 6 UNITS EACH ROW

STORMTECH SC-740

40' - 8" CPP @ 1%

PROPOSED 24"Ø YD #4
TF - 297.50
FL - 294.75

12"Ø CPP ROOF LEADER OUTLET
FL - 296.40

PROPOSED 4'Ø DOWNSTREAM DEFENDER S4
TF - 298.17
FL - 293.60 (IN)
FL - 293.60 (OUT)

PROPOSED C-CB #2
TF - 297.50
FL - 293.95

34' - 12" CPP (RL)

36' - 12" CPP @ 1%

LIMIT OF 100' URA

75' - 12" CPP @ 1%

PROPOSED C-CB #1
TF - 297.50
FL - 294.70

H.P.

7/8"/FT DN

INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE (SEE DETAIL)

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

CATCHBASIN
TF=297.74
FL(S)=293.9
FL(E)=293.8

CATCHBASIN
TF=297.43
FL(W)=293.4
FL(S)=294.4
FL(E)=293.3

CATCHBASIN
TF=297.03
FL(W)=293.3
FL(E)=293.3

MANHOLE
TF=297.12
FL(W)=292.9
FL(S)=N/A
FL(E)=N/A
FL(N)=292.8

CATCHBASIN
TF=296.53
FL(W)=295.1

PROPOSED 8"Ø SEDIMENT LOG (SEE DETAIL) (TYPICAL)

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

# *EROSION & SEDIMENTATION CONTROL PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

*SITE IMPERVIOUS*
*Existing: 27,123 S.F. = 100%*
*Proposed: 18,916 S.F. = 69.7%*

*INTERIOR LANSDSCAPING*
21 SPACES @ 15 S.F. PER SPACE
315 S.F. REQUIRED
395 S.F. PROVIDED

## PLANT SCHEDULE

| MARK | QTY. | BOTANICAL NAME | COMMON NAME | SIZE |
|---|---|---|---|---|
| Ⓡ | 5 | SCINTILLATION RODODENDRON | RODODENDRON | 24" - 30" |
| Ⓛ | 5 | GLEDITSIA TRIACANTHOS INERMIS | THORNLESS HONEY LOCUST | 2.5" CAL. |
| Ⓩ | 9 | AZALEA | AZALEA | 15" - 18" |
| ☘ | 24 | | DAYLILLY | |

N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
VOL.421 - PG.475
75 MAIN STREET

EXISTING CONCRETE WALL

73 S.F. INTERIOR LANDSCAPING

EXISTING UNNAMED BROOK

GRASS

RESIDENT ENTRANCE

UTILITY ENTRANCE

EXISTING CONCRETE WALL

7/8"/FT DN

PROPOSED 4-STORY BUILDING
7,035 S.F. FOOTPRINT
3,083 S.F. RETAIL SPACE
+ 28 DWELLING UNITS
GROUND FLOOR ELEV. 299.00

SEE ARCHITECT'S PLAN FOR BUILDING DIMENSIONS

BUSINESS ENTRANCES

PROPOSED CONCRETE PATIO/ENTRANCE AREA

PROPOSED CURB WALL (HEIGHT VARIES ±24")

PROPOSED 5' CONCRETE SIDEWALK

EXIST. CONC. WALK

N/F
THE CITY OF BRISTOL

322 S.F. INTERIOR LANDSCAPING

LIMIT OF 100' URA

MULCH

BUSINESS ENTRANCE

RESIDENT ENTRANCE

6' WALK

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.291
21 MAIN STREET

N/F
JEROME H. REISMAN AND ROSELYN REISMAN, TRUSTEES
VOL.2160 - PG.302
25 MAIN STREET

MAIN STREET

CURB

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

*SITE LANDSCAPING PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*November 13, 2024*

R. R. HILTBRAND Engineers and Surveyors

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

*GRAPHIC SCALE*
10 5 0 10 20
*1 Inch = 10 Feet*

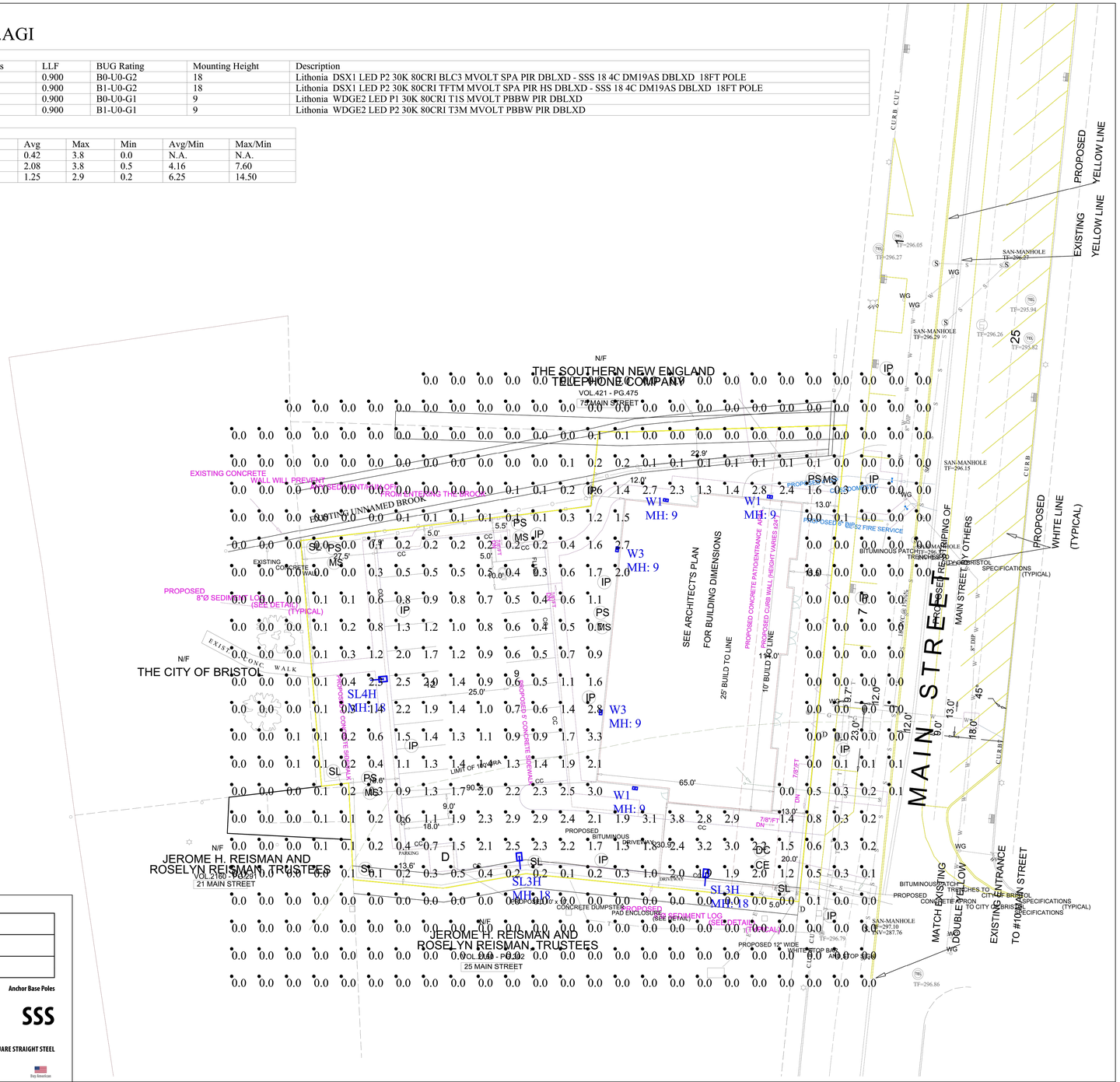
# Filename: 37 Main Street - Site Lighting - Bristol.AGI

| Luminaire Schedule | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Symbol | Qty | Label | Luminaire Lumens | Luminaire Watts | LLF | BUG Rating | Mounting Height | Description |
| | 2 | SL3H | 6185 | 67.79 | 0.900 | B0-U0-G2 | 18 | Lithonia DSX1 LED P2 30K 80CRI BLC3 MVOLT SPA PIR DBLXD - SSS 18 4C DM19AS DBLXD 18FT POLE |
| | 1 | SL4H | 7288 | 67.7927 | 0.900 | B1-U0-G2 | 18 | Lithonia DSX1 LED P2 30K 80CRI TFTM MVOLT SPA PIR HS DBLXD - SSS 18 4C DM19AS DBLXD 18FT POLE |
| | 3 | W1 | 1157 | 11.1658 | 0.900 | B0-U0-G1 | 9 | Lithonia WDGE2 LED P1 30K 80CRI T1S MVOLT PBBW PIR DBLXD |
| | 2 | W3 | 1964 | 18.9815 | 0.900 | B1-U0-G1 | 9 | Lithonia WDGE2 LED P2 30K 80CRI T3M MVOLT PBBW PIR DBLXD |

| Calculation Summary | | | | | | | |
|---|---|---|---|---|---|---|---|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| SITE | Illuminance | Fc | 0.42 | 3.8 | 0.0 | N.A. | N.A. |
| DRIVEWAY | Illuminance | Fc | 2.08 | 3.8 | 0.5 | 4.16 | 7.60 |
| PARKING | Illuminance | Fc | 1.25 | 2.9 | 0.2 | 6.25 | 14.50 |


Greg Loda / Evan White
Lighting Affiliates
1208 Cromwell Ave
Rocky Hill, CT 06067

Website : www.lightingaffiliates.com
Voice Number : (860) 721-1171 x 219
Email Address : gloda@lightingaffiliates.com


## FEATURES & SPECIFICATIONS

| Catalog Number | |
|---|---|
| Notes | |
| Type | |

**Anchor Base Poles**

**SSS**

**SQUARE STRAIGHT STEEL**

Buy American

**INTENDED USE — These specifications are for USA standards only.** Square Straight Steel is a general purpose light pole for up to 39-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

**CONSTRUCTION —**

**Pole Shaft:** The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, 0.120"), or 50 KSI (7-gauge, 0.179"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5" and 6".

**Pole Top:** Options include tenon top, drilled for side mount fixture, tenon with drilling (includes extra handhole) and open top. Side drilled and open top poles include a removable top cap.

**Handhole:** A reinforced handhole with grounding provision is provided at 18" from the base on side A. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

**Base Cover:** A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

**Anchor Base/Bolts:** Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (nominal 12") is hot-dipped galvanized per ASTM A-153.

**HARDWARE —** All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

**FINISH —** Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets SA and SB classifications of ASTM D3359. Powder-coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Paint over Hot-dipped Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes.

**BUY AMERICAN —** Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

**INSTALLATION — Do not** erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for the foundation design.

**WARRANTY** — 1-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

**NOTE:** Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

ALL LIGHTING SHALL BE SHIELDED TO PREVENT LIGHT TRESPASS ON NEIGHBORING PROPERTIES



# D-Series Size 1
LED Area Luminaire

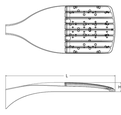
d-series

| Catalog Number | |
|---|---|
| Notes | |
| Type | |

Hit the Tab key or mouse over the page to see all interactive elements.

## Specifications

| | |
|---|---|
| EPA: | 0.69 ft² (0.06 m²) |
| Length: | 32.71" (83.1 cm) |
| Width: | 14.26" (36.2 cm) |
| Height H1: | 7.88" (20.0 cm) |
| Height H2: | 2.73" (6.9 cm) |
| Weight: | 34 lbs (15.4 kg) |



## Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

## Ordering Information

**EXAMPLE:** DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

| Series | LEDs | Color temperature[1] | Color Rendering Index[1] | Distribution | | Voltage | Mounting |
|---|---|---|---|---|---|---|---|
| DSX1 LED | **Forward optics**<br>P1 P6<br>P2 P7<br>P3 P8<br>P4 P9<br>P5<br>**Rotated optics**<br>P10[2] P12[2]<br>P11[2] P13[2] | (this section 70CRI only)<br>30K 3000K<br>40K 4000K<br>50K 5000K<br>(this section 80CRI only, extended lead times apply)<br>27K 2700K<br>30K 3000K<br>35K 3500K<br>40K 4000K<br>50K 5000K | 70CRI<br>70CRI<br>70CRI<br><br>80CRI<br>80CRI<br>80CRI<br>80CRI<br>80CRI | AFR Automotive front row<br>T1S Type I short<br>T2M Type II medium<br>T3M Type III medium<br>T3LG Type III low glare[3]<br>T4M Type IV medium<br>T4LG Type IV low glare[3]<br>TFTM Forward throw medium<br><br>T5M Type V medium<br>T5LG Type V low glare<br>T5W Type V wide<br>BLC3 Type III backlight control[3]<br>BLC4 Type IV backlight control[3]<br>LCCO Left corner cutoff[3]<br>RCCO Right corner cutoff[3] | MVOLT (120V-277V)[4]<br>HVOLT (347V-480V)[4,5]<br>XVOLT (277V - 480V)[4,5]<br><br>120[4,5]<br>208[4,5]<br>240[4,5]<br>277[4,5]<br>347[4,5]<br>480[4,5] | **Shipped included**<br>SPA Square pole mounting (4ft drilling)<br>RPA Round pole mounting (4ft drilling)<br>SPA5 Square pole mounting (5ft drilling)[6]<br>RPA5 Round pole mounting (5ft drilling)[6]<br>SPA8N Square narrow pole mounting (8ft drilling)<br>WBA Wall bracket[6]<br>MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon) |

| Control options | | Other options | | Finish (required) | |
|---|---|---|---|---|---|
| **Shipped installed**<br>NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[7,8,9]<br>PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[7,8,9]<br>PER NEMA twist-lock receptacle only (controls ordered separately)[7]<br>PERS Five-pin receptacle only (controls ordered separately)[8,9] | PERT Seven-pin receptacle only (controls ordered separately)[8,9]<br>FAO Field adjustable output[10,11]<br>BL30 Bi-level switched dimming, 30%[8,9]<br>BL50 Bi-level switched dimming, 50%[8,9]<br>DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[7]<br>DS Dual switching[8,9,12] | **Shipped installed**<br>SPD20KV 20KV surge protection<br>HS Houseside shield (black finish standard)[13]<br>L90 Left rotated optics[11]<br>R90 Right rotated optics[11]<br>CCE Coastal Construction[14]<br>HA 50°C ambient operation[14]<br>BAA Buy America(n) Act Compliant<br>SF Single fuse (120, 277, 347V)[4]<br>DF Double fuse (208, 240, 480V)[4]<br>**Shipped separately**<br>EGSR External Glare Shield (reversible, field install required, matches housing finish)<br>BSDB Bird Spikes (field install required) | DDBXD Dark Bronze<br>DBLXD Black<br>DNAXD Natural Aluminum<br>DWHXD White<br>DDBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white<br>DSSTXD Textured sandstone | DDBXD Dark Bronze<br>DBLXD Black<br>DNAXD Natural Aluminum<br>DWHXD White<br>DDBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white<br>DSSTXD Textured sandstone |





# WDGE2 LED
Architectural Wall Sconce
Precision Refractive Optic

| Catalog Number | |
|---|---|
| Notes | |
| Type | |

Hit the Tab key or mouse over the page to see all interactive elements.

## Specifications

| | |
|---|---|
| Depth (D1): | 7" |
| Depth (D2): | 1.5" |
| Height: | 9" |
| Width: | 11.5" |
| Weight: (without options) | 13.5 lbs |



## Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect *See ordering tree for details

## WDGE LED Family Overview

| Luminaire | Optics | Standard EM, 0°C | Cold EM, -20°C | Sensor | Approximate Lumens (4000K, 80CRI) P0 | P1 | P2 | P3 | P4 | P5 | P6 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WDGE1 LED | Visual Comfort | 4W | | -- | 750 | 1,200 | 2,000 | -- | -- | -- | -- |
| WDGE2 LED | Visual Comfort | 10W | 18W | Standalone / nLight | -- | 1,200 | 2,000 | 3,000 | 4,500 | 6,000 | -- |
| WDGE2 LED | Precision Refractive | 10W | 18W | Standalone / nLight | 700 | 1,200 | 2,000 | 3,200 | 4,200 | -- | -- |
| WDGE3 LED | Precision Refractive | 15W | 18W | Standalone / nLight | -- | 7,500 | 8,500 | 10,000 | 12,000 | -- | -- |
| WDGE4 LED | Precision Refractive | | | Standalone / nLight | -- | 12,000 | 16,000 | 18,000 | 20,000 | 22,000 | 25,000 |

## Ordering Information

**EXAMPLE:** WDGE2 LED P3 40K 80CRI T3M MVOLT SRM DDBXD

| Series | Package | Color Temperature | CRI | Distribution | Voltage | Mounting |
|---|---|---|---|---|---|---|
| WDGE2 LED | P0[1] P3[1] P1 P4[1] P2 P5[1] P6 | 27K 2700K<br>30K 3000K<br>40K 4000K<br>50K 5000K<br>AMB[2] Amber | 70CRI[3]<br>80CRI | T1S Type I Short<br>T2M Type II Medium<br>T3M Type III Medium<br>T4M Type IV Medium<br>TFTM Forward Throw Medium | MVOLT 347[4] 480[4] | **Shipped included**<br>SRM Surface mounting bracket<br>KW Indirect Canopy/Ceiling Washer bracket (dry damp locations only)[5]<br>**Shipped separately**<br>AWS 3/8inch Architectural wall spacer<br>PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available |

| Options | | | Finish |
|---|---|---|---|
| E10WH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 0°C min)<br>E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)<br>PE Photocell, Button Type<br>DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)<br>BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.<br>CCE Coastal Construction | **Standalone Sensors/Controls**<br>PIR Bi-level (100%/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.<br>PIRH Bi-level (100%/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.<br>PIRTFC3V Bi-level (100%/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.<br>PIRHTFC3V Bi-level (100%/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.<br>**Networked Sensors/Controls**<br>NLTAIR2 PIR Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.<br>NLTAIR2 PIRH Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.<br>NLTAIRHA2 Embedded wireless controls by nLight with ULSLH listed emergency operation, Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights<br>PIRH See page 4 for out of box functionality | DDBXD Dark bronze<br>DBLXD Black<br>DNAXD Natural aluminum<br>DWHXD White<br>DSSTD Sandstone<br>DDBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white<br>DSSTXD Textured sandstone |



PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*SITE LIGHTING PLAN*
*#37 Main Street*
*Bristol, Connecticut*
*November 13, 2024*


*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

*DESIGN REFERENCE:*

SEDIMENT & EROSION CONTROL BASED ON 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL D.E.P. BULLETIN 34 BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.

*Erosion & Sediment Controls and Stabilization Practices*

a. Temporary seeding.
b. Mulching.
c. Stone Rip-rap.

During construction, sheet runoff from the site will be filtered through hay bale barriers and silt fences. All storm drain inlets shall be provided with barrier filters. Stone rip-rap shall be provided at the outlets of drainage pipe in which erosive velocities are encountered.

*Off Site Vehicle Tracking*

Stabilized construction entrances will be installed at all proposed entrances.

Installation, Maintenance and Inspection Procedures of Erosion & Sediment Controls

*A. General-*

These are the general inspection and maintenance practices that will be used to implement the plan.

- The smallest practical portion of the site will be denuded at one time.

- All erosion control measures will be inspected at least once a week and following any storm event of 0.25 inches or greater.

- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of the report.

- Built up sediment will be removed from the silt fence or hay bale barriers when it has reached one third the height of the of the fence or barrier.

- A maintenance inspection report will be made after each inspection.

- The contractor's site superintendent will be responsible for inspections, maintenance and repair activities, and completing the inspection and maintenance report.

- R.R. Hiltbrand Engineers & Surveyors shall inspect the site on a periodic basis to assure compliance with the plan.

*B. Filters -*

1. Straw/ hay bales
   a. Sheet Flow Applications
      1. Bales shall be placed in a single row , lengthwise on the contour, with the ends of the adjacent bales tightly abutting one another.
      2. All bales shall be either wire bound or string tied. Bales shall be installed so that the bindings are oriented around the sides rather than along the tops and bottoms of the bales to prevent deterioration of the bindings.
      3. The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of (4) inches. After the bales are staked and chinked , the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built-up to (4) inches against the uphill side of the barrier. Ideally, bales should be placed ten (10) feet away from the toe of slope.
      4. Each bale shall be securely anchored by at least two (2) stakes or rebars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes and rebars shall be driven deep enough into the ground to securely anchor the bales.
      5. The gaps between bales shall be chinked (filled by wedging) with straw/hay to prevent water from escaping between the bales.
2. Silt Fence
   a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements.

*Physical Property Test Requirements*

Filtering Efficiency ASTM 5,41 75% minimum

Grab Tensile Strength ASTM D4632 100lbs.
Elongation & Failure ASTM D4632 15%
Puncture Strength
ASTM 4833 50 lbs.
Flow Rate ASTM D4491 0.2gal./ft2/min.

Ultra-Violet Radiation Stability % ASTM D4355 70% after 500 hours of exposure

b. The height of a silt fence shall not exceed thirty (30) inches above grade.

c. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at the support posts, with a min. six (6) inch overlap, and securely sealed.

d. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location and driven securely into the ground (min. of 12 inches).

e. A trench shall be excavated approximately six (6) inches wide and six (6) inches deep along the line of posts and upslope from the barrier.

f. When 'standard strength' filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one inch long, tie wires or hog rings. The wire shall extend no more than 30 inches above the original ground surface.

g. The 'standard strength' filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface.

h. When 'extra strength' filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case the filter fabric is stapled or wired directly to the posts with all other provisions of item 'g' applying.

i. The trench shall be backfilled and the soil compacted over the filter fabric.

j. Silt fences shall be removed when they have served their useful purpose, but not before the upslope areas have been permanently stabilized.

*Sequence of Installation*

Sediment barriers shall be installed prior to any soil disturbance of the contributing drainage area above them.

*Maintenance*

a. Straw/ hay bale barrier and silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the ends, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.

b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.

c. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately (1/3) the height of the barrier.

d. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

*C. Mulching*

1. Timing

In order for mulch to be effective, it must be in place prior to major storm events There are two (2) types of standards which shall be used to assure this.

a. Apply mulch prior to any storm event.

This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Massachusetts (508- 822- 0634 ), to have adequate warning of significant storms.

b. Required mulching within a specified time period.

The time period can range from 14 to 21 days of inactivity on an area, the length of time varying with site conditions, Professional judgment shall be used to evaluate the interaction of site conditions ( soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc. ) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

2. Guidelines for winter mulch application.

When mulch is applied to provide protection over winter (past the growing season) it shall be at a rate of 6000 lb. of hay or straw per acre. A tackifier may be added to the mulch.

3. Maintenance

All mulches must be inspected periodically, in particular after rain storms, to check for erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

*D. Temporary Grass Cover*

1. Seedbed Preparation

Apply fertilizer at the rate of 300 lb. / acre of 10-10-10. Apply limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of (1) tons/ acre.

2. Seeding

a. Utilize annual rye grass at a rate of 40 lb./ acre.

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer), Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance

Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface shall be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim ( mulch, filter barriers, check dams, etc. ).

*E. Permanent Grass Cover*

1. Seedbed Preparation

Apply fertilizer at the rate of 300 lb. / acre of 10-10-10. Apply limestone (equivalent to 50% calcium plus magnesium oxide) at a rate of (1) tons/ acre.

2. Seeding

| | Lbs./1,000 Sq. Ft. |
|---|---|
| a. Utilize Creeping Red Fescue (Pennlawn, Wintergreen) | .45 |
| Redtop (Streeker, Common) | .10 |
| Tall Fescue (Kentucky 31 or Smooth Bromegrass (Saratoga, Lincoln) | .45 |
| | 1.00 |

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer), Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

*F. Storm Drain Inlet Protection*

1. Straw Bale Inlet Structure

a. Bales shall be either wire bound or string tied with the bindings oriented around the sides rather than over and under the bales.

b. Bales shall be placed lengthwise in a single row surrounding the inlet, with the ends of adjacent bales pressed together.

c. The filter barrier shall be entrenched and backfilled. A trench shall be excavated around the inlet the width of a bale to a minimum depth of four (4) inches. After the bales are staked, the excavated soil shall be backfilled and compacted against the filter barrier.

d. Each bale shall be securely anchored and held in place by at least two (2) stakes or rebars driven through the bale.

e. Loose straw shall be wedged between bales to prevent water from entering between bales.

F. Stabilized Construction Entrance

1. Specifications

a. Aggregate Size: Use two (2) inch stone, (Gradation Shall Be D.O.T. No. 3)

b. Aggregate thickness: Not less than six (6) inches.

c. Width: Ten (10) foot minimum, but not less than the full width of points where ingress or egress occurs.

d. Length: As required, but not less than one hundred (50) feet.

e. Geotextile: To be placed over the entire area to be covered with aggregate. Piping of surface water under entrance(s) shall be provided as required.

f. Criteria for Geotextile: The fabrics shall be Trevia Spunbound 1135, Mirafi 6000x, or equal.

2. Maintenance

The entrance(s) shall be maintained in a condition which will prevent tracking of sediment onto the public right-of-way. When washing is required, it shall be completed on an area stabilized with aggregate which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches or waterways.

*Timing of Controls/ Measures*

As indicated in the sequence of Major Activities the hay bales and silt fences shall be installed prior to commencing any clearing, demolition or grading of the site. Structural controls shall be installed concurrently with the applicable activity, Area(s) where construction activity temporarily ceases for more than twenty one (21) days will be stabilized with a temporary seed and mulch within fourteen (14) days of the last disturbance. Once construction activity ceases permanently in an area, silt fences and hay bale barriers will be removed once permanent measures are established.

*Waste Disposal*

A. Waste Materials

All waste materials will be collected and stored in securely lidded receptacles. All trash and construction debris from the site will be deposited into a dumpster. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedure for waste disposal by the superintendent.

B. Hazardous Waste

All hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. Site personnel will be instructed in the practices by the superintendent.

C. Sanitary Waste

All sanitary waste will be collected from the portable units a minimum of once per week by a licensed sanitary waste management contractor.

*Spill Prevention*

*A. Material Management Practices*

The following are the materials management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances during construction to storm water runoff:

*Good Housekeeping:*

The following good housekeeping practices will be followed on site during the construction project:

-An effort will be made to store only sufficient amounts of products to do the job.

-All materials stored on site will be stored in a neat, orderly manner in their proper (original if possible) containers and, if possible, under a roof or other enclosure.

-Manufacturer's recommendations for proper use and disposal will be followed.

-The site superintendent will inspect daily to ensure proper use and disposal of materials.

-Substances will not be mixed with one another unless recommended by the manufacturer.

-When ever possible all of a product will be used up before disposing of the container.

*Hazardous Products:*

The following practices will be used to reduce the risks associated with hazardous products:

-Products will be kept in their original containers unless they are not re-sealable

-Original labels and product safety data will be retained for important product information.

-Surplus product that must be disposed of will be discarded according to the manufacturer's recommended methods of disposal.

*B. Product Specific Practices*

The following product specific practices will be followed on site:

Petroleum Products:

All on site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt based substances used on site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts directed by the specifications. Once applied, fertilizer will be worked into the soil to limit exposure to storm water Storage will be in a covered shed or enclosed trailers. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be disposed of properly according to manufacturer's instructions or state and local regulations.

Concrete Trucks:

Concrete trucks will discharge and wash out surplus concrete or drum wash water in a contained area on site..

*C. Spill Control Practices*

In addition to good housekeeping and material management practices discussed in the previous section the following practices will be followed for spill prevention and cleanup:

-Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnnel will be made aware of the procedures and the location of the information and cleanup supplies.

-Materials and equipment necessary for spill cleanup will be kept in the material storage area on site. Equipment and materials will include but not limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic or metal trash containers specifically for this purpose.

-All spills will be cleaned up immediately after discovery.

-The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

-Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.

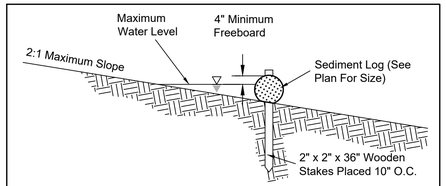
-The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to cleanup the spill if it recurs. A description of the spill, its cause, and the cleanup measures will be included.

-The site superintendent responsible for day to day operations will be the spill prevention and cleanup coordinator.

*The General Contractor(s) and/or Project Owner(s)*
are assigned the responsibility for implementing this erosion and sediment control plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, notifying the Planning and Zoning office of any transfer of this responsibility, and for conveying a copy of the Sediment & Erosion Control Plan if the title to the land is transferred.

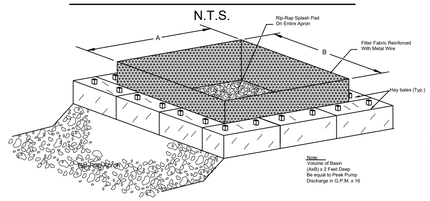
*Responsible Person:*
GOLD COAST PROPERTIES
Stephen Shapiro
203-610-1545

*Contingency Erosion Plan*
Should unforeseen erosion or sedimentation problems arise, the design engineer of record. (R.R. Hiltbrand Engineers & Surveyors ) and the local enforcement agent shall be notified immediately. An inspection of the affected area(s) shall be promptly performed. A remedial action plan shall be formulated with the local enforcement agent's approval. The site contractor shall then implement the recommended course of action which has been determined by both the engineer and local enforcement agent.

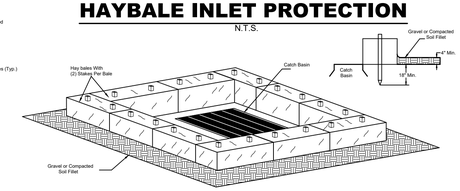


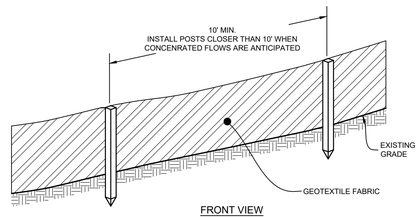

## SEDIMENT LOG
N.T.S.

## TEMPORARY SEDIMENT BASIN FOR DEWATERING DISCHARGE




## HAYBALE INLET PROTECTION




FRONT VIEW

DETAIL FOR FENCE JOINT

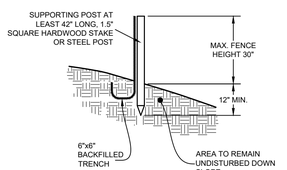



* POSITION POSTS TO OVERLAP AS SHOWN ABOVE, MAKING CERTAIN THAT THE FABRIC FOLDS AROUND EACH POST ONE FULL TURN

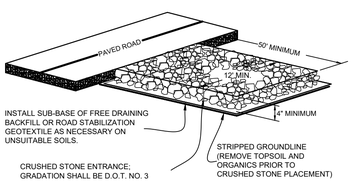
* DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OFF WITH CORD OR WIRE TO PREVENT FLOW-THROUGH OF BULK-UP SEDIMENT AT JOINT.

## SILT FENCE
N.T.S.

1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES, OF THE '2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL'.
2. THE HEIGHT OF THE BARRIER SHALL NOT EXCEED 30 INCHES ABOVE GRADE.
3. POSTS SHALL BE SPACED A MAXIMUM OF (10) FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MIN. 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS THE MANUFACTURER RECOMMENDS.
4. A TRENCH SHALL BE EXCAVATED APPROX., (6) INCHES WIDE BY (6) INCHES DEEP ALONG THE LINE OF THE POSTS AND UPSLOPE FROM THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS.
5. THE FABRIC SHALL NOT EXTEND MORE THAN (30) INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND A MINIMUM OF (8) INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
7. FILTER BARRIERS SHALL BE REMOVED WHEN THE HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPHILL SURFACE HAS BEEN PERMANENTLY STABILIZED.
8. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL, ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
10. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.



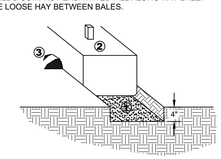

SIDE VIEW




## CONSTRUCTION ENTRANCE n.t.s.

## PLACEMENTand CONSTRUCTION OF HAY BALE BARRIER
N.T.S.

1. EXCAVATE TRENCH 4" AND PLACE FILL UP-SLOPE OF TRENCH. PLACE HAYBALE & STAKE FIRST STAKE AT ANGLE TOWARDS
2. FIRST HAYBALE. STAKES ARE 18" MIN. INTO GROUND.
3. BACKFILL & COMPACT EXCAVATED FILL ALONG HAY BALE.
4. WEDGE LOOSE HAY BETWEEN BALES.




SEDIMENT AND EROSION CONTROL SEQUENCE:

1. CALL BEFORE YOU DID - 1-800-922-4455.
2. PRE-CONSTRUCTION MEETING WITH BRISTOL WETLANDS AND ZONING STAFF.
3. UTILIZE EXISTING NORTHEASTERN SIDEWALK RAMP ENTRANCE TO SITE FOR AS LONG AS POSSIBLE.
4. ONCE EXISTING ENTRANCE IS NO LONGER PRACTICAL, INSTALL STONE CONSTRUCTION ENTRANCE.
5. COMPLETE DEMOLITION OF BITUMINOUS SURFACES AND REMOVE OFF-SITE.
6. INSTALL PERIMETER EROSION CONTROLS AS SHOWN INCLUDING AN 8"Ø SEDIMENT LOG ALONG MAIN STREET FRONTAGE.
7. CONTACT TOWN STAFF FOR INSPECTION 24 HOURS PRIOR TO EXCAVATION OF BUILDING FOUNDATION.
8. COMPLETE EXISTING UTILITY DISCONNECTS FOR EXISTING WATER AND SEWER LATERALS.
9. EXTEND NEW WATER AND SEWER LATERALS TO BUILDING FOOTPRINT.
10. EXCAVATE FOR BUILDING FOOTINGS AND WALLS
11. BACKFILL FOOTINGS AND WALLS.
12. INSTALL SITE STORM DRAINAGE.
13. CONSTRUCT ACCESS DRIVEWAY AND PARKING LOT TO PROCESS GRAVEL SURFACE FOR PROJECT STAGING.
14. CONSTRUCT BUILDING.
15. REMOVE CURBING AND SIDEWALKS ALONG MAIN STREET.
16. CONSTRUCT CONCRETE OPEN-AIR PATIO/ENTRANCE AREA.
17. INSTALL GRANITE CURB ALONG PROJECT FRONTAGE.
18. CONSTRUCT NEW CONCRETE WALKS AND ENTRANCE RAMP TO SITE.
19. BITUMINOUS PAVE ACCESS DRIVE AND PARKING LOT.
20. INSTALL EXTRUDED CONCRETE IN AREAS WITHOUT MONOLITHIC CURB
21. COMPLETE PROJECT RESTORATION, LANDSCAPING AND LIGHTING.
22. MAINTAIN ALL EROSION CONTROLS ON PROPERTY AS NEEDED. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED BASED ON SITE CONDITIONS.

**Maintenance of Erosion and Sediment Controls**

(CE) 1. **Construction Entrance (CE)**
Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces. Provide periodic top dressing with additional stone or additional length as conditions demand. Repair any measures used to trap sediment as needed. Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces. Roads adjacent to a construction site shall be left clean at the end of each day. If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then either (1) increase the length of the construction entrance, (2) modify the construction entrance road surface, or (3) install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

(GSF) 2. **Geo-textile Silt Fence (GSF)**
Inspect the silt fence at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater. Inspection of silt fence prior to large anticipated storms is also recommended.

(PS) 3. **Permanent Seeding (PS)**
Inspect permanent seeding at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater during the first growing season. Repair eroded areas as needed to control erosion with existing erosion controls or add additional erosion controls.

(DC) 4. **Entrance and Dust Control Maintenance**
a. Sweep paved apron at entrance to site weekly or as required. Any spillage on the Farmington River Turnpike by truck wheels shall be removed daily.
b. Dust control measures will be a daily activity when required. Water will be used to suppress dust from the haul road and general work area.
c. Clear drywells of silt and debris as needed.
d. To prevent airborne dust, excavation face area will be kept to a minimum. Topsoil to be stripped as excavation progresses and areas reclaimed immediately.

(MS) 5. **Mulch for Seed (MS)**
Application of mulch to protect soil surface and promote the establishment of seeding. See Maintenance Notes for inspection requirements.

(IP) 6. **Inlet Protection (IP)**
a. Inspect the structure after each major rainfall for damage and deterioration. Repair damage immediately. (See Erosion and Sedimentation Control Details Sheet ES7).

(SL) 7. **Sediment Log (SL)**
Inspect the sediment log at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater. Inspection of sediment log prior to large anticipated storms is also recommended.

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

# *EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS*
## *#37 Main Street*
## *Bristol, Connecticut*
*August 27, 2024*

*R. R. HILTBRAND ENGINEERS and SURVEYORS*
*575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548*

| PROJECT INFORMATION | |
|---|---|
| ENGINEERED PRODUCT MANAGER: | AARON CHEEVER<br>978-302-0990<br>ACHEEVER@ADSPIPE.COM |
| ADS SALES REP: | JOHN STELMOKAS<br>413-519-2036<br>JOHN.STELMOKAS@ADSPIPE.COM |
| PROJECT NO: | 5438866 |

ADS SiteAssist™ FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR WEBSITE

# 37 MAIN ST. - PROPOSED RETAIL PLAZA

BRISTOL, CT

## SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/IN., THE ASC IS DEFINED IN SECTION 8.2.6 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT WHEEL LOADS EQUAL TO OR GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTION 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 8.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

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## IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS SHOWN IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 9" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #0, 357, 4, 467, 5, 56, OR 57.
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

## NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

**USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.**

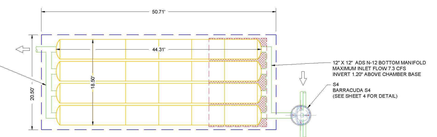
CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

## PROPOSED LAYOUT

| | |
|---|---|
| 24 | STORMTECH SC-740 CHAMBERS |
| 8 | STORMTECH SC-740 END CAPS |
| 6 | STONE ABOVE (in) |
| 6 | STONE BELOW (in) |
| 40 | % STONE VOID |
| 1040 | SYSTEM AREA (ft²) |
| 140 | SYSTEM PERIMETER (ft) |

## PROPOSED ELEVATIONS

| | |
|---|---|
| 304.00 | MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED) |
| 298.00 | MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC) |
| 297.50 | MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC) |
| 297.50 | MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT) |
| 297.50 | MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT) |
| 296.50 | TOP OF STONE |
| 296.00 | TOP OF SC-740 CHAMBER |
| 295.80 | 12" BOTTOM MANIFOLD INVERT |
| 293.50 | BOTTOM OF SC-740 CHAMBER |
| 293.00 | BOTTOM OF STONE |




NO ISOLATOR ROW PLUS

PLACE MINIMUM 12.5' OF ADSPLUS85 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

| | |
|---|---|
| 37 MAIN ST. - PROPOSED RETAIL PLAZA | BRISTOL, CT |
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| PROJECT #: 5438866 | CHECKED: JTR |

StormTech® CHAMBER SYSTEMS | 1-800-821-6710 | WWW.STORMTECH.COM

4640 TRUXTUN BLVD HILLIARD, OH 43026

ADS AS NOTED

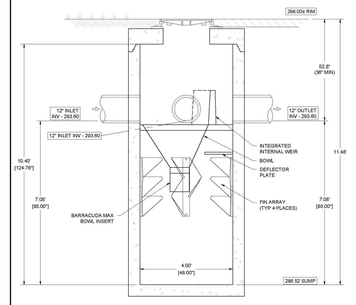
SHEET 3 OF 6

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ADVANCED DRAINAGE SYSTEMS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ADVANCED DRAINAGE SYSTEMS, INC. IS PROHIBITED. ANY USE OF THIS DRAWING FOR THE DESIGN OR CONSTRUCTION OF ANY STORMWATER MANAGEMENT SYSTEM OTHER THAN THE ADS STORMTECH SYSTEM SHOWN HEREON IS PROHIBITED. ADS ASSUMES NO RESPONSIBILITY FOR STRUCTURES DESIGNED OR CONSTRUCTED USING THIS DRAWING.

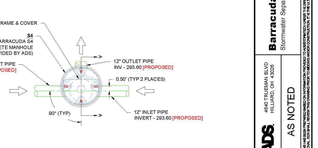
| BARRACUDA MAX S4 | |
|---|---|
| UNIT ID: | S4 |
| PEAK FLOW RATE (CFS) | |
| TREATMENT FLOW RATE (CFS): | 1.52 |

## PRODUCT SPECIFICATIONS

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
  - OR -
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH $d_{50}$=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.
  - OR -
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER CURRENT NJDEP/NJCAT HDS PROTOCOL.




**SECTION VIEW A-A**
SCALE: 1" = 1"




**SITE SPECIFIC PLAN VIEW**
SCALE: 1" = 5'

| | |
|---|---|
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| PROJECT #: 5438866 | CHECKED: JTR |

Barracuda Max Stormwater Separator

4640 TRUXTUN BLVD HILLIARD, OH 43026

ADS AS NOTED

SHEET 4 OF 6

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| PROJECT INFORMATION | |
|---|---|
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| ADS SALES REP: | JOHN STELMOKAS<br>413-519-2036<br>JOHN.STELMOKAS@ADSPIPE.COM |
| PROJECT NO: | 5438866 |

# 37 MAIN ST. - PROPOSED RETAIL PLAZA

BRISTOL, CT

## BAYSAVER BARRACUDA SPECIFICATIONS

**MATERIALS AND DESIGN**

CONCRETE STRUCTURES: DESIGNED FOR H-20 AND/OR HS-20 TRAFFIC LOADING AND APPLICABLE SOIL LOADS OR AS OTHERWISE DETERMINED BY A LICENSED PROFESSIONAL ENGINEER. THE MATERIALS AND STRUCTURAL DESIGN OF THE DEVICES SHALL BE PER ASTM C857 AND ASTM C858.

48" HP MANHOLE STRUCTURES: MADE FROM AN IMPACT MODIFIED COPOLYMER POLYPROPYLENE MEETING THE MATERIAL REQUIREMENTS OF ASTM F2764. THE ECCENTRIC CONE REDUCER SHALL BE MANUFACTURED FROM POLYETHYLENE MATERIAL MEETING ASTM D3350 CELL CLASS 315320C. GASKETS SHALL BE MADE OF MATERIAL MEETING THE REQUIREMENTS OF ASTM F477.

SEPARATOR INTERNALS SHALL BE SUBSTANTIALLY CONSTRUCTED OF STAINLESS STEEL, POLYETHYLENE, OR OTHER THERMOPLASTIC MATERIAL APPROVED BY THE MANUFACTURER.

**PERFORMANCE**

THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.

THE STORMWATER TREATMENT UNIT INTERNALS SHALL CONSIST OF(1)SEPARATOR CONE ASSEMBLY, AND (1)SUMP ASSEMBLY WHICH INCLUDES(4) LEGS WITH "TEETH".

THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
- OR -
THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH $d_{50}$=75 MICRON AND 200 MSG, INFLUENT CONCENTRATION.
- OR -
THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER CURRENT NJDEP/NJCAT HDS PROTOCOL.

**MANUFACTURER**

EACH STORMWATER TREATMENT SYSTEM SHALL BE A BARRACUDA SYSTEM AS MANUFACTURED BY BAYSAVER, LLC. 1030 DEER HOLLOW DR., MOUNT AIRY, MD 21771, PHONE (301) 829-8470, FAX (301) 829-3747, TOLL FREE 1-800-229-7283 (1-800-BAYSAVER), EMAIL INFO@BAYSAVER.COM

## BARRACUDA MAINTENANCE

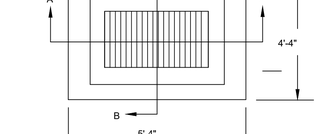
BARRACUDA SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EXCEEDS 20 INCHES. MINIMUM INSPECTION IS RECOMMENDED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF THE UNIT.

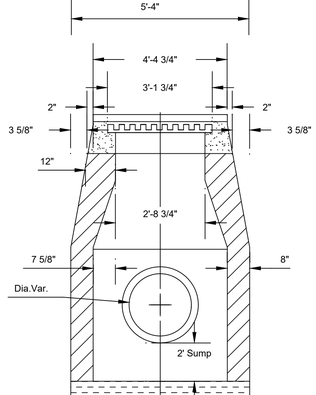
**MAINTENANCE INSTRUCTIONS**

1. REMOVE THE MANHOLE COVER TO PROVIDE ACCESS TO THE POLLUTANT STORAGE. POLLUTANTS ARE STORED IN THE SUMP, BELOW THE BOWL ASSEMBLY VISIBLE FROM THE SURFACE. YOU'LL ACCESS THIS AREA THROUGH THE 10" DIAMETER ACCESS CYLINDER.
2. USE A VACUUM TRUCK OR OTHER SIMILAR EQUIPMENT TO REMOVE ALL WATER, DEBRIS, OILS AND SEDIMENT.
3. USE A HIGH PRESSURE HOSE TO CLEAN THE MANHOLE OF ALL THE REMAINING SEDIMENT AND DEBRIS. THEN, USE THE VACUUM TRUCK TO REMOVE THE WATER.
4. FILL THE CLEANED MANHOLE WITH WATER UNTIL THE LEVEL REACHES THE INVERT OF THE OUTLET PIPE.
5. REPLACE THE MANHOLE COVER.
6. DISPOSE OF THE POLLUTED WATER, OILS, SEDIMENT AND TRASH AT AN APPROVED FACILITY.
   - LOCAL REGULATIONS PROHIBIT THE DISCHARGE OF SOLID MATERIAL INTO THE SANITARY SYSTEM. CHECK WITH THE LOCAL SEWER AUTHORITY FOR AUTHORITY TO DISCHARGE THE LIQUID.
   - SOME LOCALITIES TREAT THE POLLUTANTS AS LEACHATE. CHECK WITH LOCAL REGULATORS ABOUT DISPOSAL REQUIREMENTS.
   - ADDITIONAL LOCAL REGULATIONS MAY APPLY TO THE MAINTENANCE PROCEDURE.

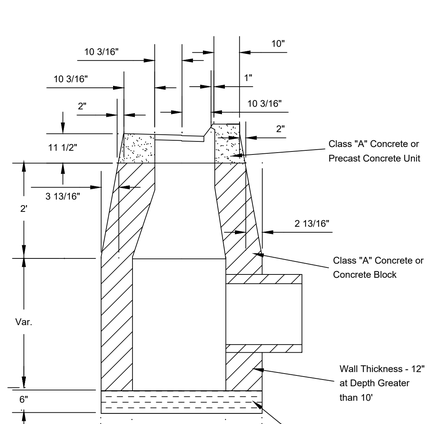
## BARRACUDA INSTALLATION NOTES

INSTALLATION OF THE STORMWATER TREATMENT UNIT(S) SHALL BE PERFORMED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH INSTRUCTIONS CAN BE OBTAINED BY CALLING ADVANCED DRAINAGE SYSTEMS AT (800) 821-6710 OR BY LOGGING ON TO WWW.ADS-PIPE.COM OR WWW.BAYSAVER.COM.



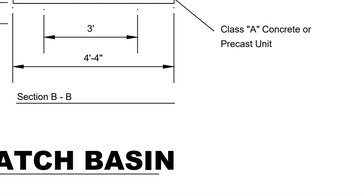

Section A - A




Section B - B

# TYPE "C" CATCH BASIN

n. t. s.




*CLASS I BACKFILL:*
*ANGULAR CRUSHED STONE OR ROCK, DENSE OR OPEN-GRADED WITH LITTLE OR NO FINES (NOTED 1 INCHES IN SIZE).*

*CLASS II BACKFILL:*
*CLEAN, COARSE-GRAINED MATERIALS, SUCH AS GRAVEL, COARSE SANDS AND GRAVEL-SAND MIXTURES (1" inches (max. size).*

*CLASS III BACKFILL:*
*COARSE-GRAINED MATERIALS WITH FINES INCLUDING SILTY OR CLAYEY GRAVELS OR SANDS. GRAVEL OR SAND MUST COMPRISE MORE THAN 50 PERCENT OF CLASS III MATERIALS (1" INCHES MAX. SIZE)*

# *ADS N-12 (CPP) TRENCH DETAIL*

*N.T.S.*

## ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

| | MATERIAL LOCATION | DESCRIPTION | AASHTO MATERIAL CLASSIFICATIONS | COMPACTION / DENSITY REQUIREMENT |
|---|---|---|---|---|
| D | **FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR RIGID PAVEMENT SUBBASE OR BASE COURSE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER. | ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. | N/A | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS. |
| C | **INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER. | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. | AASHTO M145[2]<br>A-1, A-2-4, A-3<br>OR<br>AASHTO M43[2]<br>3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 | BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% RELATIVE DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN). |
| B | **EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[1] | AASHTO M43[2]<br>3, 357, 4, 467, 5, 56, 57 | NO COMPACTION REQUIRED. |
| A | **FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[1] | AASHTO M43[2]<br>3, 357, 4, 467, 5, 56, 57 | PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[3] |

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. CAICL5ER'C' IS EXCAVATED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'C' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".




## NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 8.2.6 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/IN., AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

| | |
|---|---|
| 37 MAIN ST. - PROPOSED RETAIL PLAZA | BRISTOL, CT |
| DATE: 08/20/2024 | DRAWN: JTR |
| PROJECT #: 5438866 | CHECKED: JTR |

StormTech® CHAMBER SYSTEMS | 1-800-821-6710 | WWW.STORMTECH.COM

4640 TRUXTUN BLVD HILLIARD, OH 43026

ADS AS NOTED

SHEET 5 OF 6

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ADVANCED DRAINAGE SYSTEMS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ADVANCED DRAINAGE SYSTEMS, INC. IS PROHIBITED. ANY USE OF THIS DRAWING FOR THE DESIGN OR CONSTRUCTION OF ANY STORMWATER MANAGEMENT SYSTEM OTHER THAN THE ADS STORMTECH SYSTEM SHOWN HEREON IS PROHIBITED. ADS ASSUMES NO RESPONSIBILITY FOR STRUCTURES DESIGNED OR CONSTRUCTED USING THIS DRAWING.

## SC-740 TECHNICAL SPECIFICATION

NTS

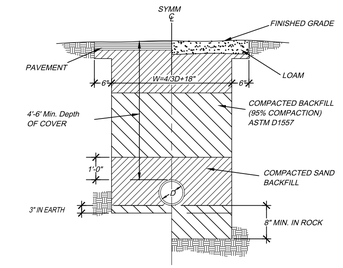



**NOMINAL CHAMBER SPECIFICATIONS**

| | | |
|---|---|---|
| SIZE (W X H X INSTALLED LENGTH) | 51.0" X 30.0" X 85.4" | (1295 mm X 762 mm X 2169 mm) |
| CHAMBER STORAGE | 45.9 CUBIC FEET | (1.30 m³) |
| MINIMUM INSTALLED STORAGE* | 74.9 CUBIC FEET | (2.12 m³) |
| WEIGHT | 75.0 lbs. | (33.4 kg) |

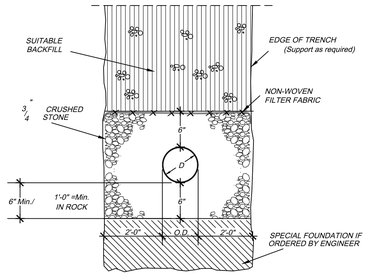
**NOMINAL END CAP SPECIFICATIONS**

| | | |
|---|---|---|
| SIZE (W X H X INSTALLED LENGTH) | 45.9" X 29.3" X 0.9" | (1166 mm X 744 mm X 244 mm) |
| END CAP STORAGE | 2.6 CUBIC FEET | (0.07 m³) |
| MINIMUM INSTALLED STORAGE** | 



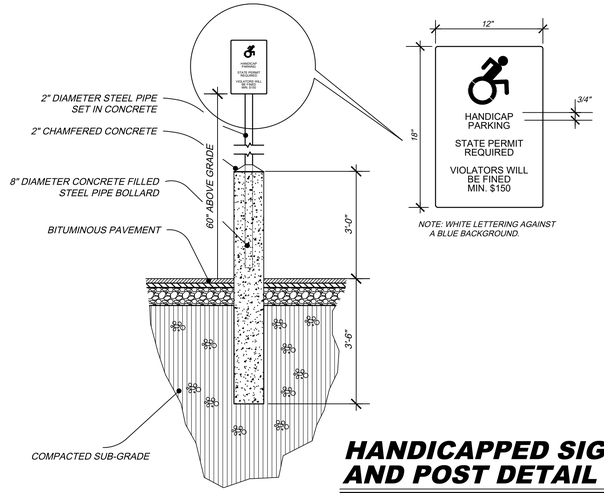

## WATER MAIN TRENCH SECTION

N.T.S.



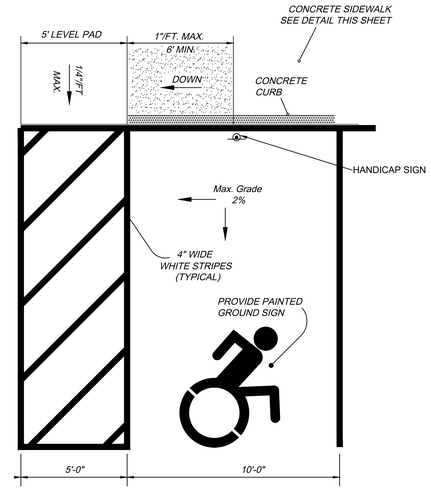

## SANITARY SEWER TRENCH SECTION

N.T.S.



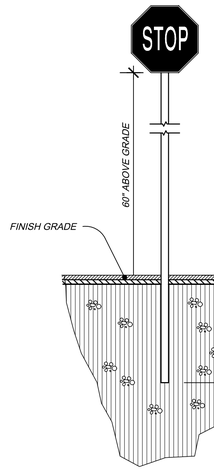

## HANDICAPPED SIGN AND POST DETAIL

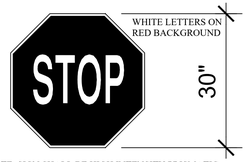
N.T.S.




## HANDICAPPED PARKING STALL DETAIL

N.T.S.



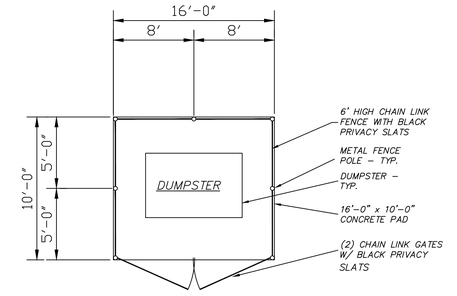




## STOP SIGN (31-0552)

N.T.S.

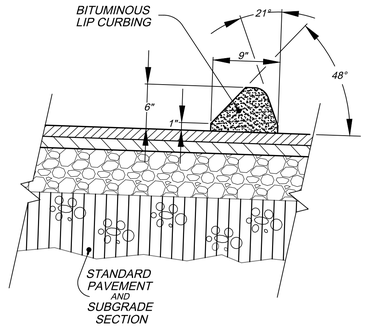
## STOP SIGN (31-0552) AND POST DETAIL

N.T.S.



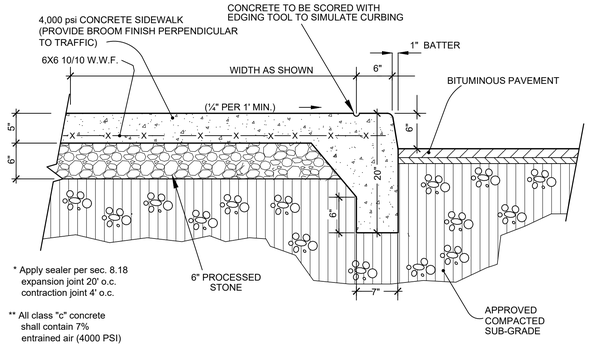

## SCREENED DUMPSTER PAD DETAIL

N.T.S.



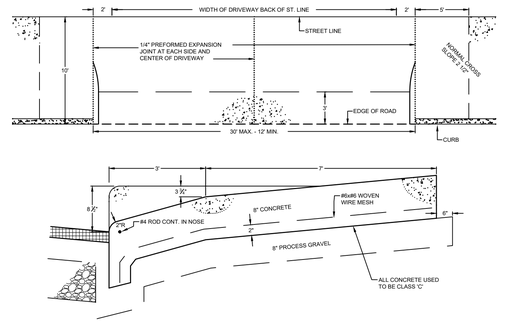

## BITUMINOUS LIP CURBING

N.T.S.



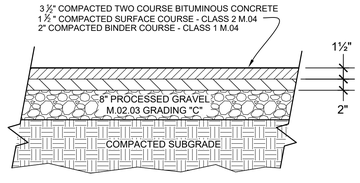

## CONCRETE CURB and SIDEWALK

N.T.S.




## TYPICAL COMMERCIAL DRIVEWAY APRON

N.T.S.




NOTE:
-ROADWAY MATERIALS AND METHODS TO BE IN CONFORMANCE WITH CONN. D.O.T. STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 814, 1988 WITH RECENT REVISIONS, and/or MUNICIPAL CURRENT STANDARDS.

-CONTRACTOR SHALL CONFIRM SUB-GRADE IS OF ADEQUATE BEARING CAPACITY PRIOR TO PAVING.

## BITUMINOUS PAVEMENT DETAIL

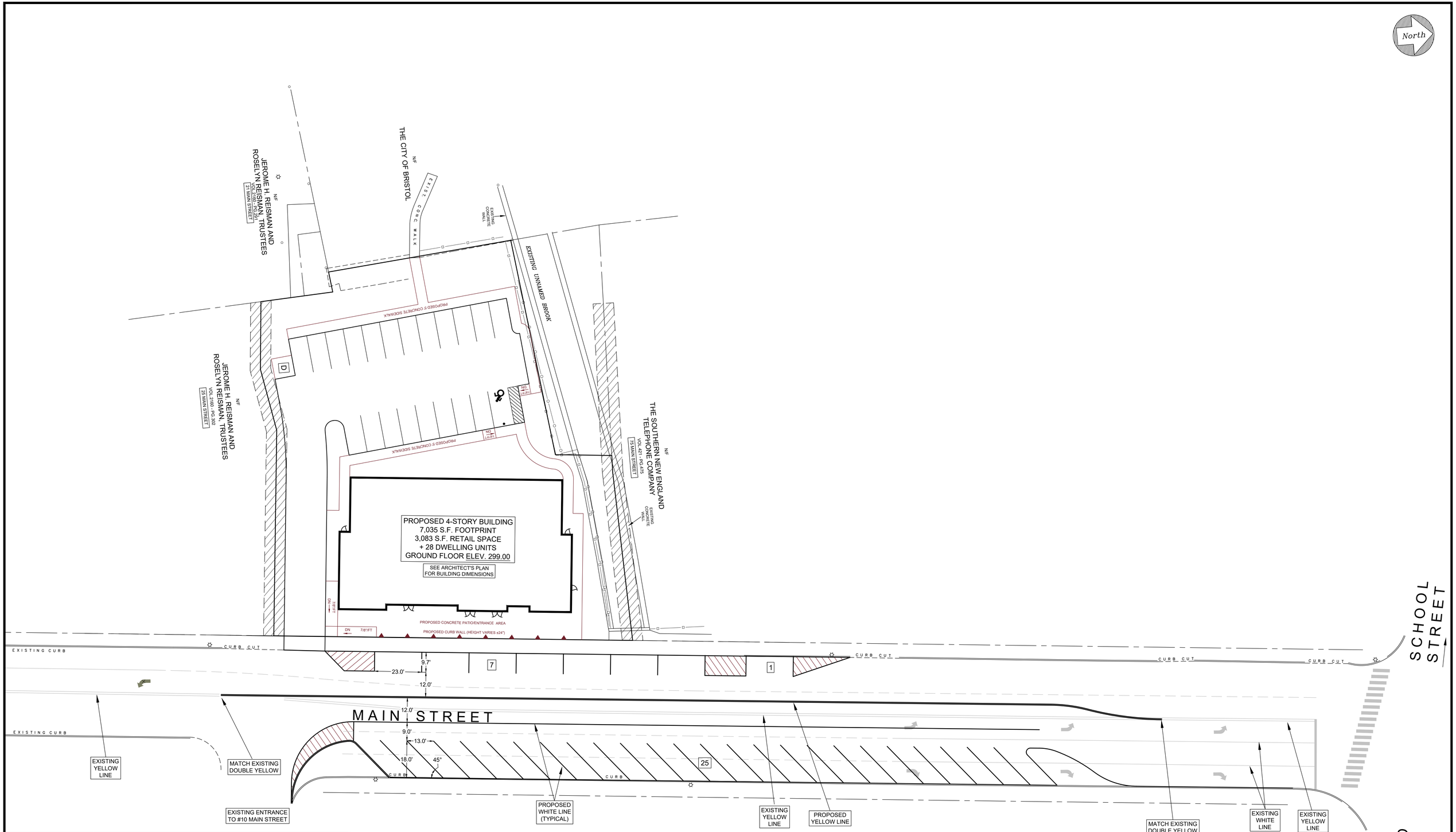
SCALE: N.T.S.

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R. R. HILTBRAND Engineers and Surveyors

*SITE DETAILS*
*Sheet 2 OF XXX*
*#37 Main Street*
*Bristol, Connecticut*
*August 27, 2024*

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548




UTILITY NOTE:
LOCATION OF UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED UPON FIELD SURVEY OF VISIBLE SURFACE STRUCTURES SUCH AS CATCH BASINS AND MANHOLES, TOGETHER WITH RECORD MAPPING OBTAINED FROM UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AS NOTED UNDER MAP REFERENCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. IN ADDITION, OTHER UTILITIES MAY ALSO EXIST, UNKNOWN TO THE SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

PREPARED FOR:
Stephen Shapiro
Gold Coast Properties
303 Linwood Avenue - Suite 2D
Fairfield, CT 06824

R.R. HILTBRAND
Engineers and Surveyors

# PROPOSED RE-STRIPING OF A PORTION OF MAIN STREET PLAN (BY OTHERS)

Bristol, Connecticut

August 27, 2024

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

# Elevation Drawings, Fenestration Calculations and Floor Plans

# BRISTOL COMMONS ON MAIN

## 37 MAIN STREET

## BRISTOL CT.



| SHEET LIST | |
|---|---|
| SHEET NUMBER | SHEET NAME |
| A-000 | TITLE SHEET |
| A-101 | FIRST FLOOR PLAN |
| A-102 | SECOND FLOOR PLAN |
| A-103 | THIRD FLOOR PALN |
| A-104 | FOURTH FLOOR PLAN |
| A-201 | ELEVATIONS |
| A-202 | ELEVATIONS |

### OWNER:

GOLD COAST PROPERTIES
STEPHEN SHAPIRO
EASTON, CONNECTICUT, 06612

### ARCHITECT:

SCHADLER SELNAU ASSOCIATES P.C.
5 WATERVILLE ROAD
FARMINGTON, CONNECTICUT 06032

### STRUCTURAL ENGINEER:

TO BE DETERMINED

### MEP ENGINEERS:

TO BE DETERMINED

### CIVIL ENGINEER:

R.R. HILTBRAND ENGINEERS AND SURVEYORS
575 NORTH MAIN STREET
BRISTOL, CONNECTICUT, 06010

Job.No. yyyy-xxxx

Schadler Selnau associates, p.c.
architecture • planning • interiors
5 waterville road farmington, ct 06032
(860) 677-9620
hsa-architects.com

Bristol Commons on Main

37 MAIN STREET BRISTOL CT

| REVISION | | |
|---|---|---|
| NO | DESC | DATE |

NOT FOR CONSTRUCTION

TITLE SHEET

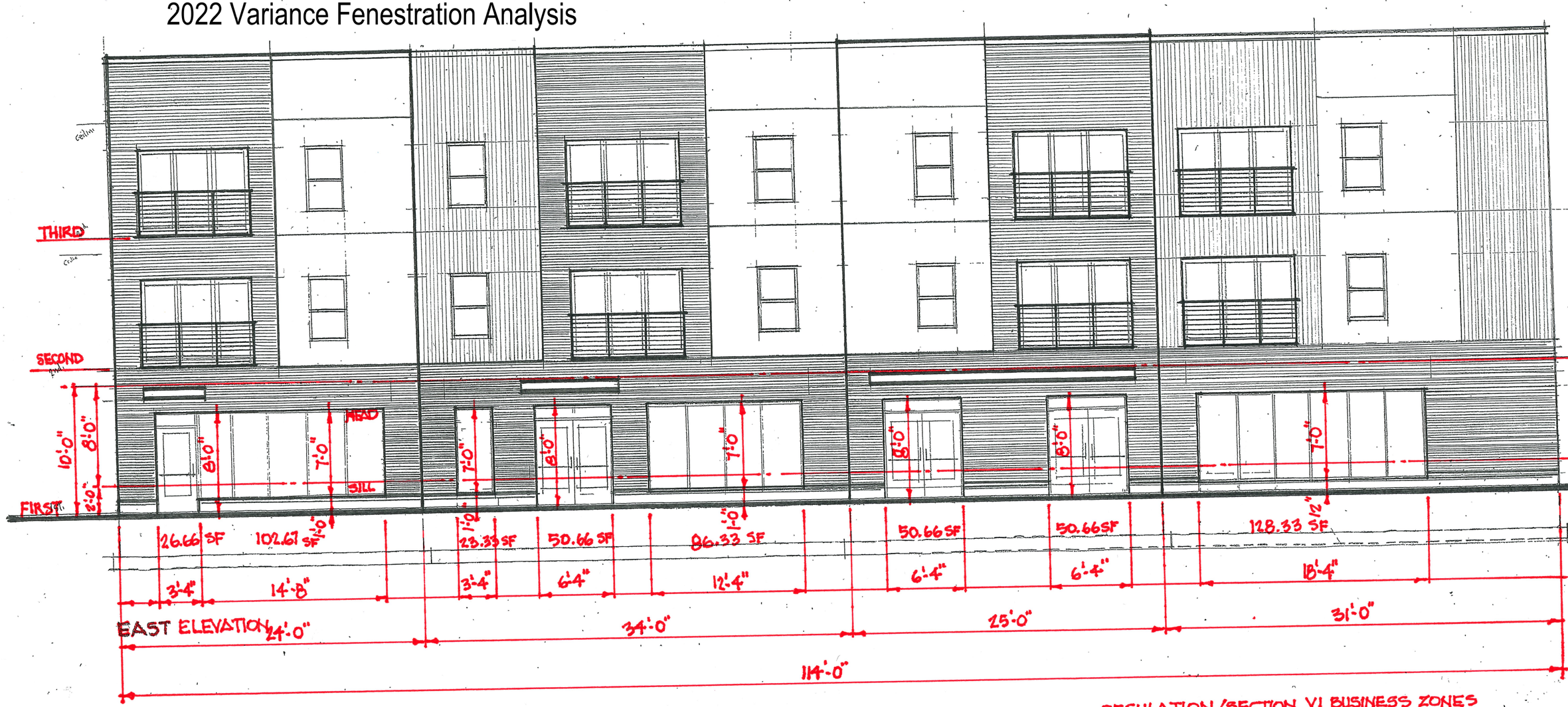
SCALE: 12" = 1'-0"

DATE ISSUED: Issue Date

A-000

9/30/2024 11:31:17 AM S:\Shared Folders\new server location\COMPUTER INFORMATION\current projects\37 Main Street Bristol CT\CD\37 Main Street Bristol CT(R14).rvt

# 2022 Variance Fenestration Analysis




EAST ELEVATION

37 MAIN STREET / BRISTOL / 06010
SCHADLER SELINAU ASSOCIATES PC
5 WATERVILLE ROAD / FARMINGTON / CT 06032

REQUIRED WINDOW FENESTRATION
MEASURED @ 10'-0" TO HEAD AND 2'-0" TO SILL
OR 8'-0" X LENGTH OF BUILDING STREET FACING
FASCADE OR 8'-0" x 114' BUILDING LENGTH OF
8' x 114' = 912 SF @ 65% REQUIRED OR 593 SF REQUIRED

WINDOW FENESTRATION PROVIDED
519.33 SF PROVIDED SHORT FALL 73.67 SF
593.00 SF REQUIRED

REGULATION / SECTION VI BUSINESS ZONES
V.C. - DOWNTOWN BUSINESS ZONE
V.C.1.a BD1 - MAIN STREET
V.C.BD.6 BUILDING FORM STANDARDS
V.C. BD.6 (5) BUILDING ELEMENT
BD-1 65% MIN OF WALL AREA
WALL MEASURED BETWEEN 2' AND 10'
FROM TOP OF FOUNDATION WALL

SCALE : 1/8" = 1'-0"
DATE : 10 OCTOBER 2022

2024 Revised Window Configuration



2024 Variance Fenestration Analysis

37 MAIN STREET
FIRST FLOOR
21 AUGUST 2024

114'-0"
104'-0"
5'-0"
26'-6"
25'-6"
25'-6"
26'-6"
5'-0"

ADA
one bedroom

ONE BEDROOM

ONE BEDROOM

ONE BEDROOM

65'-0"
38'-6"
26'-6"
21 RISERS @ 6.85" = 144"/12.0" FLR. TO FLR.
19 TREADS @ 11"

STAIR NO. 1
9'-2"
12"
8'-0"
12"
18'-0"
12"

T.

WINDOW FENESTRATION
REQUIRED
Measured @ 10' HEAD and
2'-0" to SILL or 8'-0" x
Length of Building Street
Facing Facade or 8'-0" x 114' = 912 SF @ 65% REQUIRED or 593 SF REQUIRED

RETAIL

PROVIDED 585 SF

REQ'D 593SF - 585SF = 8SF shortfall

RETAIL

T.

3500# =
8'-8"
7'-0"
ELEV.
OTIS · ELEC.

T.

RETAIL

STAIR NO. 2

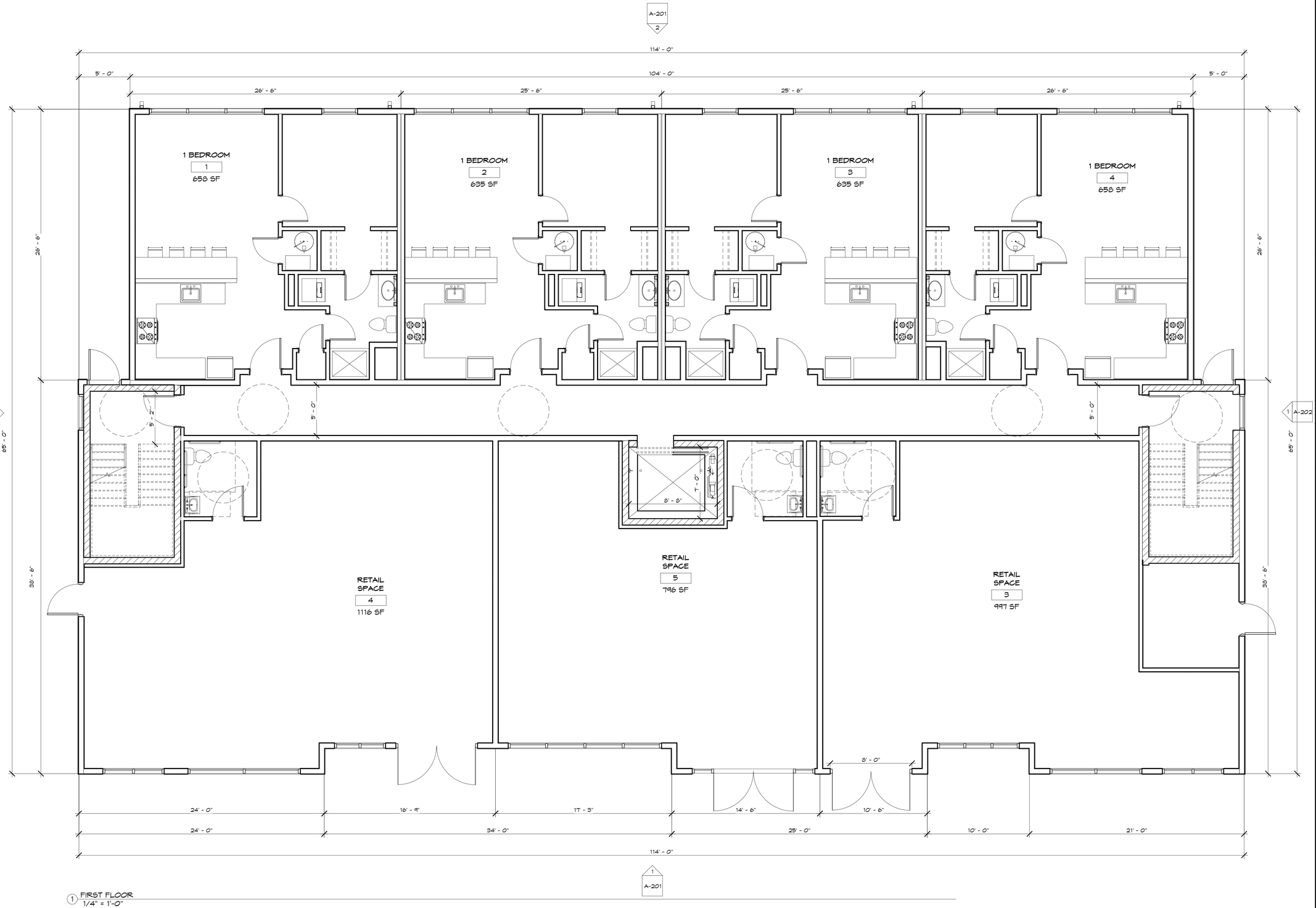
WATER
MECH.
ELECTRICAL

3'-0"
11'-0"

2'-0" 6'-0" 3'-0" 11'-0" 2'-0" 1'-0" 5'-0" 2'-0" 6'-0" 4'-0" 14'-0" 2'-0" 2'-0" 6'-0" 5'-0" 6'-0" 2'-6" 1'-0" 8'-0" 1'-0" 9'-0" 6'-0" 2'-0"

7x6=42SF
24'-0"
7x11=77SF
7x5=35SF
8x6=48SF
34'-0"
14x7=98SF
7x2=14SF
8x6=48SF
7x2=14SF
8x6=48SF
25'-0"
7x8=56SF
2'-0"
7x9=63SF
10'-0"
7x6=42SF
21'-0"

114'-0"




1 FIRST FLOOR
1/4" = 1'-0"

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Job.No. YYYY-XXXX


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architecture • planning • interiors
5 waterville road, farmington, ct 06032
(860) 677-9620
hsa-architects.com


Bristol Commons on Main

37 MAIN STREET BRISTOL CT

REVISION

| NO | DESC | DATE |
|---|---|---|

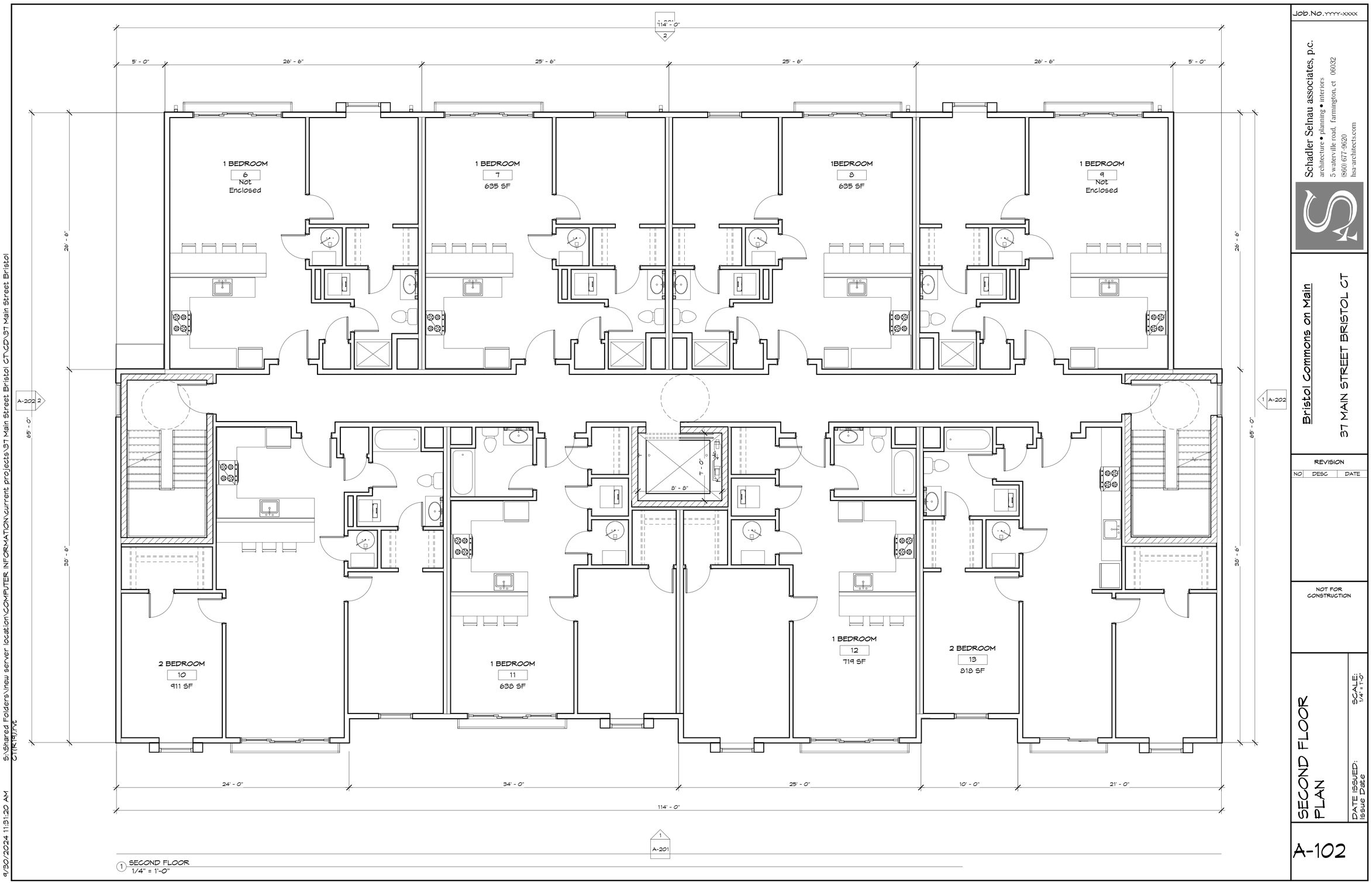
NOT FOR CONSTRUCTION

FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-101




1 SECOND FLOOR
1/4" = 1'-0"

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Job.No.yyyy-xxxx

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37 MAIN STREET BRISTOL CT

REVISION

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|---|---|---|

NOT FOR CONSTRUCTION

SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-102




1 THIRD FLOOR
1/4" = 1'-0"

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37 MAIN STREET BRISTOL CT

REVISION

| NO | DESC | DATE |
|---|---|---|

NOT FOR CONSTRUCTION

THIRD FLOOR PALN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-103




1 FOURTH FLOOR
1/4" = 1'-0"

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architecture • planning • interiors
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37 MAIN STREET BRISTOL CT

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|---|---|---|
| NO | DESC | DATE |

NOT FOR CONSTRUCTION

FOURTH FLOOR PLAN

SCALE: 1/4" = 1'-0"

DATE ISSUED: Issue Date

A-104




1 EAST ELEVATION
3/16" = 1'-0"




2 WEST ELEVATION
3/16" = 1'-0"

Job.No. yyyy-xxxx

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architecture • planning • interiors
5 waterville road, farmington, ct 06032
(860) 677-9620
hsa-architects.com

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37 MAIN STREET BRISTOL CT

REVISION

| NO | DESC | DATE |
|---|---|---|

NOT FOR CONSTRUCTION

ELEVATIONS

SCALE: 3/16" = 1'-0"

DATE ISSUED: Issue Date

A-201

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1 NORTH ELEVATION 1
3/16" = 1'-0"




2 SOUTH ELEVATION
3/16" = 1'-0"

9/30/2024 11:31:36 AM S:\Shared Folders\new server location\COMPUTER INFORMATION\current projects\37 Main Street Bristol CT\CD\37 Main Street Bristol CT(R19).rvt

Job.No. yyyy-xxxx

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architecture • planning • interiors
5 waterville road, farmington, ct 06032
(860) 677-9620
hsa-architects.com

Bristol Commons on Main

37 MAIN STREET BRISTOL CT

REVISION

| NO | DESC | DATE |
|---|---|---|

NOT FOR CONSTRUCTION

ELEVATIONS

SCALE: 3/16" = 1'-0"

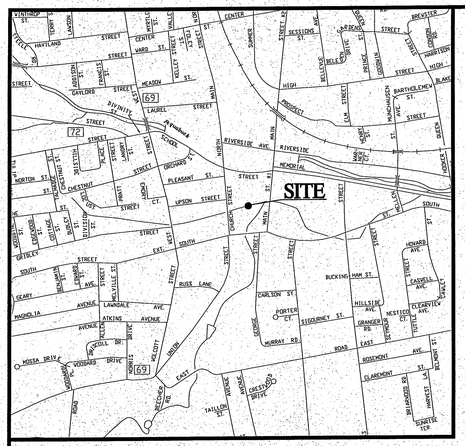
DATE ISSUED: Issue Date

A-202

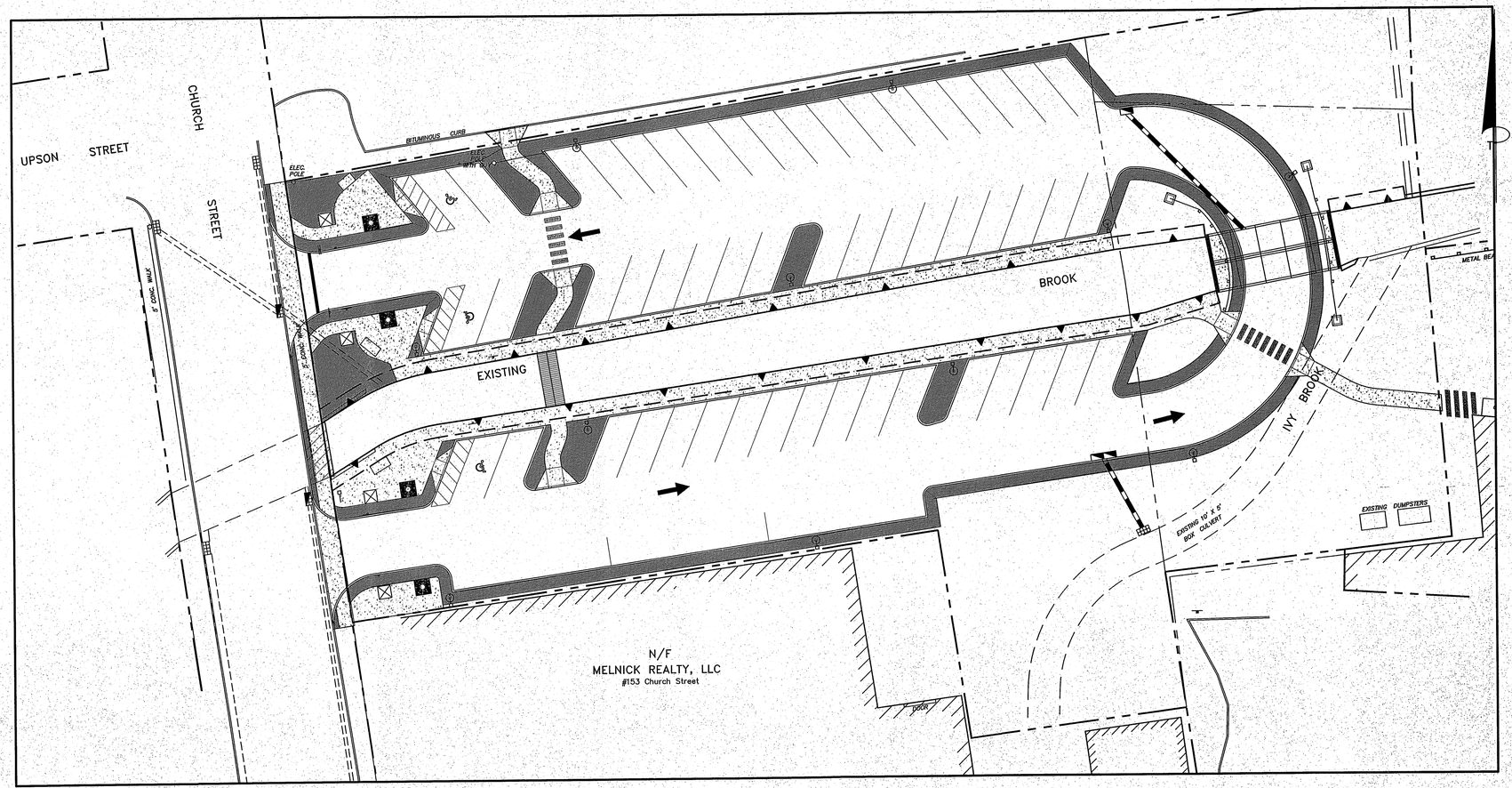
# Site Plan for: 149 Church Street

# Municipal Parking

# CITY OF BRISTOL
# PLAN
FOR
# SITE REMEDIATION AND CONSTRUCTION OF PARKING FACILITY
# 149 CHURCH STREET
IN THE TOWN OF
# BRISTOL, CONNECTICUT




LOCATION MAP
Scale: 1"=1000'




Approved by the Conservation Commission acting as the Inland-Wetlands Agency for the City of Bristol
X With Conditions ____ Without Condition
8/25/10 Date
1677 Permit Number
Signature

CITY OF BRISTOL, CONNECTICUT
This Site Plan has been approved by the Zoning Commission of the City of Bristol, CT.
Chairman/Secretary
9/15/10 Date
Pursuant to Section 8-3(i) of the Connecticut General Statutes, all work in connection with this Site Plan shall be completed by 9/15/15. Failure to complete all such work by that date shall result in automatic expiration of the approval of this Site Plan.

## LIST OF DRAWINGS


SHEET NO.
1 - TITLE SHEET/PROJECT LOCATION MAP
2 - EXISTING CONDITIONS PLAN
3 - NON-REMEDIAL DEMOLITION PLAN
4 - SITE & LAYOUT PLAN
5 - GRADING & EROSION CONTROL PLAN
6 - LIGHTING PLAN
7 - LANDSCAPE, SIGNAGE & PAVEMENT MARKING PLAN
8 - MISCELLANEOUS CONSTRUCTION DETAILS
9 - MISCELLANEOUS CONSTRUCTION DETAILS (2)
10 - REMEDIATION EXCAVATION AREAS


BOARD OF PUBLIC WORKS
## MAYOR ARTHUR T. WARD, CHMN.
DIRECTOR OF PUBLIC WORKS
## W.E. VESELKA, P.E.
CITY ENGINEER
## PAUL A. STRAWDERMAN, P.E.
AUGUST, 2010 Contract :

**"THIS DOCUMENT HAS BEEN PREPARED A PART OF THE CITY OF BRISTOL (I.W.W.C., T.P.Z., OR Z.B.A.) APPLICATION PROCESS AND CAN NOT BE CONSIDERED FINAL NOR USED FOR CONSTRUCITON PURPOSES UNTIL ALL NECESSARY APPROVALS HAVE BEEN ATTAINED"**

Inland Wetlands Permit No. 1677
Approval Date: 8/25/2010

FORM 816 (2004) STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION SHALL GOVERN INCLUDING ALL SUPPLEMENTAL SECIFICATIONS (LATEST REVISION).


PREPARED BY:
City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax 860-584-3838
ci.bristol.ct.us


| No. | DATE | COMMENTS |
|---|---|---|
| 1. | 9/14/2010 | City Staff Comments |
| 2. | 10/15/2010 | City Staff Comments |

DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut
Title Sheet

DRAWING NUMBER:
1

## NOTES

1 – THIS SURVEY (OR MAP) HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20–300B–1 THRU 20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996:

TYPE OF SURVEY : PROPERTY SURVEY.

BOUNDARY DETERMINATION CATEGORY : DEPENDENT RESURVEY

CLASS OF ACCURACY : CLASS "A–2"

2 – BEARINGS BASED ON N.A.D. 83.

3 – (50) DENOTES BRISTOL ASSESSOR'S MAP LOT NUMBER.

4 – AREA OF LOT 49–50 = 40,918 S.F.±
AREA OF LOT 61–1A = 13,293 S.F.±
AREA OF LOT 61–2 = 2982 S.F.±

## MAP REFERENCES

1 – SURVEY OF PROPERTY PREPARED FOR THE H. J. MILLS, INC. 149 CHURCH STREET BRISTOL, CONNECTICUT SCALE 1"= 20' DATE : JANUARY 6, 1989 REVISED 2/13/19 DAVID C. HINTZ R.L.S.

2 – MAP SHOWING EXCHANGE OF LAND BETWEEN BRISTOL BANK AND TRUST COMPANY AND H. J. MILLS INC. BRISTOL, CONN. SCALE 1"= 40' AUG. 1939 SPERRY & BUELL INC.

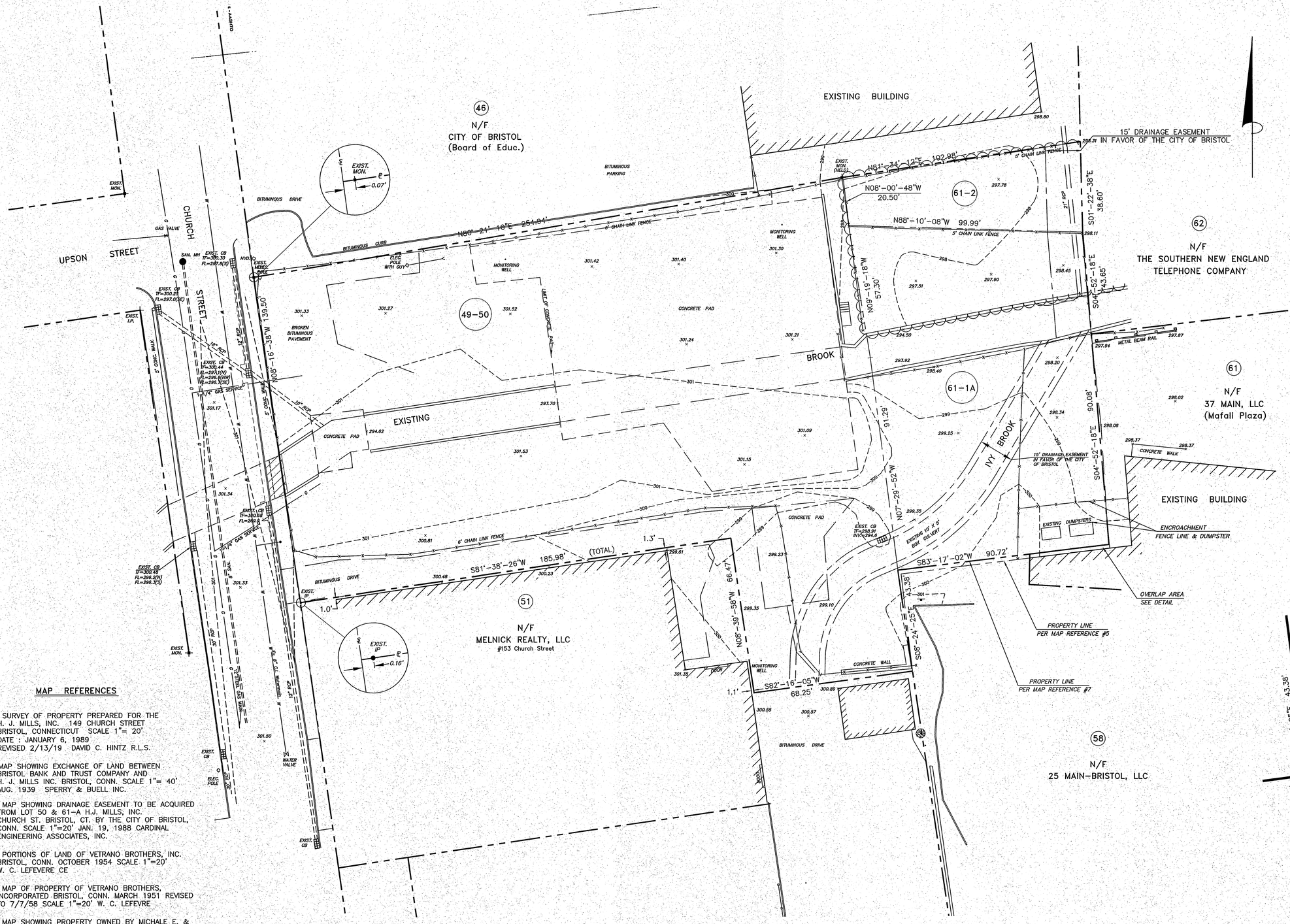
3 – MAP SHOWING DRAINAGE EASEMENT TO BE ACQUIRED FROM LOT 50 & 61–A H.J. MILLS, INC. CHURCH ST. BRISTOL, CT. BY THE CITY OF BRISTOL, CONN. SCALE 1"=20' JAN. 19, 1988 CARDINAL ENGINEERING ASSOCIATES, INC.

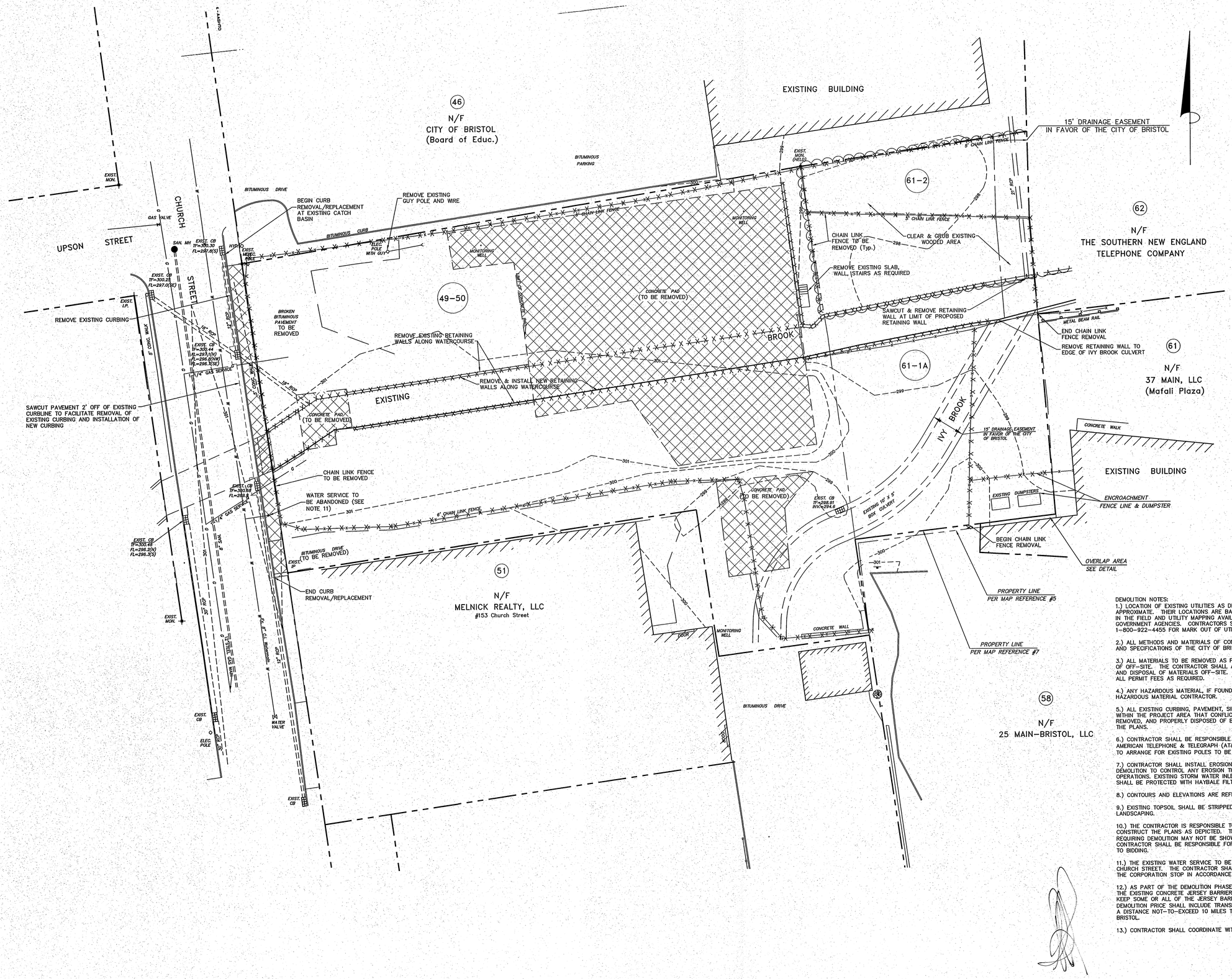
4 – PORTIONS OF LAND OF VETRANO BROTHERS, INC. BRISTOL, CONN. OCTOBER 1954 SCALE 1"=20' W. C. LEFEVERE CE

5 – MAP OF PROPERTY OF VETRANO BROTHERS, INCORPORATED BRISTOL, CONN. MARCH 1951 REVISED TO 7/7/58 SCALE 1"=20' W. C. LEFEVRE

6 – MAP SHOWING PROPERTY OWNED BY MICHALE E. & DANIEL E. LAURENTANO AND AMELIA DESMOND CHURCH STREET BRISTOL, CONN. SCALE : 1" = 20' JANUARY 28, 1980

7 – LOT LINE REVISION MAP FOR WALGREENS STORE #10203 DEVELOPER/OWNER 107 SOUTH STREET CORP. #25 MAIN STREET BRISTOL, CT. SCALE : 1" = 20' DATE : JULY 1, 2005 REVISED TO 12/5/05 KRATZERT JONES & ASSOCIATES, INC.


(46) N/F CITY OF BRISTOL (Board of Educ.)
EXISTING BUILDING
15' DRAINAGE EASEMENT IN FAVOR OF THE CITY OF BRISTOL
N81°-34'-12"E 102.98'
8' CHAIN LINK FENCE
N08°-00'-48"W 20.50'
61-2
N88°-10'-08"W 99.99'
5' CHAIN LINK FENCE
S01°-22'-38"E 38.60'
(62) N/F THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
N08°-19'-52"W 57.30'
S04°-52'-18"E 43.65'
METAL BEAM RAIL
UPSON STREET
CHURCH STREET
BITUMINOUS DRIVE
BITUMINOUS CURB
6' CHAIN LINK FENCE
BITUMINOUS PARKING
MONITORING WELL
CONCRETE PAD
BROKEN BITUMINOUS PAVEMENT
49-50
61-1A
BROOK
IVY BROOK
N08°-19'-08"W 135.50'
N07°-29'-52"W 129.69'
90.08'
S04°-52'-18"E
15' DRAINAGE EASEMENT IN FAVOR OF THE CITY OF BRISTOL
(61) N/F 37 MAIN, LLC (Mafali Plaza)
CONCRETE WALK
EXISTING BUILDING
EXISTING DUMPSTERS
ENCROACHMENT FENCE LINE & DUMPSTER
OVERLAP AREA SEE DETAIL
PROPERTY LINE PER MAP REFERENCE #5
PROPERTY LINE PER MAP REFERENCE #7
S83°-17'-02"W 90.72'
S81°-38'-26"W 185.98' (TOTAL)
6' CHAIN LINK FENCE
EXISTING 10' X 5' BOX CULVERT
EXISTING 12" RCP
EXISTING 18" RCP
EXISTING 15" RCP
EXISTING 6" SAN. SEWER
EXISTING 8" W. MAIN
EXISTING 12" GAS MAIN
EXISTING 6" GAS SERVICE
EXISTING 1" GAS SERVICE
EXISTING 3" GAS MAIN
EXISTING 4" GAS MAIN
EXISTING 8" GAS MAIN
EXISTING 12" GAS MAIN
EXISTING 16" GAS MAIN
EXISTING 24" GAS MAIN
EXISTING 30" GAS MAIN
EXISTING 36" GAS MAIN
EXISTING 42" GAS MAIN
EXISTING 48" GAS MAIN
EXISTING 54" GAS MAIN
EXISTING 60" GAS MAIN
EXISTING 66" GAS MAIN
EXISTING 72" GAS MAIN
EXISTING 78" GAS MAIN
EXISTING




DEMOLITION NOTES:

1.) LOCATION OF EXISTING UTILITIES AS DEPICTED HEREON SHALL BE CONSIDERED APPROXIMATE. THEIR LOCATIONS ARE BASED UPON A COMBINATION OF STRUCTURES VISIBLE IN THE FIELD AND UTILITY MAPPING AVAILABLE FROM LOCAL UTILITY COMPANIES AND GOVERNMENT AGENCIES. CONTRACTORS SHALL CONTACT CALL- BEFORE-U-DIG AT 1-800-922-4455 FOR MARK OUT OF UTILITIES 72 hrs. PRIOR TO ANY EXCAVATION.

2.) ALL METHODS AND MATERIALS OF CONSTRUCTION SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF BRISTOL.

3.) ALL MATERIALS TO BE REMOVED AS PART OF THIS PLAN SHALL BE PROPERLY DISPOSED OF OFF-SITE. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FOR DEMOLITION AND DISPOSAL OF MATERIALS OFF-SITE. THE CONTRACTOR SHALL POST BONDS AND PAY ALL PERMIT FEES AS REQUIRED.

4.) ANY HAZARDOUS MATERIAL, IF FOUND ON-SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.

5.) ALL EXISTING CURBING, PAVEMENT, SIDEWALKS, CONCRETE, SIGNAGE, EARTH MATERIAL, ETC. WITHIN THE PROJECT AREA THAT CONFLICT WITH PROPOSED WORK SHALL BE DEMOLISHED, REMOVED, AND PROPERLY DISPOSED OF BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE IN THE PLANS.

6.) CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING WITH AMERICAN TELEPHONE & TELEGRAPH (AT&T) AND/OR CONNECTICUT LIGHT & POWER (CL&P) TO ARRANGE FOR EXISTING POLES TO BE REMOVED/RELOCATED AS NECESSARY.

7.) CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS NECESSARY DURING DEMOLITION TO CONTROL ANY EROSION THAT MAY TAKE PLACE DURING DEMOLITION OPERATIONS. EXISTING STORM WATER INLETS SUCH AS CATCH BASINS, YARD DRAINS, ETC. SHALL BE PROTECTED WITH HAYBALE FILTERS.

8.) CONTOURS AND ELEVATIONS ARE REFERENCED TO NGVD OF 1929.

9.) EXISTING TOPSOIL SHALL BE STRIPPED AND STOCK PILED FOR USE IN LATER LANDSCAPING.

10.) THE CONTRACTOR IS RESPONSIBLE TO DEMOLISH AND REMOVE ALL ITEMS AS REQUIRED TO CONSTRUCT THE PLANS AS DEPICTED. THE CONTRACTOR SHALL BE AWARE THAT ALL ITEMS REQUIRING DEMOLITION MAY NOT BE SHOWN AND/OR DEPICTED ON THE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE PROPERTY PRIOR TO BIDDING.

11.) THE EXISTING WATER SERVICE TO BE ABANDONED SHALL BE TERMINATED AT THE MAIN IN CHURCH STREET. THE CONTRACTOR SHALL EXCAVATE AND REMOVE THE EXISTING SERVICE TO THE CORPORATION STOP IN ACCORDANCE WITH BRISTOL WATER DEPARTMENT REQUIREMENTS.

12.) AS PART OF THE DEMOLITION PHASE, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING CONCRETE JERSEY BARRIERS. THE CITY OF BRISTOL RESERVES THE RIGHT TO KEEP SOME OR ALL OF THE JERSEY BARRIERS IF THEY SO DESIRE. THE CONTRACTORS DEMOLITION PRICE SHALL INCLUDE TRANSPORTING AND DELIVERING THE BARRIER(S) ONE-WAY A DISTANCE NOT-TO-EXCEED 10 MILES TO A LOCATION TO BE DETERMINED BY THE CITY OF BRISTOL.

13.) CONTRACTOR SHALL COORDINATE WITH CL&P TO REMOVE EXISTING GUY POLE AND WIRE.

APPROVED

PREPARED BY:


City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax. 860-584-3838
ci.bristol.ct.us

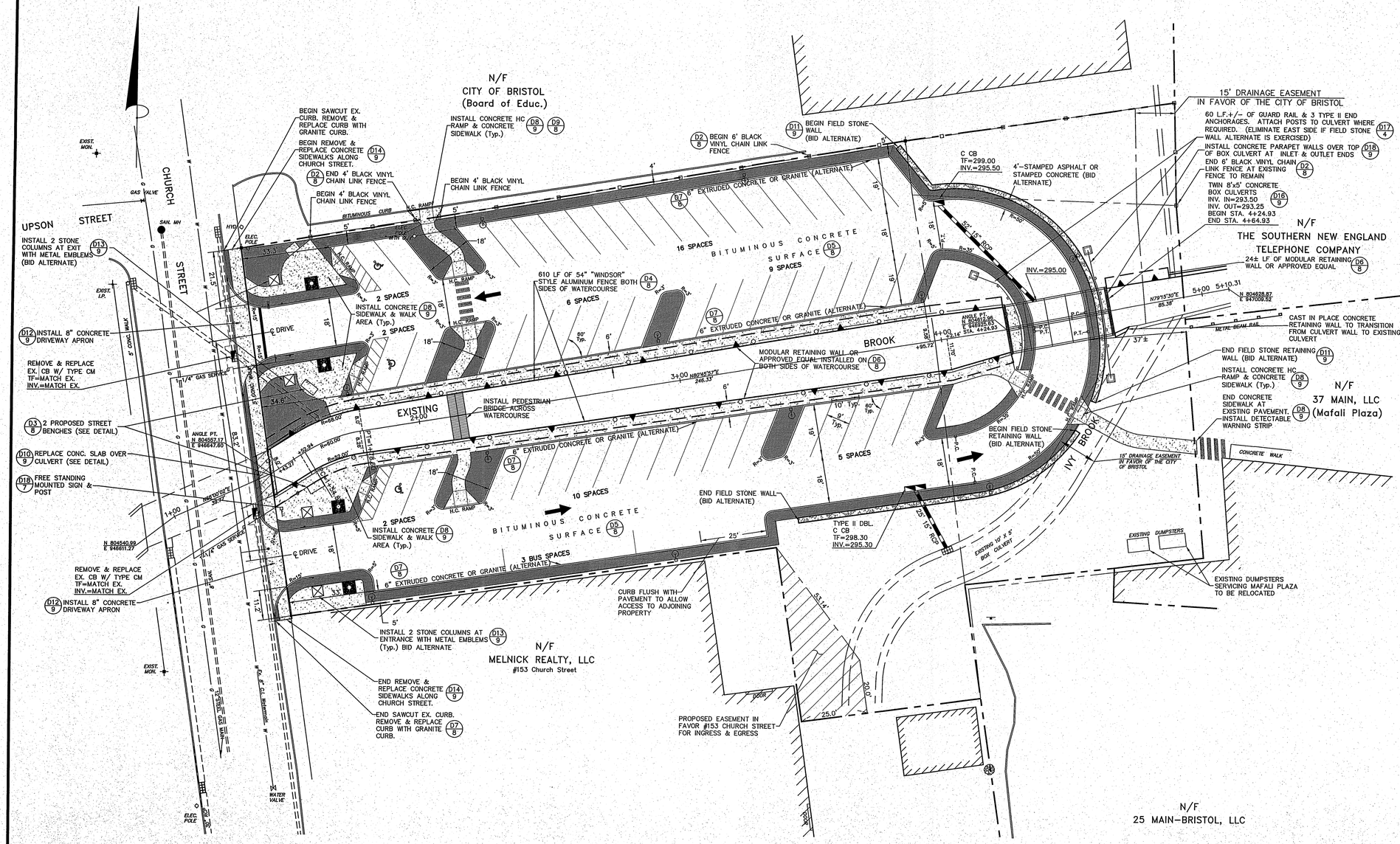

| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

# Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Non-Remedial Demolition Plan

DRAWING NUMBER:
3


N/F
CITY OF BRISTOL
(Board of Educ.)
INSTALL CONCRETE HC RAMP & CONCRETE SIDEWALK (Typ.) D8/9 D9/8
BEGIN SAWCUT EX. CURB. REMOVE & REPLACE CURB WITH GRANITE CURB.
BEGIN REMOVE & REPLACE CONCRETE SIDEWALKS ALONG CHURCH STREET. D14/9
D2/8 END 4' BLACK VINYL CHAIN LINK FENCE
BEGIN 4' BLACK VINYL CHAIN LINK FENCE
BEGIN 4' BLACK VINYL CHAIN LINK FENCE
D2/8 BEGIN 6' BLACK VINYL CHAIN LINK FENCE
D11/9 BEGIN FIELD STONE WALL (BID ALTERNATE)
15' DRAINAGE EASEMENT IN FAVOR OF THE CITY OF BRISTOL
60 L.F.+/- OF GUARD RAIL & 3 TYPE II END ANCHORAGES. ATTACH POSTS TO CULVERT WHERE REQUIRED. (ELIMINATE EAST SIDE IF FIELD STONE WALL ALTERNATE IS EXERCISED) D17/4
INSTALL CONCRETE PARAPET WALLS OVER TOP OF BOX CULVERT AT INLET & OUTLET ENDS D18/9
END 6' BLACK VINYL CHAIN LINK FENCE AT EXISTING FENCE TO REMAIN D2/8
TWIN 8'x5' CONCRETE BOX CULVERTS D16/9
INV. IN=293.50
INV. OUT=293.25
BEGIN STA. 4+24.93
END STA. 4+64.93
C CB TF=299.00 INV.=295.50
4"-STAMPED ASPHALT OR STAMPED CONCRETE (BID ALTERNATE)
6" EXTRUDED CONCRETE OR GRANITE (ALTERNATE) D7/8
BITUMINOUS CONCRETE SURFACE D5/8
16 SPACES
9 SPACES
6 SPACES
5 SPACES
10 SPACES
3 BUS SPACES
2 SPACES
INSTALL CONCRETE SIDEWALK & WALK AREA (Typ.) D8/9
610 LF OF 54" "WINDSOR" STYLE ALUMINUM FENCE BOTH SIDES OF WATERCOURSE D4/8
BROOK
IVY BROOK
MODULAR RETAINING WALL OR APPROVED EQUAL INSTALLED ON BOTH SIDES OF WATERCOURSE D6/8
INSTALL PEDESTRIAN BRIDGE ACROSS WATERCOURSE
INV.=295.00
N/F
THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY
24± LF OF MODULAR RETAINING WALL OR APPROVED EQUAL D6/8
CAST IN PLACE CONCRETE RETAINING WALL TO TRANSITION FROM CULVERT WALL TO EXISTING CULVERT
END FIELD STONE RETAINING WALL (BID ALTERNATE) D11/9
INSTALL CONCRETE HC RAMP & CONCRETE SIDEWALK (Typ.) D8/9
END CONCRETE SIDEWALK AT EXISTING PAVEMENT. INSTALL DETECTABLE WARNING STRIP D8/9
N/F
37 MAIN, LLC
(Mafall Plaza)
BEGIN FIELD STONE RETAINING WALL (BID ALTERNATE)
15' DRAINAGE EASEMENT IN FAVOR OF THE CITY OF BRISTOL
CONCRETE WALK
EXISTING DUMPSTERS
EXISTING DUMPSTERS SERVICING MAFALL PLAZA TO BE RELOCATED
END FIELD STONE WALL (BID ALTERNATE)
TYPE II DBL. C CB TF=298.30 INV.=295.30
EXISTING 10' X 5' BOX CULVERT
CURB FLUSH WITH PAVEMENT TO ALLOW ACCESS TO ADJOINING PROPERTY
PROPOSED EASEMENT IN FAVOR #153 CHURCH STREET FOR INGRESS & EGRESS
N/F
MELNICK REALTY, LLC
#153 Church Street
INSTALL 2 STONE COLUMNS AT ENTRANCE WITH METAL EMBLEMS (Typ.) BID ALTERNATE D13/9
END REMOVE & REPLACE CONCRETE SIDEWALKS ALONG CHURCH STREET. D14/9
END SAWCUT EX. CURB. REMOVE & REPLACE CURB WITH GRANITE CURB. D7/8
N/F
25 MAIN–BRISTOL, LLC
UPSON STREET
CHURCH STREET
INSTALL 2 STONE COLUMNS AT EXIT WITH METAL EMBLEMS (BID ALTERNATE) D13/9
D12/9 INSTALL 8" CONCRETE DRIVEWAY APRON
REMOVE & REPLACE EX. CB W/ TYPE CM TF=MATCH EX. INV.=MATCH EX.
D3/8 2 PROPOSED STREET BENCHES (SEE DETAIL)
D10/9 REPLACE CONC. SLAB OVER CULVERT (SEE DETAIL)
D18/7 FREE STANDING MOUNTED SIGN & POST
REMOVE & REPLACE EX. CB W/ TYPE CM TF=MATCH EX. INV.=MATCH EX.
D12/9 INSTALL 8" CONCRETE DRIVEWAY APRON
EXIST. MON.
GAS VALVE
SAN. MH
EXIST. L.P.
ELEC. POLE
HYD.
W
G
E
ELEC. POLE
W
W
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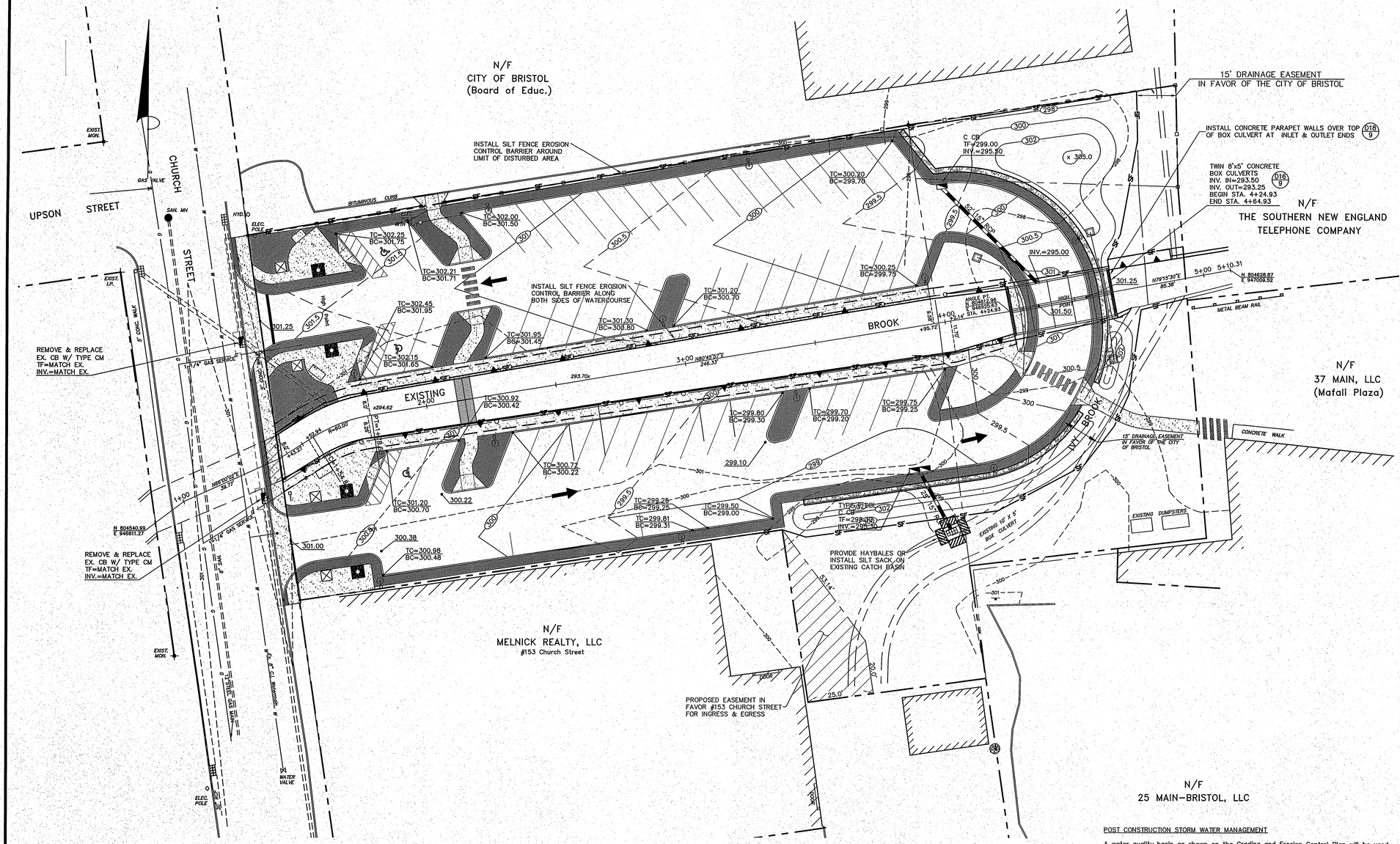


1. All disturbed areas shall have erosion control provided in accordance with the "Connecticut Guidelines for Erosion and Sediment Control" and the Town. Erosion control measures are to be accomplished prior to any other construction on the site.
2. Temporary erosion control shall be directed toward and have the purpose of controlling soil erosion at its potential source. Downstream sediment entrapment measures (proposed channel and infiltration basins) shall be employed, but only as a backup to primary control at the source.
3. A continuing program of installation and maintenance of sediment control shall be employed during the construction period. The contractor shall inspect and maintain sediment control devices on a weekly basis and immediately after each rainfall event.
4. Temporary erosion control construction shall be employed until such time as permanent paving, planting, and restoration of natural areas is effective in control of erosion from the site.
5. Temporary silt fences shall be located at all points where surface water can leave the construction area. Silt fences shall be constructed to remove sediments from flowing water through filtration and sedimentation. Silt fences shall be arranged to create ponding behind them. Provisions shall be made for removing accumulated sediments and maintaining ponding capacity. Stockpiles shall be encircled with silt fence. Silt and unusable material shall be disposed of in area approved by owner's engineer. Contractor to contact engineer prior to placement.
6. Grading operations shall be scheduled so that the ground surface will be disturbed for the shortest possible time before permanent construction is installed. Large areas shall be maintained as flat as possible to minimize soil transport through surface flow. Wherever steeper slopes or abrupt changes in grade are required, a diversion ditch or berm shall be constructed at the top of the slope to cause the surface water to flow along the diversion to a control point to be transported downslope in a slope drain. In no case shall surface water be allowed to flow uncontrolled down slopes.
7. Concentrated storm runoff shall not be permitted to flow uncontrolled down unprotected slopes. Temporary slope drains shall be provided to convey surface water down slopes until the permanent drainage system is in place and permanent ground cover is established. Slope drains shall be provided with an apron at their tops to anchor them and properly direct water into them. Stone or hay bales shall be placed at slope drain outlets to prevent scour at these points.
8. As much of the permanent storm drainage system as is practicable shall be initially installed and surface water diverted into the system. The remainder of the storm drainage system shall be installed as soon as conditions will allow. Temporary sediment barriers shall be maintained around drainage structures until final subgrade preparation is begun.
9. All disturbed areas except those designated to receive pavement shall be grassed or covered with vegetative materials in accordance with the Landscape Plans. All grade break slopes shall be protected by application of ground cover or terracing until construction of permanent surfaces begins. Temporary ground cover may consist of any effective erosion preventative treatment such as straw or other mulches, stone base, plastic sheets, fiber mats, plantings, etc. All grassing or planting operations shall include mulching as stabilization until ground cover by planting is effective. Any stockpiled top soil, if left undisturbed for more than 30 days, shall be grassed.
10. At the time that permanent erosion control is effective, temporary devices and their accumulated sediments shall be removed.
11. Hazardous or pollutant materials shall be stored at least 25 feet from any wetland/watercourse or storm drainage inlet. Contractor's equipment when parked shall follow same criteria.
12. The schedule on interim stabilization is as follows: Immediately upon reaching final grades or work has temporarily been suspended for more than 30 days, hay shall be spread on all disturbed area to provide a uniform blanket of protection. Hay shall be removed only when conditions are appropriate for growing grass.

CONSTRUCTION SEQUENCE:

1. Install sedimentation and erosion control barriers.
2. Conduct demolition of existing features as required.
3. Remove existing retaining walls along watercourse.
4. Install proposed box culvert.
5. Install proposed retaining walls along watercourse.
6. Bring site to subgrade. Install granite curbing.
7. Install bituminous pavement binder course.
8. Final grade site. Establish vegetation. Install concrete sidewalks and other site improvements.
9. Install finish course of bituminous concrete.

POST CONSTRUCTION STORM WATER MANAGEMENT

A water quality basin as shown on the Grading and Erosion Control Plan will be used as a post construction filtering device to control pollutants and storm water discharges. Also, a grass swale along the easterly portion of the site shall be maintained to direct surface water into the detention/sedimentation pond.

Waste disposal: No litter, debris, building materials or similar materials are to be discharged into the waters of the State. Also, offsite vehicle tracking of sediment and generation of dust shall be minimized.

INSPECTION

Qualified personnel (provided by the developer) shall inspect disturbed areas of the construction activity that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. Where sites have been temporarily or finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least once every month for three months.

1. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are assessable, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off–site sediment tracking.
2. Based on the results of the inspection, the description of potential sources and pollution prevention measures identified in the plan shall be revised as appropriate as soon as practicable after such inspection. Such modification shall provide for timely implementation of any changes to the plan within 7 calendar days following he inspection.

APPROVED

PREPARED BY:

City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax. 860-584-3838
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| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

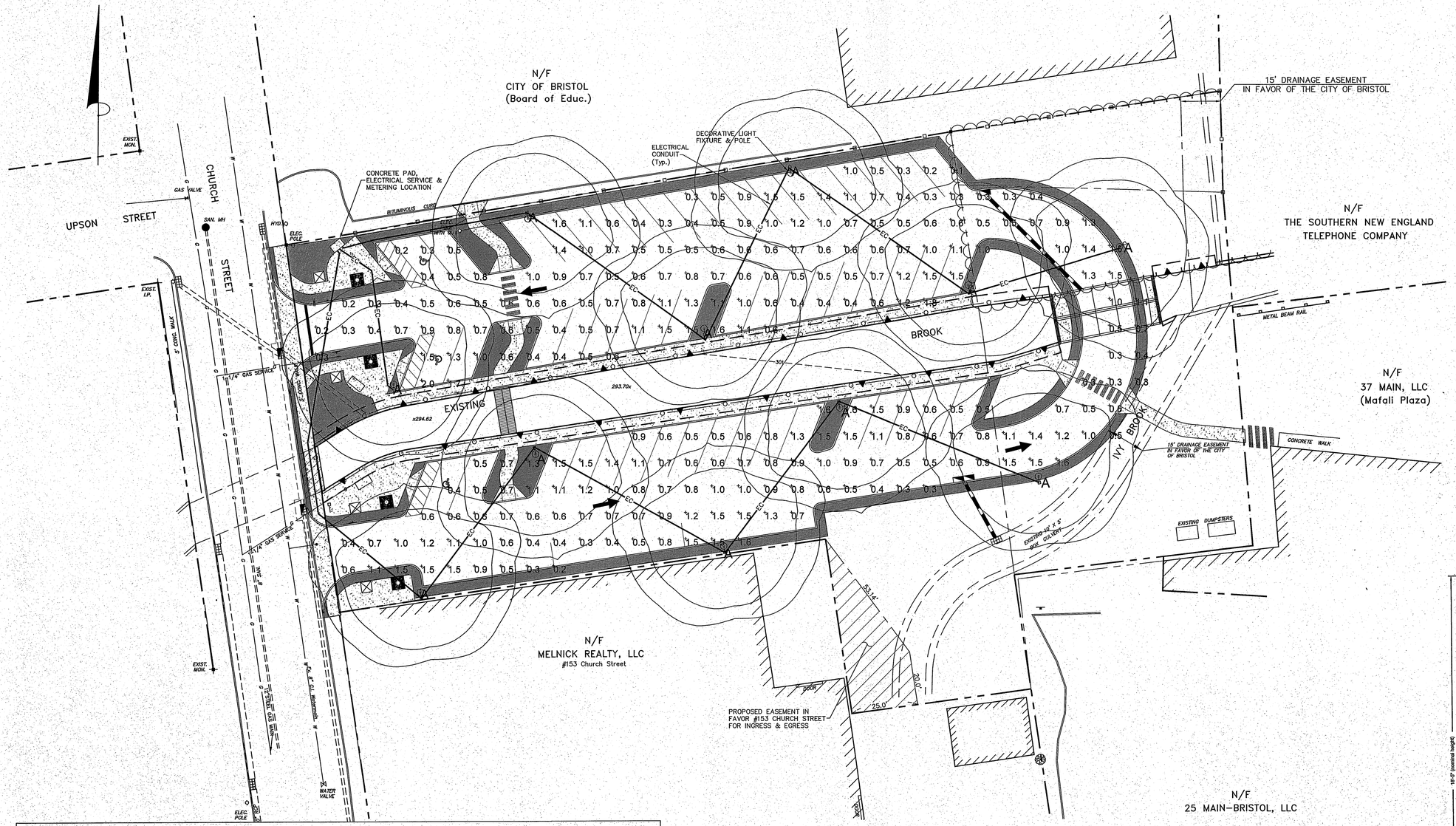
| | | | |
|---|---|---|---|
| DESIGN BY: | DJC | SCALE: | 1"=20' |
| DRAFTED BY: | DB/DJC | DATE: | 7/30/2010 |
| CHECKED BY: | RAR | CONTRACT No: | |

# Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

## Grading & Erosion Control Plan

DRAWING NUMBER:

5




## STATISTICS

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| Parking & Drive | + | 0.8 fc | 2.0 fc | 0.1 fc | 20.0:1 | 8.0:1 |

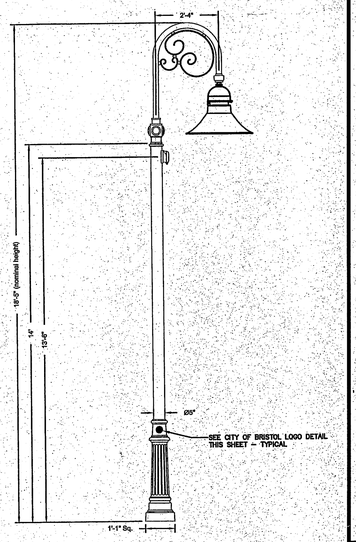
## LUMINAIRE SCHEDULE

| Symbol | Label | Qty | Catalog Number | Description | Lamp | File | Lumens | LLF | Watts |
|---|---|---|---|---|---|---|---|---|---|
| | A | 11 | GP10DMH000XS1 AN | GLASWERKS II PRAGUE | 100W CLEAR PULSE PROTECTED MH | 105642.IES | 9000 | 0.72 | 130 |

## NOTES

1. Fixture mounting height at 14'6"
2. All calculations shown are maintained after 4000hr burn in period.

CITY OF BRISTOL
LOGO DETAIL




FIXTURE TYPE 'A' DETAIL

APPROVED

PREPARED BY:

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DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
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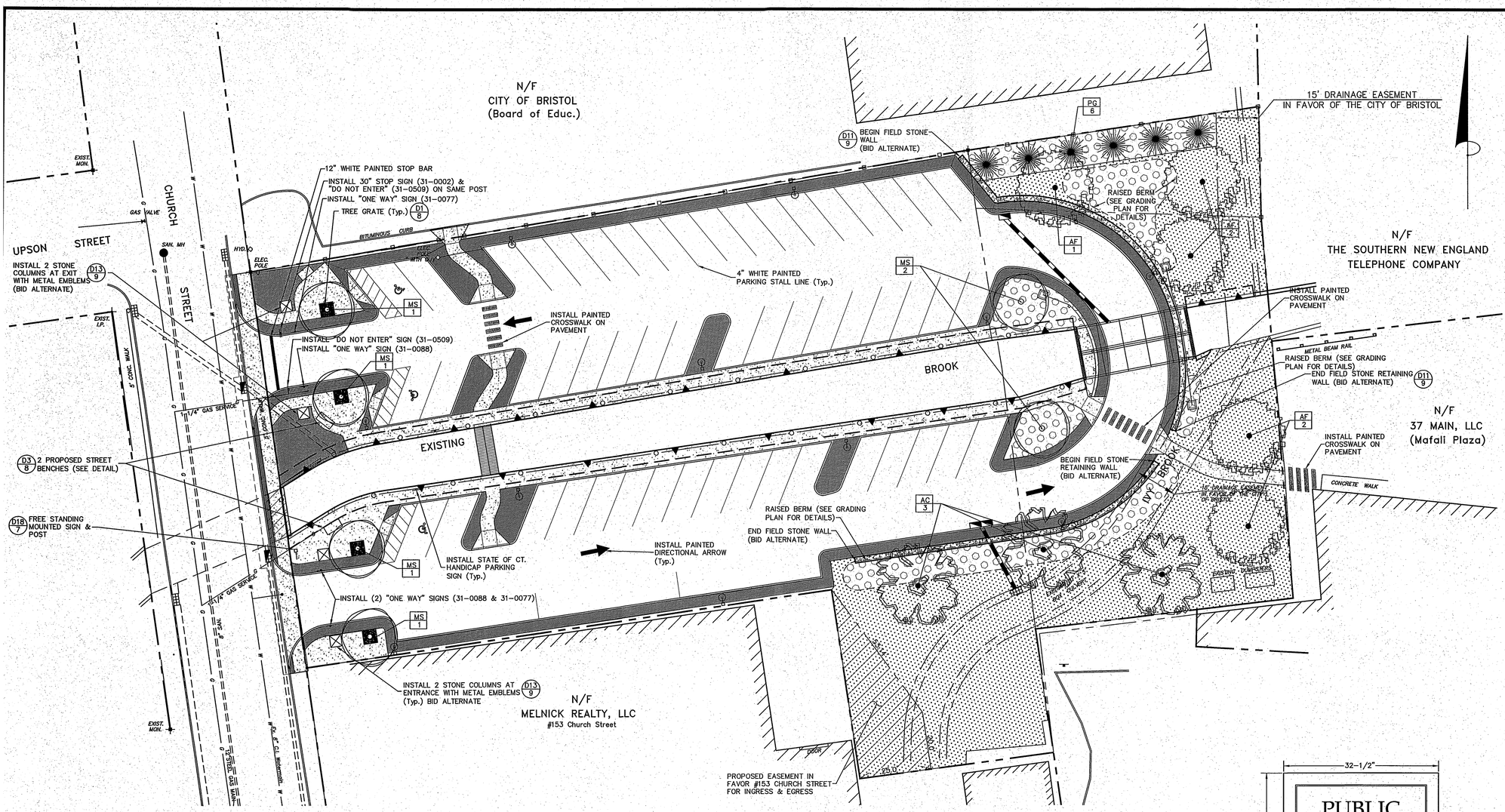
Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Lighting Plan

DRAWING NUMBER:
6




LANDSCAPE NOTES:

1.) THE CONTRACTOR SHALL GUARANTEE THAT ALL PLANTS, TREES, AND SHRUBS SHALL BE HEALTHY AND FREE OF DISEASE FOR A PERIOD OF TWO YEARS AFTER INSTALLATION. CONTRACTOR SHALL REPLACE ANY DEAD OR DISEASED PLANTS AT THE CONTRACTOR'S EXPENSE.

2.) THE CONTRACTOR SHALL SUPPLY ALL MATERIALS, PLANTS, AND LABOR NECESSARY TO COMPLETE THE WORK DEPICTED ON THE DRAWINGS AND LISTED IN THE PLANT SCHEDULE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY.

3.) THE LOCATIONS FOR PLANT MATERIAL SHALL BE CONSIDERED APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO SLOPE, VEGETATION, AND SITE FACTORS SUCH AS ROCK OUTCROPS, ETC. PRIOR TO PLANTING THE CONTRACTOR SHALL GET APPROVAL FROM THE OWNER FOR ANY ADJUSTMENTS OF THE PLANT MATERIALS AND OR LOCATIONS.

4.) LANDSCAPE PLANTING PITS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, AND BLASTED ROCK SHALL BE REMOVED FROM WITHIN ISLANDS TO BE LANDSCAPED TO A DEPTH OF 2' OR A GREATER DEPTH IF REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS. REPLACE SOIL WITHIN ISLANDS WITH LOAM OR SANDY LOAM FREE OF RUBBISH AND STONES GREATER THAN 1" IN DIAMETER AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT.

5.) ALL SLOPES GREATER THAN 3:1 RECEIVING A GRASS SEEDING MIXTURE SHALL BE COVERED WITH AN EROSION CONTROL BLANKET.

6.) UNLESS NOTED OTHERWISE, ALL DISTURBED AREAS NOT COVERED BY OTHER SITE IMPROVEMENTS SHALL BE RECEIVE A MINIMUM OF 6" OF TOPSOIL AND TURF ESTABLISHED.

7.) ALL PLANTING BEDS SHALL BE MULCHED WITH 3" OF SHREDDED BARK OVER A WEED BARRIER.

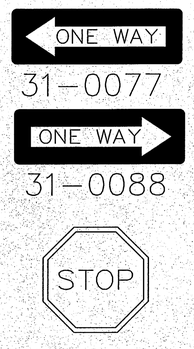
8.) PLANT MATERIALS AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE CONNECTICUT LANDSCAPE CONTRACTORS ASSOCIATION STANDARDS.

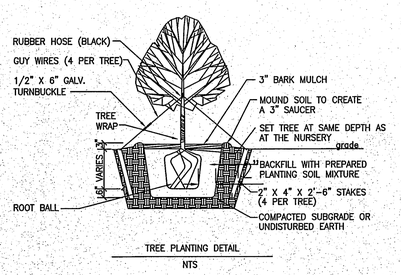
9.) PARKING SPACES SHALL BE STRIPED WITH 4" SINGLE WHITE LINES. PAINTED STOP BARS SHALL BE 12" SINGLE WHITE LINES. HATCHING AREA FOR HANDICAPPED SPACES SHALL BE 4" SINGLE WHITE LINES AT A 45-DEGREE ANGLE, 2' ON CENTER.

10.) WILDFLOWER SEED MIX SHALL BE A MIX CONSISTING OF ONLY NATIVE PLANTS SUITED FOR THE NORTHEAST REGION. APPLICATION RATE SHALL BE 20 lbs./ACRE.

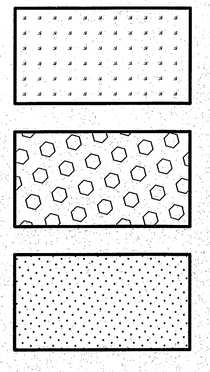
11.) PAVEMENT MARKINGS SHALL BE EPOXY IN ACCORDANCE WITH CONNECTICUT D.O.T. SPECIFICATIONS.

12.) SIGN DIMENSIONS, COLORS, SIZES, HEIGHTS, AND INSTALLATION DETAILS SHALL BE IN ACCORDANCE WITH THE STATE TRAFFIC COMMISSION STANDARDS AND THE "MANUAL OF TRAFFIC CONTROL DEVICES."



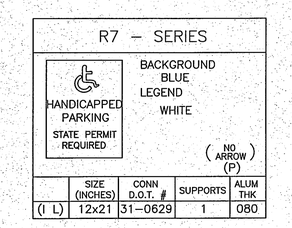

TREE PLANTING DETAIL
NTS



TURF ESTABLISHMENT (6" TOPSOIL & SEED OR SOD)

6" OF CEDAR MULCH OVER LANDSCAPE FABRIC

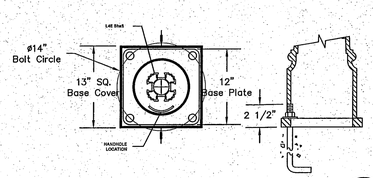
AREA TO BE TOPSOILED (6") AND SEEDED WITH WILDFLOWER MIX



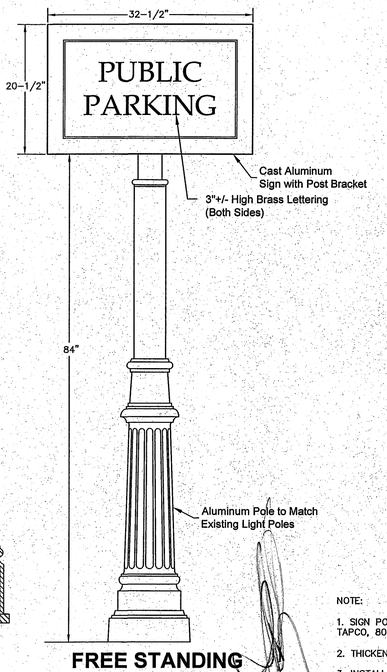

HANDICAPPED SIGN

PLANT SCHEDULE

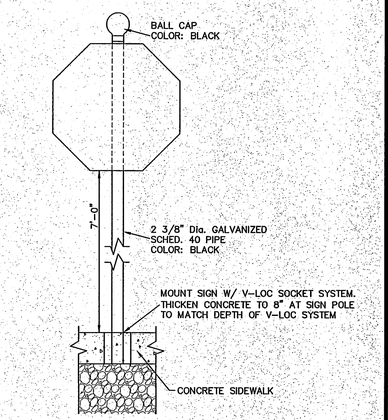
| SYMBOL | LATIN NAME | COMMON NAME | SIZE | QTY | NOTES |
|---|---|---|---|---|---|
| EVERGREEN TREES | | | | | |
| PG | PICEA GLAUCA | WHITE SPRUCE | 5-6' | 6 | B&B |
| DECIDUOUS TREES | | | | | |
| AC | AMELANCHIAR CANADENSIS | SHADBLOW | 5-6' | 3 | B&B |
| AF | ACER x FREEMANII 'AUTUMN FANTASY' | AUTUMN FANTASY MAPLE | 5-6' | 5 | B&B |
| MS | MALUS 'VELVET PILLAR' | VELVET PILLAR FLOWERING CRABAPPLE | 2 1/2"-3" CAL. | 6 | B&B |




POST ANCHOR DETAIL
N.T.S.




D18 FREE STANDING MOUNTED SIGN & POST
N.T.S.




TRAFFIC SIGN POST
N.T.S.

APPROVED

NOTE:

1. SIGN POST SHALL BE MOUNTED WITH A V-LOC SOCKET SYSTEM MODEL 23-VRI MF'D. BY TAPCO, 800 WALL ST. ELM GROVE, WI 53122, WWW.TAPCONET.COM
2. THICKEN CONC. SIDEWALK TO 8" AT SIGN POST TO ACCOMODATE THE V-LOC SYSTEM.
3. INSTALL THE V-LOC SYSTEM PLUMB & LEVEL & DO NOT MATCH THE SIDEWALK PITCH.
4. USE THIS SIGN POST FOR ALL TRAFFIC SIGNS & HANDICAP PARKING SIGNS.


City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax 860-584-3838

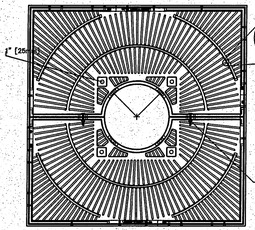

PREPARED BY:

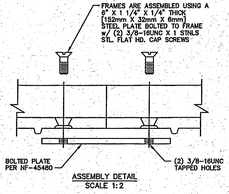
| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'

Site Remediation and Construction of Parking Facility
149 Church Street
Bristol Connecticut

DRAWING NUMBER
7



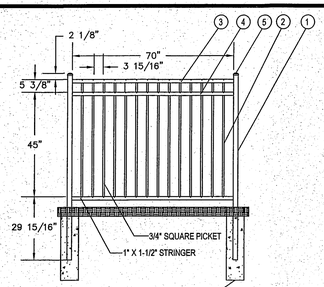

ASSEMBLY DETAIL
SCALE 1:2

## D1 TREE GRATE DETAIL

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND [METRIC] CONVERSIONS. CONFORMS TO AASHTO M306-97, M270-GR 36 & ASTM A-123 FINISH: HOT DIP GALVANIZED PER ASTM A-153 WEIGHT: FRAME 25# EACH, GRATE23.5# EACH

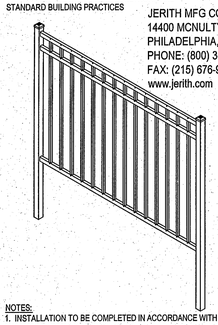
| | | | |
|---|---|---|---|
| DR. KMH | SCALE 1"=1'-0" | TITLE R-8714-A 60" x 60" TREE GRATE AND FRAME | |
| CK. | | | |
| APP. | DW. DW. | NEENAH FOUNDRY COMPANY | NF- 8714 115 B |
| DATE 11-22-99 | | | |

CAD DWG. REF: 8714115.DWG-




ALL POSTS TYPICALLY INSTALLED IN CONCRETE IN ACCORDANCE WITH LOCAL CONDITIONS AND STANDARD BUILDING PRACTICES

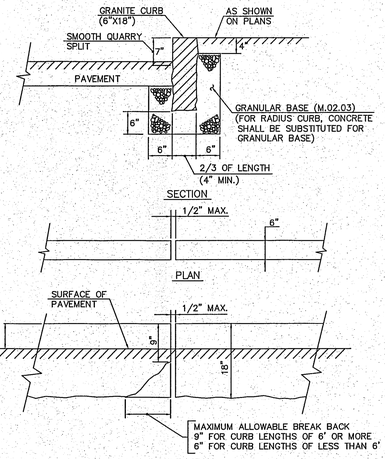
JERITH MFG CO., INC.
14400 MCNULTY ROAD
PHILADELPHIA, PA 19154
PHONE: (800) 344-2242
FAX: (215) 676-9756
www.jerith.com



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.

## D4 WINDSOR FENCE

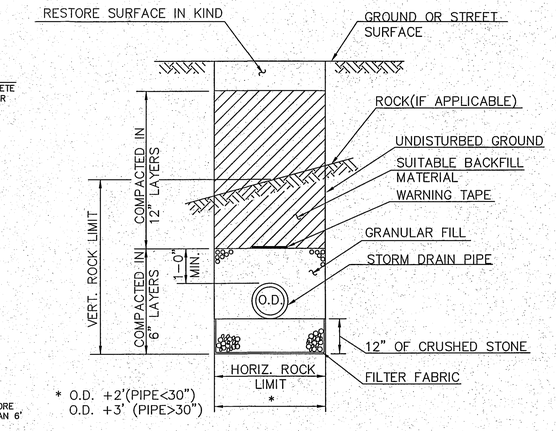
54" HEIGHT



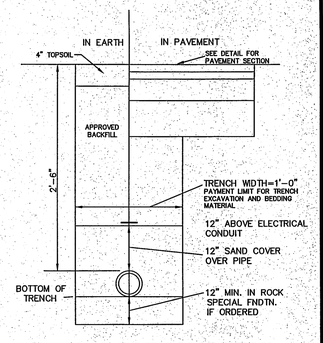

NOTE: GRANITE CURBING TO BE INSTALLED ALONG CHURCH STREET SHALL INCLUDE COST FOR SAW CUTTING BACK OF CURB TO FACILITATE INSTALLATION OF BRICK PAVERS.

## D7 GRANITE STONE CURBING

(BID ALTERNATE)

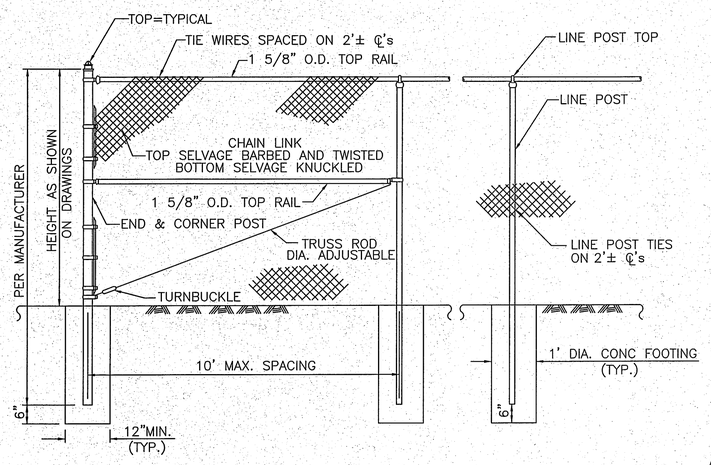



* O.D. +2'(PIPE<30")
O.D. +3' (PIPE>30")

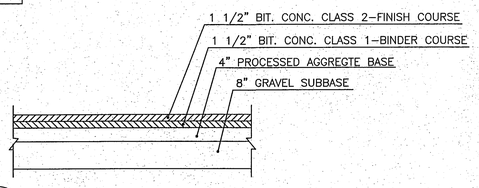



## ELECTRICAL TRENCH DETAIL

N.T.S.

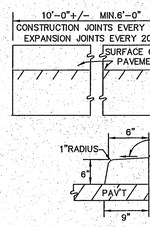



## D2 CHAIN LINK FENCE



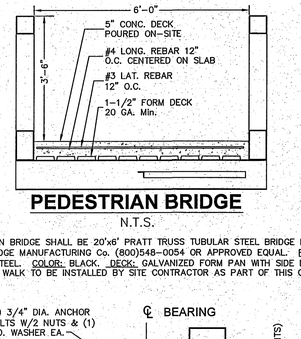

## D5 PAVEMENT SECTION

(PARKING)




## D7 EXTRUDED CONCRETE CURB

N.T.S.

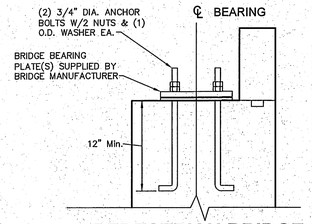



STORM DRAIN

## PEDESTRIAN BRIDGE

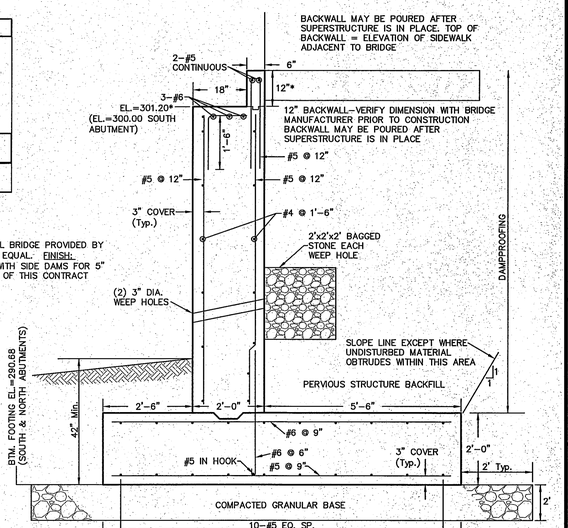
N.T.S.

PEDESTRIAN BRIDGE SHALL BE 20'x6' PRATT TRUSS TUBULAR STEEL BRIDGE PROVIDED BY EXCEL BRIDGE MANUFACTURING Co. (800)548-0054 OR APPROVED EQUAL. FINISH: PAINTED STEEL. COLOR: BLACK. DECK: GALVANIZED FORM PAN WITH SIDE DAMS FOR 5" CONCRETE WALK TO BE INSTALLED BY SITE CONTRACTOR AS PART OF THIS CONTRACT




## PEDESTRIAN BRIDGE ANCHOR BOLTS

N.T.S.

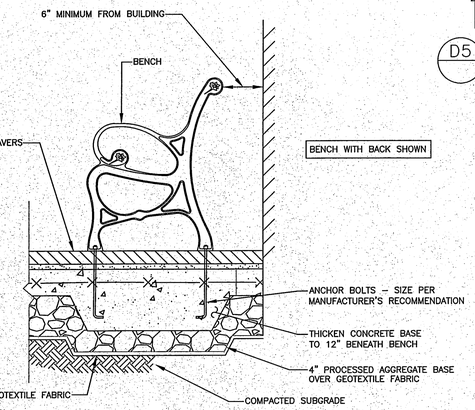



*CONTRACTOR SHALL BE RESPONSIBLE TO MODIFY BRIDGE ABUTMENT(S) BEARING PLATE ELEVATION(S) & BOTTOM OF FOOTING ELEVATIONS TO MATCH FINAL BRIDGE SHOP DRAWINGS & FIELD CONDITIONS.

SOUTHERLY ABUTMENT SHALL BE CONSTRUCTED THE SAME AS NORTHERLY ABUTMENT EXCEPT FOR BOTTOM OF FOOTING & BEARING PLATE ELEVATIONS AS NOTED.

## NORTH PEDESTRIAN BRIDGE ABUTMENT

N.T.S.




NOTE:
1. BENCH (WITH BACK) SHALL BE TIMBERFORM RESTORATION SERIES MODEL NO. 2118-8 EIGHT FEET LONG MANUFACTURED BY COLUMBIA CASCADE.

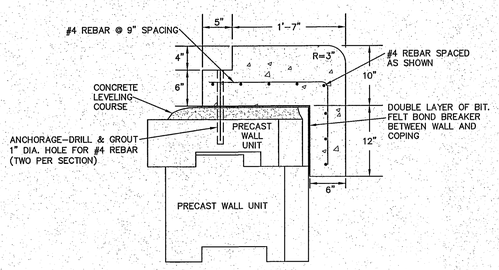
## D3 STREET BENCH

N.T.S.

RETAINING WALL NOTES:

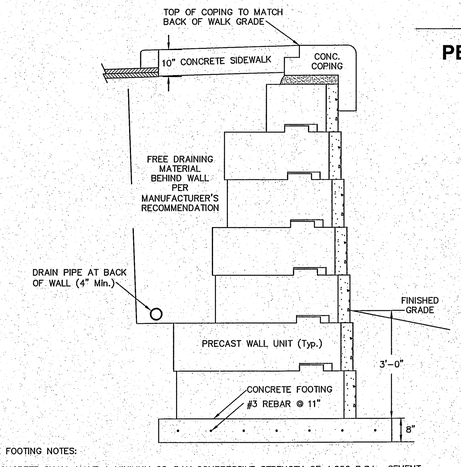
1. PRECAST CONCRETE WALL UNITS SHALL BE RECON 50 SERIES, NORTH SHORE GRANITE TEXTURE BY RECON RETAINING WALL SYSTEMS OR ACCEPTABLE EQUAL. RECON RETAINING WALL SYSTEM AVAILABLE FROM ATLAS CONCRETE PRODUCTS, 65 BURRITT STREET, NEW BRITAIN, CT 06053.

2. A SIX FOOT BAND OF CONCRETE SIDEWALK BEHIND RETAINING WALLS SHALL BE 10" THICK.




## D6 CONCRETE COPING DETAIL

NOT TO SCALE




CONCRETE FOOTING NOTES:

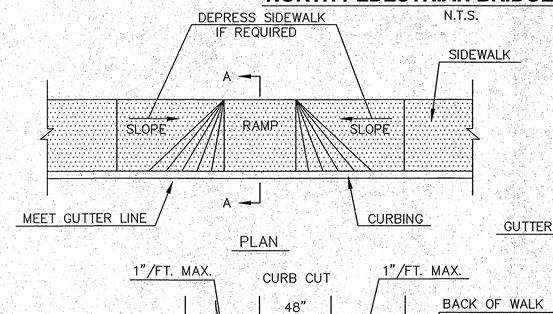
1. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I. CEMENT USED SHALL BE CLASS F AND MEET THE REQUIREMENTS OF CONNDOT FORM 816 M.03.01.

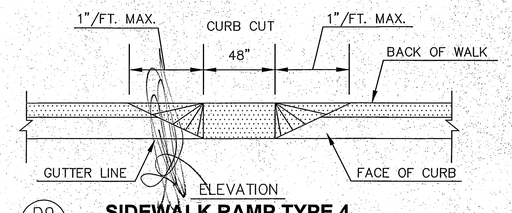
2. REINFORCING SHALL MEET THE REQUIREMENTS OF ASTM A-615M GRADE 60 DEFORMED STEEL BARS FOR CONCRETE REINFORCING. ALL BARS SHALL BE BENT COLD. UNLESS NOTED OTHERWISE NOTED, REINFORCING SPLICE LENGTHS SHALL BE 15" FOR #3 BARS.

DISCLAIMER:
These typical details are preliminary and conceptual in nature. They are provided for general information purposes only. Prior to construction the contractor shall submit a shop drawing of the proposed retaining wall system for approval. The shop drawing shall be a site specific design performed by a licensed Professional Engineer who is familiar with the actual site conditions, materials, and local practices.

## D6 BLOCK RETAINING WALL

NOT TO SCALE




## D9 SIDEWALK RAMP TYPE 4

APPROVED


City of Bristol
Department of Public Works
Tel. 860-584-6125
Fax 860-584-3838
111 North Main Street
Bristol, Connecticut 06010
ci.bristol.ct.us


PREPARED BY:

| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

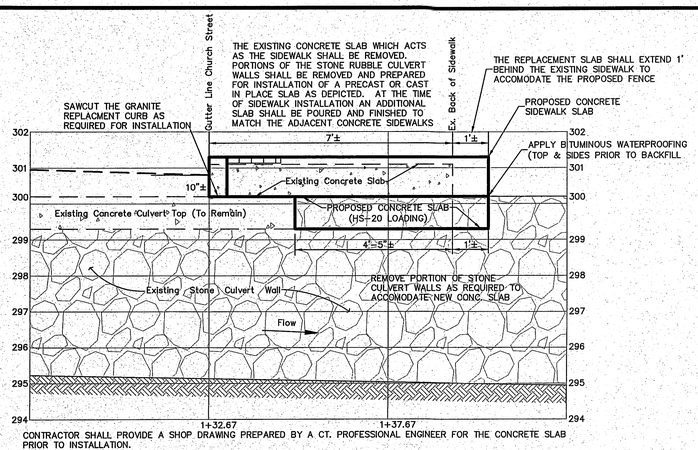
DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Miscellaneous Construction Details

DRAWING NUMBER:

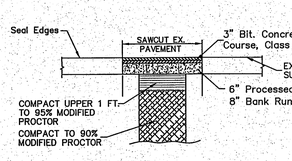
8




CONTRACTOR SHALL PROVIDE A SHOP DRAWING PREPARED BY A CT. PROFESSIONAL ENGINEER FOR THE CONCRETE SLAB PRIOR TO INSTALLATION.

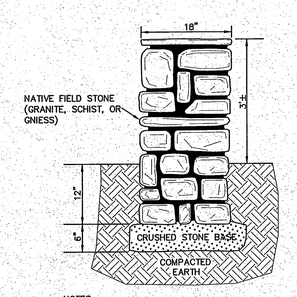
## D10 CONCRETE SLAB REPLACEMENT OVER CULVERT DETAIL

N.T.S.




TYPICAL PAVEMENT CUT & REPAIR

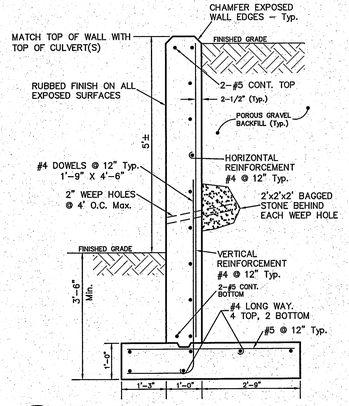
N.T.S.




NOTES:
1. CAP SHALL BE A Min. OF 3" THICK.
2. ALL MORTAR JOINTS SHALL BE DEEPLY RAKED TO AVOID MORTAR BEING EXPOSED ALONG ANY WALL FACE.
3. USE NATIVE FIELD STONE FOR EXPOSED FACE STONES.

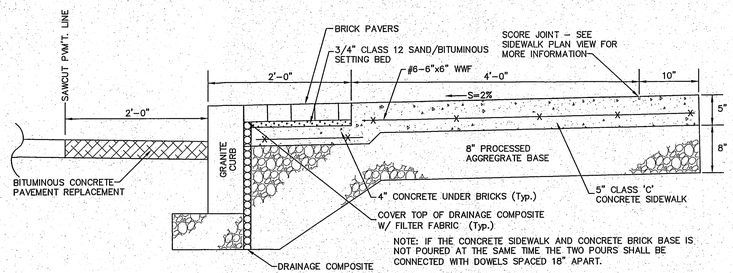
## D11 FIELD STONE WALL

N.T.S. (BID ALTERNATE)




## D15 CONCRETE TRANSITION WALL

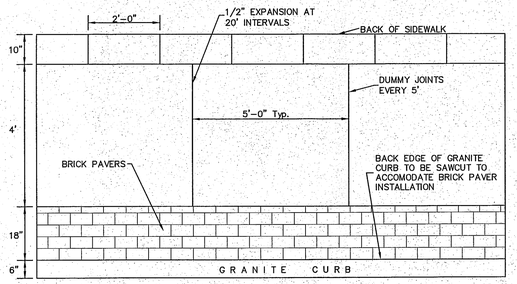
Scale: 1"=2'




NOTE: IF THE CONCRETE SIDEWALK AND CONCRETE BRICK BASE IS NOT POURED AT THE SAME TIME THE TWO POURS SHALL BE CONNECTED WITH DOWELS SPACED 18" APART.

## SECTION

N.T.S.

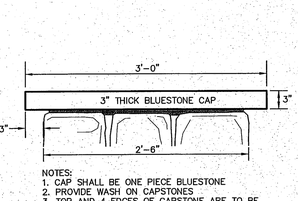



## PLAN

N.T.S.

## D14 CHURCH STREET SIDEWALK REPLACEMENT

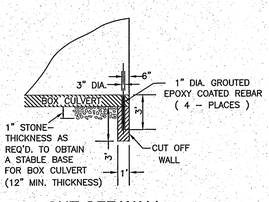
N.T.S.




NOTES:
1. CAP SHALL BE ONE PIECE BLUESTONE
2. PROVIDE WASH ON CAPSTONES
3. TOP AND 4 EDGES OF CAPSTONE ARE TO BE THERMAL FINISHED
4. MORTAR CAPSTONE IN PLACE

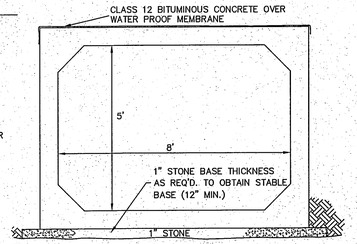
## STONE COLUMN CAP

N.T.S.




## CUT OFF WALL

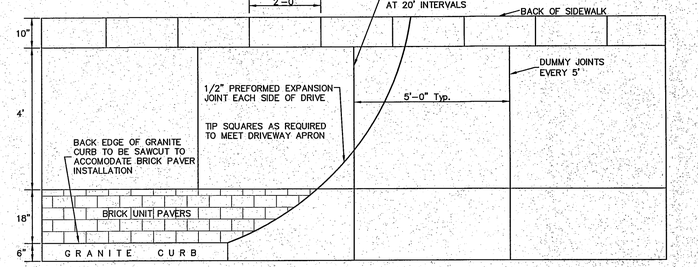
NOT TO SCALE




## D16 TYPICAL CULVERT SECTION

NOT TO SCALE

NOTES:
1. DESIGN BOX SECTIONS FOR LESS THAN 2 FEET OF COVER IN ACCORDANCE WITH ASTM C1433 (AASHTO M273)
2. INSTALL CUT OFF WALLS AT THE INLET AND OUTLET OF THE PROPOSED CULVERT

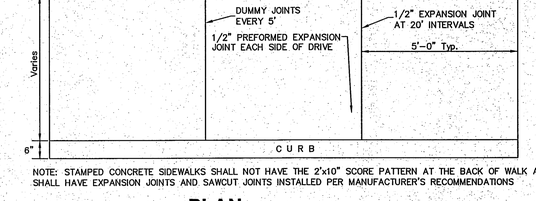



## PLAN

N.T.S.

## D12 CHURCH STREET SIDEWALK REPLACEMENT AT DRIVEWAY

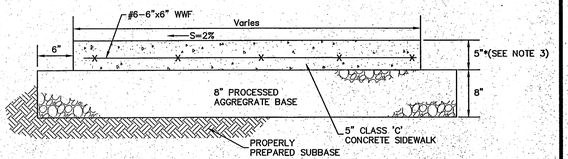
N.T.S.




NOTE: STAMPED CONCRETE SIDEWALKS SHALL NOT HAVE THE 2'x10" SCORE PATTERN AT THE BACK OF WALK AND SHALL HAVE EXPANSION JOINTS AND SAWCUT JOINTS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS

## PLAN

N.T.S.




## SECTION

N.T.S.

## D8 INTERIOR SIDEWALK DETAILS

N.T.S.

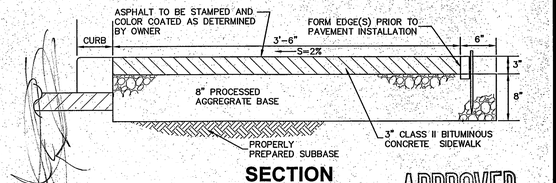
NOTE:
1. STAMPED CONCRETE PATTERN AND COLOR SHALL BE PATTERN: OFFSET BRICK, COLOR: TERRACOTTA. SHOP DRAWING SHALL BE SUBMITTED OF BOTH PATTERN & COLOR FOR APPROVAL PRIOR TO SIDEWALK INSTALLATION.

2. CONCRETE SIDEWALKS NOT STAMPED & COLORED SHALL BE BROOM FINISHED AND WINDOW PANED.

3. A SIX FOOT BAND OF CONCRETE SIDEWALK BEHIND THE MODULAR RETAINING WALL ALONG THE RIVER SHALL BE 10" THICK

NOTE:
1. STAMPED ASPHALT PATTERN SHALL BE OFFSET BRICK PATTERN AND ASPHALT COATING SHALL BE COLOR TERRACOTTA.

2. LIMITS OF ASPHALT SHALL BE FORMED TO PROVIDE SHARP EDGE AND EVEN PAVEMENT DIMENSIONS

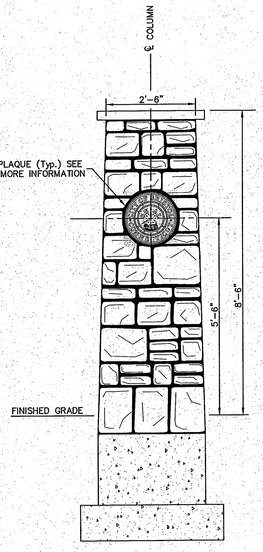


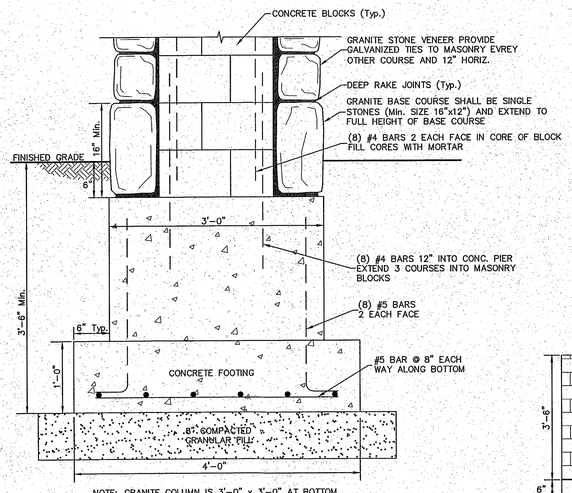

## SECTION

N.T.S.

## D8 STAMPED ASPHALT DETAILS

N.T.S.

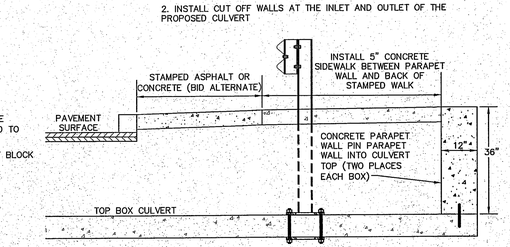



NOTE: GRANITE COLUMN IS 3'–0" x 3'–0" AT BOTTOM AND 2'–6" x 2'–6" AT TOP

## D13 STONE COLUMN

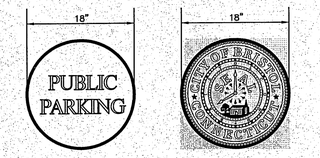
N.T.S. (BID ALTERNATE)




NOTES:
1. PARAPET WALL SHALL BE CAST IN PLACE OR PRE-CAST CONCRETE.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF PARAPET WALL FOR APPROVAL PRIOR TO INSTALLATION.

## D18 CONCRETE PARAPET WALL

N.T.S.




FONT: TIMES ROMAN

## BRONZE PLAQUE DETAIL

N.T.S.

NOTES:
1. PLAQUES SHALL BE INSTALLED ON BOTH ENTRANCE & EXIT DRIVE STONE COLUMNS FACING THE STREET. CITY SEAL SHALL BE INSTALLED ON NORTHERLY COLUMNS. "PUBLIC PARKING" PLAQUE SHALL BE INSTALLED ON SOUTHERLY COLUMNS.

2. PLAQUES SHALL BE CAST BRONZE WITH PEBBLE FINISH FROM ARCHITECTURAL BRONZE ALUMINUM CORPORATION. 1-800-339-6581 OR APPROVED EQUAL.

3. CONTRACTOR SHALL PROVIDE A SHOP DRAWING OF PROPOSED CASTING FROM THE MANUFACTURER FOR APPROVAL BY THE ENGINEER PRIOR TO CASTING.

APPROVED


City of Bristol
Department of Public Works
111 North Main Street
Bristol, Connecticut 06010
Tel. 860-584-6125
Fax. 860-584-3838
ci.Bristol.ct.us


PREPARED BY:

| No. | DATE | COMMENTS: |
|---|---|---|
| 1 | 9/14/2010 | City Staff Comments |
| 2 | 10/15/2010 | City Staff Comments |

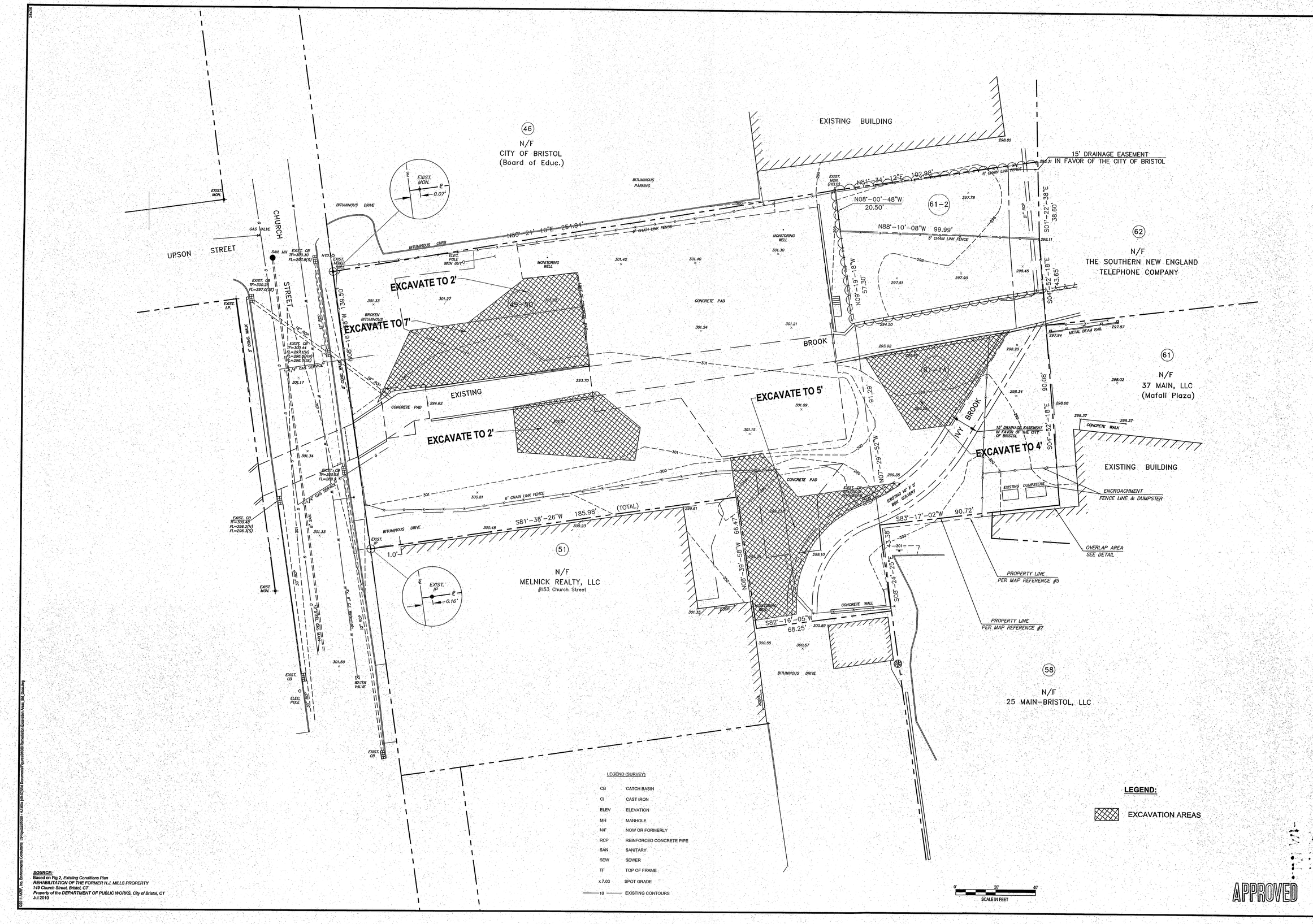
DESIGN BY: DJC
DRAFTED BY: DB/DJC
CHECKED BY: RAR
SCALE: 1"=20'
DATE: 7/30/2010
CONTRACT No:

Site Remediation and Construction of Parking Facility
149 Church Street Bristol Connecticut

Miscellaneous Construction Details

DRAWING NUMBER:

9




SOURCE:
Based on Fig 2, Existing Conditions Plan
REHABILITATION OF THE FORMER H.J. MILLS PROPERTY
149 Church Street, Bristol, CT
Property of the DEPARTMENT OF PUBLIC WORKS, City of Bristol, CT
Jul 2010

AKRF
Environmental Consultants
700 Main Street Suite C, Willimantic, CT 06226

FORMER H.J. MILLS SITE
149-151 CHURCH STREET
BRISTOL, CT

REMEDIATION EXCAVATION AREAS

DATE
4.18.11

SCALE
as shown

PROJECT No.
91089

FIGURE
1

# Zoning Report 9/23

881 Farmington Avenue.

**Zoning Solutions, Inc.**
836 Washington Street, P.O. Box 850270, Braintree, MA 02185
781-848-0040 ~ FAX 781-380-4136

# ZONING CERTIFICATE

**Date: September 11, 2023**

This certificate was compiled from public records obtained and reviewed by Zoning Solutions, Inc. regarding the zoning requirements and limitations for this property.

**Subject Property:**

**881 Farmington Avenue, Bristol, CT**

**Zoning District:**

**General Business (BG) District and the Aquifer Protection District**

**See attached zoning map & index**

**Permitted Uses:**

**Motor vehicle repair and service is allowed by special permit**
**Retail sales and service is allowed with site plan approval**
**Professional offices are allowed with site plan approval**
**Mixed-use is allowed with site plan approval and special permit**

**See attached use regulations for additional permitted uses**

**According to Town records the property is an automobile repair shop built in 1945. It was confirmed with Edward Spyros in the building department that the existing use of the property as automobile repair is grandfathered as legally pre-existing non-conforming.**

**Dimensional/ Open Space Requirements: See Section VII Area and Dimensional Requirements attached.**

# 881 Farmington Avenue.

**Other relevant records attached:**

1. **Use Table;**
2. **Dimensional Regulations;**
3. **Zoning map and map index**
4. **Parking Regulations**
5. **Assessor plans**

This Zoning Certificate is not a title insurance product or a legal zoning opinion, but a limited representation to the zoning district and permitted uses therein for the property according to the provisions of the Town of Bristol, CT public records as amended through September 11, 2023. Zoning Solutions. Inc. has relied upon the authenticity and accuracy of the representations and documentation provided to Zoning Solutions, Inc. by representatives at Bristol Town Hall in making this certification.

If this certificate raises zoning issues not clearly explained by the enclosed documentation, please contact the undersigned immediately.

Zoning Solutions, Inc.
By:

David B. Lane, Attorney at Law
Commonwealth of Massachusetts

Enclosures

881 Farmington Avenue.

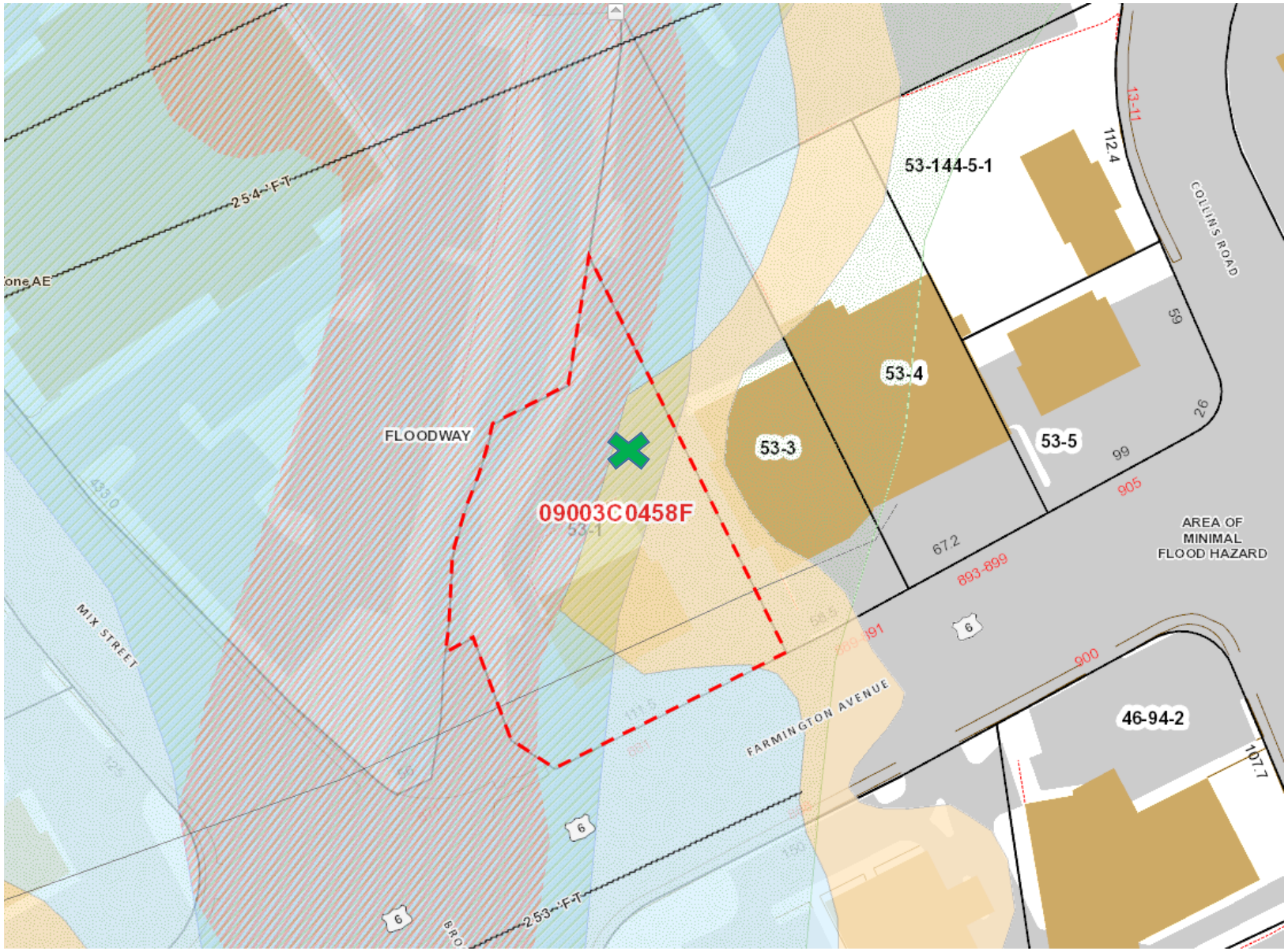
# Applicant Narrative

**From:** Jonas L <alphapetrotank@yahoo.com>
**Sent:** Tuesday, October 29, 2024 10:04 AM
**To:** Robert Flanagan <RobertFlanagan@bristolct.gov>
**Subject:** 811 Farmington ave zoning

Good morning Robert ,

It was a pleasure speaking with you this morning ,as i mentioned to you earlier our plan is to keep the facility as an auto repair shop as we already have all the permits and zoning and compliance that i have sent you ,the property will stay in its current condition with no modifications or any other use to it .
We plan on having the site operate between the hours of 8 am and 6 pm Monday thru Saturday ,and have between 2 and 3 employees working on site .
As for the Aquafier permit we intend on keeping it for the same use as well as the current permit lists the site as a repair shop .

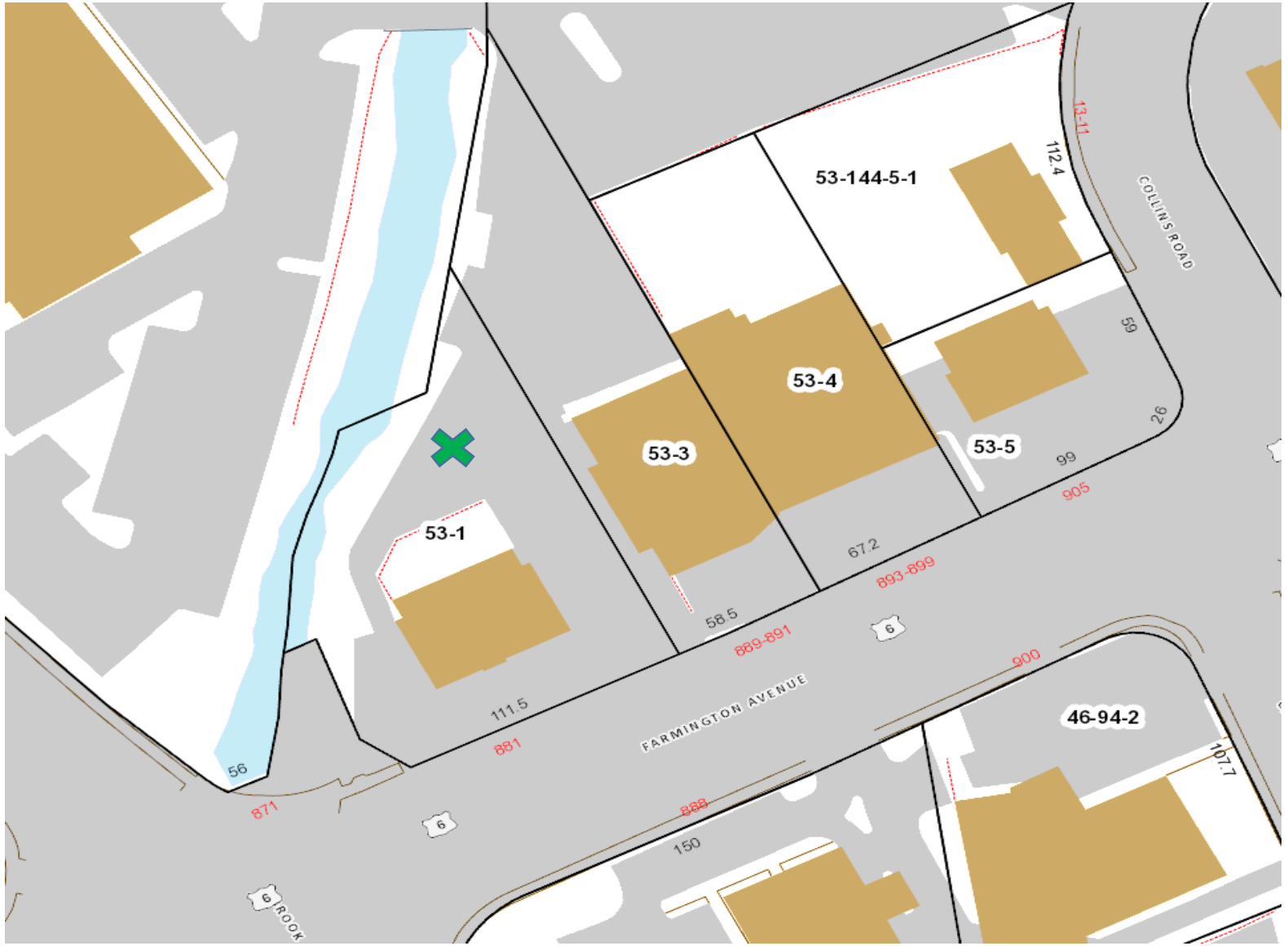
Thank you for your cooperation and i look forward to working with you .




881 Farmington Ave.
Floodplain and Inland Wetlands
<u>Non-Conforming Lot and Use</u>

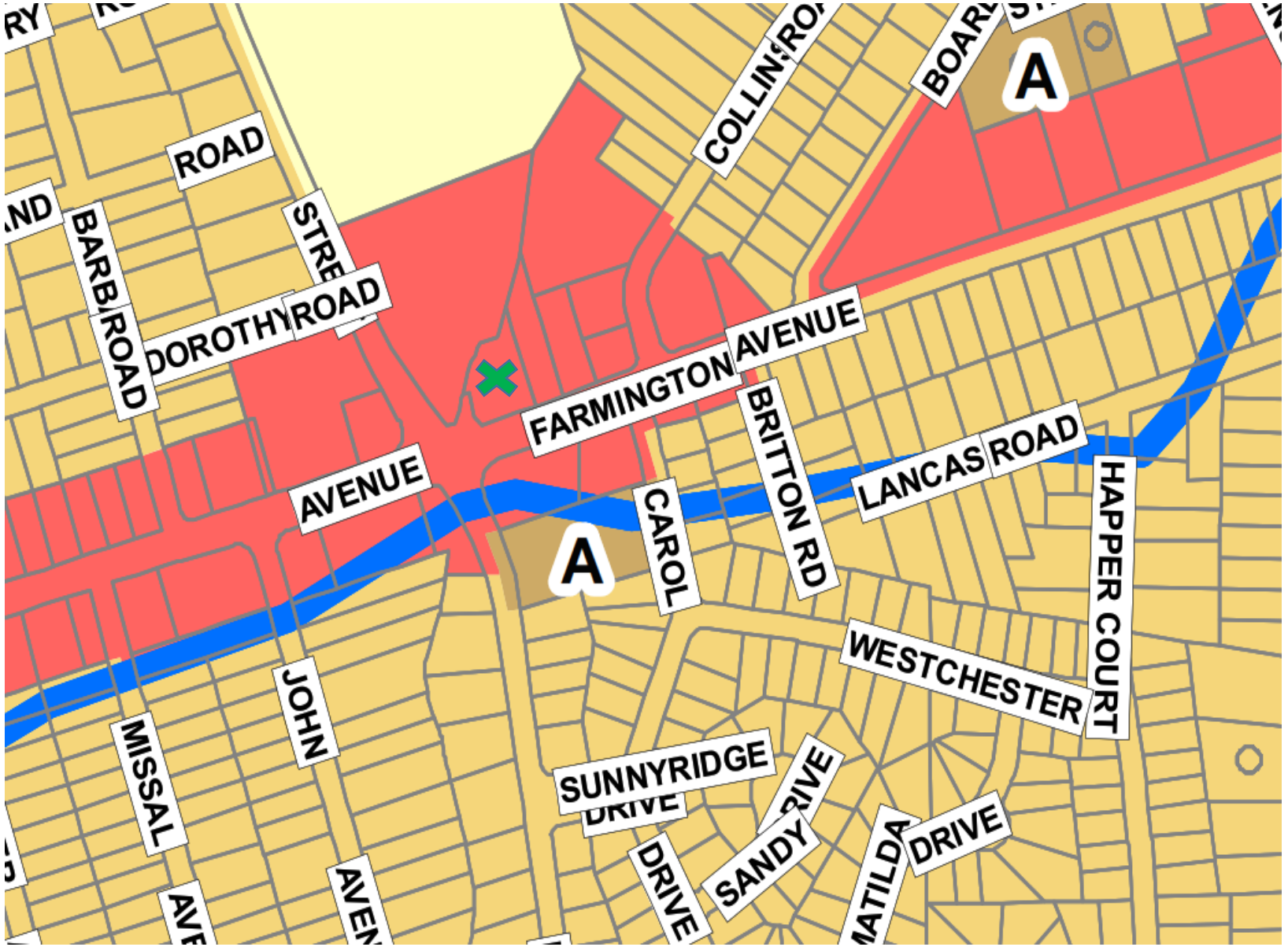



881 Farmington Ave.
Zoning – General Business (BG)
<u>Non-Conforming Lot and Use</u>




881 Farmington Ave.
Location Map
Non-Conforming Lot and Use

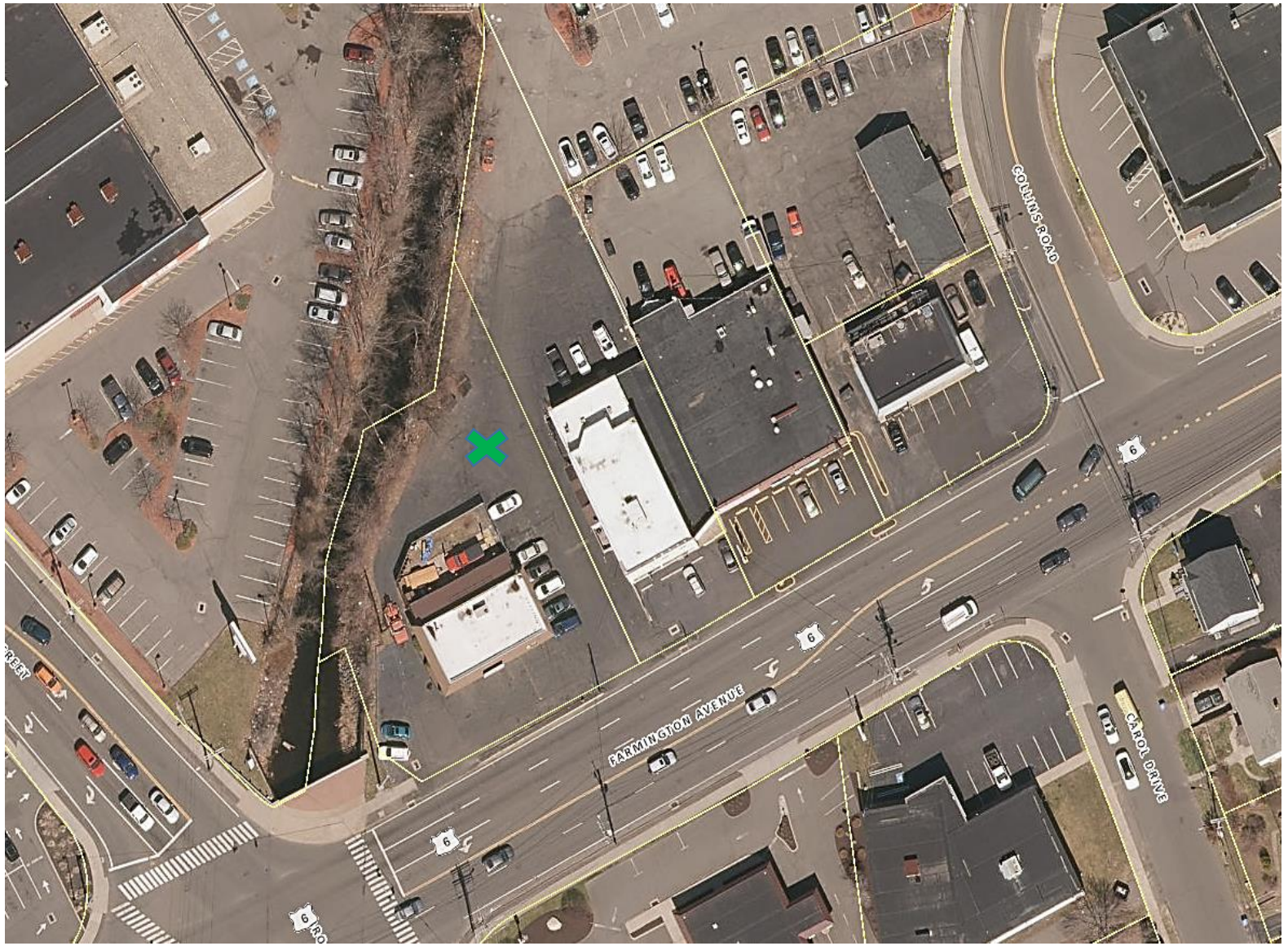
# Zoning Map w/ Aquifer



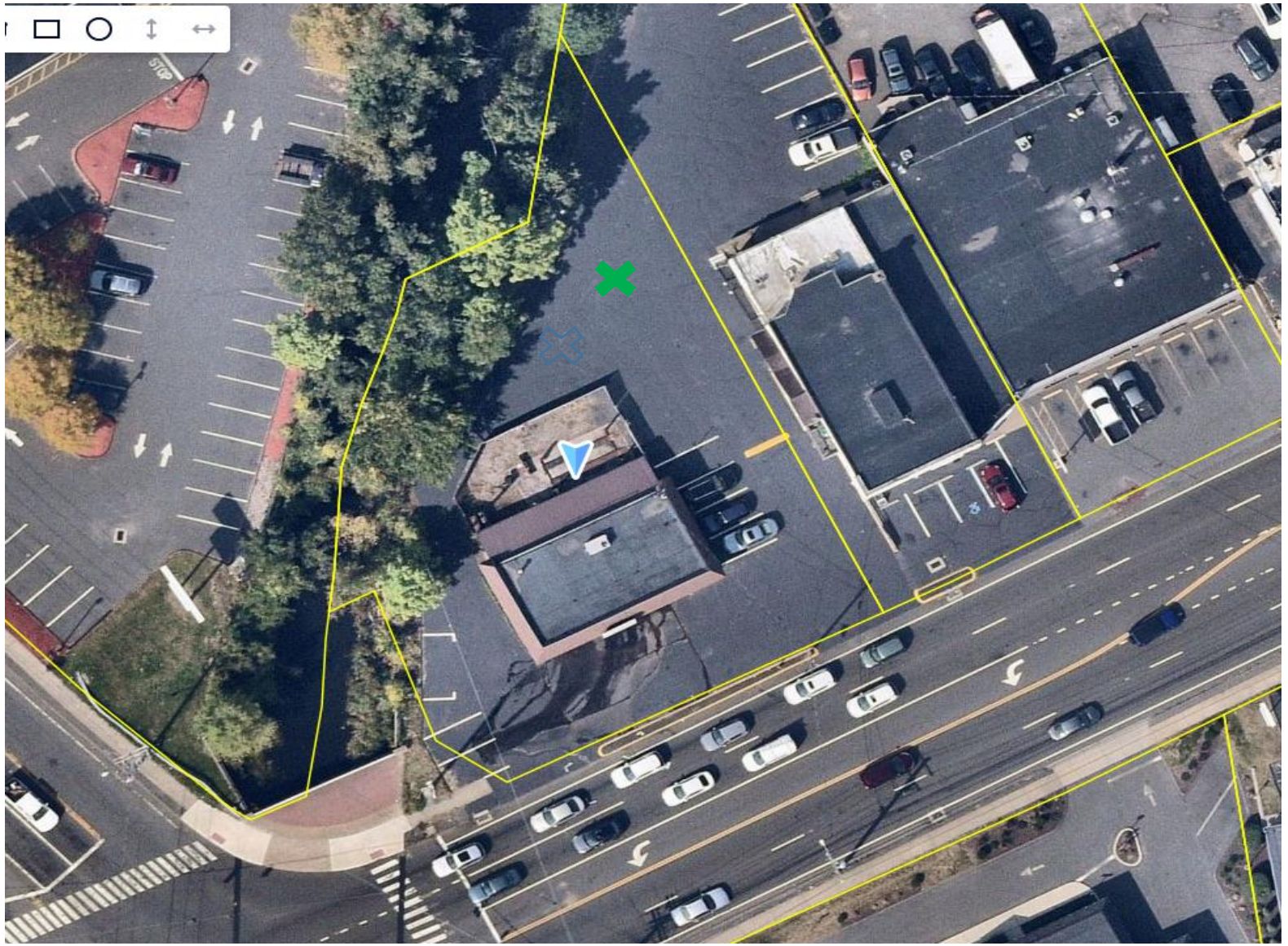

881 Farmington Ave.

Zoning – General Business (BG)

Non-Conforming Lot and Use

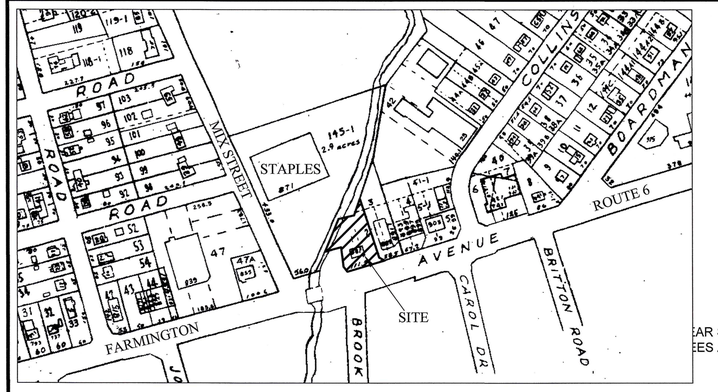



881 Farmington Ave.
Aerial Photo
Non-Conforming Lot and Use



881 Farmington Ave.
Aerial Photo
Non-Conforming Lot and Use

# Survey 2009




SITE LOCATION PLAN
Scale: 1" = 200'±

N/F
JN 305 LLC AND JN 474 LLC

N/F
JULIA P. WARZECHO

DRAINAGE RIGHT OF WAY GRANTED TO STATE OF CONNECTICUT

TEMPORARY WORK AREA GRANTED TO STATE OF CONNECTICUT

FLAGGED INLAND WETLANDS (TYPICAL)

WLF 1 WLF 2 WLF 3 WLF 4 WLF 5

CLEAR SMALL TREES AND BRUSH

PROPOSED SILTFENCE

EXISTING EDGE OF CLEARING TO REMAIN UNCHANGED

EXISTING EDGE OF PAVEMENT TO REMAIN IN EXISITNG LOCATION

EXISTING BITUMINOUS PARKING LOT TO BE LOWERED 2.7' TO PROVIDE 1,149.2 C.F. OF ADDITIONAL FLOOD STORAGE

EXISTING BITUMINOUS PAVEMENT

EXISTING CONCRETE PAD

EXISTING DUMPSTERS

Approximate location of Sewer Easements Granted to City of Bristol. (Refer to Vol.724 – Pg.294 & vol.302 – Pg.47 B.L.R. Also see Easement maps prepared by City of Bristol and Mattson Associates)

N62°54'49"E
24.58'

N62°54'49"E
± 43.00'

N1316'00"E 105.01' Closing Line

S61°38'41"W 35.00'±

N51°44'13"W 48.32'

N48°14'37"W 25.06'

S62°54'49"W 111.50'

S69°40'48"E 16.98'

REMOVE EXISTING CHAIN LINK FENCE FOR CONSTRUCTION AND RESET UPON COMPLETION

REMOVE EXISTING TEMPORARY CANVAS CANOPY GARAGE AND CONCRETE PAD 660 S.F. TOTAL

PROPOSED 26' x 48' BUILDING
1,248 S.F. F.F. - 252.50

REMOVE PORTION OF EXISTING BUILDING 572 S.F. (CROSS HATCHED)

SAWCUT EXISTING PAVEMENT (TYPICAL)

6" PVC SDR-35 HIGH LEVEL OVERFLOW

1 EA 4' x 4' x 8' PRECAST CONCRETE GALLEY H-20 LOADED
12" PERIMETER CRUSHED STONE
TF - 251.40±
FL - 249.50±
BOTTOM GALLEY - 245.00

6" PVC SDR-35 ROOF LEADER

FL 249.00

Existing Building To Remain
FLOOR = 252.5

OVERHANG

PAVED

Paved

Paved Walk

Curb

Curb cut

Gate

BIT. RAMP DN.

DRAIN

GRADE TO 252

5'

15' ROP

Traffic Control Pole

Catchbasin
TF=250.6
Inv=248.1

CL&P
12646-S

CL&P
15677

EXISTING BUILDING

FLOODWAY

RIPRAP

Edge of Brook

COPPERMINE BROOK

FARMINGTON AVENUE – U. S. ROUTE 6

GRAPHIC SCALE
10 5 0 10 20
1 Inch = 10 Feet

THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CALL 1-800-922-4455 AND HAVE ALL UTILITIES MARKED ON THE GROUND.

North

## SURVEY NOTES:

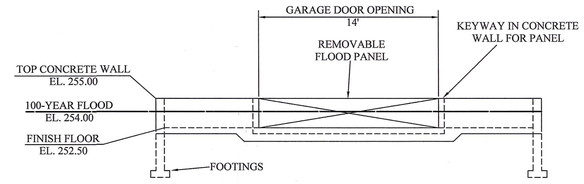
1. This map has been prepared pursuant to the Regulations of Connecticut State Agencies Sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the State of Connecticut " as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26,1996.
2. The type of survey performed is an Improvement Location Survey and is intended to depict the horizontal and vertical locations of structural and site improvements with respect to applicable zoning setback requirements.
3. The survey is a Dependent Resurvey.
4. The map conforms to the Horizontal Accuracy of a Class A-2 Survey.
5. The map conforms to the Vertical Accuracy of a Class T-2 Survey.
6. Basis for North is Map Reference No. 1.

## MAP REFERENCE:

1. Improvement Location Survey
Prepared For Frank Warzecho
881 Farmington Avenue
Bristol, Connecticut
Scale: 1"=20' Date: September, 2009
Prepared By: GM2 Associates, Inc.

## GENERAL NOTES:

1. Assessors Map 53 Lot 2
2. Current Owner: Julia P. Warzecho
3. Area = 15,400 S.F. or 0.35 Acres
4. Zone BG
5. Lot is in a 100-Year Flood Zone AE with a base flood elevation of EL. 254.00 NAVD '88. A portion of the property is located within the channel and adjacent Floodplain Floodway as depicted. Based on FEMA, May 31, 2007 Hartford County Volume 3 of 7 Community Number 090023.
6. Existing Condition Impervious = 12,648 S.F. (82.1%)
Proposed Condition Impervious = 12,648 S.F. (82.1%)
7. Proposed foundation walls to extend to elevation 255.00 (Minimum)
8. All tools, fluids, oils, and floatables to be stored in racks or shelving above elevation 255.00 except for jacks, lifts, stands, etc.
9. Flood storage displaced by proposed 26' x 48' building. 2,121.6 C.F.
Flood storage displaced by existing portion of building to be removed. (572 S.F.) -972.4 C.F.
Total Required Mitigation 1,149.2 C.F.



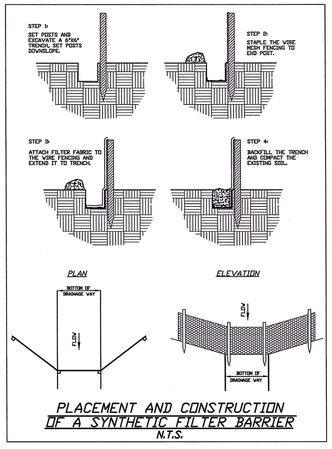

## BUILDING FOUNDATION SECTION

N.T.S.

NOTE:
ALL TOOLS, FLUIDS, OILS, AND FLOATABLES TO BE STORED IN RACKS OR SHELVING ABOVE ELEVATION 255.00 EXCEPT FOR JACKS, LIFTS, STANDS, ETC.

## CONSTRUCTION SEQUENCE:

1. Notify City of Bristol Staff (1) week prior to start of construction.
2. Call Before You Dig at 1-800-922-4455.
3. Install siltation fence along existing edge of clearing.
4. Demolish existing concrete slab and remover rubble off-site.
5. Demolish portion of existing building and remove off-site.
6. Install proposed foundation. All excess material not utilized for backfill shall be hauled off-site. Fill stockpiled for backfill must be covered with plastic tarp until utilized.
7. Install drywell for roof leaders.
8. Sawcut existing pavement and remove off-site.
9. Lower parking lot grades 2.7' to provide 1,148 C.F. of additional flood storage. All excess material to be hauled off-site.
10. Bituminous pave parking area.
11. Loam, fertilize, seed, and mulch any disturbed perimeter areas.
12. Monitor silt fences until all areas are stabilized.




PLACEMENT AND CONSTRUCTION OF A SYNTHETIC FILTER BARRIER
N.T.S.

R. R. HILTBRAND
Engineers and Surveyors

*IMPROVEMENT LOCATION SURVEY*
*Prepared for Frank Warzecho*
*#881 Farmington Avenue*
*Bristol, Connecticut*
*November 11, 2009*

R. R. HILTBRAND ENGINEERS and SURVEYORS
575 NORTH MAIN STREET BRISTOL, CONNECTICUT 06010 (860) 582 4548

...09-117\#881 Farmington Avenue - Bristol - Warzecho\dwg\RRH Map 11-11-09.dwg

**Zoning Solutions, Inc.**
P.O. Box 850287
Braintree, MA 02185-0287
USA

Voice: 781-848-0089
Fax: 781-380-4136

# INVOICE

Invoice Number: 23-2866
Invoice Date: Sep 11, 2023
Page: 1
*Duplicate*

| Bill To: |
|---|
| Adam J. Hirsch Esq<br>6 Woody Lane<br>Fairfield, CT 06825 |

| Ship to: |
|---|
| Adam J. Hirsch Esq<br>6 Woody Lane<br>Fairfield, CT 06825 |

| Customer ID | Customer PO | Payment Terms | |
|---|---|---|---|
| Adam J. Hirsch Esq. | | C.O.D. | |
| **Sales Rep ID** | **Shipping Method** | **Ship Date** | **Due Date** |
| | US MAIL | | 9/11/23 |

| Quantity | Item | Description | Unit Price | Amount |
|---|---|---|---|---|
| 1.00 | Zoning Certificate | 881 Farmington avenue, Bristol, CT | 400.00 | 400.00 |

| | |
|---|---|
| Subtotal | 400.00 |
| Sales Tax | |
| Total Invoice Amount | 400.00 |
| Payment/Credit Applied | |
| **TOTAL** | **400.00** |

Check/Credit Memo No:

# 881 FARMINGTON AVE, Bristol, CT 06010

**Records** **Details**

## Property Owner

881 FARMINGTON AVE LLC

881 FARMINGTON AVE
BRISTOL, CT 06010

## Records

| Record # | Record Type | Status |
|---|---|---|
| S-21-30 | Sign Permit | Complete |
| HB-17-345 | Historical Building Permit | Complete |
| HB-07-1539 | Historical Building Permit | Complete |
| HB-06-1646 | Historical Building Permit | Complete |
| HB-1997-1029 | Historical Building Permit | Complete |

**City of Bristol, CT**

# City of Bristol

**111 North Main Street**
**Bristol, CT 06010**

Permit #: S-21-30

# SIGN PERMIT

**POST THIS PERMIT CONSPICUOUSLY**

| | |
|---|---|
| **Owner:** | 881 FARMINGTON AVE LLC |
| **Address:** | 881 FARMINGTON AVE<br>Bristol, CT 06010 |
| **Contractor Name:** | Bristol Signart Inc. |
| **Project Description:** | Replace existing building sign face |

**Map/Block/Lot:** 53-1 **Location:** 881 FARMINGTON AVE

In accordance with this application, plans and specifications submitted to the Building Department, this project will be completed subject to the State of Connecticut Building Codes. Otherwise this permit will be null and void. Occupancy of this new building or addition prior to issuance of Certification of Occupancy will be considered a violation of the state Building Code.

**Permit #:** S-21-30

**Expires in 6 months if construction is not continuous.**

**Date Issued:** October 1, 2021

This is an e-permit. To learn more, scan this barcode or visit bristolct.viewpointcloud.com/#/records/16954

# City of Bristol

**111 North Main Street**
**Bristol, CT 06010**

Permit #: S-21-30

# CERTIFICATE OF APPROVAL

**RETAIN FOR YOUR RECORDS**

| | |
|---|---|
| **Owner:** | 881 FARMINGTON AVE LLC |
| **Address:** | 881 FARMINGTON AVE<br>Bristol, CT 06010 |
| **Contractor Name:** | Bristol Signart Inc. |
| **Project Description:** | Replace existing building sign face |
| **Conditions:** | |

**Map/Block/Lot:** 53-1 **Location:** 881 FARMINGTON AVE

In accordance with this application, plans and specifications submitted to the Building Department, this project will be completed subject to the State of Connecticut Building Codes. Otherwise this permit will be null and void. Occupancy of this new building or addition prior to issuance of Certification of Occupancy will be considered a violation of the state Building Code.

**Permit #:** S-21-30

**Date Issued:** October 1, 2021

This is an e-permit. To learn more, scan this barcode or visit bristolct.viewpointcloud.com/#/records/16954

# 881 FARMINGTON AVE, Bristol, CT 06010

**Records** **Details**

**Property Owner**

881 FARMINGTON AVE LLC

881 FARMINGTON AVE
BRISTOL, CT 06010

**Zoning**

BG

**Building Type**

Ind/Comm

**Occupancy**

Auto Repr

**MBL**

53-1

**Year Built**

1945

**Book Page**

1831/0150

**Lot Area**

0.28

**Water**

All Public

**Sewage**

NULL

## City of Bristol, CT

**Your Profile**

Sign Up (/sign-up)

Your Records (/dashboard/records)

**Resources**

Search for Records (/search)

Claim a Record (/claimRecord)

Employee Login (https://bristolct.workflow.opengov.com)

Portal powered by **OpenGov**

# 881 FARMINGTON AVE

| | | | |
|---|---|---|---|
| **Location** | 881 FARMINGTON AVE | **Mblu** | 53/ / 1/ / |
| **Acct#** | 0184799 | **Owner** | 881 FARMINGTON AVE LLC |
| **Assessment** | $177,660 | **Appraisal** | $253,800 |
| **PID** | 2461 | **Building Count** | 1 |

## Current Value

| Appraisal | | | |
|---|---|---|---|
| **Valuation Year** | **Improvements** | **Land** | **Total** |
| 2022 | $101,000 | $152,800 | $253,800 |
| **Assessment** | | | |
| **Valuation Year** | **Improvements** | **Land** | **Total** |
| 2022 | $70,700 | $106,960 | $177,660 |

## Owner of Record

| | | | |
|---|---|---|---|
| **Owner** | 881 FARMINGTON AVE LLC | **Sale Price** | $0 |
| **Co-Owner** | | **Certificate** | |
| **Address** | 881 FARMINGTON AVE<br>BRISTOL, CT 06010 | **Book & Page** | 1831/0150 |
| | | **Sale Date** | 03/02/2010 |
| | | **Instrument** | 03 |

## Ownership History

| Ownership History | | | | | |
|---|---|---|---|---|---|
| **Owner** | **Sale Price** | **Certificate** | **Book & Page** | **Instrument** | **Sale Date** |
| 881 FARMINGTON AVE LLC | $0 | | 1831/0150 | 03 | 03/02/2010 |
| WARZECHO FRANK P | $0 | | 1831/0147 | 01 | 03/02/2010 |
| WARZECHO JULIA P | $0 | 1 | 1233/0853 | 00 | 12/08/1997 |
| WARZECHO FRANK ESTATE + | $0 | | 1220/0378 | | 07/14/1997 |

## Building Information

### Building 1 : Section 1

**Year Built:** 1945

**Living Area:** 2,161
**Replacement Cost:** $173,377
**Building Percent Good:** 55
**Replacement Cost Less Depreciation:** $95,400

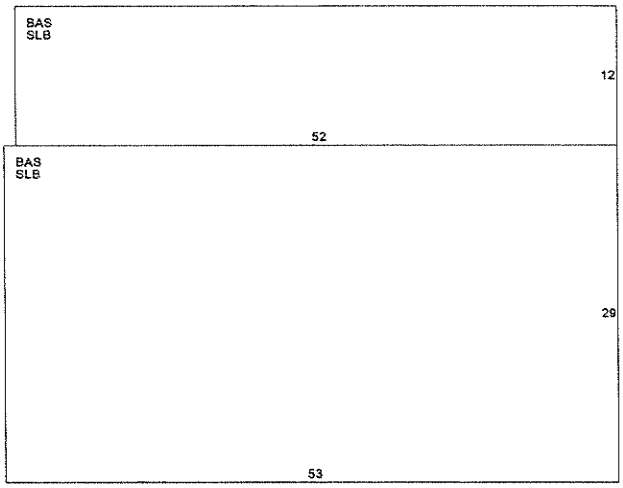
| Building Attributes | |
|---|---|
| **Field** | **Description** |
| Style | Service Shop Loc |
| Model | Ind/Comm |
| Grade | C |
| Stories: | 1 |
| Occupancy | 1.00 |
| Exterior Wall 1 | Brick/Masonry |
| Exterior Wall 2 | |
| Roof Structure | Flat |
| Roof Cover | T+G/Rubber |
| Interior Wall 1 | Minim/Masonry |
| Interior Wall 2 | |
| Interior Floor 1 | Concr-Finished |
| Interior Floor 2 | |
| Heating Fuel | Oil |
| Heating Type | Hot Air-no Duc |
| AC Type | Central |
| Struct Class | |
| Bldg Use | Auto Repr |
| Bedrooms | |
| Full Baths | |
| Half Baths | |
| 1st Floor Use: | |
| Heat/AC | Heat/AC Split |
| Frame Type | Masonry |
| Baths/Plumbing | Average |
| Ceiling/Wall | Ceiling Only |
| Rooms/Prtns | Average |
| Wall Height | 10.00 |
| % Comn Wall | |

### Building Photo



0184799 03/13/2016
(https://images.vgsi.com/photos2/BristolCTPhotos/\00\03\36\69.JPG)

### Building Layout




(ParcelSketch.ashx?pid=2461&bid=2461)

| Building Sub-Areas (sq ft) | | | Legend |
|---|---|---|---|
| **Code** | **Description** | **Gross Area** | **Living Area** |
| BAS | First Floor | 2,161 | 2,161 |
| SLB | Slab | 2,161 | 0 |
| | | 4,322 | 2,161 |

### Extra Features

| Extra Features | | | | Legend |
|---|---|---|---|---|
| **Code** | **Description** | **Size** | **Value** | **Bldg #** |
| OHD | Overhead Door | 3.00 Units | $0 | 1 |

## Land

### Land Use

| | |
|---|---|
| **Use Code** | 332 |
| **Description** | Auto Repr |
| **Zone** | BG |
| **Neighborhood** | |
| **Alt Land Appr** | No |
| **Category** | |

### Land Line Valuation

| | |
|---|---|
| **Size (Acres)** | 0.28 |
| **Frontage** | 146 |
| **Depth** | |
| **Assessed Value** | $106,960 |
| **Appraised Value** | $152,800 |

lblIndfront

### Outbuildings

| Outbuildings | | | | | | Legend |
|---|---|---|---|---|---|---|
| **Code** | **Description** | **Sub Code** | **Sub Description** | **Size** | **Value** | **Bldg #** |
| PAV1 | Paving Asph. | | | 3000.00 S.F. | $3,400 | 1 |
| LT2 | Light (2 fixt) | | | 1.00 UNITS | $1,500 | 1 |
| FN3 | Fence 6' | | | 80.00 L.F. | $700 | 1 |

### Valuation History

| Appraisal | | | |
|---|---|---|---|
| **Valuation Year** | **Improvements** | **Land** | **Total** |
| 2022 | $101,000 | $152,800 | $253,800 |
| 2021 | $102,300 | $132,800 | $235,100 |
| 2020 | $102,300 | $132,800 | $235,100 |

| Assessment | | | |
|---|---|---|---|
| **Valuation Year** | **Improvements** | **Land** | **Total** |
| 2022 | $70,700 | $106,960 | $177,660 |
| 2021 | $71,610 | $92,960 | $164,570 |
| 2020 | $71,610 | $92,960 | $164,570 |

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# City of Bristol, CT

## Property Listing Report

| Map Block Lot | 53-1 | Building # | 1 | PID | 2461 | Account | 0184799 |
|---|---|---|---|---|---|---|---|

## Property Information

| | |
|---|---|
| Property Location | 881 FARMINGTON AVE |
| Owner | 881 FARMINGTON AVE LLC |
| Co-Owner | |
| Mailing Address | 881 FARMINGTON AVE<br>BRISTOL CT 06010 |
| Land Use | 332 Auto Repr |
| Land Class | C |
| Zoning Code | BG |
| Census Tract | 04060.01 |

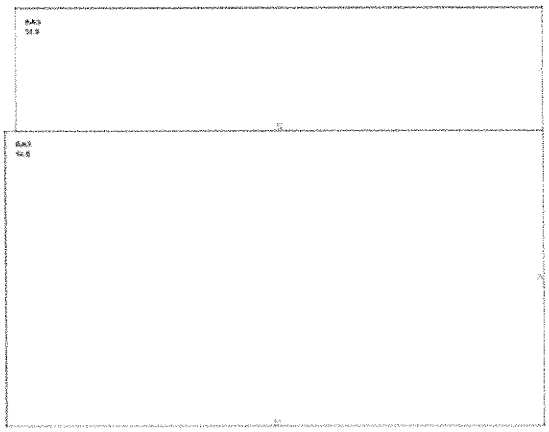
| | |
|---|---|
| Neighborhood | |
| Acreage | 0.28 |
| Utilities | All Public |
| Lot Setting/Desc | Level |
| Book / Page | 1831/0150 |
| Additional Info | |

## Photo



0184799 03/13/2016

## Sketch



## Primary Construction Details

| | |
|---|---|
| Year Built | 1945 |
| Building Desc. | Auto Repr |
| Building Style | Service Shop Loc |
| Building Grade | |
| Stories | 1 |
| Occupancy | 1.00 |
| Exterior Walls | Brick/Masonry |
| Exterior Walls 2 | NA |
| Roof Style | Flat |
| Roof Cover | T+G/Rubber |
| Interior Walls | Minim/Masonry |
| Interior Walls 2 | NA |
| Interior Floors 1 | Concr-Finished |
| Interior Floors 2 | |

| | |
|---|---|
| Heating Fuel | Oil |
| Heating Type | Hot Air-no Duc |
| AC Type | 03 |
| Bedrooms | 0 |
| Full Bathrooms | 0 |
| Half Bathrooms | 0 |
| Extra Fixtures | 0 |
| Total Rooms | |
| Bath Style | NA |
| Kitchen Style | NA |
| Fin Bsmt Area | 0 |
| Fin Bsmt Quality | 0 |
| Bsmt Gar | 0 |
| Fireplaces | 0 |

(*Industrial / Commercial Details)

| | |
|---|---|
| Building Use | Ind/Comm |
| Building Condition | A |
| Sprinkler % | NA |
| Heat / AC | Heat/AC Split |
| Frame Type | Masonry |
| Baths / Plumbing | Average |
| Ceiling / Wall | Ceiling Only |
| Rooms / Prtns | Average |
| Wall Height | 10.00 |
| First Floor Use | NA |
| Foundation | NA |

Report Created On 9/5/2023

# City of Bristol, CT

Property Listing Report

| Map Block Lot | 53-1 | Building # | 1 | PID | 2461 | Account | 0184799 |
|---|---|---|---|---|---|---|---|

## Valuation Summary

(Assessed value = 70% of Appraised Value)

| Item | Appraised | Assessed |
|---|---|---|
| Buildings | 95400 | 66780 |
| Extras | 0 | 0 |
| Improvements | | |
| Outbuildings | 5600 | 3920 |
| Land | 152800 | 106960 |
| Total | 253800 | 177660 |

## Outbuilding and Extra Features

| Type | Description |
|---|---|
| Overhead Door | 3 Units |
| Paving Asph. | 3000 S.F. |
| Light (2 fixt) | 1 UNITS |
| Fence 6' | 80 L.F. |
| | |
| | |
| | |
| | |
| | |
| | |

## Sub Areas

| Subarea Type | Gross Area (sq ft) | Living Area (sq ft) |
|---|---|---|
| First Floor | 2161 | 2161 |
| Slab | 2161 | 0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Total Area | 4322 | 2161 |

## Sales History

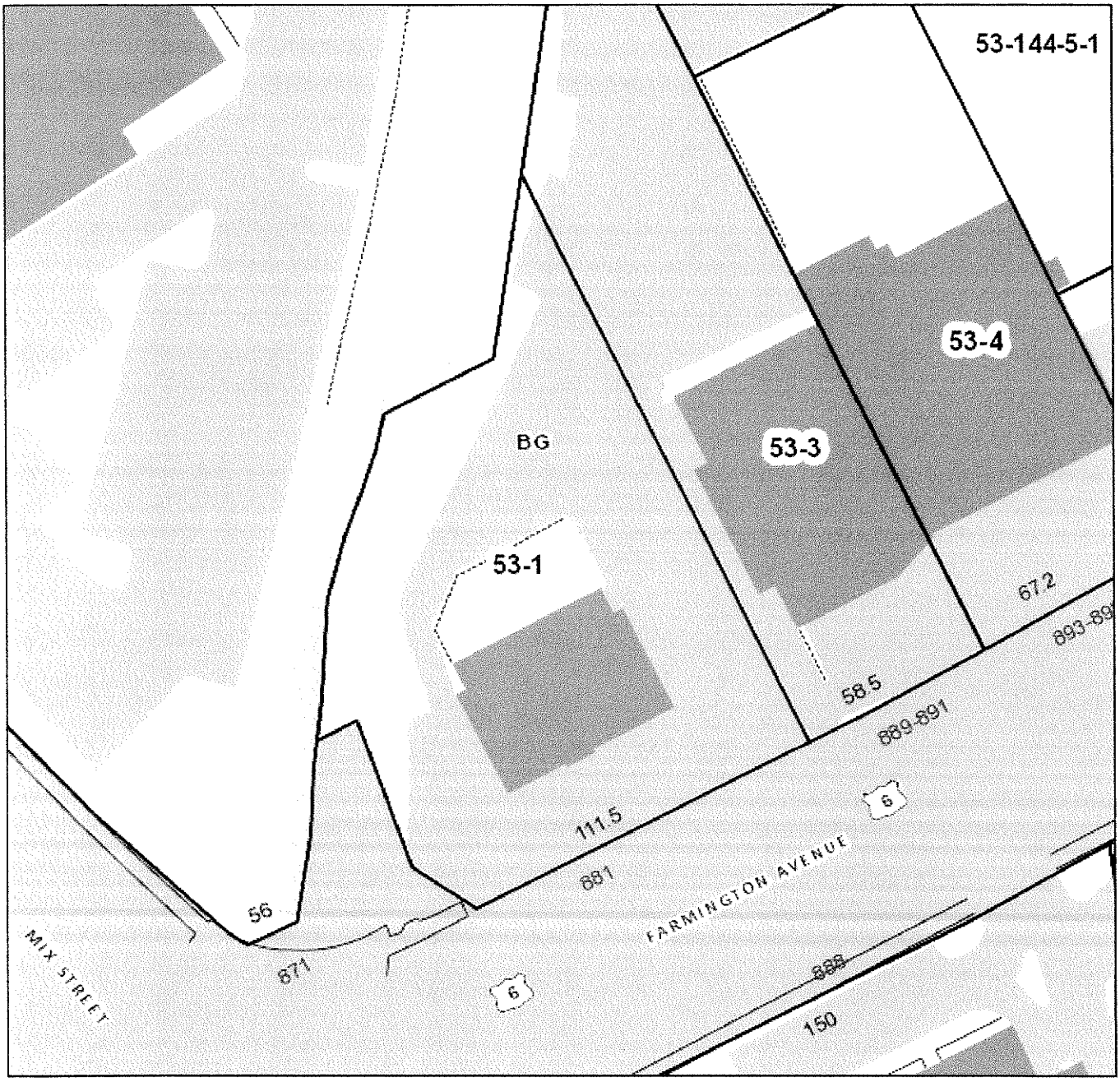
| Owner of Record | Book/ Page | Sale Date | Sale Price |
|---|---|---|---|
| 881 FARMINGTON AVE LLC | 1831/0150 | 2010-03-02 | 0 |
| WARZECHO FRANK P | 1831/0147 | 2010-03-02 | 0 |
| WARZECHO JULIA P | 1233/0853 | 1997-12-08 | 0 |
| WARZECHO FRANK ESTATE + | 1220/0378 | 1997-07-14 | 0 |

Report Created On 9/5/2023

# City of Bristol

Geographic Information System (GIS)

Date Printed: 9/5/2023




**MAP DISCLAIMER - NOTICE OF LIABILITY**

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of Bristol and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 50 feet

0 50 Feet

N W E S

**IWWA Application #1659 for 881 Farmington Avenue – circa 2009 – hyperlink:**

https://www.bristolct.gov/DocumentCenter/View/47816/1659---881-FARMINGTON-AVE


Panorama
Mon Apr 22 2024


Search
Panorama
Wed Mar 29 2023
Nearmap
Imagery © 2024 Nearmap, HERE
20 ft
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Search
Panorama
Tue Mar 22 2022
Nearmap
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Search
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Sat Mar 27 2021
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Thu Mar 5 2020
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Mon Apr 23 2018
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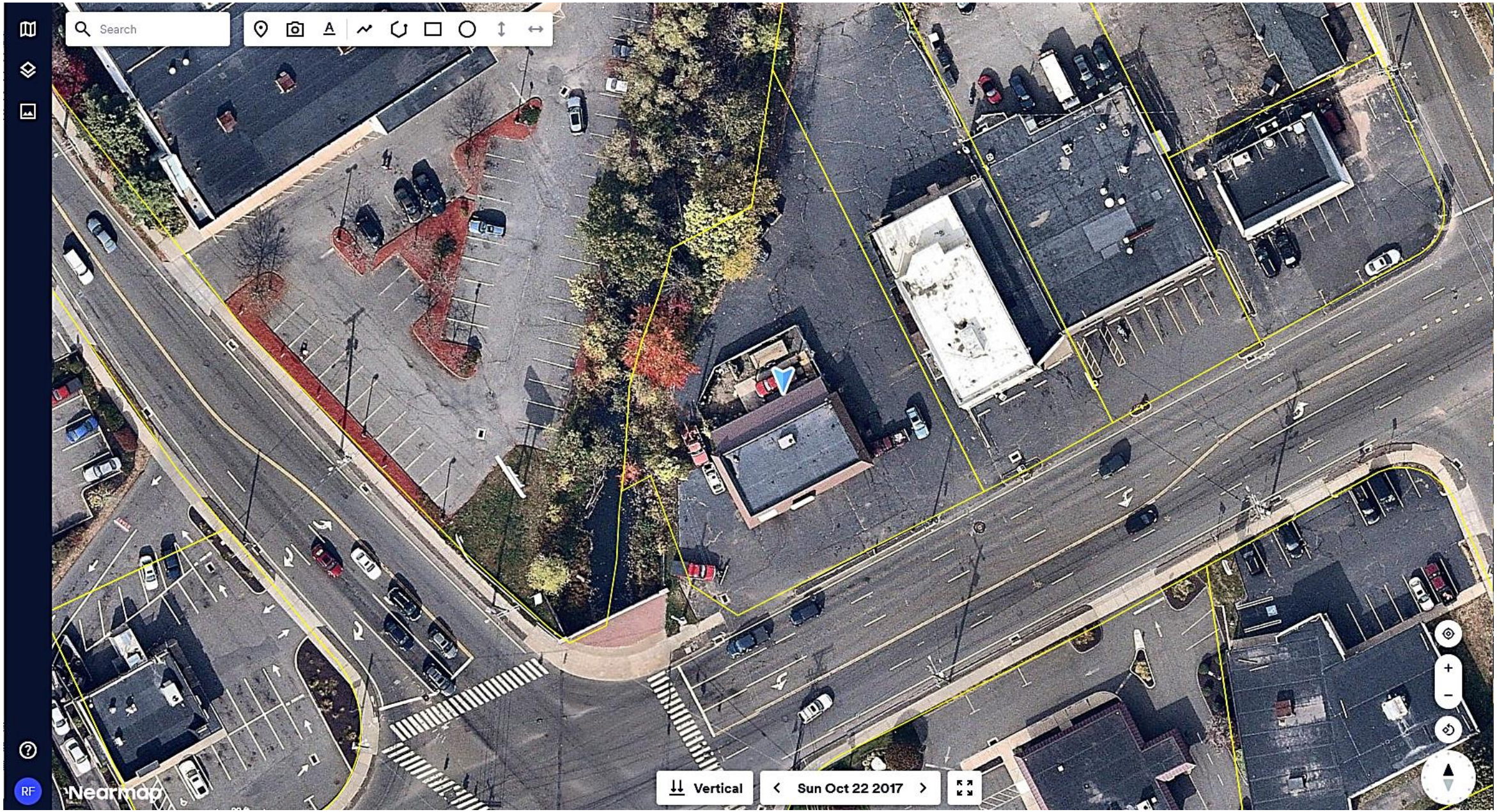
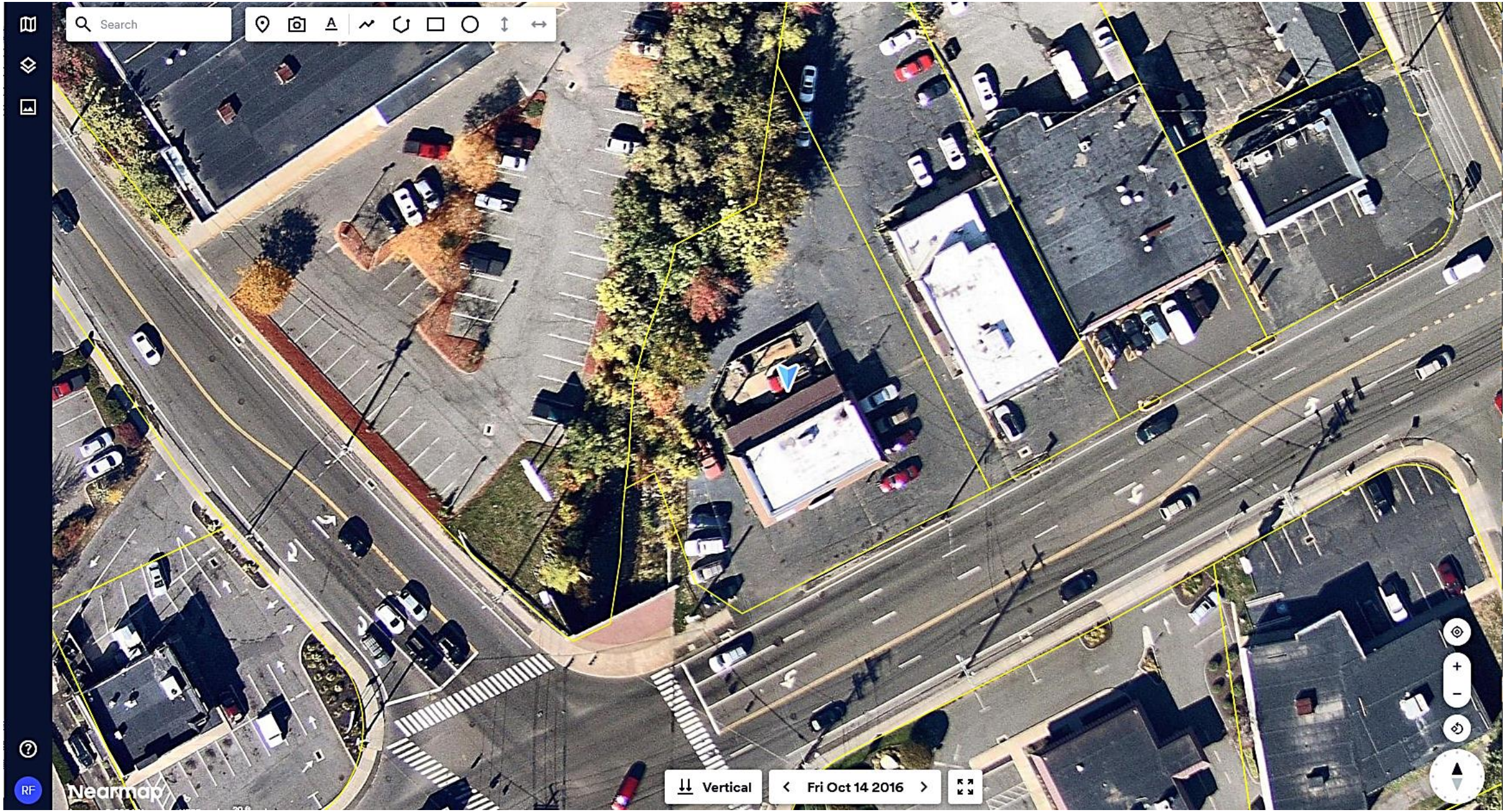
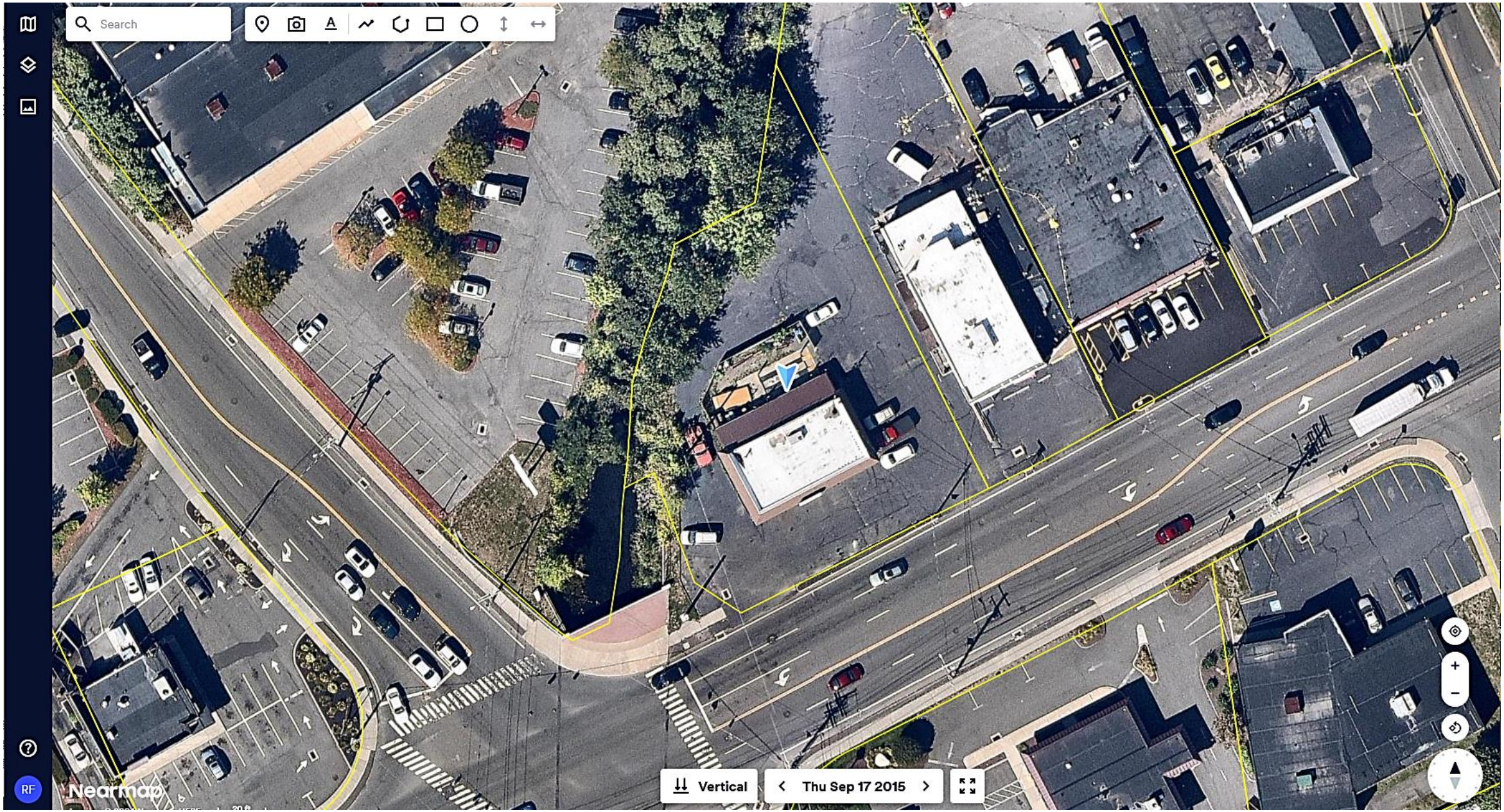

Search
Vertical
Sun Oct 22 2017
Nearmap
RF


Search
Vertical
Fri Oct 14 2016
Nearmap
RF


Search
Vertical
Thu Sep 17 2015
Nearmap
RF

## Inactive Sites

If a regulated facility/site is currently out of business, unoccupied, or in some other way currently inactive at the time the registration is due, the regulated facility may be registered if it has been active within the past five (5) years of the date the Aquifer Protection Area was adopted and if Aquifer Protection Area Regulations are in place.

In this case, the facility owner or property owner should file an Aquifer Protection Area Registration to preserve its right to conduct a regulated activity in the future.

The facility seeking to register an inactive site may register only the regulated activities that were previously conducted on the site within the past five (5) year timeframe.

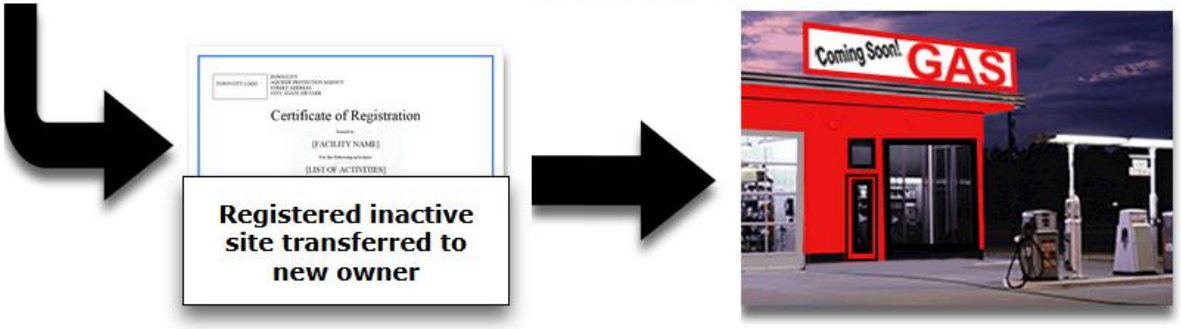
If the facility is registered as an inactive site and then becomes active, the facility should modify its registration to an active status. If the facility becomes active but will be adding or changing the registered regulated activity conducted on site, then an Aquifer Protection Area Permit is required to be submitted to the Agency for review and approval.

## Inactive Sites, continued




For example, four (4) years ago a gas station was active and registered with the Municipal Aquifer Protection Area Agency. Unfortunately, the gas station went out of business and the property became unoccupied.

Now, new business owners want to revive the gas station and bring it back to life. Because the site had an Aquifer Protection Area Registration and was active within the last five (5) years, the Aquifer Protection Area Registration for the site is able to be transferred to the new business owners.






## Aquifer Protection Area Registration Renewals

A registration expires five (5) years from the date of receipt of the registration by the Municipal Aquifer Protection Agency. Registered facilities must apply to the Agency to renew the registration on a form prescribed by the Commissioner for a facility before expiration of the registration.

If a registered regulated activity is out of business or inactive when the registration renewal is required, a five (5) year allowance is in effect from the date the registration expires.

If the registrant has not applied to renew the registration within five (5) years of the date the registration expires, the facility is no longer eligible for registration, and conduct of regulated activities would be prohibited.

## Aquifer Protection Area Registration Transfers

If the owner or operator of a registered site changes, the new owner or operator may apply to transfer the registration for a facility.

The application for transfer must be on the prescribed form and be submitted to the Connecticut DEEP or Municipal Aquifer Protection Agency, as appropriate.

If the facility holds a Municipal Aquifer Protection Area Registration, then the registration must be transferred by the Municipal Aquifer Protection Agency.

