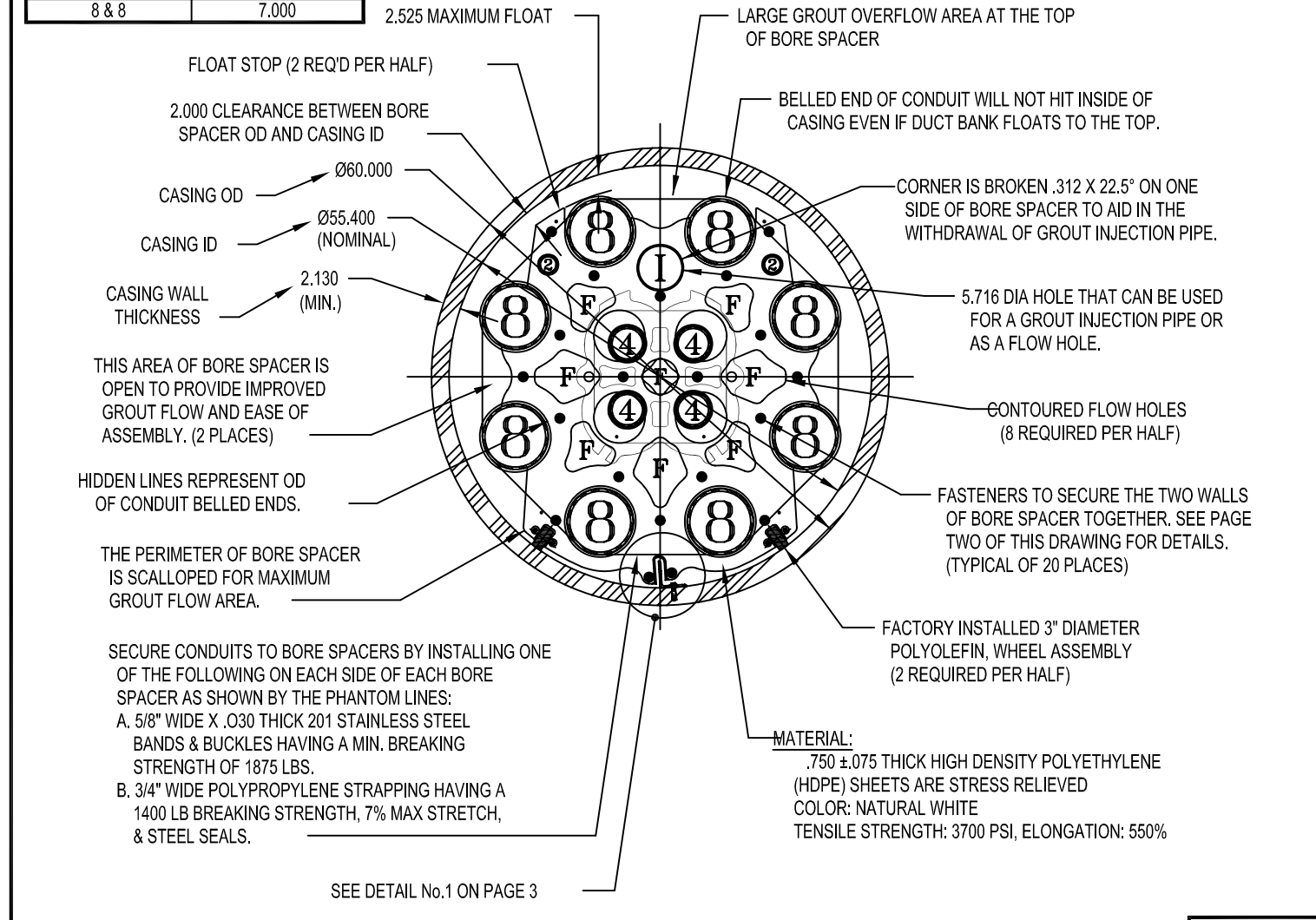


**APPENDIX A**

**DRAWINGS**

**(PLAN AND PROFILE AND EQUIPMENT LAYOUT DRAWINGS)**

CONDUIT SIZE	MIN. DISTANCE
4 & 4	4.000
2 & 8	2.500
4 & 8	8.400
8 & 8	7.000



**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 IMPEDIE 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 (CORROSCREW) AS IT IS PULLED THRU THE CASING UNLESS AN "OFF CENTER WEIGHT TECHNIQUE" OR "L" ANGLE & SLOT IS USED.
6. THIS BORE SPACER WILL ACCOMMODATE THE "SINGLE-END" "FLUSH COUPLED" EXTRACTABLE 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.

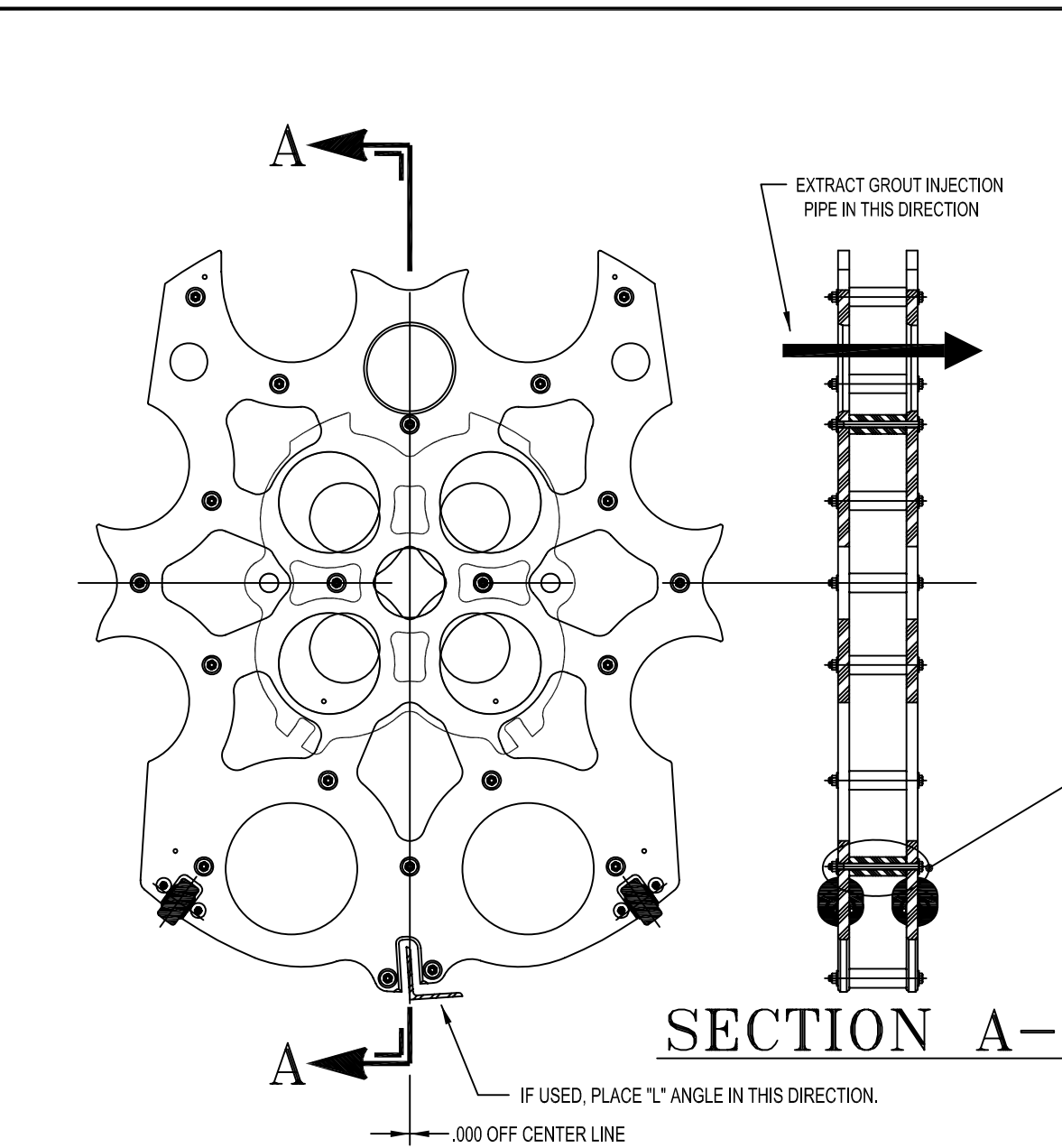
**DOUBLE WALL, FULL COMPLEMENT BORE SPACER**  
 With 8 Ea. 8", 4 Ea. 4" & 2 Ea. 2" EPC40 (Sch.40) PVC Conduits In A 60,000 OD X 2,130 Min. Wall HOBAS (Centrifugally Cast Fiberglass Reinforced Polymer Mortar) Casing  
 See At Left: **Alan Armstrong** **Alan Armstrong** **Don McCoy**  
 3-31-06  
 1st Designed For **BLACK & VEATCH**  
 Overland Park, KS - STEVE LEE - Phone: 913-458-4621  
**UNDERGROUND DEVICES, INC.** 90-4045  
 NORTHBRIDG, ILLINOIS 60062 - PHONE: (847) 205-9000  
 PAGE 1 OF 3

**UNDERGROUND DEVICES**  
 CATALOG NUMBER:  
 BS4045W4

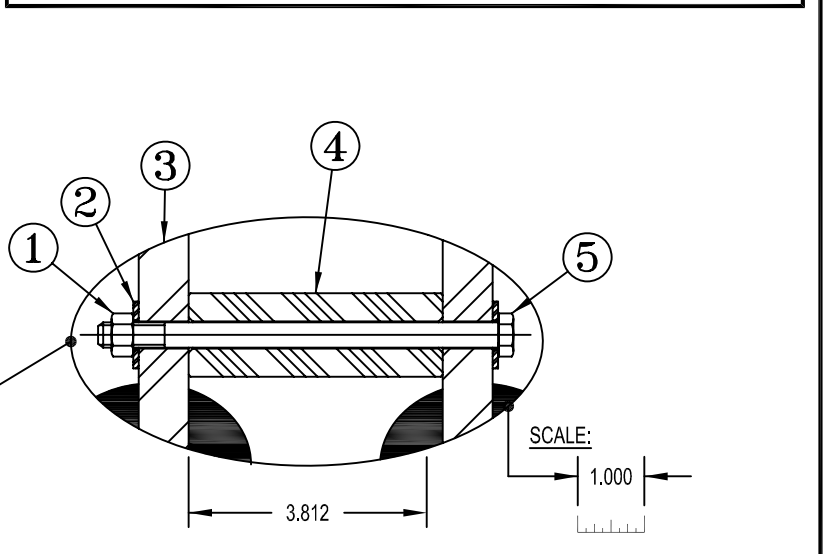
**PATENT PENDING**  
 SCALE: 1/4" = 1'-0"



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ITEM NUMBER	QTY RECD	DESCRIPTION
1	20	3/8-16 HEX NUT (GRADE 2, CENTER LOCK LOCKING NUT, ZINC PLATED STEEL)
2	40	3/8 FLAT WASHER (.438 ID X 1.000 OD X .078 THK US STANDARD, ZINC PLATED STEEL)
3	2	UDI 90-4045 BLANK BORE SPACER
4	20	UDI 90-803 SPACER BUSHING (TYPE 1 PVC DARK GRAY)
5	20	3/8-16 X 8" LG HEX HEAD CAP SCREW (GRADE 2, ZINC PLATED LOW CARBON STEEL)



CONDUIT OD	FULL HOLE DIAMETER	PARTIAL HOLE DIAMETER
NOMINAL	ACTUAL	ACTUAL
2"	2.375	2.485
4"	4.500	4.653
6"	6.625	6.740
		6.845

**DOUBLE WALL, FULL COMPLEMENT BORE SPACER**  
 With 8 Ea. 8", 4 Ea. 4" & 2 Ea. 2" EPC40 (Sch.40) PVC Conduits In A 60,000 OD X 2,130 Min. Wall HOBAS (Centrifugally Cast Fiberglass Reinforced Polymer Mortar) Casing  
 See At Left: **Alan Armstrong** **Alan Armstrong** **Don McCoy**  
 3-31-06  
 1st Designed For **BLACK & VEATCH**  
 Overland Park, KS - STEVE LEE - Phone: 913-458-4621  
**UNDERGROUND DEVICES, INC.** 90-4045  
 NORTHBRIDG, ILLINOIS 60062 - PHONE: (847) 205-9000  
 PAGE 2 OF 3

**UNDERGROUND DEVICES**  
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 BS4045W4

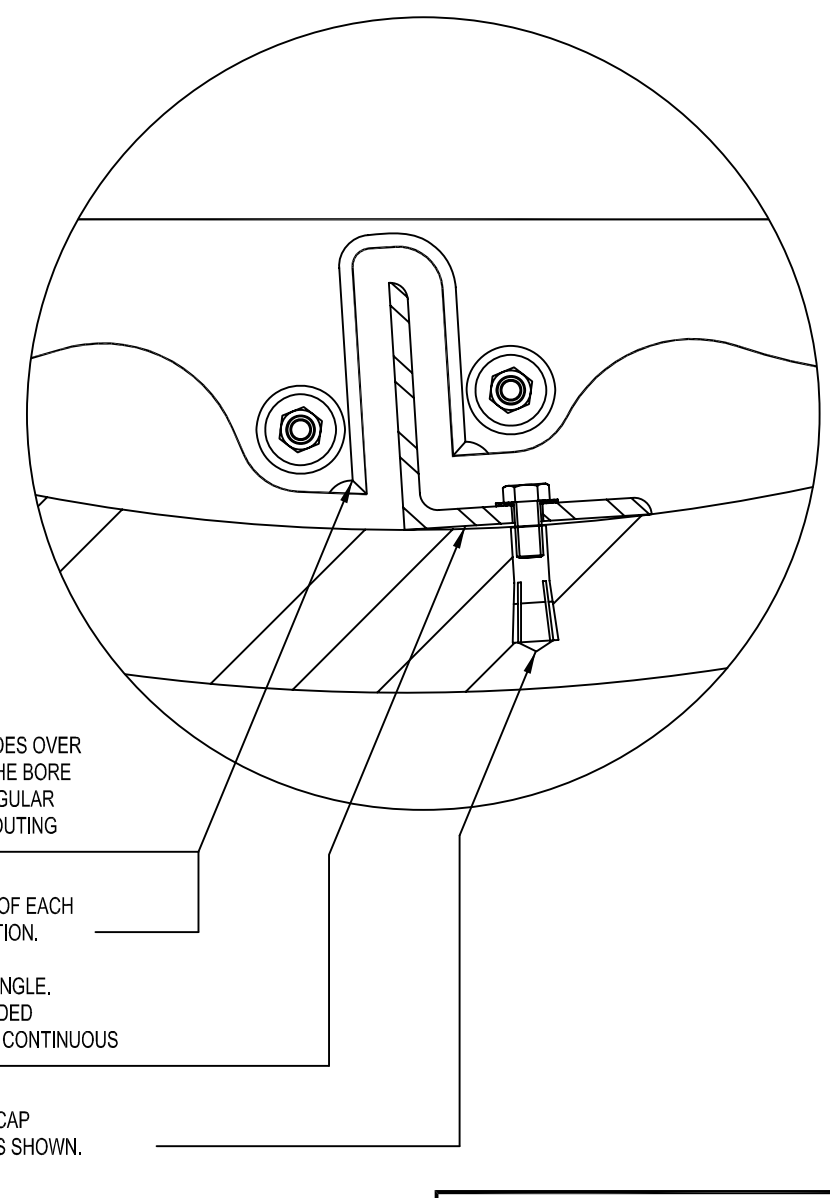
**PATENT PENDING**  
 SCALE: 1/4" = 1'-0"



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**DETAIL No. 1**

SCALE @ 4X



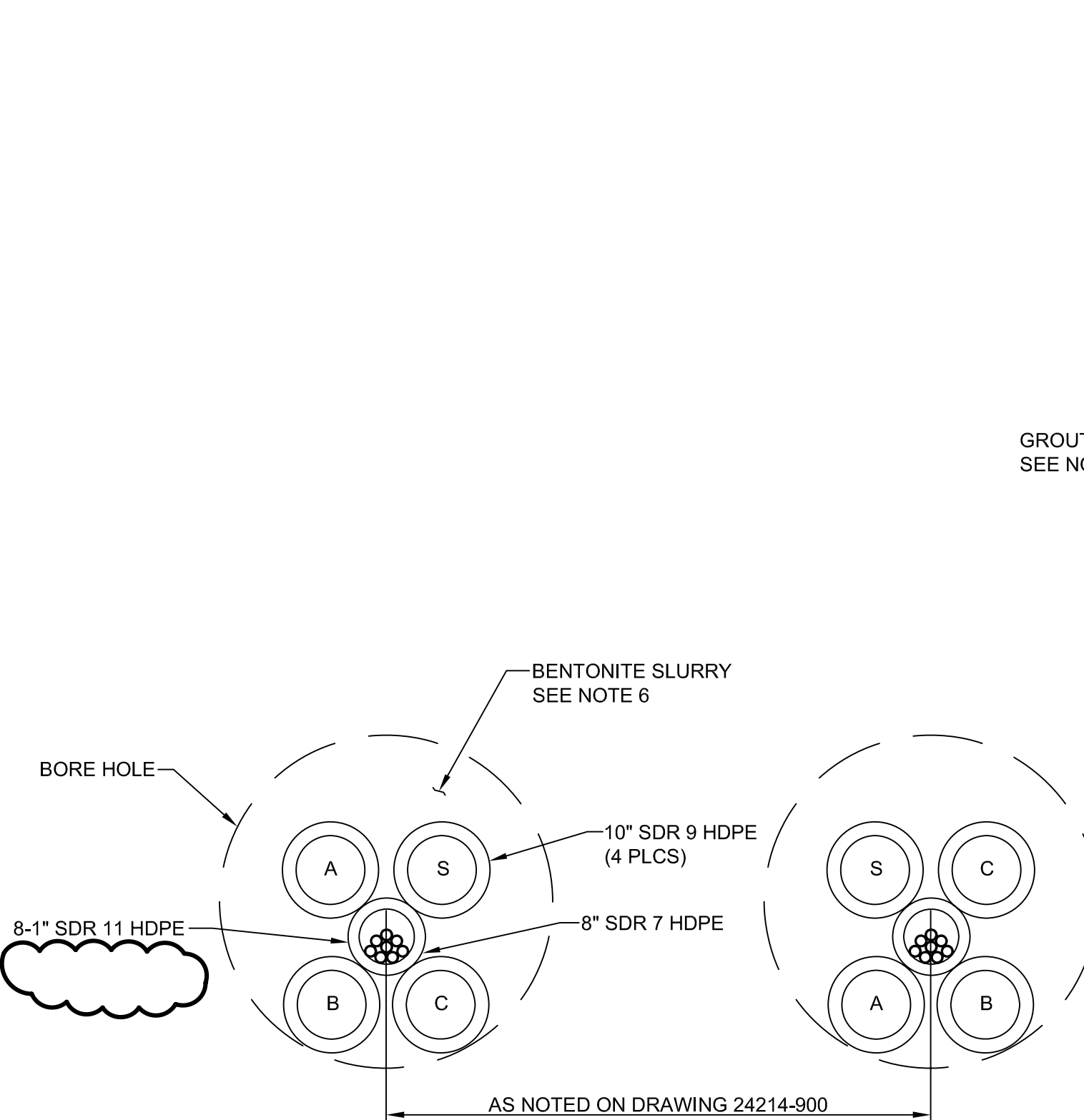
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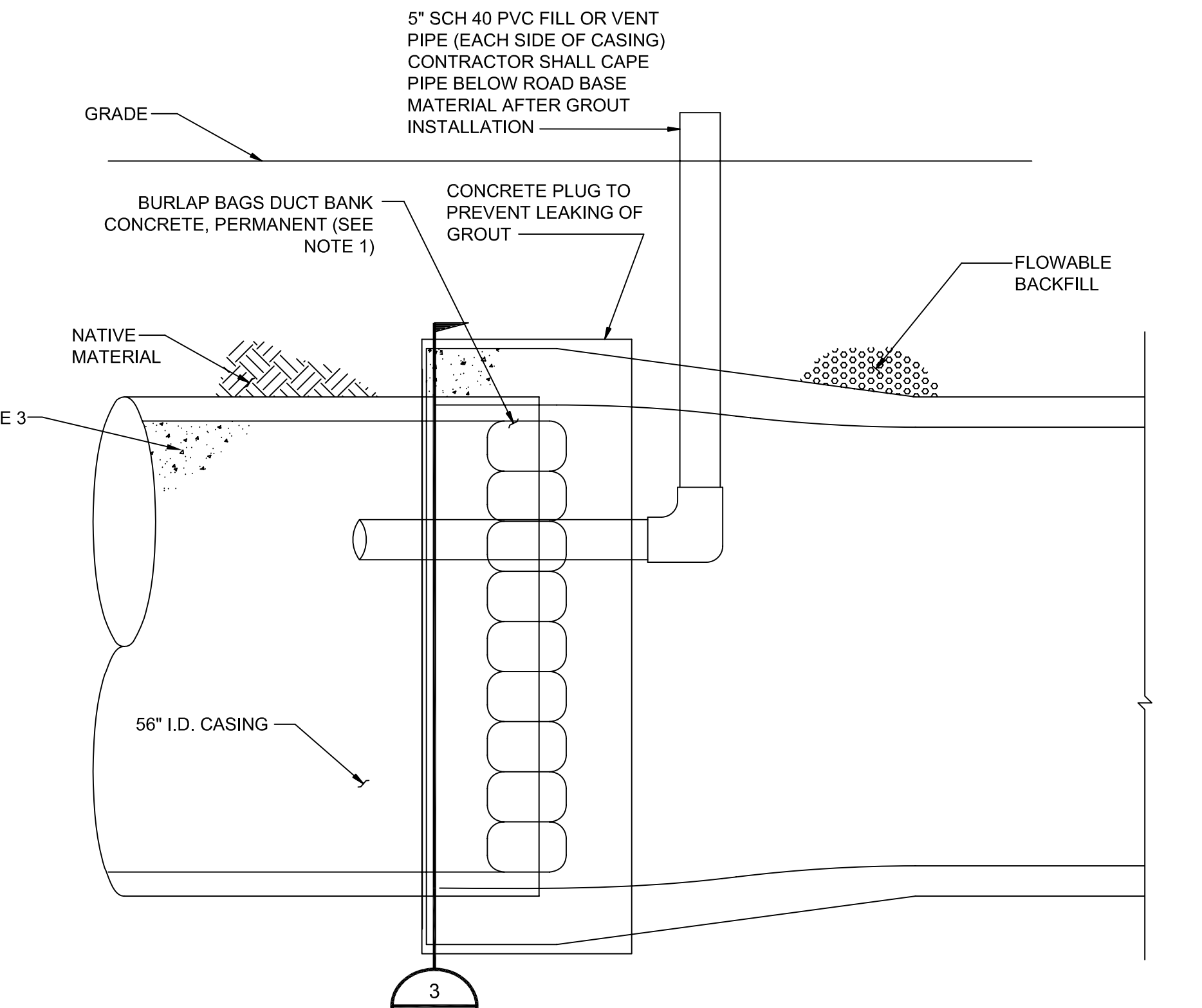


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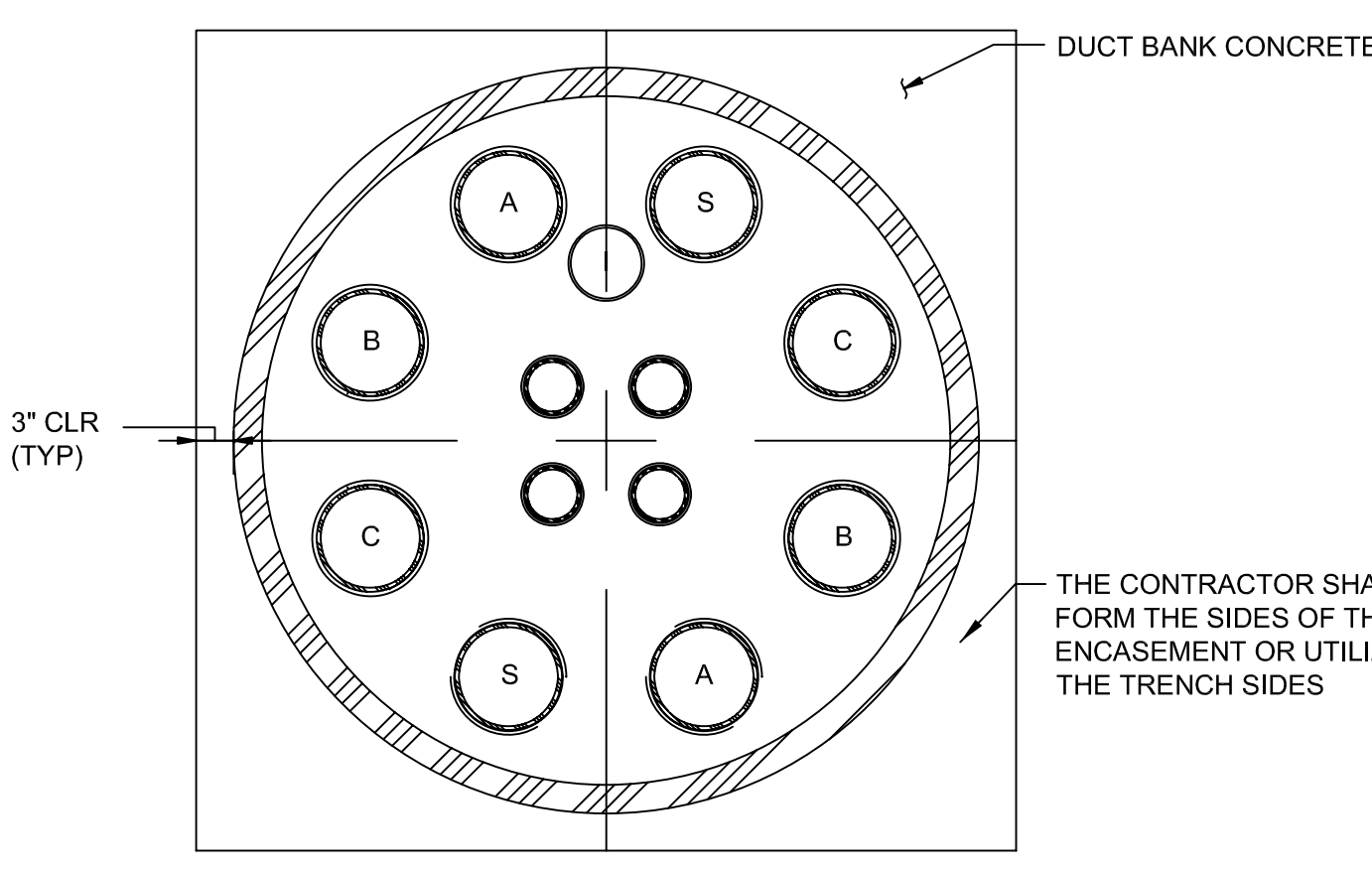
**DOUBLE WALL, FULL COMPLEMENT BORE SPACER**  
 With 8 Ea. 8", 4 Ea. 4" & 2 Ea. 2" EPC40 (Sch.40) PVC Conduits In A 60,000 OD X 2,130 Min. Wall HOBAS (Centrifugally Cast Fiberglass Reinforced Polymer Mortar) Casing  
 See At Left: **Alan Armstrong** **Alan Armstrong** **Don McCoy**  
 3-31-06  
 1st Designed For **BLACK & VEATCH**  
 Overland Park, KS - STEVE LEE - Phone: 913-458-4621  
**UNDERGROUND DEVICES, INC.** 90-4045  
 NORTHBRIDG, ILLINOIS 60062 - PHONE: (847) 205-9000  
 PAGE 3 OF 3



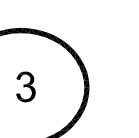
**HDD**  
 3/4" = 1'-0"



**CASING/DUCT BANK INTERFACE**  
 3/4" = 1'-0" REF: THIS DWG



**CASING/DUCT BANK INTERFACE**  
 3/4" = 1'-0"



**NOTES**

1. EACH BURLAP BAG SHALL BE FILLED WITH DUCT BANK CONCRETE AND WET DOWN WITH WATER PRIOR TO CONCRETE ENCASEMENT TO ENSURE THAT THE CEMENT IN THE BAG DOESN'T EXTRACT WATER FROM THE ENCASEMENT CONCRETE. THESE BAGS SHALL NOT BE REMOVED AND SHALL REMAIN AS A PERMANENT PART OF THE BACKFILL. THE SIZE OF EACH BAG SHALL BE APPROXIMATELY 8" HIGH X 8" IN DIAMETER OR SIZED TO FIT. THE BAGS SHALL BE ARRANGED IN A MANNER THAT WILL PLUG THE END OF THE CASING PIPE AND PREVENT INFILTRATION OF CONCRETE INTO THE CASING PIPE. ANY ALTERNATIVES TO SEALING THE CASING SHALL BE SUBMITTED TO BLACK & VEATCH FOR APPROVAL.
2. ALL CASING PIPES SHALL BE COMPLETELY FILLED WITH A THERMALLY ACCEPTABLE GROUT. GROUT MIX DESIGN SHALL MEET PROJECT SPECIFICATIONS.
3. GROUT SAMPLES SHALL BE SUBMITTED TO THE TEST COMPANY (CONTACT TEST COMPANY FOR APPROPRIATE SIZE & METHOD OF TRANSPORTATION) IN ACCORDANCE WITH THE SPECIFICATIONS.
4. CONTRACTOR SHALL FURNISH AND INSTALL CASING PIPE SPACERS. SPACERS SHALL BE INSTALLED A MAXIMUM DISTANCE OF 5 FEET APART. SPACERS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
5. 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.
6. BENTONITE SLURRY SAMPLES SHALL BE SUBMITTED TO THE TEST COMPANY (CONTACT TEST COMPANY FOR APPROPRIATE SIZE & METHOD OF TRANSPORTATION) IN ACCORDANCE WITH THE SPECIFICATIONS.

**BLACK & VEATCH**

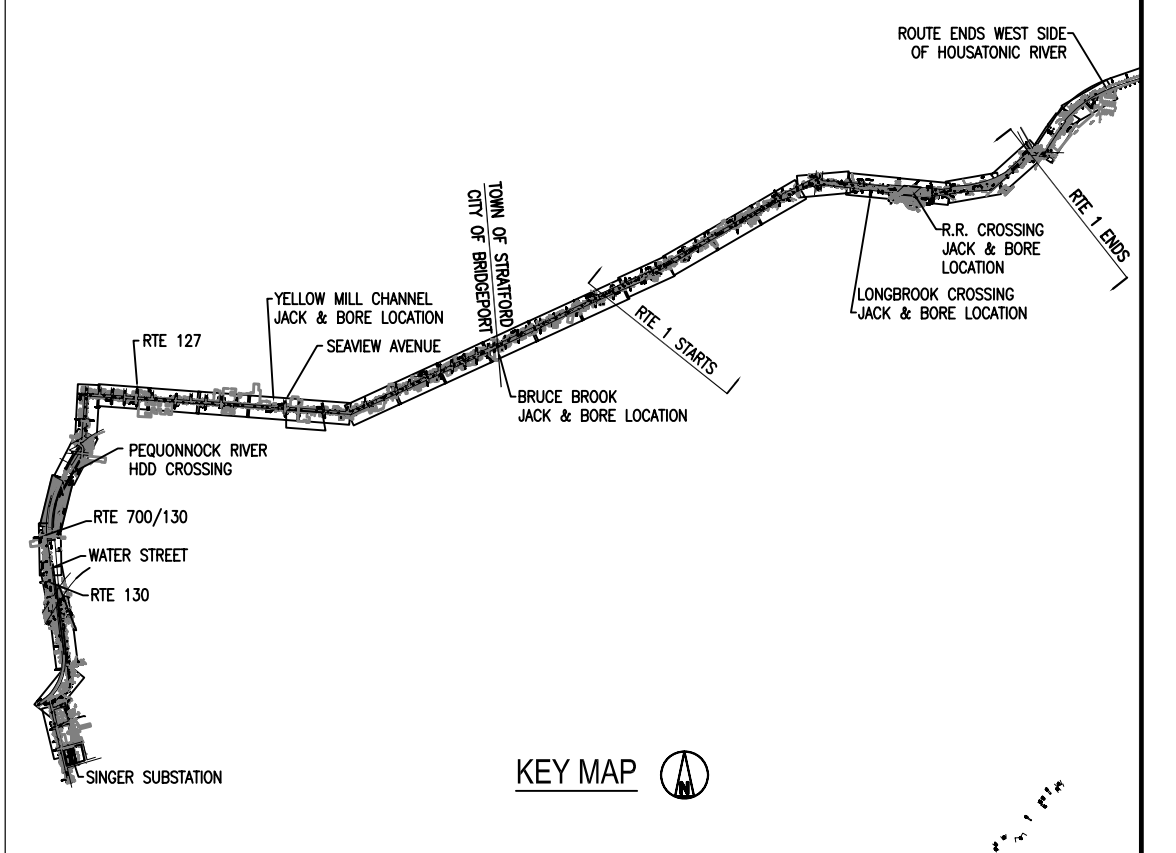
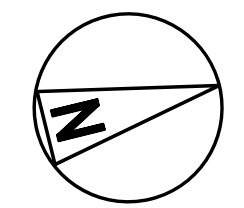
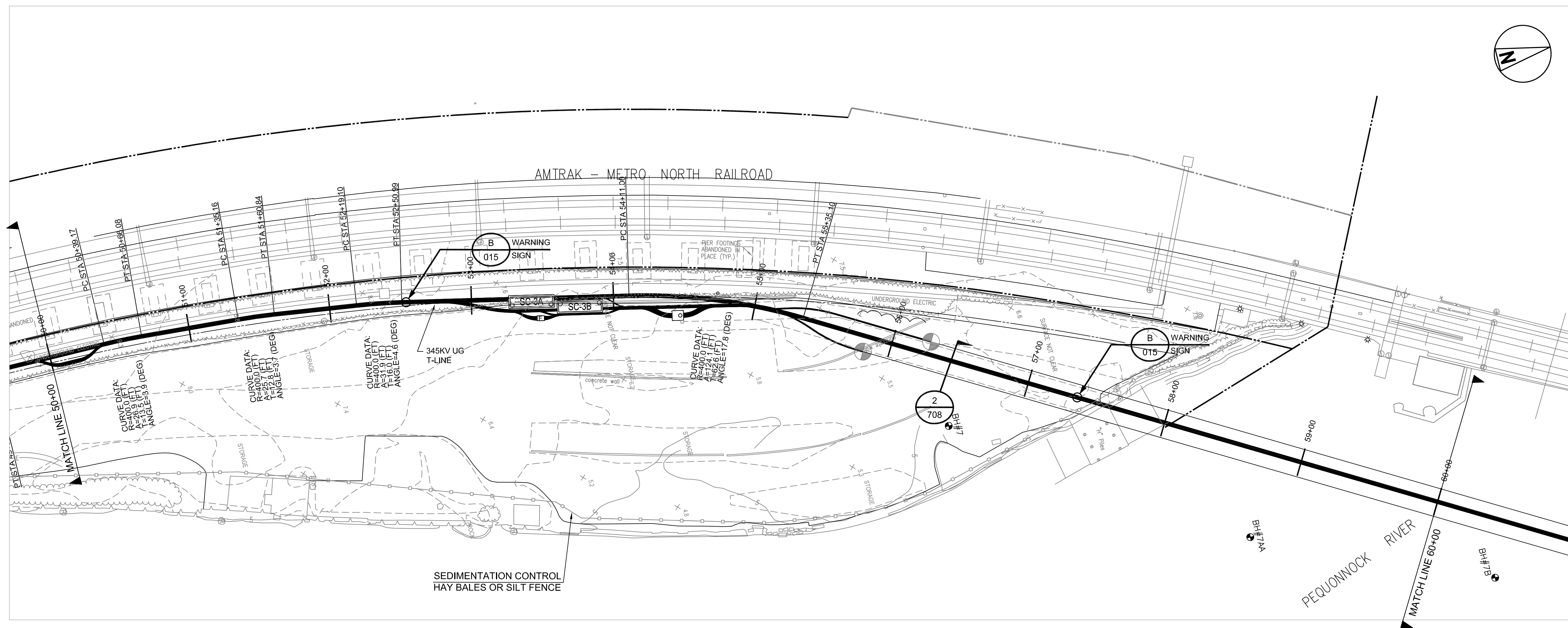
PROJECT NO. 136745

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DESIGNED	ASM	0	11-23-06	INITIAL ISSUE	WJB	-	ASM	-
APPROVED	-	A	11-11-05	ISSUED FOR CLIENT REVIEW	WJB	-	ASM	-
CHECKED	-	No	Date	Revision	By	Chkd.	Engr.	Supv.

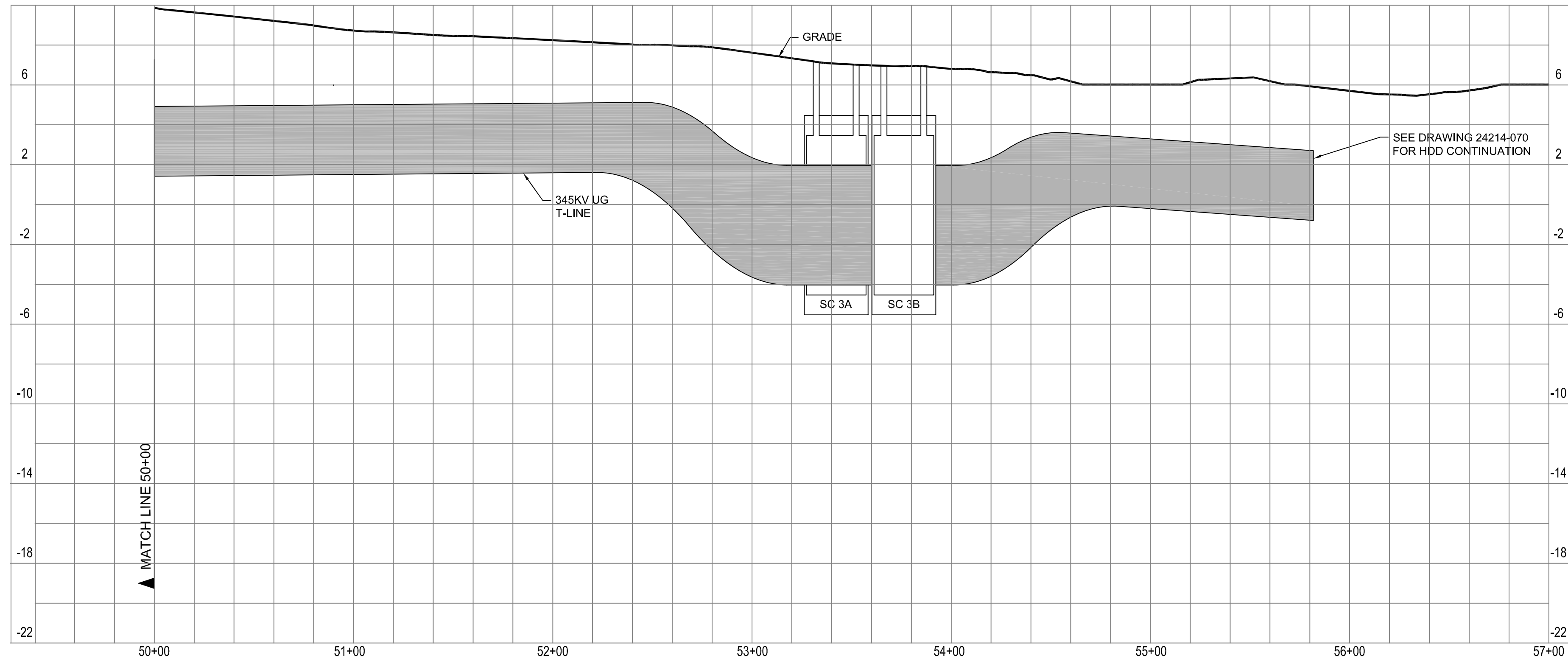
**ui** The United Illuminating Company  
 157 Church St. New Haven, Ct. 06506

MIDDLETOWN-NORWALK PROJECT  
 345KV UG TRANSMISSION LINE  
 CASING AND HDD DETAILS

Drawn	Date	Scale:	AS NOTED	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
Chkd.	Design Engr.	Design Supv.		24214-708		24214-708



NOTES:  
 1. SEE DRAWING 24214-740 & 741 FOR DETAILS ON THE HORIZONTAL DIRECTIONAL DRILL.

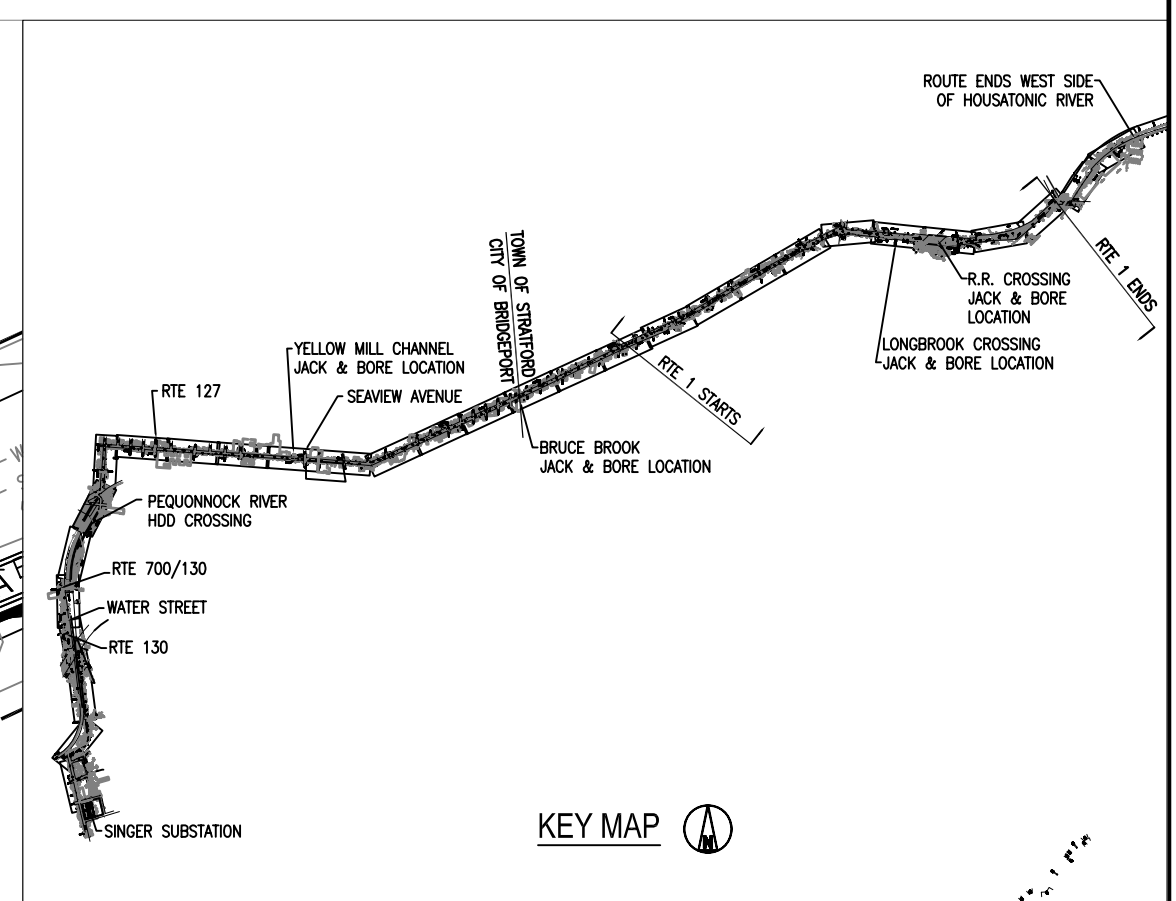
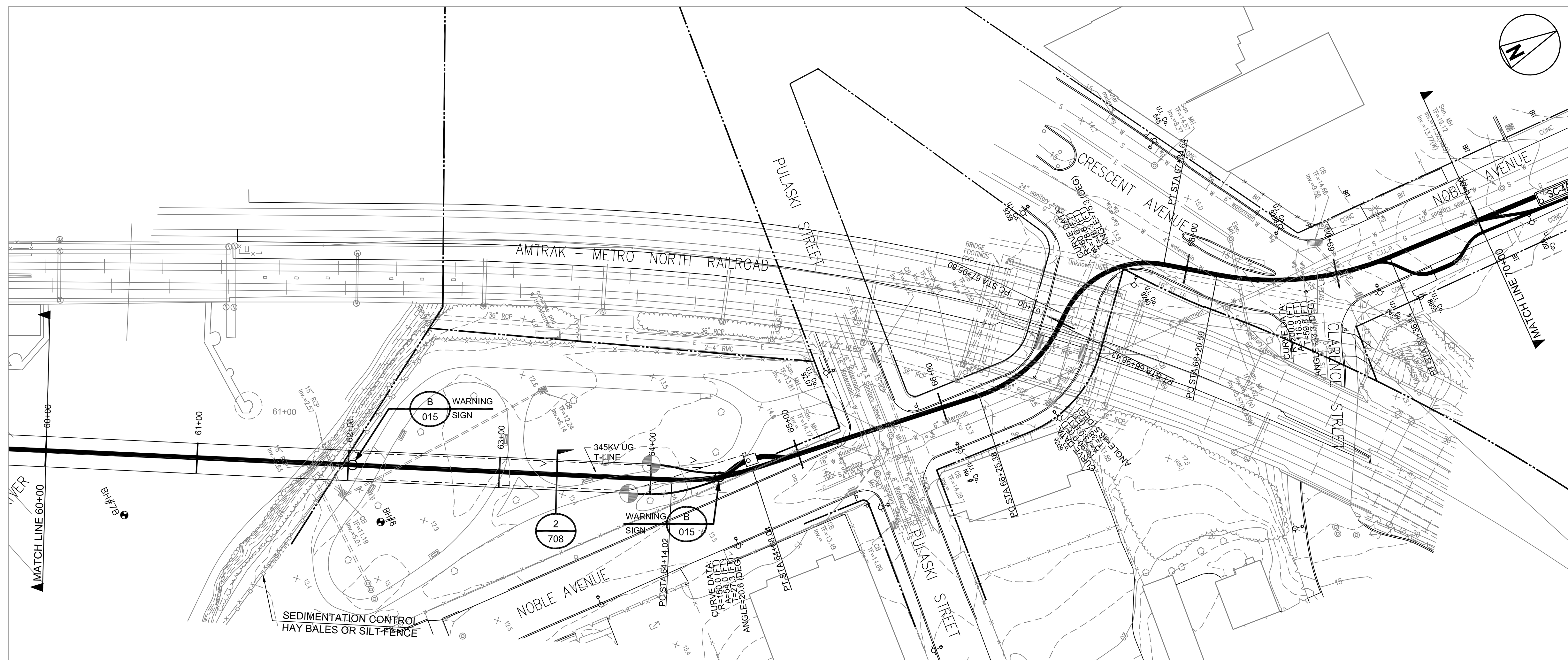


**BLACK & VEATCH**  
 PROJECT NO. 136745  
 DRAWN EJM  
 DESIGNED ASM  
 APPROVED -  
 CHECKED -

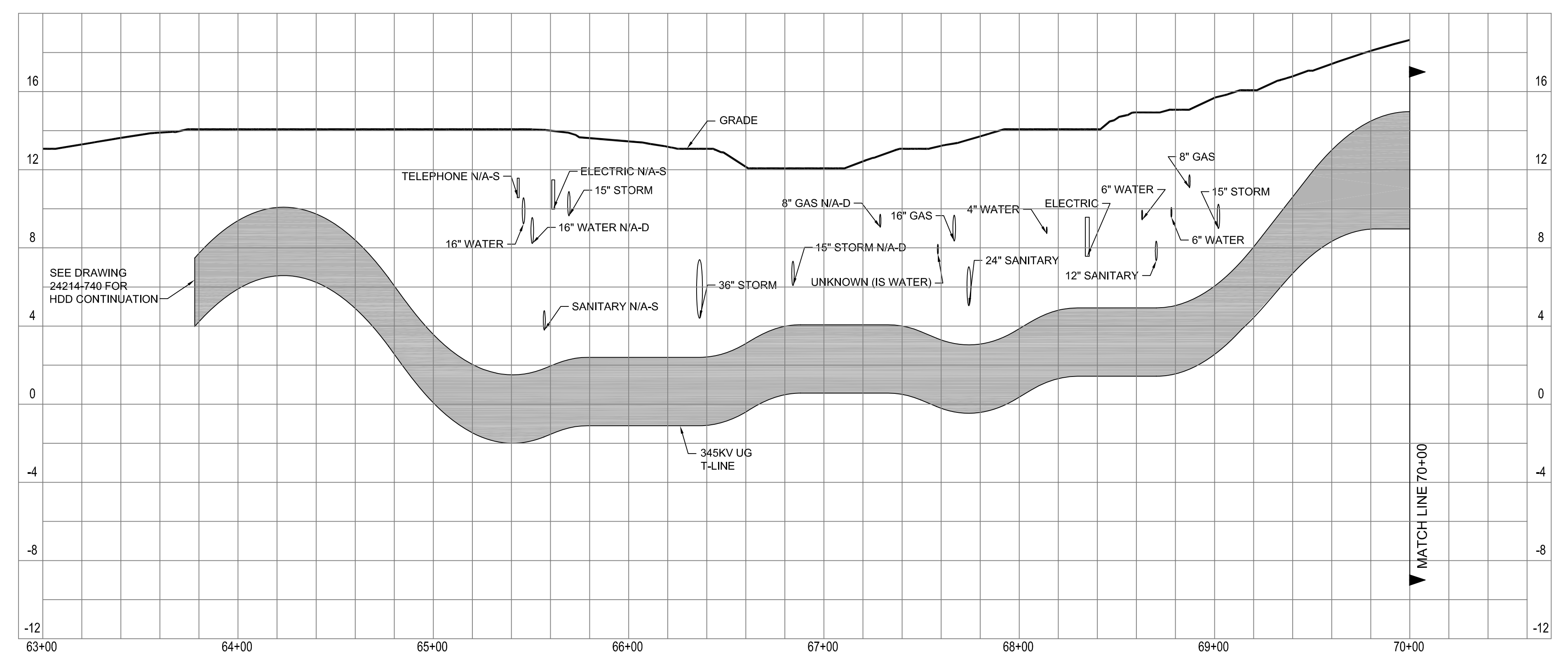
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0	11/23/05	INITIAL REVIEW	WJB	-	ASM	-
D	11/11/05	ISSUED FOR OWNER'S REVIEW	WJB	-	ASM	-
C	07/29/05	ISSUED FOR 60% REVIEW - REVISED	SML	-	ASM	-
B	06/17/05	ISSUED FOR 60% REVIEW	SML	-	ASM	-
A	02/17/05	ISSUED FOR 30% REVIEW	WJB	-	ASM	-

**ui** The United Illuminating Company  
 157 Church St. New Haven, Ct. 06506  
 Drawn \_\_\_\_\_ Date \_\_\_\_\_ Scale: AS NOTED  
 Chkd. \_\_\_\_\_ Design Engr. \_\_\_\_\_ Design Supv. \_\_\_\_\_

MIDDLETOWN-NORWALK PROJECT  
 345KV UG TRANSMISSION LINE  
 PEQUONNOCK RIVER HDD CROSSING  
 CAD FILE NAME: 24214-715  
 SEQUENCE No.:  
 DRAWING NUMBER: 24214-715



NOTES:  
 1. SEE DRAWING 24214-740 & 741 FOR DETAILS ON THE HORIZONTAL DIRECTIONAL DRILL.



**BLACK & VEATCH**

PROJECT NO. 136745  
 DRAWN EJM  
 DESIGNED ASM  
 APPROVED -  
 CHECKED -

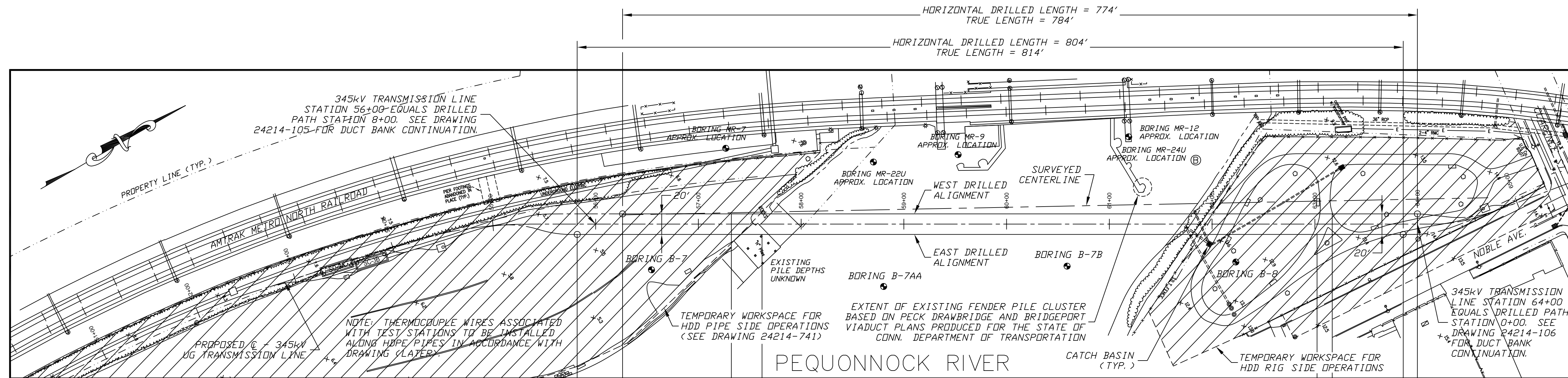
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0	11/23/05	INITIAL REVIEW	WJB	-	ASM	-
D	11/11/05	ISSUED FOR OWNER'S REVIEW	WJB	-	ASM	-
C	07/29/05	ISSUED FOR 60% REVIEW - REVISED	SML	-	ASM	-
B	06/17/05	ISSUED FOR 60% REVIEW	SML	-	ASM	-
A	02/17/05	ISSUED FOR 30% REVIEW	WJB	-	ASM	-
No	Date	Revision	By	Chkd.	Engr.	Supv.

**ui** The United Illuminating Company  
 157 Church St. New Haven, Ct. 06506

Drawn \_\_\_\_\_ Date \_\_\_\_\_ Scale: AS NOTED  
 Chkd. \_\_\_\_\_ Design Engr. \_\_\_\_\_ Design Supv. \_\_\_\_\_

MIDDLETOWN-NORWALK PROJECT  
 345KV UG TRANSMISSION LINE  
 PEQUONNOCK RIVER HDD CROSSING

CAD FILE NAME: 24214-716  
 SEQUENCE No. \_\_\_\_\_  
 DRAWING NUMBER: 24214-716



**PLAN**

SCALE: 1"=60'

**WEST DRILLED ALIGNMENT COORDINATES**

EXIT POINT @ 12°  
7+73.79, 5.63, 10.00' RIGHT  
N 127261.43, E 479765.90

P.T. 26° SAG BEND  
6+67.87, -16.89, 10.00' RIGHT

P.C. 26° SAG BEND  
0+83.09, -6.68, 10.00' RIGHT  
RADIUS = 1,300'

ENTRY POINT @ 14°  
0+00.14, 14.00, 10.00' RIGHT  
N 127931.91, E 480151.89

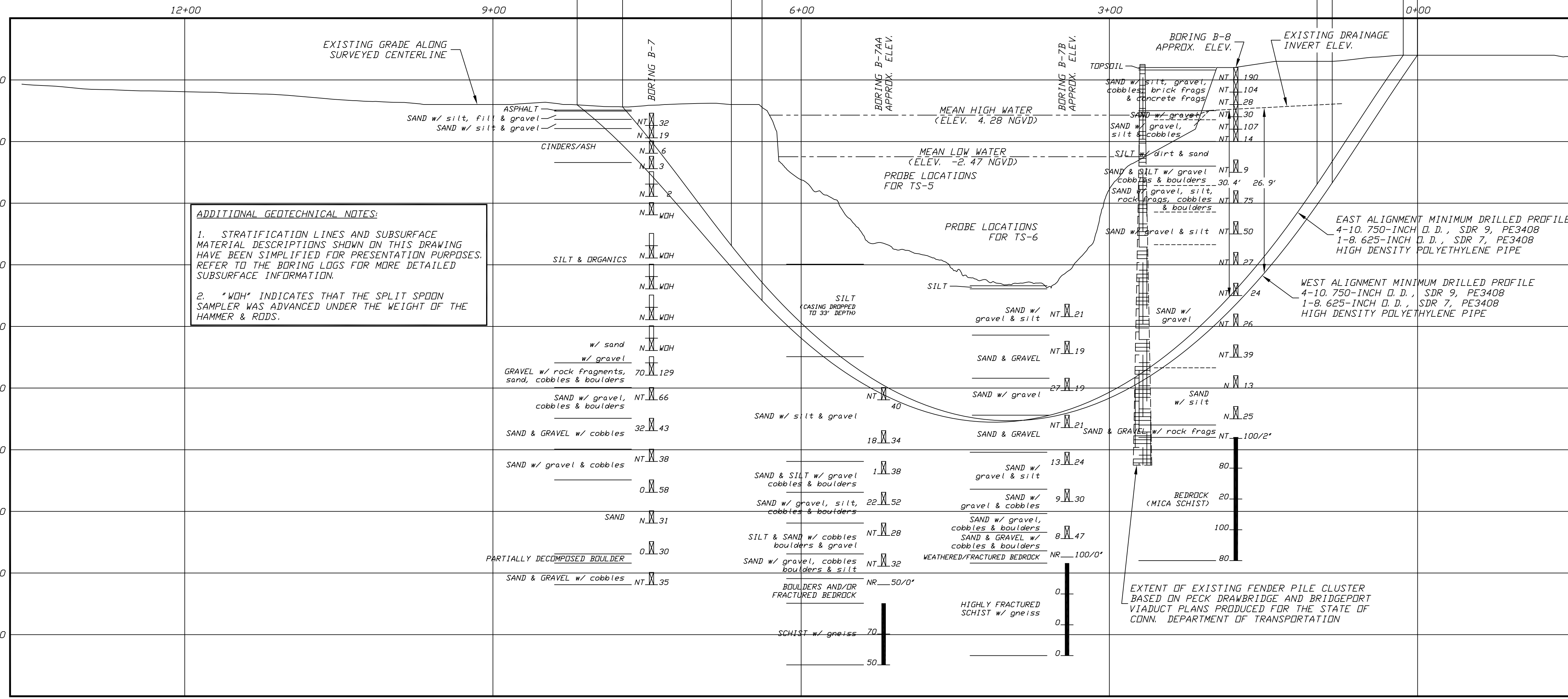
**EAST DRILLED ALIGNMENT COORDINATES**

EXIT POINT @ 10°  
8+17.97, 5.94, 10.00' LEFT  
N 127213.16, E 479761.19

P.T. 24° SAG BEND  
6+38.08, -25.78, 10.00' LEFT

P.C. 24° SAG BEND  
0+97.84, -6.91, 10.00' LEFT  
RADIUS = 1,300'

ENTRY POINT @ 14°  
0+13.96, 14.00, 10.00' LEFT  
N 127909.95, E 480162.33



**PROFILE**

SCALE: 1"=60' HORIZONTAL  
1"=10' VERTICAL

**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.

John D. Hair, P.E.  
Consulting Engineer  
2121 South Columbia Avenue  
Suite 101  
Tulsa, Oklahoma 74114

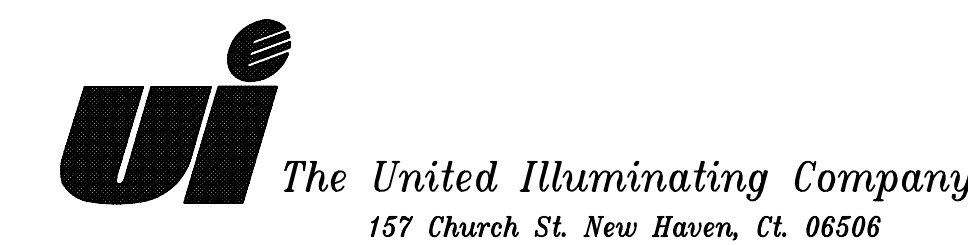


PROJECT NO. 136745

DRAWN MST 11/21/05  
CHECKED JSP 11/21/05  
APPROVED JSP 11/21/05

DESIGNED ASM  
APPROVED  
CHECKED

0 07/17/06 ISSUED FOR PERMIT  
By JSP JDH ASM  
Chkd. Engr. Supv.



157 Church St. New Haven, Ct. 06506  
Drawn \_\_\_\_\_ Date \_\_\_\_\_  
Design Engr. \_\_\_\_\_ Design Supv. \_\_\_\_\_

MIDDLETOWN-NORWALK PROJECT  
345kV UG TRANSMISSION LINE  
CROSSING OF THE PEQUONNOCK RIVER  
BY HORIZONTAL DIRECTIONAL DRILLING

CAD FILE NAME SEQUENCE No. DRAWING NUMBER  
24214-740 24214-740 24214-740

**GENERAL LEGEND**

○ DRILLED PATH ENTRY/EXIT POINT

**GEOTECHNICAL LEGEND**

● BORING LOCATION

**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

**THIN WALL (UNDISTURBED) SAMPLE**

**CORE BARREL SAMPLE**

uc<sub>s</sub> 6,250 → UNCONFINED COMPRESSIVE STRENGTH (PSI)  
53.6 → MOHS HARDNESS  
→ ROCK QUALITY DESIGNATION (PERCENT)

**GEOTECHNICAL NOTES**

1. GEOTECHNICAL DATA PROVIDED BY SOIL TESTING, INC., OXFORD, CONNECTICUT. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR MORE DETAILED SUBSURFACE INFORMATION.
2. FOR DETAILS OF BORINGS SHOWN IN THE PLAN VIEW WITH A DESIGNATION OF MR-#, REFER TO A REPORT TITLED "GEOPHYSICAL INVESTIGATION, MIDDLETOWN-NORWALK, 345-KV TRANSMISSION LINE, PEQUONNOCK RIVER SOUTH CROSSING, BRIDGEPORT, CONNECTICUT", PRODUCED BY NDT CORPORATION OF WORCESTER, MASSACHUSETTS AND DATED APRIL 2004.
3. 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. THE LETTERS "NR" INDICATE THAT THERE WAS NO RECOVERY.
4. 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.

**TOPOGRAPHIC SURVEY NOTES**

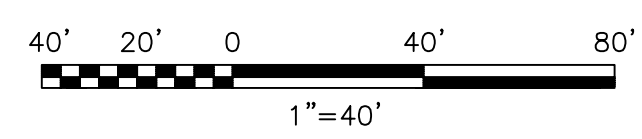
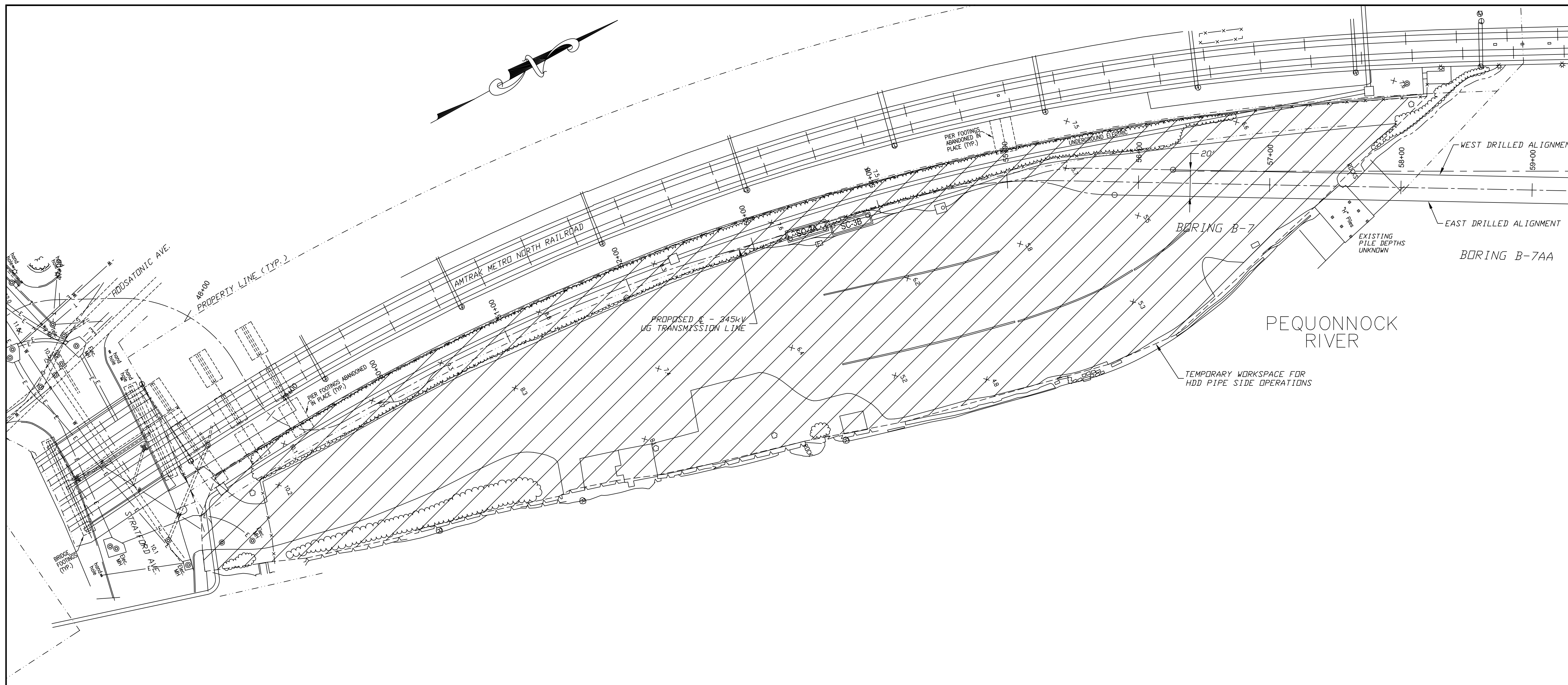
1. TOPOGRAPHIC SURVEY DATA PROVIDED BY LUCHS CONSULTING ENGINEERS LLC, WEST HAVEN, CT.
2. NORTHERINGS AND EASTINGS ARE IN U.S. SURVEY FEET REFERENCED TO CONNECTICUT STATE PLANE COORDINATES, NAD 27. ELEVATIONS ARE IN FEET REFERENCED TO NGVD 29.

**DRILLED PATH NOTES**

1. DRILLED PATH STATIONING IS IN FEET BY HORIZONTAL MEASUREMENT AND IS REFERENCED TO CONTROL ESTABLISHED FOR THE DRILLED SEGMENT.
2. DRILLED PATH COORDINATES REFER TO CENTERLINE OF PIPE.
3. THE PILOT HOLE SHALL BE DRILLED TO THE TOLERANCES LISTED BELOW. IN ALL CASES, RIGHT-OF-WAY RESTRICTIONS AND CONCERN FOR ADJACENT UTILITIES SHALL TAKE PRECEDENCE OVER THE LISTED TOLERANCES.

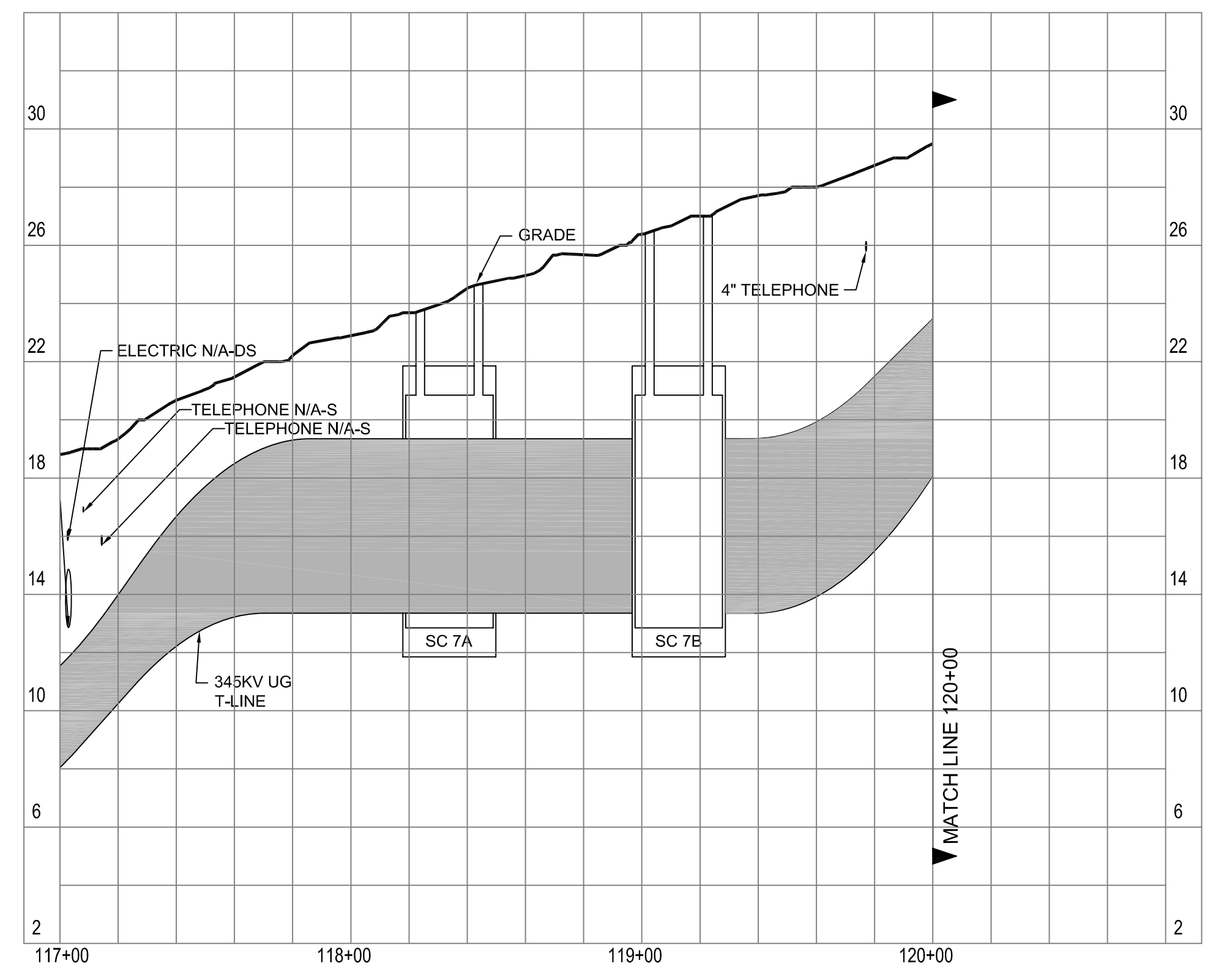
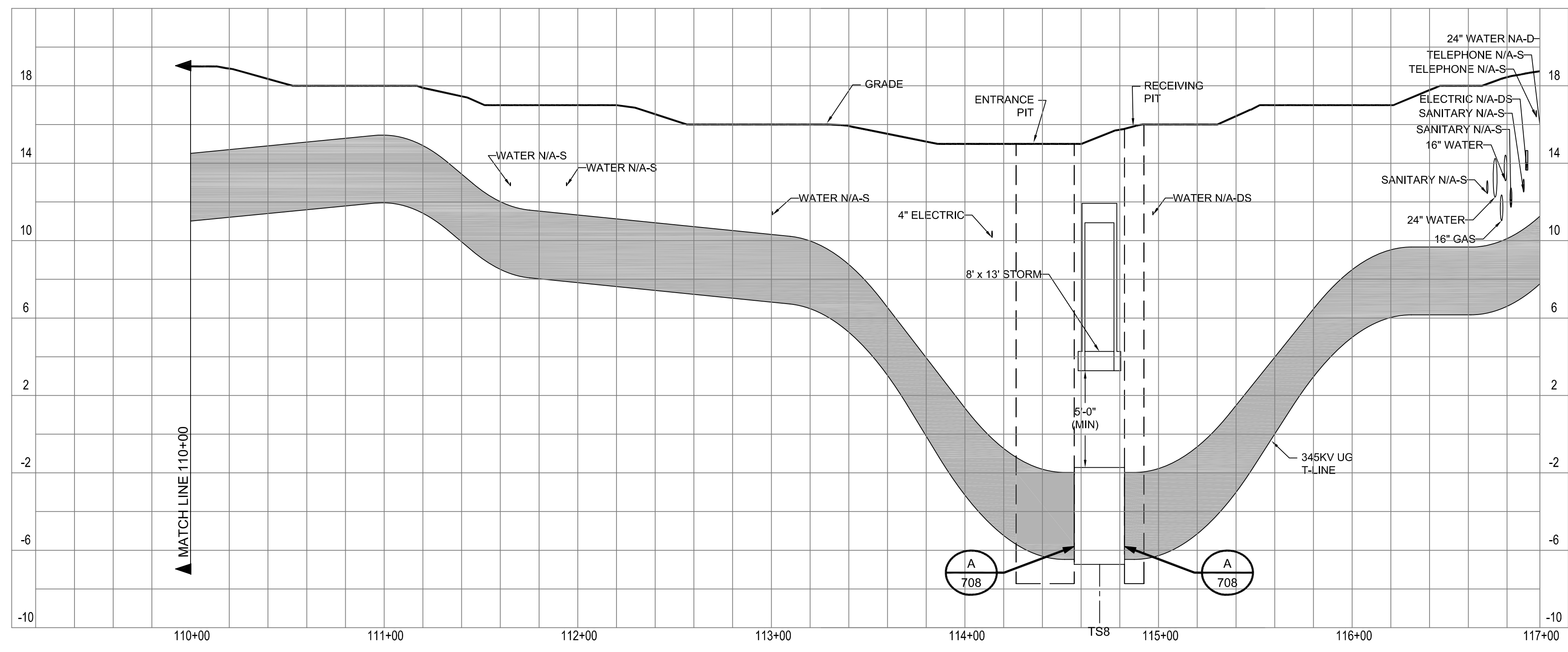
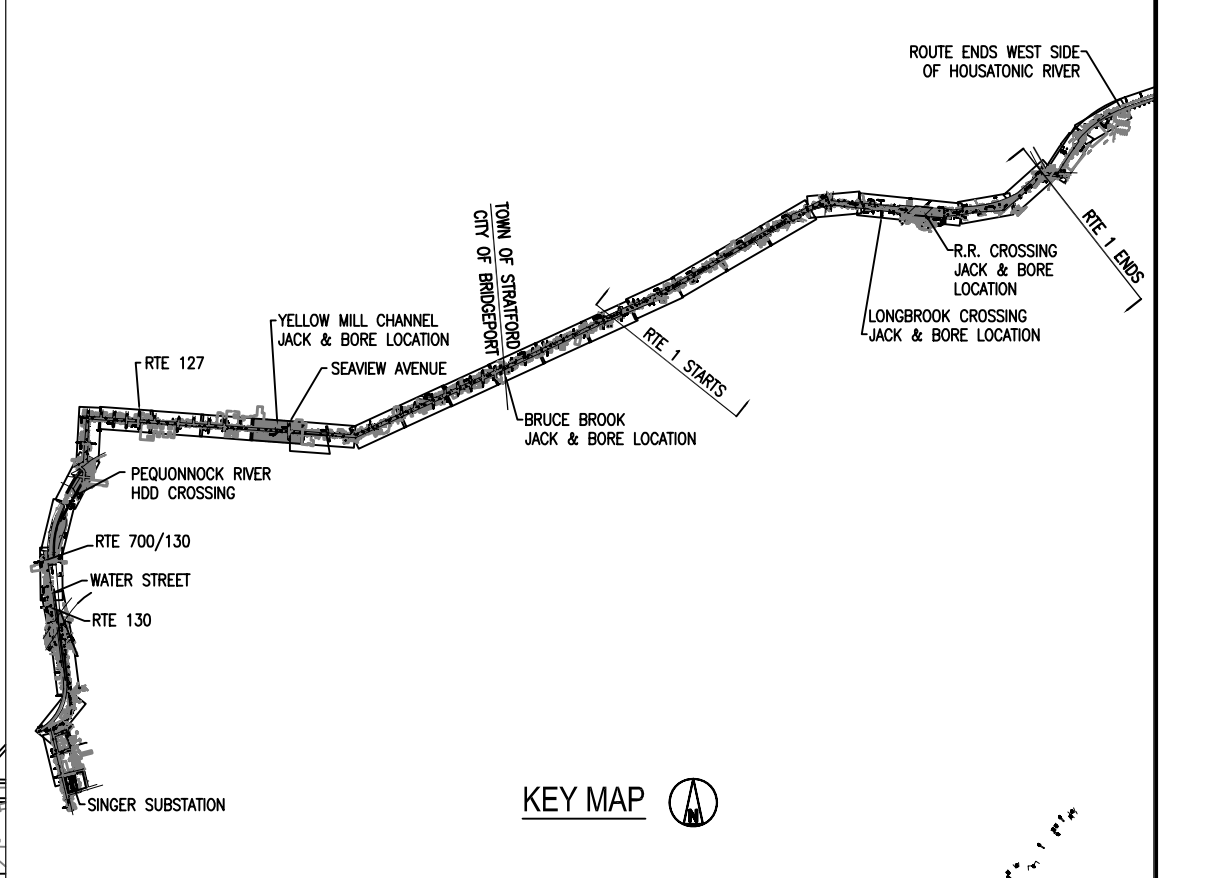
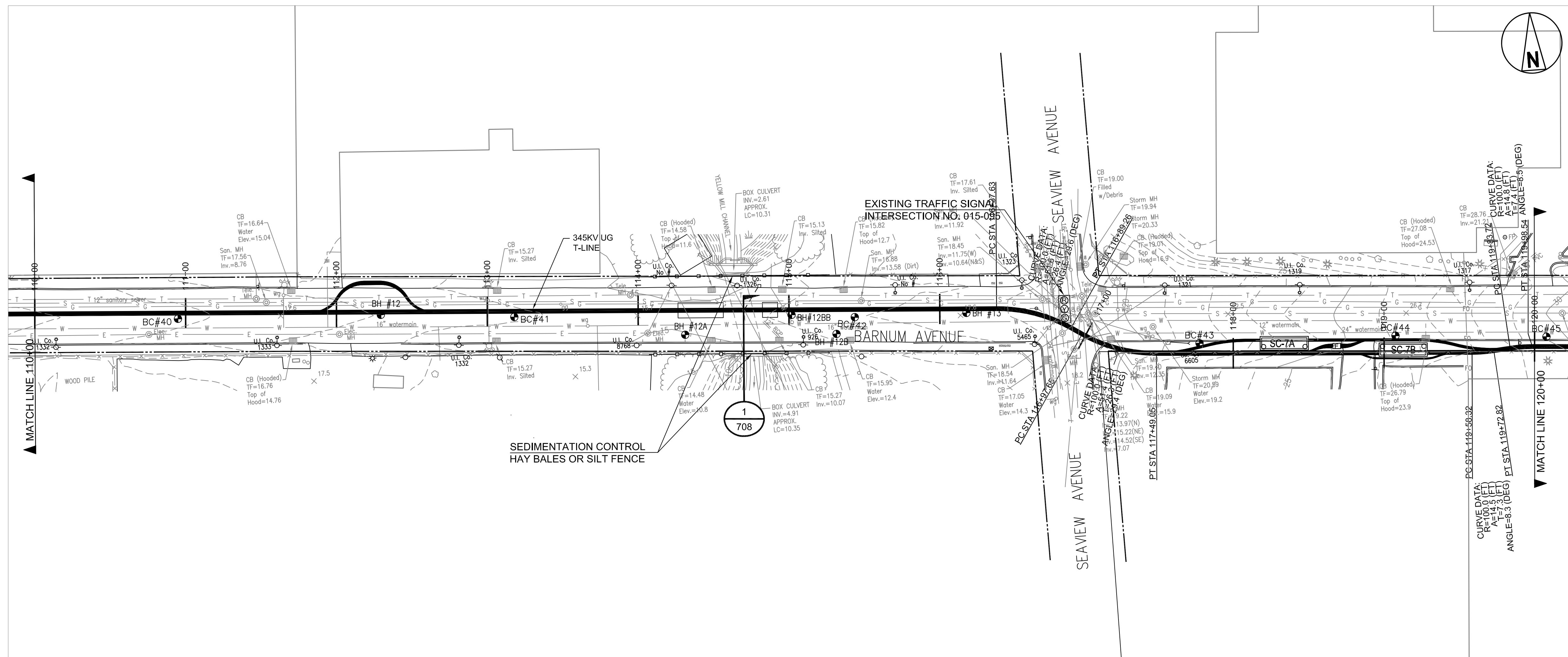
**PILOT HOLE TOLERANCES**

1. ELEVATION - PLUS 0 FEET, MINUS 20 FEET.
2. ALIGNMENT (WEST) - PLUS 10 FEET (WEST) AND MINUS 5 FEET (EAST).
3. ALIGNMENT (EAST) - PLUS 5 FEET (WEST) AND MINUS 10 FEET (EAST).
4. ENTRY POINT - AT THE STAKED LOCATION.
5. EXIT POINT - PLUS OR MINUS 5 FEET IN ALIGNMENT, PLUS 20 FEET AND MINUS 0 FEET IN LENGTH.
6. CURVE RADIUS - NO LESS THAN 500 FEET.

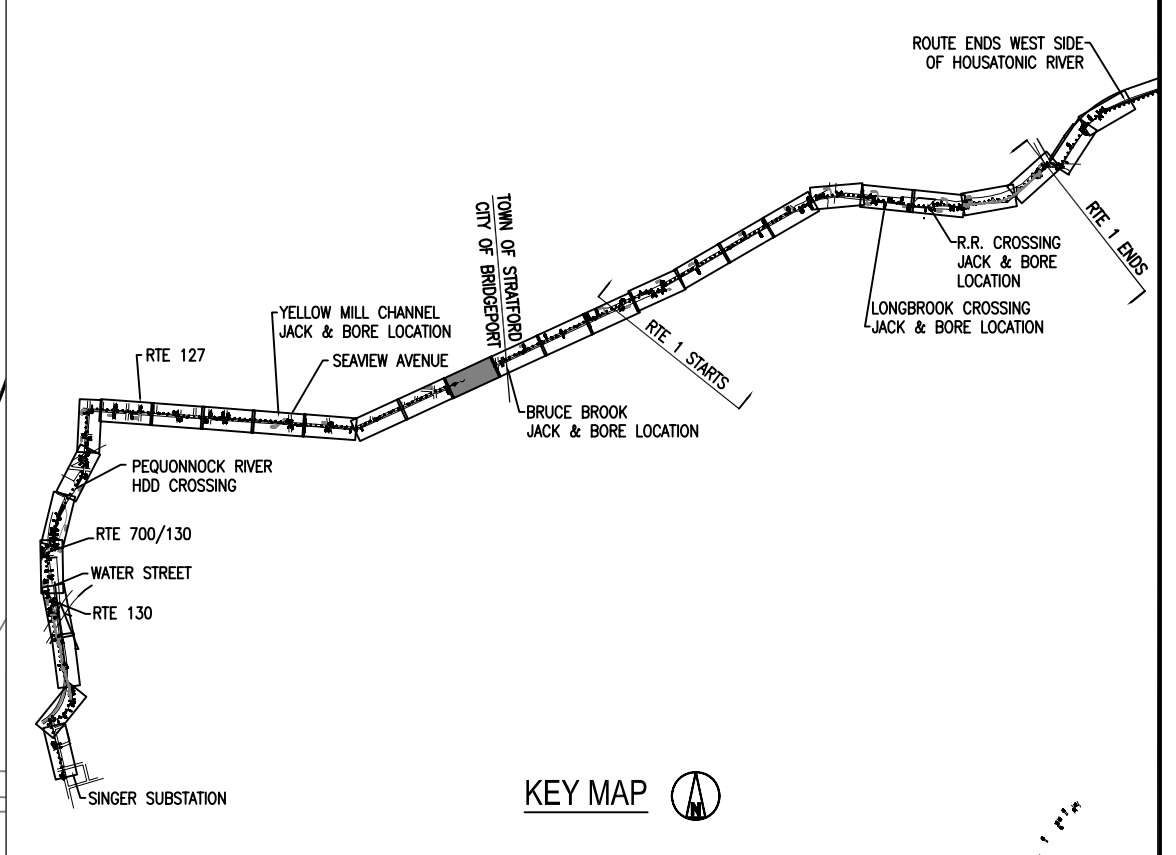
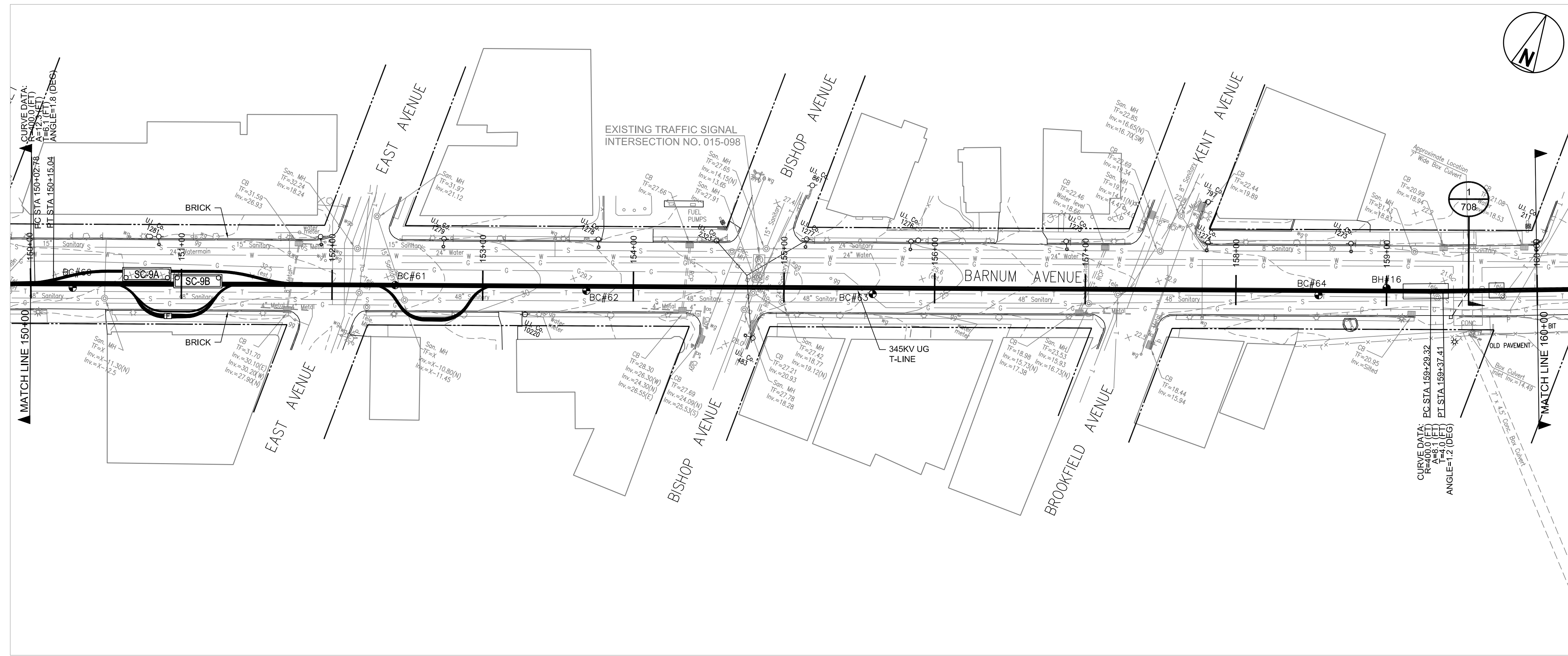


**PLAN**  
SCALE: 1"=40'

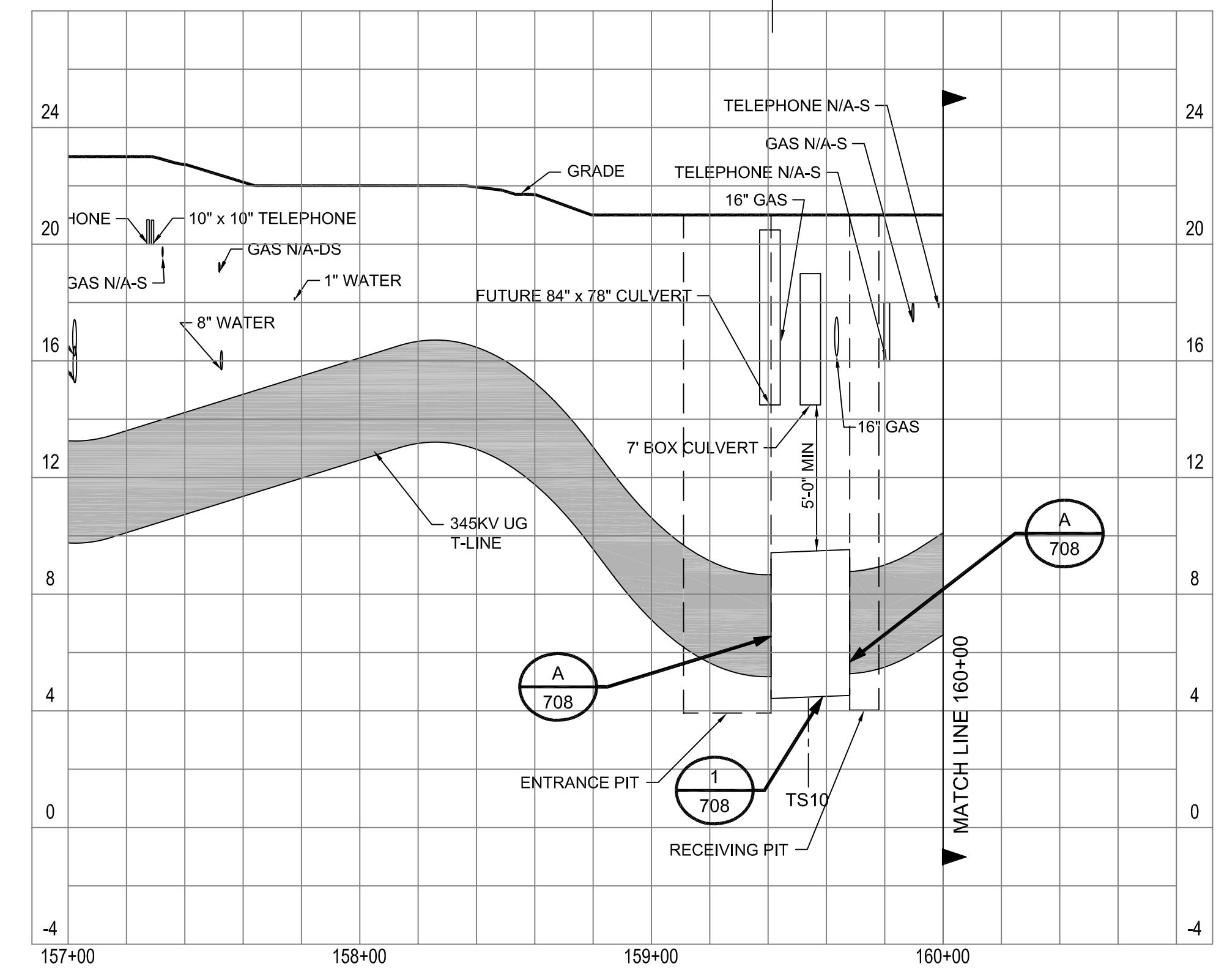
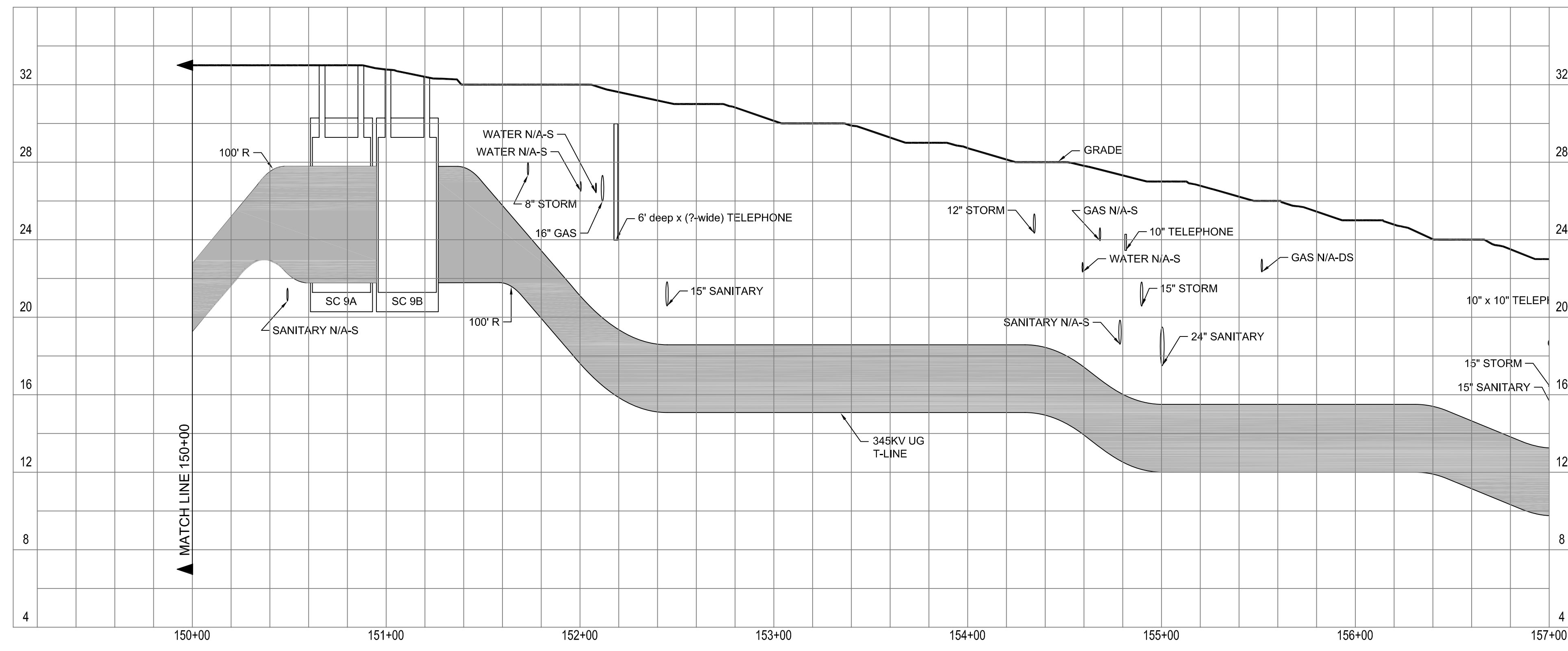
John D. Hair, P.E. Consulting Engineer 2121 South Columbia Avenue Suite 101 Tulsa, Oklahoma 74114		PROJECT NO. 136745		The United Illuminating Company 157 Church St. New Haven, Ct. 06506			MIDDLETOWN-NORWALK PROJECT 345kV UG TRANSMISSION LINE CROSSING OF THE PEQUONNOCK RIVER TEMPORARY WORKSPACE DETAIL					
DRAWN	MST	11/21/05	DESIGNED	ASM		Drawn	Date	Scale:	AS NOTED	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
CHECKED	JSP	11/21/05	APPROVED		1	07/17/06	ISSUED FOR PERMIT					
APPROVED			CHECKED		No	Date	Revision	By	Chkd.	Engr.	Supv.	
										24214-741		24214-741



				MIDDLETOWN-NORWALK PROJECT 345KV UG TRANSMISSION LINE YELLOW MILL CHANNEL JACK & BORE CROSSING	
PROJECT NO. 136745	1 07/17/06 ISSUED FOR PERMIT 2 11/23/05 INITIAL REVIEW 3 11/11/05 ISSUED FOR OWNER'S REVIEW 4 07/29/05 ISSUED FOR 60% REVIEW - REVISED 5 06/17/05 ISSUED FOR 60% REVIEW 6 02/17/05 ISSUED FOR 30% REVIEW	EJM - ASM - WJB - ASM - WJB - ASM - SML - ASM - SML - ASM - WJB - ASM -	Drawn _____ Date _____ Chkd. _____ Design Engr. _____	Scale: AS NOTED Design Supv. _____	CAD FILE NAME 24214-721
DRAWN EJM DESIGNED ASM APPROVED _____ CHECKED _____	No Date Revision	By Chkd. Engr. Supv.	Date _____ Design Engr. _____	Sequence No. _____ 24214-721	DRAWING NUMBER 24214-721



NOTES:  
 1. CONTRACTOR MAY ELECT TO INSTALL ONE JACK & BORE CASING BETWEEN STATION 159+41 TO 161+46. THE MINIMUM CLEARANCE AT FACILITIES MUST BE MAINTAINED.



**BLACK & VEATCH**  
 PROJECT NO. 136745

DRAWN	EJM
DESIGNED	ASM
APPROVED	-
CHECKED	-

1	07/17/06	ISSUED FOR PERMIT	EJM	-	ASM	-
0	11/23/05	INITIAL REVIEW	WJB	-	ASM	-
D	11/11/05	ISSUED FOR OWNER'S REVIEW	WJB	-	ASM	-
C	07/29/05	ISSUED FOR 60% REVIEW - REVISED	SML	-	ASM	-
B	06/17/05	ISSUED FOR 60% REVIEW	SML	-	ASM	-
A	02/17/05	ISSUED FOR 30% REVIEW	WJB	-	ASM	-
No	Date	Revision	By	Chkd.	Engr.	Supv.

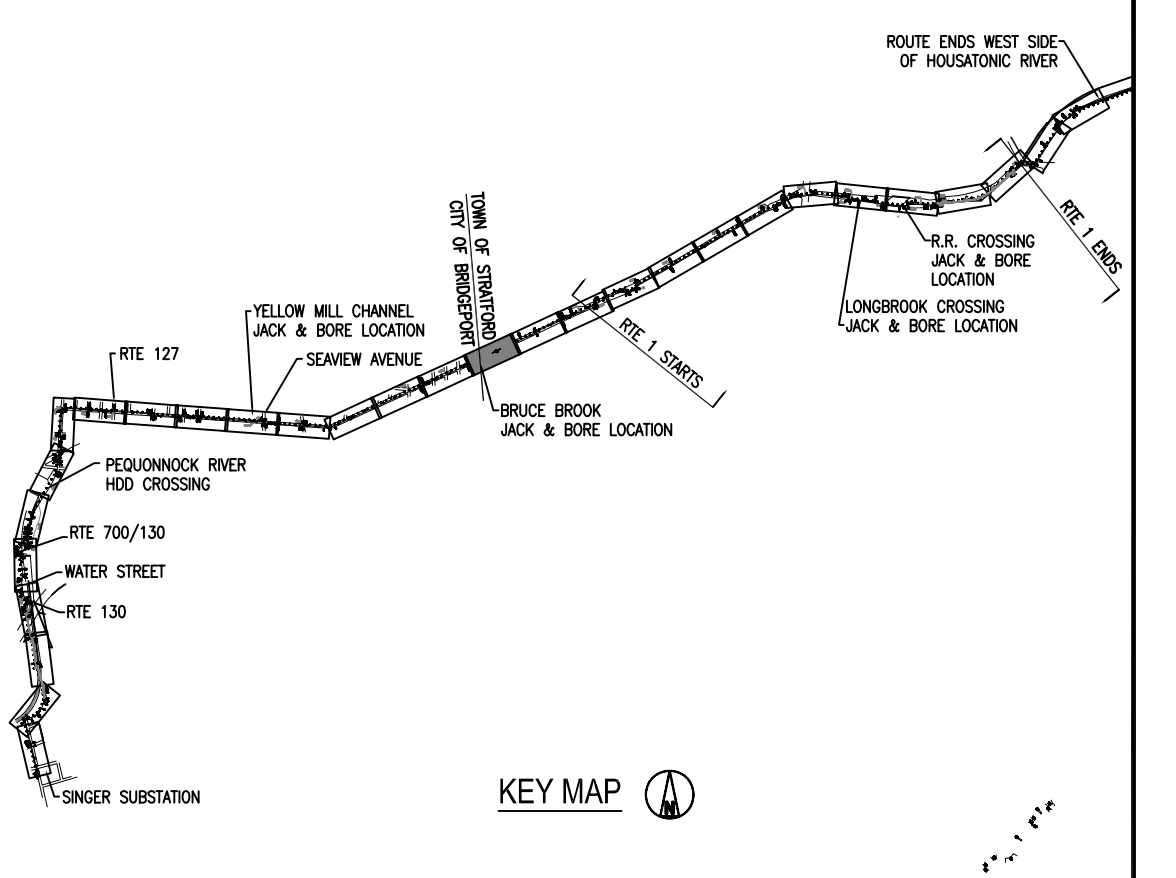
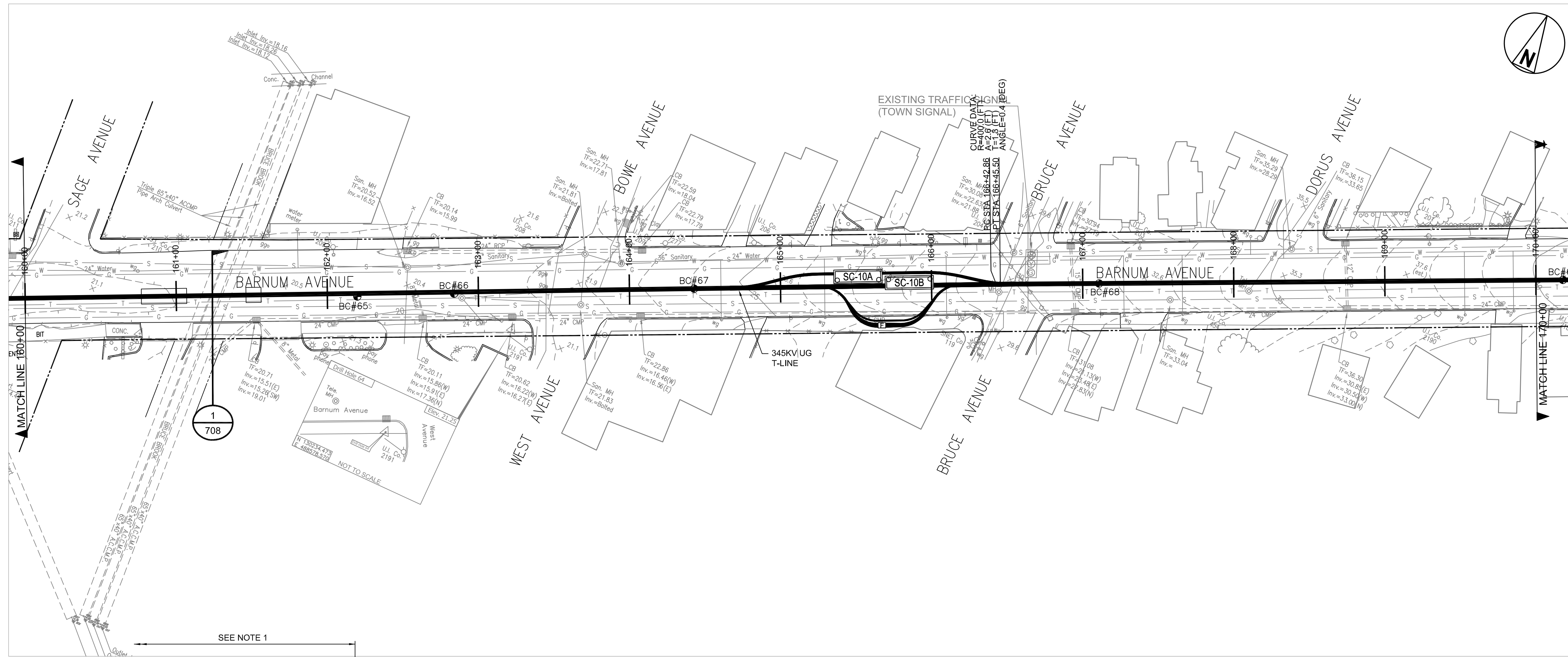
**ui** The United Illuminating Company  
 157 Church St. New Haven, Ct. 06506

Drawn	Date	Scale: AS NOTED
Design Engr.	Design Supv.	

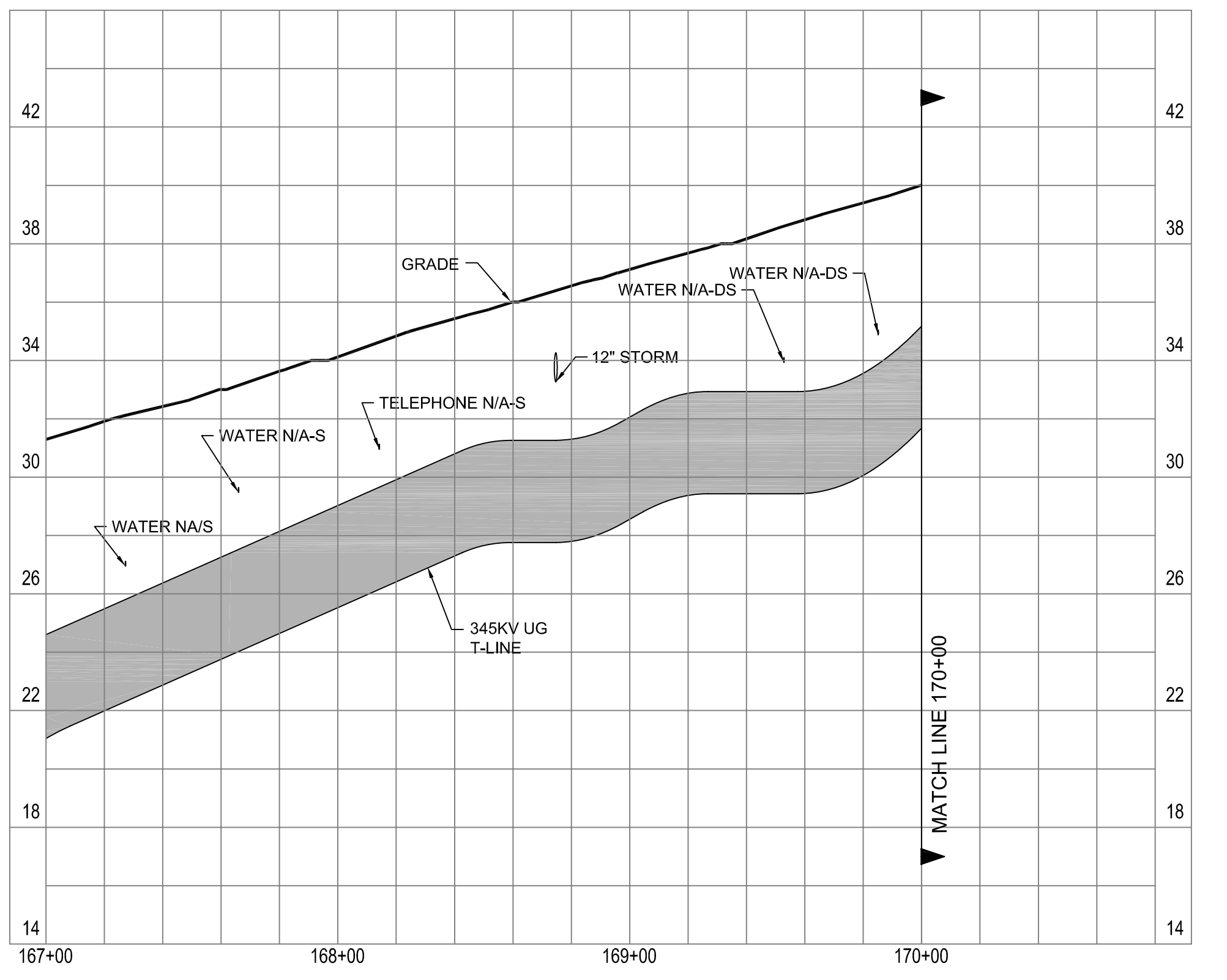
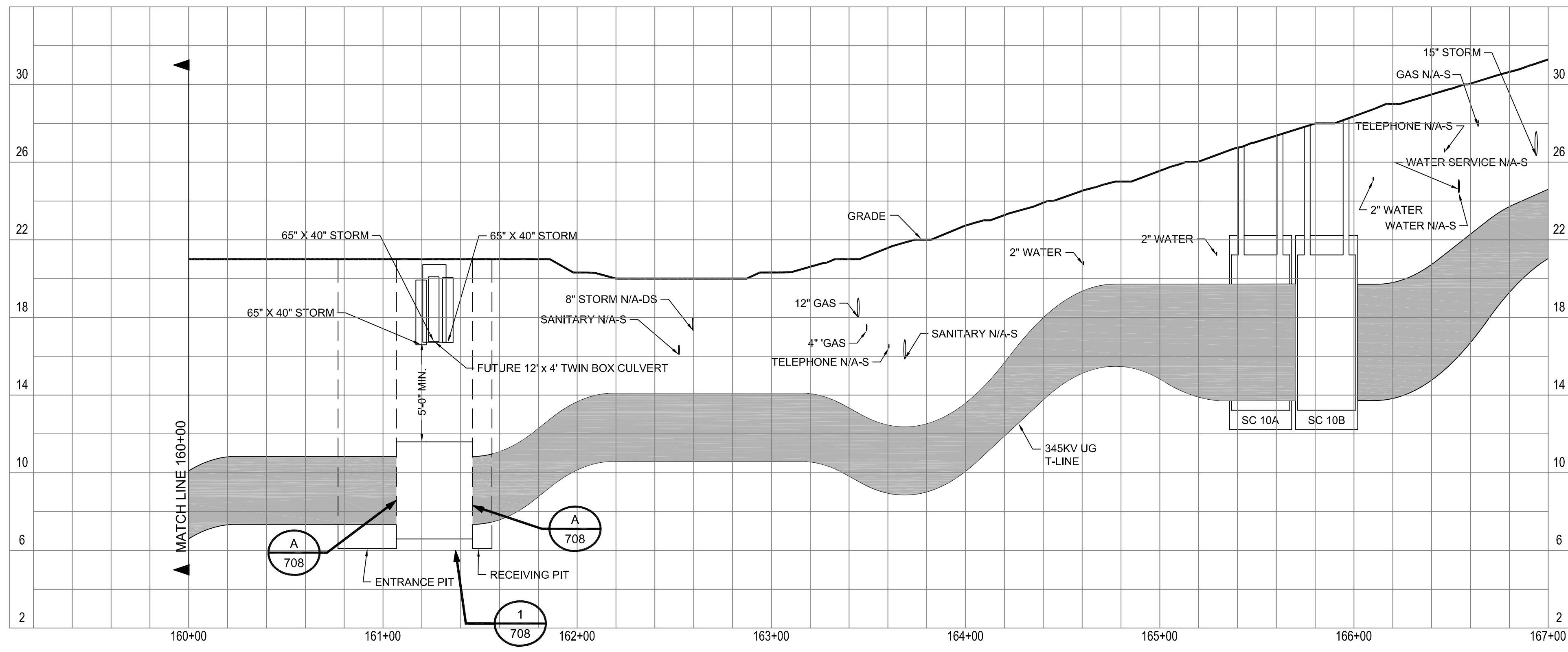
MIDDLETOWN-NORWALK PROJECT  
 345KV UG TRANSMISSION LINE  
 BRUCE BROOK JACK & BORE  
 CROSSING

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
24214-725		24214-725

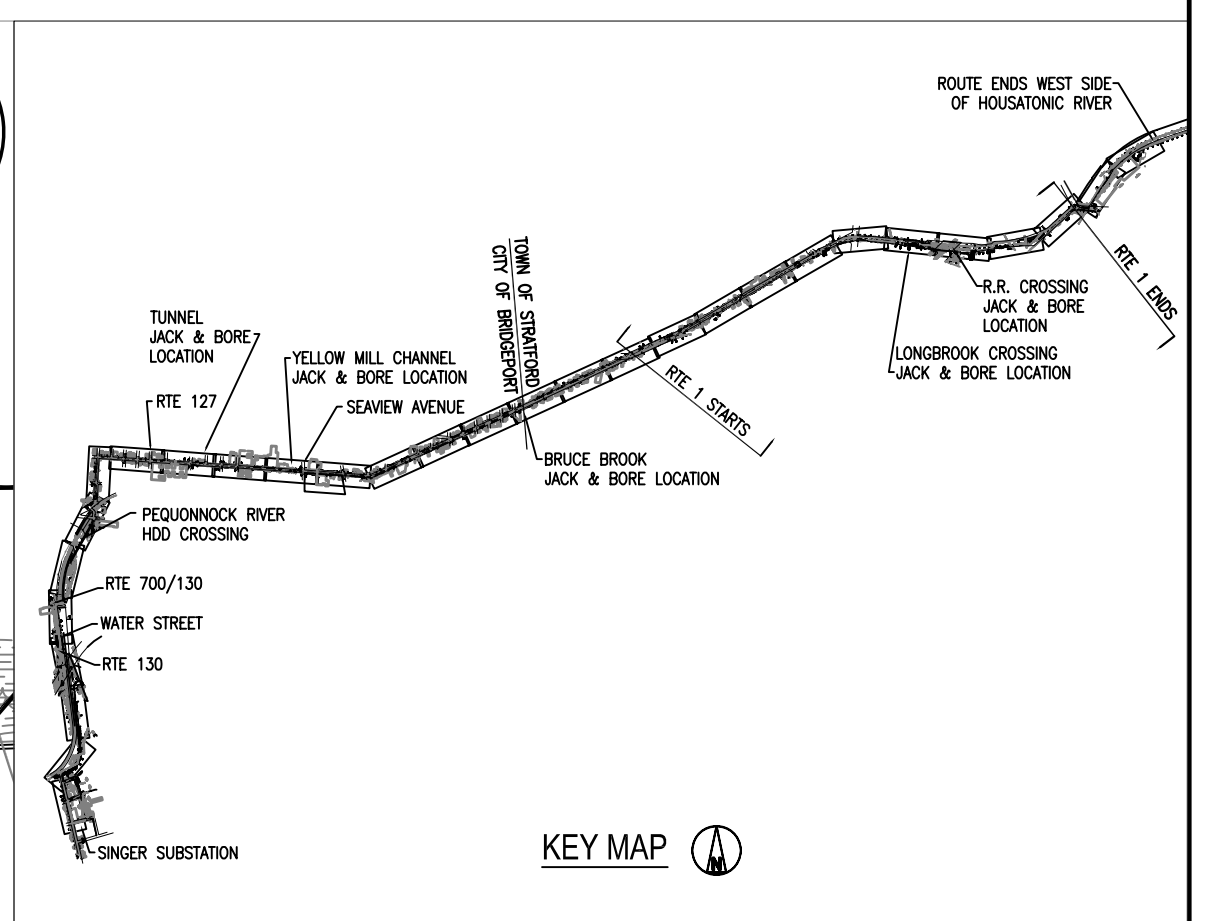
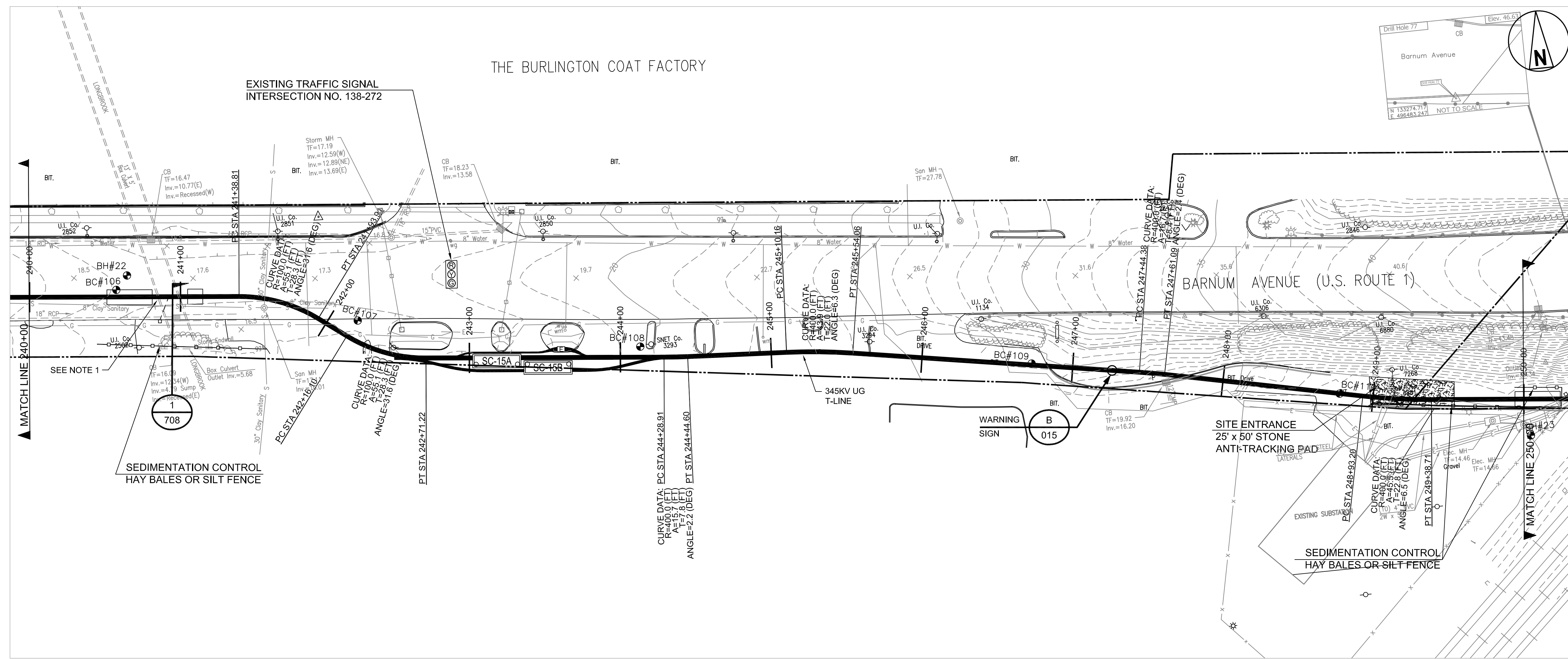




NOTES:  
 1. CONTRACTOR MAY ELECT TO INSTALL ONE JACK & BORE CASING BETWEEN STATION 159+41 TO 161+46. THE MINIMUM CLEARANCE AT FACILITIES MUST BE MAINTAINED.

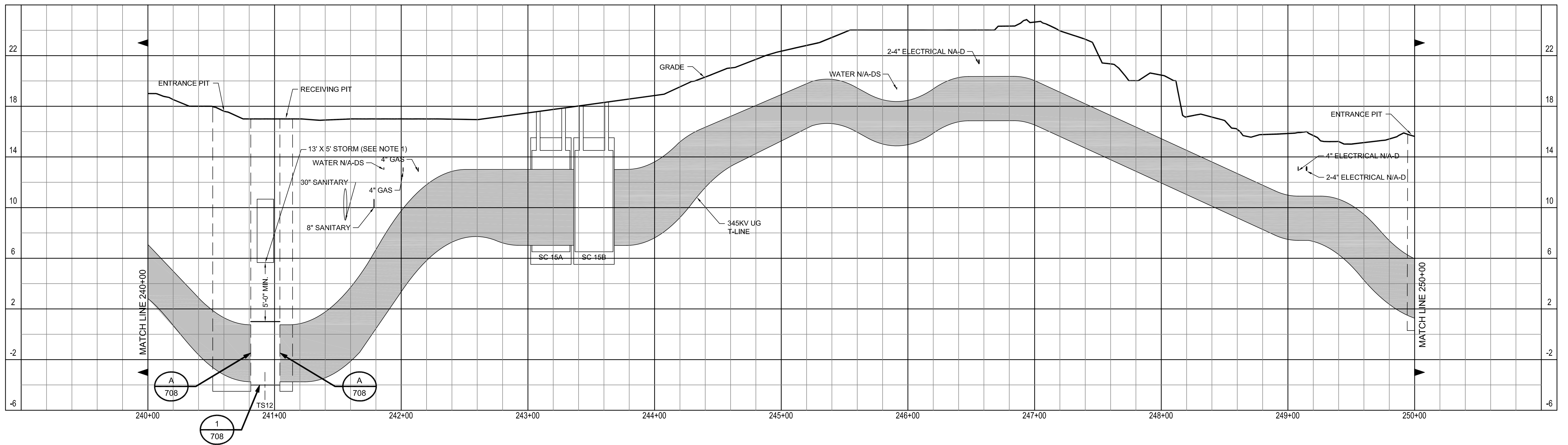


				MIDDLETOWN-NORWALK PROJECT 345KV UG TRANSMISSION LINE BRUCE BROOK JACK & BORE CROSSING	
PROJECT NO. 136745		157 Church St. New Haven, Ct. 06506		CAD FILE NAME: 24214-726	
DRAWN: EJM DESIGNED: ASM APPROVED: - CHECKED: -	1 07/17/06 ISSUED FOR PERMIT 0 11/23/05 INITIAL REVIEW D 11/11/05 ISSUED FOR OWNER'S REVIEW C 07/29/05 ISSUED FOR 60% REVIEW - REVISED B 06/17/05 ISSUED FOR 60% REVIEW A 02/17/05 ISSUED FOR 30% REVIEW	EJM - ASM - WJB - ASM - SML - ASM - WJB - ASM -	Drawn: _____ Date: _____ Chkd: _____ Design Engr.: _____	Scale: AS NOTED Design Supv.: _____	SEQUENCE No. 24214-726 DRAWING NUMBER 24214-726



- NOTE:**
- 1.) CONTRACTOR SHALL CONFIRM INVERT AND SIZE OF BOX CULVERT PRIOR TO JACK AND BORE INSTALLATION.
  - 2.) CONTRACTOR SHALL MAINTAIN TRAFFIC SIGNAL OPERATIONS AT ALL TIMES. ALL NECESSARY MODIFICATIONS AND ADJUSTMENTS SHALL BE CONSTRUCTED AND PAID FOR UNDER CDOT STANDARD, ITEM 1118062A "TEMPORARY SIGNALIZATION (ALL SITES)", AS SPECIFIED IN THE SPECIFICATIONS.

- SURVEY NOTES:**
- 1) SURVEY DATA PROVIDED BY LUCHS CONSULTING ENGINEERS LLC, WEST HAVEN CT, UNLESS OTHERWISE NOTED.
  - 2) NORTHINGS AND EASTINGS ARE IN U.S. SURVEY FEET REFERENCED TO CONNECTICUT STATE PLAIN COORDINATES, NAD 27. ELEVATIONS ARE IN FEET REFERENCED TO NGVD 29.



**BLACK & VEATCH**  
PROJECT NO. 136745  
DRAWN EJM  
DESIGNED ASM  
APPROVED --  
CHECKED DHS

1	08/14/06	ISSUED FOR PERMIT	EJM	-	ASM	-
0	11/23/05	INITIAL ISSUE	WJB	-	ASM	-
E	11/11/05	ISSUED FOR OWNER'S REVIEW	WJB	-	ASM	-
D	10/13/05	ISSUED FOR CLIENT REVIEW	WJB	-	ASM	-
C	07/19/05	ISSUED FOR 60% REVIEW - REVISED	SML	-	ASM	-
B	06/17/05	ISSUED FOR 60% REVIEW	SML	-	ASM	-
A	02/17/05	ISSUED FOR 30% REVIEW	WJB	-	ASM	-
No	Date	Revision	By	Chkd.	Engr.	Supv.

**ui** The United Illuminating Company  
157 Church St. New Haven, Ct. 06506

MIDDLETOWN-NORWALK PROJECT  
345KV UG TRANSMISSION LINE  
LONGBROOK  
JACK AND BORE CROSSING

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
24214-734		24214-734

Drawn: \_\_\_\_\_ Date: \_\_\_\_\_ Scale: AS NOTED  
Chkd.: \_\_\_\_\_ Design Engr.: \_\_\_\_\_ Design Supv.: \_\_\_\_\_