KENSINGTON AVENUE CULVERT REPLACEMENT

MERIDEN, CONNECTICUT

FINAL DESIGN

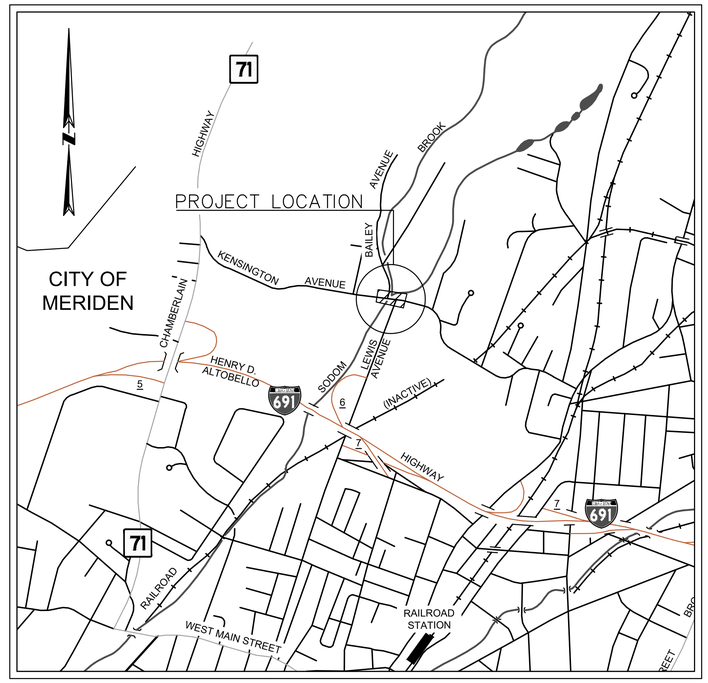
JUNE 18, 2020

STANDARD CONVENTIONS

Survey Control Point	Deciduous Tree
Monument Found	Deciduous Tree w/Wire
Iron Pin/Rebar Found	Coniferous Tree
Drill Hole	Coniferous Tree w/Wire
Property Corner (Calculated)	Shrub
Stone Pile	Brushline
Sewer Manhole	Treeline
Drain Manhole	Rock Outcrop
Catch Basin	Edge of Water
Yard Drain	Edge of Gravel
Hydrant	Delineated Wetland Boundary
Utility Pole	Wetland Flag
Guy Anchor	Wetlands
Concrete	Property Line
Bituminous Concrete	Abutting Property Line
Record Information	Easement Line
Set	Stone Wall
Found	Retaining Wall
Monitoring Well	Chain Link Fence
Mail Box	Stockade Fence
Fence Post	Post and Wire Fence
Metal Post	Picket Fence
Wood Post	Iron Fence
Accessible Parking Space	Split Rail Fence
Sign	Wood Guardrail
Double Post Sign	Steel Guardrail
	Wood/Cable Guardrail
	Steel/Cable Guardrail
	Overhead Wires

LIST OF DRAWINGS

SHEET NO.	TITLE	SHEET NO.	STANDARD DRAWINGS
T-01	TITLE SHEET	HW_INX 1 - 2	HIGHWAY STANDARD SHEET INDEX
EX-01	EXISTING CONDITIONS PLAN	HW-507_01	TYPE "C", "C-L" & DROP INLET CATCH BASIN
DES-01 - DES-02	DETAILED ESTIMATE SHEET	HW-507-07	TYPE "C", "C-L" CATCH BASIN TOPS AND CURBS
TYP-01	TYPICAL SECTIONS	HW-507-08	CATCH BASIN FRAMES AND GRATES
DET-01	EROSION & SEDIMENTATION CONTROL DETAILS	HW-507-10	MANHOLE - FRAME & COVER
PLN-01	ROADWAY PLAN	HW-811_01	CURBING
IGP-01	INTERSECTION GRADING PLAN	HW-815_01	BITUMINOUS CONCRETE CURBING
PLN-02	SIGNAGE & PAVEMENT MARKINGS PLAN	HW-949_02	PLANTING DETAILS FOR SHRUBS
PLN-03	PAVEMENT RESTORATION PLAN		SIDEWALK RAMPS SHEET 1
PRO-01	ROADWAY AND CULVERT PROFILE		SIDEWALK RAMPS SHEET 2
UTIL-01	PROPOSED WATER MAIN RELOCATION PLAN, PROFILE, & DETAILS		SIDEWALK RAMPS SHEET 3
UTIL-02	PROPOSED SEWER MAIN PLAN, PROFILE, & DETAILS		SIDEWALK RAMPS SHEET 4
SEC-01	CHANNEL RESTORATION GRADING	TR-STD_INDEX	TRAFFIC STANDARD SHEET INDEX
LA-01 - LA-03	STREAM BANK RESTORATION PLANS	TR-1208_02	METAL SIGN POSTS AND SIGN MOUNTING DETAILS
S-01	GENERAL PLAN, LONGITUDINAL SECTION AND ELEVATION	TR-1210_04	PAVEMENT MARKING LINES AND SYMBOLS
S-02	SUBSURFACE EXPLORATION PLAN AND LOGS	TR-1220_01	SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS
S-03	DEMOLITION LIMITS	GS-1	SIGN FACE SHEET ALUMINUM R-SERIES SIGNS TYPICAL DETAILS
S-04	WATER HANDLING PLAN (STAGE 1A & 1B)	GS-2	SIGN FACE SHEET ALUMINUM S&W-SERIES SIGNS TYPICAL DETAILS
S-05	WATER HANDLING PLAN (STAGE 1C)		
S-06	WATER HANDLING PLAN (STAGE 2)		
S-07	GENERAL CONSTRUCTION NOTES		
S-08	FRAMING PLAN, LONGITUDINAL SECTION AND TRANSVERSE SECTION		
S-09	PRECAST CONCRETE BOX CULVERT DETAILS		
S-10	CAST-IN-PLACE CONCRETE PARAPET DETAILS		
S-11	PREFABRICATED MODULAR RETAINING WALL ELEVATIONS		
TMP-01 - TMP-03	TRAFFIC MANAGEMENT AND DETOUR PLANS		
XSC-01 - XSC-06	CROSS SECTIONS		



PROJECT LOCATION PLAN

500 0 1000 2000 4000 feet

SCALE: 1" = 1000'±

GENERAL NOTES:

1. CONSTRUCTION SPECIFICATIONS:
   Connecticut Department of Transportation, Standard Specifications for Roads, Bridges, Facilities, and Incidental Construction, Form 817, dated 2016, Special Provisions, and City of Meriden Specifications.
2. 400 FOOT GRID BASED ON CONNECTICUT COORDINATE SYSTEM N.A.D. 1983
3. VERTICAL DATUM BASED ON NAVD 1988

DISCLAIMER

IT IS THE RESPONSIBILITY OF EACH BIDDER AND ALL OTHER INTERESTED PARTIES TO OBTAIN ALL BIDDING RELATED INFORMATION AND DOCUMENTS FROM OFFICIAL SOURCES.

PERSONS AND/OR ENTITIES WHICH REPRODUCE AND/OR MAKE SUCH INFORMATION AVAILABLE BY ANY MEANS ARE NOT AUTHORIZED BY THE CITY TO DO SO AND MAY BE LIABLE FOR CLAIMS RESULTING FROM THE DISSEMINATION OF UNOFFICIAL, INCOMPLETE AND/OR INACCURATE INFORMATION.

DESIGN CRITERIA

DESIGN STANDARDS: CTDOT HIGHWAY DESIGN MANUAL, 2003 EDITION,
CTDOT BRIDGE DESIGN MANUAL, CTDOT HYDRAULICS & DRAINAGE MANUAL

KENSINGTON AVENUE:
FUNCTIONAL CLASSIFICATION: MINOR URBAN ARTERIAL
POSTED SPEED:25 MPH

FINAL DESIGN PLANS

CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450
DATE: JUNE 18, 2020

PLANS FOR:
KENSINGTON AVENUE CULVERT REPLACEMENT
CITY OF MERIDEN, MERIDEN, CT 06450

PLANS PREPARED BY:

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

PLANS PREPARED FOR:

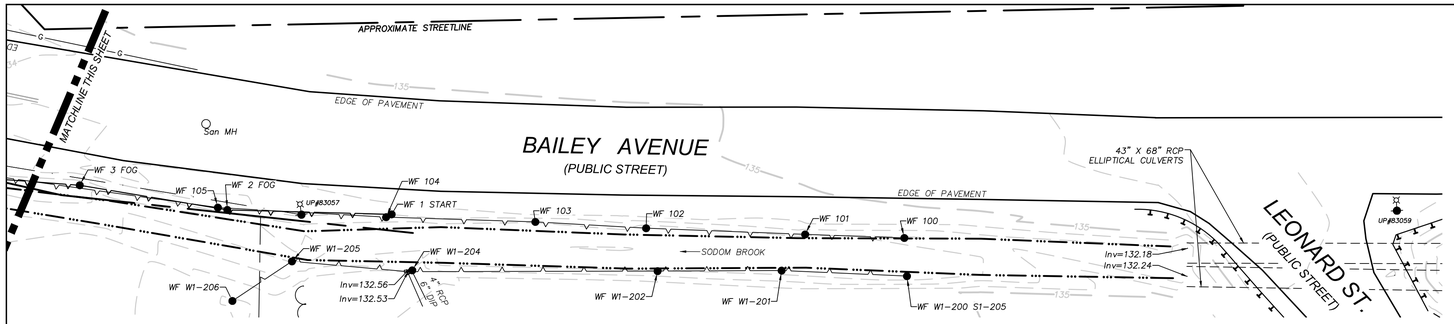
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

STATE OF CONNECTICUT
DALE L. SPRINGER
No. 22275
LICENSED
PROFESSIONAL ENGINEER

ISSUED FOR BIDDING - JUNE 18, 2020

REV.	DATE	REVISION DESCRIPTION	

T-01



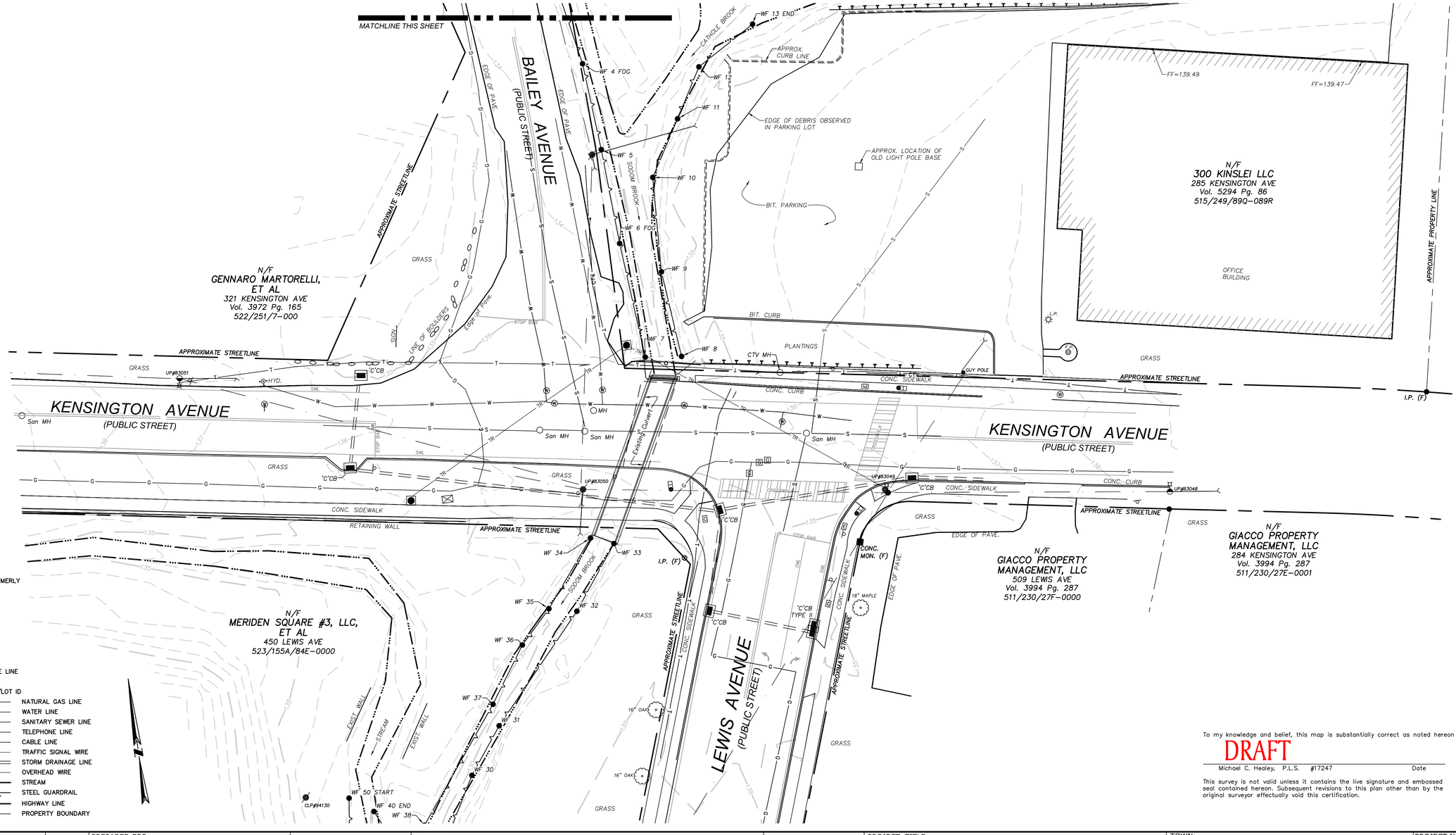
SURVEY NOTES

1. THIS SURVEY AND MAP HAVE 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 INTENT OF THIS SURVEY AND PLAN: DOCUMENT EXISTING CONDITIONS
3. THE FIELD SURVEY WAS PERFORMED ON THE GROUND BY BSC GROUP JULY 2017, AUGUST 2018, AND JUNE & JULY 2019.
4. THE REFERENCE MERIDIAN (NORTH ARROW) SHOWN IS BASED UPON NORTH AMERICAN DATUM OF 1983 (NAD83), AS DETERMINED FROM RTK/G.P.S.
5. EXISTING UTILITIES, WHERE SHOWN HEREON, ARE APPROXIMATE. NO GUARANTEE IS IMPLIED OR INTENDED AS TO THE ACCURACY, LOCATION OR THAT ALL UTILITIES AND/OR SUBSURFACE STRUCTURES ARE SHOWN. CONSULT WITH THE APPROPRIATE UTILITY COMPANY OR AGENCY PRIOR TO DESIGNING IMPROVEMENTS, COMMENCING DEMOLITION OR CONSTRUCTION. "CALL BEFORE YOU DIG" 1-800-922-4455.

MAP REFERENCE

REFERENCE HAS BEEN MADE TO THE FOLLOWING MAPS AND PLANS:

1. "PROPERTY SURVEY MERIDEN SQUARE LEWIS AVENUE, KENSINGTON AVENUE & CHAMBERLAIN HIGHWAY MERIDEN CONNECTICUT" DATE: 3/17/99 REVISED TO 5/5/99 SCALE: 1"=50' SHEET 3 OF 4 PREPARED BY CLOSE, JENSEN & MILLER, P.C. (M.L.R. 5561)
2. "RESUBDIVISION PLAN MERIDEN SQUARE MERIDEN CONNECTICUT PREPARED FOR H. CO. MAY CENTERS MERIDEN SQUARE PARTNERSHIP 611 OLIVE STREET, SUITE 1555, ST LOUIS, MISSOURI 63101-1797 (314)342-6200 SCALE: 1"=100 FEET 1"=30.480 METERS 29 OCTOBER 1991" SHEET 2 OF 5 PREPARED BY ALLAN H. SWANSON INC. (M.L.R. 5162)
3. "CITY ENGINEERS OFFICE MERIDEN, CONN. NOVEMBER, 1970 SCALE: HOR.1"=50' VERT1"=5' LEWIS AVENUE RECONSTRUCTION" DWG #3267
4. "SITE PLAN SOUTHERN NEW ENGLAND TELEPHONE OFFICE OF THE BUILDING ENGINEER-DESIGN MERIDEN TSPS 285 KENSINGTON AVE RENOVATIONS FOR OSPS CONV." SCALE: 1"=20' DATE: 2-22-91 REVISED 2-28-91 SHEET S1 OF 19
5. "MAP SHOWING PROPERTY OF CITY OF MERIDEN LEONARD STREET MAY 12, 1972 MERIDEN, CONN. BASE MAP TAKEN FROM MAP BY H.E. DAGGETT MARCH, 1921 SCALE 1"=50'"
6. "MAP OF LOTS A & B PROPERTY OF ANGLEO IODICE KENSINGTON AVE., MERIDEN, CONN. JUNE 1946. SCALE 1"=50' H.E. DAGGETT, CIVIL ENGINEER, MERIDEN, CONN." (M.L.R. #605)
7. "KENSINGTON AVE. FROM LEWIS AVENUE TO CHAMBERLAIN HWY. 1944 SCALE=50 FT. TO AN INCH."
8. "KENSINGTON AVE. FROM COLONY ST TO WEST SIDE KENSINGTON HGTS. 1915 FROM KENSINGTON HGTS. TO LEWIS AVE. MAY 1944 1"=50'"



LEGEND & ABBREVIATIONS

⊡	MONUMENT	N/F	NOW OR FORMERLY
○	CALCULATED POINT	CONC	CONCRETE
⊗	IRON PIPE	BIT	BITUMINOUS
●	IRON ROD	PAVE	PAVEMENT
	PEDESTRIAN SIGNAL	EXIST	EXISTING
	TRAFFIC SIGNAL POLE	SAN	SANITARY
	SIGN	MON	MONUMENT
	FLAG POLE	IP	IRON PIPE
	HYDRANT	IR	IRON ROD
W	WATER GATE VALVE	SWL	SINGLE WHITE LINE
G	GAS GATE VALVE	(F)	FOUND
	UTILITY POLE	522/251/7-0000	MAP/BLOCK/LOT ID
	UTILITY POLE WITH LIGHT	G	NATURAL GAS LINE
	MANHOLE	W	WATER LINE
S	CATCH BASIN	S	SANITARY SEWER LINE
T	ELECTRIC HAND HOLE	T	TELEPHONE LINE
C	CABLE HAND HOLE	CTV	CABLE LINE
TR	TRAFFIC CONTROL BOX	TR	TRAFFIC SIGNAL WIRE
	TREE		STORM DRAINAGE LINE
FP	FLAG POLE		OVERHEAD WIRE
LP	LIGHT POLE		STREAM
REF	REFERENCE		STEEL GUARDRAIL
VOL	VOLUME (LAND RECORDS)		HIGHWAY LINE
PG	PAGE (LAND RECORDS)		PROPERTY BOUNDARY

To my knowledge and belief, this map is substantially correct as noted hereon

DRAFT

Michael C. Healey, P.L.S. #17247 Date

This survey is not valid unless it contains the live signature and embossed seal contained hereon. Subsequent revisions to this plan other than by the original surveyor effectually void this certification.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003XCP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 20'
0 10 20 40

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DATE: MAY 6, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE: EXISTING CONDITIONS PLAN

PROJECT NO. 83640.03
DRAWING NO. EX-01
SHEET NO.

HIGHWAY AND STRUCTURE ITEMS

ITEM NUMBER	0201001A	0202000A	0202100	0202200	0202452	0202513	0202529	0202533	0204189A	0209001	0212000	0213100	0216000	0219011	0304002	0406154A	0406171	0406172	0406236	0406271	0406272A	0503866A	0507771	0507781	0586011.10	0586750	0601000	0601201	0601086A	0601201	0601086A	0601201	0601086A	0601201	0601086A	0601201
ITEM	CLEARING AND GRUBBING	EARTH EXCAVATION	ROCK EXCAVATION	CHANNEL EXCAVATION - EARTH	TEST PIT	REMOVAL OF CONCRETE SIDEWALK	CUT BITUMINOUS CONCRETE PAVEMENT	REMOVAL OF EXISTING CURBING	HANDLING WATER - PRECAST CONCRETE BOX CULVERT	FORMATION OF SUBGRADE	SUBBASE	GRANULAR FILL	PERVIOUS STRUCTURE BACKFILL	SEDIMENT CONTROL SYSTEM AT CATCH BASIN	PROCESSED AGGREGATE BASE	LEVELING COURSE	HMA S0.5	HMA S0.375	MATERIAL FOR TACK COAT	MILLING OF BITUMINOUS CONCRETE (0" TO 2")	MILLING OF BITUMINOUS CONCRETE (0" TO 4")	REMOVAL OF EXISTING CULVERT (SITE NO. 1)	RESET CATCH BASIN	RESET MANHOLE	TYPE 'C' CATCH BASIN - 0' - 10' DEEP	TYPE 'C' CATCH BASIN TOP	CLASS "A" CONCRETE	CLASS "F" CONCRETE	15' X 5' PRECAST CONCRETE BOX CULVERT	CLASS "F" CONCRETE	15' X 5' PRECAST CONCRETE BOX CULVERT	CLASS "F" CONCRETE	15' X 5' PRECAST CONCRETE BOX CULVERT	CLASS "F" CONCRETE	15' X 5' PRECAST CONCRETE BOX CULVERT	CLASS "F" CONCRETE
UNIT	LS	c.y.	c.y.	c.y.	ea.	s.y.	l.f.	l.f.	LS	s.y.	c.y.	c.y.	c.y.	ea.	c.y.	ton	ton	ton	gal	s.y.	s.y.	LS	ea.	ea.	ea.	ea.	c.y.	c.y.	l.f.	c.y.	l.f.	c.y.	l.f.	c.y.	l.f.	c.y.
QUANTITY	1	1620	81	285	1	125	110	240	1	410	250	100	725	5	165	20	210	225	90	825	975	1	1	1	2	1	7	8	1	8	1	8	1	8	1	8
SUBTOTAL	1	1620	81	285	1	125	110	240	1	410	250	100	725	5	165	20	210	225	90	825	975	1	1	1	2	1	7	8	1	8	1	8	1	8	1	8
UNASSIGNED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1	1620	81	285	1	125	110	240	1	410	250	100	725	5	165	20	210	225	90	825	975	1	1	1	2	1	7	8	1	8	1	8	1	8	1	8

HIGHWAY AND STRUCTURE ITEMS

ITEM NUMBER	0811105	0815093	0822001	0910300	0913973	0921001	0921005	0921039	0944000	0949001A	0950013	0950019A	0950020A	0969060	0970000A	0970007	0971001A	0975003	0976002	0978002	0979002	0980001	1003911A	1118012A	1208996	1208932	1208996	1208932	1208996	1208932	1208996	1208932	1208996	1208932	1208996	1208932
ITEM	CONCRETE CURBING CAST IN PLACE	BITUMINOUS CONCRETE PARK CURB	TEMPORARY PRECAST CONCRETE BARRIER CURB	METAL BEAM RAIL (R-B MASH)	PROTECTIVE FENCE(5' HIGH) - BRIDGE	CONCRETE SIDEWALK	CONCRETE SIDEWALK RAMP	DETECTABLE WARNING STRIP	FURNISHING AND PLACING TOPSOIL	FURNISHING, , PLANTING AND MULCHING TREES	EROSION CONTROL MATTING	TURF ESTABLISHMENT - LAWN	TURF ESTABLISHMENT - STREAM BANK	CONSTRUCTION FIELD OFFICE, SMALL	TRAFFIC PERSON	TRAFFICPERSON (UNIFORMED FLAGGER)	MAINTENANCE AND PROTECTION OF TRAFFIC	MOBILIZATION	BARRICADE WARNING LIGHTS - HIGH INTENSITY	TRAFFIC DRUM	CONSTRUCTION BARRICADE TYPE II	CONSTRUCTION STAKING	REMOVE AND REINSTALL SPAN POLE	REMOVAL AND/OR RELOCATION OF TRAFFIC SIGNAL	METAL SIGN POST	SIGN FACE - SHEET ALUMINUM (TYPE IV RETROREFLECTIVE	METAL SIGN POST	SIGN FACE - SHEET ALUMINUM (TYPE IV RETROREFLECTIVE	METAL SIGN POST	SIGN FACE - SHEET ALUMINUM (TYPE IV RETROREFLECTIVE	METAL SIGN POST	SIGN FACE - SHEET ALUMINUM (TYPE IV RETROREFLECTIVE	METAL SIGN POST	SIGN FACE - SHEET ALUMINUM (TYPE IV RETROREFLECTIVE SHEETING)	METAL SIGN POST	SIGN FACE - SHEET ALUMINUM (TYPE IV RETROREFLECTIVE
UNIT	l.f.	l.f.	l.f.	l.f.	l.f.	s.f.	s.f.	ea.	s.y.	LS	S.Y.	S.Y.	S.Y.	mo.	LS	hr	LS	LS	day	ea.	ea.	LS	ea.	LS	ea.	s.f.	ea.	s.f.	ea.	s.f.	ea.	s.f.	ea.	s.f.	ea.	s.f.
QUANTITY	400	200	300	425	35	1065	350	4	1500	1	1925	1500	1925	9	1	100	1	1	270	25	2	1	1	1	6	20	6	20	6	20	6	20	6	20	6	20	6	20
SUBTOTAL	400	200	300	425	35	1065	350	4	1500	1	1925	1500	1925	9	1	100	1	1	270	25	2	1	1	1	6	20	6	20	6	20	6	20	6	20	6	20	6	20
UNASSIGNED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	400	200	300	425	35	1065	350	4	1500	1	1925	1500	1925	9	1	100	1	1	270	25	2	1	1	1	6	20	6	20	6	20	6	20	6	20	6	20	6	20

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-EST.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: NONE

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE:
DETAILED ESTIMATE SHEET

PROJECT NO. 83640.03
DRAWING NO. DES-01
SHEET NO.

HIGHWAY AND STRUCTURE ITEMS

ITEM NUMBER	1302006A	1302061	1302062	1400005	1400006	1400106A	1400124A	1403001A	1403002A	1403010A	1403501A	1405103	1408455A	1802211	1803300A
ITEM	12" GATE VALVE	ADJUST GATE BOX (WATER)	ADJUST GATE BOX (GAS)	TRENCH EXCAVATION 0' - 15' DEEP (SANITARY SEWER)	ROCK IN TRENCH EXCAVATION 0'-15' DEEP (SANITARY SEWER)	18" PVC PIPE (SANITARY SEWER)	CONCRETE ENCASED 18" PVC PIPE (SANITARY SEWER)	MANHOLE (SANITARY SEWER)	MANHOLE OVER 10' DEEP (SANITARY SEWER)	MANHOLE FRAME AND COVER (SANITARY SEWER)	RESET MANHOLE (SANITARY SEWER)	BEDDING MATERIAL (SANITARY SEWER)	TEMPORARY SANITARY SEWER BYPASS	TEMPORARY SAND BARRELS (200 LB.)	IMPACT ATTENUATION SYSTEM (TANGENTIAL)
UNIT	ea.	ea.	ea.	c.y.	c.y.	l.f.	l.f.	ea.	ea.	ea.	ea.	c.y.	LS	EA.	ea.
QUANTITY	1	5	3	400	40	215	30	4	3	7	2	85	1	15	1
SUBTOTAL	1	5	3	400	40	215	30	4	3	7	2	85	1	15	1
UNASSIGNED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1	5	3	400	40	215	30	4	3	7	2	85	1	15	1

HIGHWAY AND STRUCTURE ITEMS

ITEM NUMBER	
ITEM	
UNIT	
QUANTITY	
SUBTOTAL	
UNASSIGNED	
TOTAL	

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-EST.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: NONE

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

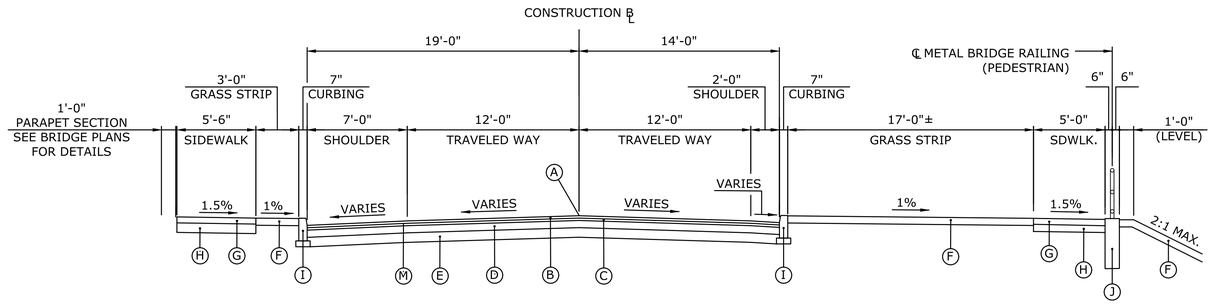
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE: KENSINGTON AVENUE CULVERT REPLACEMENT

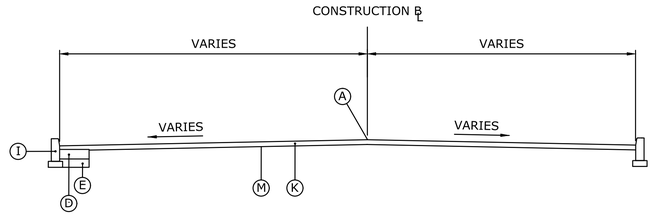
TOWN: MERIDEN

DRAWING TITLE: DETAILED ESTIMATE SHEET

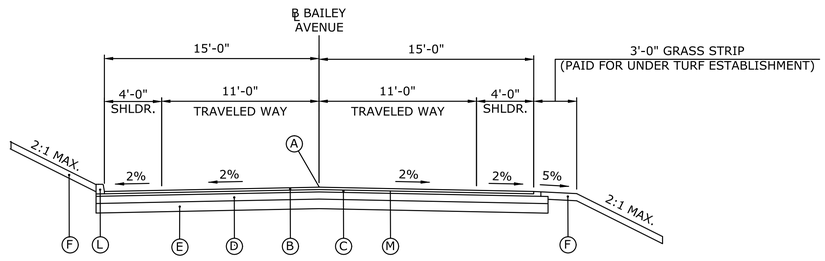
PROJECT NO. 83640.03
DRAWING NO. DES-02
SHEET NO.



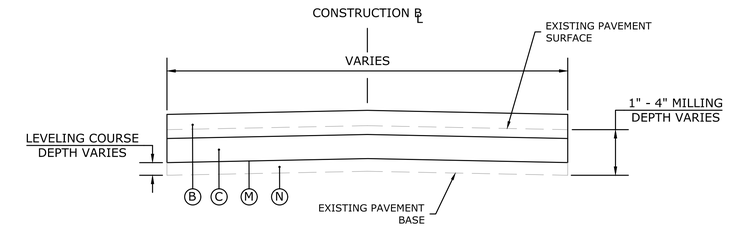
FULL DEPTH CONSTRUCTION



KENSINGTON AND LEWIS AVENUE - 2" MILLING AND PAVEMENT OVERLAY



BAILEY AVENUE - FULL DEPTH CONSTRUCTION
STA. 2+00 TO STA. 2+50



BAILEY, KENSINGTON, AND LEWIS AVENUE - 1" MILLING AND 4" OVERLAY WITH LEVELING COURSE
SCALE: NONE

LEGEND

- Ⓐ - POINT OF GRADE APPLICATION ALONG BASELINE
- Ⓑ - 2" HMA S0.375 (PLACED IN TWO EQUAL LIFTS)
- Ⓒ - 2" HMA S0.5 (PLACED IN TWO EQUAL LIFTS)
- Ⓓ - 6" PROCESSED AGGREGATE BASE
- Ⓔ - 8" GRAVEL SUBBASE (TWO EQUAL LIFTS)
- Ⓕ - 6" TOPSOIL AND SEED
- Ⓖ - 5" CONCRETE SIDEWALK
- Ⓗ - 8" PROCESSED AGGREGATE BASE
- Ⓘ - 6" PRECAST CONCRETE CURBING
- Ⓙ - 12" DIA. CONCRETE FOUNDATION FOR METAL BRIDGE RAILING (PEDESTRIAN)
- Ⓚ - VARIABLE THICKNESS HMA S0.5 OVERLAY (2" MIN.)
- Ⓛ - BITUMINOUS CONCRETE LIP CURBING
- Ⓜ - TACK COAT
- Ⓝ - LEVELING COURSE (DEPTH VARIES)
- Ⓞ - 1" - 4" MILLED SECTION

NOTES:

1. REFER TO PAVEMENT RESTORATION PLAN, SHT. PLN-03, FOR LIMITS OF CONSTRUCTION.
2. PROPOSED ROADWAY CROSS SLOPES VARY THROUGH LIMITS OF FULL DEPTH CONSTRUCTION AND MILLING. FOR PROPOSED GRADES, SEE INTERSECTION GRADING PLAN, SHT. IGP-01.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-TYP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

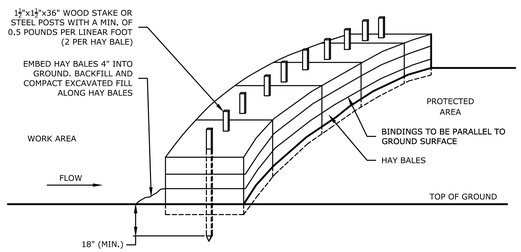
SCALE: 1" = 5'
0 2.5 5 10

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. TYP-01
DRAWING TITLE: TYPICAL SECTIONS AND PAVEMENT DETAILS
SHEET NO.



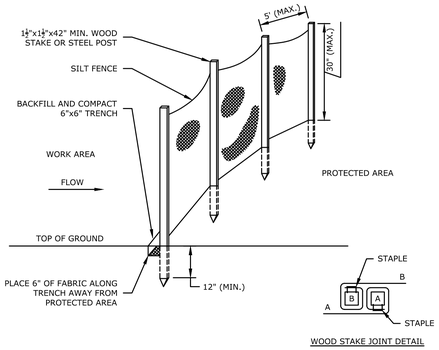
GENERAL NOTES

1. HAY BALES SHALL BE MADE OF HAY OR STRAW WITH 40 POUND MIN. WEIGHT AND 120 POUND MAX. WEIGHT HELD TOGETHER BY TWINE OR WIRE.
2. PLACE HAY BALES ON CONTOUR AND WING THE LAST HAY BALES UP SLOPE SO THAT THE TOP OF THE LAST SEVERAL HAY BALES ARE HIGHER THAN THE LINE OF HAY BALES.
3. DRIVE FIRST STAKE IN EACH BALE TOWARD THE PREVIOUSLY LAID BALE TO FORCE THEM TOGETHER.
4. PUT ONE HAY BALE PERPENDICULAR ALONG HAY BALE BARRIER EACH 100 FEET.

HAY BALE BARRIER

SCALE: NONE

EC-106-CT



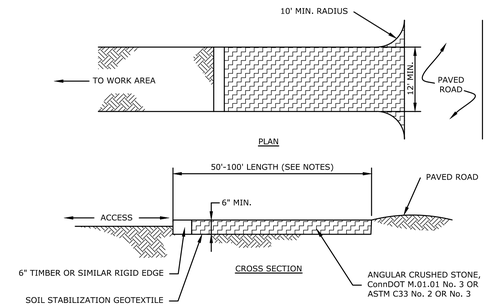
WOOD STAKE JOINT DETAIL

GENERAL NOTES

1. FOR SLOPE & SWALE INSTALLATIONS, EXTEND FENCE UP SLOPE SUCH THAT BOTTOM ENDS OF FENCE WILL BE HIGHER THAN THE TOP OF THE LOWEST PORTION OF FENCE.
2. FOR FENCE INSTALLED ON LEVEL TERRAIN INSTALL WING SECTIONS PERPENDICULAR TO MAIN BARRIER AT 50'-100' INTERVALS.

SEDIMENTATION CONTROL SYSTEM

SCALE: NONE



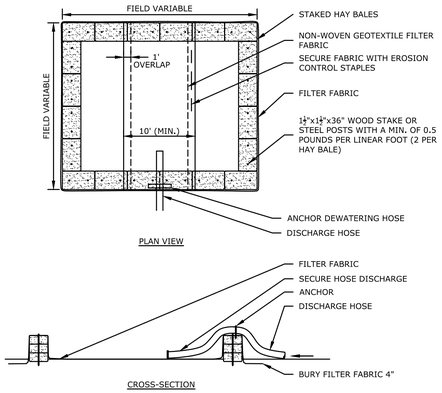
NOTES:

1. REMOVE TOPSOIL AND ORGANICS PRIOR TO CRUSHED STONE PLACEMENT.
2. INSTALL SUB-BASE OF FREE DRAINING BACKFILL OR ROAD STABILIZATION GEOTEXTILE AS NECESSARY ON UNSTABLE SOILS.
3. LENGTH SHALL BE 50 FOOT MINIMUM. WHERE TRACKED SEDIMENTS CONTAIN LESS THAN 80% SAND, LENGTH SHALL BE 100 FOOT MINIMUM.
4. IF THE GRADE OF THE CONSTRUCTION ENTRANCE DRAINS TO THE PAVED SURFACE AND IT EXCEEDS 2% SLOPE, CONSTRUCT ENTRANCE AT LEASE 15 FEET FROM ITS ENTRANCE ONTO THE PAVED SURFACE WHILE DIVERTING RUN-OFF WATER TO A SETTLING OR FILTERING AREA.
5. CONSTRUCT ANY DRAINAGE AND SETTLING FACILITIES REQUIRED TO ACCOMMODATE VEHICLE WASHING OPERATIONS. DIVERT ALL WASH WATER AWAY FROM ENTRANCE TO THE SETTLING AREA.
6. MAINTAIN ENTRANCE IS A CONDITION THAT WILL PREVENT WASHING OF SEDIMENT ONTO PAVED SURFACES.

CONSTRUCTION ENTRANCE

SCALE: NONE

EC-101-CT



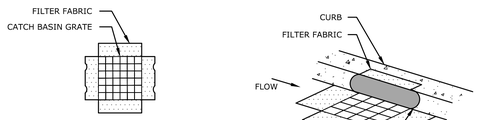
GENERAL NOTES

1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS.
2. THE BASIN TO BE SIZED ACCORDING TO: CUBIC FEET OF STORAGE = PUMP DISCHARGE RATE(gpm) x 16.
3. SIZE SHOWN ON PLANS SHALL BE ADJUSTED AS REQUIRED FOR THE ACTUAL PUMPING RATE.

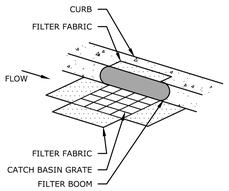
DEWATERING HAY BALE BASIN (TYPE 1)

SCALE: NONE

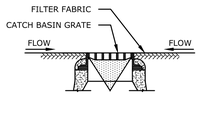
EC-114-CT



TYPE "C-L" CATCH BASIN - PLAN VIEW



TYPE "C" CATCH BASIN



TYPE "C-L" CATCH BASIN - SECTION VIEW

GENERAL NOTES

1. PROVIDE INLET PROTECTION TO ALL EXISTING CATCH BASINS IN THE VICINITY OF CONSTRUCTION. PROTECT NEW CATCH BASINS AS THEY ARE CONSTRUCTED.
2. GRATE TO BE PLACED OVER FILTER FABRIC.

SEDIMENT CONTROL SYSTEM AT CATCH BASIN

SCALE: NONE

TEMPORARY E&S MEASURES MAINTENANCE SCHEDULE

E&S MEASURE	MAINTENANCE MEASURES	SCHEDULE
FILTER INSERTS IN DRAINAGE SYSTEM	CLEAN CATCH BASIN GRATE, REMOVE SEDIMENT/DEBRIS FROM FILTER INSERTS	WEEKLY & WITHIN 24 HOURS AFTER STORM GENERATING A DISCHARGE
HAY BALES/ SILT FENCE BARRIER	REPAIR/REPLACE WHEN FAILURE OBSERVED, REMOVE SILT WHEN ACCUMULATION REACHES APPROX. HALF HEIGHT OF BARRIER	WEEKLY & WITHIN 24 HOURS AFTER STORM GENERATING A DISCHARGE
TARP TEMPORARY STOCKPILES	ENSURE TARP IS SECURED OVER STOCKPILE AT THE END OF EACH DAY	DAILY
CONSTRUCTION ENTRANCE	SWEEP PAVED ROADWAY ADJACENT TO SITE ENTRANCE AS NECESSARY, REFRESH STONE AS NECESSARY, REMOVE SILTED GRAVEL	WEEKLY
MOISTEN EXPOSED SOILS	PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS AND KEEP TRAVELWAYS DAMP	DAILY

SUGGESTED CONSTRUCTION SEQUENCE:

1. CONDUCT A PRE-CONSTRUCTION MEETING WITH THE OWNER AND ENGINEER PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. INSTALL CONSTRUCTION ENTRANCE(S) AND PLACE FILTER INSERTS IN EXISTING CATCH BASINS.
3. INSTALL PERIMETER E&S CONTROLS AND REQUEST PRE-CONSTRUCTION INSPECTION FROM THE ENGINEER.
4. FOLLOWING THE ENGINEER'S APPROVAL OF INSTALLED E&S CONTROLS, COMMENCE CONSTRUCTION OPERATIONS.
5. AT THE CONCLUSION OF CONSTRUCTION, COMPLETE THE INSTALLATION OF POST-CONSTRUCTION SITE STABILIZATION MEASURES AS SHOWN ON THE DRAWINGS.

NOTE: THE CONTRACTOR MAY MODIFY THE SUGGESTED CONSTRUCTION SEQUENCE INDICATED ABOVE, PROVIDED A REVISED SEQUENCE IS SUBMITTED FOR REVIEW AND APPROVED BY THE OWNER AND ENGINEER.

EROSION & SEDIMENTATION CONTROL NOTES:

1. SEE ROADWAY PLAN, SHT. PLN-01 AND WATER HANDLING PLANS, SHT. S-02 AND S-03, FOR LOCATION OF PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES.
2. DO NOT PROCEED WITH THE WORK UNTIL ALL E&S CONTROL MEASURES ARE IN-PLACE AND HAVE BEEN INSPECTED AND APPROVED BY THE ENGINEER.
3. THE MEASURES SPECIFIED HEREON ARE THE MINIMUM REQUIREMENTS FOR E&S CONTROL AND ARE SHOWN IN GENERAL SIZE AND LOCATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL E&S CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO ANY RESOURCE AREAS. PROVIDE ADDITIONAL E&S MEASURES AS REQUIRED TO CONTROL EROSION AND SILTATION THROUGHOUT THE DURATION OF THE CONSTRUCTION AS CONDITIONS DICTATE AND/OR AS DIRECTED BY THE OWNER OR THE ENGINEER.
4. MONITOR AND INSPECT ALL E&S MEASURES IN AN ONGOING MANNER THROUGHOUT THE WORK AND TAKE CORRECTIVE MEASURES, AS REQUIRED, TO MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO ANY RESOURCE AREAS.
5. ANY EROSION AND SEDIMENTATION MEASURE IMPLEMENTED BEYOND THAT SHOWN HEREON SHALL CONFORM TO APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT'S 2002 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL."
6. ANY STOCKPILED MATERIAL SHALL BE SUBJECT TO EROSION CONTROL MEASURES THAT INCLUDE A MINIMUM OF SILT FENCE OR HAY BALE BARRIER. COVER STOCKPILES IF SIGNIFICANT RAINFALL IS PREDICTED.
7. PROVIDE TEMPORARY SEEDING WITH MULCH ON ALL EXPOSED SOIL AREAS WHERE WORK WILL BE SUSPENDED FOR LONGER THAN 30 DAYS. APPLY SEED AND MULCH WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK. WHEN SEEDING IS NOT POSSIBLE DUE TO SEASONAL WEATHER CONDITIONS OR OTHER FACTORS, PROVIDE TEMPORARY STRUCTURAL SOIL PROTECTION SUCH AS MULCH, WOODCHIPS, EROSION CONTROL MATTING, OR COMPOST.
8. ALL TEMPORARY SLOPES IN EXCESS OF 3 (HORIZONTAL) TO 1 (VERTICAL) SHALL BE STABILIZED WITH EROSION CONTROL MATTING OR APPROVED EQUIVALENT.
9. NO RUNOFF SHALL BE ALLOWED TO ENTER ANY STORMWATER SYSTEM OR EXIT THE SITE PRIOR TO TREATMENT FOR SEDIMENT REMOVAL.
10. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS. ALL TRASH SHALL BE CLEANED ON A DAILY BASIS AND THE SITE SHALL BE LEFT IN A NEAT CONDITION AT THE END OF EACH WORK DAY.
11. TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS AND ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION, CONTROL, AND RESPONSE.
12. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER AND MAINTAIN ADEQUATE MOISTURE LEVELS.
13. SWEEP ADJACENT ROADWAYS IF MUD OR SOIL IS TRACKED ON TO THEM, OR AS DIRECTED BY THE ENGINEER. SHOULD THE STABILIZED CONSTRUCTION ENTRANCE FAIL TO PREVENT THE TRACKING OF SOILS OR SEDIMENT OFF OF THE PROJECT SITE, A WASHING RACK SHALL BE INSTALLED ALONG WITH APPROPRIATE MEASURES TO COLLECT RESULTING WASTEWATER.
14. SEDIMENT CONTROL SYSTEM AT CATCH BASINS SHALL BE INSTALLED AND CLEANED/CHANGED PER THE MANUFACTURER'S RECOMMENDATIONS. UNITS SHALL BE INSTALLED COMPLETELY AROUND INLETS OF EXISTING AND PROPOSED DRAINAGE STRUCTURES SUCH THAT NO RUNOFF IS ALLOWED TO ENTER DRAINAGE SYSTEMS WITHOUT FILTERING THROUGH THE DEVICE.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-DET.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

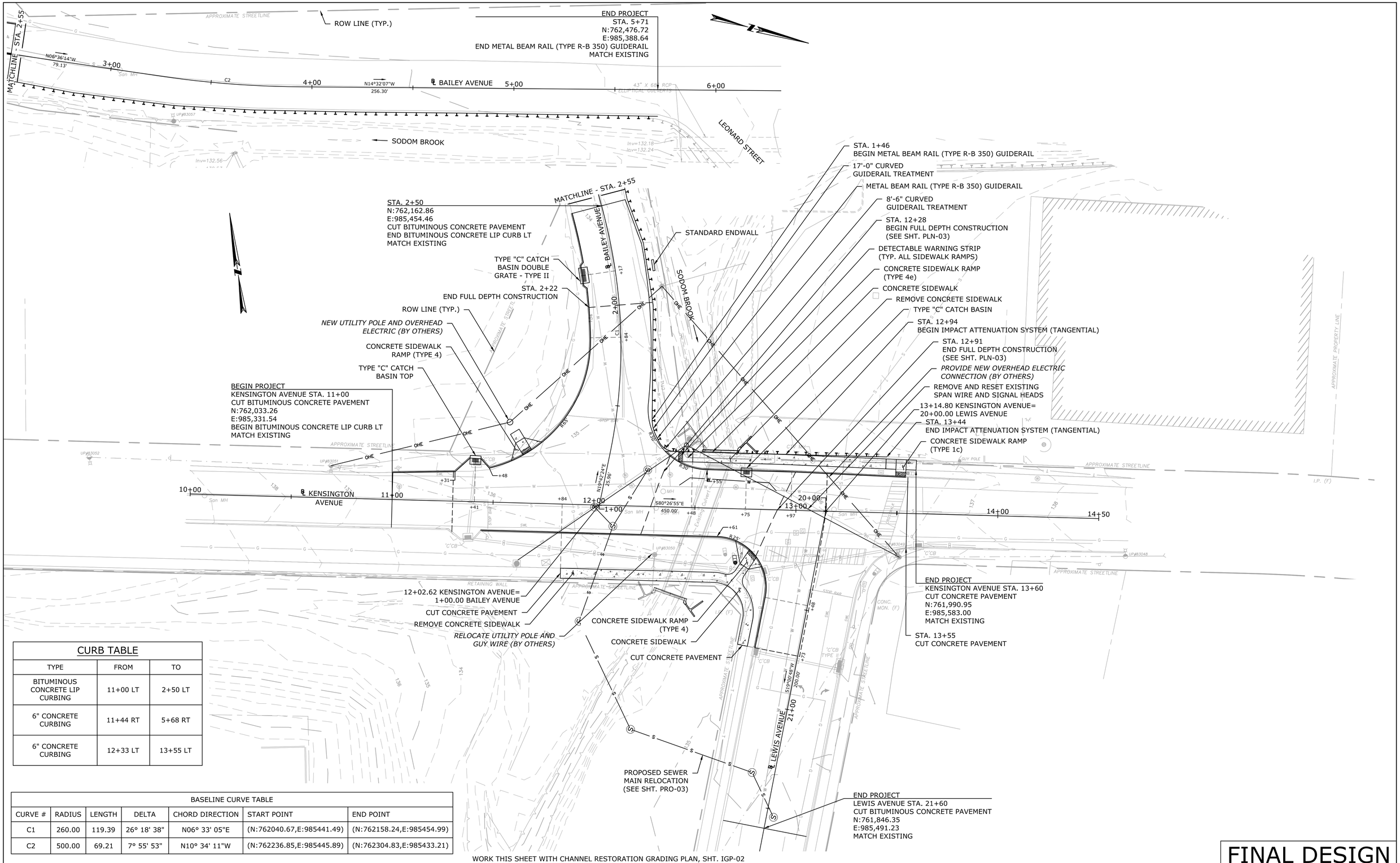
SCALE: NONE
0

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. DET-01
DRAWING TITLE: EROSION & SEDIMENTATION CONTROL DETAILS
SHEET NO.



CURB TABLE

TYPE	FROM	TO
BITUMINOUS CONCRETE LIP CURBING	11+00 LT	2+50 LT
6" CONCRETE CURBING	11+44 RT	5+68 RT
6" CONCRETE CURBING	12+33 LT	13+55 LT

BASELINE CURVE TABLE

CURVE #	RADIUS	LENGTH	DELTA	CHORD DIRECTION	START POINT	END POINT
C1	260.00	119.39	26° 18' 38"	N06° 33' 05"E	(N:762040.67,E:985441.49)	(N:762158.24,E:985454.99)
C2	500.00	69.21	7° 55' 53"	N10° 34' 11"W	(N:762236.85,E:985445.89)	(N:762304.83,E:985433.21)

WORK THIS SHEET WITH CHANNEL RESTORATION GRADING PLAN, SHT. IGP-02

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-PLAN.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 20'
0 10 20 40

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

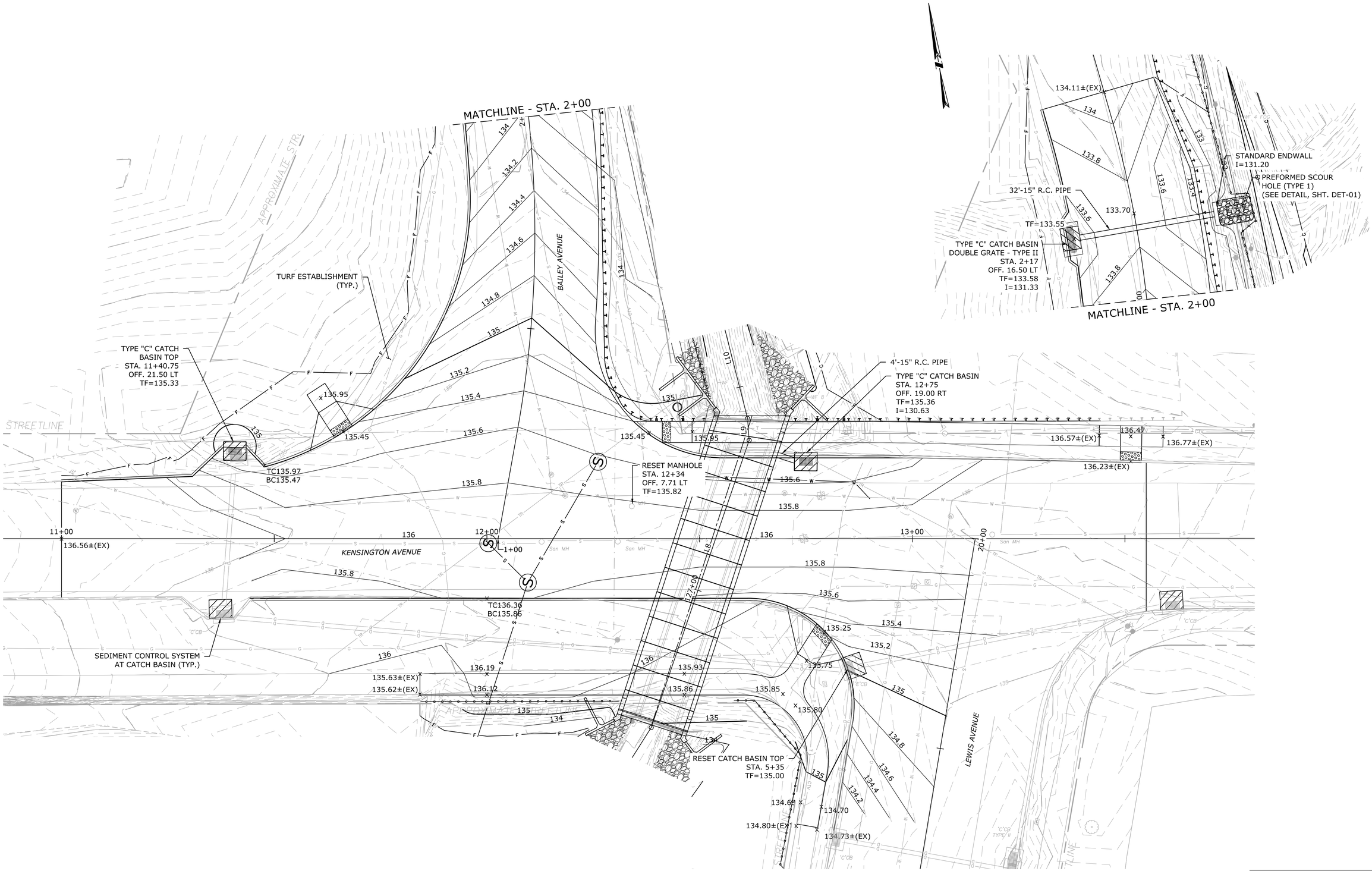
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE: ROADWAY PLAN

PROJECT NO. 83640.03
DRAWING NO. PLN-01
SHEET NO.



FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-IGP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

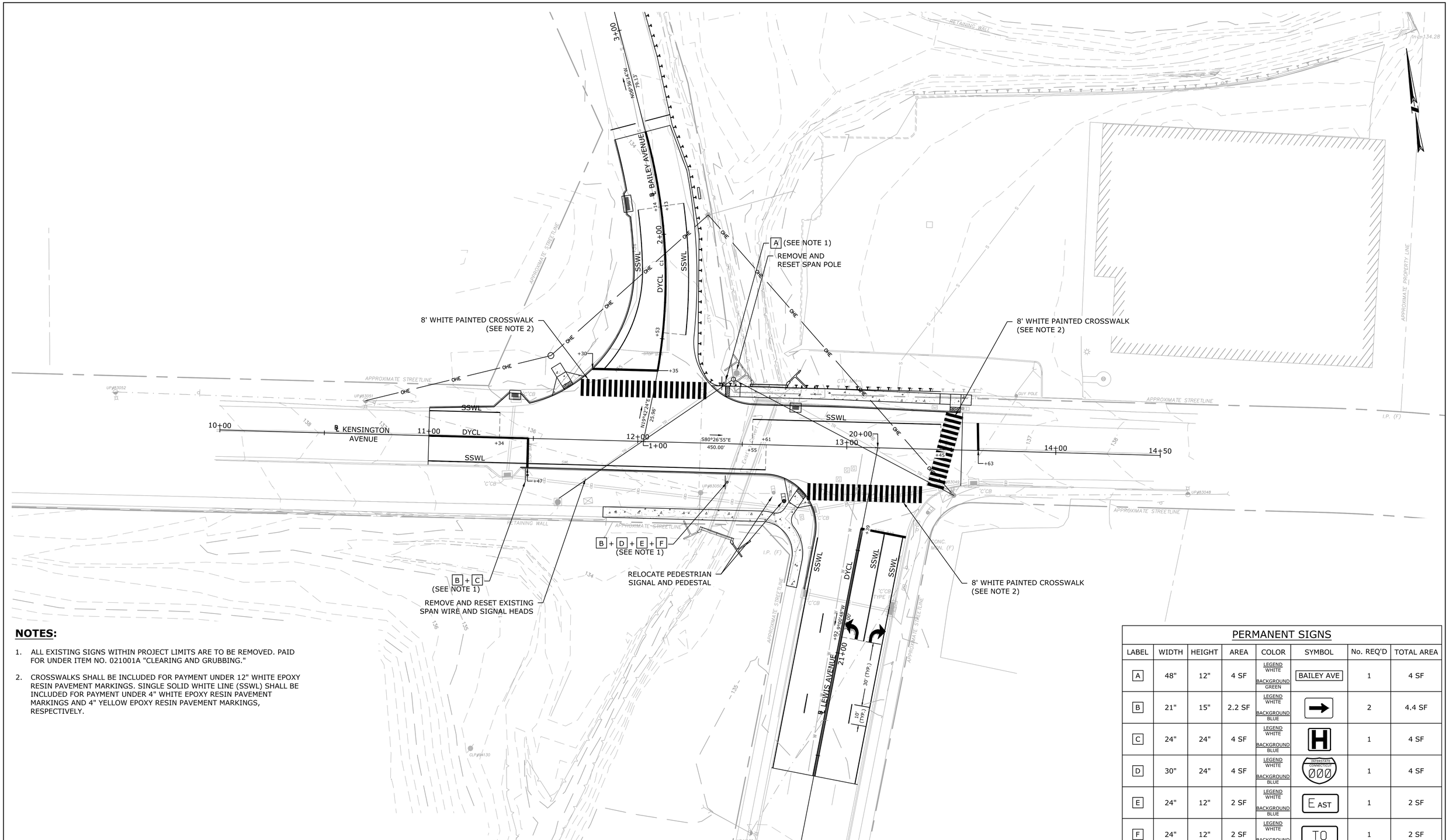
SCALE: 1" = 10'
0 5 10 20

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
DRAWING TITLE: INTERSECTION GRADING AND DRAINAGE PLAN
PROJECT NO. 83640.03
DRAWING NO. IGP-01
SHEET NO.



NOTES:

1. ALL EXISTING SIGNS WITHIN PROJECT LIMITS ARE TO BE REMOVED. PAID FOR UNDER ITEM NO. 021001A "CLEARING AND GRUBBING."
2. CROSSWALKS SHALL BE INCLUDED FOR PAYMENT UNDER 12" WHITE EPOXY RESIN PAVEMENT MARKINGS. SINGLE SOLID WHITE LINE (SSWL) SHALL BE INCLUDED FOR PAYMENT UNDER 4" WHITE EPOXY RESIN PAVEMENT MARKINGS AND 4" YELLOW EPOXY RESIN PAVEMENT MARKINGS, RESPECTIVELY.

PERMANENT SIGNS

LABEL	WIDTH	HEIGHT	AREA	COLOR	SYMBOL	No. REQ'D	TOTAL AREA
A	48"	12"	4 SF	LEGEND WHITE / BACKGROUND GREEN	BAILEY AVE	1	4 SF
B	21"	15"	2.2 SF	LEGEND WHITE / BACKGROUND BLUE	→	2	4.4 SF
C	24"	24"	4 SF	LEGEND WHITE / BACKGROUND BLUE	H	1	4 SF
D	30"	24"	4 SF	LEGEND WHITE / BACKGROUND BLUE	INTERSTATE CONNECTICUT 000	1	4 SF
E	24"	12"	2 SF	LEGEND WHITE / BACKGROUND BLUE	EAST	1	2 SF
F	24"	12"	2 SF	LEGEND WHITE / BACKGROUND BLUE	TO	1	2 SF
						7	20.4 SF

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–PLAN.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 20'
0 10 20 40

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

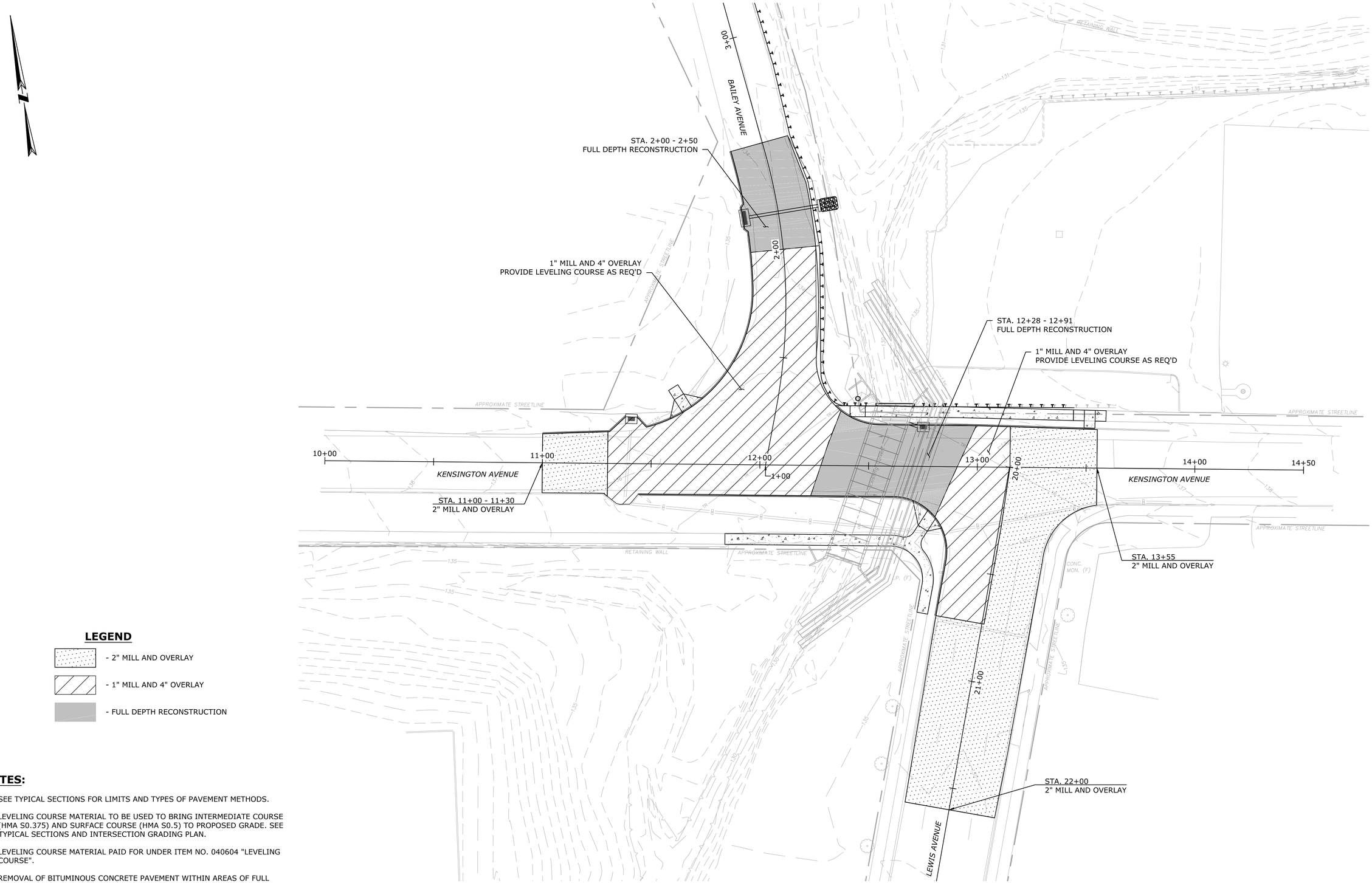
TOWN:
MERIDEN

DRAWING TITLE:
SIGNAGE & PAVEMENT MARKINGS PLAN

PROJECT NO.
83640.03

DRAWING NO.
PLN-02

SHEET NO.



LEGEND

- 2" MILL AND OVERLAY
- 1" MILL AND 4" OVERLAY
- FULL DEPTH RECONSTRUCTION

NOTES:

1. SEE TYPICAL SECTIONS FOR LIMITS AND TYPES OF PAVEMENT METHODS.
2. LEVELING COURSE MATERIAL TO BE USED TO BRING INTERMEDIATE COURSE (HMA S0.375) AND SURFACE COURSE (HMA S0.5) TO PROPOSED GRADE. SEE TYPICAL SECTIONS AND INTERSECTION GRADING PLAN.
3. LEVELING COURSE MATERIAL PAID FOR UNDER ITEM NO. 040604 "LEVELING COURSE".
4. REMOVAL OF BITUMINOUS CONCRETE PAVEMENT WITHIN AREAS OF FULL DEPTH RECONSTRUCTION TO BE PAID UNDER ITEM NO. 0202000 "EARTH EXCAVATION".
5. SEE SHEET S-03 FOR APPROXIMATE LIMIT OF STRUCTURE EXCAVATION.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–PRP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 20'
0 10 20 40

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

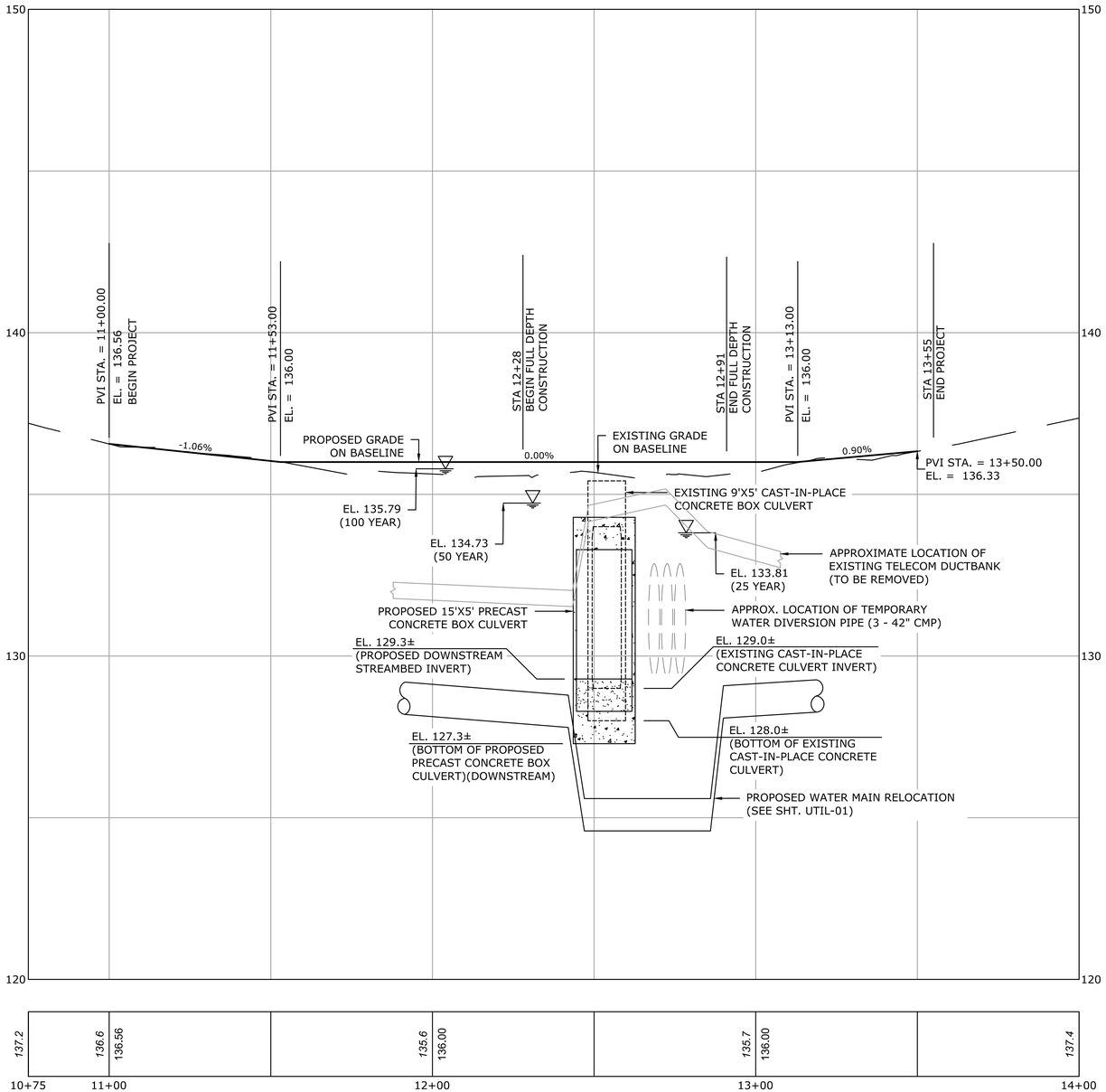
TOWN:
MERIDEN

DRAWING TITLE:
PAVEMENT RESTORATION PLAN

PROJECT NO.
83640.03

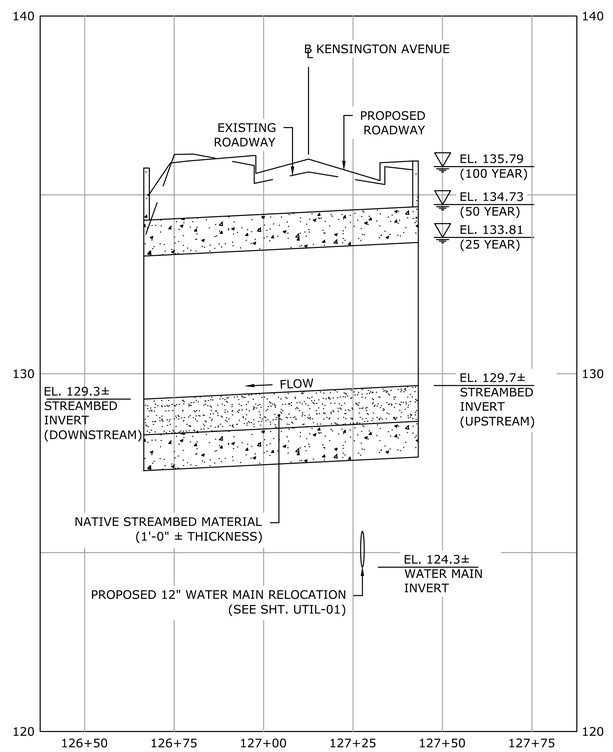
DRAWING NO.
PLN-03

SHEET NO.



PROFILE - KENSINGTON AVENUE

SCALE: 1"=20'-0" (HORIZONTAL)
1"=2'-0" (VERTICAL)



PRECAST CONCRETE BOX CULVERT
PROFILE - SODOM BROOK

SCALE: 1"=20'-0" (HORIZONTAL)
1"=2'-0" (VERTICAL)

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-PLAN.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 20'
0 10 20 40

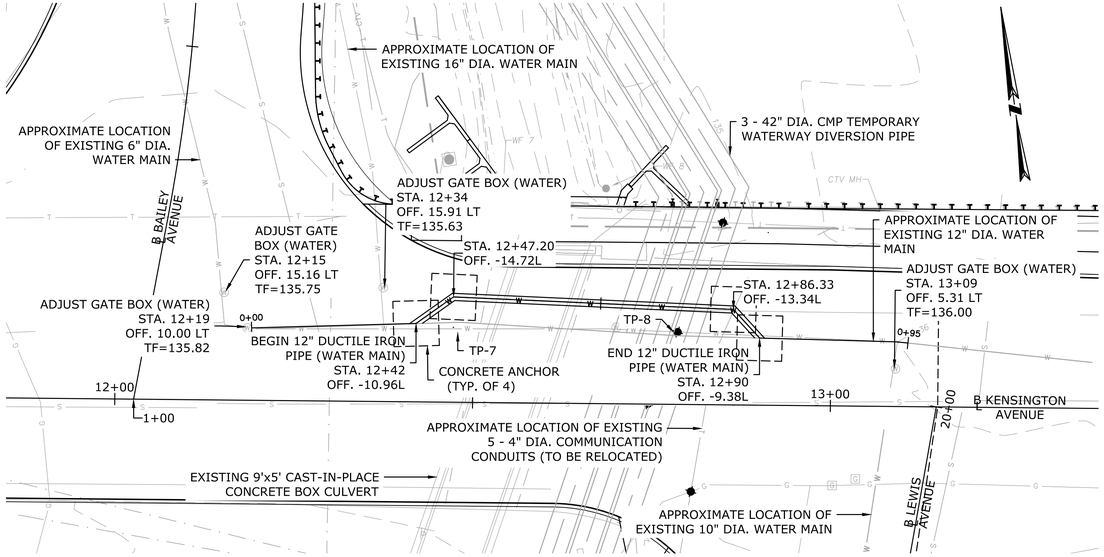
BSC GROUP

655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

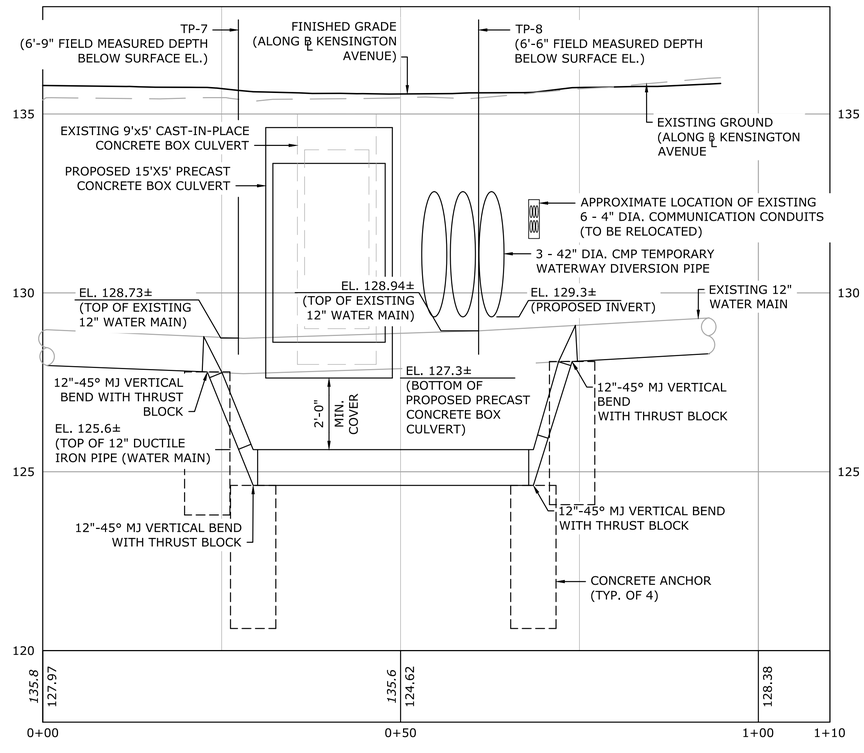
PROJECT TITLE:
KENSINGTON AVENUE CULVERT
REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. PRO-01
DRAWING TITLE: ROADWAY AND CULVERT PROFILE
SHEET NO.



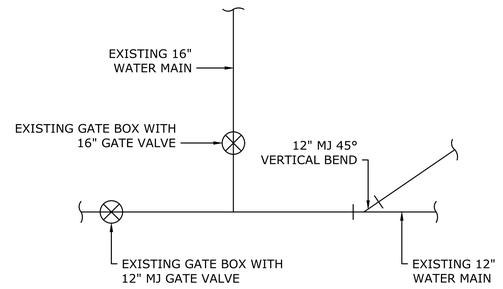
PROPOSED WATER MAIN PLAN

SCALE: 1" = 10'-0"



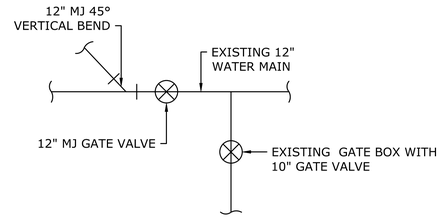
PROPOSED WATER MAIN PROFILE

SCALE: 1" = 10'-0" (HORIZONTAL)
1" = 2'-0" (VERTICAL)



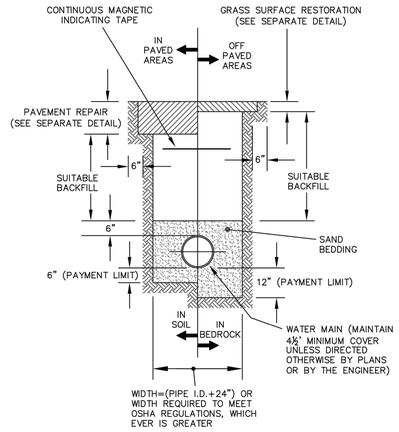
WEST TIE-IN DETAIL

N.T.S.



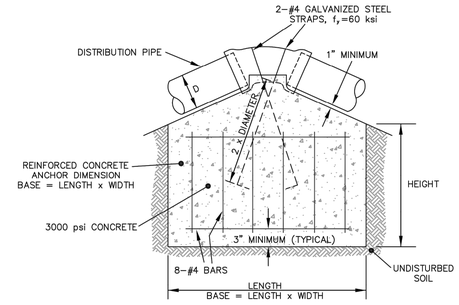
EAST TIE-IN DETAIL

N.T.S.



WATER MAIN TRENCH

NOT TO SCALE



TYPICAL CONCRETE ANCHOR

NOT TO SCALE

BEND		45°			22½°
PIPE DIAMETER (D) IN INCHES		12	8	6	12
VOLUME OF CONCRETE REQUIRED (CF)		157	74	43	81
TYPICAL DIMENSIONS IN FEET	LENGTH	6.33	5	4	5.25
	WIDTH	6.33	5	4	5.25
	HEIGHT	4	3	3	3

SUGGESTED CONSTRUCTION SEQUENCE:

1. INSTALL 12" MJ GATE VALVE IN EXISTING WATER MAIN ADJACENT TO EAST TIE-IN LOCATION.
2. TRENCH AND INSTALL PORTION OF PROPOSED 12" DUCTILE IRON PIPE (WATER MAIN) FROM EAST TIE-IN LOCATION TO A POINT WEST OF THE PROPOSED TEMPORARY WATERWAY DIVERSION PIPE (CAP PIPE END AND BACKFILL). TRENCH FOR 12" DUCTILE IRON PIPE (WATER MAIN) SHALL BE PAID FOR UNDER TRENCH EXCAVATION (XX) DEEP AND ROCK-IN-TRENCH EXCAVATION (XX) DEEP. ALL DUCTILE IRON PIPE, FITTINGS, SLEEVES, JOINT RESTRAINTS, THRUST BLOCKS AND APPURTENANCES REQUIRED FOR THE WATER MAIN INSTALLATION SHALL BE PAID FOR UNDER 12" DUCTILE IRON PIPE (WATER MAIN). SEE SPECIAL PROVISION.
3. INSTALL COFFERDAM, TEMPORARY WATERWAY DIVERSION PIPE AND DEWATERING HAY BALE BASIN (TYPE 1) - THESE ITEMS REPRESENT THE WATER HANDLING SYSTEM. PUMP WATER WITHIN THE COFFERDAM TO THE DEWATERING HAY BALE BASIN (TYPE 1) AS NECESSARY TO PERFORM THE REQUIRED DEMOLITION AND CONSTRUCTION OPERATIONS IN THE DRY.
4. REMOVE THE EXISTING BITUMINOUS CONCRETE WEARING SURFACE AND BEGIN DEMOLITION OF THE EXISTING STRUCTURE AS SHOWN ON THE DEMOLITION PLAN. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION/SELECTIVELY DEMOLISH THE PORTION OF THE EXISTING STRUCTURE ON TOP OF, AND DIRECTLY ADJACENT TO, THE EXISTING 12" WATER MAIN.
5. TRENCH, INSTALL, PRESSURE TEST, FLUSH, SAMPLE AND DISINFECT REMAINDER OF PROPOSED 12" DUCTILE IRON PIPE (WATER MAIN) TO WEST TIE-IN LOCATION.
6. DEMOLISH ANY REMAINING PORTIONS OF THE EXISTING STRUCTURE AND EXISTING 12" WATER MAIN SYSTEM BETWEEN PROPOSED EAST AND WEST TIE-IN LOCATIONS.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–WATER_PROFILE.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

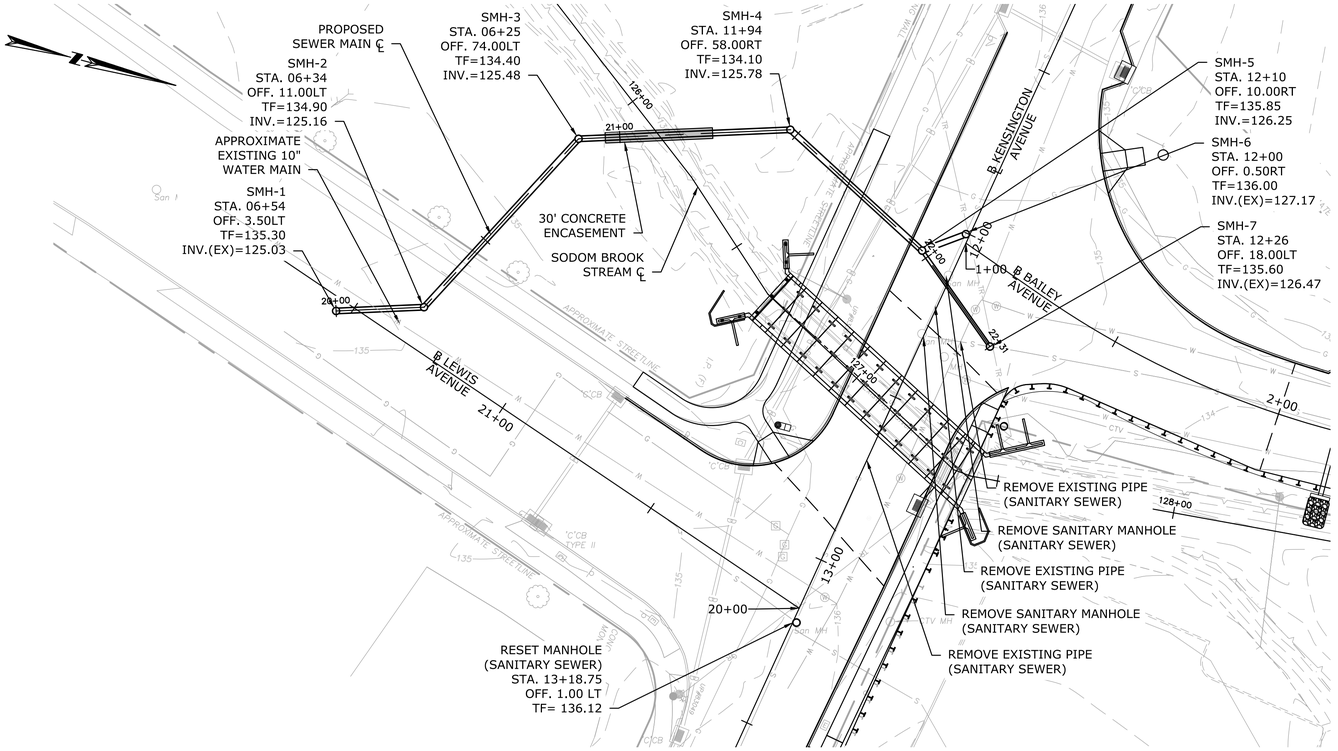
SCALE: 1" = 10'
0 5 10 20

BSC GROUP
© 2020 BSC GROUP, INC.
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

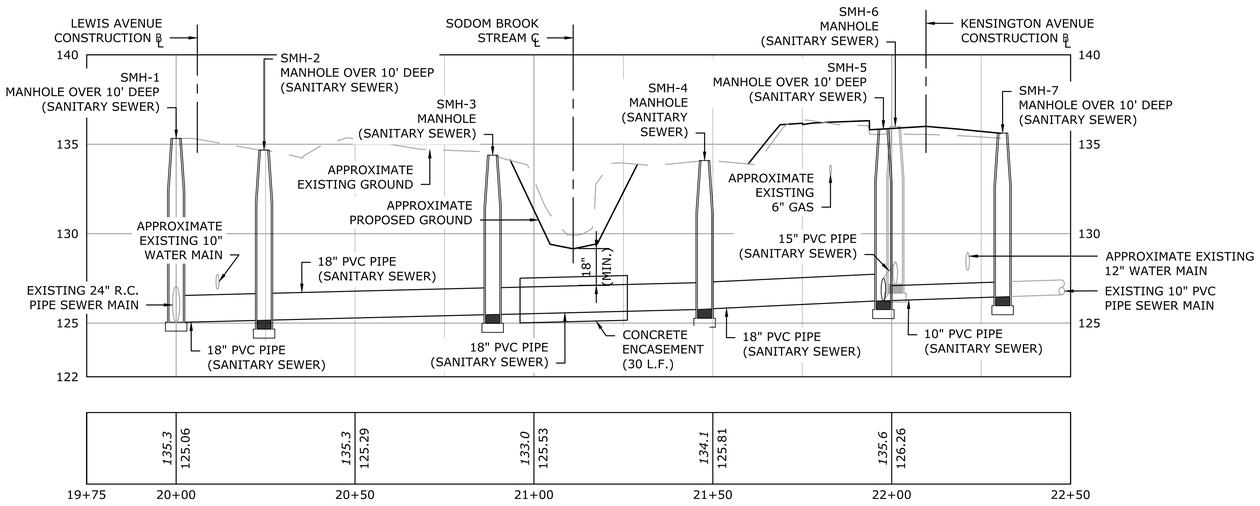
PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. UTIL-01
DRAWING TITLE: PROPOSED WATER MAIN RELOCATION PLAN, PROFILE, & DETAILS
SHEET NO.



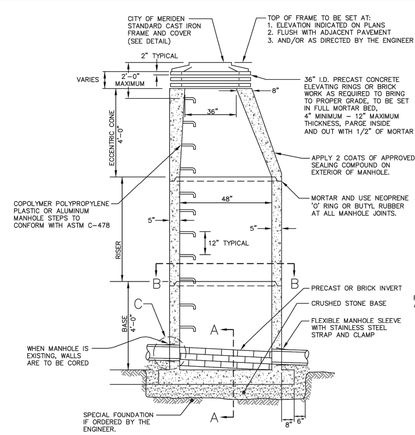
PROPOSED SEWER MAIN RELOCATION PLAN

SCALE: 1" = 20'-0"

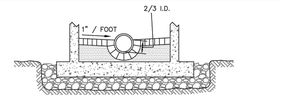


PROPOSED SEWER MAIN RELOCATION PROFILE

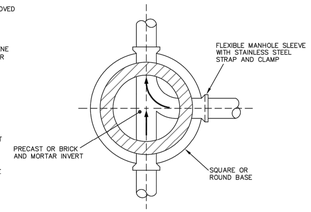
SCALE: 1" = 20'-0" (HORIZONTAL)
1" = 4'-0" (VERTICAL)



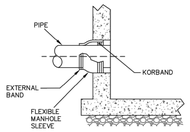
SANITARY SEWER MANHOLE



SECTION A–A



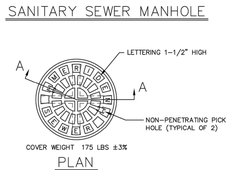
SECTION B–B



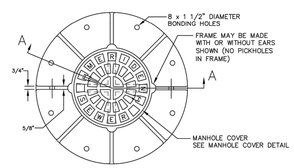
VIEW C
CORING OF EXISTING MANHOLE

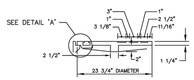
GENERAL NOTES FOR MANHOLES:

1. Backfill all manholes with bank–run gravel.
2. All pipe, chimney, and drop encasements to be class 'A' concrete. Class 'A' concrete shall be 3000 psi strength at 28 days.
3. Manholes which are located in rights–of–way off City streets shall have bolt down manhole covers.



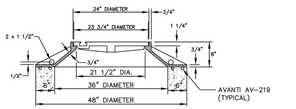
PLAN





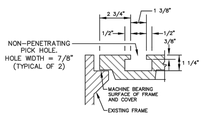
SECTION A–A

PLAN



FRAME WEIGHT 427 LBS ±3%
COVER WEIGHT 175 LBS ±3%

SECTION A–A



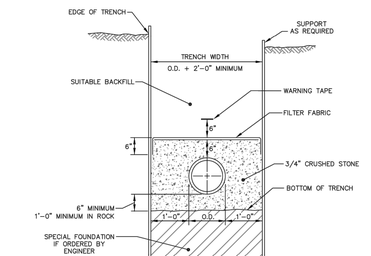
DETAIL 'A'

NOTES

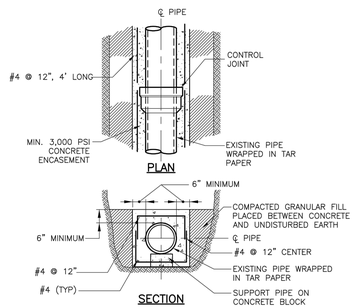
1. MANHOLE FRAME AND COVER TO BE LeBARON FOUNDARY INC. CATALOG NUMBER LJ 116 OR APPROVED EQUAL WITH A MINIMUM WEIGHT OF 602 LBS ±3%
2. MACHINE BEARING SURFACE REQUIRED ON THE FRAME SEAT AND COVER.

SANITARY SEWER MANHOLE COVER

SANITARY SEWER MANHOLE FRAME



TYPICAL TRENCH SECTION
SANITARY SEWER



NOTES:

1. CONTROL JOINTS AND PIPE JOINTS FOR ARCHES, AND ENCASEMENT SHALL COINCIDE FOR SPACING. MAXIMUM DISTANCE BETWEEN CONTROL JOINTS SHALL BE 24'±.
2. REINFORCING STEEL TO BE USED ONLY WHEN DEPTH OF COVER TO TOP OF SURFACE OF CONCRETE IS 5'–0" OR LESS.
3. REFER TO SEWER TRENCH DETAIL FOR BACKFILLING AND BEDDING REQUIREMENTS.
4. LIMITS OF CONCRETE ENCASEMENT SHALL BE SHOWN ON CONTRACT DRAWINGS OR AS DIRECTED BY ENGINEER.

CONCRETE ENCASEMENT

SANITARY SEWER MAIN EXTENSION STANDARD NOTES:

1. The sanitary sewer main and service connection must be constructed in accordance with the City of Meriden Department of Public Works Standards and Specifications.
2. The Contractor must contact "Call Before You Dig" at 1–800–922–4455 for location and marking of all existing utilities prior to any excavation.
3. Upon completion of the sanitary sewer main installation, as–built plans must be submitted to the City of Meriden Engineering Division and certified by a licensed Land Surveyor or Civil Engineer. These plans must be in accordance with the Engineering Division standards.
4. Sanitary sewer lines shall be a minimum of ten feet apart horizontally and 18" apart vertically from any water line.
5. A pre–construction meeting must be held one week prior to beginning construction to include the Contractor, Design Engineering, and City Engineering staff. The Contractor shall be responsible for organizing this meeting.
6. The City Public Works Facility Inspector must be notified by the Contractor a minimum of 48 hours prior to beginning construction.
7. Final wye locations must be coordinated with the individual property owners prior to begining construction.
8. A public hearing must be held for any sanitary sewer main extension and Public Utilities Commision approval will be required.
9. Sanitary sewer main lines must pass a low pressure air test per City of Meriden Specifications. TV/videotape inspection of the main line will be required per City of Meriden Requirements.
10. Sanitary sewer manholes must pass a vacuum test per City of Meriden Specifications.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–SEWER_PROFILE.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 20'
0 10 20 40

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

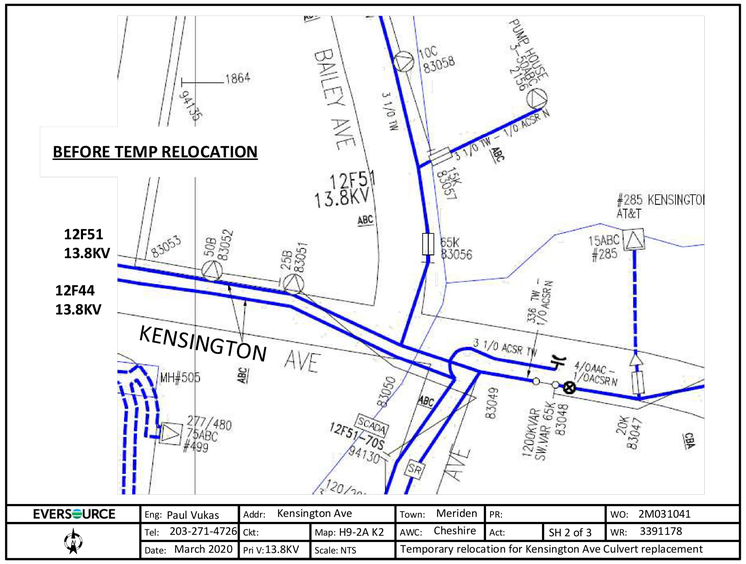
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

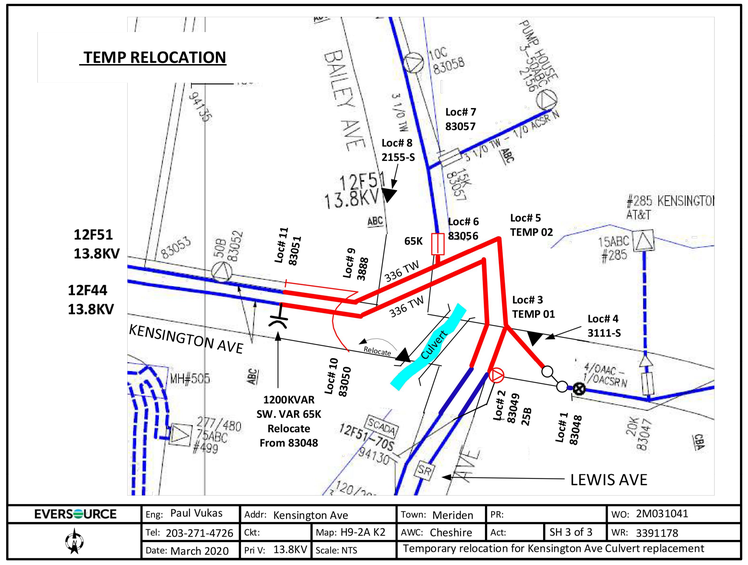
TOWN: MERIDEN

DRAWING TITLE:
PROPOSED SEWER MAIN PLAN, PROFILE, & DETAILS

PROJECT NO. 83640.03
DRAWING NO. UTIL-02
SHEET NO.



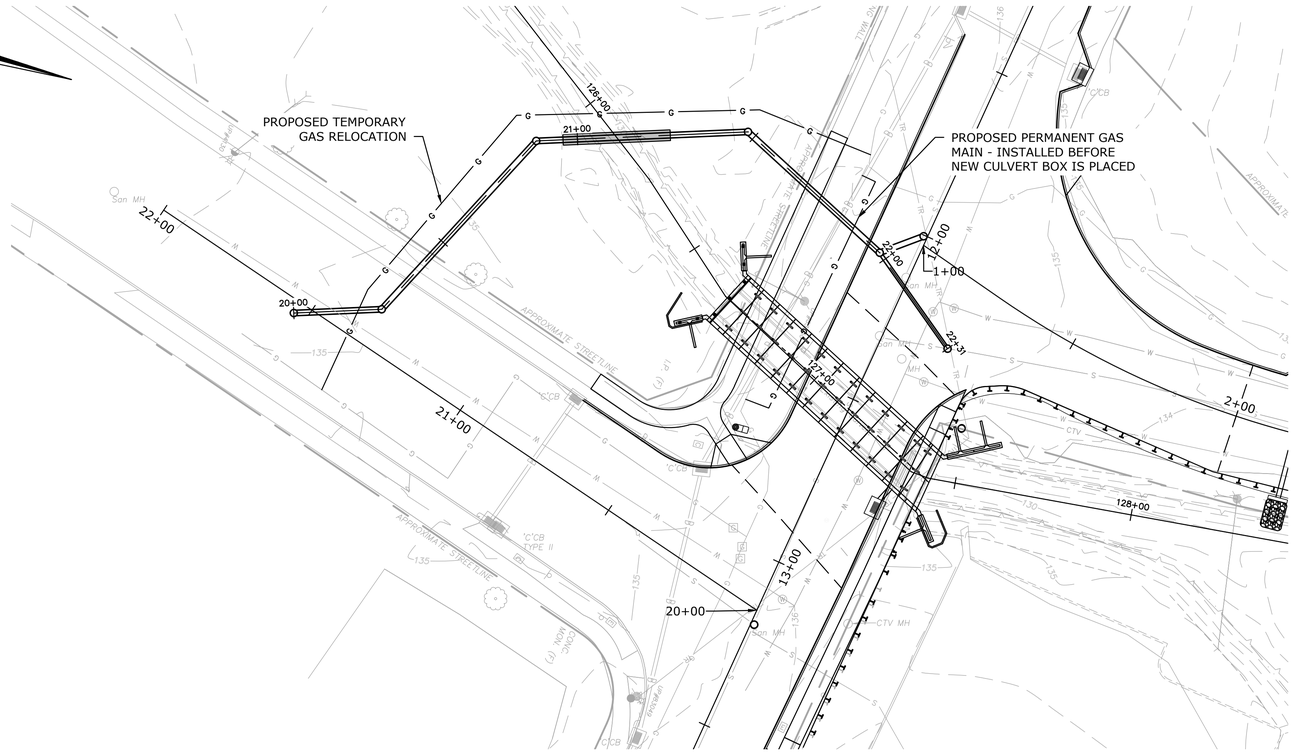
EVERSOURCE	Eng: Paul Vukas	Addr: Kensington Ave	Town: Meriden	PR:	WO: 2M031041
	Tel: 203-271-4726	Ckt:	Map: H9-2A K2	AWC: Cheshire	Act: SH 2 of 3	WR: 3391178
	Date: March 2020	Pri V:13.8KV	Scale: NTS	Temporary relocation for Kensington Ave Culvert replacement		



EVERSOURCE	Eng: Paul Vukas	Addr: Kensington Ave	Town: Meriden	PR:	WO: 2M031041
	Tel: 203-271-4726	Ckt:	Map: H9-2A K2	AWC: Cheshire	Act: SH 3 of 3	WR: 3391178
	Date: March 2020	Pri V: 13.8KV	Scale: NTS	Temporary relocation for Kensington Ave Culvert replacement		

PROPOSED ELECTRICAL SERVICE RELOCATION

SCALE: NONE



PROPOSED GAS MAIN RELOCATION PLAN

SCALE: NONE

FOR INFORMATIONAL PURPOSES ONLY
NOT FOR CONSTRUCTION

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-SEWER_PROFILE.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: NONE
0

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

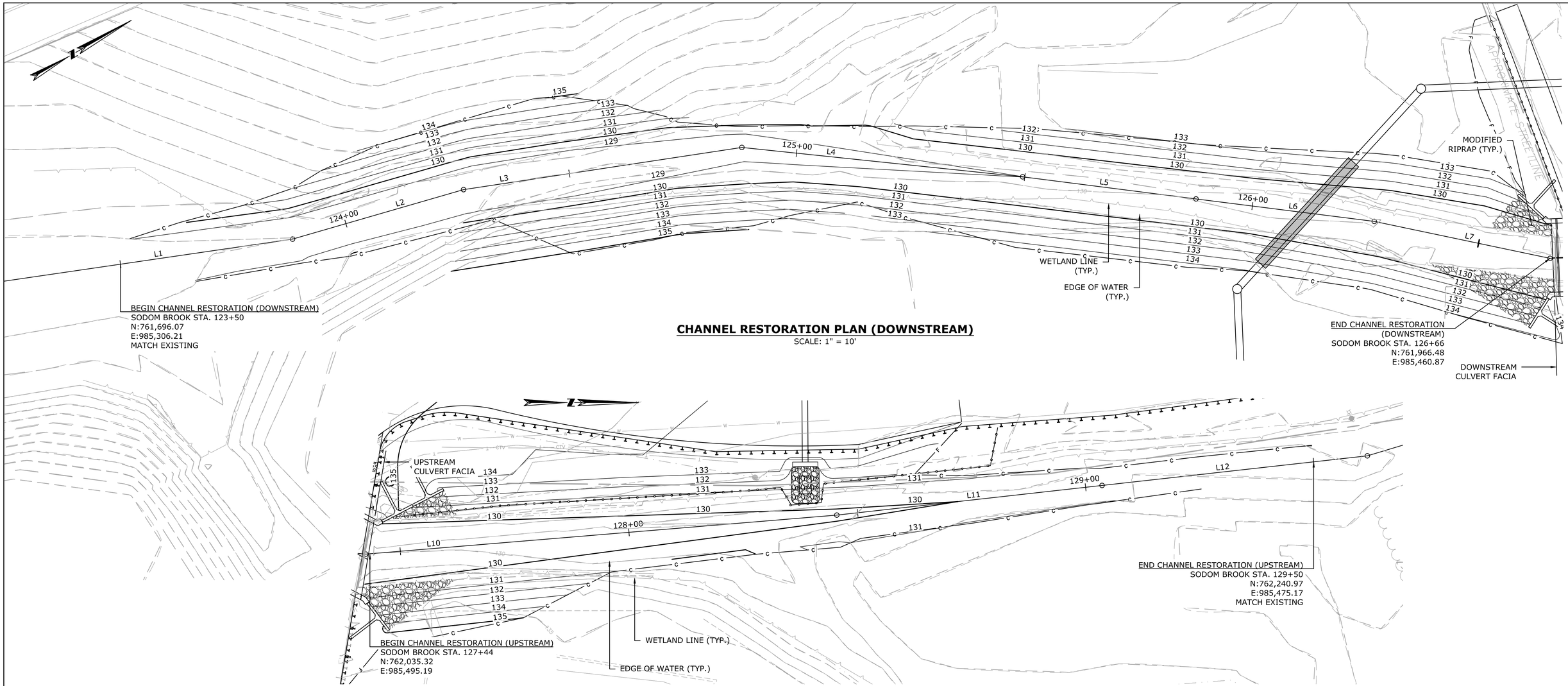
ENGINEER:
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT
REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE:
UTILITY RELOCATION PLAN

PROJECT NO. 83640.03
DRAWING NO. UTIL-03
SHEET NO.



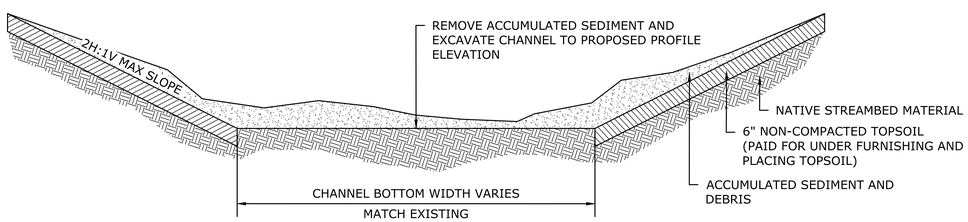
CHANNEL RESTORATION PLAN (DOWNSTREAM)

SCALE: 1" = 10'

CHANNEL RESTORATION PLAN (UPSTREAM)

SCALE: 1" = 10'

STREAM BASELINE TABLE				
LINE #	DIRECTION	LENGTH	START POINT	END POINT
L1	N21°41'57"E	68.87	(N:761667.27, E:985294.76)	(N:761731.26, E:985320.22)
L2	N13°52'25"E	38.79	(N:761731.26, E:985320.22)	(N:761768.92, E:985329.52)
L3	N21°23'08"E	61.35	(N:761768.92, E:985329.52)	(N:761826.05, E:985351.89)
L4	N35°58'12"E	61.52	(N:761826.05, E:985351.89)	(N:761875.83, E:985388.02)
L5	N37°16'21"E	38.09	(N:761875.83, E:985388.02)	(N:761906.14, E:985411.09)
L6	N37°10'39"E	39.14	(N:761906.14, E:985411.09)	(N:761937.32, E:985434.74)
L7	N41°51'57"E	39.16	(N:761937.32, E:985434.74)	(N:761966.48, E:985460.87)
L8	N28°23'11"E	71.34	(N:761966.48, E:985460.87)	(N:762029.24, E:985494.78)
L9	N05°23'01"E	5.17	(N:762029.24, E:985494.78)	(N:762034.39, E:985495.27)
L10	N04°44'05"W	103.02	(N:762034.39, E:985495.27)	(N:762137.05, E:985486.77)
L11	N06°22'04"W	58.17	(N:762137.05, E:985486.77)	(N:762194.86, E:985480.31)
L12	N06°22'04"W	58.17	(N:762194.86, E:985480.31)	(N:762252.67, E:985473.86)



NOTES:

1. ALL EXCAVATION REQUIRED TO REMOVE ACCUMULATED SEDIMENT AND SHAPE THE PROPOSED CHANNEL TO THE LINE AND GRADE SHOWN IN THE SODOM BROOK CROSS SECTIONS SHALL BE PAID FOR UNDER CHANNEL EXCAVATION - EARTH.
2. FOR SLOPES EXCEEDING 3H:1V, APPLY TEMPORARY EROSION CONTROL BLANKET (CARTHAGE MILLS ECS-2B STRAW BIODEGRADABLE DOUBLE NET BLANKET, OR ENGINEER-APPROVED EQUAL) OVER AREA.

TYPICAL SODOM BROOK CHANNEL RESTORATION DETAIL

SCALE: $\frac{1}{2}$" = 1'-0"

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-IGP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

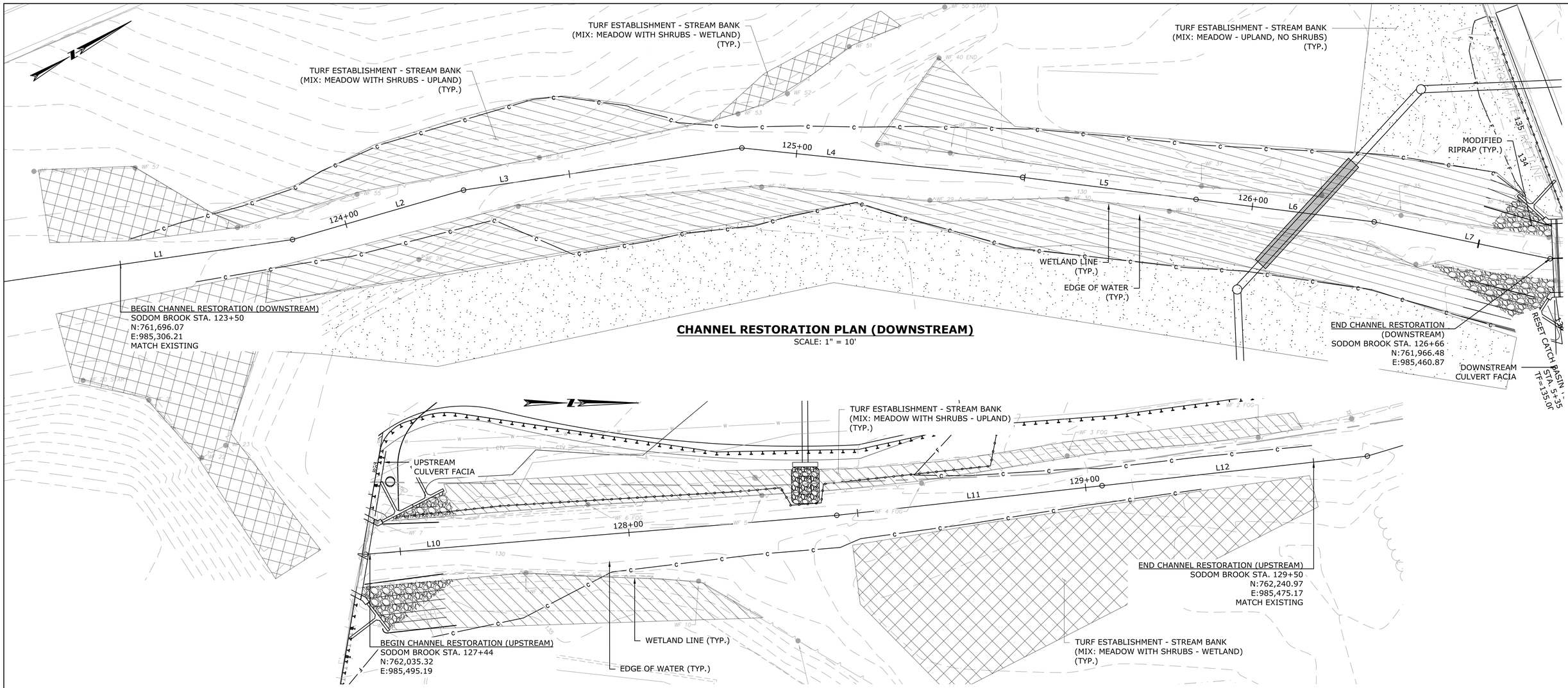
SCALE: 1" = 10'
0 5 10 20

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. SEC-01
DRAWING TITLE: CHANNEL RESTORATION GRADING
SHEET NO.



CHANNEL RESTORATION PLAN (DOWNSTREAM)

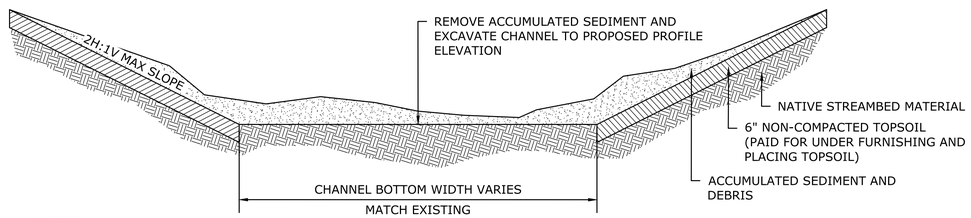
SCALE: 1" = 10'

CHANNEL RESTORATION PLAN (UPSTREAM)

SCALE: 1" = 10'

SEED MIX LEGEND

- MEADOW WITH SHRUBS - WETLAND
- MEADOW WITH SHRUBS - UPLAND
- MEADOW - UPLAND, NO SHRUBS



NOTES:

1. ALL EXCAVATION REQUIRED TO REMOVE ACCUMULATED SEDIMENT AND SHAPE THE PROPOSED CHANNEL TO THE LINE AND GRADE SHOWN IN THE SODOM BROOK CROSS SECTIONS SHALL BE PAID FOR UNDER CHANNEL EXCAVATION - EARTH.
2. FOR SLOPES EXCEEDING 3H:1V, APPLY TEMPORARY EROSION CONTROL BLANKET (CARTHAGE MILLS ECS-2B STRAW BIODEGRADABLE DOUBLE NET BLANKET, OR ENGINEER-APPROVED EQUAL) OVER AREA.

TYPICAL SODOM BROOK CHANNEL RESTORATION DETAIL

SCALE: $\frac{1}{2}$" = 1'-0"

NOTE:
SEE STREAM BED RESTORATION PLANTING PLAN FOR SHRUB AND TREE PLANTINGS.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-IGP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 10'
0 5 10 20

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT
REPLACEMENT

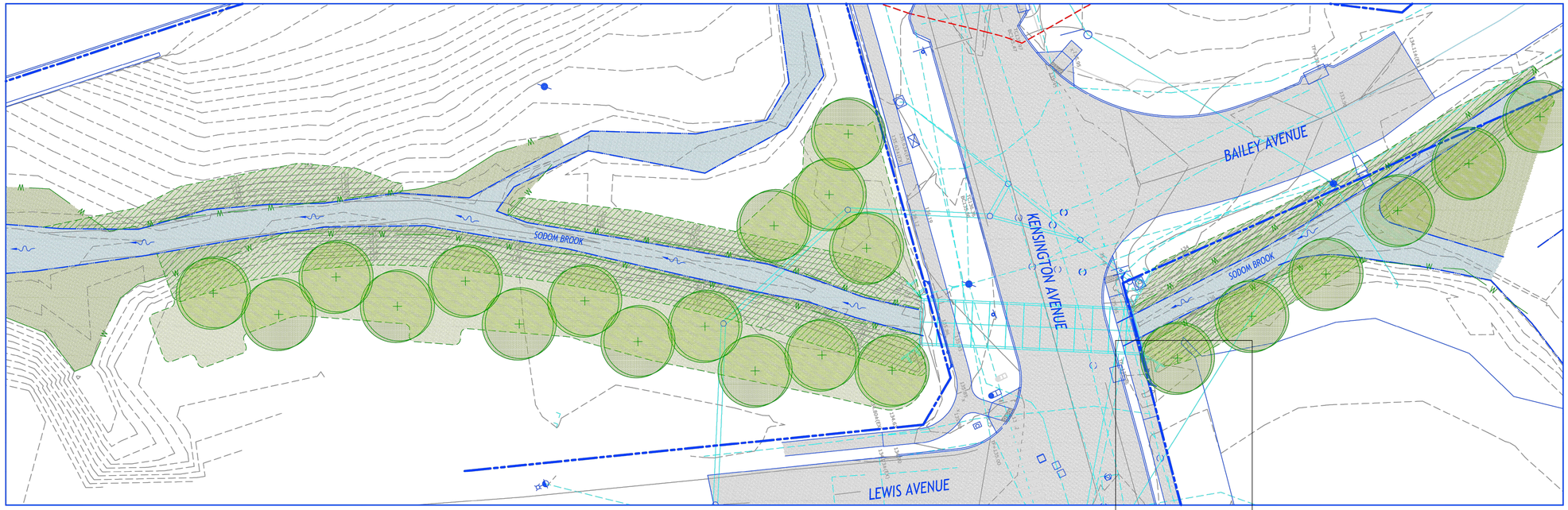
TOWN:
MERIDEN

PROJECT NO.
83640.03

DRAWING NO.
LA-01

DRAWING TITLE:
CHANNEL RESTORATION PLAN

SHEET NO.



GENERAL NOTES:

1. FOR CONSTRUCTION METHODS, SEE SPECIFICATION FOR ITEM NO. 0949001A "FURNISHING, PLANTING AND MULCHING TREES AND SHRUBS" AND ITEM NO. 0950020 "TURF ESTABLISHMENT - STREAM BANK."

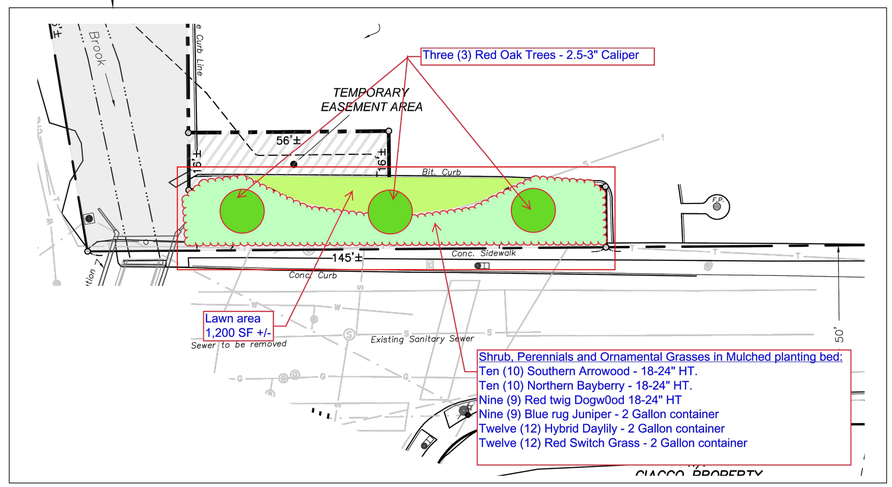
2. CONTRACTOR TO SUBMIT PLANTING PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 135.45 × PROPOSED SPOT GRADE
- PROPERTY BOUNDARY
- W WETLAND
- WATERCOURSE BOUNDARY
- 100' REGULATED UPLAND REVIEW AREA BOUNDARY
- EXISTING UTILITIES
- PROPOSED UTILITIES
- PROPOSED NATIVE TREES
- PROPOSED MEADOW WITH SHRUBS- UPLAND
- PROPOSED MEADOW - UPLAND, NO SHRUBS
- PROPOSED MEADOW WITH SHRUBS- WETLAND

PLANT LIST

SYM.	Q'TY.	SCIENTIFIC NAME	COMMON NAME	SIZE	ROOT
TREES					
LT	6	LIRIODENDRON TULIPIFERA	TULIP TREE	10'-12' HT.	B&B
QA	5	QUERCUS ALBA	WHITE OAK	10'-12' HT.	B&B
QR	6	QUERCUS RUBRA	RED OAK	10'-12' HT.	B&B
UA	5	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	10'-12' HT.	B&B
TOTAL:	22				
SHRUBS					
CA	50	CLETHRA ALNIFOLIA	SWEETPEPPERBUSH	18"-24" HT.	CONT.
CM	50	CORNUS AMOMUM	SILKY DOGWOOD	18"-24" HT.	CONT.
CR	50	CORNUS RACEMOSA	GRAY DOGWOOD	18"-24" HT.	CONT.
MP	50	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	18"-24" HT.	CONT.
SC	50	SAMBUCUS CANADENSIS	ELDERBERRY	18"-24" HT.	CONT.
VD	50	VIBURNUM DENTATUM	SOUTHERN ARROWWOOD	18"-24" HT.	CONT.
TOTAL:	300				
SEED MIXES					
UPLAND MEADOW MIX WITH SHRUBS: 'NO MOW SEED MIX WITH RYE' AS PRODUCED BY PRAIRE NURSERY (WWW.PRAIRIENURSERY.COM). APPLIED AT A RATE OF 5LBS/1,000 SQUARE FEET.					
UPLAND MEADOW MIX: 'NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES' AS PRODUCED BY NEW ENGLAND WETLAND PLANTS (WWW.NEWP.COM). APPLIED AT A RATE OF 1LBS/1,250 SQUARE FEET.					
WETLAND MEADOW MIX: 'NEW ENGLAND WETMIX' AS PRODUCED BY NEW ENGLAND WETLAND PLANTS(WWW.NEWP.COM). APPLIED AT A RATE OF 1LBS/2,500 SQUARE FEET.					



ABUTTER PLANTING PLAN
SCALE: 1" = 20'±

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-IGP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 20'
0 10 20 40

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD DATE: JUNE 18, 2020
APPROVED BY: DLS No.

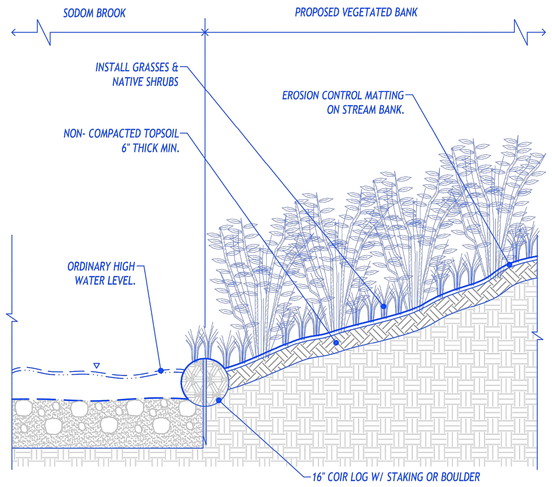
PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
DRAWING TITLE: STREAM BANK RESTORATION PLANTING PLAN

PROJECT NO. 83640.03
DRAWING NO. LA-02
SHEET NO.

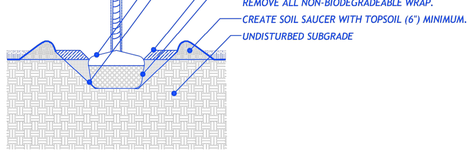
STREAMBANK STABILIZATION AND VEGETATION DETAIL

SCALE: 0' 1' 2'



TREE PLANTING DETAIL

NOT TO SCALE



HABITAT MANAGEMENT SPECIFICATION

1. **WORK DESCRIPTION**
PROVIDE ALL MEANS AND MATERIALS NECESSARY FOR SUPPLYING, INSTALLING AND MAINTAINING THE TYPE AND SIZE OF THE PLANT MATERIAL AND OTHER IMPROVEMENTS INDICATED IN THE SITE PLAN.

2. **QUALITY ASSURANCE**
   - A. WETLAND SCIENTIST SHALL BE ONSITE TO MONITOR CONSTRUCTION, MONITORING AND MAINTENANCE OF THE HABITAT ENHANCEMENT ACTIVITIES TO ENSURE COMPLIANCE WITH THE DESIGN AND SPECIFICATIONS AND TO MAKE ADJUSTMENTS WHEN APPROPRIATE TO MEET ENHANCEMENT OBJECTIVES.
   - B. ALL WORK SHALL BE PERFORMED BY PERSONNEL WITH WETLAND AND STREAM BANK HABITAT RESTORATION AND ENHANCEMENT PROJECT EXPERIENCE, UNDER THE DIRECTION OF A SKILLED FOREMAN WITH A MINIMUM THREE YEARS EXPERIENCE.
   - C. THE PLANNING, ACCOMPLISHING AND MAINTAINING OF THE HABITAT ENHANCEMENT ACTIVITIES ARE THE RESPONSIBILITY OF THE CITY OF MERIDEN.
   - D. ALL HEAVY EQUIPMENT STORAGE, REFUELING AND MINOR MAINTENANCE IS TO TAKE PLACE OUTSIDE OF THE REGULATED WETLANDS AND WATERCOURSES.
   - E. DISPOSE OF EXCESS MATERIAL AND DEBRIS RESULTING FROM THE PROPOSED HABITAT ENHANCEMENT WORK OFF-SITE. LEAVE WORK AREA CLEAN AND NEAT UPON COMPLETION OF THE WORK. REPAIR ANY DAMAGED DONE TO THE EXISTING SITE IMPROVEMENT AS A RESULT OF THE WORK.

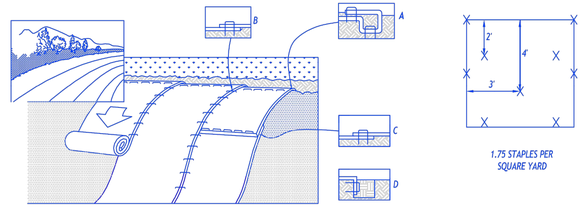
3. **PRODUCT AND EXECUTION DATA**
   - A. SOIL
     - a. TOPSOIL SHALL CONSIST OF A MIXTURE OF EQUAL VOLUMES OF ORGANIC AND MINERAL MATERIALS. WELL DECOMPOSED LEAF-COMPOST OR EQUAL (NOT INCLUDING PEAT) SHALL BE USED FOR THE ORGANIC MATERIAL, WHICH SHALL BE FREE OF WEED SEEDS AND PHYSICAL (E.G., PLASTIC) AND CHEMICAL CONTAMINANTS. THE ORGANIC MATTER CONTENT SHOULD BE 15 TO 25 PERCENT BY DRY WEIGHT.
     - b. PROVIDE DOCUMENTATION REGARDING THE SOURCE OF TOPSOIL AND THE POTENTIAL FOR THE PRESENCE OF INVASIVE SPECIES SEEDS.
     - c. TESTING OF THE TOPSOIL BY AN ACCEPTABLE LABORATORY PRIOR TO PLANTING WILL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR.
     - d. SPREAD TOPSOIL TO A DEPTH REQUIRED TO ACHIEVE THE MICROTOPOGRAPHIC VARIATION AND TO MEET THICKNESS, GRADES, AND ELEVATIONS SHOWN ON THE PLAN AND DETAILS.
   - B. VEGETATION
     - a. GENERAL
       - NON NATIVE, NON INVASIVE ANNUALS MAY BE USED FOR TEMPORARY PLANTINGS IF APPROVED BY THE OWNER'S REPRESENTATIVE.
       - PROVIDE A CERTIFICATE OR INVOICE FROM THE PLANT MATERIAL SUPPLIERS INDICATING THE PLANT SOURCE, THE BOTANICAL NAME, QUANTITY, AND SIZE OF THE PLANTS DELIVERED TO THE PROJECT SITE, IN ADDITION TO PROVIDING ALL PLANT LABELS.
       - ALL PLANT MATERIALS SHALL BE INSPECTED FOR DEFECTS, DISEASE, DAMAGE OR INSECTS BEFORE PLANTING. ANY SUBSTANDARD PLANTS SHALL BE RETURNED TO, AND REPLACED BY THE CONTRACTOR. ACCEPTABLE PLANTINGS ARE TO BE PLANTED PER THE SPECIFICATIONS OF THE PLANTING PLAN.
       - ALL PLANT MATERIALS ARE SUBJECT TO REPLACEMENT BY SUITABLE ALTERNATIVES PER AGREEMENT BETWEEN THE PROPERTY OWNER, NURSERY CONTRACTOR, AND APPROPRIATE REGULATORY AGENCIES (E.G., CORPS).
       - ALL PLANT MATERIAL LOCATIONS ARE SUBJECT TO FIELD ADJUSTMENTS IN RESPONSE TO SITE CONDITIONS. THESES ADJUSTMENTS SHALL BE THE DISCRETION OF THE PROPERTY OWNER. UNDER THE DIRECTION OF A QUALIFIED WETLAND SCIENTIST, UP TO 50 PERCENT OF THE PLANTS MAY BE LOCATED DIFFERENTLY THAN SHOWN ON THE DRAWINGS.
       - SIZES SHALL CONFORM TO MEASUREMENTS SPECIFIED IN THE PLANT LIST. USE PLANTS LARGER THAN SPECIFIED IF APPROVED BY THE OWNER'S REPRESENTATIVE, AND CAUSES NO INCREASE TO THE CONTRACT PRICE.
       - MAKE ALL NECESSARY MEASUREMENTS TO PROPERLY LOCATE PLANTS AS SHOWN ON THE DRAWING. LOCATIONS OF PLANTS SHALL BE VERIFIED BY PROPERTY OWNER PRIOR TO INSTALLATION. ANY PLANTS INSTALLED PRIOR TO THE APPROVAL OF THE PROPERTY OWNER SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.
       - PRIOR TO PLANTING, VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES. EXERCISE CARE WHEN DIGGING IN THESE AREAS. ASSUME RESPONSIBILITY FOR ANY DAMAGE AND REPLACEMENT OR REPAIR AT THE CONTRACTOR'S EXPENSE.
     - b. TREES AND SHRUBS
       - PLACE THE PLANT IN THE CENTER OF THE PIT OR SPACED IN BEDS AS INDICATED ON THE DRAWINGS. SET THE PLANT PLUMB AND ADJUST ITS HEIGHT TO ACHIEVE THE ELEVATION SHOWN ON THE DRAWINGS BY PLACING PREPARED SOIL BENEATH THE ROOTBALL. BURLAP, ROPE, WIRE BASKETS OR OTHER MATERIAL SHALL BE CUT AND REMOVED FROM THE TOPS OF THE ROOTBALL AND NOT LEFT IN THE PLANTING PIT. BACKFILL AROUND THE ROOTBALL WITH PREPARED PLANTING SOIL. UNIFORMLY COMPACT AND WATER THE PREPARED PLANTING SOIL TO FILL VOIDS AND TO FIRMLY SECURE ROOTBALL.
       - FORM A "SAUCER" AT THE SURFACE OF THE PLANTING PIT OR BED WITH TOPSOIL. SHAPE THE SAUCER TO THE DIMENSIONS INDICATED ON THE DRAWINGS. BLEND THE PERIMETER OF THE SAUCERS AND BEDS TO FORM A SMOOTH AND UNIFORM TRANSITION TO FINISH GRADE.
       - IMMEDIATELY AFTER PLANTING, FIRMLY INSTALL STAKES AS INDICATED ON THE DRAWINGS. ATTACH GUY WIRES, TURNBUCKLES AND FRICTION GUARDS TO TREE AND STAKES. TIE WIRES TO SECURELY ANCHOR TREE.
       - COVER ALL TREE PITS AND PLANTING BEDS WITH THE SPECIFIED MULCH DEPTH, DIMENSIONS, AND AREAS INDICATED ON THE DRAWING.
       - PRUNE IN ACCORDANCE WITH AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS TO REMOVE DEAD AND DISEASED PORTION OF THE PLANT.
       - ALL WIRE FLAGS USED TO IDENTIFY PLANT LOCATIONS SHALL BE REMOVED AFTER PLANT INTRODUCTION AND CONFIRMATION BY THE PROPERTY OWNER.
     - c. HERBS - SEEDING
       - USE PURE LIVE SEED ONLY.
       - SEED WHEN SOILS ARE NOT INUNDATED. DO NOT ALLOW INUNDATION TO OCCUR UNTIL THE HEIGHT OF SEEDED PLANTS EXCEED INUNDATION DEPTHS.
       - SURFACE-SOW SEED AND THEN PUSH SEED INTO CONTACT WITH THE TOPSOIL.
       - APPLY SEED AT RATES AS SPECIFIED ON THE PLANT LIST.
       - SURFACE PREPARATION. LOOSEN SUBGRADE OF THE PLANTING BED AREAS TO A MINIMUM DEPTH OF 1".
       - IMMEDIATELY FOLLOWING SEEDING, MULCH THE SEEDED SURFACE WITH STERILE STRAW AT A RATE OF 1.5 TO 3 TONS/ACRE. SPREAD MULCH BY HAND OR DISK HARROW SET STRAIGHT.
       - LIMIT OF SEEDING IS SUBJECT TO FIELD ADJUSTMENT IN RESPONSE TO SITE CONDITIONS. THESE ADJUSTMENTS SHALL BE AT THE DISCRETION OF THE PROJECT WETLAND SCIENTIST.
   - C. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES: UNLESS NOTED OTHERWISE, THE MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (2002 GUIDELINES).
     - COIR LOGS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE EZ-LOG AS SOLD BY ECODEPOT (WWW.ECODEPOTSALES.COM) OR APPROVED EQUAL.
     - EROSION CONTROL BLANKETS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE ECS-2B AS SOLD BY EAST COAST EROSION CONTROL (WWW.EASTCOASTEROSION.COM) OR APPROVED EQUAL.

4. **MAINTENANCE**
   - A. MAINTENANCE IS TO BEGIN IMMEDIATELY AFTER PLANTING HAS BEEN COMPLETED.
   - B. THE MAINTENANCE PERIOD SHALL BE EXTENDED AT NO ADDITIONAL COST TO THE PROPERTY OWNER UNTIL PREVIOUS PUNCH LIST ITEMS HAVE BEEN CORRECTED, AT WHICH TIME THE FINAL INSPECTION WILL BE MADE.
   - C. ALL PLANT MATERIAL SHALL BE PRUNED, WEEDED, AND SOIL AMENDMENTS ADDED AS REQUIRED TO KEEP PLANT MATERIAL IN A HEALTHY GROWING CONDITION.
   - D. PROTECT ALL PLANTED AREAS AGAINST DAMAGE, INCLUDING EROSION, WILDLIFE, AND TRESPASSING BY PROVIDING AND MAINTAINING PROPER SAFEGUARDS.
   - E. ALL PLANT STOCK SHALL BE WATERED UPON COMPLETION OF PLANTING. ARRANGEMENTS SHALL BE MADE TO PROVIDE ADEQUATE IRRIGATION TO INTRODUCED PLANTING STOCK AND SEEDED AREAS UNTIL PLANTS ARE FIRMLY ESTABLISHED. IRRIGATION SHALL NOT TO BE USED TO PROVIDE WETLAND HYDROLOGY. IRRIGATION SHALL BE DISCONTINUED AND MEASURES SHALL BE REMOVED NO LATER THAN THE END OF THE SECOND GROWING SEASON UNLESS SPECIFIED OTHERWISE.
   - F. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION. ADJUST OR REPLACE STAKES, GUYING MATERIALS, TO SECURELY ANCHOR AND PROTECT.
   - G. AT THE END OF THE MAINTENANCE PERIOD, ALL PLANT MATERIAL SHALL BE IN A HEALTHY GROWING CONDITION AS RELATED TO CONDITIONS WITHIN THE CONTROL OF THE CONTRACTOR.
   - H. CONTROL INVASIVE SPECIES FOR A MINIMUM OF THREE YEARS FOLLOWING THE CONSTRUCTION PHASE OF THE PROJECT.
     - a. INVASIVE SPECIES ARE THOSE SPECIES IDENTIFIED IN SECTION 4f. OF THE "NEW ENGLAND DISTRICT COMPENSATORY MITIGATION GUIDANCE" DATED JULY 10, 2010 AND PUBLISHED BY THE US ARMY CORP OF ENGINEERS.
     - b. CONDUCT THE CONTROL ACTIVITIES UNDER THE DIRECTION OF A QUALIFIED WETLAND SCIENTIST AT LEAST TWICE EACH GROWING SEASON - IN LATE SPRING/EARLY SUMMER AND AGAIN IN LATE SUMMER/EARLY FALL. MONITORING AND MAINTENANCE WILL INCLUDE:
       - DETERMINE THE PRESENCE AND ABUNDANCE OF INVASIVE PLANTS.
       - FIELD MARK (VIA FLAGGING OR OTHER MEANS) DESIRABLE VEGETATION TO REMAIN AND INVASIVE (UNDESIRABLE) PLANTS TO BE CONTROLLED.
       - CONTROL INVASIVES PLANTS VIA PHYSICAL OR CHEMICAL METHODS. THE METHOD TYPE WILL BE DETERMINED BY THE WETLAND SCIENTIST BASED ON THE TYPE AND ABUNDANCE OF INVASIVE PLANTS AND THE TYPE AND ABUNDANCE OF ADJACENT DESIRABLE PLANTS. THE PLANT CONSERVATION ALLIANCE'S ALIEN PLANT WORKING GROUP DATABASE (HTTP://WWW.NPS.GOV/PLANTS/ALIEN/FACTMAIN.HTM) REGARDING THE CONTROL OF INVASIVE PLANT SPECIES WILL BE CONSULTED TO ASSIST WITH SPECIFYING AN APPROPRIATE METHODOLOGY. COMPLETE PHYSICAL PLANT CONTROL ACTIVITIES BY HAND OR VIA HAND TOOLS (E.G., WEED WRENCH, BRUSH CUTTER). CHEMICAL METHODS WILL PRIMARILY INCLUDE THE USE OF GLYPHOSPHATE-BASED HERBICIDES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE LAWS.

5. **MONITORING AND REPORTING:**
   - A. MONITOR THE CONDITIONS OF THE HABITAT ENHANCEMENT IMPROVEMENTS FOR THREE YEARS. THE FIRST YEAR OF MONITORING SHALL BEGIN FOLLOWING THE FIRST FULL GROWING SEASON FOLLOWING CONSTRUCTION COMPLETION AND PLANTING.
   - B. CONDUCT MONITORING ACTIVITIES AT LEAST TWICE EACH GROWING SEASON - IN LATE SPRING/EARLY SUMMER AND AGAIN IN LATE SUMMER/EARLY FALL.
   - C. THE PROJECT WETLAND SCIENTIST SHALL PREPARE AND SUBMIT AN ANNUAL MONITORING REPORT TO THE REGULATORY AGENCIES BY DECEMBER 15TH OF EACH MONITORING YEAR. A SELF-CERTIFICATION FORM WILL BE COMPLETED AND SIGNED AS A TRANSMITTAL COVERSHEET FOR EACH ANNUAL MONITORING REPORT.
   - D. THE MONITORING REPORTS SHALL BE CONCISE (MAXIMUM 10 PAGES) AND EFFECTIVELY PROVIDE THE INFORMATION NECESSARY TO ASSESS THE STATUS OF THE COMPENSATORY MITIGATION PROJECT. THE REPORTS SHALL INCLUDE:
     - a. PROJECT OVERVIEW
       - CONCLUSIONS REGARDING WHETHER THE HABITAT ENHANCEMENT PLAN IS SUCCESSFULLY ACHIEVING THE ENHANCEMENT OBJECTIVES. IN ADDITION, INFORMATION REGARDING THE DISCOVERY OF POTENTIAL INVASIVE PLANTS AND CONTROL ACTIONS TAKEN SHALL BE PROVIDED.
       - SUMMARY DATA AND PHOTOS TO SUBSTANTIATE THE NOTED CONCLUSIONS.
       - MAPS SHOWING LOCATION OF HABITAT ENHANCEMENT AREA AND SURROUNDING HABITATS, LOCATION OF PHOTOGRAPHIC REFERENCE POINTS, TRANSECTS, SAMPLING DATA POINTS AND/OR OTHER FEATURES PERTINENT TO THE ENHANCEMENT PLAN.
       - THE MAPS SHOULD INCLUDE A LEGEND AND SHOULD FIT ON AN 8.5 X 11 INCH SHEET.
       - CONCLUSIONS. IF APPLICABLE, A BRIEF DISCUSSION OF THE DIFFICULTIES, POTENTIAL REMEDIAL ACTIONS, AND TIME-TABLE PROPOSED BY THE PERMITTEE.
       - AS-BUILT PLAN WITH 1-FOOT CONTOURS, STRUCTURES, EXTENT OF PLANT COMMUNITIES (FIRST YEAR ONLY).
     - b. WITHIN 60 DAYS OF COMPLETING THE CONSTRUCTION PHASE OF THE HABITAT ENHANCEMENT PLAN, SUBMIT A SIGNED LETTER TO THE REGULATORY AGENCIES SPECIFYING THE DATE OF COMPLETION. IF HABITAT ENHANCEMENT CONSTRUCTION ACTIVITIES ARE NOT COMPLETED BY DECEMBER 31 OF ANY GIVEN YEAR, THE PERMITTEE SHALL PROVIDE THE REGULATORY AGENCIES WITH A LETTER PROVIDING THE DATE MITIGATION WORK BEGAN AND THE WORK COMPLETED AS OF DECEMBER 31. THE LETTER WILL BE SENT NO LATER THAN JANUARY 31 OF THE NEXT YEAR.
     - c. DURING THE FINAL YEAR OF MONITORING, AN ADDITIONAL ASSESSMENT AND REPORT SHALL BE COMPLETED BY A WETLAND SCIENTIST OTHER THAN THE WETLAND SCIENTIST THAT COMPLETED THE ANNUAL MONITORING REPORTS. THE ASSESSMENT REPORT SHALL:
       - SUMMARIZE THE ORIGINAL AND MODIFIED HABITAT ENHANCEMENT OBJECTIVES AND DISCUSS THE LEVEL OF ATTAINMENT OF THESE OBJECTIVES.
       - DESCRIBE SIGNIFICANT PROBLEMS AND SOLUTIONS DURING CONSTRUCTION AND MAINTENANCE (MONITORING) OF THE HABITAT ENHANCEMENT AREA.
       - IDENTIFY REGULATORY AGENCY PROCEDURES OR POLICIES THAT ENCUMBERED IMPLEMENTATION OF THE HABITAT ENHANCEMENT PLAN.
       - RECOMMEND MEASURES TO IMPROVE THE EFFICIENCY, REDUCE THE COST, OR IMPROVE THE EFFECTIVES OF SIMILAR PROJECTS IN THE FUTURE.

TEMPORARY EROSION CONTROL BLANKETS

NOT TO SCALE



1. DIG A 6" BY 6" TRENCH BOTH UP-SLOPE AND DOWN-SLOPE OF THE AREA THE MATTING IS TO BE APPLIED. PREPARE THE SLOPE SOIL SURFACE (RAKING, SEEDING AND FERTILIZING).
2. BEGIN BY PLACING THE BLANKET A MINIMUM OF 12" UP-SLOPE OF THE UP-SLOPE TRENCH. SECURE THE BLANKET AT THE BOTTOM OF THE TRENCH WITH STAPLES PLACED 12" APART. BACKFILL AND COMPACT THE TRENCH. APPLY SEED, AND FOLD THE BLANKET OVER SOIL, SECURE WITH A ROW OF STAPLES PLACED 12" APART ACROSS THE WIDTH OF THE BLANKET. (DIAGRAM A)
3. ROLL THE BLANKET VERTICALLY DOWN THE SLOPE. INSTALL STAPLES IN PATTERN SHOWN ON DIAGRAM E.
4. PARALLEL BLANKETS MUST BE OVERLAPPED BY A MINIMUM OF 4", AND SECURED WITH A ROW OF STAPLES PLACED APPROXIMATELY 3'-0" APART. (DIAGRAM B)
5. ADDITIONAL VERTICAL BLANKETS CAN BE JOINED USING A MINIMUM 4" OVERLAPPING OR SHINGLE STYLE (DIAGRAM C) IN THE DIRECTION OF WATER FLOW. CONNECT THE BLANKETS BY PLACING STAPLES APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKETS.
6. PLACE A ROW OF STAPLES 4" APART ALONG THE OUTER END OF THE LAST BLANKET ON EACH SIDE. A SECOND ROW SHOULD BE PLACED 4" FROM THE FIRST ROW IN A STAGGERED PATTERN.
7. THE BOTTOM END OF BLANKET MUST BE SECURED IN A 6" X 6" TRENCH WITH A ROW OF STAPLES PLACED AT 12" INTERVALS. (DIAGRAM D)

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-IGP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: NONE

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE:
STREAM BANK RESTORATION PLANTING NOTES & DETAILS

PROJECT NO. 83640.03
DRAWING NO. LA-03
SHEET NO.

NOTE:
WORK THIS SHEET WITH SUGGESTED CONSTRUCTION SEQUENCE ON SHTS. S-04 THRU S-06.

APPROXIMATE RELOCATED POSITION OF 18" DIA. SANITARY SEWER (SEE PROPOSED SEWER MAIN PLAN AND PROFILE)

PROPOSED CURBLINE

℄ KENSINGTON AVENUE

PROPOSED RELOCATED POSITION OF SPAN POLE FOUNDATION (PAID FOR UNDER REMOVAL AND/OR RELOCATION OF TRAFFIC SIGNAL EQUIPMENT)

PROTECTIVE FENCE (5' HIGH) (INSTALLED AT SOUTH PREFABRICATED, MODULAR RETAINING WALLS ONLY)

RELOCATE EXISTING UTILITY POLE (BY OTHERS) (SEE ROADWAY PLAN FOR PROPOSED LOCATION)

REMOVE, STAGE AND REINSTALL EXISTING OVERHEAD SPAN WIRE AND INTERCONNECTED TRAFFIC SIGNAL EQUIPMENT (PAID FOR UNDER REMOVAL AND/OR RELOCATION OF TRAFFIC SIGNAL EQUIPMENT)

O.H.W. LINE (TYP.)

BEGIN 15'X5' PRECAST CONCRETE BOX CULVERT STA. 12+44.00

B-1

SODOM BROOK

18° SKEW

12+50

MODIFIED RIPRAP OVER GEOTEXTILE (SEPARATION - HIGH SURVIVABILITY)(TYP.)

℄ 15'X5'PRECAST CONCRETE BOX CULVERT

WETLAND LINE (TYP.)

END 15'X5' PRECAST CONCRETE BOX CULVERT STA. 12+61.87

B-2

APPROXIMATE RELOCATED POSITION OF 12" DIA. WATERMAIN (SEE PROPOSED WATERMAIN PLAN AND PROFILE)

PREFABRICATED, MODULAR RETAINING WALL (PAID FOR UNDER RETAINING WALL (SITE NO. 1)(SEE BRIDGE SHT. S-10)(TYP.)

RELOCATE EXISTING 6" DIA. GASLINE (BY OTHERS)

TYPE "C" CATCH BASIN (HWY. ITEM)

4" STRUCTURE UNDERDRAIN WRAPPED IN GEOTEXTILE (SUBSURFACE DRAINAGE - CLASS A)(INCIDENTAL TO RETAINING WALL (SITE NO. 1)

RELOCATE PEDESTRIAN SIGNAL AND PEDESTAL (HWY. ITEM)(SEE ROADWAY PLAN FOR PROPOSED LOCATION)

PROPOSED CURBLINE

APPROXIMATE LOCATION OF EXISTING BURIED COMMUNICATION DUCT(S) TO BE TEMPORARILY SUPPORTED/RELOCATED DURING CONSTRUCTION (AS REQUIRED)(BY OTHERS)

APPROXIMATE LOCATION OF EXISTING 4-4" DIA. COMMUNICATION CONDUITS TO BE TEMPORARILY SUPPORTED DURING CONSTRUCTION (BY OTHERS)

CONCRETE SIDEWALK RAMP (HWY. ITEM)

APPROXIMATE LOCATION OF EXISTING RIGHT-OF-WAY LINE

APPROXIMATE LOCATION OF EXISTING RIGHT-OF-WAY LINE

S80° 26' 54.93"E 343.93'

PROPOSED METAL BEAM RAIL SYSTEM (HWY. ITEM)(SEE ROADWAY PLAN FOR LAYOUT)

GENERAL PLAN

SCALE: $\frac{3}{16}$"=1'-0"

GENERAL NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016) WITH SUPPLEMENTAL SPECIFICATIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EIGHTH EDITION (2017), AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003).

MATERIAL STRENGTHS:

CLASS "A" CONCRETE, BASED ON:	f'c = 3,300 psi
CLASS "F" CONCRETE, BASED ON:	f'c = 4,400 psi
15'X5' PRECAST CONCRETE BOX CULVERT:	f'c = 5,000 psi

THE SPECIFIED CONCRETE STRENGTH USED IN DESIGN, f'c, OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 6.01 CONCRETE FOR STRUCTURES.

REINFORCEMENT (ASTM A615, GRADE 60):	fy = 60,000 psi
STRUCTURAL STEEL (AASHTO M270, GRADE 50)	fy = 50,000 psi

LIVE LOAD:

STANDARD DESIGN VEHICLE:	AASHTO HL-93
PERMIT (OVERLOAD) VEHICLE:	PER CONNDOT POLICY
FUTURE PAVING ALLOWANCE:	NONE

BITUMINOUS CONCRETE OVERLAY: THIS SHALL CONSIST OF TWO LAYERS. THE FIRST SHALL BE A UNIFORM LAYER OF HMA S0.375 (2" THICK). THE SECOND SHALL BE A UNIFORM LAYER OF HMA S0.5 (2" THICK).

DECIMAL DIMENSIONS: WHEN DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.

EXISTING DIMENSIONS: DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE FIELD SURVEY AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

CONCRETE NOTES:

CLASS "A" CONCRETE: CLASS "A" CONCRETE SHALL BE USED FOR CAST-IN-PLACE CUTOFF/RETURN WALLS, AND CLOSURE POURS AT RETAINING WALL (SITE NO. 1).

CLASS "F" CONCRETE: CLASS "F" CONCRETE SHALL BE USED FOR CAST-IN-PLACE CONCRETE HEADWALL AND PARAPETS.

EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1"X1" UNLESS DIMENSIONED OTHERWISE.

CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE TWO INCHES OF COVER UNLESS DIMENSIONED OTHERWISE.

REINFORCEMENT: ALL REINFORCEMENT AND SUPPORT DEVICES SHALL BE ASTM A615 GRADE 60 (GALVANIZED) UNLESS OTHERWISE NOTED.

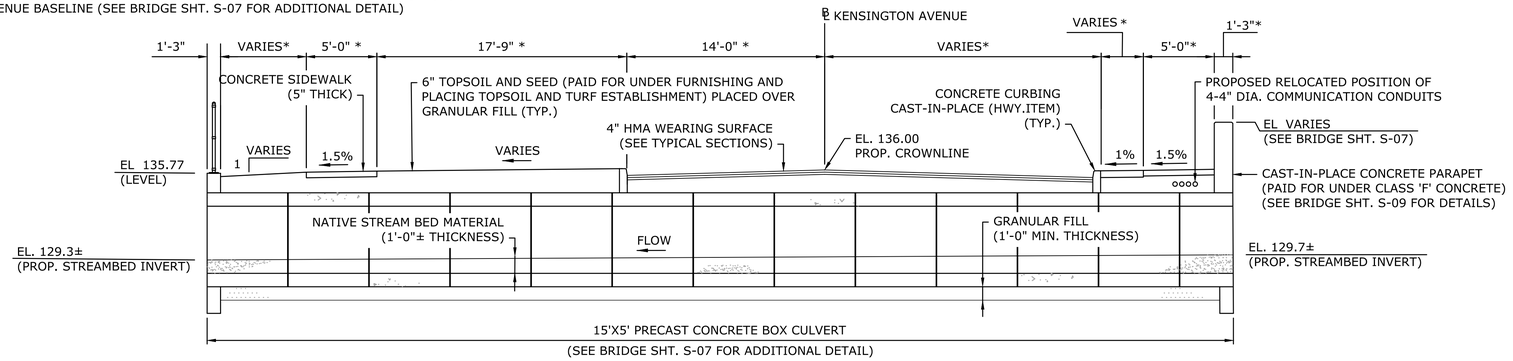
TRANSPORTATION DATA
(ESTIMATED MAXIMUM VALUES)

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT*	SHIPPING WIDTH	SHIPPING WEIGHT
C1-C13	17'-0"	7'-0"	6'-0"	20 TON

CONCRETE DISTRIBUTION

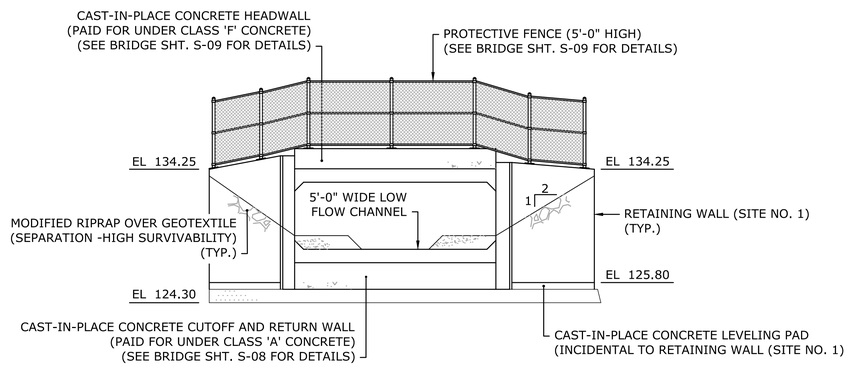
SUPERSTRUCTURE	10 CY
SUBSTRUCTURE	5 CY
TOTAL	15 CY

* REPORTED DIMENSIONS ARE MEASURED PERPENDICULAR TO THE KENSINGTON AVENUE BASELINE (SEE BRIDGE SHT. S-07 FOR ADDITIONAL DETAIL)



TYPICAL SECTION

SCALE: $\frac{3}{16}$"=1'-0"



DOWNSTREAM ELEVATION

SCALE: $\frac{3}{16}$"=1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-BRIDGE_SHEET.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS NOTED

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

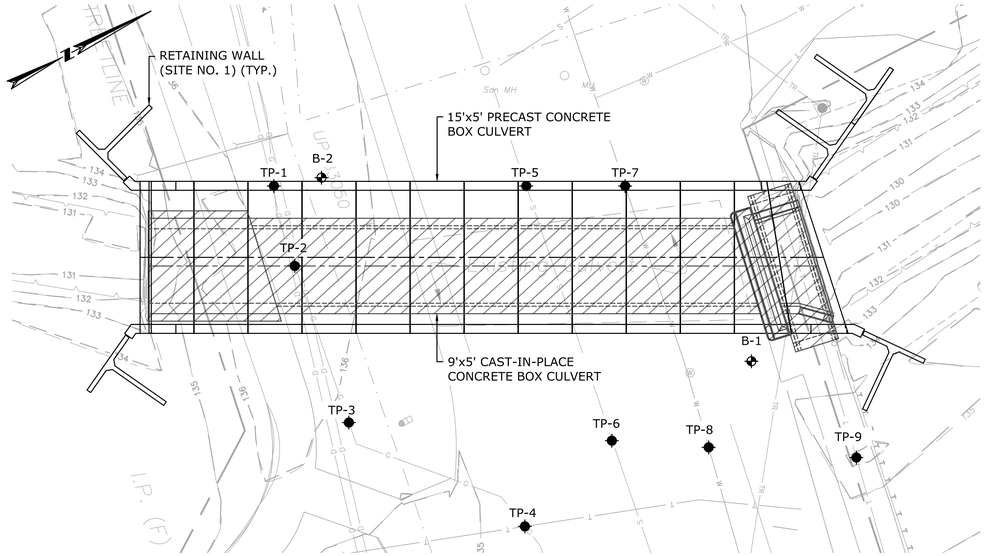
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE:
GENERAL PLAN, LONGITUDINAL SECTION AND ELEVATION

PROJECT NO. 83640.03
DRAWING NO. S-01
SHEET NO.



SUBSURFACE EXPLORATION PLAN

SCALE: $\frac{1}{8}$" = 1'-0"

TEST PIT LOCATION TABLE

TEST PIT	NORTHING	EASTING	SURFACE EL.	FIELD MEASURED EL. BELOW SURFACE	FIELD MEASURED DEPTH BELOW SURFACE EL.	UTILITY DESCRIPTION
TP-1	761984.02	985460.90	136.1	132.8±	3'-3"±	6" DIA. GASLINE (TEST PITTING TO BE PERFORMED BY YANKEE GAS)
TP-2	761981.96	985469.92	136.1	134.3±	1'-9"±	
TP-3	761979.23	985488.33	135.9	134.4±	1'-6"±	
TP-4	761991.30	985507.63	135.3	133.4±	1'-10"±	
TP-5	762008.99	985474.11	135.70	127.77	7'-11"	18" DIA. SEWER MAIN
TP-6	762004.55	985503.90	135.60	127.62	7'-11"	
TP-7	762018.55	985478.88	135.50	128.73	6'-9"	12" DIA. WATERLINE
TP-8	762013.52	985509.48	135.50	128.94	6'-6"	
TP-9	762028.88	985518.46	135.40	133.87	1'-6"	4" DIA. COMMUNICATION

NOTES:

1. THE DESIGN INTENT IS TO EXTEND THE GRANULAR FILL INTO SUITABLE MATERIAL (SILTY SAND (SM) LAYER) - UNSUITABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF UNDER EARTH EXCAVATION AND REPLACED WITH GRANULAR FILL AS DIRECTED BY THE ENGINEER. IT SHOULD BE NOTED THAT THE QUANTITIES FOR EARTH EXCAVATION AND GRANULAR FILL INCLUDE A NOMINAL (10%) CONTINGENCY FOR REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL.
2. THE FACTORED BEARING RESISTANCE = 3.15 KSF. FACTORED BEARING RESISTANCE IS THE PRODUCT OF NOMINAL BEARING RESISTANCE AND A RESISTANCE FACTOR OF 0.45.

EL. 124.3±
(BOTTOM OF GRANULAR FILL
BELOW 15'x5' PRECAST
CONCRETE BOX CULVERT)
(TYP.)(SEE NOTE 1)

BORING LOG NO. B-1

Page 1 of 1

PROJECT: Replacement of Kensington Avenue Culvert
CLIENT: BSC Group, Glastonbury, Connecticut
SITE: Intersection of Kensington and Lewis Avenue, Meriden, Connecticut

LOCATION See Exploration Plan
Latitude: 41.5523° Longitude: -72.8031°
Surface Elev.: 136.1 (Ft.)

DEPTH	ELEVATION (Ft.)		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)
0.0	136	**TOPSOIL**					
0.5	135.5	**FILL - SILTY SAND**, trace gravel, red to brown				2-2-5-5 N=7	11
2.5	133.5	**BITUMINOUS CONCRETE**					
2.8	133.3	**FILL - SILTY SAND**, trace gravel, red to brown				12-4-4-2 N=8	
4.5	131.5	**SANDY SILT (ML)**, with gravel, brown, loose, (AASHTO A-4)	5			4-2-3-2 N=5	
						2-6-2-2 N=8	29
						3-2-3-4 N=5	
10.0	126	**SILTY SAND (SM)**, with gravel, red to brown, medium dense to dense, (AASHTO A-1-a)	10			4-6-8-10 N=14	
						12-14-17-23 N=31	11
			15			6-14-12-10 N=26	
						11-16-12-11 N=28	
22.0	114	**SANDSTONE**, fine to coarse grained, red to brown	20			6-14-19-32 N=33	
23.3	113	***Boring Terminated at 23.25 Feet***					

Stratification lines are approximate. In-situ, the transition may be gradual.
Samples taken with a 2" O.D. split spoon

Advancement Method: 4 1/2-inch inside diameter continuous flight hollow-stem augers.
Abandonment Method: Boring backfilled with auger cuttings upon completion.
See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.
Notes:

WATER LEVEL OBSERVATIONS
10 feet while drilling

Terracon, 201 Hammer Mill Rd, Rocky Hill, CT
Boring Started: 04-30-2018 | Boring Completed: 04-30-2018
Drill Rig: Mobile B-53 | Driller: T.Roe
Project No.: J2175144

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT GEO SMART LOG NO WELL J2175144 REPLACEMENT OF KE GPJ TERRACON_DATATEMPLATE.GDT 7/17/18

EL. 124.3±
(BOTTOM OF GRANULAR FILL
BELOW RETAINING WALL
(SITE NO. 1))
(TYP.)(SEE NOTE 1)

BORING LOG NO. B-2

Page 1 of 1

PROJECT: Replacement of Kensington Avenue Culvert
CLIENT: BSC Group, Glastonbury, Connecticut
SITE: Intersection of Kensington and Lewis Avenue, Meriden, Connecticut

LOCATION See Exploration Plan
Latitude: 41.5524° Longitude: -72.8029°
Surface Elev.: 135.4 (Ft.)

DEPTH	ELEVATION (Ft.)		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)
0.0	135	**BITUMINOUS CONCRETE**					
0.3	135	**FILL - SILTY SAND**, trace gravel, red to brown				6-9-10-6 N=19	11
3.0	132.5	**SANDY SILT (ML)**, trace gravel, brown, medium dense, (AASHTO A-4)	5			1-8-9-10 N=17	37
						9-6-6-5 N=12	
7.0	128.5	**SILTY SAND (SM)**, with gravel, red to brown, medium dense to dense, (AASHTO A-1-a)	10			17-21-23-4 N=44	
						10-14-23-20 N=37	14
						11-12-10-11 N=22	
			15			7-9-11-8 N=20	
						8-13-14-12 N=27	
21.7	113.5	**SANDSTONE**, fine to coarse grained, red to brown	20			6-13-17-50/2" N=30	
23.5	112	***Boring Terminated at 23.5 Feet***					

Stratification lines are approximate. In-situ, the transition may be gradual.
Samples taken with a 2" O.D. split spoon

Advancement Method: 4 1/2-inch inside diameter continuous flight hollow-stem augers.
Abandonment Method: Borings backfilled with soil cuttings upon completion. Pavement repaired using "cold patch" asphalt.
See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.
Notes:

WATER LEVEL OBSERVATIONS
7.3 feet while drilling

Terracon, 201 Hammer Mill Rd, Rocky Hill, CT
Boring Started: 04-30-2018 | Boring Completed: 04-30-2018
Drill Rig: Mobile B-53 | Driller: T.Roe
Project No.: J2175144

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT GEO SMART LOG NO WELL J2175144 REPLACEMENT OF KE GPJ TERRACON_DATATEMPLATE.GDT 7/17/18

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–TYP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS SHOWN
0

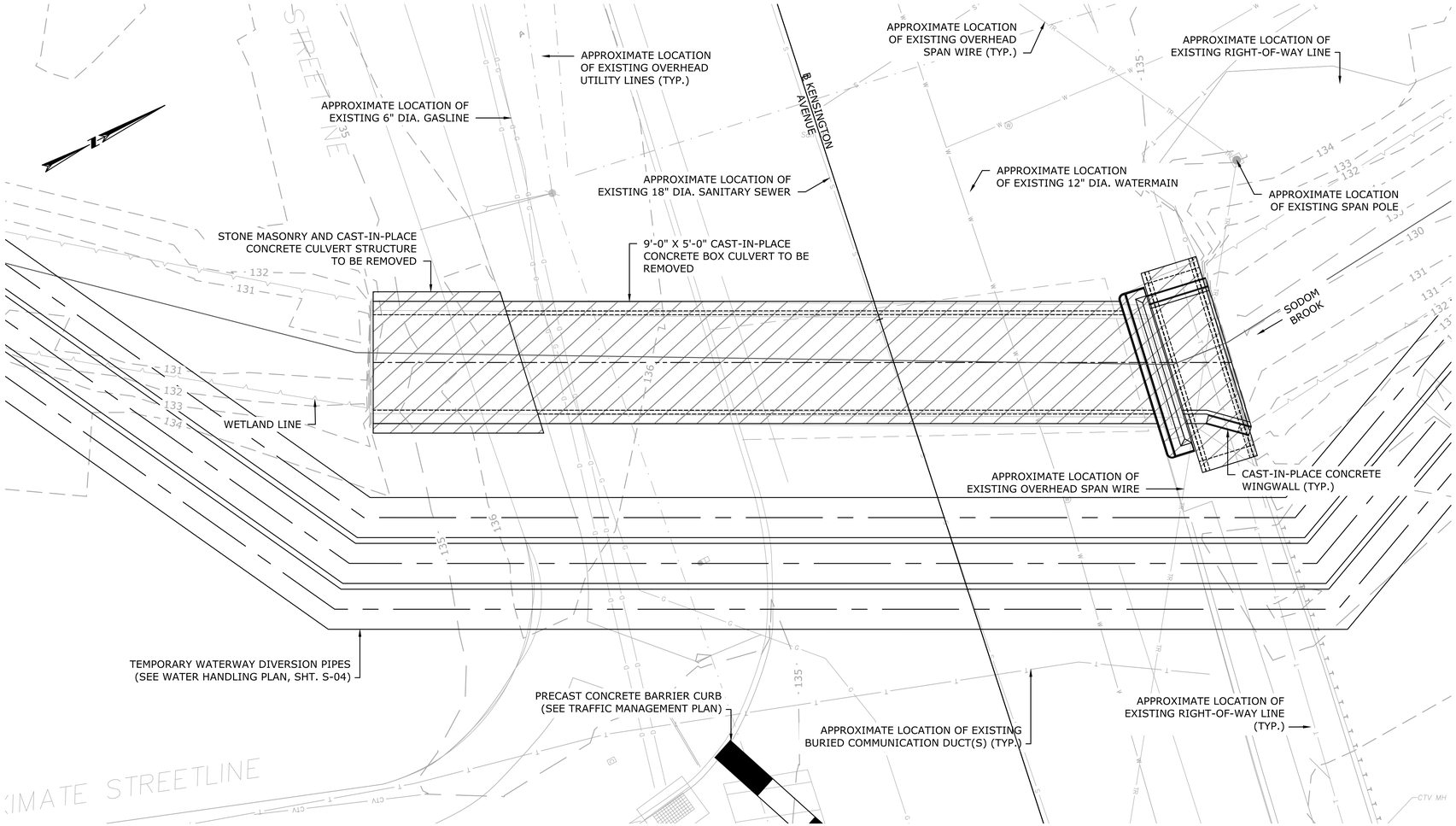
BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

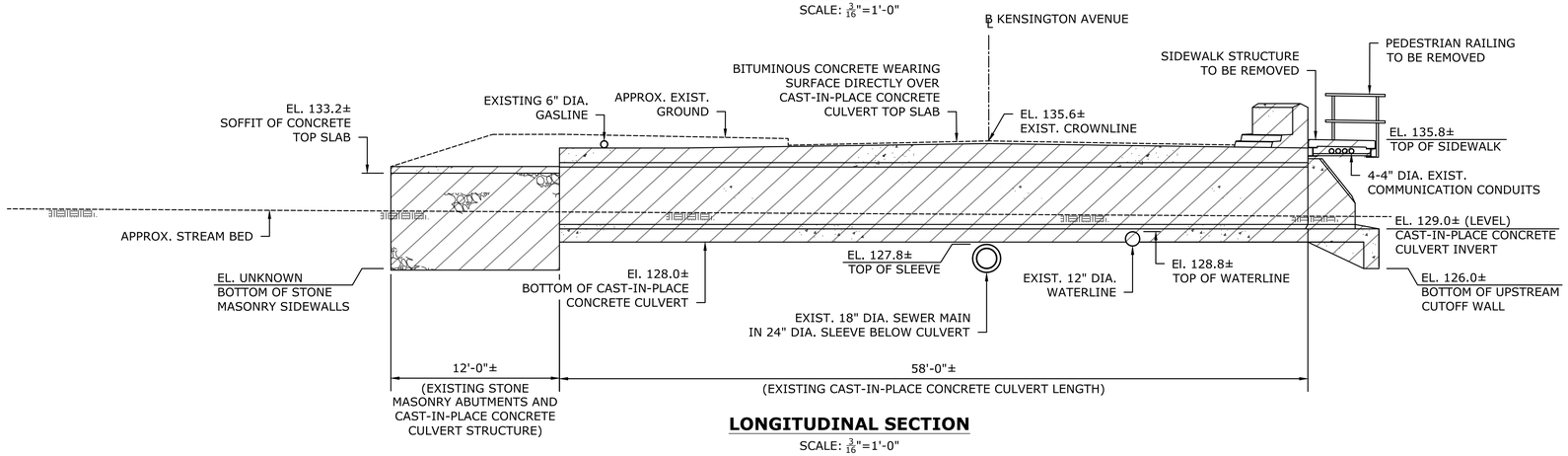
TOWN: MERIDEN
DRAWING TITLE: SUBSURFACE EXPLORATION PLAN AND LOGS

PROJECT NO. 83640.03
DRAWING NO. S-02
SHEET NO.



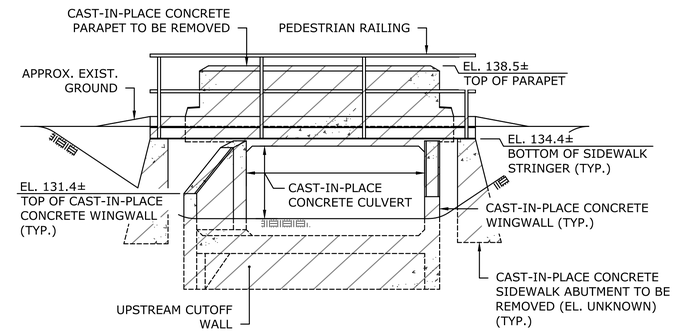
PLAN

SCALE: $\frac{3}{16}$"=1'-0"



LONGITUDINAL SECTION

SCALE: $\frac{3}{16}$"=1'-0"



UPSTREAM ELEVATION

SCALE: $\frac{1}{4}$"=1'-0"

DEMOLITION NOTES:

1. REMOVAL OF THE EXISTING BITUMINOUS CONCRETE WEARING SURFACE WITHIN THE LIMITS OF DEMOLITION SHALL BE PAID FOR UNDER EARTH EXCAVATION. SEE SPECIAL PROVISION.
2. REMOVAL OF THE EXISTING STRUCTURE (INCLUDING THE EXISTING PARAPET, SIDEWALK STRUCTURE, AND PEDESTRIAN RAILING) SHALL BE PAID FOR UNDER REMOVAL OF EXISTING CULVERT (SITE NO. 1). SEE SPECIAL PROVISION.
3. ALL MATERIAL REMOVED DURING DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-DEMOLITION.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS SHOWN
0

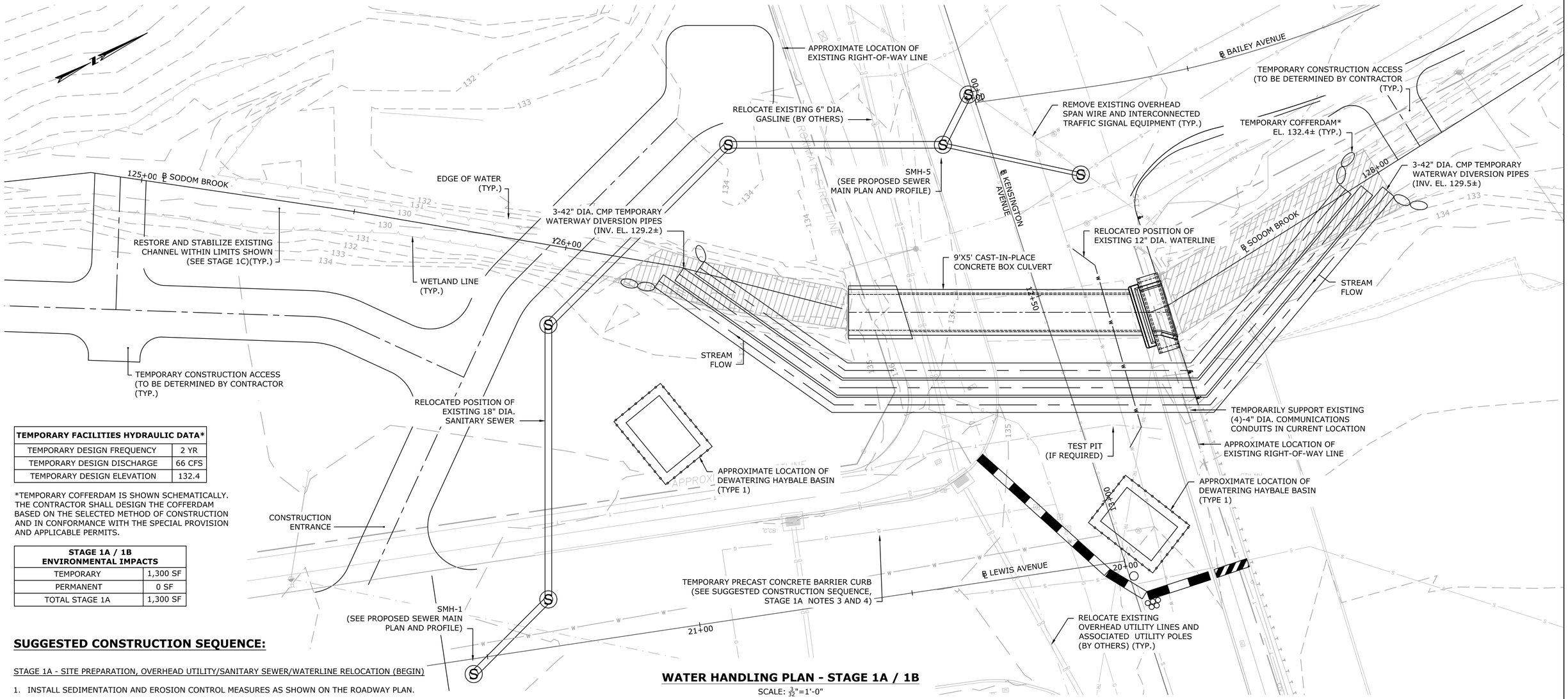
BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
DRAWING TITLE: DEMOLITION LIMITS

PROJECT NO. 83640.03
DRAWING NO. S-03
SHEET NO.



TEMPORARY FACILITIES HYDRAULIC DATA*	
TEMPORARY DESIGN FREQUENCY	2 YR
TEMPORARY DESIGN DISCHARGE	66 CFS
TEMPORARY DESIGN ELEVATION	132.4

*TEMPORARY COFFERDAM IS SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL DESIGN THE COFFERDAM BASED ON THE SELECTED METHOD OF CONSTRUCTION AND IN CONFORMANCE WITH THE SPECIAL PROVISION AND APPLICABLE PERMITS.

STAGE 1A / 1B ENVIRONMENTAL IMPACTS	
TEMPORARY	1,300 SF
PERMANENT	0 SF
TOTAL STAGE 1A	1,300 SF

SUGGESTED CONSTRUCTION SEQUENCE:

STAGE 1A - SITE PREPARATION, OVERHEAD UTILITY/SANITARY SEWER/WATERLINE RELOCATION (BEGIN)

1. INSTALL SEDIMENTATION AND EROSION CONTROL MEASURES AS SHOWN ON THE ROADWAY PLAN.
2. CLEAR AND GRUB THE SITE AS REQUIRED TO COMPLETE THE PROPOSED DEMOLITION AND CONSTRUCTION OPERATIONS.
3. RELOCATE EXISTING 18" DIA. SANITARY SEWER BETWEEN SMH-1 AND SMH-5 AS SHOWN ON THE PROPOSED SEWER MAIN PLAN AND PROFILE. SEE TRAFFIC MANAGEMENT PLAN FOR DETAILED PHASING TO ACCOMMODATE TEMPORARY SANITARY SEWER BYPASS SYSTEM AND PERFORM TIE-IN AT SMH-1.
4. CONFIGURE TEMPORARY PRECAST CONCRETE BARRIER CURB TO DEFINE WORK ZONE LIMITS AND IMPLEMENT DETOUR AS SHOWN ON THE TRAFFIC MANAGEMENT PLAN. ALL WORK ASSOCIATED WITH FURNISHING AND PLACING THE INITIAL CONFIGURATION SHALL BE PAID FOR UNDER TEMPORARY PRECAST CONCRETE BARRIER CURB. ALL WORK ASSOCIATED WITH ADJUSTMENT, RELOCATION AND MAINTENANCE OF THE INITIAL CONFIGURATION SHALL BE PAID FOR UNDER MAINTENANCE AND PROTECTION OF TRAFFIC.
5. COMPLETE RELOCATION OF EXISTING 18" DIA. SANITARY SEWER AS SHOWN ON THE PROPOSED SEWER MAIN PLAN AND PROFILE.
6. RELOCATE EXISTING 6" DIA. GASLINE (BY OTHERS).
7. REMOVE AND STAGE EXISTING OVERHEAD SPAN WIRE AND INTERCONNECTED TRAFFIC SIGNAL EQUIPMENT. ALL WORK ASSOCIATED WITH THE REMOVAL, STAGING AND REINSTALLATION (SEE SUGGESTED CONSTRUCTION SEQUENCE, STAGE 2B) OF THE EXISTING OVERHEAD SPAN WIRE AND INTERCONNECTED TRAFFIC SIGNAL EQUIPMENT SHALL BE PAID FOR UNDER REMOVAL AND/OR RELOCATION OF TRAFFIC SIGNAL EQUIPMENT. REMOVE AND STAGE EXISTING SPAN POLE. ALL WORK ASSOCIATED WITH THE REMOVAL, STAGING AND REINSTALLATION (SEE SUGGESTED CONSTRUCTION SEQUENCE, STAGE 2B) OF THE EXISTING SPAN POLE SHALL BE PAID FOR UNDER REMOVE AND REINSTALL SPAN POLE.
8. RELOCATE EXISTING OVERHEAD UTILITY LINES AND ASSOCIATED UTILITY POLES (BY OTHERS).
9. BEGIN RELOCATION OF EXISTING 12" DIA. WATERLINE. REFER TO SUGGESTED CONSTRUCTION SEQUENCE AND DETAILS SHOWN ON THE PROPOSED WATERLINE PLAN AND PROFILE.

WATER HANDLING PLAN - STAGE 1A / 1B

SCALE: 3/32"=1'-0"

STAGE 1B - WATER DIVERSION, DEMOLITION, WATERLINE RELOCATION (COMPLETE) AND TEMPORARY SUPPORT OF EXISTING COMMUNICATION CONDUITS

1. INSTALL COFFERDAM, TEMPORARY WATERWAY DIVERSION PIPE AND DEWATERING HAY BALE BASIN (TYPE 1) - THESE ITEMS REPRESENT THE WATER HANDLING SYSTEM. THE FURNISHING, INSTALLATION, DEWATERING AND MAINTENANCE (INCLUDING PUMPING) OF THE WATER HANDLING SYSTEM SHALL BE PAID FOR UNDER HANDLING WATER - PRECAST CONCRETE BOX CULVERT.
2. PUMP WATER WITHIN THE COFFERDAM TO THE DEWATERING HAY BALE BASIN (TYPE 1) AS NECESSARY TO PERFORM THE REQUIRED DEMOLITION AND CONSTRUCTION OPERATIONS IN THE DRY. THE CONTRACTOR SHALL SIZE THE BASIN IN ACCORDANCE WITH THE CONNECTICUT EROSION AND SEDIMENTATION CONTROL GUIDELINES BASED ON THE PUMP USED FOR THE WORK. THE DEWATERING HAY BALE BASIN (TYPE 1) SHALL BE LOCATED IN AN UPLAND AREA - THE SIZE AND LOCATION OF THE DEWATERING HAY BALE BASIN (TYPE 1) SHOWN ON THE WATER HANDLING PLANS IS SCHEMATIC.
3. REMOVE THE EXISTING BITUMINOUS CONCRETE WEARING SURFACE AND BEGIN DEMOLITION OF THE EXISTING STRUCTURE AS SHOWN ON THE DEMOLITION PLAN.
4. COMPLETE RELOCATION OF EXISTING 12" DIA. WATERLINE. REFER TO SUGGESTED CONSTRUCTION SEQUENCE AND DETAILS SHOWN ON THE PROPOSED WATERLINE PLAN AND PROFILE.
5. INSTALL TEST PIT (IF REQUIRED) TO DETERMINE AS-BUILT LOCATION OF THE EXISTING BURIED COMMUNICATION DUCT(S) IN THE LEWIS/KENSINGTON AVENUE INTERSECTION. ALL WORK ASSOCIATED WITH DETERMINATION OF AS-BUILT LOCATION OF THE EXISTING BURIED COMMUNICATION DUCT(S) SHALL BE PAID FOR UNDER TEST PIT. THE CONTRACTOR IS NOTIFIED THAT THE EXISTING COMMUNICATIONS CONDUITS CURRENTLY SUSPENDED BELOW THE CANTILEVERED SIDEWALK AT THE EXISTING CULVERT CROSSING WILL REQUIRE TEMPORARY SUPPORT AND PROTECTION DURING ALL DEMOLITION AND CONSTRUCTION OPERATIONS. THE COST ASSOCIATED WITH THE DESIGN, INSTALLATION AND MAINTENANCE OF ANY TEMPORARY WORKS REQUIRED FOR THE SUPPORT OF THE EXISTING COMMUNICATION CONDUITS SHALL BE THE RESPONSIBILITY OF FRONTIER COMMUNICATIONS.
6. COMPLETE DEMOLITION OF THE EXISTING STRUCTURE AS SHOWN ON THE DEMOLITION PLAN.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-WATER_HANDLING.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS SHOWN

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

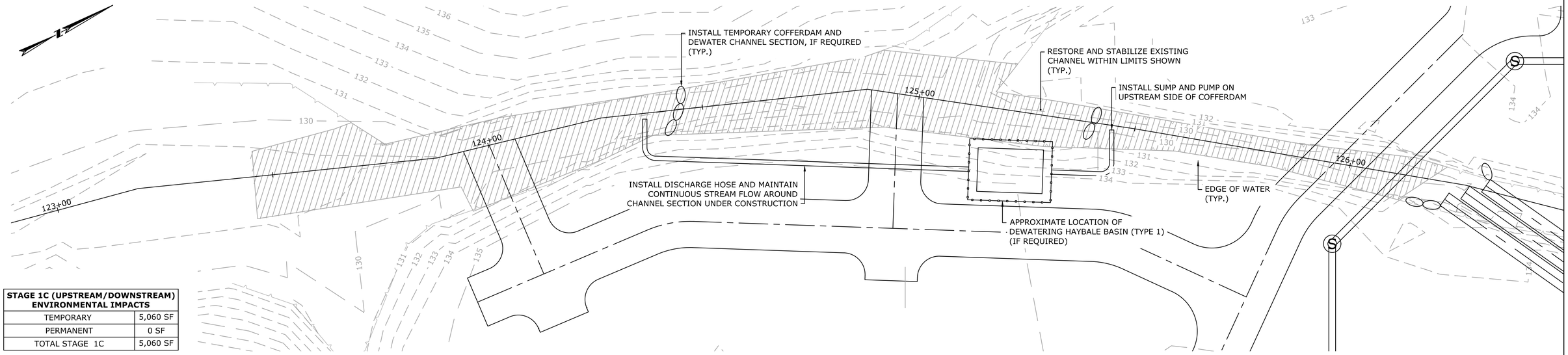
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE:
WATER HANDLING PLAN (STAGE 1A & 1B)

PROJECT NO. 83640.03
DRAWING NO. S-04
SHEET NO.



STAGE 1C (UPSTREAM/DOWNSTREAM) ENVIRONMENTAL IMPACTS	
TEMPORARY	5,060 SF
PERMANENT	0 SF
TOTAL STAGE 1C	5,060 SF

WATER HANDLING PLAN - STAGE 1C (DOWNSTREAM)

SCALE: $\frac{3}{32}$"=1'-0"

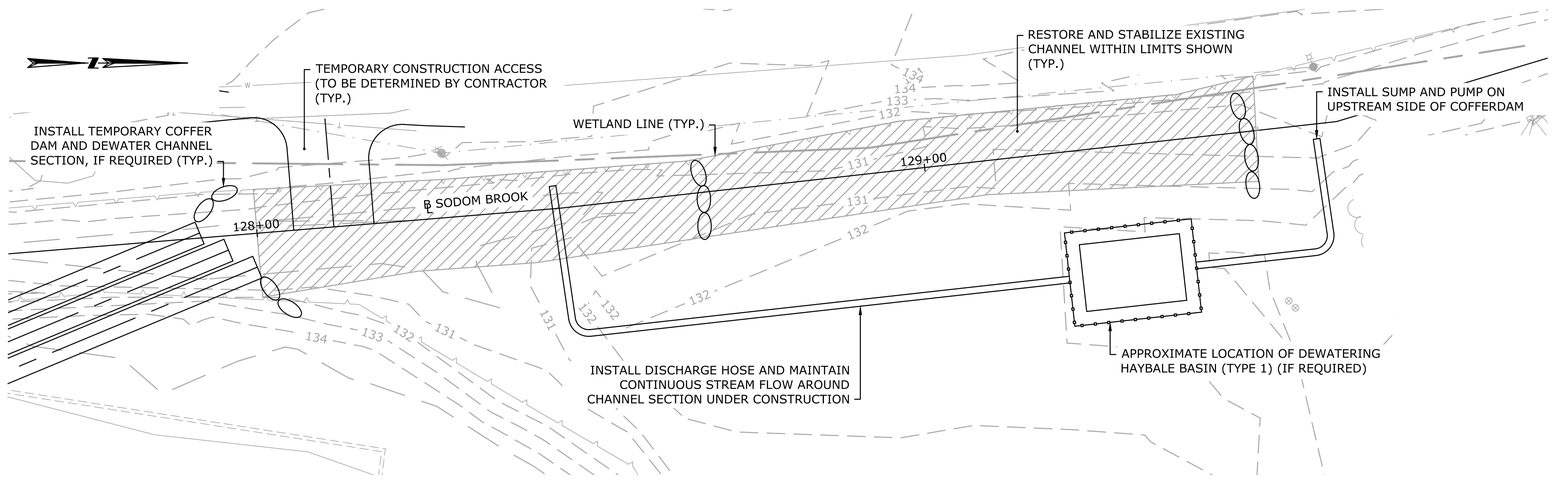
SUGGESTED CONSTRUCTION SEQUENCE:

STAGE 1C - CHANNEL RESTORATION (UPSTREAM AND DOWNSTREAM)

1. THE INTENT IS TO COMPLETE THE CHANNEL RESTORATION WORK IN NOMINAL SECTION LENGTHS DURING LOW FLOW CONDITIONS. SHOULD STREAM FLOW BE PRESENT IN THE CHANNEL SECTION UNDER CONSTRUCTION, THE CONTRACTOR SHALL INSTALL COFFERDAMS AT EACH END OF THE SECTION LENGTH UNDER CONSTRUCTION AND PUMP WATER WITHIN THE SECTION TO THE DEWATERING HAYBALE BASIN (TYPE 1) AS NECESSARY TO PERFORM THE CHANNEL RESTORATION WORK IN THE DRY. THE FURNISHING, INSTALLATION, DEWATERING AND MAINTENANCE (INCLUDING PUMPING) OF THE WATER HANDLING SYSTEM REQUIRED TO COMPLETE THE CHANNEL RESTORATION WORK SHALL BE INCLUDED UNDER HANDLING WATER - PRECAST CONCRETE BOX CULVERT.

2. THE INTENT IS TO MAINTAIN CONTINUOUS STREAM FLOW AT ALL TIMES. THE CONTRACTOR SHALL INSTALL A SUMP AT THE UPSTREAM COFFERDAM (UPSTREAM SIDE) AND PUMP WATER FROM THE ADJACENT UPSTREAM SECTION, AROUND THE SECTION LENGTH UNDER CONSTRUCTION, TO THE DEWATERING HAYBALE BASIN (TYPE 1) WITH DISCHARGE TO THE ADJACENT DOWNSTREAM SECTION.

3. REMOVE DEBRIS/RECONSTRUCT UPSTREAM AND DOWNSTREAM CHANNEL APPROACHES AS SHOWN ON THE SODOM BROOK CROSS SECTIONS. ALL EXCAVATION REQUIRED TO COMPLETE THE CHANNEL RESTORATION WORK SHALL BE PAID FOR UNDER CHANNEL EXCAVATION - EARTH.



WATER HANDLING PLAN - STAGE 1C (UPSTREAM)

SCALE: $\frac{3}{32}$"=1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-WATER_HANDLING.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS SHOWN
0

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

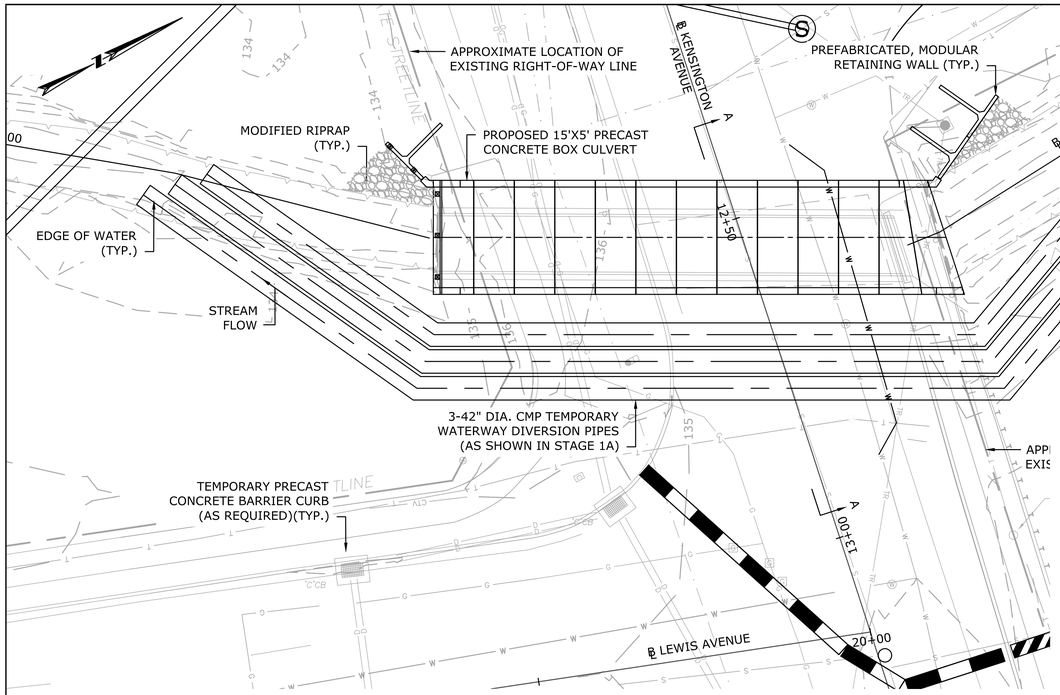
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

DRAWING TITLE:
WATER HANDING PLAN (STAGE 1C)

PROJECT NO. 83640.03
DRAWING NO. S-05
SHEET NO.



WATER HANDLING PLAN - STAGE 2A

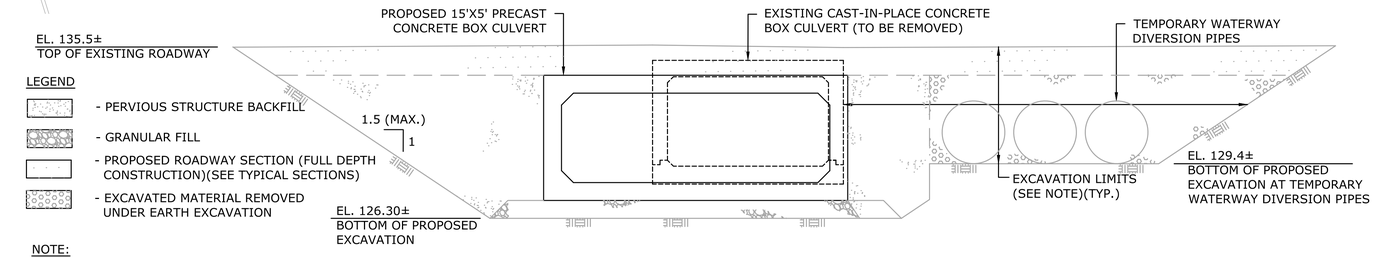
SCALE: $\frac{3}{32}$"=1'-0"

STAGE 2 ENVIRONMENTAL IMPACTS	
TEMPORARY	0 SF
PERMANENT	0 SF
TOTAL STAGE 2	0 SF
TOTAL PROJECT	6,360 SF

SUGGESTED CONSTRUCTION SEQUENCE:

STAGE 2A - INSTALLATION OF PROPOSED 15'X5' PRECAST CONCRETE BOX CULVERT, APPROACH WORK AND INCIDENTALS

1. PREPARE FOUNDATION, PLACE CAST-IN-PLACE CONCRETE CUTOFF/RETURN WALLS AS SHOWN ON BRIDGE SHT. S-08 AND INSTALL PROPOSED 15'X5' PRECAST CONCRETE BOX CULVERT AS SHOWN ON BRIDGE SHT. S-07, WITH ASSOCIATED PREFABRICATED, MODULAR RETAINING WALLS (WEST SIDE ONLY) AS SHOWN ON BRIDGE SHT. S-10.
2. INSTALL CAST-IN-PLACE CONCRETE PARAPET, HEADWALL AND CLOSURES AS SHOWN ON BRIDGE SHTS. S-07 AND S-08.
3. INSTALL TRAFFIC CONTROL FOUNDATION - SPAN POLE (TO BE DESIGNED/DETAILED BY CONTRACTOR TO MATCH THE BASE PLATE PATTERN ON THE EXISTING SPAN POLE). REINSTALL SPAN POLE.
4. BACKFILL PROPOSED CULVERT TO THE BOTTOM OF PROPOSED ROADWAY SUBBASE WITHIN THE LIMITS OF EXCAVATION SHOWN ON SECTION A, THIS SHEET (WEST SIDE ONLY)
5. INSTALL MODIFIED RIPRAP OVER GEOTEXTILE (SEPARATION - HIGH SURVIVABILITY) AT PROPOSED CULVERT INLET/OUTLET LOCATIONS (WEST SIDE ONLY) AND INSTALL NATURAL STREAMBED MATERIAL (AND LOW FLOW CHANNEL) THROUGH PROPOSED CULVERT BARREL AS SHOWN ON BRIDGE SHTS. S-01 AND S-07.

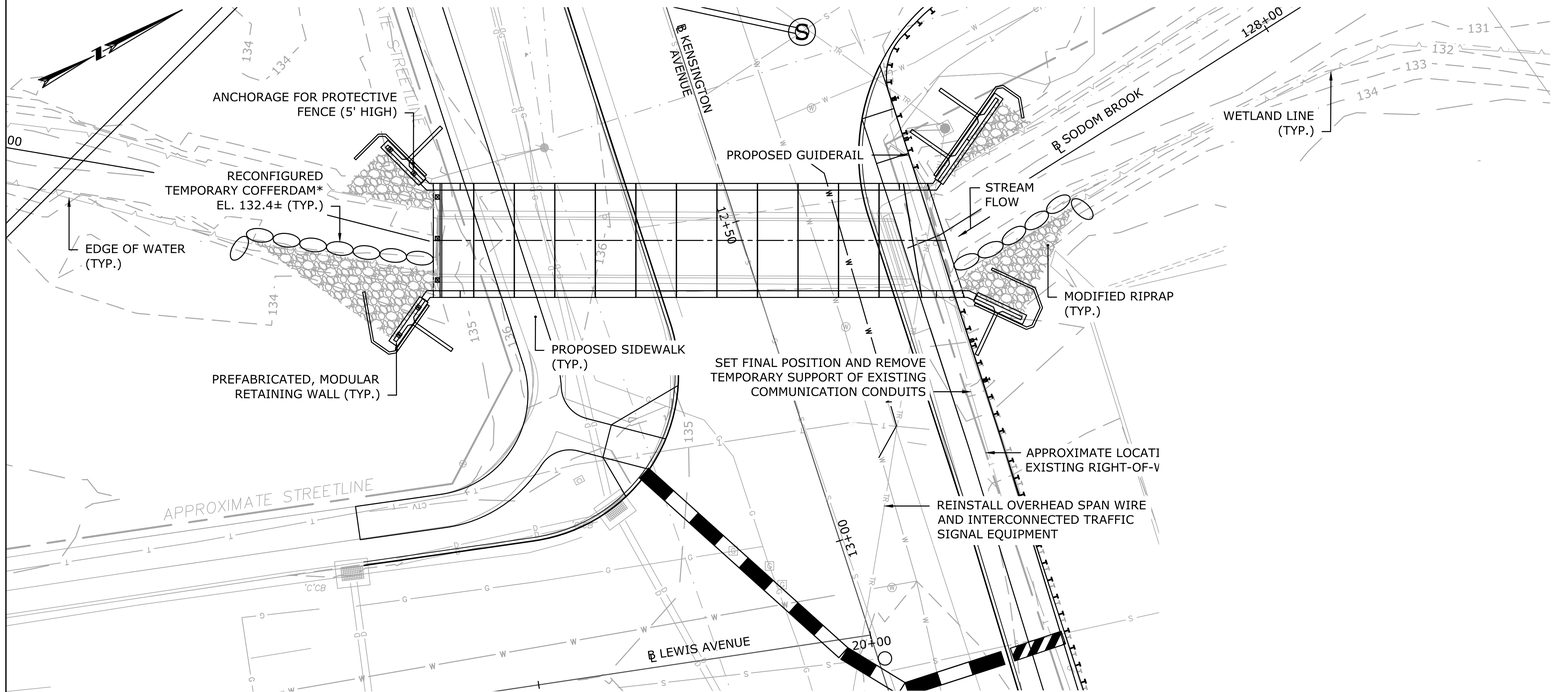


NOTE:

ALL EXCAVATION REQUIRED FOR THE DEMOLITION OF THE EXISTING CAST-IN-PLACE CONCRETE BOX CULVERT AND CONSTRUCTION OF THE PROPOSED 15'X5' PRECAST CONCRETE BOX CULVERT (INCLUDING EXCAVATION FOR INSTALLATION OF THE TEMPORARY WATERWAY DIVERSION PIPES) SHALL BE PAID FOR UNDER EARTH EXCAVATION. ANY TEMPORARY EXCAVATION SUPPORT, IF SELECTED BY THE CONTRACTOR, SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION. SEE SPECIAL PROVISION.

SECTION A

SCALE: $\frac{1}{4}$"=1'-0"



WATER HANDLING PLAN - STAGE 2B

SCALE: $\frac{3}{32}$"=1'-0"

STAGE 2B - DIVERT STREAM FLOW, REMOVE WATER HANDLING SYSTEM, INSTALLATION OF PREFABRICATED, MODULAR RETAINING WALLS (EAST SIDE ONLY), APPROACH WORK AND INCIDENTALS

1. RECONFIGURE/INSTALL COFFERDAM AS REQUIRED TO COMPLETE INSTALLATION OF PREFABRICATED, MODULAR RETAINING WALLS (EAST SIDE ONLY) IN THE DRY. DIVERT STREAM FLOW THROUGH PROPOSED 15' X 5' PRECAST CONCRETE BOX CULVERT.
2. REMOVE COFFERDAMS, TEMPORARY WATERWAY DIVERSION PIPE AND DEWATERING HAY BALE BASIN (TYPE 1).
3. PREPARE FOUNDATION AND INSTALL PREFABRICATED, MODULAR RETAINING WALLS (EAST SIDE ONLY) AND ASSOCIATED MODIFIED RIPRAP OVER GEOTEXTILE (SEPARATION - HIGH SURVIVABILITY) AS SHOWN ON BRIDGE SHT. S-10.
4. INSTALL CAST-IN-PLACE CONCRETE CLOSURES AS SHOWN ON BRIDGE SHT. S-08.
5. BACKFILL PROPOSED CULVERT TO THE BOTTOM OF PROPOSED ROADWAY SUBBASE WITHIN THE LIMITS OF EXCAVATION SHOWN ON SECTION A, THIS SHEET (EAST SIDE ONLY).
6. SET FINAL POSITION AND REMOVE TEMPORARY SUPPORTS FOR THE EXISTING 4 - 4" DIA. COMMUNICATION CONDUITS.
7. CONSTRUCT ROADWAY SUBBASE, INSTALL PROTECTIVE FENCE (5' HIGH), SIDEWALKS AND INCIDENTALS.
8. RETURN PREVIOUSLY RELOCATED OVERHEAD UTILITY LINES AND ASSOCIATED UTILITY POLES TO ORIGINAL POSITION (IF REQUIRED)(BY OTHERS).
9. REINSTALL EXISTING OVERHEAD SPAN WIRE AND INTERCONNECTED TRAFFIC SIGNAL EQUIPMENT.

STAGE 3 - INSTALLATION OF PAVEMENT SURFACES, SITE CLEANUP AND DEMOBILIZATION (GRAPHIC NOT SHOWN)

1. COMPLETE INSTALLATION OF PAVEMENT SURFACES WITHIN THE ESTABLISHED WORK ZONE. ADJUST WORK ZONE LIMITS AND PROVIDE SUPPLEMENTAL TRAFFIC CONTROL TO COMPLETE PAVEMENT OVERLAY IN AREAS ADJACENT TO THE ESTABLISHED WORK ZONE, AS REQUIRED.
2. RESTORE SITE IN ACCORDANCE WITH THE STREAM BANK RESTORATION PLAN.
3. CLEANUP AND DEMOBILIZE FROM SITE.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–WATER_HANDLING.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS SHOWN
0

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
DRAWING TITLE: WATER HANDLING PLAN (STAGE 2)
PROJECT NO. 83640.03
DRAWING NO. S-06
SHEET NO.

DESIGN:

PRECAST UNITS TO BE DESIGNED BY PRECASTER. DESIGN TO BE STAMPED BY CONNECTICUT LICENSED PROFESSIONAL ENGINEER AND SUBMITTED FOR REVIEW BY BSC GROUP. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS PREPARED IN ACCORDANCE WITH THE LATEST AASHTO LRFD DESIGN SPECIFICATIONS AND CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL FOR HL-93 LOADING FOR APPROVAL OF THE ENGINEER. THE DESIGN COMPUTATIONS SHALL CONSIDER ALL LOADS AS APPROPRIATE DURING FABRICATION, SHIPMENT, ERECTING, CONSTRUCTION AND UPON COMPLETION OF CONSTRUCTION BASED UPON THESE CONSTRUCTION PLANS.

CONTRACTOR AND PRECAST SUPPLIER SHALL REVIEW PRECAST DELIVERY ROUTES FOR BOTH WEIGHT AND HEIGHT RESTRICTIONS.

UNSUITABLE MATERIAL:

ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE ENGINEER.

EXISTING CONDITIONS:

ALL DIMENSIONS AND DETAILS SHOWN FOR THE EXISTING STRUCTURE ARE NOT GUARANTEED TO BE CORRECT. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR THE COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF AND SHALL NOT COMMENCE ANY FABRICATION UNTIL THEY HAVE MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE SUBMITTED SHOP DRAWINGS HAVE BEEN APPROVED BY THE ENGINEER. SHOP DRAWINGS SHALL STATE THAT THE EXISTING DIMENSIONS, ANGLES, ELEVATIONS AND FIELD CONDITIONS HAVE BEEN FIELD VERIFIED BY THE CONTRACTOR.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS REQUIRED FOR THE PROPER PERFORMANCE OF THE WORK. FIELD CONDITIONS MAY EXIST WHICH DEVIATE FROM THE TYPICAL AND THEORETICAL DIMENSIONS SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR FABRICATION AND FIT OF THEIR WORK.

CONSTRUCTION JOINTS:

CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF BSC GROUP.

TRAFFIC:

CONSTRUCTION SHALL TAKE PLACE IN ONE STAGE AND THE ROAD WILL BE CLOSED TO TRAFFIC FOR THE DURATION OF BRIDGE CONSTRUCTION. REFER TO THE TRAFFIC MANAGEMENT AND/OR DETOUR PLANS FOR TRAFFIC CONTROL DURING DEMOLITION AND CONSTRUCTION.

UTILITIES:

THE CONTRACTOR SHALL PROTECT FROM DAMAGE, AS NECESSARY, ANY EXISTING UTILITIES/POLES. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE RESPECTIVE UTILITY OWNERS FOR ALL UTILITIES THAT ARE TO BE TEMPORARILY OR PERMANENTLY RELOCATED FOR THE BRIDGE REPLACEMENT WORK.

CONSTRUCTION:

ANY PERMIT MODIFICATIONS REQUIRED DUE TO THE CONTRACTOR'S MEANS AND METHODS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL MODIFY ALL REQUIRED PERMITS AND LICENSES AND PAY ALL CHARGES AND FEES INCURRED. THE CONTRACTOR SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROSECUTION OF THE WORK, AND SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES, AND REGULATIONS OF THE FEDERAL GOVERNMENT, THE STATE, THE TOWN, AND OTHER BODIES HAVING JURISDICTION OVER THE WORK AND ENCOMPASSED BY THE CONTRACT. THE COMPLETION DATE WILL REMAIN AS STATED IN THE CONTRACT DOCUMENTS.

AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

DEMOLITION NOTES:

1. THE ENTIRE EXISTING CULVERT WILL BE DEMOLISHED.
2. EXISTING SKETCHES WERE BASED OFF LIMITED EXPLORATORY INVESTIGATION AND ARE CONCEPTUAL ONLY. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUACY AND ACCURACY THEREOF, AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE/SHE HAS MADE THE REQUIRED MEASUREMENTS AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.
3. ALL DEMOLITION ACTIVITIES SHALL OCCUR IN THE DRY.
4. CONTRACTOR SHALL SUBMIT A CONTROL OF WATER, DEMOLITION PLAN AND PROCEDURE BEFORE THE START OF DEMOLITION.
5. THE CONTRACTOR SHALL DISPOSE OF ANY DEMOLITION DEBRIS, CONSTRUCTION DEBRIS, WOOD WASTES, CONTAMINATED SOILS, HAZARDOUS MATERIALS AND OTHER MATERIALS OR SPECIAL WASTES IN STRICT ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.
6. THE CONTRACTOR MUST COORDINATE ALL WORK WITH THE CITY OF MERIDEN, THE ENGINEER AND ANY EFFECTED ABUTTERS. WORK SHALL NOT PROCEED WITHOUT WRITTEN APPROVAL FROM THE CITY OF MERIDEN.

BACKFILL NOTES:

1. THE CULVERT UNITS SHALL BE BACKFILLED SIMULTANEOUSLY. NO MORE THAN ONE FOOT SIX INCHES OF DIFFERENTIAL HEIGHT SHALL BE PERMITTED.
2. NO BACKFILL SHALL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THEY HAVE BEEN APPROVED BY THE ENGINEER.
3. PERVIOUS STRUCTURE BACKFILL AGAINST WATERPROOFED SURFACES SHALL BE PLACED CAREFULLY AND WITH A WORKMANLIKE MANNER TO AVOID DAMAGE TO THE WATERPROOFING.
4. MECHANICAL TAMPERS OR APPROVED COMPACTING EQUIPMENT SHALL BE USED TO COMPACT ALL BACKFILL AND GRANULAR FILL IMMEDIATELY ADJACENT TO EACH SIDE OF THE PRECAST CONCRETE BRIDGE. HEAVY CONSTRUCTION EQUIPMENT WILL NOT BE PERMITTED ATOP AN INCOMPLETE STRUCTURE.
5. BACKFILL IN FRONT OF THE WINGWALLS SHALL BE CARRIED TO GROUND LINES AS SHOWN IN THE PLANS.
6. FILL BEHIND THE WINGWALLS SHALL BE PLACED AT THE SAME TIME AS THE BRIDGE FILL. FILL SHALL BE PLACED IN PROGRESSIVELY PLACED HORIZONTAL LAYERS NOT EXCEEDING 9 INCHES.
7. THE USE OF VIBRATORY ROLLERS FOR COMPACTION PURPOSES WILL NOT BE PERMITTED.
8. NO BACKFILLING SHALL OCCUR DURING WET OR FREEZING WEATHER.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-BRIDGE_SHEET.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS NOTED

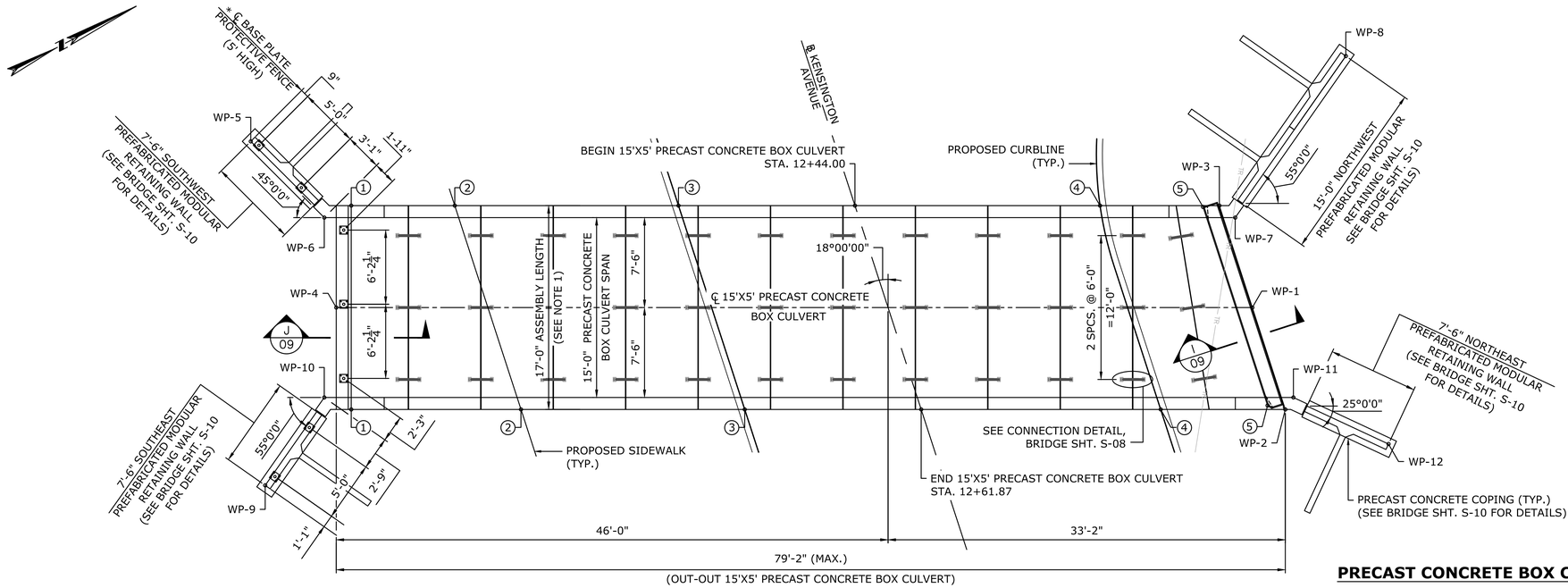
BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

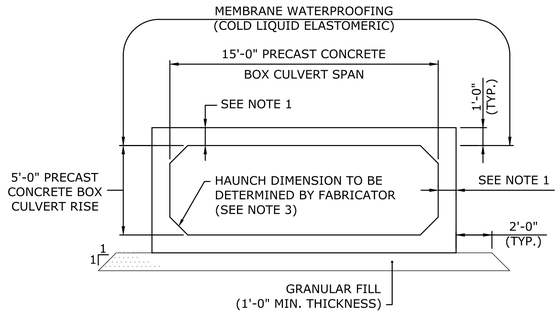
ENGINEER: DMD DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
DRAWING TITLE: GENERAL CONSTRUCTION NOTES

PROJECT NO. 83640.03
DRAWING NO. S-07
SHEET NO.





TRANSVERSE SECTION

SCALE: ¼"=1'-0"

ELEVATION TABLE			
LOCATION		BEGIN	END
①	EL. 'A'	135.77	135.77
	EL. 'B'	135.27	134.62
②	EL. 'C'	136.00	135.91
③	EL. 'D'	135.66	135.55
④	EL. 'E'	135.49	135.39
⑤	EL. 'F'	136.10	135.96
	EL. 'G'	139.60	139.46

WORKING POINT TABLE								
15'X5' PRECAST CONCRETE BOX CULVERT			NORTH PREFABRICATED MODULAR RETAINING WALLS			SOUTH PREFABRICATED MODULAR RETAINING WALLS		
WP #	NORTHING	EASTING	WP #	NORTHING	EASTING	WP #	NORTHING	EASTING
WP-1	762034.82	985496.41	WP-5	761967.16	985445.47	WP-9	761954.95	985471.47
WP-2	762033.33	985505.22	WP-6	761969.65	985453.95	WP-10	761962.71	985467.25
WP-3	762036.31	985487.60	WP-7	762037.03	985489.10	WP-11	762034.39	985504.64
WP-4	761967.07	985461.06	WP-8	762051.44	985481.42	WP-12	762039.63	985511.76

FRAMING PLAN

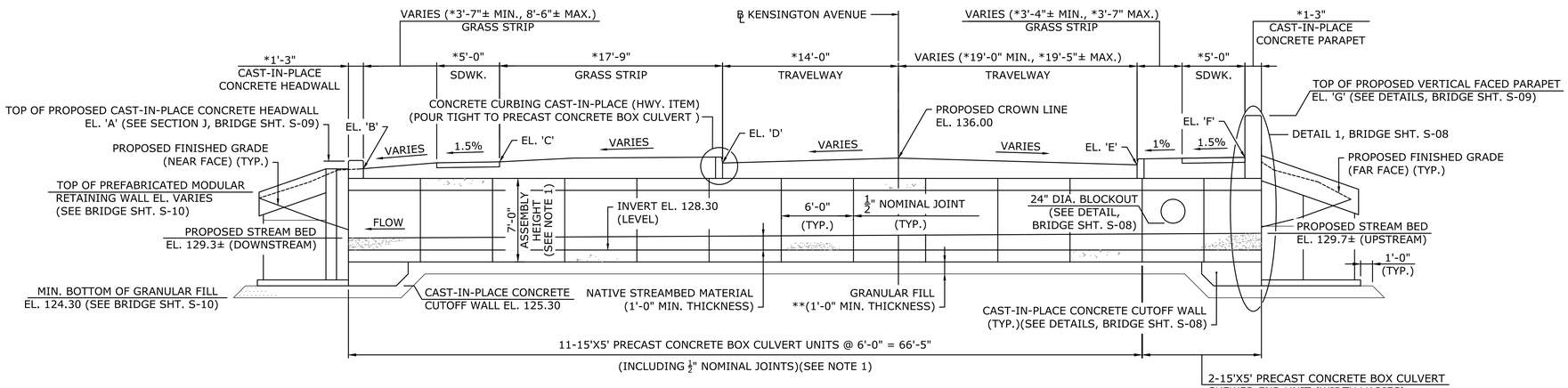
SCALE: 3/16"=1'-0"

PRECAST CONCRETE BOX CULVERT NOTES:

1. THE 15'X5' PRECAST CONCRETE BOX CULVERT SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR TO MEET THE MINIMUM SPAN AND RISE DIMENSIONS SHOWN ON THE PLANS AND THE REQUIREMENTS CONTAINED IN THE SPECIAL PROVISION. IT SHOULD BE NOTED THAT ROOF AND WALL THICKNESS (AND FINISHED ASSEMBLY HEIGHT AND LENGTH DIMENSIONS) HAVE BEEN SHOWN ON THE PLANS, BUT MAY VARY BASED ON THE PRECAST CONCRETE BOX CULVERT FABRICATOR SELECTED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE MODIFICATIONS TO THE FRAMING PLAN AND DETAILING OF OTHER INDIVIDUAL COMPONENTS, AS REQUIRED, TO INTERFACE WITH THE FURNISHED 15'X5' PRECAST CONCRETE BOX CULVERT.
2. ALL NOMINAL JOINTS BETWEEN INDIVIDUAL 15'X5' PRECAST CONCRETE BOX CULVERT UNITS SHALL BE DETAILED BY THE FABRICATOR TO BE WATERTIGHT AND SHALL BE DESIGNED TO MEET ALL STRENGTH AND SERVICEABILITY REQUIREMENTS CONTAINED IN THE SPECIAL PROVISION.
3. THE HORIZONTAL AND VERTICAL HAUNCH DIMENSIONS SHALL BE EQUAL TO THE WALL THICKNESS IN INCHES, IF HAUNCHES WITH OTHER DIMENSIONS ARE USED, A SPECIAL REINFORCEMENT DESIGN/DETAIL SHALL BE SUBMITTED BY THE FABRICATOR.
4. ALL INSERTS OR HOLES CAST INTO THE CULVERT SECTIONS FOR THE SOLE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE GROUTED OVER TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.
5. ALL INSERTS SHALL HAVE A CORROSIVE RESISTANT COATING. THE COST OF FURNISHING AND INSTALLING INSERTS SHALL BE CONSIDERED INCIDENTAL TO 15'X5' PRECAST CONCRETE BOX CULVERT AND SHALL BE ONE OF THE FOLLOWING:

STAR EXPANSION INDUSTRIES CORP.	TYPE P-35-T
RICHMOND SCREW ANCHOR CO.	TYPE LF
DAYTON SUPERIOR CORP.	TYPE F-57

6. THE MINIMUM CONCRETE COVER SHALL BE 2" FOR ALL MEMBERS OF THE PRECAST CONCRETE BOX CULVERT UNITS.



*REPORTED DIMENSIONS ARE MEASURED PERPENDICULAR TO THE KENSINGTON AVENUE BASELINE
**SEE NOTE 1, BRIDGE SHT. S-02

EAST LONGITUDINAL SECTION

(WEST LONGITUDINAL SECTION SIMILAR)

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

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–BRIDGE_SHEET.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS NOTED

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT
REPLACEMENT

TOWN:
MERIDEN

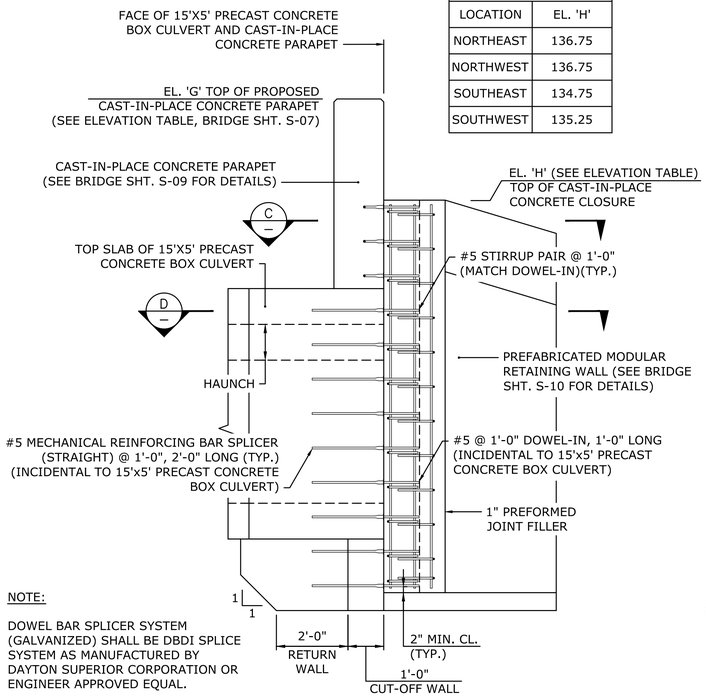
DRAWING TITLE:
FRAMING PLAN, LONGITUDINAL AND
TRANSVERSE SECTION

PROJECT NO.
83640.03

DRAWING NO.
S-08

SHEET NO.

ELEVATION TABLE	
LOCATION	EL. 'H'
NORTHEAST	136.75
NORTHWEST	136.75
SOUTHEAST	134.75
SOUTHWEST	135.25



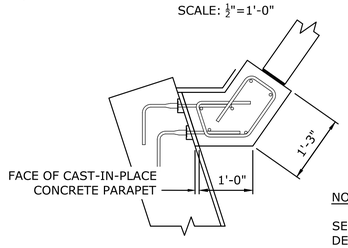
NOTE:

DOWEL BAR SPLICER SYSTEM (GALVANIZED) SHALL BE DBDI SPLICE SYSTEM AS MANUFACTURED BY DAYTON SUPERIOR CORPORATION OR ENGINEER APPROVED EQUAL.

DETAIL 1

(CONNECTION AT NORTH FASCIA SHOWN, SOUTH FASCIA SIMILAR)

SCALE: $\frac{1}{2}$"=1'-0"

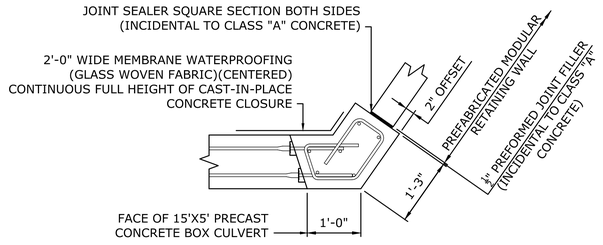


NOTE:

SEE SECTION D FOR DETAILS NOT SHOWN HERE.

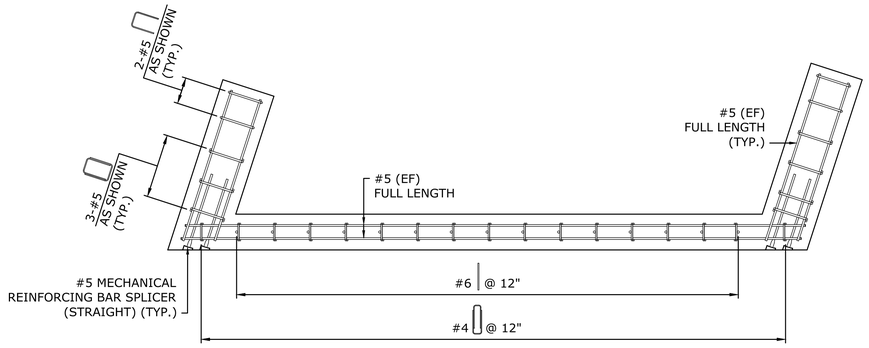
SECTION C

SCALE: $\frac{1}{2}$"=1'-0"

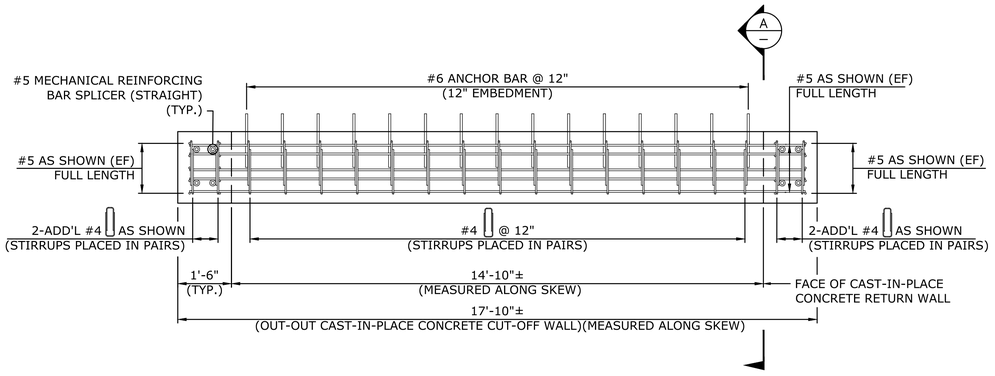


SECTION D

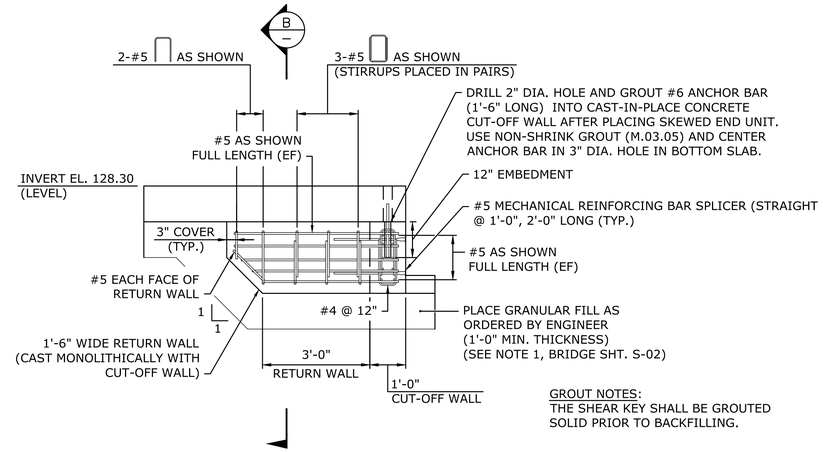
SCALE: $\frac{1}{2}$"=1'-0"



PLAN

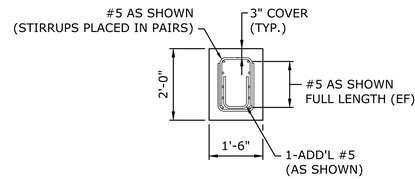


ELEVATION



GROUT NOTES:
THE SHEAR KEY SHALL BE GROUTED SOLID PRIOR TO BACKFILLING.

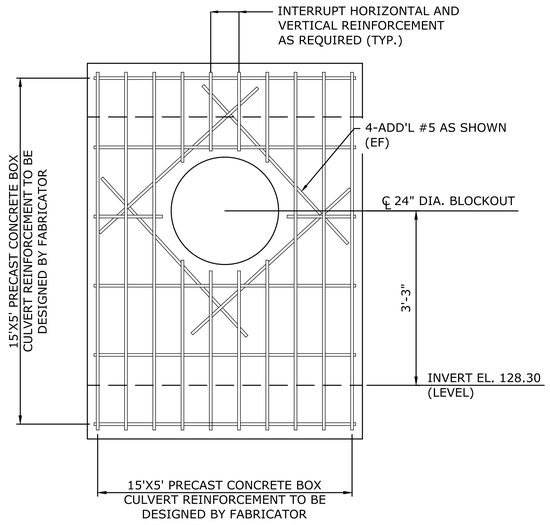
SECTION A



SECTION B

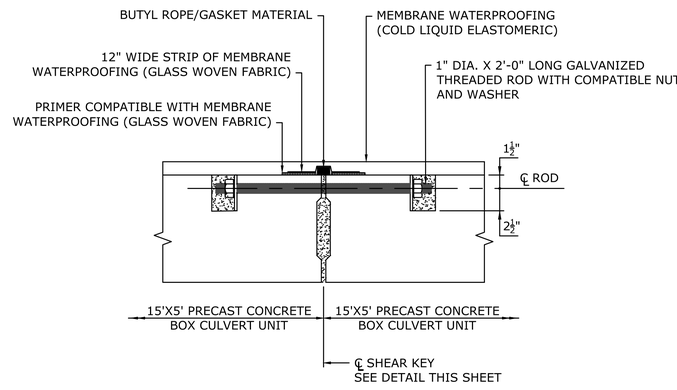
CAST-IN-PLACE CONCRETE CUT-OFF WALL DETAILS

SCALE: $\frac{1}{2}$"=1'-0"



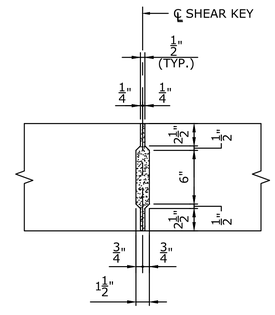
BLOCKOUT DETAIL

SCALE: $\frac{3}{4}$"=1'-0"



CONNECTION DETAIL

SCALE: 1½"=1'-0"



SHEAR KEY DETAIL

SCALE: 1½"=1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-BRIDGE_SHEET.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS NOTED

BSC GROUP
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655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

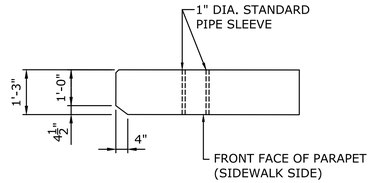
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN

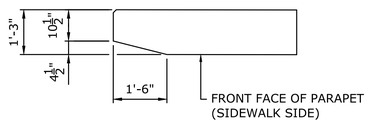
DRAWING TITLE:
PRECAST CONCRETE BOX CULVERT DETAILS

PROJECT NO. 83640.03
DRAWING NO. S-09
SHEET NO.



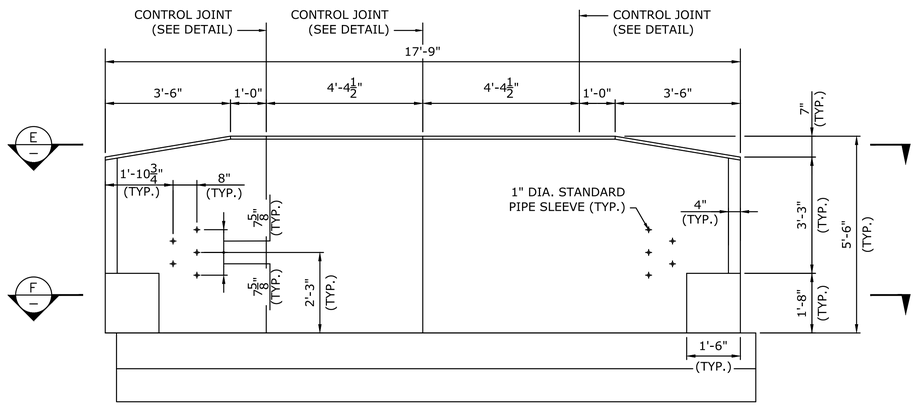
SECTION E

SCALE: ½"=1'-0"



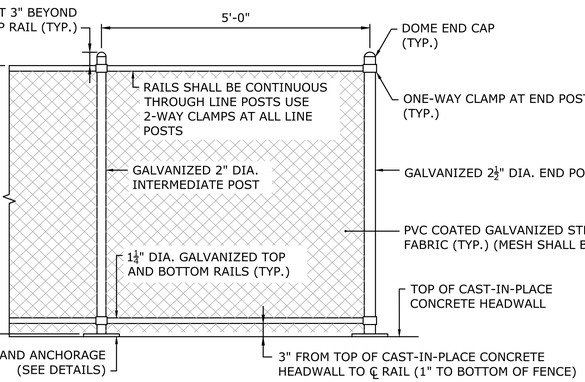
SECTION F

SCALE: ½"=1'-0"



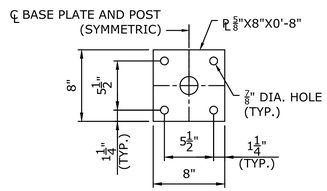
ELEVATION - CAST-IN-PLACE CONCRETE PARAPET

SCALE: ½"=1'-0"



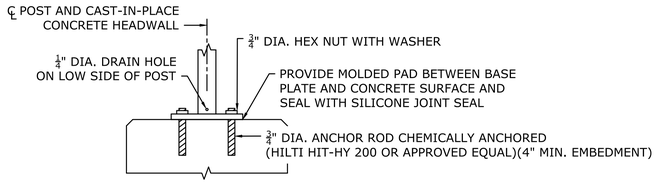
PROTECTIVE FENCE (5' HIGH)

SCALE: ¾"=1'-0"



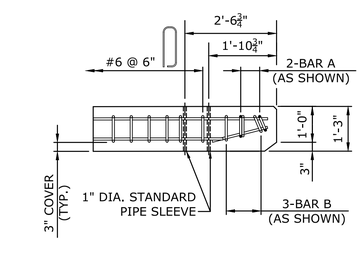
BASE PLATE DETAIL

SCALE: 1½"=1'-0"



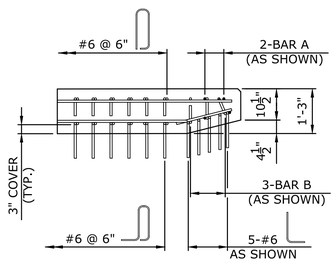
ANCHORAGE DETAIL

SCALE: 1½"=1'-0"



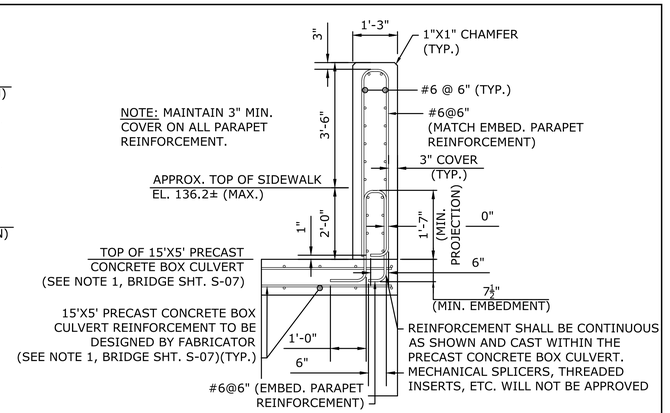
SECTION G

SCALE: ½"=1'-0"



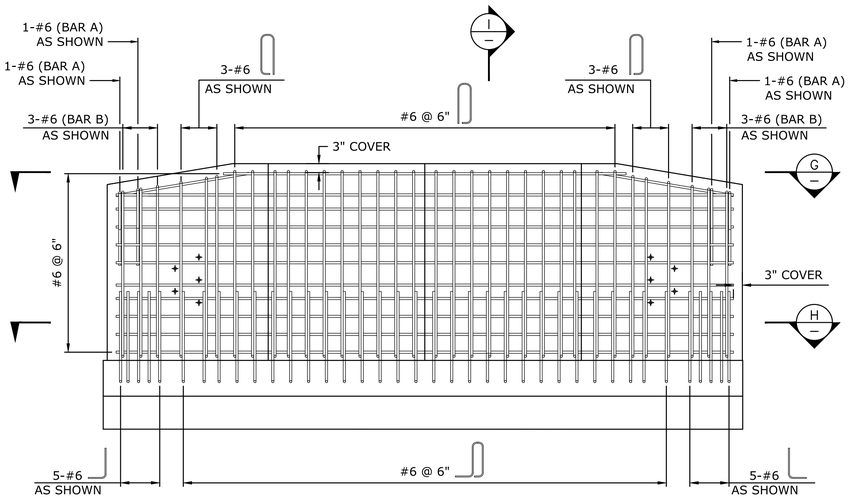
SECTION H

SCALE: ½"=1'-0"



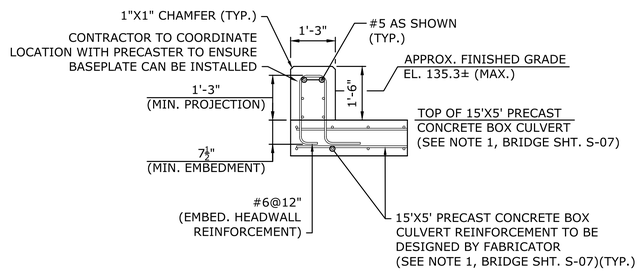
SECTION I

SCALE: ½"=1'-0"



ELEVATION - CAST-IN-PLACE CONCRETE PARAPET REINFORCEMENT

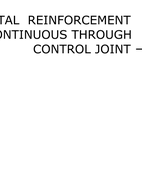
SCALE: ½"=1'-0"



NOTE:
1. MAINTAIN 3" MIN. COVER ON ALL HEADWALL REINFORCEMENT.
2. REINFORCEMENT SHALL BE CONTINUOUS AS SHOWN AND CAST WITHIN THE PRECAST CONCRETE BOX CULVERT. MECHANICAL SPLICERS, THREADED INSERTS, ETC. WILL NOT BE APPROVED.

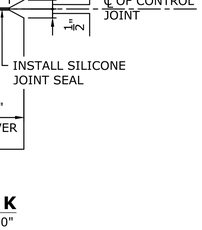
SECTION J

SCALE: ½"=1'-0"



TYPE A BAR

SCALE: ¾"=1'-0"



TYPE B BAR

SCALE: ¾"=1'-0"

PARAPET CONTROL JOINT

SCALE: ½"=1'-0"

SECTION K

SCALE: 3"=1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-BRIDGE_SHEET.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: AS NOTED

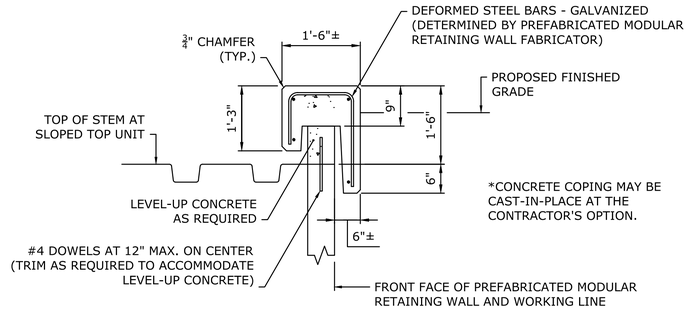
BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

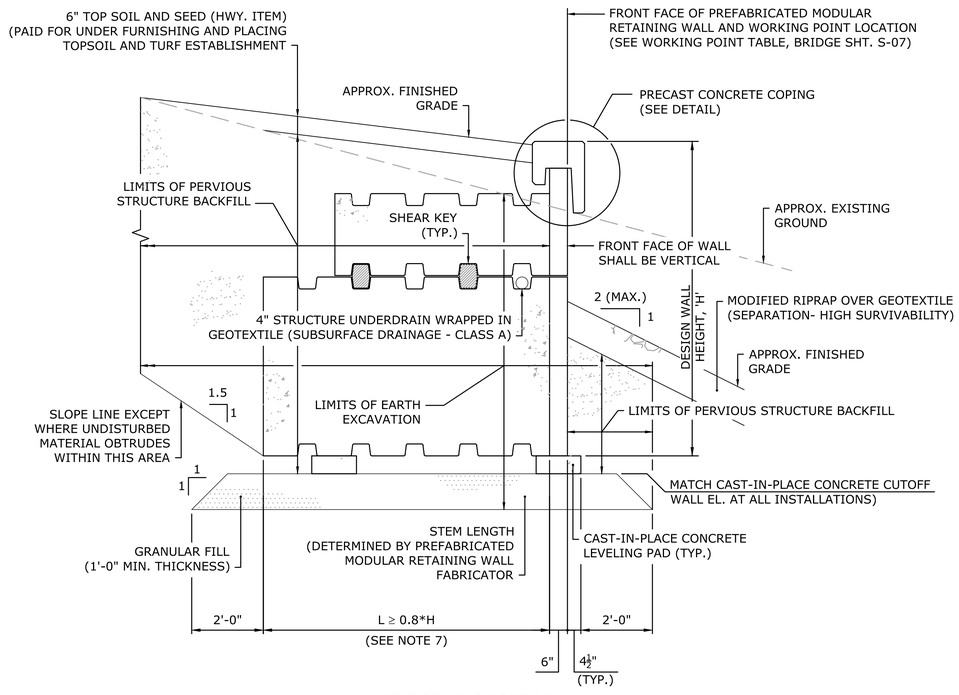
TOWN: MERIDEN
DRAWING TITLE: CAST-IN-PLACE CONCRETE PARAPET DETAILS

PROJECT NO. 83640.03
DRAWING NO. S-10
SHEET NO.



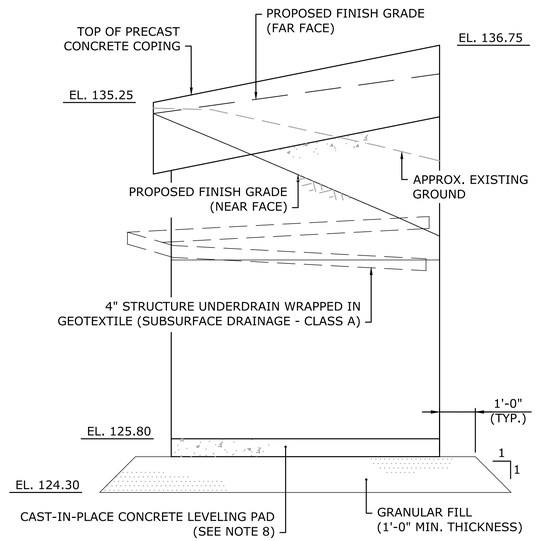
PRECAST CONCRETE COPING DETAIL

SCALE: ¾" = 1'-0"



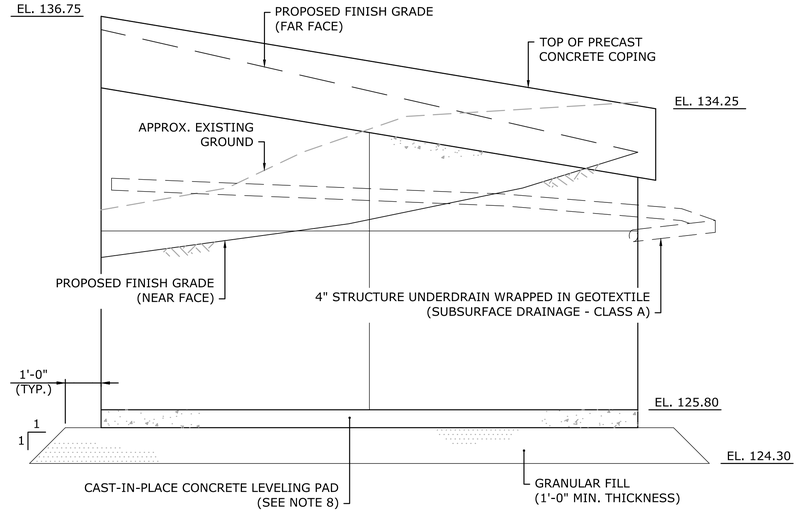
TYPICAL SECTION

SCALE: ½" = 1'-0"



NORTHEAST RETAINING WALL ELEVATION

SCALE: ½" = 1'-0"



NORTHWEST RETAINING WALL ELEVATION

SCALE: ½" = 1'-0"

SOUTHEAST RETAINING WALL ELEVATION

SCALE: ½" = 1'-0"

SOUTHWEST RETAINING WALL ELEVATION

SCALE: ½" = 1'-0"

PREFABRICATED MODULAR RETAINING WALL NOTES:

1. DIMENSIONS AND REPORTED ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY BE ADJUSTED TO ACCOMMODATE THE SELECTED PREFABRICATED MODULAR RETAINING WALL. THE DESIGN INTENT IS TO PROVIDE A NOMINAL REVEAL ABOVE FINISHED GRADE ALONG THE PREFABRICATED MODULAR RETAINING WALL (FAR FACE), A MINIMUM BOTTOM OF CAST-IN-PLACE CONCRETE LEVELING PAD ELEVATION TO MATCH THE ADJACENT CUT-OFF WALL ELEVATION, A MINIMUM CAST-IN-PLACE CONCRETE LEVELING PAD THICKNESS OF 6" AND A MINIMUM GRANULAR FILL THICKNESS OF 1'-0".

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE DESIGN OF THE SELECTED PREFABRICATED MODULAR RETAINING WALL. THE CONTRACTOR SHALL SELECT, DESIGN AND CONSTRUCT ONE OF THE FOLLOWING WALL OPTIONS IN ACCORDANCE WITH THE SPECIAL PROVISION: T-WALL RETAINING WALL SYSTEM, (THE NEEL COMPANY), WHICH HAS BEEN USED AS THE BASIS OF DESIGN/DETAIILNG SHOWN, OR DOUBLEWAL-STANDARD MODULE (DOUBLEWAL CORPORATION). THE CONTRACTOR IS REMINDED OF THE DETAILED SUBMITTAL REQUIREMENTS CONTAINED IN THE SPECIAL PROVISION - IN ADDITION TO SUBMISSION OF THE DESIGN CALCULATION AND SHOP DRAWING PACKAGE, THE CONTRACTOR SHALL ALSO PROVIDE THE REQUESTED DESIGNER/CONTRACTOR QUALIFICATIONS AND QUALIFIED MANUFACTURER REPRESENTATIVE, AS REQUIRED. ALL PLANS AND DESIGN CALCULATIONS SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT. THE COMPLETE PACKAGE SHALL BE SUBMITTED TO BSC GROUP FOR APPROVAL.

3. AN APPROVED FACING SEALER (ON CTDOT QUALIFIED PRODUCT LIST) SHALL BE APPLIED TO ALL EXPOSED PREFABRICATED MODULAR RETAINING WALL SURFACES (INCLUDING PRECAST CONCRETE COPING) TO APPROXIMATELY 1'-0" BELOW PROPOSED FINISHED GRADE.

4. THE PREFABRICATED MODULAR RETAINING WALL SYSTEM SHALL BE PAID FOR UNDER RETAINING WALL (SITE NO. 1). ALL COSTS ASSOCIATED WITH THE DESIGN, FABRICATION AND CONSTRUCTION OF THE PREFABRICATED MODULAR RETAINING WALL SYSTEM INCLUDING THE CAST-IN-PLACE CONCRETE LEVELING PAD, WALL UNITS, LEVEL-UP CONCRETE, PRECAST CONCRETE COPING, FACING SEALER, 4" STRUCTURE UNDERDRAIN WRAPPED IN GEOTEXTILE (SUBSURFACE DRAINAGE - CLASS A), AND MANUFACTURER REPRESENTATIVE SHALL BE CONSIDERED INCIDENTAL TO RETAINING WALL (SITE NO. 1).

RETAINING WALL (SITE NO. 1)

5. THE CONTRACTOR SHALL FILL ALL LIFTING DEVICE RECESSES IN THE PRECAST CONCRETE COPING WITH AN APPROVED (ON CTDOT QUALIFIED CONSTRUCTION MATERIALS LIST) NON-SHRINK GROUT AFTER INSTALLATION (COLOR TO MATCH PRECAST CONCRETE COPING). ALL COSTS SHALL BE CONSIDERED INCIDENTAL TO RETAINING WALL (SITE NO. 1).

6. QUANTITY ESTIMATES ARE BASED ON L = 0.8*H.

7. THE CAST-IN-PLACE CONCRETE LEVELING PADS (REQUIRED FRONT AND REAR OF EACH PREFABRICATED MODULAR RETAINING WALL UNIT SHALL HAVE A MINIMUM THICKNESS OF 6" AND A MINIMUM WIDTH OF 1'-3" (BASED ON MANUFACTURER RECOMMENDATIONS).

8. ANY ADDITIONAL PERVIOUS STRUCTURE BACKFILL REQUIRED OUTSIDE THE LIMITS SHOWN ON THE TYPICAL SECTION AND ANY TEMPORARY EARTH RETAINING SYSTEM REQUIRED TO ACCOMMODATE THE PREFABRICATED MODULAR RETAINING WALL SYSTEM INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO RETAINING WALL (SITE NO. 1).

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–WINGWALL.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

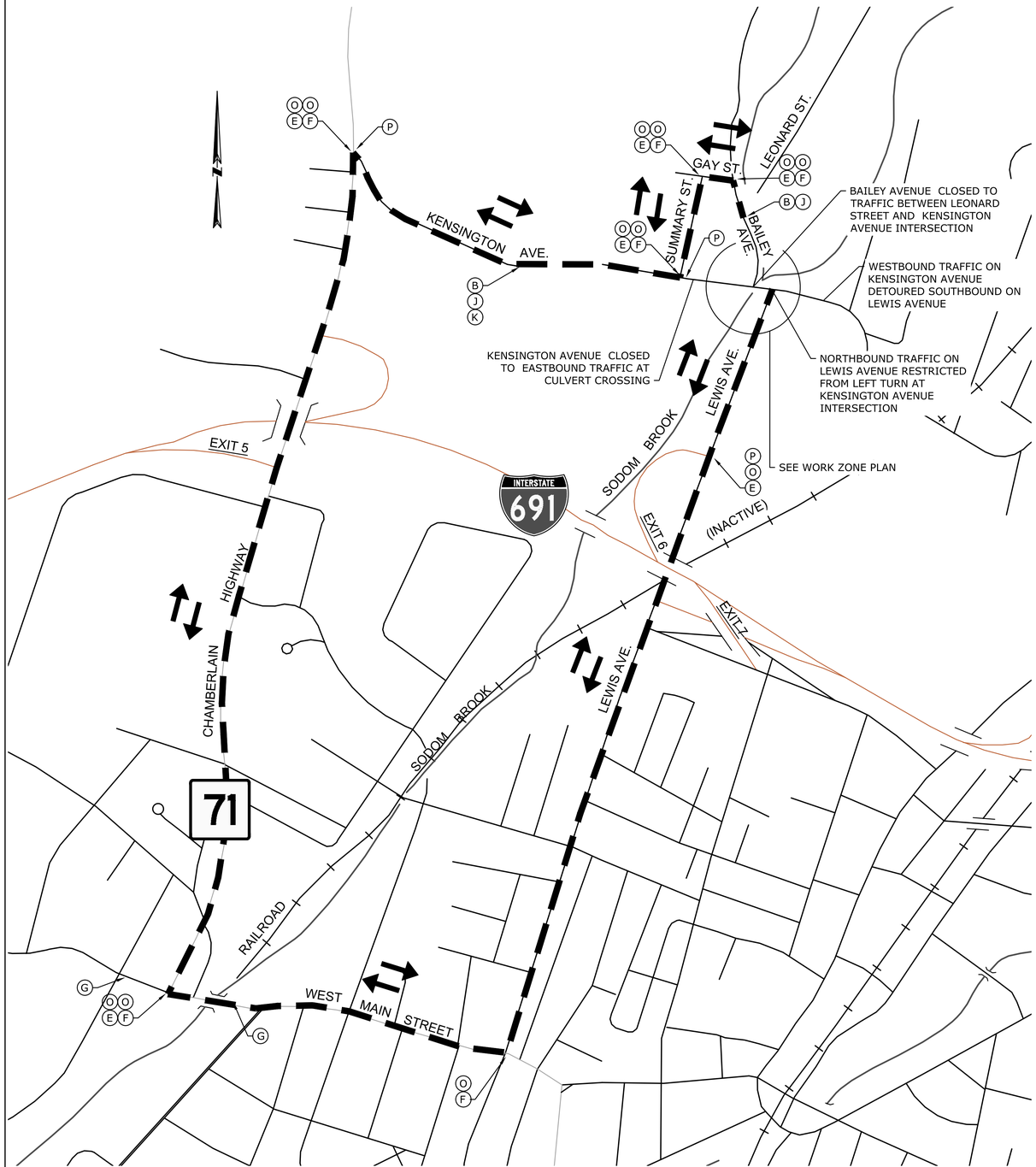
SCALE: AS NOTED

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY:

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. S-11
DRAWING TITLE: PREFABRICATED MODULAR RETAINING WALL ELEVATIONS
SHEET NO.



DETOUR PLAN

SCALE: 1" = 400'

DETOUR SIGN LEGEND

A	SIDEWALK CLOSED	INSTALL 80-9076	B	ROAD CLOSED	INSTALL 80-9080	C	STOP	INSTALL 31-0552	D	ROAD CLOSED TO THRU TRAFFIC / DETOUR	INSTALL 80-9928 80-9702
E	DETOUR	INSTALL 80-9710(R)	F	DETOUR	INSTALL 80-9710(L)	G	DETOUR AHEAD	INSTALL 80-9933	H	DETOUR	INSTALL 80-9710
I	ROAD WORK AHEAD	INSTALL 80-9603	J	AHEAD	INSTALL 86-9870	K	DETOUR AHEAD 1000 FT	INSTALL 80-9805	L	LEFT LANE CLOSED AHEAD	INSTALL 80-9847
M		INSTALL 80-9918L	N	DETOUR	INSTALL 80-9703	O	KENSINGTON AVENUE	INSTALL 80-9920	P	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	INSTALL 80-9077

NOTES:

1. THE DETOUR SIGNING PACKAGE SHALL BE PAID FOR UNDER CONSTRUCTION SIGNS. TEMPORARY PAVEMENT MARKINGS AT THE KENSINGTON/LEWIS AVENUE INTERSECTION SHALL BE PAID FOR UNDER TEMPORARY PLASTIC PAVEMENT MARKING TAPE - 4" WHITE AND TEMPORARY PLASTIC PAVEMENT MARKING TAPE - 12" WHITE. ADDITIONAL ITEMS REQUIRED FOR DELINEATION/PROTECTION OF THE WORK ZONE ARE INCLUDED IN THE LEGEND. ALL COSTS ASSOCIATED WITH THE MAINTENANCE OF THE WORK ZONE AND DETOUR INCLUDING THE ERECTION, MOVEMENT, ADJUSTMENT, AND RELOCATION OF SIGNS (EXISTING OR PROPOSED), BARRICADES AND DRUMS SHALL BE INCLUDED UNDER MAINTENANCE AND PROTECTION OF TRAFFIC.
2. PRIOR TO INITIATING THE DETOUR, IN ACCORDANCE WITH SPECIAL PROVISION SECTION 1.08 - PROSECUTION AND PROGRESS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, CONNECTICUT DEPARTMENT OF TRANSPORTATION (CONNDOT) DISTRICT 1, THE CITY OF MERIDEN DEPARTMENT OF PUBLIC WORKS AND THE CITY OF MERIDEN EMERGENCY COMMUNICATIONS CENTER.
3. PROJECT-WIDE ADVANCE CONSTRUCTION SIGNS, INCLUDING SERIES 16 SIGNS, SHALL BE MAINTAINED. ADDITIONAL WARNING SIGNS MAY BE INSTALLED AS DIRECTED BY THE ENGINEER.
4. ALL DETOUR SIGNS SHALL BE MOUNTED ON EXISTING POLES OR POSTS, ON PORTABLE SIGN SUPPORTS OR INSTALLED IN GRASS AREAS. SIGNS SHALL BE POST MOUNTED WHERE FEASIBLE. ALL POST MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 7 FEET ABOVE THE ROADWAY. SIGNS INSTALLED OVER SIDEWALK SHALL HAVE AN 8'-6" MINIMUM VERTICAL CLEARANCE OVER THE SIDEWALK. SIGNS SHALL NOT BE INSTALLED IN EXISTING SIDEWALKS. THE EXACT LOCATION OF SIGNS ARE TO BE VERIFIED BY THE ENGINEER.
5. ALL DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN THE DETOUR IS NOT IN EFFECT.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-TMP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

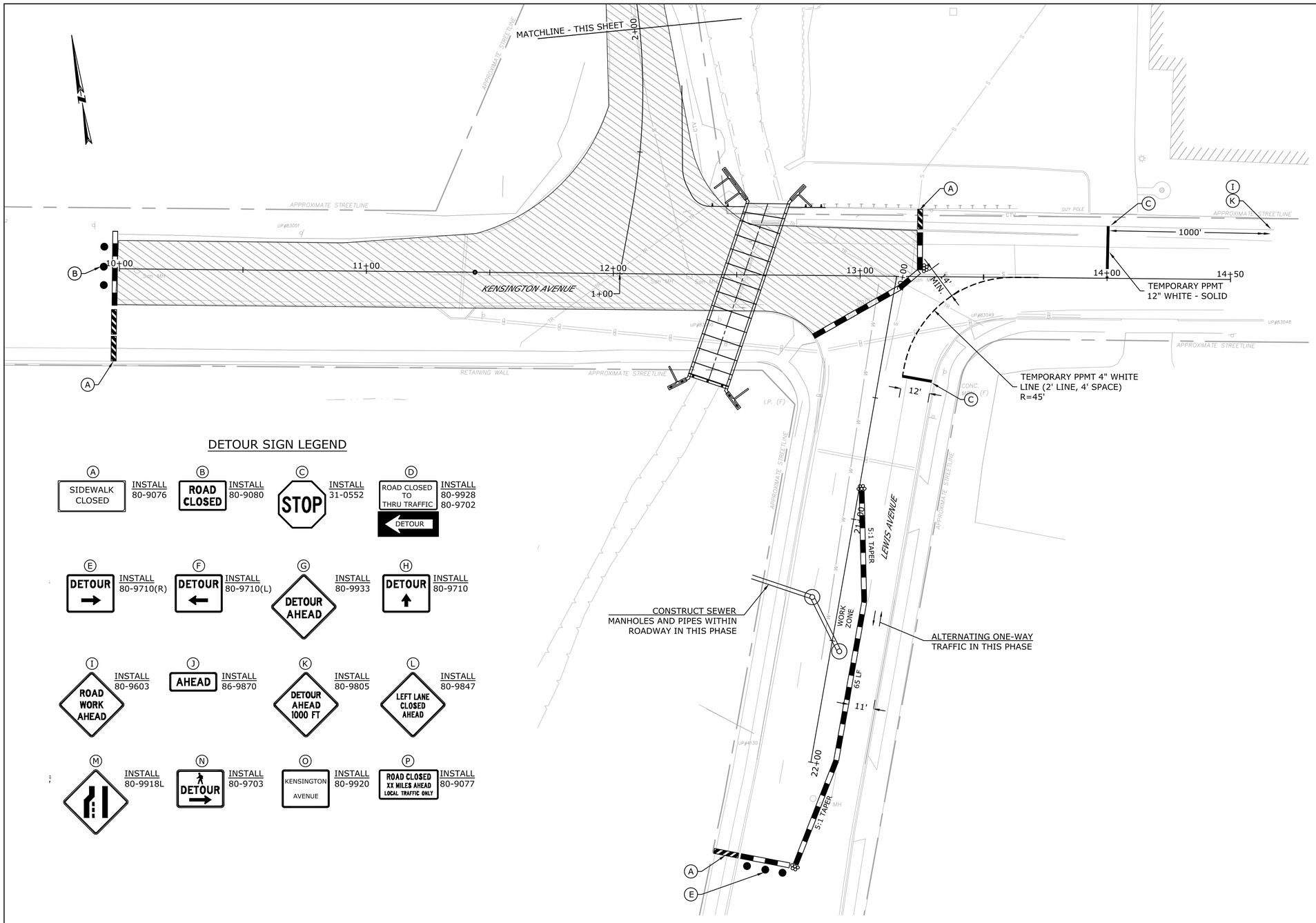
SCALE: 1" = 400'
0 200 400 800

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD DATE: JUNE 18, 2020
APPROVED BY: DLS No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
DRAWING TITLE: DETOUR PLAN AND SIGNAGE
PROJECT NO. 83640.03
DRAWING NO. TMP-01
SHEET NO.



DETOUR SIGN LEGEND

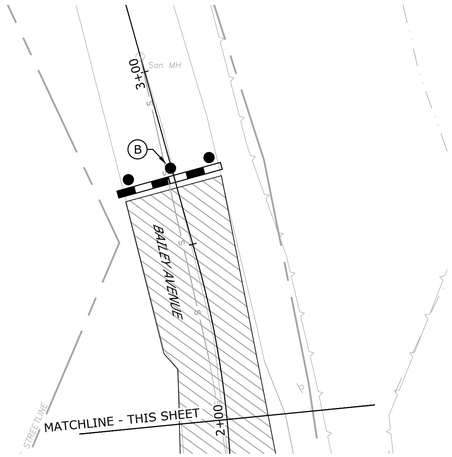
A — SIDEWALK CLOSED	INSTALL 80-9076	B — ROAD CLOSED	INSTALL 80-9080
C — STOP	INSTALL 31-0552	D — ROAD CLOSED TO THRU TRAFFIC / DETOUR	INSTALL 80-9928, 80-9702
E — DETOUR →	INSTALL 80-9710(R)	F — DETOUR ←	INSTALL 80-9710(L)
G — DETOUR AHEAD	INSTALL 80-9933	H — DETOUR ↑	INSTALL 80-9710
I — ROAD WORK AHEAD	INSTALL 80-9603	J — AHEAD	INSTALL 86-9870
K — DETOUR AHEAD 1000 FT	INSTALL 80-9805	L — LEFT LANE CLOSED AHEAD	INSTALL 80-9847
M	INSTALL 80-9918L	N — DETOUR →	INSTALL 80-9703
O — KENSINGTON AVENUE	INSTALL 80-9920	P — ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	INSTALL 80-9077

PHASE 1 TRAFFIC MANAGEMENT PLAN

SCALE: 1" = 20'

LEGEND

- TEMPORARY PRECAST CONCRETE BARRIER CURB
- TRAFFIC DRUM
- BARRICADE WARNING LIGHTS - HIGH INTENSITY
- TEMPORARY SAND BARREL (200 lb.)
- CONSTRUCTION BARRICADE TYPE II
- WORK ZONE AREA



NOTES:

1. THE DETOUR SIGNING PACKAGE SHALL BE PAID FOR UNDER CONSTRUCTION SIGNS. TEMPORARY PAVEMENT MARKINGS AT THE KENSINGTON/LEWIS AVENUE INTERSECTION SHALL BE PAID FOR UNDER TEMPORARY PLASTIC PAVEMENT MARKING TAPE - 4" WHITE AND TEMPORARY PLASTIC PAVEMENT MARKING TAPE - 12" WHITE. ADDITIONAL ITEMS REQUIRED FOR DELINEATION/PROTECTION OF THE WORK ZONE ARE INCLUDED IN THE LEGEND. ALL COSTS ASSOCIATED WITH THE MAINTENANCE OF THE WORK ZONE AND DETOUR INCLUDING THE ERECTION, MOVEMENT, ADJUSTMENT, AND RELOCATION OF SIGNS (EXISTING OR PROPOSED), BARRICADES AND DRUMS SHALL BE INCLUDED UNDER MAINTENANCE AND PROTECTION OF TRAFFIC.
2. PRIOR TO INITIATING THE DETOUR, IN ACCORDANCE WITH SPECIAL PROVISION SECTION 1.08 - PROSECUTION AND PROGRESS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, CONNECTICUT DEPARTMENT OF TRANSPORTATION (CONNDOT) DISTRICT 1, THE CITY OF MERIDEN DEPARTMENT OF PUBLIC WORKS AND THE CITY OF MERIDEN EMERGENCY COMMUNICATIONS CENTER.
3. PROJECT-WIDE ADVANCE CONSTRUCTION SIGNS, INCLUDING SERIES 16 SIGNS, SHALL BE MAINTAINED. ADDITIONAL WARNING SIGNS MAY BE INSTALLED AS DIRECTED BY THE ENGINEER.
4. ALL DETOUR SIGNS SHALL BE MOUNTED ON EXISTING POLES OR POSTS, ON PORTABLE SIGN SUPPORTS OR INSTALLED IN GRASS AREAS. SIGNS SHALL BE POST MOUNTED WHERE FEASIBLE. ALL POST MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 7 FEET ABOVE THE ROADWAY. SIGNS INSTALLED OVER SIDEWALK SHALL HAVE AN 8'-6" MINIMUM VERTICAL CLEARANCE OVER THE SIDEWALK. SIGNS SHALL NOT BE INSTALLED IN EXISTING SIDEWALKS. THE EXACT LOCATION OF SIGNS ARE TO BE VERIFIED BY THE ENGINEER.
5. ALL DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN THE DETOUR IS NOT IN EFFECT.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–TMP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

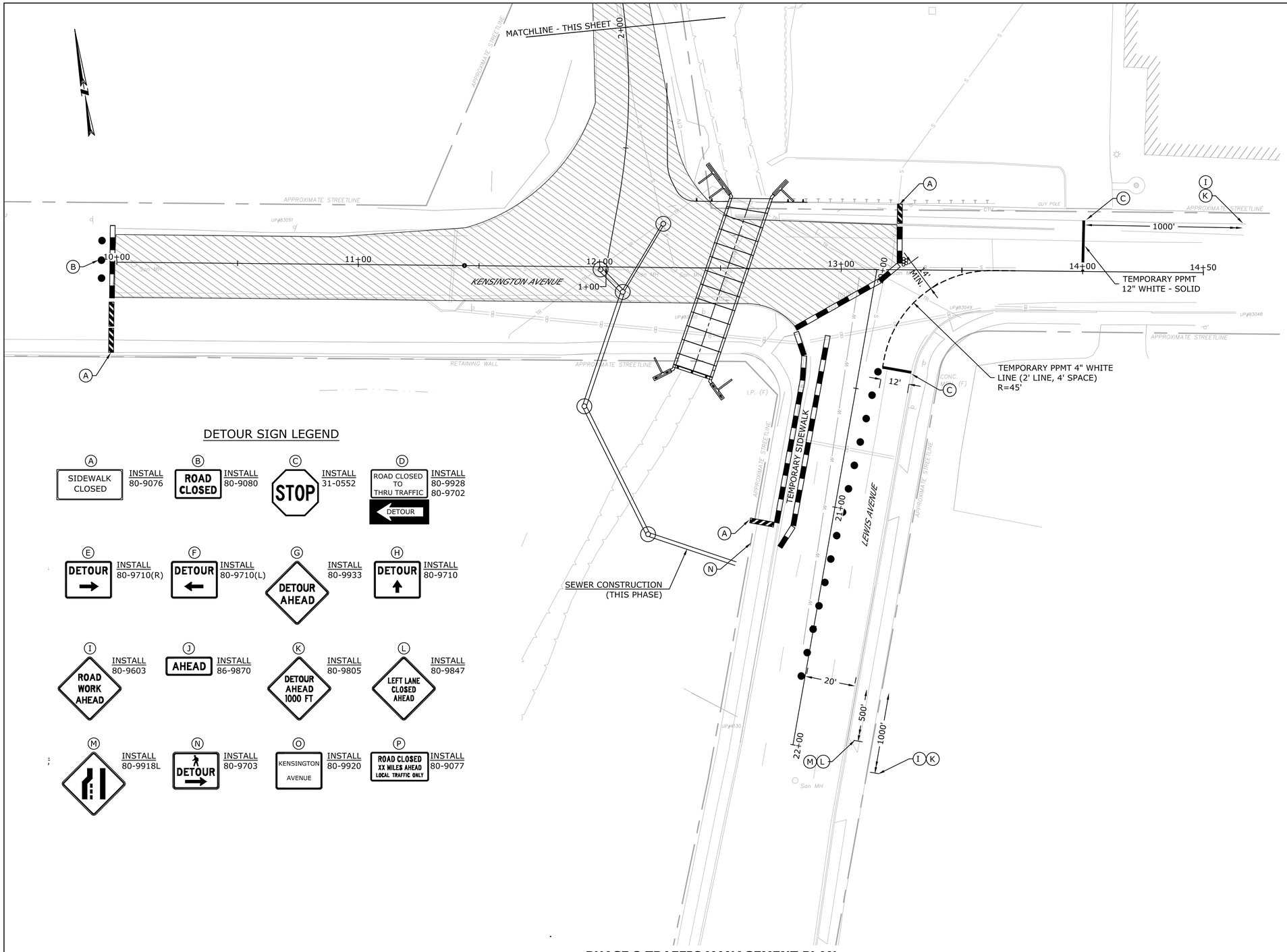
SCALE: 1" = 20'
0 10 20 40

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD DATE: JUNE 18, 2020
APPROVED BY: DLS No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING TITLE: TRAFFIC MANAGEMENT PLAN PHASE 1
DRAWING NO. TMP-02
SHEET NO.



PHASE 2 TRAFFIC MANAGEMENT PLAN

SCALE: 1" = 20'

LEGEND

- TEMPORARY PRECAST CONCRETE BARRIER CURB
- TRAFFIC DRUM
- BARRICADE WARNING LIGHTS - HIGH INTENSITY
- TEMPORARY SAND BARREL (200 lb.)
- CONSTRUCTION BARRICADE TYPE II
- WORK ZONE AREA

DETOUR SIGN LEGEND

A — SIDEWALK CLOSED	INSTALL 80-9076	B — ROAD CLOSED	INSTALL 80-9080
C — STOP	INSTALL 31-0552	D — ROAD CLOSED TO THRU TRAFFIC / DETOUR	INSTALL 80-9928, 80-9702
E — DETOUR →	INSTALL 80-9710(R)	F — DETOUR ←	INSTALL 80-9710(L)
G — DETOUR AHEAD	INSTALL 80-9933	H — DETOUR ↑	INSTALL 80-9710
I — ROAD WORK AHEAD	INSTALL 80-9603	J — AHEAD	INSTALL 86-9870
K — DETOUR AHEAD 1000 FT	INSTALL 80-9805	L — LEFT LANE CLOSED AHEAD	INSTALL 80-9847
M	INSTALL 80-9918L	N — DETOUR →	INSTALL 80-9703
O — KENSINGTON AVENUE	INSTALL 80-9920	P — ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	INSTALL 80-9077

NOTES:

1. THE DETOUR SIGNING PACKAGE SHALL BE PAID FOR UNDER CONSTRUCTION SIGNS. TEMPORARY PAVEMENT MARKINGS AT THE KENSINGTON/LEWIS AVENUE INTERSECTION SHALL BE PAID FOR UNDER TEMPORARY PLASTIC PAVEMENT MARKING TAPE - 4" WHITE AND TEMPORARY PLASTIC PAVEMENT MARKING TAPE - 12" WHITE. ADDITIONAL ITEMS REQUIRED FOR DELINEATION/PROTECTION OF THE WORK ZONE ARE INCLUDED IN THE LEGEND. ALL COSTS ASSOCIATED WITH THE MAINTENANCE OF THE WORK ZONE AND DETOUR INCLUDING THE ERECTION, MOVEMENT, ADJUSTMENT, AND RELOCATION OF SIGNS (EXISTING OR PROPOSED), BARRICADES AND DRUMS SHALL BE INCLUDED UNDER MAINTENANCE AND PROTECTION OF TRAFFIC.
2. PRIOR TO INITIATING THE DETOUR, IN ACCORDANCE WITH SPECIAL PROVISION SECTION 1.08 - PROSECUTION AND PROGRESS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, CONNECTICUT DEPARTMENT OF TRANSPORTATION (CONNDOT) DISTRICT 1, THE CITY OF MERIDEN DEPARTMENT OF PUBLIC WORKS AND THE CITY OF MERIDEN EMERGENCY COMMUNICATIONS CENTER.
3. PROJECT-WIDE ADVANCE CONSTRUCTION SIGNS, INCLUDING SERIES 16 SIGNS, SHALL BE MAINTAINED. ADDITIONAL WARNING SIGNS MAY BE INSTALLED AS DIRECTED BY THE ENGINEER.
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5. ALL DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN THE DETOUR IS NOT IN EFFECT.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-TMP.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

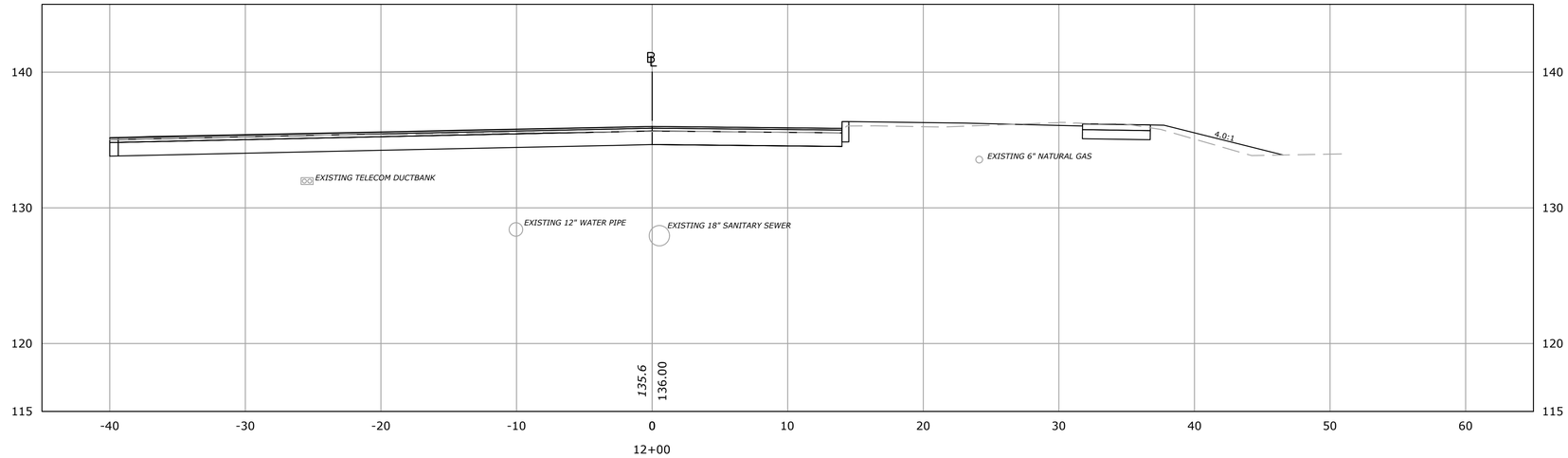
SCALE: 1" = 20'
0 10 20 40

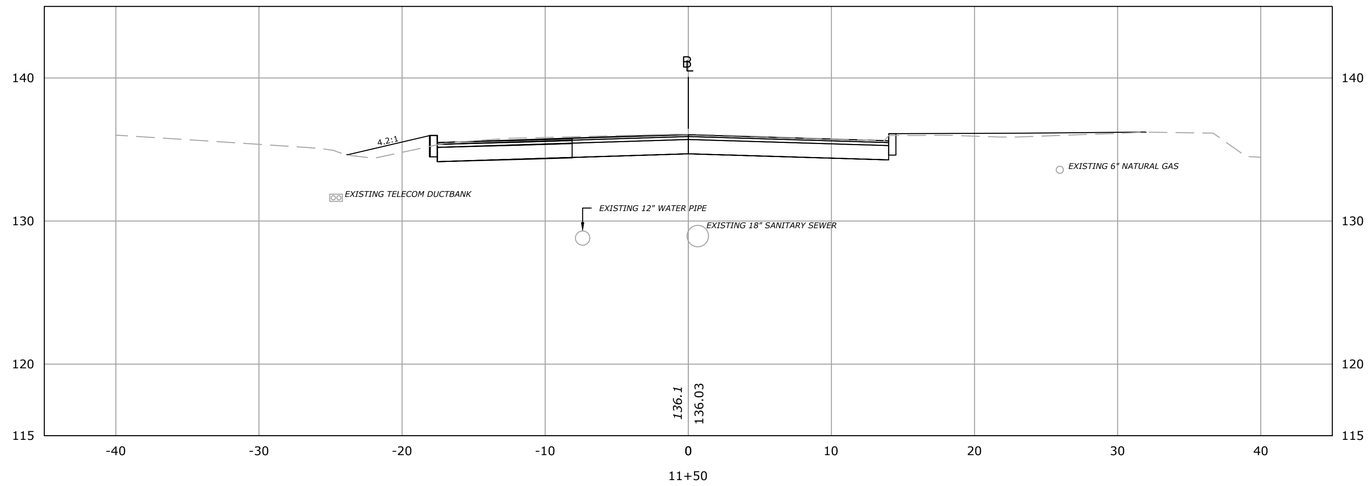
BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

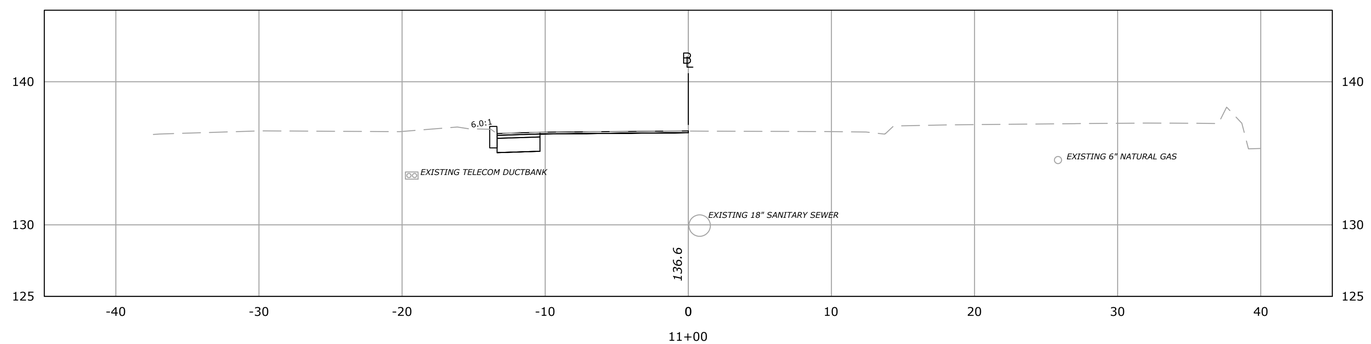
ENGINEER: DMD DATE: JUNE 18, 2020
APPROVED BY: DLS No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
DRAWING TITLE: TRAFFIC MANAGEMENT PLAN PHASE 2
PROJECT NO. 83640.03
DRAWING NO. TMP-03
SHEET NO.







NOTES:

1. PROPOSED ROADWAY CROSS SLOPES VARY THROUGH LIMITS OF FULL DEPTH CONSTRUCTION. WORK KENSINGTON AVENUE SECTIONS WITH THE INTERSECTION GRADING PLAN, SHT. IGP-01.
2. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES IS APPROXIMATE BASED ON AVAILABLE MAPPING AND FIELD SURVEY.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-XSC.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 5'
0 2.5 5 10

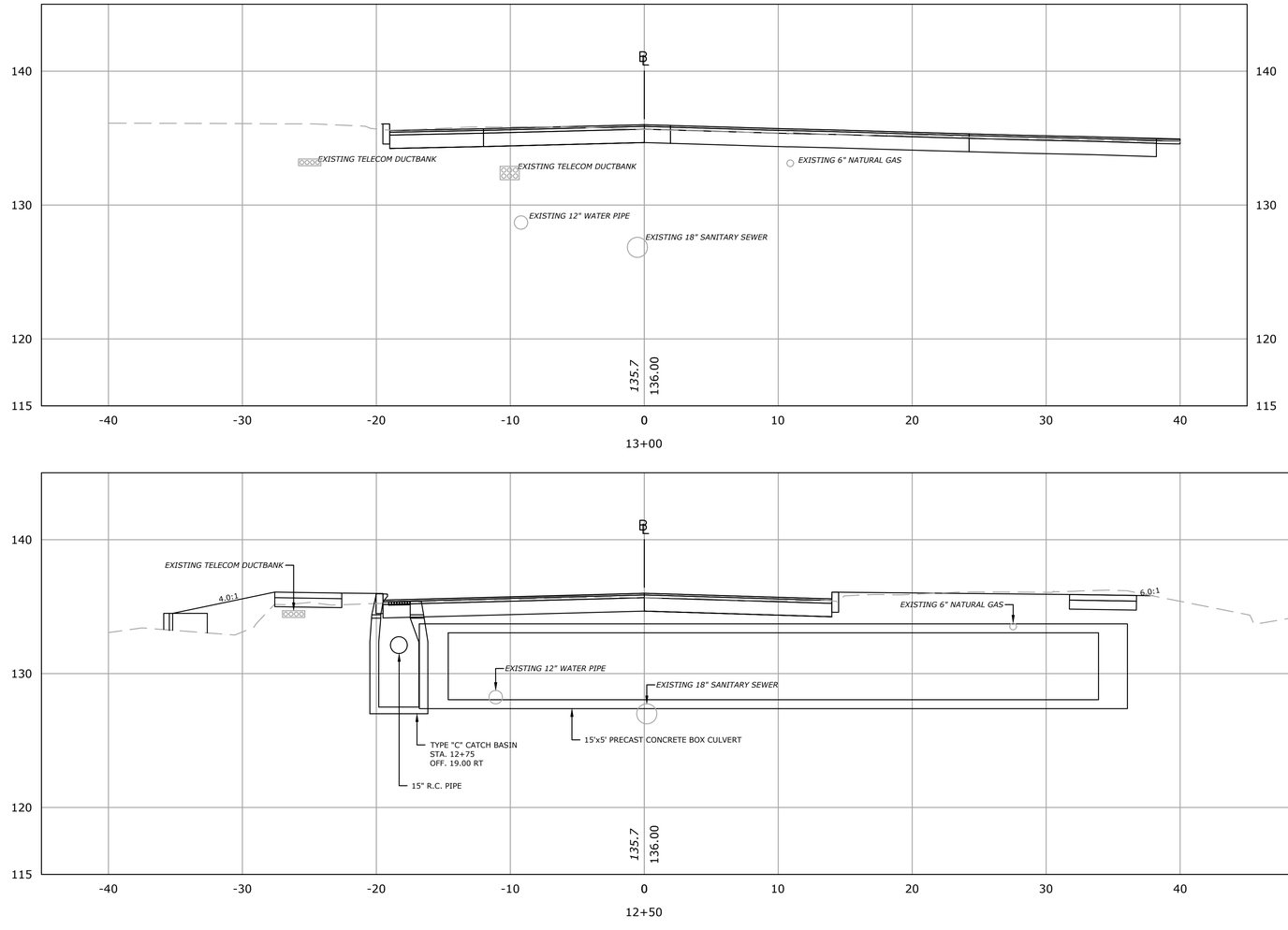
BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. XSC-01
SHEET NO.

DRAWING TITLE:
KENSINGTON AVENUE CROSS SECTIONS STA. 11+00 - STA. 12+00



NOTES:

1. PROPOSED ROADWAY CROSS SLOPES VARY THROUGH LIMITS OF FULL DEPTH CONSTRUCTION. WORK KENSINGTON AVENUE SECTIONS WITH THE INTERSECTION GRADING PLAN, SHT. IGP-01.

2. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES IS APPROXIMATE BASED ON AVAILABLE MAPPING AND FIELD SURVEY.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-XSC.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

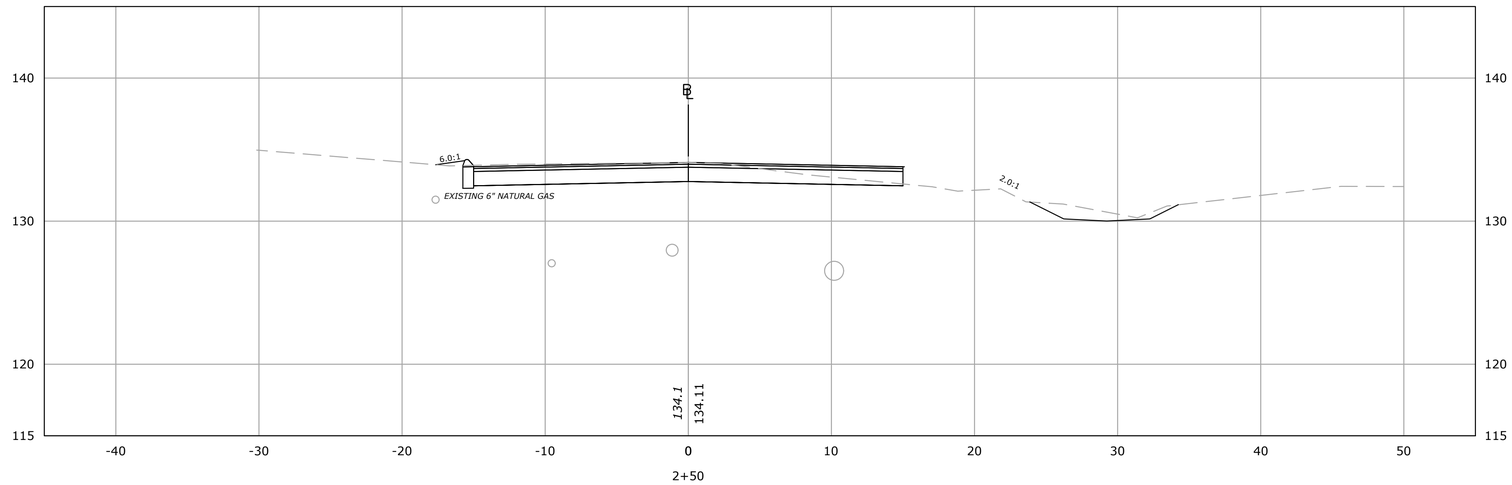
SCALE: 1" = 5'
0 2.5 5 10

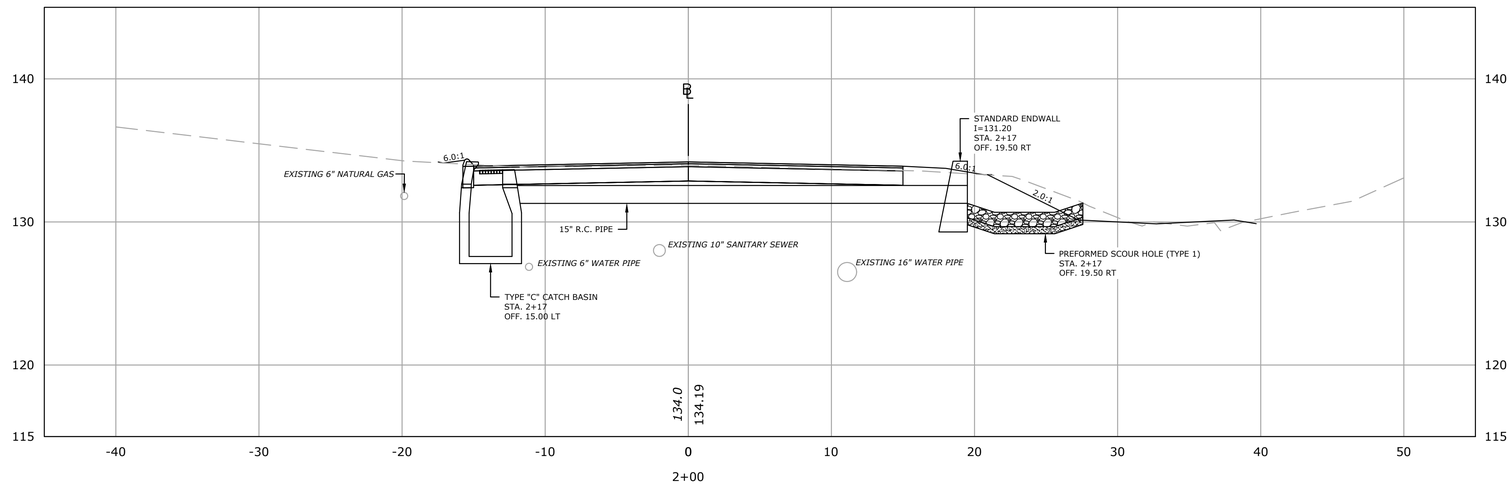
BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

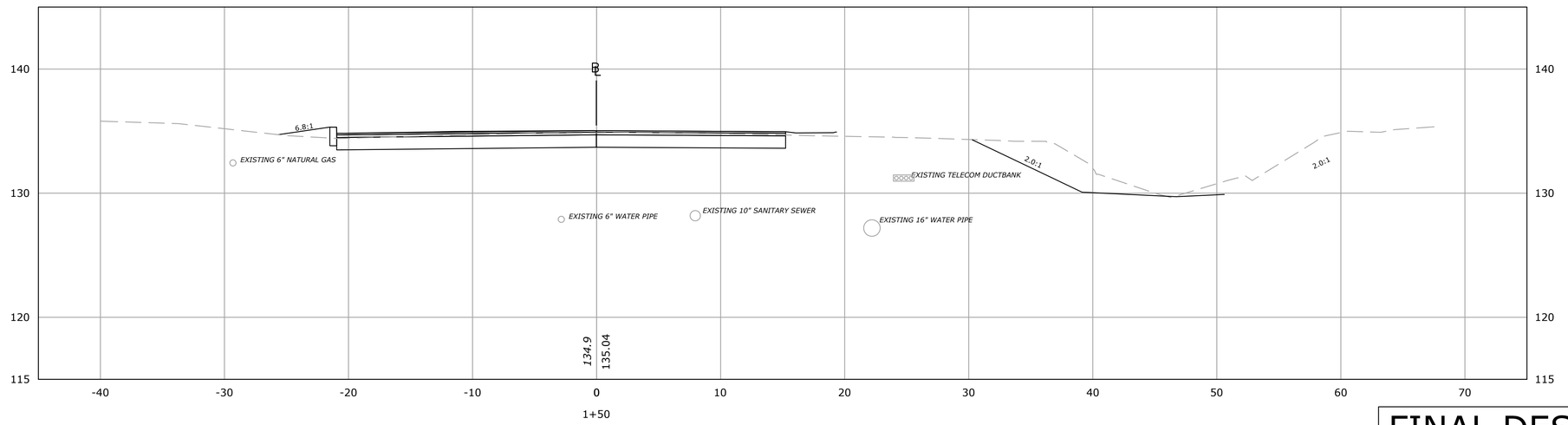
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. XSC-02
DRAWING TITLE: KENSINGTON AVENUE CROSS SECTIONS STA. 12+50 - STA. 13+00
SHEET NO.







NOTES:

1. PROPOSED ROADWAY CROSS SLOPES VARY THROUGH LIMITS OF FULL DEPTH CONSTRUCTION. WORK BAILEY AVENUE SECTIONS WITH THE INTERSECTION GRADING PLAN, SHT. IGP-01.
2. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES IS APPROXIMATE BASED ON AVAILABLE MAPPING AND FIELD SURVEY.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-XSC.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 5'
0 2.5 5 10

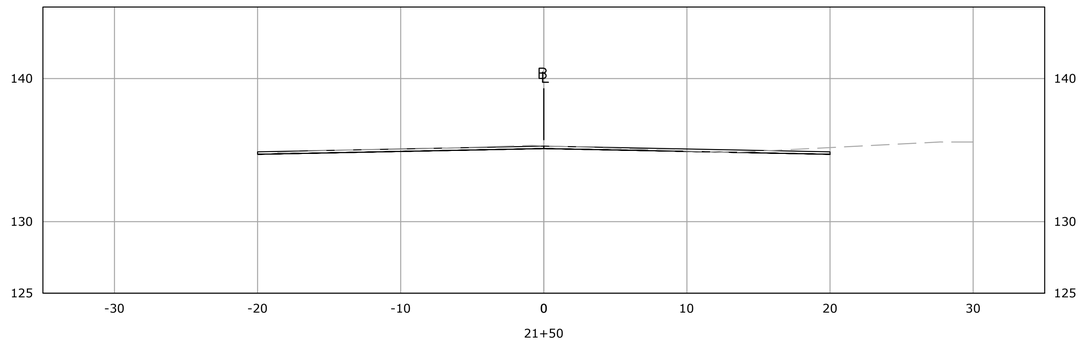
BSC GROUP

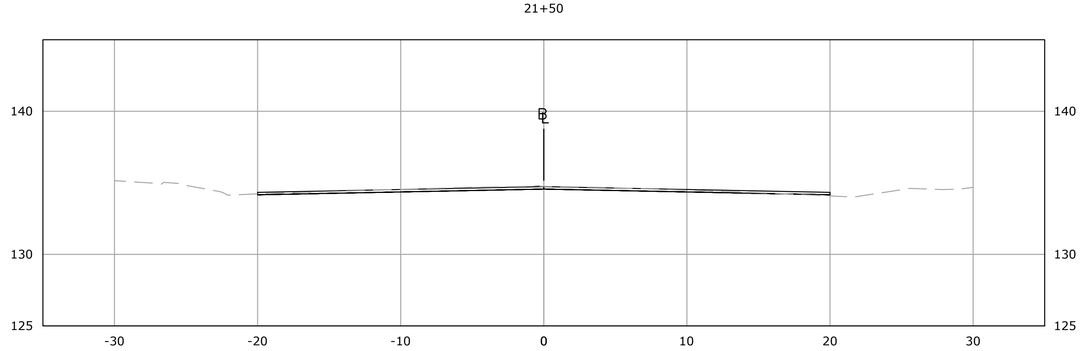
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

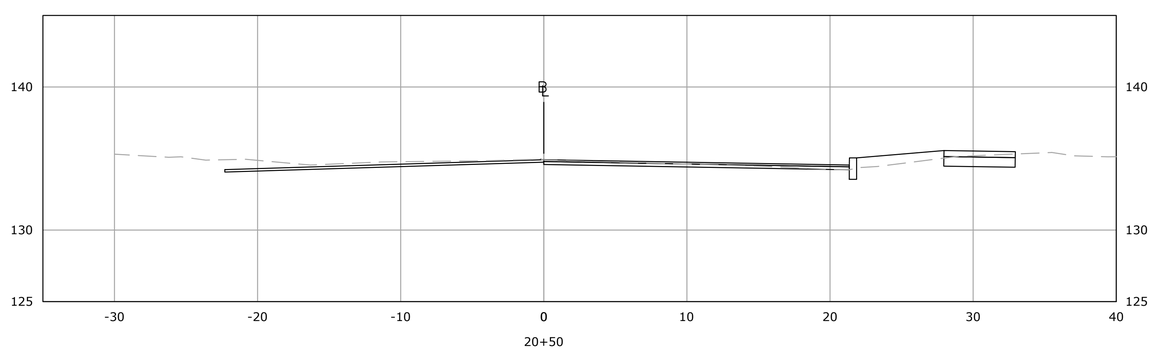
ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. XSC-03
DRAWING TITLE: BAILEY AVENUE CROSS SECTIONS STA. 1+50 - STA. 2+50
SHEET NO.







NOTES:

1. PROPOSED ROADWAY CROSS SLOPES VARY THROUGH LIMITS OF FULL DEPTH CONSTRUCTION. WORK LEWIS AVENUE SECTIONS WITH THE INTERSECTION GRADING PLAN, SHT. IGP-01.
2. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES IS APPROXIMATE BASED ON AVAILABLE MAPPING AND FIELD SURVEY.

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–XSC.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

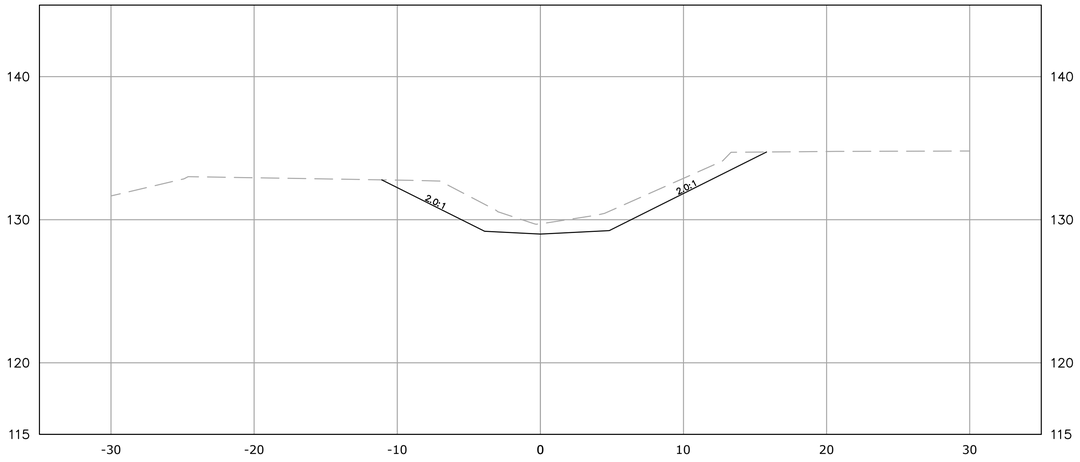
SCALE: 1" = 5'
0 2.5 5 10

BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. XSC-04
DRAWING TITLE: LEWIS AVENUE CROSS SECTIONS STA. 20+50 - STA. 21+50
SHEET NO.



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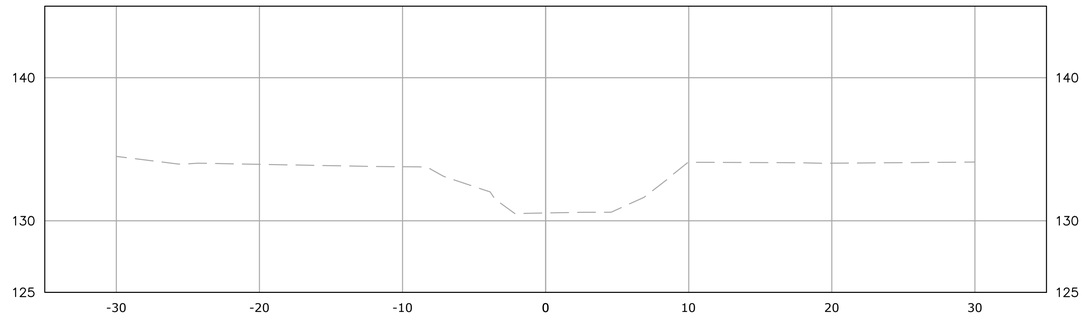

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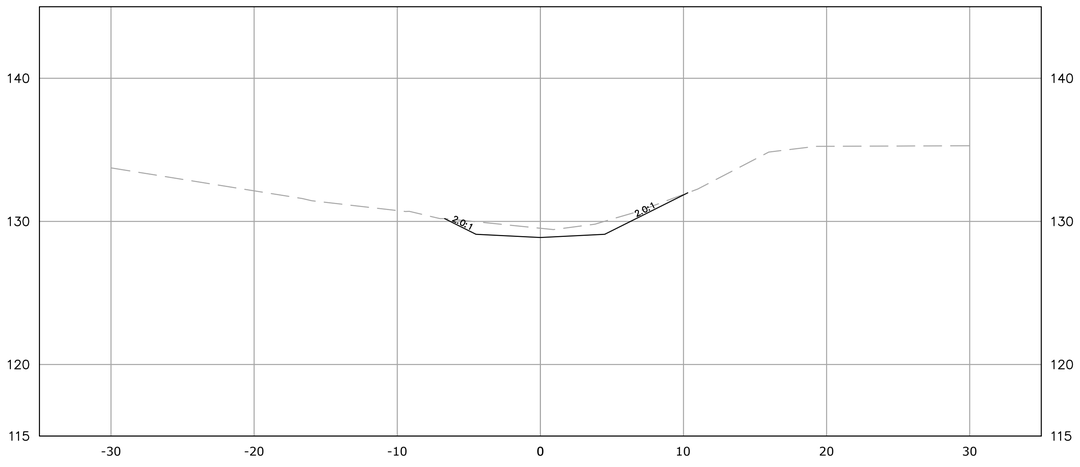

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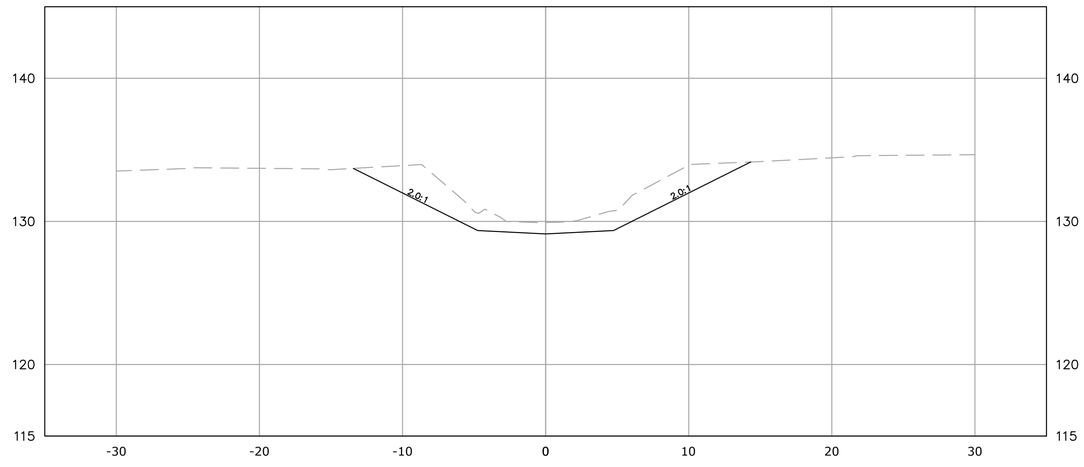


126+00

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003-XSC_STRM.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

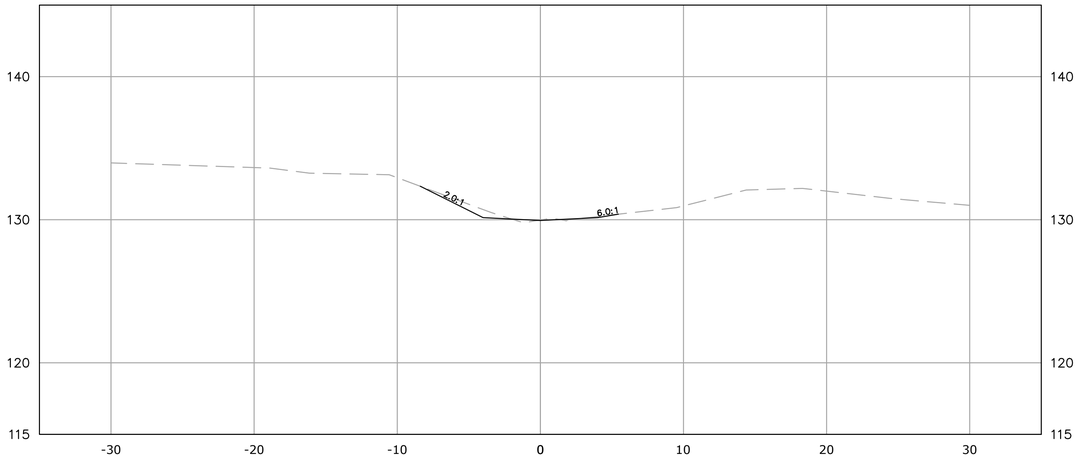
SCALE: 1" = 5'
0 3 5 10

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. XSC-05
DRAWING TITLE: SODOM BROOK CROSS SECTIONS
SHEET NO.



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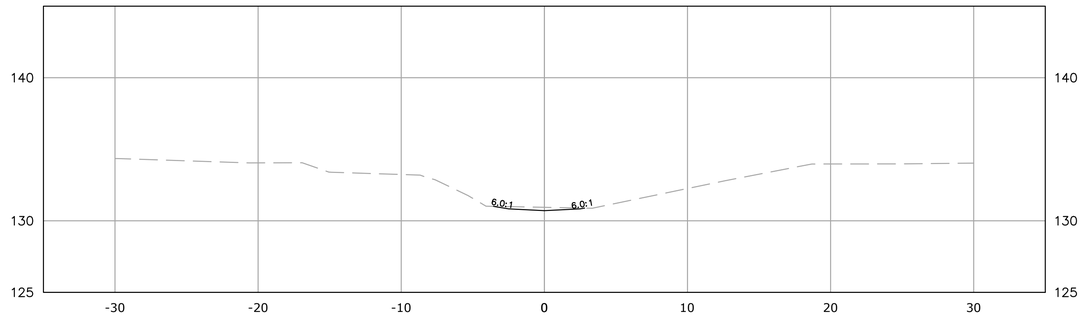

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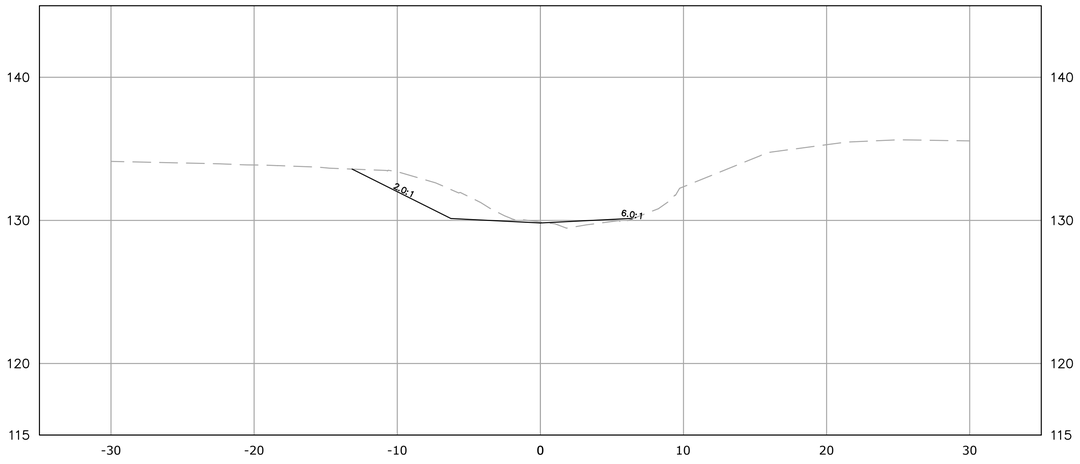

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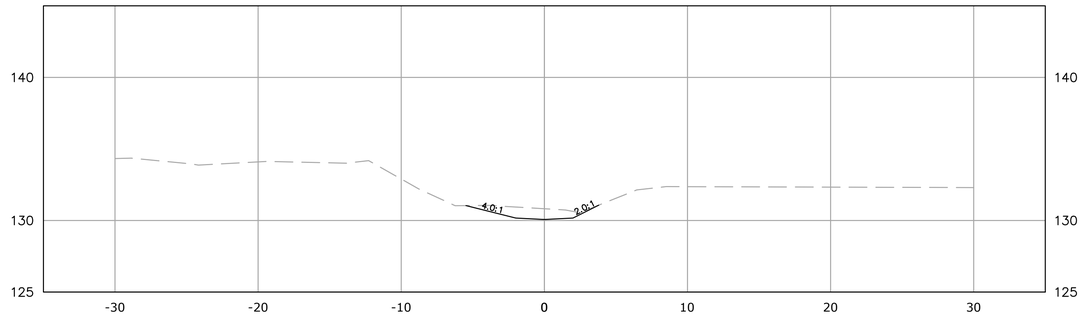

129+00

FINAL DESIGN

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 8364003–XSC_STRM.DWG

PREPARED FOR:
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CT 06450

SCALE: 1" = 5'
0 3 5 10

BSC GROUP
655 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

ENGINEER: DMD
DATE: JUNE 18, 2020
APPROVED BY: DLS
No.

PROJECT TITLE:
KENSINGTON AVENUE CULVERT REPLACEMENT

TOWN: MERIDEN
PROJECT NO. 83640.03
DRAWING NO. XSC-06
DRAWING TITLE: SODOM BROOK CROSS SECTIONS
SHEET NO.