08 - FIO: UTILITY SUPPORT PLANS
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 12/3/2025

DESIGNER/DRAFTER: EH

CHECKED BY: MG

TOWN OF WALLINGFORD

Filename: FIO-01 INDEX - UTILITY SUPPORT.DWG

SIGNATURE/ BLOCK:

AI Engineers
919 MIDDLE STREET
MIDDLETOWN, CT 06457

PROJECT TITLE:
REHABILITATION OF BRIDGE NO. 04392 TOELLES ROAD OVER THE QUINNIPIAC RIVER

TOWN: **WALLINGFORD**

DRAWING TITLE: **INDEX OF DRAWINGS**

PROJECT NO. **L148-0003**

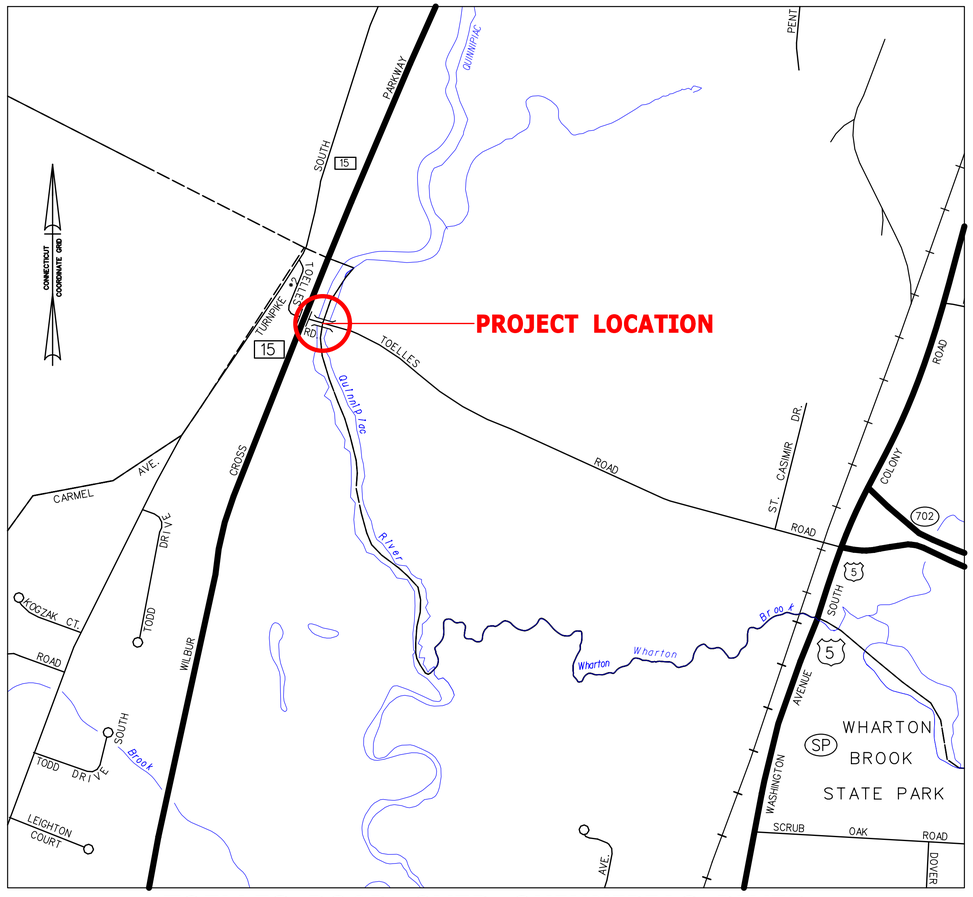
DRAWING NO. **FIO-01**

SHEET NO.

Border Version: 07/19/16

TABLE OF CONTENTS

EVERSOURCE ENERGY



TOELLES ROAD OVER QUINNIPIAC RIVER
WALLINGFORD - NORTH HAVEN, CONNECTICUT

COMPLEX COMPONENT: 8" STL IP GAS ON BRIDGE No. 04392

TEMPORARY INSTALLATION: ±170' OF 8" STEEL IP MAIN
PERMANENT INSTALLATION: ±160' OF 8" STEEL IP MAIN
ABANDONMENT (EXISTING): ±150' OF 8" STEEL IP MAIN
ABANDONMENT (TEMPORARY): ±170' OF 8" STEEL IP MAIN
AFFECTED STREETS: TOELLES ROAD

REHABILITATION OF BRIDGE No. 04392 OVER QUINNIPIAC RIVER
TOELLES ROAD OVER QUINNIPIAC RIVER
WALLINGFORD - NORTH HAVEN, CT
PROJECT #21C301

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

CERTIFIED SUBSTANTIALLY CORRECT:

STATE OF CONNECTICUT THOMAS J. BULZAT No. 17942 LICENSED PROFESSIONAL ENGINEER

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - COVER

SCALE: AS NOTED SHEET: 1 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/10/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-01	A

Filed: ..\22-021 1 COVER.dgn
Date: 4/12/2024 Time: 10:21:33 AM

GENERAL NOTES:

A. IF ANY OF THE FOLLOWING OCCUR A DRAWING REVISION IS REQUIRED AND MUST BE APPROVED AND/OR STAMPED BY THE ENGINEER OF RECORD. CHANGES CAN BE APPROVED AND/OR STAMPED BY A PROJECT ENGINEER, BUT THE ENGINEER OF RECORD MUST BE INFORMED.

1. IF THE TIE IN POINT MOVES TO A DIFFERENT SEGMENT OF PIPE THAN SHOWN.

2. IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED.

3. IF THERE IS ANY CHANGE TO WHAT IS SHOWN ON THE DRAWING WITHIN 50 FTOF A PRESSURE REGULATING STATION, DISTRICT REGULATOR, OR GATE STATION.

4. IF A CHANGE IN PIPE SIZE, MATERIAL, OR WALL THICKNESS IS REQUIRED.

5. ALTERNATE FITTINGS THAT ARE ACCEPTABLE FOR ANY TIE-IN DETAIL WILL BE CALLED OUT IN THE DRAWING. FITTING CHANGES NOT SHOWN AS ALTERNATIVES ON THE DRAWING WILL NEED TO FOLLOW THE DRAWING CHANGE PROCESS CONTAINED IN SECTION V.D.

B. CONSTRUCTION DRAWINGS, LOCATIONS OF EXISTING UTILITIES, UNDERGROUND STRUCTURES AND WORK LOCATIONS ARE BASED ON BEST AVAILABLE INFORMATION BUT HAVE NOT BEEN FIELD VERIFIED.

C. ALL WORK, MATERIAL AND CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH ALL PERMITS AND APPROVALS PER EVERSOURCE, LOCAL, STATE, OSHA AND FEDERAL REGULATIONS AND STANDARDS.

D. ALL LIVE GAS WORK EXCEPT SERVICE SIZE TAPS, INCLUDING BUT NOT LIMITED TO TAPPING OF FITTINGS ON LIVE MAINS, STOPPING, MANIPULATING VALVE, ABANDONMENT, SHALL BE PERFORMED BY, OR AT THE DIRECTION AND UNDER THE DIRECT SUPERVISION OF EVERSOURCE GAS PERSONNEL AND IN ACCORDANCE WITH THE WRITTEN PROCEDURE. DRAWING CHANGES MAY ALSO REQUIRE A CHANGE TO THE PROCEDURE.

E. EXCAVATOR IS REQUIRED TO PROTECT EXISTING UTILITIES, STRUCTURES, LANDSCAPES FEATURES, SIGNAGE, CURBS, ETC. CARE SHOULD BE TAKEN NOT TO DISTURB OR DAMAGE SUCH ITEMS. ROADWAY, SIDEWALKS, AND GRASS DISTURBED SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OR TOWN. PLANT BEDS WILL BE RELOCATED TO THEIR EXISTING REGULAR LOCATION.

F. ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), INCLUDING ALL REVISIONS AND ADDENDA. ALL TRAFFIC CONTROL DEVICES WILL BE SUPPLIED BY EXCAVATOR.

21C301 - Toelles Road Bridge, Wallingford

Stock Code	Quantity	Units	Item Description
592778	360	FT	PIPE, 8 IN IPS X 0.322 IN THK WALL, 7.981 IN ID X 8-5/8 IN OD, 45 FT LG, ERW X BUTTWELD, CS, MIN GR B, POLYETHYLENE COATED, AP
513679	1	ROLL	CABLE, INSULATED, MDP, #12 AWG, 7 STR, YELLOW, POLYETHYLENE-30, SOFT DRAWN CU, 500 FT/RL, FOR USED AS PIPE LOCATOR
565814	1	ROLL	TAPE,WARNING, MARKED BURIED GAS LINE, 4 MIL, 1000 FT ROLL, 6 IN W, YELLOW, ISSUE EACH ROLL AS 1, T-01-A00,
546243	2	EA	FITTING,LINE STOPPER, BOTTOM OPENING, 8 IN , WELDED ENDS, W/ 150 LB FLANGE, FOR BEVELED 8.625 IN OD THIN WALL STEEL PIPE
545362	12	EA	ELBOW,PIPE, 45 DEG, 8 IN X 0.322 IN THK WALL, BUTT WELD ENDS, CS, ASTM A234, ANSI B16.9, LONG RADIUS
545358	8	EA	8" ST ELBOW 90 DEGREE LONG RADIUS
541491	2	EA	BOX,CORROSION, 18 IN LG, 5 IN DP, CI, W/ 5 TERMINAL, HOOKS, NON-LOCKING LID, NM5 DROP TURN, YELLOW LID MARKED CP TEST & B&T BOX
503674	90	Roll	TAPE,WAX, 9 FT LG X 4 IN W, BROWN, 24 ROLLS/CS, BELOW GROUND USE ONLY, TR-1WAX
560521	12	Roll	TAPE, PROTECTION, 75 FT LG X 2 IN W X 0.035 IN THK, PRIMER REQ'D BELOW 40F, GRAY, 12 ROLLS/CS, PREVENTS CORROSION, COLD APPLIED ON PIPING.
508572	4	GL	PRIMER, 4 GAL/CASE, BROWN, FOR WAX TAPE, APPLICATION TEMP 0 TO 230 F, TEMCOAT 3000
508576	1	GL	PRIMER, CORROSION PROTECTION, 1 GAL, 4/CASE, FOR COLD APPLIED TAPECOAT TAPE
551880	10	EA	NIPPLE,PIPE, NON-BLOWING, 1-1/4 IN, 3 IN LG, WELDED X THREADED ENDS, CS
503961	2	EA	COUPLING,PIPE, CONDUCTIVE, 8 IN IPS, COMPRESSION ENDS, CS/PLASTIC
542548	6	EA	CAP,PIPE, 8 IN , COMPRESSION END, 150 LB, W/ 1 IN OFF-CENTER VENT, FOR 8.625 IN OD STEEL PIPE
604096	1	EA	VALVE, BALL, 8 IN, STEEL, WELDXWELD, 150 LB, FULL PORT, EPOXY COATED, W/HZ GEAR OPERATOR, 22 IN LONG , KEROSET
604132	1	EA	BOX VALVE, W/5-4/4IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488. 6/BOX
578415	500	FT	CABLE, INSULATED, THHN, #10 AWG, 19 STR, 600 V, UL, WHITE, 15 MILS PVC, 4 MILS NYLON JACKET, CU, 500 FT/ROLL
603139	500	FT	CABLE, INSULATED, THHN, #10 AWG, 19 STR, 600 V, UL, BLACK, 15 MILS PVC, 4 MILS NYLON JACKET, CU, 500 FT/ROLL
DIRECT	2	EA	PIPE MARKER SIGN TAG
DIRECT	15	EA	ADJUSTABLE ROLL GUIDE FOR 8" PIPE
DIRECT	26	EA	NON-CONDUCTIVE PIPE ROLLER FOR 8" PIPE
DIRECT	2	EA	STAND ALONE GAS WARNING SIGN
DIRECT	26	EA	7/8" THREADED RODS, 24" LONG
DIRECT	3	EA	ANGLE ATTACHMENT BRACKET SIZE 3
DIRECT	7	EA	FRP ROLL-ON SHIELDS TYPE #220-240
DIRECT	12	EA	HILTI ANCHOR BOLTS, 1/2" KWIK BOLT 3
DIRECT	2	EA	3/8" STEEL PLATE, 36" X 24"

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

CERTIFIED SUBSTANTIALLY CORRECT:

STATE OF CONNECTICUT THOMAS J. BULZAK No. 17942 LICENSED PROFESSIONAL ENGINEER

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - NOTES

SCALE: AS NOTED SHEET: 2 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-02	A

Filed: ...\22-021 2 NOTES.dgn

Date: 4/12/2024 Time: 12:12:27 PM

DRAWING LEGEND

COUPLINGS

- ST/ST COMP INSUL CPLG
- ST/CI COMP INSUL CPLG
- CI/CI COMP INSUL CPLG
- ST WELDED INSUL CPLG
- PL/ST COMP CPLG
- PL/CI COMP CPLG
- CI/ST COMP CPLG
- ST/ST COMP CPLG
- CI/CI COMP CPLG
- PL EF CPLG
- PL/ST HYD CPLG
- PL/CI HYD CPLG

END CAPS

- ST WELDED END CAP
- PL EF END CAP
- PL FUSION END CAP
- ST COMP END CAP
- CI COMP END CAP
- PL COMP END CAP
- ST COMP END CAP W/ VENT
- CI COMP END CAP W/ VENT
- PL COMP END CAP W/ VENT

CATHODIC PROTECTION

- TYPE "A" TEST STATION
- TYPE "B" TEST STATION
- TYPE "C" TEST STATION
- TYPE "D" TEST STATION
- TYPE "M" TEST STATION
- TYPE "X" TEST STATION
- RECTIFIER
- ANODE

CIVIL COMPONENTS

- UTILITY POLE
- CATCH BASIN
- HYDRANT
- LIGHT POLE
- SEWER MANHOLE
- DRAINAGE MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE

UTILITY & BOUNDARY

- REGULATING STATION 50' BOUNDARY
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- GAS MAIN TO BE ABANDONED
- GAS MAIN WITH SERVICE TRANSFERS
- GAS MAIN WITH PRESSURE INCREASE
- RIGHT-OF-WAY
- ELECTRIC
- WATER LINE
- SEWER LINE
- TELEPHONE
- DRAIN LINE
- OVERHEAD WIRES

ABBREVIATIONS

- CI - CAST IRON
- CP - CATHODIC PROTECTION
- COMP - COMPRESSION
- CPLG - COUPLING
- EF - ELECTROFUSION
- HYD - HYDRAULIC
- INSUL - INSULATING
- MECH - MECHANICAL
- PL - PLASTIC
- RED - REDUCER
- ST - STEEL
- TRANS - TRANSITION

PIPELINE COMPONENTS

- ST VALVE
- PL VALVE
- ST RED
- PL RED
- PL TO ST TRANS FITTING
- TRACER WIRE TEST BOX
- ST CLAMP
- CI CLAMP

PRESSURE CONTROL FITTINGS

- ST LINE STOPPER
- CI MECH LINE STOPPER
- ST SIDE OUT
- ST BOTTOM OUT
- ST SADDLE
- CI SADDLE
- ST TAPPED CLAMP
- CI TAPPED CLAMP
- PL EF TAPPING TEE
- ST NON-BLOWING TEE
- ST NON-BLOWING NIPPLE

MISCELLANEOUS

- PLASTIC PIPE SQUEEZE
- INSIDE METER
- OUTSIDE METER
- REGULATOR STATION
- SERVICE VALVE

PRESSURE SYSTEM

- LP - LOW PRESSURE (< 0.5 PSIG OR <14 W.C.)
- EL - ELEVATED LOW ELP (0.5 - ≤ 2 PSIG)
- IP - INTERMEDIATE PRESSURE (> 2 - ≤ 60 PSIG)
- HP - HIGH PRESSURE (> 60 - ≤ 99 PSIG)
- EH - ELEVATED HIGH (> 99 - ≤ 199 PSIG)
- SP - SPECIAL PRESSURE (> 199 - ≤ 750 PSIG)

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING TOELLES ROAD BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER

PROJECT No. 21C301 - WALLINGFORD

TOELLES ROAD (8" STL IP) - LEGEND

SCALE: NOT TO SCALE SHEET: 3 OF 13

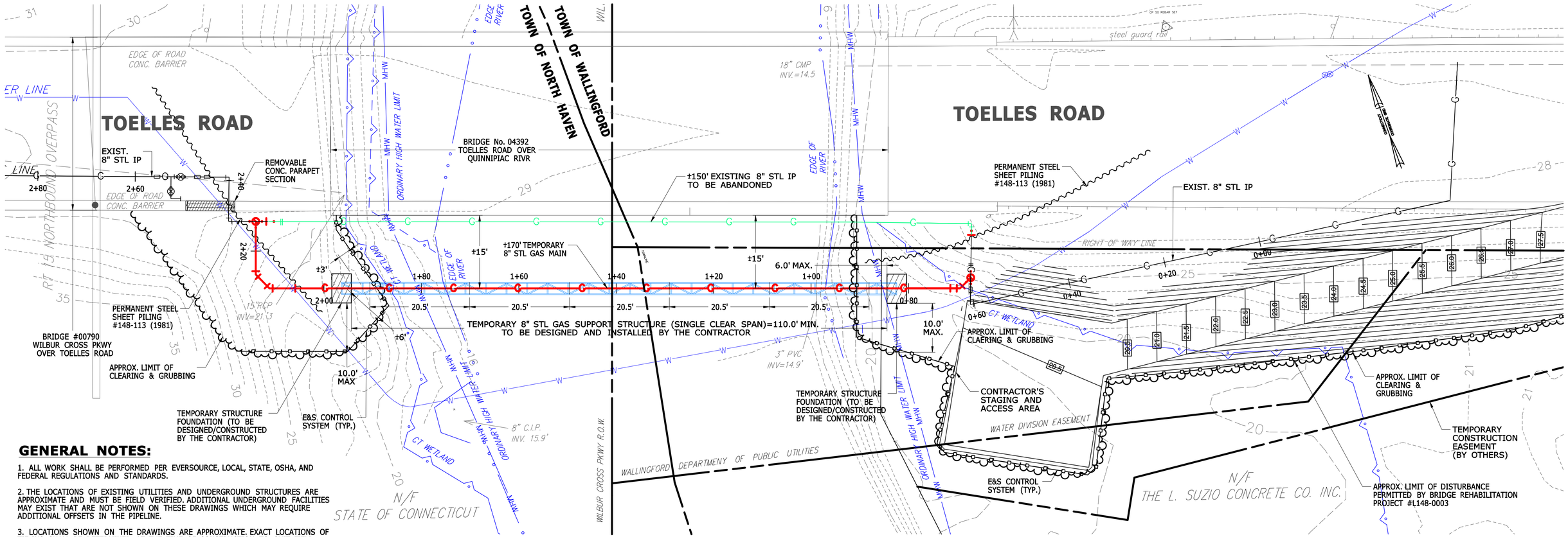
Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-03	A

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

Filed: ...\22-021 3 LEGEND.dgn

Date: 4/12/2024 Time: 10:31:20 AM



GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED PER EVERSOURCE, LOCAL, STATE, OSHA, AND FEDERAL REGULATIONS AND STANDARDS.

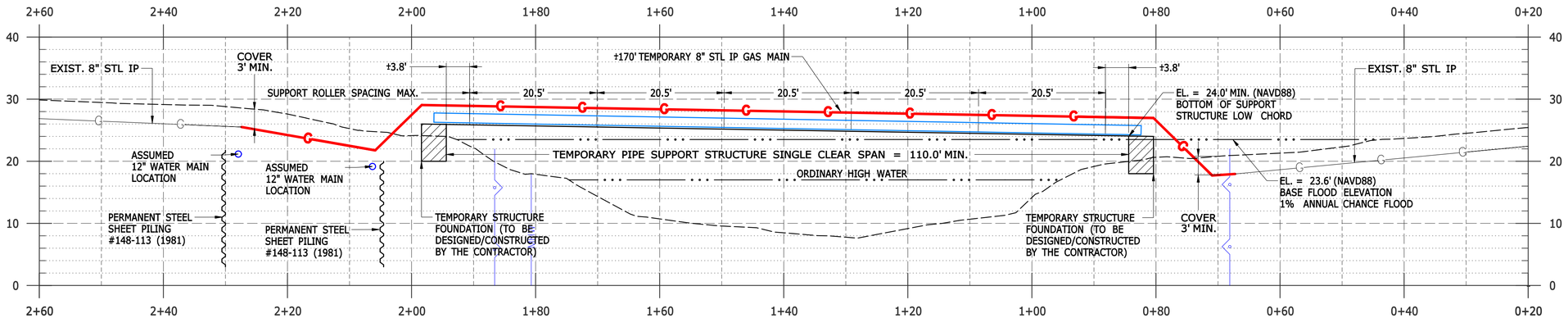
2. THE LOCATIONS OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. ADDITIONAL UNDERGROUND FACILITIES MAY EXIST THAT ARE NOT SHOWN ON THESE DRAWINGS WHICH MAY REQUIRE ADDITIONAL OFFSETS IN THE PIPELINE.

3. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT LOCATIONS OF TIE-INS SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION TO SUIT FIELD CONDITIONS ON THE SPECIFIC TIE-IN POINT. VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY TIE IN WORK.

4. ALL LIVE GAS WORK INCLUDING BUT NOT LIMITED TO TAPPING OF FITTINGS ON LIVE MAINS, STOPPING, MANIPULATING VALVE, ABANDONMENT, SHALL BE PERFORMED BY, OR AT THE DIRECTION AND UNDER THE DIRECT SUPERVISION OF EVERSOURCE GAS PERSONNEL AND IN ACCORDANCE WITH THE WRITTEN PROCEDURE. DRAWING CHANGES MAY ALSO REQUIRE A CHANGE TO THE PROCEDURE.

PLAN:

SCALE: 1" = 10'



ELEVATION:

HZ & VT SCALE: 1" = 10'

PIPE CROSSING DATA:

CONTENT TO BE HANDLED	NATURAL GAS
NORMAL OPERATING PRESSURE	60 PSI
NOMINAL PIPE SIZE	8"
OUTSIDE DIAMETER	8.625"
INSIDE DIAMETER	7.981"
WALL THICKNESS	0.322"
WEIGHT PER FOOT	25.58 LB/FT
MATERIAL	CARBON STEEL
PROCESS OF MANUFACTURE	SEAMLESS OR EWR
SPECIFICATION	ASTM A53 API 5L
GRADE OR CLASS	B MIN.
TEST PRESSURE	150 PSIG MIN.
TYPE OF JOINT	BUTT WELD
TYPE OF COATING	PRITEC 40/10 MIL
CATHODIC PROTECTION DETAILS	IMPRESSED CURRENT

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

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3. COMPLETE PLANS OF THE EXISTING TOELLES ROAD BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

CERTIFIED SUBSTANTIALLY CORRECT:

SCALE 1" = 10

20 10 0 10 20

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

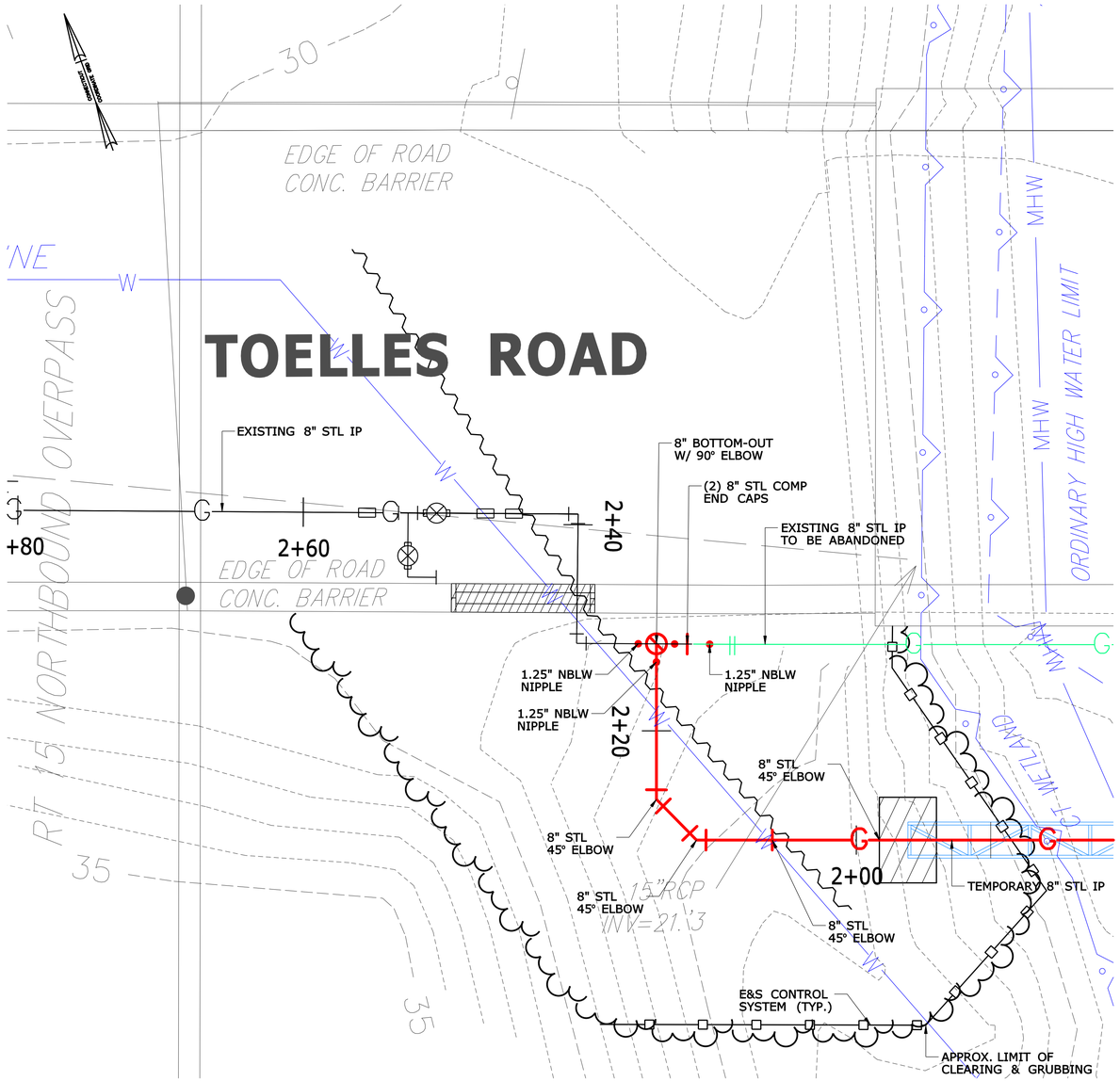
REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - TEMP. PLAN & PROFILE

SCALE: AS NOTED SHEET: 4 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-04	A

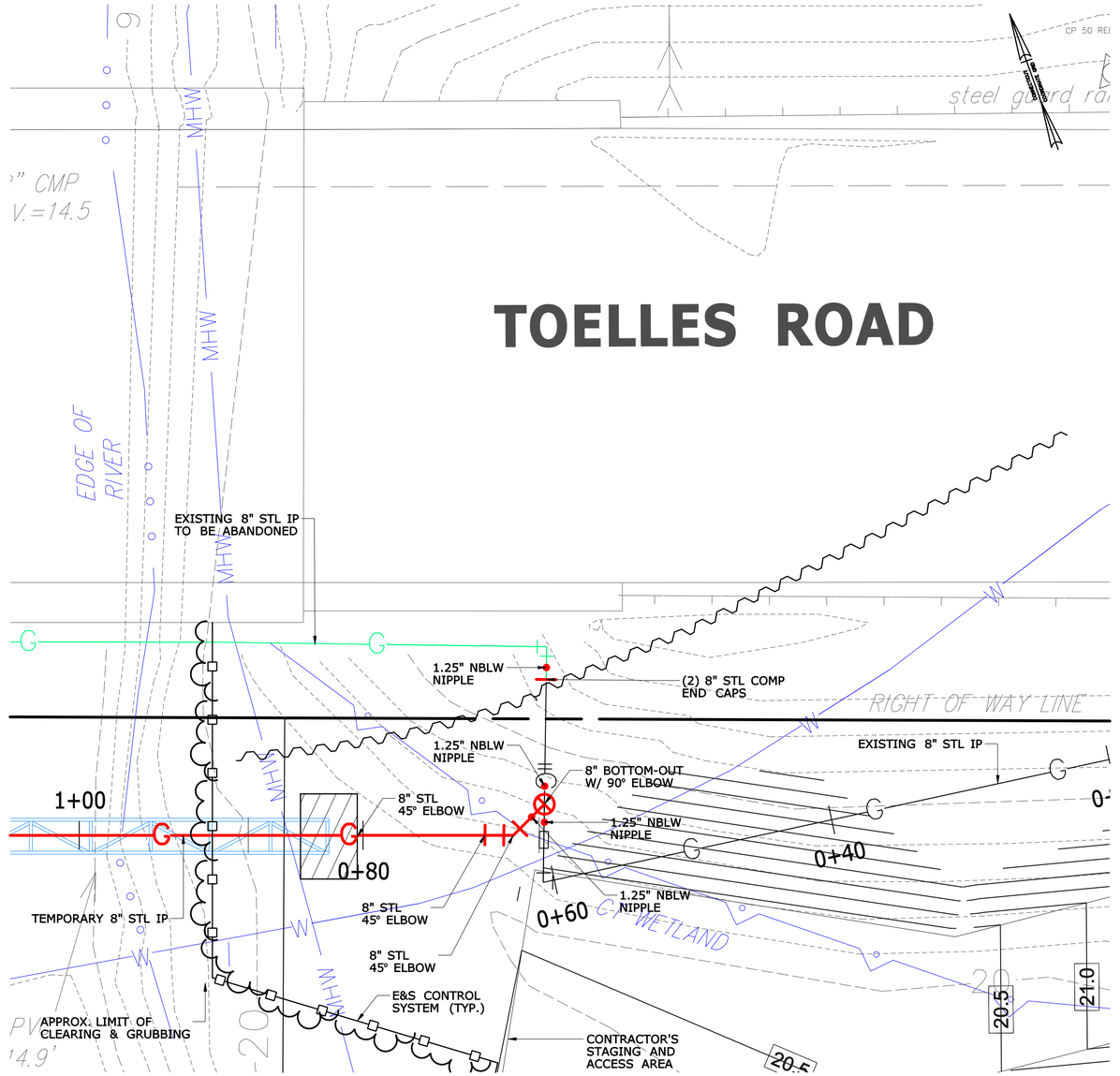
Filed: ...\22-021 4 TEMPORARY SITE PLAN.dgn

Date: 4/12/2024 Time: 11:03:13 AM



CONNECTION PLAN - WEST:

SCALE: 1" = 5'



CONNECTION PLAN - EAST:

SCALE: 1" = 5'

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

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SCALE 1" = 5

10 5 0 5 10

CERTIFIED SUBSTANTIALLY CORRECT:

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

STATE OF CONNECTICUT
THOMAS J. BULSAY
No. 17942
LICENSED PROFESSIONAL ENGINEER

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER

PROJECT No. 21C301

TOELLES ROAD (8" STL IP) - TEMPORARY CONNECTIONS

SCALE: AS NOTED SHEET: 5 OF 13

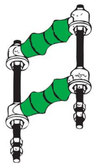
Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-05	A

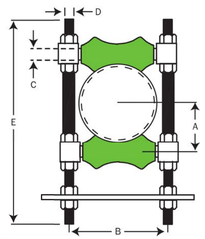
Filed: ...\22-021 5 TEMPORARY CONNECTION DETAILS.dgn

Date: 4/12/2024 Time: 11:07:28 AM

ADJUSTABLE ROLL GUIDE

3B





ADJUSTABLE ROLL GUIDE INCLUDES:
4 ADJUSTABLE SOCKETS
2 ROLL AXLES
2 VERTICAL THREADED RODS
12 HEX NUTS
2 CAST IRON ROLLS (OMIT WHEN ORDERING NON-CONDUCTIVE ROLLERS)
SPECIFICATIONS MAY VARY - All Dimensions in inches

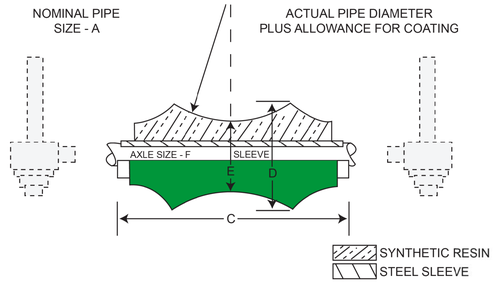
Pipe Size	A	*B	C	Rod Size D	E	Socket No.	Max. Load lbs.	Wt. lbs/ea.
2	1 9/16	4 1/8	3/8	3/8	12	#1-3/8	600	2.15
3	2 3/16	5 1/2	1/2	1/2	14	#2-1/2	700	4.34
4	2 3/4	6 3/4	1/2	5/8	18	#3-1/2	750	6.73
5	3 7/16	8 1/16	5/8	5/8	18	#3-5/8	750	8.95
6	4	9 9/16	3/4	3/4	24	#4-3/4	1070	14.59
8	5 1/4	11 15/16	7/8	7/8	24	#5-7/8	1350	24.33
10	6 1/4	14 1/16	7/8	7/8	30	#5-7/8	1730	27.7
12	7 7/16	15 13/16	1	7/8	30	#5-1	2400	39.62
14	8 5/16	17 3/4	1 1/8	1	36	#6-1 1/8	3130	57.61
16	9 3/8	19 3/4	1 1/4	1	36	#6-1 1/4	3970	87.57
18	10 3/8	21 7/8	1 1/4	1	42	#6-1 1/4	4200	99.54
20	11 1/2	24 1/4	1 1/4	1 1/4	42	#8-1 1/4	4550	131.82
24	13 13/16	28 5/8	1 1/2	1 1/2	42	#9-1 1/2	6160	219.74

*Axle lengths may affect B dimension. Contact supplier before pre drilling holes.

LB&A, INC
LINN BROWN & ASSOCIATES
A UTILITY SERVICE COMPANY

HWARG3B • 1/09

NON-CONDUCTIVE PIPE ROLLER DIMENSIONS HANGER MOUNTED MODEL



HANGER RODS, NUTS, SOCKETS AND AXLE ARE DESCRIBED IN OUR PIPE HANGER CATALOG

(IN INCHES)

MODEL NUMBER	NOMINAL PIPE SIZE - A	C	D	E	F
2 H	2	2 5/8	1 1/4	13/16	3/8
2 1/2 H*	2 1/2	3 1/4	1 1/2	7/8	1/2
3 H	3	3 3/4	1 5/8	7/8	1/2
4 H	4	4 3/4	2	1 1/2	1/2
5 H	5	5 13/16	2 3/8	1 1/2	5/8
6 H	6	6 7/8	2 3/4	1 3/4	3/4
8 H	8	8 7/8	3 1/8	2 1/8	7/8
10 H	10	11	3 5/8	2 1/8	7/8
12 H	12	12 1/2	4	2 1/8	1
14 H	14	14 1/2	4 1/2	2 1/2	1 1/8
16 H	16	16 1/4	5	2 5/8	1 1/4
18 H	18	18 3/8	5 9/16	2 3/4	1 1/4
20 H	20	20 1/4	5 3/4	3 1/2	1 1/4
24 H	24	24 1/4	7 1/16	4 1/8	1 1/2
LARGER SIZES ON SPECIAL ORDER					

*SPECIAL ORDER

E&S CONTROL NOTES:

1. ALL ACTIVITIES AND MATERIALS SHALL STRICTLY CONFORM WITH THE "BEST MANAGEMENT PRACTICES" AND OTHER INFORMATION AS PROVIDED IN "STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION", FORM 818.

2. PRIOR TO THE START OF ANY WORK, THE CONTRACTOR SHALL ASSIGN ONE PERSON WHO WILL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF ALL SEDIMENTATION CONTROL MEASURES DESCRIBED HEREIN FOR THE DURATION OF THE PROJECT. ALL CONTROL MEASURES SHALL BE INSPECTED ON A DAILY BASIS THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIRED/REPLACED AS NECESSARY. THE NAME AND TELEPHONE NUMBER OF THAT PERSON SHALL BE GIVEN TO THE ENGINEER, TO THE OWNER'S ENVIRONMENTAL AGENT AND THE TOWNS REPRESENTATIVES AT THE PRE-CONSTRUCTION MEETING.

3. THE CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENT CONTROL MEASURES AT ALL CATCH BASINS SUBJECT TO SEDIMENT RUNOFF IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

4. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE AND BE MAINTAINED UNTIL PERMANENT STABILIZATION IS ESTABLISHED. EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED IN ACCORDANCE WITH "THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL".

5. EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AT LEAST EVERY 7 CALENDAR DAYS AND AFTER EACH RAINFALL OF 0.5" OR GREATER IN A 24 HOUR PERIOD. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES.

6. REQUIRED INSPECTION FORMS MUST BE COMPLETED AND MAINTENANCE RECORDS MUST BE KEPT ON-SITE IN A LOGBOOK THROUGHOUT CONSTRUCTION.

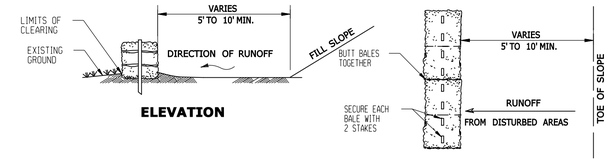
7. THE CONTRACTOR IS RESPONSIBLE TO KEEP PUBLIC RIGHT-OF-WAY CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.

8. THE NATURAL STREAMBED MATERIAL USED IN RESTORATION OF THE TRENCH CROSSING OF THE CHANNEL SHALL BE CLEAN AND VOID OF SILT AND FINES.

9. THE CONTRACTOR IS RESPONSIBLE TO REMOVE EROSION AND SEDIMENT CONTROL MEASURES AFTER THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

10. PUMPING OF SEDIMENT LADEN WATER FROM THE STREAM CROSSING AREA REQUIRES PUMP INTAKE AND OUTLET PROTECTION, PUMPING SETTLING BASIN OR PORTABLE SEDIMENT TANK.

11. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL THROUGHOUT CONSTRUCTION PERIOD AND UNTIL SITE IS PERMANENTLY STABILIZED.

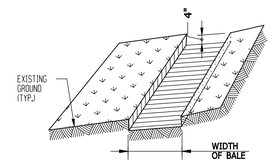


ELEVATION

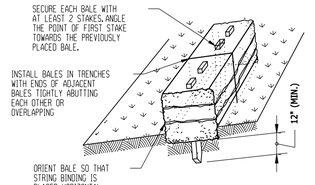
PLAN

INSTALLATION OF A STRAW BALE BARRIER AT TOE OF FILL

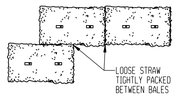
NOT TO SCALE



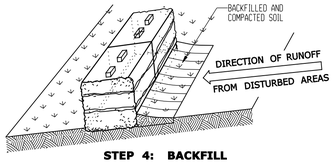
STEP 1: EXCAVATE TRENCH



STEP 2: INSTALL BALES



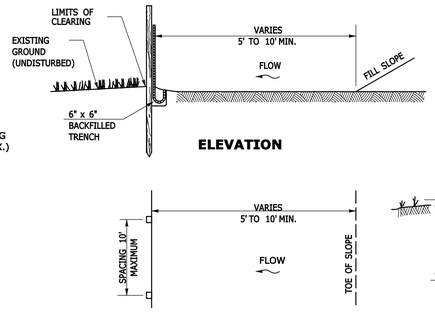
STEP 3: TIGHTLY PACK STRAW BETWEEN BALES (PLAN VIEW OF BALES)



STEP 4: BACKFILL SOIL AGAINST BALES

PROPERLY STAKED AND ENTRENCHED STRAW BALES

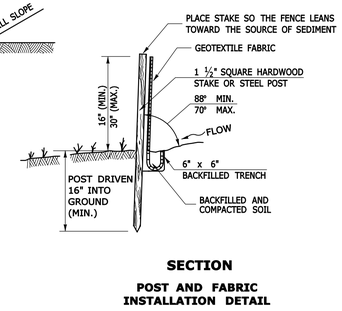
NOT TO SCALE



ELEVATION

PLAN

SILT FENCE INSTALLATION AT TOE OF FILL

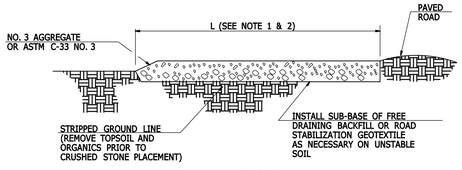


SECTION

POST AND FABRIC INSTALLATION DETAIL

PIPE ROLLER SUPPORT DATA:

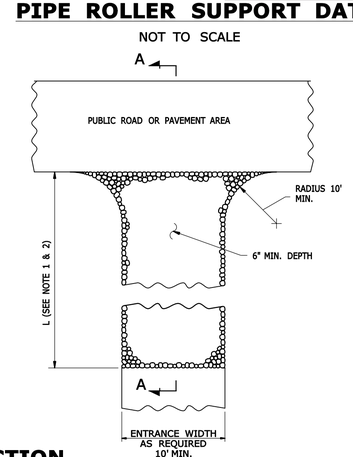
NOT TO SCALE



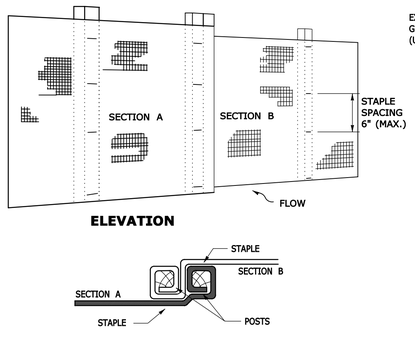
SECTION A-A

NOTES:

1. L=50' MIN. WHERE THE SOILS ARE SANDS OR GRAVELS.
2. L=100' MIN. WHERE THE SOILS ARE CLAYS OR SILTS.



PLAN



ELEVATION

PLAN

JOINING TWO ADJACENT SILT FENCE SECTIONS

SILT FENCE NOTE:

1. ALTERNATE PRE-ASSEMBLED EROSION/SEDIMENTATION CONTROL OPTIONS WILL BE ALLOWED AS LONG AS SPECIFIED DIMENSIONS ARE SATISFIED. FOLLOW MANUFACTURER'S INFORMATION FOR INSTALLATION PROCEDURES.

SILT FENCE

NOT TO SCALE

ANTI-TRACKING CONSTRUCTION ENTRANCE RAMP

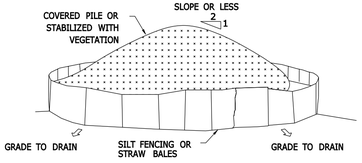
NOT TO SCALE

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.



MATERIAL STOCKPILING NOTES:

1. AREA CHOSEN FOR STOCKPILING SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING OR STRAW BALES, THEN COVERED OR STABILIZED WITH VEGETATION.

MATERIAL STOCKPILING DETAIL

NOT TO SCALE

DRAFT

CERTIFIED SUBSTANTIALLY CORRECT:

STATE OF CONNECTICUT THOMAS J. BOLZAK No. 17942 LICENSED PROFESSIONAL ENGINEER

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

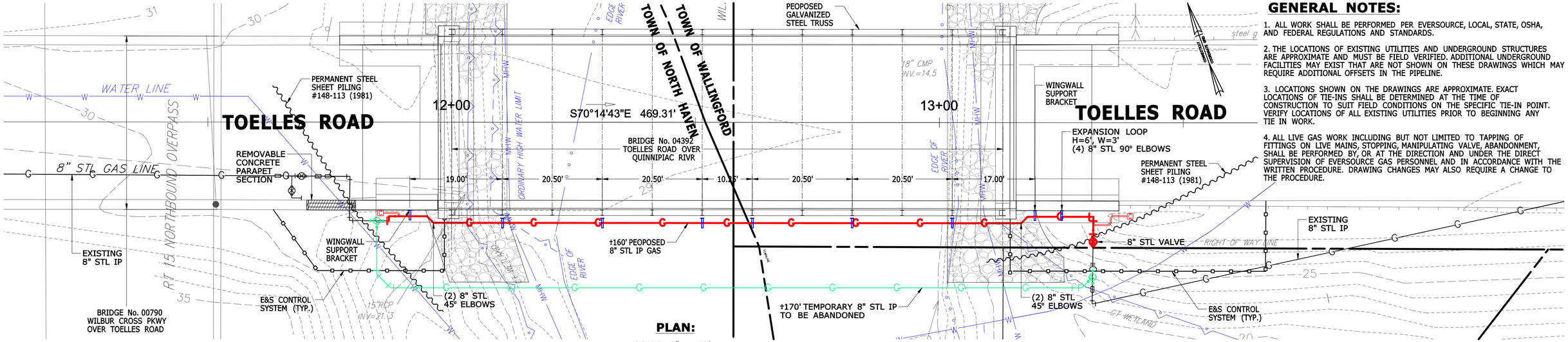
REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES RD, WALLINGFORD (8" STL IP) - TEMP. DETAILS

SCALE: AS NOTED SHEET: 6 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-06	A

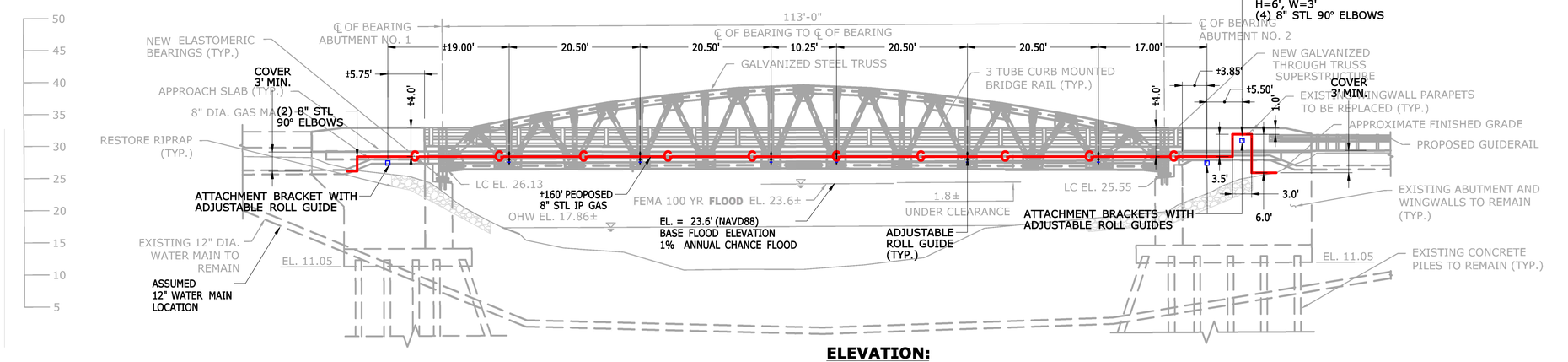
Filed: ...\22-021 6 TEMPORARY INSTALLATION DETAILS.dgn

Date: 4/12/2024 Time: 11:10:47 AM



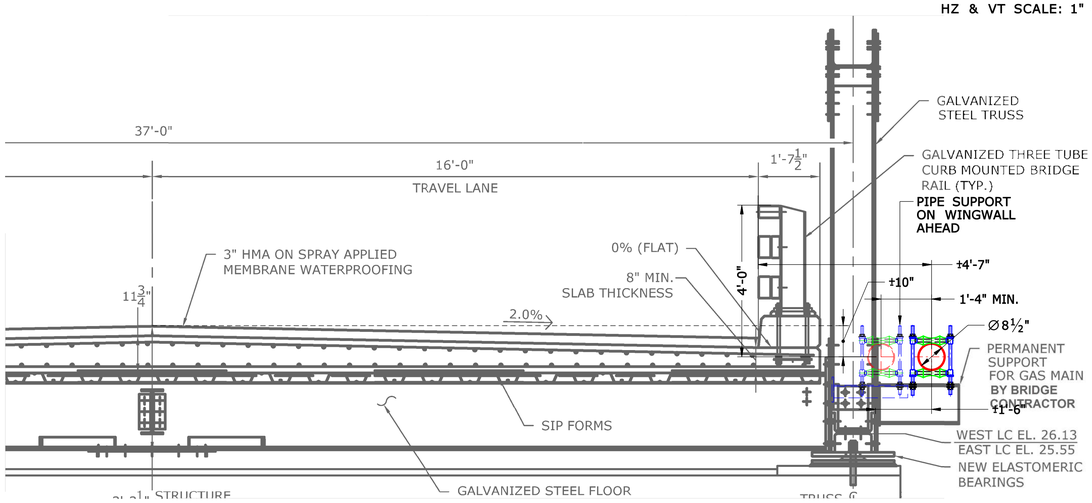
PLAN:

SCALE: 1" = 10'



ELEVATION:

HZ & VT SCALE: 1" = 10'



PARTIAL TYPICAL SECTION:

SCALE: ½" = 1' - 0"

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED PER EVERSOURCE, LOCAL, STATE, OSHA, AND FEDERAL REGULATIONS AND STANDARDS.

2. THE LOCATIONS OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. ADDITIONAL UNDERGROUND FACILITIES MAY EXIST THAT ARE NOT SHOWN ON THESE DRAWINGS WHICH MAY REQUIRE ADDITIONAL OFFSETS IN THE PIPELINE.

3. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT LOCATIONS OF TIE-INS SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION TO SUIT FIELD CONDITIONS ON THE SPECIFIC TIE-IN POINT. VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY TIE IN WORK.

4. ALL LIVE GAS WORK INCLUDING BUT NOT LIMITED TO TAPPING OF FITTINGS ON LIVE MAINS, STOPPING, MANIPULATING VALVE, ABANDONMENT, SHALL BE PERFORMED BY, OR AT THE DIRECTION AND UNDER THE DIRECT SUPERVISION OF EVERSOURCE GAS PERSONNEL AND IN ACCORDANCE WITH THE WRITTEN PROCEDURE. DRAWING CHANGES MAY ALSO REQUIRE A CHANGE TO THE PROCEDURE.

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING TOELLES ROAD BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

PIPE CROSSING DATA:

CONTENT TO BE HANDLED	NATURAL GAS
NORMAL OPERATING PRESSURE	60 PSI
NOMINAL PIPE SIZE	8"
OUTSIDE DIAMETER	8.625"
INSIDE DIAMETER	7.981"
WALL THICKNESS	0.322"
WEIGHT PER FOOT	25.58 LB/FT
MATERIAL	CARBON STEEL
PROCESS OF MANUFACTURE	SEAMLESS OR EWR
SPECIFICATION	ASTM A53 API 5L
GRADE OR CLASS	B MIN.
TEST PRESSURE	150 PSIG MIN.
TYPE OF JOINT	BUTT WELD
TYPE OF COATING	PRITEC 40/10 MIL
CATHODIC PROTECTION DETAILS	IMPRESSED CURRENT

SCALE 1" = 10

20 10 0 10 20

CERTIFIED SUBSTANTIALLY CORRECT:

STATE OF CONNECTICUT THOMAS J. BULZAK No. 17942 LICENSED PROFESSIONAL ENGINEER

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

WINGWALL ATTACHMENT:

SCALE: 1" = 1'-0"

DRAFT

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

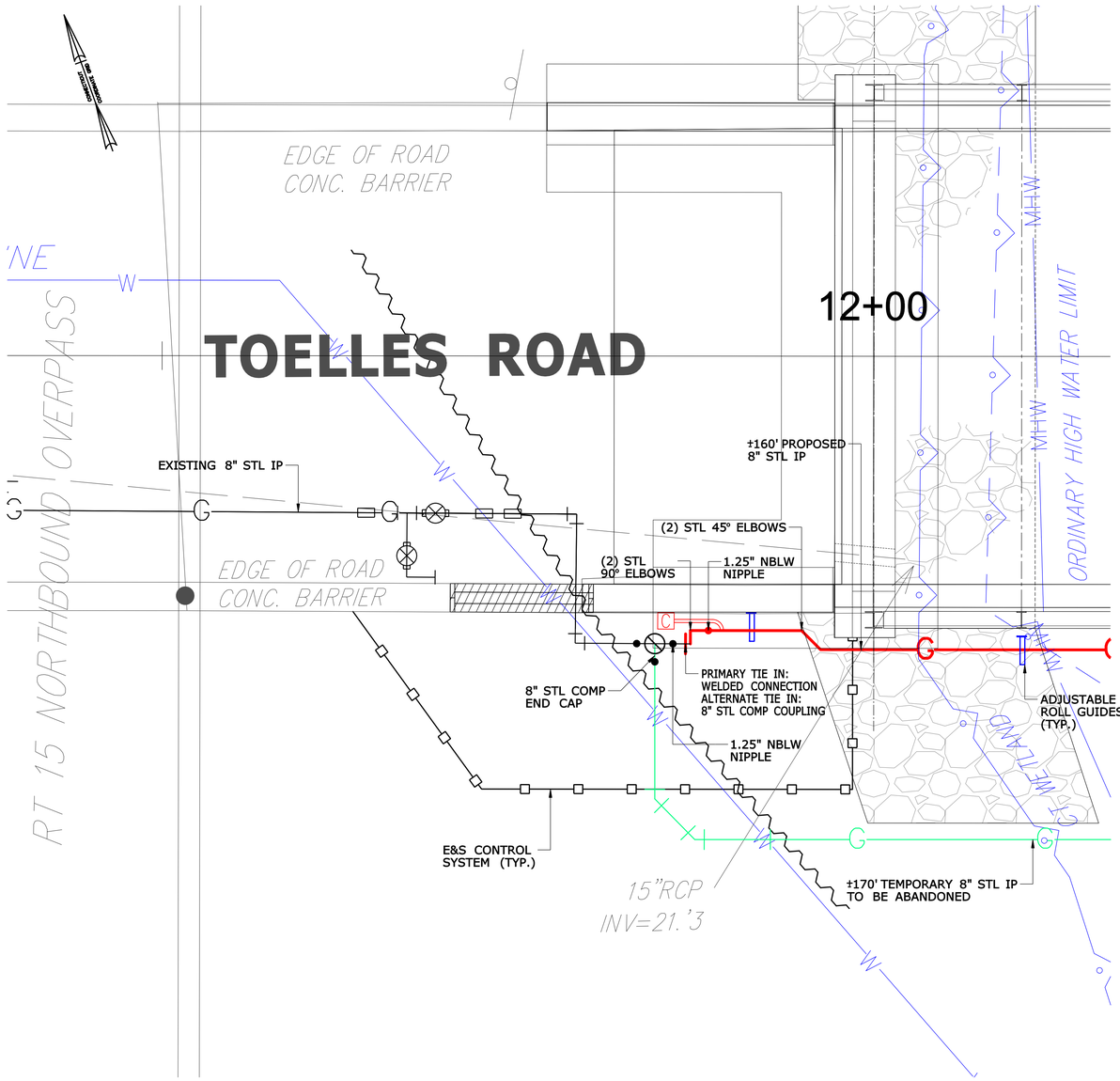
REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - PROPOSED PLAN & PROFILE

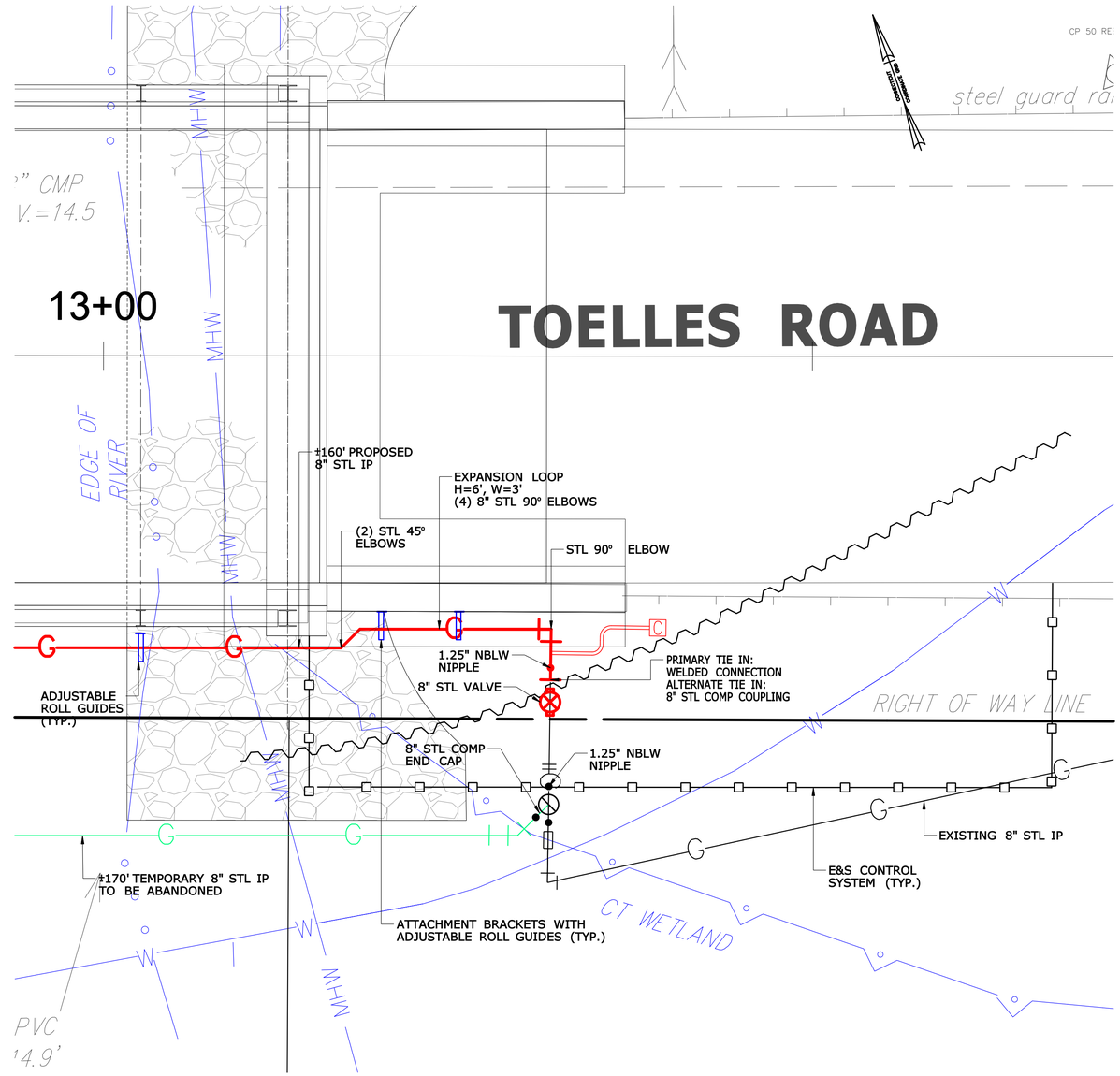
SCALE: AS NOTED SHEET: 7 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-07	A

Filed: ...\22-021 7 PROPOSED PLAN & ELEVATION.dgn

Date: 4/12/2024 Time: 11:21:46 AM





CONNECTION PLAN - WEST:

SCALE: 1" = 5'

CONNECTION PLAN - EAST:

SCALE: 1" = 5'

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

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SCALE 1" = 5

10 5 0 5 10

CERTIFIED SUBSTANTIALLY CORRECT:

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

STATE OF CONNECTICUT
THOMAS J. BULZACK
No. 17942
LICENSED PROFESSIONAL ENGINEER

FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER

PROJECT No. 21C301 - WALLINGFORD

TOELLES ROAD (8" STL IP) - PERMANENT CONNECTIONS

SCALE: AS NOTED SHEET: 8 OF 13

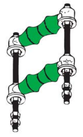
Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-08	A

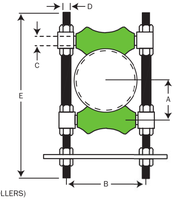
Filed: ...\22-021 8 PERMANENT CONNECTION DETAILS.dgn

Date: 4/12/2024 Time: 11:25:06 AM

ADJUSTABLE ROLL GUIDE

3B





ADJUSTABLE ROLL GUIDE INCLUDES:
4 ADJUSTABLE SOCKETS
2 ROLL AXLES
2 VERTICAL THREADED RODS
12 HEX NUTS
2 CAST IRON ROLLS (OMIT WHEN ORDERING NON-CONDUCTIVE ROLLERS)
SPECIFICATIONS MAY VARY - All Dimensions in inches

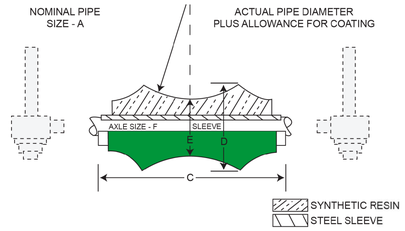
Pipe Size	A	*B	C	Rod Size D	E	Socket No.	Max. Load lbs.	Wt. lbs/ea.
2	1 9/16	4 1/8	3/8	3/8	12	#1-3/8	600	2.15
3	2 3/16	5 1/2	1/2	1/2	14	#2-1/2	700	4.34
4	2 3/4	6 3/4	1/2	5/8	18	#3-1/2	750	6.73
5	3 7/16	8 1/16	5/8	5/8	18	#3-5/8	750	8.95
6	4	9 9/16	3/4	3/4	24	#4-3/4	1070	14.59
8	5 1/4	11 15/16	7/8	7/8	24	#5-7/8	1350	24.33
10	6 1/4	14 1/16	7/8	7/8	30	#5-7/8	1730	27.7
12	7 7/16	15 13/16	1	7/8	30	#5-1	2400	39.62
14	8 5/16	17 3/4	1 1/8	1	36	#6-1 1/8	3130	57.61
16	9 3/8	19 3/4	1 1/4	1	36	#6-1 1/4	3970	87.57
18	10 3/8	21 7/8	1 1/4	1	42	#6-1 1/4	4200	99.54
20	11 1/2	24 1/4	1 1/4	1 1/4	42	#8-1 1/4	4550	131.82
24	13 13/16	28 5/8	1 1/2	1 1/2	42	#9-1 1/2	6160	219.74

*Axle lengths may affect B dimension. Contact supplier before pre drilling holes.

LB&A, INC
LINN BROWN & ASSOCIATES
A UTILITY SERVICE COMPANY

HWARG3B • 1/09

NON-CONDUCTIVE PIPE ROLLER DIMENSIONS HANGER MOUNTED MODEL



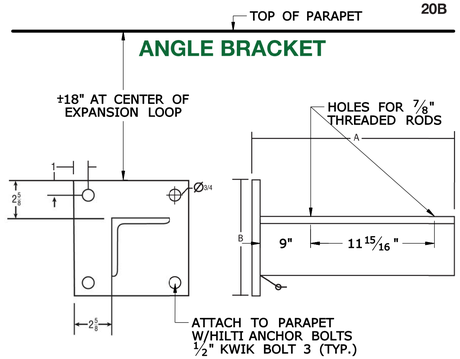
HANGER RODS, NUTS, SOCKETS AND AXLE ARE DESCRIBED IN OUR PIPE HANGER CATALOG
(IN INCHES)

MODEL NUMBER	NOMINAL PIPE SIZE - A	C	D	E	F
2 H	2	2 3/8	1 1/4	13/16	3/8
2 1/2 H*	2 1/2	3 1/4	1 1/2	1/8	1/2
3 H	3	3 3/4	1 5/8	1/8	1/2
4 H	4	4 3/4	2	1 1/2	1/2
5 H	5	5 13/16	2 3/8	1 1/2	5/8
6 H	6	6 7/8	2 3/4	1 3/4	3/4
8 H	8	8 7/8	3 1/8	2 1/8	7/8
10 H	10	11	3 5/8	2 1/8	7/8
12 H	12	12 1/2	4	2 1/8	1
14 H	14	14 1/2	4 1/2	2 1/2	1 1/8
16 H	16	16 1/4	5	2 5/8	1 1/4
18 H	18	18 3/8	5 9/16	2 3/4	1 1/4
20 H	20	20 1/4	5 3/4	3 1/2	1 1/4
24 H	24	24 1/4	7 1/16	4 1/8	1 1/2
LARGER SIZES ON SPECIAL ORDER					

*SPECIAL ORDER

20B

ANGLE BRACKET



Size	Max Load	A	B	Base Plate	Angle
1	610	14"	8"	1/2"x8"x8"	3/8" x 4"x4"
2	610	18"	8"	1/2"x8"x8"	3/8" x 4"x4"
3	610	24"	8"	1/2"x8"x8"	3/8" x 4"x4"

The angle bracket is generally used on bridge side walls with limited space. Fabricated from steel and available in hot dipped galvanized finish. Wedge anchors available for mounting.

Dimensions and finish can be changed upon request.

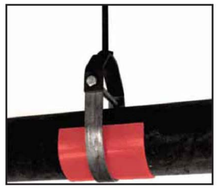
LB&A, INC
LINN BROWN & ASSOCIATES
A UTILITY SERVICE COMPANY

Advantages and Benefits of FRP Roll-On Shields:

- Easy to Install - Simply snap on and slide into place.
- The shields can be installed as an electrical insulator between buried steel pipes that are run parallel or may touch each other.
- No tools, banding, welding or adhesives are required.
- Hanger disassembly not required on existing pipelines.
- 240° peripheral grip holds FRP Roll-On Shield in place even when clear of supporting structures.
- Roll-On Shields are durable, flexible and light weight for ease of handling, installation or storage. Their flexibility automatically compensates for most pipeline diameter variations including coating and coverings.
- Easily installed on existing pipelines; ideally suited for new construction.
- Significantly less expensive than insulated rollers.

Roll-On Shields Application Instructions:

1. With two hands, simply snap the shield onto the pipe at desired location and slide into place.
2. Be sure shield is centered on the hanger to allow for any pipeline movement.
3. Observe all necessary safety precautions when working at high elevations.
4. Epi-SEAL® Epoxy Seam Sealer is sometimes used to seal the corresponding surfaces of Roll-On Shields and uncoated mains.



FRP Roll-On Shield's unique 240° peripheral design is shown on insulated pipe with clevis hanger.

Roll-On Shield Sizes*

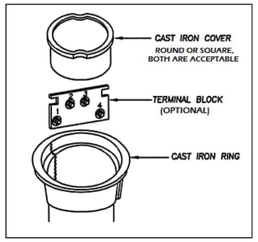
Shield Nos.	Fit Pipe Diams. (Nominal)	Shield Length
2	2"	6"
4	4"	6"
6	6"	9"
8	8"	12"
10	10"	12"
12	12"	12"
16	16"	12"
18	18"	12"
20	20"	12"
24	24"	12"
30	30"	12"
36	36"	12"
*42	*42"	12"
*48	*48"	12"

* Special Order

Custom lengths and thicknesses available on a quote basis.

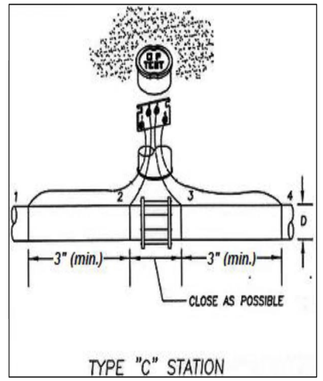
NOTE: Please see separate insert sheet for current FRP Roll-On Shield specifications, physical properties and dimensional data.

Identification of Test Stations



Type "C" Station

Wires 1 & 2 should be the same color and wires 3 and 4 should be the same color but a different color than 1 & 2.



TEST STATION TYPE "C"

NOT TO SCALE

PIPE ROLLER SUPPORT DATA:

NOT TO SCALE

CORROSION PROTECTION NOTES:

1. THE 8" STEEL MAIN SHALL BE FACTORY COATED PRITEC STEEL. AT ALL WELDS USE KLNN SHRINK SLEEVES.

2. AT EACH PIPE ROLLER USE A NON-CONDUCTIVE ROLLER AND A COMBINATION OF THE #220-240 FRP SHIELD TO PROVIDE MECHANICAL PROTECTION.

3. AT EACH ROLLER THE PIPE SHALL RECEIVE TRENTON #2 WAX TAPE AND PRIMER OVER THE PRITEC COATING.

4. AT EAST END OF THE BRIDGE INSTALL A TYPE C TEST STATION. OFFSET WIRES AND TS BOXES TO SIDE OF ROAD FOR SAFE TESTING.

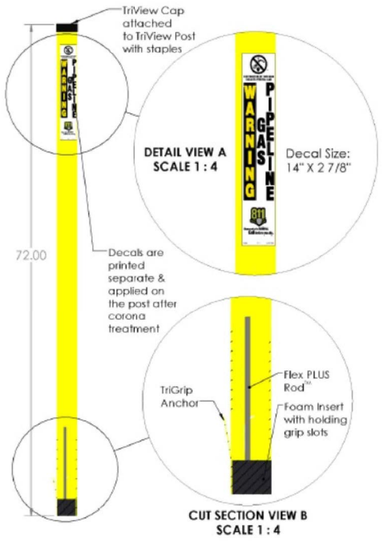
PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, AUGUST 1, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

Assembled View

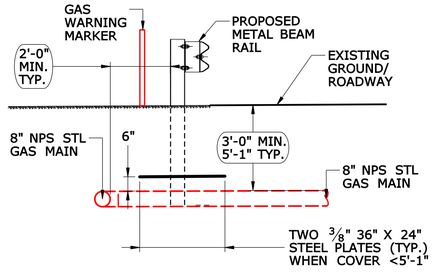


STAND ALONE WARNING SIGN

NOT TO SCALE

SIGN LEGEND

NOT TO SCALE



PIPE CROSSING AT GUIDERAIL

SCALE: 3/8" = 1'-0"

CERTIFIED SUBSTANTIALLY CORRECT:

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

STATE OF CONNECTICUT THOMAS J. BULZAK No. 17942 LICENSED PROFESSIONAL ENGINEER

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

DRAFT

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - PROPOSED DETAILS

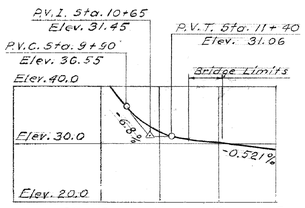
SCALE: AS NOTED SHEET: 9 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-09	A

Filed: ...\22-021 9 PROPOSED INSTALLATION DETAILS.dgn

Date: 4/12/2024 Time: 11:30:31 AM

FHWA REGION	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	Wallingford-North Haven	M-2563(3)	148-113	1981		19	35

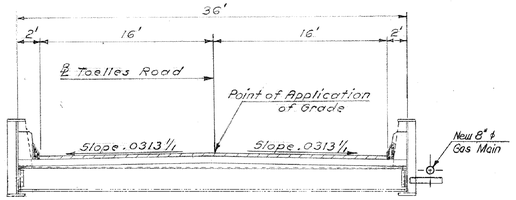


℄ PROFILE TOELLES ROAD

Scales: Horiz. 1"= 200'
Vert. 1"= 10'

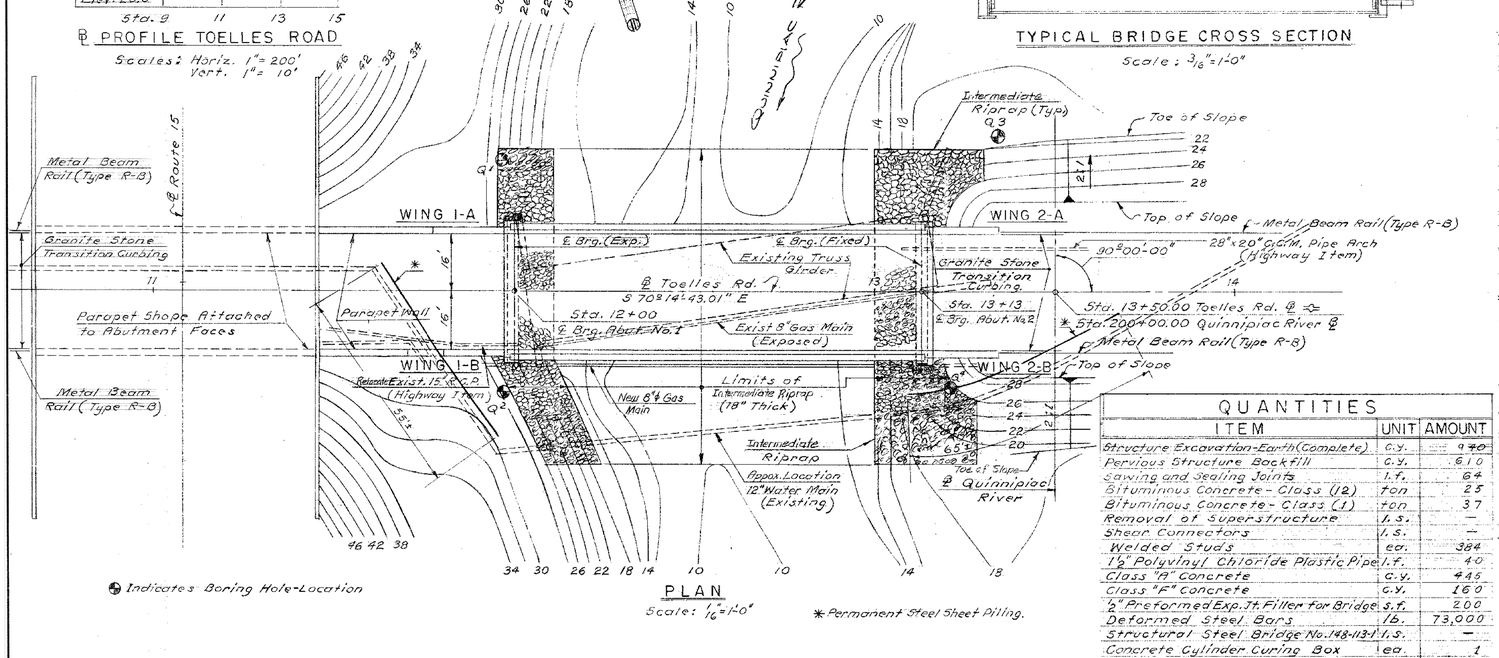
CONCRETE DISTRIBUTION

SUPERSTRUCTURE	C.Y.	160
SUBSTRUCTURE	C.Y.	300
FOOTINGS	C.Y.	145
TOTAL	C.Y.	605



TYPICAL BRIDGE CROSS SECTION

Scale: 3/16"=1'-0"



● Indicates Boring Hole-Location

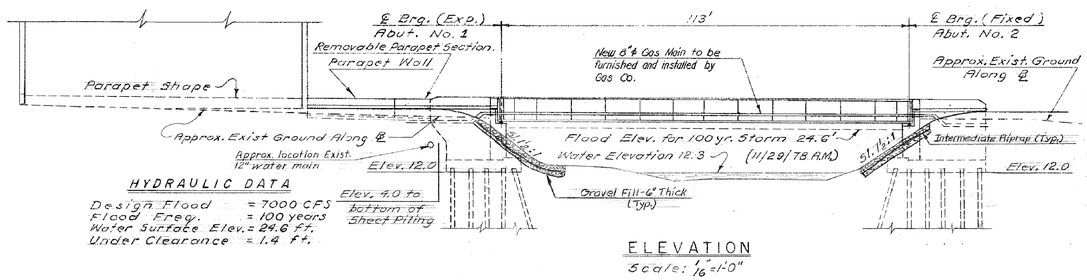
PLAN

Scale: 1/16"=1'-0"

✱ Permanent Steel Sheet Piling.

QUANTITIES

ITEM	UNIT	AMOUNT
Structure Excavation-Earth (Complete)	C.Y.	970
Pervious Structure Backfill	C.Y.	610
Sawing and Sealing Joints	L.F.	64
Bituminous Concrete - Class (12)	ton	25
Bituminous Concrete - Class (1)	ton	37
Removal of Superstructure	L.S.	—
Shear Connectors	L.S.	—
Welded Studs	ea.	384
1½" Polyvinyl Chloride Plastic Pipe	L.F.	40
Class "A" Concrete	C.Y.	445
Class "F" Concrete	C.Y.	160
½" Preformed Exp. Jt. Filler for Bridge	S.F.	200
Deformed Steel Bars	Lb.	73,000
Structural Steel Bridge No. 148-113-1	L.S.	—
Concrete Cylinder Curing Box	ea.	1
Cast-In-Place Concrete Piles	L.F.	2640
Intermediate Riprap	C.Y.	765
Membrane Waterproofing (Sheet)	S.Y.	470
Dampproofing	S.Y.	240
Permanent Steel Sheet Piling	L.F.	120
Bagged Stone	C.F.	32
6" C.I.P. Outlets for Underdrain	L.F.	70
8"x16" Sloped Granite Stone Curbing for Bridges	L.F.	370
Protective Compound for Bridges	S.Y.	160
Drilling Holes and Grouting Dowels	ea.	140
Removal of Existing Masonry	C.Y.	240
Gravel Fill	C.Y.	55



HYDRAULIC DATA

Design Flood = 7000 CFS
Flood Freq. = 100 years
Water Surface Elev. = 24.6 Ft.
Under Clearance = 1.4 Ft.

ELEVATION

Scale: 1/16"=1'-0"

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

NO.	DATE	DESCRIPTION
		REVISIONS

GENERAL NOTES

Specifications: Connecticut Department of Transportation Form 812 (1980), and Special Provisions.

Design Specifications: Standard Specifications for Highway Bridges (AASHTO-1977), with the Interim Specifications up to and including 1980, as supplemented by the Connecticut Department of Transportation Bridge Manual (1986).

Allowable Design Stresses: Class "A" & Class "F" Concrete Based on f'_c = 3000 psi.

Reinforcement (ASTM A 615 Grade 60) ℄ (tensile) = 24,000 psi.

Structural Steel ASTM A 588 F_t = 27,000 psi. All thickness to 4" incl.

Live Load: HS20-44.

Future Paving Allowance: None.

Additional Dead Load For Remain in Place Forms: 18 Lbs./S.F.

Composite Construction: No temporary intermediate supports shall be used during the placing and setting of the concrete deck slab. Temporary supports may be used for structural steel erection only. Live and superimposed dead loads will be permitted when directed by the Engineer but not less than 10 days after the final portion of deck slab has been placed.

Class "A" Concrete: Class "A" Concrete shall be used for the entire substructure and parapet walls.

Class "F" Concrete: Class "F" Concrete shall be used for bridge decks including sidewalks and parapets.

Joint Seal: See Special Provisions.

Paraffin: The cost of furnishing and applying paraffin is included in the item for Class "F" concrete.

Exposed Edges: Exposed edges shall be beveled 1"x1" unless dimensioned otherwise.

Structural Steel: See Structure Sheet Nos. 7 & 8 for A.S.T.M. designations.

Reinforcement: Grade 60 bars shall be used throughout the entire structure.

Paint: Paint shall conform to the requirements of Article 6.03.03-30C, "Colored Finish Vinyl System." The color of the final field coat of paint on the structural steel shall match the Department's Standard Bridge Color No. 6.06 (Blue).

Felt: The cost of furnishing and placing 15# felt is included in the item for "Class "A" Concrete."

Foundation Pressures and Pile Loads: The Various Group Loadings noted on the substructure plan sheets refer to the Group Loads as given in the A.A.S.H.T.O. Standard Specifications for Highway Bridges.

Construction Joints: Construction joints, other than those shown on the the plans, will not be permitted without prior approval of the Engineer.

Decimal Dimensions: When dimensions are given to less than three decimal places, the omitted digits shall be assumed to be zeros.

Utilities: The existing 12" water main shall remain in service at all times during construction. The Contractor shall notify the owner, the Town of Wallingford, before starting any work adjacent to the water main.

INSPECTION OF FIELD WELDS

METHOD	UNIT	QUANTITY
Radiographic or Ultrasonic	in.	0
Ultrasonic	in.	0
Magnetic particle	L.F.	0

The new 8"ϕ gas main and appurtenances shall be furnished and installed by Northeast Utilities.

CONNECTICUT
DEPARTMENT OF TRANSPORTATION

WALLINGFORD-NORTH HAVEN

TOELLES ROAD
OVER THE
QUINNIPIAC RIVER

GENERAL PLAN

ENGINEER BRIDGE DESIGN UNIT

DESIGNER W.F.C. DRAFTSMAN G.O.K. CHECKER G.D.B.

APPROVED _____ DATE 8/21/81

STRUCTURE NO. 148-113-1 BRIDGE LOG NO. STRUCTURE SHEET NO. 1 OF 10

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

CERTIFIED SUBSTANTIALLY CORRECT:

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

STATE OF CONNECTICUT THOMAS J. BULZACK No. 17942 LICENSED PROFESSIONAL ENGINEER

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - #148-113 (EXISTING) Sheet 1

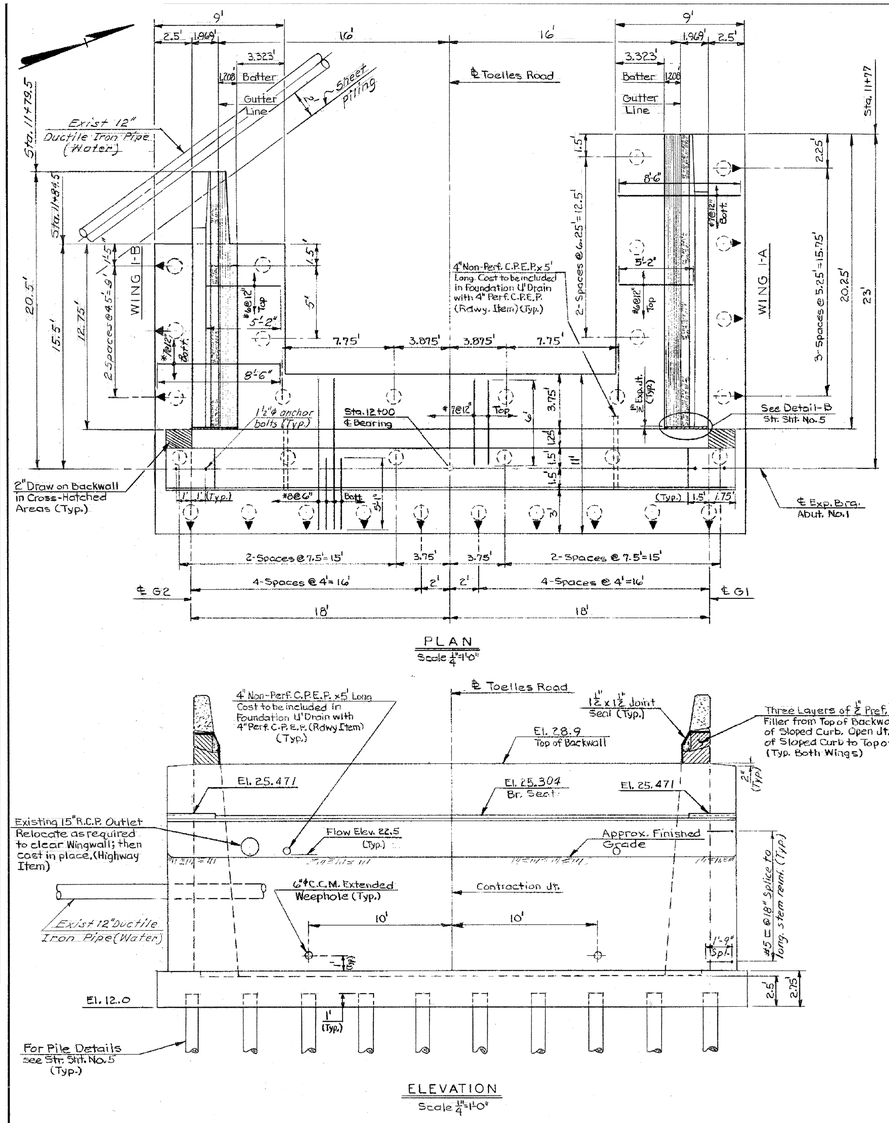
SCALE: AS NOTED SHEET: 10 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-10	A

Filed: ...\22-021 10 0148-0113 Sheet 1 DETAILS.dgn

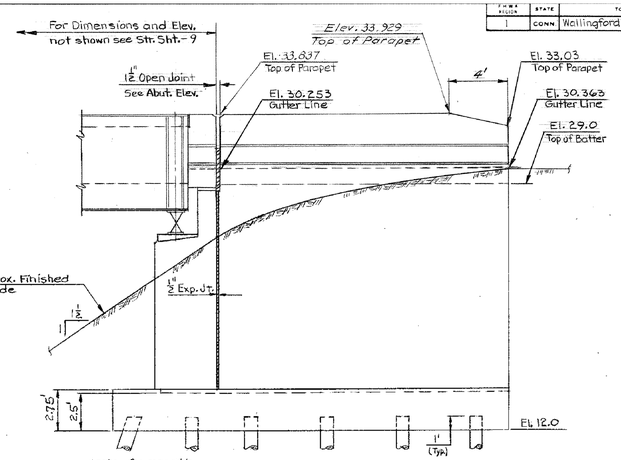
Date: 4/12/2024 Time: 11:35:14 AM

FUNCT. SYSTEM	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	Wallingford - North Haven	M-2563(3)	148-113	1981		21	35

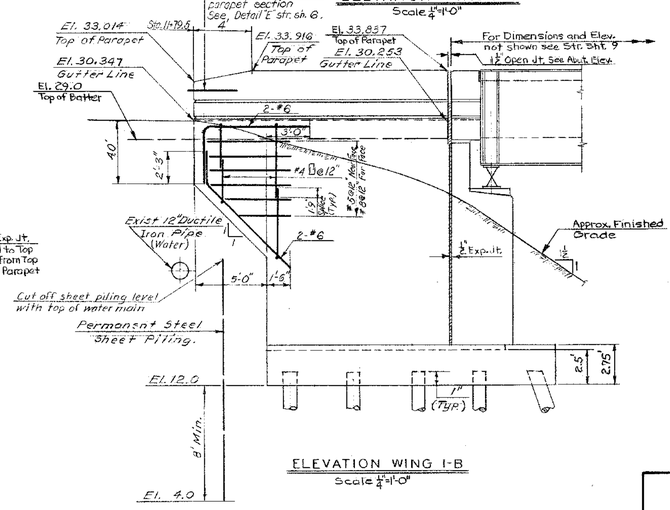


PLAN
Scale ¼"=1'0"

ELEVATION
Scale ¼"=1'0"



ELEVATION WING 1-A
Scale ¼"=1'0"



ELEVATION WING 1-B
Scale ¼"=1'0"

NOTES

For Typical Abutment & Wingwall Sections, see Structure Sheet No. 5.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

NO.	DATE	DESCRIPTION
		REVISIONS

CONNECTICUT
DEPARTMENT OF TRANSPORTATION

WALLINGFORD-NORTH HAVEN

TOELLES RD.

OVER

QUINNIPIAC RIVER

ABUTMENT NO.1 – WINGS 1-A & 1-B

ENGINEER Bridge Design Unit
DESIGNER W.F.C. | DRAFTER F.T.R. | CHECKER G.D.B.
APPROVED
DATE 8 | 21 | 81
STRUCTURE NO. 148-113-1
BRIDGE LOG NO.
STRUCTURE SHEET NO. 3 of 10

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

CERTIFIED SUBSTANTIALLY CORRECT:

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

STATE OF CONNECTICUT · THOMAS J. BULZAT · NO. 17942 · LICENSED PROFESSIONAL ENGINEER

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - #148-113 (EXISTING) Sheet 3

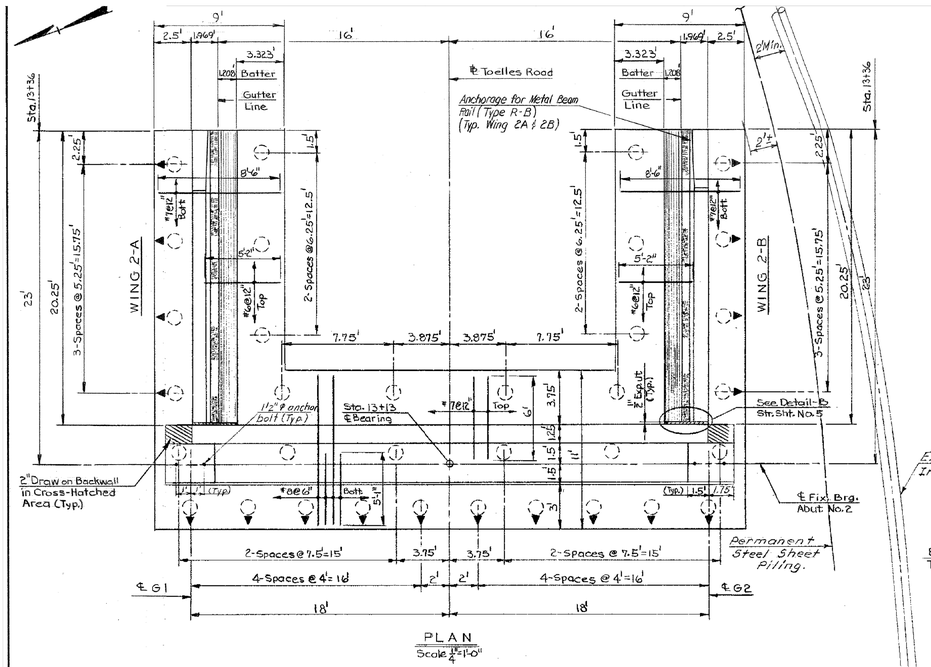
SCALE: AS NOTED SHEET: 11 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-11	A

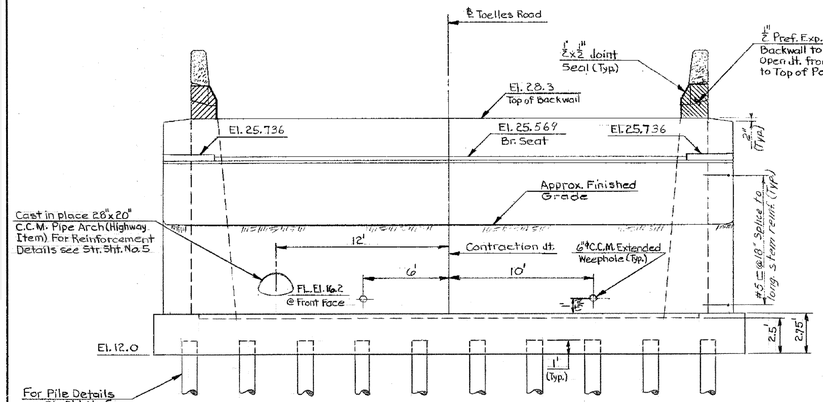
Filed: ..\22-021 11 0148-0113 Sheet 3 DETAILS.dgn

Date: 4/12/2024 Time: 11:34:27 AM

REGION	STATE	TOWN	PROJ. NO.	PROJ. NO	YEAR	PROJ. NO	SHEET NO	TOTAL SHEETS
1	CONN.	Wallingford-North Haven	M-2563(3)	148-113	1981		22	35



PLAN
Scale ¼"=1'-0"



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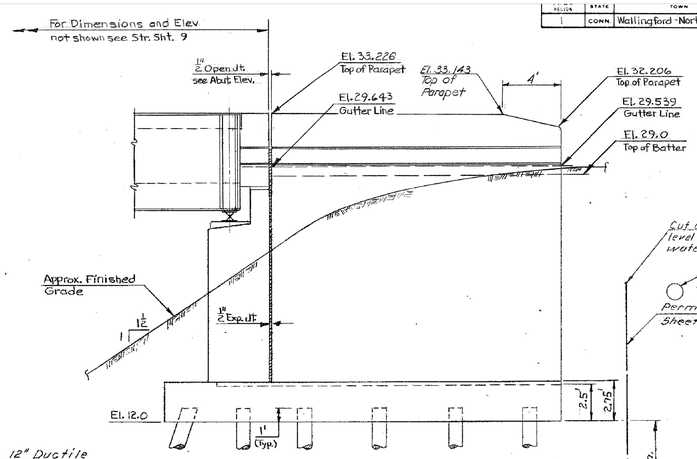
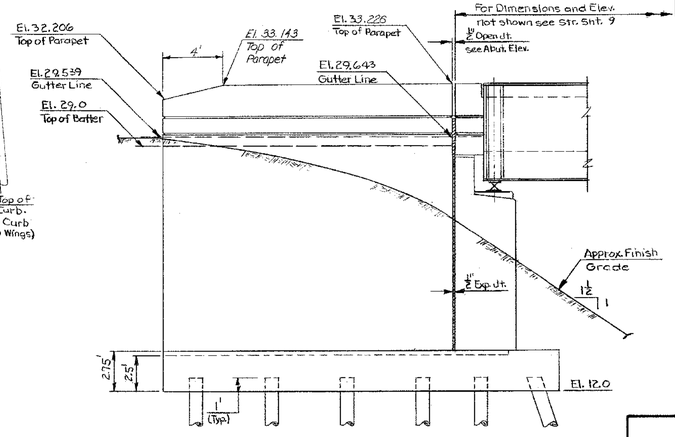


ELEVATION WING 2-B
Scale ¼"=1'-0"

NOTES

For Typical Abutment & Wingwall Sections, see Structure Sheet No. 5



ELEVATION WING 2-A
Scale ¼"=1'-0"

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NO.	DATE	DESCRIPTION
		REVISIONS

CONNECTICUT
DEPARTMENT OF TRANSPORTATION

WALLINGFORD-NORTH HAVEN

TOELLES RD.

OVER

QUINNIPIAC RIVER

ABUTMENT NO. 2 – WINGS 2-A & 2-B

ENGINEER Bridge Design Unit

DESIGNER W.E.C. | DRAFTER F.T.R. | CHECKER G.D.B.

APPROVED [signature] DATE 8/21/81

STRUCTURE NO. 148-113-1 | BRIDGE LOC NO. | STRUCTURE SHEET NO. 4 of 10

DRAFT

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

CERTIFIED SUBSTANTIALLY CORRECT:

[signature]

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

STATE OF CONNECTICUT THOMAS J. BULZACK No. 17942 LICENSED PROFESSIONAL ENGINEER

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - #148-113 (EXIST.) Sheet 4

SCALE: AS NOTED SHEET: 12 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-12	A

Filed: ...\22-021 12 0148-0113 Sheet 4 DETAILS.dgn

Date: 4/12/2024 Time: 11:42:12 AM

SERIES 16 SIGNS

THE 16-S SIGN SHALL BE USED ON ALL PROJECTS THAT REQUIRE SIDEWALK RECONSTRUCTION OR RESTRICT PEDESTRIAN TRAVEL ON AN EXISTING SIDEWALK.

SERIES 16 SIGNS SHALL BE INSTALLED IN ADVANCE OF THE TRAFFIC CONTROL PATTERNS TO ALLOW MOTORISTS THE OPPORTUNITY TO AVOID A WORK ZONE. SERIES 16 SIGNS SHALL BE INSTALLED ON ANY MAJOR INTERSECTING ROADWAYS THAT APPROACH THE WORK ZONE, ON LIMITED-ACCESS HIGHWAYS, THESE SIGNS SHALL BE LOCATED IN ADVANCE OF THE NEAREST UPSTREAM EXIT RAMP AND ON ANY ENTRANCE RAMPS PRIOR TO OR WITHIN THE WORK ZONE LIMITS.

THE LOCATION OF SERIES 16 SIGNS CAN BE FOUND ELSEWHERE IN THE PLANS OR INSTALLED AS DIRECTED BY THE ENGINEER.

SIGNS 16-E AND 16-H SHALL BE POST-MOUNTED.

SIGN 16-E SHALL BE USED ON ALL EXPRESSWAYS.

SIGN 16-H SHALL BE USED ON ALL RAMPS, OTHER STATE ROADWAYS, AND MAJOR TOWN/CITY ROADWAYS.

SIGN 16-M SHALL BE USED ON OTHER TOWN ROADWAYS.

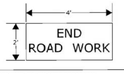
REGULATORY SIGN "ROAD WORK AHEAD, FINES DOUBLED"

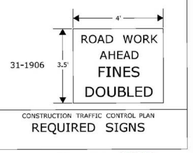
THE REGULATORY SIGN "ROAD WORK AHEAD FINES DOUBLED" SHALL BE INSTALLED FOR ALL WORK ZONES THAT OCCUR ON ANY STATE HIGHWAY IN CONNECTICUT WHERE THERE ARE WORKERS ON THE HIGHWAY OR WHEN THERE IS OTHER THAN EXISTING TRAFFIC OPERATIONS.

THE "ROAD WORK AHEAD FINES DOUBLED" REGULATORY SIGN SHALL BE PLACED AFTER THE SERIES 16 SIGN AND IN ADVANCE OF THE "ROAD WORK AHEAD" SIGN.

"END ROAD WORK" SIGN

THE LAST SIGN IN THE PATTERN MUST BE THE "END ROAD WORK" SIGN.





SCALE: NONE

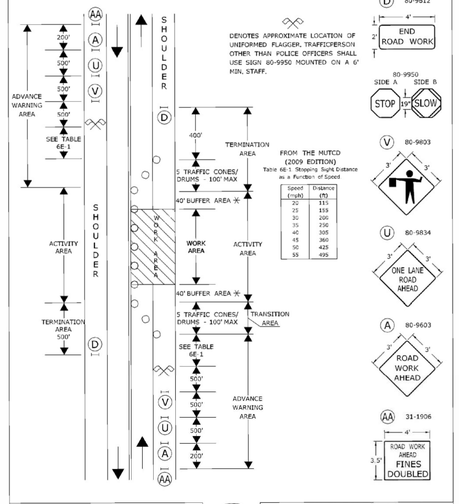
CONSTRUCTION TRAFFIC CONTROL PLAN
REQUIRED SIGNS

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED Charles S. Hartow 2012.09.05 11:35:43-04'00' PRINCIPAL ENGINEER

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

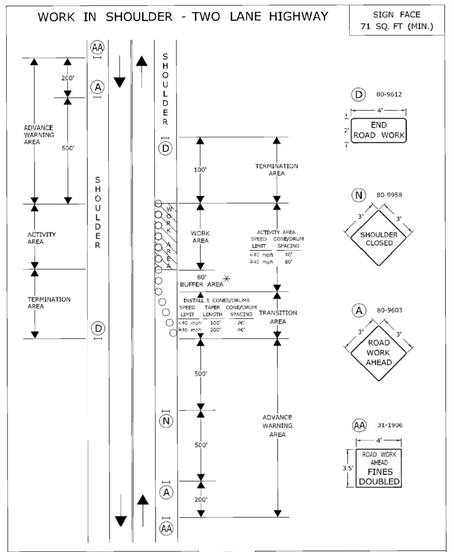
CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 1 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED Charles S. Hartow 2012.09.05 15:50:23-04'00' PRINCIPAL ENGINEER

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

CONNECTICUT DEPARTMENT OF TRANSPORTATION
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TRAFFIC CONTROL NOTES:

1. ALL VEHICULAR TRAFFIC ON TOELLES ROAD SHALL BE ADEQUATELY PROTECTED THROUGH THE USE OF APPROPRIATE TRAFFIC CONTROL PATTERNS AND DEVICES.

2. DURING CONSTRUCTION ON TOELLES ROAD THE CONTRACTOR SHALL EMPLOY TYPICAL CONSTRUCTION TRAFFIC CONTROL PLANS 13 THROUGH 15 WITH ASSOCIATED TEMPORARY SIGNING.

3. TRAFFIC CONTROL DEVICES ON TOELLES ROAD SHALL BE LOCATED AT SPACING FOR SPEED LIMIT LESS THAN 40 MPH.

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

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED Charles S. Hartow 2012.09.05 15:50:23-04'00' PRINCIPAL ENGINEER

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

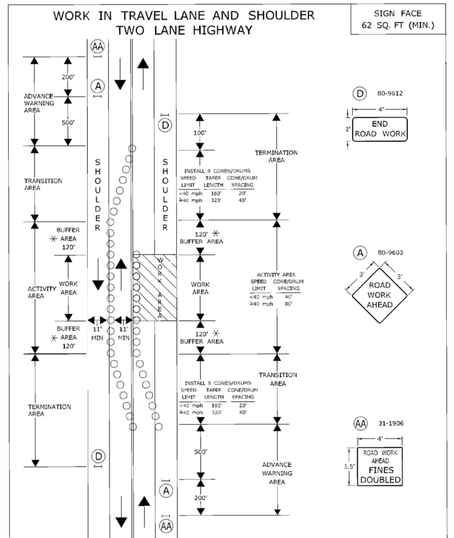
CONSTRUCTION TRAFFIC CONTROL PLAN
PLAN 13 - SHEET 2 OF 2
SEE NOTES 1, 2, 4, 6, 7, 8

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED Charles S. Hartow 2012.09.05 15:50:45-04'00' PRINCIPAL ENGINEER

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

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & CONSTRUCTION

APPROVED Charles S. Hartow 2012.09.05 15:50:23-04'00' PRINCIPAL ENGINEER

PROJECT PLAN REFERENCES:

1. TOWN OF WALLINGFORD, REHABILITATION OF BRIDGE NO. 04392 OVER THE QUINNIPIAC RIVER, WALLINGFORD, PROJECT NO. L148-0003 BY AI ENGINEERS, INC., 919 MIDDLE STREET MIDDLETOWN, CT 06457, FINAL DESIGN REVIEW - OCTOBER 22, 2022.

2. CONNECTICUT DEPARTMENT OF TRANSPORTATION, PLAN FOR REPLACEMENT OF BRIDGE AND APPROACHES ON TOELLES ROAD OVER THE QUINNIPIAC RIVER REHABILITATION OF BRIDGES IN THE TOWNS OF NORTH HAVEN & WALLINGFORD, STATE PROJECT #148-113, 1981.

3. COMPLETE PLANS OF THE EXISTING BRIDGE (STATE PROJECT #148-113) ARE AVAILABLE THROUGH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION.

DRAFT

CERTIFIED SUBSTANTIALLY CORRECT:

EcoDesign, LLC
for
SARGIS ASSOCIATES, INC.

STATE OF CONNECTICUT
THOMAS J. BULZAK
No. 17942
LICENSED PROFESSIONAL ENGINEER

FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION

No.	Description	Date	Dw/Ck
A	DRAFT ISSUED FOR REVIEW	04/15/24	TJB/NMK

Revision/Status

EVERSOURCE ENERGY

REHABILITATION OF BRIDGE No. 04392 over QUINNIPIAC RIVER
PROJECT No. 21C301 - WALLINGFORD
TOELLES ROAD (8" STL IP) - TCP

SCALE: NOT TO SCALE SHEET: 13 OF 13

Drawn by / Date	Checked by / Date	Drawing Number	Rev. No.
TJB 04/12/2024	NMK 04/12/2024	CT-CEN-PIP-22-042-13	A

Filed: ...\22-021 13 TCP DETAILS.dgn

Date: 4/12/2024 Time: 11:44:32 AM