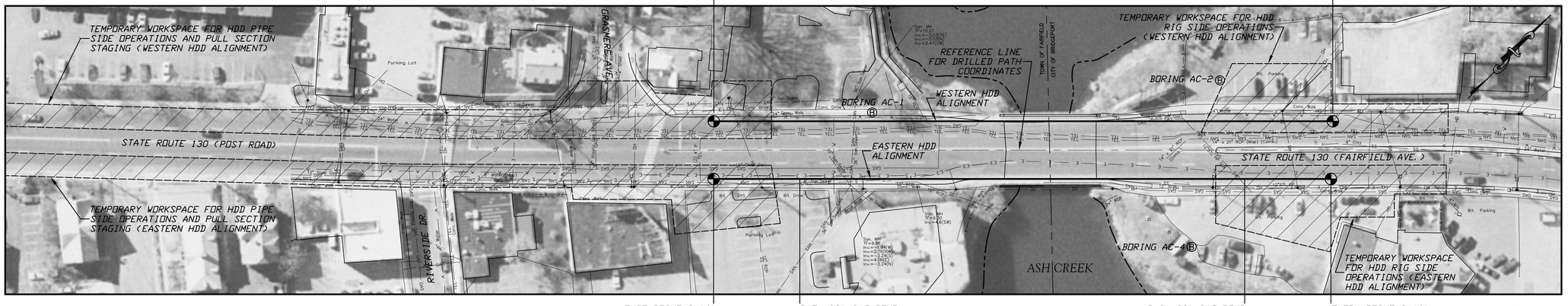
HORIZONTAL LENGTH = 537' (WESTERN ALIGNMENT), 535' (EASTERN ALIGNMENT)
TRUE LENGTH = 548'(WESTERN ALIGNMENT), 547' EASTERN ALIGNMENT)



EXIT POINT @ 16°
6+35.34, 10.51
N 616928.99, E 865632.64

P.T. 32° SAG BEND
5+60.72, -10.88

WESTERN HDD ALIGNMENT
(ALL COORDINATES 25' RIGHT)

P.C. 32° SAG BEND
1+74.83, -10.88
RADIUS = 700'

ENTRY POINT @ 16°
0+98.36, 11.04
N 617306.54, E 866014.47

EXIT POINT @ 16°
6+35.47, 10.55
N 616893.34, E 865667.70

P.T. 32° SAG BEND
5+60.72, -10.88

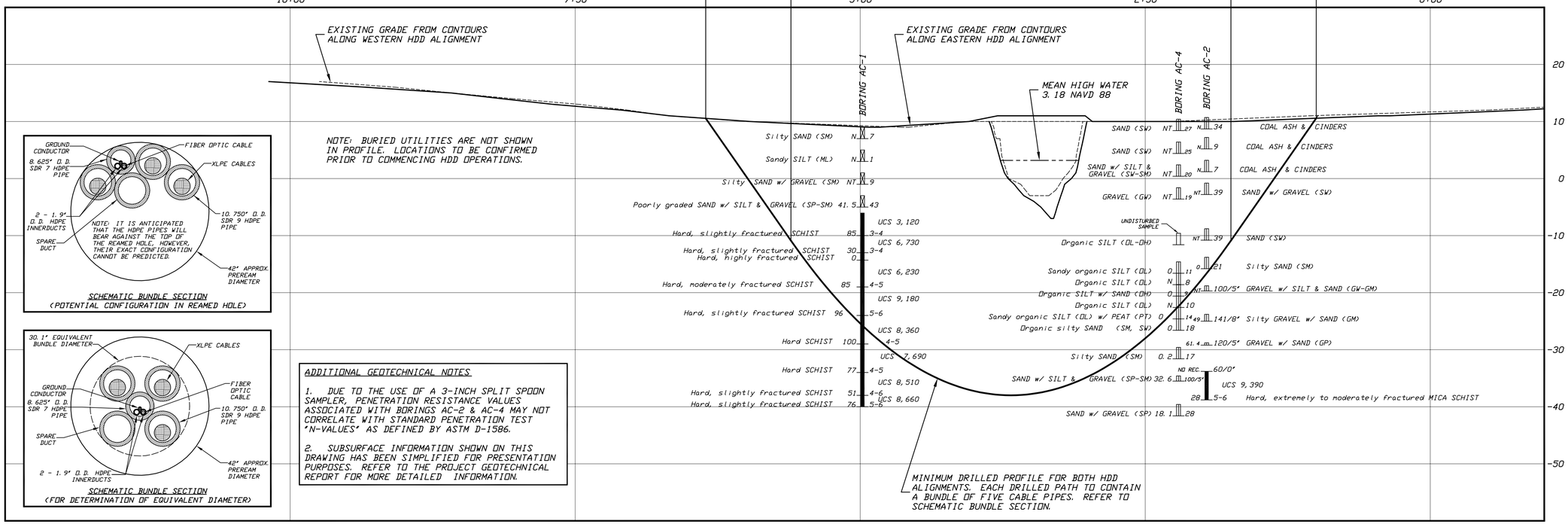
EASTERN HDD ALIGNMENT
(ALL COORDINATES 25' LEFT)

P.C. 32° SAG BEND
1+74.83, -10.88
RADIUS = 700'

ENTRY POINT @ 16°
1+00.00, 10.57
N 617269.84, E 866048.46

PLAN

SCALE: 1"= 50'



PROFILE

SCALE: 1"= 50' HORIZONTAL
1"= 10' VERTICAL

NOTE: IT IS ANTICIPATED THAT THE HDPE PIPES WILL BEAR AGAINST THE TOP OF THE REAMED HOLE, HOWEVER, THEIR EXACT CONFIGURATION CANNOT BE PREDICTED.

SCHEMATIC BUNDLE SECTION
(POTENTIAL CONFIGURATION IN REAMED HOLE)

SCHEMATIC BUNDLE SECTION
(FOR DETERMINATION OF EQUIVALENT DIAMETER)

ADDITIONAL GEOTECHNICAL NOTES

1. DUE TO THE USE OF A 3-INCH SPLIT SPOON SAMPLER, PENETRATION RESISTANCE VALUES ASSOCIATED WITH BORINGS AC-2 & AC-4 MAY NOT CORRELATE WITH STANDARD PENETRATION TEST "N-VALUES" AS DEFINED BY ASTM D-1586.

2. SUBSURFACE INFORMATION SHOWN ON THIS DRAWING HAS BEEN SIMPLIFIED FOR PRESENTATION PURPOSES. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR MORE DETAILED INFORMATION.

GENERAL LEGEND

DRILLED PATH ENTRY/EXIT POINT

GEOTECHNICAL LEGEND

(B) — BORING LOCATION

2" O.D. SPLIT SPOON SAMPLE
53 23 — PENETRATION RESISTANCE IN BLOWS PER FOOT FOR A 140 POUND HAMMER FALLING 30 INCHES
PERCENTAGE OF GRAVEL BY WEIGHT FOR SAMPLES CONTAINING GRAVEL

3" O.D. SPLIT SPOON SAMPLE
53 23 — PENETRATION RESISTANCE IN BLOWS PER FOOT FOR A 140 POUND HAMMER FALLING 30 INCHES
PERCENTAGE OF GRAVEL BY WEIGHT FOR SAMPLES CONTAINING GRAVEL

CORE BARREL SAMPLE
UCS 6,250 — UNCONFINED COMPRESSIVE STRENGTH (PSI)
53 6 — MOHS HARDNESS
ROCK QUALITY DESIGNATION (PERCENT)

0 50' 100'
HORIZONTAL SCALE IN FEET
0 10' 20'
VERTICAL SCALE IN FEET

60% COMPLETION
PRELIMINARY

PROTECTION OF UNDERGROUND FACILITIES

CONTRACTOR SHALL UNDERTAKE THE FOLLOWING STEPS PRIOR TO COMMENCING DRILLING OPERATIONS:

1. CONTACT THE UTILITY LOCATION/ NOTIFICATION SERVICE FOR THE CONSTRUCTION AREA.
2. POSITIVELY LOCATE AND STAKE ALL EXISTING UNDERGROUND FACILITIES. ANY FACILITIES LOCATED WITHIN 10 FEET OF THE DESIGNED DRILLED PATHS SHALL BE EXPOSED.
3. MODIFY DRILLING PRACTICES AND DOWNHOLE ASSEMBLIES AS NECESSARY TO PREVENT DAMAGE TO EXISTING FACILITIES.

GENERAL NOTES

1. TOPOGRAPHIC SURVEY DATA PROVIDED BY BL COMPANIES, MERIDEN, CONNECTICUT.
2. NORTHINGS AND EASTINGS ARE IN U.S. SURVEY FEET REFERENCED TO CONNECTICUT STATE PLANE COORDINATES, NAD 83.
3. ELEVATIONS ARE IN FEET REFERENCED TO NAVD 88.
4. STATIONING IS IN FEET BY HORIZONTAL MEASUREMENT AND IS REFERENCED TO CONTROL ESTABLISHED FOR THE DRILLED SEGMENTS.
5. DRILLED PATH COORDINATES REFER TO CENTERLINE OF PIPE.

PILOT HOLE TOLERANCES

THE PILOT HOLES SHALL BE DRILLED TO THE TOLERANCES LISTED BELOW. HOWEVER, IN ALL CASES, RIGHT-OF-WAY RESTRICTIONS AND CONCERN FOR ADJACENT UTILITIES SHALL TAKE PRECEDENCE OVER THESE TOLERANCES.

1. ELEVATION - PLUS 0 FEET, MINUS 10 FEET
2. ALIGNMENT - PLUS OR MINUS 5 FEET
3. ENTRY POINT - AT THE STAKED LOCATION
4. EXIT POINT - PLUS OR MINUS 5 FEET IN ALIGNMENT, PLUS OR MINUS 10 FEET IN LENGTH

GEOTECHNICAL NOTES

1. GEOTECHNICAL DATA TAKEN FROM A MARCH 2006 GEOTECHNICAL EVALUATION REPORT PRODUCED BY GZA GEOENVIRONMENTAL, INC., NORWOOD, MASSACHUSETTS. REFER TO THIS REPORT FOR MORE DETAILED SUBSURFACE INFORMATION.
2. THE LETTER "N" TO THE LEFT OF A SPLIT SPOON SAMPLE INDICATES THAT NO GRAVEL WAS OBSERVED IN THE SAMPLE. THE LETTERS "NT" INDICATE THAT GRAVEL WAS OBSERVED BUT NO GRADATION TESTS WERE PERFORMED.
3. THE GEOTECHNICAL DATA IS ONLY DESCRIPTIVE OF THE LOCATIONS ACTUALLY SAMPLED. EXTENSION OF THIS DATA OUTSIDE OF THE ORIGINAL BORINGS MAY BE DONE TO CHARACTERIZE THE SOIL CONDITIONS, HOWEVER, COMPANY DOES NOT GUARANTEE THESE CHARACTERIZATIONS TO BE ACCURATE. CONTRACTOR MUST USE HIS OWN EXPERIENCE AND JUDGEMENT IN INTERPRETING THIS DATA.

no.	date	revisions	by	chk

John D. Hair, P.E.
Consulting Engineer

Burns & McDonnell SINCE 1898

date 01-04-07
detailed
designed JDH&A (RCR/JSP)
checked JDH&A (DLB)

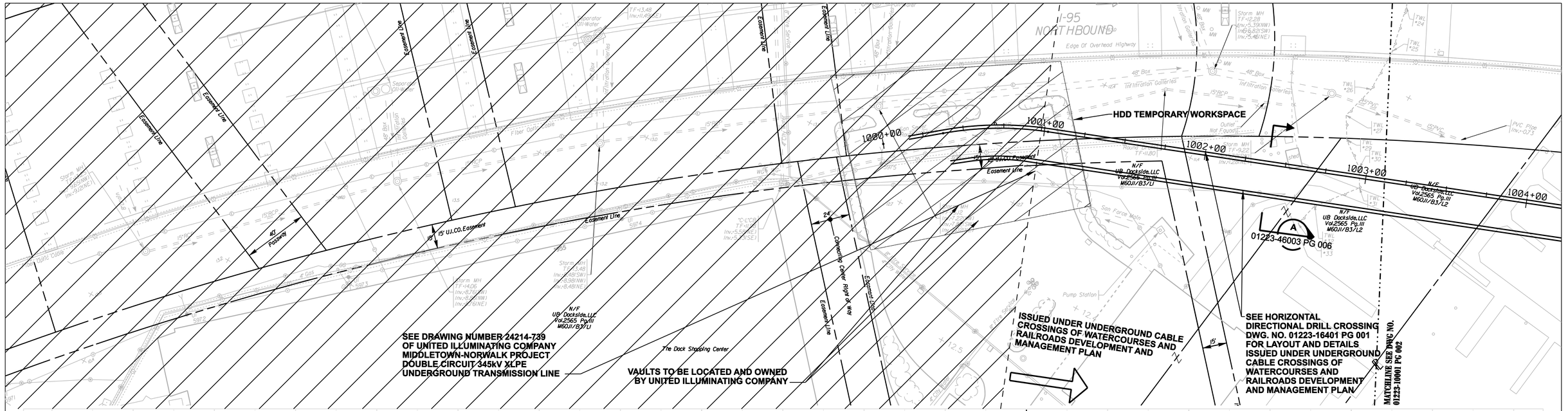
MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

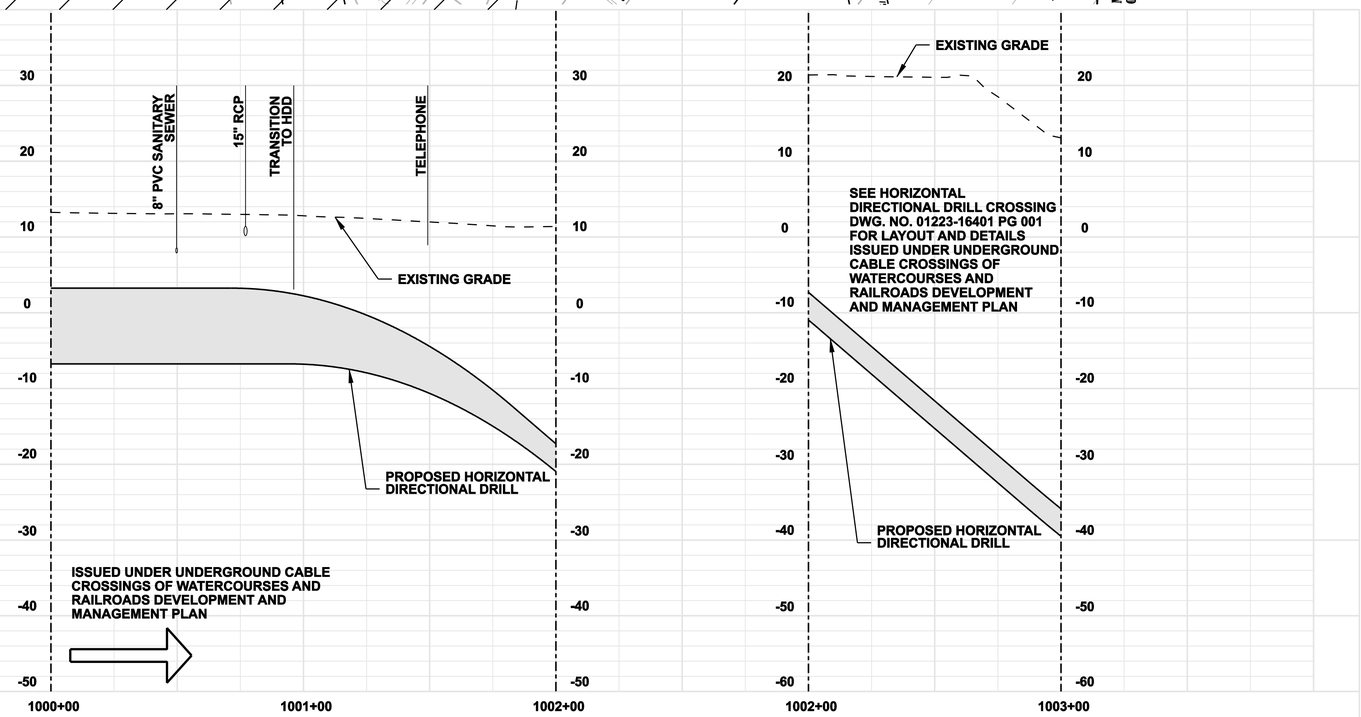
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

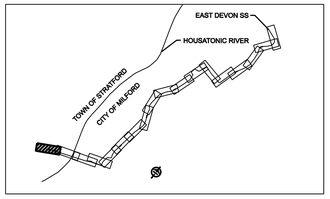
TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT
PLAN AND PROFILE
CROSSING OF ASH CREEK BY
HORIZONTAL DIRECTIONAL DRILLING
TOWN OF FAIRFIELD & CITY OF BRIDGEPORT, CONNECTICUT

BY	CHKD	APP	APP
DATE	DATE	DATE	DATE
SCALE AS NOTED		DWG. NO. 01224-16404 PG 001	





SEE DRAWING NUMBER 24214-739 OF UNITED ILLUMINATING COMPANY MIDDLETOWN-NORWALK PROJECT DOUBLE CIRCUIT 345kV XLPE UNDERGROUND TRANSMISSION LINE



NORTH

0 30' 60'
HORIZONTAL SCALE IN FEET
0 10' 20'
VERTICAL SCALE IN FEET

DOCKET No. 272

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRELIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 10/11/05 | detailed L. ROWSE
designed C. COURTRIGHT | checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

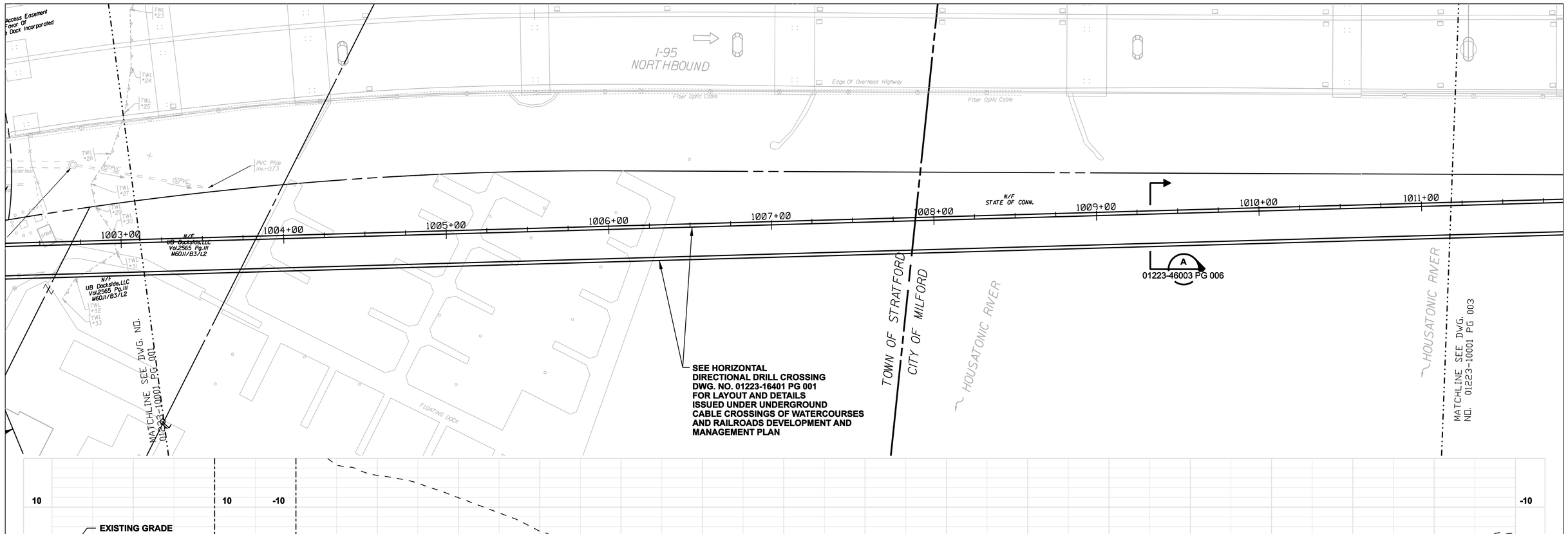
NORTHEAST UTILITIES SERVICE CO.

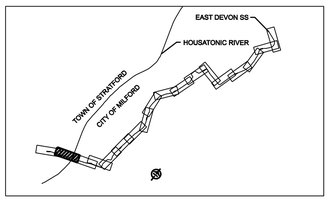
FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT

TOWN OF STRATFORD
PLAN AND PROFILE Sta. 1000+00 to 1003+00

BY SEN–BMCD	CHKD	APP	APP
DATE 10–11–05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223–10001 PG 001	





NORTH

0 30' 60'
HORIZONTAL SCALE IN FEET
0 10' 20'
VERTICAL SCALE IN FEET

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

DOCKET No. 272

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED		
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRELIMINARY	CTC	

Burns & McDonnell
SINCE 1898

date 10/11/05
detailed L. ROWSE
designed C. COURTRIGHT
checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

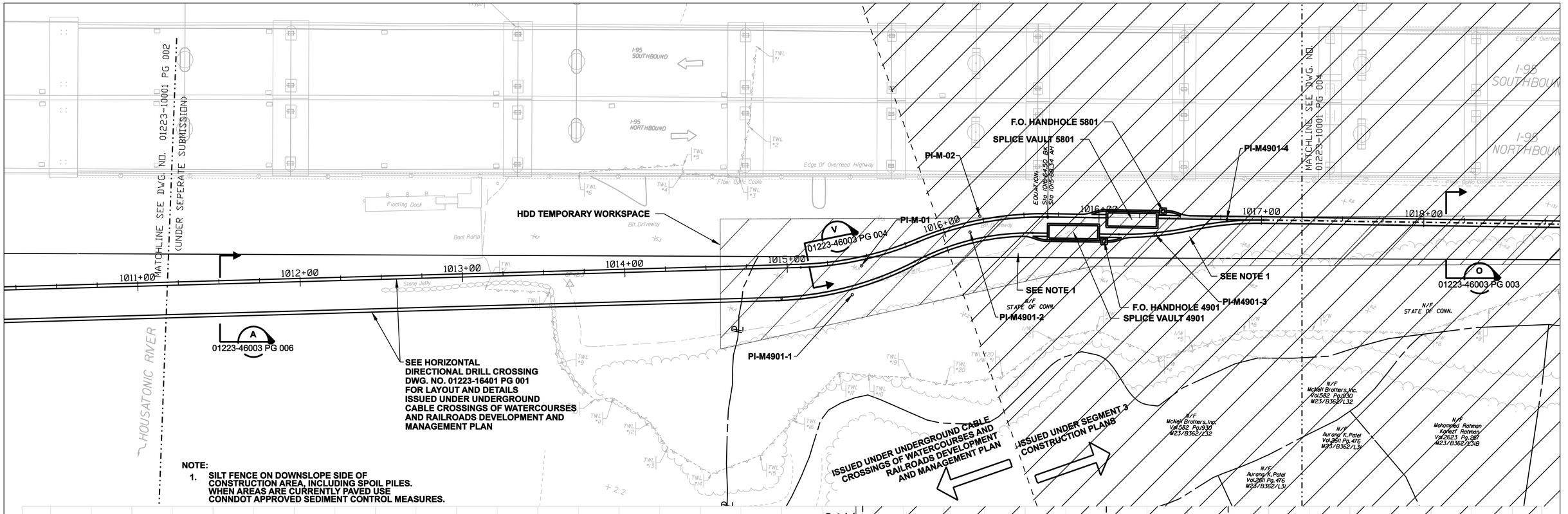
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT

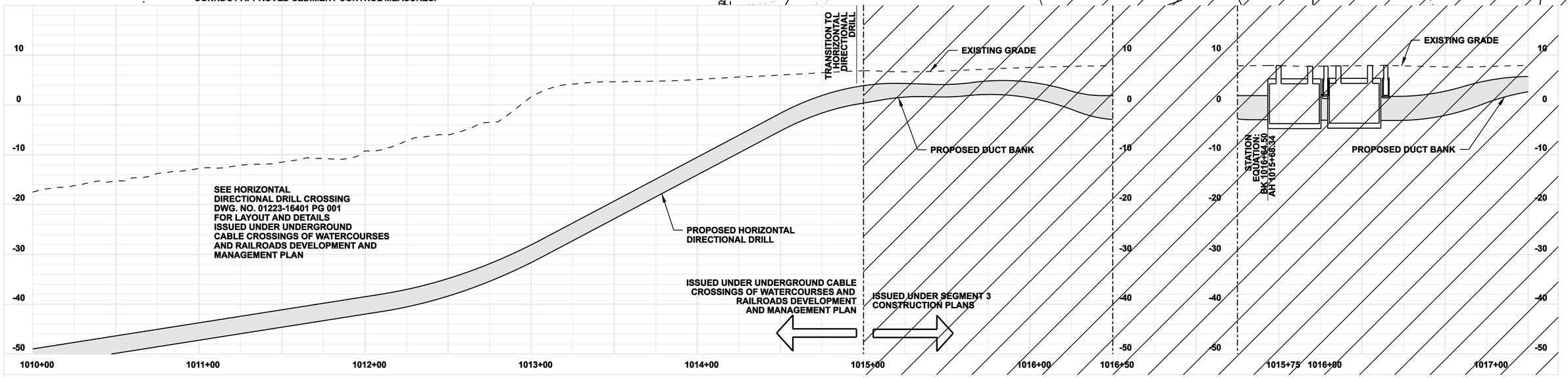
TOWN OF STRATFORD/CITY OF MILFORD
PLAN AND PROFILE Sta. 1002+00 to 1010+50

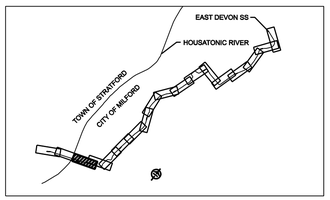
BY SEN–BMCD	CHKD	APP	APP
DATE 10–11–05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223–10001 PG 002	



NOTE:

1. SILT FENCE ON DOWNSLOPE SIDE OF CONSTRUCTION AREA, INCLUDING SPOIL PILES. WHEN AREAS ARE CURRENTLY PAVED USE CONNDOT APPROVED SEDIMENT CONTROL MEASURES.





NORTH

0 30' 60'
HORIZONTAL SCALE IN FEET
0 10' 20'
VERTICAL SCALE IN FEET

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

DOCKET No. 272

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRELIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 10/11/05
designed C. COURTRIGHT
detailed L. ROWSE
checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

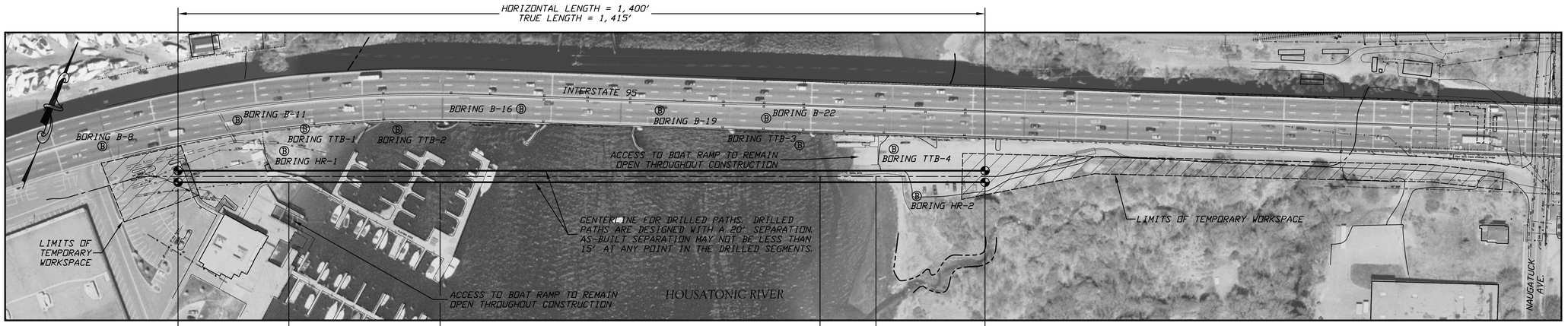
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT

CITY OF MILFORD
PLAN AND PROFILE Sta. 1010+00 to 1017+25

BY SEN–BMCD	CHKD	APP	APP
DATE 10–11–05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223–10001 PG 003	



PLAN

SCALE: 1" = 100'

ENTRY POINT @ 16°
11+00.00, 12.48
N 635168.24, E 900351.55
N 635149.52, E 900358.58

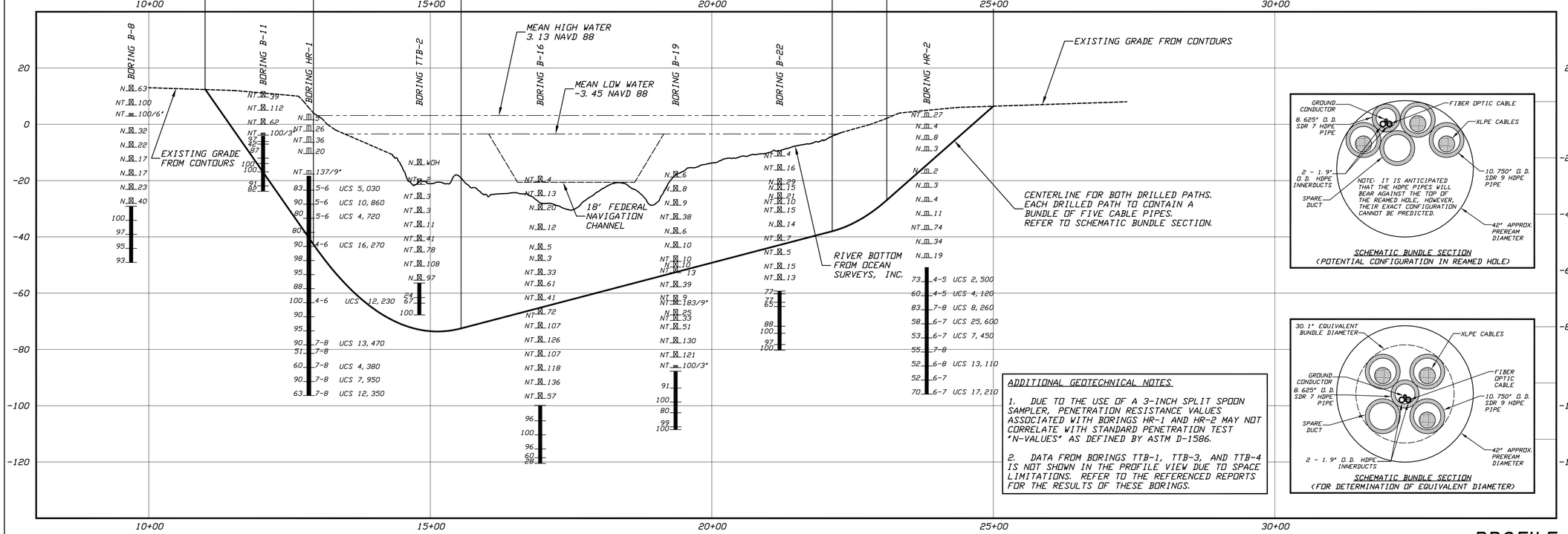
P.C. 19° SAG BEND
12+92.24, -42.65
RADIUS = 800'

P.T. 19° SAG BEND
15+54.62, -72.54

P.C. 7° SAG BEND
22+13.74, -38.00
RADIUS = 800'

P.T. 7° SAG BEND
23+10.79, -26.94

EXIT POINT @ 10°
25+00.00, 6.42
N 635659.76, E 901662.44
N 635641.03, E 901669.46



PROFILE

SCALE: 1" = 100' HORIZONTAL
1" = 20' VERTICAL

SCHEMATIC BUNDLE SECTION
(POTENTIAL CONFIGURATION IN REAMED HOLE)

SCHEMATIC BUNDLE SECTION
(FOR DETERMINATION OF EQUIVALENT DIAMETER)

ADDITIONAL GEOTECHNICAL NOTES

1. DUE TO THE USE OF A 3-INCH SPLIT SPOON SAMPLER, PENETRATION RESISTANCE VALUES ASSOCIATED WITH BORINGS HR-1 AND HR-2 MAY NOT CORRELATE WITH STANDARD PENETRATION TEST "N-VALUES" AS DEFINED BY ASTM D-1586.

2. DATA FROM BORINGS TTB-1, TTB-3, AND TTB-4 IS NOT SHOWN IN THE PROFILE VIEW DUE TO SPACE LIMITATIONS. REFER TO THE REFERENCED REPORTS FOR THE RESULTS OF THESE BORINGS.

PROTECTION OF UNDERGROUND FACILITIES

CONTRACTOR SHALL UNDERTAKE THE FOLLOWING STEPS PRIOR TO COMMENCING DRILLING OPERATIONS:

1. CONTACT THE UTILITY LOCATION/ NOTIFICATION SERVICE FOR THE CONSTRUCTION AREA.

2. POSITIVELY LOCATE AND STAKE ALL EXISTING UNDERGROUND FACILITIES. ANY FACILITIES LOCATED WITHIN 10 FEET OF THE DESIGNED DRILLED PATH SHALL BE EXPOSED.

3. MODIFY DRILLING PRACTICES AND DOWNHOLE ASSEMBLIES AS NECESSARY TO PREVENT DAMAGE TO EXISTING FACILITIES.

GENERAL NOTES

1. TOPOGRAPHIC SURVEY DATA PROVIDED BY BL COMPANIES, MERIDEN, CONNECTICUT.

2. NORTHINGS AND EASTINGS ARE IN U.S. SURVEY FEET REFERENCED TO CONNECTICUT STATE PLANE COORDINATES, NAD 83.

3. ELEVATIONS ARE IN FEET REFERENCED TO NAVD 88.

4. STATIONING IS IN FEET BY HORIZONTAL MEASUREMENT AND IS REFERENCED TO CONTROL ESTABLISHED FOR THE DRILLED SEGMENTS.

5. DRILLED PATH COORDINATES REFER TO CENTERLINE OF PIPE.

PILOT HOLE TOLERANCES

THE PILOT HOLES SHALL BE DRILLED TO THE TOLERANCES LISTED BELOW. HOWEVER, IN ALL CASES, RIGHT-OF-WAY RESTRICTIONS AND CONCERN FOR ADJACENT UTILITIES SHALL TAKE PRECEDENCE OVER THESE TOLERANCES.

1. ELEVATION - PLUS 0 FEET, MINUS 10 FEET

2. ALIGNMENT - PLUS OR MINUS 5 FEET BUT NO CLOSER THAN 15 FEET BETWEEN THE DRILLED PATHS

3. ENTRY POINT - AT THE STAKED LOCATION

4. EXIT POINT - PLUS OR MINUS 5 FEET IN ALIGNMENT, PLUS OR MINUS 10 FEET IN LENGTH

GEOTECHNICAL NOTES

1. GEOTECHNICAL DATA TAKEN FROM A MARCH 2006 GEOTECHNICAL EVALUATION REPORT PRODUCED BY GZA GEOENVIRONMENTAL, INC., NORWOOD, MASSACHUSETTS AND BORING LOGS INCLUDED IN APPENDIX 3 OF AN APRIL 2004 GEOPHYSICAL INVESTIGATION PRODUCED BY NDT CORPORATION, WORCESTER, MASSACHUSETTS. REFER TO THESE REPORTS FOR MORE DETAILED SUBSURFACE INFORMATION.

2. THE LETTER "N" TO THE LEFT OF A SPLIT SPOON SAMPLE INDICATES THAT NO GRAVEL WAS OBSERVED IN THE SAMPLE. THE LETTERS "NT" INDICATE THAT GRAVEL WAS OBSERVED BUT NO GRADATION TESTS WERE PERFORMED.

3. THE GEOTECHNICAL DATA IS ONLY DESCRIPTIVE OF THE LOCATIONS ACTUALLY SAMPLED. EXTENSION OF THIS DATA OUTSIDE OF THE ORIGINAL BORINGS MAY BE DONE TO CHARACTERIZE THE SOIL CONDITIONS, HOWEVER, COMPANY DOES NOT GUARANTEE THESE CHARACTERIZATIONS TO BE ACCURATE. CONTRACTOR MUST USE HIS OWN EXPERIENCE AND JUDGEMENT IN INTERPRETING THIS DATA.

GENERAL LEGEND

DRILLED PATH ENTRY/EXIT POINT

GEOTECHNICAL LEGEND

B — BORING LOCATION

2" O.D. SPLIT SPOON SAMPLE
53 / 23 — PENETRATION RESISTANCE IN BLOWS PER FOOT FOR A 140 POUND HAMMER FALLING 30 INCHES / PERCENTAGE OF GRAVEL BY WEIGHT FOR SAMPLES CONTAINING GRAVEL

3" O.D. SPLIT SPOON SAMPLE
53 / 23 — PENETRATION RESISTANCE IN BLOWS PER FOOT FOR A 140 POUND HAMMER FALLING 30 INCHES / PERCENTAGE OF GRAVEL BY WEIGHT FOR SAMPLES CONTAINING GRAVEL

CORE BARREL SAMPLE
UCS 6,250 — UNCONFINED COMPRESSIVE STRENGTH (PSI)
53 / 6 — MOHS HARDNESS / ROCK QUALITY DESIGNATION (PERCENT)

0 100' 200'
HORIZONTAL SCALE IN FEET
0 20' 40'
VERTICAL SCALE IN FEET

ISSUED FOR CONSTRUCTION

no.	date	revisions	by	chk
1	01/17/07	Modify rig side temporary workspace and add notes regarding access to boat ramps	DLB	JSP

John D. Hair, P.E.
Consulting Engineer

date 09-01-06 | detailed
designed JDH&A (JSP/DLB) | checked JDH&A (JSP)

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT
PLAN AND PROFILE
CROSSING OF THE HOUSATONIC RIVER
BY HORIZONTAL DIRECTIONAL DRILLING
MILFORD, CONNECTICUT

BY	CHKD	APP	APP
DATE	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223-16401 PG 001	

NOTE:

1. SILT FENCE ON DOWNSLOPE SIDE OF CONSTRUCTION AREA, INCLUDING SPOIL PILES. WHEN AREAS ARE CURRENTLY PAVED USE CONNDOT APPROVED SEDIMENT CONTROL MEASURES.

MATCHLINE SEE DWG. NO. 01223-10001 PG 003

ISSUED UNDER UNDERGROUND CABLE CROSSINGS OF WATERCOURSES AND RAILROADS DEVELOPMENT AND MANAGEMENT PLAN

SEE JACK AND BORE CROSSING DWG. NO. 01223-16402 PG 001 FOR LAYOUT AND DETAILS ISSUED UNDER UNDERGROUND CABLE CROSSINGS OF WATERCOURSES AND RAILROADS DEVELOPMENT AND MANAGEMENT PLAN

N/F STATE OF CONN. RAILROAD TRACKS

N/F STATE OF CONN. METRO NORTH COMMUTER RAILROAD CO.

MATCHLINE SEE DWG. NO. 01223-10001 PG 005

TMS #1
SEE DETAIL 5
DWG. NO. 01223-46003 PG 005

I-95 SOUTHBOUND

I-95 NORTHBOUND

TH-416
ELEC.
(NOT FOUND)
BY MH2E
N 635918.08
E 902239.36

TH-416
(2) 4" PVC ELEC.
TOP +12.9'
N 635948.65
E 902242.23

TH-417
6" TEL.
TOP +5.4'
N 635986.05
E 902234.41

PI-M-04

DUCT BANK LOCATED UNDER I-95 BRIDGE

ISSUED UNDER SEGMENT 3 CONSTRUCTION PLANS

SPLICE VAULT 4901

F. O. HANDHOLE 5801

PI-M-02

PI-M4901-2

PI-M-01

EQUATION:
Sta. 1016+42.50 BK =
Sta. 1015+68.34 AH

PI-M4901-3

PI-M4901-4

SEE NOTE 1

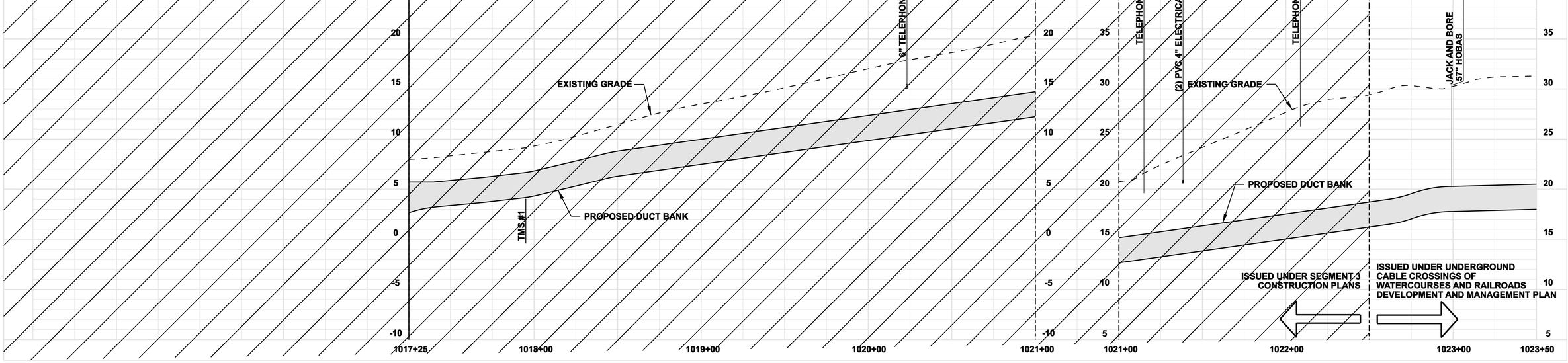
SPLICE VAULT 5801

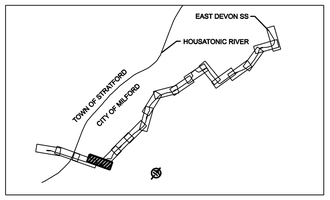
F. O. HANDHOLE 4901

01223-46003 PG 003

PI-M-03

1016+00 1017+00 1018+00 1019+00 1020+00 1021+00 1022+00 1023+00





NORTH

0 30' 60'
HORIZONTAL SCALE IN FEET

0 5' 10'
VERTICAL SCALE IN FEET

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

DOCKET No. 272

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED		
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRELIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 10/11/05
designed C. COURTRIGHT
detailed L. ROWSE
checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

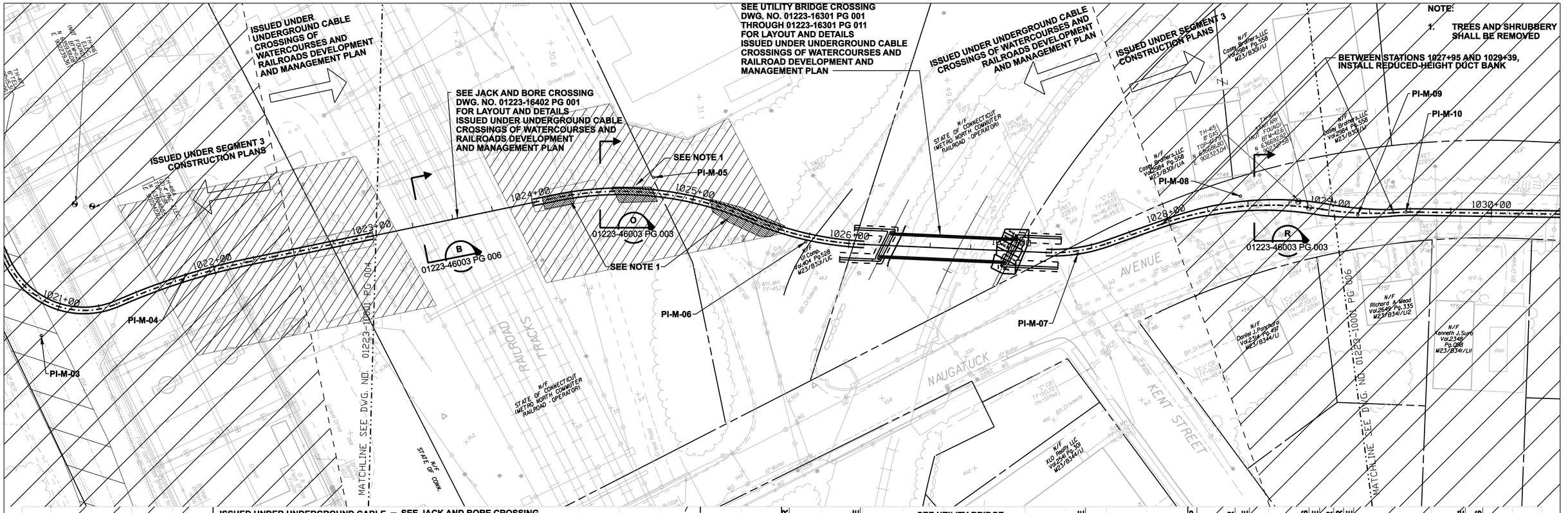
NORTHEAST UTILITIES SERVICE CO.

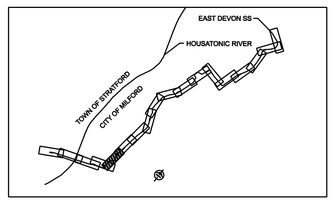
FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT

CITY OF MILFORD
PLAN AND PROFILE Sta. 1017+25 to 1023+50

BY SEN–BMCD	CHKD	APP	APP
DATE 10–11–05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223–10001 PG 004	





NORTH

0 30' 60'
HORIZONTAL SCALE IN FEET

0 5' 10'
VERTICAL SCALE IN FEET

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

DOCKET No. 272

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRELIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 10/11/05
designed C. COURTRIGHT
detailed L. ROWSE
checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

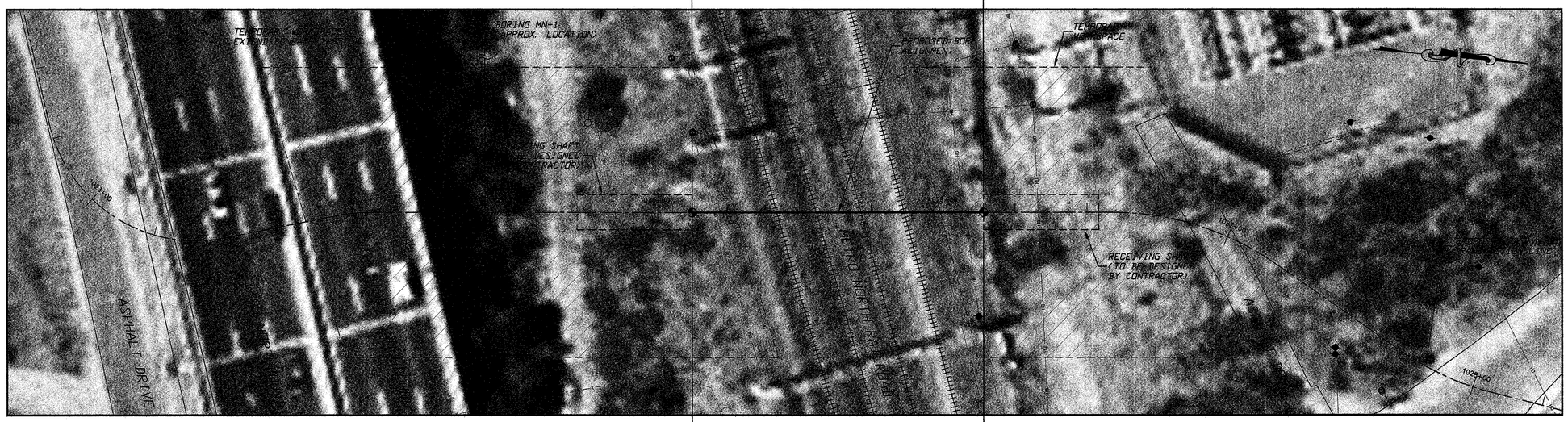
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT

CITY OF MILFORD
PLAN AND PROFILE Sta. 1021+50 to 1030+00

BY SEN–BMCD	CHKD	APP	APP
DATE 10–11–05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223–10001 PG 005	

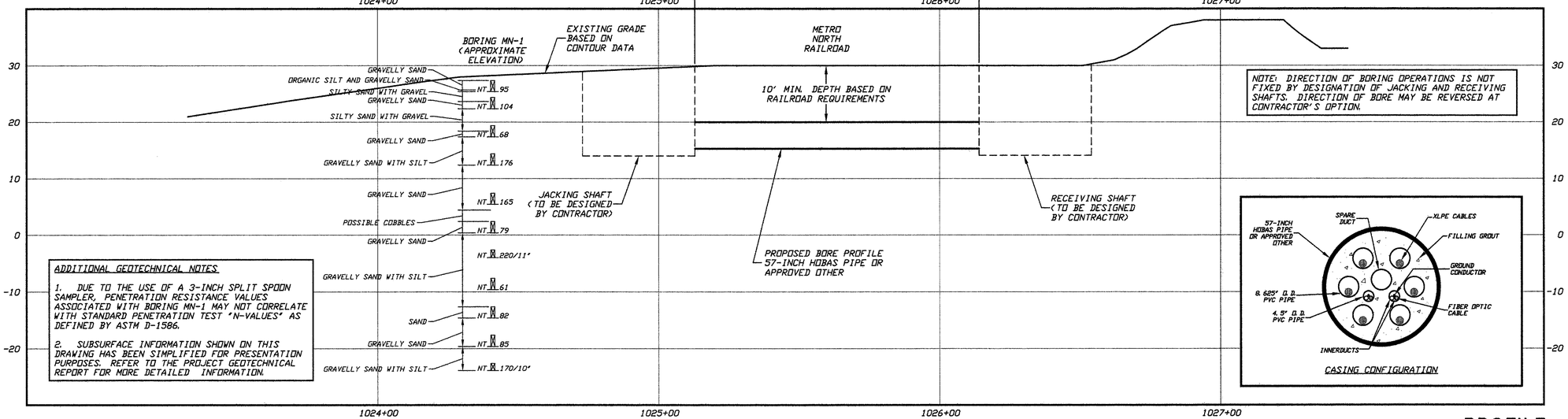


PLAN

SCALE: 1"= 20'

BORE ENTRY
STA. 1025+12.88
ELEV. 20.00 (T.O.P.)
N 636117.89, E 902279.67

BORE EXIT
STA. 1026+14.04
ELEV. 20.00 (T.O.P.)
N 636218.62, E 902270.39



NOTE: DIRECTION OF BORING OPERATIONS IS NOT FIXED BY DESIGNATION OF JACKING AND RECEIVING SHAFTS. DIRECTION OF BORE MAY BE REVERSED AT CONTRACTOR'S OPTION.

CASING CONFIGURATION

ADDITIONAL GEOTECHNICAL NOTES

1. DUE TO THE USE OF A 3-INCH SPLIT SPOON SAMPLER, PENETRATION RESISTANCE VALUES ASSOCIATED WITH BORING MN-1 MAY NOT CORRELATE WITH STANDARD PENETRATION TEST "N-VALUES" AS DEFINED BY ASTM D-1586.

2. SUBSURFACE INFORMATION SHOWN ON THIS DRAWING HAS BEEN SIMPLIFIED FOR PRESENTATION PURPOSES. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR MORE DETAILED INFORMATION.

PROFILE

SCALE: 1"= 20' HORIZONTAL
1"= 10' VERTICAL

PROTECTION OF UNDERGROUND FACILITIES

CONTRACTOR SHALL UNDERTAKE THE FOLLOWING STEPS PRIOR TO COMMENCING BORING OPERATIONS:

1. CONTACT THE UTILITY LOCATION/NOTIFICATION SERVICE FOR THE CONSTRUCTION AREA.

2. POSITIVELY LOCATE AND STAKE ALL EXISTING UNDERGROUND FACILITIES WITHIN 25 FEET OF THE BORE ALIGNMENT. LOCATIONS AND DEPTHS SHALL BE VERIFIED BY POTHOLING OR EXCAVATION.

3. UNDERGROUND FACILITIES LOCATED WITHIN 5 FEET OF THE DESIGNED BORE PATH SHALL BE EXPOSED.

4. MODIFY BORING PRACTICES AS NECESSARY TO PREVENT DAMAGE TO EXISTING FACILITIES.

GENERAL NOTES

1. TOPOGRAPHIC SURVEY DATA PROVIDED BY BL COMPANIES, MERIDEN, CONNECTICUT.

2. NORTHINGS AND EASTINGS ARE IN U.S. SURVEY FEET REFERENCED TO CONNECTICUT STATE PLANE COORDINATES, NAD 83.

3. ELEVATIONS ARE IN FEET REFERENCED TO NAVD 88.

4. STATIONING IS IN FEET BY HORIZONTAL MEASUREMENT.

5. HORIZONTAL BORE ENTRY AND EXIT COORDINATES REFER TO TOP OF PIPE.

LINE AND GRADE TOLERANCES

THE CASING SHALL BE INSTALLED TO THE LINE AND GRADE INDICATED ON THIS DRAWING WITHIN THE FOLLOWING TOLERANCES.

ALIGNMENT. PLUS OR MINUS 3 FEET.

ELEVATION. PLUS 0 FEET, MINUS 3 FEET.

HOWEVER, IN ALL CASES RIGHT-OF-WAY RESTRICTIONS AND CONCERN FOR ADJACENT FACILITIES SHALL TAKE PRECEDENCE OVER THE TOLERANCES LISTED.

GEOTECHNICAL NOTES

1. GEOTECHNICAL DATA TAKEN FROM DRAFT BORING LOGS PRODUCED BY GZA GEOENVIRONMENTAL, INC., NORWOOD, MASSACHUSETTS. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR MORE DETAILED SUBSURFACE INFORMATION.

2. THE LETTER "N" TO THE LEFT OF A SPLIT SPOON SAMPLE INDICATES THAT NO GRAVEL WAS OBSERVED IN THE SAMPLE. THE LETTERS "NT" INDICATE THAT GRAVEL WAS OBSERVED BUT NO GRADATION TESTS WERE PERFORMED.

3. THE GEOTECHNICAL DATA IS ONLY DESCRIPTIVE OF THE LOCATIONS ACTUALLY SAMPLED. EXTENSION OF THIS DATA OUTSIDE OF THE ORIGINAL BORINGS MAY BE DONE TO CHARACTERIZE THE SOIL CONDITIONS, HOWEVER, COMPANY DOES NOT GUARANTEE THESE CHARACTERIZATIONS TO BE ACCURATE. CONTRACTOR MUST USE HIS OWN EXPERIENCE AND JUDGEMENT IN INTERPRETING THIS DATA.

GENERAL LEGEND

HORIZONTAL BORE ENDPOINT

GEOTECHNICAL LEGEND

B BORING LOCATION

SPLIT SPOON SAMPLE

53 N 23 — PENETRATION RESISTANCE IN BLOWS PER FOOT FOR A 140 POUND HAMMER FALLING 30 INCHES
PERCENTAGE OF GRAVEL BY WEIGHT FOR SAMPLES CONTAINING GRAVEL

CORE BARREL SAMPLE

UCS 6,250 — UNCONFINED COMPRESSIVE STRENGTH (PSI)
53 6 — MOHS HARDNESS
ROCK QUALITY DESIGNATION (PERCENT)

0 20' 40'
HORIZONTAL SCALE IN FEET
0 10' 20'
VERTICAL SCALE IN FEET

60% COMPLETION PRELIMINARY

no.	date	revisions	by	chk

John D. Hair, P.E.
Consulting Engineer

Burns & McDonnell SINCE 1898

STATE OF CONNECTICUT — JOHN D. HAIR — No. 25030 — LICENSED PROFESSIONAL ENGINEER — 1/8/2007

date 03-23-06 — detailed
designed JDH&A (JSP) — checked 03-23-06

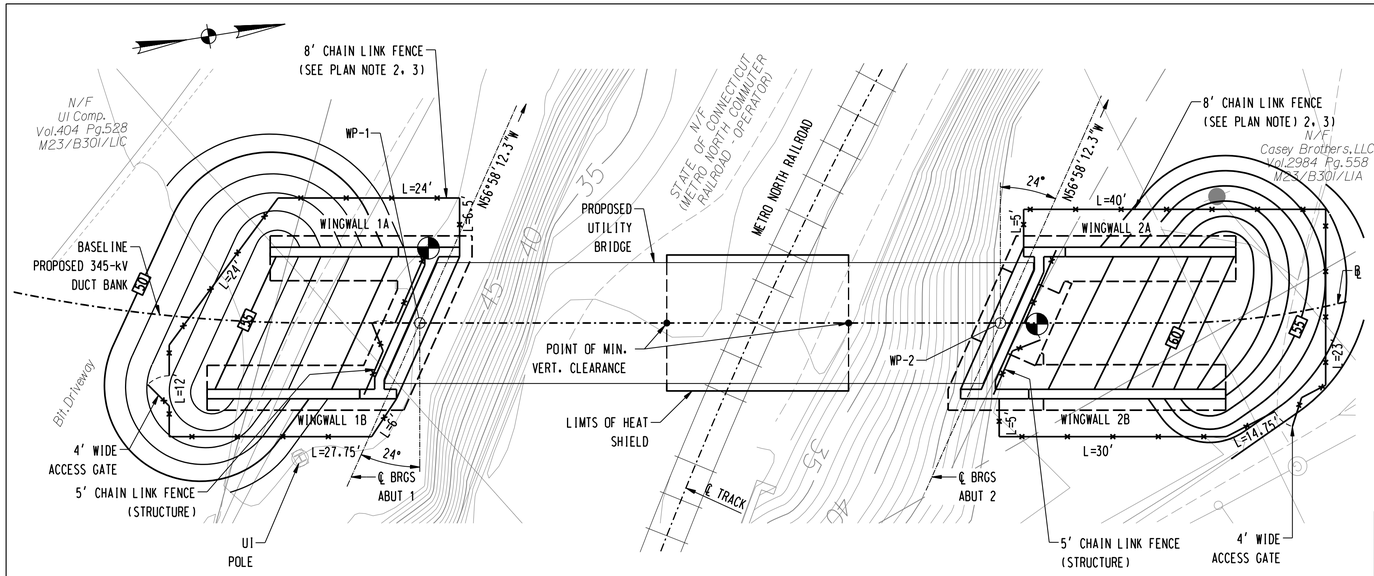
MF	NO.	DATE	REVISIONS	DLB BY	JSP CHK	JSP APP	APP
	1	1/08/07	REVISE PIPE SPECIFICATION				

NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

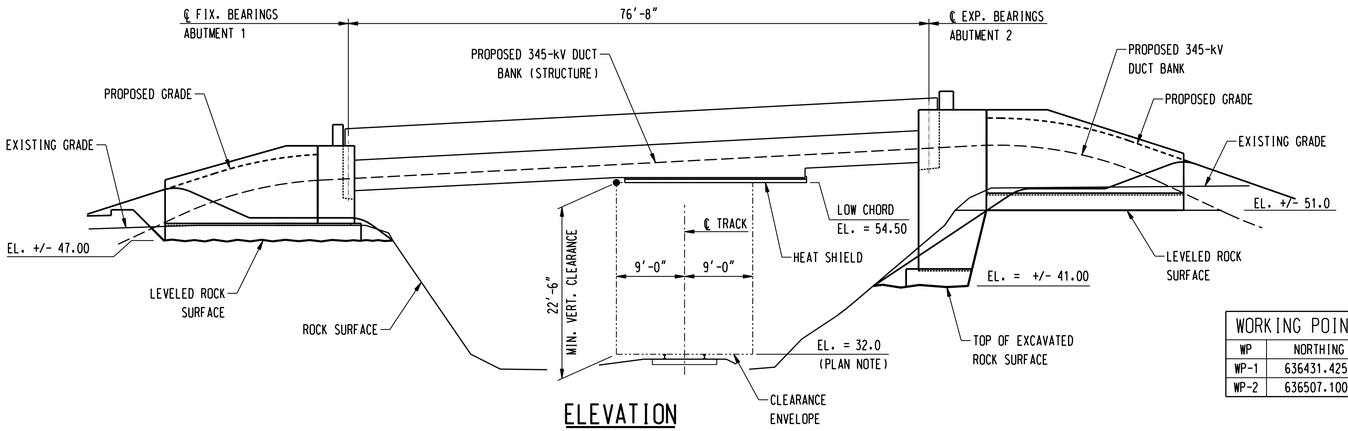
TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT
PLAN AND PROFILE
CROSSING OF THE METRO NORTH RAILROAD
BY HORIZONTAL BORING
MILFORD, CONNECTICUT

BY	CHKD	APP	APP
DATE	DATE	DATE	DATE
SCALE AS NOTED		DWG. NO.	01223–16402 PG 001



PLAN

SCALE: 1" = 10'



ELEVATION

SCALE: 1" = 10'

PLAN NOTES

1. TRACK ELEVATION SHOWN IS APPROXIMATE. CONTRACTOR SHALL VERIFY ELEVATION OF RAILROAD TRACK AT POINT OF MIN. VERTICAL CLEARANCE PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY BL COMPANIES SHOULD THE ACTUAL TRACK ELEVATION BE HIGHER THAN SHOWN. BRIDGE ELEVATIONS SHALL BE ADJUSTED ACCORDINGLY TO MEET REQUIRED MIN. VERTICAL CLEARANCE.
2. 4" OF CRUSHED STONE FOR SLOPE PROTECTION SHALL BE PROVIDED WITHIN THE LIMITS DEFINED IN THE 8' HIGH PROTECTIVE FENCE DETAILS. SEE DWG. No. 01224-16302 PG 013
3. CRUSHED STONE FOR SLOPE PROTECTION SHALL BE INCLUDED IN THE PAY ITEM "8' CHAIN LINK FENCE".

DESIGN LOADS

GRAVITY LOADS

A. MISCELLANEOUS DEAD LOAD	= 126.5 PLF/BEAM
B. UTILITY DEAD LOAD	= 92 PLF/BEAM
C. LIVE LOAD	= 30 PSF
D. ROOF SNOW LOAD	= 22.5 PSF

LATERAL LOADS

WIND:
A. BASIC WIND VELOCITY = 100 MPH
B. HORIZONTAL WIND PRESSURE = 50 PSF
C. VERTICAL WIND PRESSURE = 20 PSF
D. FOR ROOF & CLADDING - WIND PRESSURE ACCORDING SEI/ASCE STANDARD 7-02

SEISMIC:
A. SEISMIC PERFORMANCE ZONE - 2 (PER AASHTO 3.10.4)

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
STRUCTURE EXCAVATION - EARTH (COMPLETE)	CY	30
STRUCTURE EXCAVATION - ROCK (COMPLETE)	CY	190
PERVIOUS STRUCTURE BACKFILL	CY	240
STEEL-LAMINATED ELASTOMERIC BEARINGS	EA	2
CLASS "A" CONCRETE	CY	260
DEFORMED STEEL BARS	LB	33800
ARCHITECTURAL CLADDING (SITE K)	SY	250
STRUCTURAL STEEL (GALVANIZED) (SITE K)	LB	57000
FIBERGLASS STRUCTURAL SHAPES (SITE K)	LB	5000
DAMPPROOFING	SY	190
8' CHAIN LINK FENCE	LF	230
5' CHAIN LINK FENCE (STRUCTURE)	LF	42
HEAT SHIELD	L.S.	1

GENERAL NOTES

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 816 (2004), SUPPLEMENTAL SPECIFICATIONS DATED JULY, 2005, AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 3RD EDITION (2004); SEI/ASCE STANDARD 7-02, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES; AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2003 EDITION, UP TO AND INCLUDING 2005 REVISIONS.

ALLOWABLE DESIGN STRESSES:

CLASS "A" CONCRETE	BASED ON	f'c = 3000 PSI
REINFORCEMENT ASTM A615, GRADE 60	BASED ON	fy = 60.000 PSI
STRUCTURAL STEEL AASHTO M270, GRADE 50T2	BASED ON	Fy = 50.000 PSI
FIBERGLASS STRUCTURAL SHAPE	BASED ON	Fu = 33.000 PSI

STRUCTURAL STEEL: SEE STRUCTURAL STEEL NOTES FOR DESIGNATIONS AND REQUIREMENTS.

FOUNDATION PRESSURES: THE VARIOUS STRENGTH LIMITS NOTED ON THE SUBSTRUCTURE PLAN SHEETS REFER TO THE STRENGTH LIMITS AS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION.

DIMENSIONS & ELEVATIONS: WHEN DIMENSIONS AND ELEVATIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE CONSIDERED TO BE ZEROS.

ALL ELEVATIONS ARE GIVEN IN DECIMAL FEET.

CONCRETE NOTES

CLASS "A" CONCRETE: CLASS "A" CONCRETE SHALL BE USED FOR THE ENTIRE SUBSTRUCTURES.

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

CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE TWO INCHES CLEAR COVER, UNLESS OTHERWISE NOTED.

REINFORCEMENT: ALL REINFORCEMENT SHALL BE ASTM A615, GRADE 60.

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

BORING LEGEND

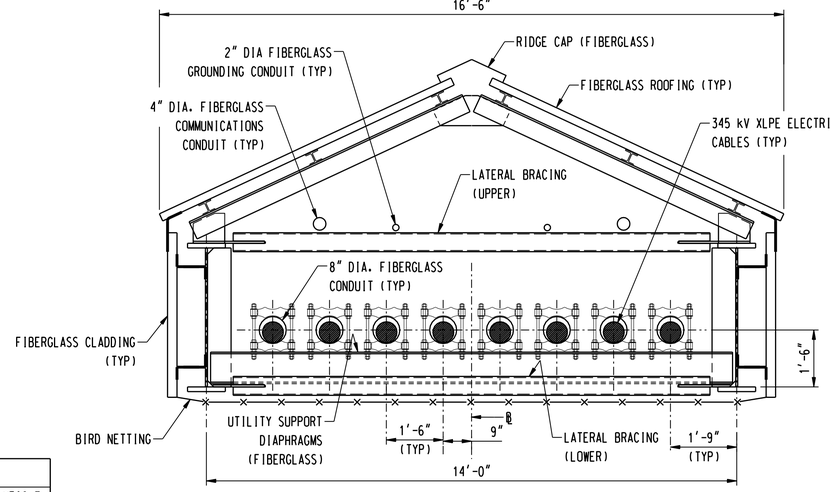
LOCATION OF BORING PERFORMED BY GZA GEO ENVIRONMENTAL, INC.

WORKING POINT COORDINATES

WP	NORTHING	EASTING
WP-1	636431.4255	902321.1488
WP-2	636507.1003	902333.1752

TRANSPORTATION DIMENSIONS AND MASS DATA

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
S1-S3	78' - 2"	4'-3"	1'-10"	18 000 LB.



TYPICAL SECTION

SCALE: ½" = 1'-0"

CONCRETE DISTRIBUTION

SUPERSTRUCTURE	C.Y.	0
SUBSTRUCTURE	C.Y.	205
FOOTINGS	C.Y.	45
TOTAL	C.Y.	250

INSPECTION OF FIELD WELDS

METHOD	UNIT	QUANTITY
ULTRASONIC	inch	0
MAGNETIC PARTICLE	feet	0

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

NOTICE TO BRIDGE INSPECTORS

IT IS RECOMMENDED THAT AREMA, NESC, CONNDOT AND MNR'S BRIDGE SAFETY PROCEDURES BE FOLLOWED WHEN INSPECTING AND MAINTAINING THIS BRIDGE FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS. (THE LISTING OF COMPONENTS FOR SPECIFIC ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE.) THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY NORTHEAST UTILITIES.

COMPONENT OR DETAIL	STRUCTURE SHEET REFERENCE
PLATE GIRDERS	01223-16301 PG 007
BEARINGS	01223-16301 PG 010

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

no.	date	revisions	by	chk
7	4/5/07	ISSUED CSC REVISED	D.Q.	B.K.
6	9/04/06	ISSUED CSC	D.Q.	B.K.
5	6/01/06	ISSUED 60% PRELIMINARY	D.Q.	B.K.
4	5/10/06	ISSUED SECOND REVIEW	D.Q.	B.K.
3	1/31/06	ADDENDUM No.2	D.Q.	B.K.
2	1/23/06	ISSUED TO BMcD & N.U. FOR REVIEW	D.Q.	B.K.
1	1/19/06	ISSUED CIVIL R.F.P.	D.Q.	B.K.

BL Companies
ARCHITECTURE
ENGINEERING
PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING
ENVIRONMENTAL SCIENCES
355 Research Parkway
Meriden, CT 06450
800.301.3077
www.blcompanies.com

date 01/10/06
designed M. BEAULIEU
detailed C. CHUANG
checked D. QUINIT / B. KUTA

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

METRO NORTH SPURLINE
GENERAL PLAN

BY	CHKD	APP	APP
DATE	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223-16301 PG 001	

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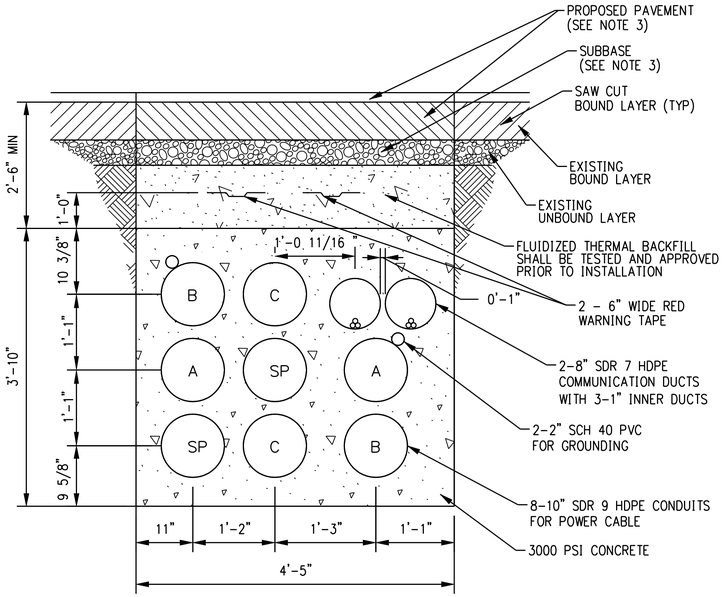
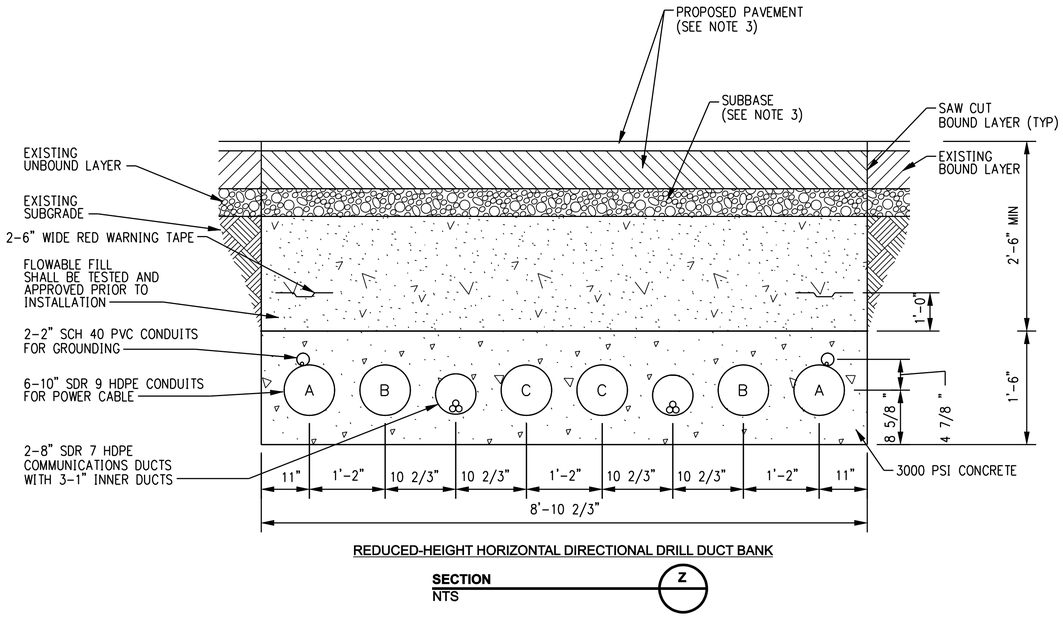


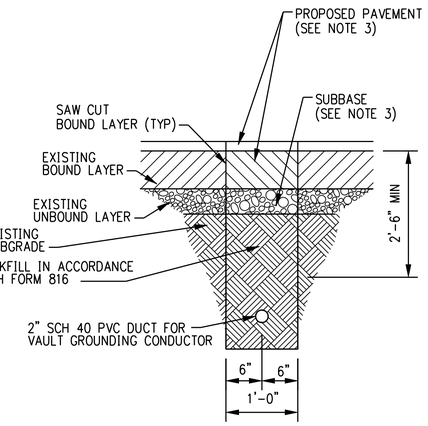
TYPICAL HORIZONTAL DIRECTIONAL DRILL DUCT BANK

SECTION Y
NTS



REDUCED-HEIGHT HORIZONTAL DIRECTIONAL DRILL DUCT BANK

SECTION Z
NTS



TYPICAL GROUNDING DUCT BANK

SECTION AA
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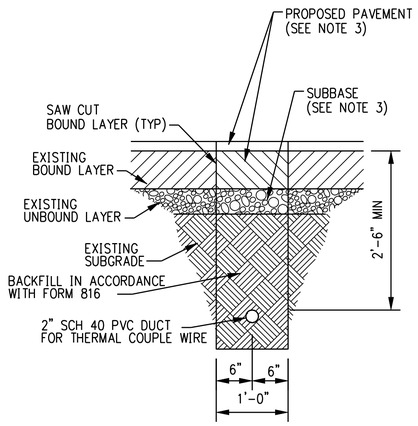
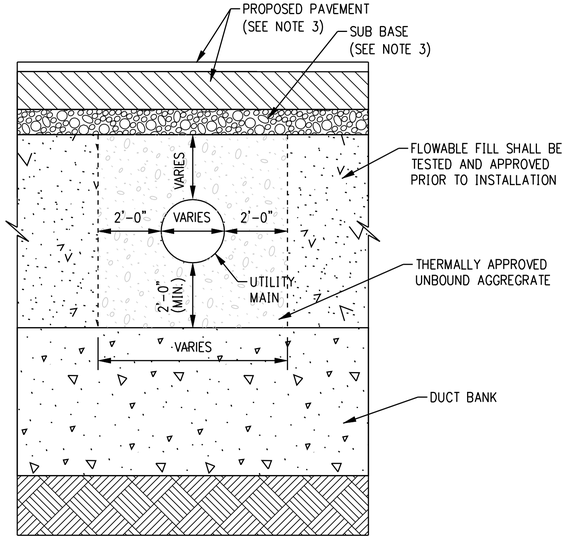


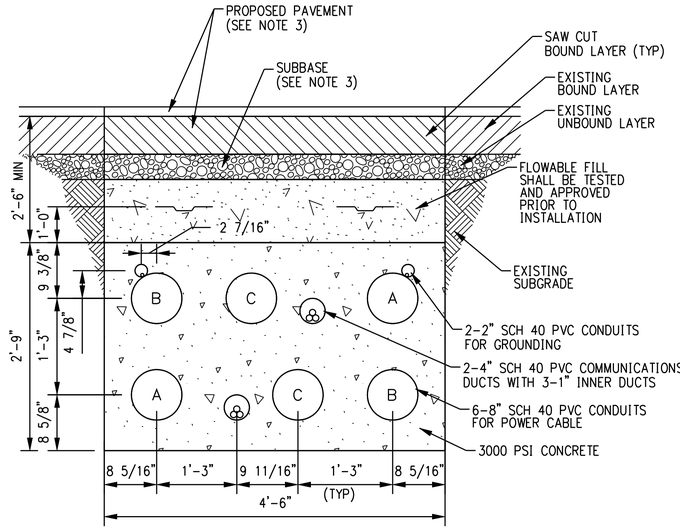
TYPICAL THERMAL COUPLE WIRE DUCT BANK

SECTION BB
NTS



TYPICAL GAS UTILITY CROSSING

SECTION M
NTS



15" PHASE-SPACING DUCT BANK

SECTION N
NTS

GENERAL NOTES:

1. STANDARD TRENCH WITH PERMANENT PAVEMENT RESTORATION IN STATE HIGHWAY SHOWN. PAVEMENT RESTORATION REQUIREMENTS SHALL VARY DEPENDENT ON SPECIFIC EXISTING PAVEMENT CROSS SECTIONS AND MATERIALS.
2. ALL FIBERGLASS CONDUITS SHALL BE OF BULLET-RESISTANT GRADE OR APPROVED OTHER.
3. REFERENCE RESTORATION DRAWINGS FOR PROPOSED PAVEMENT SECTIONS.

DOCKET No. 272

FOR REFERENCE ONLY
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no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRLIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 11/09/05
designed C. COURTRIGHT
detailed L. ROWSE
checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

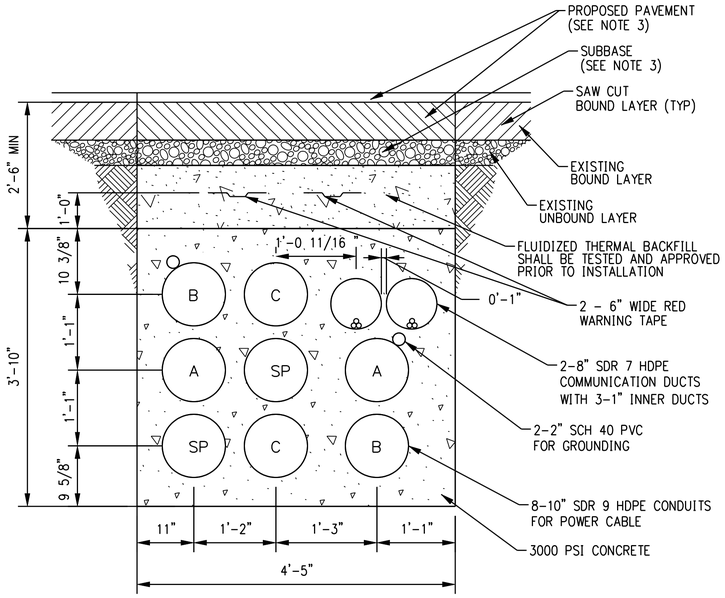
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

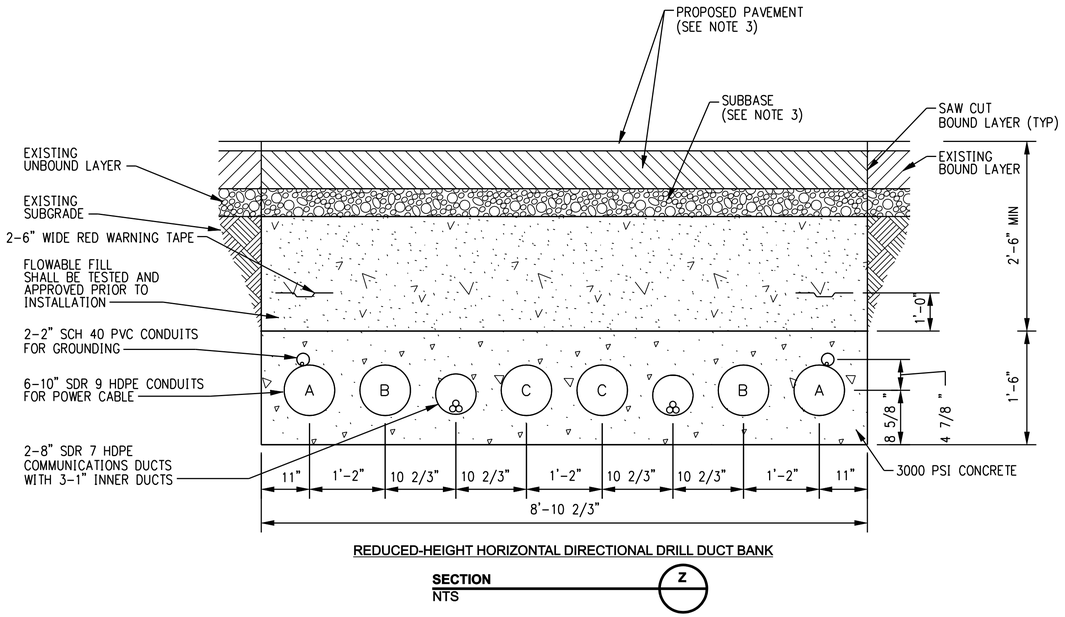
UTILITY BRIDGE DUCT BANK DETAILS AND UTILITY CROSSING DETAIL

BY SEN-BMCD	CHKD	APP	APP
DATE 11-09-05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01224-46003 PG 002	



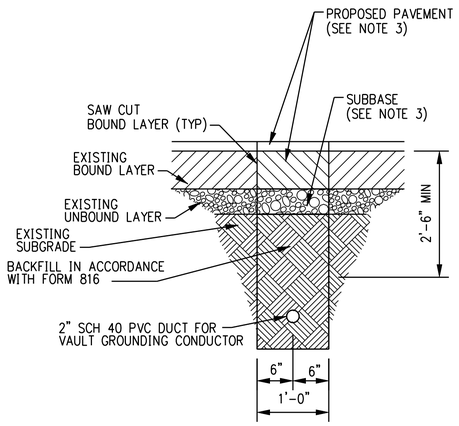
TYPICAL HORIZONTAL DIRECTIONAL DRILL DUCT BANK

SECTION Y
NTS



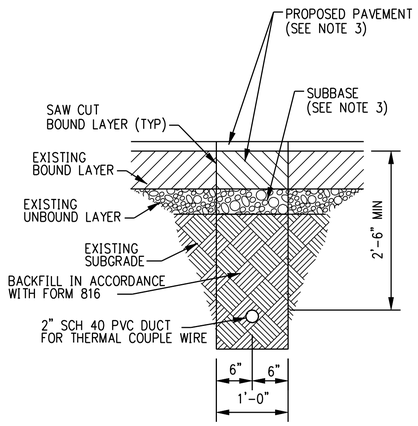
REDUCED-HEIGHT HORIZONTAL DIRECTIONAL DRILL DUCT BANK

SECTION Z
NTS



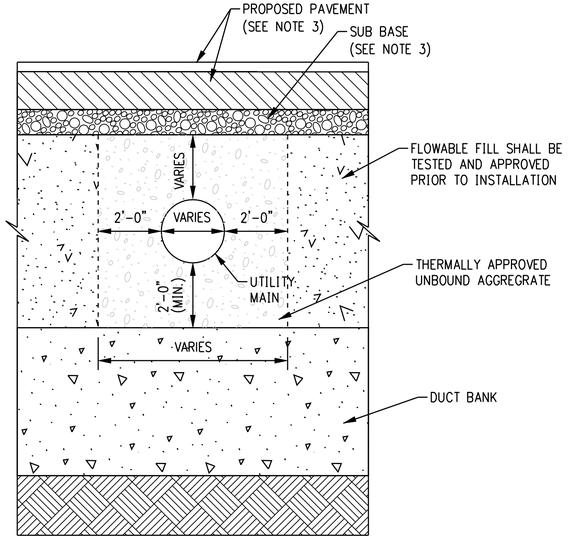
TYPICAL GROUNDING DUCT BANK

SECTION AA
NTS



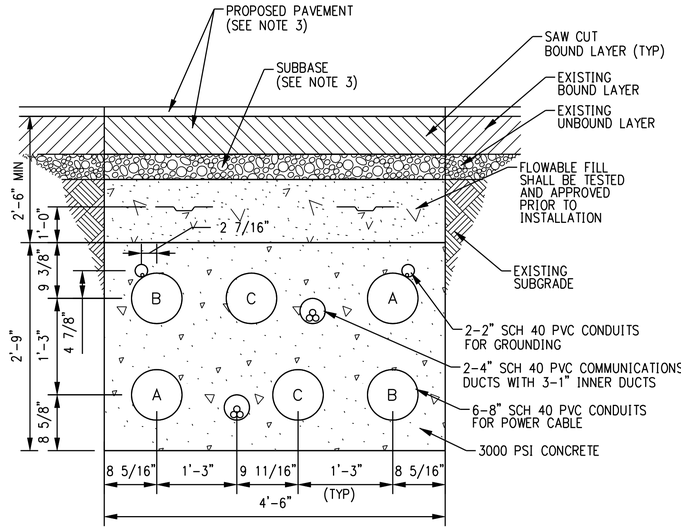
TYPICAL THERMAL COUPLE WIRE DUCT BANK

SECTION BB
NTS



TYPICAL GAS UTILITY CROSSING

SECTION M
NTS



15" PHASE-SPACING DUCT BANK

SECTION N
NTS

GENERAL NOTES:

1. STANDARD TRENCH WITH PERMANENT PAVEMENT RESTORATION IN STATE HIGHWAY SHOWN. PAVEMENT RESTORATION REQUIREMENTS SHALL VARY DEPENDENT ON SPECIFIC EXISTING PAVEMENT CROSS SECTIONS AND MATERIALS.
2. ALL FIBERGLASS CONDUITS SHALL BE OF BULLET-RESISTANT GRADE OR APPROVED OTHER.
3. REFERENCE RESTORATION DRAWINGS FOR PROPOSED PAVEMENT SECTIONS.

DOCKET No. 272

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no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
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Burns & McDonnell SINCE 1898

date 11/09/05
designed C. COURTRIGHT
detailed L. ROWSE
checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

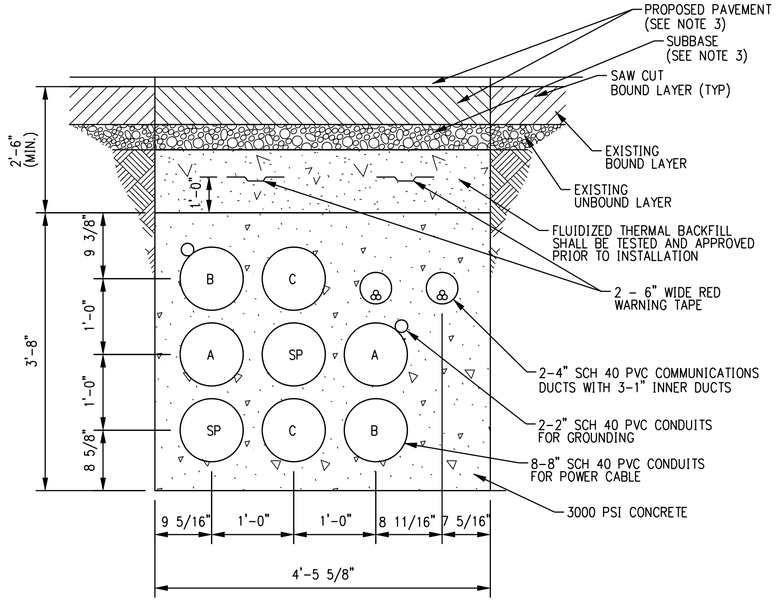
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

UTILITY BRIDGE DUCT BANK DETAILS AND UTILITY CROSSING DETAILS

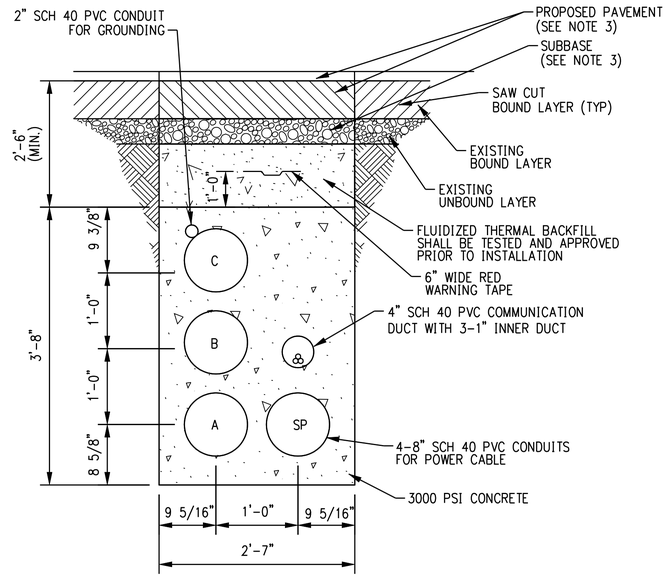
BY SEN-BMCD	CHKD	APP	APP
DATE 11-09-05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223-46003 PG 002	



TYPICAL UTILITY BRIDGE DUCT BANK WITH SPARE

SECTION O

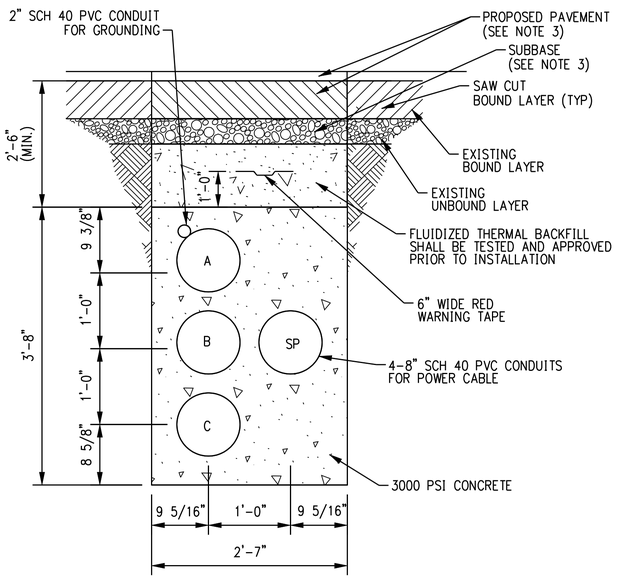
NTS



UTILITY BRIDGE SINGLE CIRCUIT WITH COMMUNICATIONS DUCT BANK AND SPARE

SECTION P

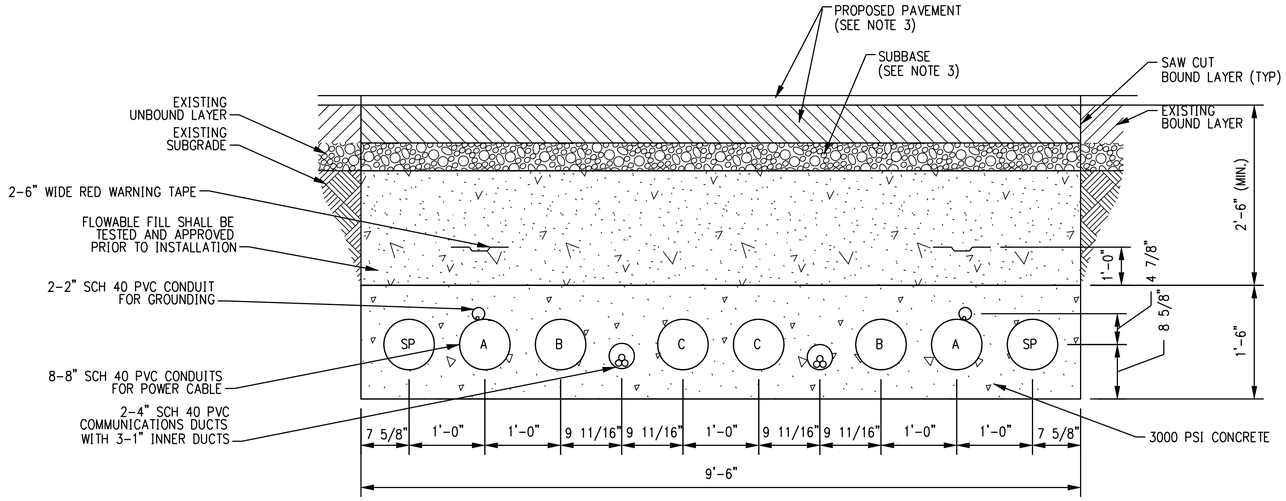
NTS



UTILITY BRIDGE SINGLE CIRCUIT DUCT BANK WITH SPARE

SECTION Q

NTS



UTILITY BRIDGE REDUCED-HEIGHT DUCT BANK WITH SPARE

SECTION R

NTS

GENERAL NOTES:

1. STANDARD TRENCH WITH PERMANENT PAVEMENT RESTORATION IN STATE HIGHWAY SHOWN. PAVEMENT RESTORATION REQUIREMENTS SHALL VARY DEPENDENT ON SPECIFIC EXISTING PAVEMENT CROSS SECTIONS AND MATERIALS.
2. OMITTED
3. REFERENCE RESTORATION DRAWINGS FOR PROPOSED PAVEMENT SECTIONS.

DOCKET No. 272

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRLIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 11/09/05 | detailed L. ROWSE

designed C. COURTRIGHT | checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

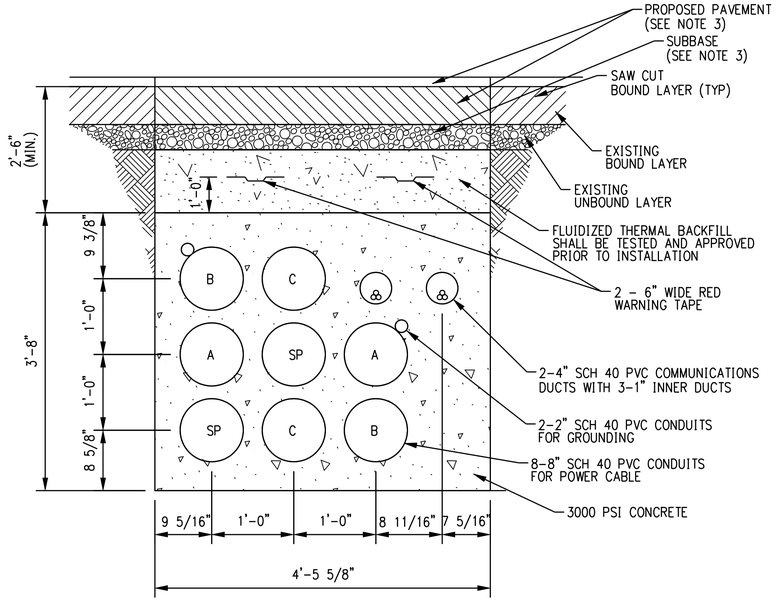
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT

UTILITY BRIDGE DUCT BANK DETAILS

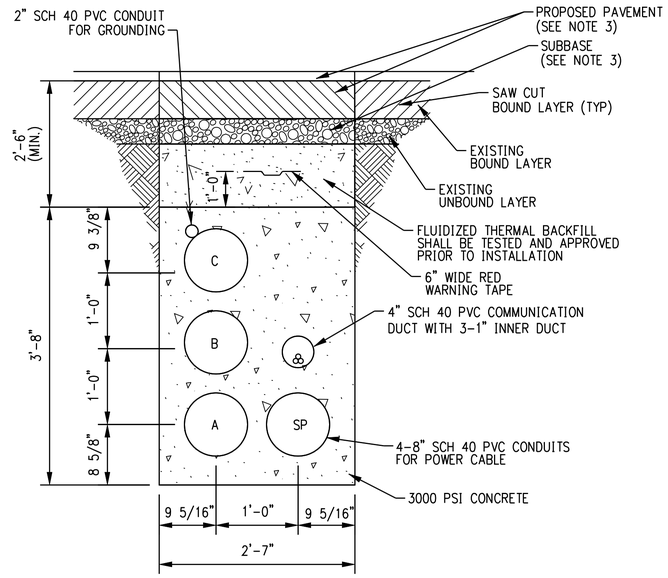
BY SEN–BMCD	CHKD	APP	APP
DATE 11–09–05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01224–46003 PG 003	



TYPICAL UTILITY BRIDGE DUCT BANK WITH SPARE

SECTION O

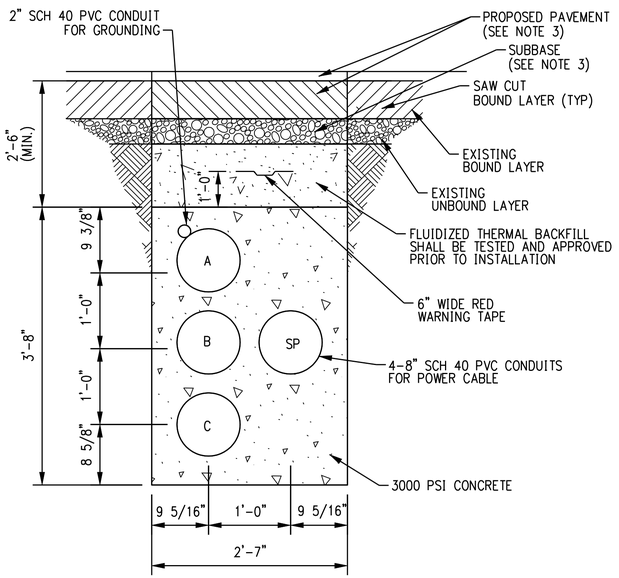
NTS



UTILITY BRIDGE SINGLE CIRCUIT WITH COMMUNICATIONS DUCT BANK AND SPARE

SECTION P

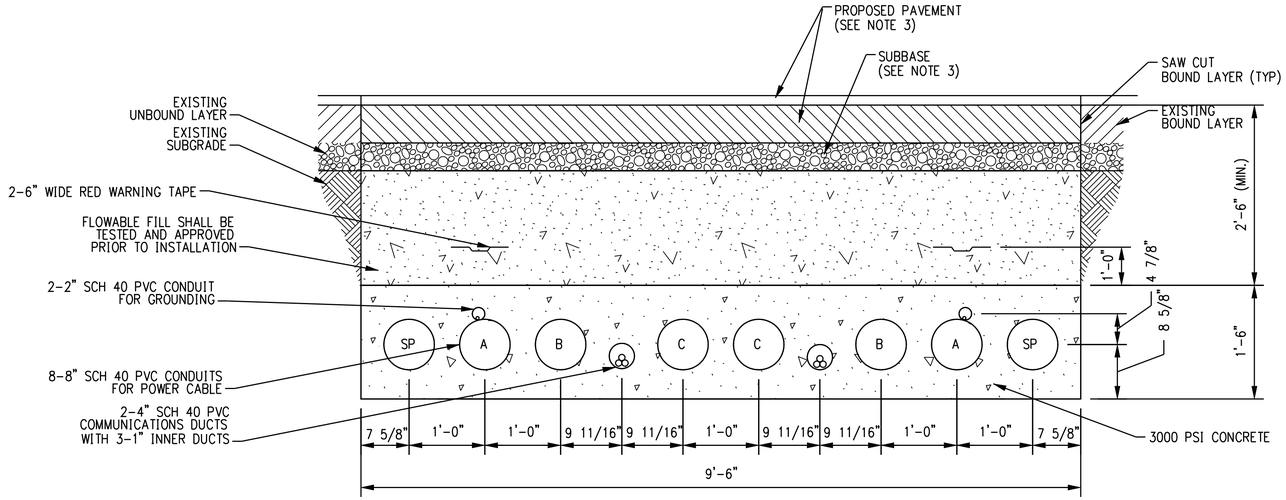
NTS



UTILITY BRIDGE SINGLE CIRCUIT DUCT BANK WITH SPARE

SECTION Q

NTS



UTILITY BRIDGE REDUCED-HEIGHT DUCT BANK WITH SPARE

SECTION R

NTS

GENERAL NOTES:

1. STANDARD TRENCH WITH PERMANENT PAVEMENT RESTORATION IN STATE HIGHWAY SHOWN. PAVEMENT RESTORATION REQUIREMENTS SHALL VARY DEPENDENT ON SPECIFIC EXISTING PAVEMENT CROSS SECTIONS AND MATERIALS.
2. OMITTED
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1	6/1/06	ISSUED 60% PRELIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 11/09/05 | detailed L. ROWSE

designed C. COURTRIGHT | checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

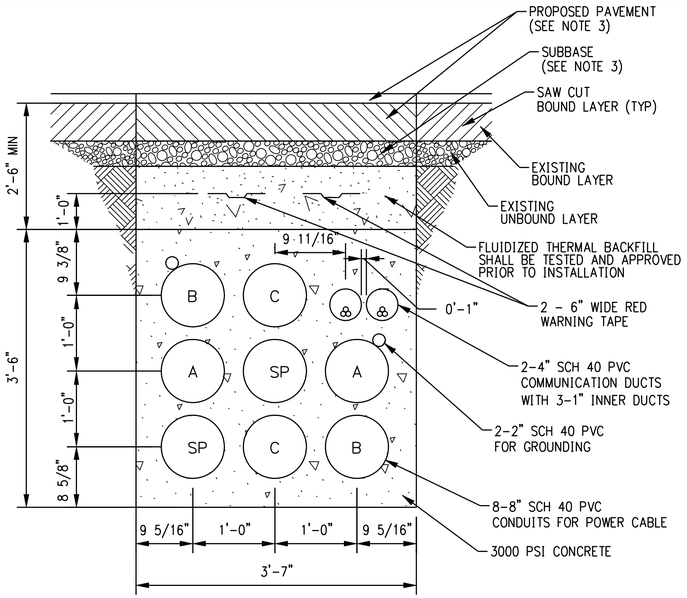
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

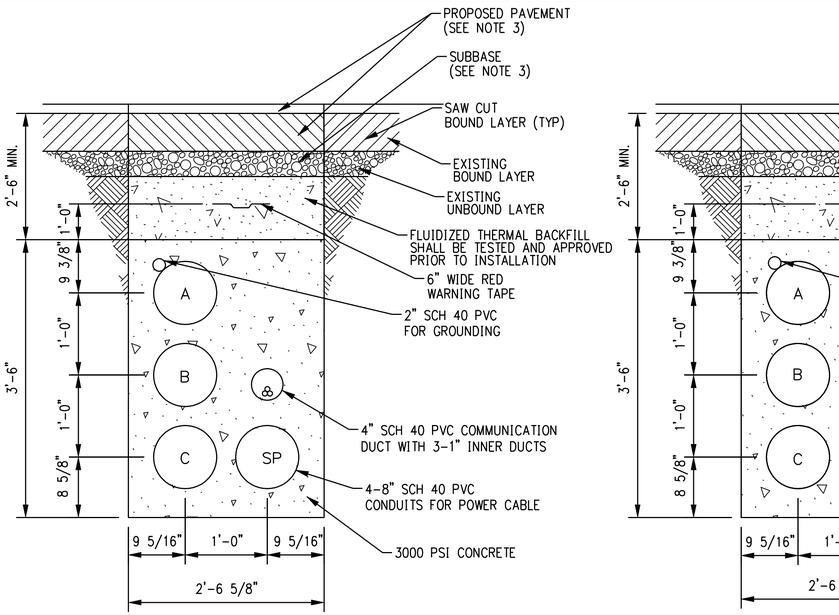
TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

UTILITY BRIDGE DUCT BANK DETAILS

BY SEN-BMCD	CHKD	APP	APP
DATE 11-09-05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223-46003 PG 003	



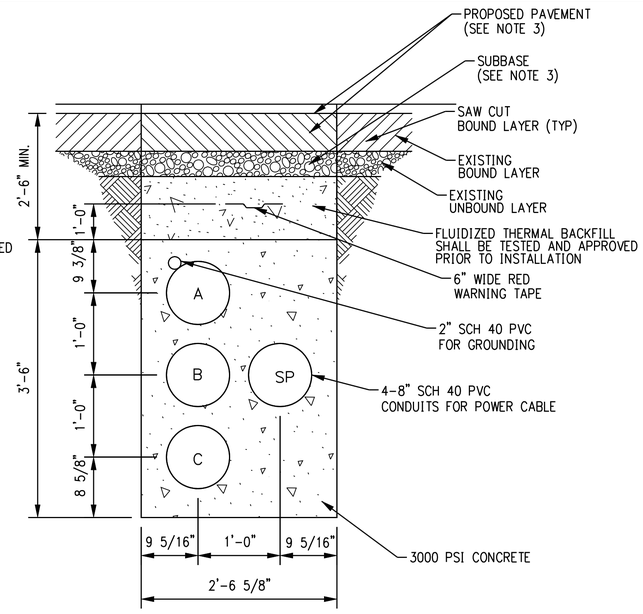
TYPICAL JACK AND BORE DUCT BANK



JACK AND BORE SINGLE CIRCUIT WITH COMMUNICATIONS DUCT BANK

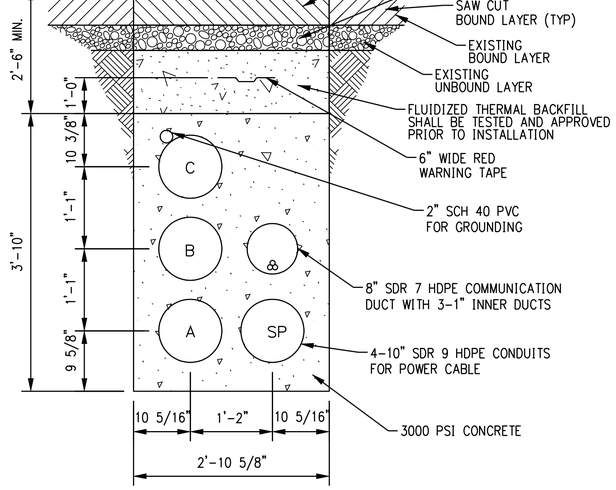
SECTION **S**
NTS

SECTION **T**
NTS



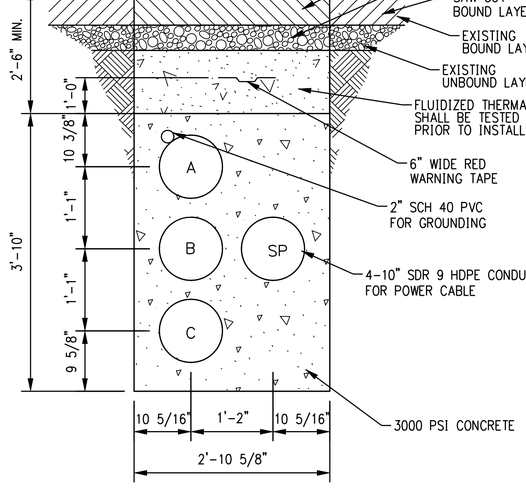
JACK AND BORE SINGLE CIRCUIT DUCT BANK

SECTION **U**
NTS



HORIZONTAL DIRECTIONAL DRILL SINGLE CIRCUIT WITH COMMUNICATIONS DUCT BANK

SECTION **V**
NTS



HORIZONTAL DIRECTIONAL DRILL SINGLE CIRCUIT DUCT BANK

SECTION **W**
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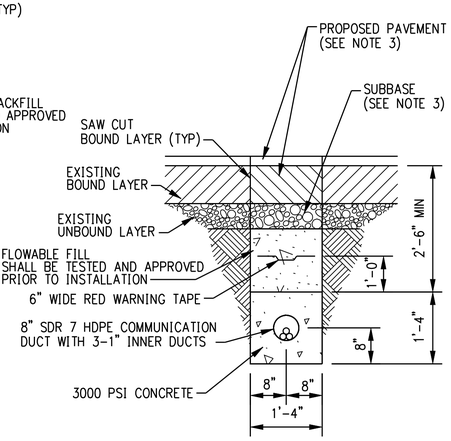

HORIZONTAL DIRECTIONAL DRILL COMMUNICATIONS DUCT BANK

SECTION **X**
NTS

GENERAL NOTES:

1. STANDARD TRENCH WITH PERMANENT PAVEMENT RESTORATION IN STATE HIGHWAY SHOWN. PAVEMENT RESTORATION REQUIREMENTS SHALL VARY DEPENDENT ON SPECIFIC EXISTING PAVEMENT CROSS SECTIONS AND MATERIALS.

2. REFERENCE RESTORATION DRAWINGS FOR PROPOSED PAVEMENT SECTIONS.

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1	6/1/06	ISSUED 60% PRLIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 11/09/05 | detailed L. ROWSE
designed C. COURTRIGHT | checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

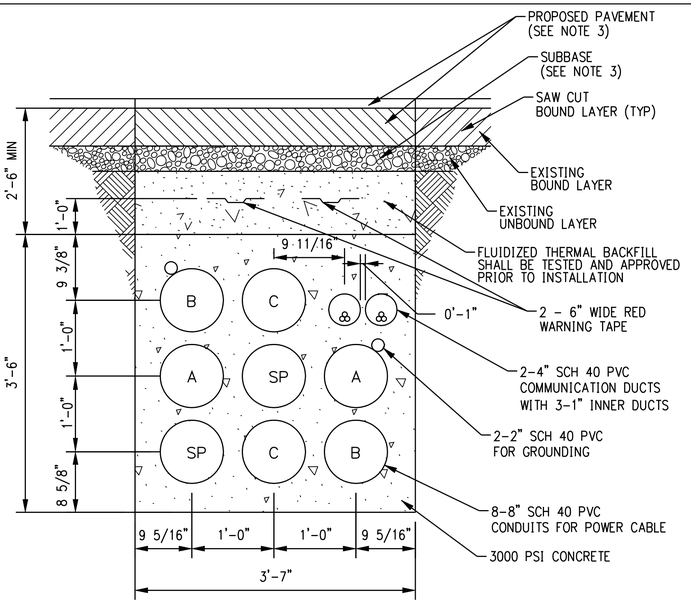
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

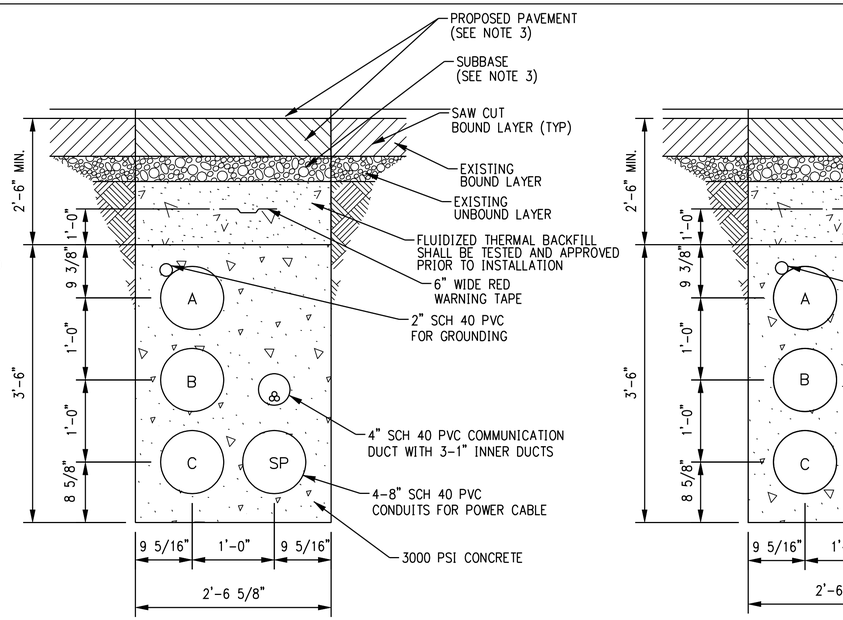
TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

JACK AND BORE AND HORIZONTAL DIRECTIONAL DRILL DUCT BANK DETAILS

BY SEN-BMCD	CHKD	APP	APP
DATE 11-09-05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01224-46003 PG 004	



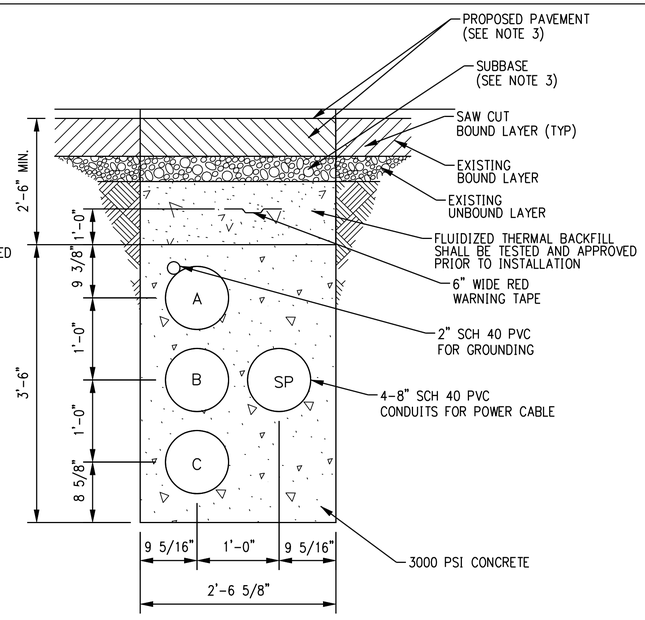
TYPICAL JACK AND BORE DUCT BANK



JACK AND BORE SINGLE CIRCUIT WITH COMMUNICATIONS DUCT BANK

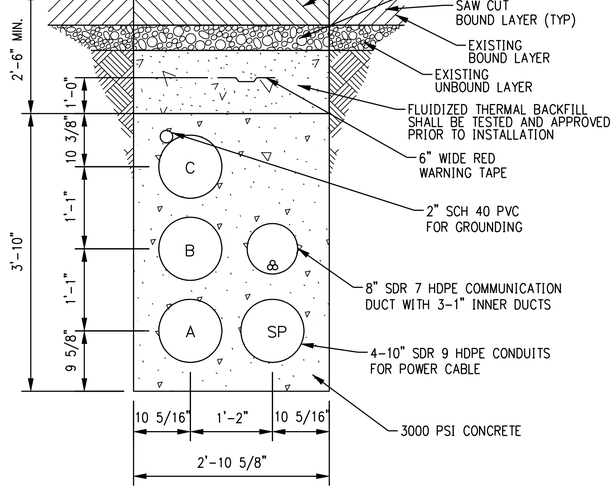
SECTION **S**
NTS

SECTION **T**
NTS



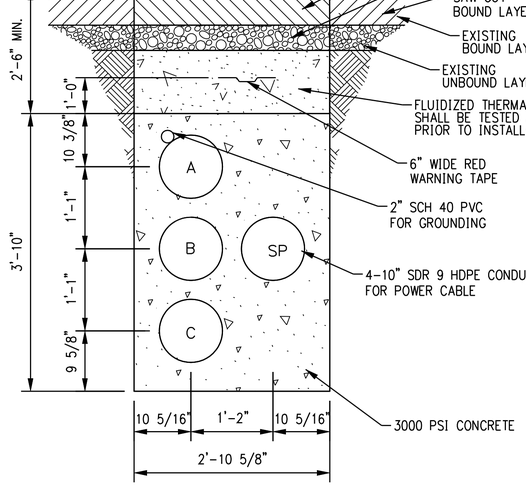
JACK AND BORE SINGLE CIRCUIT DUCT BANK

SECTION **U**
NTS



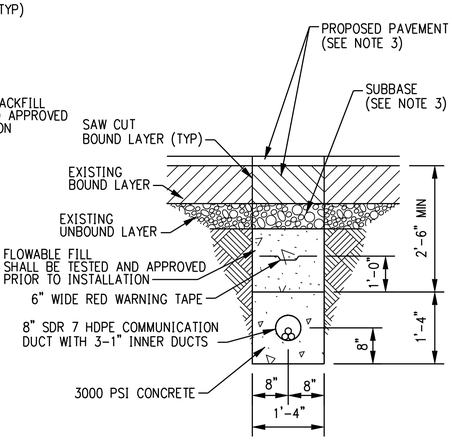
HORIZONTAL DIRECTIONAL DRILL SINGLE CIRCUIT WITH COMMUNICATIONS DUCT BANK

SECTION **V**
NTS



HORIZONTAL DIRECTIONAL DRILL SINGLE CIRCUIT DUCT BANK

SECTION **W**
NTS



HORIZONTAL DIRECTIONAL DRILL COMMUNICATIONS DUCT BANK

SECTION **X**
NTS

GENERAL NOTES:

1. STANDARD TRENCH WITH PERMANENT PAVEMENT RESTORATION IN STATE HIGHWAY SHOWN. PAVEMENT RESTORATION REQUIREMENTS SHALL VARY DEPENDENT ON SPECIFIC EXISTING PAVEMENT CROSS SECTIONS AND MATERIALS.

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Burns & McDonnell SINCE 1898

date 11/09/05 | detailed L. ROWSE
designed C. COURTRIGHT | checked S. NEWLAND

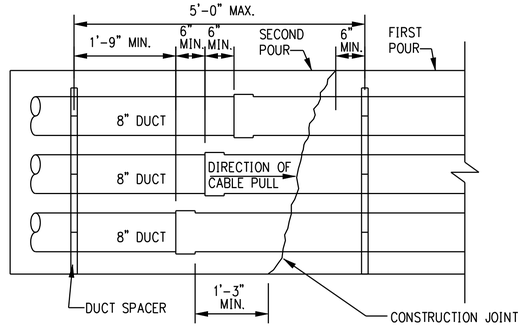
MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT
JACK AND BORE AND HORIZONTAL DIRECTIONAL DRILL DUCT BANK DETAILS

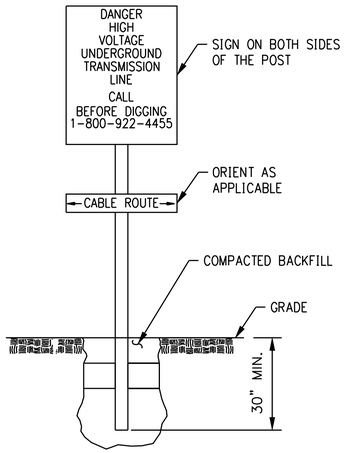
BY SEN-BMCD	CHKD	APP	APP
DATE 11-09-05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223-46003 PG 004	



CONSTRUCTION JOINT DETAIL

DETAIL 1

NTS



TYPICAL WARNING SIGN

DETAIL 2

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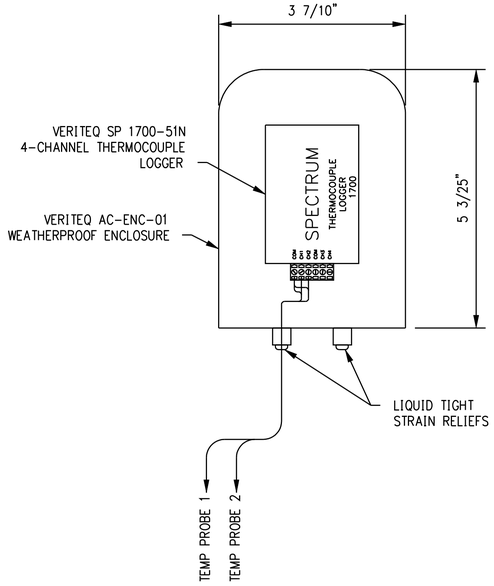
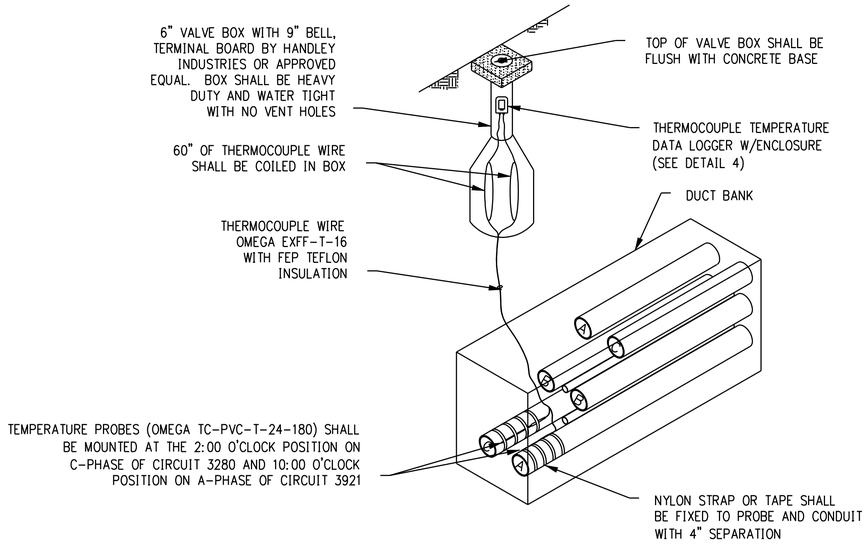


THERMOCOUPLE TEMPERATURE DATA LOGGER

DETAIL 4

NTS



TEMPERATURE MONITORING STATION INSTALLATION

DETAIL 5

NTS

FOR REFERENCE ONLY
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DOCKET No. 272

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
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Burns & McDonnell SINCE 1898

date 11/09/05 | detailed L. ROWSE

designed C. COURTRIGHT | checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

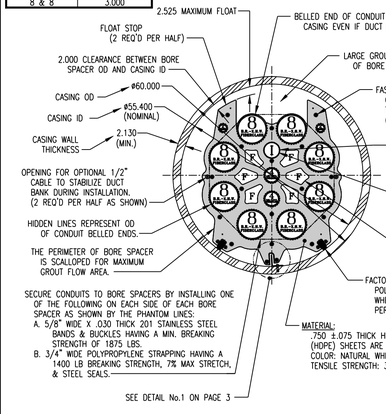
TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

CROSSING AND TEMPERATURE MONITORING DETAILS

BY SEN-BMCD	CHKD	APP	APP
DATE 11-09-05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01224-46003 PG 005	

MINIMUM DISTANCE BETWEEN CONDUITS	
CONDUIT SIZE	MIN. DISTANCE
2 & 8	3.000
4 & 4	2.500
4 & 8	3.000
8 & 8	3.000

CTR TO CTR DISTANCE BETWEEN CONDUITS	
CONDUIT SIZE	MIN. DISTANCE
2 & 8	8.817
4 & 4	7.152
4 & 8	9.834
8 & 8	12.000



NOTES:
1. USE ONE BORE SPACER FOR EVERY 5 FEET OF DUCT BANK.
2. THE CASING ID MUST BE SMOOTH AND FREE FROM RIDGES, PROJECTIONS AND SEAMS THAT MIGHT IMPEDE THE ROLLING OF WHEELS.
3. A TROUGH OR FEEDER BRIDGE SHOULD BE CONSTRUCTED AT THE LEADING END OF THE CASING TO SUPPORT SECTIONS OF DUCT BANK AS THEY ARE ASSEMBLED AND PULLED INTO THE CASING.
4. THIS BORE SPACER IS DESIGNED FOR A CASING THAT IS STRAIGHT AND TRUE.
5. IT IS POSSIBLE THAT THE DUCT BANK WILL ROTATE (CORKSCREW) AS IT IS PULLED THRU THE CASING UNLESS AN "OFF CENTER WEIGHT TECHNIQUE", "STABILIZATION CABLES" OR "L" ANGLE & SLOT TECHNIQUE IS USED.
6. THIS BORE SPACER WILL ACCOMMODATE THE "SINGLE-END", "FLUSH COUPLED EXTRACTABLE INJECTION PIPE" OR "STATIONARY SACRIFICIAL INJECTION PIPE" METHODS OF GROUT FILLING.
7. IT IS ESSENTIAL THAT THE BORE SPACERS ARE HELD IN PLACE RELATIVE TO THE CONDUIT. REASON: AS THE GROUT IS PUMPED INTO THE CASING, THE COMPARTMENTS FORMED BETWEEN THE BORE SPACERS ARE MORE OR LESS FILLED SEQUENTIALLY, PLACING A TEMPORARY THRUST LOAD ON EACH BORE SPACER.
8. THE DUCT BANK MUST BE HELD IN POSITION AT BOTH ENDS TO ACCOMMODATE POSSIBLE UNEVEN THRUST LOADS THAT MAY BE GENERATED DURING THE GROUTING OPERATION.
9. WHEN FILLING THE AREA BETWEEN THE CONDUITS AND CASING WITH GROUT, TAKE CARE NOT TO EXCEED THE HYDRAULIC COLLAPSE PRESSURE OF THE CONDUITS.
10. DEPENDING ON THE GROUT SPECIFIC GRAVITY AND GROUT FLOW, IT IS POSSIBLE THAT THE DUCT BANK WILL FLOAT TO THE TOP OF THE CASING.
11. ACTUAL QUANTITY OF GROUT USED SHOULD BE MEASURED AND RECORDED.

DOUBLE WALL, FULL COMPLEMENT BORE SPACER With 8 Ea. 8", 2 Ea. 4" & 2 Ea. 2" RTRC-XHW (Bullet-Resistant, Extra Heavy Wall Fiberglass) Conduits Per NEMA TC-2002 In A 60.000" OD X 2.130 Min. Wall HOBAS (Centrifugally Cast Fiberglass Reinforced Polymer Mortar) Casing

SH: See At Left | DRAWN BY: Alan Armstrong | ENGR'D BY: B.Muehlenbeck | DESIGN BY: Don McCoy
DT: 7-7-06 | APPROV BY: | REVISION:

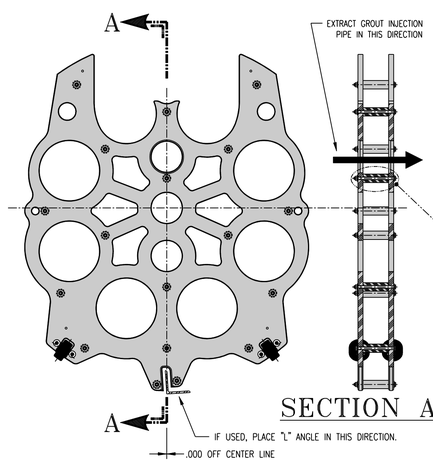
UNDERGROUND DEVICES CATALOG NUMBER: BS4150W4

• PATENT PENDING •

SCALE: 1.000

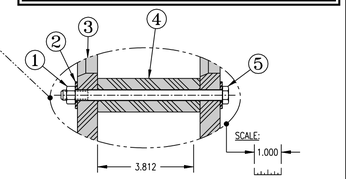
1st Designed For BURNS & MCDONNELL
Kansas City, MO - CHRIS COURTRIGHT - Phone: 816-333-9400

UNDERGROUND DEVICES, INC. 90-4150
NORTHBROOK, ILLINOIS 60062 - PHONE: (847) 205-9000 PAGE 1 OF 3



SECTION A-A

BILL OF MATERIAL		
ITEM NUMBER	QTY REQ'D	DESCRIPTION
1	18	3/8-16 HEX NUT (GRADE 2, CENTERLOCK LOCKING NUT, ZINC PLATED STEEL)
2	36	3/8 FLAT WASHER (.438 ID X 1.000 OD X .078 THK, USS STANDARD, ZINC PLATED STEEL)
3	2	UDI 90-4150 BLANK BORE SPACER
4	18	UDI 90-803 SPACER BUSHING (TYPE 1 PVC DARK GRAY)
5	18	3/8-16 X 6" LG HEX HEAD CAP SCREW (GRADE 2, ZINC PLATED LOW CARBON STEEL)



CONDUIT AND HOLE SIZES				
CONDUIT OD		FULL HOLE DIAMETER		PARTIAL
NOMINAL	ACTUAL	BANDED	NON-BANDED	HOLE DIAMETER
2"	2.500	----	2.620	----
4"	4.500	----	4.653	----
8"	8.900	9.015	----	8.920

DOUBLE WALL, FULL COMPLEMENT BORE SPACER With 8 Ea. 8", 2 Ea. 4" & 2 Ea. 2" RTRC-XHW (Bullet-Resistant, Extra Heavy Wall Fiberglass) Conduits Per NEMA TC-2002 In A 60.000" OD X 2.130 Min. Wall HOBAS (Centrifugally Cast Fiberglass Reinforced Polymer Mortar) Casing

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DT: 7-7-06 | APPROV BY: | REVISION:

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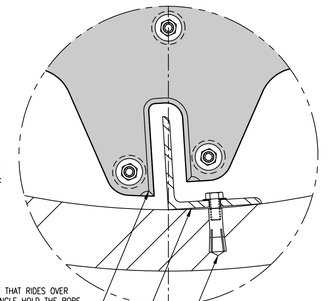
Kansas City, MO - CHRIS COURTRIGHT - Phone: 816-333-9400

UNDERGROUND DEVICES, INC. 90-4150
NORTHBROOK, ILLINOIS 60062 - PHONE: (847) 205-9000 PAGE 2 OF 3

DETAIL No.1

SCALE @ 4X



NOTE THAT BORE SPACER HAS A SLOT THAT RIDES OVER THE "L" ANGLE. THIS SLOT & "L" ANGLE HOLD THE BORE SPACERS AND CONDUITS IN THE CORRECT ANGULAR POSITION DURING INSTALLATION AND THE GROUTING OPERATION.

SLOT IS CHAMFERED .094 X 45° ON BOTH SIDES OF EACH BORE SPACER WALL TO ENHANCE SLIDING ACTION.

OPTIONAL 3.500 X 3.500 X .250 THICK STEEL "L" ANGLE. LENGTHS OF "L" ANGLE SHOULD BE FIELD WELDED TOGETHER AND GROUND SMOOTH FORMING A CONTINUOUS RAIL IN THE CASING AS SHOWN.

SECURE "L" ANGLE TO CASING WITH HEX HEAD CAP SCREWS, WASHERS AND DROP-IN ANCHORS AS SHOWN.

DOUBLE WALL, FULL COMPLEMENT BORE SPACER With 8 Ea. 8", 2 Ea. 4" & 2 Ea. 2" RTRC-XHW (Bullet-Resistant, Extra Heavy Wall Fiberglass) Conduits Per NEMA TC-2002 In A 60.000" OD X 2.130 Min. Wall HOBAS (Centrifugally Cast Fiberglass Reinforced Polymer Mortar) Casing

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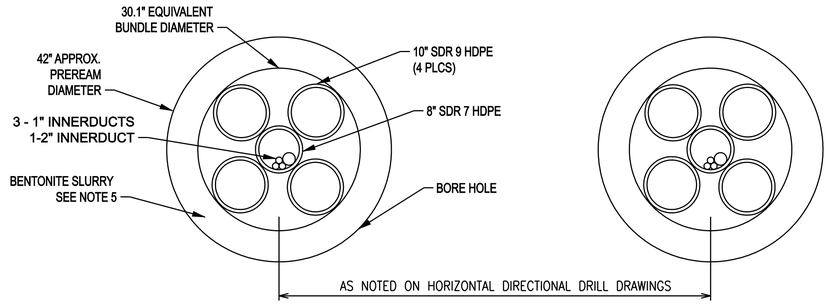
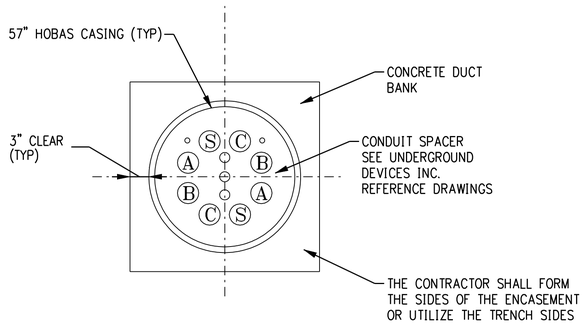
UNDERGROUND DEVICES, INC. 90-4150
NORTHBROOK, ILLINOIS 60062 - PHONE: (847) 205-9000 PAGE 3 OF 3



HORIZONTAL DIRECTIONAL DRILL

SECTION A
NTS



JACK AND BORE

SECTION B
NTS

NOTES:

1. ALL CASING SHALL BE COMPLETELY FILLED WITH A THERMALLY ACCEPTABLE GROUT. GROUT MIX DESIGN SHALL MEET PROJECT SPECIFICATIONS.
2. GROUT SAMPLES SHALL BE SUBMITTED TO THE TEST COMPANY (CONTACT TEST COMPANY FOR APPROPRIATE SIZE & METHOD OF TRANSPORTATION) IN ACCORDANCE WITH THE SPECIFICATIONS.
3. CONTRACTOR SHALL FURNISH AND INSTALL CASING PIPE SPACER. SPACERS SHALL BE INSTALLED A MAXIMUM DISTANCE OF 5 FEET APART. SPACERS SHALL BE INSTALLED PER MANUFACTURES RECOMMENDATIONS.
4. CONTRACTOR SHALL SUBMIT DETAILED DESIGN OF EACH BORED CROSSING FOR REVIEW, INCLUDING AS A MINIMUM WORK PLAN, EQUIPMENT AND MATERIALS TO BE USED, WORK AREAS, BORE PIT SIZES AND LOCATIONS.
5. BENTONITE SLURRY SAMPLES SHALL BE SUBMITTED TO THE TEST COMPANY (CONTACT TEST COMPANY FOR APPROPRIATE SIZE & METHOD OF TRANSPORTATION) IN ACCORDANCE WITH THE SPECIFICATIONS.

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4	4/5/07	ISSUED CSC REVISED	CTC	
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
2	9/4/06	ISSUED CSC	CTC	
1	6/1/06	ISSUED 60% PRELIMINARY	CTC	

Burns & McDonnell SINCE 1898

date 6/15/06 | detailed L. ROWSE
designed C. COURTRIGHT | checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

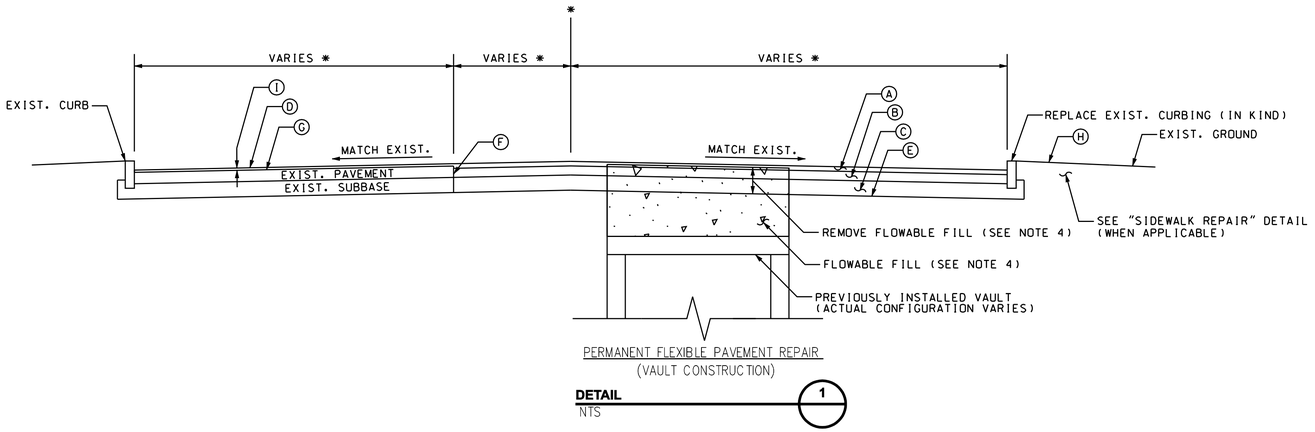
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

HORIZONTAL DIRECTIONAL DRILL AND JACK AND BORE SECTIONS

BY SEN-BMCD	CHKD	APP	APP
DATE 6/15/06	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01223-46003 PG 006	



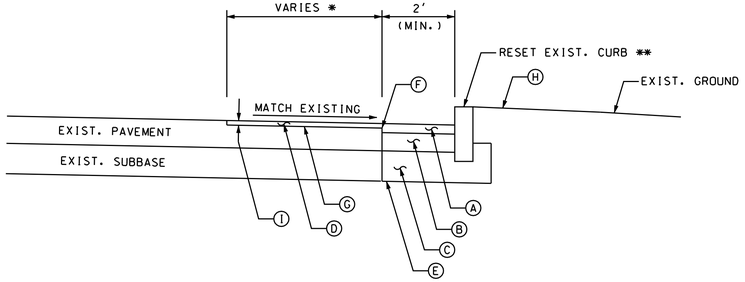
PERMANENT FLEXIBLE PAVEMENT REPAIR
(VAULT CONSTRUCTION)

DETAIL 1
NTS

* SEE MILLING AND OVERLAY PLANS FOR LIMITS.

LEGEND FOR TYPICAL SECTIONS

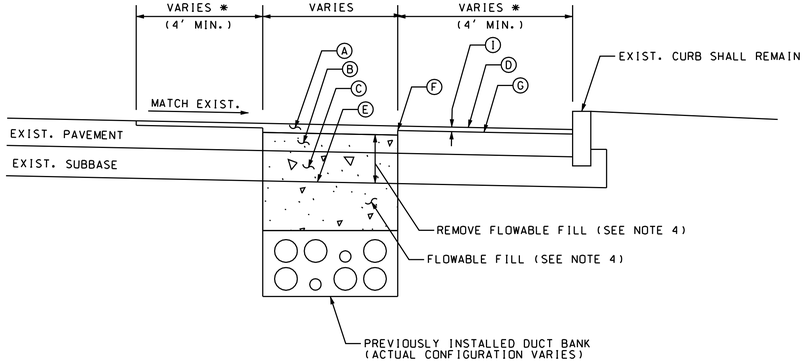
- (A) STATE ROAD – 3" SUPERPAVE 0.5 INCH (PLACED IN TWO EQUAL LIFTS)
  LOCAL ROAD – 2" SUPERPAVE 0.5 INCH
- (B) STATE ROAD – 6" SUPERPAVE 1.5 INCH (PLACED IN TWO EQUAL LIFTS)
  LOCAL ROAD – 2" SUPERPAVE 0.375 INCH
- (C) 10" PROCESSED AGGREGATE SUBBASE
- (D) 1.5" SUPERPAVE 0.5 INCH
- (E) FORMATION OF SUBGRADE
- (F) CUT BITUMINOUS CONCRETE PAVEMENT
- (G) APPLY TACK COAT
- (H) TURF ESTABLISHMENT
- (I) MILL BITUMINOUS CONCRETE PAVEMENT (1.5")
- (J) CUT CONCRETE PAVEMENT
- (K) CONCRETE CURBING
- (L) CONCRETE SIDEWALK



RESET STONE CURBING/REPLACE CONC. CURBING

DETAIL 3
NTS

* SEE MILLING AND OVERLAY PLANS FOR LIMITS.
** WHEN THE EXISTING CURBING IS DEEMED TO BE UNSUITABLE FOR REUSE BY THE ENGINEER, THE CONTRACTOR SHALL FURNISH AND INTALL NEW CURBING OF THE SAME MATERIAL TO REPLACE IT.



PERMANENT FLEXIBLE PAVEMENT REPAIR
(DUCT BANK CONSTRUCTION)

DETAIL 2
NTS

* SEE MILLING AND OVERLAY PLANS FOR LIMITS.

NOTES:

1) THE LIMITS OF RESET STONE CURBING, CONCRETE CURBING AND CONCRETE SIDEWALK ARE SHOWN ON THE MILLING AND OVERLAY PLANS. THESE AREAS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO RESTORE ADDITIONAL DISTURBED AREAS, IF ANY, DUE TO THE CONTRACTOR'S ACTIVITIES.
2) "MATERIAL FOR TACK COAT" SHALL BE APPLIED BETWEEN PAVEMENT COURSES AND TO ALL PAVEMENT JOINTS.
3) SEE TYPICAL DETAIL DRAWINGS FOR TEMPORARY PAVEMENT REPAIR DETAIL.
4) "PROCESSED AGGREGATE SUBBASE" SHALL BE USED IN PLACE OF "FLOWABLE FILL" AS THE ALTERNATE BACKFILL. "FLOWABLE FILL" AND "PROCESSED AGGREGATE SUBBASE" SHALL BE THERMALLY TESTED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. SEE TECHNICAL SPECIFICATIONS FOR DETAILS.

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Burns & McDonnell SINCE 1898

date 6/15/06
designed BL COMPANIES
detailed BL COMPANIES
checked S. NEWLAND

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP

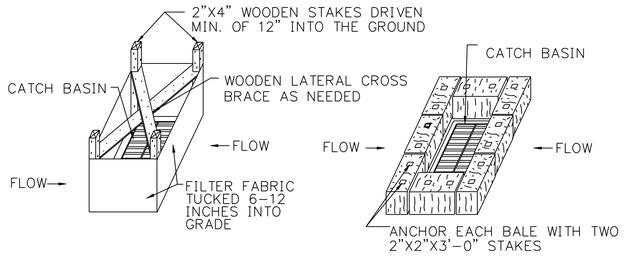
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN–NORWALK 345kV TRANSMISSION PROJECT

PAVEMENT RESTORATION DETAILS

BY SEN–BMCD	CHKD	APP	APP
DATE 6-15-06	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01224–71003 PG 001	



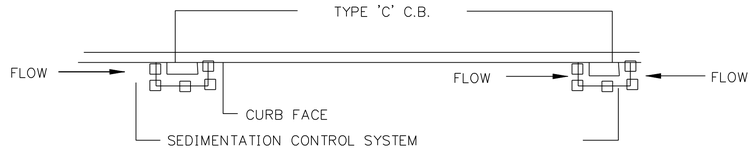
SILT FENCE INSTALLATION AT CATCH BASINS AT LOW POINTS

HAY BALE FILTER INSTALLATION AT CATCH BASIN AT LOW POINTS

STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, SHALL BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
SEDIMENT SHALL BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT.

CATCH BASIN EROSION CONTROL

DETAIL 1 / **NTS**

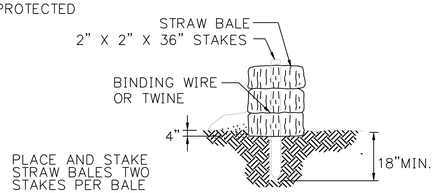


PLAN FOR TYPE 'C' C.B (ON GRADE)

PLAN FOR TYPE 'C' CB (AT LOW POINT)

NOTE:
SEDIMENTATION CONTROL SYSTEMS SHALL BE LOCATED AT ALL EXISTING OR PROPOSED BASINS WHICH ACCEPT FLOW FROM THE CONSTRUCTION AREA UNTIL TURF ESTABLISHMENT OR AS DIRECTED BY THE ENGINEER.

DETAIL 2 / **NTS**



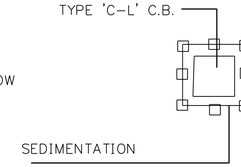
STRAW BALE BARRIERS SHALL NOT BE USED FOR MORE THAN 3 MONTHS

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BARRIER.

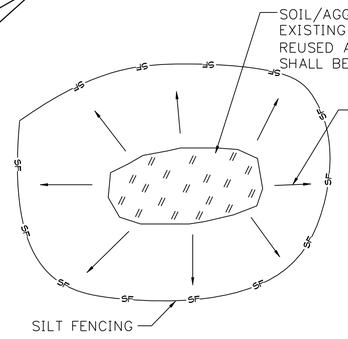
ANY SECTION OF STRAW BALE BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.

HAYBALE BARRIER

DETAIL 4 / **NTS**



PLAN FOR TYPE 'C-L' C.B.



MATERIALS STOCKPILE

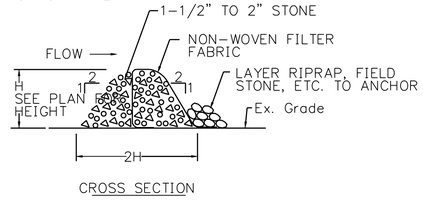
DETAIL 3 / **NTS**

NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT BEING REUSED IN THE WORK SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.

2. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.

3. STOCKPILE HEIGHTS SHALL NOT EXCEED 35'. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.

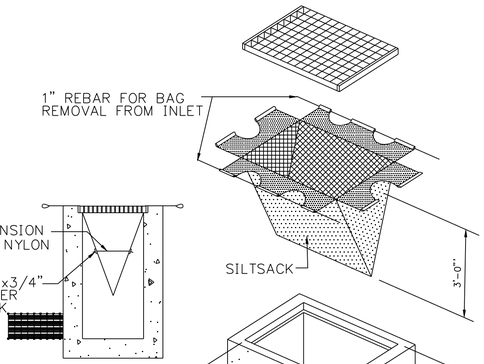
NOTE:
USE FOR IN-STREAM OR SWALE SEDIMENT INTERCEPTION.
LOCATE NOT TO BACKWATER ONTO WORK AREA.



CROSS SECTION

STONE FILTER BERM W/ FILTER FABRIC

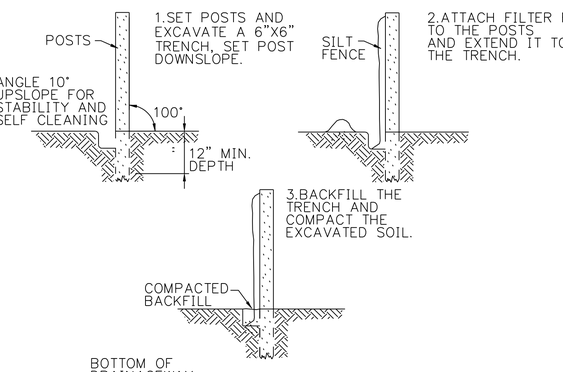
DETAIL 5 / **NTS**

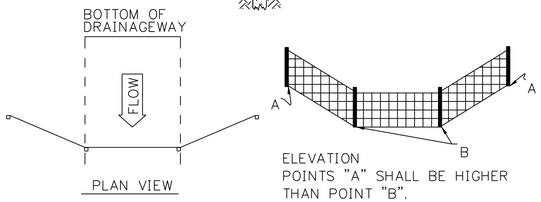


NOTE: REGULAR FLOW = 40 GAL./MIN./SF
HIGH FLOW = 200 GAL./MIN./SF

SILTSACK

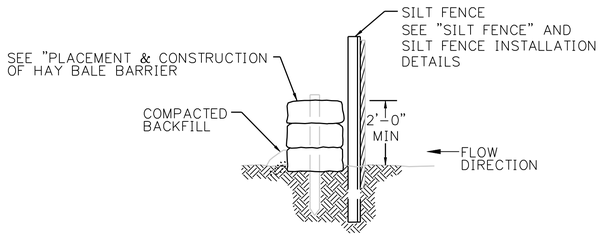
DETAIL 9 / **NTS**





GEOTEXTILE SILT FENCE BARRIER W/OUT HAYBALES

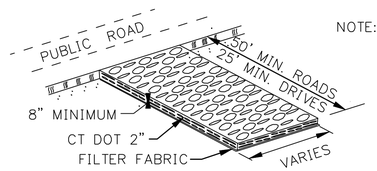
DETAIL 6 / **NTS**



BACKFILL AND COMPACT THE EXCAVATED SOIL AS SHOWN ON THE UPHILL SIDE OF THE BARRIER TO PREVENT PIPING

GEOTEXTILE SILT FENCE BARRIER W/ HAYBALES

DETAIL 7 / **NTS**



CONSTRUCTION ENTRANCE

DETAIL 8 / **NTS**

no.	date	revisions	by	chk
4	4/5/07	ISSUED CSC REVISED	CTC	
3	2/26/07	ISSUED DOT/ MUNICIPALITY REVIEW	CTC	
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date 8/15/05 | detailed BL COMPANIES

designed BL COMPANIES | checked S. NEWLAND

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NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE MIDDLETOWN-NORWALK 345kV TRANSMISSION PROJECT

EROSION CONTROL DETAILS

BY SEN-BMCD	CHKD	APP	APP
DATE 8-15-05	DATE	DATE	DATE
SCALE AS NOTED	D	DWG. NO. 01224-15003 PG 001	

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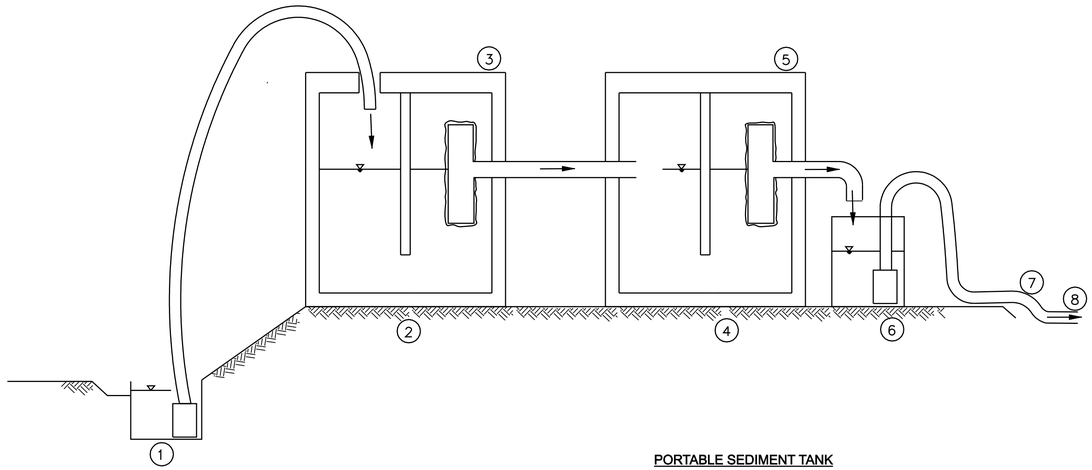
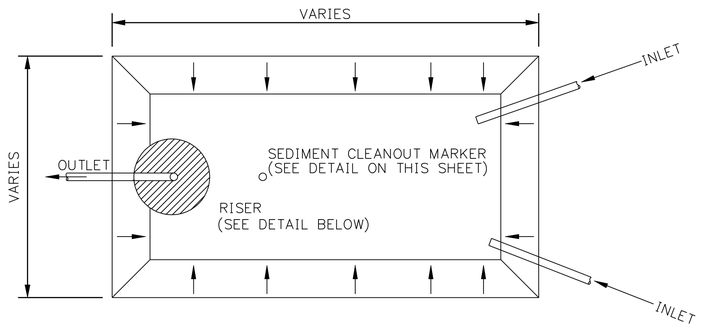
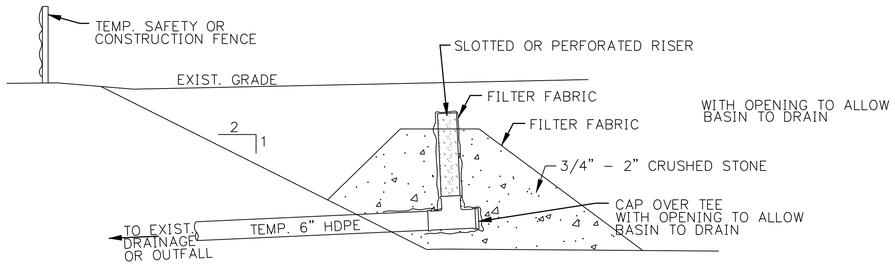


NOTES
1. 20 GPM TRASH PUMP DEWATERS FOUNDATION EXCAVATION
2. MUDDY WATER DISCHARGES TO 1,250 GAL SEPTIC TANK (OR DET. OUTLET STRUCTURE)
3. 4" TEE OUTLET WRAPPED W/ FILTER FABRIC
4. 1,250 GAL CLEAR WELL
5. 2ND 4" TEE OUTLET WRAPPED W/ FILTER FABRIC
6. 2ND PUMP IN 55 GAL DRUM (OR GRAVITY HOSE) DRAINS SYSTEM
7. TEMP. OUTLET TO CATCH BASIN IN STREET
8. 2-1,250 GAL. TANKS = 2,500 GAL. CAPACITY TOTAL

PORTABLE SEDIMENT TANK

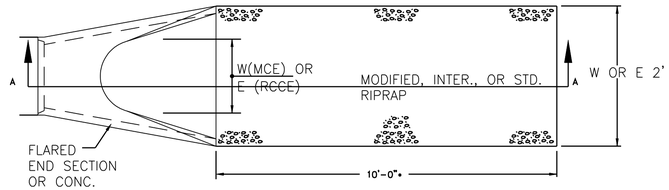
DETAIL 1
NTS





TEMPORARY SEDIMENT TRAP

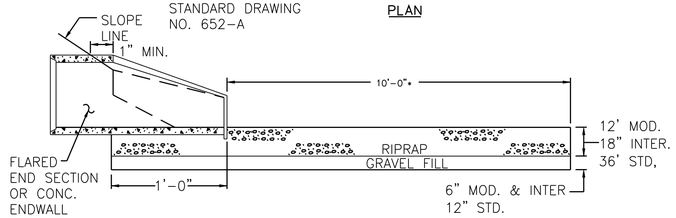
DETAIL 2
NTS



NOTES:
FOR DETAILS OF CULVERT ENDS SEE DOT STANDARD DRAWING NO. 652-A

*OR AS SHOWN ON PLAN

PLAN

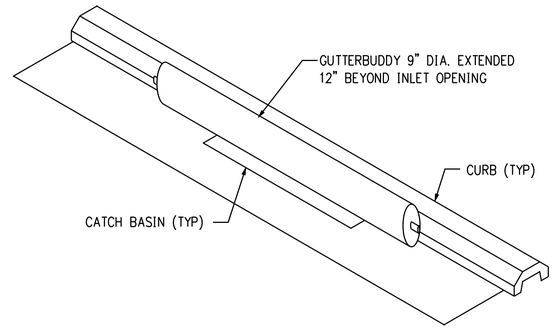


RIPRAP TYPE	"T" (INCHES)
INTERMEDIATE	18
MODIFIED	12
STANDARD	36

SECTION A-A

LEVEL SPREADER

DETAIL 3
NTS



GUTTERBUDDY STORM DRAIN

DETAIL 4
NTS

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EROSION CONTROL DETAILS

BY SEN-BMCD	CHKD	APP	APP
DATE 11-09-05	DATE	DATE	DATE
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