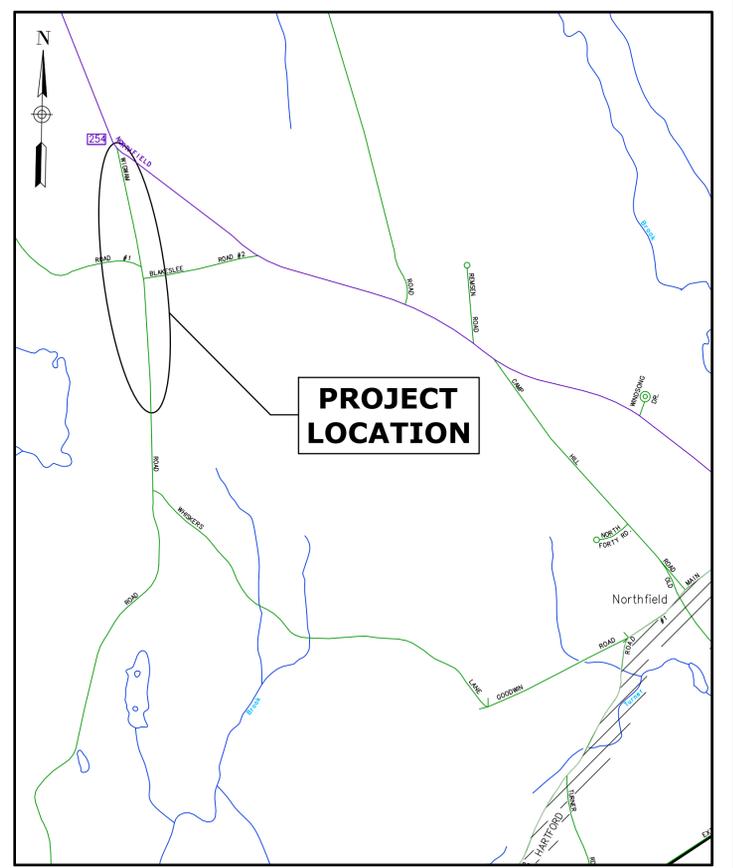
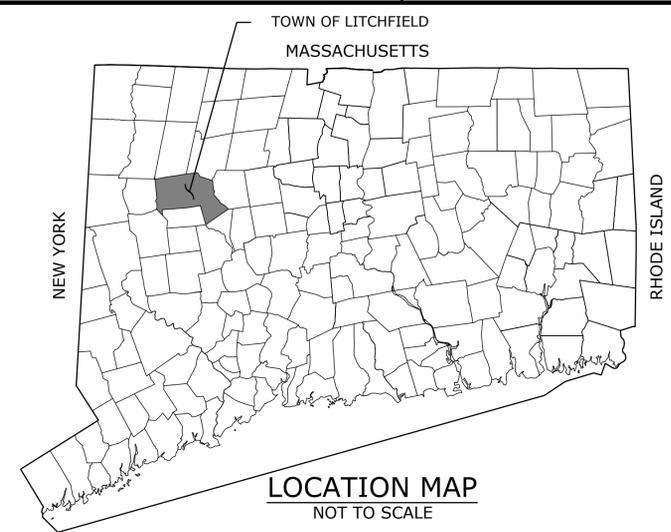


RECONSTRUCTION OF WIGWAM ROAD LITCHFIELD, CONNECTICUT



DECEMBER 2, 2025

PREPARED BY:



HALEY WARD
ENGINEERING | ENVIRONMENTAL | SURVEYING

140 Willow Street
Winsted, Connecticut 06098
860.379.6669

NOTE:
PROJECT PLANS INCLUDE PLAN, PROFILE AND CROSS SECTION SHEETS THAT INCLUDE REFERENCES OR DETAILS TO HMA S0.375, HMA S0.50, BITUMINOUS CONCRETE LIP CURBING, METAL BEAM RAIL, METAL BEAM RAIL END ANCHORAGES, TERMINAL ELEMENTS AND APPURTENANCES, AND BITUMINOUS CONCRETE WEARING SURFACES AT DRIVEWAY APRONS. THESE ITEMS ARE BY OTHERS AND ARE NOT INCLUDED IN THIS CONTRACT.

NOTE:
COORDINATE GRADING WITH PLAN SHEETS AT ALL INTERSECTIONS, BEGINNING OF PROJECT, END OF PROJECT, AND DRIVEWAY APRONS.

LIST OF DRAWINGS

SHEET #	SHEET NAME
G1	COVER SHEET
G2	GENERAL INFORMATION
B1	BORING LOGS
PP1	PLAN AND PROFILE STA. 00+50 TO STA. 12+00
PP2	PLAN AND PROFILE STA. 12+00 TO STA. 23+00
PP3	PLAN AND PROFILE STA. 23+00 TO STA. 34+00
PP4	PLAN AND PROFILE BLAKESLEE ROAD EAST AND WEST
HA1	HORIZONTAL ALIGNMENT
SS1	STORM SEWER SYSTEM LAYOUT
CS1A	TYPICAL SECTIONS
CS1	CROSS SECTIONS STA. 1+00 TO STA. 3+50
CS2	CROSS SECTIONS STA. 4+00 TO STA. 7+00
CS3	CROSS SECTIONS STA. 7+50 TO STA. 8+50
CS4	CROSS SECTIONS STA. 9+00 TO STA. 12+00
CS5	CROSS SECTIONS STA. 12+50 TO STA. 15+50
CS6	CROSS SECTIONS STA. 16+00 TO STA. 19+00
CS7	CROSS SECTIONS STA. 19+50 TO STA. 23+50
CS8	CROSS SECTIONS STA. 24+00 TO STA. 27+00
CS9	CROSS SECTIONS STA. 27+50 TO STA. 31+00
CS10	CROSS SECTIONS STA. 31+50 TO STA. 33+50
CS11	SUPPLEMENTAL CROSS SECTIONS
CS12	SUPPLEMENTAL CROSS SECTIONS
SESC-1	SOIL EROSION AND SEDIMENT CONTROL DETAILS
SESC-2	SOIL EROSION AND SEDIMENT CONTROL NARRATIVE
HW-286_01	DRAINAGE TRENCH EXCAVATION
HW-506_01a	ENDWALLS
HW-506_01b	STEEL REINFORCING FOR ENDWALLS
HW-586_01	CATCH BASIN AND DROP INLET TYPES "C" AND "C-L"
HW-586_07a	CATCH BASIN TOPS TYPE "C" AND "C-L"
HW-586_08	CATCH BASIN FRAMES AND GRATES
HW-686_02	PIPE ENDS
HW-751_01	UNDERDRAINS AND UNDERDRAIN OUTLETS
HW-815_01	BITUMINOUS CONCRETE CURBING
HW-910_17	R-B TERMINAL SECTION
HW-910_20	MASH W-BEAM HARDWARE
HW-910_21	METAL BEAM RAIL (R-B MASH) GUIDE RAIL
HW-911_01	R-B END ANCHORAGE TYPE I AND II
HW-921_01	DRIVEWAY RAMP AND SIDEWALKS
HW-930_01	OBJECT MARKER
TR-1205_01	DELINEATIONS, DELINEATORS AND OBJECT MARKER DETAILS
TR-1208_01	SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS
TR-1208_02	METAL SIGN POSTS AND SIGN MOUNTING DETAILS
TR-GS_04	PAVEMENT MARKING LINES AND SYMBOLS
TR-GS_13	SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS
TR-GS_14	CONSTRUCTION SIGN SUPPORTS AND CHANNELING DEVICES

1	2025.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
RECONSTRUCTION OF WIGWAM ROAD LITCHFIELD, CONNECTICUT				
TITLE				
COVER				
DATE		2025.12.02		SCALE
				AS NOTED
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010118.22156				
DRAWING No.				REV
G1				1

OWNER
Raz Alexe P.E.
Director of Public Works / Town Engineer
74 West Street
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ENGINEER
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e-mail: rcolabella@haleyward.com

FILE LOCATION: P:\CT\40101188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT.DWG, 2026.02.10, 5:17 AM

BORING LOGS

Boring 1 - Sta. 2+00

0'-5" Asphalt
5'-9" Gravel Base
9'-48" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 48" (probable boulder)
- Drilled past cobbles/boulders 9'-24"; no sampling
- Asphalt layer includes an overlay.

**Blow Count Summary
B-1 Sta. 2+00**

0'-6"	28
6'-9"	See Note 2
12'-18"	See Note 2
18'-24"	See Note 2
24'-30"	38
30'-36"	60
36'-42"	58
42'-48"	34

Boring 2 - Sta. 4+50

0'-4.5" Asphalt
4.5' - 10' Gravel Base
10.5'-54" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Asphalt layer includes an overlay

**Blow Count Summary
B-2 Sta. 4+50**

0'-6"	
6'-12"	25
12'-18"	30
18'-24"	29
24'-30"	26
30'-36"	13
36'-42"	24
42'-48"	34
48'-54"	35

Boring 3 - Sta. 7+00

0'-4.5" Asphalt
4.5'-10.5" Gravel Base
10'-54" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Asphalt layer includes an overlay

**Blow Count Summary
B-3 Sta. 7+00**

0'-6"	
6'-12"	30
12'-18"	70
18'-24"	30
24'-30"	26
30'-36"	15
36'-42"	18
42'-48"	19
48'-54"	22

Boring 4 - Sta. 9+50

0'-4.5" Asphalt
4.5'-16.5" Gravel Base
16.5'-28" Silty Very Dense Glacial Till (Hardpan)
28'-54" Moderately Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Asphalt layer includes an overlay

**Blow Count Summary
B-4 Sta. 9+50**

0'-6"	
6'-12"	13
12'-18"	16
18'-24"	24
24'-30"	27
30'-36"	18
36'-42"	18
42'-48"	19
48'-54"	24

Boring 5 - Sta. 12+00

0'-4.5" Asphalt
4.5'-6" Gravel Base
6'-48" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 48" (probable boulder)
- Asphalt layer includes an overlay
- Drilled past cobbles/boulders 15'-24"; no sampling
- Thin layer of gravel base noted at this location

**Blow Count Summary
B-5 Sta. 12+00**

0'-6"	
6'-12"	38
12'-18"	49
18'-24"	50/3"
24'-30"	See Note 3
30'-36"	18
36'-42"	24
42'-48"	33

Boring 6 - Sta. 14+50

0'-4.5" Asphalt
4.5'-9.5" Gravel Base
9.5'-54" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Asphalt layer includes an overlay

**Blow Count Summary
B-6 Sta. 14+50**

0'-6"	
6'-12"	31
12'-18"	27
18'-24"	33
24'-30"	42
30'-36"	18
36'-42"	23
42'-48"	24
48'-54"	28

Boring 7 - Sta. 17+00

0'-3" Asphalt
3'-4" Gravel Base
4'-54" Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Very thin / negligible layer of gravel base present

**Blow Count Summary
B-7 Sta. 17+00**

0'-6"	
6'-12"	17
12'-18"	41
18'-24"	31
24'-30"	17
30'-36"	12
36'-42"	12
42'-48"	10
48'-54"	24

Boring 8 - Sta. 19+50

0'-3" Asphalt
3'-6" Gravel Base
6'-54" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"

**Blow Count Summary
B-8 Sta. 19+50**

0'-6"	
6'-12"	11
12'-18"	37
18'-24"	18
24'-30"	37
30'-36"	28
36'-42"	35
42'-48"	33
48'-54"	40

Boring 13 - Sta. 32+00

0'-3" Asphalt
3'-8" Gravel Base
8'-54" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"

**Blow Count Summary
B-13 Sta. 32+00**

0'-6"	
6'-12"	18
12'-18"	25
18'-24"	36
24'-30"	48
30'-36"	21
36'-42"	24
42'-48"	30
48'-54"	36

Boring 9 - Sta. 22+00

0'-5" Asphalt
5'-8" Gravel Base
8'-54" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Asphalt may contain pot-hole fill. No clear sign of overlay.

**Blow Count Summary
B-9 Sta. 22+00**

0'-6"	
6'-12"	25
12'-18"	37
18'-24"	38
24'-30"	72
30'-36"	30
36'-42"	35
42'-48"	35
48'-54"	39

Boring 10 - Sta. 24+50

0'-6" Asphalt
6'-10.5" Gravel Base
10.5'-54" Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Asphalt may contain pot-hole fill. No clear sign of overlay.
- Soil sample (fill layer) was wet at 30' +/-

**Blow Count Summary
B-10 Sta. 24+50**

0'-6"	
6'-12"	20
12'-18"	27
18'-24"	18
24'-30"	13
30'-36"	6
36'-42"	7
42'-48"	9
48'-54"	10

Boring 11 - Sta. 27+00

0'-3" Asphalt
3'-9" Gravel Base
9'-54" Very Dense Glacial Till (Hardpan)

Notes:

- This boring was advanced to a greater depth than the others to gather information for a future culvert installation near this location.
- Boring terminated at 66" (refusal)
- Soil sample (fill layer) was wet at 30' +/-

**Blow Count Summary
B-11 Sta. 27+00**

0'-6"	
6'-12"	30
12'-18"	37
18'-24"	72
24'-30"	38
30'-36"	27
36'-42"	20
42'-48"	17
48'-54"	31
54'-60"	42
60'-66"	66
66'-69"	50/3"

Boring 12 - Sta. 29+50

0'-3" Asphalt
3'-8" Gravel Base
8'-54" Very Dense Glacial Till (Hardpan)

Notes:

- Boring terminated at 54"
- Soil sample (fill layer) was wet at 30' +/-

**Blow Count Summary
B-12 Sta. 29+50**

0'-6"	
6'-12"	50
12'-18"	29
18'-24"	13
24'-30"	7
30'-36"	21
36'-42"	29
42'-48"	29
48'-54"	30

1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK

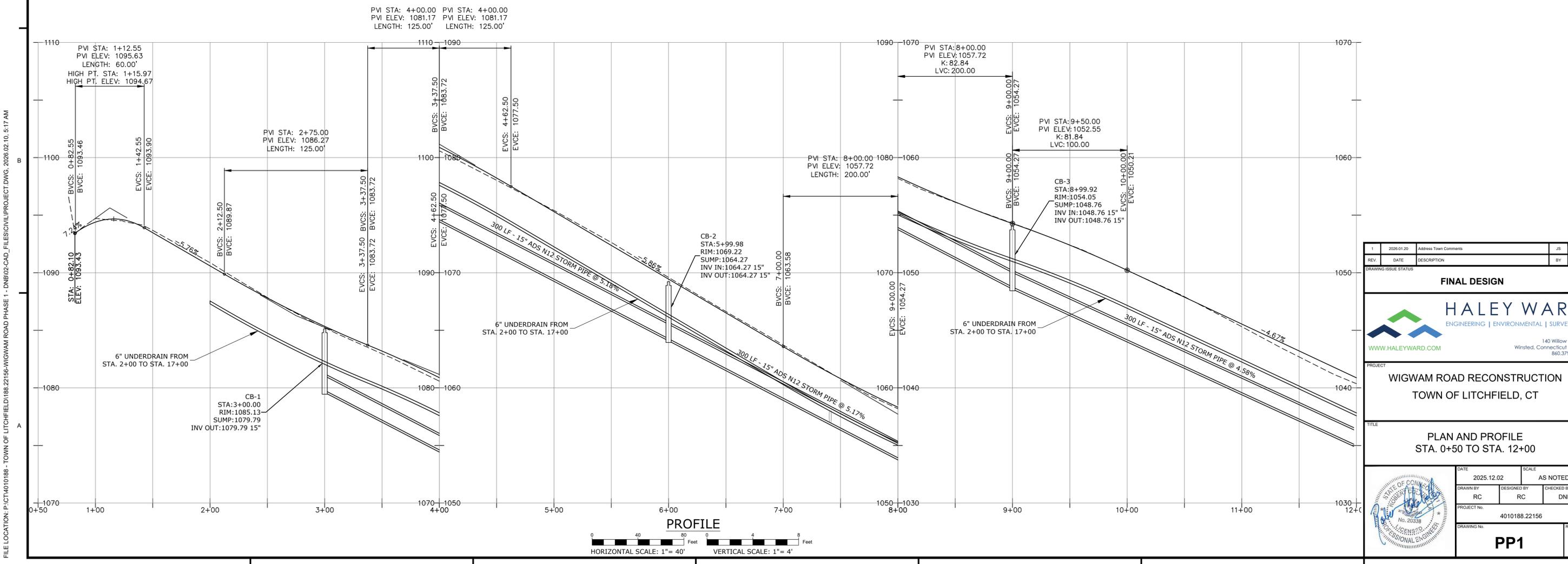
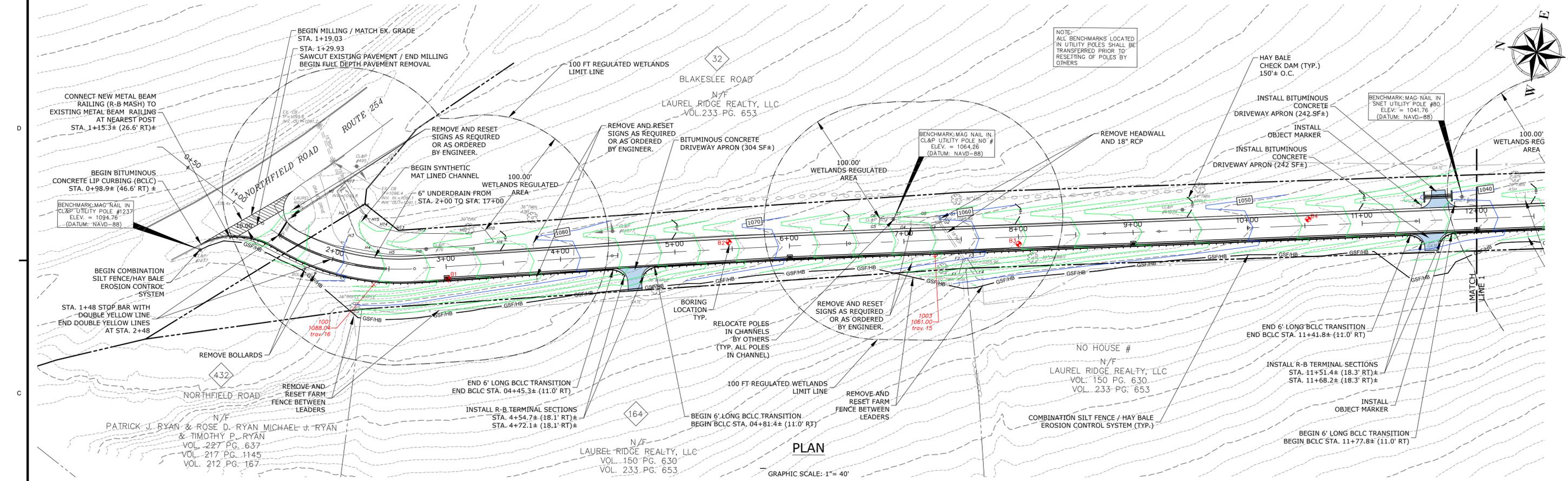
DRAWING ISSUE STATUS
FINAL DESIGN

HALEY WARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
WWW.HALEYWARD.COM
140 Willow Street
Winsted, Connecticut 06098
860.379.6699

PROJECT
**WIGWAM ROAD RECONSTRUCTION
TOWN OF LITCHFIELD, CT**

TITLE
BORING LOGS

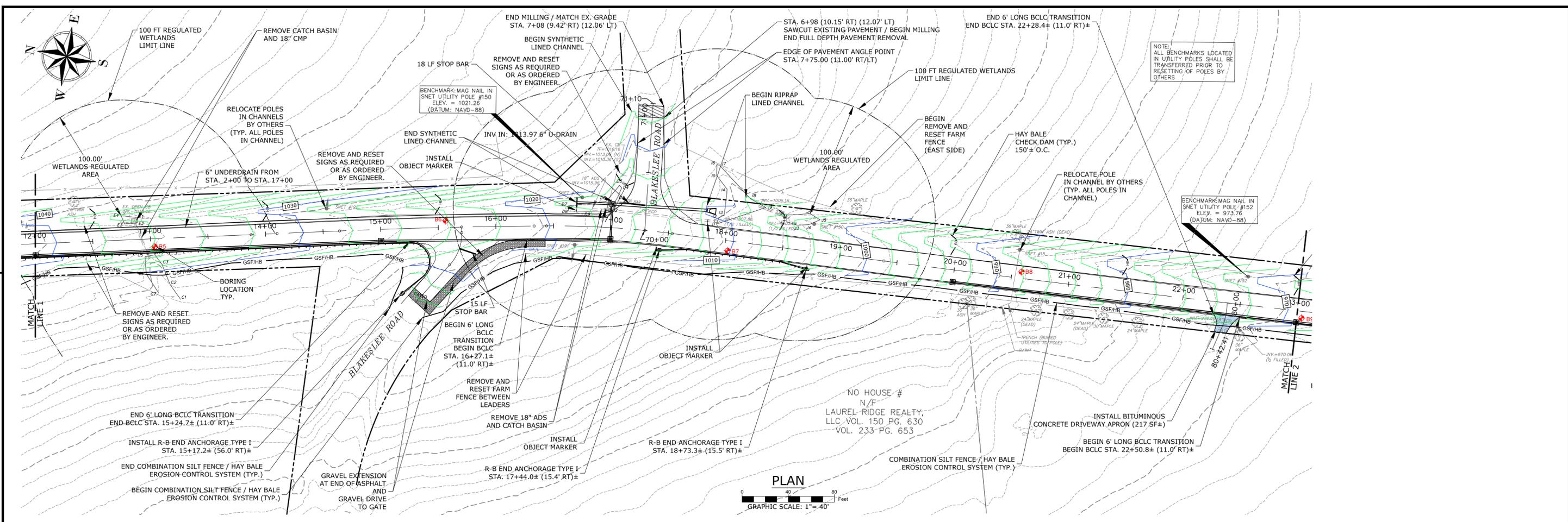
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CHECKED BY	DNB		
PROJECT No.	4010188.22156		
DRAWING No.	B-1	REV.	1



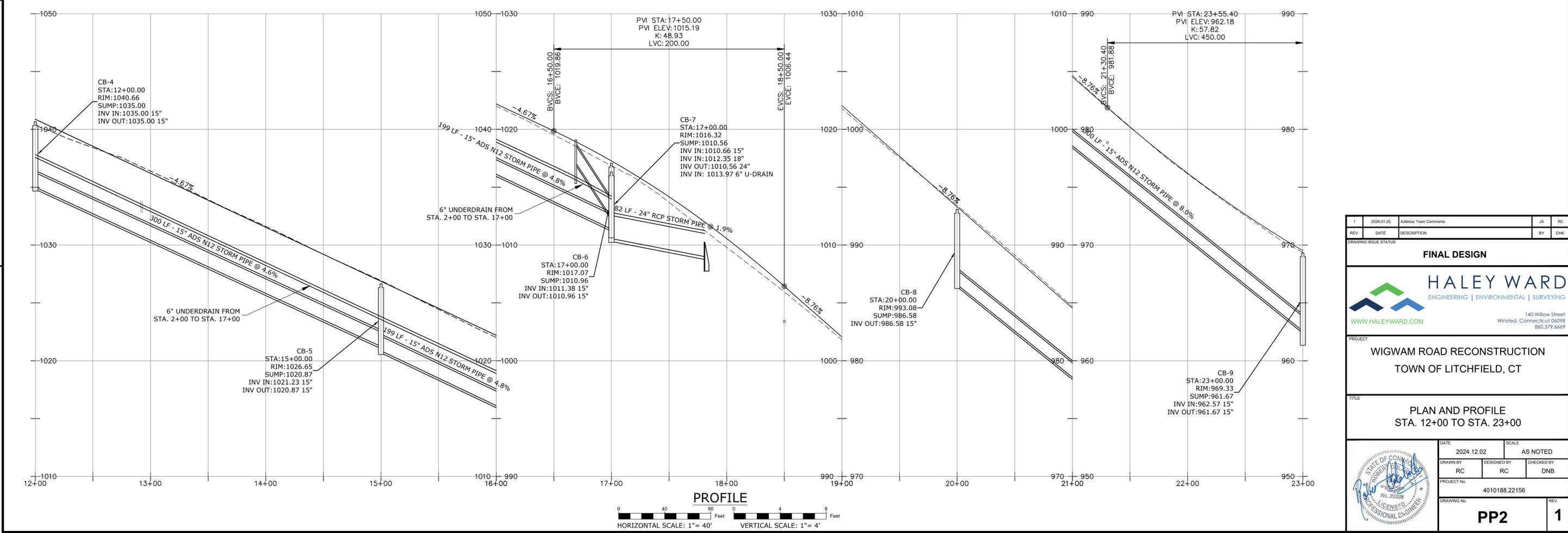
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REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM				
140 Willow Street Winsted, Connecticut 06098 860.379.6669				
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
PLAN AND PROFILE STA. 0+50 TO STA. 12+00				
DATE		SCALE		
2025.12.02		AS NOTED		
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010188.22156				
DRAWING No.				
PP1				1

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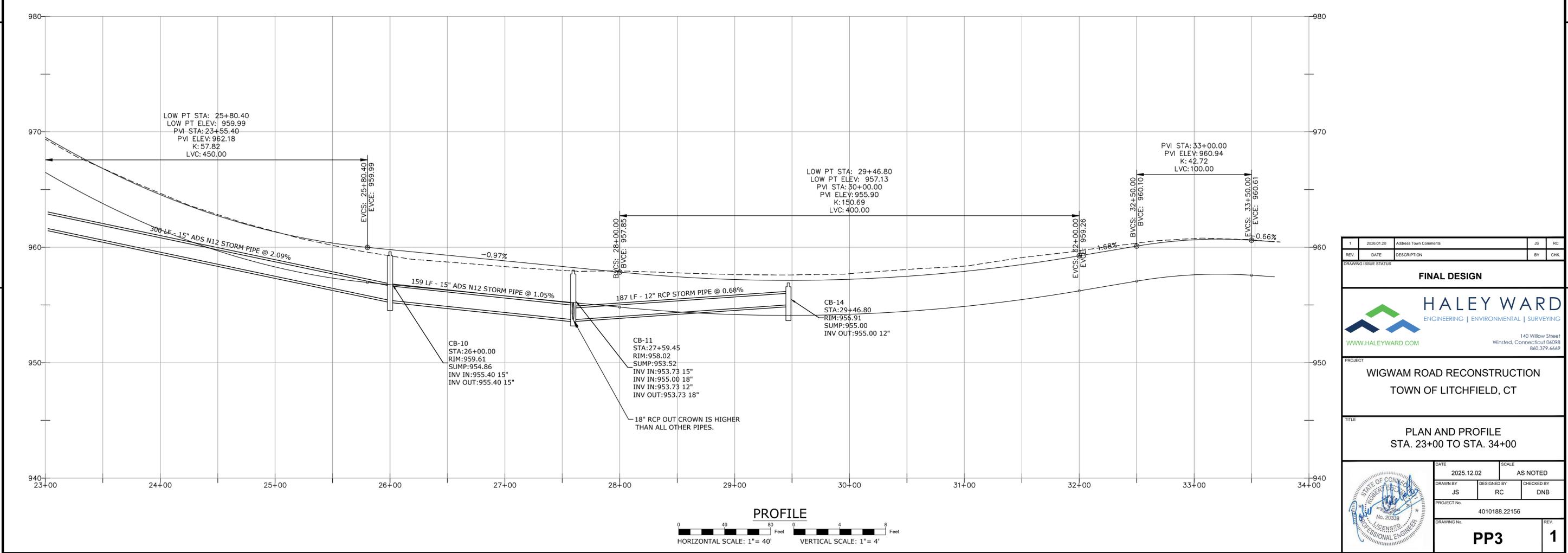
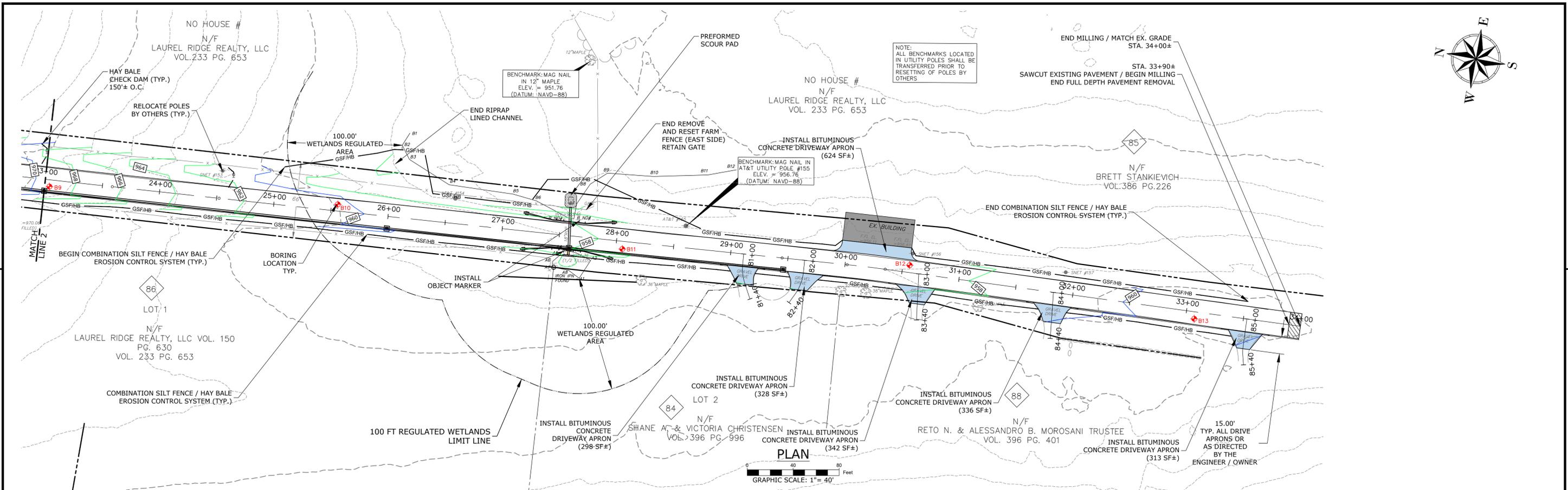
PLAN
GRAPHIC SCALE: 1" = 40'



PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

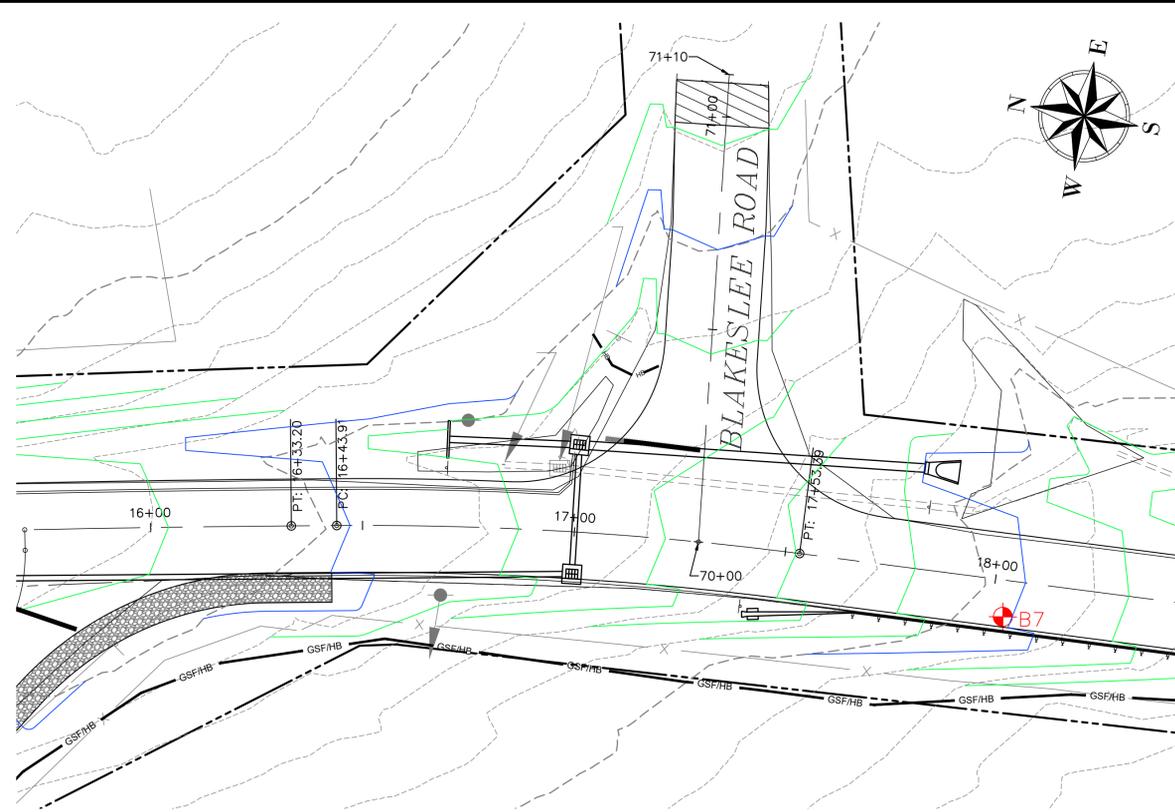
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REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
www.haleyward.com		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
PLAN AND PROFILE STA. 12+00 TO STA. 23+00				
DATE: 2024.12.02		SCALE: AS NOTED		
DRAWN BY: RC	DESIGNED BY: RC	CHECKED BY: DNB		
PROJECT No. 4010188.22156				
PP2				1

FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT DWG. 2026.02.10. 5:18 AM



1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
PLAN AND PROFILE STA. 23+00 TO STA. 34+00				
		DATE: 2025.12.02 SCALE: AS NOTED		
DRAWN BY: JS		DESIGNED BY: RC		CHECKED BY: DNB
PROJECT No.: 4010188.22156				
PP3				1

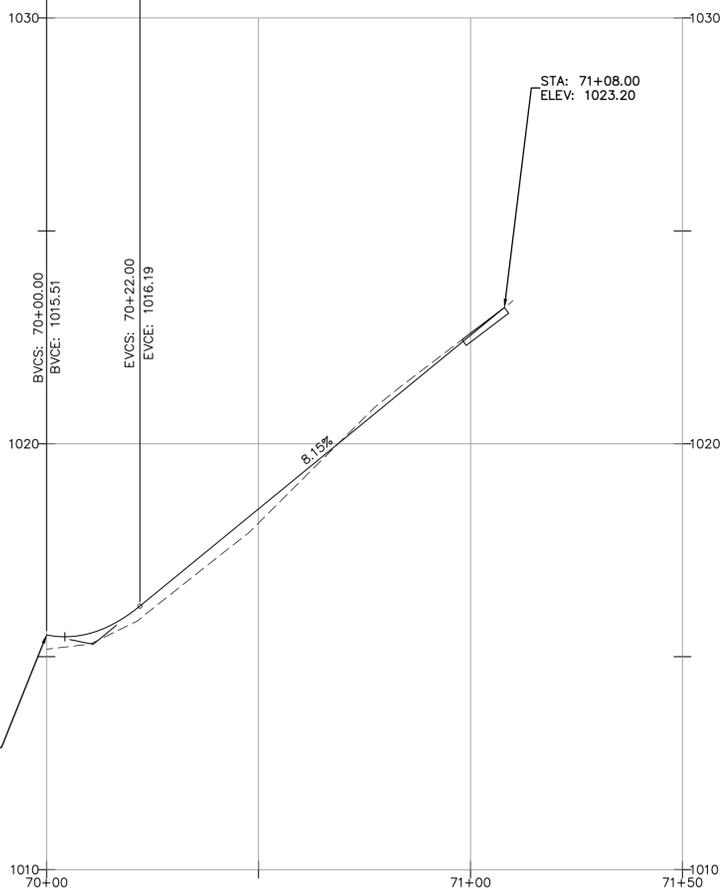
FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT DWG. 2026.02.10. 5:18 AM



**PLAN
BLAKESLEE ROAD EAST**

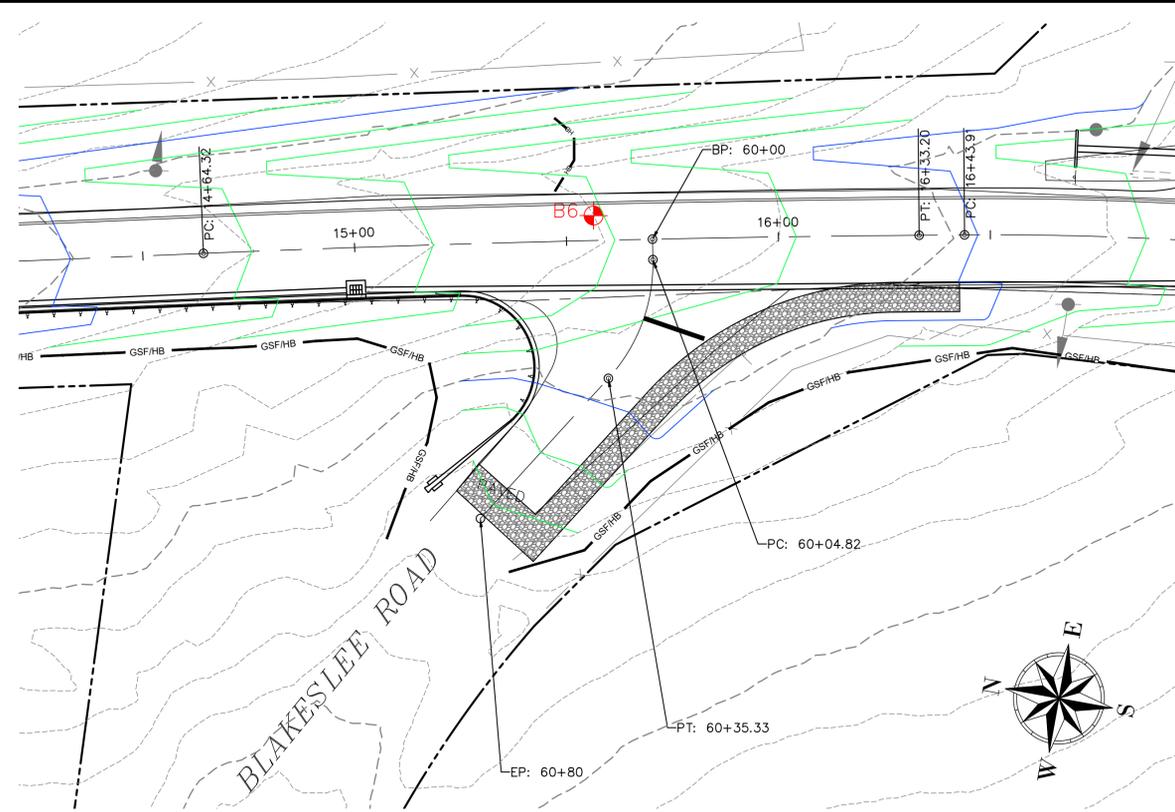
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PVI ELEV: 1015.29
LENGTH: 22.00'
LOW PT. STA: 70+04.31
LOW PT. ELEV: 1015.47

HORIZONTAL GRAPHIC SCALE: 1" = 20'



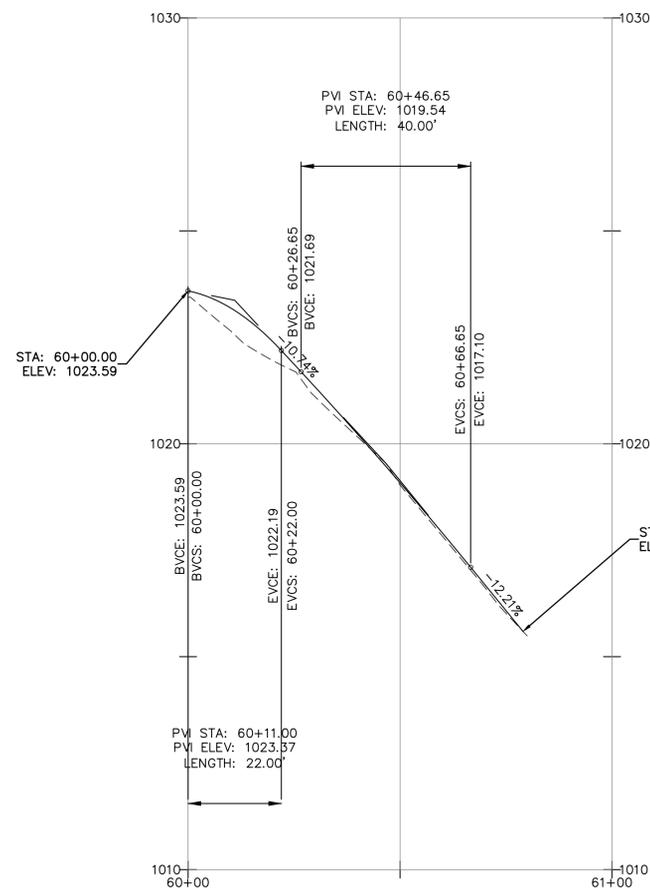
PROFILE

HORIZONTAL GRAPHIC SCALE: 1" = 20'
VERTICAL GRAPHIC SCALE: 1" = 2'



**PLAN
BLAKESLEE ROAD WEST**

HORIZONTAL GRAPHIC SCALE: 1" = 20'

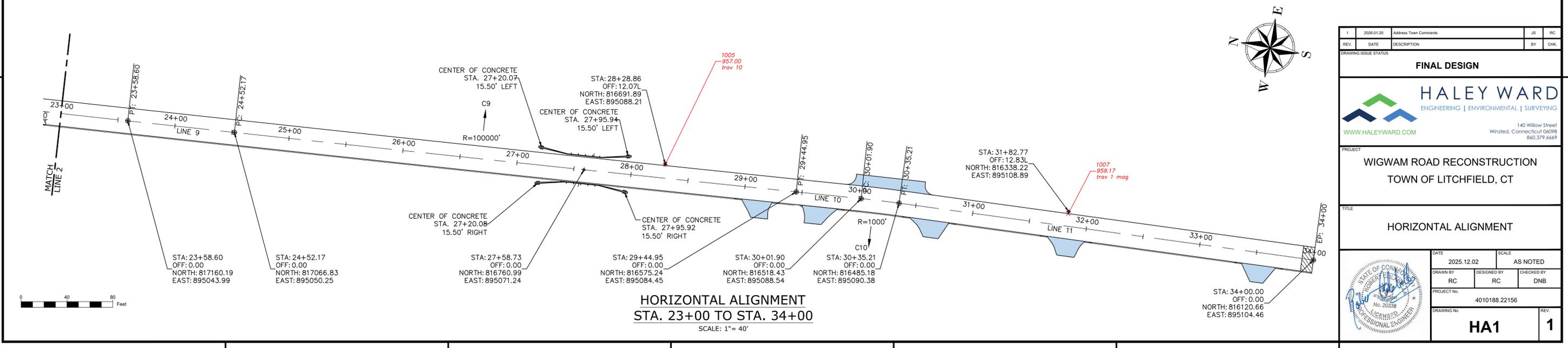
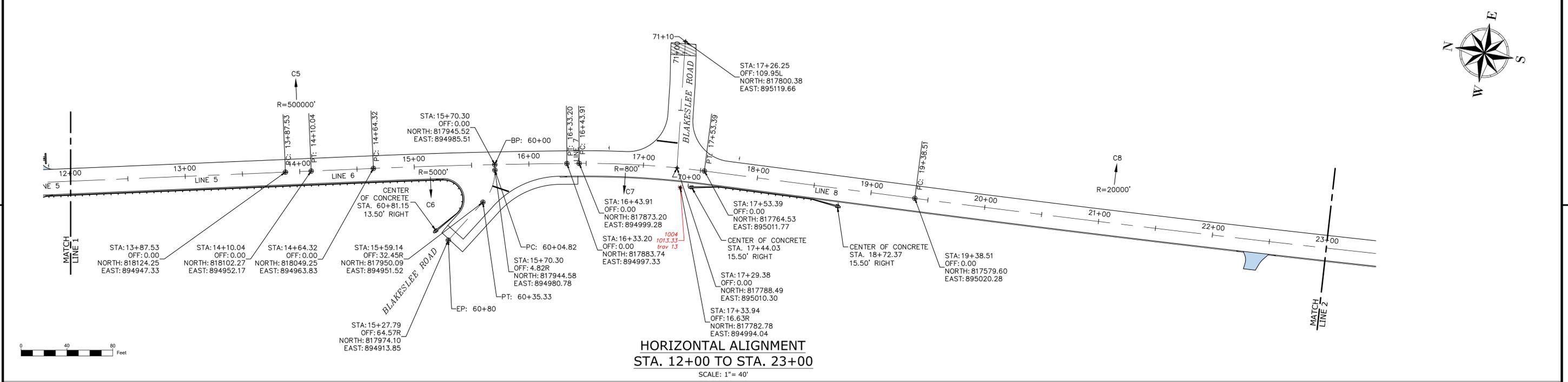
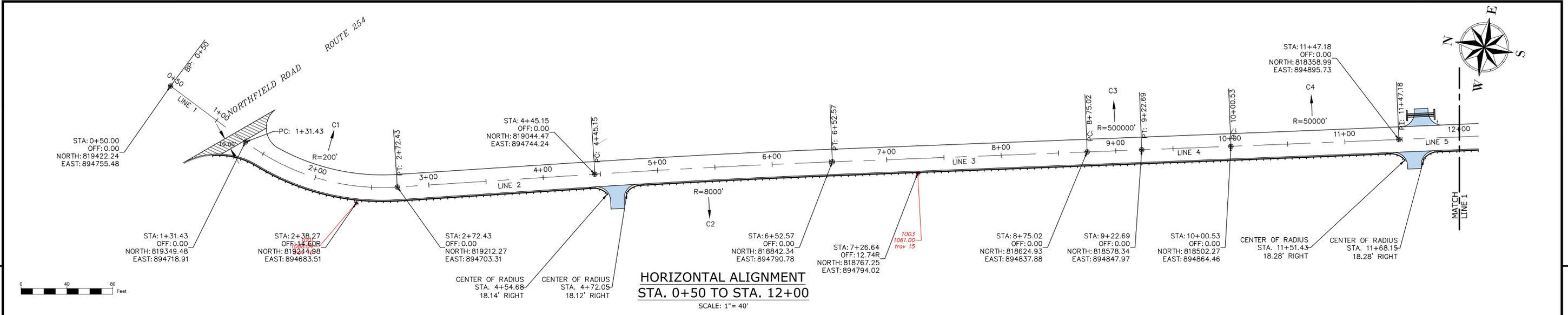


PROFILE

HORIZONTAL GRAPHIC SCALE: 1" = 20'
VERTICAL GRAPHIC SCALE: 1" = 2'

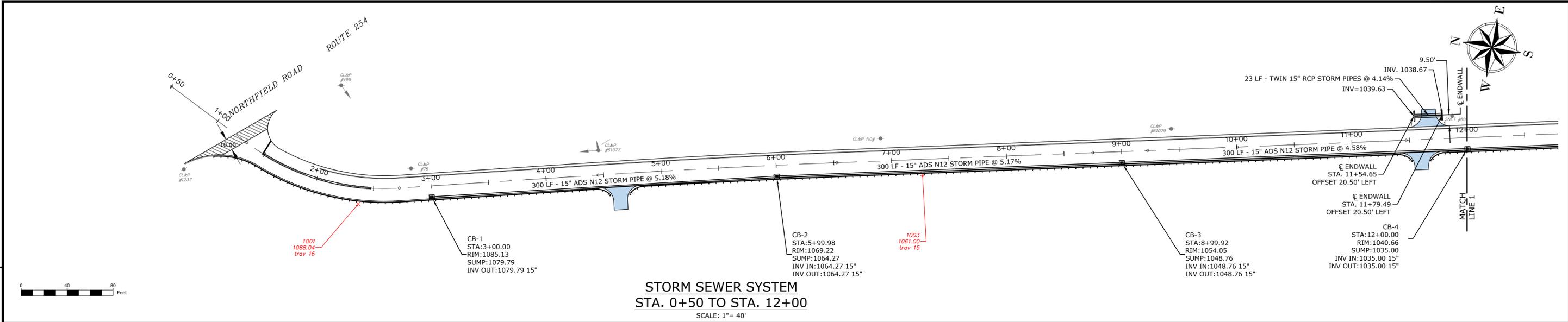
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FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE PLAN AND PROFILE BLAKESLEE ROAD EAST AND WEST				
		DATE: 2025.12.02 SCALE: AS NOTED DRAWN BY: RC DESIGNED BY: RC CHECKED BY: DNB PROJECT No.: 4010188.22156		
PP4				1

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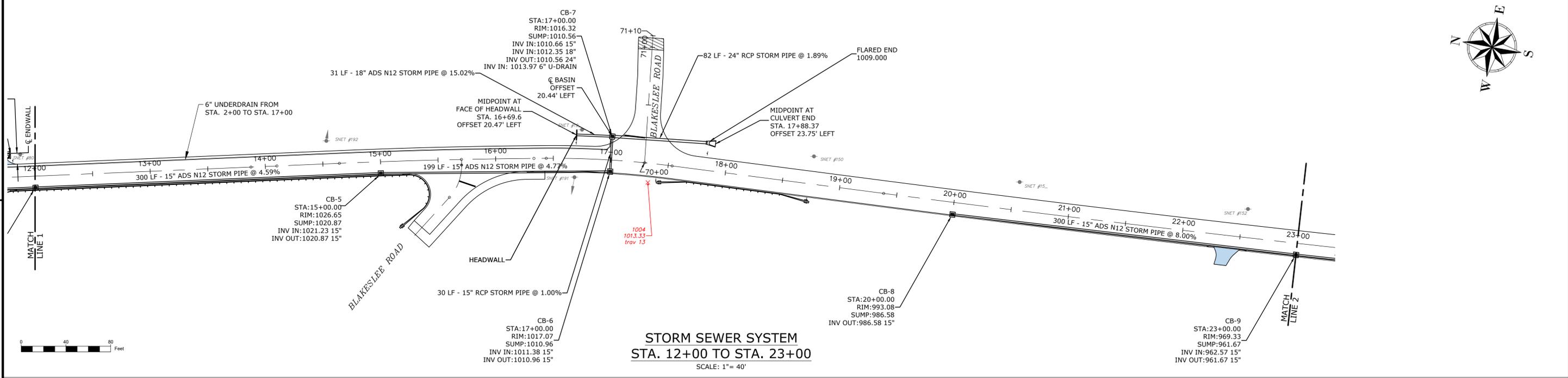


1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
 ENGINEERING ENVIRONMENTAL SURVEYING WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
		PROJECT WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT		
HORIZONTAL ALIGNMENT				
DATE: 2025.12.02 DRAWN BY: RC PROJECT No.: 4010188.22156		SCALE: AS NOTED DESIGNED BY: RC CHECKED BY: DNB		
		HA1		

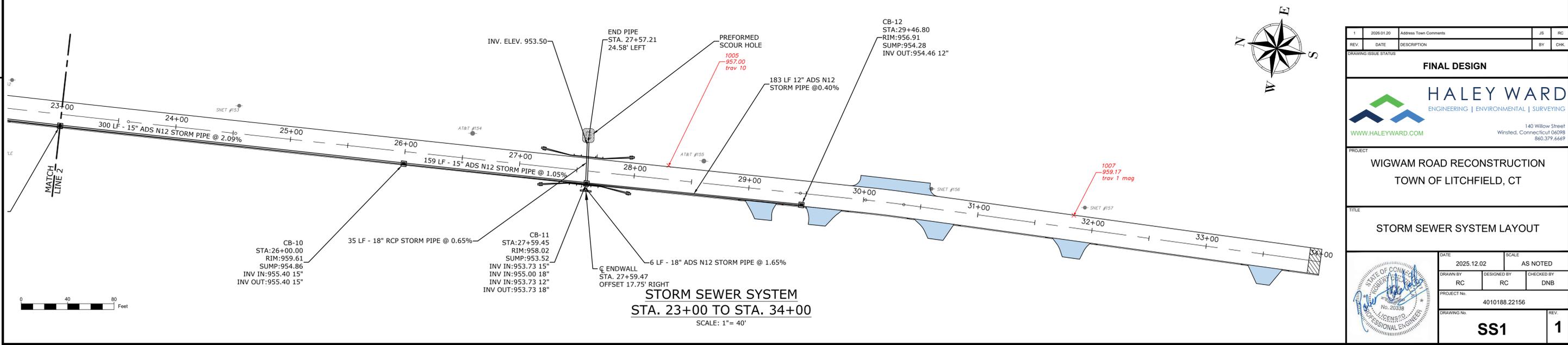
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**STORM SEWER SYSTEM
STA. 0+50 TO STA. 12+00**
SCALE: 1"= 40'



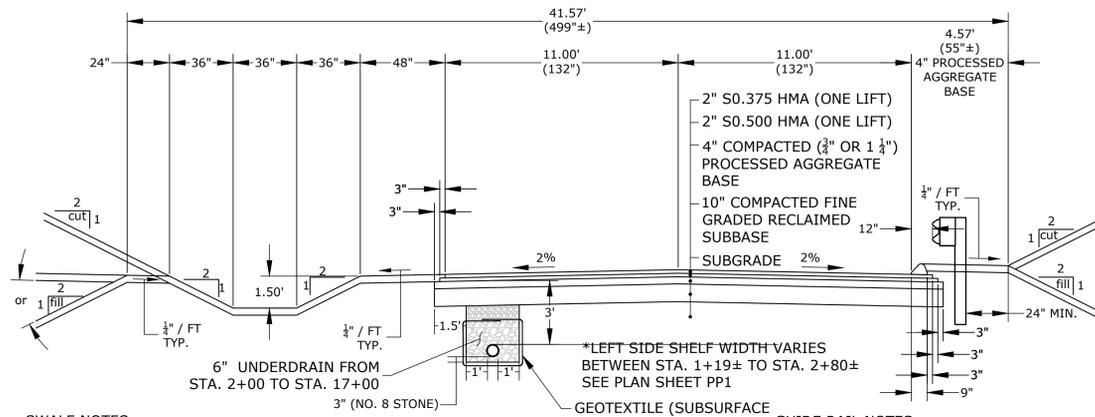
**STORM SEWER SYSTEM
STA. 12+00 TO STA. 23+00**
SCALE: 1"= 40'



**STORM SEWER SYSTEM
STA. 23+00 TO STA. 34+00**
SCALE: 1"= 40'

1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
 HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING www.haleyward.com		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
STORM SEWER SYSTEM LAYOUT				
DATE		SCALE		
2025.12.02		AS NOTED		
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010188.22156				
DRAWING No.				REV.
SS1				1

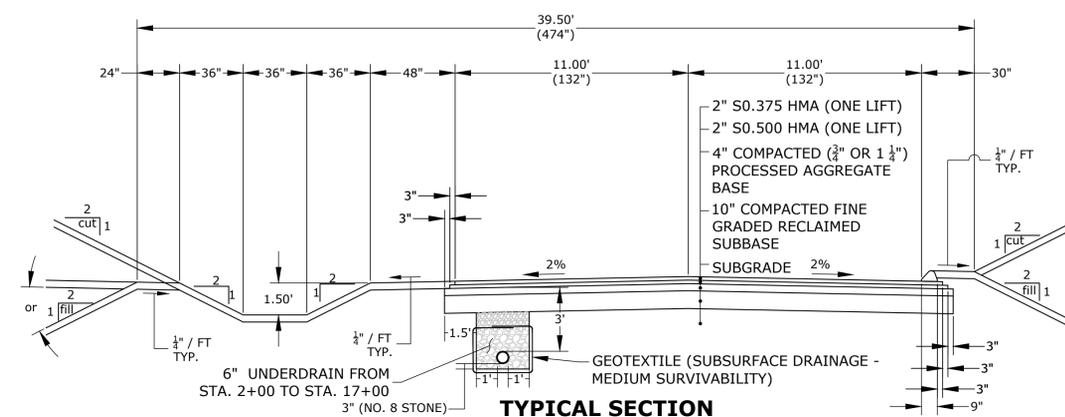




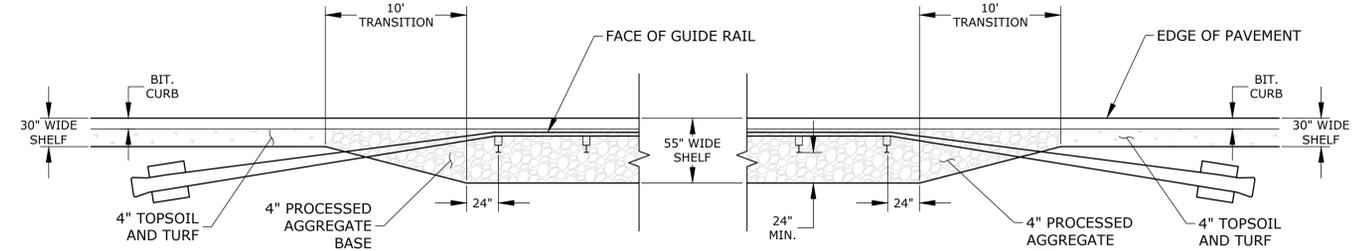
- SWALE NOTES:**
- 48" SHELF (LEFT) WIDTH VARIES FROM STA. 1+19.0± TO STA. 2+80.0± SEE PLAN SHEET PP1
 - SWALE IS DISCONTINUED FROM STA. 11+55± TO 11+80± AT DRIVEWAY APRON TO FIELD (LEFT) SEE PLAN SHEET PP1
 - SWALE IS DISCONTINUED FROM STA. 16+70± TO STA. 17+88± AT BLAKESLEE ROAD EAST SEE PLAN SHEET PP2
 - SWALE ENDS AT STA. 25+07± DIRECT DISCHARGE TO WETLAND AREA SEE PLAN SHEET PP3
 - SEE PLAN SHEETS FOR BEGIN AND END OF BITUMINOUS CONCRETE LIP CURBING ALONG ROADWAY.

**TYPICAL SECTION
GUIDE RAIL AND CURBING RIGHT
STA. 1+19± TO STA. 15+50±
STA. 17+67± TO STA. 17+88±
SCALE 1" = 4'**

- GUIDE RAIL NOTES:**
- GUIDE RAIL IS DISCONTINUED FROM STA. 11+52± TO STA. 11+68± AT DRIVEWAY APRON SEE PLAN SHEET PP1
 - GUIDE RAIL IS DISCONTINUED FROM STA. 15+25± TO STA. 17+44± AT BLAKESLEE ROAD WEST SEE PLAN SHEET PP2
 - GUIDE RAIL IS DISCONTINUED FROM STA. 18+44± TO STA. 27+20± SEE PLAN SHEET PP2 AND PP3
 - GUIDE RAIL IS DISCONTINUED FROM STA. 27+99± TO END OF PROJECT SEE PLAN SHEET PP3
 - WHERE SHELF TRANSITIONS FROM 4.57' TO 2.0' THE TRANSITION LENGTH SHALL BE 10FT. THE TRANSITION SHALL BE CONSTRUCTED OF 4" PROCESSED AGGREGATE BASE.
 - GUIDE RAIL CONTINUES FROM STA. 17+41.3 TO 18+75.0± (RT) AND FROM STA. 27+17.4 TO STA. 27+98.6± (LT AND RT)



**TYPICAL SECTION
STA. 16+27± TO STA. 17+67±
STA. 17+88± TO STA. 25+06±
SWALE / ROADWAY LEFT CURBING RIGHT
SCALE 1" = 4'**

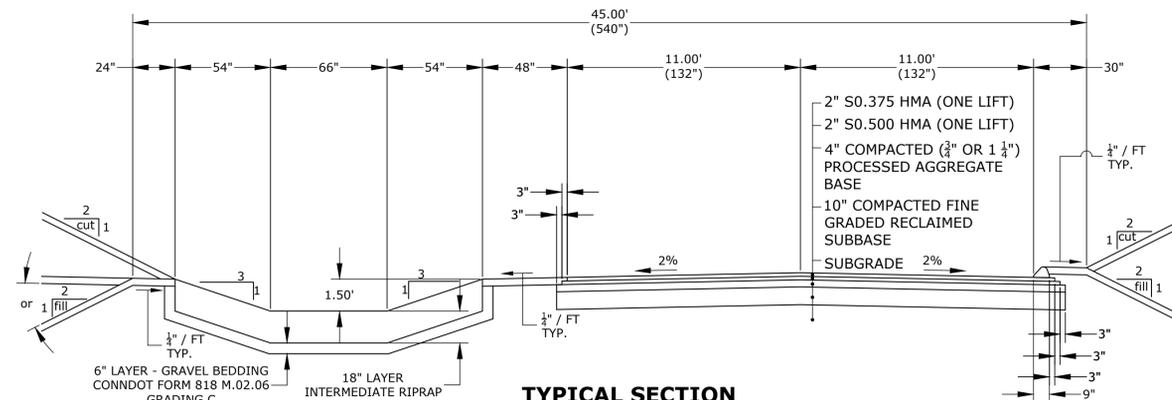


**SHELF TRANSITION
IN AND OUT
AT GUIDE RAILING
SCALE 1" = 4'**

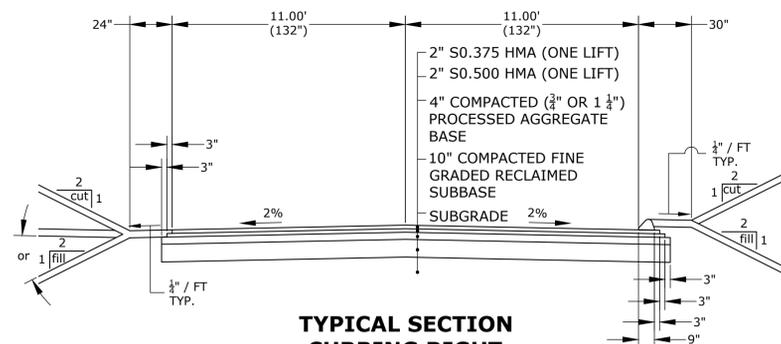
NOTE:
PROJECT PLANS INCLUDE PLAN, PROFILE AND CROSS SECTION SHEETS THAT INCLUDE REFERENCES OR DETAILS TO HMA S0.375, HMA S0.50, BITUMINOUS CONCRETE LIP CURBING, METAL BEAM RAIL, METAL BEAM RAIL END ANCHORAGES, TERMINAL ELEMENTS AND APPURTENANCES, AND BITUMINOUS CONCRETE WEARING SURFACES AT DRIVEWAY APRONS. THESE ITEMS ARE BY OTHERS AND ARE NOT INCLUDED IN THIS CONTRACT.

NOTE:
COORDINATE GRADING WITH PLAN SHEETS AT ALL INTERSECTIONS, BEGINNING OF PROJECT, END OF PROJECT, AND DRIVEWAY APRONS.

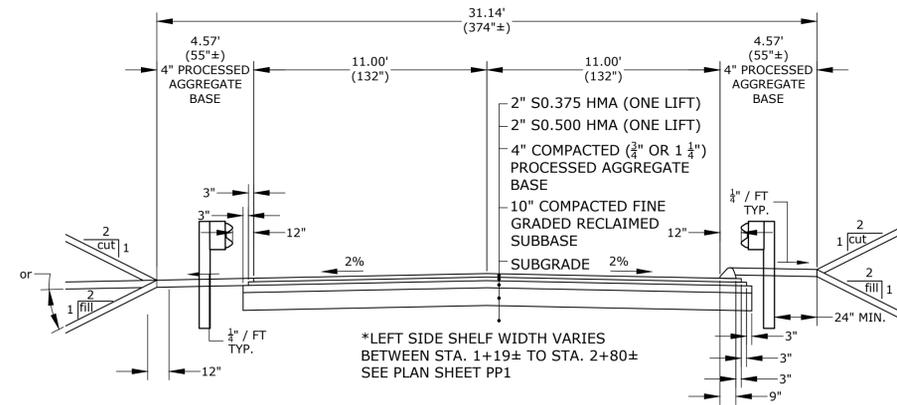
NOTE:
SEE CHANNEL / SWALE DETAILS DRAWING SESC-1.



**TYPICAL SECTION
STA. 17+88± TO STA. 25+06±
SWALE / ROADWAY LEFT CURBING RIGHT
SCALE 1" = 4'**



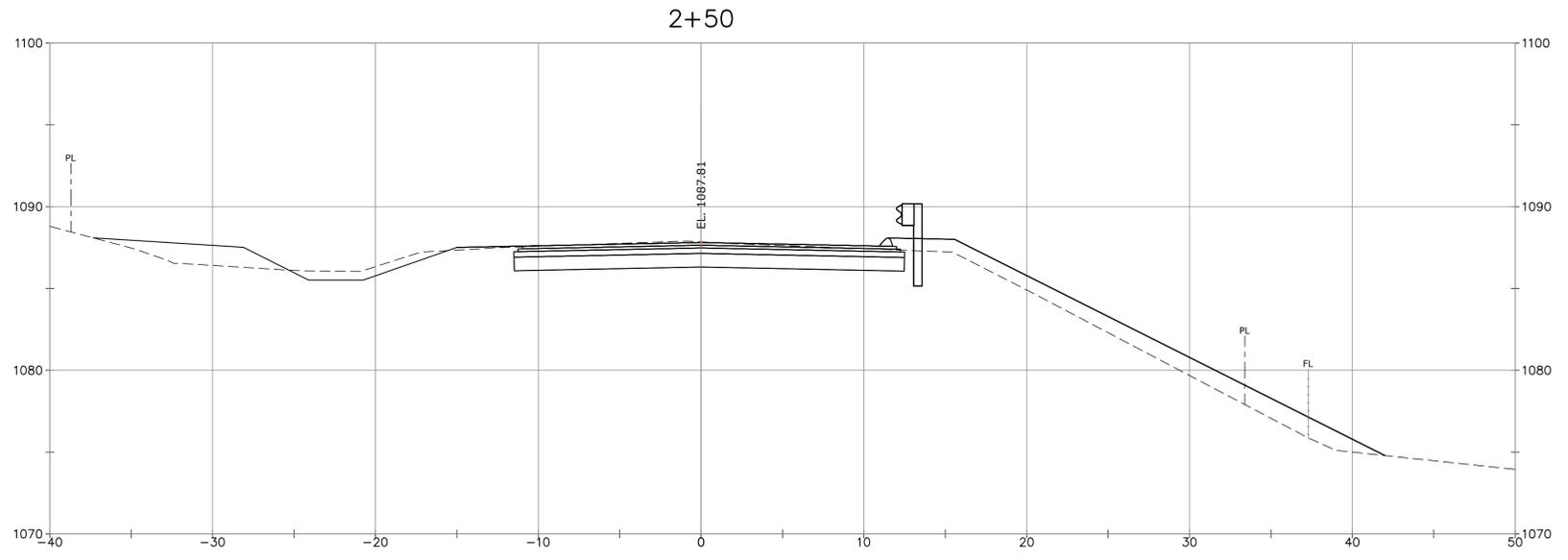
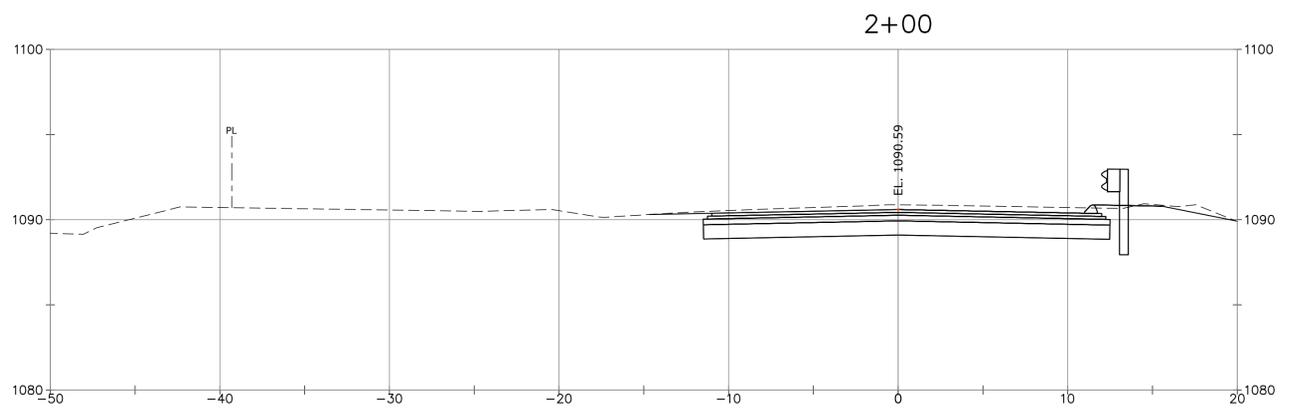
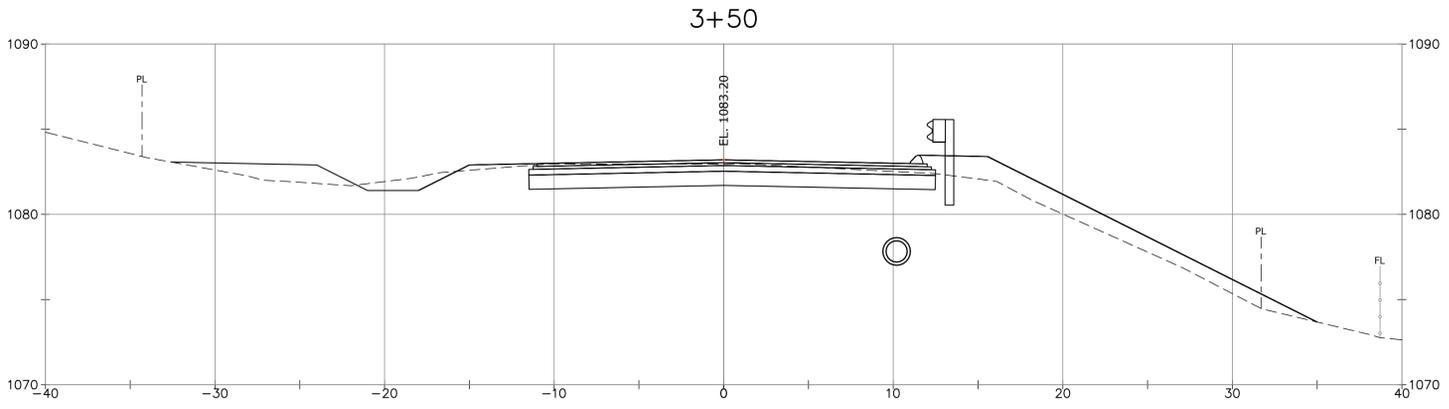
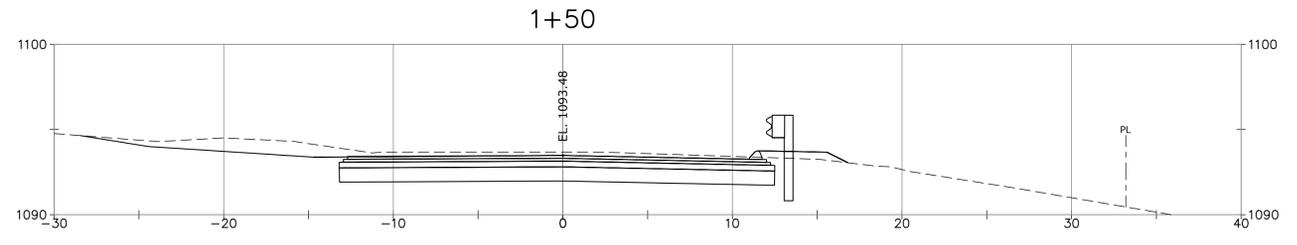
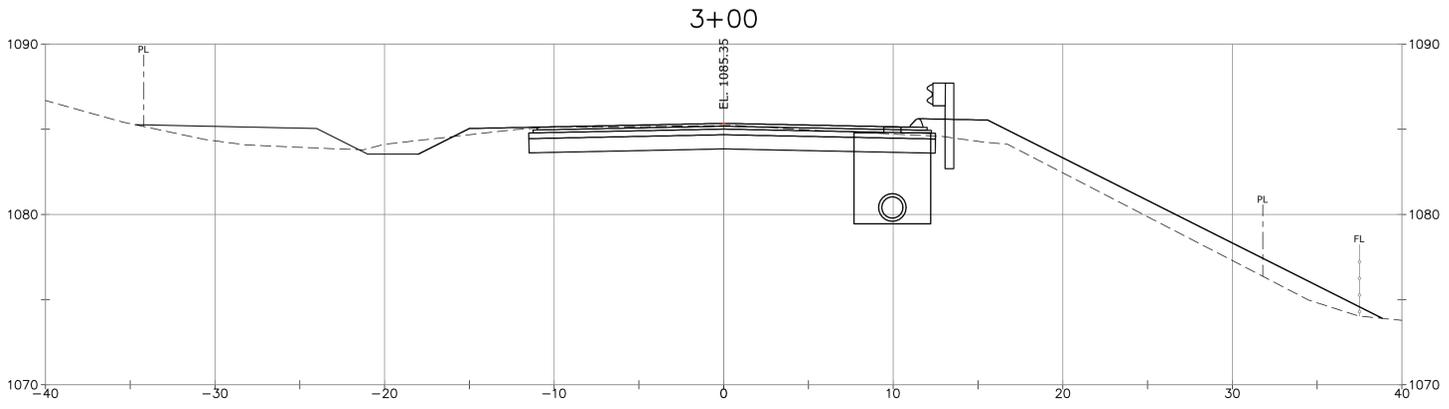
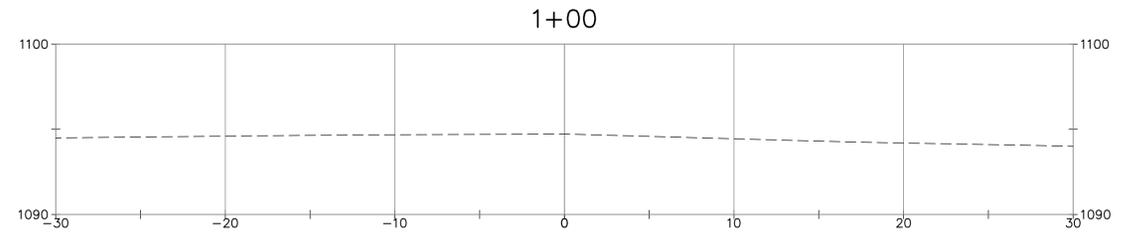
**TYPICAL SECTION
CURBING RIGHT
STA. 25+06± TO STA. 27+43±
STA. 27+73± TO STA. 34+00
SCALE 1" = 4'**



**TYPICAL SECTION
GUIDE RAIL LEFT AND RIGHT / CURBING RIGHT
STA. 27+43± TO STA. 27+73±
SCALE 1" = 4'**

1	2025.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM				
140 Willow Street Winsted, Connecticut 06098 860.379.6669				
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
CROSS SECTIONS 2+50 AND 4+00				
DATE		SCALE		
2025.12.02		AS NOTED		
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	DNB / RC	DNB		
PROJECT No.				
4010188.22156				
DRAWING No.				
CS1A				
				REV
				1

FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT DWG. 2026.02.10. 5:19 AM



1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK

DRAWING ISSUE STATUS

FINAL DESIGN



HALEY WARD
ENGINEERING | ENVIRONMENTAL | SURVEYING

WWW.HALEYWARD.COM

140 Willow Street
Winsted, Connecticut 06098
860.379.6669

PROJECT
**WIGWAM ROAD RECONSTRUCTION
TOWN OF LITCHFIELD, CT**

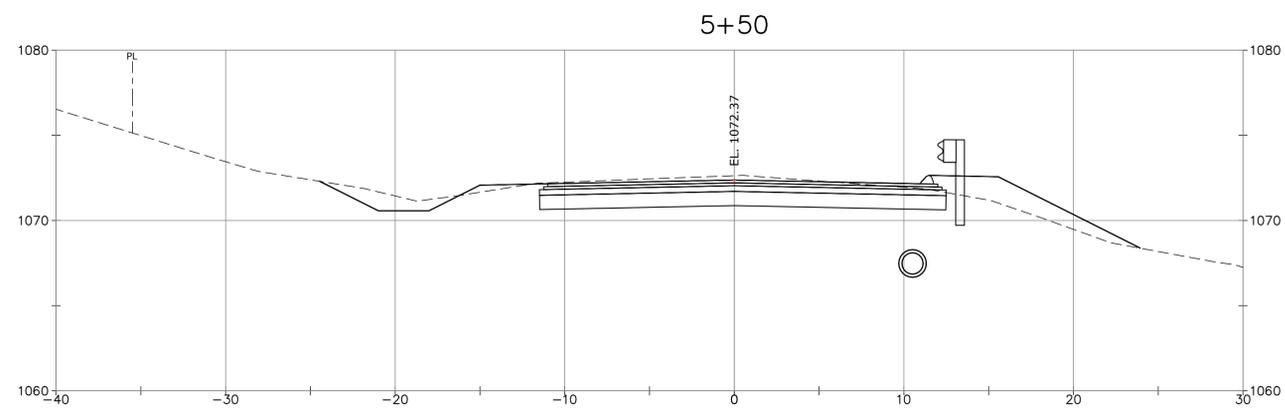
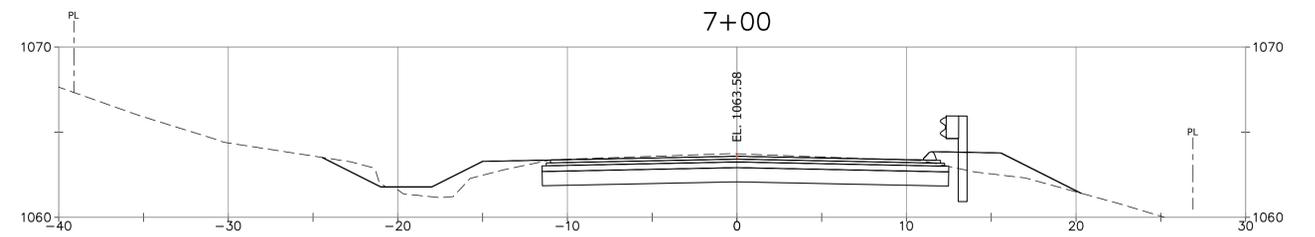
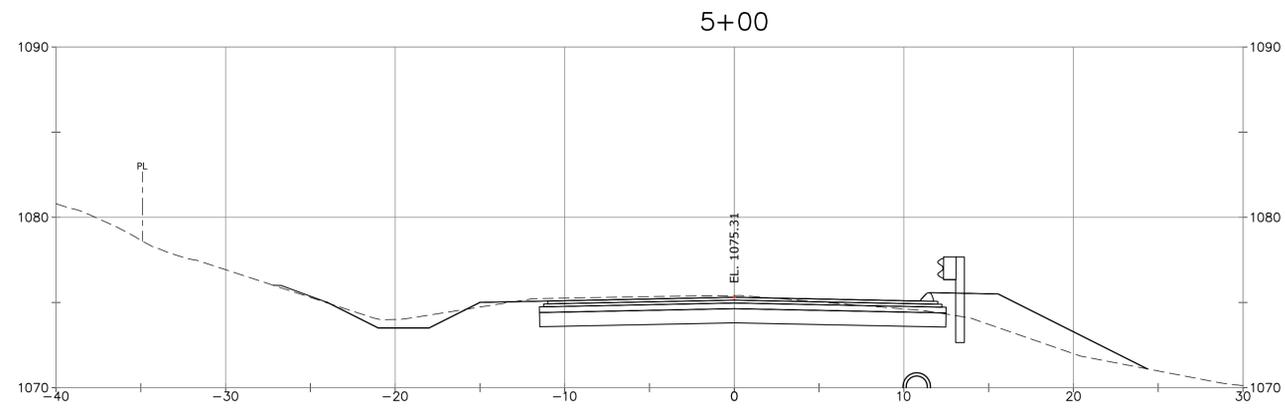
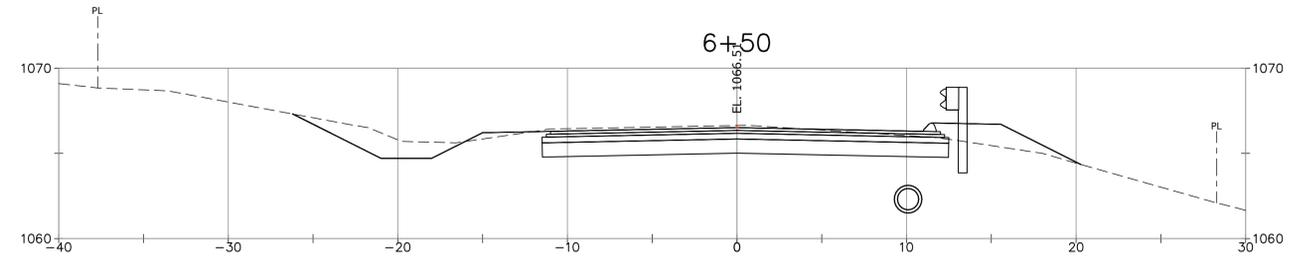
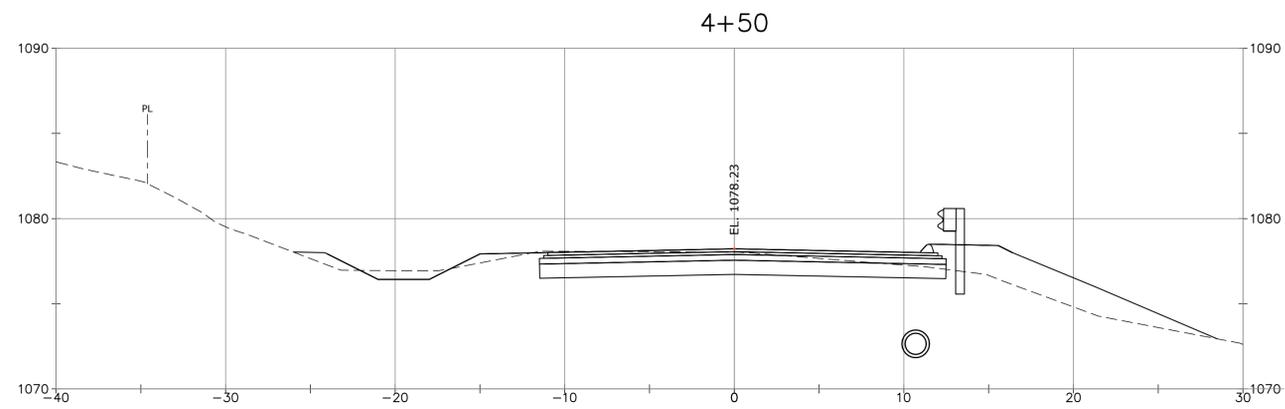
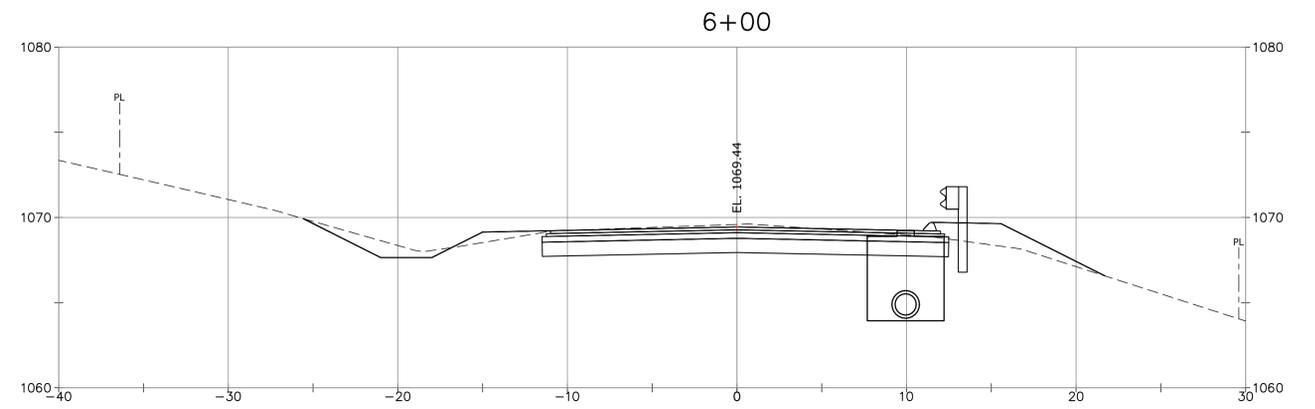
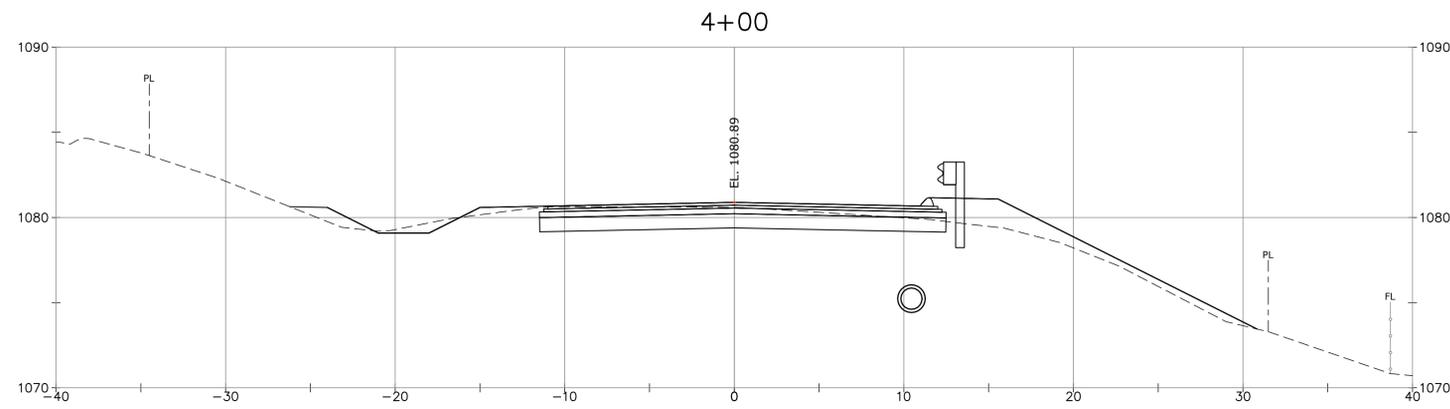
TITLE
**CROSS SECTIONS
1+00 TO 3+50**

DATE	2025.12.02	SCALE	AS NOTED
DRAWN BY	R	DESIGNED BY	DNB
CHECKED BY	DNB	PROJECT No.	4010188.22156
CS-1		REV.	1



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FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNE\02-CAD_FILES\CIVIL\PROJECT DWG. 2026.02.10. 6:20 AM



1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
 HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE CROSS SECTIONS 4+00 AND 7+00				
DATE		2025.12.02	SCALE	
DESIGNED BY		RC	AS NOTED	
DRAWN BY		RC	CHECKED BY	
PROJECT No.		4010188.22156	DNE	
DRAWING No.		CS-2	REV.	
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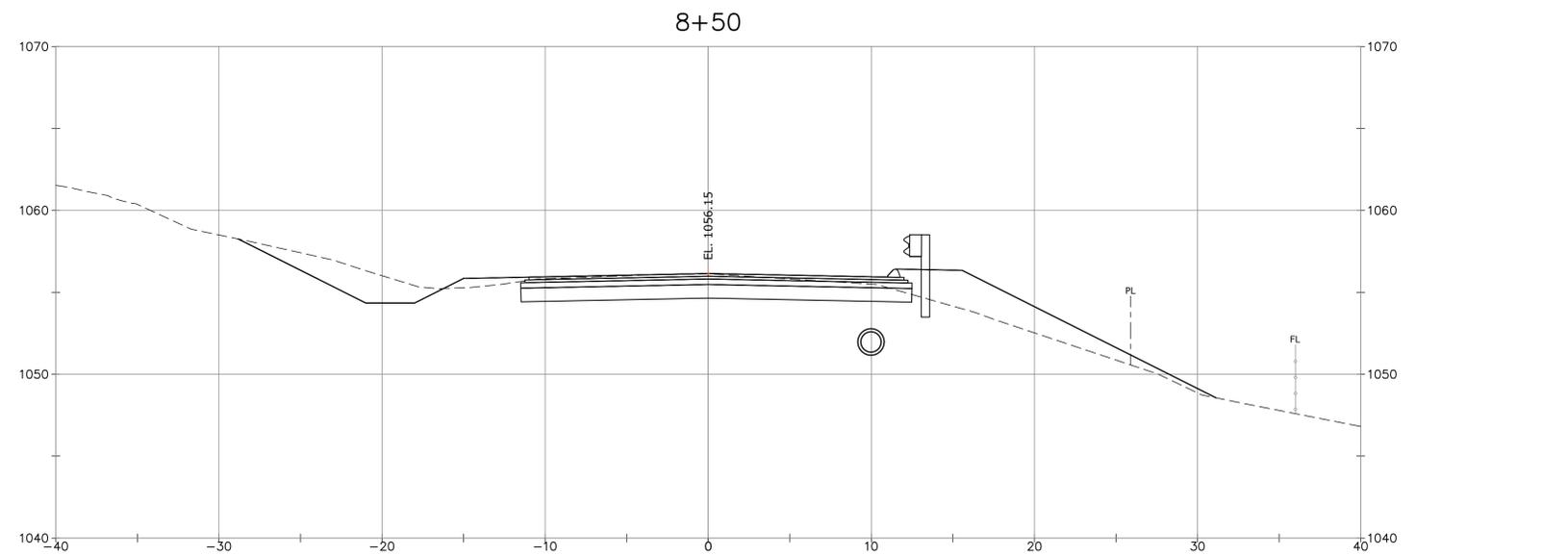
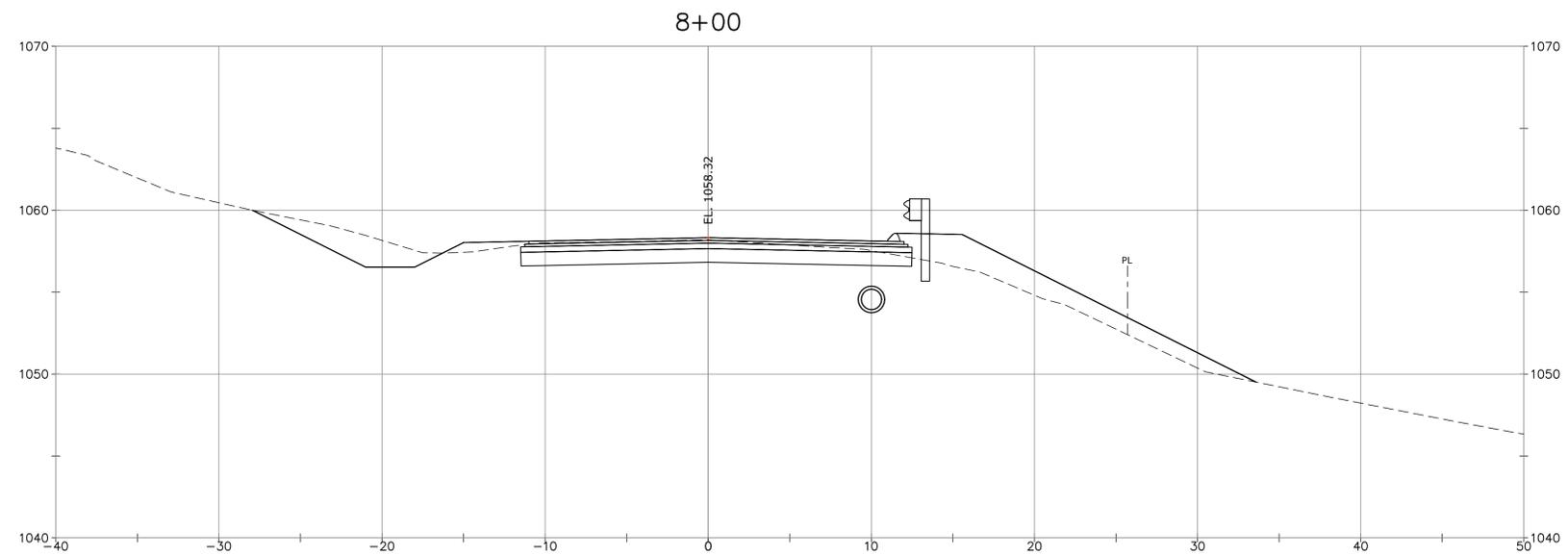
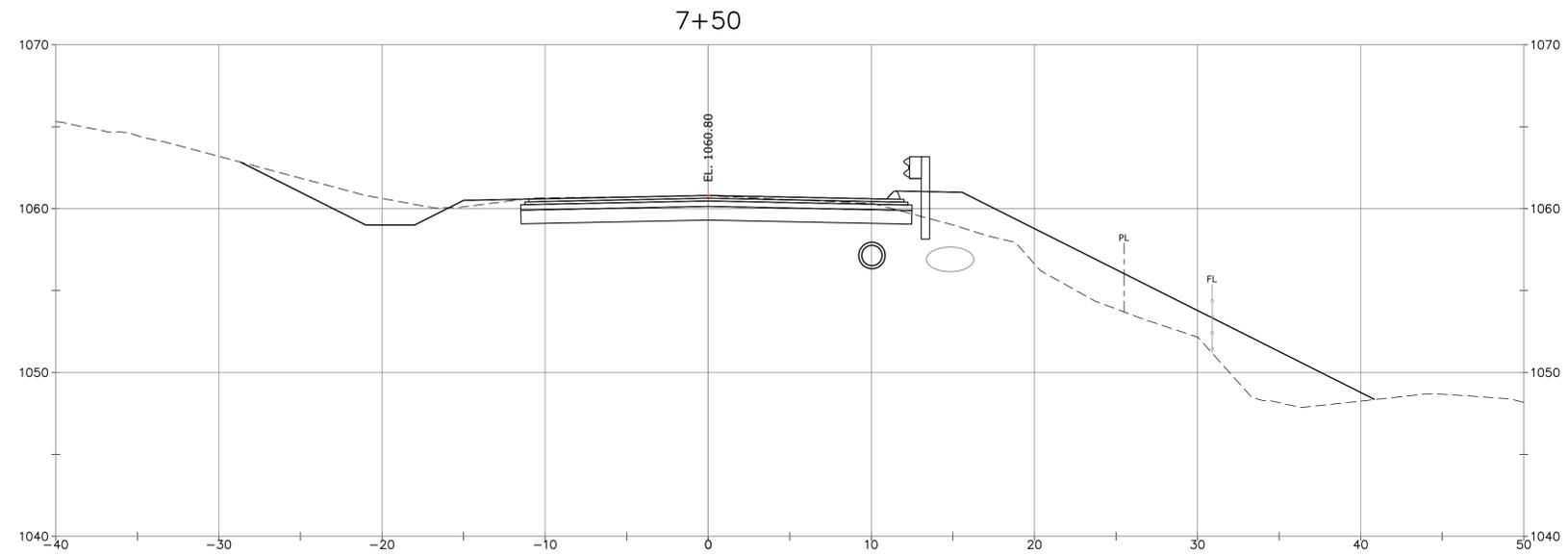
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1	2026.01.20	Address Town Comments	JS	RC
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
CROSS SECTIONS 7+50 TO 8+50				
DATE		2025.12.02		SCALE
				AS NOTED
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010188.22156				
DRAWING No.				REV.
CS-3				1

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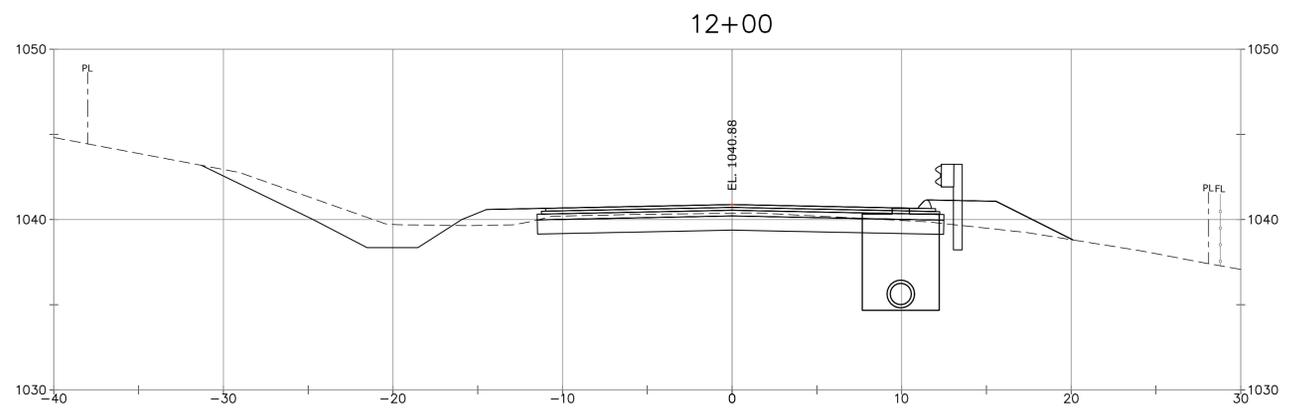
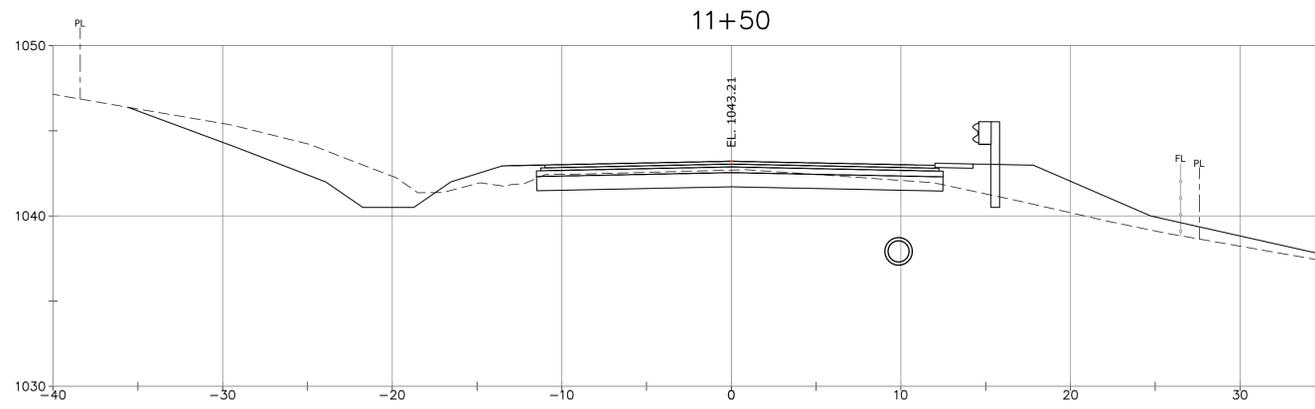
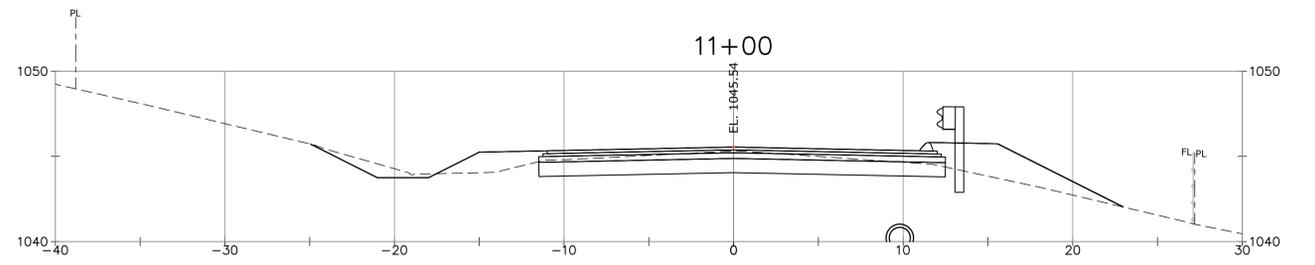
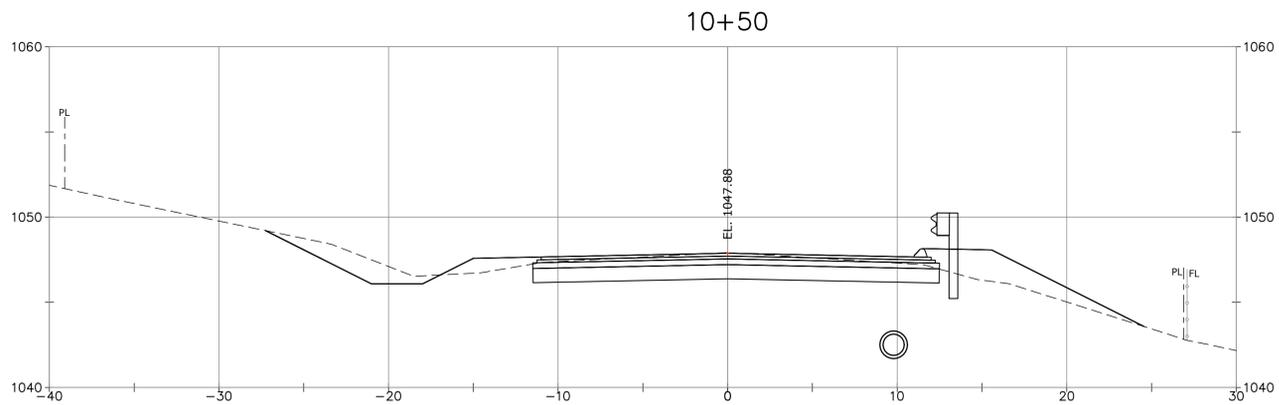
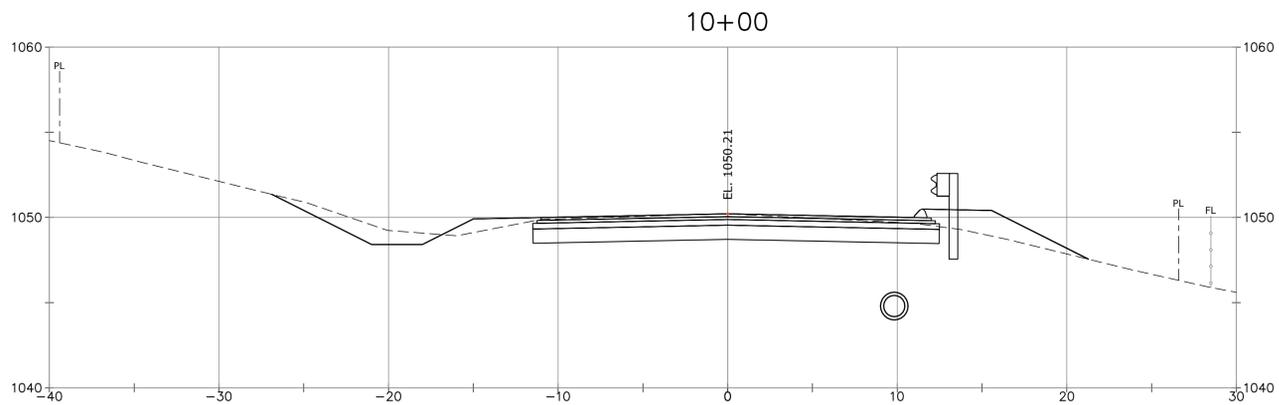
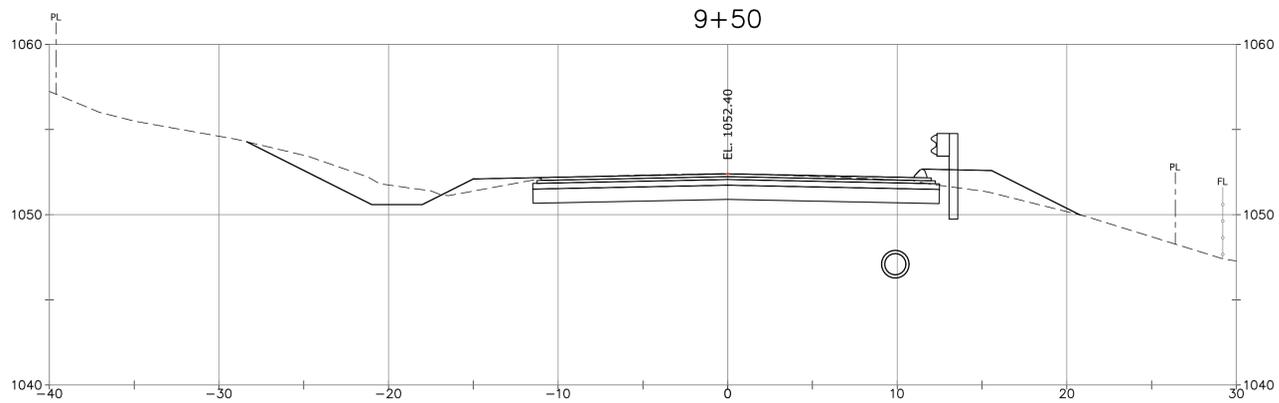
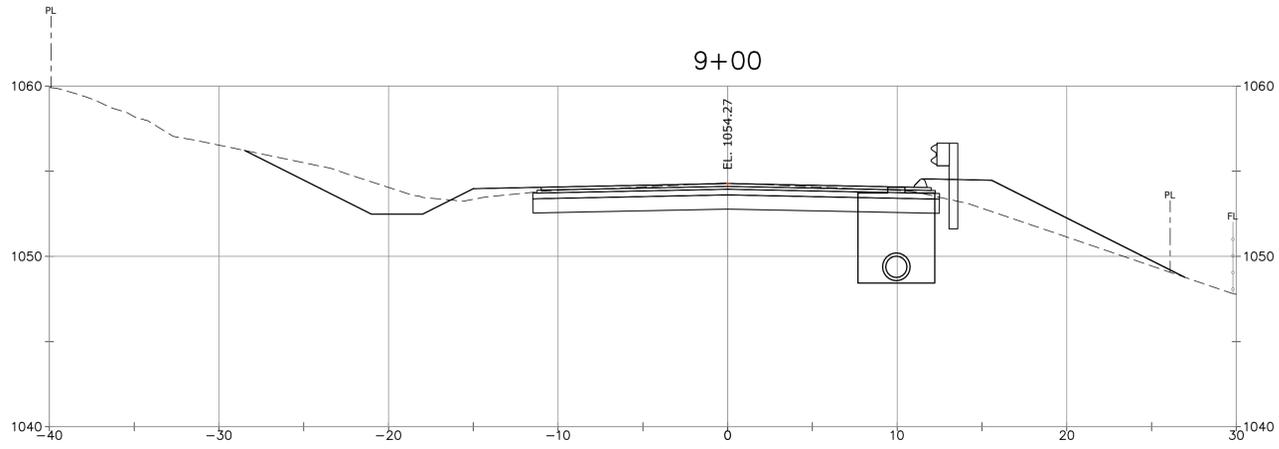
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FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT DWG. 2026.02.10. 6:20 AM



1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK

DRAWING ISSUE STATUS

FINAL DESIGN



PROJECT

**WIGWAM ROAD RECONSTRUCTION
TOWN OF LITCHFIELD, CT**

TITLE

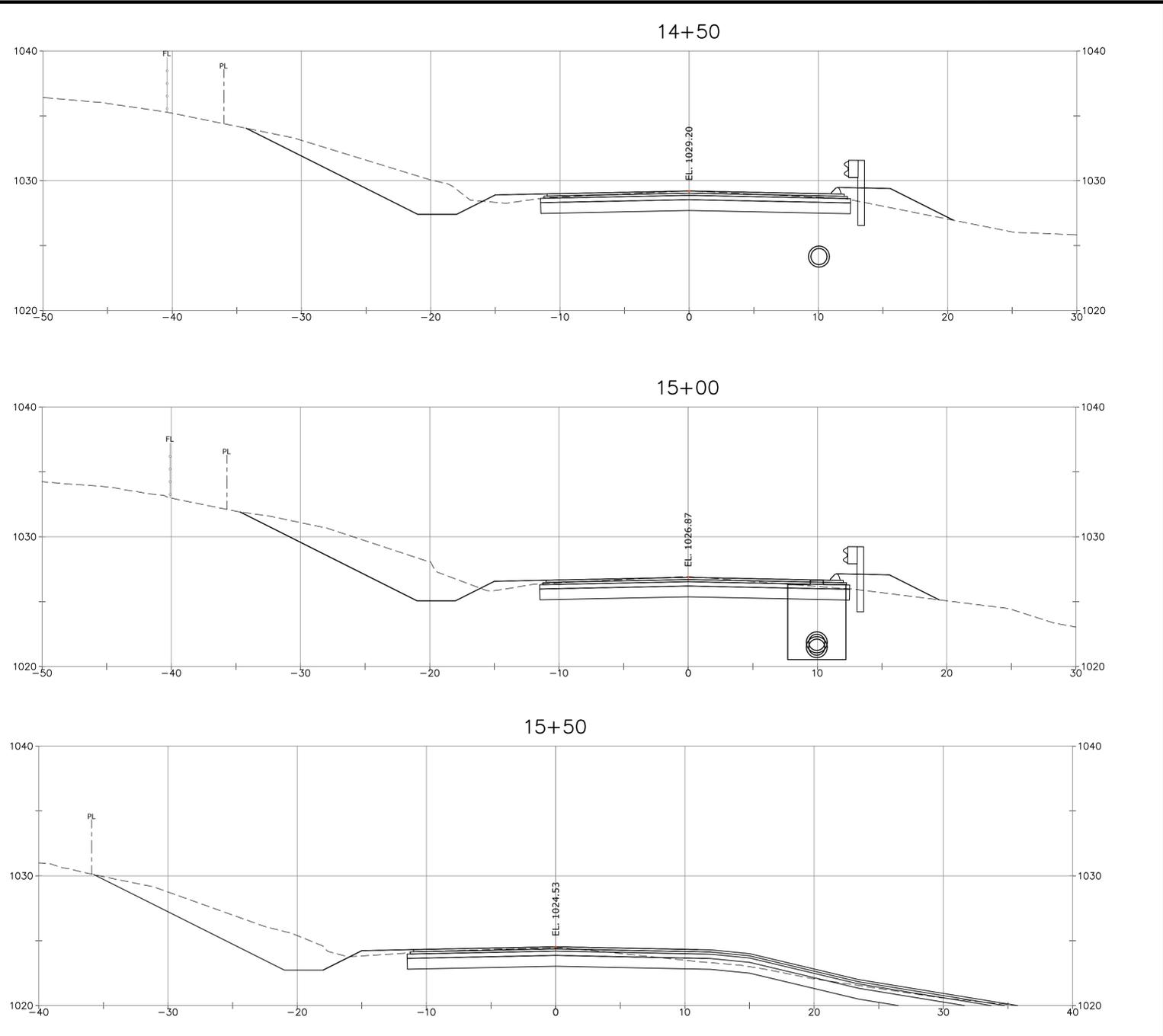
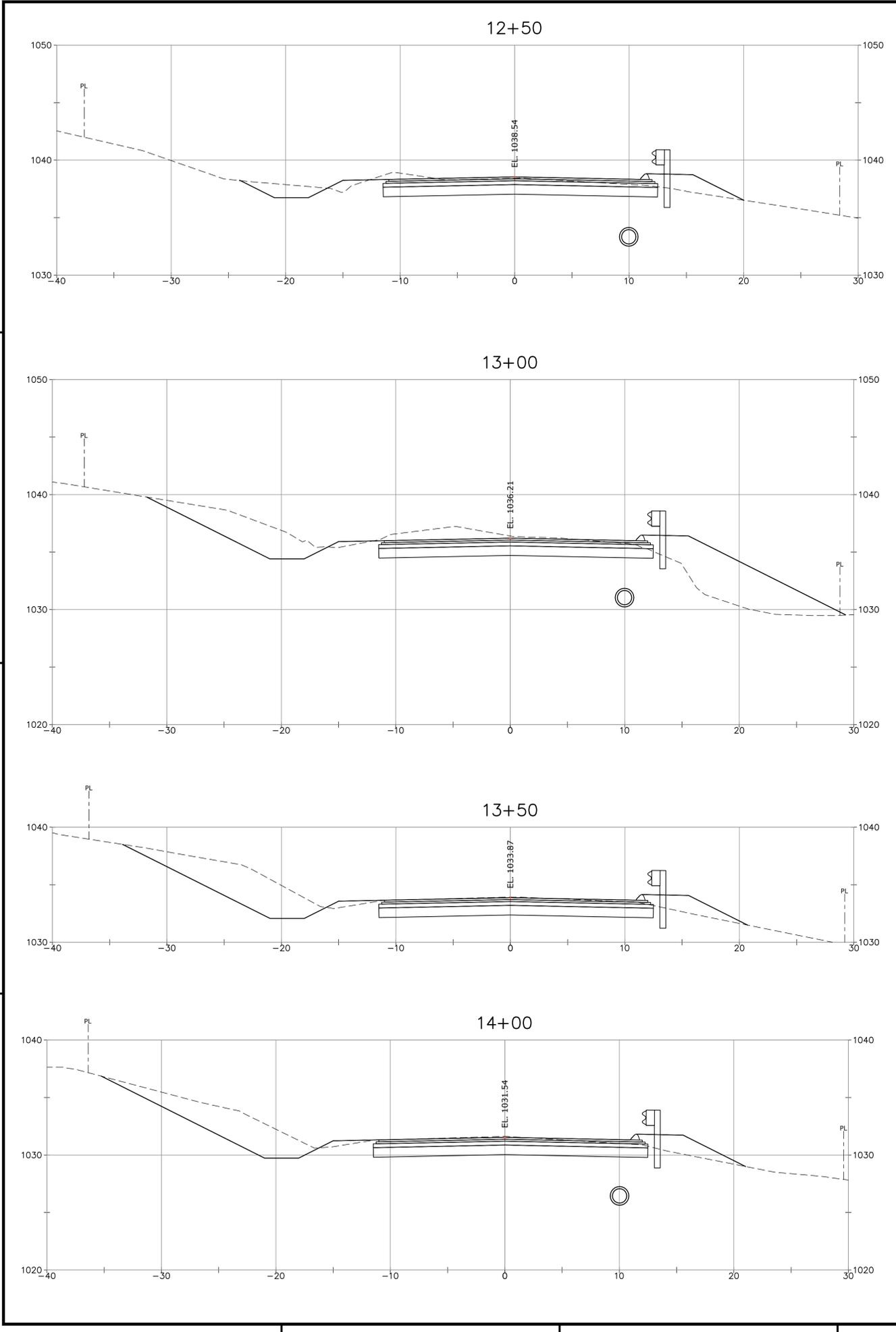
**CROSS SECTIONS
9+00 TO 12+00**

DATE	2025.12.02	SCALE	AS NOTED
DRAWN BY	JS	DESIGNED BY	RC
CHECKED BY	DNB	PROJECT No.	4010188.22156

DRAWING No. **CS-4** REV. **1**



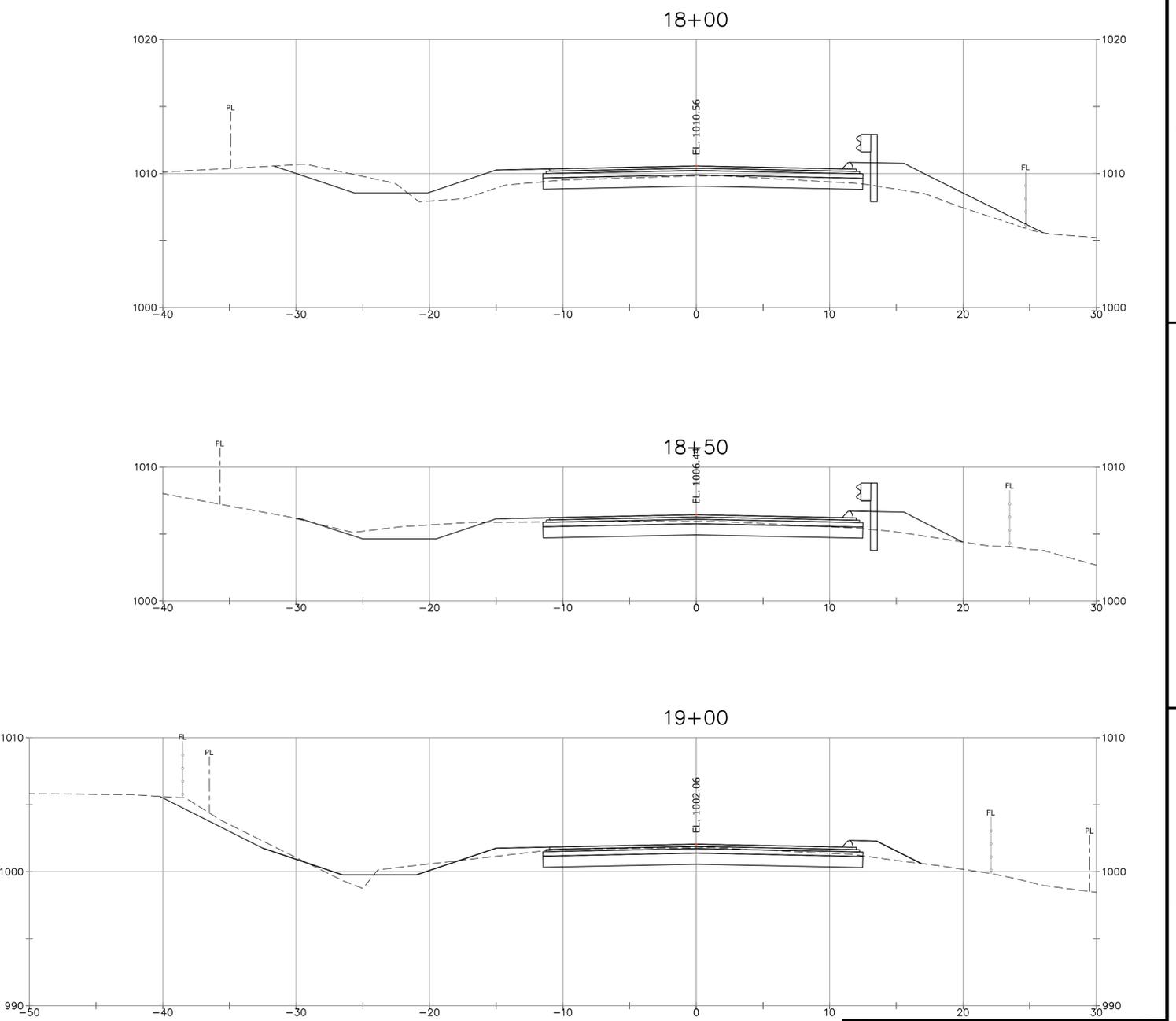
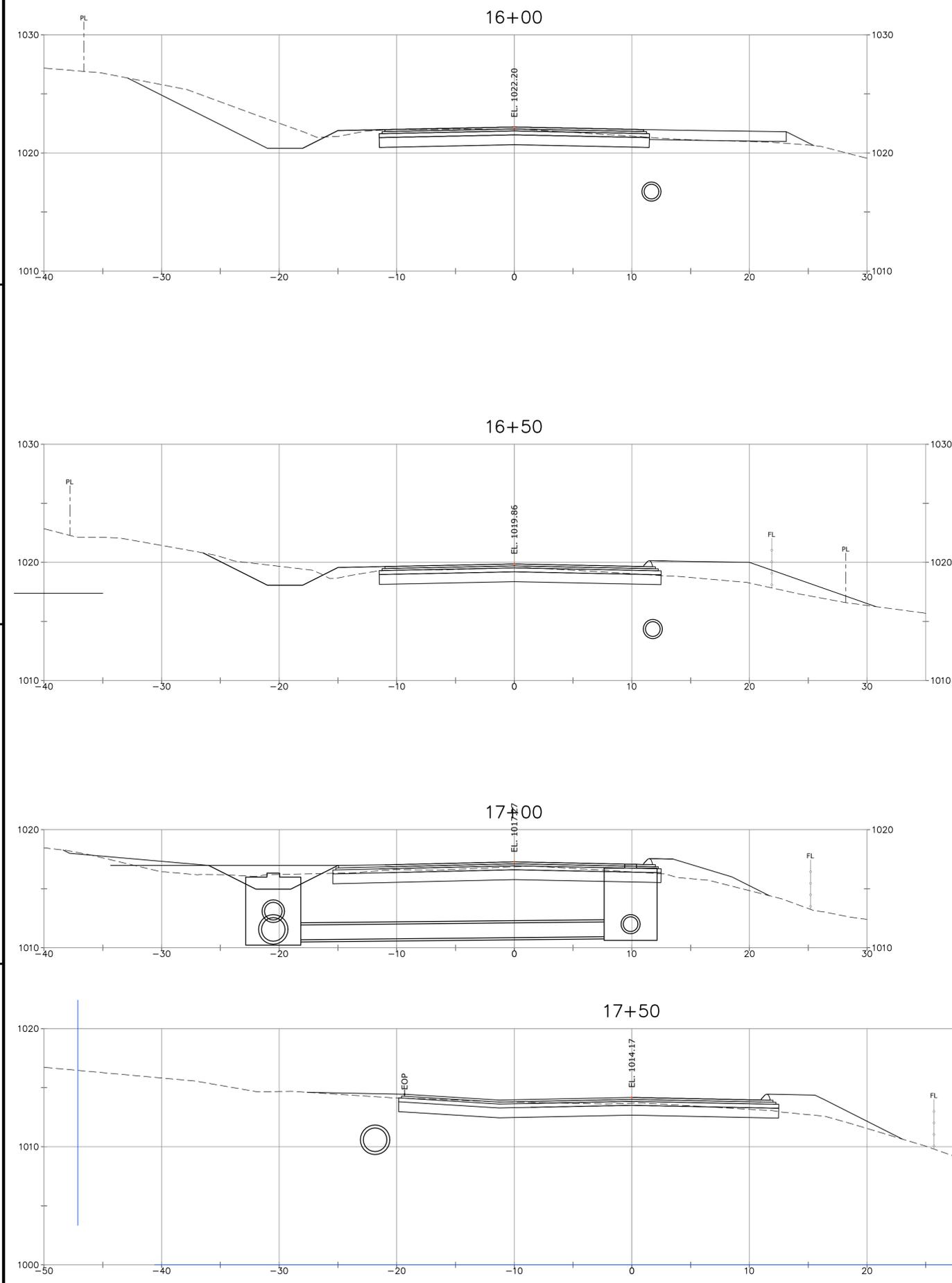
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1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
 HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
CROSS SECTIONS 12+50 TO 15+50				
DATE		2025.12.02	SCALE	
DRAWN BY		RC	AS NOTED	
DESIGNED BY		RC	CHECKED BY	
PROJECT No.		4010188.22156	DNB	
DRAWING No.		CS-5	REV	
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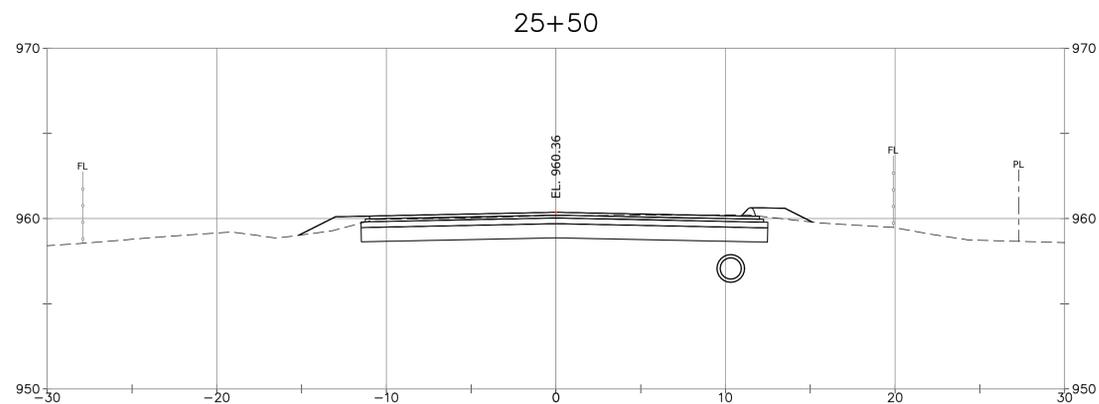
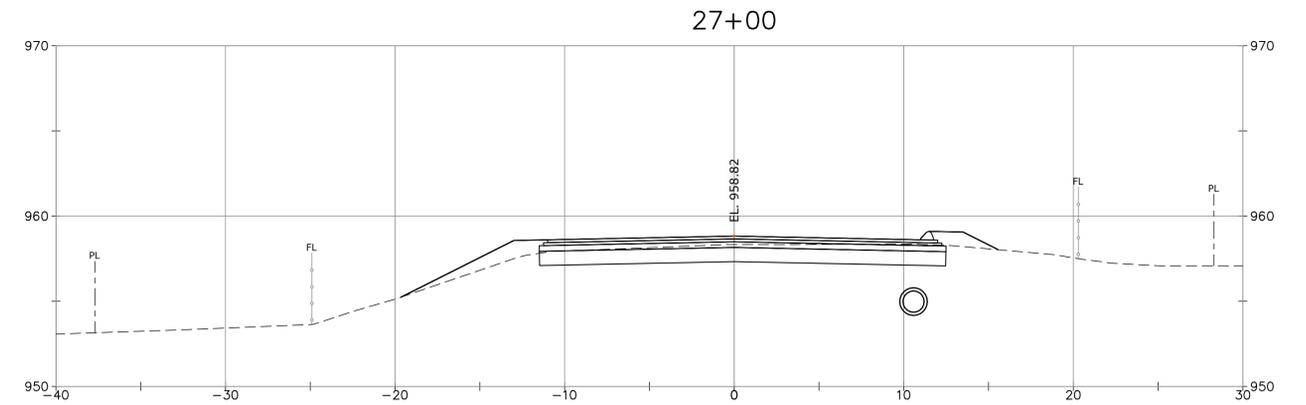
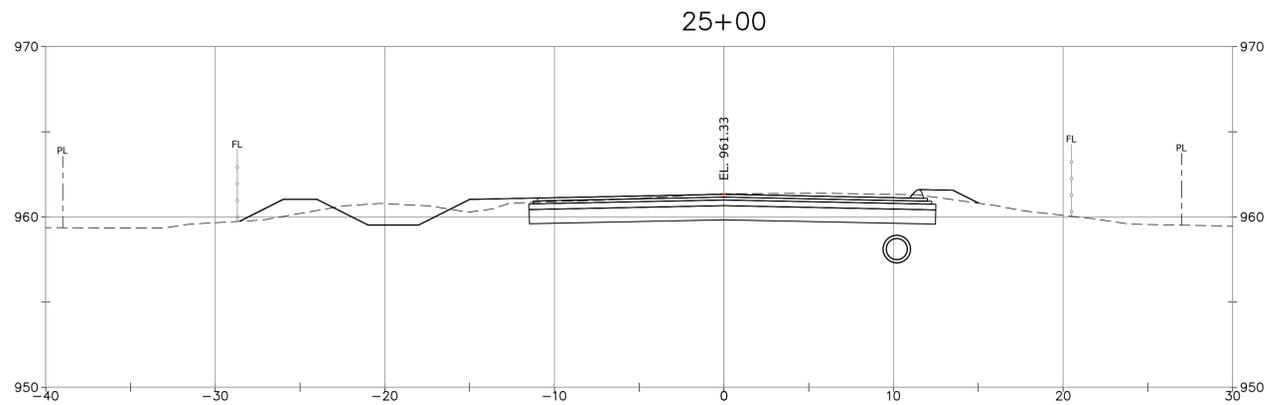
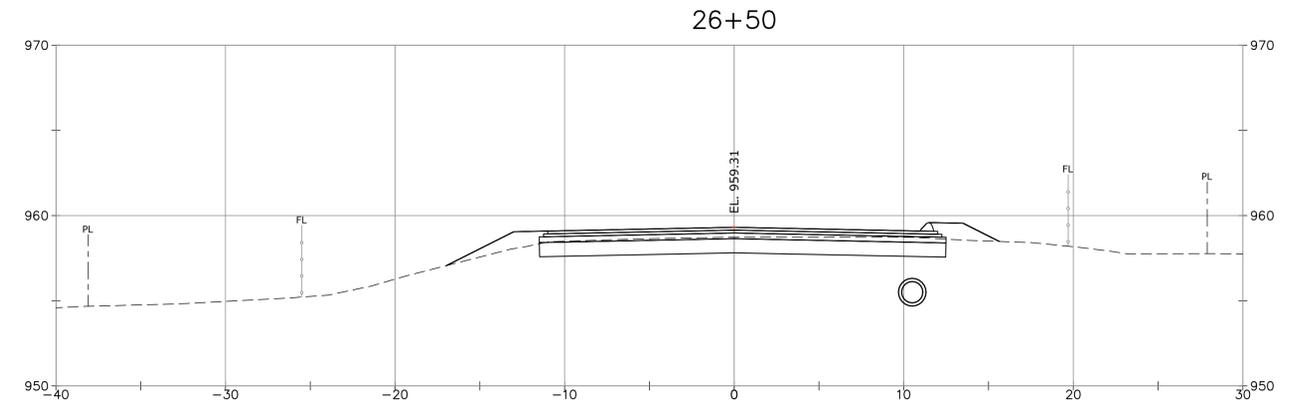
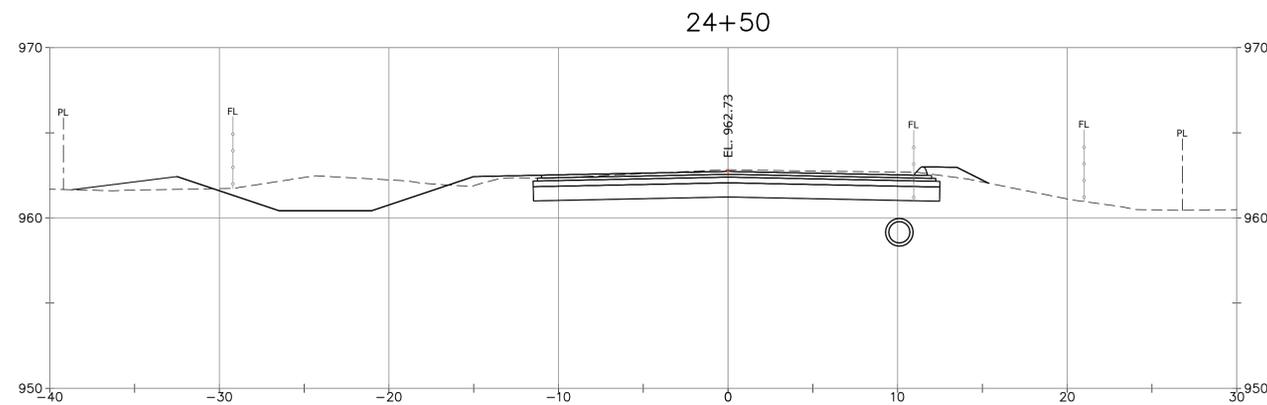
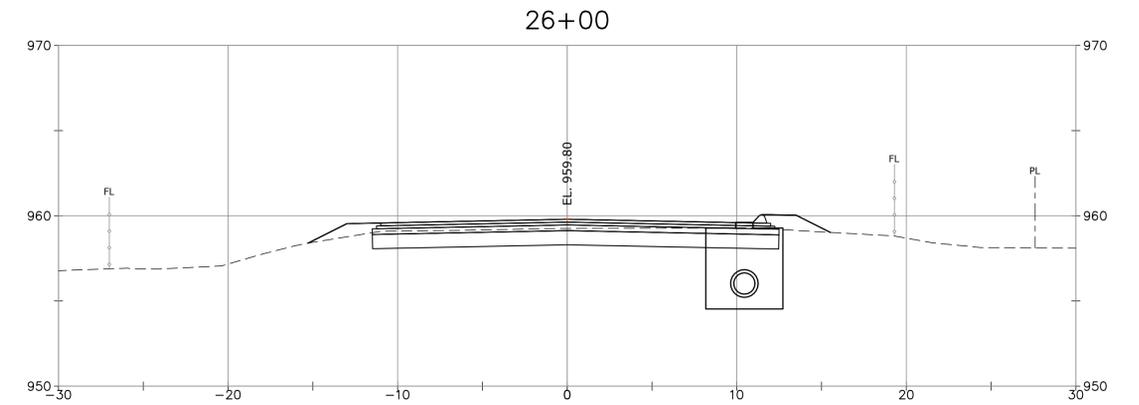
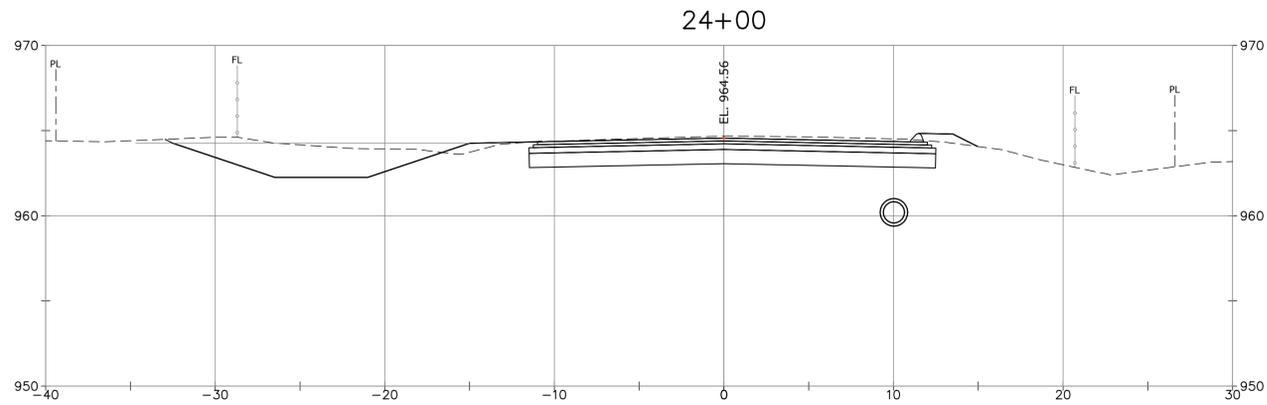
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1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
CROSS SECTIONS 16+00 TO 19+00				
DATE		2025.12.02		SCALE
DRAWN BY		RC		AS NOTED
DESIGNED BY		RC		CHECKED BY
PROJECT No.		4010188.22156		DNB
DRAWING No.				REV.
CS-6				1

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FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT DWG_2026.02.10_5:22 AM



1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD		
		ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION				
TOWN OF LITCHFIELD, CT				
TITLE				
CROSS SECTIONS				
24+00 TO 27+00				
DATE		2025.12.02	SCALE	
			AS NOTED	
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010188.22156				
DRAWING No.				REV
CS-8				1

7

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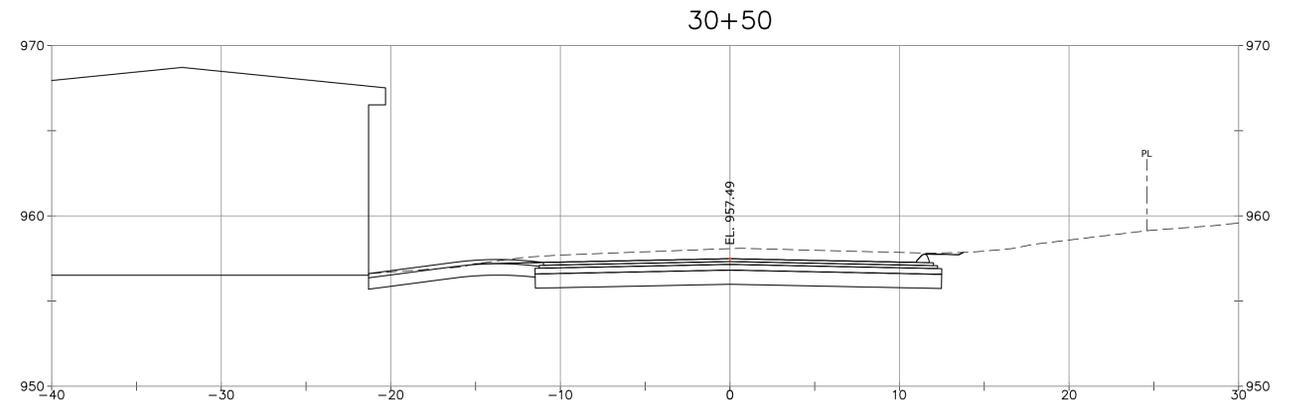
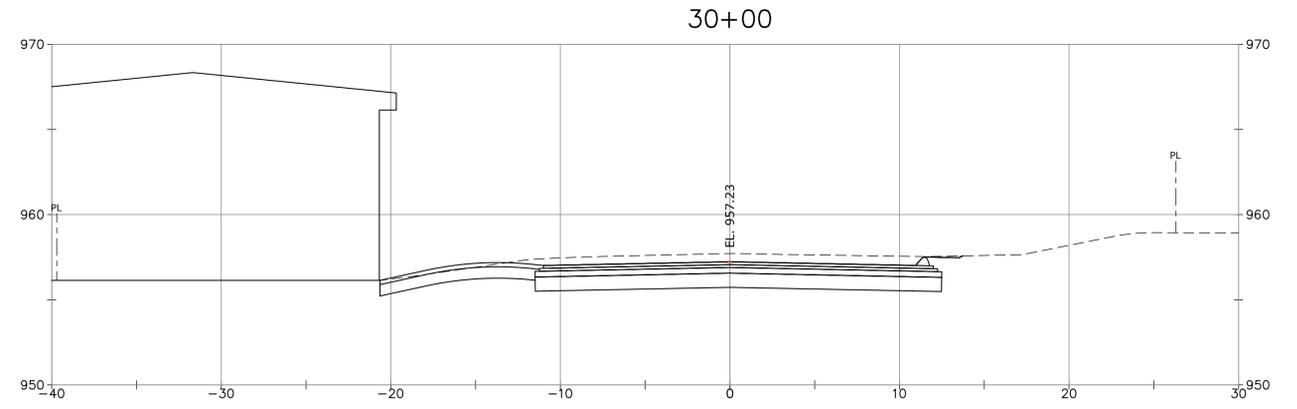
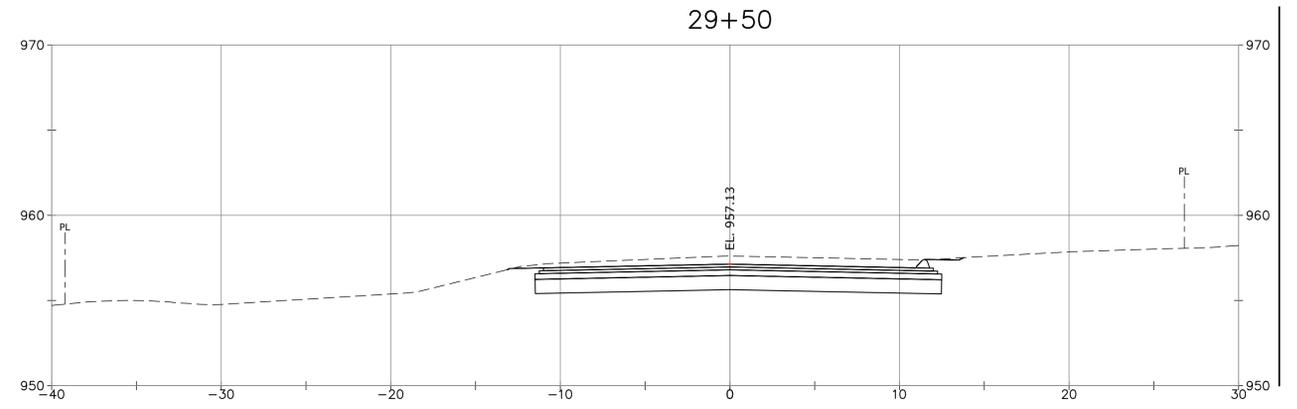
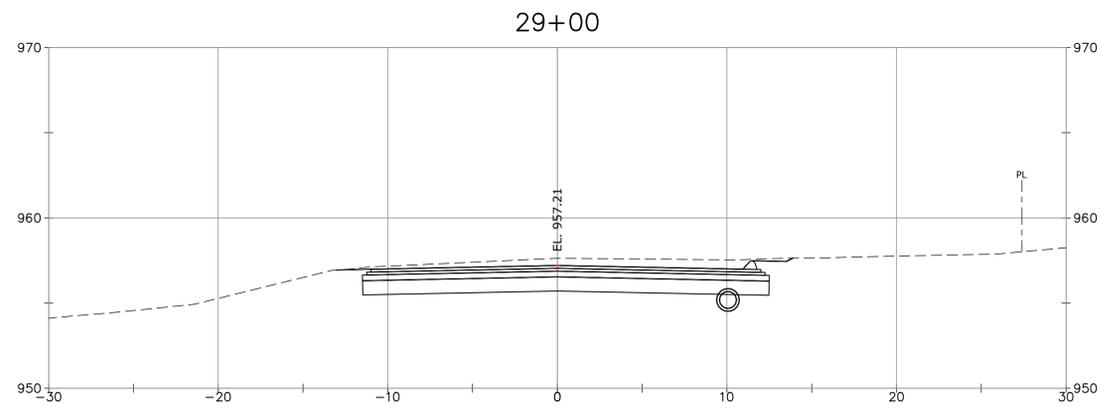
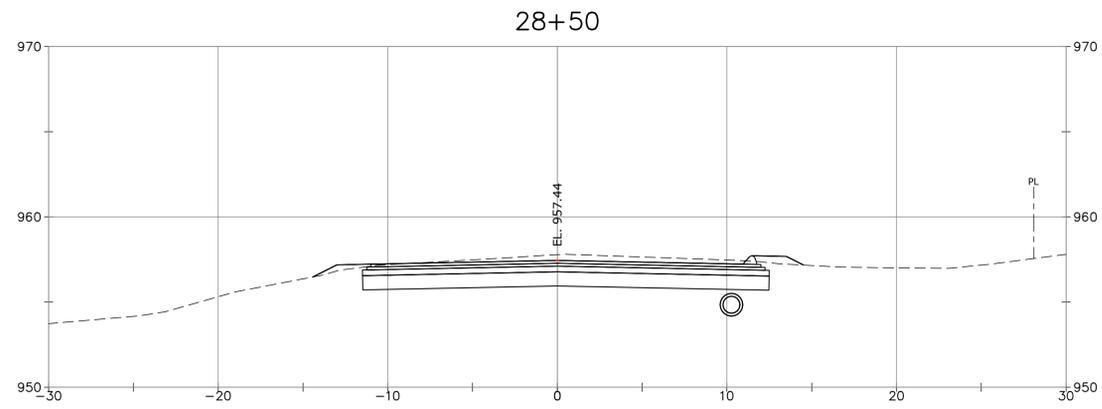
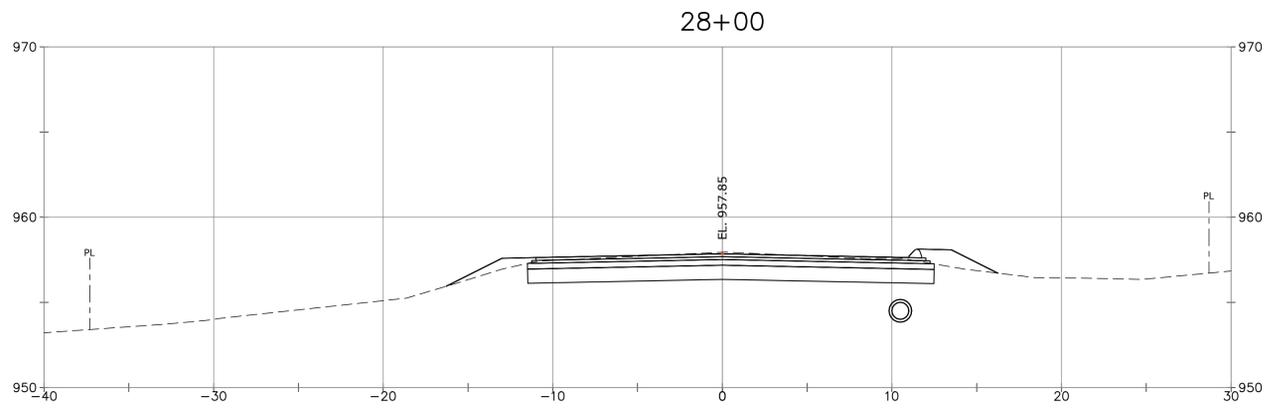
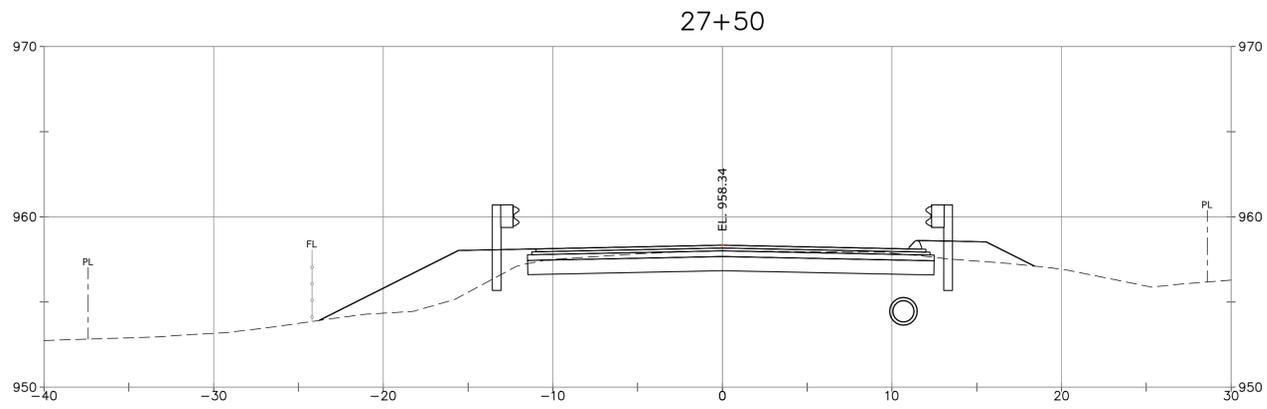
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FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\188.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT DWG. 2026.02.10. 6:23 AM



1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE CROSS SECTIONS 27+50 TO 31+00				
DATE		2025.12.02		SCALE
DRAWN BY		RC		AS NOTED
DESIGNED BY		RC		CHECKED BY
PROJECT No.		4010188.22156		DNB
DRAWING No.				REV.
CS-9				1

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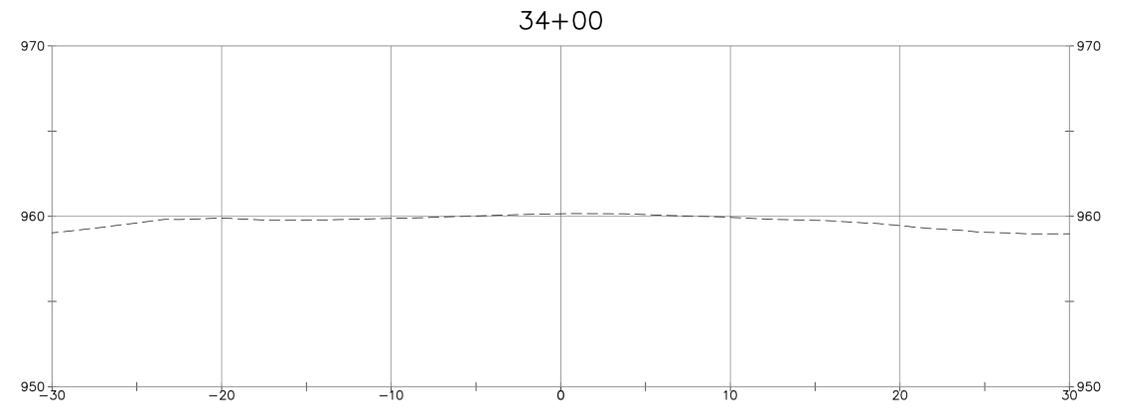
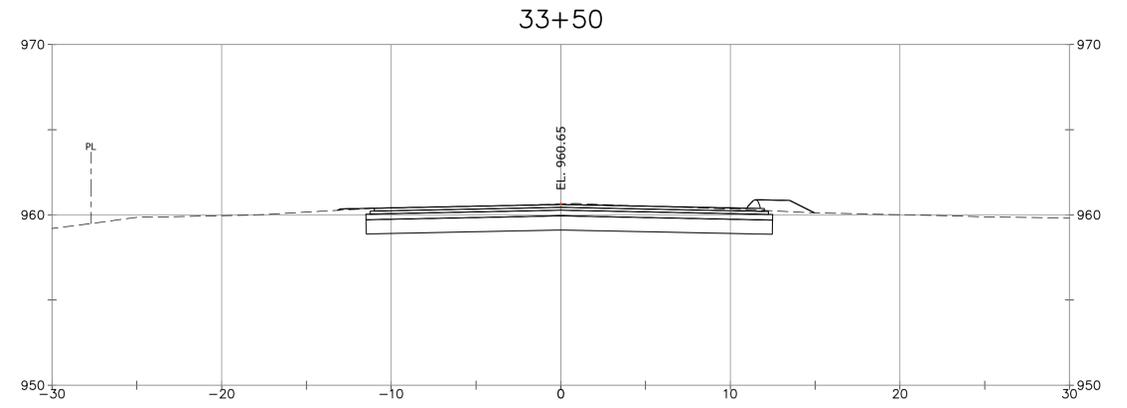
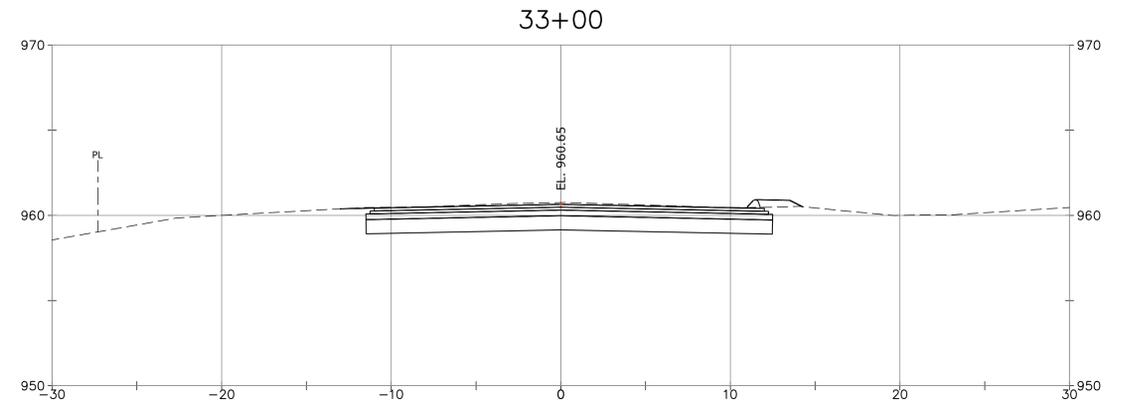
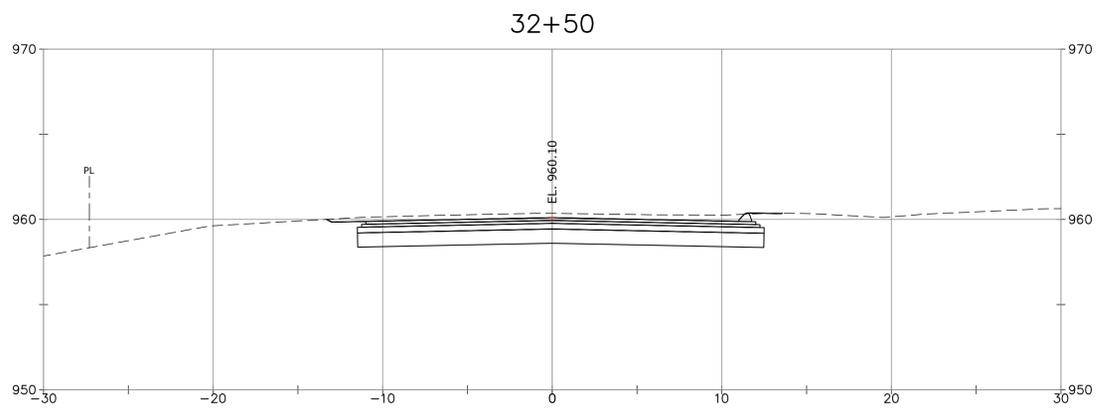
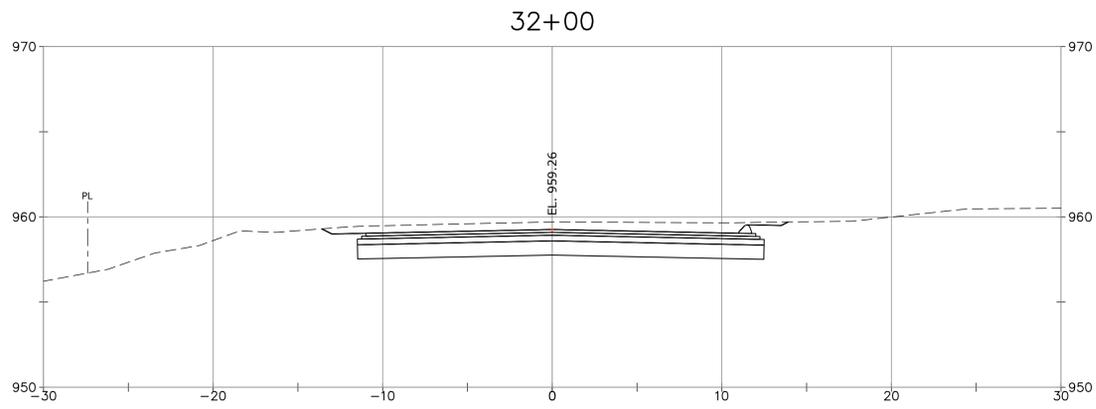
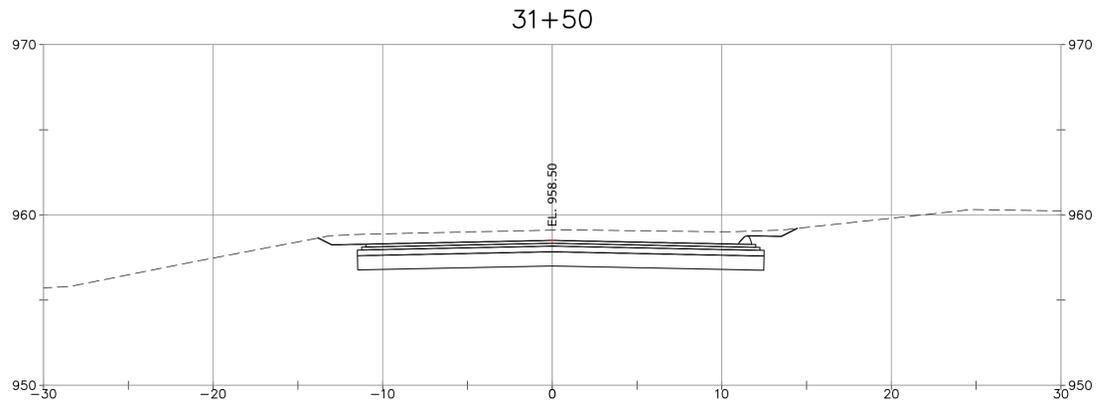
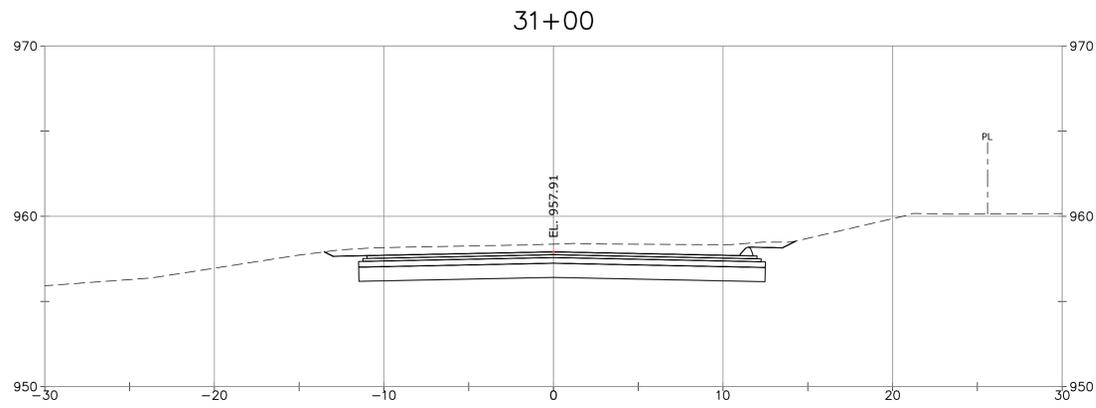
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1	2026.01.20	Address Town Comments	JS	RC
REV.	DATE	DESCRIPTION	BY	CHK.
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FINAL DESIGN				
 HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE CROSS SECTIONS 31+00 TO 33+50				
		DATE: 2025.12.02 DRAWN BY: RC PROJECT No.: 4010188.22156	SCALE: AS NOTED DESIGNED BY: RC CHECKED BY: DNB	REV. 1
CS-10				

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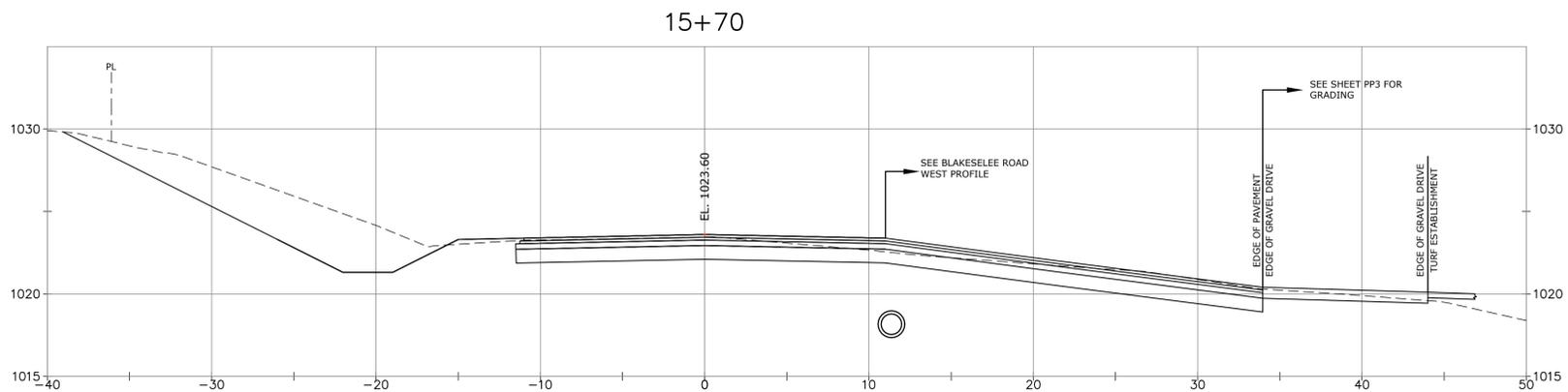
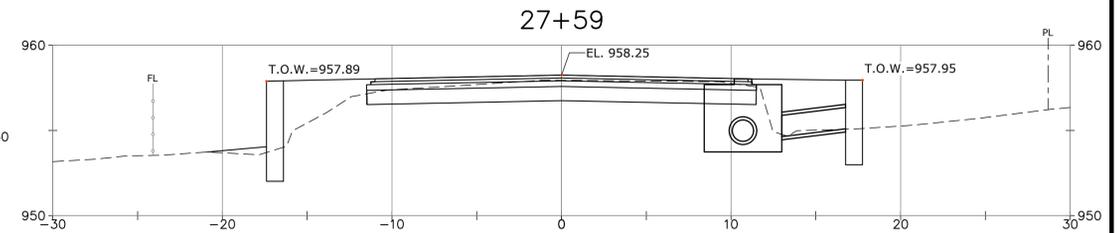
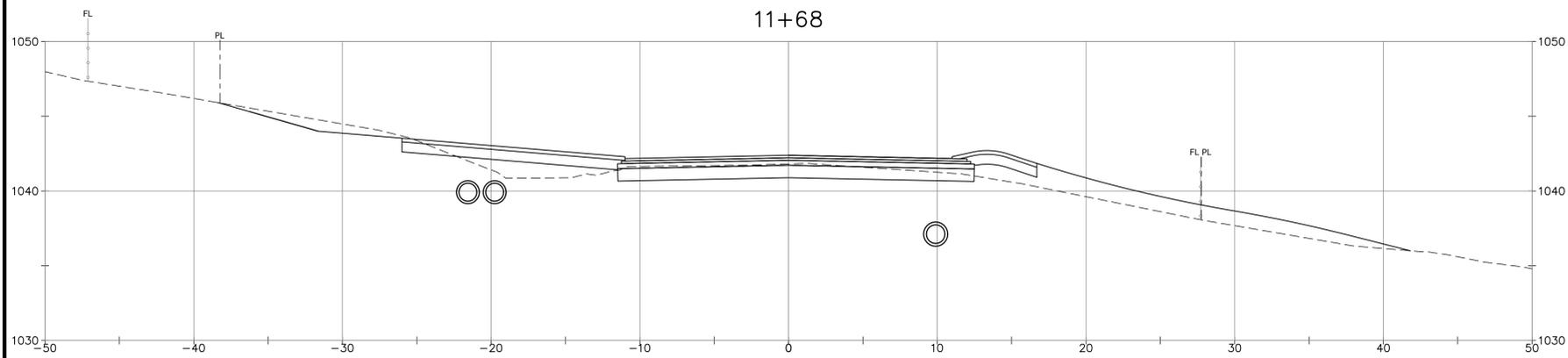
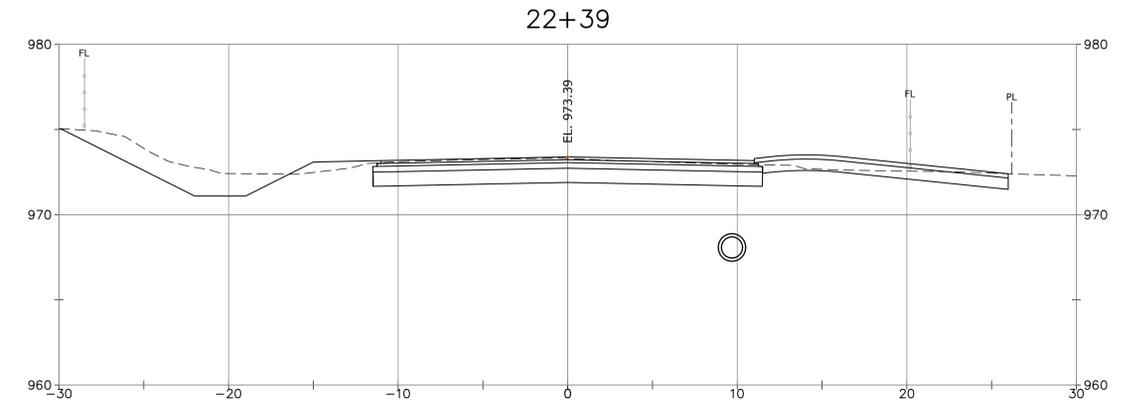
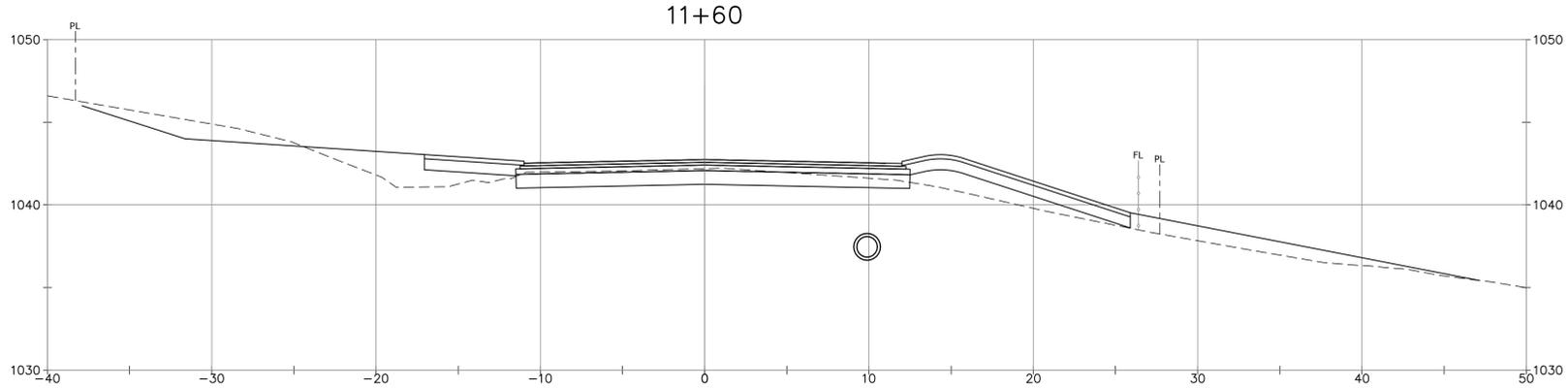
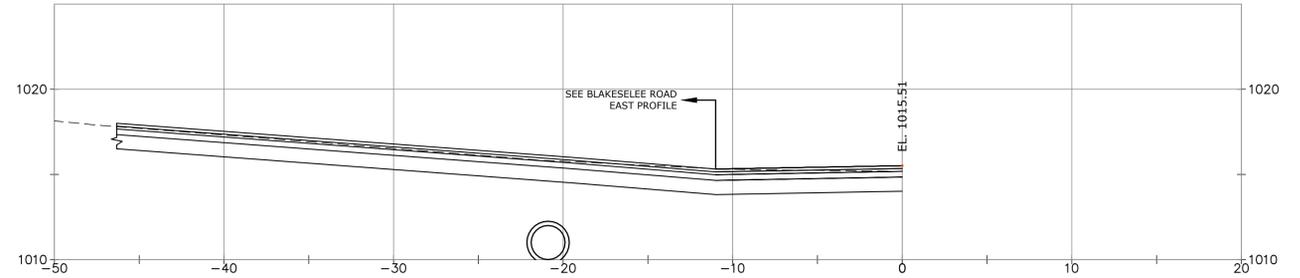
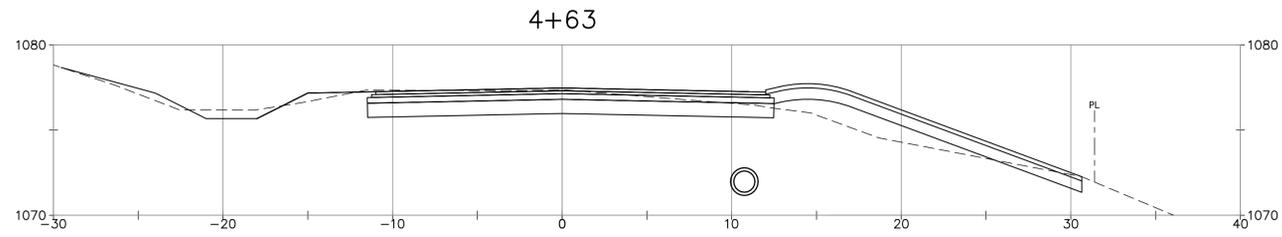
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REV	DATE	DESCRIPTION	BY	CHK

DRAWING ISSUE STATUS

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HALEY WARD
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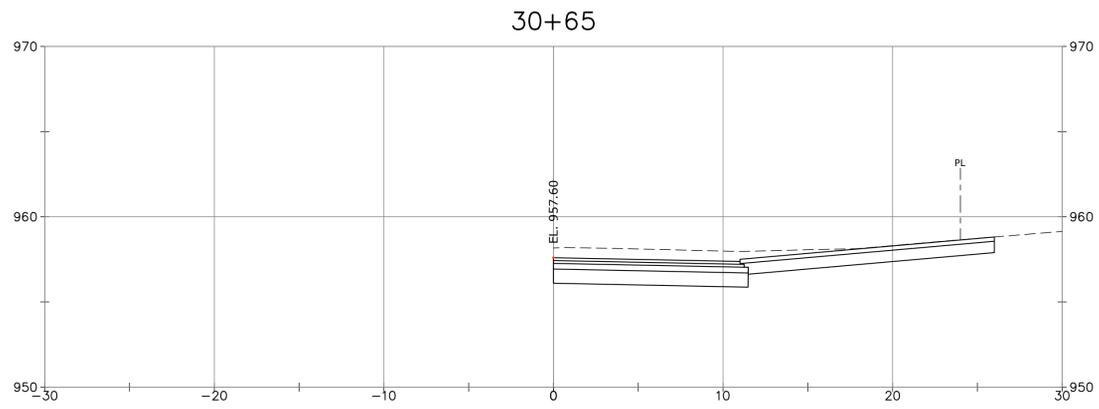
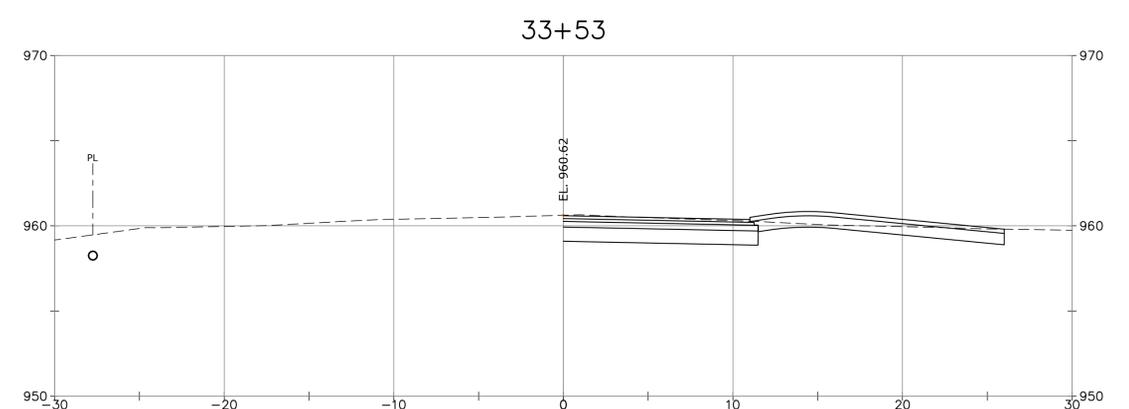
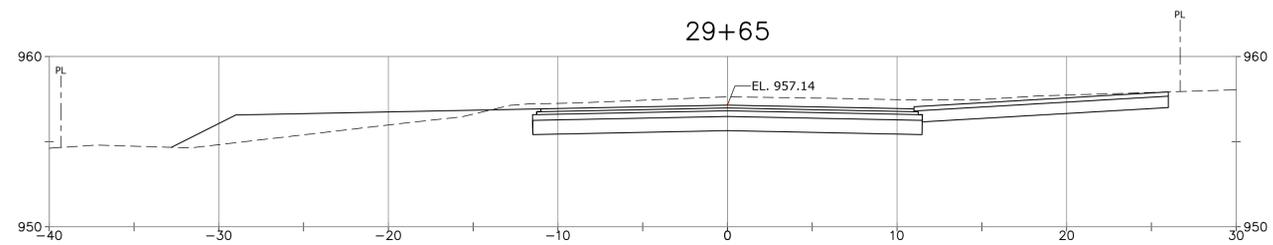
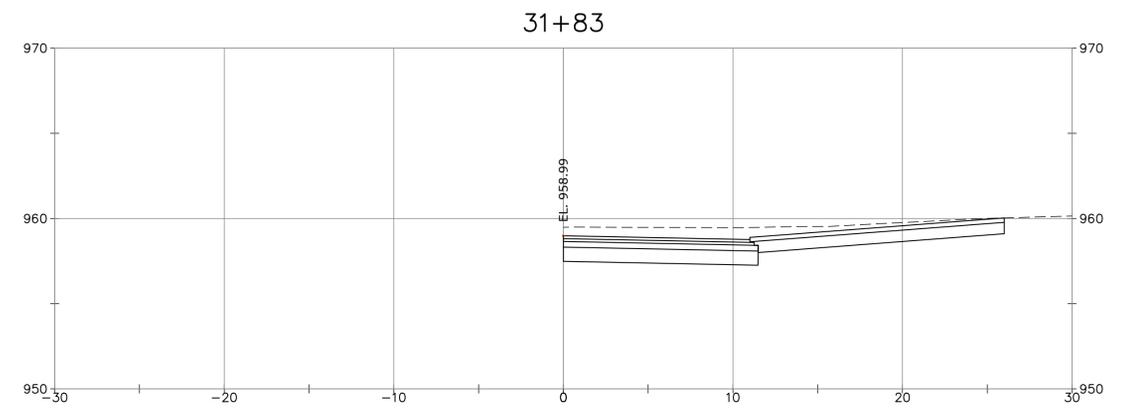
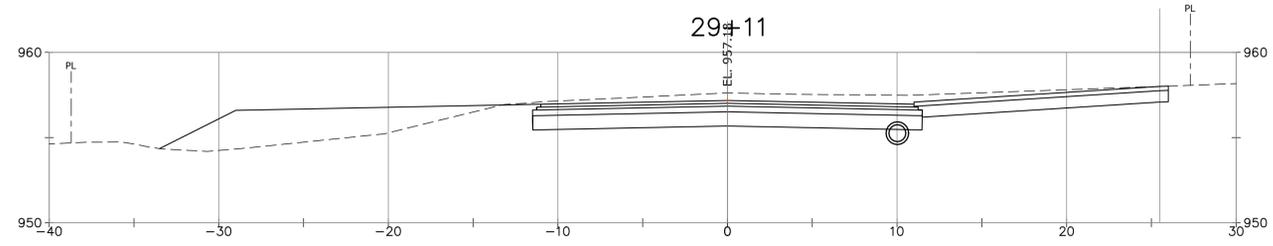
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**WIGWAM ROAD RECONSTRUCTION
TOWN OF LITCHFIELD, CT**

TITLE
**SUPPLEMENTAL
CROSS SECTIONS**

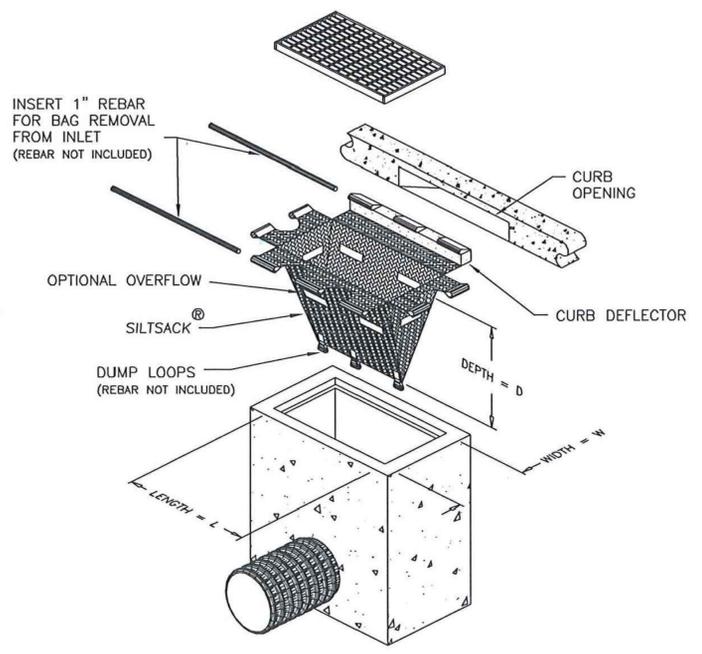
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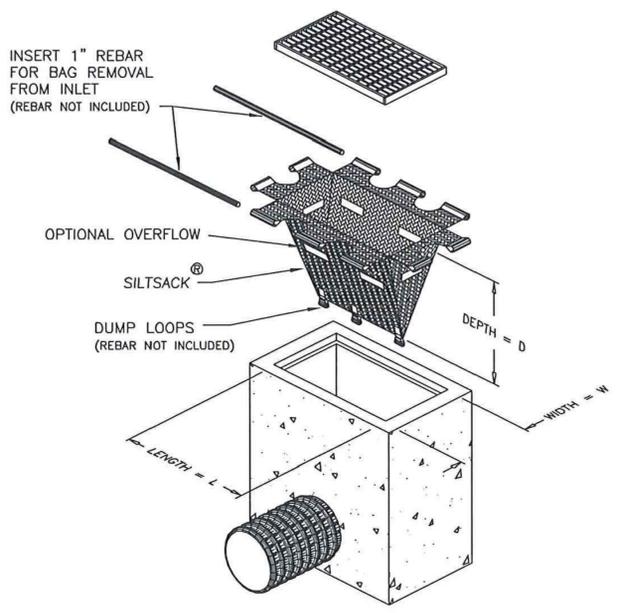
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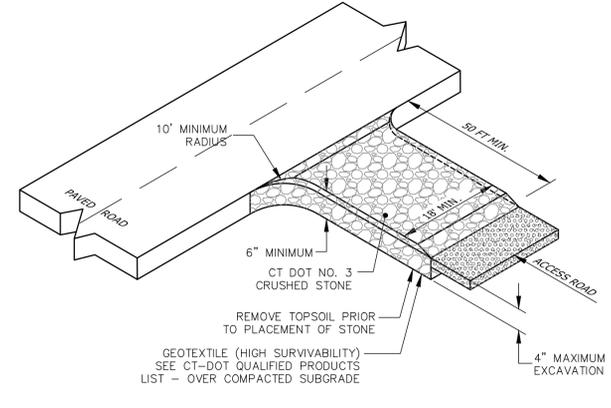
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REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
SUPPLEMENTAL CROSS SECTIONS				
DATE		2025.12.02		SCALE
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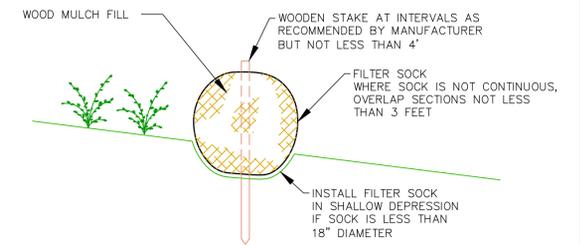
SILT SACK WITH CURB DEFLECTOR
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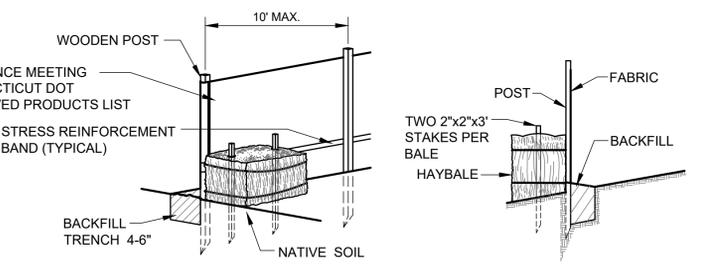
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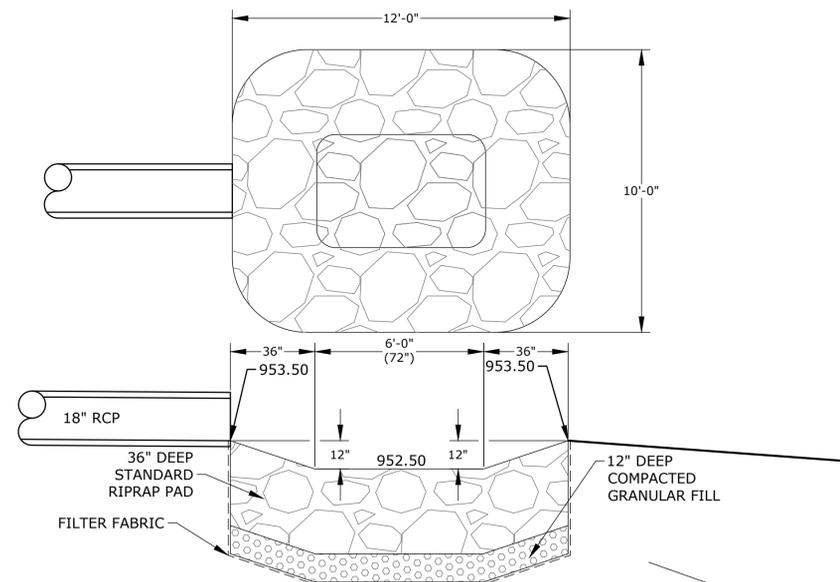
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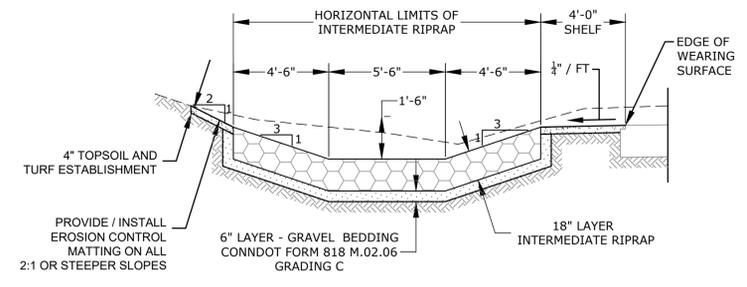
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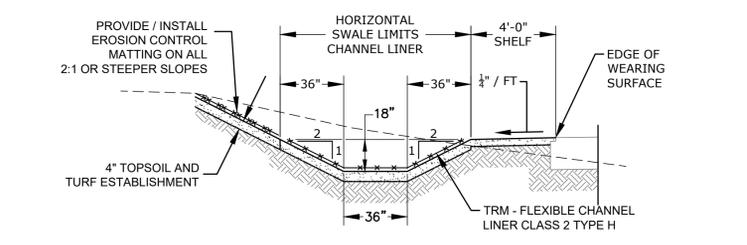
SILT FENCE/HAYBALE COMBINATION BARRIER
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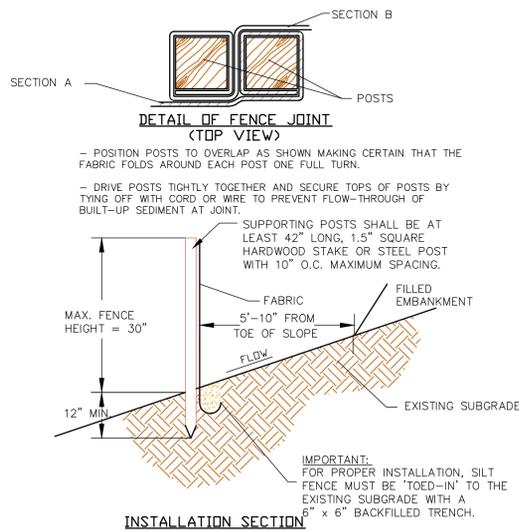
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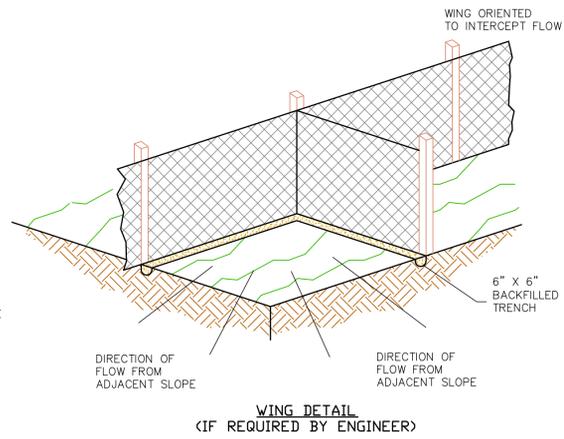
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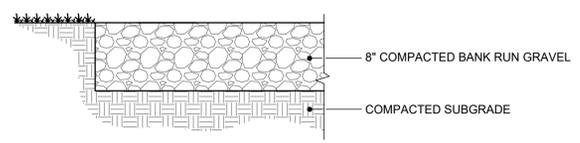
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SEDIMENTATION AND EROSION CONTROL (GEOTEXTILE SILT FENCE SYSTEM)
NTS

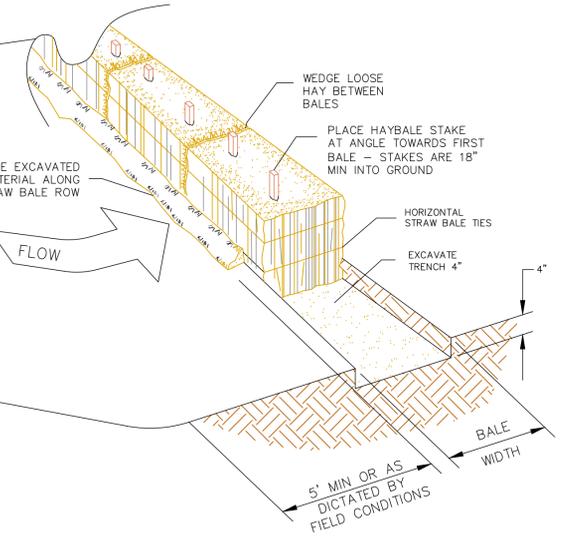


WING DETAIL
(IF REQUIRED BY ENGINEER)



GRAVEL DRIVEWAY
NTS

- NOTES:
1. Place hay bales on contour and wing last hay bales up-slope so that the top of last hay bales are higher than the line of hay bales.
 2. Stake all hay bales.
 3. Maintain and remove sediment deposits as required during construction.
 4. Regular maintenance shall include but not be limited to the following:
 - a.) Removal of sediment build-up
 - b.) Replacement of damaged units
 - c.) minimum inspection requirements include at least once per week or within 24hrs of a precipitation event greater than 0.5"



SEDIMENTATION AND EROSION CONTROL (HAY-BALE SYSTEM)
NTS

1	2026.01.20	Address Town Comments	JS	RC
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DRAWING ISSUE STATUS				
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www.haleyward.com		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
RECONSTRUCTION OF WIGWAM ROAD LITCHFIELD, CONNECTICUT				
TITLE				
SOIL EROSION AND SEDIMENT CONTROL DETAILS				
DATE		SCALE		
2025.12.02		AS NOTED		
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010118.22156				
DRAWING No.				
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SOIL EROSION AND SEDIMENT CONTROL PLAN NARRATIVE

1. INTRODUCTION AND PERMIT COMPLIANCE

Pursuant to Connecticut P.A. 83-388 and the Litchfield Zoning Regulations, this project requires a Soil Erosion and Sediment Control Plan and Narrative.

This narrative describes the **minimum** measures required to control soil erosion during and after construction of the sitework shown on this plan. The soil erosion and sediment control measures shown on this plan are designed in accordance with a document entitled "Connecticut Guidelines for Soil Erosion and Sediment Control" published by the Connecticut Council on Soil and Water Conservation in 2002. The Contractor may be required to implement additional measures to prevent site erosion and sedimentation of downstream waterways.

The Contractor shall obtain copies of, and comply with the conditions of all permits for this project.

The Contractor's activities and operations include all site work and work incidental to the project as depicted on the Contract Drawings. If any of the Contractor's activities require approvals above and beyond those already accounted for by the Owner's permits, the Contractor shall apply for and obtain such permits prior to conducting those operations. If incidental work such as haul roads, waste and disposal areas, staging areas, and field offices are not shown on the plans, and require additional erosion control, the Contractor shall provide such controls.

2. PROJECT DESCRIPTION AND SITE CHARACTERISTICS

The Town of Litchfield proposes to reconstruct drainage and pavement on the north end of Wigwam Road . The project limits begin at State Route 254 and extend continuously in a southerly direction for approximately 3,300-feet. The project's total footprint is approximately 3.95 acres.

The proposed drainage improvements will be comprised of swales, catch basins, and storm sewers. These design features will eliminate existing erosion issues along the west side of Wigwam Road. A synthetic lined swale will be constructed along the east side of the road. It will begin at Route 254 and continue south for approximately 1,600 feet. The runoff within this portion of the swale will be conveyed to the south of Blakeslee through a storm sewer. Once discharged, runoff will follow an intermediate riprap lined channel for approximately 800 feet. The swale will eventually fade as the water is discharged to a wetland located towards the south end of the project limits.

Bituminous concrete lip curbing will be installed along the west side of Wigwam Road. This curbing will help convey surface runoff from the roadway to the proposed storm sewer system.

Full depth reconstruction of Wigwam Road will begin at Route 254 and continue 3,300 feet south. Approximately 110 feet of Blakeslee Road on the east and west side of Wigwam Road will be reconstructed as well. Minor changes have been made to the vertical alignment of each roadway. All driveway aprons will be reconstructed and blended to the new roadway elevations.

To improve roadway safety, Wigwam Road will be equipped with new R-B Mash metal beam rail and end terminal sections. Object markers will be placed adjacent to structures such as headwalls, inlet and outlet pipes, etc. These markers will be installed per CTDOT requirements.

3. CONSTRUCTION SEQUENCING

The Town of Litchfield proposes to construct drainage and pavement improvements on Wigwam Road Phase 1 over the course of a 90-day period during the 2024 or 2025 construction seasons. The Town anticipates the following construction sequence.

Note: Contractor shall maintain at least alternating one-way traffic through the construction zone during all construction operations.

Stage 1 - Drainage Improvements

- Place perimeter erosion controls where shown on the plan.
- Complete clearing and grubbing activities throughout the length of the project.
- Construct culvert crossing, headwalls, and preformed scour hole at Sta. 27+60.
- Construct riprap-lined swale from Sta. 26+00 (L) to Sta. 17+90 (L).
- Construct turf-reinforced swale from Sta. 17+00 (L) to Sta. 1+90 (L) on Wigwam Road and from Sta. 70+15 (L) to Sta. 71+08 (L) on Blakeslee Road. Remove cross culverts as encountered during swale construction.
- Establish turf in turf-reinforced swales. Place temporary erosion-control matting on top of turf-reinforced swales to protect against erosion of underlying topsoil while turf is becoming established.
- Construct new storm sewers from Sta. 17+90 (L) to Sta. 3+00 (R). Place silt sacks in new catch basins as they are constructed.

Stage 2 Pavement Construction

- Excavate existing pavement and base layers (one lane at a time) from Sta. 34+00 to Sta. 17+50. Load these materials onto Town trucks.
- Excavate to subgrade (one lane at a time) from Sta. 34+00 to Sta. 17+50. Simultaneously form roadway embankment on right side of roadway from Sta. 34+00 to Sta. 17+50. Place subbase and processed aggregate base quickly after subgrade is established to provide a traveling surface for vehicles.
- Perform final grading of roadway embankment from Sta. 34+00 to Sta. 17+50. Place topsoil, seed, and mulch. Place erosion-control matting on all areas subject to turf establishment.
- Excavate existing pavement and base layers (one lane at a time) from Sta. 17+50 to Sta. 1+30. Load these materials onto Town trucks.
- Excavate to subgrade (one lane at a time) from Sta. 17+50 to Sta. 1+30. Simultaneously form roadway embankment on right side of roadway from Sta. 17+50 to Sta. 1+30. Place subbase and processed aggregate base quickly after subgrade is established to provide a traveling surface for vehicles.
- Perform final grading of roadway embankment from Sta. Sta. 17+50 to Sta. 1+30. Place topsoil, seed, and mulch. Place erosion-control matting on all areas subject to turf establishment.
- Place bituminous concrete base course.
- Place bituminous concrete wearing course.
- Complete bituminous concrete handwork (driveway aprons).

Stage 3 - Final Operations

- Construct guide rails. Install processed aggregate surface beneath guide rails.
- Place topsoil, seed, and mulch in areas adjacent to driveway pavement and new guiderails and in any other un-stabilized areas throughout the site. Place erosion-control matting on all areas with turf-establishment that have slopes 3H:1V or steeper.
- Install object markers.
- Reset road signs.
- Paint stop-bars and double-yellow centerlines at intersections.

4. RESPONSIBILITY

4.1 RESPONSIBILITIES OF OWNER/PERMITEE

The Owner/Permittee is The Town of Litchfield, 101 Russell Street, Litchfield, CT 06759, Phone 860-567-7575. The Owner/Permittee shall:

- Provide the Contractor with copies of land-use permits that Owner has acquired.
- Inform all parties involved with the proposed site work of this plan's objectives and requirements.

4.2 RESPONSIBILITIES OF CONTRACTOR

The Contractor has not been selected at the time of permit application. The Contractor is responsible for preventing erosion of the site.

The Contractor shall:

- Install, monitor, and maintain the soil erosion and sediment control measures as shown on this plan.
- Comply with all permit requirements.

- Provide the Owner, Engineer, and the municipality with 24 hour phone numbers in the event of an emergency at the site.

5. PRECONSTRUCTION CONFERENCE

The Owner will conduct a preconstruction meeting with the Contractor, Engineer, and the Wetlands Enforcement Agent to review the proposed soil erosion and sediment control measures, construction sequence, and other factors required to prevent project-related sediment from reaching near by wetlands or waterways.

6. DESCRIPTION AND MAINTENANCE OF EROSION CONTROL MEASURES

6.1 TEMPORARY STABILIZATION MEASURES

Temporary Grass Cover:

Depending on conditions at time of surface restoration, Contractor may elect to plant temporary grass cover and defer final seeding to the spring of 2024. Contractor shall loosen the soil to a depth of two inches before seeding. If existing soil is not capable of growing grass, the Contractor shall spread at least two inches of topsoil over the loosened surface. If seeding commences during late autumn, the winter ryegrass seed shall be used. Seeding rates shall be 5 lbs./1000 sq. ft. Hay mulch shall be spread at the rate of 100 lbs./1000 sq. ft. and Contractor shall protect mulch and seed with stapled jute mesh or erosion control matting as stipulated below. Contractor shall irrigate the grass until an acceptable stand of grass is established.

Silt Fence:

Install silt fence as shown on the plans and details. Embed the silt fence into the ground and firmly anchor it as shown in the details. Remove sediment once levels have reached 1/4 of the effective fence-height. Repair and/or replace silt fence immediately if damaged or deteriorated.

Filter Sock:

Install an erosion control filter sock of the size shown in the Contract Drawings. Remove surface rocks or other obstacles that prevent close contact with the ground surface and firmly stake it as shown on the details. Remove sediment once levels have reached 1/4 the effective barrier height. Repair and/or replace the barrier immediately if damaged or deteriorated. Stake filter sock at intervals recommended by manufacturer, but not less than four feet. For filter sock less than 12 inches, install in a shallow excavation. Where filter sock is not continuous, overlap sections by three feet minimum.

Silt Sacks:

Install a silt sack in the catch basin where shown on the plans. Install in accordance with manufacturer's instructions. Remove and empty according to manufacturer's instructions.

Stockpiling or Storage of Excavated Materials:

Completely surround all temporary (2-4 weeks) material stockpiles with haybales or silt fence to prevent transportation of sediment. Seed stockpiles that will remain for a longer duration with a quick-growing rye grass.

Erosion Control Matting:

Install erosion control matting on all areas disturbed by construction activities. Contractor shall select a fabric from the Connecticut Department of Transportation's Qualified Product List. The fabric shall meet the requirements of *Class 1 Type D Slope Protection* for all areas. Contractor shall maintain the fabric until a durable stand of grass is established.

Tree Protection:

The Owner will select trees or groups of trees to remain prior to construction. The Contractor shall provide snow fencing, board fencing, or cord fencing around trees or groups of trees to protect them against damage. The Contractor shall be responsible for selecting and installing the protection measures most appropriate for the conditions present. The Contractor shall repair and/or replace tree protection measures immediately if damaged during construction.

6.2 PERMANENT STABILIZATION MEASURES

Site Restoration:

Contractor shall be responsible for restoration of all unpaved areas following completion of the project. Restoration shall include the furnishing, placement, and shaping of topsoil and the establishment of a firm stand of turf. At a minimum, Contractor shall restore unpaved areas to the limits indicated on the Contract Drawings; however the limits shall be extended to include any portion of unpaved areas damaged inadvertently or for Contractor's convenience.

Contractor shall furnish, place, and shape topsoil, to a minimum depth of four inches, in all areas disturbed by construction. Final grade of topsoil shall match existing grade at adjacent areas and shall be shaped to a smooth contour. Topsoil material shall conform to requirements of ConnDOT Form 818, Article M.13.01 - Item 1 (Topsoil).

Following placement of topsoil, contractor shall provide an accepted, uniform stand of established perennial turf grasses by furnishing and placing fertilizer, seed, and mulch on all areas to be treated as shown on the plans or where designated by Engineer.

- Seed shall meet the requirements of ConnDOT Form 818, Article M.13.04.
- Fertilizer shall meet the requirements of ConnDOT Form 818, Article M.13.03.
- Mulch shall be wood fiber, hay, or straw and shall meet the requirements of ConnDOT Form 818, Article M.13.05.
- Erosion control matting shall conform to the requirements specified above.

Construction Methods for turf establishment shall conform to the following requirements:

1. Surface Preparation:

A. Level areas and lawns shall be made friable and receptive for seeding by disking or by other approved methods to the satisfaction of Engineer. All disturbed soil areas brought to final grade shall be seeded within 7 days, or as directed by Engineer, in accordance with these specifications. In all cases, the final prepared and seeded soil surface shall meet the lines and grades for such surface as shown in the plans, or as directed by Engineer.

B. Slopes and Embankment Areas: These areas shall be made friable and receptive to seeding by disking or by other approved methods which will not disrupt the line and grade of the slope surface. In no event will seeding be permitted on hard or crusted soil surface.

C. Seeding shall not be permitted until all weed growth is removed.

2. Seeding Season: The optimal calendar dates for seeding are: Spring (March 15 to June 30) and Fall (August 15 to October 31). All disturbed soil areas at final grade shall be seeded within 7 days or as directed by Engineer, in accordance with these specifications. Any seeding outside the optimal dates shall be performed in the same manner. Since acceptable turf establishment is less likely, Contractor shall be responsible for reseeding until the turf stand conforms to the requirements of ConnDOT Form 818 Article 9.50.03-5.

3. Sowing Methods: The Contractor shall sow the grass seed mixture using traditional methods or hydro-seeding.

A. Sowing by Traditional Methods: The rate of seed application shall be no less than 175 lbs./acre. Fertilizer shall be initially applied at a rate of 320 lbs./acre during or preceding seeding. When wood fiber mulch is used, it shall be applied in water slurry at a rate of 2,000 lbs./acre with, or immediately after the application of seed, fertilizer, and limestone (if limestone is required). Tackifier may be used with straw mulch as proposed by Contractor. When the grass seeding growth has attained a height of 6 inches, the specified grass areas (mowed and un-mowed) shall receive a uniform application of fertilizer hydraulically placed at the rate of 320 lbs./acre

B. Sowing by Hydro-seeding: If hydro-seeding is proposed, Contractor shall furnish a hydro-seeding Plan for Engineer's acceptance two weeks prior to the start of this work. The hydro-seeding plan shall include the following:

- Proposed manufacturer and copy of the manufacturer's recommended application rates for various grades and hose angles of application, the site's soil type(s) and expected weather conditions.
- Number of square feet of seeding that can be covered with the quantity of solution per hydro-seeder.
- Time between mixing of slurry and seed in hydro seeding tank and application.

iv. Type of hydro seed machine including nozzle type and automation information if applicable. If the Hydro-seeding Plan is accepted for use, deviation from ConnDOT Form 818, Article 9.50.03-1 (Surface Preparation) will not be allowed. Hydro-seeding shall not be used if the extended weather patterns are hot and dry and the soil surface is dry and dusty, unless Contractor's submission addresses application of straw or hay mulch and addresses follow up maintenance (i.e. additional watering) for "drought conditions." The hydro seed tank and hoses(s) shall be completely flushed and cleaned each day before seeding is to be started, and shall also be thoroughly flushed of all residue after application to every 10 acres.

4. Disturbance: Contractor shall keep all equipment and vehicular and pedestrian traffic off areas that have been seeded to prevent excessive compaction and damage to young plants. Where any disturbance has occurred, Contractor shall rework the soil to make a suitable seedbed, then re-seed and mulch such areas with the full amounts of the specified materials, at no additional cost to the State.

5. Stand of Perennial Turf Grasses: Contractor shall provide and maintain a uniform stand of established turf grass species having attained a height of 6 inches consisting of no less than 60% coverage per square foot throughout the seeded areas until the entire Project has been accepted. Reseeding, as required to achieve and maintain a uniform stand of established turf grass species, shall be at no additional cost to Owner.

6. Establishment: Contractor shall keep all seeded areas free from weeds and debris, such as stones, cables, baling wire, and shall mow at its own expense, on a 1 time only basis, all slopes 4:1 or less (flatter) and level turf established (seeded) areas to a height of 3 inches when the grass growth attains a height of 6 inches. Clean-up shall include, but not be limited to, the removal of all debris from the turf establishment operations on the shoulders, pavement or elsewhere on adjacent properties publicly and privately owned. Mowing shall be done at least once.

7. Erosion Control Matting: Erosion control matting shall be installed following seeding where called for on the plans or as directed by Engineer. Staples shall be installed as per manufacturer's recommendations. Where two lengths of matting are joined, the end of the up-grade strip shall overlap the down-grade strip per the manufacturer's recommendations. Contractor shall maintain and protect the areas with erosion control matting until such time as the turf grass is established. Contractor shall replace or repair any and all erosion control matting areas damaged by fire, water or other causes including the operation of construction equipment, at no cost to Owner. No mowing will be required in the locations where erosion control matting is installed.

6.3 PERMANENT STRUCTURAL MEASURES (POST CONSTRUCTION STORMWATER MANAGEMENT)

Land Grading:

Proposed grades are shown in detail on the plan. In general, the Contractor shall properly stockpile earth, move it to fill areas, or export it from the site. Place and compact fill in shallow lifts, proceeding uphill from the toe area. Create large but shallow runoff collection areas at the end of each working day to help collect and prevent runoff from running down the fill face.

Bring all excavated, filled, or disturbed areas to final grade as soon as possible and stabilize areas with loam, seed and mulch immediately. Keep erosion control measures in place until the site is stabilized with pavement and/or vegetation.

6.4 OTHER CONTROLS

Waste Disposal:

Provide an adequate number of covered waste containers to ensure that no litter, debris, building materials, or similar materials are discharged to wetlands or watercourses. Instruct subcontractors to use the containers for waste material. Empty the containers promptly when full.

Pavement Maintenance:

The Contractor shall sweep paved roadways adjacent to the site on a routine basis to prevent tracking of mud onto public roadways and washing of mud into waterways. If the Contractor's schedule for cleaning the pavement is found to be inadequate by the Owner, Owner's Representative, or the municipality, the Contractor shall increase the frequency at no additional cost to the Owner.

Cleaning of Stormwater Structures:

Clean all stormwater structures, including, but not limited to pipes, swales, detention basins, sediment traps, and riprap aprons of sediment upon completion of the project.

8. GENERAL CONDITIONS

8.1 If erosion control measures are damaged by construction vehicles, acts of vandalism, or severe weather conditions, the Contractor shall immediately remove sediment in the vicinity of the erosion control measures and repair these measures to a functional condition.

8.2 If, during or after construction, it becomes apparent that existing erosion control measures are incapable of controlling erosion, the Owner or Engineer may require additional control measures including, but not limited to; additional haybales, silt fence, sediment basins, or mechanically anchored mulch.

8.3 Refueling of equipment or machinery within 75 feet of any wetland or watercourse is prohibited.

8.4 No construction shall proceed until a written proposal of methods to prevent construction debris, paint, spent blast materials, or other materials from entering the wetland or watercourse has been submitted by the Contractor to the Owner and approved by the Owner, and such methods have been implemented as the Owner directs. These materials shall be collected and disposed of in an environmentally safe manner in accordance with all applicable Federal and State laws and regulations. The Owner may order the Contractor to cease such activity temporarily if, in the judgement of the Owner, wind or storm conditions threaten to cause the deposit of such materials into a waterway.

8.5 No materials resulting from construction activities shall be placed in or allowed to contribute to the degradation of an adjacent wetland or watercourse. Disposal of any material shall be in accordance with Connecticut General Statutes, including, but not limited to, Sections 22a-207 through 22a-209.

8.6 Fording of streams with equipment is prohibited, except as allowed by the Owner and the Owner's permits. Minimize such equipment travel. Where frequent, place washed stone to minimize erosion, scour, and turbidity, provided no significant grade change will be required for any haul road or temporary structure placed in wetlands or watercourses. Unless the above activities are specifically authorized by the Owner's permits, the Contractor shall acquire permits for such activities before commencement of the work.

8.7 Conduct work within or adjacent to watercourses during periods of low flow, whenever possible. The Owner shall remain aware of flow conditions during the conduct of such work, and shall cause such activity to cease should flow conditions threaten to cause excessive erosion, siltation or turbidity. The Contractor shall make every effort to secure the work site before predicted major storms. A major storm shall be defined as a storm predicted by NOAA Weather Service with warnings of flooding, severe thunderstorms, or similarly severe weather conditions or effects.

8.9 Stabilize all temporary fill to prevent erosion and to prevent sediment or other particulate matter from reentering a wetland or watercourse. Restore and revegetate all areas affected by temporary fills to their original contours or as directed by the Owner. Confine the extent of temporary fill or excavation to that area necessary to perform the work, as approved by the Owner.

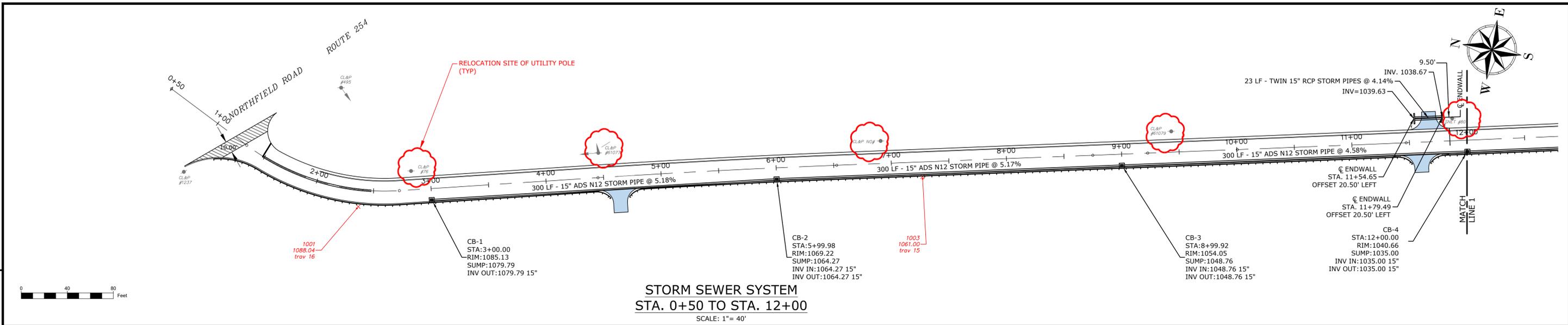
8.10 Dumping of oil, chemicals or other deleterious materials on the ground is forbidden. The Contractor shall provide a means of catching, retaining, and properly disposing of drained oil, removed oil filters, or other deleterious material. All spills of such materials shall be reported immediately by the Contractor to the DEEP.

8.11 No application of herbicides or pesticides within 75 feet of any wetland or watercourse will be allowed. All such applications must be done by a Connecticut licensed applicator. The Contractor shall submit to the Owner the proposed applicator's name and license number, and must receive the Owner's approval of the proposed applicator, before such application is carried out.

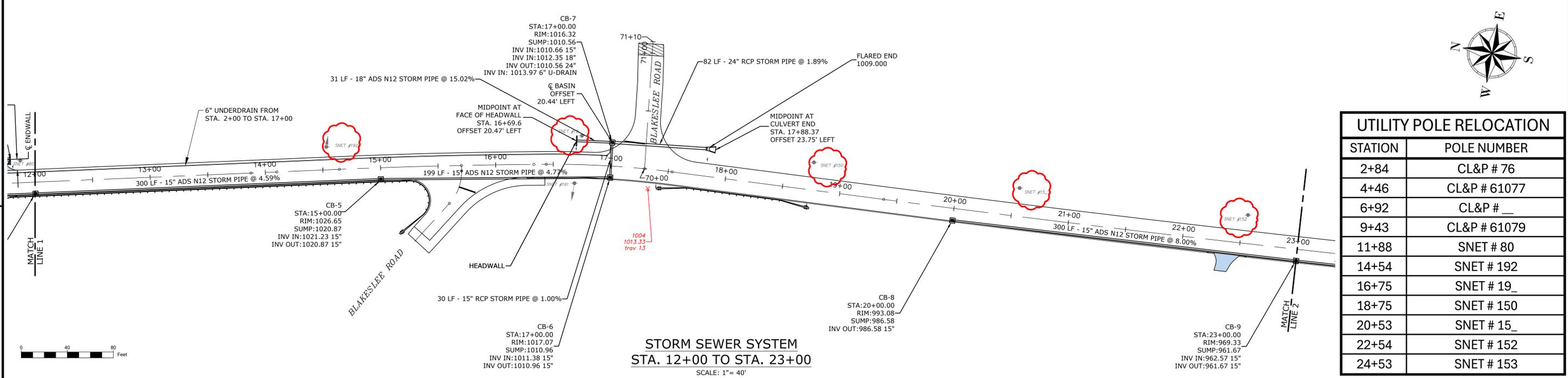
FILE LOCATION: P:\CT\4010188 - TOWN OF LITCHFIELD\186.22156-WIGWAM ROAD PHASE 1 - DNB\02-CAD_FILES\CIVIL\PROJECT DWG. 2026.02.10. 5:24 AM

1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
SOIL EROSION AND SEDIMENT CONTROL NARRATIVE				
DATE		SCALE		
2025.12.02		AS NOTED		
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010188.22156				
DRAWING No.				REV.
SESC-2				1

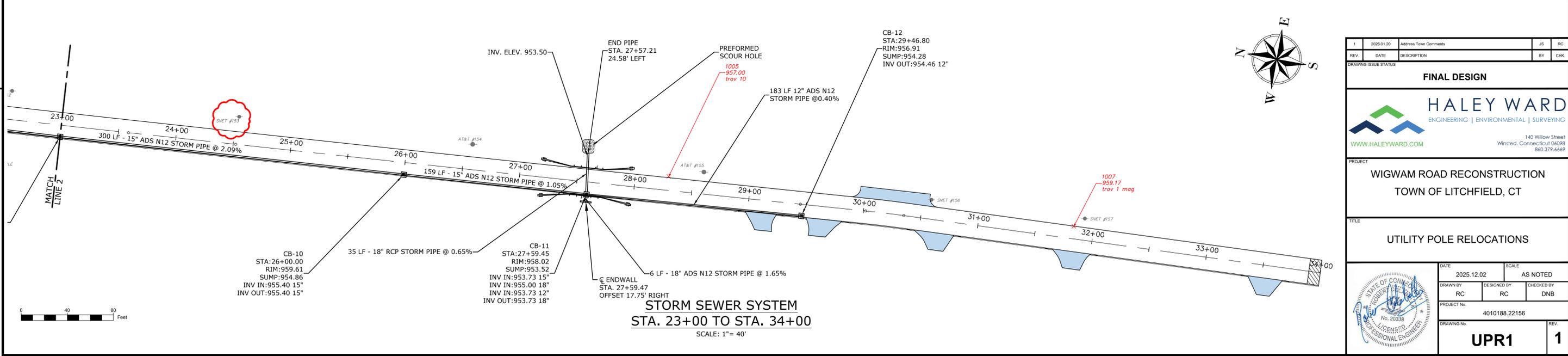
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STORM SEWER SYSTEM
STA. 0+50 TO STA. 12+00
 SCALE: 1" = 40'



STORM SEWER SYSTEM
STA. 12+00 TO STA. 23+00
 SCALE: 1" = 40'

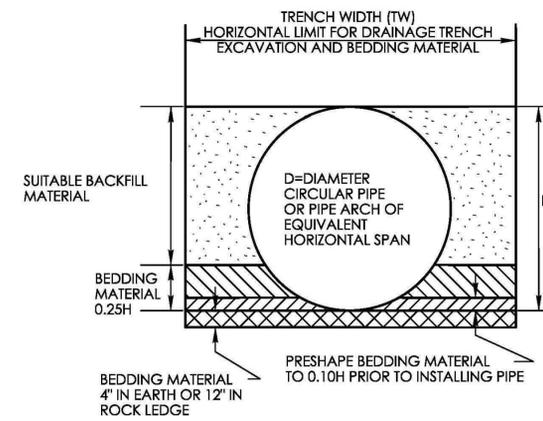


STORM SEWER SYSTEM
STA. 23+00 TO STA. 34+00
 SCALE: 1" = 40'

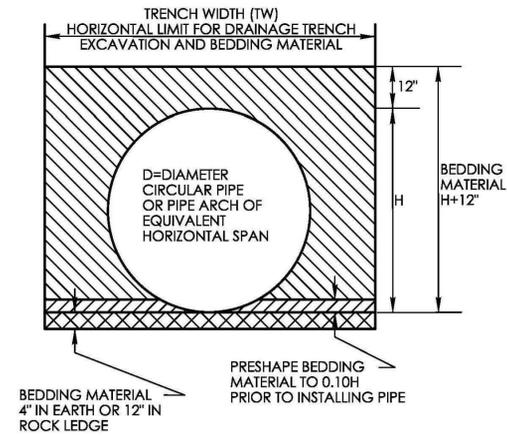
UTILITY POLE RELOCATION	
STATION	POLE NUMBER
2+84	CL&P # 76
4+46	CL&P # 61077
6+92	CL&P #
9+43	CL&P # 61079
11+88	SNET # 80
14+54	SNET # 192
16+75	SNET # 19
18+75	SNET # 150
20+53	SNET # 15
22+54	SNET # 152
24+53	SNET # 153

1	2026.01.20	Address Town Comments	JS	RC
REV	DATE	DESCRIPTION	BY	CHK
DRAWING ISSUE STATUS				
FINAL DESIGN				
		HALEY WARD ENGINEERING ENVIRONMENTAL SURVEYING		
WWW.HALEYWARD.COM		140 Willow Street Winsted, Connecticut 06098 860.379.6669		
PROJECT				
WIGWAM ROAD RECONSTRUCTION TOWN OF LITCHFIELD, CT				
TITLE				
UTILITY POLE RELOCATIONS				
DATE		SCALE		
2025.12.02		AS NOTED		
DRAWN BY	DESIGNED BY	CHECKED BY		
RC	RC	DNB		
PROJECT No.				
4010188.22156				
DRAWING No.				REV
UPR1				1





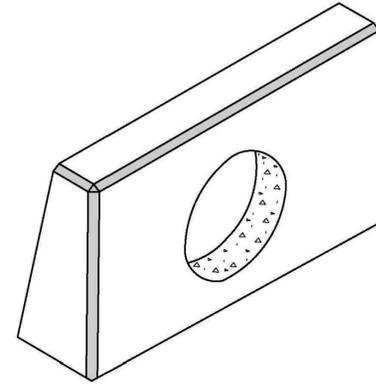
**PIPE TRENCH
FOR PIPES LESS THAN 48"**



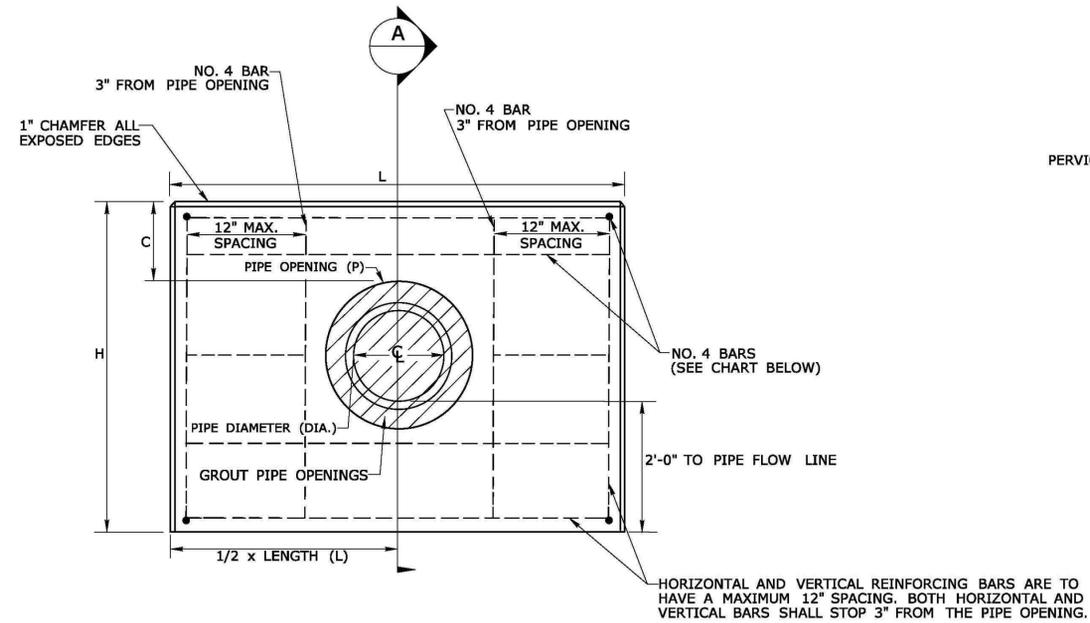
**PIPE TRENCH
FOR PIPES GREATER THAN
OR EQUAL TO 48"**

TRENCH WIDTH (TW) CHART

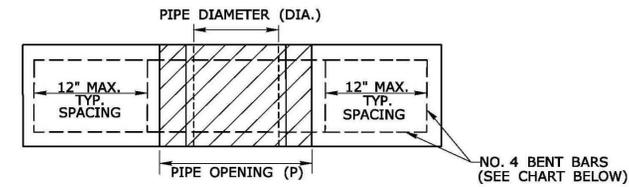
PIPE, PIPE-ARCH, OR DRAINAGE STRUCTURE	TRENCH WIDTH
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN LESS THAN 30"	2' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN GREATER THAN OR EQUAL TO 30"	3' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
PIPE OR PIPE-ARCH FABRICATED FROM STRUCTURAL PLATES	4' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN
DRAINAGE STRUCTURES	2' BEYOND ALL EXTERIOR OR FOUNDATION WALLS



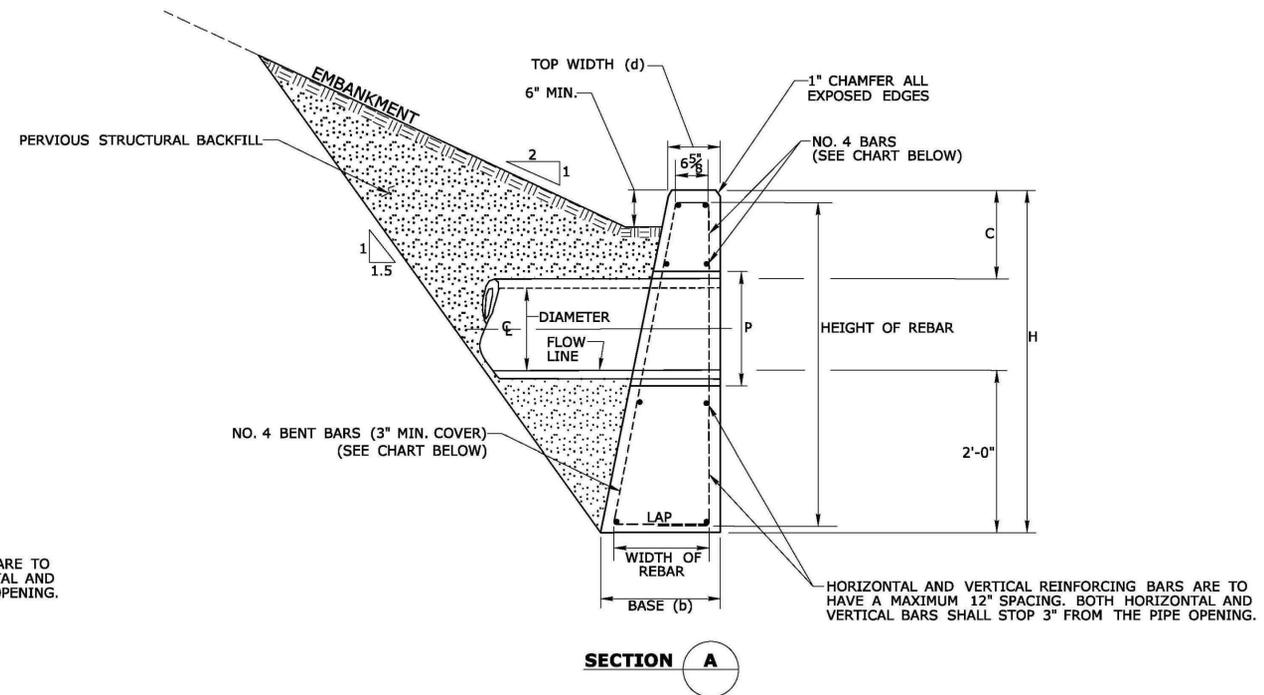
STRAIGHT ENDWALL



FRONT ELEVATION



PLAN



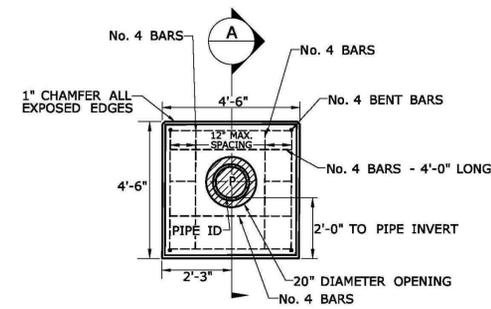
SECTION A

- GENERAL NOTES:**
1. PIPE OPENING DIMENSIONS ARE NOMINAL (SEE CHART)*.
 2. ALL REINFORCING BARS SHALL HAVE 3" COVER MIN.
 3. ALL REINFORCING BARS ARE TO BE TIED NOT WELDED.
 4. WET SETTING OF ANY STEEL IS NOT PERMITTED.
 5. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A767, CLASS 1.

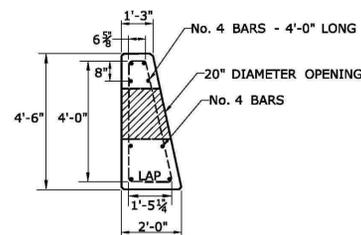
STANDARD ENDWALL DIMENSIONS													
CONCRETE								REINFORCING STEEL					
PIPE DIAMETER (DIA.)	CLEARANCE (C)	*PIPE OPENINGS (P)	TOTAL HEIGHT (H)	LENGTH (L)	TOP WIDTH (d)	BASE (b)	VOL. C.Y.	PIPE DIAMETER (DIA.)	NO. 4 BENT BARS	NO. 4 BARS - (NOMINAL LENGTH)	HEIGHT OF REBAR	WIDTH OF REBAR	
IN.	IN.	IN.	FT-IN.	FT-IN.	FT-IN.	FT-IN.		IN.	EA.	EA.	FT-IN.	FT-IN.	
12"	14"	20"	4'-6"	4'-6"	1'-3"	2'-0"	1.10	12"	4	10 - (4'-0")	4'-0"	1'-5 1/4"	
15"	14"	24"	4'-9"	5'-6"	1'-3"	2'-0"	1.39	15"	6	12 - (5'-0")	4'-3"	1'-5 1/4"	
18"	14"	26"	5'-0"	6'-6"	1'-3"	2'-0"	1.75	18"	6	12 - (6'-0")	4'-6"	1'-6 1/4"	
24"	14"	32"	5'-6"	8'-6"	1'-6"	2'-3"	2.87	24"	8	12 - (8'-0")	5'-0"	1'-7 1/4"	
30"	12"	42"	6'-0"	10'-6"	1'-9"	2'-3"	3.98	30"	8	14 - (10'-0")	5'-6"	1'-8 1/4"	
36"	12"	48"	6'-6"	12'-6"	1'-9"	2'-8"	5.67	36"	10	14 - (12'-0")	6'-0"	2'-0 5/8"	
42"	12"	54"	7'-0"	14'-6"	2'-0"	3'-0"	7.99	42"	12	16 - (14'-0")	6'-6"	2'-2"	
48"	12"	62"	7'-6"	16'-6"	2'-0"	3'-0"	9.59	48"	14	16 - (16'-0")	7'-2"	2'-2 1/2"	

SEE PROJECT PLANS FOR NON-STANDARD ENDWALL DETAILS

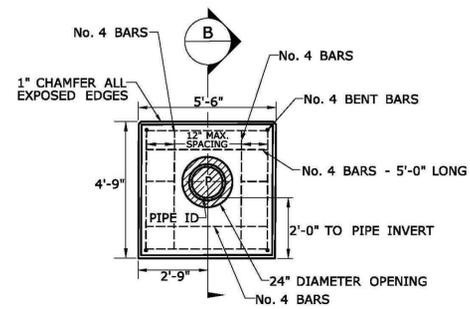
NOT TO SCALE ###	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2021.11.02 09:33:13-04'00'	APPROVED BY: Digitally signed by Michael J. Callahan, Michael Date: 2021.11.09 07:44:35-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: ENDWALLS	STANDARD SHEET NO.: HW-506_01a
	PLOTTED DATE: 10/29/2021						



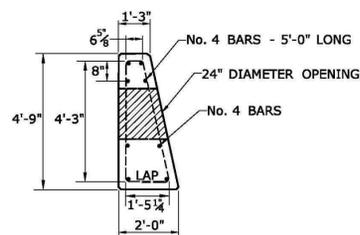
**FRONT ELEVATION
(FOR 12" RCP)**



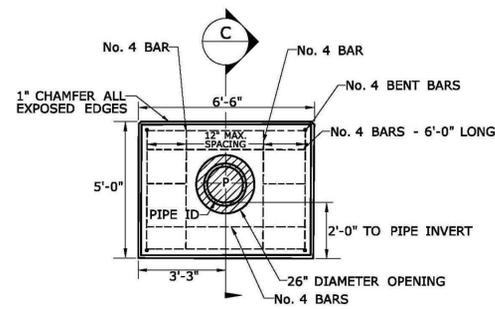
**SECTION A
(FOR 12" RCP)**



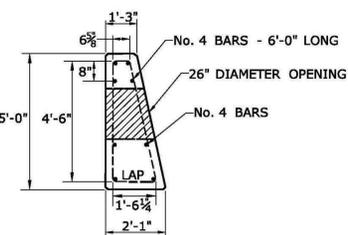
**FRONT ELEVATION
(FOR 15" RCP)**



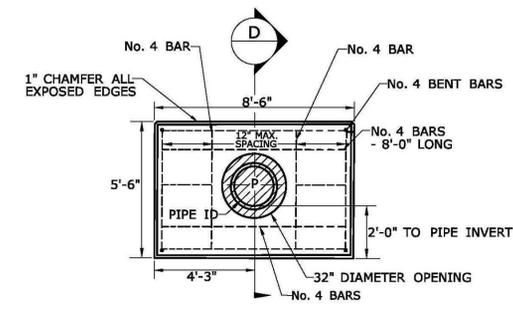
**SECTION B
(FOR 15" RCP)**



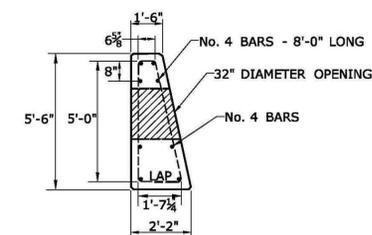
**FRONT ELEVATION
(FOR 18" RCP)**



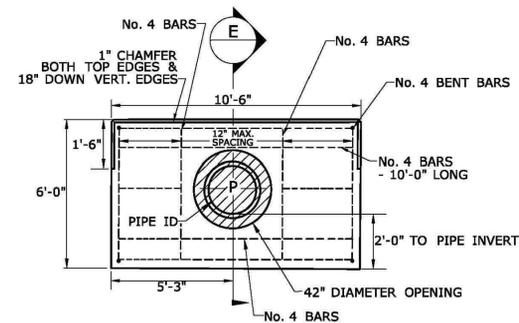
**SECTION C
(FOR 18" RCP)**



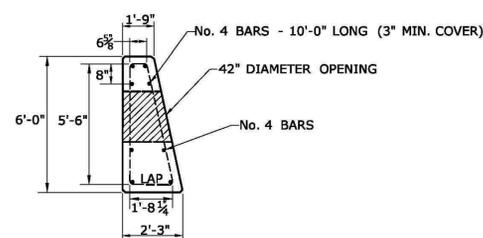
**FRONT ELEVATION
(FOR 24" RCP)**



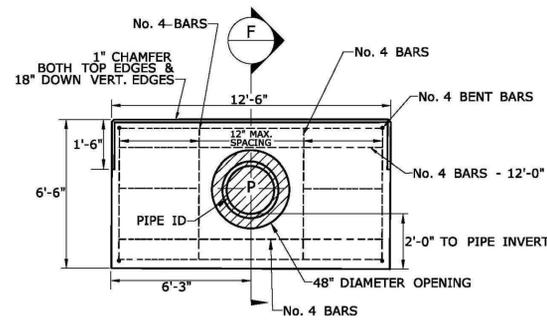
**SECTION D
(FOR 24" RCP)**



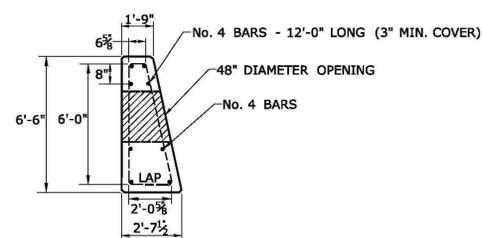
**FRONT ELEVATION
(FOR 30" RCP)**



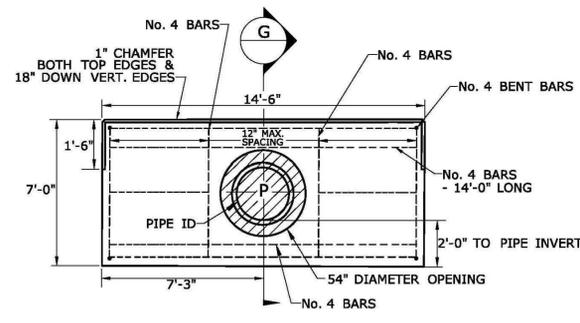
**SECTION E
(FOR 30" RCP)**



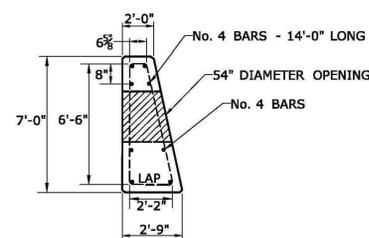
**FRONT ELEVATION
(FOR 36" RCP)**



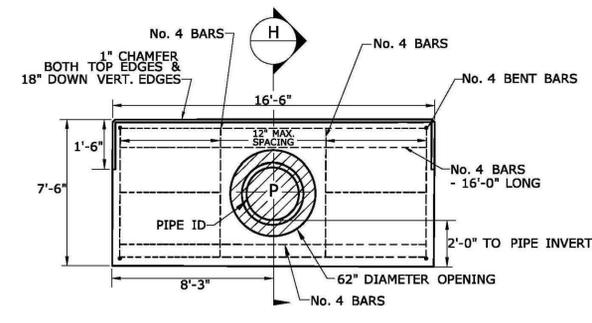
**SECTION F
(FOR 36" RCP)**



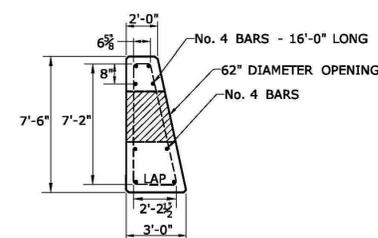
**FRONT ELEVATION
(FOR 42" RCP)**



**SECTION G
(FOR 42" RCP)**



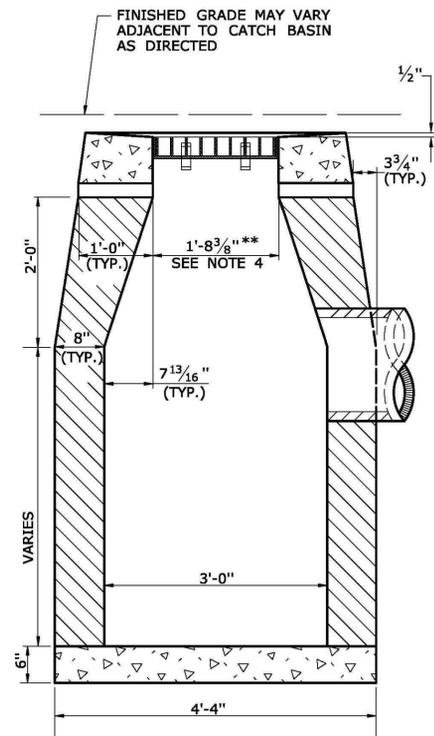
**FRONT ELEVATION
(FOR 48" RCP)**



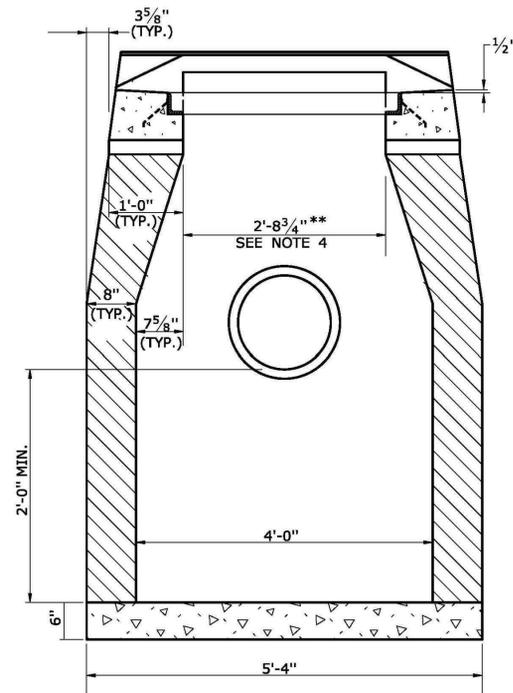
**SECTION H
(FOR 48" RCP)**

GENERAL NOTES:

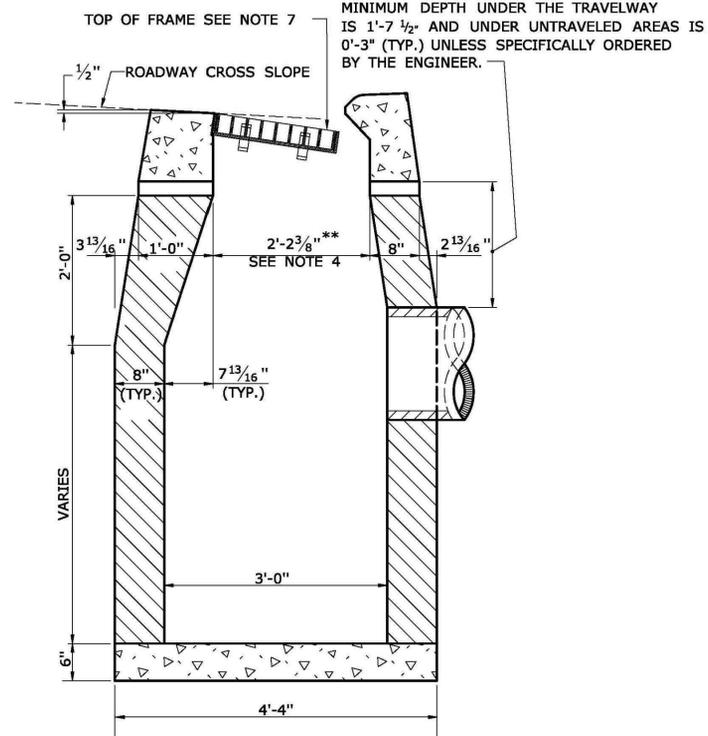
1. ALL REINFORCING SHALL HAVE 3" MIN. COVER.
2. SEE CHART ON HW-506.01a FOR REINFORCING BARS.
3. ALL BARS SHALL STOP 3" FROM THE PIPE OPENING AND HAVE 12" MAX. SPACING.



SECTION B
TYPE "C-L" CATCH BASIN

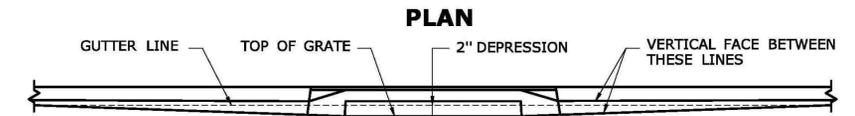
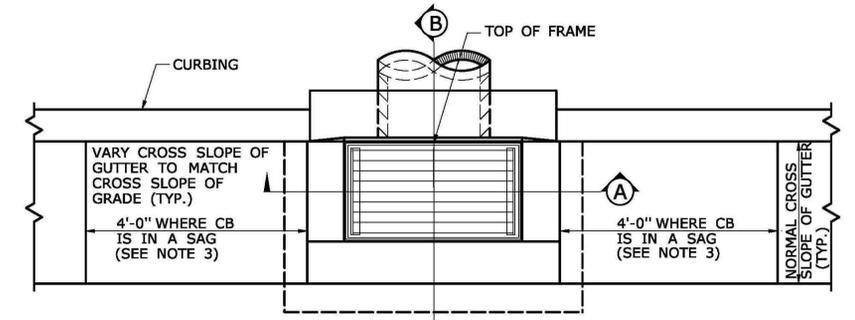


SECTION A
**TYPE "C" & "C-L" CATCH BASIN
(TYPE "C" TOP SHOWN)**

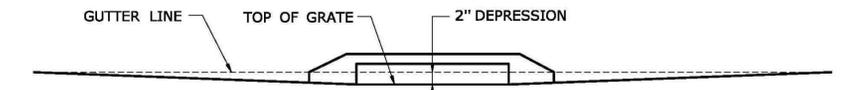


SECTION B
TYPE "C" CATCH BASIN

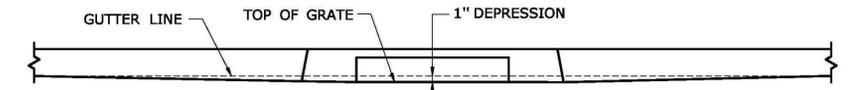
- GENERAL NOTES:**
- FOR CATCH BASIN TOPS, SEE SHEET NO. HW-586-07.
 - ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL.
 - USE 6'-0" ON UPGRADE SIDE (SEE PLAN VIEW) OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED BY THE ENGINEER.
 - IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE DIMENSIONS SHOWN. CORCELLING SHALL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND INSIDE THE LIMITS FOR THE CATCH BASIN OPENINGS SHOWN IN THE SECTION VIEWS **.
 - WALL THICKNESS OF ALL CATCH BASINS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. 12" THICKNESS SHALL START AFTER THE FIRST 10'.
 - SPACERS CAN BE EITHER CONCRETE MASONRY UNIT OR PRECAST WITH THE REQUIRED REINFORCING (RECOMMENDED BY THE MANUFACTURER) AS NEEDED TO PROVIDE THE PROPER GRADE SHOWN ON THE PLANS.
 - TOP OF FRAME ELEVATION SHALL BE MEASURED IN THE CENTER OF GRATE AT GUTTER LINE.



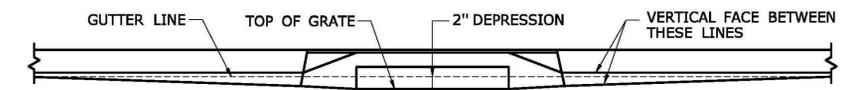
CATCH BASINS IN A LINE WITH 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING



CATCH BASINS WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED

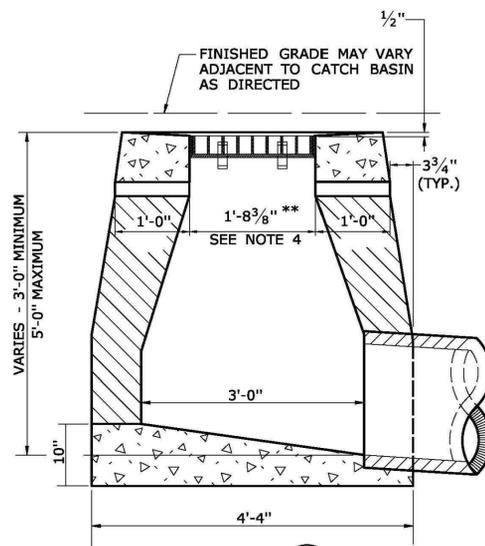


CATCH BASINS IN A LINE WITH 6" CONCRETE CURBING OR 6" STONE CURBING

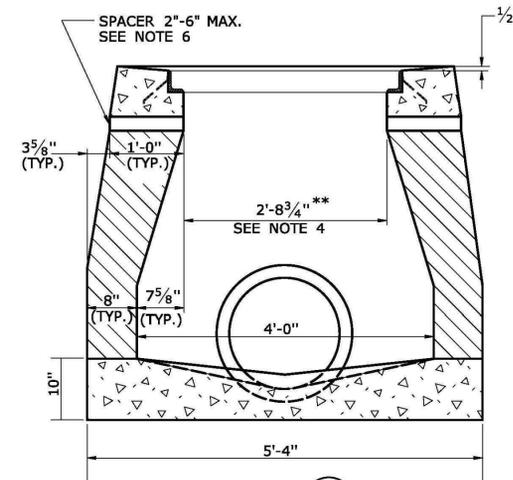


CATCH BASINS IN A LINE WITH 6" BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED)

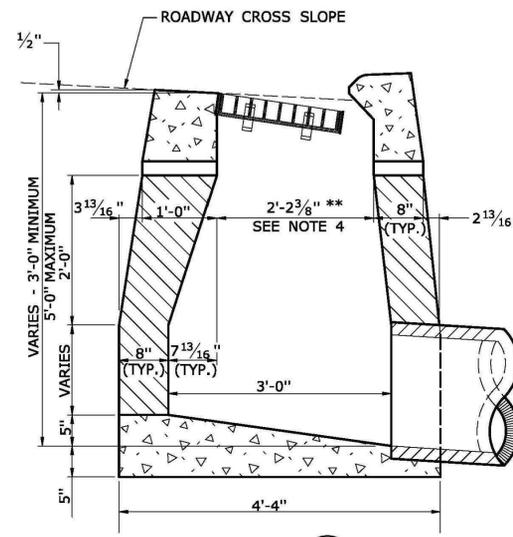
DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN



SECTION B
TYPE "C-L" DROP INLET



SECTION A
**TYPE "C" & "C-L" DROP INLET
(TYPE "C-L" TOP SHOWN)**



SECTION B
TYPE "C" DROP INLET

NOT TO SCALE
###

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Leo Fontaine, P.E.
2020.07.08
09:22:22-04'00'

APPROVED BY:
James Fallon, P.E.

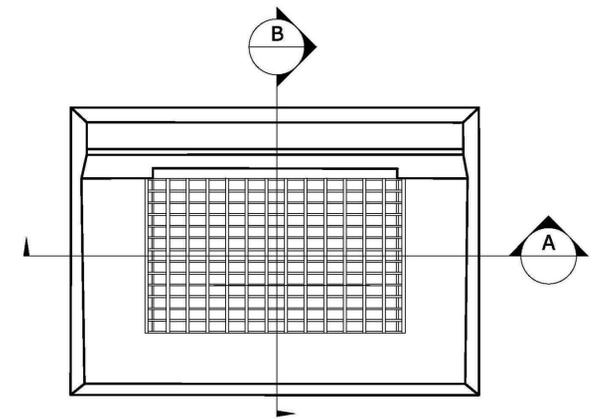
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CTDOT
STANDARD SHEET

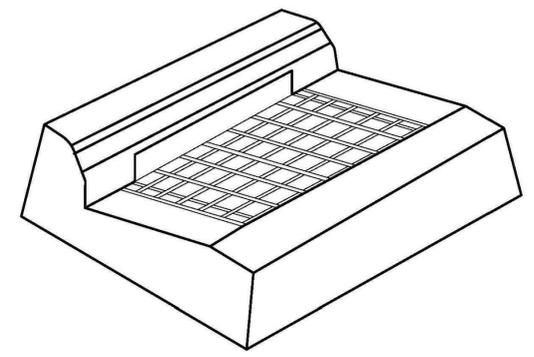
STANDARD SHEET TITLE:
CATCH BASIN AND DROP INLET TYPES "C" AND "C-L"

STANDARD SHEET NO.:
HW-586_01

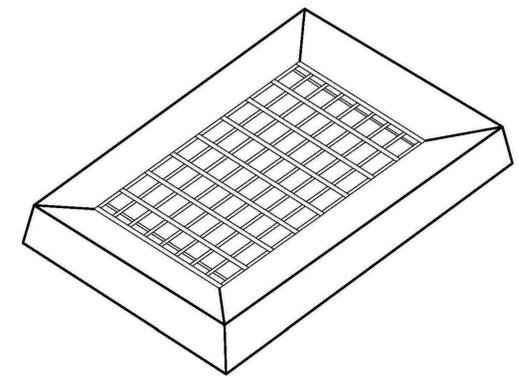
- GENERAL NOTES:**
- SEE SHEET HW-586.08, FOR CATCH BASIN FRAMES AND GRATES AND HW-586.09 FOR CATCH BASIN LOCK DOWN TOPS.
 - SEE SHEET HW-586.01, CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" TO DETERMINE THE TOP OF FRAME DEPRESSION AT THE GUTTER.
 - ALL BARS SHALL HAVE A MINIMUM 2" COVER.



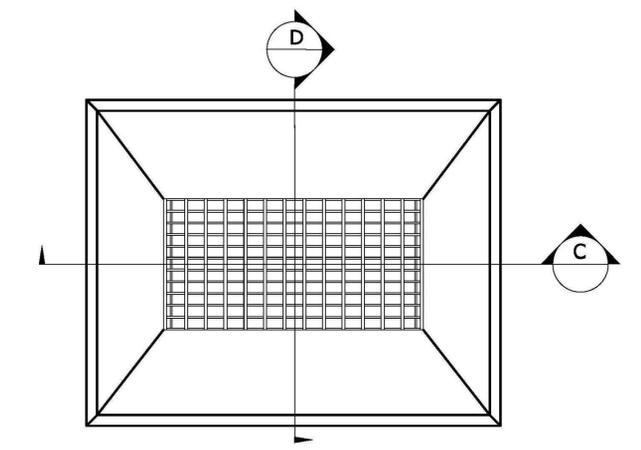
TYPE "C" CATCH BASIN TOP PLAN



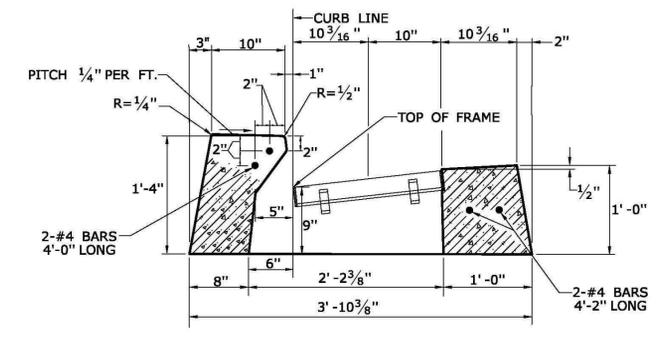
TYPE "C" CATCH BASIN TOP



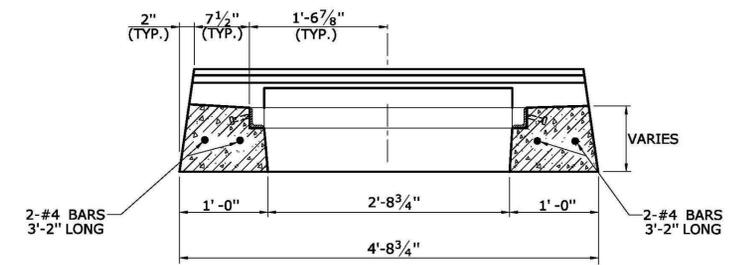
TYPE "C-L" CATCH BASIN TOP



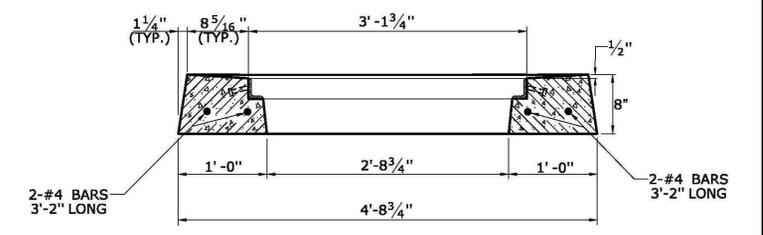
TYPE "C-L" CATCH BASIN TOP PLAN



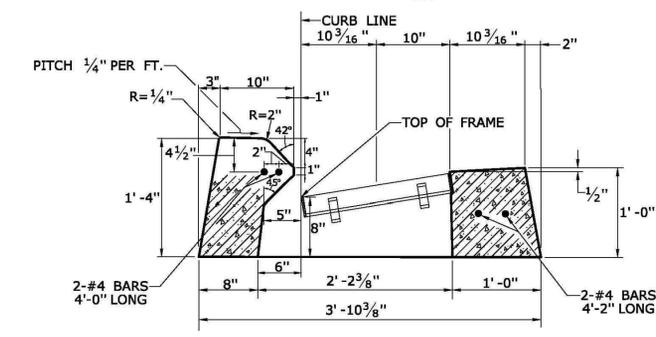
TYPE "C" CATCH BASIN TOP FOR 6" CONCRETE CURBING OR 6" STONE CURBING SECTION B



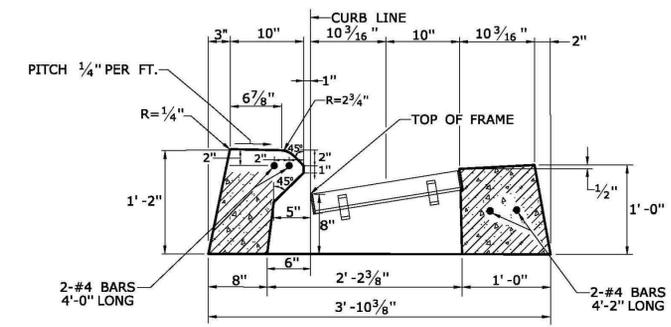
TYPE "C" CATCH BASIN TOP SECTION A



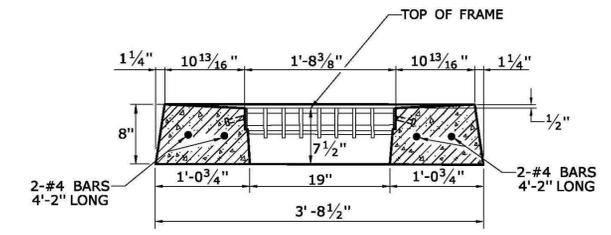
TYPE "C-L" CATCH BASIN TOP SECTION C



TYPE "C" CATCH BASIN TOP FOR 6" BITUMINOUS CONCRETE LIP CURBING SECTION B



TYPE "C" CATCH BASIN TOP FOR 4" CONCRETE PARK CURBING OR 4" BITUMINOUS CONCRETE PARK CURBING SECTION B



TYPE "C-L" CATCH BASIN TOP SECTION D

NOT TO SCALE
####

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Digitally signed by
Leo Fontaine, P.E.
Date: 2021.11.02
09:34:05-0400

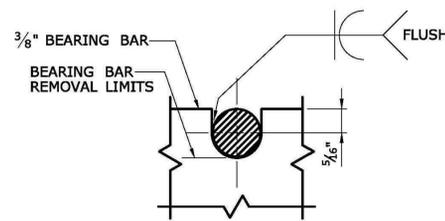
APPROVED BY:
Digitally signed by
Michael J. Calloway, Michael
Date: 2021.11.09
07:41:05-0500



CTDOT
STANDARD SHEET

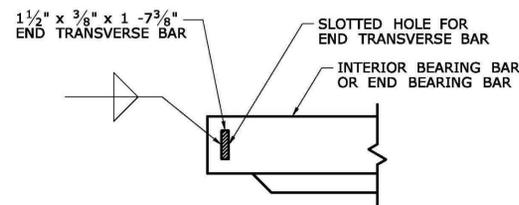
STANDARD SHEET TITLE:
CATCH BASIN TOPS TYPE "C" AND "C-L"

STANDARD SHEET NO.:
HW-586_07a

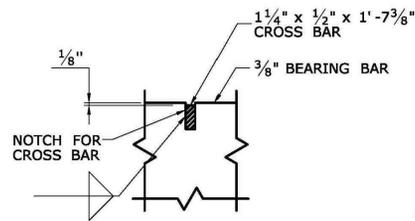


NOTE:
 $\frac{3}{8}$ " DIA. ROUND BAR SHALL CONTACT BEARING BAR AT BOTTOM AND BE FLUSH AT TOP.

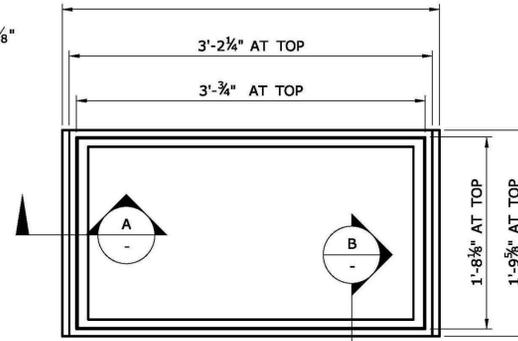
**ROUND BAR ATTACHMENT
 CATCH BASIN GRATE TYPE A**



**END TRANSVERSE BAR ATTACHMENT
 CATCH BASIN GRATE TYPE A AND B**



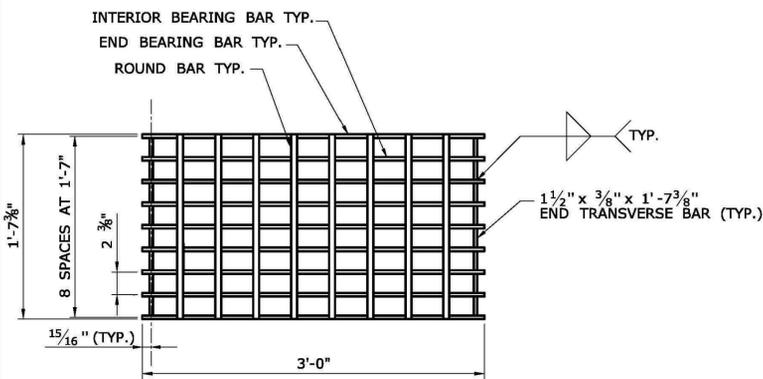
**CROSS BAR ATTACHMENT
 CATCH BASIN GRATE TYPE B**



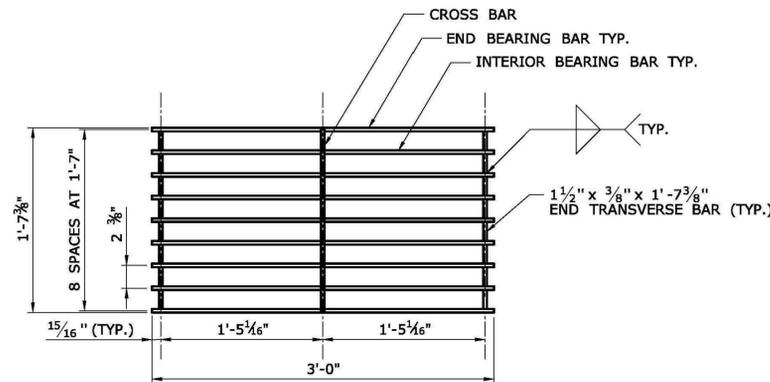
PLAN

GENERAL NOTES:

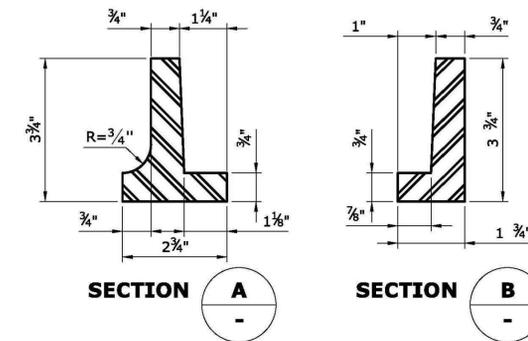
1. STEEL OR CAST IRON SHALL BE USED FOR FRAMES. STEEL SHALL BE USED FOR TYPE "A" AND "B" GRATES.
2. TYPE "A" GRATES SHALL BE USED ON ALL ROADWAYS WHERE BICYCLE TRAFFIC IS ALLOWED OR ON HEAVY DUTY LOCK DOWN TOPS AS DIRECTED BY THE ENGINEER.
3. TYPE "B" GRATES SHALL BE USED ON ALL LIMITED ACCESS HIGHWAYS, RAMPS AND WHERE BICYCLE TRAFFIC IS NOT ALLOWED OR AS DIRECTED BY THE ENGINEER.
4. DO NOT GALVANIZE CAST IRON FRAMES.
5. DIMENSIONAL TOLERANCES SHALL BE $\pm \frac{1}{16}$ INCH.
6. ALL STEEL BARS SHALL BE WELDED AT ALL INTERSECTIONS.



PLAN



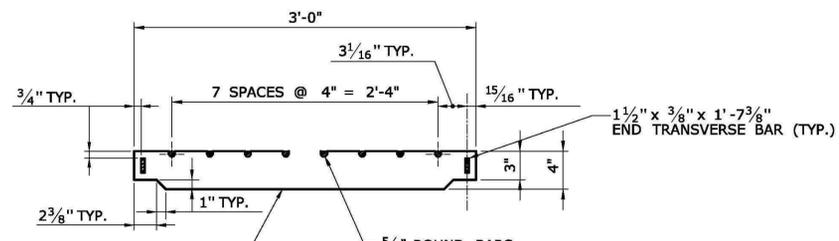
PLAN



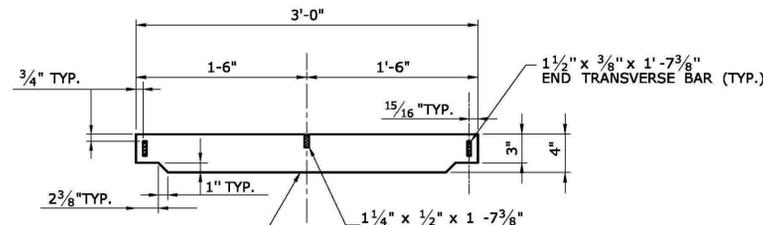
SECTION A

SECTION B

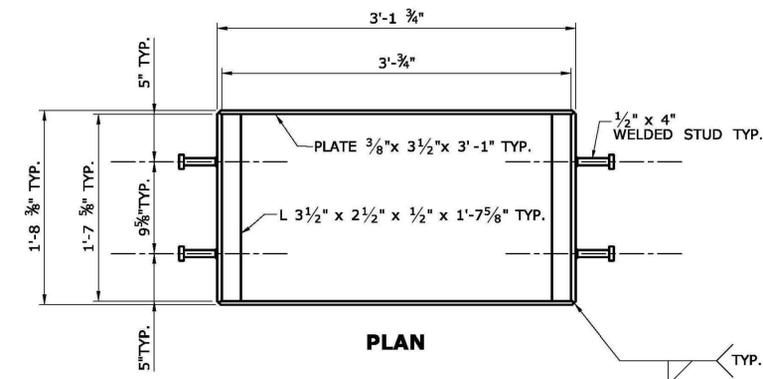
CAST IRON FRAME ALTERNATE



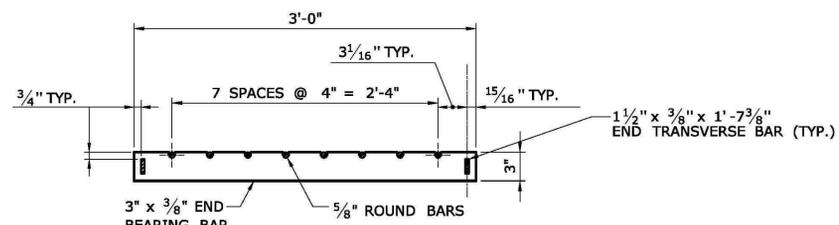
**ELEVATION- INTERIOR BEARING BAR
 CATCH BASIN GRATE TYPE A**



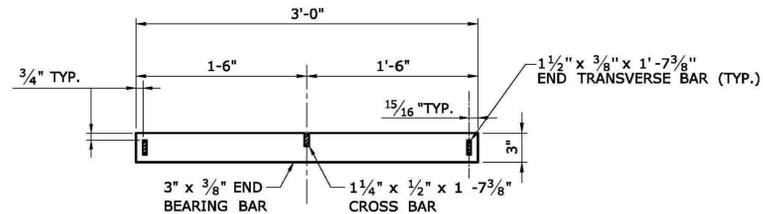
**ELEVATION- INTERIOR BEARING BAR
 CATCH BASIN GRATE TYPE B**



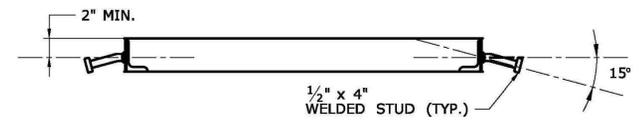
PLAN



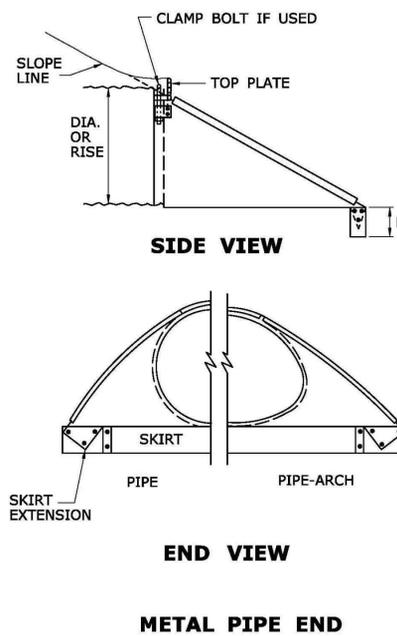
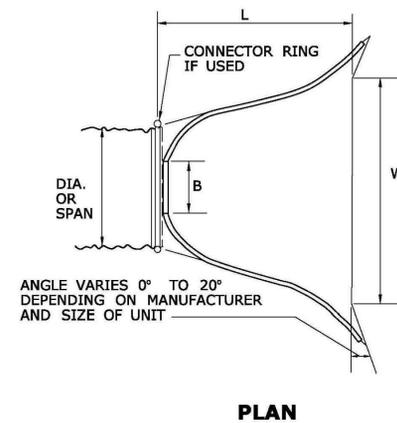
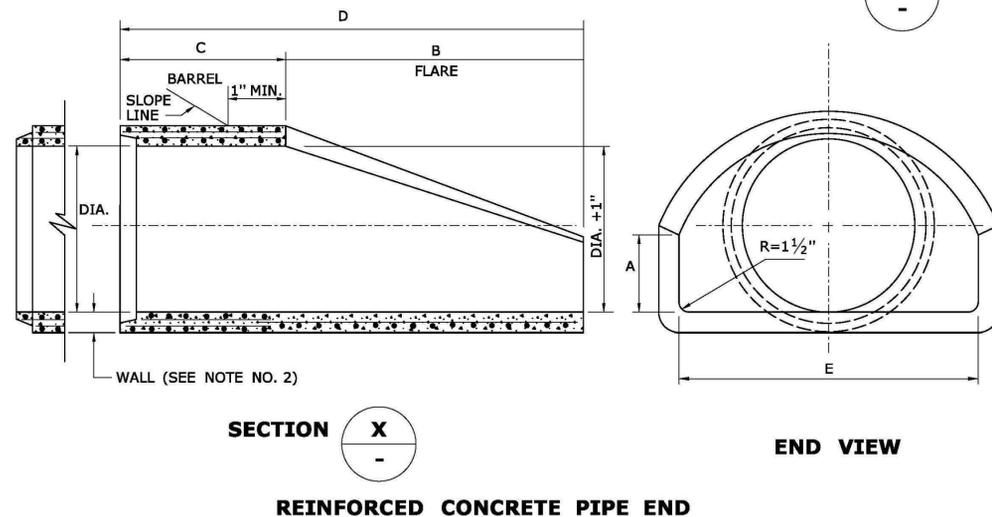
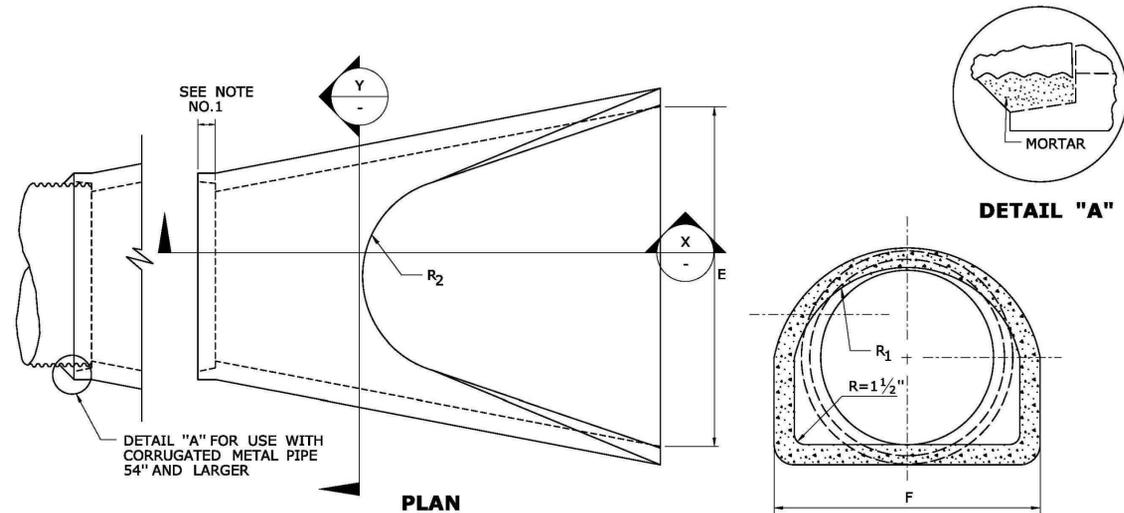
**ELEVATION- END BEARING BAR
 CATCH BASIN GRATE TYPE A**



**ELEVATION- END BEARING BAR
 CATCH BASIN GRATE TYPE B**

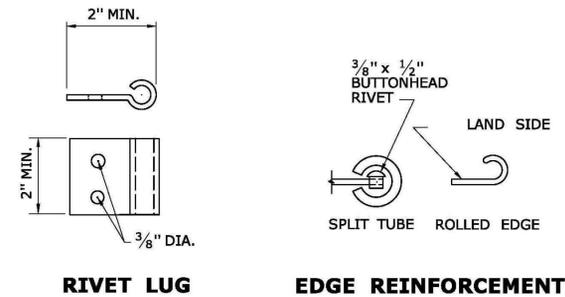
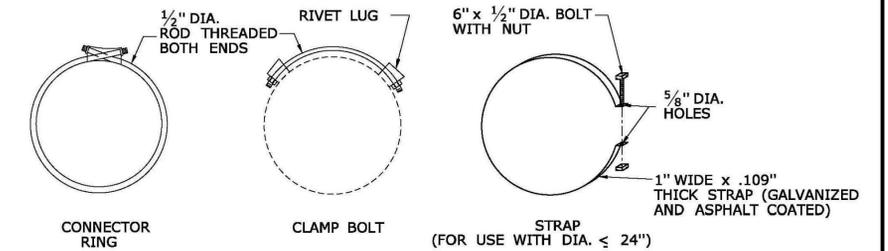


**WELDED STUD ANCHOR DETAILS
 STEEL FRAME**



GENERAL NOTES:

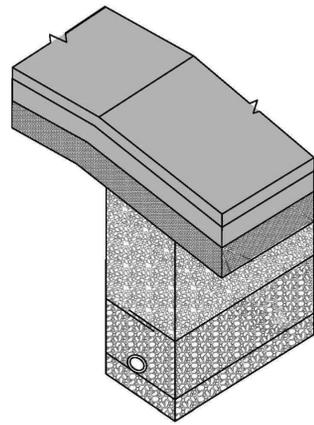
1. JOINTS SHALL BE TONGUE AND GROOVE OR BELL AND SPIGOT AS REQUIRED TO CONFORM TO PIPE INSTALLED.
2. WALL THICKNESS SHALL CONFORM TO PIPE THICKNESS.



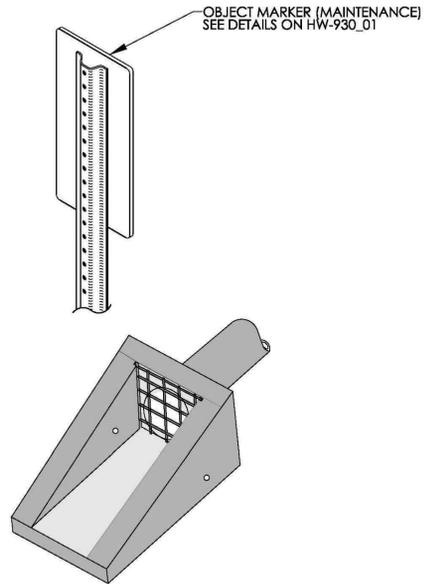
DIA.	DIMENSIONS FOR REINFORCED CONCRETE PIPE END								FLARE REINFORCEMENT ONE LAYER ONLY IN CENTER OF WALL	
	A	B	C	D	E	F	R ₁	R ₂	MIN. AREA OF LONGITUDINAL STEEL SQ. IN. PER FT.	MIN. AREA OF TRANSVERSE STEEL SQ. IN. PER FT.
12"	4"	2'-0"	4'-0 ³ / ₈ "	6'-0 ³ / ₈ "	2'-0"	1'-7 ¹⁵ / ₁₆ "	10 ³ / ₄ "	9"	0.048	0.048
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0 ⁵ / ₁₆ "	1'-0 ¹ / ₂ "	11"	0.054	0.054
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2'-5"	1'-3 ¹ / ₂ "	1'-0"	0.060	0.060
21"	9"	2'-11"	3'-2"	6'-1"	3'-6"	2'-7 ¹ / ₂ "	1'-4"	1'-1"	0.066	0.066
24"	9 ¹ / ₂ "	3'-7 ¹ / ₂ "	2'-6"	6'-1 ¹ / ₂ "	4'-0"	2'-9 ³ / ₁₆ "	1'-4 ¹³ / ₁₆ "	1'-2"	0.072	0.072
30"	1'-0"	4'-6"	1'-7 ³ / ₄ "	6'-1 ³ / ₄ "	5'-0"	3'-1"	1'-6 ¹ / ₂ "	1'-3"	0.084	0.084
36"	1'-3"	5'-3"	2'-10 ³ / ₄ "	8'-1 ³ / ₄ "	6'-0"	3'-11 ¹³ / ₁₆ "	2'-0 ⁵ / ₁₆ "	1'-8"	0.096	0.096
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4'-5 ⁷ / ₈ "	2'-3 ¹ / ₂ "	1'-10"	0.108	0.108
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	4'-8 ¹ / ₂ "	2'-4 ¹ / ₂ "	1'-10"	0.120	0.120
54"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	5'-5 ¹ / ₂ "	2'-9 ¹ / ₈ "	2'-0"	0.132	0.132
60"	2'-9"	5'-0"	3'-3"	8'-3"	8'-0"	6'-0 ¹ / ₂ "	3'-0 ¹¹ / ₁₆ "	2'-0"	0.144	0.144

PIPE DIA.	DIMENSIONS FOR METAL PIPE END				THICKNESS INS.
	B (MAX.)	H+1"	L+1 ¹ / ₂ "	W+2"	
12"	6"	6"	21"	24"	.064
15"	8"	6"	26"	30"	.064
18"	10"	6"	31"	36"	.064
21"	12"	6"	36"	42"	.064
24"	13"	6"	41"	48"	.064
30"	16"	8"	51"	60"	.079
36"	19"	9"	60"	72"	.079
42"	22"	11"	69"	84"	.109
48"	27"	12"	78"	90"	.109
54"	30"	12"	84"	102"	.109
60"	33"	12"	87"	114"	.109
66"	36"	12"	87"	120"	.109
72"	39"	12"	87"	126"	.109
78"	42"	12"	87"	132"	.109
84"	45"	12"	87"	138"	.109

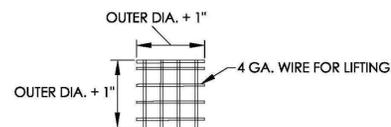
PIPE ARCH SIZE		DIMENSIONS FOR METAL PIPE END				THICKNESS INS.
SPAN	RISE	B (MAX.)	H+1"	L+1 ¹ / ₂ "	W+2"	
12"	13"	9"	6"	19"	30"	.064
17"	15"	10"	6"	23"	36"	.064
21"	18"	12"	6"	28"	42"	.064
24"	20"	14"	6"	32"	48"	.064
28"	24"	16"	6"	39"	60"	.079
35"	29"	18"	8"	46"	75"	.079
42"	33"	21"	9"	53"	85"	.109
49"	38"	26"	12"	63"	90"	.109
57"	43"	30"	12"	70"	102"	.109
71"	47"	33"	12"	77"	114"	.109



UNDERDRAIN

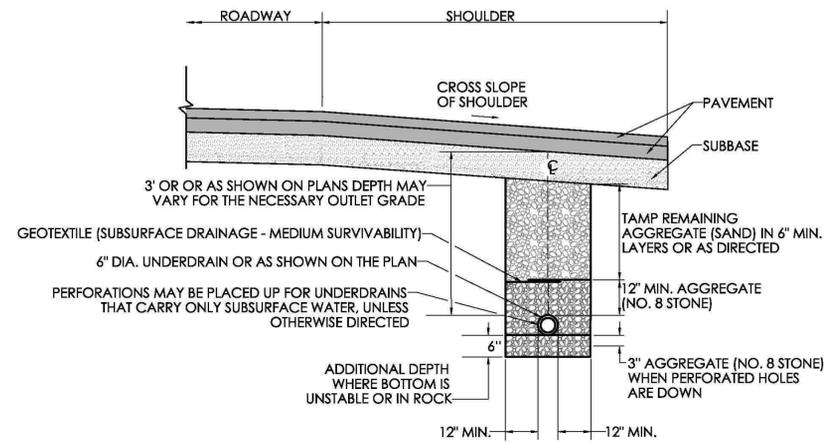


CONCRETE OUTLET FOR UNDERDRAIN

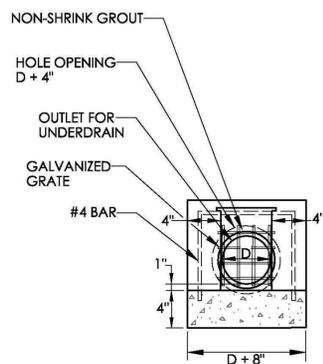


WOVEN WIRE CLOTH 4 GA. WIRE,
1 1/2" OPENING MUST BE WELDED TOGETHER,
GALV. AFTER CUTTING TO SIZE

GALVANIZED GRATE



SECTION

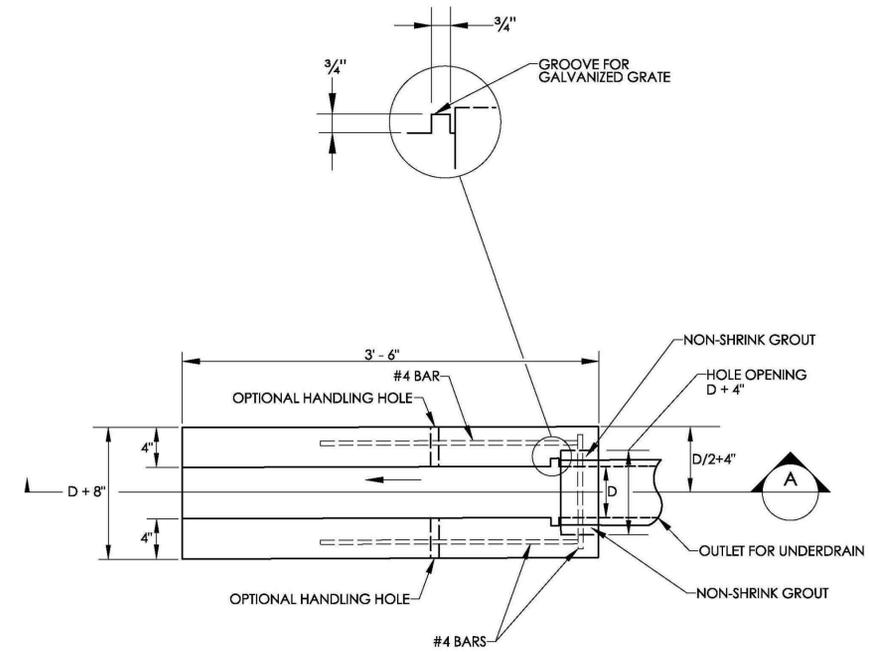


ELEVATION

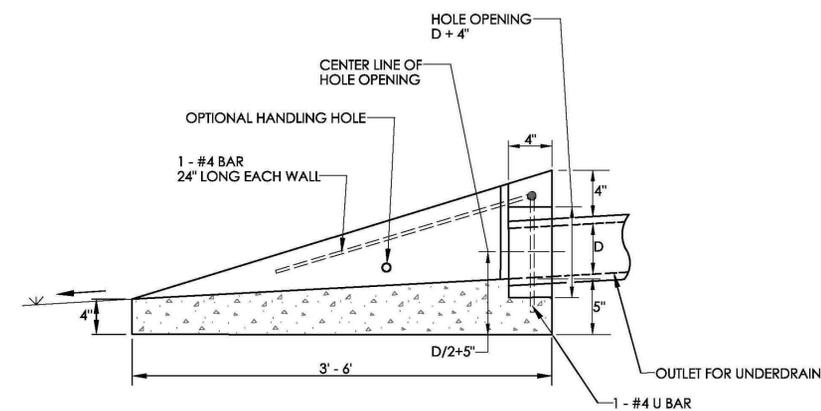
INSTALL THE BREAKAWAY POST ADJACENT TO THE CONCRETE OUTLET FOR UNDERDRAIN ON THE APPROACH SIDE OF TRAFFIC, OR AS DIRECTED.

GENERAL NOTES:

1. OBJECT MARKER SHALL BE INSTALLED ADJACENT TO UNDERDRAIN OUTS WITH MARKER FACING PARALLEL TO THE DIRECTION OF TRAFFIC (SEE HW-930_01 OBJECT MARKER).
2. REINFORCING BARS SHALL HAVE A 1 1/2" MIN. COVER.



**PLAN
CONCRETE OUTLET FOR UNDERDRAIN**



SECTION A



NOT TO SCALE

SIGNATURE BLOCK:
OFFICE OF ENGINEERING
2800 BERLIN TURNPIKE
NEWINGTON, CT 06111

SUBMITTED BY:
Leo Fontaine
Digitally signed by
Leo Fontaine, P.E.
Date: 2024.12.16
14:01:26-05'00'

APPROVED BY:
Michael N. Calabrese
Digitally signed by
Michael N.
Calabrese, P.E.
Date: 2025.01.21
13:11:01-05'00'

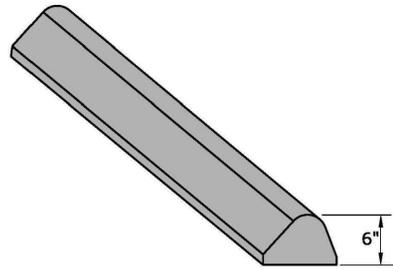


CONNECTICUT
DEPARTMENT OF
TRANSPORTATION

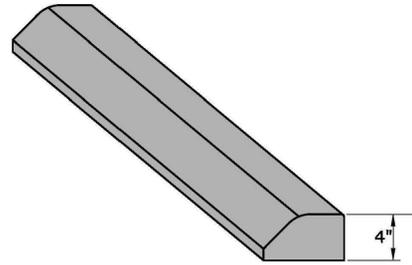
CTDOT
STANDARD SHEET

STANDARD SHEET TITLE:
UNDERDRAINS AND UNDERDRAIN OUTLETS

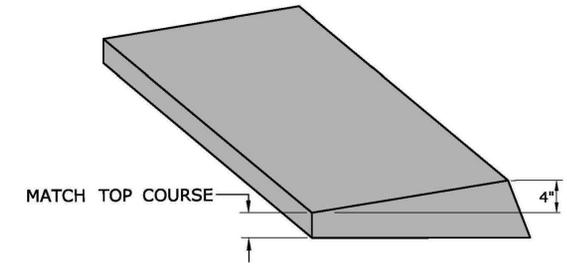
STANDARD SHEET NO.:
HW-751_01



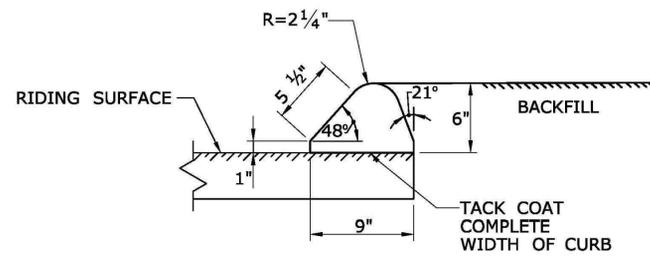
**BITUMINOUS CONCRETE LIP CURBING
(6" HIGH)**



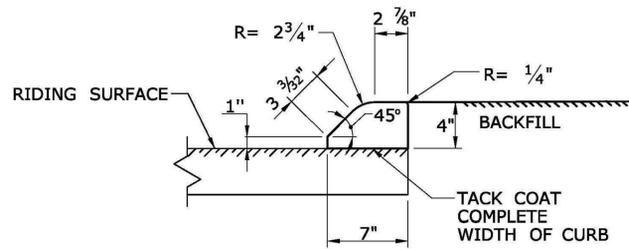
**BITUMINOUS CONCRETE PARK CURBING
(4" HIGH)**



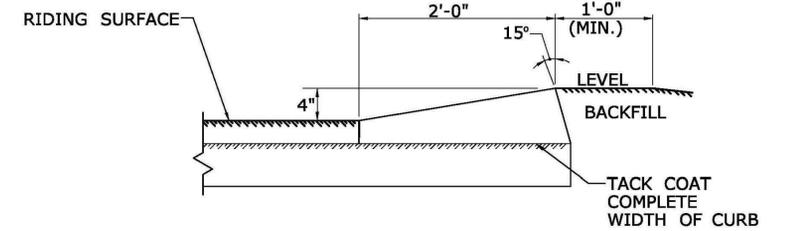
**BITUMINOUS CONCRETE BERM CURBING
(4" HIGH)**



SECTION

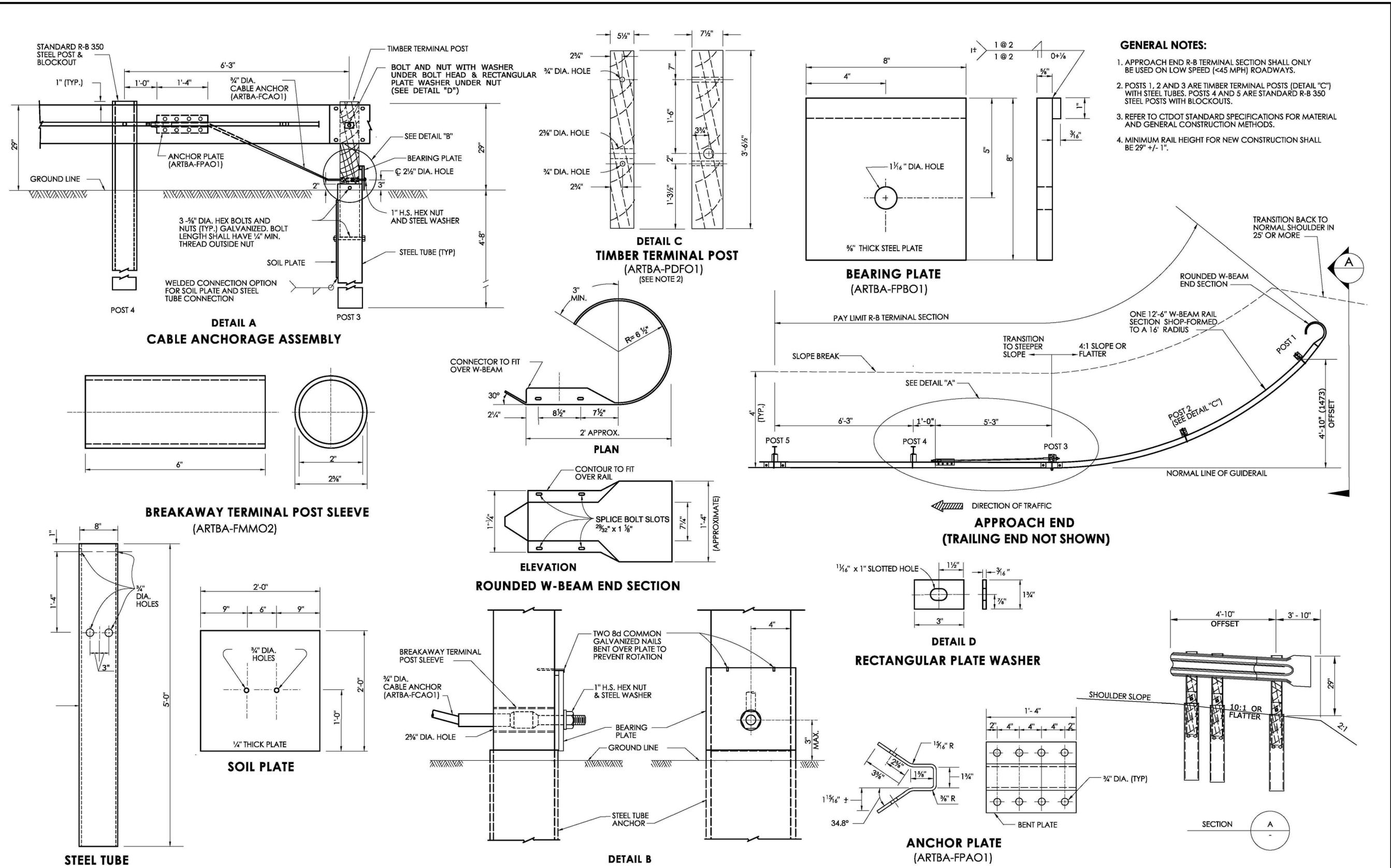


SECTION



SECTION

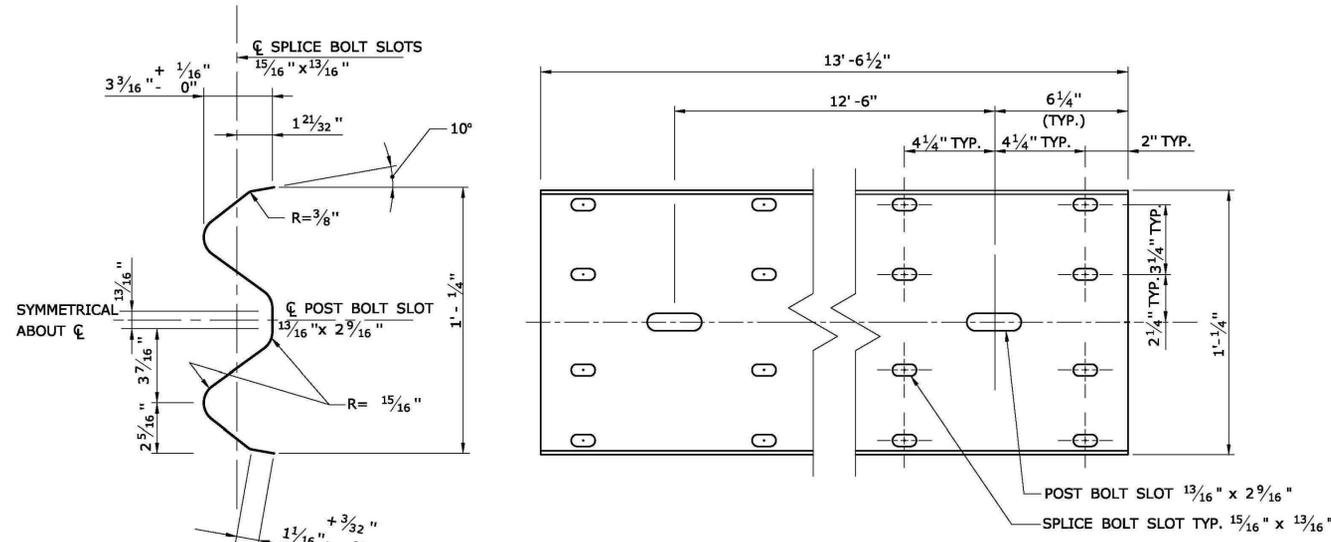
<p>NOT TO SCALE ###</p>	<p>SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111</p>	<p>SUBMITTED BY: Leo Fontaine, P.E. 2020.07.08 09:34:54-04'00"</p>	<p>APPROVED BY: James Fallon, P.E.</p>	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	<p>CTDOT STANDARD SHEET</p>	<p>STANDARD SHEET TITLE: BITUMINOUS CONCRETE CURBING</p>	<p>STANDARD SHEET NO.: HW-815_01</p>
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- GENERAL NOTES:**
1. APPROACH END R-B TERMINAL SECTION SHALL ONLY BE USED ON LOW SPEED (<45 MPH) ROADWAYS.
 2. POSTS 1, 2 AND 3 ARE TIMBER TERMINAL POSTS (DETAIL "C") WITH STEEL TUBES. POSTS 4 AND 5 ARE STANDARD R-B 350 STEEL POSTS WITH BLOCKOUTS.
 3. REFER TO CTDOT STANDARD SPECIFICATIONS FOR MATERIAL AND GENERAL CONSTRUCTION METHODS.
 4. MINIMUM RAIL HEIGHT FOR NEW CONSTRUCTION SHALL BE 29" +/- 1".

GENERAL NOTES:

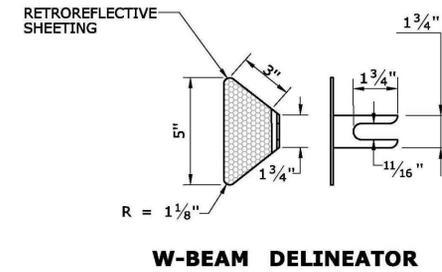
1. W6 x 9 POSTS MAY BE USED IN PLACE OF W6 x 8.5 POSTS.
2. W-BEAM GUIDERAIL SHALL USE CLASS A (12 GAUGE), TYPE II W-BEAM RAIL ELEMENTS.
3. SEVEN FOOT LONG STEEL POSTS (W6 X 8.5) ARE TO BE INSTALLED WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
4. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES



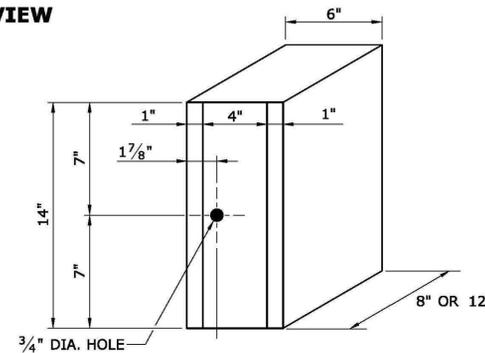
SECTION VIEW

ELEVATION VIEW

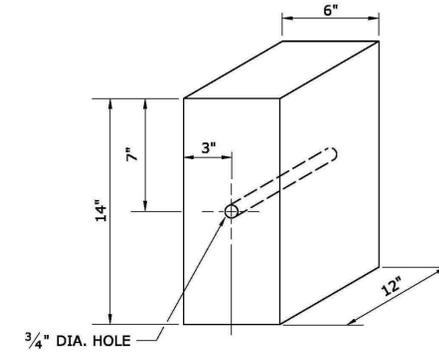
TYPICAL W-BEAM RAIL ELEMENT



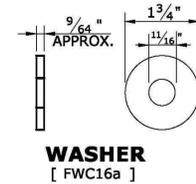
W-BEAM DELINEATOR



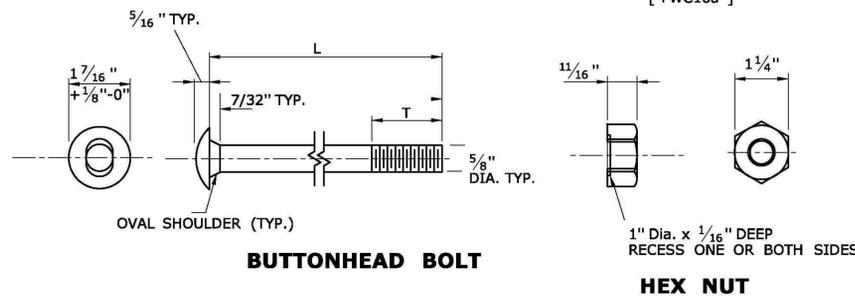
8" or 12" PLASTIC BLOCKOUT
NOMINAL DIMENSIONS



12" WOOD BLOCKOUT



WASHER
[FWC16a]

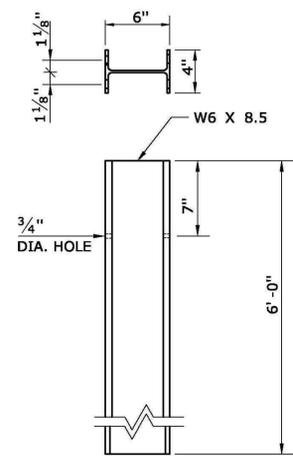


5/8" BUTTON HEAD BOLT(S) AND RECESSED NUT(S)

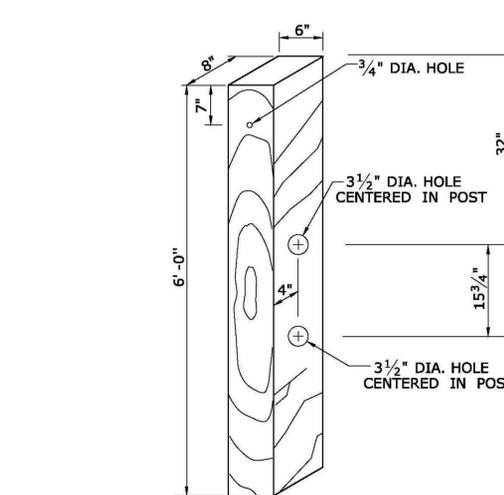
DESIGNATOR	L	T	INTENDED USE
FBB01	1-1/4"	1-1/8"	RAIL SPLICE BOLTS
FBB02	2"	1-3/4"	RUB RAIL BOLTS
FBB03	10"	4"	POST BOLTS (8" BLOCK OUTS)
	14"	4"	POST BOLT (12" BLOCK OUTS)
FBB04	18"	4"	POST BOLTS (2- 8" BLOCK OUTS)
	22"	4"	POST BOLT (CRT WOOD POST SYSTEM)

5/8" BUTTON HEAD BOLT(S) AND RECESSED NUT(S)

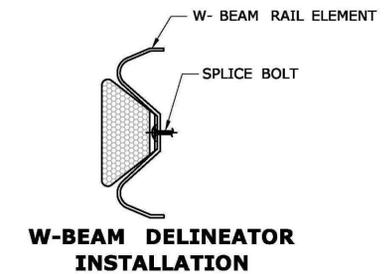
NOTE: AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT. DIAMETER SHOWN IS TYPICAL FOR ALL GUIDERAIL BOLTS. SEE DETAILS ABOVE FOR SPECIFIC LENGTHS.



STEEL POST
6'-0" LONG



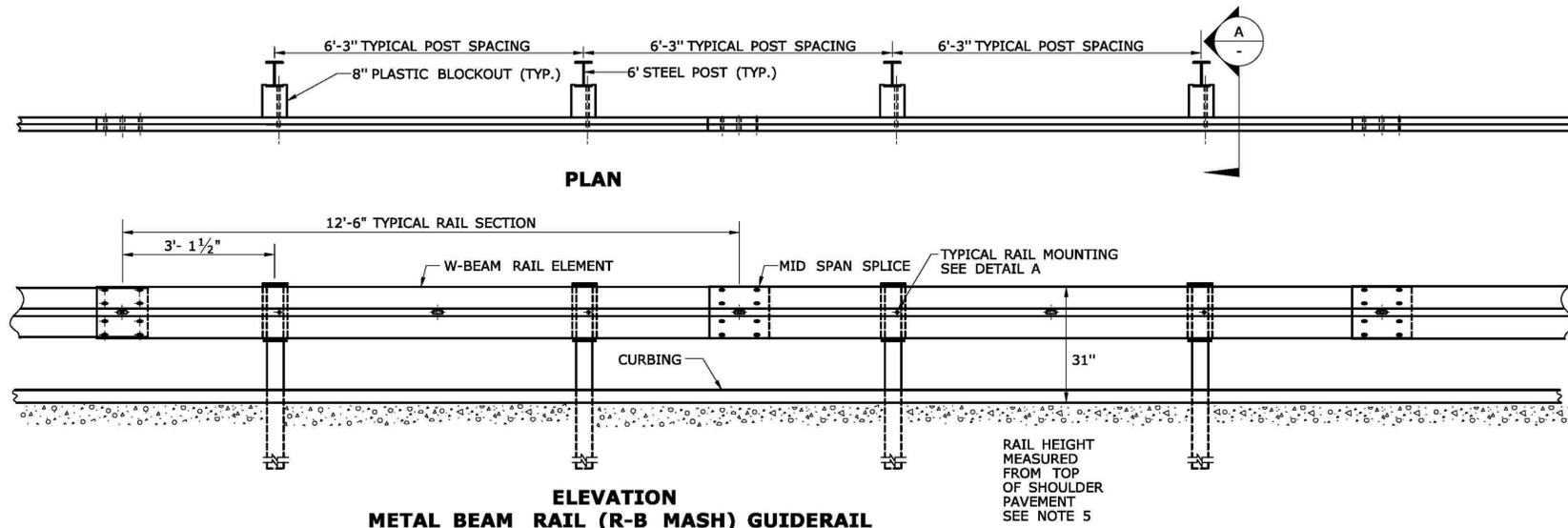
CONTROL RELEASE TIMBER (CRT) POST
6' - 0" LONG



W-BEAM DELINEATOR INSTALLATION

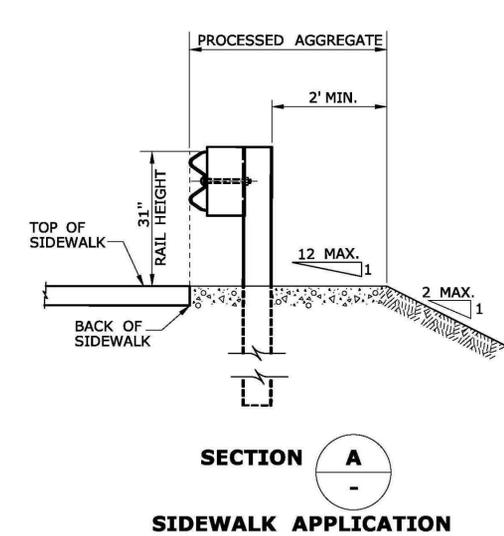
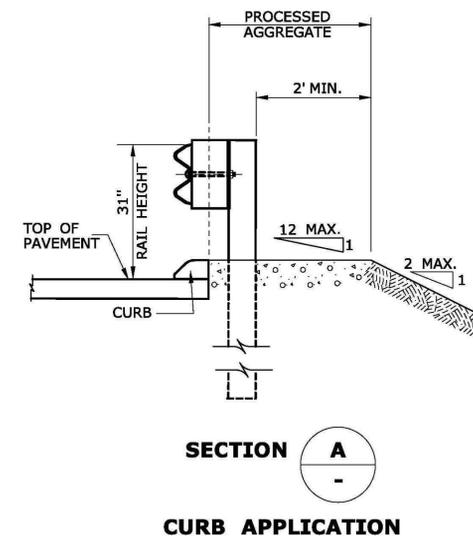
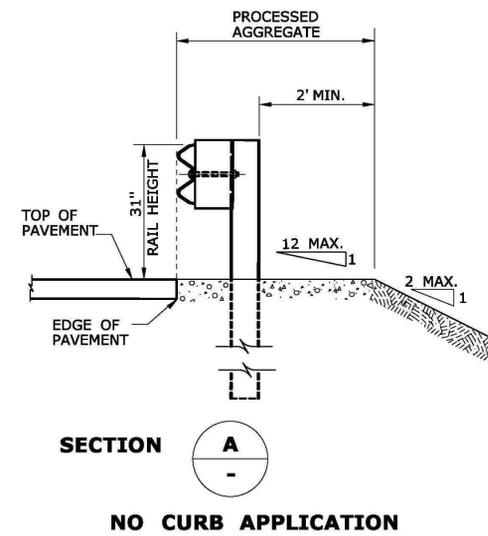
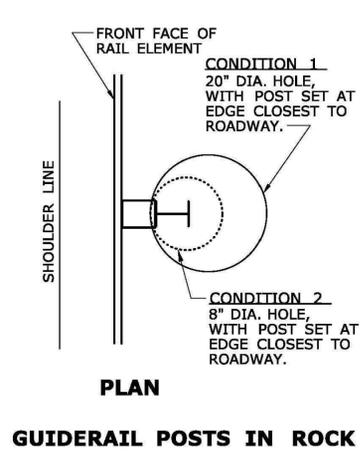
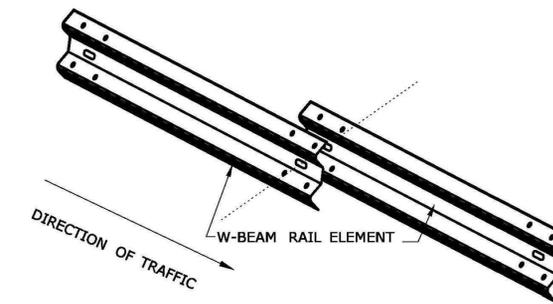
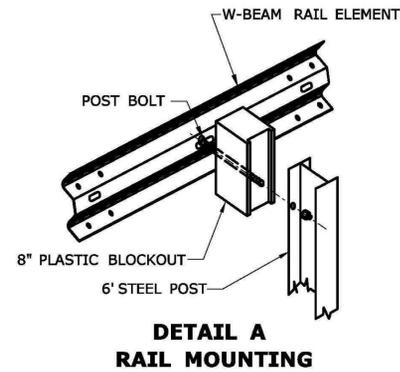
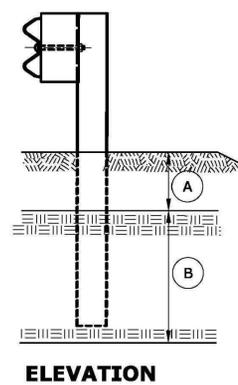
W-BEAM DELINEATOR INSTALLATION NOTES:

1. INSTALL W-BEAM DELINEATORS ON RAIL THAT IS PARALLEL TO AND NOT GREATER THAN 8' FROM THE EDGE OF THE ROADWAY. A MINIMUM OF THREE W-BEAM DELINEATORS SHALL BE INSTALLED ON ANY LENGTH OF GUIDERAIL.
2. THE SPACING OF W-BEAM DELINEATORS IS 50 FEET, INSTALLED AT RAIL SPLICE LOCATIONS. SPACING IS 25 FEET ON RADII LESS THAN 300 FEET.
3. NO W-BEAM DELINEATORS ARE PERMITTED WITHIN 75 FEET OF THE IMPACT HEAD OF ANY TANGENTIAL OR FLARED IMPACT ATTENUATION SYSTEM.
4. RETROREFLECTIVE SHEETING SHALL BE WHITE EXCEPT ON THE LEFT SIDE OF DIVIDED STREETS, HIGHWAYS, RAMPS, AND ONE WAY ROADS IN THE DIRECTION OF TRAVEL WHERE IT SHALL BE YELLOW.



GENERAL NOTES:

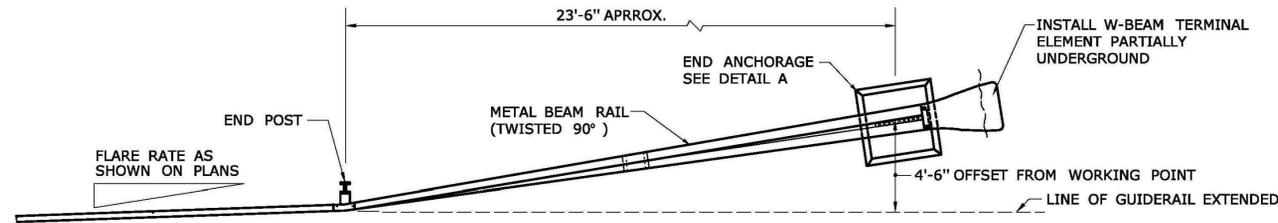
1. SEE SHEET HW-910.20 FOR MASH W-BEAM HARDWARE AND W-BEAM DELINEATOR DETAILS.
2. THREE BLOCKOUTS MAY BE USED FOR ONE POST ONLY. TWO BLOCKOUTS MAY BE USED FOR A SERIES OF POSTS. THE COST OF ADDITIONAL BLOCKOUTS AND LONGER BOLTS SHALL BE INCLUDED IN THE PRICE PER FOOT OF GUIDERRAIL. EXTRA BLOCKOUTS AT TRANSITIONS TO BRIDGE PARAPETS SHOULD BE AVOIDED. DO NOT USE ADDITIONAL BLOCKS IF IT CAUSES THE POST TO BE DRIVEN BEYOND AN EMBANKMENT HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.
3. IF BLOCKOUTS DO NOT AVOID POST FROM OBSTRUCTION, ONE POST MAY BE OMITTED IF 50 FEET OF GUIDERRAIL EXISTS ON BOTH SIDES OF LOCATION. USE METAL BEAM RAIL SPAN SECTION TYPE II OR III FOR MORE THAN ONE CONSECUTIVE OMITTED POST, SEE SHEET HW-910.24.
4. W-BEAM GUIDERRAIL MAY BE PLACED 1' OR MORE FROM THE EDGE OF PAVEMENT ONLY ON SLOPES 10:1 OR FLATTER AND WITHOUT CURBING.
5. IF THE RAIL IS INSTALLED WITHIN 2' OF THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE SHOULDER SLOPE EXTENDED TO THE RAIL. IF THE RAIL IS INSTALLED BEYOND 2' FROM THE EDGE OF PAVEMENT, THE RAIL HEIGHT IS MEASURED FROM THE GROUND DIRECTLY BELOW THE RAIL.
6. RAIL HEIGHT CONSTRUCTION TOLERANCE IS +/- 1 INCH.



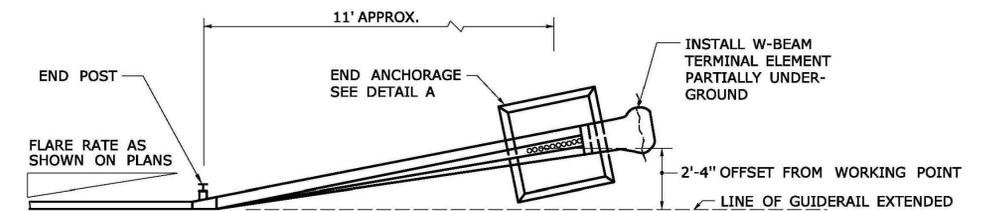
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GENERAL NOTES:

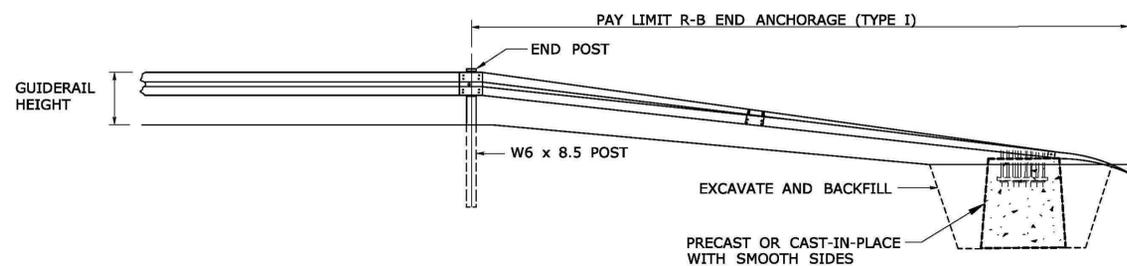
1. J-HOOK BOLTS MAY BE SUBSTITUTED FOR BOTTOM PLATE ANCHORAGE IN CONCRETE END ANCHORS USING THE SAME SIZE, STRENGTH, AND LENGTH AS NOTED ON THE PLANS.
2. INSTALLATION OF RADII DIFFERENT THAN WHAT IS SHOWN IN DETAIL "C" FOR R-B END ANCHORAGE TYPE II MUST BE APPROVED BY THE ENGINEER.



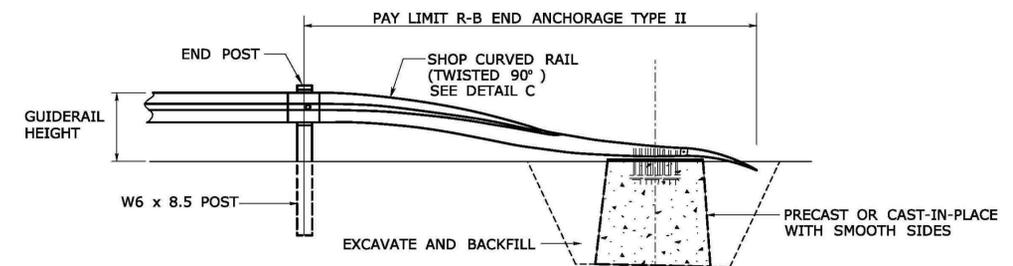
PLAN



PLAN



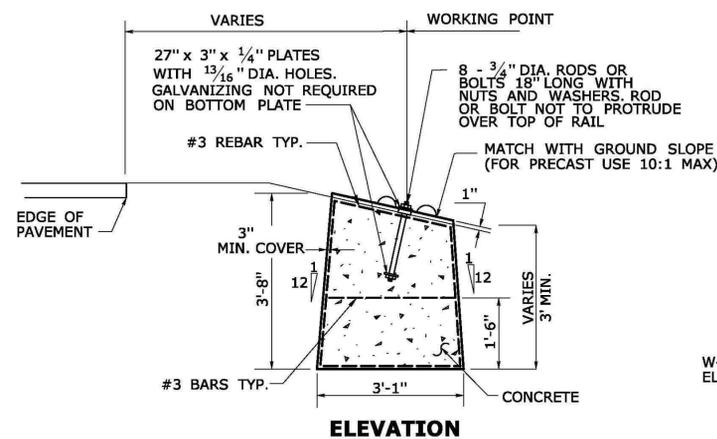
ELEVATION



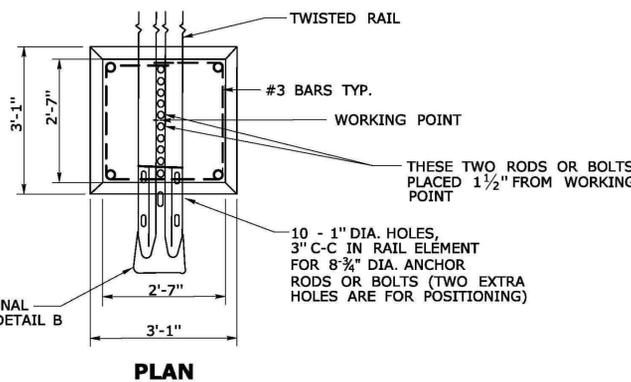
ELEVATION

R-B END ANCHORAGE TYPE I

R-B END ANCHORAGE TYPE II



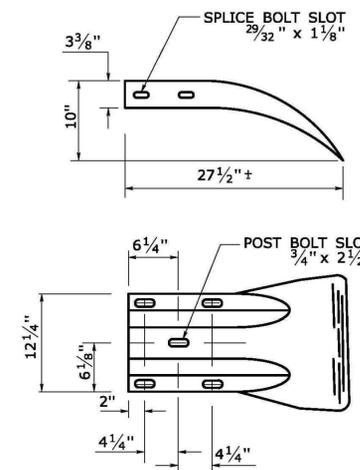
ELEVATION



PLAN

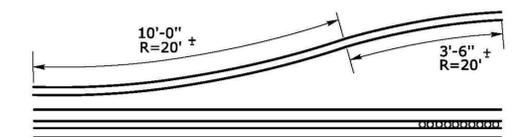
**DETAIL A
ROADSIDE CONCRETE END ANCHOR**

SEE NOTE 2



DETAIL B

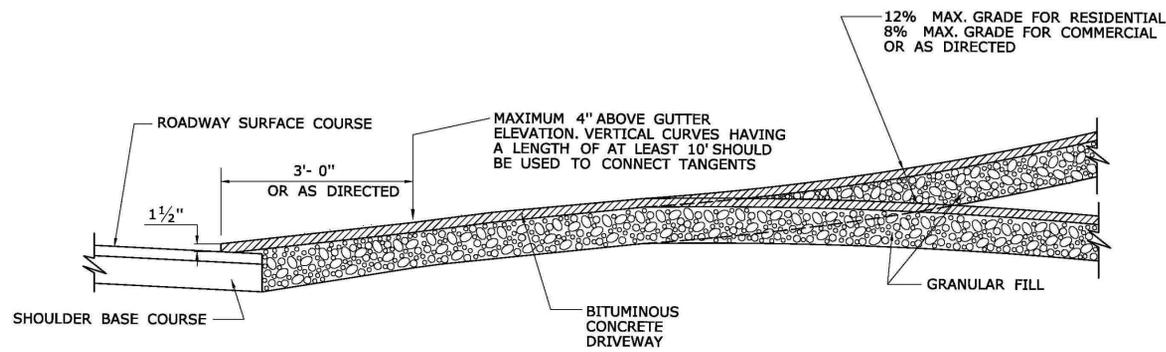
W-BEAM TERMINAL ELEMENT



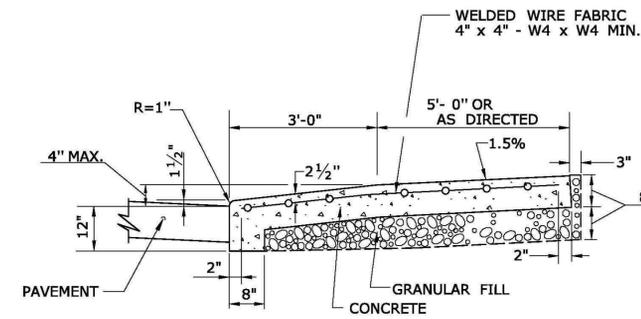
**DETAIL C
SHOP CURVED RAIL**

SEE NOTE 2

<p>NOT TO SCALE ####</p>	<p>SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111</p>	<p>SUBMITTED BY: Leo Fontaine, P.E. 2020.07.08 10.28.15-04'00'</p>	<p>APPROVED BY: James Fallon, P.E. 2020.07.15 10.19.27-04'00'</p>	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	<p>CTDOT STANDARD SHEET</p>	<p>STANDARD SHEET TITLE: R-B END ANCHORAGE TYPE I AND II</p>	<p>STANDARD SHEET NO.: HW-911_01</p>
	<p>PLOTTED DATE: 7/1/2020</p>						

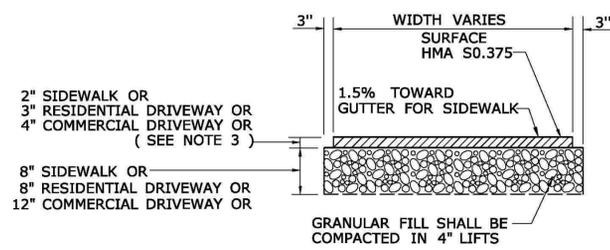


SECTION A

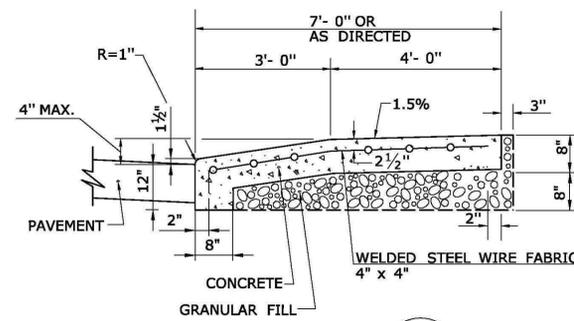


SECTION C

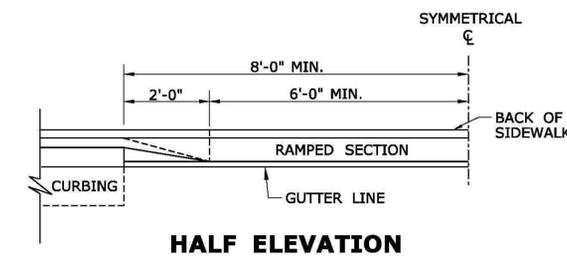
- GENERAL NOTES:**
1. DRIVEWAY ENTRANCE SHALL BE A MINIMUM OF 12' WIDE, EXCLUDING CURBING WHEN PRESENT.
 2. WELDED WIRE FABRIC MATS WITH REINFORCING AT CLOSER SPACING MAY BE USED.
 3. SURFACE HMA S0.375 TO BE PLACED IN TWO EQUAL LIFTS FOR BOTH RESIDENTIAL AND COMMERCIAL DRIVEWAYS.



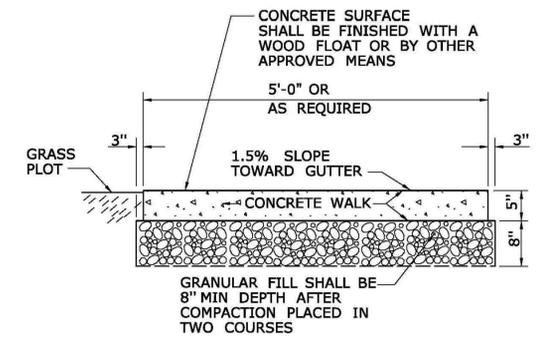
**TYPICAL SECTION
BITUMINOUS CONCRETE
SIDEWALK AND DRIVEWAY**



SECTION B

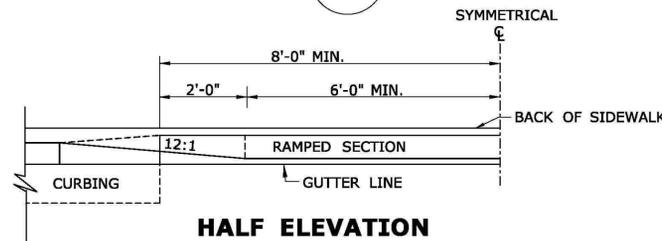


**SECTION C
HALF ELEVATION**

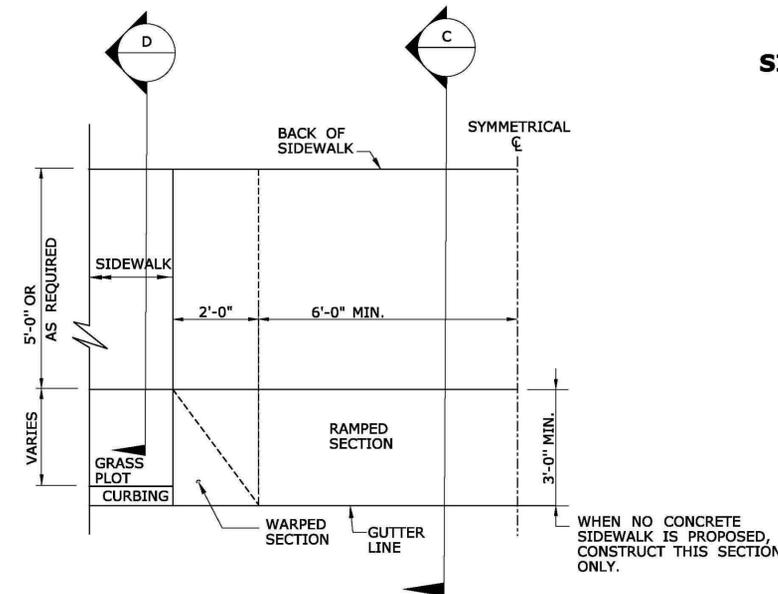


SECTION D

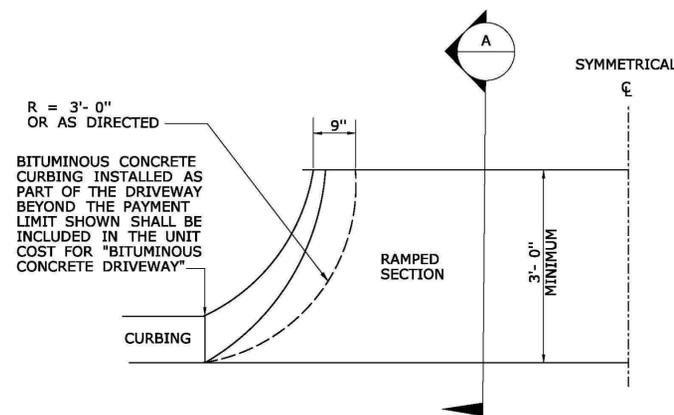
**5' WIDE CONCRETE
SIDEWALK WITH GRASS PLOT**



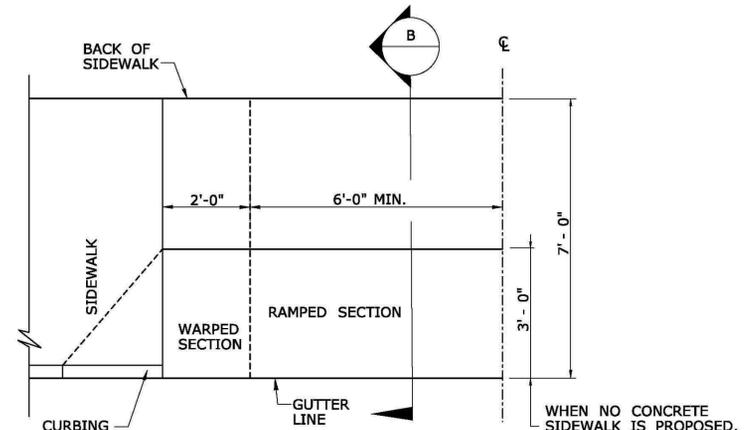
**SECTION B
HALF ELEVATION**



**SECTION C
HALF PLAN OF
CONCRETE DRIVEWAY RAMP WHERE
CURB IS SEPARATED FROM
SIDEWALK BY GRASS PLOT**



**SECTION A
HALF BITUMINOUS CONCRETE
DRIVEWAY PLAN**

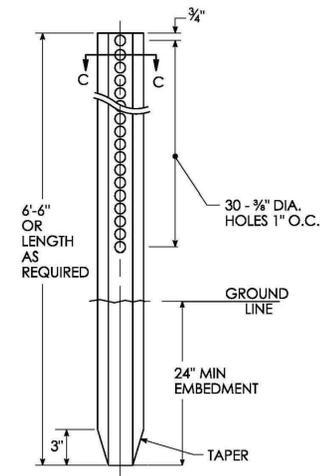


**SECTION B
HALF PLAN OF
CONCRETE DRIVEWAY RAMP WHERE
SIDEWALK ADJOINS CURBING**

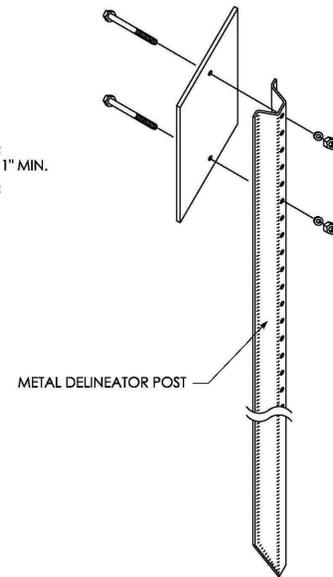
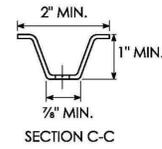
WHEN NO CONCRETE SIDEWALK IS PROPOSED, CONSTRUCT THIS SECTION ONLY.

WHEN NO CONCRETE SIDEWALK IS PROPOSED, CONSTRUCT THIS SECTION ONLY.

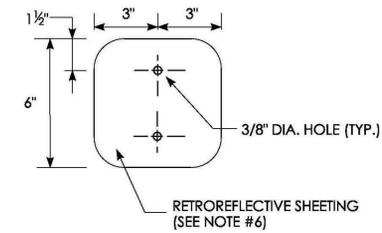
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METAL DELINEATOR POST



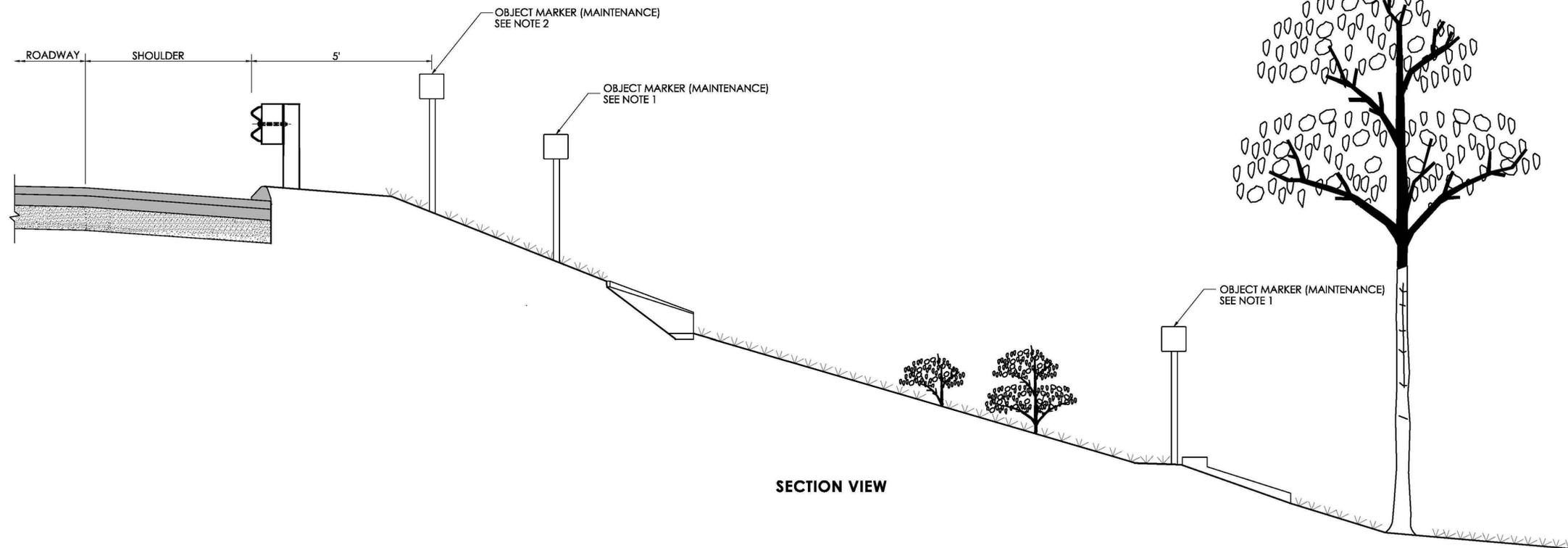
INSTALLATION ON DELINEATOR POSTS



OBJECT MARKER DETAIL

GENERAL NOTES:

1. OBJECT MARKER (MAINTENANCE) SHALL BE INSTALLED ADJACENT TO; END WALLS, DRAINAGE PIPE ENDS, UNDERDRAIN OUTLETS AND PAVED APRONS WITH THE MARKER FACING THE DIRECTION OF TRAFFIC.
2. SECOND OBJECT MARKER (MAINTENANCE) SHALL ONLY BE INSTALLED 5 FEET FROM THE EDGE OF ROADWAY WHEN THE OBJECT MARKER ADJACENT TO STRUCTURE IS GREATER THAN 15 FEET FROM THE EDGE OF THE ROADWAY.
3. OBJECT MARKER (MAINTENANCE) SHALL BE INSTALLED AT METAL BEAM GUIDERAIL ANCHORS AS SHOWN ON:
HW-911_01 R-B END ANCHORAGE TYPE I AND II,
HW-911_02 MD-B END ANCHORAGE TYPE I.
4. OBJECT MARKERS SHALL BE FASTENED WITH 3/16" STAINLESS STEEL HEX HEAD BOLTS (LENGTH AS REQUIRED), WASHER AND FIBER INSERT SELF LOCKING NUT, ON STANDARD METAL DELINEATOR POST.
5. METAL DELINEATOR POST SHALL BE 1.12 LBS/FT. ASTM A36 STEEL
6. OBJECT MARKER COMPOSITION SHALL BE 14 GA. (0.080") THICK SHEET ALUMINUM WITH BLUE TYPE IX RETROREFLECTIVE SHEETING.
7. ALL OBJECT MARKERS (MAINTENANCE) SHALL BE INSTALLED WITH THE BOTTOM OF THE OBJECT MARKER 4 FT ABOVE THE GROUND.

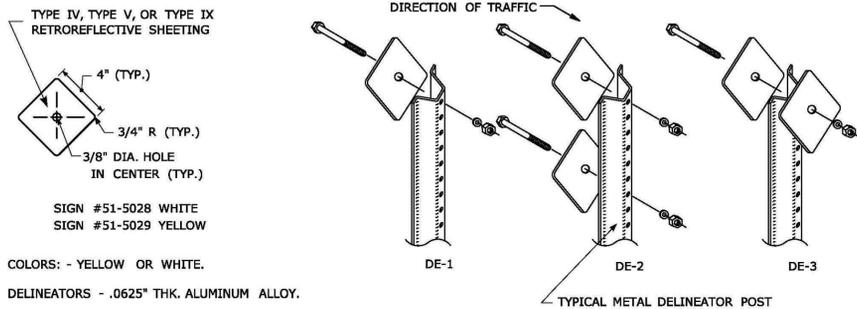


SECTION VIEW

NOT TO SCALE	SIGNATURE BLOCK: OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	SUBMITTED BY: Digitally signed by Leo Fontaine, P.E. Date: 2024.02.09 13:30:38-05'00'	APPROVED BY: Michael N. Calabrese, P.E. Date: 2024.02.26 11:36:31-05'00'	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	STANDARD SHEET TITLE: OBJECT MARKER (MAINTENANCE)	STANDARD SHEET NO.: HW-930_01
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DELINEATORS DE-1, DE-2, DE-3

INSTALLATION ON DELINEATOR POSTS



SIGN #51-5028 WHITE
SIGN #51-5029 YELLOW

COLORS: - YELLOW OR WHITE.

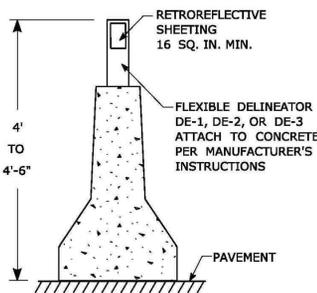
DELINEATORS - .0625" THK. ALUMINUM ALLOY.

FACE SHALL BE PRESSURE SENSITIVE, SELF ADHERING, TYPE IV, TYPE V, OR TYPE IX RETROREFLECTIVE SHEETING.

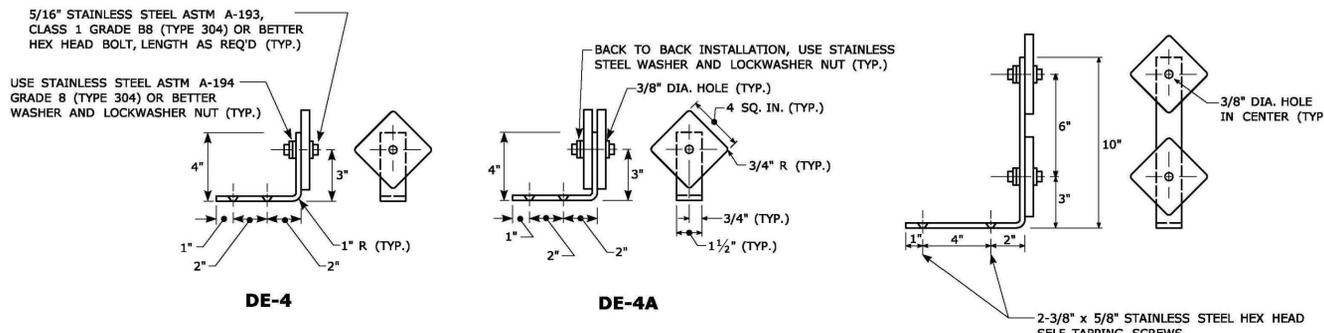
DELINEATORS SHALL BE FASTENED WITH 5/16" STAINLESS STEEL ASTM A-193 CLASS 1, GRADE B8 (TYPE 304) OR BETTER HEX HEAD BOLT (LENGTH AS REQUIRED), WASHER AND FIBER INSERT SELF LOCKING NUT, ON STANDARD METAL DELINEATOR POST.

DELINEATORS DE-1, DE-2, DE-3 TO BE PAID FOR UNDER SECTION 12.05 DELINEATORS.

INSTALLATION ON PERMANENT CONCRETE BARRIER, BRIDGE PARAPETS AND RETAINING WALLS



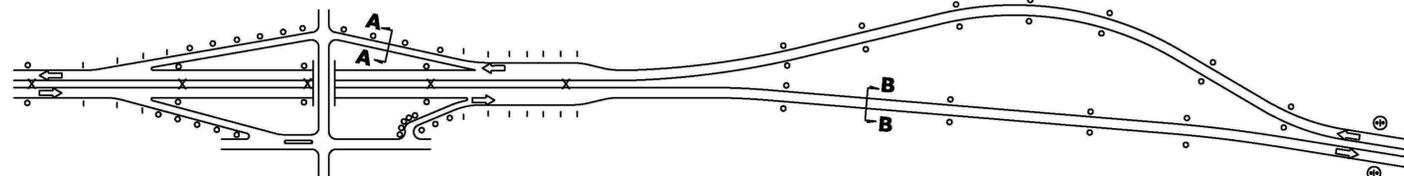
DELINEATORS DE-4, DE-4A, DE-5 FOR INSTALLATION ON METAL BRIDGE RAIL



COLORS: - YELLOW OR WHITE.
DELINEATORS - .0625" THK. ALUMINUM ALLOY.
BRACKET - .125" THK. ALUMINUM ALLOY, AND SHALL CONFORM TO SPECIFICATION M.18.07-03 BRIDGE RAIL MOUNTING BRACKETS.
FACE SHALL BE PRESSURE SENSITIVE, SELF ADHERING, TYPE IV, TYPE V, OR TYPE IX RETROREFLECTIVE SHEETING.
USE STAINLESS STEEL WASHERS ON FACE OF DELINEATORS, 5/8" O.D. X 3/8" I.D. X .032" THK. (TYP.)

DELINEATORS TYPE DE-4, DE-4A, AND DE-5 TO BE PAID FOR UNDER SECTION 12.05 DELINEATORS.

TYPICAL MAINLINE & INTERCHANGE DELINEATION



SECTION A-A

DELINEATOR PLACEMENT ON RAMP
ON TANGENT SECTIONS - RIGHT SIDE OF RAMP
ON CURVED SECTIONS - BOTH SIDES OF CURVE

SECTION B-B

DELINEATOR PLACEMENT ON MAINLINE

DELINEATOR SPACING NOTES:

- 1) AT LOCATIONS WHERE THE MEDIAN WIDTH (BETWEEN SHOULDERS) IS 12' OR LESS, AND MEDIAN BEAM RAIL IS PRESENT, TYPE DE-3 DELINEATORS SHALL BE MOUNTED WITHIN THE MEDIAN BEAM RAIL.
- 2) SPACING ON MAINLINE EXPRESSWAY TANGENTS SHALL BE 400'.
- 3) SPACING ON MAINLINE EXPRESSWAY CURVES SHALL BE AS SPECIFIED IN TABLE 3F-1 OF THE MUTCD.
- 4) ON ACCELERATION AND DECELERATION LANES AND ON-RAMP TANGENT SECTIONS, DELINEATOR SPACING SHALL BE 100'.
- 5) ON CURVED PORTIONS OF RAMP, DELINEATOR SPACING SHALL BE IN ACCORDANCE WITH TABLE 3F-1 OF THE MUTCD, BUT NOT TO EXCEED 100'.

LEGEND:

- o DE-1 DELINEATORS OR DE-4 DELINEATOR ASSEMBLY
- | DE-2 DELINEATORS OR DE-5 DELINEATOR ASSEMBLY
- x DE-3 DELINEATORS ASSEMBLY OR DE-4A DELINEATOR
- ⊙ D10-1, 2, 3, OR 4 ASSEMBLY TO BE INSTALLED WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

COLOR APPLICATION, FOR DE-1 THRU DE-5

LEFT SIDE OF ALL ROADWAYS AND RAMP - YELLOW
RIGHT SIDE OF ALL ROADWAYS AND RAMP - WHITE

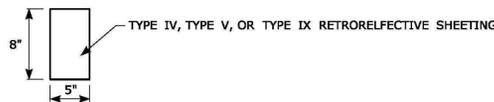
MUTCD TABLE 3F-1 APPROXIMATE SPACING FOR DELINEATORS ON HORIZONTAL CURVES

RADIUS (R) OF CURVE (feet)	APPROXIMATE SPACING (S) ON CURVE (feet)
50	20
115	25
180	35
250	40
300	50
400	55
500	65
600	70
700	75
800	80
900	85
1,000	90

DISTANCE IN FEET WERE ROUNDED TO THE NEAREST 5 FEET. SPACING FOR SPECIFIC RADII MAY BE INTERPOLATED FROM TABLE. THE MINIMUM SPACING SHOULD BE 20 FEET. THE SPACING ON CURVES SHOULD NOT EXCEED 300 FEET. IN ADVANCE OF OR BEYOND A CURVE, AND PROCEEDING AWAY FROM THE END OF THE CURVE, THE SPACING OF THE FIRST DELINEATOR IS 2S, THE SECOND IS 3S, AND THE THIRD 6S BUT NOT TO EXCEED 300 FEET.

S REFERS TO THE DELINEATOR SPACING FOR SPECIFIC RADII COMPUTED FROM THE FORMULA: $S=3\sqrt{R-50}$.

DELINEATORS DE-7, DE-7A, DE-7B, DE-7D FOR INSTALLATION ON TEMPORARY PRECAST CONCRETE BARRIER CURB AND TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE)



- DE-7 ONE WAY WHITE
- DE-7A ONE WAY YELLOW
- DE-7B TWO WAY YELLOW
- DE-7D TWO WAY WHITE

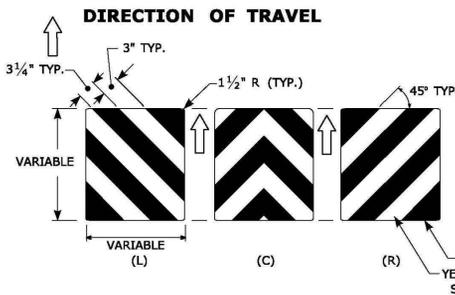
TEMPORARY PRECAST CONCRETE BARRIER DELINEATORS ARE TO BE FABRICATED OF ALUMINUM, STEEL, PLASTIC, OR OF A MATERIAL APPROVED BY THE ENGINEER AND MOUNTED IN THE CENTER OF EACH SECTION OF TEMPORARY BARRIER AS REQUIRED AND PER MANUFACTURER'S INSTRUCTIONS.

SPACING FOR TEMPORARY BARRIER CURB DELINEATORS:

ON THE LEADING TAPERED SECTION - EVERY 20',
ON THE FIRST 100' OF THE PARALLEL SECTION - EVERY 20',
ON THE REMAINING LENGTH - EVERY 100', MINIMUM OF 2' IF LESS THAN 100',
ALTERNATING ONE WAY TRAFFIC - EVERY 20',
ALL OTHER ROADWAYS SHALL BE DELINEATED IN ACCORDANCE WITH MUTCD.

DELINEATORS DE-7, DE-7A, DE-7B, AND DE-7D TO BE PAID FOR UNDER SECTION 12.05 DELINEATORS.

ATTENUATOR REFLECTORS SIGN #40-4266

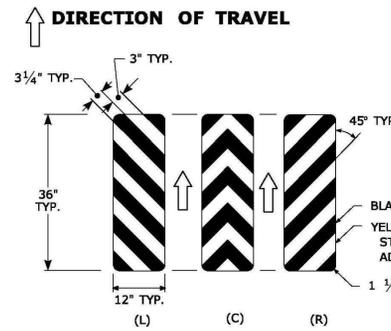


THIS SHEETING WITHOUT A SUBSTRATE TO BE INSTALLED ON THE NOSE OF THE IMPACT ATTENUATOR WITH ADHESIVE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE SHEETING SHALL COVER THE NOSE OF THE IMPACT ATTENUATOR. ON A CURVED NOSE, THE WIDTH OF THE SHEETING SHALL EXTEND 1" BEYOND THE POINT OF CURVATURE ON EACH SIDE OF THE NOSE. THE HEIGHT AND WIDTH OF THE SHEETING VARIES DEPENDING ON THE SIZE OF THE NOSE OF THE IMPACT ATTENUATOR.

BLACK OPAQUE (TYP.)
YELLOW TYPE IV OR TYPE IX RETROREFLECTIVE STRIPE (ANGLE DOWNWARD TOWARD ADJACENT PAVEMENT) (TYP.)

ATTENUATOR REFLECTOR TO BE PAID FOR UNDER SECTION 18.0 IMPACT ATTENUATOR

TYPE 3 OBJECT MARKERS SIGN #41-4267



SIGN #41-4267 MARKER MOUNTED ON 4 1/2" METAL SIGN POST. BOTTOM OF SIGN #41-4267 TO BE 4" ABOVE ADJACENT EDGE OF PAVEMENT. FINAL LOCATIONS OF SIGN #41-4267 MARKERS WILL BE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

TYPE 3 OBJECT MARKER TO BE PAID FOR UNDER SECTION 12.08 SIGN FACE SHEET ALUMINUM

REV.	DATE	REVISION DESCRIPTION
5	8-2018	INCLUDED DE-7D AND REMOVED DE-7C, DE-9, AND DE-10.
4	4-2017	REVISED ATTENUATOR REFLECTOR AND TYPE 3 OBJECT MARKERS.
3	8-2015	UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION.
2	2-2011	MINOR REVISIONS.
1	1-2010	INCLUDED DETAILS IN D10-1, D10-2, D10-3 DELINEATORS.

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

Plotted Date: 8/10/2018

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: TR-1205_01_1_2018.dgn Model: TR-1205_01

SUBMITTED BY: NAME/DATE/TIME:
Mark F. Makuch, P.E.
2018.08.17
09:04:28-04'00"

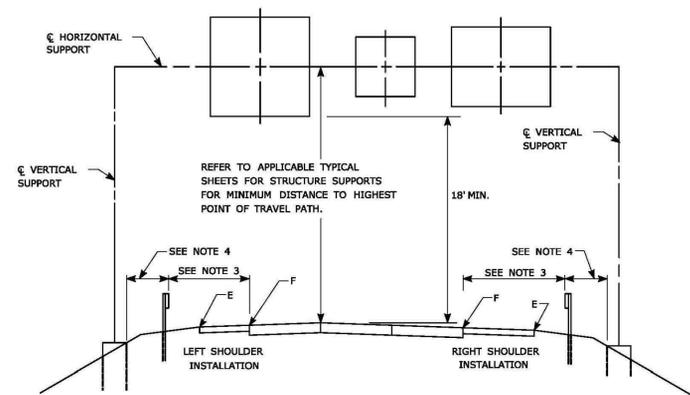
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Mark F. Carino, P.E.
2018.08.21 07:47:46-04'00"

CTDOT
STANDARD SHEET

OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
DELINEATION, DELINEATORS AND OBJECT MARKER DETAILS

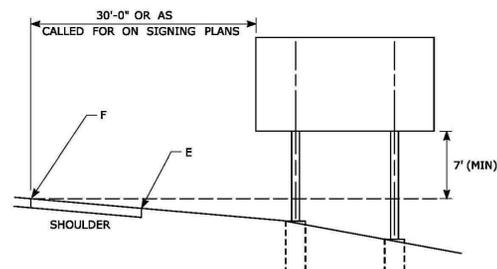
STANDARD SHEET NO.:
TR-1205_01



TYPICAL PLACEMENT OF OVERHEAD SIGNS ON SIGN SUPPORTS

NOTES:

- 1) FOR PLACEMENT OF CANTILEVER SIGN SUPPORT USE APPLICABLE PORTION OF ABOVE DETAIL.
- 2) BARRIER SYSTEMS MAY BE REQUIRED FOR BOTH SIDES OF SUPPORTS IN MEDIANS.
- 3) IMPACT PROTECTION SHALL BE PROVIDED FOR THE SIGN SUPPORTS LOCATED WITHIN CLEAR ZONE.
- 4) SIGN SUPPORT FOUNDATIONS SHALL BE LOCATED OUTSIDE OF BARRIER SYSTEMS DEFLECTION AREA.
- 5) ALL SIGNS ARE TO BE LEVEL, REGARDLESS OF CAMBER IN SUPPORT.



TYPICAL PLACEMENT OF SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS

NOTES:

- 1) MIN. VERTICAL CLEARANCE ABOVE SIDEWALKS SHALL BE 7'.
- 2) WHERE GUIDE RAIL IS USED, THE OFFSET TO THE NEAR EDGE OF SIGN FACE SHALL BE AS SHOWN ELSEWHERE IN THE CONTRACT PLANS.
- 3) ON INTERSECTING ROADS AT RAMP TERMINI, THE OFFSET TO THE NEAR EDGE OF SIGN FACE SHALL BE 6' MIN. FROM POINT "E".
- 4) IF 30'-0" MIN. CANNOT BE MET, PLEASE CONTACT THE ENGINEER.

FOR MAXIMUM EFFECTIVENESS, POSITION SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS AS FOLLOWS:

ON A TANGENT SECTION, POSITION THE SIGN SO THE VERTICAL AXIS IS PLUMB AND THE HORIZONTAL AXIS IS AT AN ANGLE OF 90° WITH THE TRAFFIC LANE WHICH THE SIGN SERVES. SIGNS LOCATED 30 FT OR MORE FROM THE EDGE OF THE ROAD SHALL BE TURNED APPROXIMATELY 3° TOWARD THE ROAD.

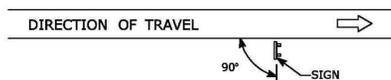


DIAGRAM "A"

ON A HORIZONTAL CURVE SECTION, POSITION THE SIGN SO THE VERTICAL AXIS IS PLUMB AND THE HORIZONTAL AXIS IS AT AN ANGLE OF 90° WITH A STRAIGHT LINE BETWEEN THE SIGN AND THE POINT AT WHICH THE SIGN SHALL BE READ.

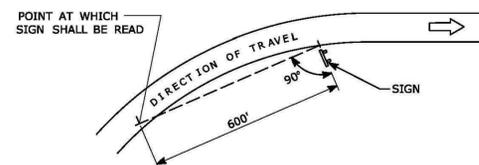
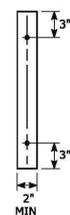


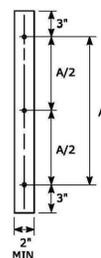
DIAGRAM "B"

SIGN ORIENTATION DETAILS FOR SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS

RETROREFLECTIVE STRIPS 48" LONG OR LESS:



RETROREFLECTIVE STRIPS OVER 48" LONG:

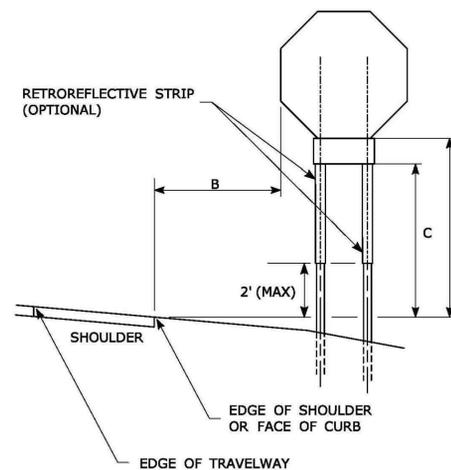


RETROREFLECTIVE STRIP DETAIL

NOTES:

RETROREFLECTIVE STRIPS WHICH ARE 48 IN LONG OR LESS SHALL BE ATTACHED USING 2 BOLTS AND RETROREFLECTIVE STRIPS OVER 48 IN LONG SHALL BE ATTACHED USING 3 BOLTS AS SHOWN ON THE DETAILS ABOVE. REFER TO STANDARD SHEET No. TR-1208-02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS" FOR MOUNTING DETAILS.

RETROREFLECTIVE STRIP COLOR SHALL MATCH THE BACKGROUND COLOR OF THE SIGN, EXCEPT THAT THE COLOR OF THE STRIP FOR "YIELD" AND "DO NOT ENTER" SIGNS SHALL BE RED.



TYPICAL SIGN PLACEMENT DETAIL

NOTES:

ALL SIGNS AND SHIELDS ON DIRECTIONAL ASSEMBLIES SHALL ABUT VERTICALLY.

REFER TO STANDARD SHEET No. TR-1208-02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS" FOR SIGN POSTS AND SIGN MOUNTING.

IF A RETROREFLECTIVE STRIP IS USED ON SIGN SUPPORT, IT SHALL BE PLACED FOR THE FULL LENGTH OF THE SUPPORT FROM THE BOTTOM OF THE SIGN TO WITHIN 2 FT ABOVE THE EDGE OF THE ROADWAY. PARKING SIGNS TYPICALLY USE 45° MOUNTING BRACKET.

DIM."A" MIN SIGN HEIGHT	DIM."B" MIN LATERAL OFFSET (1)	DIM."C" MIN PLAQUE HEIGHT (1)	ASSEMBLY LOCATION
7' (2)	6' 12' (3)	5'	SIGNS ON FREEWAYS AND EXPRESSWAYS EXCEPT CHEVRON ALIGNMENT SIGNS, ONE-DIRECTION LARGE ARROW SIGNS, DO NOT ENTER SIGNS, AND WRONG WAY SIGNS
5'	2'	4'	• SIGNS IN RURAL AREAS • DO NOT ENTER AND WRONG WAY SIGNS ALONG EXIT RAMP • DO NOT ENTER AND WRONG WAY SIGNS ON LIMITED ACCESS HIGHWAYS
5'	2'	N/A	• CHEVRON ALIGNMENT SIGNS LOCATED ON FREEWAYS, EXPRESSWAYS, RAMP, AND IN RURAL AREAS • ONE-DIRECTION LARGE ARROW SIGNS LOCATED ON FREEWAYS, EXPRESSWAYS, RAMP, AND IN RURAL AREAS
4'	6' 12' (3)	N/A	INCIDENT MANAGEMENT SIGNS AND MILE POST MARKER ASSEMBLIES LOCATED ON FREEWAYS AND EXPRESSWAYS
4'	2'	4'	CENTRAL ISLANDS OF ROUNDABOUTS
7'	2' (4)	6'	BUSINESS & RESIDENTIAL AREAS WHERE PARKING OR OTHER OBSTRUCTIONS LIMIT VISIBILITY
7'	2' (4)	7'	SIDEWALKS (5)

(1) OR AS DIRECTED BY THE ENGINEER

(2) 8 FT MINIMUM HEIGHT REQUIRED IF A SUPPLEMENTAL PLAQUE IS SUBMOUNTED BELOW THE MAJOR SIGN.

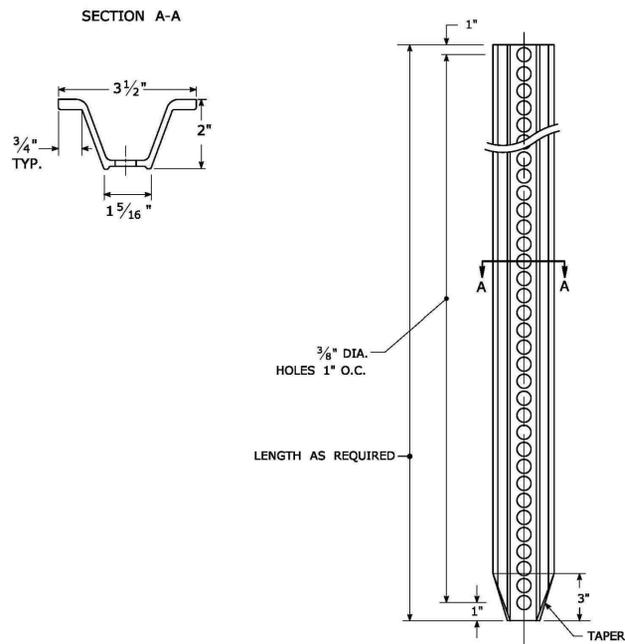
(3) 6 FT FROM EDGE OF SHOULDER, WHEN SHOULDER IS OVER 6 FT WIDE 12 FT FROM EDGE OF TRAVELWAY, WHEN SHOULDER IS LESS THAN 6 FT WIDE.

(4) A LATERAL OFFSET OF AT LEAST 1 FT FROM THE FACE OF THE CURB MAY BE USED WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING UTILITY POLES ARE CLOSE TO THE CURB.

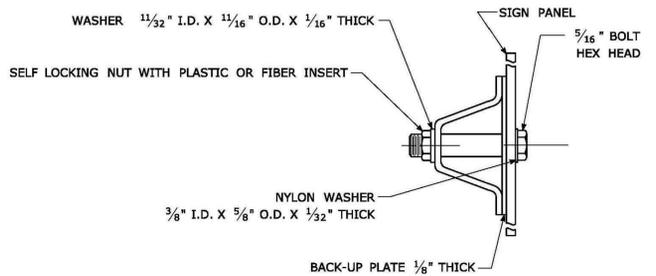
(5) A CLEAR PATH OF NOT LESS THAN 4 FT SHALL BE PROVIDED IN SIDEWALK AREAS.

<p>THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.</p> <p>Plotted Date: 8/10/2018</p>		<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p> <p>NOT TO SCALE</p>		<p>FILENAME: TR_1208_01_1_2018.dgn Model: TR-1208_01</p>		<p>SUBMITTED BY: Mark F. Makuch, P.E. 2018.08.17 09:06:06-04'00'</p> <p>APPROVED BY: [Signature] Mark F. Carino, P.E. 2018.08.21 07:48:06-04'00'</p>		<p>CDOT STANDARD SHEET OFFICE OF ENGINEERING</p>		<p>STANDARD SHEET TITLE: SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS</p>		<p>STANDARD SHEET NO.: TR-1208_01</p>	
REV.	DATE	REVISION DESCRIPTION											
3	8-2018	INCLUDED INCIDENT MANAGEMENT AND MILE MARKER SIGNS.											
2	4-2017	MINOR REVISIONS.											
1	2-2011	MINOR REVISIONS.											

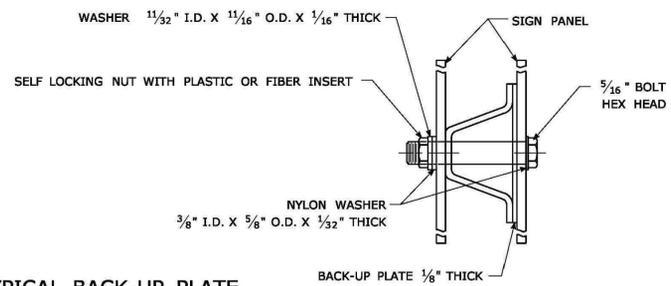
TYPICAL METAL SIGN POSTS



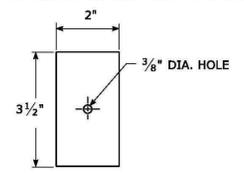
TYPICAL SIGN PANEL ATTACHMENT



TYPICAL BACK TO BACK SIGN PANEL ATTACHMENT

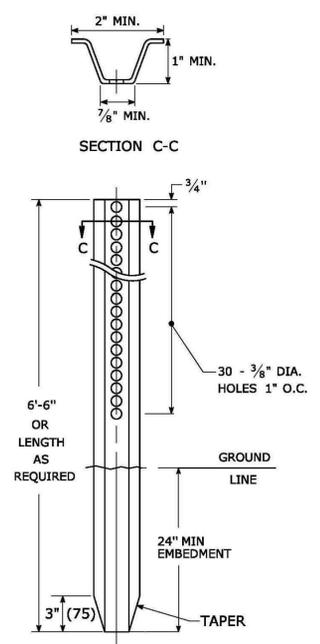


TYPICAL BACK-UP PLATE



BOLTS - STAINLESS STEEL CONFORMING TO ASTM F593, ALLOY GROUP 1 OR 2 (ALLOY TYPES 304 OR 316).
 SELF LOCKING NUTS - STAINLESS STEEL CONFORMING TO ASTM F594, ALLOY GROUP 1 OR 2 (ALLOY TYPES 304 OR 316).
 WASHERS - STAINLESS STEEL CONFORMING TO ASTM A240, (ALLOY TYPES 304 OR 316).

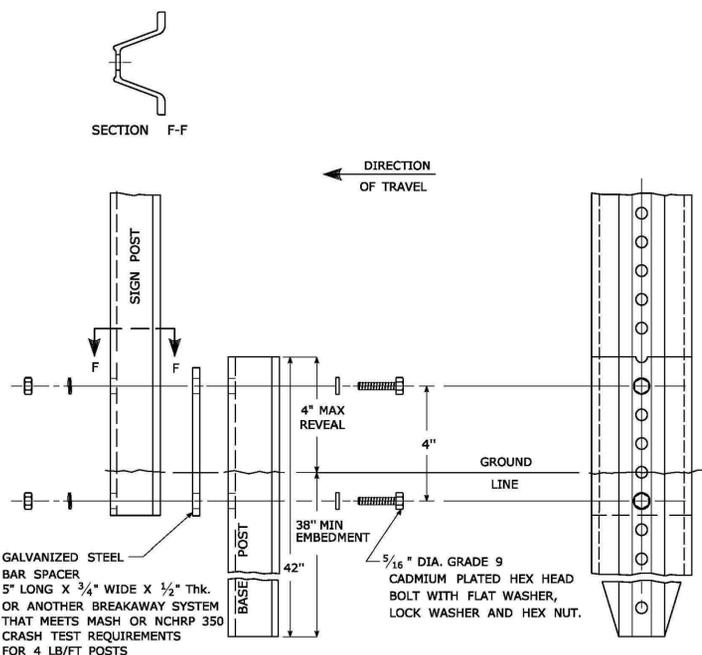
METAL DELINEATOR POST
 WT./FT. = 1.12 LBS./FT. MIN.



GENERAL NOTES:

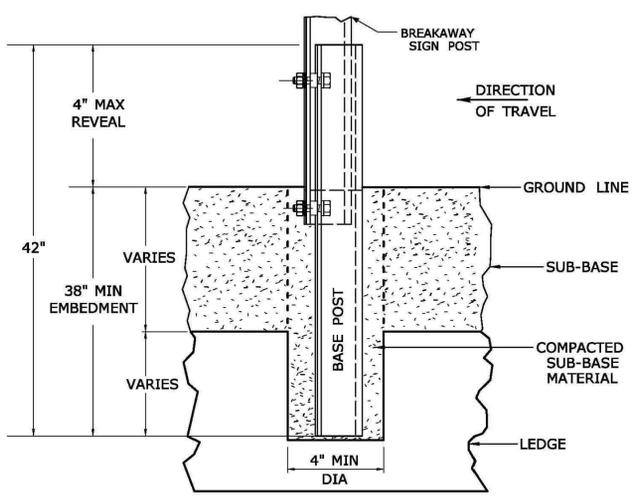
1. STEEL FOR DELINEATOR POSTS SHALL BE ASTM A36 STEEL. STEEL FOR ALL OTHER POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499 GRADE 80 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT (MASS) OF 91 LBS. OR GREATER PER LINEAR YARD.
2. AFTER FABRICATION, ALL STEEL POSTS, STRAPS AND PLATES SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A123.
3. WASHERS FOR BREAKAWAY INSTALLATIONS SHALL MEET ASTM F436, TYPE 1.
4. SPACER BAR FOR BREAKAWAY INSTALLATION SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A36.
5. ALL BOLTS, NUTS, AND WASHERS FOR BREAKAWAY INSTALLATIONS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A153.
6. ALL SIGN POSTS SHALL HAVE BREAKAWAY FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS." THE BREAKAWAY FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
7. SIGN POSTS SHALL BE 4 LBS./FT.

BREAKAWAY INSTALLATION
 FOR 4 LBS./FT. POSTS

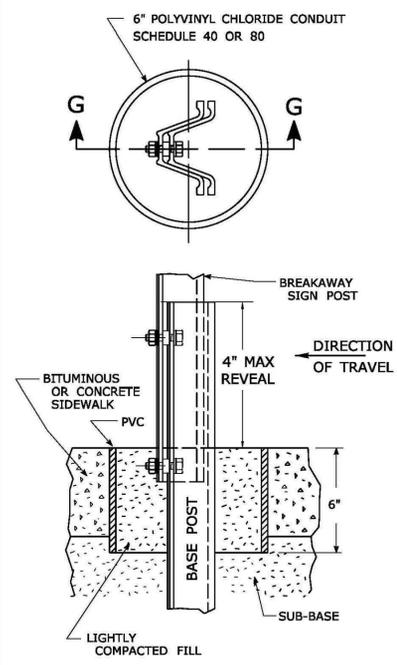


TYPICAL SIGN POST INSTALLATION IN LEDGE

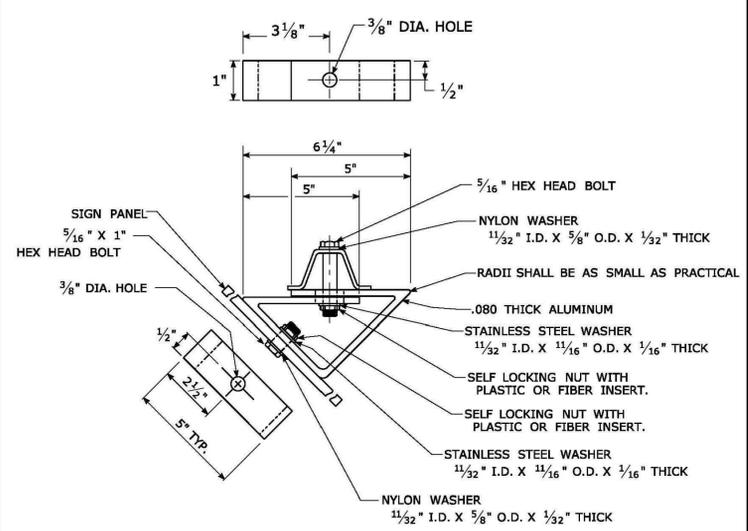
LEDGE SHALL BE REMOVED TO DRIVE THE BASE POST TO A DEPTH OF 38".
 HOLE SHALL BE FILLED WITH SUB-BASE MATERIAL AND COMPACTED WITH A TAMPING BAR, OR TECHNIQUE APPROVED BY THE ENGINEER, PRIOR TO BASE POST INSTALLATION.



TYPICAL SLEEVE FOR PAVED AREAS



45° MOUNTING BRACKET FOR INSTALLATION OF PARKING SIGNS



REV.	DATE	REVISION DESCRIPTION
2	6-2017	SIGN POST REVISIONS.
1	2-2011	MINOR REVISIONS.

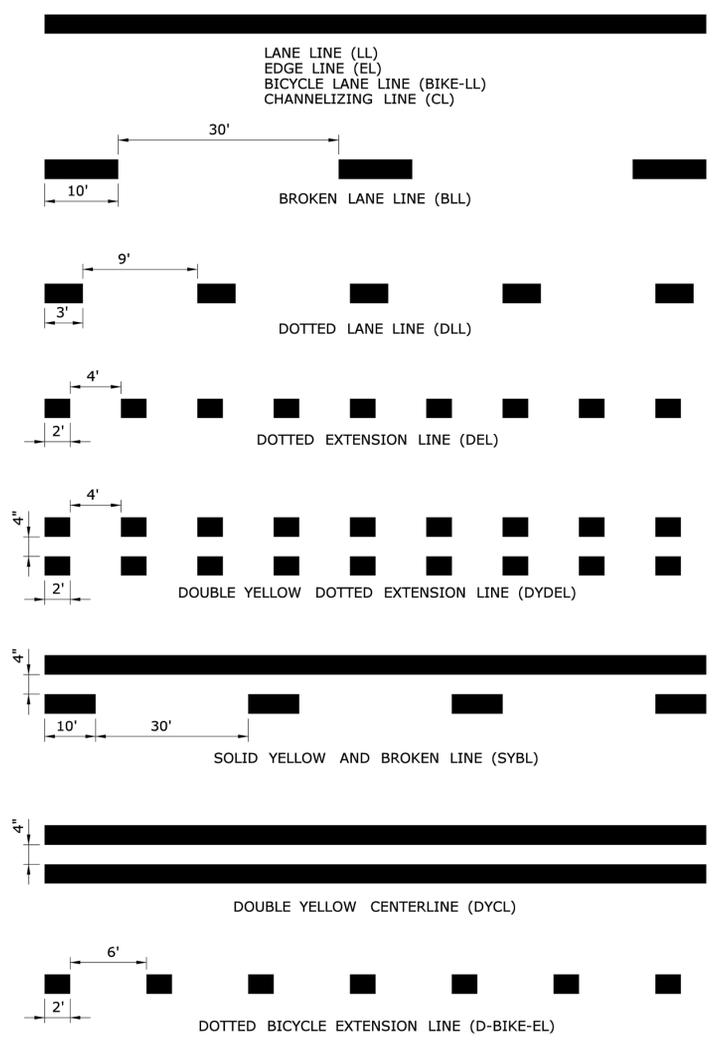
THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.
 Plotted Date: 6/6/2017

STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION
 NOT TO SCALE
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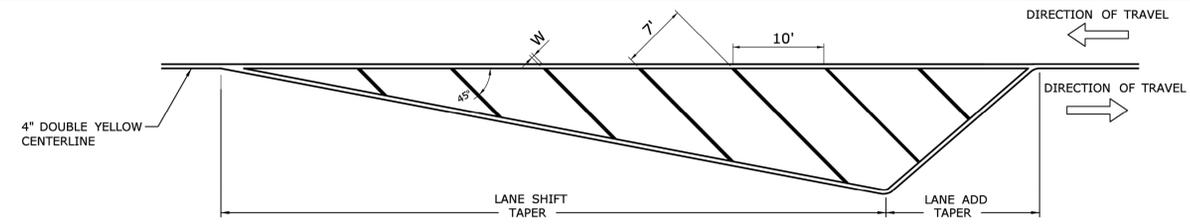
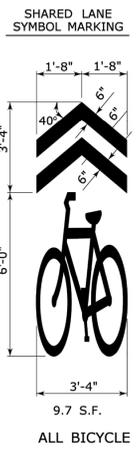
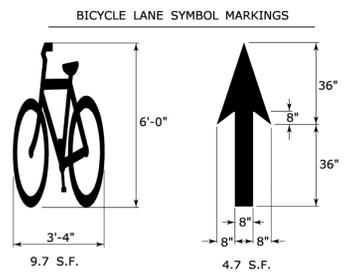
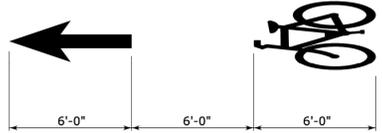
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 NAME/DATE/TIME: Gregory M. Dorosh, P.E. 2017.06.15 09:27:29-04'00'

CTDOT
 STANDARD SHEET
 OFFICE OF ENGINEERING

STANDARD SHEET TITLE: METAL SIGN POSTS AND SIGN MOUNTING DETAILS
 GUIDE SHEET NO.: TR-1208_02

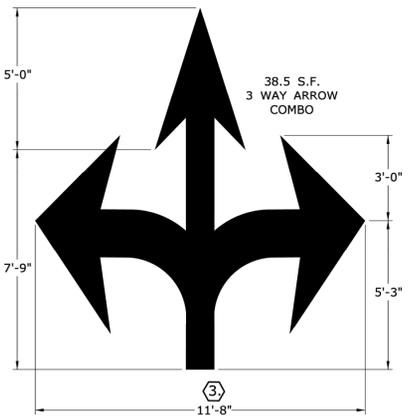
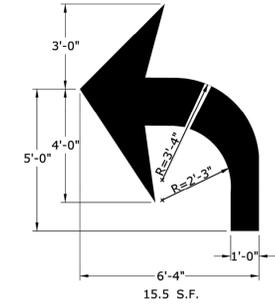
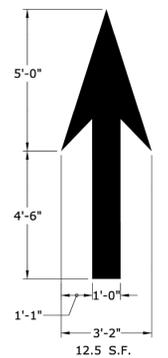
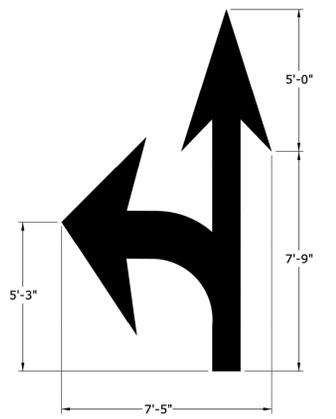


TYPICAL LONGITUDINAL SPACING



CROSS HATCHED ISLAND DETAIL (YELLOW)

W IS TO BE 8" WHEN POSTED SPEED < 45 MPH
W IS TO BE 12" WHEN POSTED SPEED ≥ 45 MPH
CROSS HATCHED ISLANDS ARE OPTIONAL AND ARE TO BE INSTALLED ONLY WHERE CALLED FOR ON THE PLANS

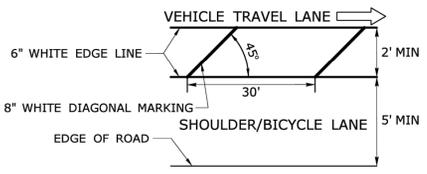


PAVEMENT ARROW DETAILS (WHITE)

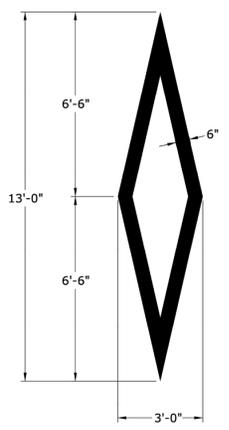
ARROWS SHALL BE CENTERED IN TRAVEL LANE

NOTES :

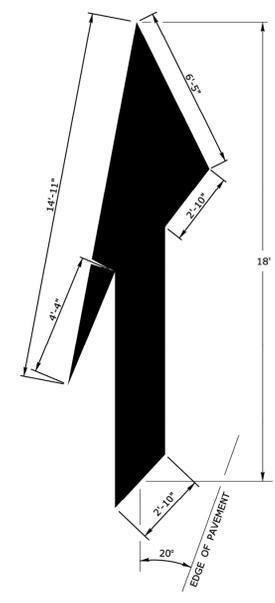
1. AREA OF PAVEMENT MARKINGS AS INDICATED IS APPROXIMATE.
2. RIGHT TURN PAVEMENT MARKING ARROWS ARE MIRROR IMAGE OF LEFT TURN PAVEMENT MARKING ARROWS.
- ③ WIDTH OF COMBINATION PAVEMENT MARKING ARROWS MAY BE REDUCED AS NEEDED BASED ON LANE WIDTH.



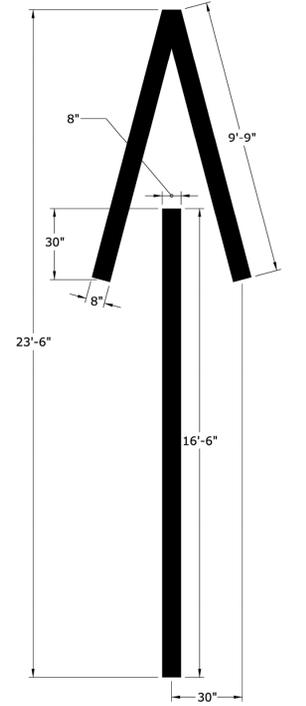
BUFFER DETAIL



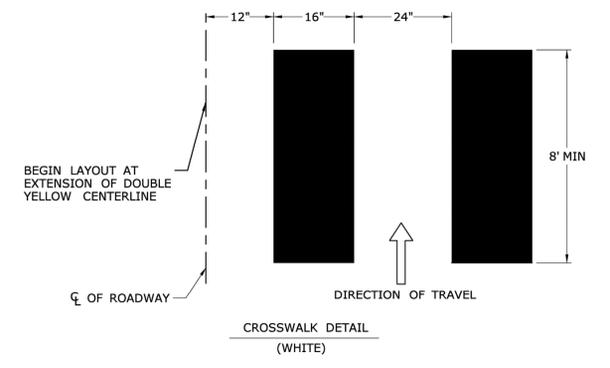
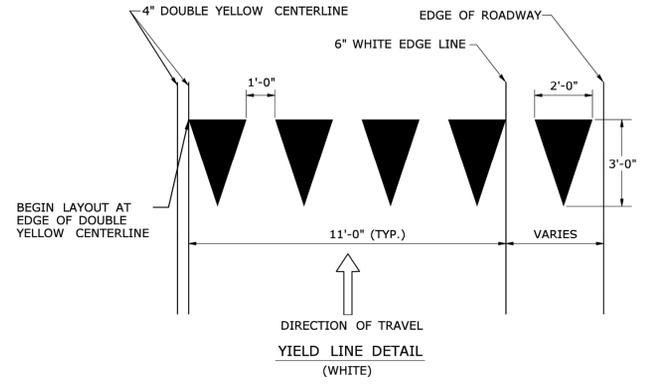
WHITE PREFERENTIAL LANE SYMBOL



WHITE LANE REDUCTION ARROW



WHITE WRONG WAY PAVEMENT ARROW



SIGNATURE BLOCK:
DESIGNER/DRAFTER: Q. BECOTTE CHECKED BY: A. MERMELSTEIN

NOT TO SCALE



PROJECT TITLE:
CTDOT TRAFFIC ENGINEERING GUIDE SHEET

TOWN(S):

DRAWING TITLE:
PAVEMENT MARKINGS LINES AND SYMBOLS

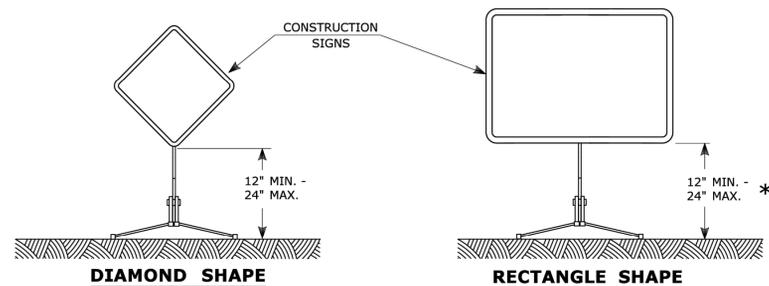
PROJECT NO.:

DRAWING NO.: **TR-GS 04**

SHEET NO.:

E5 - SERIES				G20 - SERIES				M4 - SERIES				R4-R11 - SERIES				W1 - SERIES				W3 - SERIES				W4-W6 - SERIES																																																																																																																																																																			
<p>EXIT (L) EXIT (R)</p> <p>COPY & BORDER - WHITE BACKGROUND - GREEN</p> <table border="1"> <tr><th>AREA (SQ. FT.)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th></tr> <tr><td>(L) 30.0</td><td>72X60</td><td>51-6148</td><td>2</td></tr> <tr><td>(R) 30.0</td><td>72X60</td><td>51-6150</td><td>2</td></tr> </table>				AREA (SQ. FT.)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	(L) 30.0	72X60	51-6148	2	(R) 30.0	72X60	51-6150	2	<p>END ROAD WORK</p> <p>VARIABLE MILEAGE</p> <table border="1"> <tr><th>AREA (SQ. FT.)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th></tr> <tr><td>4.5</td><td>36X18</td><td>80-9611</td><td>1</td></tr> <tr><td>8.0</td><td>48X24</td><td>80-9612</td><td>2</td></tr> </table>				AREA (SQ. FT.)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	4.5	36X18	80-9611	1	8.0	48X24	80-9612	2	<p>DETOUR</p> <p>VARIABLE ARROW</p> <table border="1"> <tr><th>AREA (SQ. FT.)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th></tr> <tr><td>2.0</td><td>24X12</td><td>80-9707</td><td>1</td></tr> <tr><td>5.0</td><td>30X24</td><td>80-9703</td><td>1</td></tr> </table>				AREA (SQ. FT.)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	2.0	24X12	80-9707	1	5.0	30X24	80-9703	1	<p>SIDEWALK CLOSED</p> <p>COPY & BORDER - BLACK BACKGROUND - WHITE</p> <table border="1"> <tr><th>AREA (SQ. FT.)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th></tr> <tr><td>3.75</td><td>30X18</td><td>80-9076</td><td>1</td></tr> <tr><td>3.0</td><td>24X18</td><td>80-9074</td><td>1</td></tr> <tr><td>2.0</td><td>24X12</td><td>80-9075</td><td>1</td></tr> </table>				AREA (SQ. FT.)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	3.75	30X18	80-9076	1	3.0	24X18	80-9074	1	2.0	24X12	80-9075	1	<p>W1-4 (L) W1-4 (R) W1-8 (L or R) W1-6 (L or R)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>(L) 9.0</td><td>36</td><td>80-9432</td><td>1</td></tr> <tr><td>(R) 9.0</td><td>36</td><td>80-9431</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9452</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9451</td><td>2</td></tr> <tr><td>3.0</td><td>18X24</td><td>80-9401</td><td>1</td></tr> <tr><td>5.0</td><td>24X30</td><td>80-9403</td><td>1</td></tr> <tr><td>7.5</td><td>30X36</td><td>80-9404</td><td>1</td></tr> <tr><td>8.0</td><td>48X24</td><td>80-9424</td><td>2</td></tr> <tr><td>12.5</td><td>60X30</td><td>80-9423</td><td>2</td></tr> </table>				(L) 9.0	36	80-9432	1	(R) 9.0	36	80-9431	1	(L) 16.0	48	80-9452	2	(R) 16.0	48	80-9451	2	3.0	18X24	80-9401	1	5.0	24X30	80-9403	1	7.5	30X36	80-9404	1	8.0	48X24	80-9424	2	12.5	60X30	80-9423	2	<p>W3-1 (OCTAGON - RED W/ WHITE BORDER) W3-2 (TRIANGLE - RED W/ WHITE BORDER) W3-3 (TOP CIRCLE - RED) W3-5 (SPEED LIMIT)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>9.0</td><td>36</td><td>80-9050</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9051</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9054</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9055</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9052</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9053</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9520</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9521</td><td>2</td></tr> </table>				9.0	36	80-9050	1	16.0	48	80-9051	2	9.0	36	80-9054	1	16.0	48	80-9055	2	9.0	36	80-9052	1	16.0	48	80-9053	2	9.0	36	80-9520	1	16.0	48	80-9521	2	<p>W4-2 (STOP-SLOW PADDLE) W4-3 (STOP-SLOW PADDLE)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>9.0</td><td>36</td><td>80-9922</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9921</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9918</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9917</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9938</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9939</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9936</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9937</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9947</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9945</td><td>2</td></tr> </table>				9.0	36	80-9922	2	16.0	48	80-9921	2	16.0	48	80-9918	2	16.0	48	80-9917	2	9.0	36	80-9938	1	16.0	48	80-9939	2	9.0	36	80-9936	1	16.0	48	80-9937	2	9.0	36	80-9947	1	16.0	48	80-9945	2
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W8-W12 - SERIES				W13 - SERIES				W20 - SERIES				W21-W24 - SERIES				16 - SERIES																																																																																																																																																																																																																																															
<p>W8-1 (LEFT LANE CLOSED) W8-15 (GROOVED PAVEMENT)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>(L) 16.0</td><td>48</td><td>80-9846</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9849</td><td>2</td></tr> <tr><td>(L) 9.0</td><td>36</td><td>80-9901</td><td>1</td></tr> <tr><td>(R) 9.0</td><td>36</td><td>80-9902</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9847</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9848</td><td>2</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9801</td><td>1</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9802</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9802</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9802</td><td>2</td></tr> </table>				(L) 16.0	48	80-9846	2	(R) 16.0	48	80-9849	2	(L) 9.0	36	80-9901	1	(R) 9.0	36	80-9902	1	(L) 16.0	48	80-9847	2	(R) 16.0	48	80-9848	2	(L) 16.0	48	80-9801	1	(R) 16.0	48	80-9802	1	(L) 16.0	48	80-9802	2	(R) 16.0	48	80-9802	2	<p>W13-1P (00 MPH)</p> <p>SUBPLATE VARIABLE SPEED</p> <table border="1"> <tr><th>AREA (SQ. FT.)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th></tr> <tr><td>4.0</td><td>24</td><td>80-9569</td><td>1</td></tr> <tr><td>6.25</td><td>30X12</td><td>80-9567</td><td>1</td></tr> <tr><td>6.25</td><td>30</td><td>80-9567</td><td>1</td></tr> </table>				AREA (SQ. FT.)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	4.0	24	80-9569	1	6.25	30X12	80-9567	1	6.25	30	80-9567	1	<p>W20-1 (ROAD WORK AHEAD) W20-2 (DETOUR 0000 FT) W20-7a (BE PREPARED TO STOP)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>6.25</td><td>30</td><td>80-9602</td><td>1</td></tr> <tr><td>9.0</td><td>36</td><td>80-9711</td><td>1</td></tr> <tr><td>9.0</td><td>36</td><td>80-9603</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9604</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9712</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9607</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9625</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9803</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9804</td><td>2</td></tr> <tr><td>10.5</td><td>42X36</td><td>80-9623</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9903</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9904</td><td>2</td></tr> <tr><td>10.5</td><td>42X36</td><td>80-9621</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9904</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9907</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9907</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9906</td><td>2</td></tr> <tr><td>16.0</td><td>48</td><td>80-9906</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9805</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9806</td><td>2</td></tr> <tr><td>32.0</td><td>96X48</td><td>80-9815</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9834</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9835</td><td>2</td></tr> </table>				6.25	30	80-9602	1	9.0	36	80-9711	1	9.0	36	80-9603	1	16.0	48	80-9604	2	16.0	48	80-9712	2	9.0	36	80-9607	1	16.0	48	80-9625	2	9.0	36	80-9803	1	16.0	48	80-9804	2	10.5	42X36	80-9623	2	9.0	36	80-9903	1	16.0	48	80-9904	2	10.5	42X36	80-9621	2	16.0	48	80-9904	2	16.0	48	80-9907	1	16.0	48	80-9907	2	16.0	48	80-9906	2	16.0	48	80-9906	2	9.0	36	80-9805	1	16.0	48	80-9806	2	32.0	96X48	80-9815	2	9.0	36	80-9834	1	16.0	48	80-9835	2	<p>W21-6 (SURVEY CREW) W21-2 (TURN OFF 2-WAY RADIO AND CELL PHONE) W21-1b (NEW TRAFFIC PATTERN AHEAD) W21-1c (ALL LANES)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>9.0</td><td>36</td><td>80-9607</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9625</td><td>2</td></tr> <tr><td>10.5</td><td>42X36</td><td>80-9623</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9905</td><td>1</td></tr> <tr><td>(L) 9.0</td><td>36</td><td>80-9056</td><td>1</td></tr> <tr><td>(R) 9.0</td><td>36</td><td>80-9059</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9057</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9057</td><td>2</td></tr> <tr><td>4.17</td><td>60X10</td><td>80-9913</td><td>2</td></tr> <tr><td>12.0</td><td>96X18</td><td>80-9914</td><td>2</td></tr> <tr><td>3.33</td><td>48X10</td><td>80-9916</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9933</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9934</td><td>2</td></tr> </table>				9.0	36	80-9607	1	16.0	48	80-9625	2	10.5	42X36	80-9623	2	9.0	36	80-9905	1	(L) 9.0	36	80-9056	1	(R) 9.0	36	80-9059	1	(L) 16.0	48	80-9057	2	(R) 16.0	48	80-9057	2	4.17	60X10	80-9913	2	12.0	96X18	80-9914	2	3.33	48X10	80-9916	2	9.0	36	80-9933	1	16.0	48	80-9934	2	<p>16-1 (CONSTRUCTION AHEAD) 16-2 (CONSTRUCTION AHEAD) 16-3 (CONSTRUCTION AHEAD) 16-5 (CONSTRUCTION AHEAD) 16-E (CONSTRUCTION AHEAD)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>6</td><td>48X18</td><td>80-9931</td><td>2</td></tr> <tr><td>7.5</td><td>60X18</td><td>80-9932</td><td>2</td></tr> <tr><td>7.5</td><td>72X18</td><td>80-9935</td><td>2</td></tr> <tr><td>12.5</td><td>60X30</td><td>80-9928</td><td>2</td></tr> <tr><td>24.0</td><td>72X48</td><td>80-9929</td><td>2</td></tr> <tr><td>5.0</td><td>30X24</td><td>80-1613</td><td>1</td></tr> <tr><td>17.5</td><td>60X42</td><td>80-1608</td><td>2</td></tr> <tr><td>35.0</td><td>84X60</td><td>80-1605</td><td>2</td></tr> <tr><td>10.0</td><td>48X30</td><td>80-1619</td><td>2</td></tr> </table>				6	48X18	80-9931	2	7.5	60X18	80-9932	2	7.5	72X18	80-9935	2	12.5	60X30	80-9928	2	24.0	72X48	80-9929	2	5.0	30X24	80-1613	1	17.5	60X42	80-1608	2	35.0	84X60	80-1605	2	10.0	48X30	80-1619	2
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<p>W9-1 (LEFT LANE CLOSED) W9-3a (ROAD WORK 0000 FT)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>(L) 16.0</td><td>48</td><td>80-9836</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9839</td><td>2</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9837</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9838</td><td>2</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9903</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9904</td><td>2</td></tr> </table>				(L) 16.0	48	80-9836	2	(R) 16.0	48	80-9839	2	(L) 16.0	48	80-9837	2	(R) 16.0	48	80-9838	2	(L) 16.0	48	80-9903	2	(R) 16.0	48	80-9904	2	<p>W16-1 (0 MILE) W16-1P (NEW)</p> <p>VARIABLE MILEAGE</p> <table border="1"> <tr><th>AREA (SQ. FT.)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th></tr> <tr><td>2.5</td><td>30X12</td><td>80-9872</td><td>1</td></tr> <tr><td>4.5</td><td>36X18</td><td>80-9873</td><td>1</td></tr> <tr><td>2.0</td><td>24X12</td><td>80-9870</td><td>1</td></tr> <tr><td>3.75</td><td>30X18</td><td>80-9871</td><td>1</td></tr> <tr><td>2.0</td><td>24X12</td><td>80-9049</td><td>1</td></tr> </table>				AREA (SQ. FT.)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	2.5	30X12	80-9872	1	4.5	36X18	80-9873	1	2.0	24X12	80-9870	1	3.75	30X18	80-9871	1	2.0	24X12	80-9049	1	<p>W20-1 (ROAD WORK 0000 FT) W20-2 (DETOUR 0000 FT) W20-4 (ONE LANE ROAD AHEAD)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>6.25</td><td>30</td><td>80-9602</td><td>1</td></tr> <tr><td>9.0</td><td>36</td><td>80-9603</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9604</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9614</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9615</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9805</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9806</td><td>2</td></tr> <tr><td>32.0</td><td>96X48</td><td>80-9815</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9834</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9835</td><td>2</td></tr> </table>				6.25	30	80-9602	1	9.0	36	80-9603	1	16.0	48	80-9604	2	9.0	36	80-9614	1	16.0	48	80-9615	2	9.0	36	80-9805	1	16.0	48	80-9806	2	32.0	96X48	80-9815	2	9.0	36	80-9834	1	16.0	48	80-9835	2	<p>W21-6 (SURVEY CREW) W21-2 (TURN OFF 2-WAY RADIO AND CELL PHONE) W21-1b (NEW TRAFFIC PATTERN AHEAD) W21-1c (ALL LANES)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>9.0</td><td>36</td><td>80-9607</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9625</td><td>2</td></tr> <tr><td>10.5</td><td>42X36</td><td>80-9623</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9905</td><td>1</td></tr> <tr><td>(L) 9.0</td><td>36</td><td>80-9056</td><td>1</td></tr> <tr><td>(R) 9.0</td><td>36</td><td>80-9059</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9057</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9057</td><td>2</td></tr> <tr><td>4.17</td><td>60X10</td><td>80-9913</td><td>2</td></tr> <tr><td>12.0</td><td>96X18</td><td>80-9914</td><td>2</td></tr> <tr><td>3.33</td><td>48X10</td><td>80-9916</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9933</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9934</td><td>2</td></tr> </table>				9.0	36	80-9607	1	16.0	48	80-9625	2	10.5	42X36	80-9623	2	9.0	36	80-9905	1	(L) 9.0	36	80-9056	1	(R) 9.0	36	80-9059	1	(L) 16.0	48	80-9057	2	(R) 16.0	48	80-9057	2	4.17	60X10	80-9913	2	12.0	96X18	80-9914	2	3.33	48X10	80-9916	2	9.0	36	80-9933	1	16.0	48	80-9934	2	<p>16-1 (CONSTRUCTION AHEAD) 16-2 (CONSTRUCTION AHEAD) 16-3 (CONSTRUCTION AHEAD) 16-5 (CONSTRUCTION AHEAD) 16-E (CONSTRUCTION AHEAD)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>6</td><td>48X18</td><td>80-9931</td><td>2</td></tr> <tr><td>7.5</td><td>60X18</td><td>80-9932</td><td>2</td></tr> <tr><td>7.5</td><td>72X18</td><td>80-9935</td><td>2</td></tr> <tr><td>12.5</td><td>60X30</td><td>80-9928</td><td>2</td></tr> <tr><td>24.0</td><td>72X48</td><td>80-9929</td><td>2</td></tr> <tr><td>5.0</td><td>30X24</td><td>80-1613</td><td>1</td></tr> <tr><td>17.5</td><td>60X42</td><td>80-1608</td><td>2</td></tr> <tr><td>35.0</td><td>84X60</td><td>80-1605</td><td>2</td></tr> <tr><td>10.0</td><td>48X30</td><td>80-1619</td><td>2</td></tr> </table>				6	48X18	80-9931	2	7.5	60X18	80-9932	2	7.5	72X18	80-9935	2	12.5	60X30	80-9928	2	24.0	72X48	80-9929	2	5.0	30X24	80-1613	1	17.5	60X42	80-1608	2	35.0	84X60	80-1605	2	10.0	48X30	80-1619	2																																																												
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<p>W8-1 (BUMP) W8-25 (LEFT SHOULDER CLOSED)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>(1) 9.0</td><td>36</td><td>80-9901</td><td>1</td></tr> <tr><td>(2) 16.0</td><td>48</td><td>80-9902</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9833</td><td>2</td></tr> <tr><td>(R) 9.0</td><td>36</td><td>80-9830</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9832</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9832</td><td>2</td></tr> </table>				(1) 9.0	36	80-9901	1	(2) 16.0	48	80-9902	1	(L) 16.0	48	80-9833	2	(R) 9.0	36	80-9830	1	(L) 16.0	48	80-9832	2	(R) 16.0	48	80-9832	2	<p>W12-1 (USE SHOULDER)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>6.25</td><td>30</td><td>80-9962</td><td>1</td></tr> <tr><td>9.0</td><td>36</td><td>80-9963</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9964</td><td>2</td></tr> </table>				6.25	30	80-9962	1	9.0	36	80-9963	1	16.0	48	80-9964	2	<p>W20-1 (ROAD WORK 0000 FT) W20-2 (DETOUR 0000 FT) W20-4 (ONE LANE ROAD AHEAD)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>6.25</td><td>30</td><td>80-9602</td><td>1</td></tr> <tr><td>9.0</td><td>36</td><td>80-9603</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9604</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9614</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9615</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9805</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9806</td><td>2</td></tr> <tr><td>32.0</td><td>96X48</td><td>80-9815</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9834</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9835</td><td>2</td></tr> </table>				6.25	30	80-9602	1	9.0	36	80-9603	1	16.0	48	80-9604	2	9.0	36	80-9614	1	16.0	48	80-9615	2	9.0	36	80-9805	1	16.0	48	80-9806	2	32.0	96X48	80-9815	2	9.0	36	80-9834	1	16.0	48	80-9835	2	<p>W21-6 (SURVEY CREW) W21-2 (TURN OFF 2-WAY RADIO AND CELL PHONE) W21-1b (NEW TRAFFIC PATTERN AHEAD) W21-1c (ALL LANES)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>9.0</td><td>36</td><td>80-9607</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9625</td><td>2</td></tr> <tr><td>10.5</td><td>42X36</td><td>80-9623</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9905</td><td>1</td></tr> <tr><td>(L) 9.0</td><td>36</td><td>80-9056</td><td>1</td></tr> <tr><td>(R) 9.0</td><td>36</td><td>80-9059</td><td>1</td></tr> <tr><td>(L) 16.0</td><td>48</td><td>80-9057</td><td>2</td></tr> <tr><td>(R) 16.0</td><td>48</td><td>80-9057</td><td>2</td></tr> <tr><td>4.17</td><td>60X10</td><td>80-9913</td><td>2</td></tr> <tr><td>12.0</td><td>96X18</td><td>80-9914</td><td>2</td></tr> <tr><td>3.33</td><td>48X10</td><td>80-9916</td><td>2</td></tr> <tr><td>9.0</td><td>36</td><td>80-9933</td><td>1</td></tr> <tr><td>16.0</td><td>48</td><td>80-9934</td><td>2</td></tr> </table>				9.0	36	80-9607	1	16.0	48	80-9625	2	10.5	42X36	80-9623	2	9.0	36	80-9905	1	(L) 9.0	36	80-9056	1	(R) 9.0	36	80-9059	1	(L) 16.0	48	80-9057	2	(R) 16.0	48	80-9057	2	4.17	60X10	80-9913	2	12.0	96X18	80-9914	2	3.33	48X10	80-9916	2	9.0	36	80-9933	1	16.0	48	80-9934	2	<p>16-1 (CONSTRUCTION AHEAD) 16-2 (CONSTRUCTION AHEAD) 16-3 (CONSTRUCTION AHEAD) 16-5 (CONSTRUCTION AHEAD) 16-E (CONSTRUCTION AHEAD)</p> <p>AREA (SQ. FT.) SIZE (INCHES) CONN. D.O.T. # POSTS</p> <table border="1"> <tr><td>6</td><td>48X18</td><td>80-9931</td><td>2</td></tr> <tr><td>7.5</td><td>60X18</td><td>80-9932</td><td>2</td></tr> <tr><td>7.5</td><td>72X18</td><td>80-9935</td><td>2</td></tr> <tr><td>12.5</td><td>60X30</td><td>80-9928</td><td>2</td></tr> <tr><td>24.0</td><td>72X48</td><td>80-9929</td><td>2</td></tr> <tr><td>5.0</td><td>30X24</td><td>80-1613</td><td>1</td></tr> <tr><td>17.5</td><td>60X42</td><td>80-1608</td><td>2</td></tr> <tr><td>35.0</td><td>84X60</td><td>80-1605</td><td>2</td></tr> <tr><td>10.0</td><td>48X30</td><td>80-1619</td><td>2</td></tr> </table>				6	48X18	80-9931	2	7.5	60X18	80-9932	2	7.5	72X18	80-9935	2	12.5	60X30	80-9928	2	24.0	72X48	80-9929	2	5.0	30X24	80-1613	1	17.5	60X42	80-1608	2	35.0	84X60	80-1605	2	10.0	48X30	80-1619	2																																																																								
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5.0	30X24	80-1613	1																																																																																																																																																																																																																																																												
17.5	60X42	80-1608	2																																																																																																																																																																																																																																																												
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10.0	48X30	80-1619	2																																																																																																																																																																																																																																																												

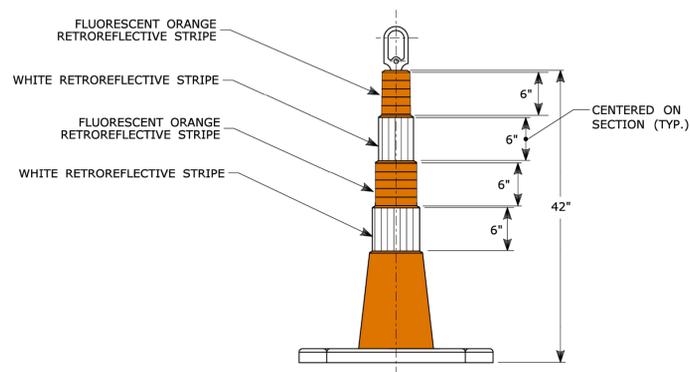


PORTABLE CONSTRUCTION SIGNS

NOTES FOR PORTABLE SIGN SUPPORTS:

- SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- MOUNTING HEIGHT OF SIGNS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 24". SIGNS SHALL BE MOUNTED HIGHER AS NEEDED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- PORTABLE SIGN SUPPORTS SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.
- PORTABLE CONSTRUCTION SIGN SUPPORTS SHOULD NOT BE USED FOR DURATION OF MORE THAN 3 DAYS EXCEPT AS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. SEE STANDARD SHEET TR-1220.01 - "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" FOR SIGN DETAILS.

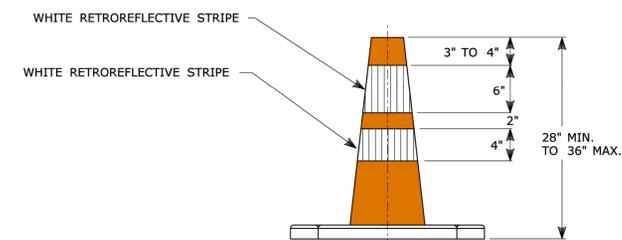
* FOR E5-1 (EXIT SIGNS) USE MIN 48".



42" TRAFFIC CONE

NOTES:

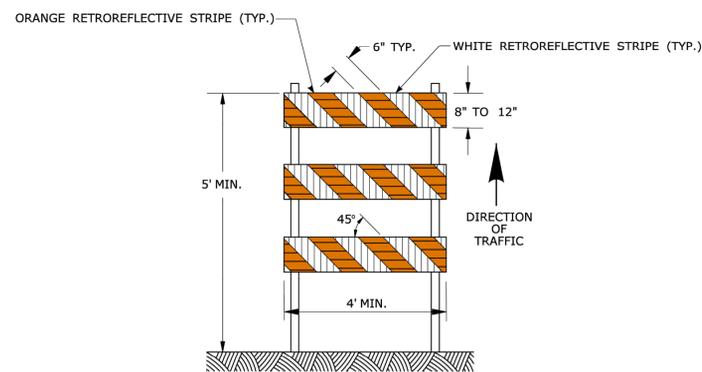
- TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING.
- THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



TRAFFIC CONE

NOTES:

- TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- THE ENTIRE AREA OF WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING.
- THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.

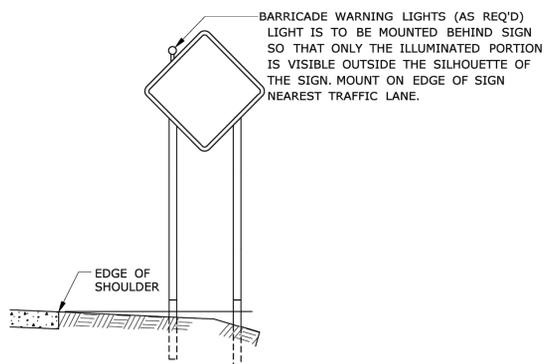


TYPE III BARRICADE

CONSTRUCTION BARRICADES

NOTES:

- CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH AND THE LATEST EDITION OF THE MUTCD.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.
- CORNERS OF BARRICADE RAILS SHALL BE ROUNDED.
- SIGNS INSTALLED ON TYPE III BARRICADES SHALL BE PLACED SO AS TO COVER NO MORE THAN 50 PERCENT OF THE TOP TWO RAILS, OR 33 PERCENT OF THE TOTAL AREA OF THE THREE RAILS.
- CONSTRUCTION BARRICADES SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.



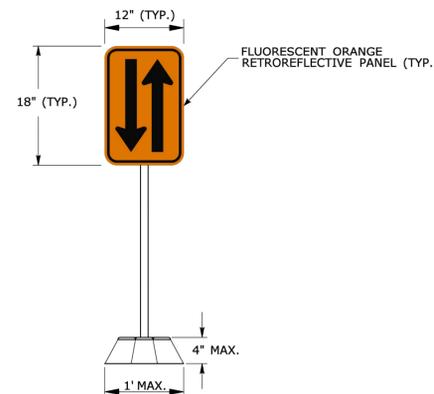
PLACEMENT OF BARRICADE WARNING LIGHTS ON CONSTRUCTION SIGNS

NOTES:

- SUPPORTS SHALL BE METAL SIGN POSTS AND HAVE BREAK-AWAY FEATURES.
- REFER TO STANDARD SHEETS:
TR-1208.01 - "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS."
TR-1208.02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."

GENERAL NOTE:

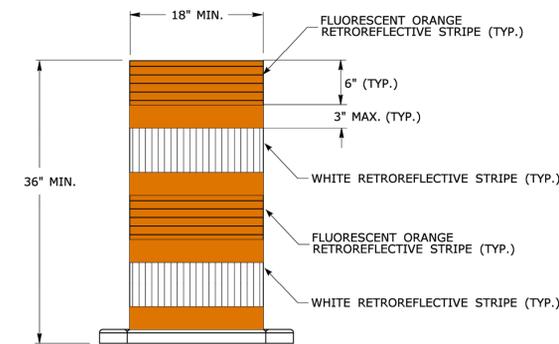
FLEXIBLE SHEETING FOR DRUMS, CONES, & BARRICADES SHALL BE TYPE IV MINIMUM AS APPROVED IN THE QUALIFIED PRODUCTS LIST.



OPPOSING TRAFFIC LANE DIVIDERS (TEMPORARY LANE SEPARATOR)

NOTES:

- THE OPPOSING TRAFFIC LANE DIVIDERS SHALL BE MOUNTED BACK TO BACK ON A FLEXIBLE SUPPORT POST. THE POST SHALL BE MOUNTED TO A BASE.
- THE LONGITUDINAL BASE SHALL HAVE SLOPING SIDES IN ORDER TO FACILITATE CROSSOVER BY EMERGENCY VEHICLES.



TRAFFIC DRUM FRONT VIEW

NOTES:

- TRAFFIC DRUM SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING.
- THE SECTIONS OF DRUMS NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.

SIGNATURE BLOCK:

NOT TO SCALE



CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:

CTDOT TRAFFIC ENGINEERING GUIDE SHEET

TOWN(S):

DRAWING TITLE:

CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

PROJECT NO.:

DRAWING NO.:

TR-GS_14

SHEET NO.:

DESIGNER/DRAFTER: S. DRISCOLL CHECKED BY: Q. BECOTTE