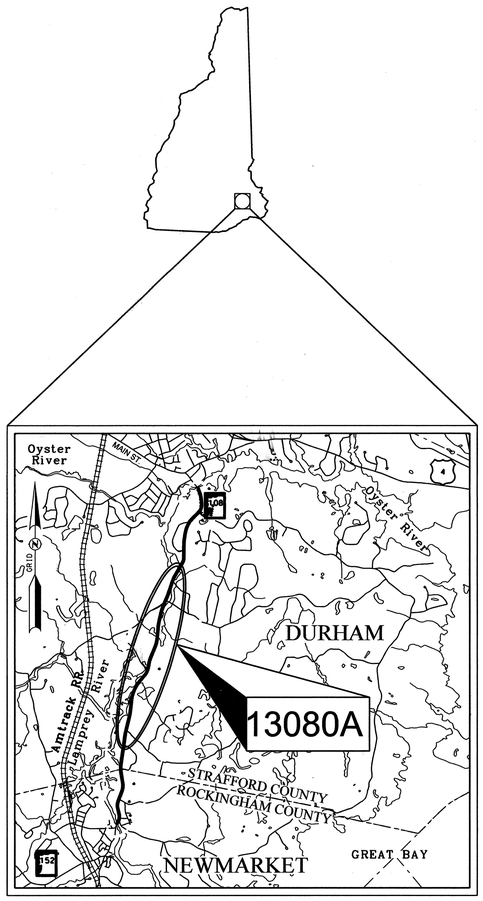
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS
FEDERAL AID PROJECT

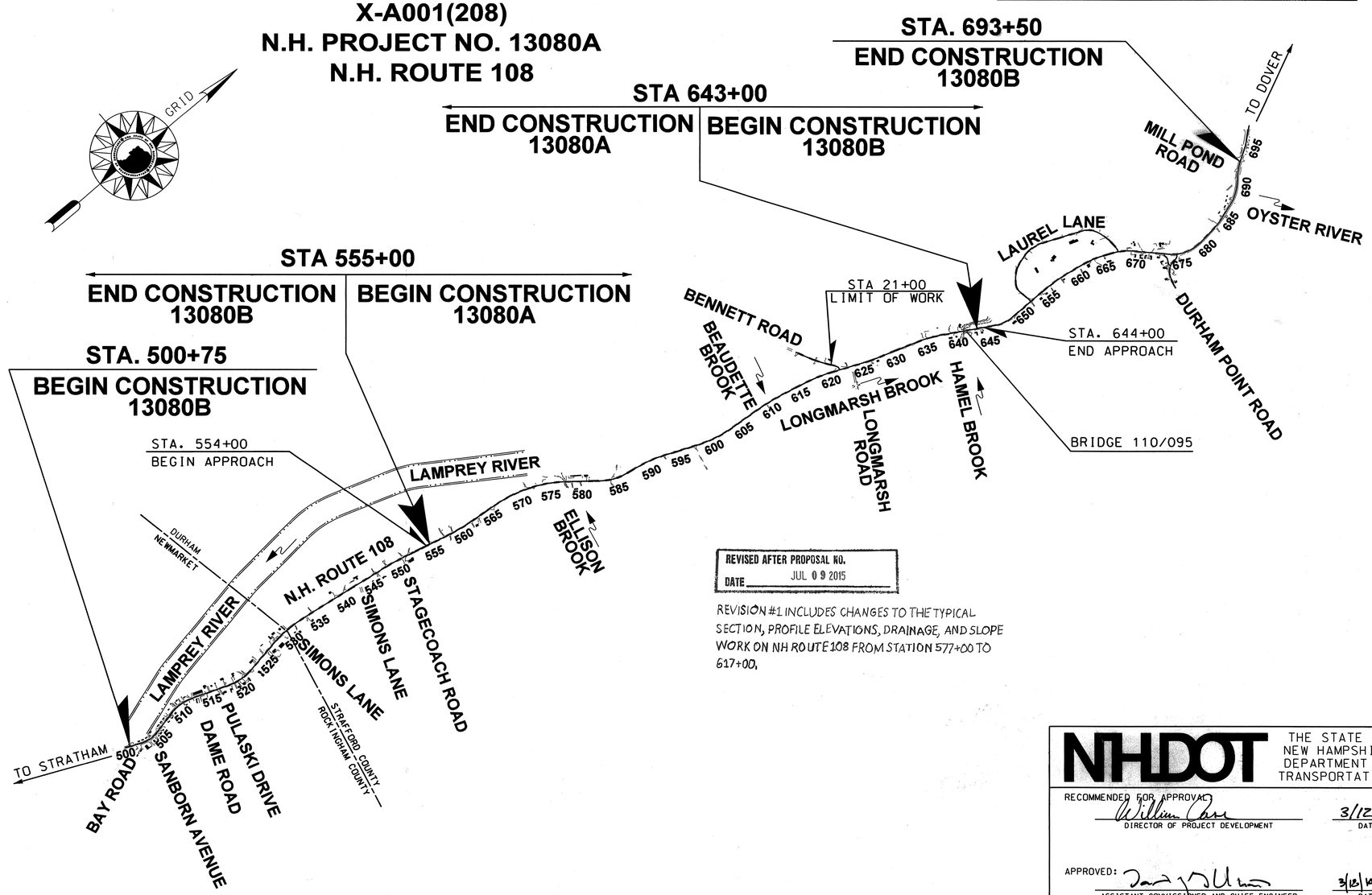
X-A001(208)
N.H. PROJECT NO. 13080A
N.H. ROUTE 108

DESIGN DATA	
AVERAGE DAILY TRAFFIC 20 14	11,000
AVERAGE DAILY TRAFFIC 20 34	13,000
PERCENT OF TRUCKS	7.4%
DESIGN SPEED	30,35,45 MPH
LENGTH OF PROJECT	1.70 MILES



LOCATION MAP

1 1/2 0 1 2 mi.
GRAPHIC SCALE



REVISED AFTER PROPOSAL NO.
DATE JUL 09 2015

REVISION #1 INCLUDES CHANGES TO THE TYPICAL SECTION, PROFILE ELEVATIONS, DRAINAGE, AND SLOPE WORK ON NH ROUTE 108 FROM STATION 577+00 TO 617+00.

TOWNS OF DURHAM & NEWMARKET

COUNTIES OF STRAFFORD AND ROCKINGHAM

SCALE: 1" = 900'

DRAWN BY JP DATE 3/14
CHECKED BY RLP DATE 3/14

STATE OF NEW HAMPSHIRE
ROBERT FAULKNER
No. 9000
LICENSED
PROFESSIONAL ENGINEER

HIGHWAY

PLANS PREPARED BY

CHA
11 King Court • Keene, NH 03431-4648
Main: (603) 357-2445 / www.chacompanies.com

BY: 3-6-14

NHDOT THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

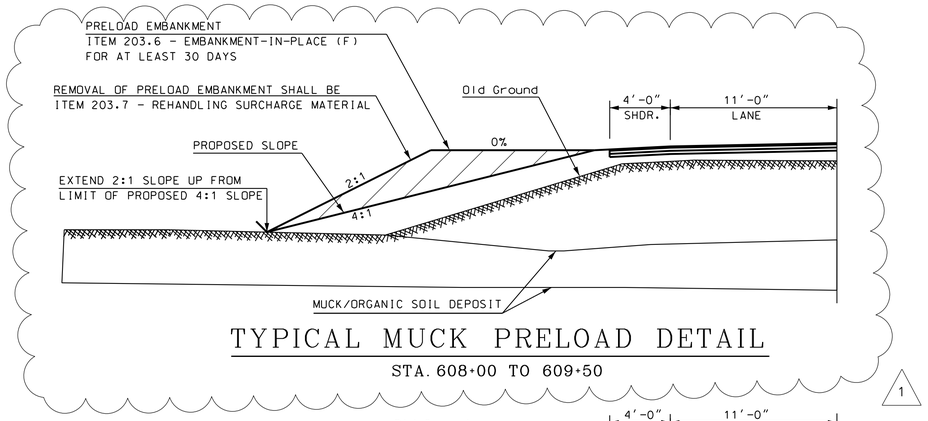
RECOMMENDED FOR APPROVAL:
William Cass
DIRECTOR OF PROJECT DEVELOPMENT — DATE 3/12/14

APPROVED:
ASSISTANT COMMISSIONER AND CHIEF ENGINEER — DATE 3/12/14

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR — DATE

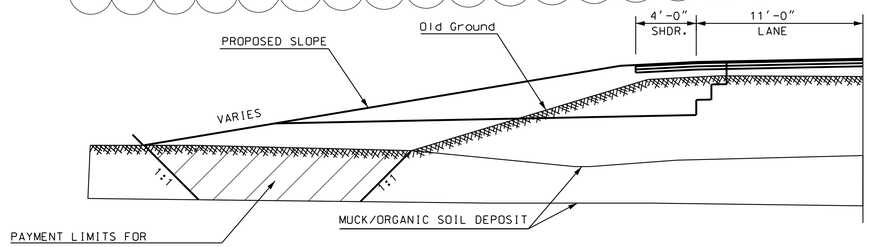
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
X-A001(208)	13080A	1	119



TYPICAL MUCK PRELOAD DETAIL

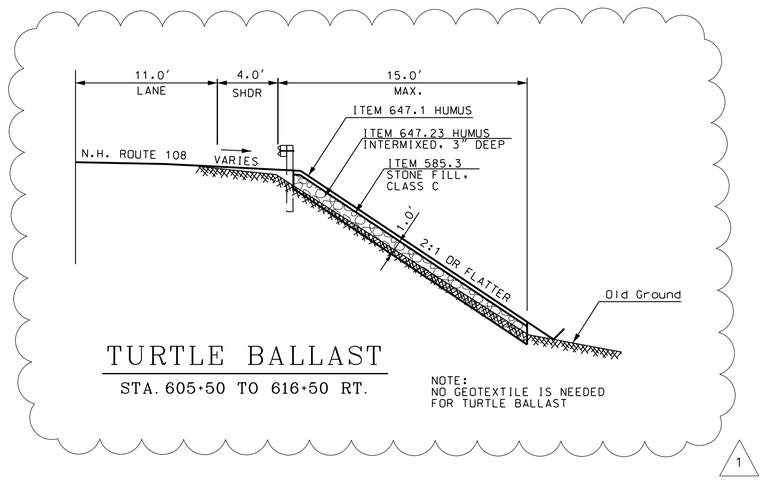
STA. 608+00 TO 609+50

1



TYPICAL MUCK REMOVAL DETAIL

STA. 556+00 TO 558+00



TURTLE BALLAST

STA. 605+50 TO 616+50 RT.

NOTE:
NO GEOTEXTILE IS NEEDED
FOR TURTLE BALLAST

1

CONSTRUCTION SEQUENCING NOTES

A. PLACE A 3/4" SHIM FROM STATION 513+00 TO STATION 685+50 UTILIZING ITEM 411.3 - PLANT MIX SURFACE (AC). PAVER SHIM. THERE IS NO PLAN COVERAGE OR ADDITIONAL DETAILS FOR THIS WORK EFFORT.

B. THE CONSTRUCTION SEQUENCE FOR THE AREAS OF RECLAIM (STA. 555+00 TO 577+00, STA. 617+00 TO 634+50, & STA. 641+50 TO 644+00) WILL BE:

1

1. STEP-BOX WIDEN THE ROADWAY SHOULDERS 9' FROM THE CENTERLINE, BY SEGMENT.

2. PAVE THE SHOULDERS (9' FROM THE CENTERLINE TO THE PROPOSED EDGE OF PAVEMENT) USING 403.11 - HOT BITUMINOUS PAVEMENT, MACHINE METHOD.
   6" NOMINAL:
   1" WEARING COURSE, 0.057 TONS/SY
   2 1/2" BINDER COURSE, 0.142 TONS/SY
   2 1/2" BASE COURSE, 0.142 TONS/SY

3. COLD PLANE THE ENTIRE LENGTH OF PAVEMENT UTILIZING ITEM 417. - COLD PLANING BITUMINOUS SURFACES
   STA. 555+00 TO 577+00 - 1.5" DEPTH
   STA. 617+00 TO 621+50 - 1.5" DEPTH
   STA. 621+50 TO 634+50 - 2.0" DEPTH
   STA. 641+50 TO 644+00 - 2.0" DEPTH

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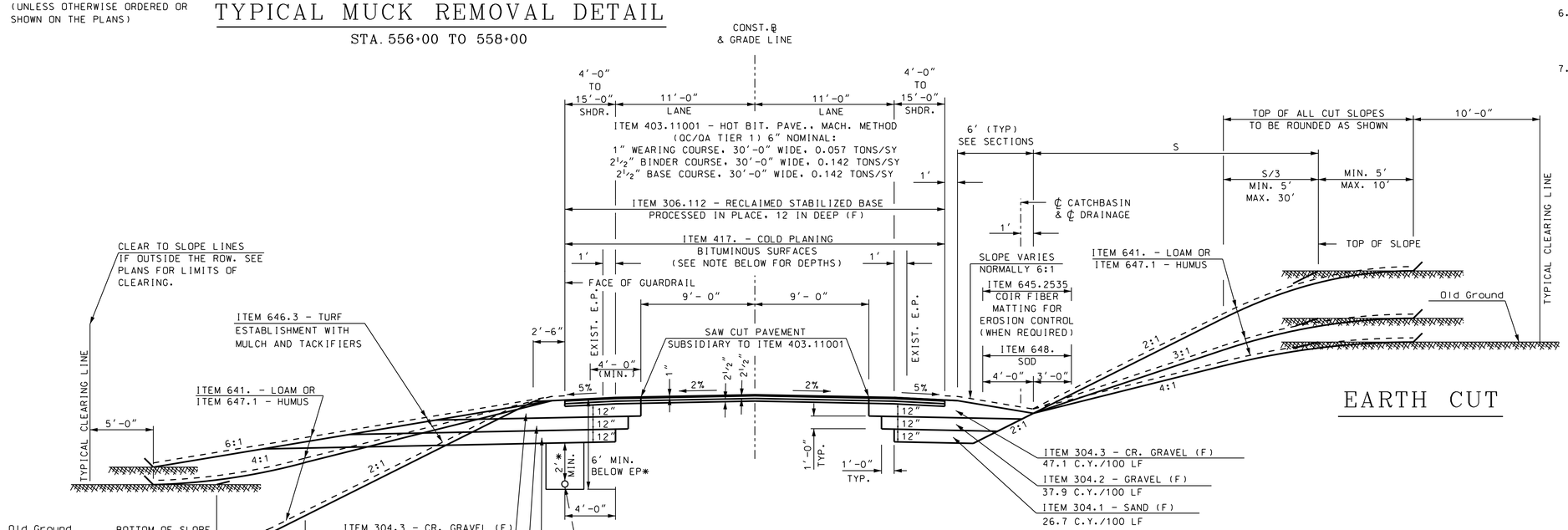
4. RECLAIM THE ENTIRE LENGTH OF PAVEMENT UTILIZING ITEM 306.112 - RECLAIMED STABILIZED BASE PROCESSED IN PLACE, 12 IN DEEP (F)

5. PLACE ITEM 306.36 - STONE FOR RECLAIMED STABILIZED BASE TO A THICKNESS OF 3 INCHES FOR THE ENTIRE LENGTH OF THE ROADWAY.

6. RECLAIM THE ENTIRE WIDTH OF THE ROADWAY UTILIZING ITEM 306.112 - RECLAIMED STABILIZED BASE PROCESSED IN PLACE, 12 IN DEEP (F)

7. PAVE ROADWAY TO DEPTHS SPECIFIED IN THE TYPICAL SECTION UTILIZING ITEM 403.11001 - HOT BITUMINOUS PAVEMENT, MACHINE METHOD (QC/QA TIER 1).



EARTH FILL

EARTH CUT

NOTE:
ITEM 417. - COLD PLANING BITUMINOUS SURFACES
STA. 555+00 TO 577+00 - 1.5" DEPTH
STA. 617+00 TO 634+50 - 2.0" DEPTH
STA. 641+50 TO 644+00 - 2.0" DEPTH
THESE DEPTHS DO NOT INCLUDE THE 3/4" PAVER SHIM DEPTH

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NH ROUTE 108

STA. 555+00 TO 577+00
STA. 617+00 TO 634+50
STA. 641+50 TO 644+00

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GENERAL NOTES

1. NO SLOPE ROUNDING SHALL APPLY IN WETLANDS AREAS.
2. SEE PLANS AND CROSS SECTIONS FOR UNDERDRAIN PLACEMENT AND DEPTHS.
3. USE ITEM 645.44 - TEMPORARY SLOPE STABILIZATION TYPE D (WILDLIFE FRIENDLY) ON ALL SLOPES 3:1 OR STEEPER.
4. CONSTANTS LISTED ARE FOR 2% NORMAL CROWN CROSS SLOPES ONLY.
5. USE ITEM 403.6 - PAVEMENT JOINT ADHESIVE ON ALL LONGITUDINAL JOINTS ON ALL PAVEMENT COURSES.
6. CLEARING IN SOME AREAS HAS BEEN SHOWN TO SLOPE LINE ONLY AND LESS THAN 10', SEE GENERAL PLANS FOR LIMITS OF CLEARING.
7. SHOULDER SELECT MATERIAL CONSTANTS ARE BASED ON A 4' SHOULDER.

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

TYPICAL SECTIONS

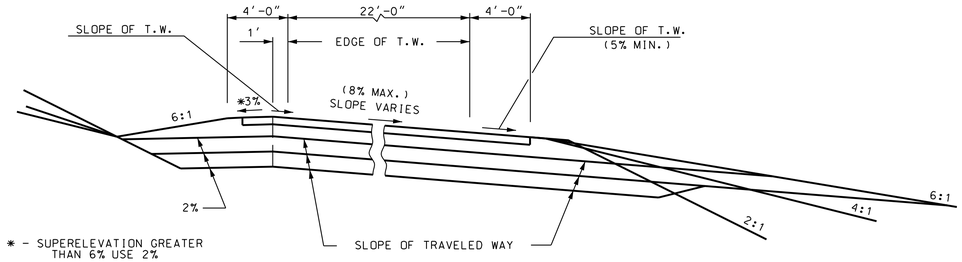
MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Default	13080A_Typical_RAP.dgn	13080A	5A	119

NUMBER	DATE	STATION	DESCRIPTION
1	7/9/2015	575+50	PROFILE REVISION

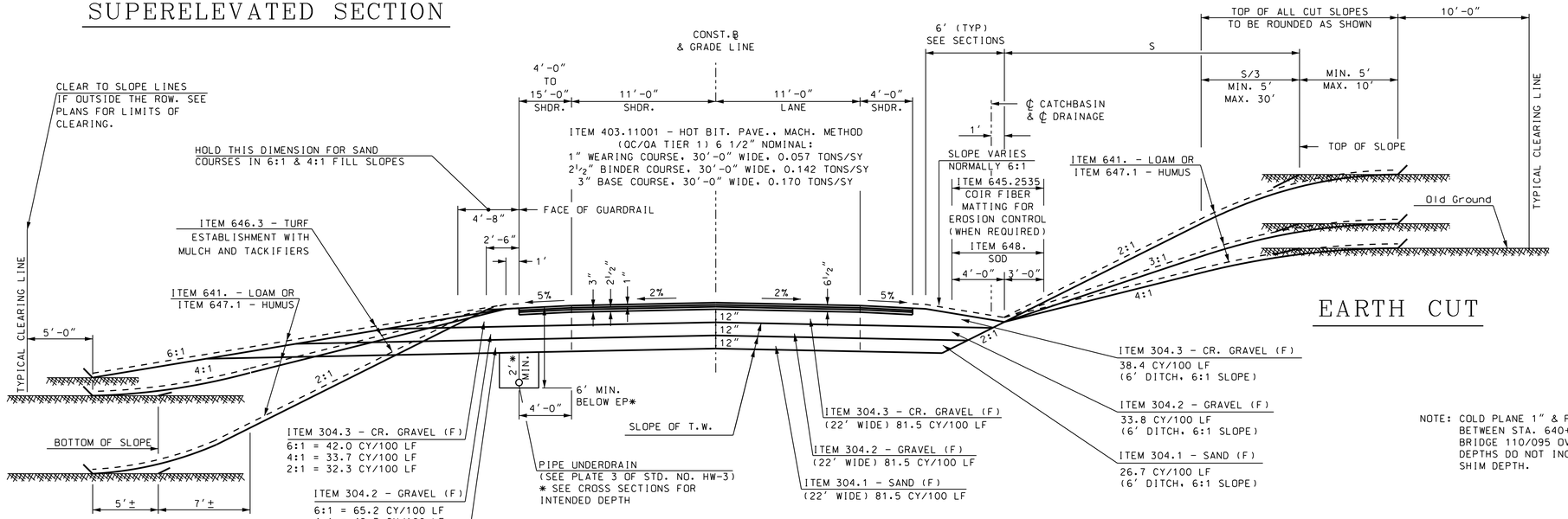
REVISIONS AFTER PROPOSAL

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

CHA PROJ. NO. 24344
PLOTTED DATED 7/9/2015
FILE NAME • V:\PROJECTS\NHN\24344\CADD_MSTN\PRJ\CUT SHEETS\TYPICALS\13080A_TYPICAL_RAP.DGN



SUPERELEVATED SECTION



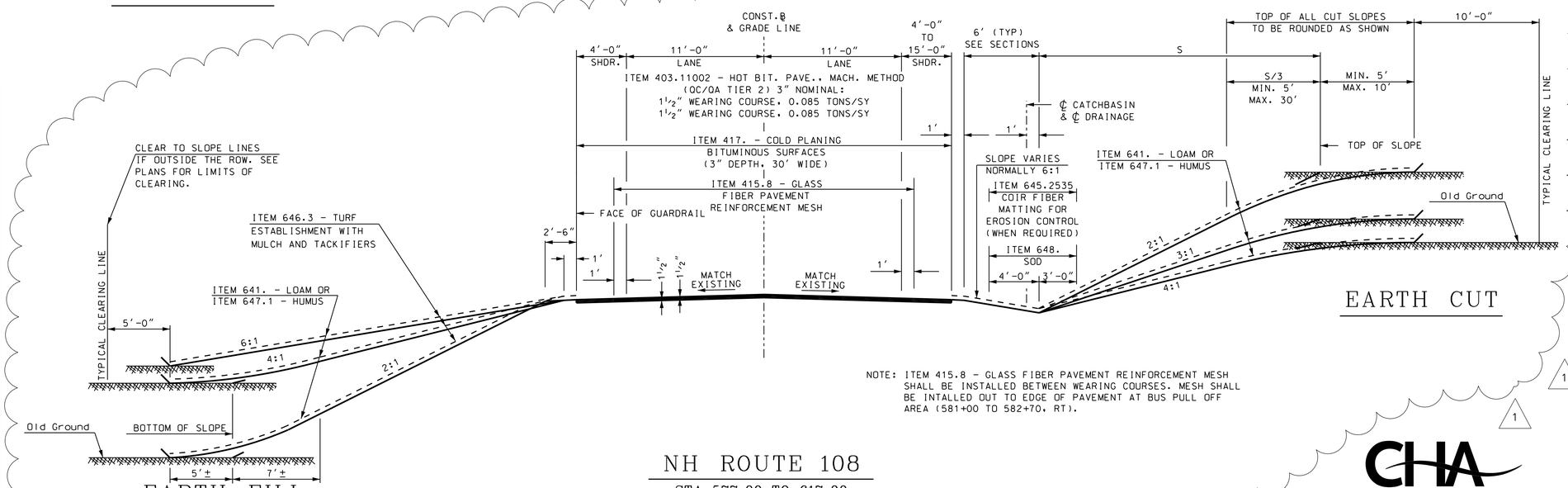
EARTH FILL

NH ROUTE 108

STA. 634+50 TO 641+50

EARTH CUT

NOTE: COLD PLANE 1" & PLACE 1" WEARING COURSE BETWEEN STA. 640+80 TO STA. 641+22 OVER BRIDGE 110/095 OVER HAMEL BROOK. THESE DEPTHS DO NOT INCLUDE THE ¾" PAVER SHIM DEPTH.



EARTH FILL

NH ROUTE 108

STA. 577+00 TO 617+00

EARTH CUT

NOTE: ITEM 415.8 - GLASS FIBER PAVEMENT REINFORCEMENT MESH SHALL BE INSTALLED BETWEEN WEARING COURSES. MESH SHALL BE INTALLED OUT TO EDGE OF PAVEMENT AT BUS PULL OFF AREA (581+00 TO 582+70, RT).

GENERAL NOTES

1. NO SLOPE ROUNDING SHALL APPLY IN WETLANDS AREAS.
2. SEE PLANS AND CROSS SECTIONS FOR UNDERDRAIN PLACEMENT AND DEPTHS.
3. USE ITEM 645.44 - TEMPORARY SLOPE STABILIZATION TYPE D (WILDLIFE FRIENDLY) ON ALL SLOPES 3:1 OR STEEPER.
4. CONSTANTS LISTED ARE FOR 2% NORMAL CROWN CROSS SLOPES ONLY.
5. USE ITEM 403.6 - PAVEMENT JOINT ADHESIVE ON ALL LONGITUDINAL JOINTS ON ALL PAVEMENT COURSES.
6. CLEARING IN SOME AREAS HAS BEEN SHOWN TO SLOPE LINE ONLY AND LESS THAN 10', SEE GENERAL PLANS FOR LIMITS OF CLEARING.
7. SHOULDER SELECT MATERIAL CONSTANTS ARE BASED ON A 4' SHOULDER.
8. SEE CROSS SECTIONS FOR SLOPE AND SLOPE ROUNDING LIMITS.

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DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

TYPICAL SECTIONS

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Default	13080A_Typical_RAP.dgn	13080A	6A	119

NUMBER	DATE	DESCRIPTION
1	7/9/2015	PROFILE REVISION

REVISIONS AFTER PROPOSAL

STATION	STATION
618+50	575+50

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME - V:\PROJECTS\KNHN24344\CADD_MSTN\PRA\CUT SHEETS\TYPICALS\13080A_TYPICAL_RAP.DGN

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

CLEARING AND GRUBBING

ITEM NO.		201.1	201.21	201.22
THE AREAS LISTED BELOW ARE SHOWN ON THE PLANS BY LETTER ID's		CLEARING AND GRUBBING (F)	REMOVING SMALL TREES	REMOVING LARGE TREES
LOCATION	DESIGNATED AREAS	ACRES	EA	EA
N.H. ROUTE 108				
STA. 555+40.3 TO 557+21.6, LT	A	0.10		
STA. 556+32.8 TO 558+12.5, RT	B	0.06		
STA. 557+49.2 TO 558+82.8, LT	C	0.05		
STA. 559+11.5 TO 561+12.3, LT	D	0.09		
STA. 558+29.1 TO 561+79.5, RT	E	0.20		
STA. 561+43.4 TO 562+71.4, LT	F	0.04		
STA. 562+85.7 TO 565+41.9, LT	G	0.09		
STA. 566+11.6 TO 568+40.0, LT	H	0.04		
STA. 566+50.0 TO 572+50.9, RT	I	0.19		
STA. 572+09.5 TO 572+57.2, LT	J	0.01		
STA. 572+82.8 TO 573+13.2, LT	K	0.01		
STA. 572+63.3 TO 574+82.7, RT	L	0.04		
STA. 575+80.9 TO 576+50.8, LT	M	0.01		
STA. 580+67.8 TO 580+93.2, RT	N	0.01		
STA. 581+05.4 TO 581+44.0, LT	O	0.03		
STA. 586+77.4 TO 687+21.1, LT	P	0.03		
STA. 586+80.9 TO 590+46.3, RT	Q	0.09		
STA. 588+68.0 TO 596+15.4, LT	R	0.17		
STA. 592+43.8 TO 592+81.6, RT	S	0.01		
STA. 598+04.2 TO 598+52.4, LT	U	0.01		
STA. 598+85.4 TO 599+70.1, LT	V	0.02		
STA. 600+17.7 TO 600+70.0, LT	W	0.01		
STA. 600+90.5 TO 605+00.0, LT	X	0.11		
STA. 603+06.3 TO 604+06.9, RT	Y	0.01		
STA. 605+45.9 TO 609+28.0, RT	Z	0.09		
STA. 605+46.6 TO 610+68.2 ,LT	AA	0.05		
STA. 610+68.2 TO 619+80.8, LT	AB	0.18		
STA. 614+58.1 TO 614+91.3, RT	AC	0.02		
STA. 617+40.4 TO 617+63.6, RT	AD	0.01		
STA. 621+14.3 TO 621+25.7, LT	AE	0.01		
STA. 622+52.6 TO 623+38.1, RT	AF	0.07		
STA. 623+01.2 TO 628+62.0, LT	AG	0.19		
STA. 629+02.5 TO 632+00.0, RT	AH	0.09		
STA. 632+00.0 TO 637+34.3, RT	AI	0.18		
STA. 632+38.0 TO 634+26.5, LT	AJ	0.08		
STA. 638+42.7 TO 638+62.6, LT	AK	0.01		
STA. 641+71.0 TO 642+50.0, LT	AL	0.06		
STA. 570+25.1, 29.5' LT			1	
STA. 572+33.3, 28.4' LT			1	
STA. 572+68.2, 27.4' LT			1	
STA. 572+76.2, 29.3' LT			1	
STA. 573+06.7, 28.7' LT			1	
STA. 573+03.9, 41.9' LT			1	
STA. 573+88.8, 39.8' LT			1	
STA. 573+96.4, 42.2' LT			1	
STA. 574+17.5, 38.1' LT			1	
STA. 574+82.3, 21.6' RT				1
STA. 574+84.7, 24.7' RT				1
STA. 575+17.4, 18.6' RT				1
STA. 575+40.5, 21.6' RT				1
STA. 642+58.0, 24.6' RT			1	
SUBTOTAL		**2.5**	**10**	**4**
ROUNDING		0.0	0	0
TOTAL		**2.5**	**10**	**4**

EARTHWORK SUMMARY

LINE	DESCRIPTION		CUBIC YARD NH ROUTE 108	BENNETT ROAD	SUBTOTAL	ROUNDING	TOTAL	
1	COMMON EXCAVATION IN SECTIONS	(Include Boulders)	16057.9 1	119.5	16177.4 1			
2	TOPSOIL REMOVED BENEATH FILL SECTIONS	(No Boulders)	2141.9	7.2	2149.1			
3	DRIVE AND APPROACH EXCAVATION	(Include Boulders)	612.7		612.7			
4	COMMON EXCAVATION FROM DRAINAGE ***		13.8		13.8			
5	BOULDERS IN SECTIONS (DEDUCT 5% from Common Excavation)		802.9 1	6.0	808.9 1			
6	BOULDERS IN DRIVE SECTIONS (DEDUCT 5% from Drive Excavation above)		30.6		30.6			
7	**COMMON EXCAVATION FOR ESTIMATE**	**ITEM 203.1**	**17992.8 1**	**120.6**	**18113.5 1**	**36.5**	**18150**	1
8	MUCK EXCAVATION IN SECTIONS		1118.7		1118.7			
9	MUCK EXCAVATION FOR DRAINAGE		103.4		103.4			
10	**MUCK EXCAVATION FOR ESTIMATE**	**ITEM 203.4**	**1222.1 1**	**0.0**	**1222.1 1**	**2.9**	**1225**	1
9	ROCK EXCAVATION - IN SECTIONS		4026.6		4026.6			
10	ROCK EXCAVATION FROM DRAINAGE ***		4.8		4.8			
12	BOULDERS IN SECTIONS (5%)		802.9 1	6.0	808.9 1			
13	BOULDERS IN DRIVE SECTIONS (Deduct 5% from Drive Excavation above)		30.6		30.6			
14	**ROCK EXCAVATION FOR ESTIMATE**	**ITEM 203.2**	**4864.9 1**	**6.0**	**4870.9 1**	**4.1**	**4875**	1
15	BOULDERS IN STRUCTURES ***		439.9		439.9			
16	**ROCK STRUCTURE EXCAVATION FOR ESTIMATE**	**ITEM 206.2**	**439.9 1**	**0.0**	**439.9 1**	**0.1**	**440**	1
17	SECTIONS FILL		8757.5 1	7.1	8764.6			
18	TOPSOIL REMOVED BENEATH FILL SECTIONS		2141.9	7.2	2149.1 1			
19	MUCK REPLACEMENT IN SECTIONS		1118.7		1118.7			
21	DRIVE AND APPROACH EXCAVATION	(Include Boulders)	612.7		612.7 1			
22	**EMBANKMENT-IN-PLACE (F) FOR ESTIMATE**	**ITEM 203.6**	**12630.8 1**	**14.3**	**12645.1**		**12645**	1
	REHANDLING SURCHARGE MATERIAL (SEE ITEM 203.7)		338.8		338.8			
	REHANDLING SURCHARGE MATERIAL FOR ESTIMATE	**ITEM 203.7**	**338.8 1**	**0.0**	**338.8 1**	**1.2 1**	**340**	1

***FROM DRAINAGE SUMMARY SHEET
LINE 7 ADD 1 THRU 4 DEDUCT LINE 5 & 6
(No Boulders) NO % CALCULATED FOR BOULDERS
(Include Boulders) 5% DEDUCTED FOR BOULDERS

FENCING AND STONE WALL

ITEM NUMBER	202.8	572.1	572.2	607.5540	607.9140	607.9150	607.9756	607.9830	670.95
DESCRIPTION	REMOVAL OF FENCE	RECONSTRUCTING STONE WALL ONE STONE WIDE	RECONSTRUCTING STONE WALL MULTIPLE STONES WIDE	WOOD FENCE PICKET, 4' HIGH	RESETTING WOVEN WIRE FENCE, 4' HIGH	RESETTING WOVEN WIRE FENCE, 5' HIGH	RESETTING WOOD FENCE, 5'6" HIGH	RESETTING MISCELLANEOUS FENCE TYPES (IRON, BARBED WIRE, ETC.), 3' HIGH	TEMPORARY SAFETY FENCE
UNIT	LF	LF	LF	LF	LF	LF	LF	LF	LF
LOCATION									
NH ROUTE 108									7000.0
STA. 556+22.1, 32.5', RT. TO 557+10.3, 31.6', RT.							88.2		
STA. 563+45.5, 35.2', LT. TO 566+05.9, 44.3', LT.					264.1				
STA. 568+15.8, 44.2', RT. TO 572+50.0, 33.5', RT.	446.8								
STA. 572+63.3, 33.5', RT. TO 577+32.9, 62.4', RT.	486.3								
STA. 573+08.3, 28.0', LT. TO 574+70.4, 42.3', LT.						121.3			
STA. 586+90.0, 47.1', RT. TO 590+26.2, 28.7', RT.	334.3								
STA. 604+16.0, 28.6', LT. TO 605+46.5, 32.3', LT.	130.3								
STA. 608+35.8, 44.0', LT. TO 608+52.2, 44.1', LT.	16.4								
STA. 618+00.0, 34.8', LT. TO 619+15.0, 32.4', LT.								115.0	
STA. 639+52.6, 29.4', RT. TO 640+65.8, 30.2', RT.				112.8					
STA. 617+32.4, 36.3', LT. TO 619+05.7, 30.8', LT.		176.4							
STA. 627+15.5, 23.8', LT. TO 628+61.0, 36.70, LT.		146.0							
STA. 632+23.4, 33.9', LT. TO 632+77.1, 31.4', LT.		53.7							
STA. 633+19.1, 31.8', LT. TO 634+23.0, 42.0', LT.			114.4						
STA. 632+03, 29.2', RT. TO 637+53.9, 23.1', RT.		547.0							
SUBTOTAL	**1414.1**	**923.1**	**114.4**	**112.8**	**264.1**	**121.3**	**88.2**	**115.0**	**7000.0**
ROUNDING	5.9	1.9	0.6	2.2	5.9	3.7	1.8	5.0	100.0
TOTAL	**1420**	**925**	**115**	**115**	**270**	**125**	**90**	**120**	**7100**

NUMBER	DATE	DESCRIPTION
1	7/9/2015	PROFILE REVISION

REVISIONS AFTER PROPOSAL

	STATION	DATE
STATION	618+50	
STATION	575+50	

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080A_QTY.DGN

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STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

QUANTITY SUMMARY SHEET
1 OF 4

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	8A	119

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

SURFACING MATERIALS

ITEM NO.	209.1	304.1	304.2	304.3	304.32	304.35	306.112	306.36	403.11	403.11001	403.11002	403.12	403.4	403.6	403.99	411.3	415.8	417.	628.2
DESCRIPTION	GRANULAR BACKFILL	SAND (F)	GRAVEL (F)	CRUSHED GRAVEL (F)	CRUSHED GRAVEL FOR SHOULDER LEVELING	CRUSHED GRAVEL FOR DRIVES	RECLAIMED STABILIZED BASE PROCESSED IN PLACE, 12 IN DEEP (F)	STONE FOR RECLAIMED STABILIZED BASE	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	HOT BITUMINOUS PAVEMENT, MACHINE METHOD (QC/QA TIER 1)	HOT BITUMINOUS PAVEMENT, MACHINE METHOD (QC/QA TIER 2)	HOT BITUMINOUS PAVEMENT, HAND METHOD	MATERIAL TRANSFER VEHICLE (MTV)	PAVEMENT JOINT ADHESIVE	TEMPORARY BITUMINOUS PAVEMENT	PLANT MIX SURFACE TREATMENT (AC), PAVER SHIM	GLASS FIBER PAVEMENT REINFORCEMENT MESH	COLD PLANING BITUMINOUS SURFACES	SAWED BITUMINOUS PAVEMENT
UNIT	CY	CY	CY	CY	TON	CY	SY	TON	TON	TON	TON	TON	TON	LF	TON	TON	SY	SY	LF
LOCATION		1	1	1			1	1	1	1	1		1	1			1		1
NH ROUTE 108	189.3	4355	5092	5621		649.2	15568	2490.9	2417.5	6174.2	2290.6	209.5	10882.3	23000.0			10864.2	29042.0	565.6
BENNETT ROAD			144	71						76.3			76.3	450.0				70.8	23.4
LONGMARSH ROAD										19.6			19.6	150.0				87.7	24.1
DRAINAGE MUCK REMOVAL	126.2																		
3/4" PAVEMENT SHIM					1917.0											2733.0		225.0	
DRAINAGE TRENCH PATCH														1	109.6				
SUBTOTAL	315.5	4355	5236	5692	1917.0	649.2	15568	2490.9	2417.5	6270.1	2290.6	209.5	10978.2	23600.0	109.6	2733.0	10864.2	29425.5	613.1
ROUNDING	4.5				33.0	0.8		9.1	2.5	29.9	9.4	0.5	41.8	400.0	0.4	67.0	35.8	74.5	1.9
TOTAL	320	4355	5236	5692	1950	650	15568	2500	2420	6300	2300	210	11020	24000	110	2800	10900	29500	615
		1	1	1			1	1	1	1	1		1	1	1		1		1

GUARDRAIL AND CONCRETE BARRIER

ITEM NO.		202.7	203.5554	203.55549	203.5555	203.55559	606.1254	606.1255	606.127	606.1285	606.141	606.18001	606.84	
DESCRIPTION	GUARDRAIL I.D. NO.	REMOVAL OF GUARDRAIL	GUARDRAIL 50' EAGRT PLATFORM	GUARDRAIL 50' EAGRT OFFSET PLATFORM	GUARDRAIL 25' EAGRT PLATFORM	GUARDRAIL 25' EAGRT OFFSET PLATFORM	BEAM GUARDRAIL (TERM. UNIT TYPE EAGRT 50 FT.) (STEEL POST)	BEAM GUARDRAIL (TERM. UNIT TYPE EAGRT 25 FT.) (STEEL POST)	BEAM GUARDRAIL (TERMINAL UNIT TYPE G-2) (STEEL POST)	BEAM GUARDRAIL (BRIDGE APPROACH UNIT)	BEAM GUARDRAIL (CURVED W/CRT POSTS)	31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)	ANCHOR FOR CURVED GUARDRAIL W/CRT POSTS	REMARKS
UNIT		LF	U	U	U	U	U	U	U	U	LF	LF	U	
LOCATION														
N.H. ROUTE 108														
STA. 555+92.4,21.3' TO 557+27.7,21.0', LT	R1	135.5												
STA. 558+92.1,50.3' TO 562+47.5,28.7', LT	1	216.0		1.0			1.0				37.5	300.0	1.0	
STA. 562+90.4,23.8' TO 571+33.7,39.9', LT	2	785.4		1.0			1.0				25.0	775.0	1.0	
STA. 575+96.6,18.7' TO 577+50.0,35.0', LT	3			1.0			1.0		1.0			112.5		
STA. 575+13.8,17.7' TO 578+01.3,22.2', RT	4		1.0	1.0			2.0					187.5		
STA. 584+87.7,52.5' TO 590+02.9,17.7', LT	5			1.0			1.0				37.5	462.5	1.0	
STA. 598+30.2,17.7' TO 604+80.2,17.7', LT	6			2.0			2.0					550.0		
STA. 607+01.4,17.7' TO 619+01.4,17.7', RT	7			2.0			2.0					1100.0		
STA. 608+06.8,17.7' TO 616+56.8,17.7', LT	8			2.0			2.0					750.0		
STA. 628+01.3,16.0' TO 632+26.3,16.0', RT	9	241.5				2.0		2.0				375.0		
STA. 640+34.8,22.9' TO 640+84.8,21.6', LT	10	18.0				1.0		1.0		1.0		12.5		
STA. 641+21.7,21.5' TO 642+96.7,22.5', LT	11	69.2				1.0		1.0		1.0		150.0		
STA. 639+80.7,20.0' TO 640+80.7,19.0', RT	12	19.1			1.0			1.0		1.0		50.0		
STA. 641+17.7,18.6' TO 641+92.7,19.3', RT	13	69.0				1.0		1.0		1.0		25.0		
SUBTOTAL		1553.7	1.0	11.0	1.0	5.0	12.0	6.0	1.0	4.0	100.0	4850.0	3.0	
ROUNDING		46.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	
TOTAL		1600	1	11	1	5	12	6	1	4	100	4875	3	

INCIDENTAL ITEMS

ITEM NO.	ITEM	UNIT	QUANTITY
206.19	COMMON STRUCTURE EXCAVATION EXPLORATORY	CY	100
211.11	VIBRATION MONITORING SERVICES	HR	150
214.	FINE GRADING	U	1
214.3	FINE GRADING EARTH BERMS IN ROCKCUTS	LF	750
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	25000
618.7	FLAGGERS	HR	3800
619.1	MAINTENANCE OF TRAFFIC	U	1
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	U	2
619.279	AUTOMATED TRAILER MOUNTED SPEED LIMIT SIGNS	U	2
621.2	RETROREFLECTIVE BEAM GUARDRAIL DELINEATOR	EA	75
621.31	SINGLE DELINEATOR WITH POST	EA	150
645.7	STORMWATER POLLUTION PREVENTION PLAN	U	1
645.71	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	HR	275
670.066	MAILBOX SUPPORT ASSEMBLIES	EA	6
692.	MOBILIZATION	U	1
697.11	INVASIVE SPECIES CONTROL AND MANAGEMENT PLAN	U	1
697.41	CRITICAL PATH METHOD (CPM) ELECTRONIC SCHEDULE	U	1
698.12	FIELD OFFICE TYPE B	MON	14
698.2	PHYSICAL TESTING LABORATORY	MON	12
699.	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	$	35000
1010.15	FUEL ADJUSTMENT	$	40000
1010.2	ASPHALT CEMENT ADJUSTMENT	$	50000
1010.3	QUALITY CONTROL QUALITY ASSURANCE (QA/QC) ASPHALT	$	32000 1

SIDEWALK ITEMS

ITEM NO.	209.4	608.26	
DESCRIPTION	GRANULAR BACKFILL (GRAV)	6" CONCRETE SIDEWALK (F)	COMMENTS
UNIT	CY	SY	
LOCATION			
RTE 108			
STA. 578+00 TO 579+20, LT (ISLAND)	13.2	80.0	
SUBTOTAL	13.2	80.0	
ROUNDING	0.8	0.0	
TOTAL	14	80	

REVISIONS AFTER PROPOSAL

STATION	DESCRIPTION
618+50	PROFILE REVISION

STATION	DATE
575+50	7/9/2015

NUMBER	DATE
1	

PLOTTED DATED 7/9/2015

CHA PROJ. NO. 24344

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		

FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRA\CUT SHEETS\13080A_QTY.DGN

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STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

QUANTITY SUMMARY SHEET
2 OF 4

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	9A	119

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

ENVIRONMENTAL PROTECTION AND EROSION CONTROL

ITEM NO.	585.2	585.3	593.221	593.321	645.121	645.2535	645.3	645.482	645.512	645.531	647.23	648.
DESCRIPTION	STONE FILL, CLASS B	STONE FILL, CLASS C	GEOTEXTILE; SEPARATION CL. 2, NON-WOVEN	GEOTEXTILE; STABILIZATION CL. 2, NON-WOVEN	TEMPORARY MULCH WITH TACKIFIERS	COIR FIBER MATTING FOR EROSION CONTROL	EROSION STONE	STUMP GRINDINGS FOR TEMPORARY EROSION CONTROL	COMPOST SOCK FOR PERIMETER BERM	SILT FENCE	HUMUS, INTERMIXED, 3" DEEP	SOD
UNIT	CY	CY	SY	SY	SY	SY	TON	CY	LF	LF	CY	SY
LOCATION												
NH ROUTE 108	436.4	657.5		654.6	8621.7 (1)	2733.0	2046.0	307.1	16234.0	5411.3	165.0	2533.0
DRAINAGE MUCK REMOVAL			268.8									
FROM DRAINAGE QUANTITIES		180.9 (1)										
SUBTOTAL	436.4	838.4	268.8	654.6	8621.7	2733.0	2046.0	307.1	16234.0	5411.3	165.0	2533.0
ROUNDING	3.6	11.6	1.2	5.4	28.3	17.0	4.0	2.9	16.0	13.7	5.0	17.0
TOTAL	440	850 (1)	270	660	8650 (1)	2750	2050	310	16250	5425	170	2550

PAVEMENT MARKINGS

ITEM NO.	632.0104	632.3118	632.911
DESCRIPTION	RETROREFLECTIVE PAINT PAVEMENT MARKING 4" LINE	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 18" LINE	OBLITERATE PAVE. MARKING LINE, 12" WIDE & UNDER
UNIT	LF	LF	LF
LOCATION			
NH ROUTE 108	79607.0		
BENNETT ROAD	206.0	101.6	
LONGMARSH ROAD	90.0	52.4	
TCP	88000.0		2000.0
3/4" PAVER SHIM	146000.0		
SUBTOTAL	313903.0	154.0	2000.0
ROUNDING	97.0	6.0	0.0
TOTAL	314000	160	2000

ENVIRONMENTAL PROTECTION AND TEMPORARY EROSION CONTROL

ITEM NO.	ITEM	UNIT	QUANTITY
503.101	WATER DIVERSION STRUCTURES	U	1
503.102	WATER DIVERSION STRUCTURES	U	1
503.103	WATER DIVERSION STRUCTURES	U	1
503.104	WATER DIVERSION STRUCTURES	U	1
503.105	WATER DIVERSION STRUCTURES	U	1
503.106	WATER DIVERSION STRUCTURES	U	1
503.107	WATER DIVERSION STRUCTURES	U	1
503.108	WATER DIVERSION STRUCTURES	U	1
503.201	COFFERDAMS	U	1
503.202	COFFERDAMS	U	1
645.0001	TURBIDITY BARRIER	LF	400
645.81	STORMWATER REMOVAL - TRUCKING	HR	150

CURBING

ITEM NO.			609.01123	609.01183	609.811	
DESCRIPTION	MARK NUMBER	RADIUS	STRAIGHT GRANITE CURB, 12" HIGH, W/ 3" X 3" MOUNTABLE BEVEL EDGE	STRAIGHT GRANITE CURB, 18" HIGH, W/ 3" X 3" MOUNTABLE BEVEL EDGE	BITUMINOUS CURB, TYPE B (4" REVEAL)	REMARKS
UNIT		FT	LF	LF	LF	
LOCATION						
N.H. ROUTE 108						
STA. 559+03.5, 15.0' TO 560+65.0, 15.0', LT	B-1				161.5	
STA. 560+65.0, 15.0' TO 561+75.0, 26.0', LT	B-2				109.9	
STA. 561+75.0, 26.0' TO 562+35.0, 26.0', LT	B-3				60.0	
STA. 562+35.0, 26.0' TO 562+52.8, 24.2', LT	B-4				17.8	
STA. 578+03.0, 20.0' TO 578+03.0, 26.0', LT	G-1	3.0	9.4			4" REVEAL
STA. 578+03.0, 20.0' TO 578+13.0, 20.0', LT	G-2			10.0		4" REVEAL TO 7" REVEAL
STA. 578+03.0, 26.0' TO 578+13.0, 26.0', LT	G-3			10.0		4" REVEAL TO 7" REVEAL
STA. 578+13.0, 20.0' TO 579+07.0, 20.0', LT	G-4			94.0		7" REVEAL
STA. 578+13.0, 26.0' TO 579+07.0, 26.0', LT	G-5			94.0		7" REVEAL
STA. 579+07.0, 20.0' TO 579+17.0, 20.0', LT	G-6			10.0		7" REVEAL TO 4" REVEAL
STA. 579+07.0, 26.0' TO 579+17.0, 26.0', LT	G-7			10.0		7" REVEAL TO 4" REVEAL
STA. 579+17.0, 20.0' TO 579+17.0, 26.0', LT	G-8	3.0	9.4			4" REVEAL
SUBTOTAL			18.8	228.0	349.2	
ROUNDING			1.2	2.0	0.8	
TOTAL			20	230	350	

LANDSCAPING AND SLOPE PROTECTION

ITEM NO.	641.	643.22	645.44	646.3	647.1
LOCATION	LOAM	FERTILIZER FOR REFERTILIZATION	TEMPORARY SLOPE STABILIZATION TYPE D (WILDLIFE FRIENDLY)	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	HUMUS
UNIT	CY	TON	SY	A	CY
LOCATION					
NH RTE 108					
STA. 554+00 - 555+10, LT.	5.6	0.01		0.02	
STA. 554+00 - 558+16, RT.	94.4	0.10		0.27	
STA.555+19 - 557+25, LT.	74.9	0.08		0.21	
STA. 557+34 - 558+97, LT.	59.7	0.06		0.17	
STA. 558+25 - 561+91, RT.	139.9	0.15		0.39	
STA. 558+88 - 562+72, LT.	100.2	0.10	1366.0	0.28	
STA. 562+01 - 563+10, RT.	22.2	0.02		0.06	
STA. 562+80 - 571+39, LT.	235.0	0.25	3204.7	0.66	
STA. 563+14 - 565+65, RT.	41.8	0.04		0.12	
STA. 565+80 - 572+50, RT.	124.5	0.13		0.35	
STA. 571+51 - 574+13, LT.	72.6	0.08		0.20	
STA. 572+63 - 578+28, RT.	113.8	0.12		0.32	
STA. 574+12 - 577+52, LT.	59.5	0.06		0.17	
STA. 578+39 - 579+54, RT.	11.2	0.01		0.03	
STA. 579+65 - 583+85, RT.	49.8	0.05		0.14	
STA. 579+90 - 580+52, LT.	4.4 (1)	0.01		0.01 (1)	
STA. 580+83 - 584+70, LT.	70.2	0.07		0.20	
STA. 584+05 - 592+93, RT.		0.20		0.54	170.3
STA. 584+69 - 621+33, LT.		0.92		2.49	780.1
STA. 592+86 - 597+48, RT.		0.08		0.23	71.3
STA. 597+58 - 623+50, RT.		0.47		1.27	397.9
STA. 621+30 - 629+06, LT.		0.19		0.51	160.4
STA. 623+74 - 626+58, RT.	46.1	0.05		0.13	
STA. 629+06 - 634+84, LT.		0.13		0.34	107.8
STA. 626+65 - 639+35, RT.	271.8	0.28	3706.3	0.77	
STA. 634+94 - 635+14, LT.	1.7	0.00	22.7	0.00	
STA. 635+37 - 638+70, LT.	68.2	0.07	930.0	0.19	
STA. 638+89 - 640+10, LT.	19.9	0.02	270.8	0.06	
STA. 639+49 - 640+90, RT.	34.1	0.04		0.10	
STA. 640+19 - 640+92, LT.	9.1	0.01		0.03	
STA. 641+08 - 643+53, RT.	34.0	0.04		0.10	
STA. 642+40 - 640+92, LT.	35.0	0.04	477.7	0.10	
STA. 643+75 - 644+00, RT.	4.0	0.01		0.01	
SUBTOTAL	1803.5	3.9	9978.2	10.46	1687.8
ROUNDING	6.5	0.1	21.8	0.54	2.2
TOTAL	1810 (1)	4	10000	11 (1)	1690

BOUNDS

ITEM NO.	622.2
DESCRIPTION	CONCRETE BOUNDS
UNIT	EA
LOCATION	
N.H. ROUTE 108	
STA. 556+91.4, 32.6', RT	1
STA. 556+91.4, 33.4', LT	1
STA. 562+70.9, 32.5', RT	1
STA. 566+60.5, 33.4', RT	1
STA. 566+60.5, 32.6', LT	1
STA. 568+90.5, 32.5', LT	1
STA. 568+90.5, 33.5', RT	1
STA. 577+72.5, 32.2', RT	1
STA. 582+55.6, 32.6', RT	1
STA. 582+55.6, 33.4', LT	1
STA. 586+47.4, 32.6', RT	1
STA. 586+47.4, 33.4', LT	1
STA. 589+13.1, 33.1', RT	1
STA. 589+13.1, 32.9', LT	1
STA. 592+58.6, 32.1', LT	1
STA. 592+58.6, 33.9', RT	1
STA. 597+28.4, 31.1', RT	1
STA. 597+28.4, 34.9', LT	1
STA. 603+91.1, 32.3', LT	1
STA. 603+91.1, 33.7', RT	1
STA. 608+12.4, 33.7', LT	1
STA. 608+12.4, 32.3', RT	1
STA. 613+12.4, 33.6', LT	1
STA. 613+12.5, 32.4', RT	1
STA. 616+12.0, 34.3', LT	1
STA. 616+12.0, 31.7', RT	1
STA. 620+83.9, 28.8', LT	1
STA. 620+83.9, 24.8', RT	1
STA. 625+04.7, 27.7', LT	1
STA. 625+04.7, 52.0', RT	1
STA. 628+45.5, 28.9', RT	1
STA. 628+45.5, 35.9', LT	1
STA. 630+93.4, 27.4', RT	1
STA. 630+93.4, 42.4', LT	1
STA. 633+71.4, 35.0', RT	1
STA. 634+27.1, 35.0', RT	1
STA. 634+27.1, 31.0', LT	1
STA. 637+45.4, 35.0', RT	1
STA. 637+56.8, 35.0', RT	1
STA. 637+45.4, 39.7', LT	1
SUBTOTAL	40
ROUNDING	0
TOTAL	40

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STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

QUANTITY SUMMARY SHEET
3 OF 4

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	10A	119

NUMBER	DATE	DESCRIPTION
1	7/9/2015	PROFILE REVISION

REVISIONS AFTER PROPOSAL

STATION	STATION
618+50	575+50

EXISTING DETAIL NHDOT DATE 02/10
NEW DESIGN P.R.P. DATE 7/15
SHEET CHECKED J.P. DATE 7/15
AS BUILT DETAILS DATE

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRA\CUT SHEETS\13080A_QTY.DGN

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

DRAINAGE SUMMARY SHEET

1 OF 6

NOTE NUMBER	202.31 FILL ABANDONED PIPE (CY)	202.41 REMOVAL OF EXISTING PIPE 0-24" DIAMETER (LF)	203.1 COMMON EXCAVATION (CY)	203.2 ROCK EXCAVATION (CY)	206.1 COMMON STRUCTURE EXCAVATION (CY)	206.2 ROCK STRUCTURE EXCAVATION (CY)	520.1 CONCRETE CLASS A (CY)	544.1 REINFORCING STEEL (ROADWAY) (LB)	585.3 STONE FILL, CLASS C (CY)	593.411 GEOTEXTILE: PERM. CONTROL, CL.1, NON-WOVEN (SY)	603.0001 VIDEO INSPECTION (LF)	603.00212 R.C. PIPE 2000D 12" (LF)	603.00215 R.C. PIPE 2000D 15" (LF)	603.00218 R.C. PIPE 2000D 18" (LF)	603.00224 R.C. PIPE 2000D 24" (LF)	603.00230 R.C. PIPE 2000D 30" (LF)	603.00236 R.C. PIPE 2000D 36" (LF)	603.00415 R.C. PIPE 3750D 15" (LF)	603.00430 R.C. PIPE 3750D 30" (LF)	603.00436 R.C. PIPE 3750D 36" (LF)	603.30115 R.C. END SECTIONS 15" (EA)	603.30124 R.C. END SECTIONS 24" (EA)	603.36112 ALUMINIZED STEEL END SECTION 12" (EA)	603.36124 ALUMINIZED STEEL END SECTION 24" (EA)	603.82212 P.E. PIPE (TYPE S) 12" (LF)	603.82215 P.E. PIPE (TYPE S) 15" (LF)	603.82218 P.E. PIPE (TYPE S) 18" (LF)	603.82224 P.E. PIPE (TYPE S) 24" (LF)	604.0007 POLYETHYLENE LINER (EA)	NOTE NUMBER
B1											35.0												2.0		35.0					B1
B2					6.0	1.6	4.4	35.3	3.7	15.6	59.9						59.9													B2
B3					25.2	2.7	4.4	35.3	23.9	84.2	24.0						24.0													B3
B4					11.6	0.5	1.8	19.8	10.7	42.2	30.2													1.0				30.2		B4
B5						2.9					143.7		143.7																1.0	B5
B6						0.6					6.0		6.0																1.0	B6
B7											156.2												2.0		156.2					B7
B8																														B8
B9																														B9
B10																														B10
B11											5.9				5.9						1.0									B11
B12					12.1	3.7	2.4	24.3	10.9	40.9	51.0				51.0														1.0	B12
B13						1					1														1					B13
B14						0.0					0.0														0.0					B14
B15				1	11.3	3.7	3.4	30.8	8.2	33.1	85.7			85.7 1																B15
B16				1	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0 1																B16
B17					1.4	0.5 1			1.5	7.5	9.5												1.0		9.5				1.0	B17
B18					30.4	6.3 1	6.4	105.8	27.2	98.5	55.0					0.0 1			55.0 1											B18
B19											55.0					0.0 1			55.0 1				1		1				1	B19
B20				1	0.0	0.0			0.0	0.0	0.0 1												0.0		0.0				0.0	B20
B21						1.3					45.1												2.0		45.1					B21
B22					29.4	6.5 1	8.0	123.5	25.2	91.6	80.7						0.0 1			80.7 1										B22
B23											80.7						0.0 1			80.7 1										B23
B24a						1					0.0 1		0.0 1								1 0.0									B24a
B24						0.0					0.0 1		0.0 1								1							1 0.0		B24
B25					7.0	1.8 1			7.3	28.7	50.9 1		50.9 1								2.0							1 0.0		B25
B26					2.5	0.5 1	4.4	35.3			14.8						14.8													B26
B27						1.6 1					21.8						0.0 1			21.8 1									1.0	B27
B28					2.5	1.3 1	4.4	35.3			14.8						14.8												1.0	B28
B29					1.2	1.5 1	1.3	15.4			59.8		59.8																1.0	B29
B30a						0.1 1					6.6		6.6 1								1.0									B30a
B30					1	1.3 1 1		1	1	1	45.8 1		0.0 1	1		1	1	45.8 1	1	1			1		1				1.0 1	B30
SHT SUBTOTAL	0.0	0.0	0.0	0.0	140.6	38.3	40.9	460.8	118.6	442.3	1138.1	0.0	267.0	85.7	56.9	0.0	113.5	45.8	110.0	183.2	3.0	1.0	7.0	1.0	245.8	0.0	0.0	30.2	8.0	SHT SUBTOTAL

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE SUMMARY SHEET
1 OF 7

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	12A	119

NUMBER	DATE	DESCRIPTION	STATION
1	7/9/2015	PROFILE REVISION	618+50
			575+50

REVISIONS AFTER PROPOSAL

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRJCUT SHEETS\13080A_QTY.DGN

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

DRAINAGE SUMMARY SHEET

NOTE NUMBER	604.12		604.128		604.15		604.22		604.225		604.25		604.328		605.506	605.79	622.1	REMARKS	NOTE NUMBER
	CATCH BASINS						DROP INLET TYPE B				DROP INLET TYPE E		DRAINAGE MANHOLES, 8-FOOT DIAMETER		6" PERF. CORR. POLYETHYL PIPE UND.	UNDERDRAIN FLUSHING BASINS	STEEL WITNESS MARKERS		
	TYPE B				TYPE E														
	4' DIA		8' DIA		4' DIA		4' DIA		5' DIA		4' DIA		8' DIA						
	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	6"				
	U	U	U	U	U	U	U	U	U	U	U	U	U	U	LF	EA	EA		
2 OF 6																			
B1																	2.0		B1
B2																			B2
B3													1.0	1.0					B3
B4																	2.0		B4
B5	1.0	1.1																ECCENTRIC CONE	B5
B6	1.0	1.0																ECCENTRIC CONE	B6
B7																	2.0		B7
B8																		NOTE DELETED	B8
B9																		NOTE DELETED	B9
B10																		NOTE DELETED	B10
B11																	1.0		B11
B12							1.0	1.0									1.0	SLAB TOP	B12
B13																		NOTE DELETED	B13
B14											0.0	0.0 (1)					0.0 (1)	NOTE DELETED (1)	B14
B15																	2.0 (1)		B15
B16									0.0	0.0 (1)							0.0 (1)	NOTE DELETED (1)	B16
B17							1.0	1.0									1.0	OFFSET SLAB TOP	B17
B18																	2.0	COORDINATE WITH DRAINAGE NOTE 19	B18
B19																		COORDINATE WITH DRAINAGE NOTE 18	B19
B20							0.0	0.0 (1)									0.0 (1)	NOTE DELETED (1)	B20
B21																	2.0		B21
B22																		COORDINATE WITH DRAINAGE NOTE 23	B22
B23																		COORDINATE WITH DRAINAGE NOTE 22	B23
B24a																	0.0 (1)	NOTE DELETED (1)	B24a
B24							0.0	0.0 (1)										NOTE DELETED (1)	B24
B25							0.0	0.0 (1)									2.0 (1)		B25
B26																			B26
B27									1.0	1.0 (1)								OFFSET SLAB TOP (1)	B27
B28									1.0	1.0 (1)								OFFSET SLAB TOP (1)	B28
B29							1.0	1.1									1.0	ECCENTRIC CONE	B29
B30a																	1.0		B30a
B30							1.0	1.0										OFFSET SLAB TOP	B30
SHT SUBTOTAL	2.0	2.1	0.0	0.0	0.0	0.0	(1) 4.0	(1) 4.1	(1) 2.0	(1) 2.0	(1) 0.0	(1) 0.0	1.0	1.0	0.0	0.0	(1) 13.0		SHT SUBTOTAL

EXISTING DETAIL	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

STATION	DESCRIPTION	NUMBER	DATE
618+50	PROFILE REVISION	1	7/9/2015
575+50			

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE SUMMARY SHEET
2 OF 7

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	13A	119

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME - V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080A_QTY.DGN

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

DRAINAGE SUMMARY SHEET

NOTE NUMBER	202.31 FILL ABANDONED PIPE (CY)	202.41 REMOVAL OF EXISTING PIPE 0-24" DIAMETER (LF)	203.1 COMMON EXCAVATION (CY)	203.2 ROCK EXCAVATION (CY)	206.1 COMMON STRUCTURE EXCAVATION (CY)	206.2 ROCK STRUCTURE EXCAVATION (CY)	520.1 CONCRETE CLASS A (CY)	544.1 REINFORCING STEEL (ROADWAY) (LB)	585.3 STONE FILL, CLASS C (CY)	593.411 GEOTEXTILE; PERM. CONTROL, CL.1, NON-WOVEN (SY)	603.0001 VIDEO INSPECTION (LF)	603.00212 R.C. PIPE 2000D 12" (LF)	603.00215 R.C. PIPE 2000D 15" (LF)	603.00218 R.C. PIPE 2000D 18" (LF)	603.00224 R.C. PIPE 2000D 24" (LF)	603.00230 R.C. PIPE 2000D 30" (LF)	603.00236 R.C. PIPE 2000D 36" (LF)	603.00415 (1) R.C. PIPE 3750D 15" (LF)	603.00430 (1) R.C. PIPE 3750D 30" (LF)	603.00436 (1) R.C. PIPE 3750D 36" (LF)	603.30115 R.C. END SECTIONS 15" (EA)	603.30124 R.C. END SECTIONS 24" (EA)	603.36112 ALUMINIZED STEEL END SECTION 12" (EA)	603.36124 ALUMINIZED STEEL END SECTION 24" (EA)	603.82212 P.E. PIPE (TYPE S) 12" (LF)	603.82215 P.E. PIPE (TYPE S) 15" (LF)	603.82218 P.E. PIPE (TYPE S) 18" (LF)	603.82224 P.E. PIPE (TYPE S) 24" (LF)	604.0007 POLYETHYLENE LINER (EA)	NOTE NUMBER
														3 OF 6																
B31						0.0 (1)					0.0 (1)		0.0 (1)																0.0 (1)	B31
B31a						0.8 (1)					36.2 (1)		0.0 (1)					36.2 (1)			1.0									B31a
B32					3.0	0.2 (1)	3.3	28.7	0.9	7.2	7.5					7.5														B32
B33						1.2 (1)					20.5					0.0 (1)			20.5 (1)										1.0	B33
B34					17.9	1.4 (1)	3.3	28.7	16.6	59.9	10.1					10.1													1.0	B34
B35						0.6					5.0			5.0																B35
B36						1.0 (1)					23.3			23.3															1.0	B36
B37					7.2	1.0 (1)	1.7	15.4	5.7	23.1	12.8			12.8															1.0	B37
B38					25.5	1.1	6.6	57.3	22.5	82.6	115.4					115.4														B38
B39						1.0					35.3		35.3																	B39
B40						0.7					26.0		26.0																1.0	B40
B41					12.1	1.2	2.4	24.3	10.9	40.9	12.3				12.3														1.0	B41
B42						1.3					35.3		35.3																1.0	B42
B43						1.2					61.4	61.4																		B43
B44						3.2					131.5															131.5				B44
B45						0.9					32.0		32.0																	B45
B46						0.6					56.0			56.0															1.0	B46
B47					6.5	0.3	1.1	13.2	5.7	23.0	25.0																25.0			B47
B48											29.7										1.0							29.7	1.0	B48
B49						0.4					29.5		29.5																	B49
B50						1.1					89.0		89.0																1.0	B50
B51						3.8					138.2		138.2																	B51
B52											94.1				94.1															B52
BR1		55.5	3.3																											BR1
BR2		20.6	2.6																											BR2
BR3		50.1	1.3																											BR3
BR4	6.1 (1)	0.0 (1)		4.8																										BR4
BR5	0.8 (1)	0.0 (1)																												BR5
BR6	3.5 (1)	0.0 (1)	3.3																											BR6
BR7	1.4 (1)	0.0 (1)	1.6																											BR7
BR8		29.7																												BR8
BR8A	4.8																													BR8A
BR9		46.3	1.7																											BR9
SHT SUBTOTAL	(1) 16.6	(1) 202.2	13.8	4.8	72.2	(1) 23.0	18.5	167.6	62.3	236.6	(1) 1026.1	61.4	(1) 385.3	97.0	106.3	(1) 133.0	0.0	(1) 36.2	(1) 20.5	(1) 0.0	2.0	0.0	0.0	0.0	0.0	131.5	25.0	29.7	(1) 10.0	SHT SUBTOTAL

NUMBER	DATE	DESCRIPTION
1	7/9/2015	PROFILE REVISION

REVISIONS AFTER PROPOSAL

STATION 618+50

STATION 575+50

EXISTING DETAIL	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE SUMMARY SHEET
3 OF 7

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	14A	119

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080A_QTY.DGN

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

DRAINAGE SUMMARY SHEET

NOTE NUMBER	604.12		604.128		604.15		604.22		604.225		604.25		604.328		605.506	605.79	622.1	REMARKS	NOTE NUMBER
	CATCH BASINS						DROP INLET TYPE B				DROP INLET TYPE E		DRAINAGE MANHOLES, 8-FOOT DIAMETER		6" PERF. CORR. POLYETHYL PIPE UND.	UNDERDRAIN FLUSHING BASINS	STEEL WITNESS MARKERS		
	TYPE B				TYPE E														
	4' DIA		8' DIA		4' DIA		4' DIA		5' DIA		4' DIA		8' DIA						
	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	6"				
	U	U	U	U	U	U	U	U	U	U	U	U	U	U	LF	EA	EA		
4 OF 6																			
B31							0.0	0.0	1									NOTE DELETED 1	B31
B31a																	1.0		B31a
B32																	1.0		B32
B33									1.0	1.0 1								ECCENTRIC CONE	B33
B34									1.0	1.0 1							1.0	ECCENTRIC CONE	B34
B35					1.0	1.0											1.0	SLAB TOP	B35
B36	1.0	1 1.0																	B36
B37	1.0	1.0															1.0	ECCENTRIC CONE	B37
B38																	2.0		B38
B39					1.0	1.0											1.0	SLAB TOP	B39
B40	1.0	1.0																ECCENTRIC CONE	B40
B41	1.0	1.2															1.0	ECCENTRIC CONE	B41
B42					1.0	1.0											1.0	SLAB TOP	B42
B43							1.0	1.0									1.0	SLAB TOP	B43
B44					1.0	1.0											1.0	SLAB TOP	B44
B45	1.0	1.0															1.0	SLAB TOP	B45
B46	1.0	1.0																SLAB TOP	B46
B47	1.0	1.0															1.0	SLAB TOP	B47
B48			1.0	1.0													1.0	ECCENTRIC CONE	B48
B49	1.0	1.0																	B49
B50							1.0	1.0											B50
B51							1.0	1.0											B51
B52	1.0	1.1															1.0		B52
BR1																			BR1
BR2																			BR2
BR3																			BR3
BR4																			BR4
BR5																			BR5
BR6																			BR6
BR7																			BR7
BR8																			BR8
BR8A																			BR8A
BR9		1 9.3					1 3.0	1 3.0		1 2.0									BR9
SHT SUBTOTAL	9.0		1.0	1.0	4.0	4.0			2.0		0.0	0.0	0.0	0.0	0.0	0.0	16.0		SHT SUBTOTAL

REVISIONS AFTER PROPOSAL

STATION	DESCRIPTION	DATE	NUMBER
618+50	PROFILE REVISION	7/9/2015	1
575+50			

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE SUMMARY SHEET
4 OF 7

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	15A	119

FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080A_QTY.DGN PLOTTED DATED 7/9/2015 CHA PROJ. NO. 24344

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

DRAINAGE SUMMARY SHEET

5 OF 6

NOTE NUMBER	202.31 FILL ABANDONED PIPE (CY)	202.41 REMOVAL OF EXISTING PIPE 0-24" DIAMETER (LF)	203.1 COMMON EXCAVATION (CY)	203.2 ROCK EXCAVATION (CY)	206.1 COMMON STRUCTURE EXCAVATION (CY)	206.2 ROCK STRUCTURE EXCAVATION (CY)	520.1 CONCRETE CLASS A (CY)	544.1 REINFORCING STEEL (ROADWAY) (LB)	585.3 STONE FILL, CLASS C (CY)	593.411 GEOTEXTILE; PERM. CONTROL, CL.1, NON-WOVEN (SY)	603.0001 VIDEO INSPECTION (LF)	603.00212 R.C. PIPE 2000D 12" (LF)	603.00215 R.C. PIPE 2000D 15" (LF)	603.00218 R.C. PIPE 2000D 18" (LF)	603.00224 R.C. PIPE 2000D 24" (LF)	603.00230 R.C. PIPE 2000D 30" (LF)	603.00236 R.C. PIPE 2000D 36" (LF)	603.00415 (1) R.C. PIPE 3750D 15" (LF)	603.00430 (1) R.C. PIPE 3750D 30" (LF)	603.00436 (1) R.C. PIPE 3750D 36" (LF)	603.30115 R.C. END SECTIONS 15" (EA)	603.30124 R.C. END SECTIONS 24" (EA)	603.36112 ALUMINIZED STEEL END SECTION 12" (EA)	603.36124 ALUMINIZED STEEL END SECTION 24" (EA)	603.82212 P.E. PIPE (TYPE S) 12" (LF)	603.82215 P.E. PIPE (TYPE S) 15" (LF)	603.82218 P.E. PIPE (TYPE S) 18" (LF)	603.82224 P.E. PIPE (TYPE S) 24" (LF)	604.0007 POLYETHYLENE LINER (EA)	NOTE NUMBER
BR10		33.0																												BR10
BU1						87.4																								BU1
BU2					0.7	68.5	0.3																							BU2
BU3						70.1																								BU3
BU4						73.7																								BU4
BU5						56.1																								BU5
BU6						5.0																								BU6
BU7						15.3																								BU7
BU8						1.3																								BU8
BU9						1.1																								BU9
SHT SUBTOTAL	0.0	33.0	0.0	0.0	0.7	378.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (1)	0.0 (1)	0.0 (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SHT SUBTOTAL

NUMBER	DATE	DESCRIPTION	STATION
1	7/9/2015	PROFILE REVISION	618+50

REVISIONS AFTER PROPOSAL

EXISTING DETAIL	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

STATION 575+50

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE SUMMARY SHEET
5 OF 7

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	16A	119

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME - V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080A_QTY.DGN

SUMMARY OF QUANTITIES (ESTIMATE)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

DRAINAGE SUMMARY SHEET

	202.31	202.41	203.1	203.2	206.1	206.2	520.1	544.1	585.3	593.411	603.0001	603.00212	603.00215	603.00218	603.00224	603.00230	603.00236	603.00415	603.00430	603.00436	603.30115	603.30124	603.36112	603.36124	603.82212	603.82215	603.82218	603.82224	604.0007	
	FILL ABANDONED PIPE	REMOVAL OF EXISTING PIPE 0-24" DIAMETER	COMMON EXCAVATION	ROCK EXCAVATION	COMMON STRUCTURE EXCAVATION	ROCK STRUCTURE EXCAVATION	CONCRETE CLASS A	REINFORCING STEEL (ROADWAY)	STONE FILL, CLASS C	GEOTEXTILE; PERM. CONTROL, CL.1, NON-WOVEN	VIDEO INSPECTION	R.C. PIPE									R.C. END SECTIONS		ALUMINIZED STEEL END SECTION		P.E. PIPE (TYPE S)				POLYETHYLENE LINER	
												2000D 12"	2000D 15"	2000D 18"	2000D 24"	2000D 30"	2000D 36"	3750D 15"	3750D 30"	3750D 36"	15"	24"	12"	24"	12"	15"	18"	24"		
	CY	LF	CY	CY	CY	CY	CY	LB	CY	SY	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	LF	LF	LF	EA	
SHT 1 SUBTOTAL	0.0	0.0	0.0	0.0	140.6	38.3	40.9	460.8	118.6	442.3	1138.1	0.0	267.0	85.7	56.9	0.0	113.5	45.8	110.0	183.2	3.0	1.0	7.0	1.0	245.8	0.0	0.0	30.2	8.0	SHT 1 SUBTOTAL
SHT 3 SUBTOTAL	16.6	202.2	13.8	4.8	72.2	23.0	18.5	167.6	62.3	236.6	1026.1	61.4	385.3	97.0	106.3	133.0	0.0	36.2	20.5	0.0	2.0	0.0	0.0	0.0	0.0	131.5	25.0	29.7	10.0	SHT 3 SUBTOTAL
SHT 5 SUBTOTAL	0.0	33.0	0.0	0.0	0.7	378.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SHT 5 SUBTOTAL
SUBTOTAL	16.6	235.2	13.8	4.8	213.5	439.9	59.7	628.4	180.9	678.9	2164.2	61.4	652.3	182.7	163.2	133.0	113.5	82.0	130.5	183.2	5.0	1.0	7.0	1.0	245.8	131.5	25.0	59.9	18.0	SUBTOTAL
ROUNDING	3.4	4.8	0.0	0.0	1.5	0.0	0.3	1.6	0.0	1.1	0.8	3.6	2.7	2.3	1.8	2.0	1.5	3.0	4.5	1.8	0.0	0.0	0.0	0.0	4.2	3.5	5.0	0.1	0.0	ROUNDING
TOTAL	20.0	240.0	13.8**	4.8**	215.0	439.9**	60.0	630.0	180.9*	680.0	2165.0	65.0	660.0	185.0	165.0	135.0	115.0	85.0	135.0	185.0	5.0	1.0	7.0	1.0	250.0	135.0	30.0	60.0	18.0	TOTAL

* NOT AN ITEM TOTAL SEE ENVIRONMENTAL PROTECTION & EROSION CONTROL SUMMARY

**SEE EARTHWORK SUMMARY

DRAINAGE SUMMARY SHEET

	604.12		604.128		604.15		604.22		604.225		604.25		604.328		605.506	605.79	622.1	
	CATCH BASINS						DROP INLET TYPE B				DROP INLET TYPE E		DRAINAGE MANHOLES, 8-FOOT DIAMETER		6" PERF. CORR. POLYETHYL PIPE UND.	UNDERDRAIN FLUSHING BASINS	STEEL WITNESS MARKERS	
	TYPE B				TYPE E													
	4' DIA		8' DIA		4' DIA		4' DIA		5' DIA		4' DIA		8' DIA					
	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	ACT	EST	6"			
	U	U	U	U	U	U	U	U	U	U	U	U	U	U	LF	EA	EA	
SHT 2 SUBTOTAL	2.0	2.1	0.0	0.0	0.0	0.0	4.0	4.1	2.0	2.0	0.0	0.0	1.0	1.0	0.0	0.0	19.0	SHT 2 SUBTOTAL
SHT 4 SUBTOTAL	9.0	9.3	1.0	1.0	4.0	4.0	3.0	3.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	SHT 4 SUBTOTAL
SHT 6 SUBTOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2717.5	12.0	1.0	SHT 6 SUBTOTAL
SUBTOTAL	11.0	11.4	1.0	1.0	4.0	4.0	7.0	7.1	4.0	4.0	0.0	0.0	1.0	1.0	2717.5	12.0	36.0	SUBTOTAL
ROUNDING		0.6		0.0		0.0		0.9		0.0		0.0		0.0	82.5	0.0	0.0	ROUNDING
TOTAL		12.0		1.0		4.0		8.0		4.0		0.0		1.0	2800.0	12.0	36.0	TOTAL

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE SUMMARY SHEET
7 OF 7

DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_QTY.dgn	13080A	18A	119

NUMBER	DATE	DESCRIPTION
1	7/9/2015	PROFILE REVISION

REVISIONS AFTER PROPOSAL

STATION 618+50

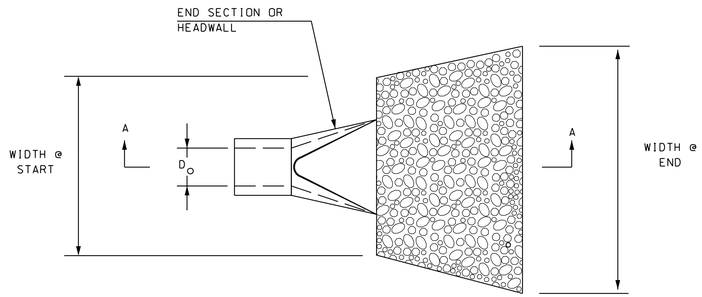
STATION 575+50

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		

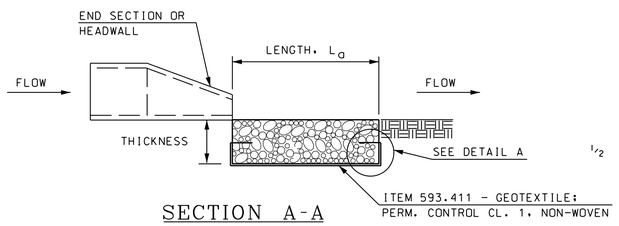
CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

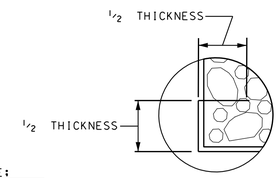
FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080A_QTY.DGN



PLAN



SECTION A-A



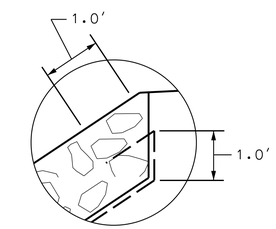
DETAIL A

STONE OUTLET PROTECTION AT PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

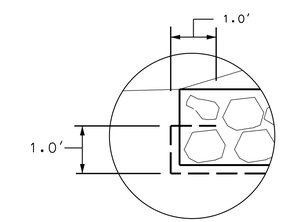
NOT TO SCALE

STONE OUTLET PROTECTION

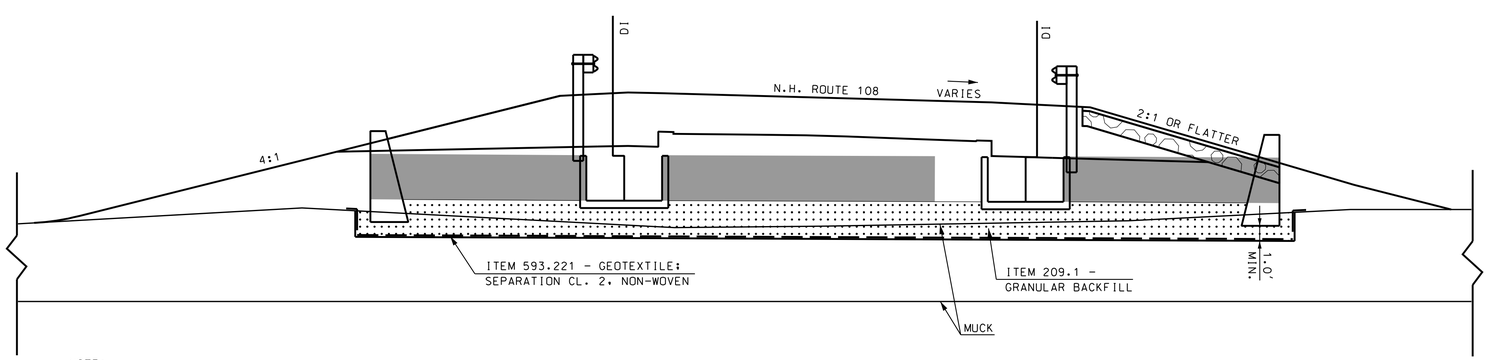
	NOTE #	LOCATION	Do (IN)	LENGTH La (FT)	WIDTH @ END (FT)	WIDTH @ START (FT)	STONE CLASS	THICKNESS (IN)
	B2	N.H. ROUTE 108 STA 557+15.0 RT 35.0'	36	10	10	10	C	12
	B3	N.H. ROUTE 108 STA 557+59.5 LT 49.1'	36	38	25	9	C	12
	B4	N.H. ROUTE 108 STA 558+05.1 RT 40.0'	24	24	16	6	C	12
	B4	N.H. ROUTE 108 STA 558+35.0 RT 40.0'	24	6	6	6	C	12
	B12	N.H. ROUTE 108 STA 573+00.0 LT 39.0'	24	16	22	6	C	12
1	B15	N.H. ROUTE 108 STA 580+79.0 RT 35.0'	18	5	5	5	C	12
	B15	N.H. ROUTE 108 STA 581+25.0 LT 50.0'	18	14	18	5	C	12
1	B17	N.H. ROUTE 108 STA 585+50.0 LT 24.8'	12	6	9	3	C	12
	B18	N.H. ROUTE 108 STA 587+02.3 RT 33.0'	(2) 30	11	11	11	C	24
1	B19	N.H. ROUTE 108 STA 587+02.3 LT 22.0'	(2) 30	32	39	11	C	24
	B20	NOTE DELETED						
	B22	N.H. ROUTE 108 STA 593+22.8 RT 40.3'	(2) 36	11	11	11	C	12
	B23	N.H. ROUTE 108 STA 593+17.2 LT 40.3'	(2) 36	29	38	11	C	12
	B25	N.H. ROUTE 108 STA 599+00.0 LT 32.0'	15	18	11	4	C	12
	B32	N.H. ROUTE 108 STA 614+75.0 LT 22.7'	30	10	10	10	C	12
	B34	N.H. ROUTE 108 STA 614+75.0 RT 22.7'	30	23	30	8	C	12
	B37	N.H. ROUTE 108 STA 617+50.0 RT 28.0'	18	19	12	5	C	12
	B38	N.H. ROUTE 108 STA 623+65.0 LT 45.0'	30	10	10	10	C	12
	B38	N.H. ROUTE 108 STA 623+30.0 RT 65.0'	30	25	33	8	C	12
	B41	N.H. ROUTE 108 STA 631+30.0 RT 33.0'	24	19	25	6	C	12
	B47	N.H. ROUTE 108 STA 640+71.9 RT 30.7'	18	18	12	5	C	12



DETAIL B
CLASS B STONE



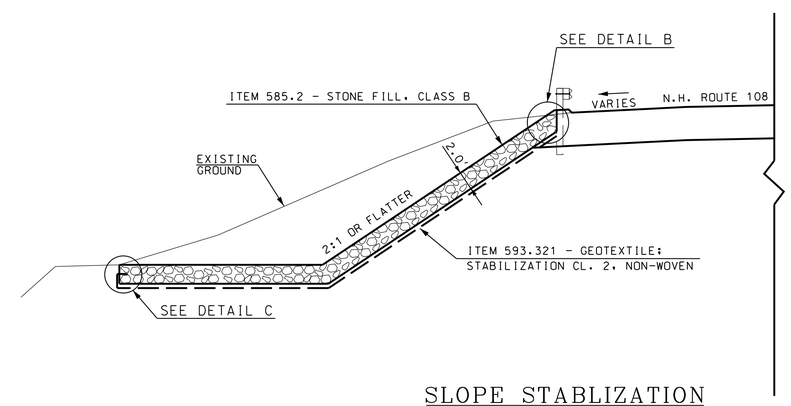
DETAIL C
CLASS B STONE



NOTE:
OVEREXCAVATE MUCK TO A MINIMUM DEPTH OF 12 INCHES BELOW PROPOSED PIPES AND STRUCTURES. ITEM 593.221 - GEOTEXTILE: SEPARATION CL. 2. NON-WOVEN SHALL BE PLACED ON THE BOTTOM, SIDES, AND TOP OF THE EXCAVATION, AND THE EXCAVATION SHALL BE BACKFILLED TO THE BOTTOM OF PIPE OR STRUCTURE WITH ITEM 209.1 - GRANULAR BACKFILL.

MUCK EXCAVATION BELOW PIPES AND STRUCTURES

STA. 557+50 - DRAINAGE NOTES B2 & B3
STA. 609+00 - DRAINAGE NOTES B26, B27 & B28
STA. 614+75 - DRAINAGE NOTES B32, B33 & B34



SLOPE STABLIZATION

STA. 641+18 TO STA. 642+57 LT.

REVISIONS AFTER PROPOSAL			
NUMBER	DESCRIPTION	STATION	DATE
1	PROFILE REVISION	575+50 618+50	7/9/2015

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

CHA PROJ. NO. 24344

FILE NAME - V:\PROJECTS\KMN\24344\CADD_MSTN\PRJ\CUT SHEETS\TYPICAL\S\13080A_MISC_DTL_RAP.DGN PLOTTED DATED 7/9/2015

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DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

MISCELLANEOUS DETAILS
1 OF 2

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
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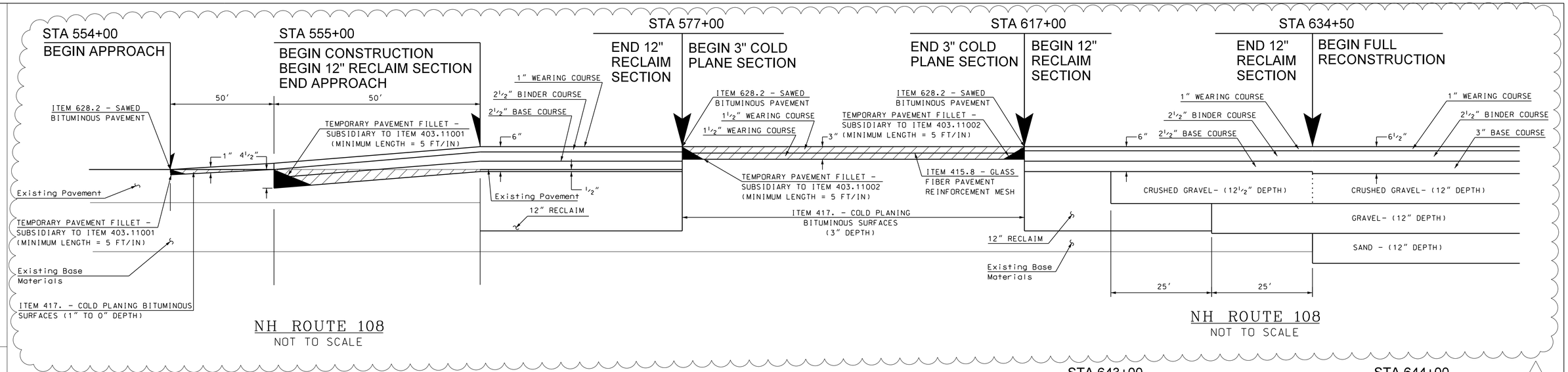
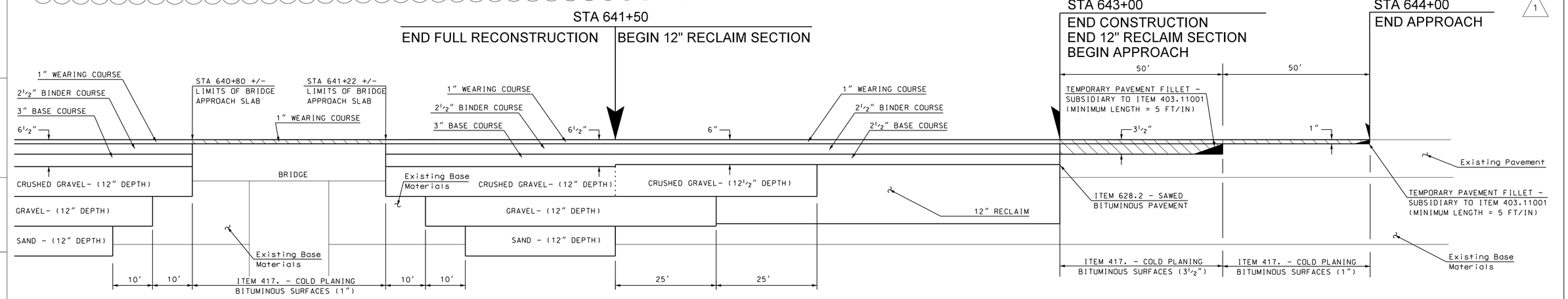
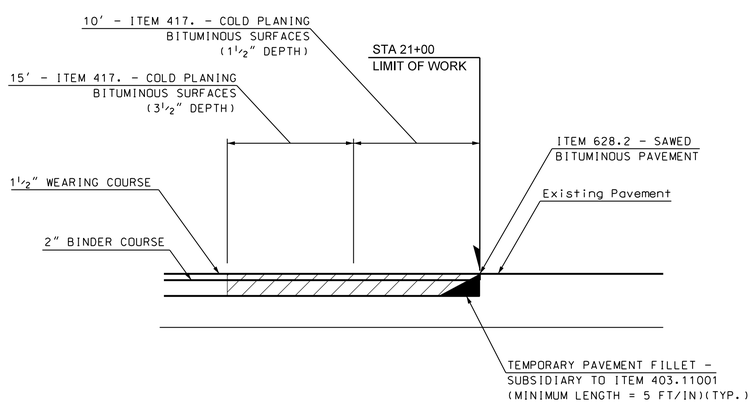
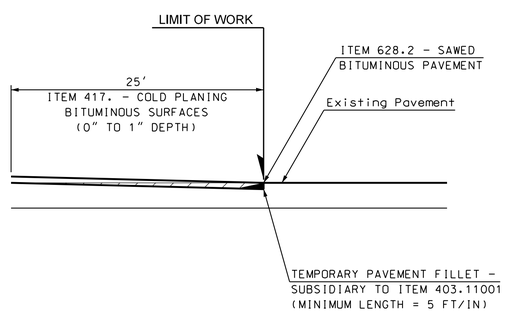






BENNETT ROAD
NOT TO SCALE



LONGMARSH ROAD
NOT TO SCALE

GENERAL NOTES:

1. NO DETAIL IS PROVIDED FOR THE PAVEMENT MATCH FOR ITEM 411.3 - PLANT MIX SURFACE TREATMENT (AC), PAVER SHIM. THE INTENT IS TO COLD PLANE A 25 FOOT LONG SEGMENT, FULL WIDTH, AT EACH PAVEMENT MATCH (STATION 513+00 TO 513+25 AND STATIONS 685+25 TO 685+50), AND THEN PLACE THE SHIM.

NUMBER	DATE	DESCRIPTION	STATION
1	7/9/2015	PROFILE REVISION	618+50

REVISIONS AFTER PROPOSAL

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		

STATION 575+50

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRA\CUT SHEETS\TYPICALS\13080A_MISC_DTL_RAP.DGN

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MISCELLANEOUS DETAILS 2 OF 2

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
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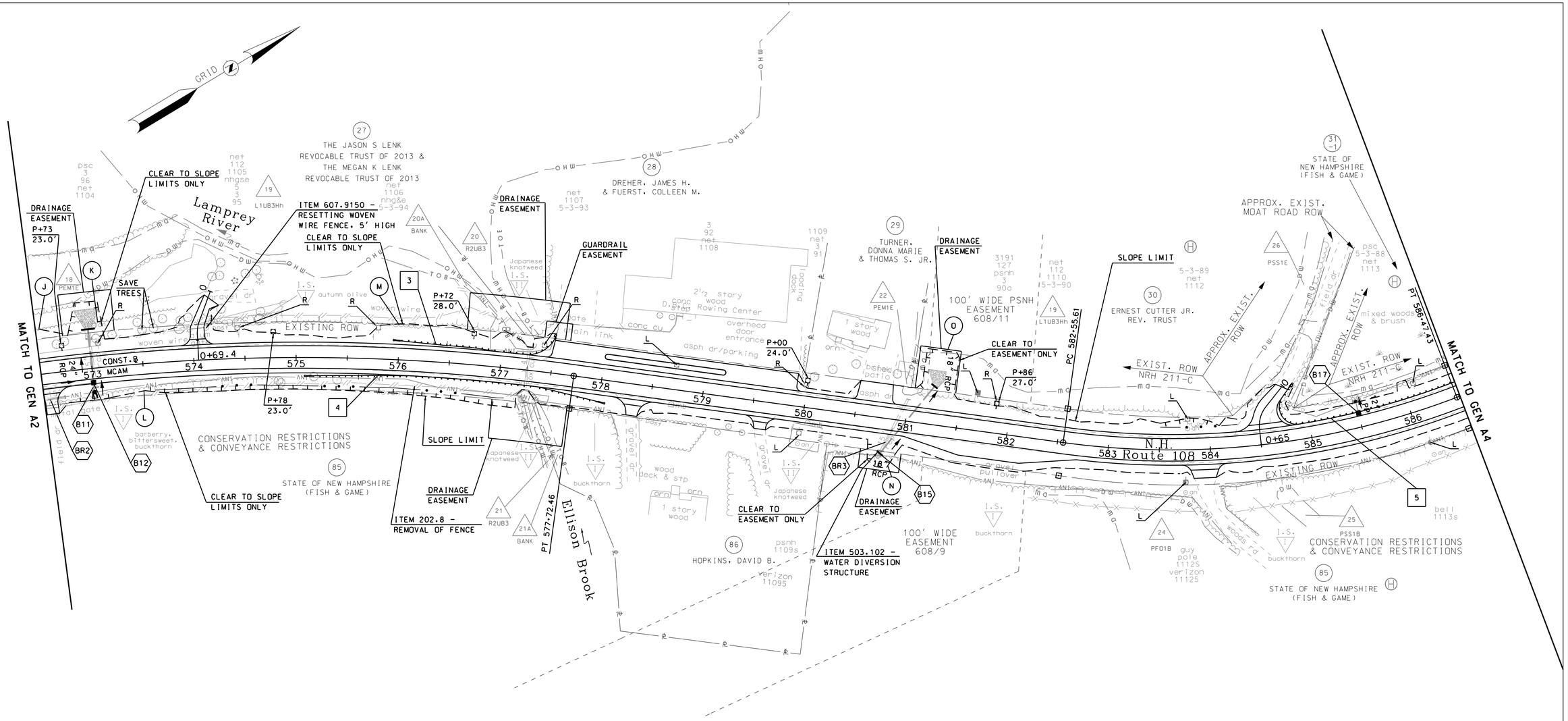

⚠1 REVISION AFTER PROPOSAL REVISES SLOPE LINES AND DRAINAGE FROM STATION 575+50 TO 618+50.

50 0 50 100
SCALE IN FEET

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF HIGHWAY DESIGN

GENERAL, DRAINAGE & UTILITY PLANS

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
GEN A3	13080AGEN.dgn	13080A	26A	119

NUMBER	DATE	DESCRIPTION	STATION	
1	7/9/2015	PROFILE REVISION	618+50	
			575+50	

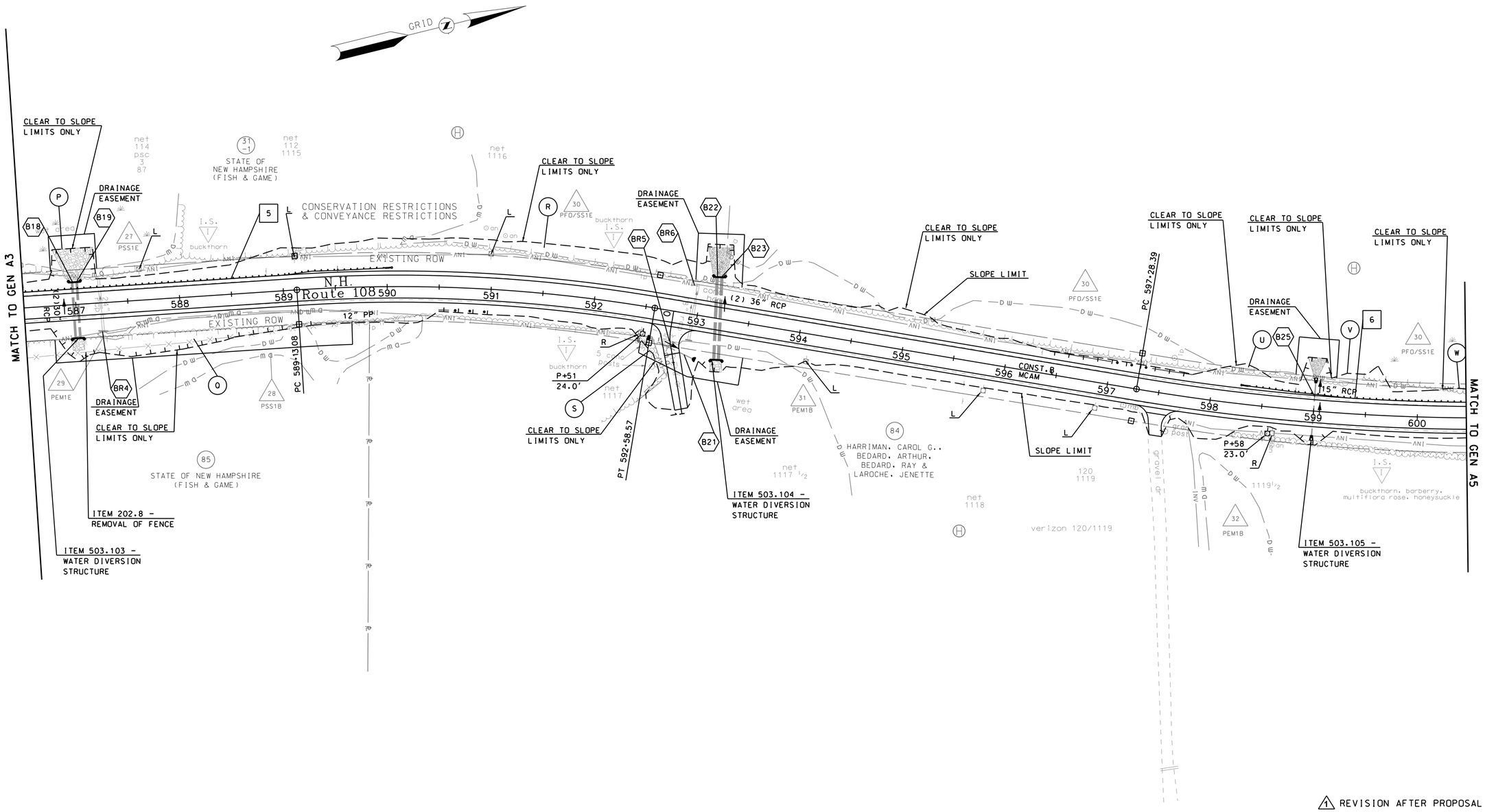
REVISIONS AFTER PROPOSAL

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080AGEN.DGN



1 REVISION AFTER PROPOSAL REVISES SLOPE LINES AND DRAINAGE FROM STATION 575+50 TO 618+50.

50 0 50 100
SCALE IN FEET

REVISIONS AFTER PROPOSAL			
NUMBER	DATE	DESCRIPTION	
1	7/9/2015	PROFILE REVISION	
		STATION	618+50
		STATION	575+50

EXISTING DETAIL	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080AGEN.DGN

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STATE OF NEW HAMPSHIRE
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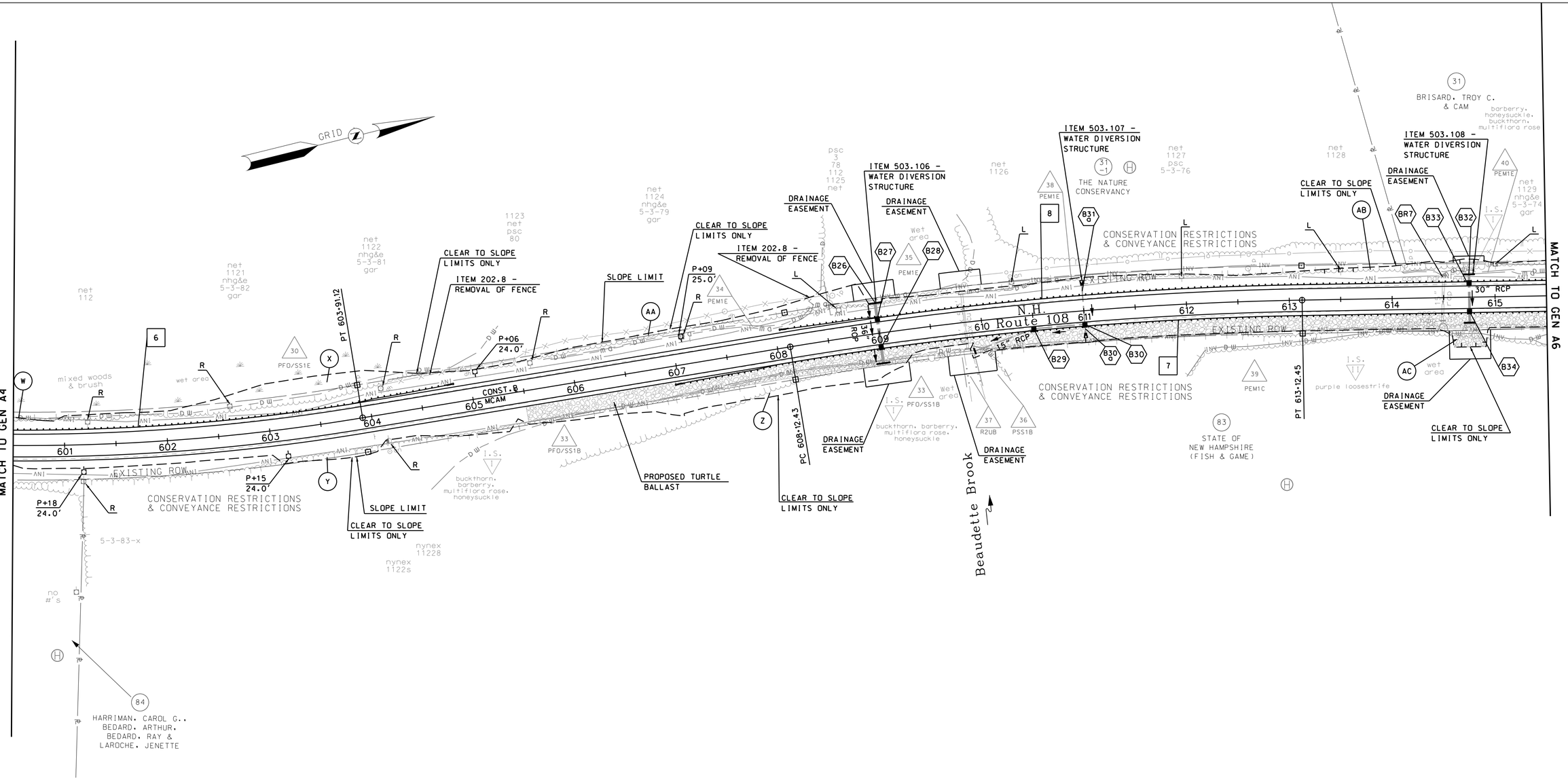
GENERAL, DRAINAGE & UTILITY PLANS

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
GEN A4	13080AGEN.dgn	13080A	27A	119



⚠1 REVISION AFTER PROPOSAL REVISES SLOPE LINES AND DRAINAGE FROM STATION 575+50 TO 618+50.

50 0 50 100
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GENERAL, DRAINAGE & UTILITY PLANS

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
GEN A5	13080AGEN.dgn	13080A	28A	119

NUMBER	DATE	DESCRIPTION	STATION	STATION
1	7/9/2015	PROFILE REVISION	618+50	575+50

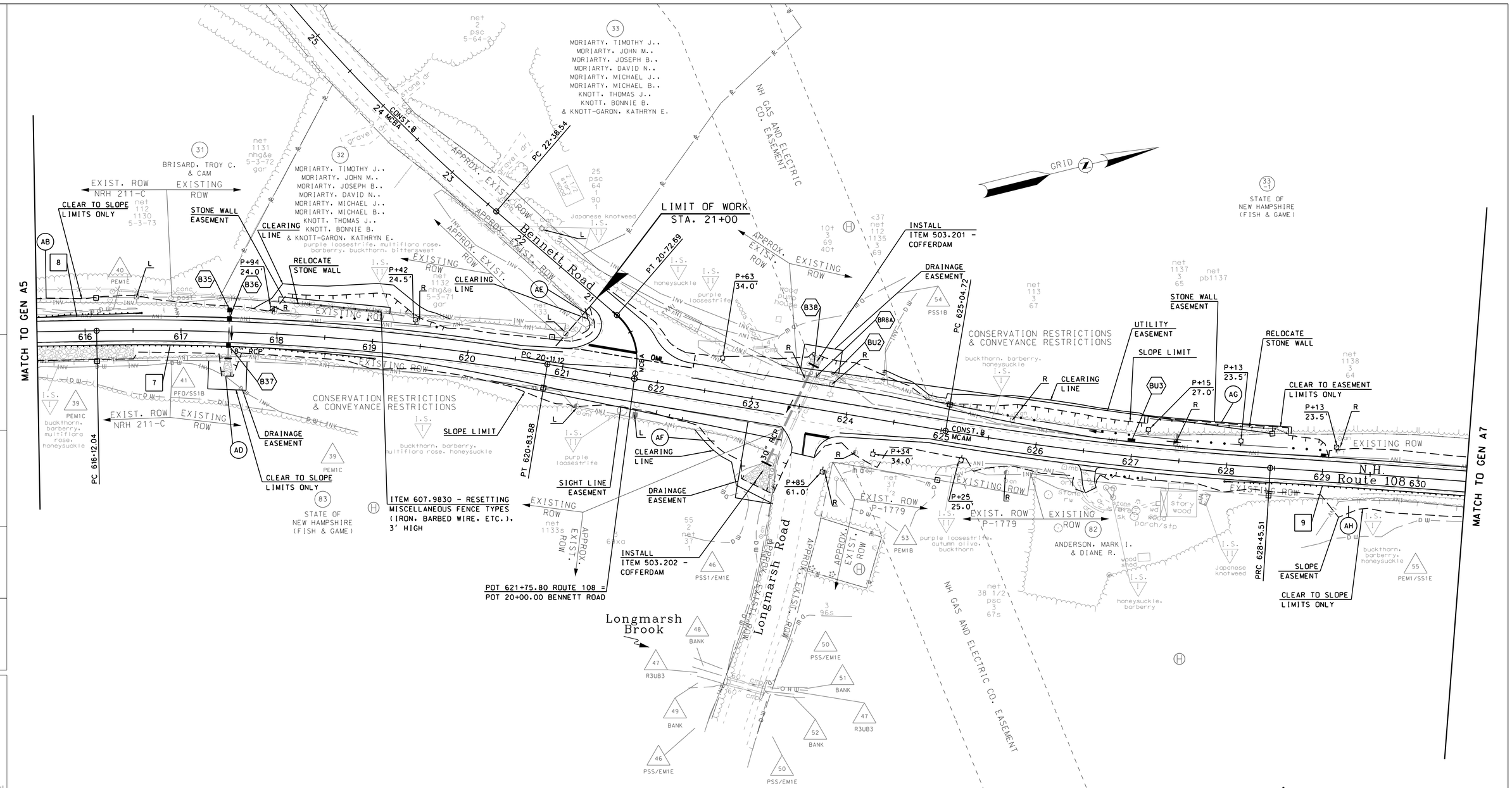
REVISIONS AFTER PROPOSAL

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME • V:\PROJECTS\KHN\24344\CADD_MSTN\PRJ\CUT SHEETS\13080AGEN.DGN



1 REVISION AFTER PROPOSAL REVISES SLOPE LINES AND DRAINAGE FROM STATION 575+50 TO 618+50.

50 0 50 100
SCALE IN FEET

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DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

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MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
GEN A6	13080AGEN.dgn	13080A	29A	119

EXISTING DETAIL	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

NUMBER	DATE	DESCRIPTION
1	7/9/2015	PROFILE REVISION

REVISIONS AFTER PROPOSAL

STATION	STATION
575+50	618+50

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

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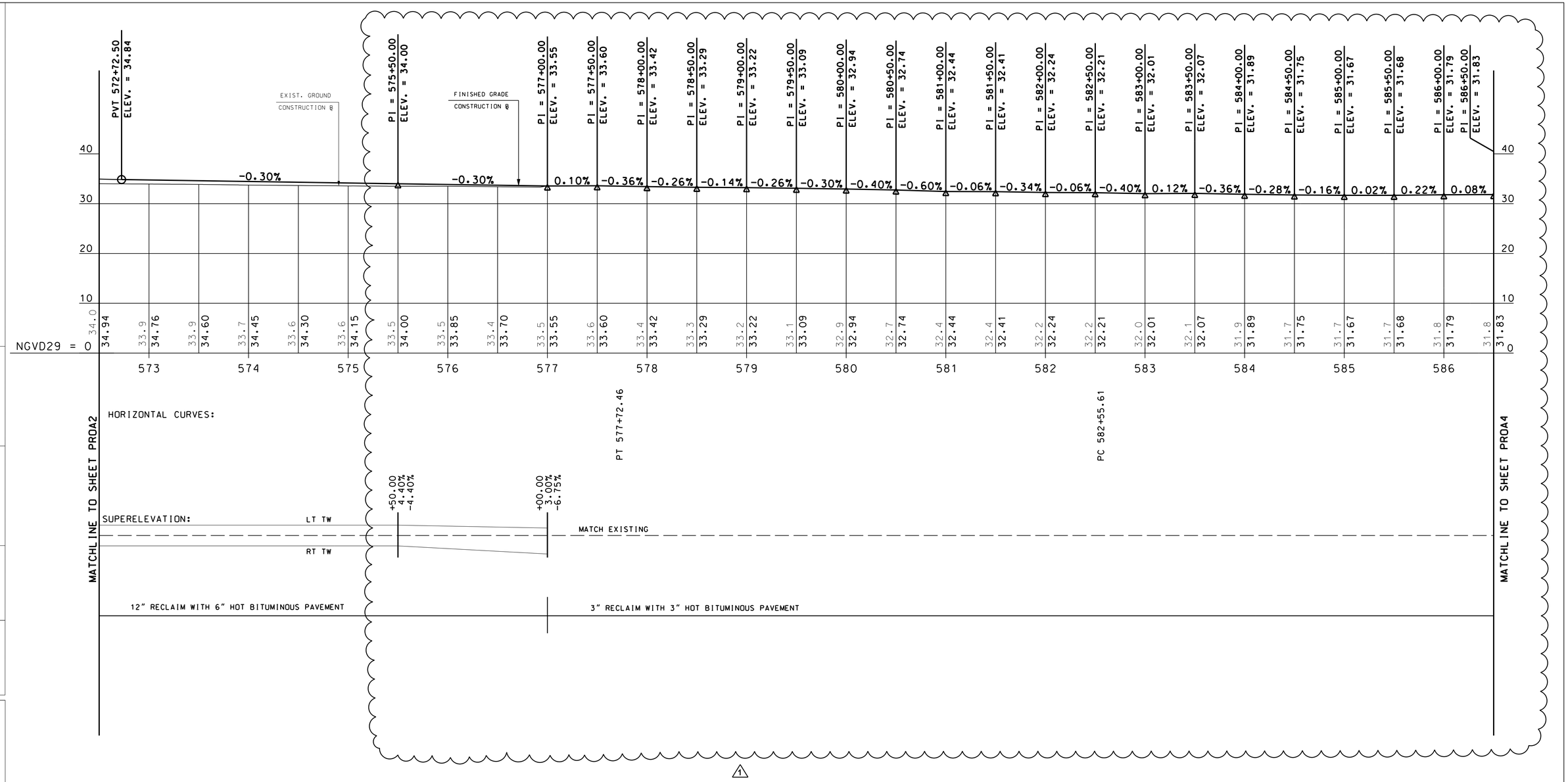

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SCALE IN FEET

REVISIONS AFTER PROPOSAL			
NUMBER	DATE	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION

EXISTING DETAIL NHDOT	DATE	02/10
NEW DESIGN P.R.P.	DATE	7/15
SHEET CHECKED J.P.	DATE	7/15
AS BUILT DETAILS	DATE	

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRA\CUT SHEETS\PROFILES\13080A_PRO.DGN

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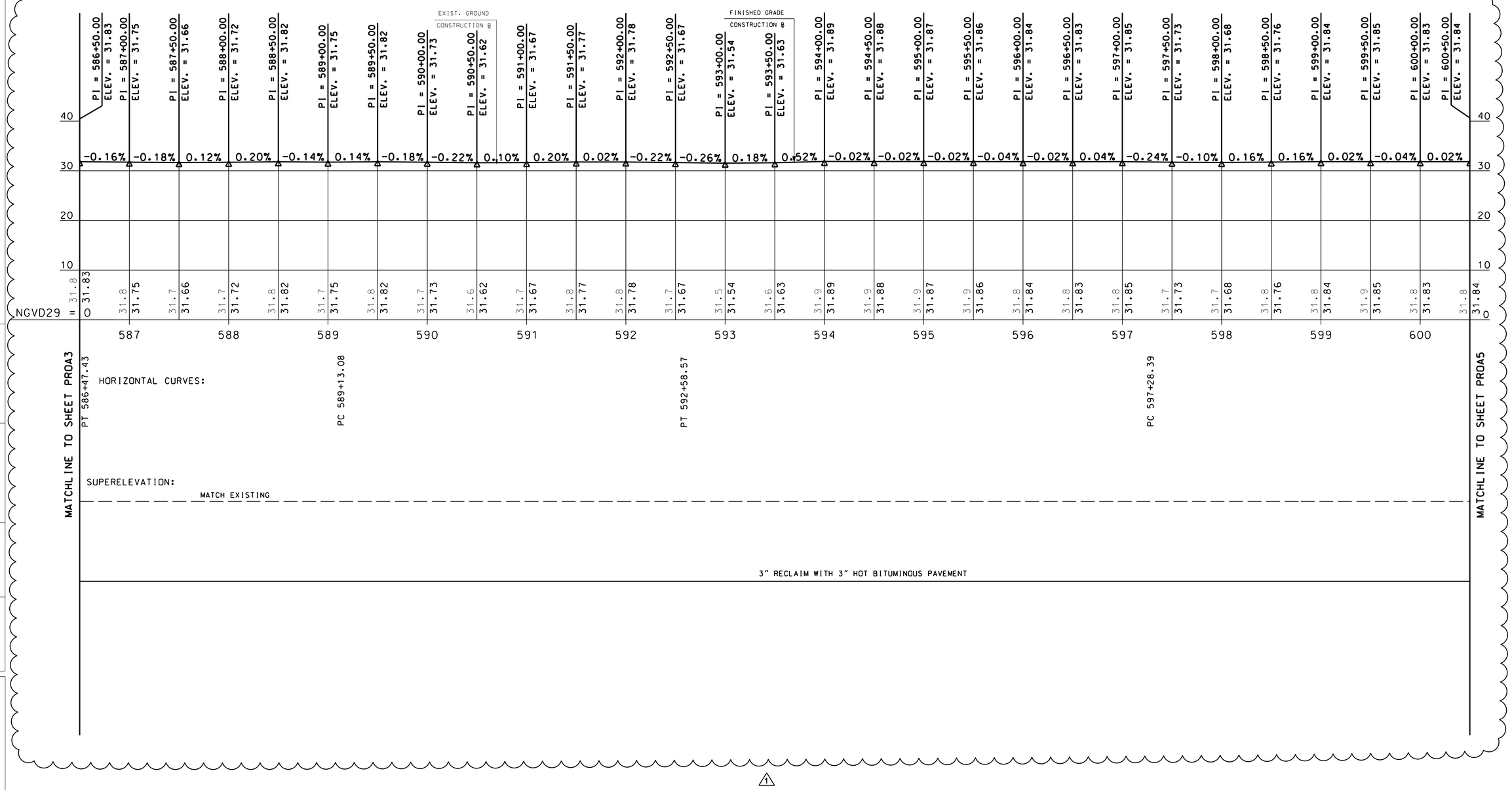
STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

ROUTE 108 PROFILE
SHEET A3

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
PROA3	13080A_PRO.dgn	13080A	33A	119



50 0 50 100
SCALE IN FEET

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

ROUTE 108 PROFILE
SHEET A4

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
PROA4	13080A_PRO.dgn	13080A	34A	119

EXISTING DETAIL NHDOT	DATE	02/10
NEW DESIGN P.R.P.	DATE	7/15
SHEET CHECKED J.P.	DATE	7/15
AS BUILT DETAILS	DATE	

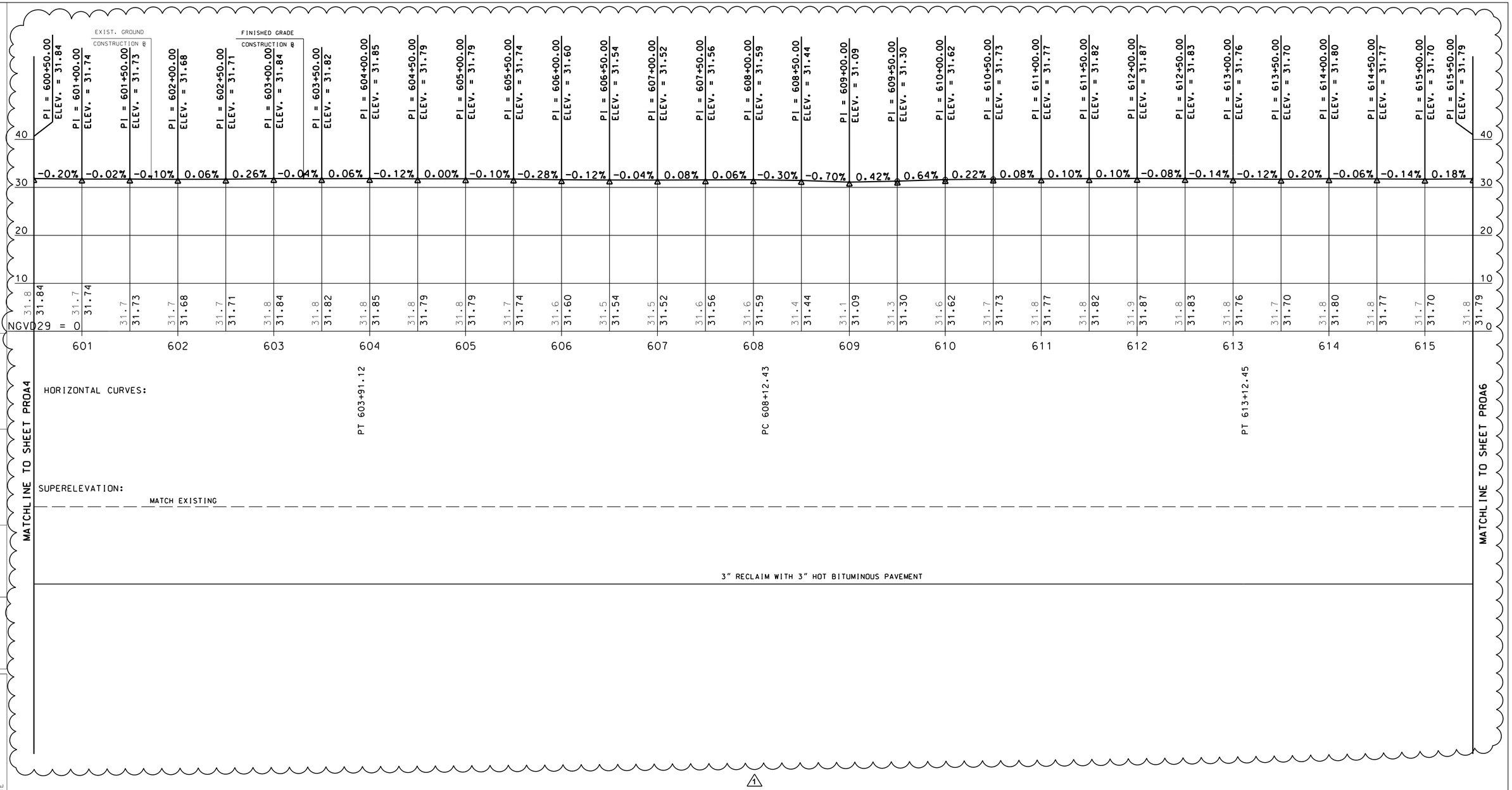
REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50 PROFILE REVISION

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\PROFILES\13080A_PRO.DGN



STATION	DESCRIPTION
618+50	PROFILE REVISION
575+50	

REVISIONS AFTER PROPOSAL

NUMBER	DATE
1	7/9/2015

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

50 0 50 100
SCALE IN FEET

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

ROUTE 108 PROFILE
SHEET A5

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MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
PROA5	13080A_PRO.dgn	13080A	35A	119

CHA PROJ. NO. 24344
PLOTTED DATED 7/9/2015
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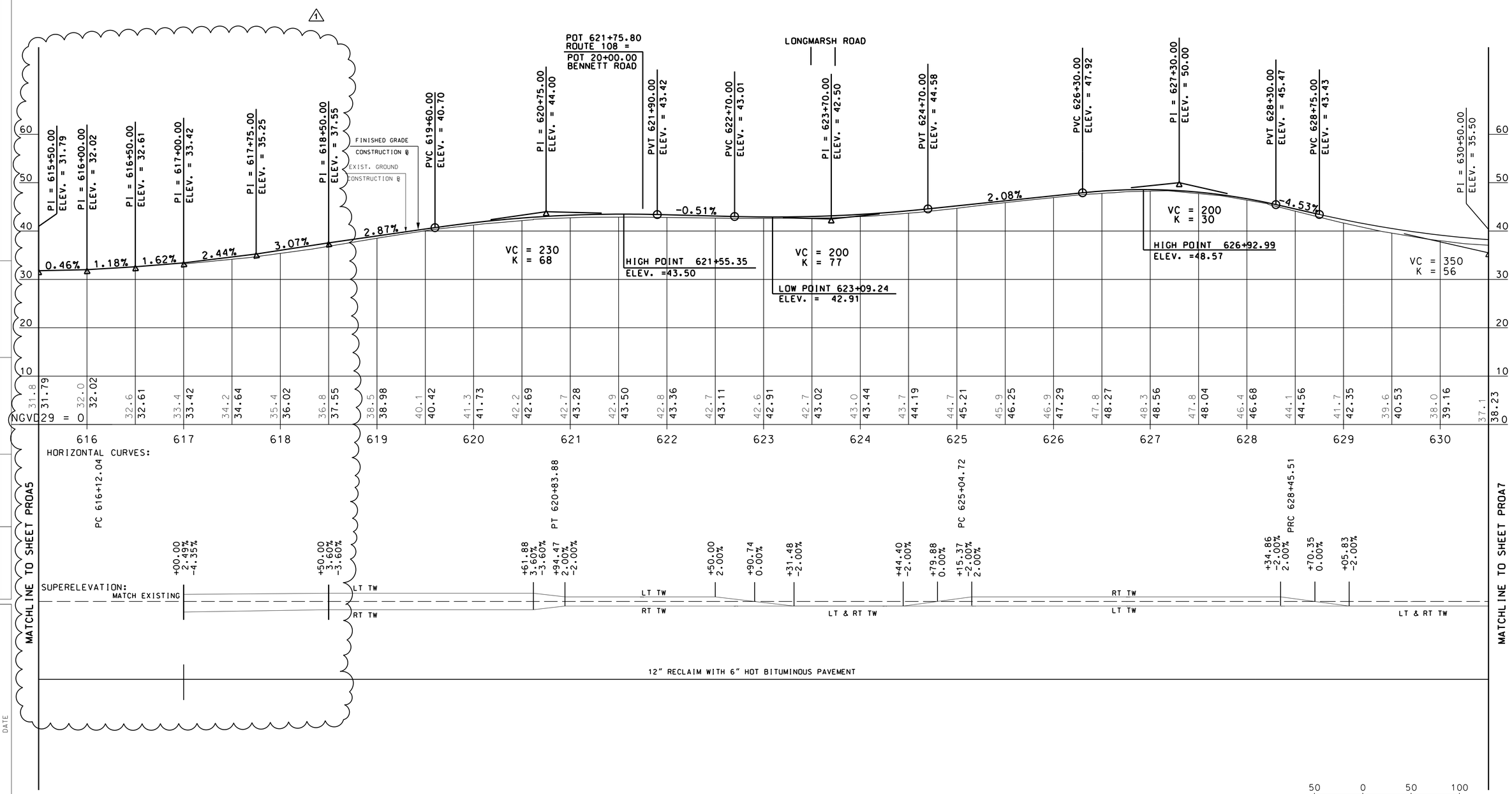

NUMBER	DATE	DESCRIPTION
1	7/9/2015	PROFILE REVISION

REVISIONS AFTER PROPOSAL

STATION	STATION
575+50	618+50

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME - V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\PROFILES\13080A_PRO.DGN

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

ROUTE 108 PROFILE
SHEET A6

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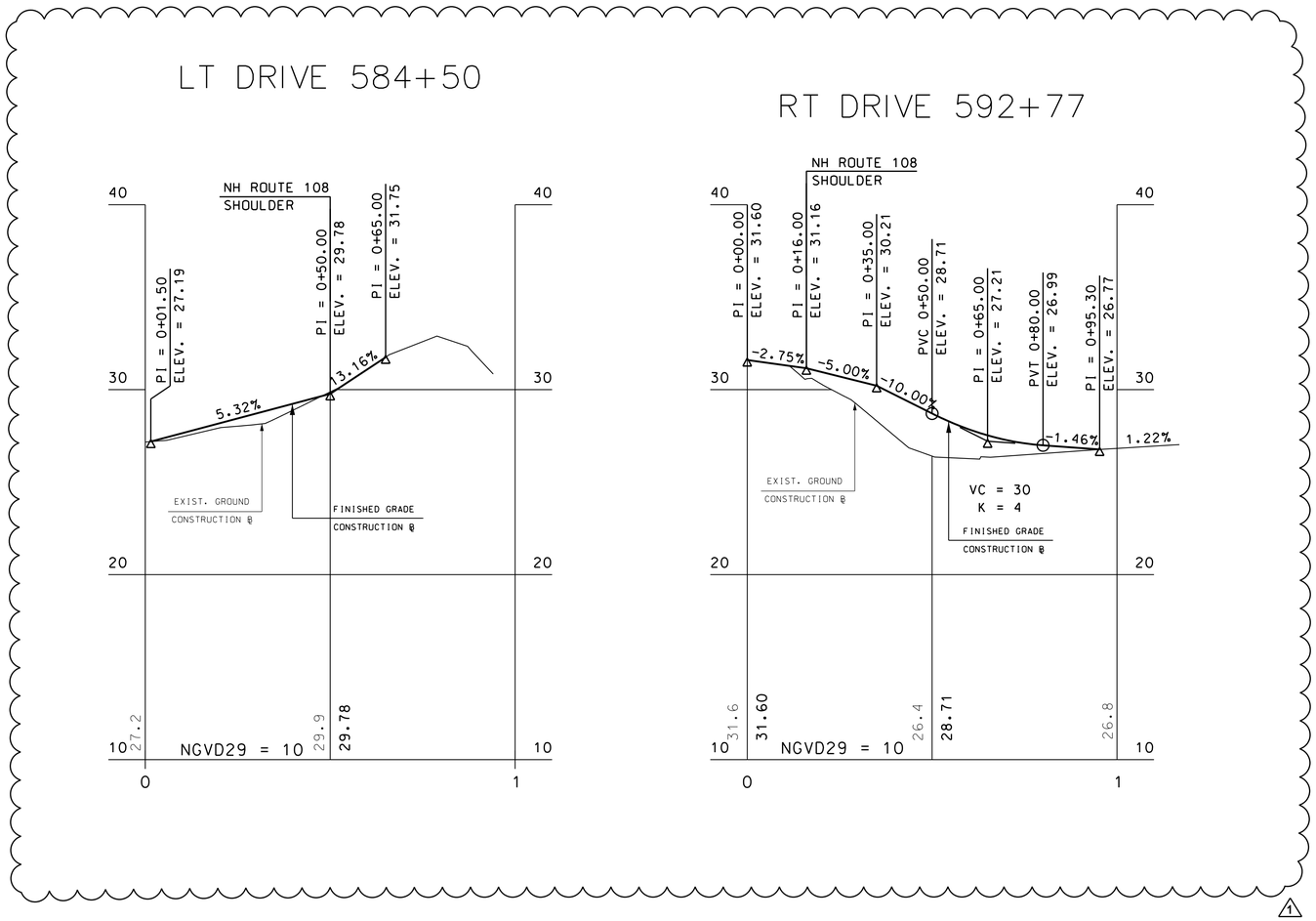
MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
PROA6	13080A_PRO.dgn	13080A	36A	119



1

20 0 20 40

SCALE IN FEET

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRIVE PROFILES A2

CHA

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MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
DRIVE PRO A2	13080A_PRO.dgn	13080A	40A	119

NUMBER	DATE	DESCRIPTION	STATION	STATION
1	7/9/2015	PROFILE REVISION	618+50	575+50

REVISIONS AFTER PROPOSAL

EXISTING DETAIL	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\PROFILES\13080A_PRO.DGN

B1

STA 555+35.0, LT 25.0' TO STA 555+00.0, LT 25.0'
CONSTRUCT 35.0' x 12" PE PIPE (TYPE S)
CONSTRUCT 12" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 45.00
CONSTRUCT 12" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 44.00

B2

STA 557+54.9, LT 21.5' TO STA 557+25.0, RT 35.0'
CONSTRUCT 59.9' x 36" R.C. PIPE
CONSTRUCT PC-3 HEADWALL @ STA +25.0, RT 35.0'
INV. @ PIPE = 35.50
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

B3

STA 557+59.5, LT 49.1' TO STA 557+54.9, LT 21.5'
CONSTRUCT 24.0' x 36" R.C. PIPE
CONSTRUCT DRAINAGE MANHOLE, 8-FOOT @ +54.9, LT 21.5'
36'' INV. IN = 35.25
15'' INV. IN = 37.00
36'' INV. OUT = 35.25
COVER ELEV.= 42.50
CONSTRUCT PC-3 HEADWALL @ STA +59.5, LT 49.1'
INV. @ PIPE = 35.00
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

B4

STA 558+05.1, RT 40.0' TO STA 558+35.0, RT 40.0'
CONSTRUCT 30.2' x 24" PE PIPE (TYPE S)
CONSTRUCT PC-1 HEADWALL @ STA +35.0, RT 40.0'
INV. @ PIPE = 37.75
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
CONSTRUCT 24" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 37.50
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

B5

STA 557+54.9, LT 21.5' TO STA 559+05.0, LT 13.3'
CONSTRUCT 143.7' x 15" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +05.0, LT 13.3' W/ECCENTRIC CONE
& POLYETHYLENE LINER
15'' INV. IN = 39.85
15'' INV. OUT = 38.60
GRATE ELEV.= 45.45

B6

STA 559+05.0, LT 13.3' TO STA 559+15.1, LT 13.3'
CONSTRUCT 6.0' x 15" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +15.1, LT 13.3' W/ECCENTRIC CONE
& POLYETHYLENE LINER
15'' INV. OUT = 40.00
GRATE ELEV.= 45.75

B7

STA 560+64.9, RT 30.0' TO STA 562+19.9, RT 25.0'
CONSTRUCT 156.2' x 12" PE PIPE (TYPE S)
CONSTRUCT 12" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 57.50
CONSTRUCT 12" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 51.00

B8

NOTE DELETED

B9

NOTE DELETED

B10

NOTE DELETED

B11

STA 573+00.0, RT 14.0' TO STA 573+00.0, RT 21.9'
CONSTRUCT 5.9' x 24" R.C. PIPE
CONSTRUCT 24" R.C. END SECTION
INV. @ PIPE = 29.76

B12

STA 573+00.0, LT 39.0' TO STA 573+00.0, RT 14.0'
CONSTRUCT 51.0' x 24" R.C. PIPE
CONSTRUCT DROP INLET TYPE B, 4-FOOT DIAMETER @ +00.0, RT 14.0'
W/ POLYETHYLENE LINER
6" INV. IN = 30.50
24" INV. IN = 28.95
24" INV. OUT = 28.95
GRATE ELEV.= 34.00
CONSTRUCT PC-3 HEADWALL @ STA +00.0, LT 39.0'
INV. @ PIPE = 26.65
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
REMOVE MRM HDR
REMOVE MRM HDR
REMOVE 49.4' x 15" RCP (SUBSIDIARY)

B13

NOTE DELETED

B14

NOTE DELETED

1

B15

STA 581+23.8, LT 38.1' TO STA 580+79.0, RT 35.0'
CONSTRUCT 85.7' x 18" R.C. PIPE
CONSTRUCT PC-3 HEADWALL @ STA +79.0, RT 35.0'
INV. @ PIPE = 26.80
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
CONSTRUCT PC-3 HEADWALL @ STA +23.8, LT 38.1'
INV. @ PIPE = 26.25
STA 580+79.8, RT 33.0' TO STA 580+82.5, RT 25.4'
REMOVE 8.0' x 15" R.C. PIPE (SUBSIDIARY)
REMOVE MRM HDR @ 580+76.8, RT 31.4'

1

B16

NOTE DELETED

1

1

B17

STA 585+50.0, LT 24.8' TO STA 585+50.0, LT 13.3'
CONSTRUCT 9.5' x 12" PE PIPE (TYPE S)
CONSTRUCT DROP INLET TYPE B, 4-FOOT DIAMETER @ +50.0, LT 13.3' w/OFFSET
SLAB TOP & POLYETHYLENE LINER
12'' INV. OUT = 25.55
GRATE ELEV.= 29.70
CONSTRUCT 12" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 25.40
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

NOTE:
ALL CONCRETE HEADWALLS SHALL BE CONSTRUCTED WITH FORM LINERS TO GIVE THE EXPOSED CONCRETE A STONE PATTERN.

1

DRAINAGE STRUCTURES FROM STATION 577+00 TO 617+00 THAT HAVE THE SAME INLET AND OUTLET ELEVATION FOR PIPES CROSSING THE ROADWAY SHALL HAVE NO SUMP. IN ADDITION, IT IS THE INTENT TO ELIMINATE THE "LIP" CREATED AT THE BASE OF THE STRUCTURE WHERE THE PIPES ENTER. THIS MAY MEAN ADDING EXTRA CONCRETE TO THE BOTTOM OF THE STRUCTURE TO ALLOW A SMOOTH SURFACE FROM ONE PIPE TO THE NEXT.

SEE STONE OUTLET PROTECTION TABLE SHOWN ON SHEET 19.

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

CHA PROJ. NO. 24344

PLOTTED DATED 7/9/2015

FILE NAME - V:\PROJECTS\KNN\24344\CADD_MSTN\PRA\CUT SHEETS\13080ADNS_RAP.DGN

CHA
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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE NOTES
1 OF 4

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Default	13080ADNS_RAP.dgn	13080A	41A	119

B18
STA 586+97.8, RT 33.0' TO STA 586+97.8, LT 22.0'
CONSTRUCT 55.0' x 30" R.C. PIPE, 3750D
CONSTRUCT PC-9 HEADWALL @ STA +02.3, RT 33.0'
INV. @ PIPE B18 = 26.00
INV. @ PIPE B19 = 25.70
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
CONSTRUCT PC-9 HEADWALL @ STA +02.3, LT 22.0'
INV. @ PIPE B18 = 25.59
INV. @ PIPE B19 = 25.29
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
COORDINATE W/DRAINAGE NOTE B19

1

B19
STA 587+02.3, LT 22.0' TO STA 587+02.3, RT 33.0'
CONSTRUCT 55.0' x 30" R.C. PIPE, 3750D
COORDINATE W/DRAINAGE NOTE B18

1

B20 NOTE DELETED

1

B21
STA 593+02.2, RT 42.1' TO STA 592+58.7, RT 29.6'
CONSTRUCT 45.1' x 12" PE PIPE (TYPE S)
CONSTRUCT 12" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 29.00
CONSTRUCT 12" ALUMINIZED STEEL END SECTION
INV. @ PIPE = 26.00
REMOVE MRM HDR
REMOVE 4.4' x 15" RCP (SUBSIDIARY)

B22
STA 593+11.8, LT 39.8' TO STA 593+21.8, RT 40.3'
CONSTRUCT 80.7' x 36" R.C. PIPE, 3750D
CONSTRUCT PC-9 HEADWALL @ STA +27.2, RT 39.7'
INV. @ PIPE B22 = 26.00
INV. @ PIPE B23 = 25.70
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
CONSTRUCT PC-9 HEADWALL @ STA +17.2, LT 40.3'
INV. @ PIPE B22 = 25.60
INV. @ PIPE B23 = 25.30
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
COORDINATE W/DRAINAGE NOTE B23

1

B23
STA 593+17.2, LT 40.3' TO STA 593+27.2, RT 39.7'
CONSTRUCT 80.7' x 36" R.C. PIPE, 3750D
COORDINATE W/DRAINAGE NOTE B22

1

B24 NOTE DELETED

1

B24 a NOTE DELETED

1

B25
STA 599+00.0, LT 27.3' TO STA 599+00.0, RT 23.6'
CONSTRUCT 50.9' x 15" R.C. PIPE
CONSTRUCT 15" R.C. END SECTION @ +00.0, LT 27.3'
INV. @ PIPE = 26.32
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
CONSTRUCT 15" R.C. END SECTION @ +00.0, RT 23.6'
INV. @ PIPE = 27.95

1

B26
STA 609+00.0, LT 13.3' TO STA 609+00.0, LT 30.0'
CONSTRUCT 14.8' x 36" R.C. PIPE
CONSTRUCT PC-3 HEADWALL @ STA +00.0, LT 30.0'
INV. @ PIPE = 25.32

1

B27
STA 609+00.0, RT 13.3' TO STA 609+00.0, LT 13.3'
CONSTRUCT 21.8' x 36" R.C. PIPE, 3750D
CONSTRUCT DROP INLET TYPE B, 5-FOOT DIAMETER @ +00.0, LT 13.3' W/OFFSET
SLAB TOP & POLYETHYLENE LINER
36" INV. IN = 25.25
36" INV. OUT = 25.25
GRATE ELEV.= 31.09

1

B28
STA 609+00.0, RT 30.0' TO STA 609+00.0, RT 13.3'
CONSTRUCT 14.8' x 36" R.C. PIPE
CONSTRUCT DROP INLET TYPE B, 5-FOOT DIAMETER @ +00.0, RT 13.3' W/OFFSET
SLAB TOP & POLYETHYLENE LINER
36" INV. IN = 25.15
36" INV. OUT = 25.15
GRATE ELEV.= 30.55
CONSTRUCT PC-3 HEADWALL @ STA +00.0, RT 30.0'
INV. @ PIPE = 25.07

1

B29
STA 609+89.9, RT 29.0' TO STA 610+50.0, RT 13.3'
CONSTRUCT 59.8' x 15" R.C. PIPE
CONSTRUCT DROP INLET TYPE B, 4-FOOT DIAMETER @ +50.0, RT 13.3' W/ECCENTRIC CONE
& POLYETHYLENE LINER
15'' INV. IN = 25.50
15'' INV. OUT = 25.25
GRATE ELEV.= 31.19
CONSTRUCT PC-3 HEADWALL @ STA +89.9, RT 29.0'
INV. @ PIPE = 25.00

1

B30
STA 610+50.0, RT 13.3' TO STA 611+00.0, RT 13.3'
CONSTRUCT 45.8' x 15" R.C. PIPE, 3750D
CONSTRUCT DROP INLET TYPE B, 4-FOOT DIAMETER @ +00.0, RT 13.3' W/OFFSET
SLAB TOP & POLYETHYLENE LINER
15" INV. IN = 27.28
15" INV. IN = 27.28
15" INV. OUT = 27.28
GRATE ELEV.= 31.25

1

B30 a
STA 611+00.0, RT 13.3' TO STA 611+00.0, RT 21.8'
CONSTRUCT 6.6' x 15" R.C. PIPE
CONSTRUCT 15" R.C. END SECTION
INV. @ PIPE = 27.48

B31 NOTE DELETED

1

B31 a
611+00.0, RT 13.3' TO STA 611+00.0, LT 24.9'
CONSTRUCT 36.2' x 15" R.C. PIPE, 3750D
CONSTRUCT 15" R.C. END SECTION
INV. @ PIPE = 28.21

1

B32
STA 614+75.0, LT 13.3' TO STA 614+75.0, LT 22.7'
CONSTRUCT 7.5' x 30" R.C. PIPE
CONSTRUCT PC-3 HEADWALL @ STA +75.0, LT 22.7'
INV. @ PIPE = 26.30
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

B33
STA 614+75.0, RT 12.8' TO STA 614+75.0, LT 12.8'
CONSTRUCT 20.5' x 30" R.C. PIPE, 3750D
CONSTRUCT DROP INLET TYPE B, 5-FOOT DIAMETER @ +75.0, LT 12.8' W/ECCENTRIC CONE
& POLYETHYLENE LINER
30" INV. IN = 26.25
30" INV. OUT = 26.25
GRATE ELEV.= 31.32

1

B34
STA 614+75.0, RT 25.3' TO STA 614+75.0, RT 12.8'
CONSTRUCT 10.1' x 30" R.C. PIPE
CONSTRUCT DROP INLET TYPE B, 5-FOOT DIAMETER @ +75.0, RT 12.8' W/ECCENTRIC CONE
& POLYETHYLENE LINER
30" INV. IN = 26.15
30" INV. OUT = 26.15
GRATE ELEV.= 31.29
CONSTRUCT PC-3 HEADWALL @ STA +75.0, RT 25.3'
INV. @ PIPE = 26.10
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

1

NOTE:
ALL CONCRETE HEADWALLS SHALL BE CONSTRUCTED WITH FORM LINERS TO GIVE THE EXPOSED CONCRETE A STONE PATTERN.

1

DRAINAGE STRUCTURES FROM STATION 577+00 TO 617+00 THAT HAVE THE SAME INLET AND OUTLET ELEVATION FOR PIPES CROSSING THE ROADWAY SHALL HAVE NO SUMP. IN ADDITION, IT IS THE INTENT TO ELIMINATE THE "LIP" CREATED AT THE BASE OF THE STRUCTURE WHERE THE PIPES ENTER. THIS MAY MEAN ADDING EXTRA CONCRETE TO THE BOTTOM OF THE STRUCTURE TO ALLOW A SMOOTH SURFACE FROM ONE PIPE TO THE NEXT.

SEE STONE OUTLET PROTECTION TABLE SHOWN ON SHEET 19.

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION
1	7/9/2015	575+50	PROFILE REVISION
		618+50	

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080ADNS_RAP.DGN PLOTTED DATED 7/9/2015 CHA PROJ. NO. 24344

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE NOTES 2 OF 4

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Default	13080ADNS_RAP.dgn	13080A	42A	119

B35
STA 617+50.0, LT 14.0' TO STA 617+50.0, LT 23.0'
CONSTRUCT 5.0' x 18" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE E @ +50.0, LT 23.0' w/SLAB TOP
18'' INV. OUT = 29.10
GRATE ELEV.= 33.00

B36
STA 617+50.0, RT 13.3' TO STA 617+50.0, LT 14.0'
CONSTRUCT 23.3' x 18" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +50.0, RT 13.3'
W/ POLYETHYLENE LINER
18" INV. IN = 29.00
18" INV. OUT = 28.75
GRATE ELEV.= 34.80
1

B37
STA 617+50.0, RT 28.0' TO STA 617+50.0, RT 13.3'
CONSTRUCT 12.8' x 18" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +50.0, RT 13.3' W/ECCENTRIC CONE
& POLYETHYLENE LINER
18'' INV. IN = 28.60
18'' INV. OUT = 28.60
GRATE ELEV.= 33.95
CONSTRUCT PC-3 HEADWALL @ STA +50.0, RT 28.0'
INV. @ PIPE = 28.50
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
1

B38
STA 623+30.0, RT 65.0' TO STA 623+65.0, LT 45.0'
CONSTRUCT 115.4' x 30" R.C. PIPE
CONSTRUCT PC-3 HEADWALL @ STA +65.0, LT 45.0'
INV. @ PIPE = 35.00
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE
CONSTRUCT PC-3 HEADWALL @ STA +30.0, RT 65.0'
INV. @ PIPE = 33.00
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

B39
STA 631+00.0, RT 13.3' TO STA 631+00.0, LT 26.0'
CONSTRUCT 35.3' x 15" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE E @ +00.0, LT 26.0' w/SLAB TOP
6'' INV. IN = 32.75
15'' INV. OUT = 32.00
GRATE ELEV.= 35.50

B40
STA 631+30.0, RT 13.3' TO STA 631+00.0, RT 13.3'
CONSTRUCT 26.0' x 15" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +00.0, RT 13.3' W/ECCENTRIC CONE
& POLYETHYLENE LINER
15'' INV. IN = 31.50
15'' INV. OUT = 31.25
GRATE ELEV.= 37.26

B41
STA 631+30.0, RT 27.5' TO STA 631+30.0, RT 13.3'
CONSTRUCT 12.3' x 24" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +30.0, RT 13.3' W/ECCENTRIC CONE
& POLYETHYLENE LINER
15" INV. IN = 31.00
15" INV. IN = 31.00
24" INV. OUT = 30.00
GRATE ELEV.= 37.18
CONSTRUCT PC-3 HEADWALL @ STA +30.0, RT 27.5'
INV. @ PIPE = 29.39
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

B42
STA 631+30.0, RT 13.3' TO STA 631+30.0, LT 26.0'
CONSTRUCT 35.3' x 15" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE E @ +30.0, LT 26.0' w/SLAB TOP
& POLYETHYLENE LINER
6'' INV. IN = 32.25
15'' INV. OUT = 31.50
GRATE ELEV.= 35.60

B43
STA 639+90.0, RT 14.0' TO STA 639+25.0, RT 21.0'
CONSTRUCT 61.4' x 12" R.C. PIPE
CONSTRUCT DROP INLET TYPE B, 4-FOOT DIAMETER @ +25.0, RT 21.0' w/SLAB TOP
6" INV. IN = 26.70
12" INV. OUT = 26.17
GRATE ELEV.= 30.12

B44
STA 639+90.0, LT 22.0' TO STA 638+54.6, LT 27.5'
CONSTRUCT 131.5' x 15" PE PIPE (TYPE S)
CONSTRUCT CATCH BASIN TYPE E @ +54.6, LT 27.5' w/SLAB TOP
15'' INV. OUT = 27.50
GRATE ELEV.= 31.20
REMOVE 5.2' x 15" RCP (SUBSIDIARY)

B45
STA 639+90.0, LT 22.0' TO STA 639+90.0, RT 14.0'
CONSTRUCT 32.0' x 15" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +90.0, LT 22.0' w/SLAB TOP
15" INV. IN = 25.77
6" INV. IN = 26.00
15" INV. OUT = 25.77
GRATE ELEV.= 29.00

B46
STA 640+50.0, RT 15.0' TO STA 639+90.0, RT 14.0'
CONSTRUCT 56.0' x 18" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +90.0, RT 14.0' w/SLAB TOP
& POLYETHYLENE LINER
15" INV. IN = 25.61
12" INV. IN = 25.36
18" INV. OUT = 25.36
GRATE ELEV.= 29.65

B47
STA 640+71.9, RT 30.7' TO STA 640+50.0, RT 15.0'
CONSTRUCT 25.0' x 18" PE PIPE (TYPE S)
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +50.0, RT 15.0' w/SLAB TOP
18'' INV. IN = 25.08
18'' INV. OUT = 25.08
GRATE ELEV.= 29.00
CONSTRUCT PC-1 HEADWALL @ STA +71.9, RT 30.7'
INV. @ PIPE = 24.90
CONSTRUCT STONE FILL, CLASS C
CONSTRUCT NON-WOVEN GEOTEXTILE

B48
STA 641+78.0, LT 38.0' TO STA 641+50.0, LT 19.2'
CONSTRUCT 29.7' x 24" PE PIPE (TYPE S)
CONSTRUCT CATCH BASIN TYPE B, 8-FOOT DIAMETER @ +50.0, LT 19.2'
W/ECCENTRIC CONE & POLYETHYLENE LINER
15" INV. IN = 24.40
24" INV. IN = 23.40
24" INV. OUT = 23.40
GRATE ELEV.= 28.78
CONSTRUCT 24" R.C. END SECTION
INV. @ PIPE = 23.20

B49
STA 641+50.0, LT 19.2' TO STA 641+50.0, RT 16.3'
CONSTRUCT 31.5' x 15" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +50.0, RT 16.3'
15'' INV. IN = 24.56
15'' INV. OUT = 24.56
GRATE ELEV.= 29.00

B50
STA 641+50.0, RT 16.3' TO STA 642+43.0, RT 14.0'
CONSTRUCT 89.0' x 15" R.C. PIPE
CONSTRUCT DROP INLET TYPE B, 4-FOOT DIAMETER @ +43.0, RT 14.0'
W/ POLYETHYLENE LINER
15'' INV. IN = 25.75
15'' INV. OUT = 25.50
GRATE ELEV.= 30.88

B51
STA 642+43.0, RT 14.0' TO STA 643+85.0, RT 21.0'
CONSTRUCT 138.2' x 15" R.C. PIPE
CONSTRUCT DROP INLET TYPE B, 4-FOOT DIAMETER @ +85.0, RT 21.0'
12'' INV. IN = 31.25
12'' INV. IN = 31.25 (FUTURE CONTRACT B)
6'' INV. IN = 31.25 (FUTURE CONTRACT B)
15'' INV. OUT = 31.00
GRATE ELEV.= 36.90

B52
STA 641+50.0, LT 19.2' TO STA 642+50.0, LT 18.0'
CONSTRUCT 94.1' x 24" R.C. PIPE
CONSTRUCT CATCH BASIN TYPE B, 4-FOOT DIAMETER @ +50.0, LT 18.0'
24" INV. OUT = 24.25
GRATE ELEV.= 30.88

NOTE:
ALL CONCRETE HEADWALLS SHALL BE CONSTRUCTED WITH FORM LINERS TO GIVE THE EXPOSED CONCRETE A STONE PATTERN.
1

DRAINAGE STRUCTURES FROM STATION 577+00 TO 617+00 THAT HAVE THE SAME INLET AND OUTLET ELEVATION FOR PIPES CROSSING THE ROADWAY SHALL HAVE NO SUMP. IN ADDITION, IT IS THE INTENT TO ELIMINATE THE "LIP" CREATED AT THE BASE OF THE STRUCTURE WHERE THE PIPES ENTER. THIS MAY MEAN ADDING EXTRA CONCRETE TO THE BOTTOM OF THE STRUCTURE TO ALLOW A SMOOTH SURFACE FROM ONE PIPE TO THE NEXT.

SEE STONE OUTLET PROTECTION TABLE SHOWN ON SHEET 19.

REVISIONS AFTER PROPOSAL

STATION	STATION	DESCRIPTION	NUMBER	DATE
575+50	618+50	PROFILE REVISION	1	7/9/2015

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE NOTES
3 OF 4

MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Default	13080ADNS_RAP.dgn	13080A	43A	119

CHA PROJ. NO. 24344
PLOTTED DATED 7/9/2015
FILE NAME • V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080ADNS_RAP.DGN

BR1 STA 557+18.5, RT 25.5' TO STA 557+19.0, LT 29.9'
REMOVE 55.5' x 18" RCP
REMOVE (2) MRM HDR

BR2 STA 572+71.1, RT 25.1' TO STA 572+50.3, RT 25.0'
REMOVE 20.6' x 15" RCP
REMOVE (2) MRM HDR

BR3 STA 580+82.5, RT 25.4' TO STA 580+99.5, LT 21.7'
REMOVE 50.1' x 15" RCP
REMOVE MRM HDR

BR4 STA 587+24.9, RT 28.3' TO STA 587+23.3, LT 23.8'
FILL & ABANDON 52.1' x 24" RCP
REMOVE (2) MRM HDR
1

BR5 STA 592+88.1, RT 30.2' TO STA 592+71.0, RT 29.4'
FILL & ABANDON 17.2' x 15" RCP
1

BR6 STA 592+92.8, RT 26.1' TO STA 592+92.9, LT 27.8'
FILL & ABANDON 53.8' x 18" RCP
REMOVE (2) MRM HDR
1

BR7 STA 614+48.5, RT 24.0' TO STA 614+50.6, LT 23.2'
FILL & ABANDON 47.2' x 15" RCP
REMOVE (2) MRM HDR
1

BR8 STA 558+38.2, RT 32.8' TO STA 558+08.8, RT 30.3'
REMOVE 29.7' x 12" PIPE

BR8A STA 623+33.8, RT 67.7' TO STA 623+62.1, LT 34.7'
FILL ABANDONED PIPE 106.3' x 15" RCP

BR9 STA 631+14.7, RT 27.0' TO STA 631+14.1, LT 23.2'
REMOVE 46.3' x 18" CMP
REMOVE MRM HDR

BR10 STA 638+69.7, LT 24.3' TO STA 639+02.5, LT 20.9'
REMOVE 33.0' x 15" RCP

BU1 STA 573+00.0, RT 14.0' TO STA 567+00.0, RT 17.0'
CONSTRUCT 594.1' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ 567+00.0, RT 17.0'
CONSTRUCT FLUSHING BASIN @ 570+00.0, RT 17.0'

BU2 STA 624+00.0, LT 40.0' TO STA 626+97.1, LT 17.1'
CONSTRUCT 307.4' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT UL-2 HEADWALL @ STA +00.0, LT 40.0'
INV. @ PIPE = 37.15
CONSTRUCT FLUSHING BASIN @ 626+97.0, LT 17.0'

BU3 STA 631+00.0, LT 26.0' TO STA 627+00.0, LT 17.0'
CONSTRUCT 403.0' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ 627+00.0, LT 17'
CONSTRUCT FLUSHING BASIN @ 629+00.0, LT 17'

BU4 STA 631+30.0, LT 26.0' TO STA 634+62.9, LT 17.0'
CONSTRUCT 336.6' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ 634+62.9, LT 17'
CONSTRUCT FLUSHING BASIN @ 633+00.0, LT 17'

BU5 STA 636+52.0, RT 15.0' TO STA 634+00.0, RT 17.0'
CONSTRUCT 250.7' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ +00.0, RT 17'

BU6 STA 637+52.0, LT 15.0' TO STA 634+65.8, LT 17.0'
CONSTRUCT 289.6' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ +65.8, LT 17'

BU7 STA 638+27.0, RT 15.0' TO STA 636+50.0, RT 17.0'
CONSTRUCT 176.9' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ +50.0, RT 17'

BU8 STA 639+90.0, LT 22.0' TO STA 637+50.0, LT 17.0'
CONSTRUCT 241.7' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ +50.0, LT 17'

BU9 STA 638+25.0, RT 15' TO STA 639+25.0, RT 21.0'
CONSTRUCT 101.3' x 6" PERF. CORR. POLYETHYLENE PIPE UND.
CONSTRUCT FLUSHING BASIN @ +25.0, RT 17'

NOTE:
ALL CONCRETE HEADWALLS SHALL BE CONSTRUCTED
WITH FORM LINERS TO GIVE THE EXPOSED CONCRETE
A STONE PATTERN

SEE STONE OUTLET PROTECTION TABLE SHOWN ON SHEET 19

REVISIONS AFTER PROPOSAL

STATION	DESCRIPTION
618+50	PROFILE REVISION

STATION	NUMBER	DATE
575+50	1	7/9/2015

		DATE
EXISTING DETAIL	NHDOT	02/10
NEW DESIGN	P.R.P.	7/15
SHEET CHECKED	J.P.	7/15
AS BUILT DETAILS		DATE

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRAINAGE NOTES
4 OF 4

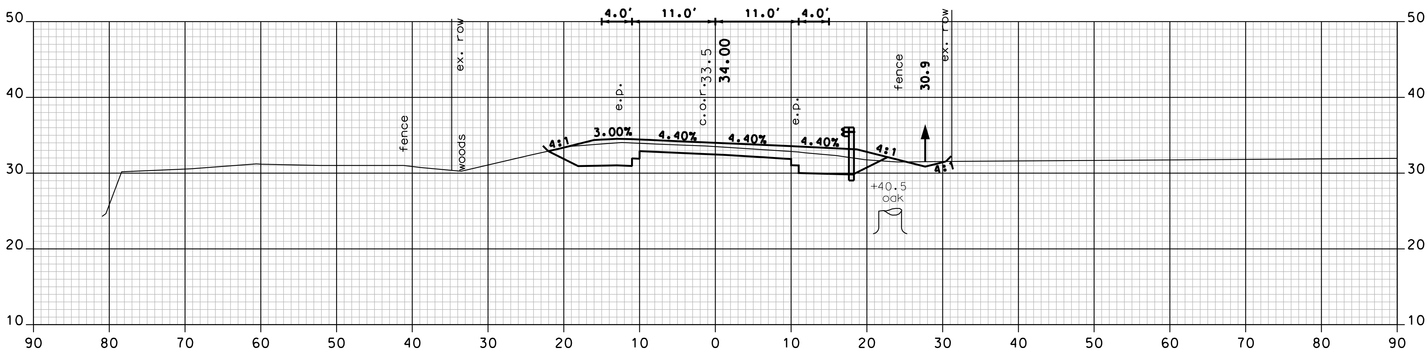
MODEL	DGN FILENAME	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Default	13080ADNS_RAP.dgn	13080A	44A	119

CHA PROJ. NO. 24344
PLOTTED DATED 7/9/2015
FILE NAME = V:\PROJECTS\KNH\24344\CADD_MSTN\PRJ\CUT SHEETS\13080ADNS_RAP.DGN

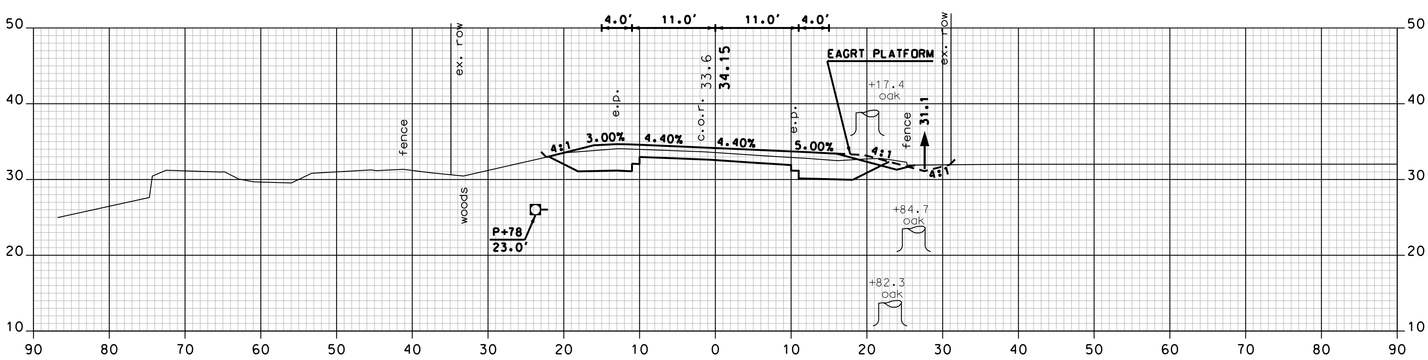
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

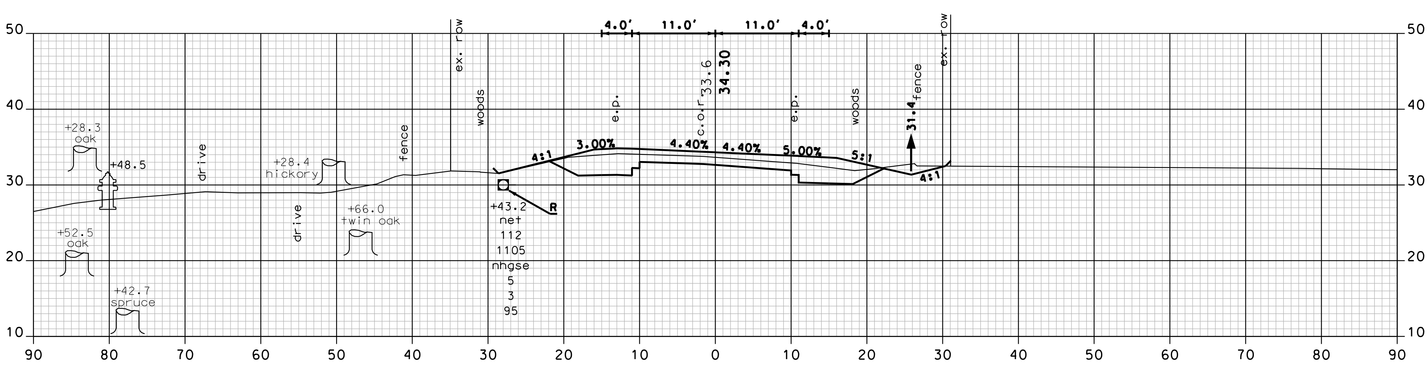
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



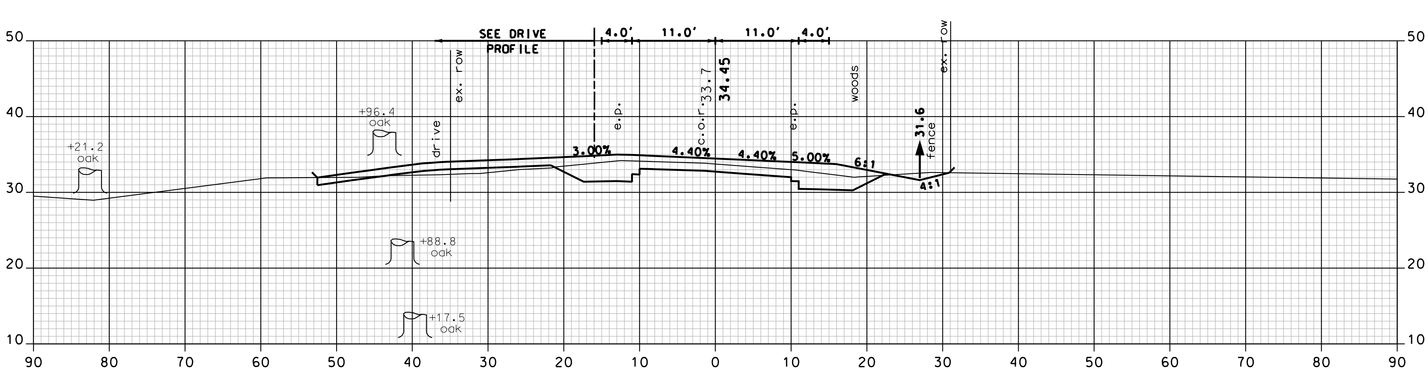
575+50



575+00



574+50



574+00 (DRIVE LT.)

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

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SHEET TOTALS

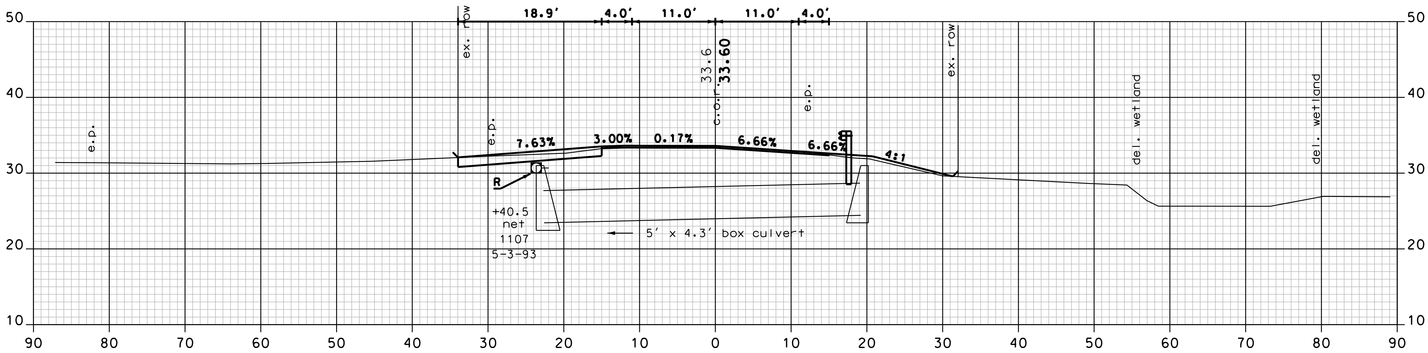
COMMON EXCAV.	553.0 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	16.2 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	71A	119

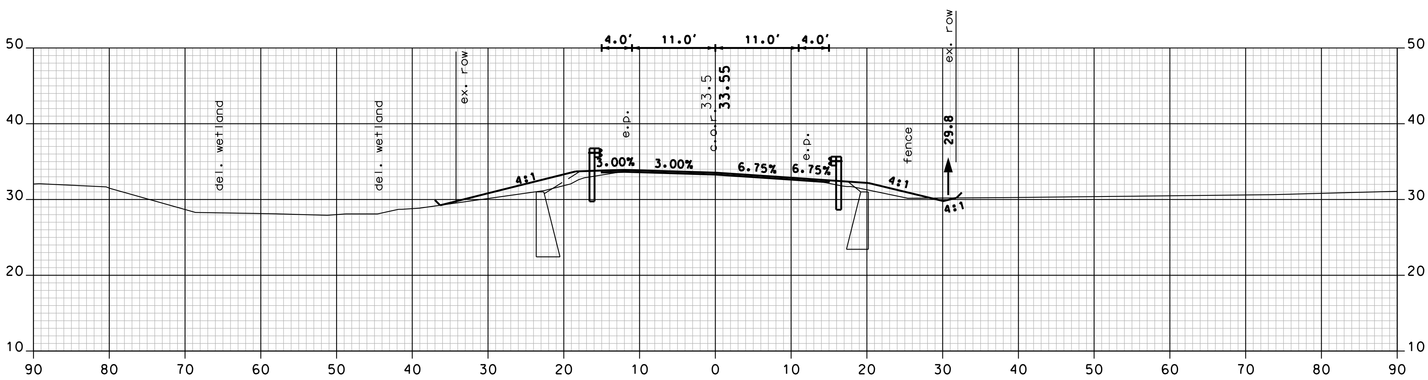
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

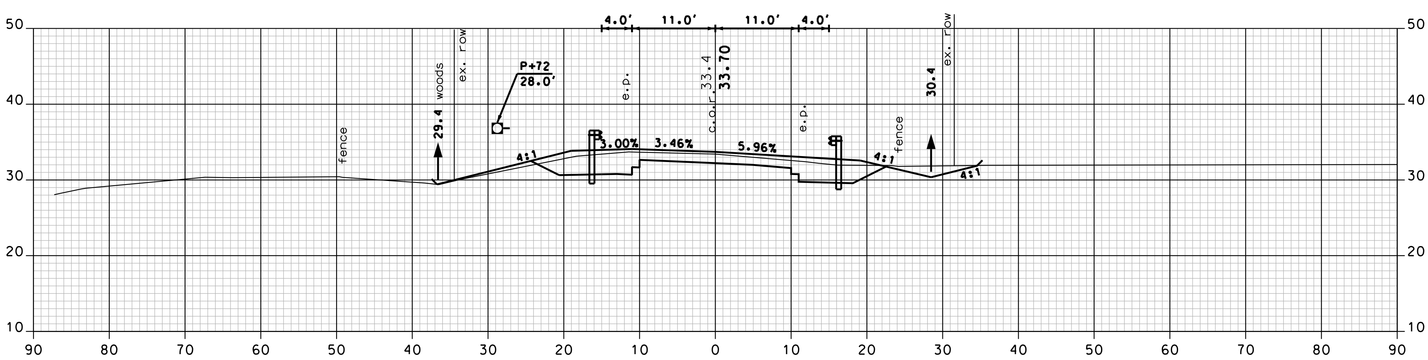
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



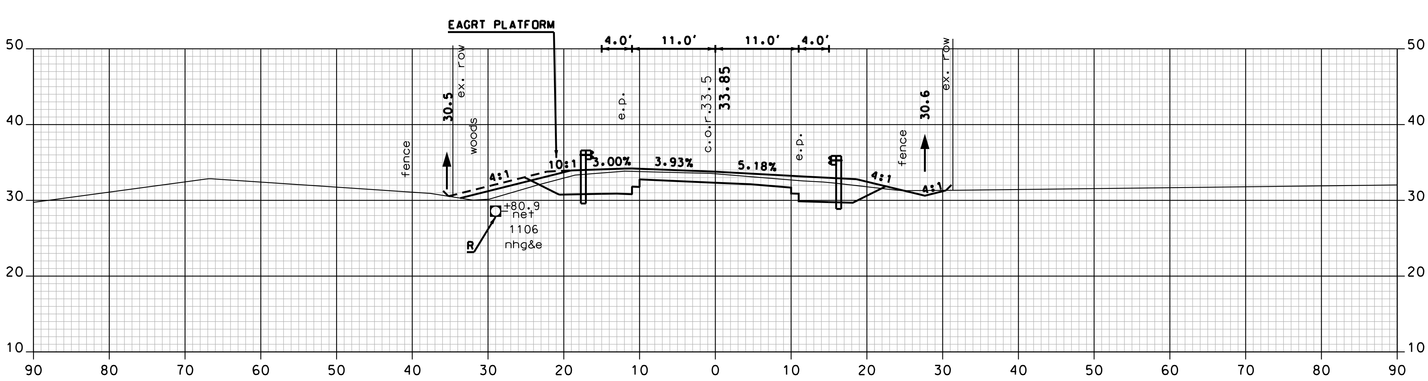
577+50 (DRIVE LT.)



577+00



576+50



576+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

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SHEET TOTALS

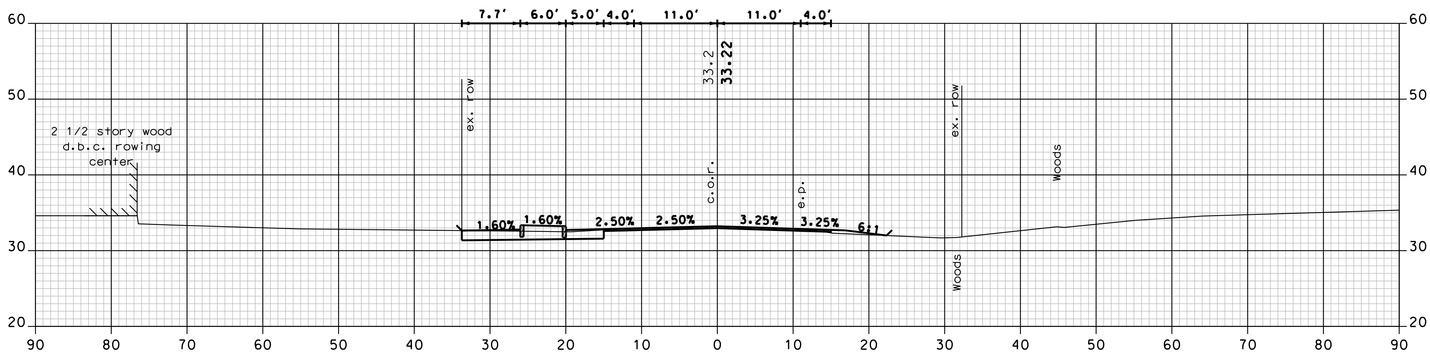
COMMON EXCAV.	229.5 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	77.4 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	72A	119

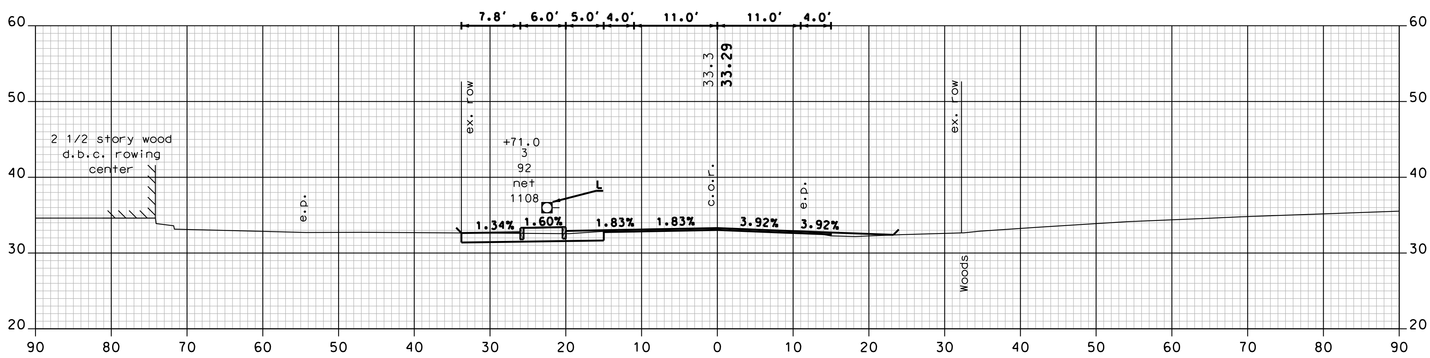
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

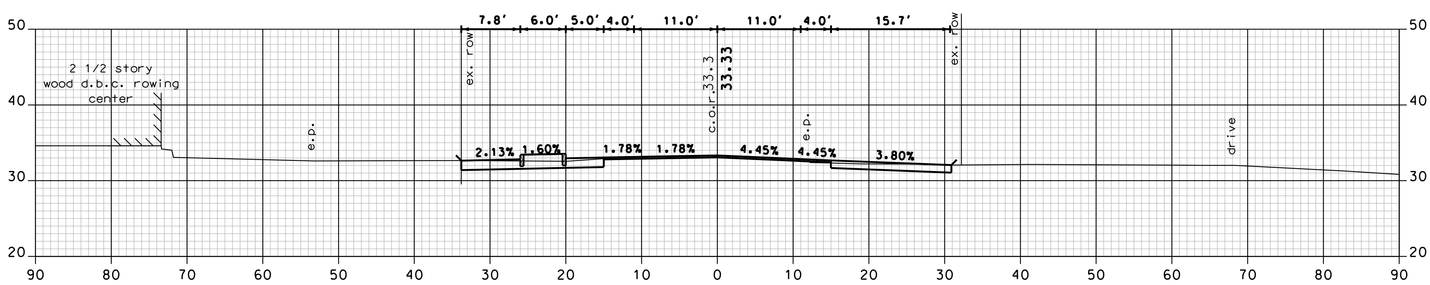
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



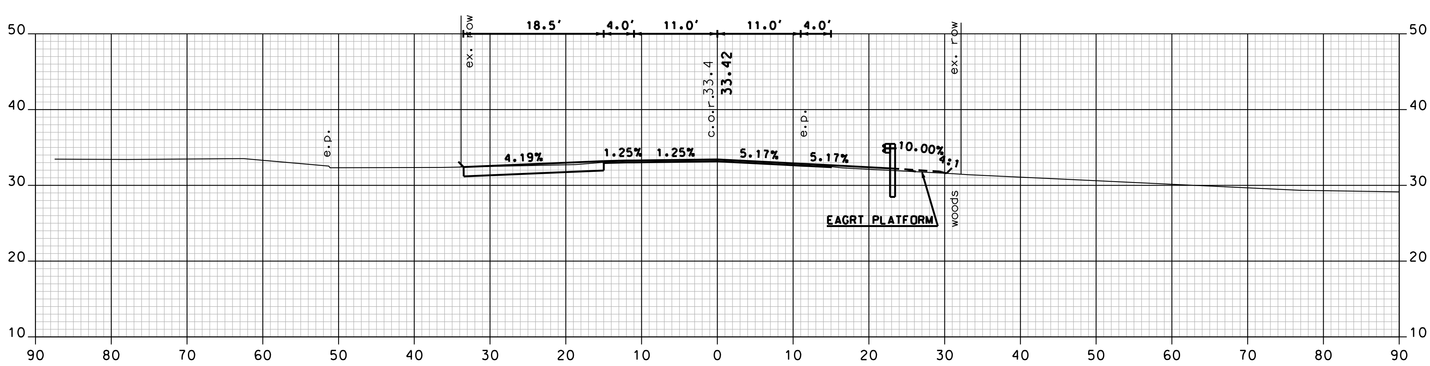
579+00



578+50



578+34 (DRIVE RT.)



578+00 (DRIVE LT.)

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

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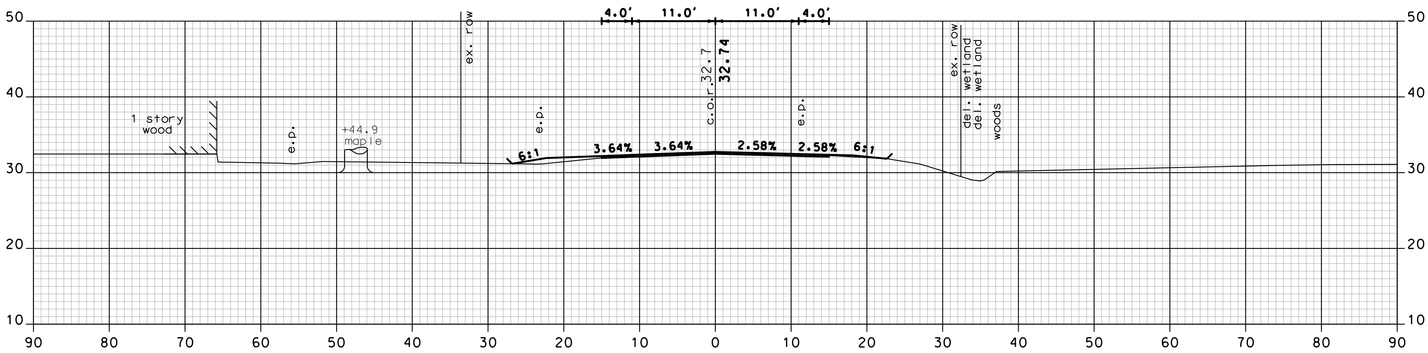
SHEET TOTALS			
COMMON EXCAV.	0.0 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	11.8 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	73A	119

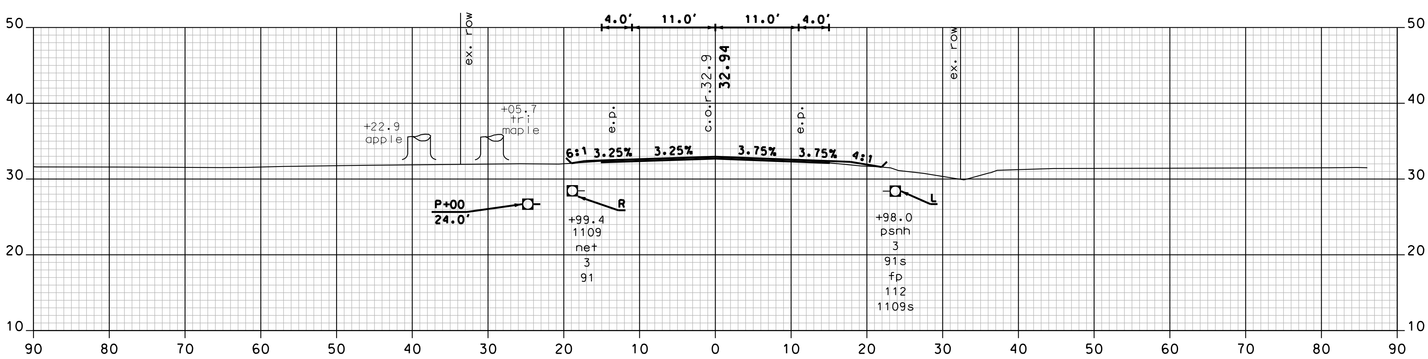
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

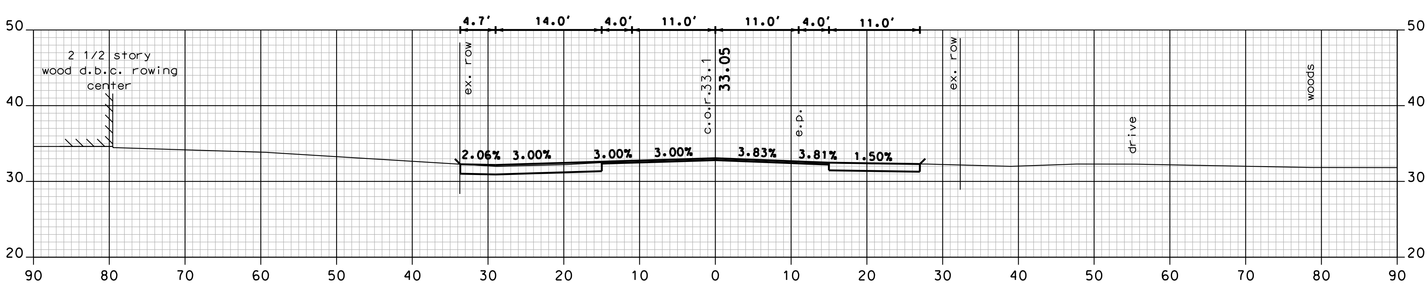
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



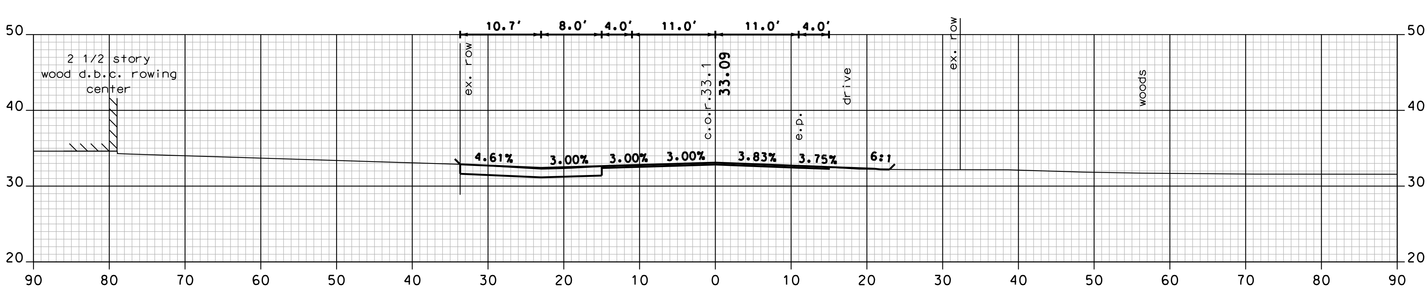
580+50



580+00



579+62 (DRIVE LT. & RT.)



579+50 (DRIVE LT.)

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

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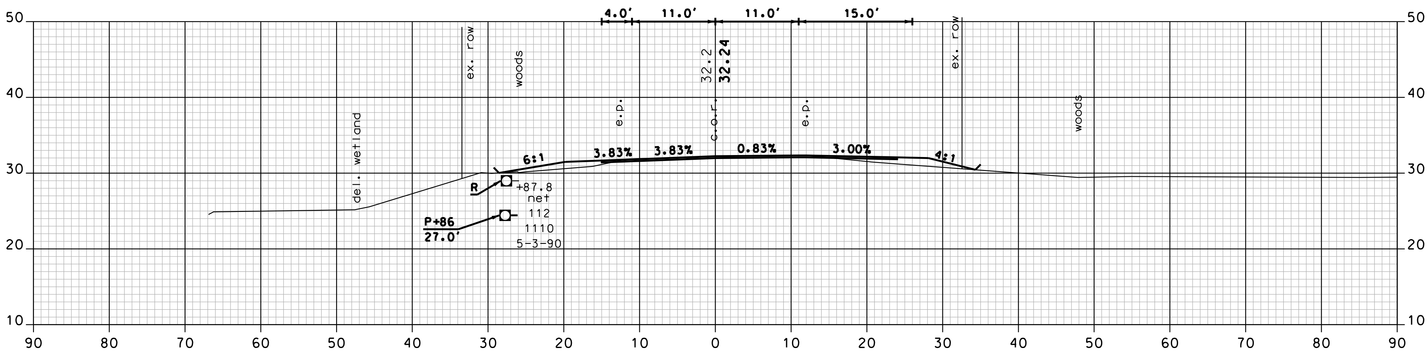
SHEET TOTALS			
COMMON EXCAV.	0.0 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	42.1 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	74A	119

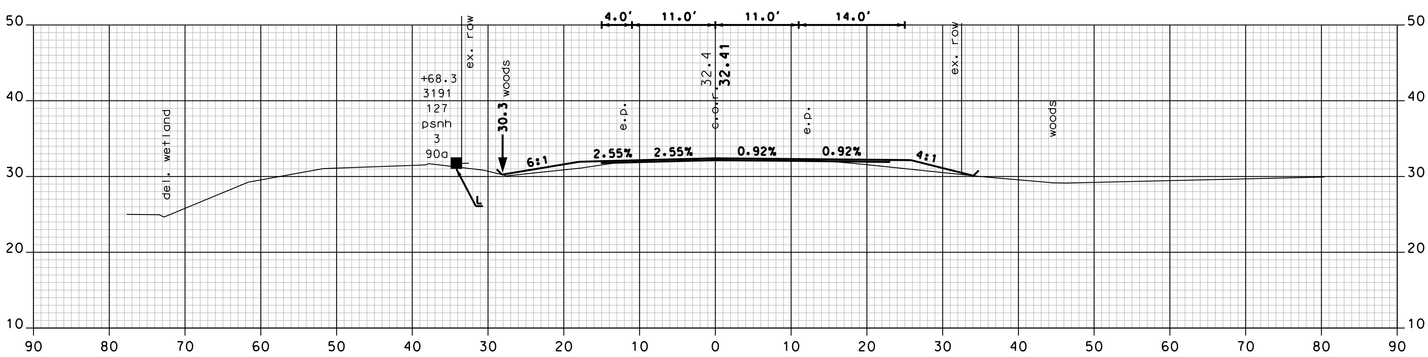
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

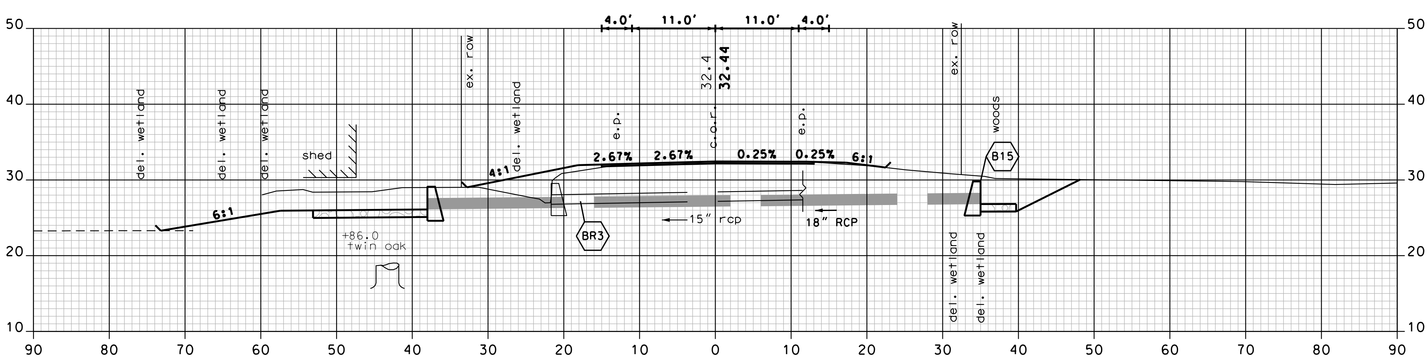
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



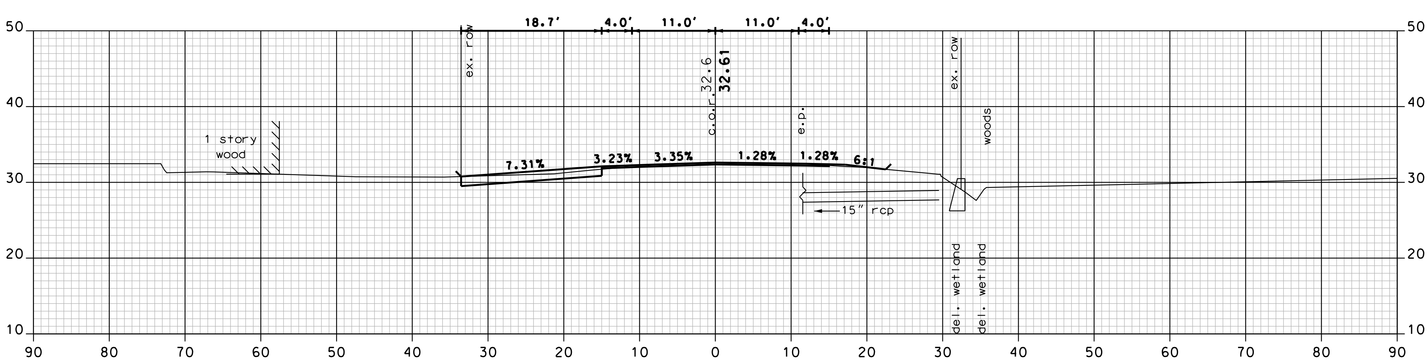
582+00



581+50



581+00



580+71 (DRIVE LT.)

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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SHEET TOTALS

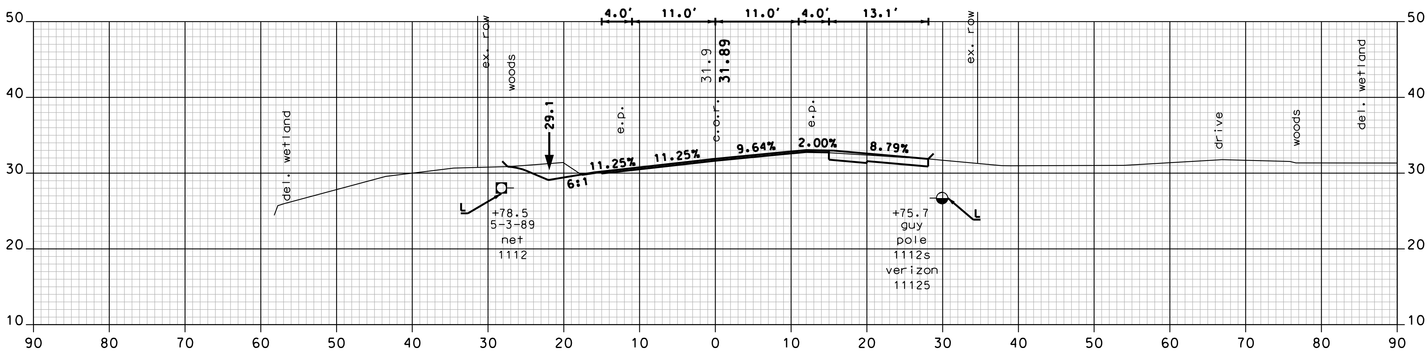
COMMON EXCAV.	0.0 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	97.2 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	75A	119

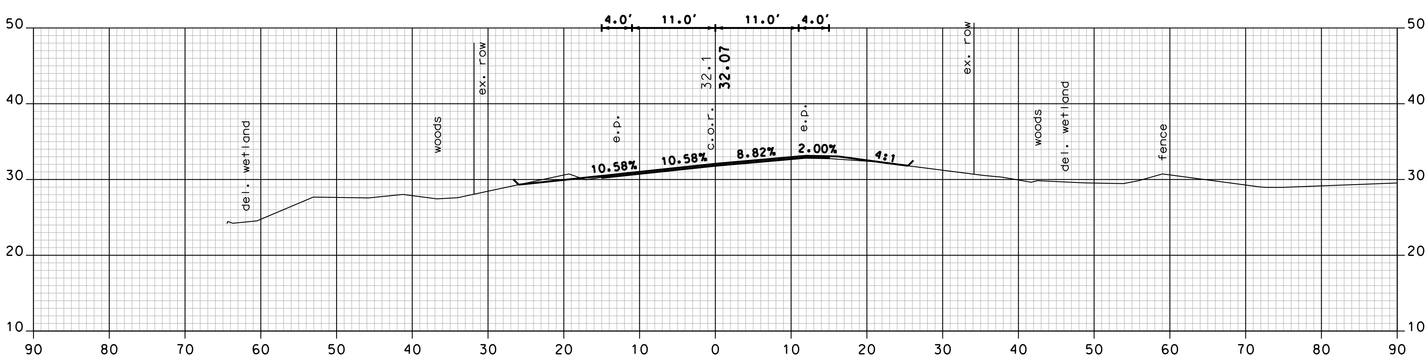
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

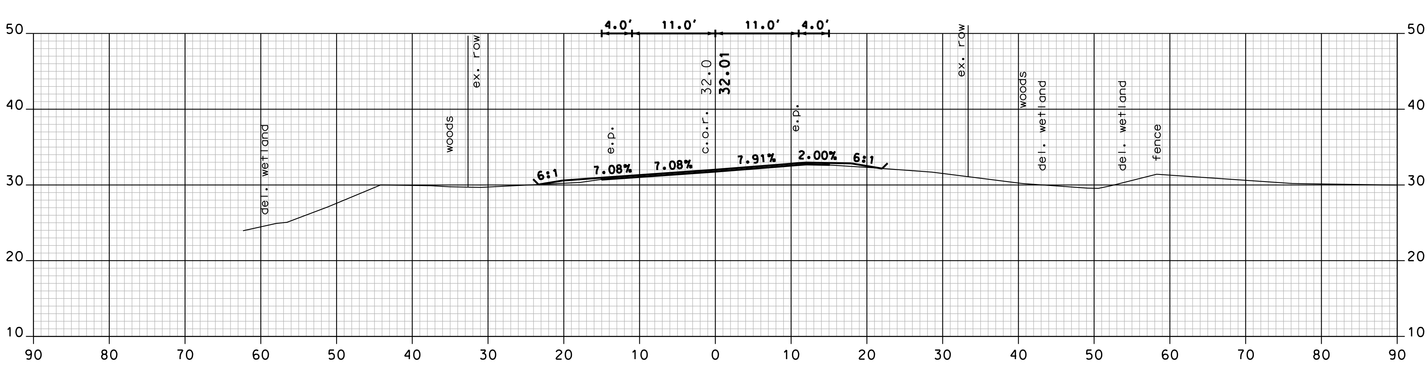
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



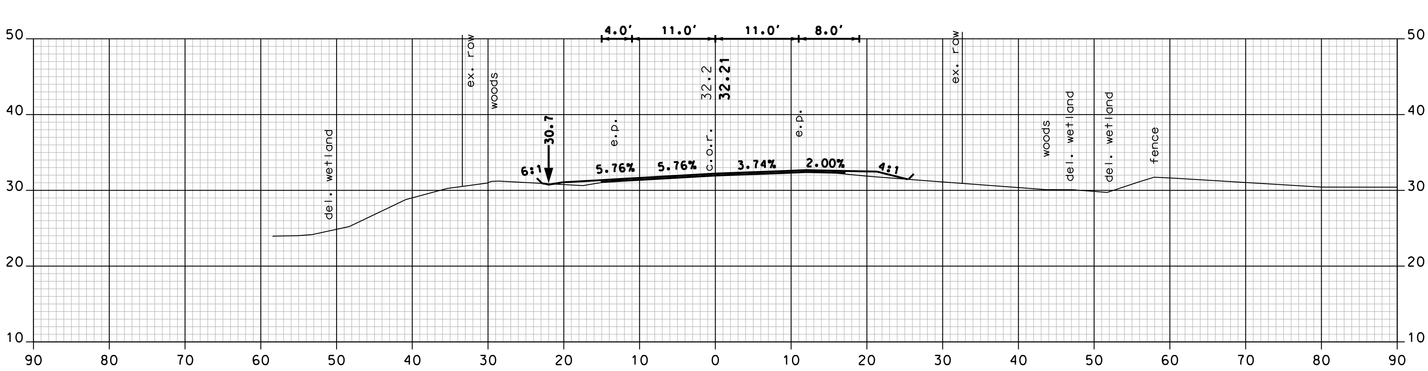
584+00 (DRIVE RT.)



583+50



583+00



582+50

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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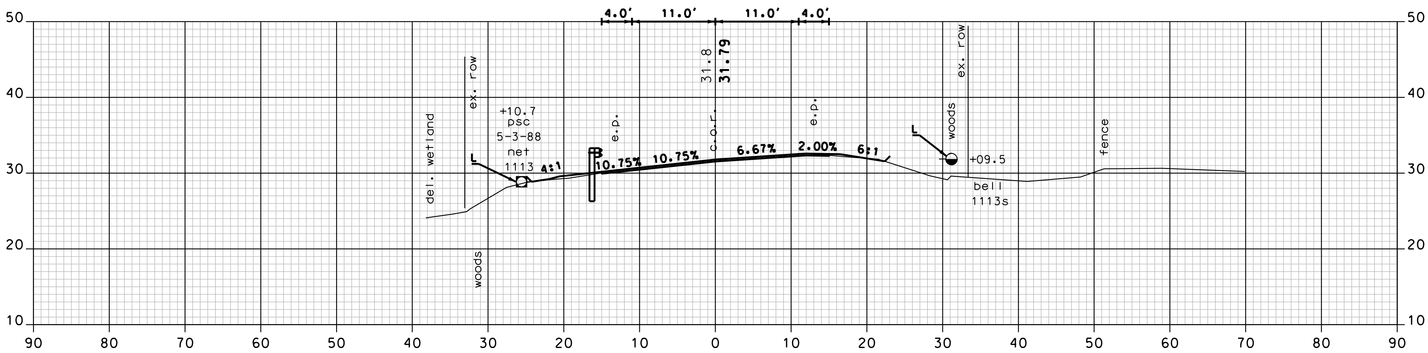
SHEET TOTALS			
COMMON EXCAV.	26.3 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	19.6 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	76A	119

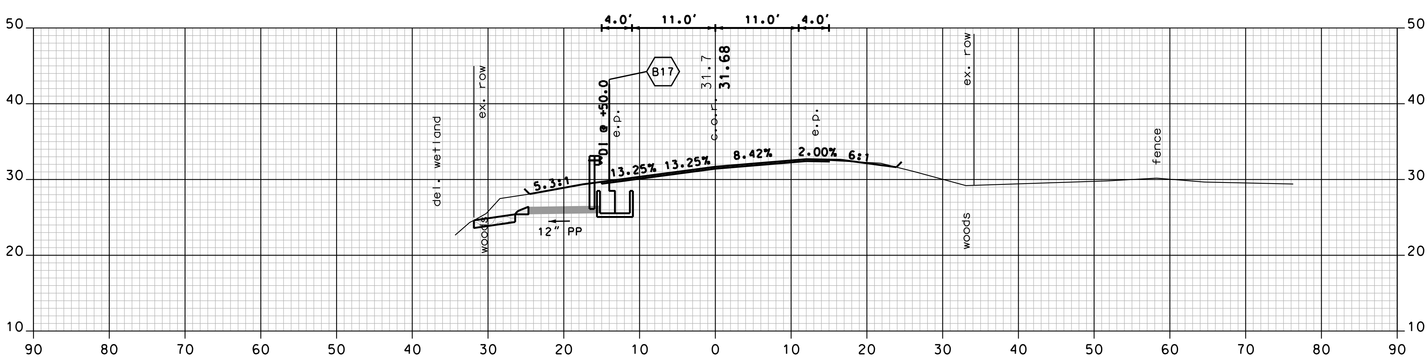
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

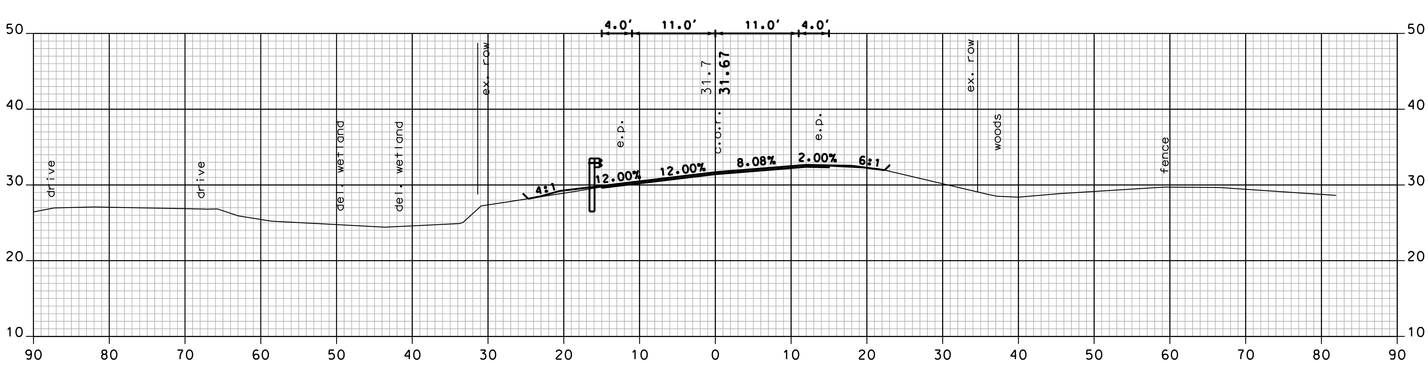
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



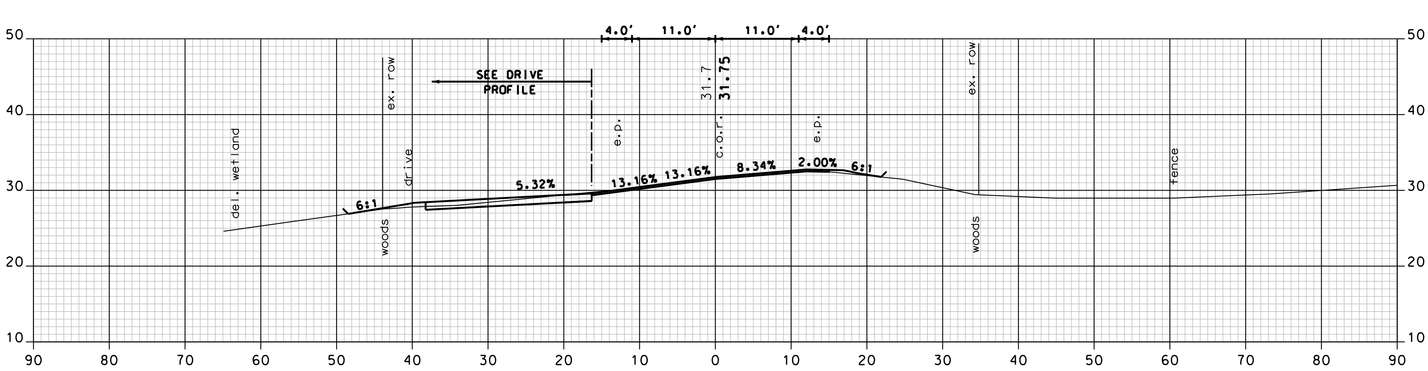
586+00



585+50



585+00



584+50 (DRIVE LT. SKEWED AHEAD)

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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SHEET TOTALS

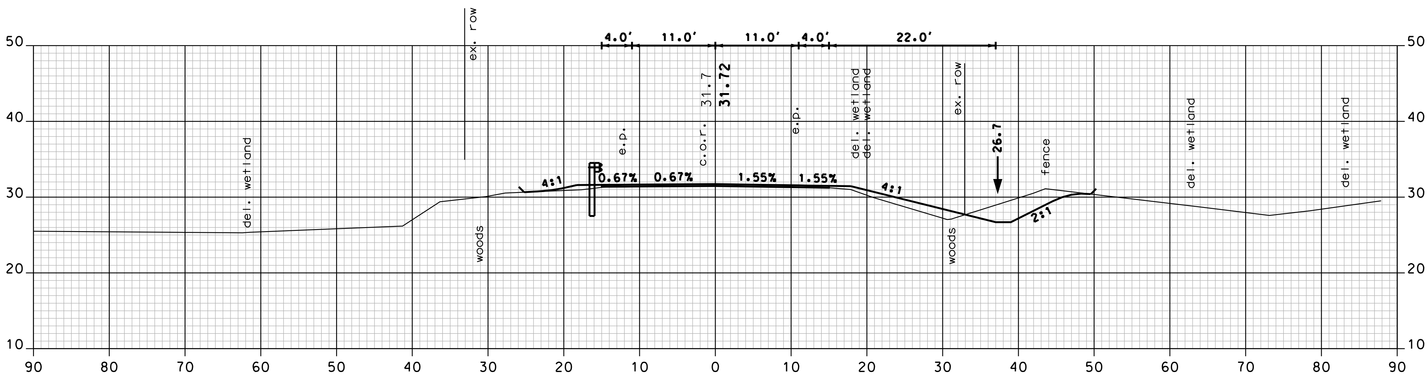
COMMON EXCAV.	1.7 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	16.2 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	77A	119

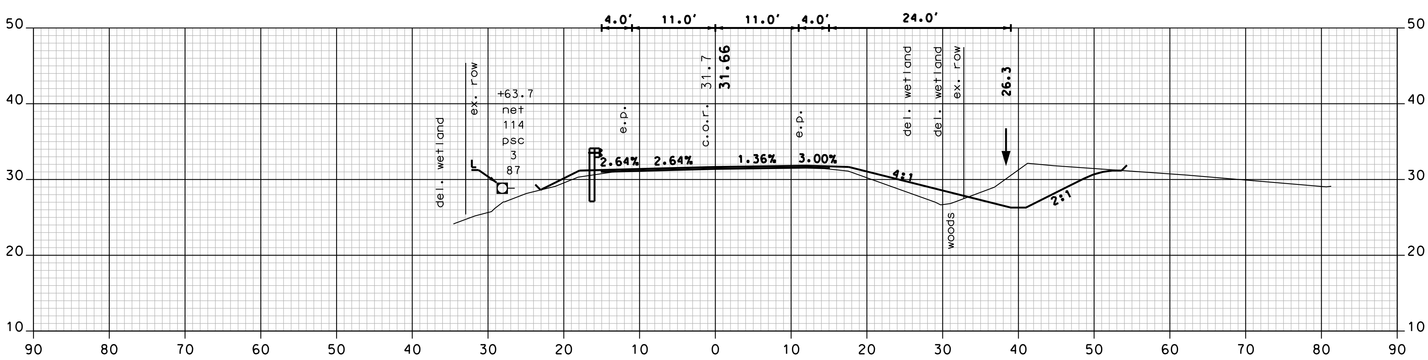
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

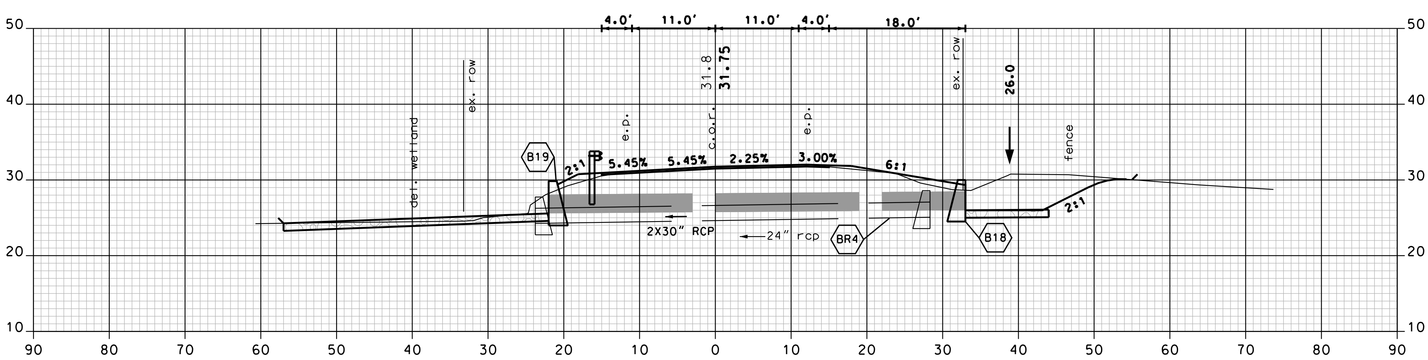
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



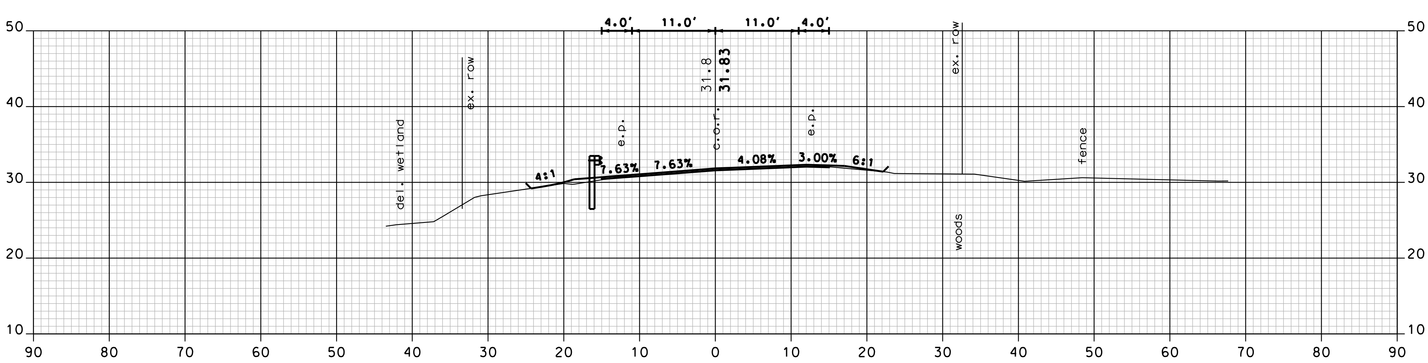
588+00



587+50



587+00



586+50

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-6648
Mail: (603) 357-2445 • www.chacompanies.com

SHEET TOTALS

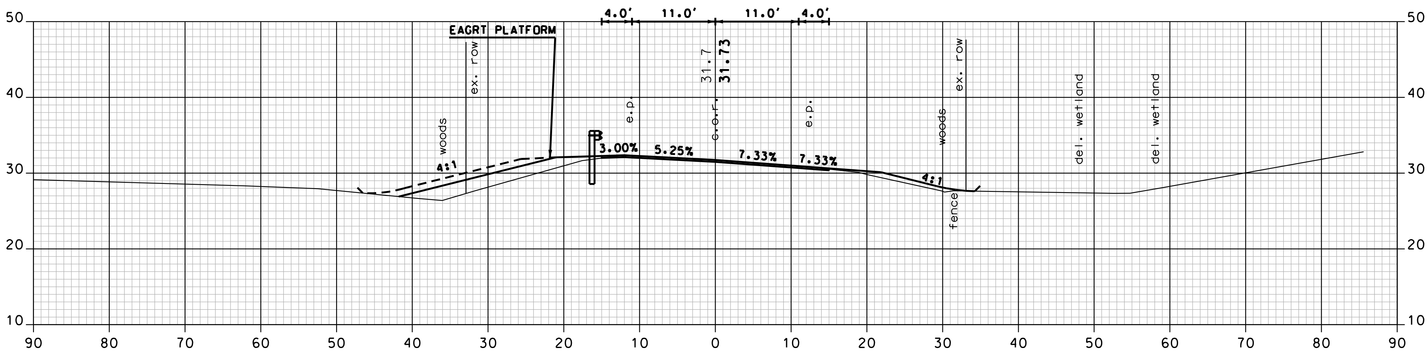
COMMON EXCAV.	143.5 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	133.2 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	78A	119

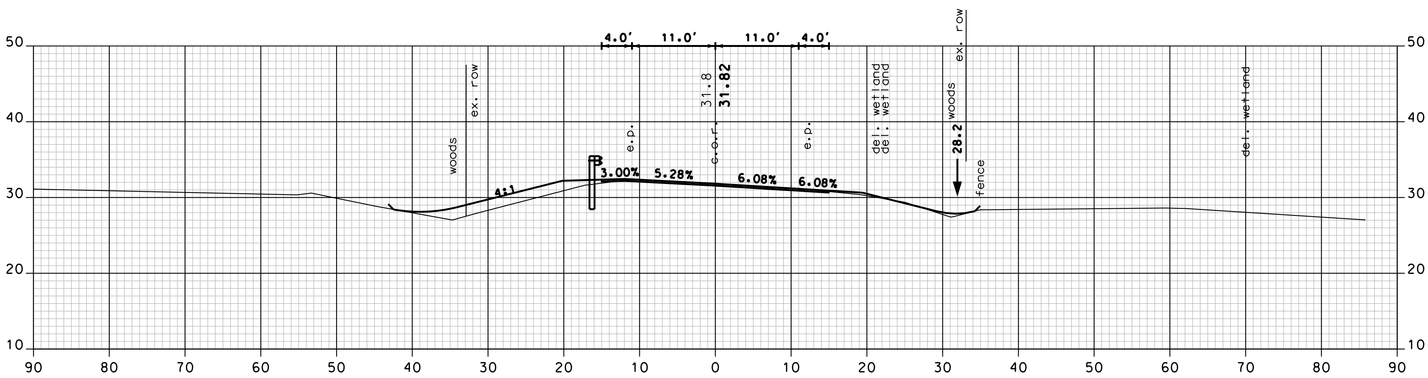
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

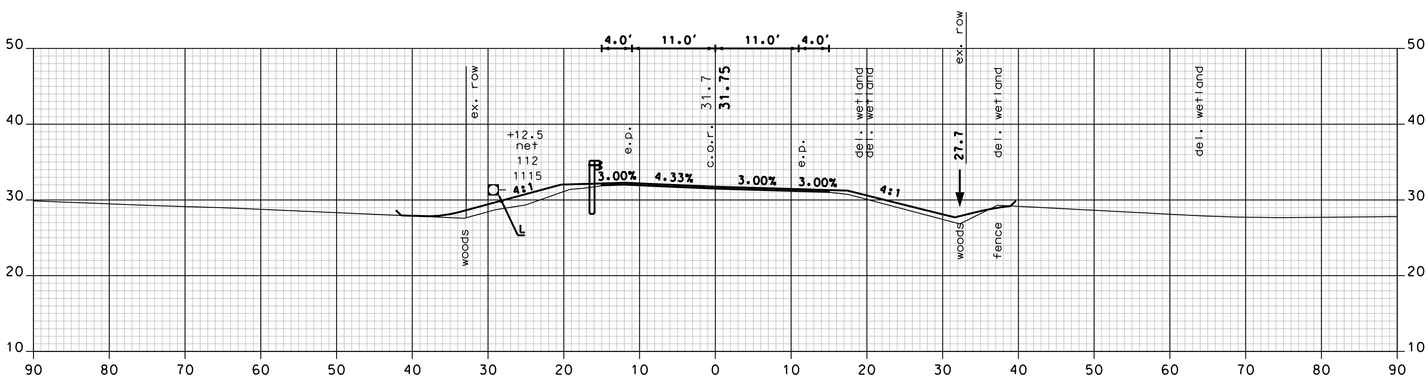
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



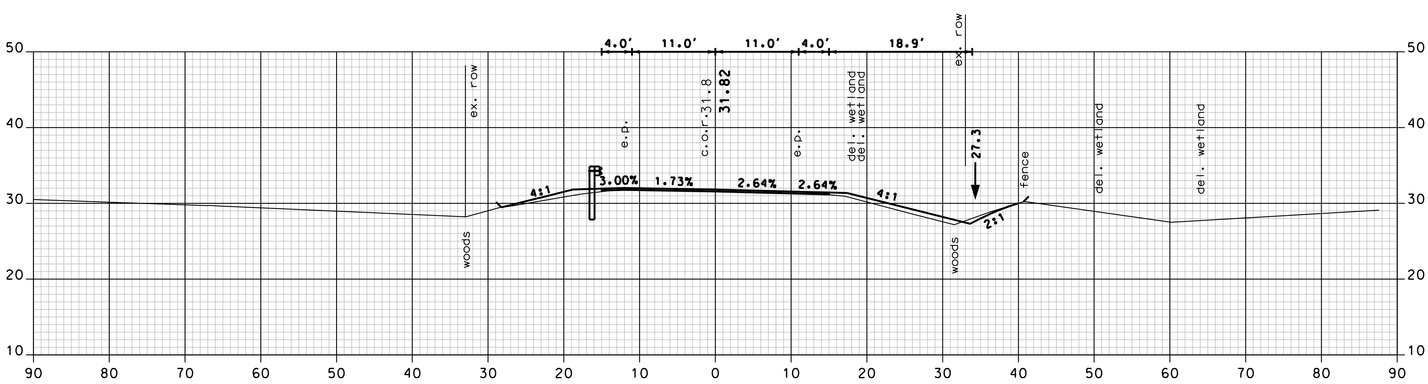
590+00



589+50



589+00



588+50

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-4648
Main: (603) 357-2445 • www.chacompanies.com

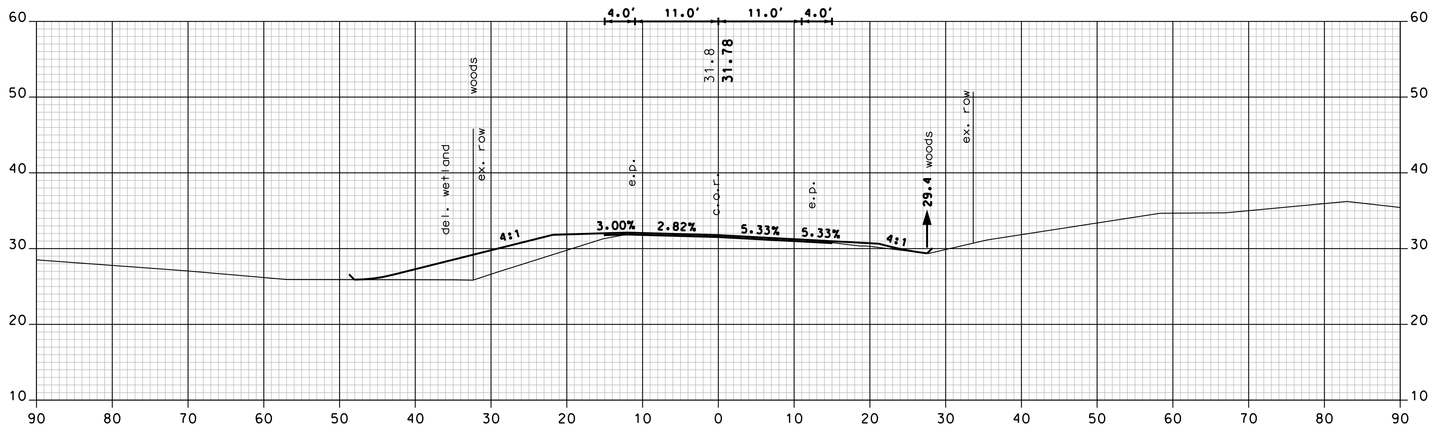
SHEET TOTALS			
COMMON EXCAV.	4.4 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	252.7 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	79A	119

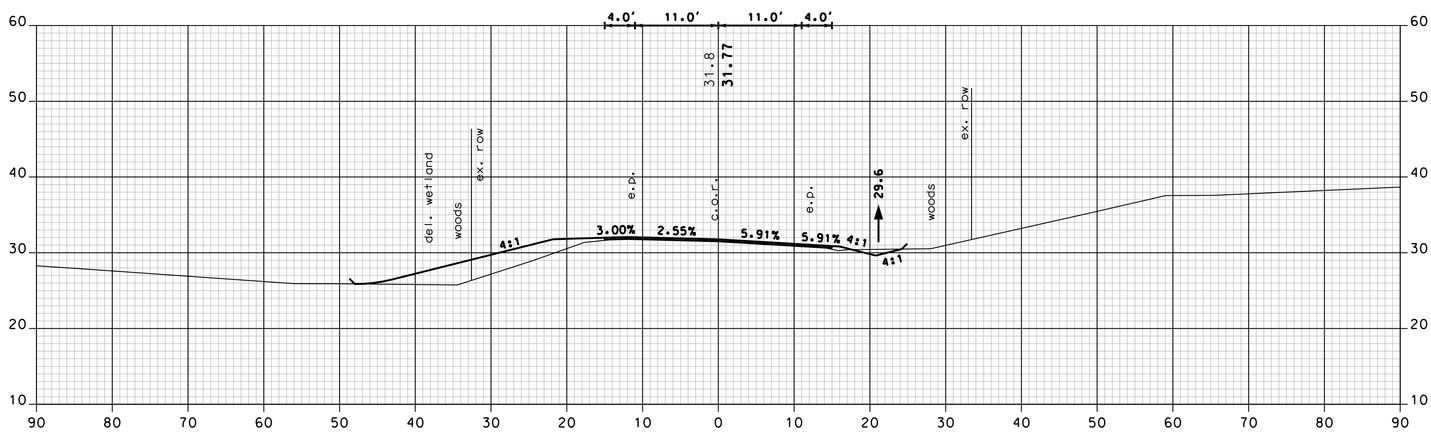
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

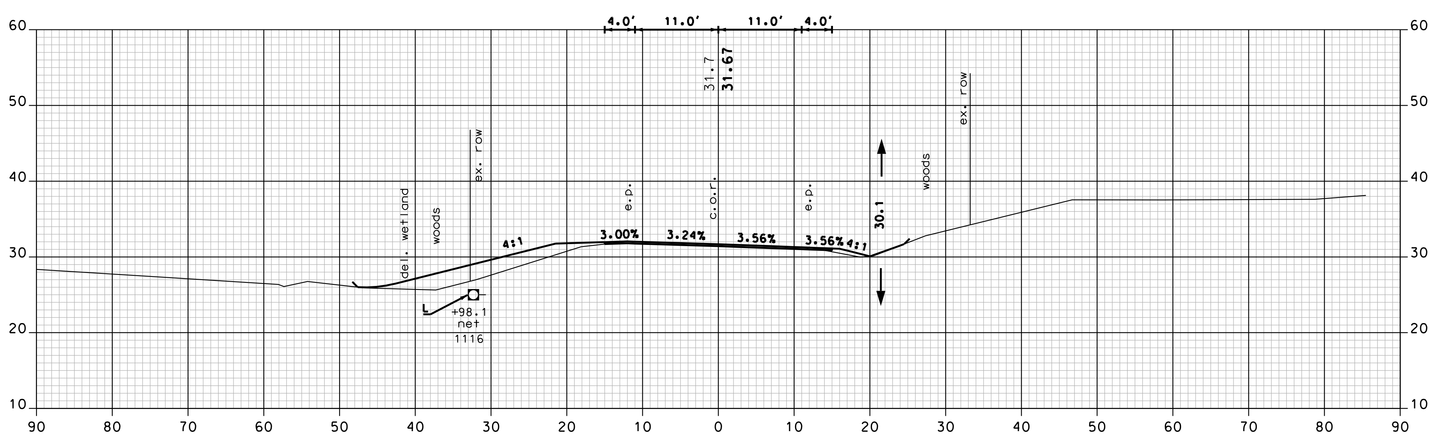
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



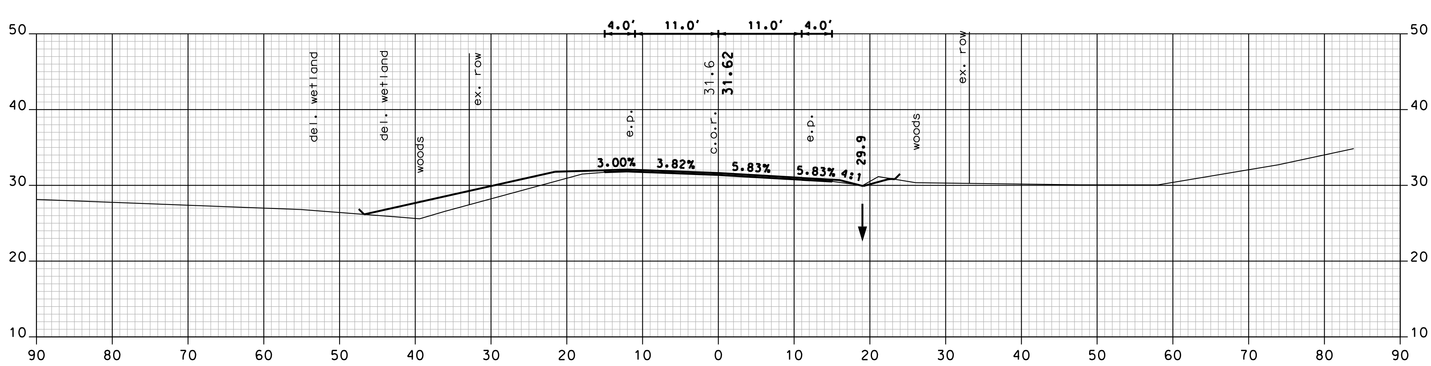
592+00



591+50



591+00



590+50

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-4648
Main: (603) 357-2445 • www.chacompanies.com

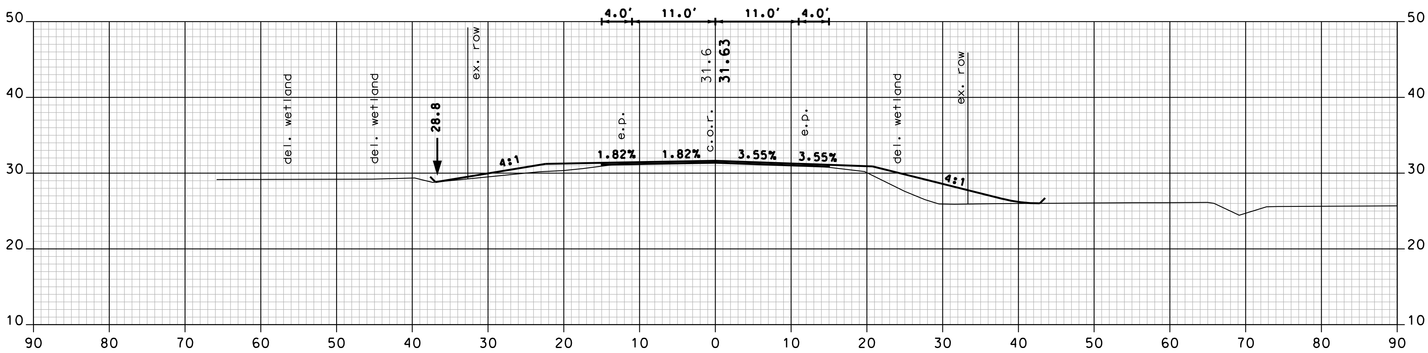
SHEET TOTALS			
COMMON EXCAV.	11.2 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	420.6 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	80A	119

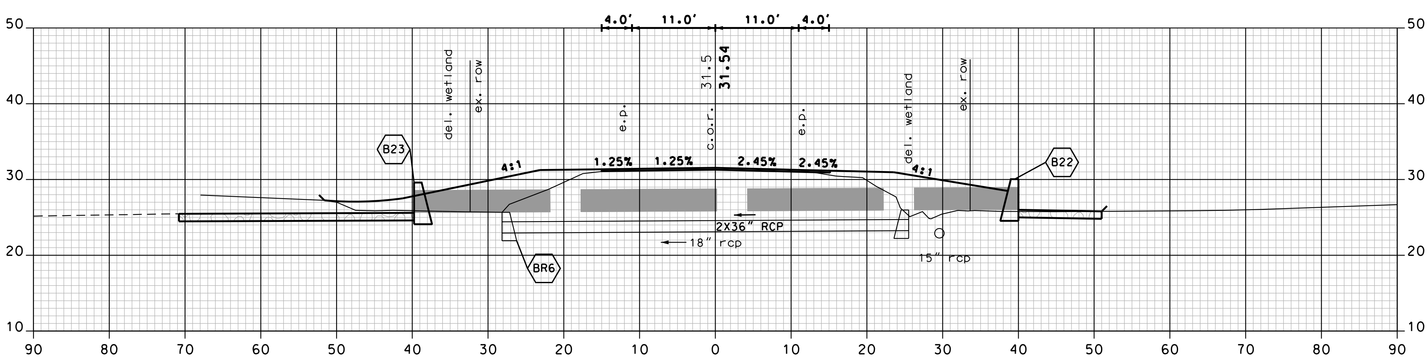
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

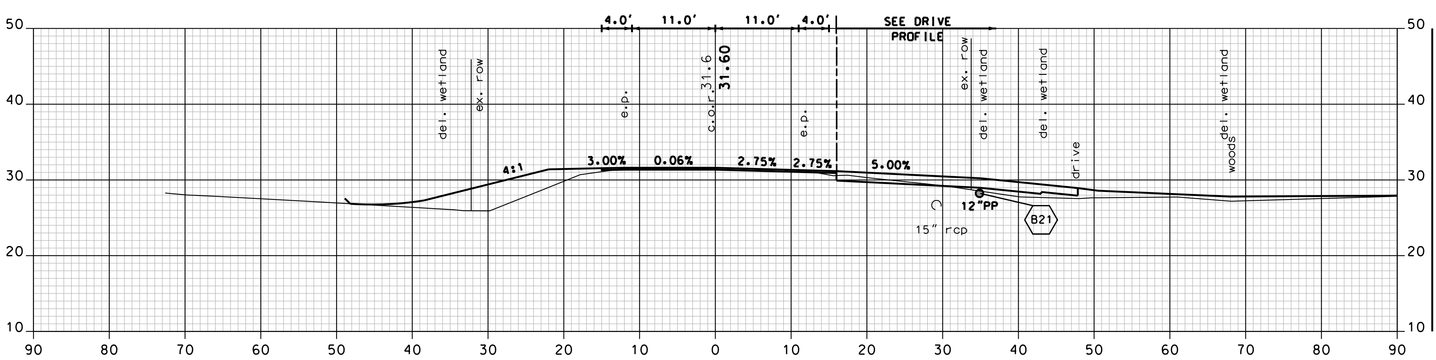
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



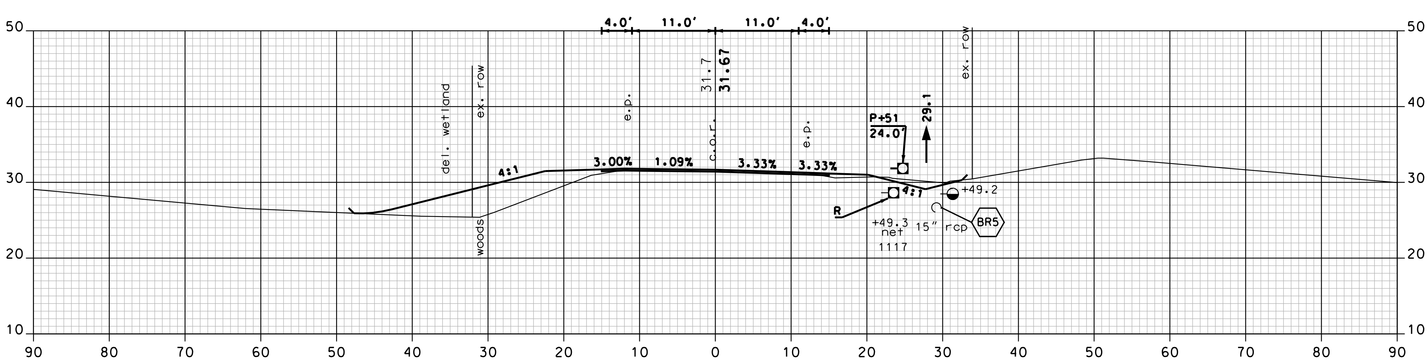
593+50



593+00



592+77 (DRIVE RT. SKEWED AHEAD)



592+50

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-6648
Main: (603) 357-2445 • www.chacompanies.com

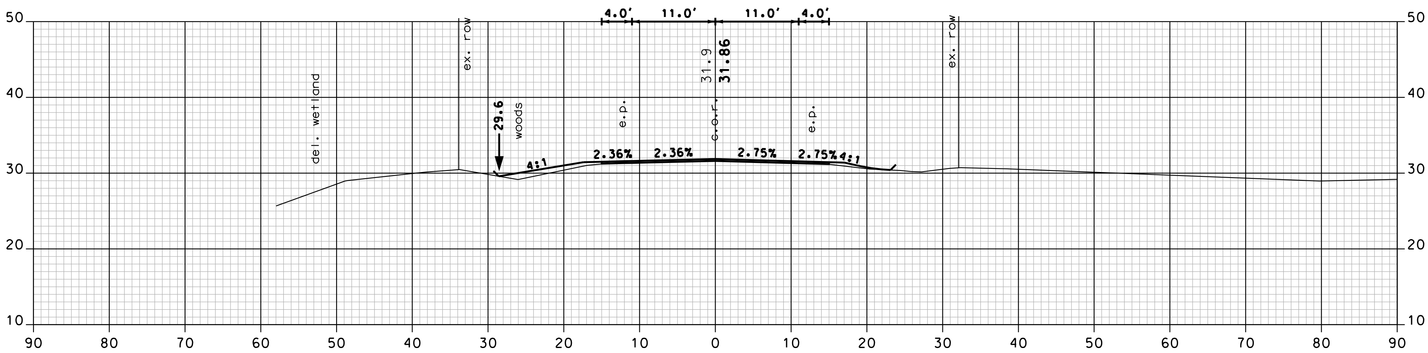
SHEET TOTALS			
COMMON EXCAV.	4.9 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	444.0 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	81A	119

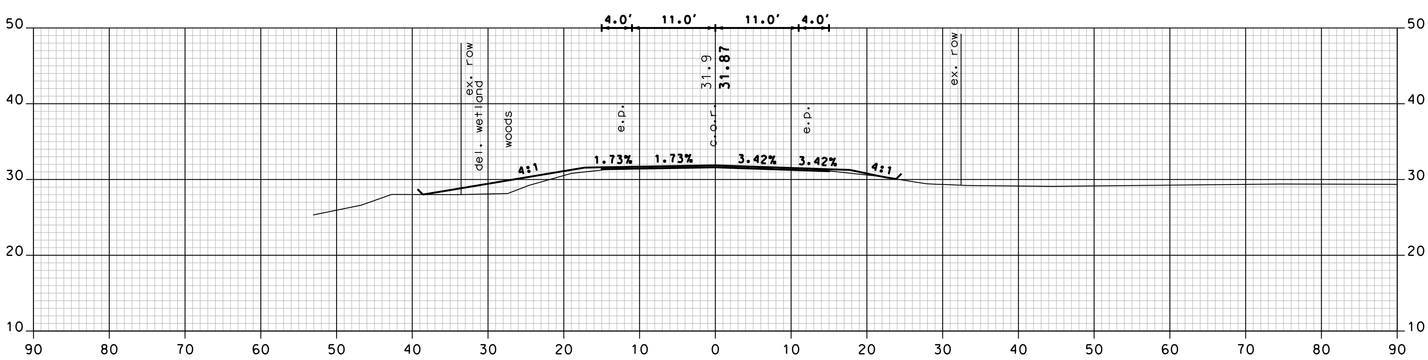
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

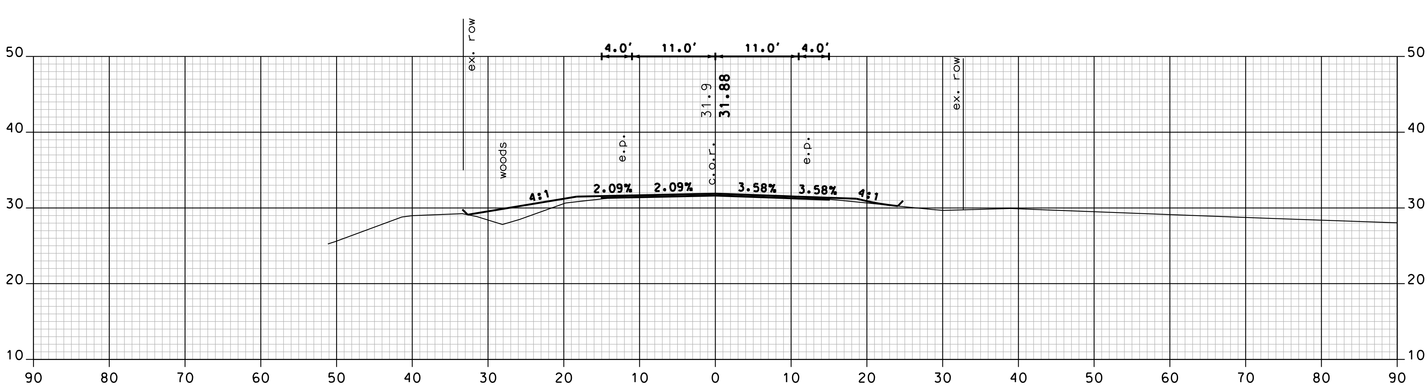
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



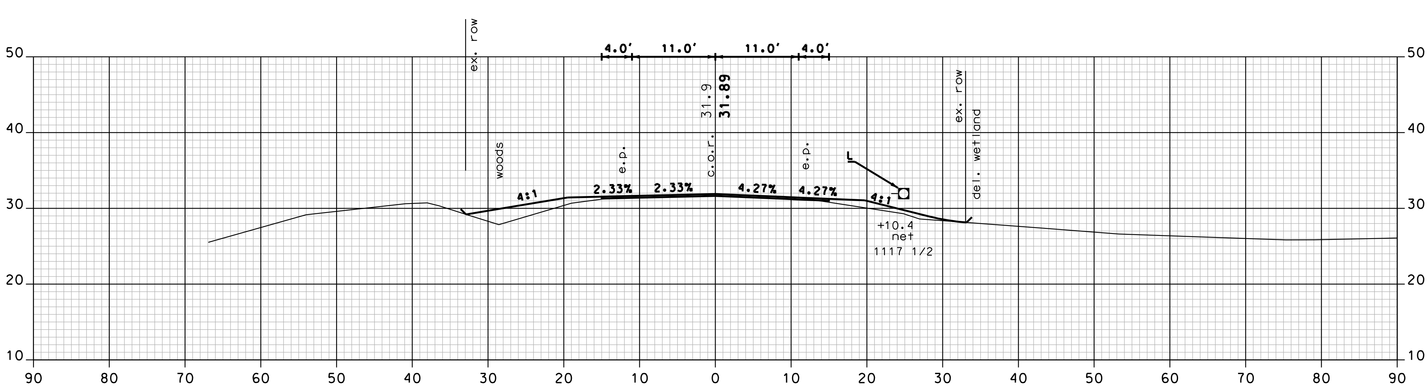
595+50



595+00



594+50



594+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-6648
Main: (603) 357-2445 • www.chacompanies.com

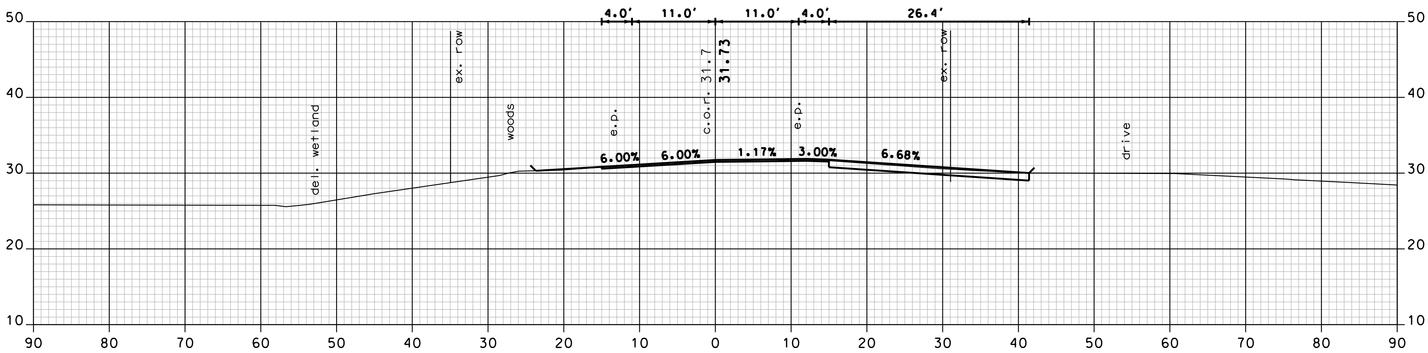
SHEET TOTALS			
COMMON EXCAV.	0.0 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	132.9 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	82A	119

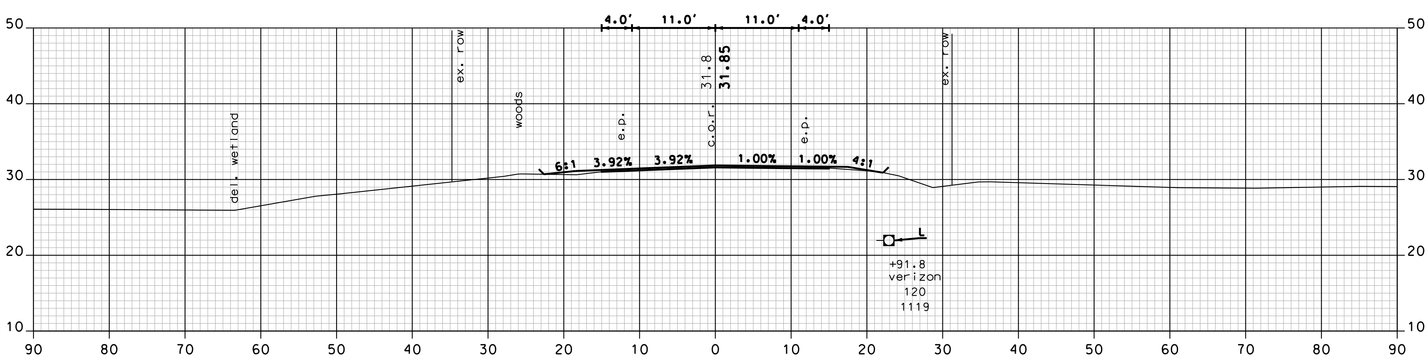
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

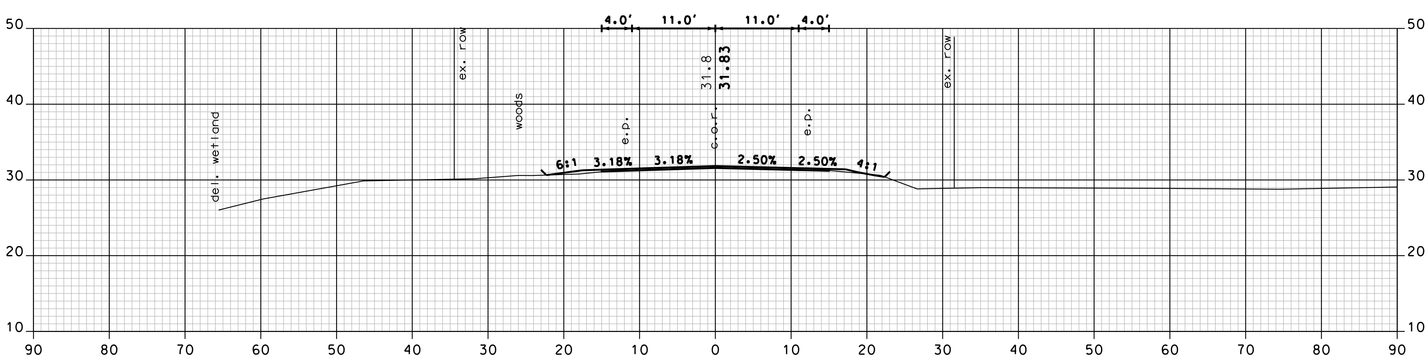
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



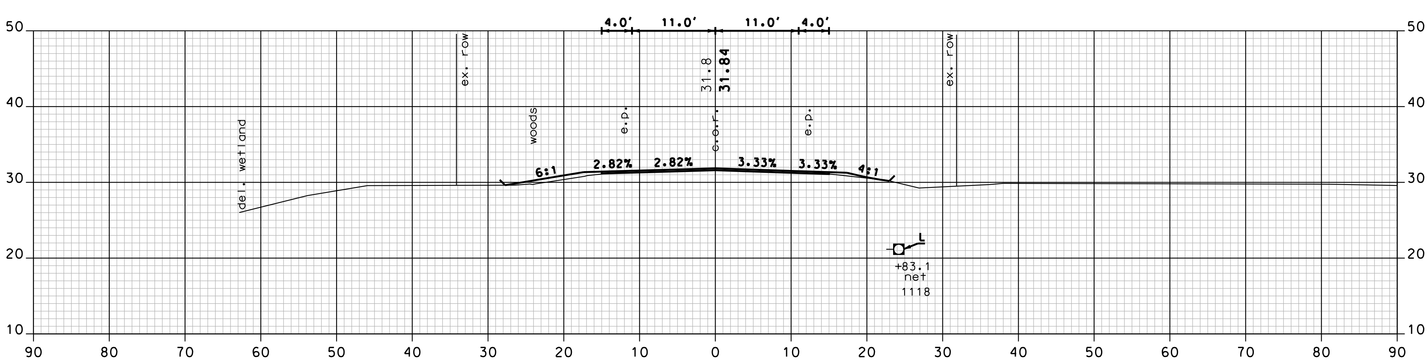
597+50 (DRIVE RT.)



597+00



596+50



596+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-4648
Mail: (603) 357-2445 • www.chacompanies.com

SHEET TOTALS

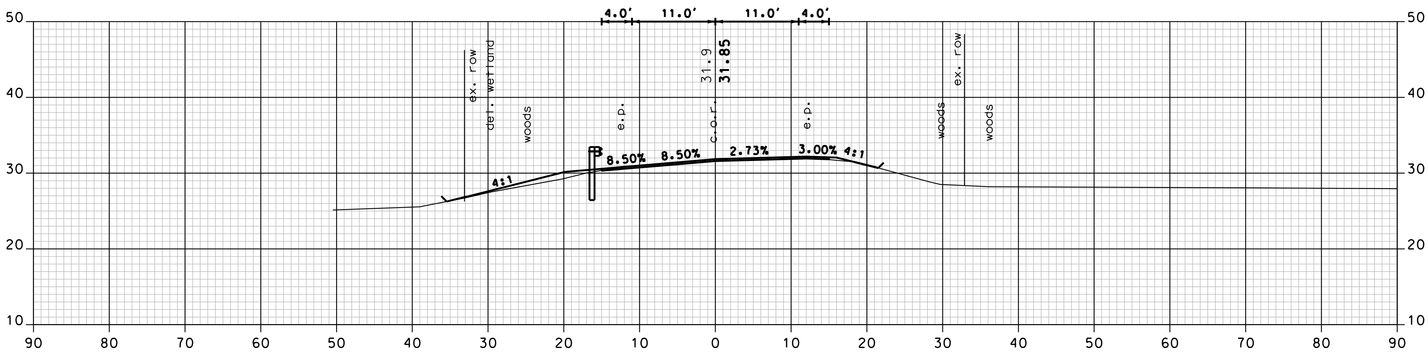
COMMON EXCAV.	0.0 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	30.1 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	83A	119

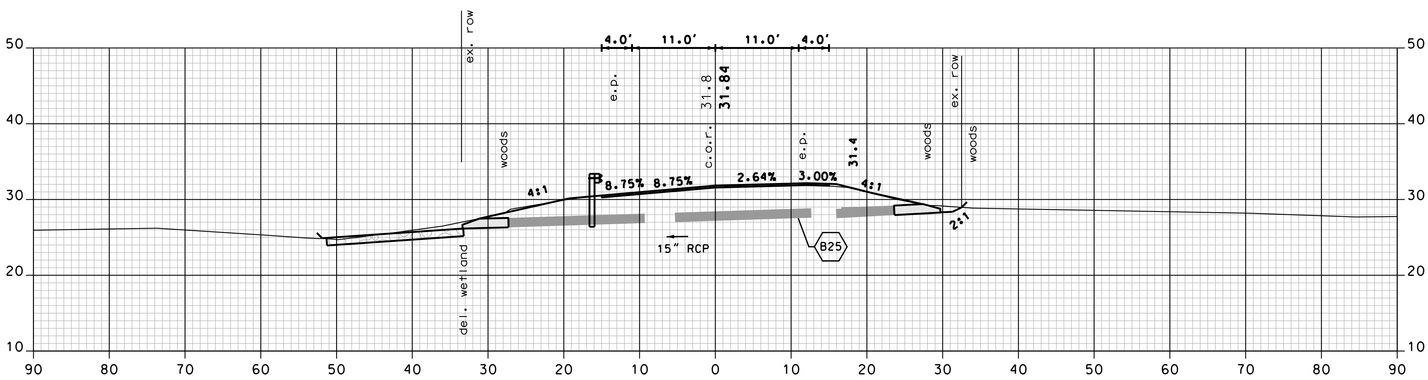
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

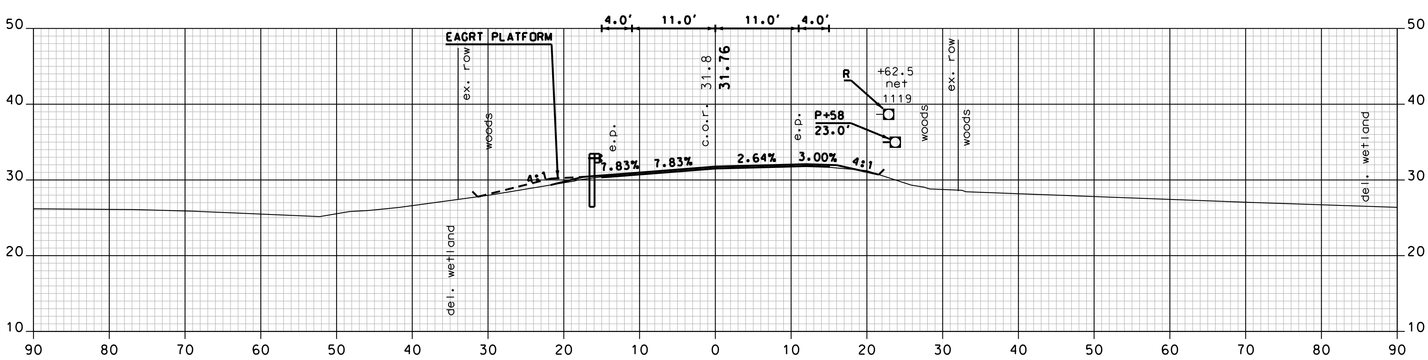
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



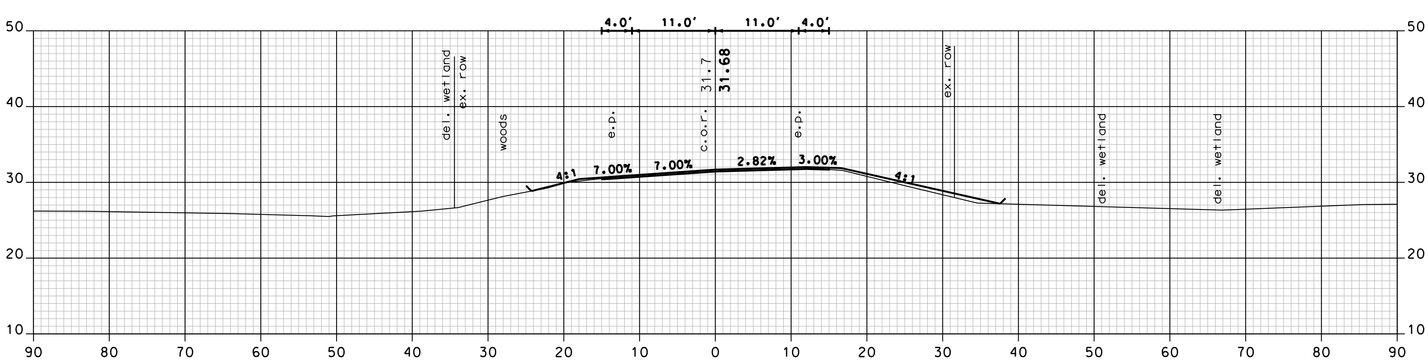
599+50



599+00



598+50



598+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-4648
Main: (603) 357-2445 • www.chacompanies.com

SHEET TOTALS

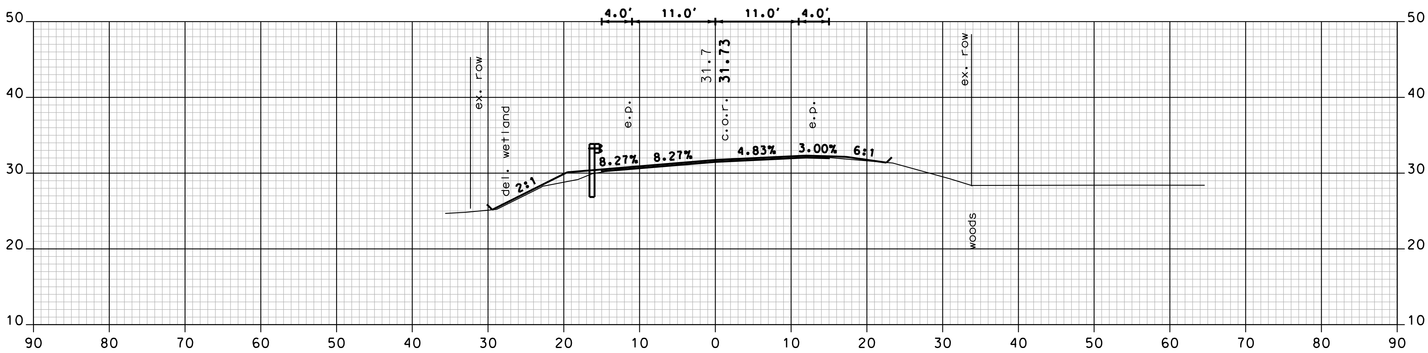
COMMON EXCAV.	5.9 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	36.1 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	84A	119

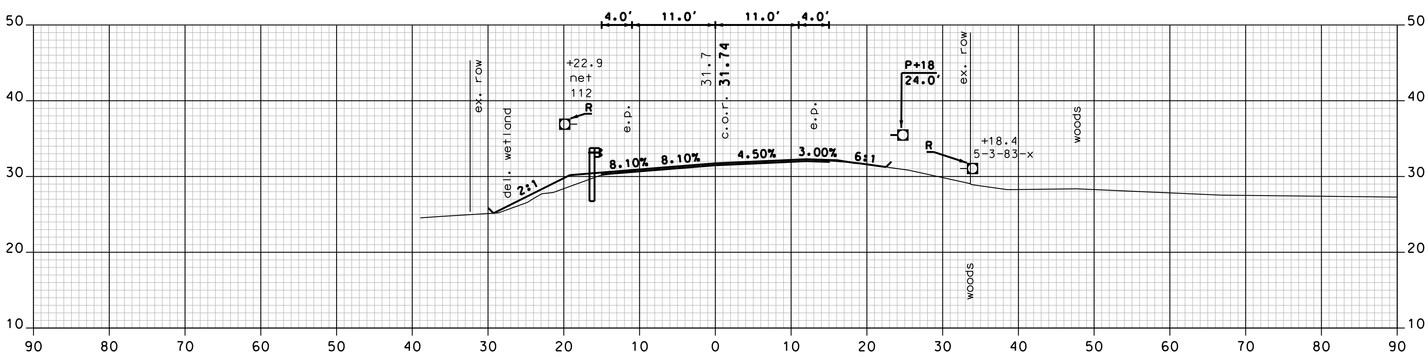
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

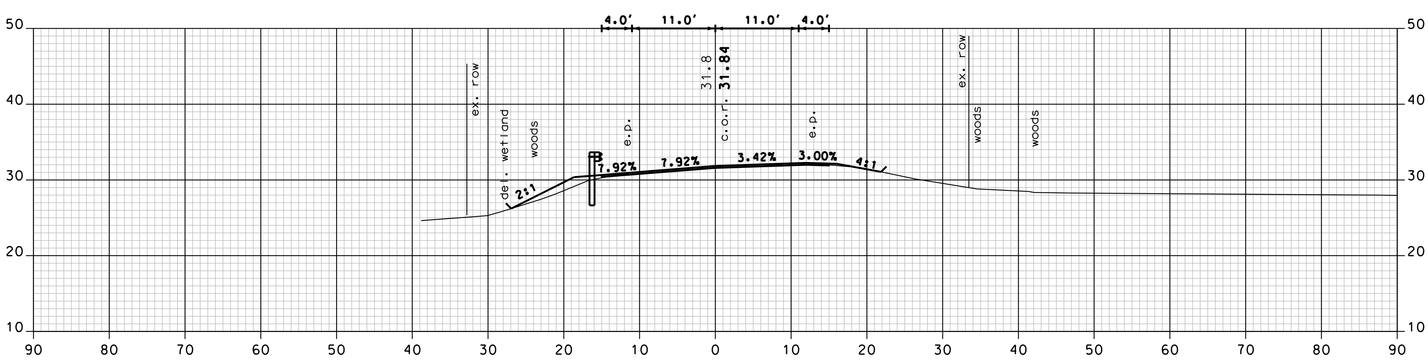
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



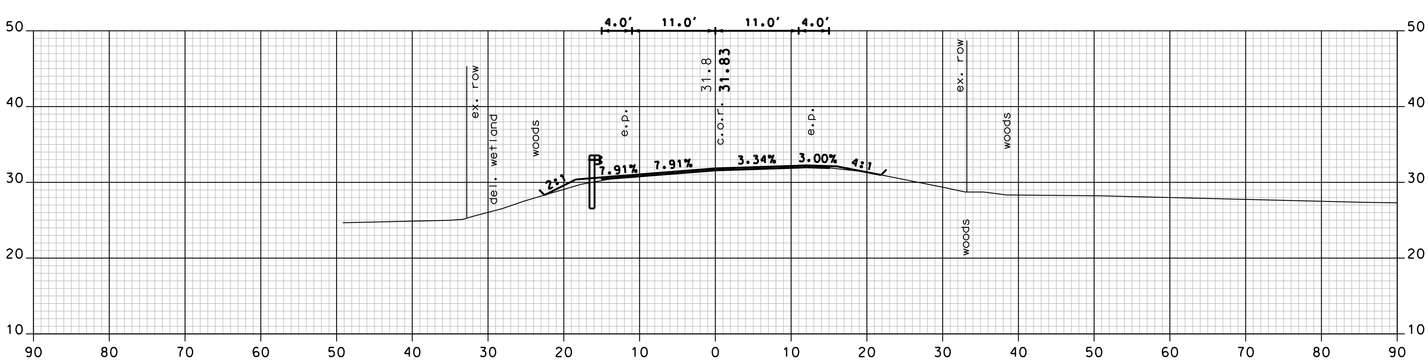
601+50



601+00



600+50



600+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-4648
Main: (603) 357-2445 • www.chacompanies.com

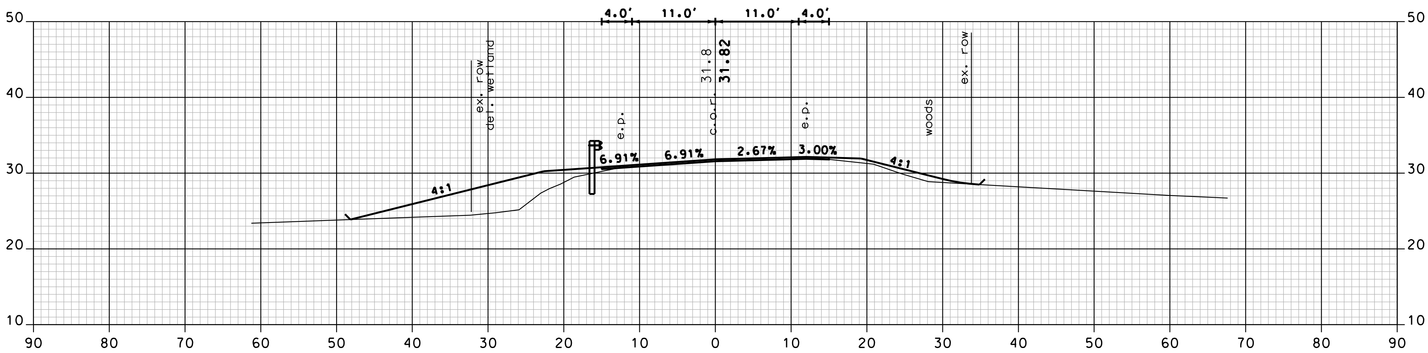
SHEET TOTALS			
COMMON EXCAV.	0.2 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	72.5 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	85A	119

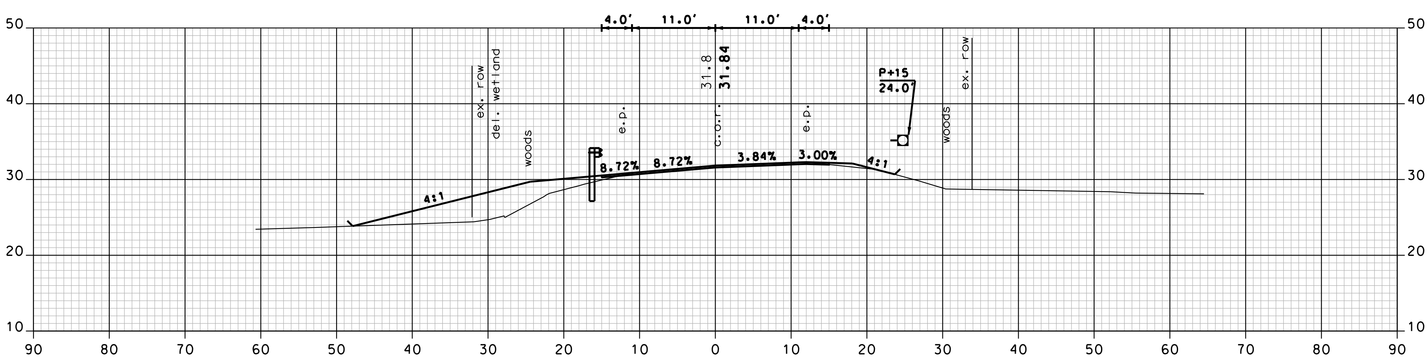
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

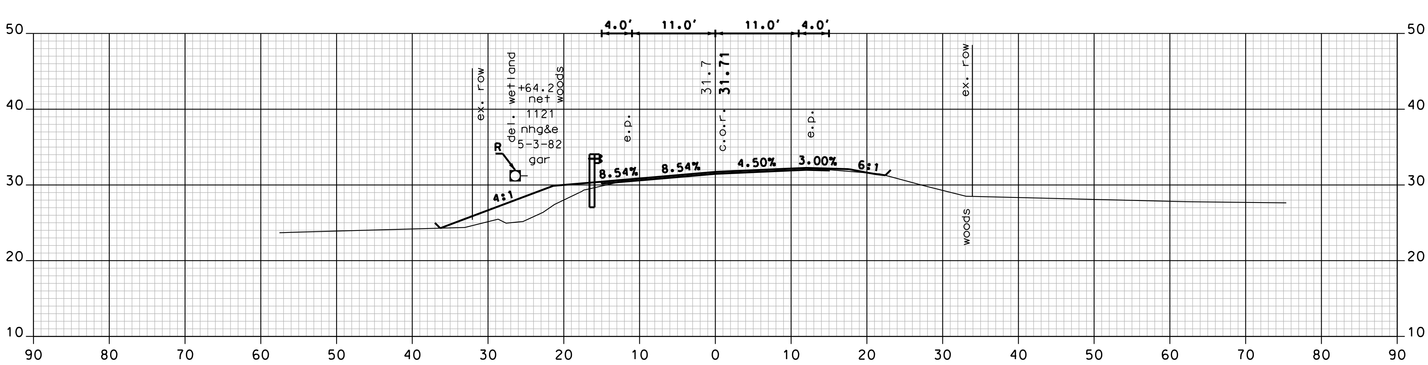
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



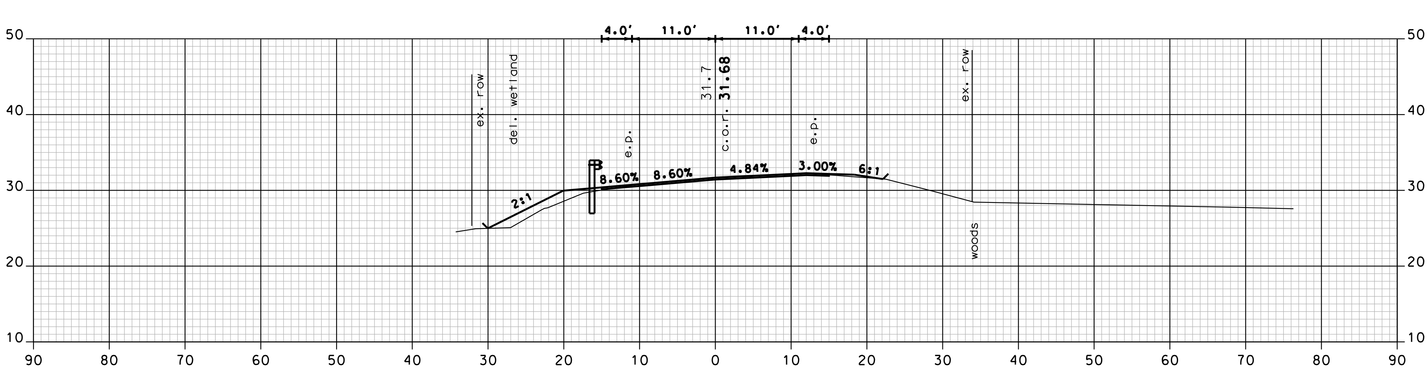
603+50



603+00



602+50



602+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-4648
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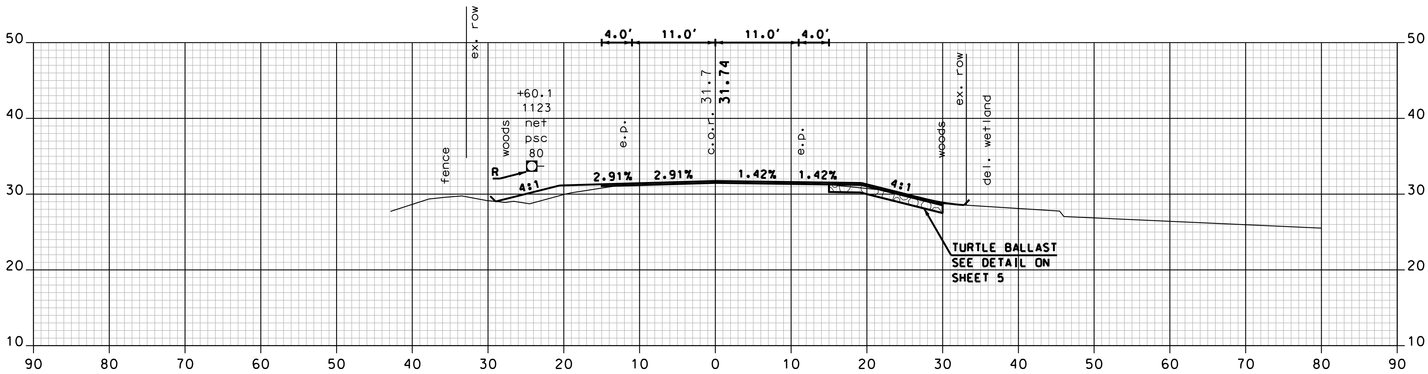
SHEET TOTALS			
COMMON EXCAV.	0.4 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	427.1 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	86A	119

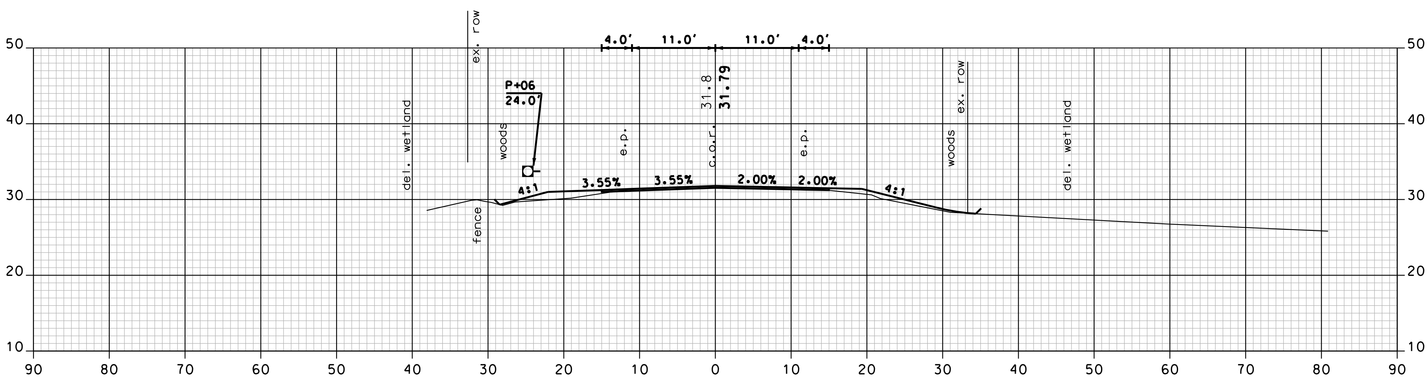
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

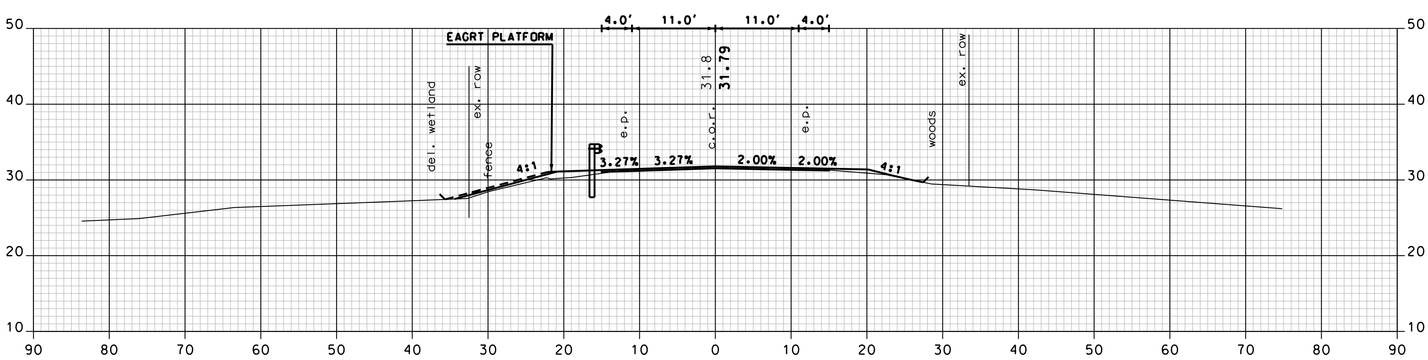
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



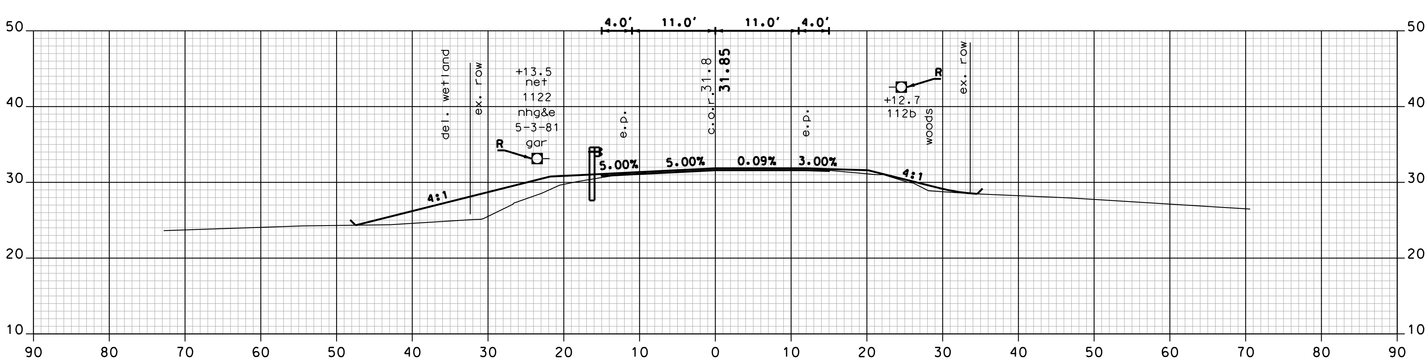
605+50



605+00



604+50



604+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

CHA
11 King Court • Keene, NH 03431-4648
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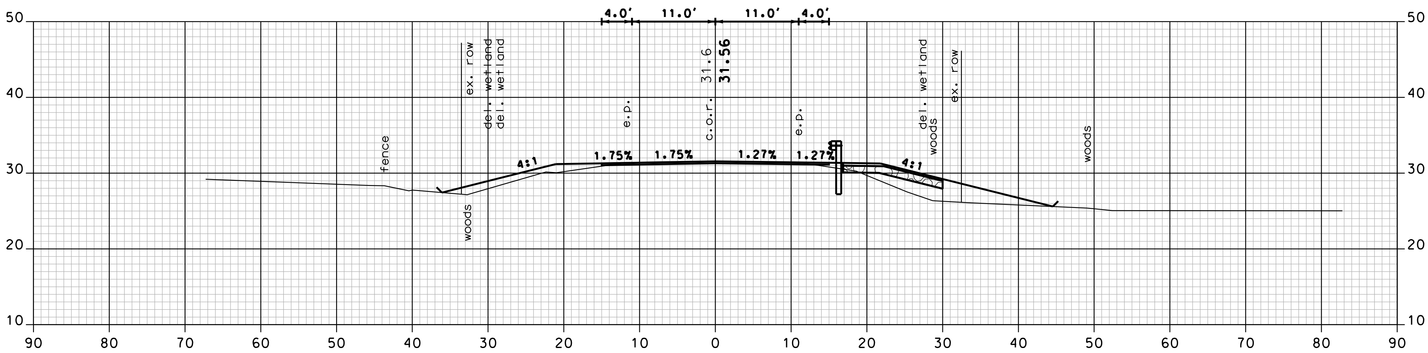
SHEET TOTALS			
COMMON EXCAV.	32.1 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	157.5 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	87A	119

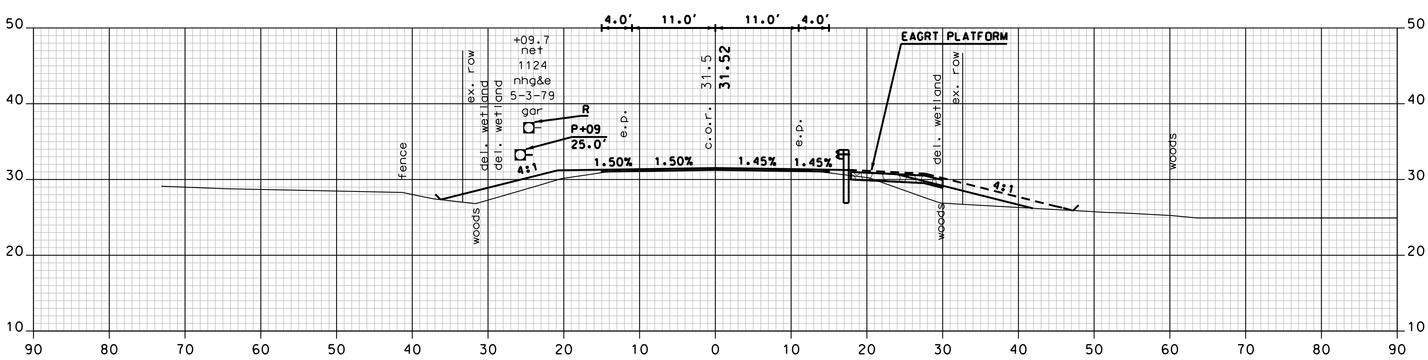
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

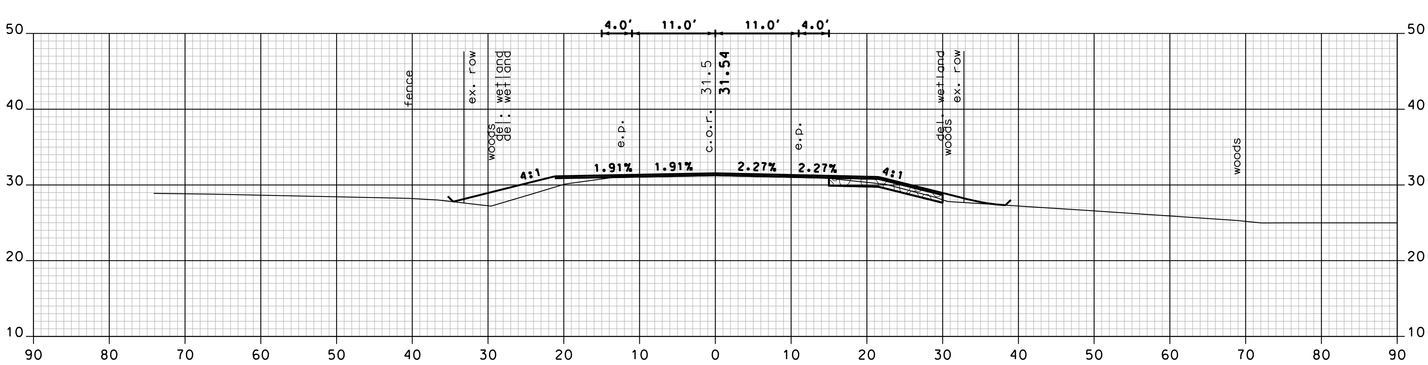
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



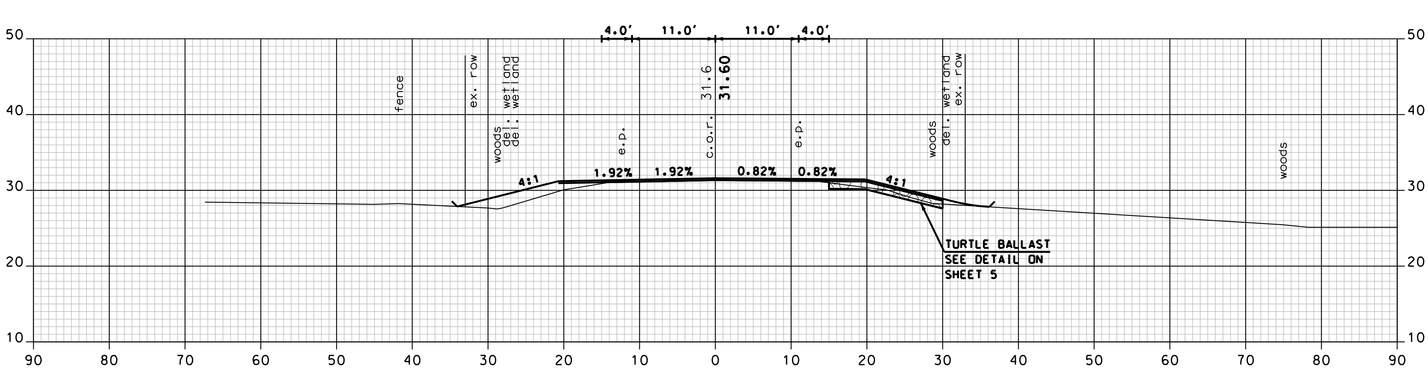
607+50



607+00



606+50



606+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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SHEET TOTALS

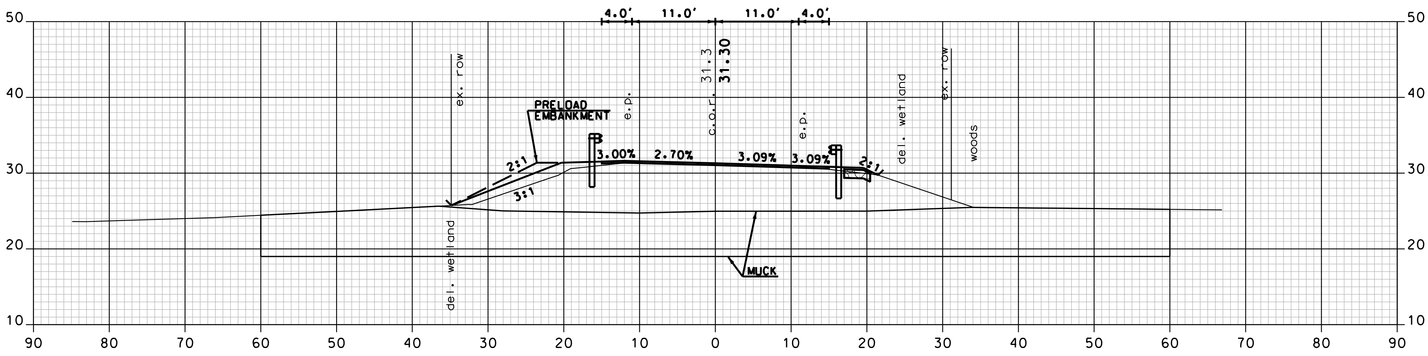
COMMON EXCAV.	26.7 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	338.4 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	88A	119

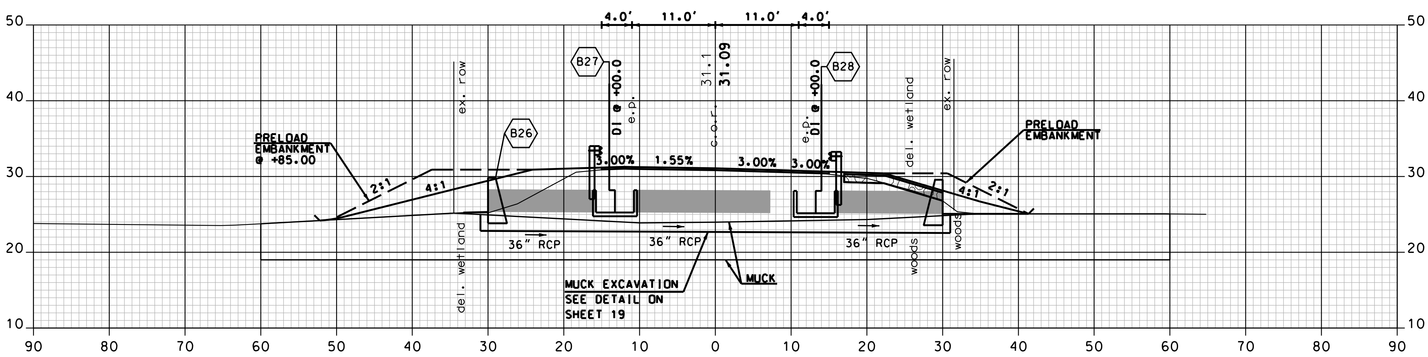
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

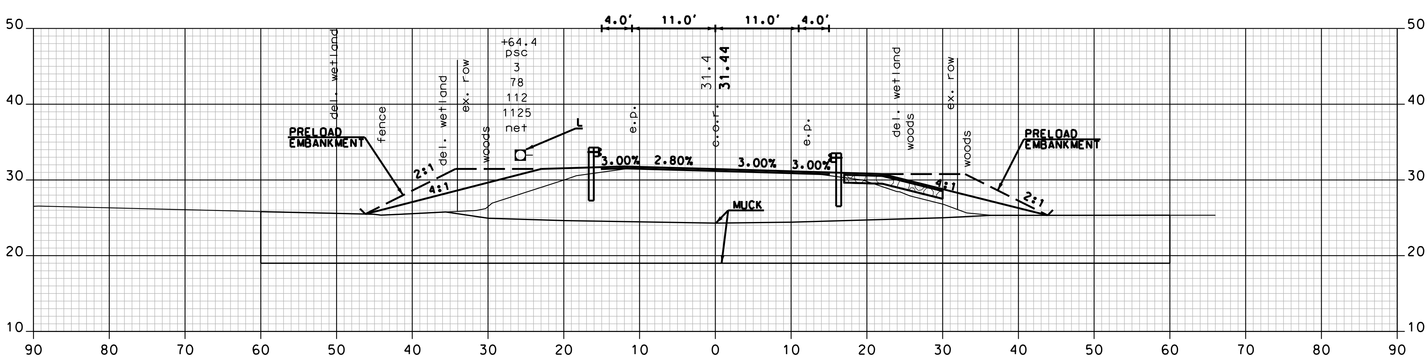
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



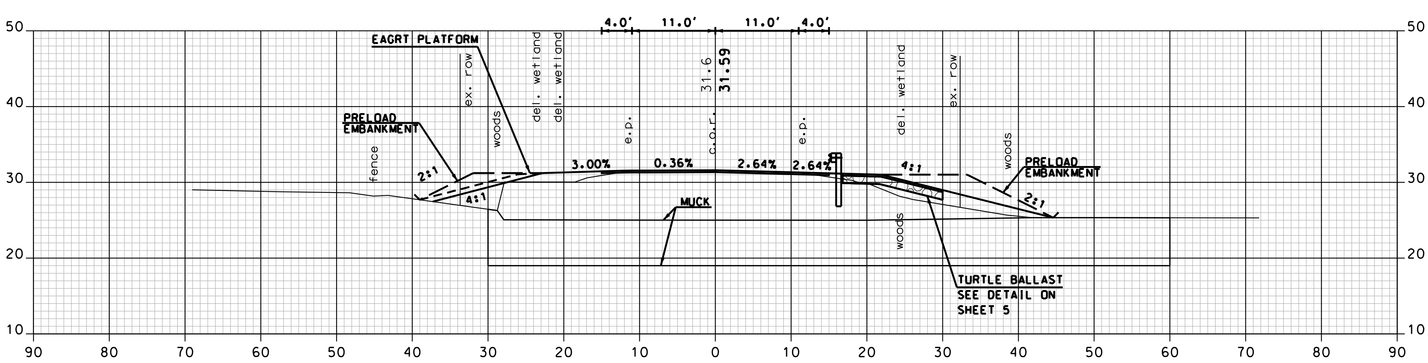
609+50



609+00



608+50



608+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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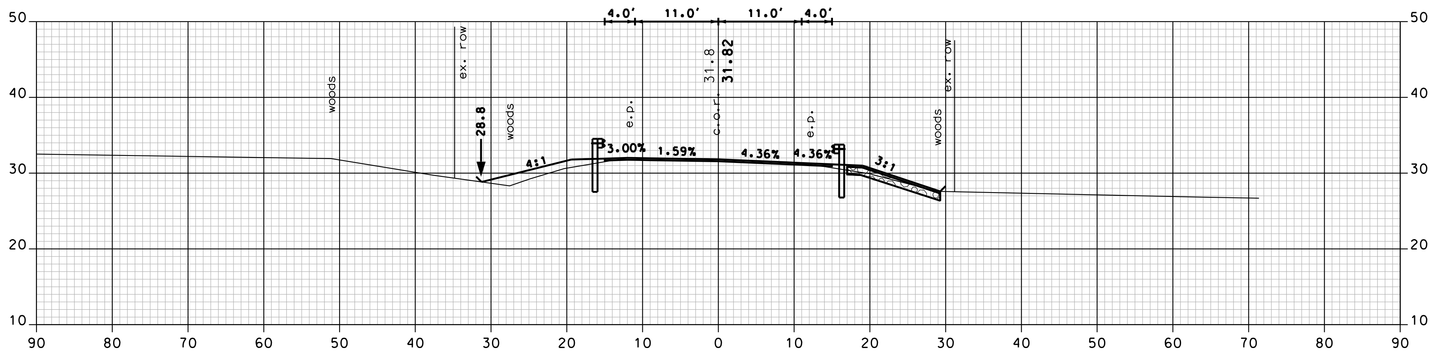
SHEET TOTALS			
COMMON EXCAV.	19.1 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	718.8 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	89A	119

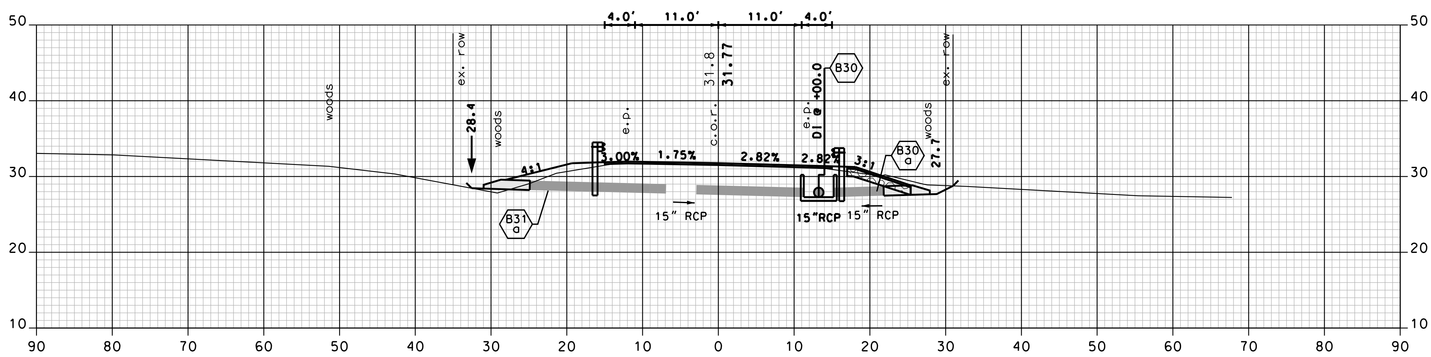
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

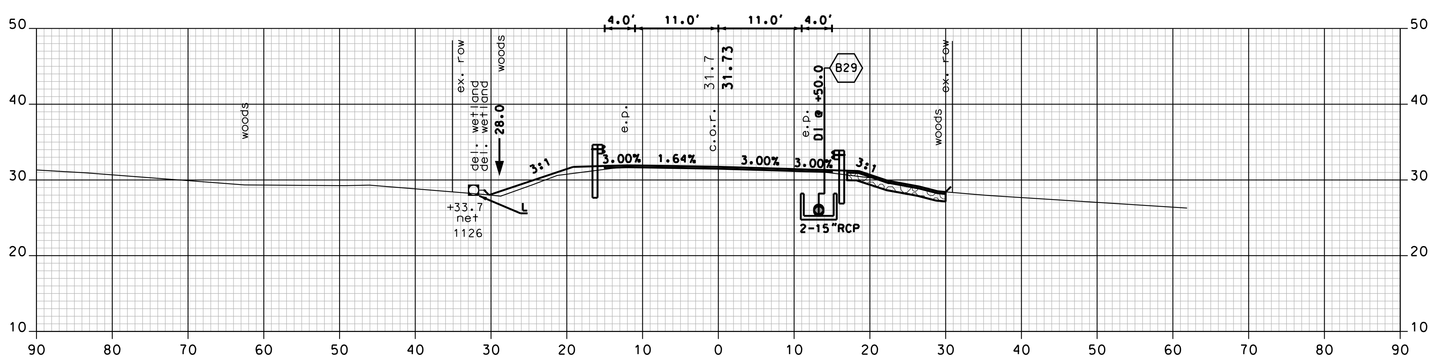
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



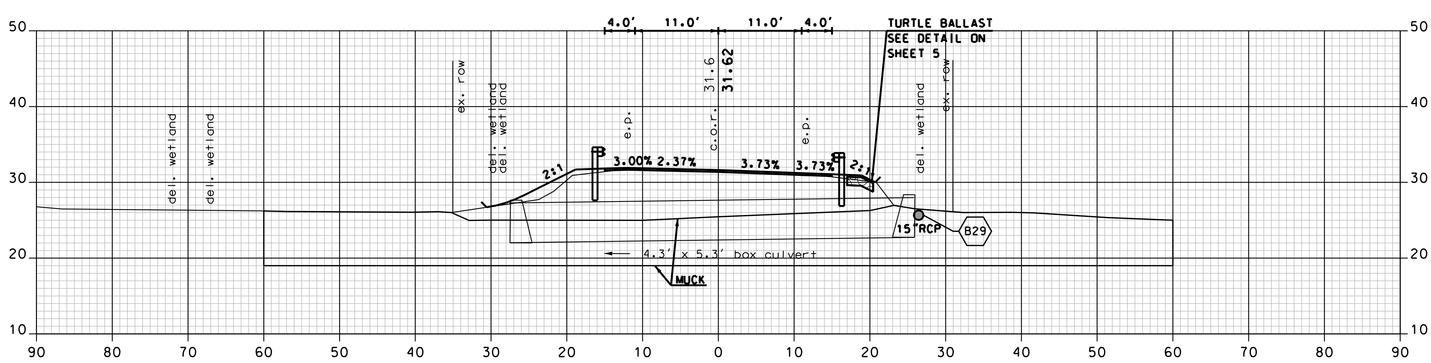
611+50



611+00



610+50



610+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

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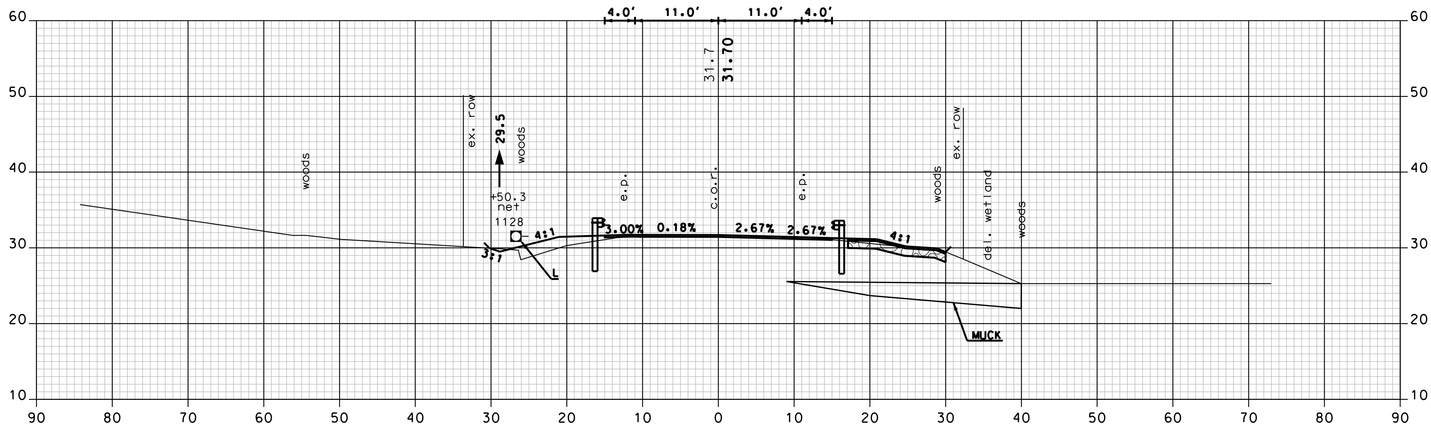
SHEET TOTALS			
COMMON EXCAV.	90.2 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	115.9 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	90A	119

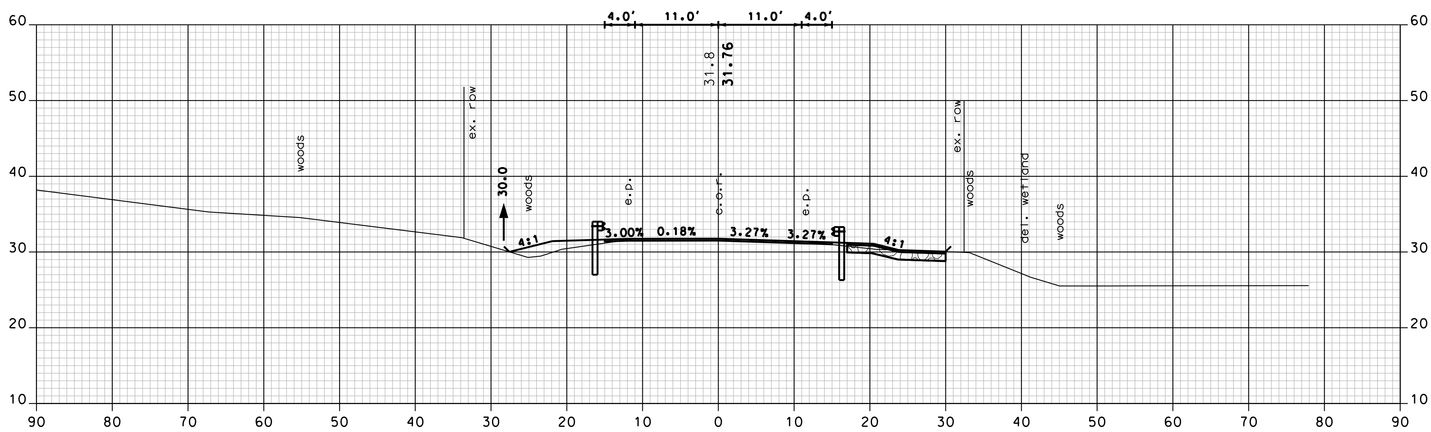
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

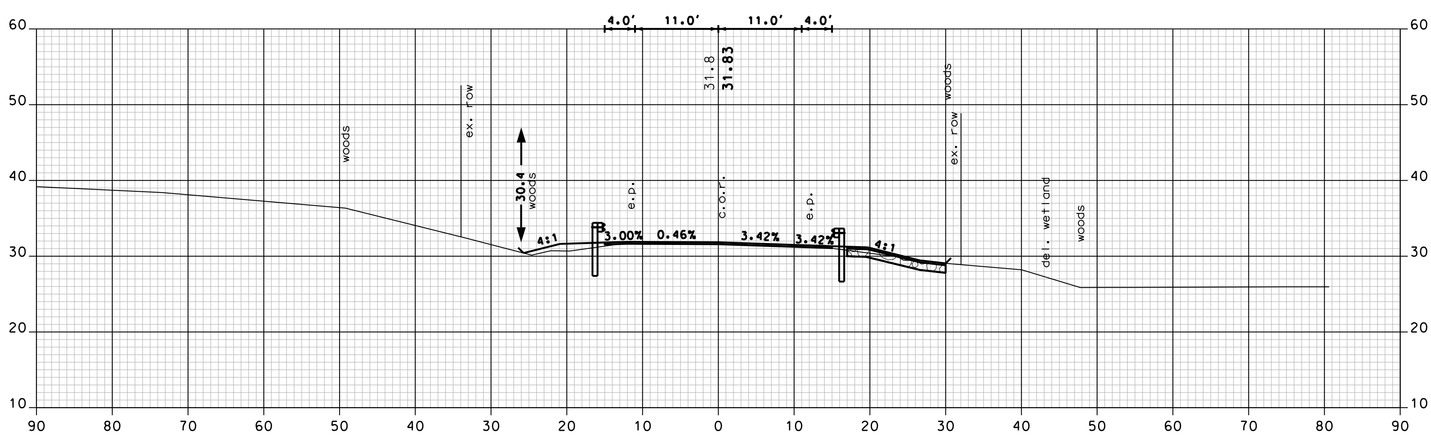
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



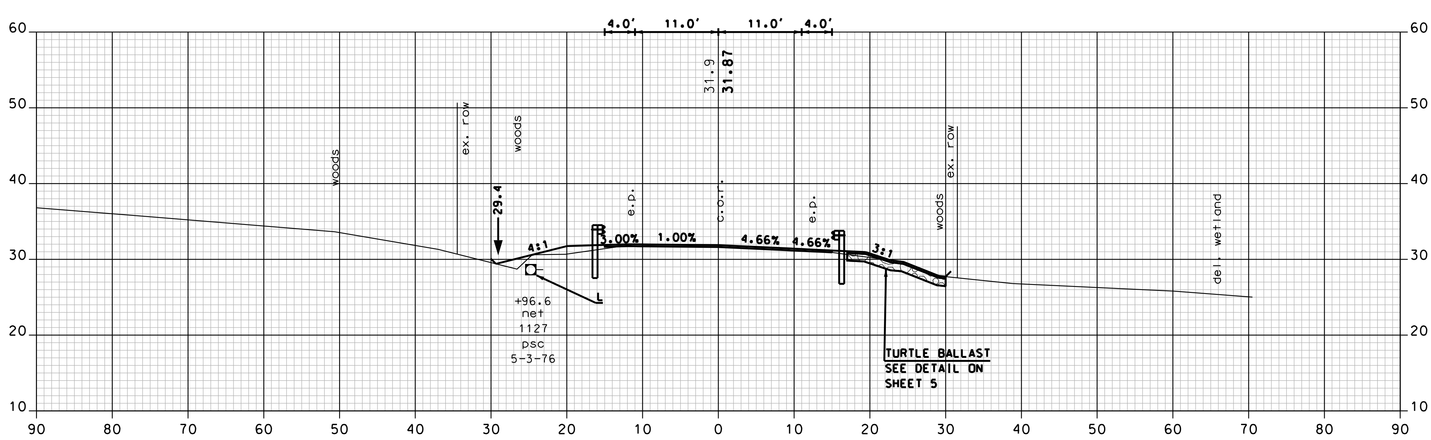
613+50



613+00



612+50



612+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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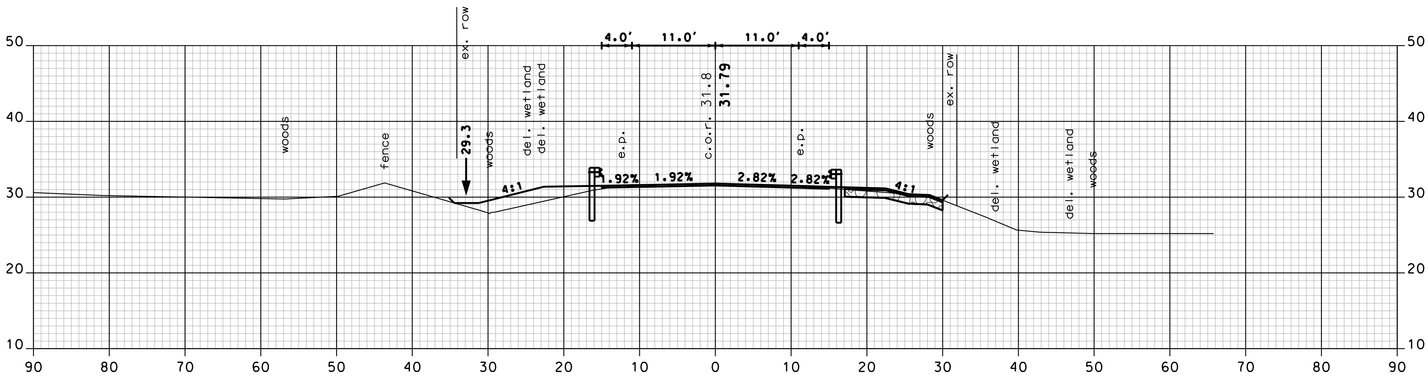
SHEET TOTALS			
COMMON EXCAV.	99.4 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	190.8 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	91A	119

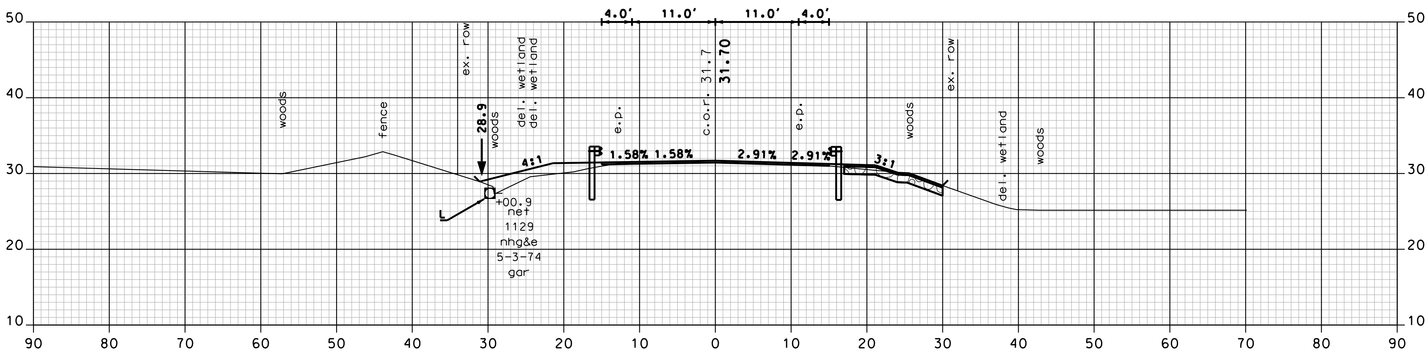
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

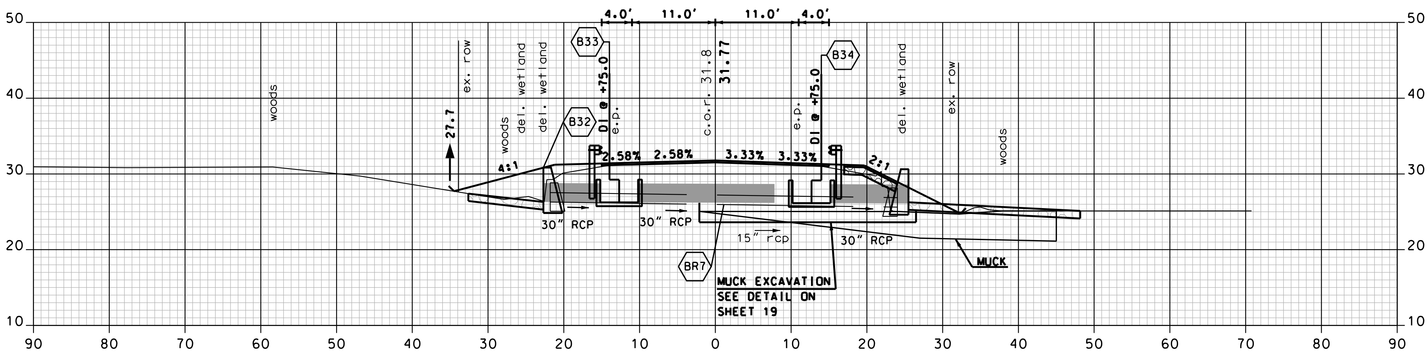
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



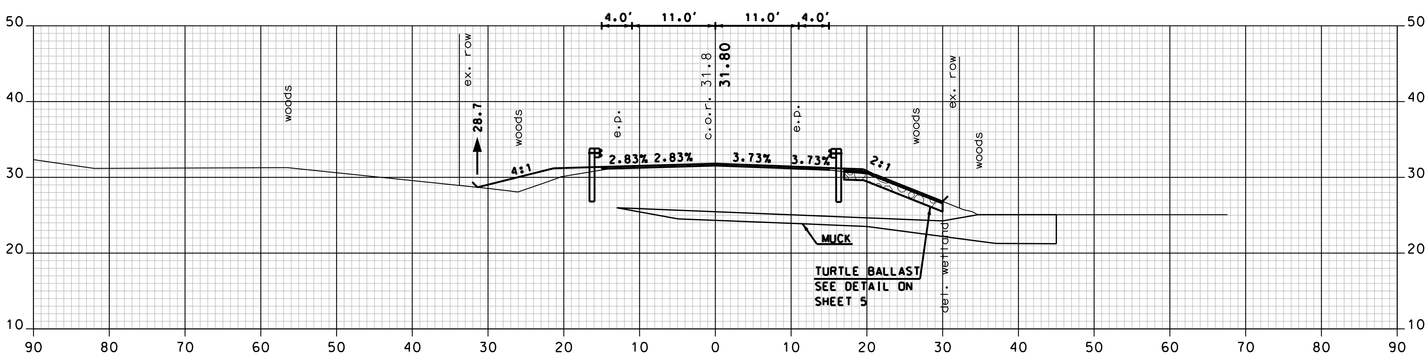
615+50



615+00



614+50



614+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

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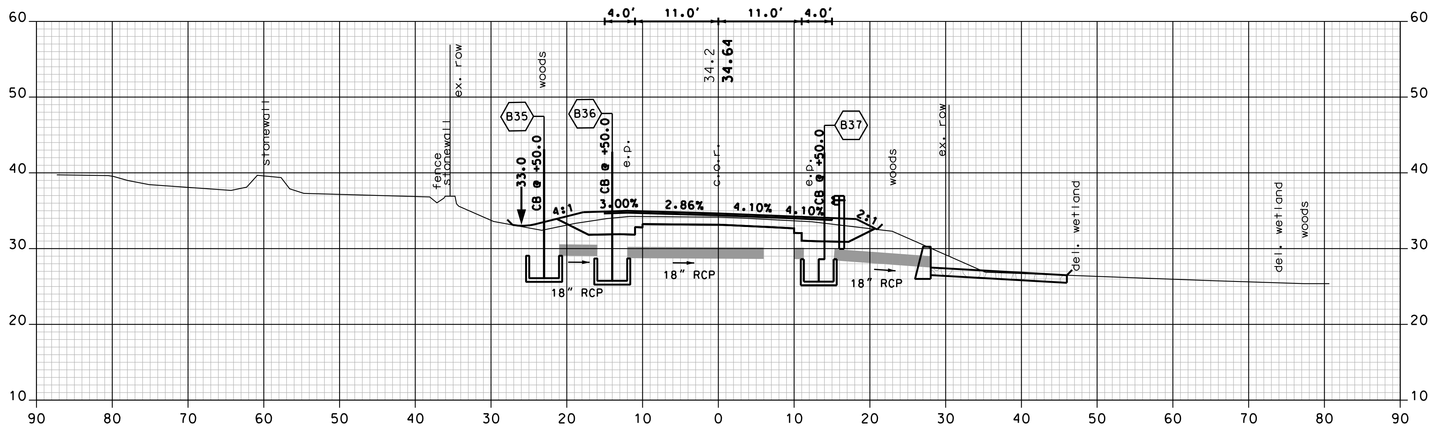
SHEET TOTALS			
COMMON EXCAV.	83.2 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	189.1 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	92A	119

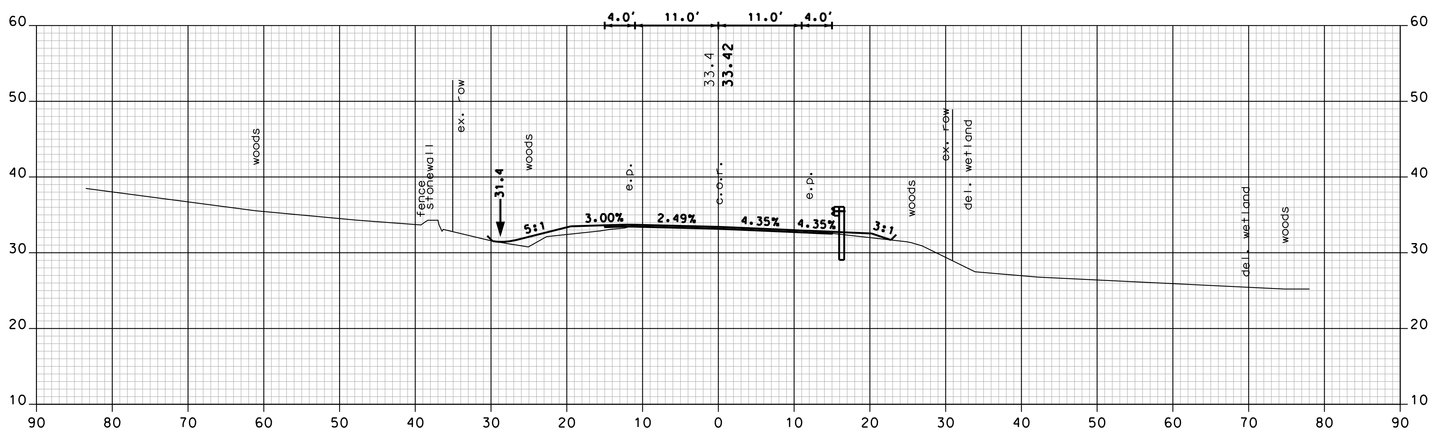
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

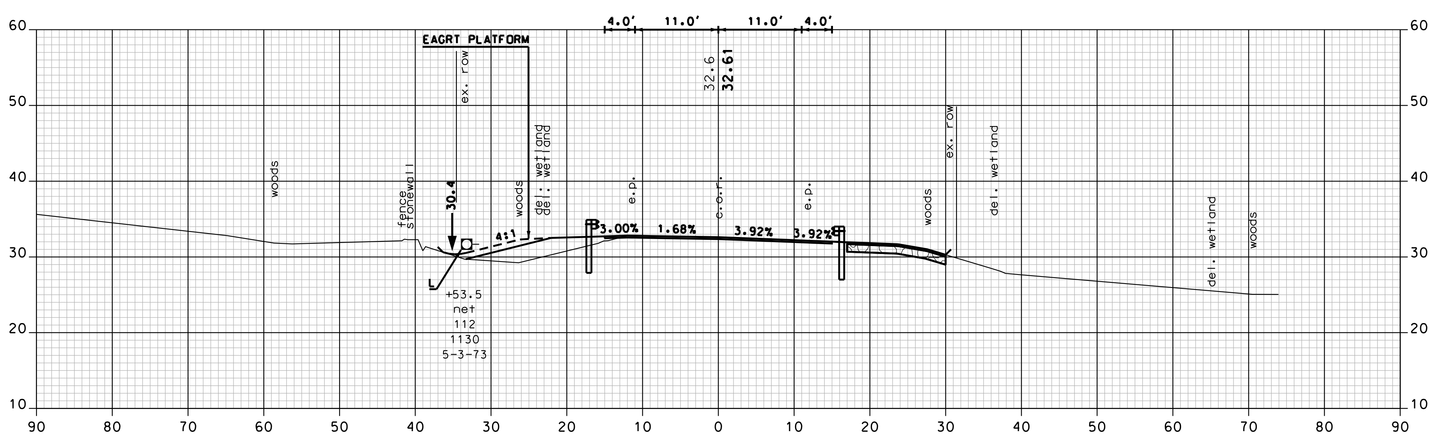
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



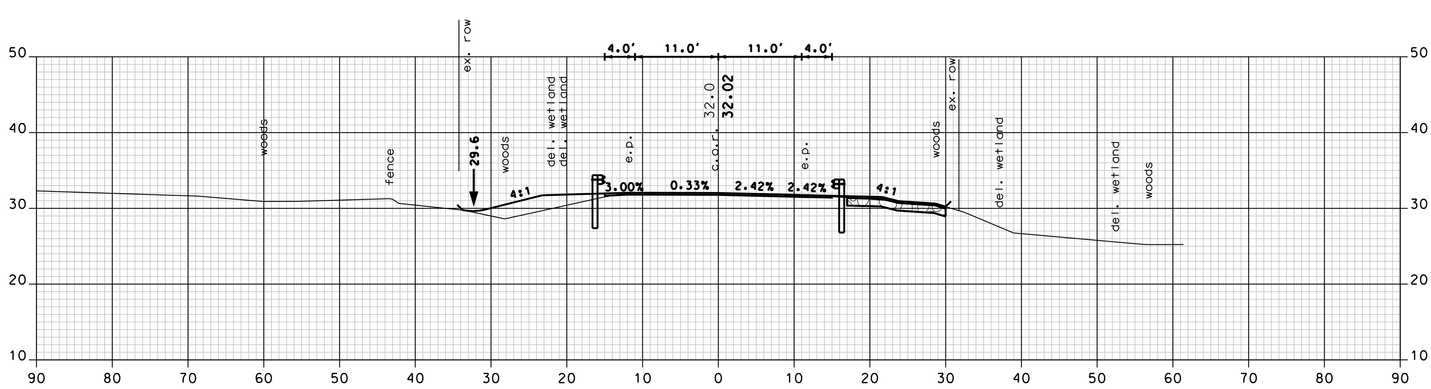
617+50



617+00



616+50



616+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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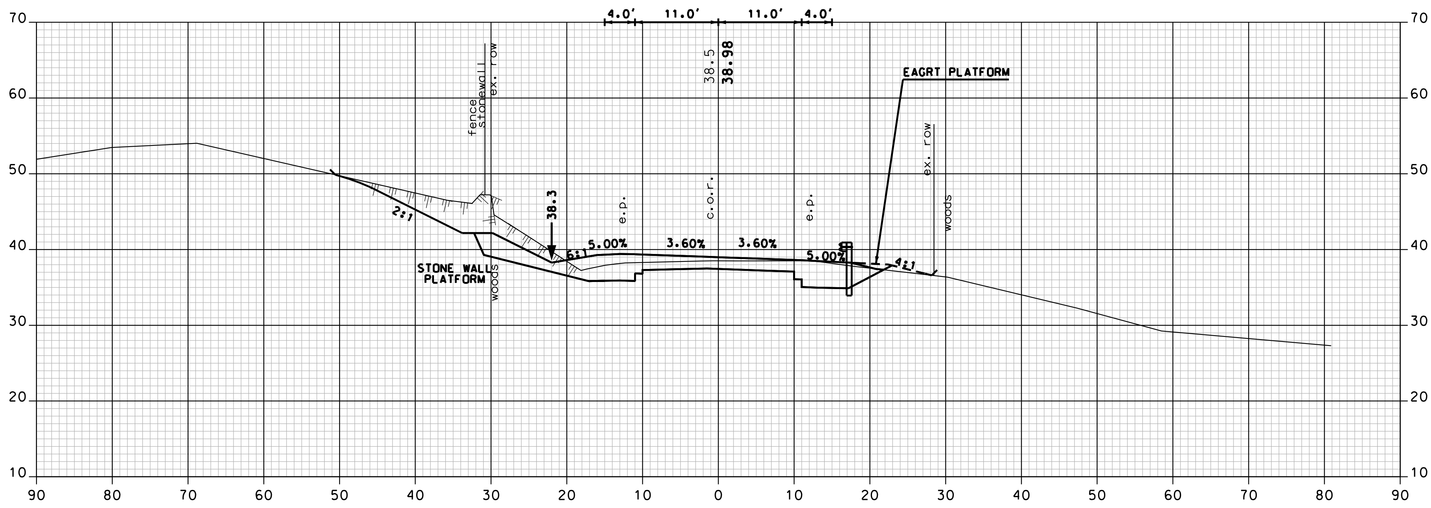
SHEET TOTALS			
COMMON EXCAV.	201.4 C.Y.	ROCK EXCAV.	0.0 C.Y.
FILL	71.6 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	93A	119

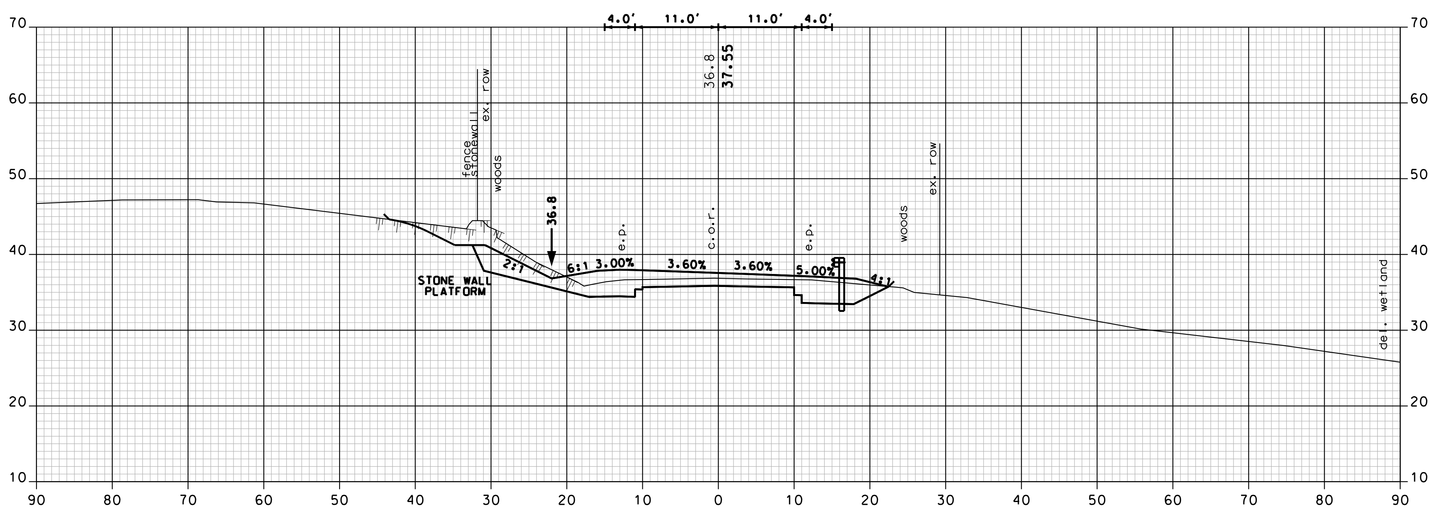
SDR PROCESSED	NHDOT	DATE	02/10
NEW DESIGN	P.R.P.	DATE	7/15
SHEET CHECKED	J.P.	DATE	7/15
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL

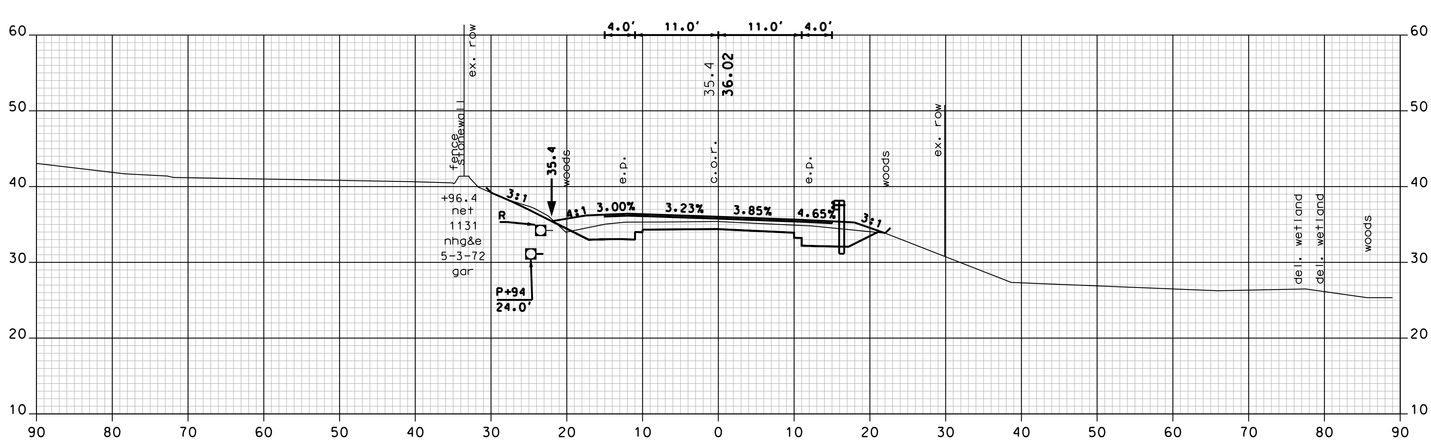
NUMBER	DATE	STATION	STATION	DESCRIPTION
1	7/9/2015	575+50	618+50	PROFILE REVISION



619+00



618+50



618+00

1 REVISION AFTER PROPOSAL REVISES CROSS SECTIONS AND DRAINAGE FROM STATION 575+50 TO 618+50.

NH ROUTE 108 - MCAM

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SHEET TOTALS

COMMON EXCAV.	393.7 C.Y.	ROCK EXCAV.	289.5 C.Y.
FILL	79.4 C.Y.	MUCK EXCAV.	0.0 C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
13080A_MCAM_XS.dgn	13080A	94A	119