

**LEGEND**

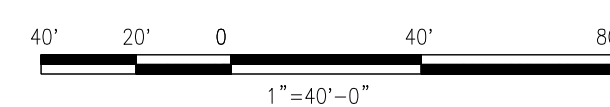
SYMBOL	DESCRIPTION
	CATCH BASIN
	PROPERTY LINE
	EDGE OF PAVEMENT
	NEW 8' FENCE
	EXISTING FENCE TO BE REMOVED
	WETLANDS LINE
	INJECTION WELLS
	MONITORING WELLS
	FLOOD WAY
	PUBLIC PARKING AND RIVER ACCESS (.912 ACRES)

**REFERENCE DRAWINGS**

SUBSTATION EQUIPMENT PLAN	XXXXX-400
SUBSTATION SECTION 1	XXXXX-401
SUBSTATION SECTIONS	XXXXX-402

**PRELIMINARY**

NOT TO BE USED FOR CONSTRUCTION



PROJECT NO. 178262

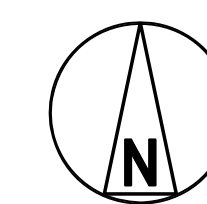
DRAWN	JDB	2	01/10/2013	PRE-FILE TESTIMONY ISSUE	JDB	-	ALL	-
DESIGNED	JDB	1	11/19/2012	ADDENDUM - CONTROL BUILDING RE-LOCATION	JDB	-	ALL	-
APPROVED	ALL	0	05/2012	MCF REVIEW ISSUE	JDB	-	ALL	-
CHECKED	-	No	Date	Revision	By	Chkd.	Engr.	Supv.



Drawn	Date 01/27/12	Scale: 1:40
Design Engr. -	Design Supv. -	

**SITE PLAN**  
**SHELTON SUBSTATION**

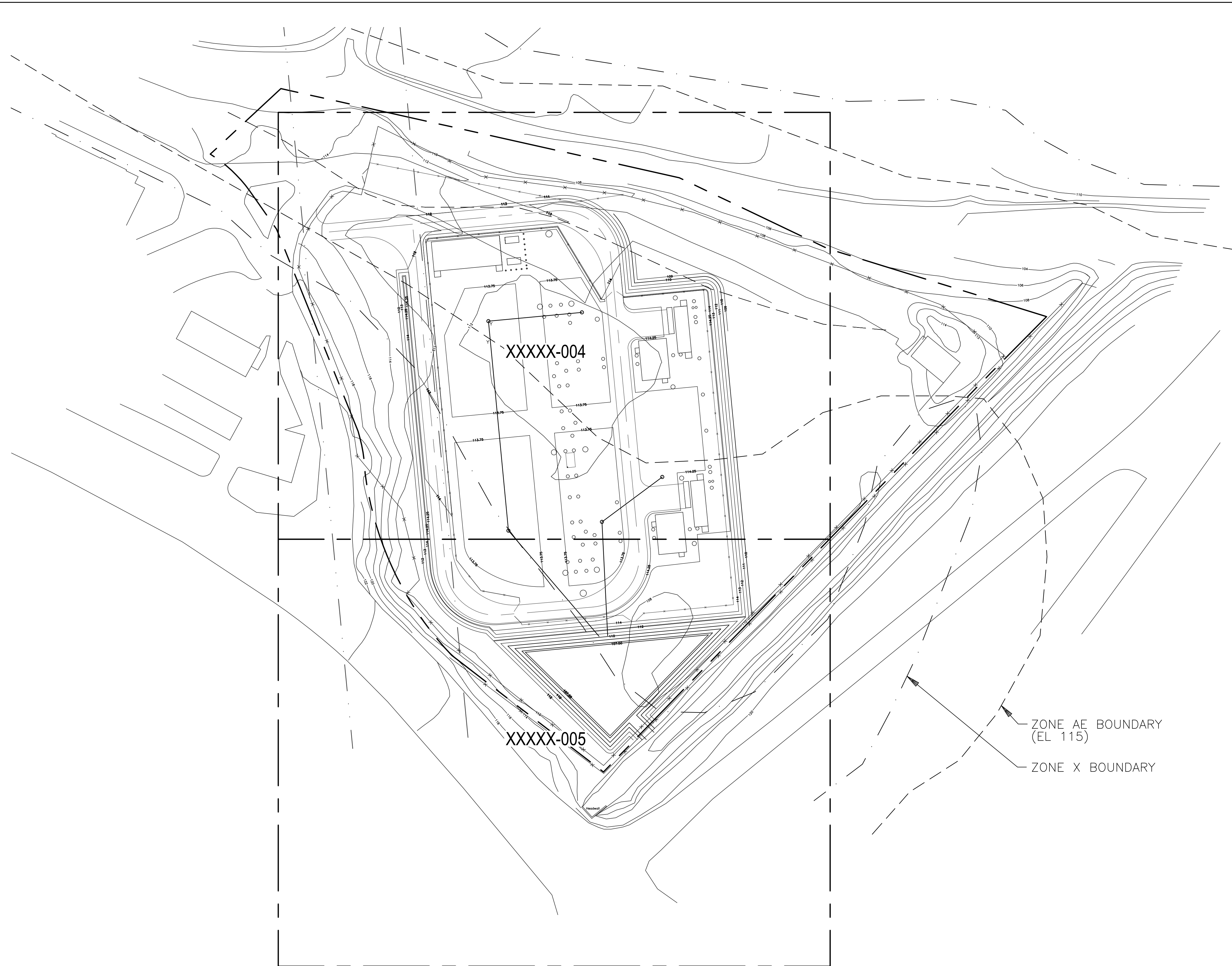
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	XXXXX-001



# PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

	PROJECT NO. 178262			AERIAL SITE PLAN	
				SHELTON SUBSTATION	
DRAWN JDB DESIGNED JDB APPROVED ALL CHECKED -	2 01/10/2013 1 11/19/2012 0 05/2012 No Date	PRE-FILE TESTIMONY ISSUE ADDENDUM - CONTROL BUILDING RE-LOCATION MCF REVIEW ISSUE Revision	JDB - MRH - JDB - MRH - JDB - MRH - By Chkd. Engr. Supv.	Drawn _____ Date 01/27/12 Chkd. _____ Design Engr. _____ Scale: _____ Design Supv. _____	CAD FILE NAME _____ SEQUENCE No. _____ DRAWING NUMBER XXXXX-002



GENERAL NOTES

- GENERAL NOTES APPLICABLE TO ALL GRADING AND DRAINAGE AND EROSION CONTROL DRAWINGS.
- SEE DRAWING XXXXX-006 FOR EROSION CONTROL PLANS.
- SEE DRAWING XXXXX-007 FOR CATCH BASIN SCHEDULE AND DETAILS AND XXXXX-009 FOR GRADING AND DRAINAGE DETAILS.
- COORDINATES SHOWN ARE BASED ON CONNECTICUT STATE PLANE NAD27 FEET.
- GRADE SHALL SLOPE UNIFORMLY BETWEEN FINISH SPOT ELEVATIONS AND CONTOURS SHOWN ON THE PLANS.
- A SMOOTH VERTICAL TRANSITION SHALL BE PROVIDED AT ROAD INTERSECTIONS.
- SLOPES SHALL BE 3(H):1(V) OR FLATTER, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE FOR TYING FINISHED CONTOURS INTO EXISTING CONTOURS IN AREAS WHERE THERE IS INSUFFICIENT SURVEY DATA OF THE EXISTING GRADE.
- EXISTING CONTOURS AND SPOT ELEVATIONS ARE BASED ON THE 10/29/2009 ALTA SURVEY PRODUCED BY NOWAKOWSKI, O'BYMACHOW, KANE AND ASSOCIATES.
- SPOT ELEVATIONS AND CONTOURS ON THESE DRAWINGS ARE TOP OF FINISHED GRADE. SUBTRACT FINISH SURFACING MATERIAL THICKNESS TO OBTAIN TOP OF SUBGRADE.
- ALL AREAS OUTSIDE OF THE SUBSTATION THAT ARE DISTURBED DURING CONSTRUCTION SHOULD BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITIONS, AND STABILIZED UNLESS NOTED OTHERWISE.
- SLOPE GRADE TO DRAIN IN DIRECTION OF FLOW ARROWS.
- THE FINISHED GRADE SHALL BE SET 6 INCHES BELOW TOP OF CONCRETE UNLESS NOTED OTHERWISE. FINISHED GRADE SHOULD SLOPE AWAY FROM THE STRUCTURE AT A MINIMUM SLOPE OF 1%.
- ZONE AE IS 100 YEAR FLOODPLAIN AND ZONE X IS 500 YEAR FLOODPLAIN. FLOODPLAIN BOUNDARIES FROM FIRM MAP NUMBER 09001C0313F, DATE JUNE 18, 2010.

LEGEND APPLICABLE TO ALL GRADING AND DRAINAGE DRAWINGS

---	ZONE X BOUNDARY		ASPHALT SURFACING
- - -	ZONE AE BOUNDARY		AGGREGATE SURFACING
---	PROPERTY LINE		REINFORCED CONCRETE
- · - · -	R/W LIMIT OF RIGHT-OF-WAY		EARTH
x x x x	SUBSTATION FENCE		RIPRAP
99	NEW CONTOUR		SAND/BEDDING MAT'L
C	CATCH BASIN		GRASS
S	NEW STORM WATER SYSTEM		WETLANDS
C	NEW CULVERT		
→	DITCH/SWALE FLOW INDICATOR		
→	GRADE SURFACE FLOW INDICATOR		
123.45 +	NEW SPOT ELEVATION		
SM	SURVEY CONTROL MONUMENT		
x x x x	EXISTING FENCE		
99	EXISTING CONTOUR		
1	SECTION OR DETAIL NUMBER		
53000	DRAWING DESIGNATION NUMBER		

ABBREVIATIONS APPLICABLE TO ALL GRADING AND DRAINAGE DRAWINGS

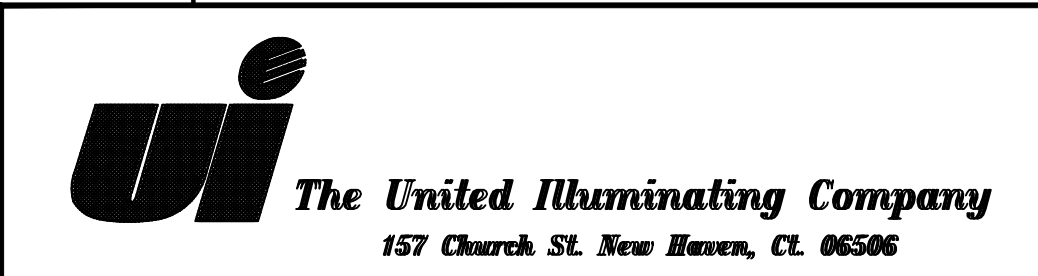
A	ARC LENGTH	LS	LIFT STATION
AGG	AGGREGATE	LTR	LATER
APPROX	APPROXIMATE	MATL	MATERIAL
ASPH	ASPHALT	MH	MANHOLE
AVG	AVERAGE	MSL	MEAN SEA LEVEL
BLDG	BUILDING	MW	MONITORING WELL
B/MH	BOTTOM OF MANHOLE ELEVATION	N	NORTH
BOD	BOTTOM OF ELECTRICAL DUCT BANK	NO.	NUMBER
BOP	BOTTOM OF PIPE	NTS	NOT TO SCALE
BU	BELL-UP	OD	OUTSIDE DIAMETER
CHDPE	CORRUGATED HIGH DENSITY POLYETHYLENE PIPE	OWS	OIL/WATER SEPARATOR
CJ	CONTRACTION JOINT	PC	POINT OF CURVATURE
CL	CENTERLINE	PE	PLAIN END
CMP	CORRUGATED METAL PIPE	PI	POINT OF INTERSECTION
CO	CLEANOUT	PL	PROPERTY LINE
D	DEGREE OF CURVE	PLCS	PLACES
Δ	DELTA ANGLE OF HORIZONTAL CURVE	PRC	POINT OF REVERSE CURVE
DI	DUCTILE IRON	PT	POINT OF TANGENT
DIA	DIAMETER	PVC	POINT OF VERTICAL CURVE
DIM	DIMENSION	PVI	POINT OF VERTICAL INTERSECTION
DWG	DRAWING	PVT	POINT OF VERTICAL TANGENT
E	EAST	R	RADIUS
EA	EACH	RCP	REINFORCED CONCRETE PIPE
EF	EACH FACE	RD	ROOF DRAIN
EGP	EDGE OF PAVEMENT	RED	REDUCER
EGS	EDGE OF SHOULDER	REQD	REQUIRED
EHH	ELECTRICAL HANDHOLE	REV	REVISION
EL	ELEVATION	R/W	RIGHT-OF-WAY
EJ	EXPANSION JOINT	S	SOUTH
EW	EACH WAY	SE	SUPERELEVATION
EXP	EXPANSION	SIM	SIMILAR
FD	FLOOR DRAIN	STA	STATION
FDN	FOUNDATION	T	TANGENT LENGTH
FF	FINISHED FLOOR	TMH	TOP OF MANHOLE
FG	FINISHED GRADE	TOC	TOP OF CONCRETE
FRP	FIBER REINFORCED PIPE	TOG	TOP OF GRATING
FT	FOOT	TOP	TOP OF PAVEMENT
HC	HANDICAPPED	TYP	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE	UNO	UNLESS NOTED OTHERWISE
HVCM	HORIZ & VERT CONTROL MONUMENT	DS	DESIGN SPEED
HP	HIGH POINT	VERT	VERTICAL
ID	INSIDE DIAMETER	W	WEST
IN	INCH	W/O	WITHOUT
INV	INVERT	WP	WORK POINT
L	LENGTH		
LC	LENGTH OF VERTICAL CURVE		

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



<b>BLACK &amp; VEATCH</b> Building a world of difference®	
PROJECT NO. 178262	
DRAWN	RMG
DESIGNED	SMR
APPROVED	-
CHECKED	-

1	01/10/13	PRE-FILE TESTIMONY ISSUE	RRH	-	SMR	-
0	04/30/12	MCF REVIEW ISSUE	RMG	-	SMR	-
No	Date	Revision	By	Chkd.	Engr.	Supv.

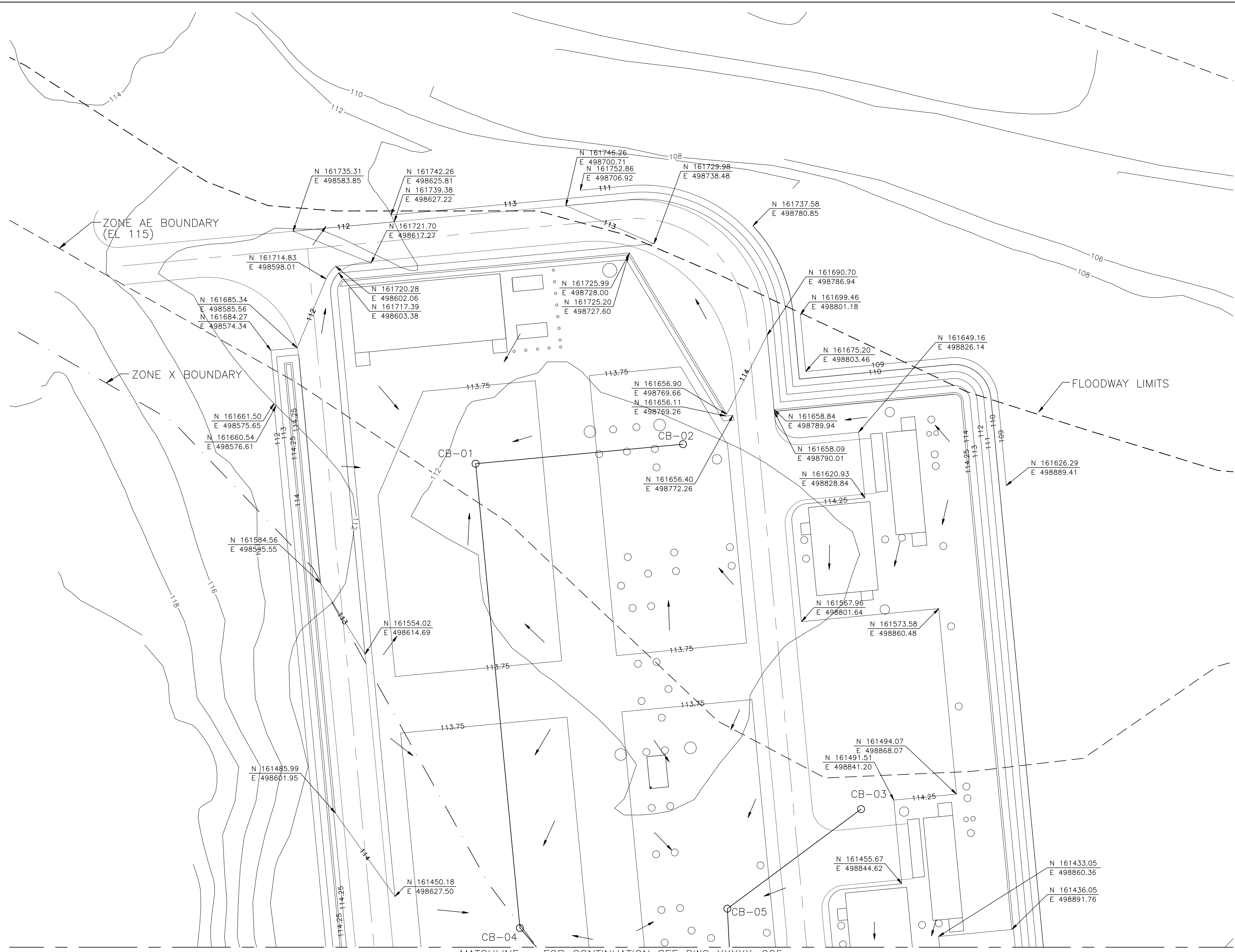


GRADING AND DRAINAGE - SITE  
KEY PLAN  
SHELTON SUBSTATION

Drawn	RMG	Date	04/30/12	Scale:	1:50	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
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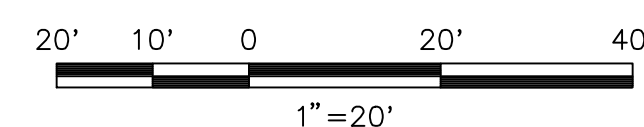
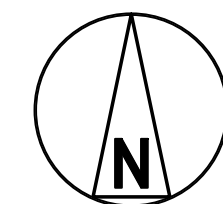
NOTES

1. SEE DWG XXXXX-003 FOR GENERAL NOTES, KEY PLAN AND ABBREVIATIONS.



**PRELIMINARY**

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PROJECT NO. 178262

DRAWN RMG

DESIGNED SMR

APPROVED -

CHECKED -

No	Date	Revision	By	Chkd.	Engr.	Supv.
1	01/10/13	PRE-FILE TESTIMONY ISSUE	RRH		SMR	
0	04/30/12	MCF REVIEW ISSUE	RMG		SMR	



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

Drawn	RMG	Date	04/30/12	Scale:	1:20
Design Engr.	SMR	Design Supv.			

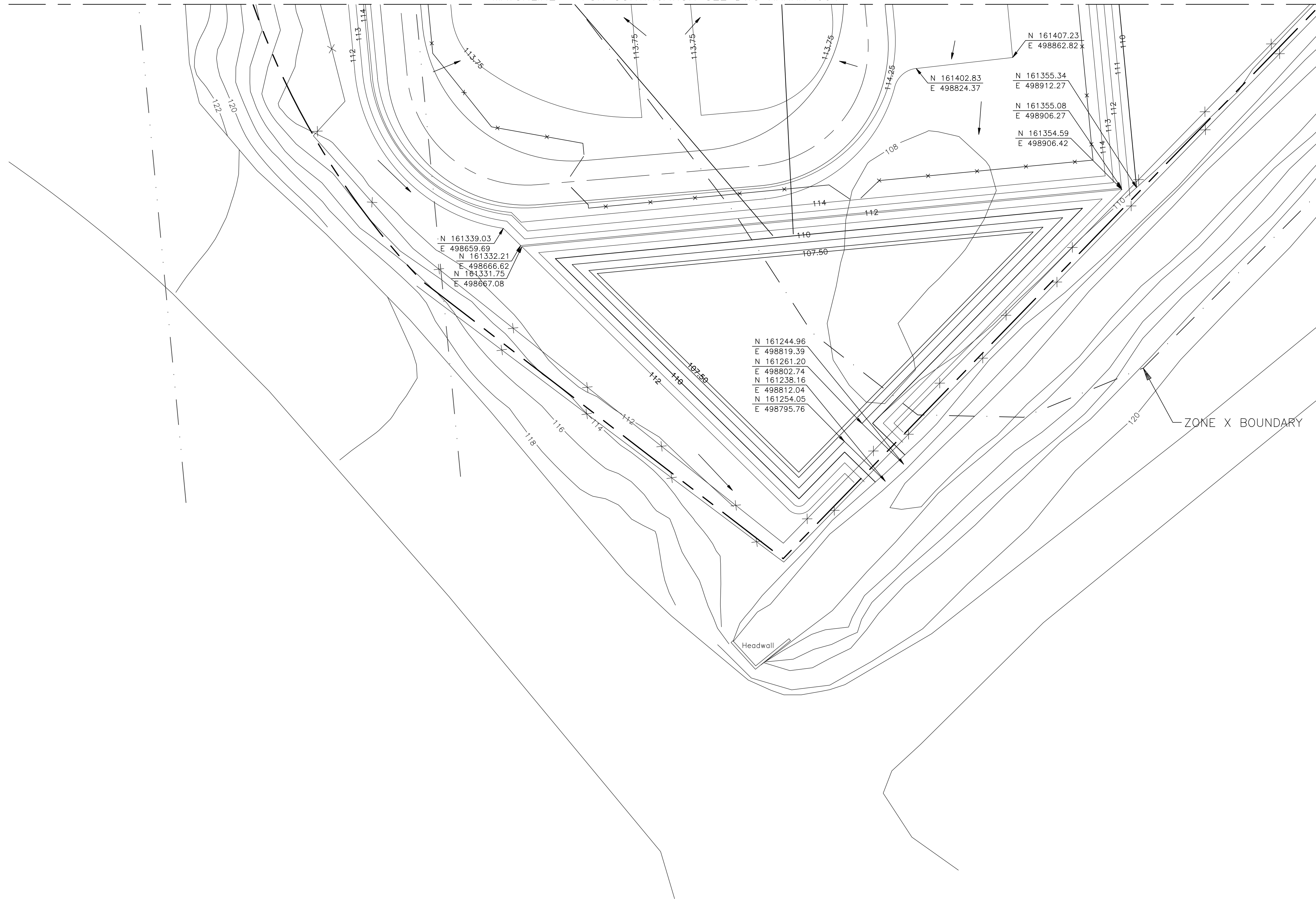
GRADING AND DRAINAGE - SITE  
PLAN - AREA 1  
SHELTON SUBSTATION

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	XXXXX-004

MATCHLINE - FOR CONTINUATION SEE DWG XXXX-004

NOTES

1. SEE DWG XXXX-003 FOR GENERAL NOTES, KEY PLAN AND ABBREVIATIONS.



N 161339.03  
E 498659.69  
N 161332.21  
E 498666.62  
N 161331.75  
E 498667.08

N 161402.83  
E 498824.37

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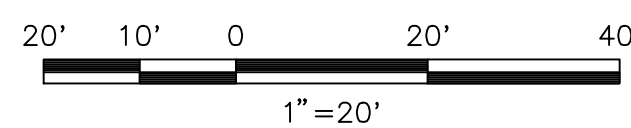
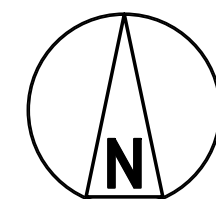
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E 498812.04  
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E 498795.76

ZONE X BOUNDARY

Headwall

**PRELIMINARY**

NOT TO BE USED FOR CONSTRUCTION



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DRAWN	RMG
DESIGNED	SMR
APPROVED	-
CHECKED	-

1	01/10/13	PRE-FILE TESTIMONY ISSUE	RRH	SMR
0	04/30/12	MCF REVIEW ISSUE	RMG	SMR
No	Date	Revision	By	Chkd. Engr. Supv.



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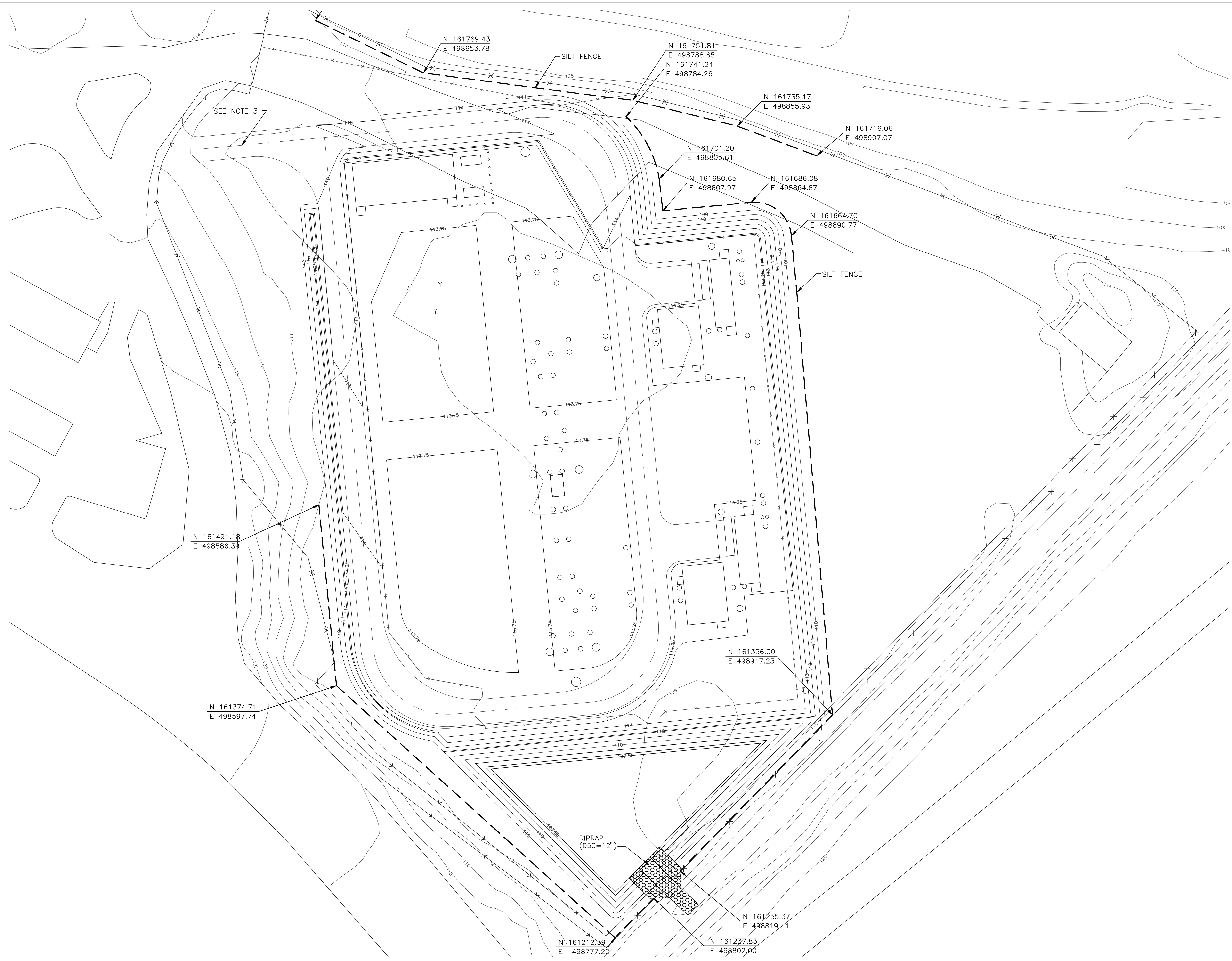
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Chkd.	-	Design Engr.	SMR	Design Supv.	-

GRADING AND DRAINAGE - SITE  
PLAN - AREA 2  
SHELTON SUBSTATION

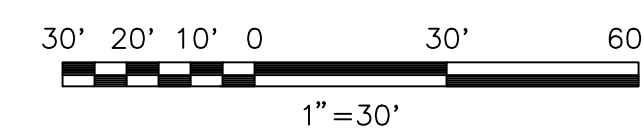
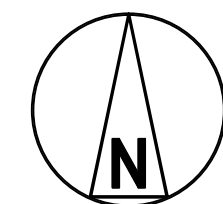
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	XXXXX-005

NOTES

1. SEE DWG XXXX-003 FOR GENERAL NOTES, KEY PLAN AND ABBREVIATIONS.
2. SEE DWG XXXX-008 FOR SILT FENCE AND ANTI-TRACKING PAD DETAILS.
3. TWO ANTI-TRACKING PADS, FIELD LOCATE BY BVCI FIELD CONSTRUCTION MANAGER.



NOT TO BE USED FOR CONSTRUCTION



PROJECT NO. 178262

DRAWN RMG

DESIGNED SMR

APPROVED -

CHECKED -

No	Date	Revision	By	Chkd.	Engr.	Supv.
1	01/10/13	PRE-FILE TESTIMONY ISSUE	RRH		SMR	
0	04/30/12	MCF REVIEW ISSUE	RMG		SMR	



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157 Church St. New Haven, Ct. 06506

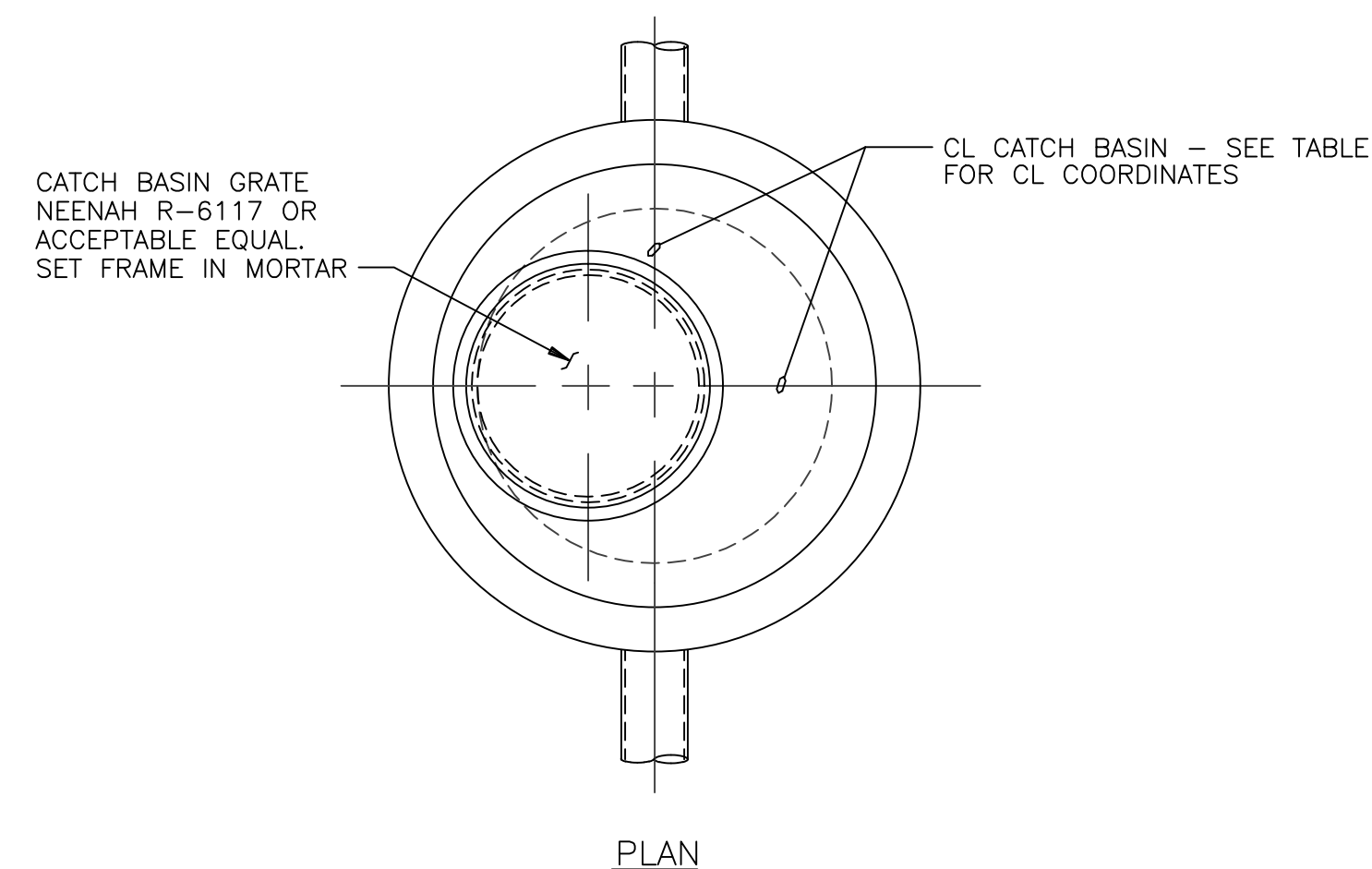
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Design Engr.	SMR	Design Supv.	-		

EROSION CONTROL - SITE PLAN  
SHELTON SUBSTATION

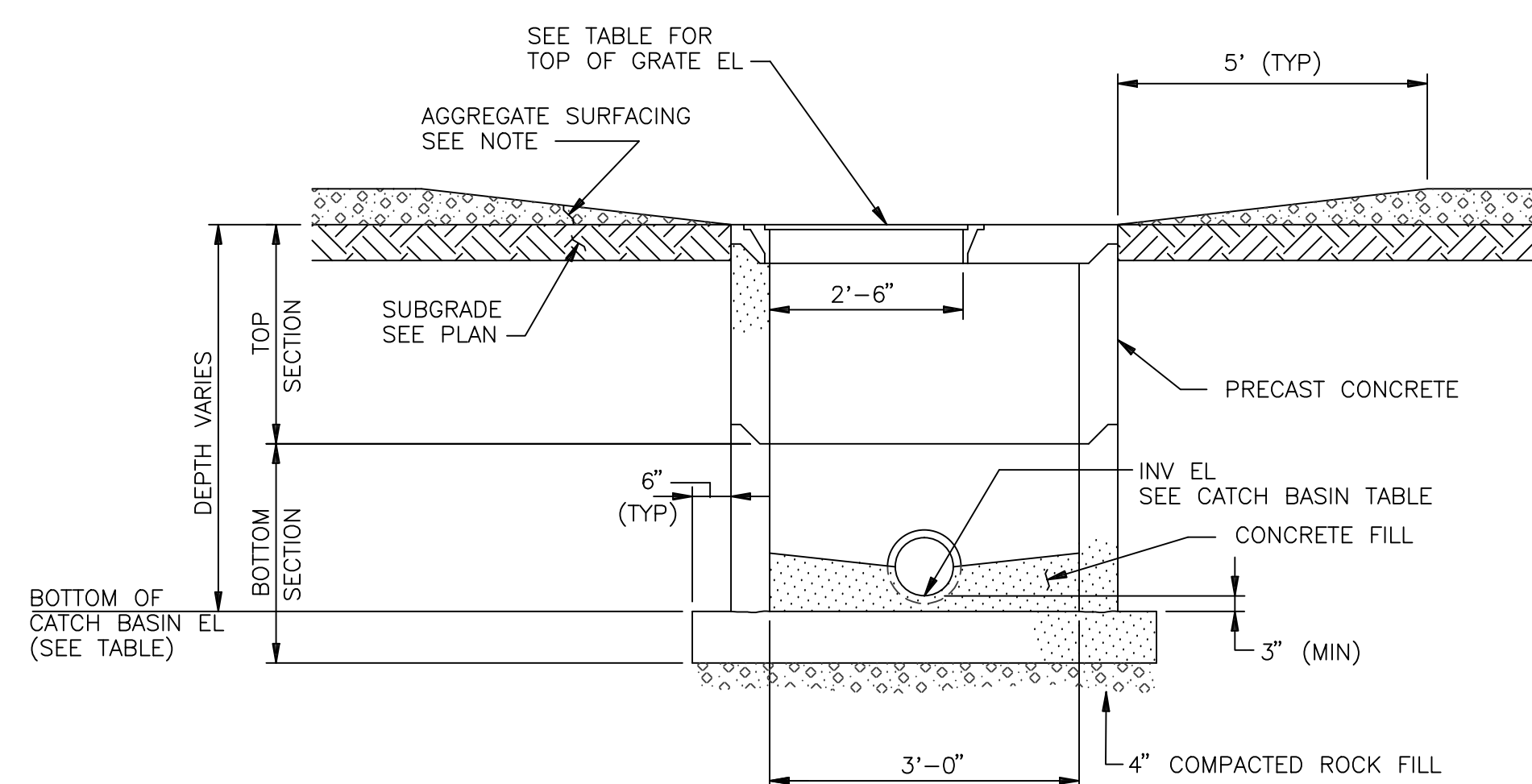
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-	-	XXXXX-006

NOTES

1. SEE DWG XXXXX-003 FOR GENERAL NOTES, KEY PLAN AND ABBREVIATIONS.



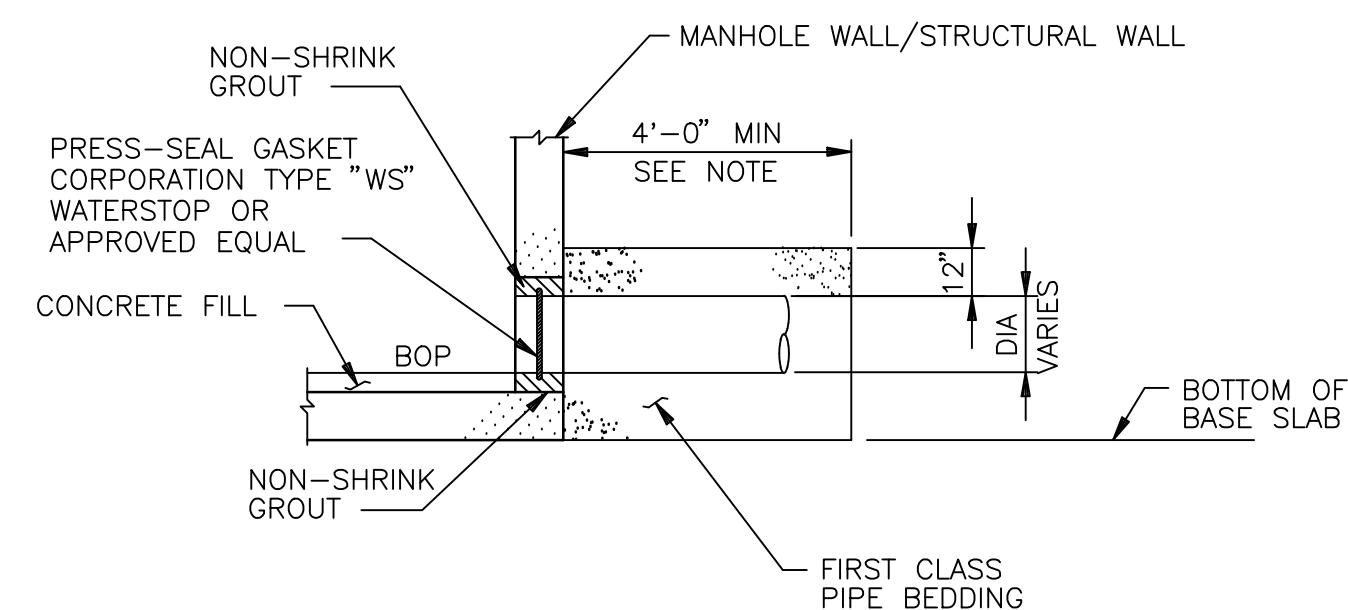
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SECTION

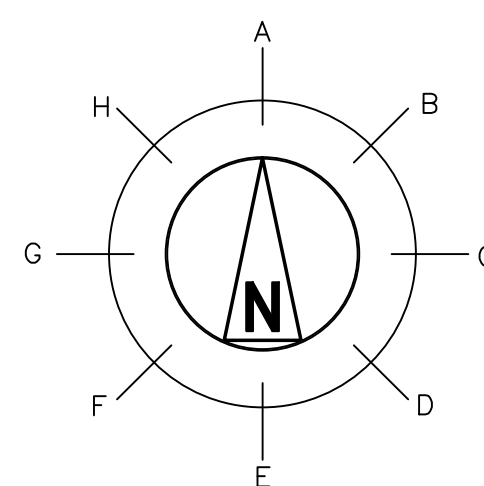
NOTE: AGGREGATE SURFACING SHALL TRANSITION FROM 0 AT THE EDGE OF THE MANHOLE TO FULL DEPTH WITHIN 5' OF THE MANHOLE EDGE.

TYPICAL PRECAST CATCH BASIN  
NO SCALE



NOTE: FIRST CLASS PIPE BEDDING TO LIMITS SHOWN OR EDGE OF MANHOLE EXCAVATION WHICHEVER IS GREATER.

TYPICAL WALL PENETRATION DETAIL  
NO SCALE



CATCH BASIN TABLE																						
STRUCTURE NO.	DRAWING NO.	CENTERLINE COORDINATES		TOP OF GRATE ELEVATION	BOTTOM OF CATCH BASIN ELEVATION	INLET & OUTLET PIPE INFORMATION																REMARKS
		NORTH	EAST			A		B		C		D		E		F		G		H		
						INV EL	DIA	INV EL	DIA	INV EL	DIA	INV EL	DIA	INV EL	DIA	INV EL	DIA	INV EL	DIA	INV EL	DIA	
CB-01	XXXXX-004	155397.00	545431.00	113.32	108.65	-	-	-	-	109.10	12"	-	-	108.90	15"	-	-	-	-	-	-	
CB-02	XXXXX-004	155497.50	546497.00	113.32	109.07	-	-	-	-	-	-	-	-	-	-	-	109.32	12"	-	-		
CB-03	XXXXX-004	153621.00	547412.75	113.95	109.07	-	-	-	-	-	-	-	-	109.95	12"	-	-	-	-	-		
CB-04	XXXXX-004	153009.00	545659.00	113.32	107.95	108.40	15"	-	-	-	-	108.20	18"	-	-	-	-	-	-	-	OUTLET TO INFILTRATION BASIN	
CB-05	XXXXX-004	153109.00	546725.00	113.32	108.87	-	-	109.32	12"	-	-	-	-	109.12	12"	-	-	-	-	-	OUTLET TO INFILTRATION BASIN	

ALL DIMENSIONS ARE IN FEET, EXCEPT DIAMETER, WHICH IS IN INCHES FOR PIPELINE MATERIAL SEE PIPELINE LIST

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DRAWN	RMG
DESIGNED	SMR
APPROVED	-
CHECKED	-

PROJECT NO.	178262
DESIGNED	SMR
DATE	01/10/13
REVISION	PRE-FILE TESTIMONY ISSUE
DATE	04/30/12
REVISION	MCF REVIEW ISSUE
DATE	-
REVISION	-



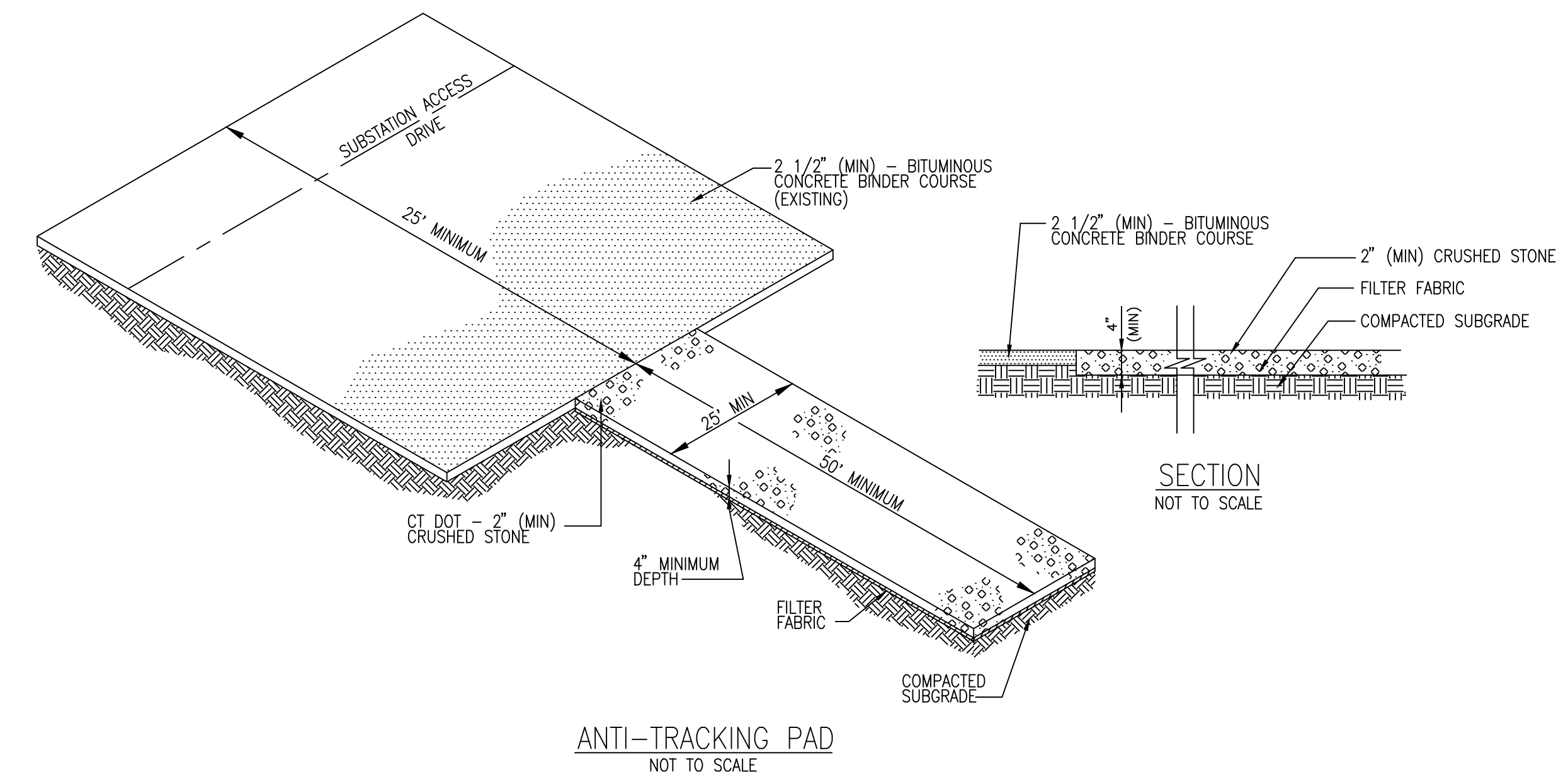
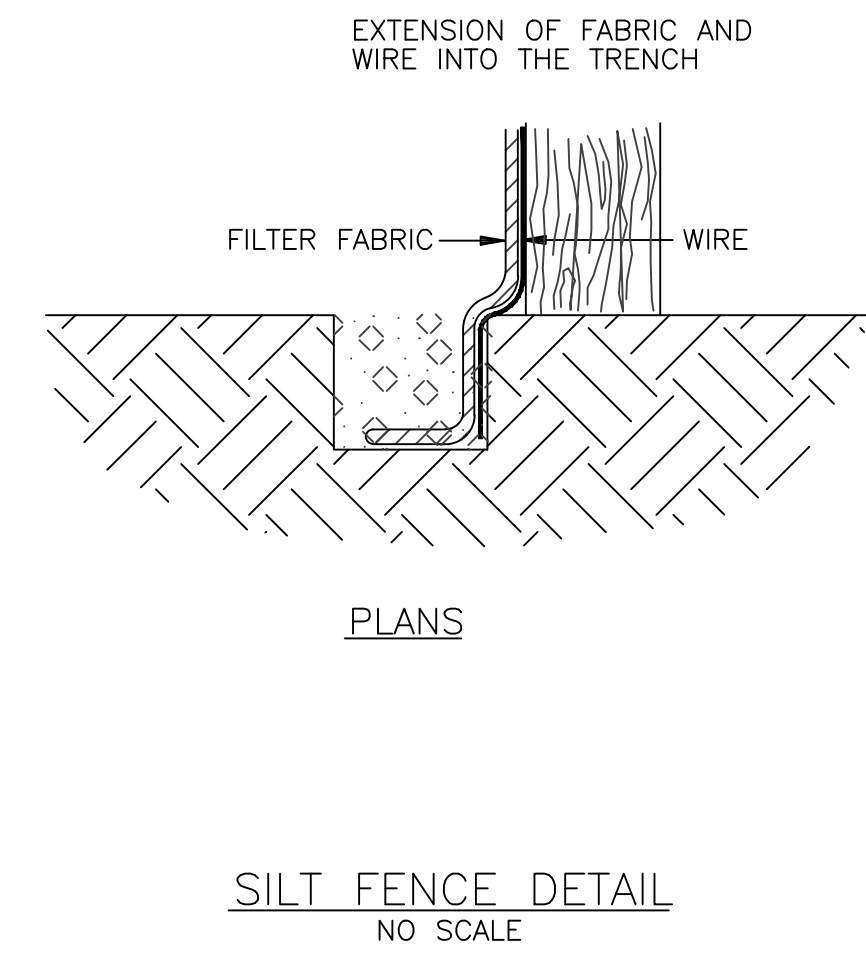
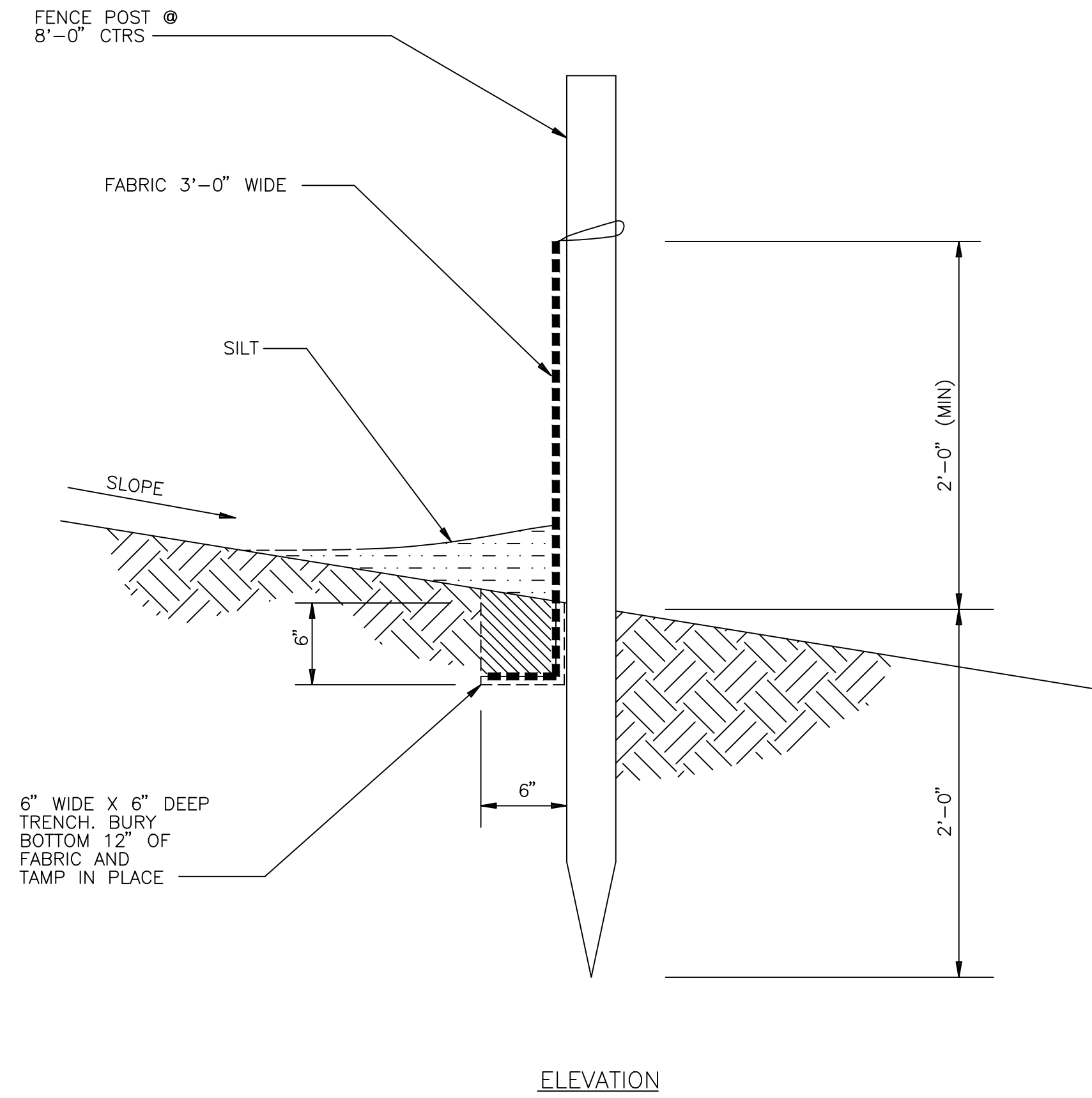
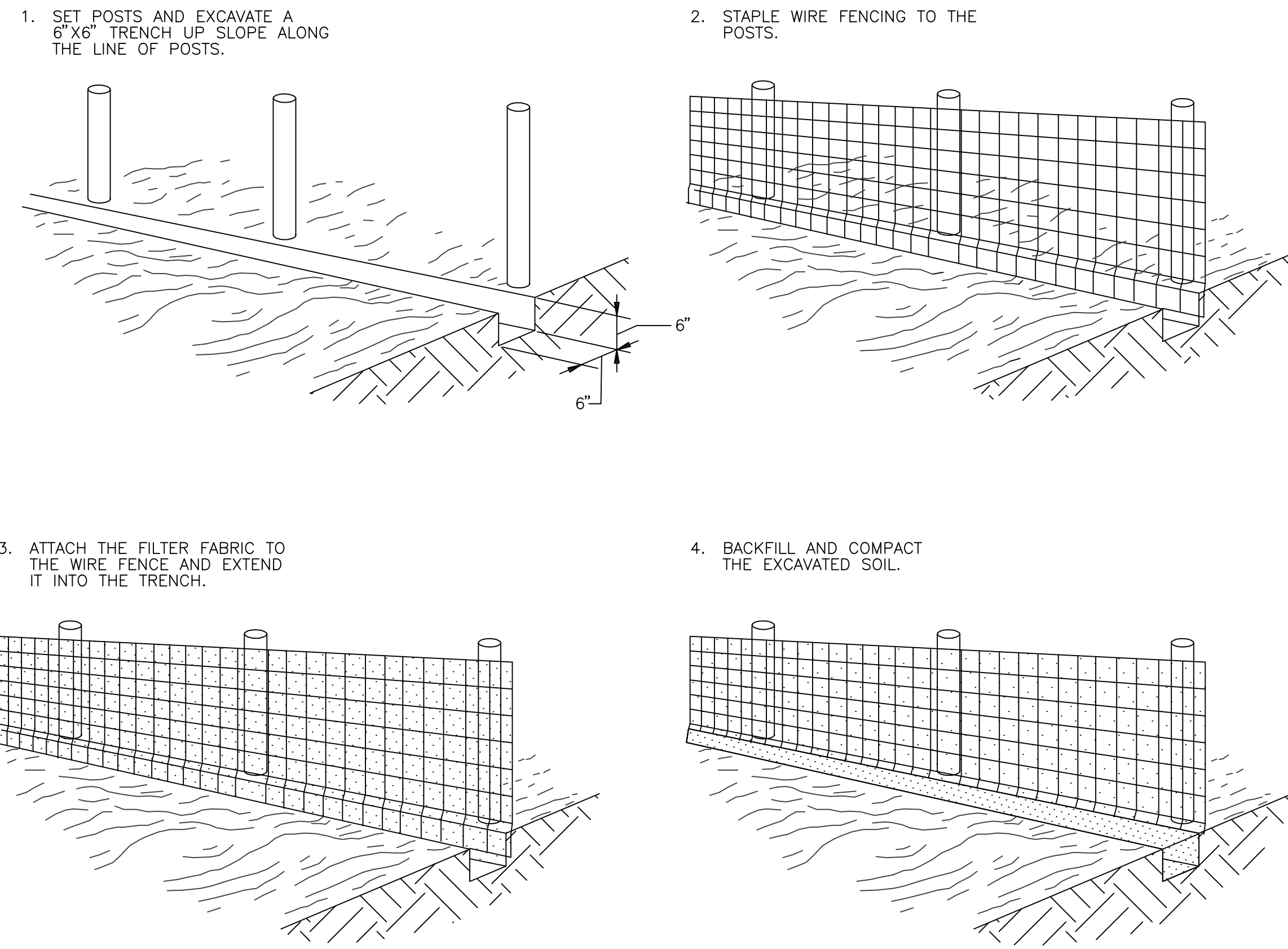
GRADING AND DRAINAGE - SITE  
CATCH BASIN SCHEDULE AND DETAILS  
SHELTON SUBSTATION

Drawn	RMG	Date	04/30/12	Scale	-
Chkd.	-	Design Engr.	SMR	Design Supv.	-

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	XXXXX-007

NOTES

1. SEE DWG XXXXX-003 FOR GENERAL NOTES, KEY PLAN AND ABBREVIATIONS.
2. SEE DWG XXXXX-006 FOR EROSION CONTROL PLAN INFORMATION.



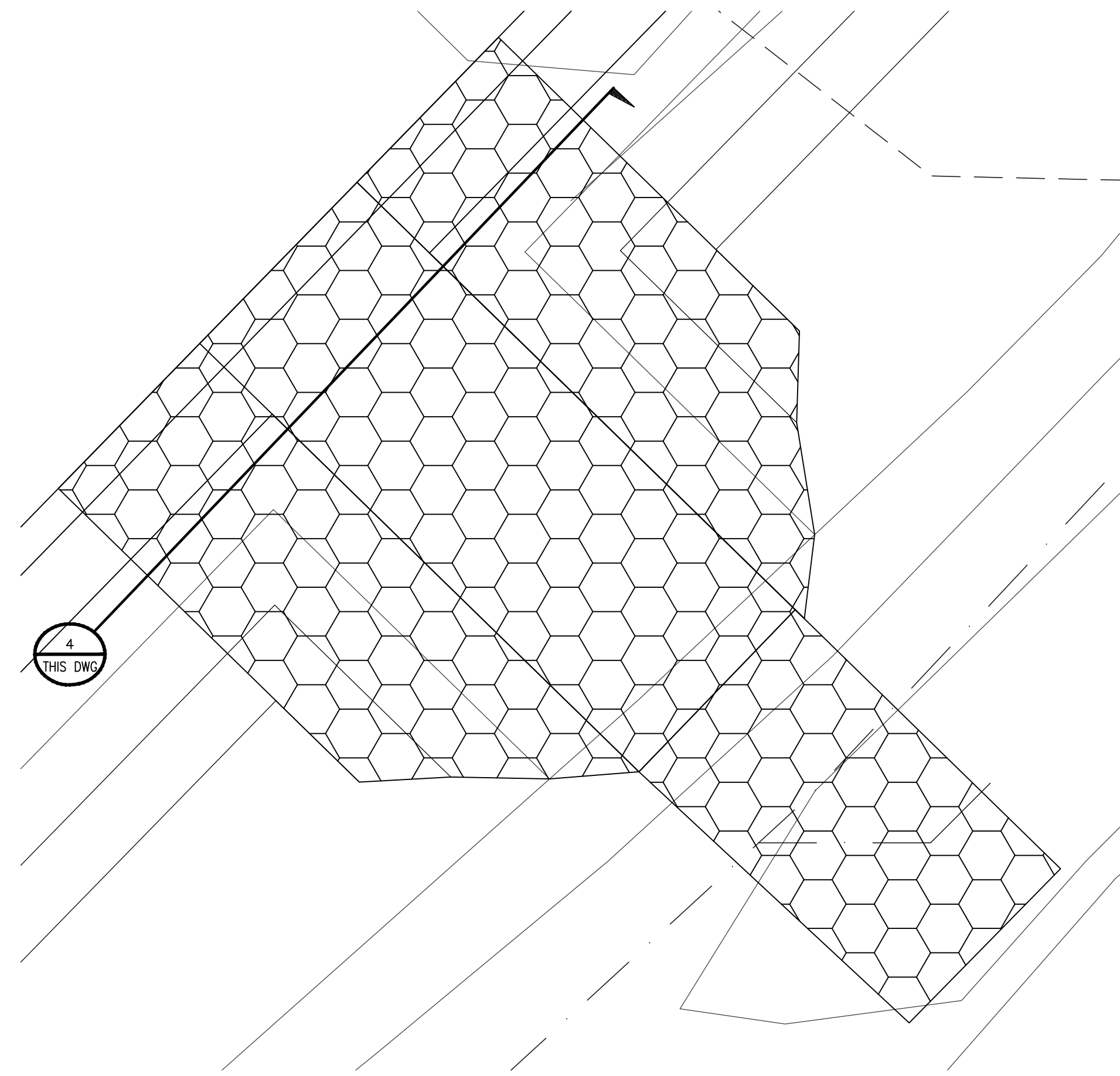
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				EROSION CONTROL - SITE EROSION CONTROL DETAILS SHELTON SUBSTATION	
PROJECT NO. 178262		157 Church St. New Haven, Ct. 06506		CAD FILE NAME	
DRAWN RMG	DESIGNED SMR	APPROVED -	CHECKED -	Drawn RMG	Date 04/30/12
1 01/10/13 PRE-FILE TESTIMONY ISSUE	0 04/30/12 MCF REVIEW ISSUE	RRH SMR	RMG SMR	Scale: -	SEQUENCE No.
No Date	Revision	By Chkd. Engr. Supv.	Chkd. -	Design Engr. SMR	Design Supv. -
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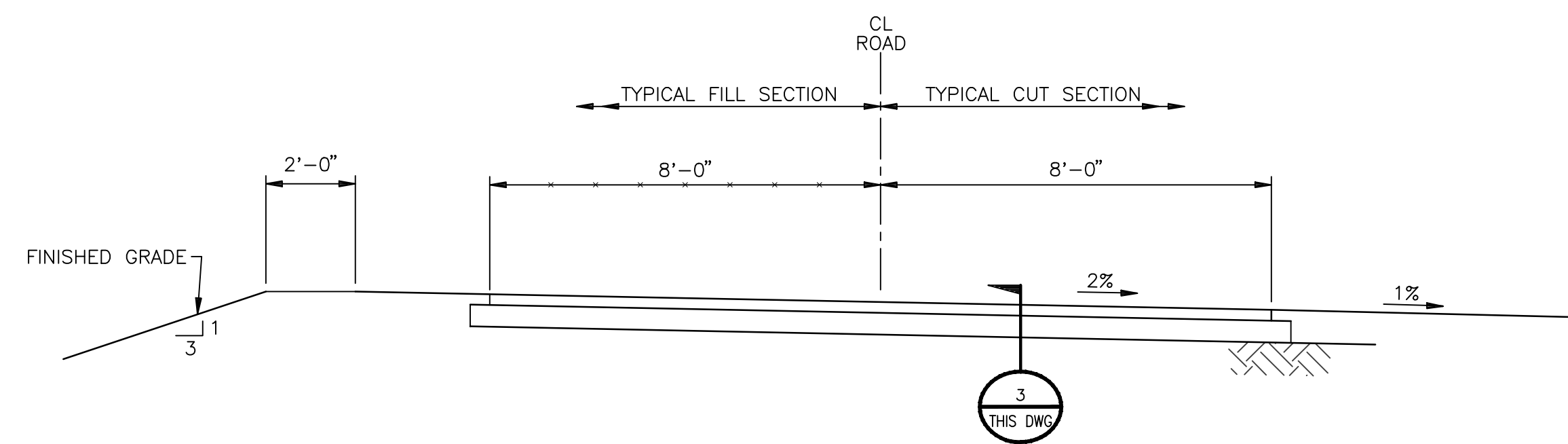


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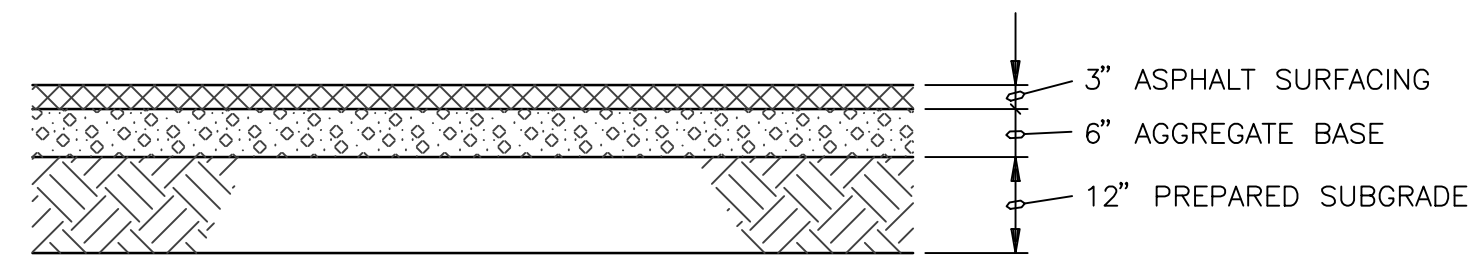
1. SEE DWG XXXX-003 FOR GENERAL NOTES, KEY PLAN AND ABBREVIATIONS.



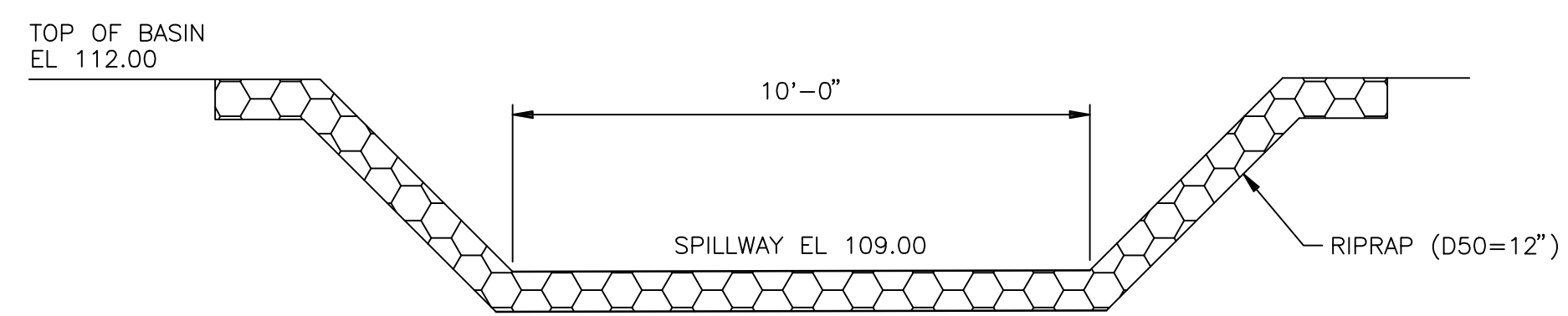
DETAIL 1  
NO SCALE



TYPICAL ASPHALT SURFACE ROAD SECTION  
NO SCALE



SECTION 3  
NO SCALE



SECTION 4  
NO SCALE

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<b>BLACK &amp; VEATCH</b> Building a world of difference®	
PROJECT NO. 178262	
DRAWN	RMG
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1	01/10/13	PRE-FILE TESTIMONY ISSUE	RRH	SMR
0	04/30/12	MCF REVIEW ISSUE	RMG	SMR
No	Date	Revision	By	Chkd. Engr. Supv.



Drawn	RMG	Date	04/30/12	Scale:	-
Chkd.	-	Design Engr.	SMR	Design Supv.	-

GRADING AND DRAINAGE - SITE  
DETAILS  
SHELTON SUBSTATION

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	XXXXX-009