

**TOWN OF STODDARD, NH
KING'S HIGHWAY CULVERT REPLACEMENT
OVER KENNEDY BROOK
D&K Project No. 325288**

ADDENDUM NO. 3

December 9, 2020

Page 1 of 2

TO: PROSPECTIVE BIDDERS

FROM: DuBois & King, Inc.
15 Constitution Drive, Suite 1L
Bedford, NH 03110

This Addendum forms part of the Contract Documents and modifies the original Bidding Documents dated November 20, 2020. **NOTE: Contractor to Acknowledge receipt of this Addendum in the space provided on Page 1 of the Bid Form (Section 00410, Page 00410-1). Failure to do so may subject the Bidder to disqualification.**

I. CONTRACT DOCUMENTS (SPECIFICATIONS) CHANGES

A. SECTION 410 – BID FORM, ARTICLE 5 – BASIS OF BID, Paragraph 5.01:

1. Page 5 **Revise** the quantity for Item 504.2, Rock Bridge Excavation from 50 CY to 20 CY.
2. Page 6 **Insert** the following new Bid Item:

538.2 Barrier Membrane, Peel and Stick – Vertical Surfaces, per square yard;

_____ Dollars and 5
S.Y.
_____ Cents (\$_____) \$_____

3. **Delete** Section 00410 – Bid Form in its entirety (11 pages). **Replace** with Bid Form, Revised 12/9/20 (11 pages), attached.

II. PLANS (DRAWINGS) CHANGES

A. SHEET NO. 6 – SUMMARY OF QUANTITIES

1. BRIDGE ITEMS (TABLE)

Insert the following new item:

538.2	BARRIER MEMBRANE, PEEL AND STICK – VERTICAL SURFACES	SY	5
-------	--	----	---

- B. The plans (31 sheets) have been revised to address changes to the boring designations and structure footing elevations. The revised plans (Rev. 1, dated 12/9/20) are attached to this addendum.

III. ADDITIONAL INFORMATION OR CLARIFICATION

- A. The Bid Form has been revised (revised 12/9/20) to address changes to this document in this Addendum No. 3.

1. Revised Bid Form is hereby **reissued** to prospective bidders for use in completing and submitting a Bid for this project. Bid Form, Revised 12/9/20, is attached.

IV. ATTACHMENTS

- Bid Form, Revised 12/9/20
- Revision 1 Plans, Revised 12/9/20

END ADDENDUM

BID FORM

REVISED 12/9/20

KING'S HIGHWAY CULVERT REPLACEMENT OVER KENNEDY BROOK

TABLE OF CONTENTS

	Page
ARTICLE 1 – Bid Recipient	1
ARTICLE 2 – Bidder’s Acknowledgements	1
ARTICLE 3 – Bidder’s Representations	1
ARTICLE 4 – Bidder’s Certification	2
ARTICLE 5 – Basis of Bid	3
ARTICLE 6 – Time of Completion	10
ARTICLE 7 – Attachments to this Bid	10
ARTICLE 8 – Defined Terms	10
ARTICLE 9 – Bid Submittal	11

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Ms. Michelle Pong, Town Administrator, Town of Stoddard, 1450 Route 123 North, Stoddard, NH 03464

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda posted on the Engineer’s website:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance

- of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
 - G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
 - H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
 - I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
 - J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Brief Description - Unit or Lump Sum Price (in both words and numerals)	Estimated Quantity	Total Bid Price (in numerals)
203.1	<u>Common Excavation</u> , per cubic yard;		
	_____ Dollars and	325	
		C.Y.	
	_____ Cents (\$_____)		\$_____
203.5572	<u>Guardrail EAGRT Offset Platform Alternate, TL 2 – 25'</u> , per unit;		
	_____ Dollars and	4	
		U	
	_____ Cents (\$_____)		\$_____
203.6	<u>Embankment-In-Place</u> , per cubic yard;		
	_____ Dollars and	290	
		C.Y.	
	_____ Cents (\$_____)		\$_____
207.3	<u>Unclassified Channel Excavation</u> , per cubic yard;		
	_____ Dollars and	140	
		C.Y.	
	_____ Cents (\$_____)		\$_____

209.201 Granular Backfill (Bridge), per cubic yard;

_____ Dollars and 250
C.Y.
_____ Cents (\$ _____) \$ _____

214. Fine Grading, per unit;

_____ Dollars and 1
U
_____ Cents (\$ _____) \$ _____

304.3 Crushed Gravel, per cubic yard;

_____ Dollars and 570
C.Y.
_____ Cents (\$ _____) \$ _____

304.35 Crushed Gravel for Drives, per cubic yard;

_____ Dollars and 10
C.Y.
_____ Cents (\$ _____) \$ _____

503.201 Cofferdams, per unit;

_____ Dollars and 1
U
_____ Cents (\$ _____) \$ _____

504.1 Common Bridge Excavation, per cubic yard;

_____ Dollars and 650
C.Y.
_____ Cents (\$ _____) \$ _____

504.2 Rock Bridge Excavation, per cubic yard;

_____ Dollars and 20
C.Y.
_____ Cents (\$ _____) \$ _____

520.001 Concrete Class AAA, per cubic yard;

_____ Dollars and 75
C.Y.
_____ Cents (\$ _____) \$ _____

520.1 Concrete Class A, per cubic yard;

_____ Dollars and 23
C.Y.
_____ Cents (\$ _____) \$ _____

520.2 Concrete Class B, per cubic yard;

_____ Dollars and 60
C.Y.
_____ Cents (\$ _____) \$ _____

520.211 Concrete Class B, Footings (On Rock), per cubic yard;

_____ Dollars and 20
C.Y.
_____ Cents (\$ _____) \$ _____

534.3 Water Repellent (Silane/Siloxane), per gallon;

_____ Dollars and 5
GAL
_____ Cents (\$ _____) \$ _____

538.2 Barrier Membrane, Peel and Stick – Vertical Surfaces, per square yard;

_____ Dollars and 5
S.Y.
_____ Cents (\$ _____) \$ _____

544.201 Reinforcing Steel – Epoxy Coated, per pound;

_____ Dollars and 23500
LB
_____ Cents (\$ _____) \$ _____

563.3 Bridge Rail T101, per linear foot;

_____ Dollars and 55
L.F.
_____ Cents (\$ _____) \$ _____

585.2 Stone Fill, Class B, per cubic yard;

_____ Dollars and 145
C.Y.
_____ Cents (\$ _____) \$ _____

593.421 Geotextile; Perm Control Cl. 2, Non-Woven, per square yard;

_____ Dollars and 500
S.Y.
_____ Cents (\$ _____) \$ _____

606.12551 Beam Guardrail (Terminal Unit Type EAGRT, TL 2 – 25') (Steel Post), per unit;

_____ Dollars and 4
U
_____ Cents (\$ _____) \$ _____

606.1285 Beam Guardrail (Bridge Approach Unit), per unit;

_____ Dollars and 4
U
_____ Cents (\$ _____) \$ _____

606.18001 31" W-Beam Guardrail With 8" Offset Block (Steel Post), per linear foot;

_____ Dollars and 262.5
L.F.
_____ Cents (\$ _____) \$ _____

615.03 Traffic Sign Type C, per square foot;

_____ Dollars and 5
S.F.
_____ Cents (\$ _____) \$ _____

615.033 Removing Traffic Sign, Type C, per unit;

_____ Dollars and 2
U
_____ Cents (\$ _____) \$ _____

619.1 Maintenance of Traffic, per unit;

_____ Dollars and 1
U
_____ Cents (\$ _____) \$ _____

645.531 Silt Fence, per linear foot;

_____ Dollars and 410
L.F.
_____ Cents (\$ _____) \$ _____

645.7 Storm Water Pollution Prevention Plan, per unit;

_____ Dollars and 1
U
_____ Cents (\$ _____) \$ _____

645.711 Monitoring SWPPP and Erosion and Sediment Controls, per visit;

_____ Dollars and 16
VISIT
_____ Cents (\$ _____) \$ _____

646.31 Turf Establishment with Mulch and Tackifiers, per square yard;

_____ Dollars and 475
S.Y.
_____ Cents (\$ _____) \$ _____

647.1 Humus, per cubic yard;

_____ Dollars and 52
C.Y.
_____ Cents (\$ _____) \$ _____

670.046 Construct and Remove Temporary Widening, per unit;

_____ Dollars and 1
U
_____ Cents (\$ _____) \$ _____

670.067 Relocate Multiple Mailboxes, per unit;

_____ Dollars and 1
U
_____ Cents (\$ _____) \$ _____

692. Mobilization, per unit;

_____ Dollars and 1
U
_____ Cents (\$ _____) \$ _____

699. Miscellaneous Temporary Erosion and Sediment Control, per allowance;

Three Thousand _____ Dollars and 1
Allowance
_____ Cents (\$ _____) \$ 3,000.00

1008.11 Alterations and Additions as Needed – Unanticipated Work, per allowance;

Ten Thousand _____ Dollars and 1
Allowance
_____ Cents (\$ _____) \$ 10,000.00

* Unit Bid Items and Authorized Addition or Reduction payment items shall be applied to additions or reductions in the scope of work. Indeterminate Quantity assumed for comparison for bids.

Total of All Unit Price Bid Items (BASE BID) (\$ _____)

Notes:

1. Bidder acknowledges that (a) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (b) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.
2. Unit Prices have been computed in accordance with Paragraph 13.03.B of the General Conditions.
3. In the event that there is a discrepancy between the lump sum or unit prices written in words and figures, the prices written in words shall govern.
4. BIDDERS must bid on each item. All entries in the entire BID must be made clearly and in ink; prices bid must be written in both words and in figures.
5. BIDDERS must insert extended item prices obtained from quantities and unit prices.
6. BIDS shall include all applicable taxes and fees.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
 - B. List of Subcontractors;
 - C. List of Suppliers;
 - D. Proposed Construction Schedule.

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: [Indicate correct name of bidding entity]

By: _____
[Signature]

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
[Signature]

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

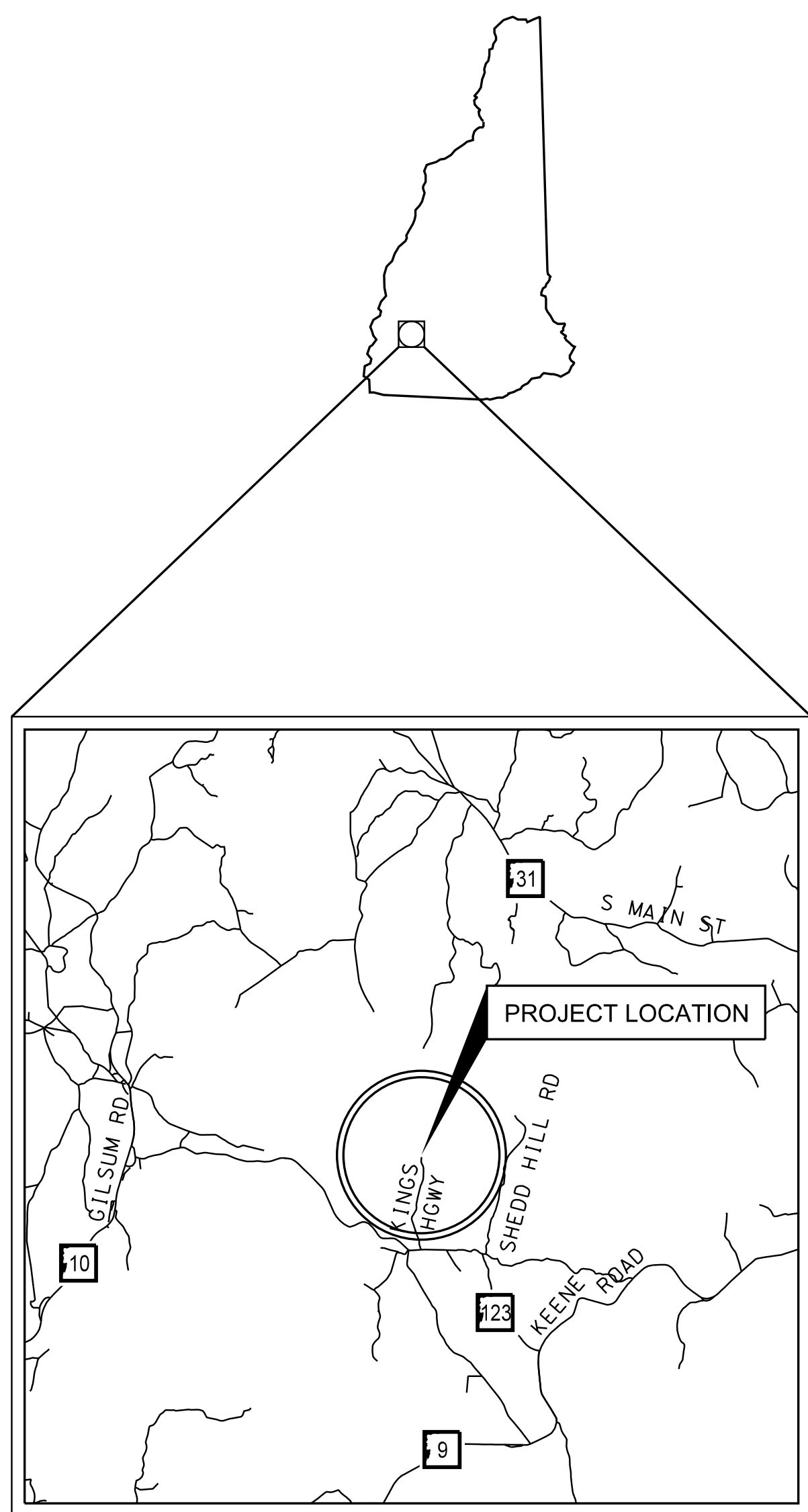
Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____
(where applicable)

CONSTRUCTION PLANS

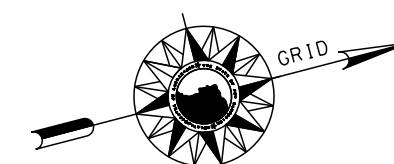
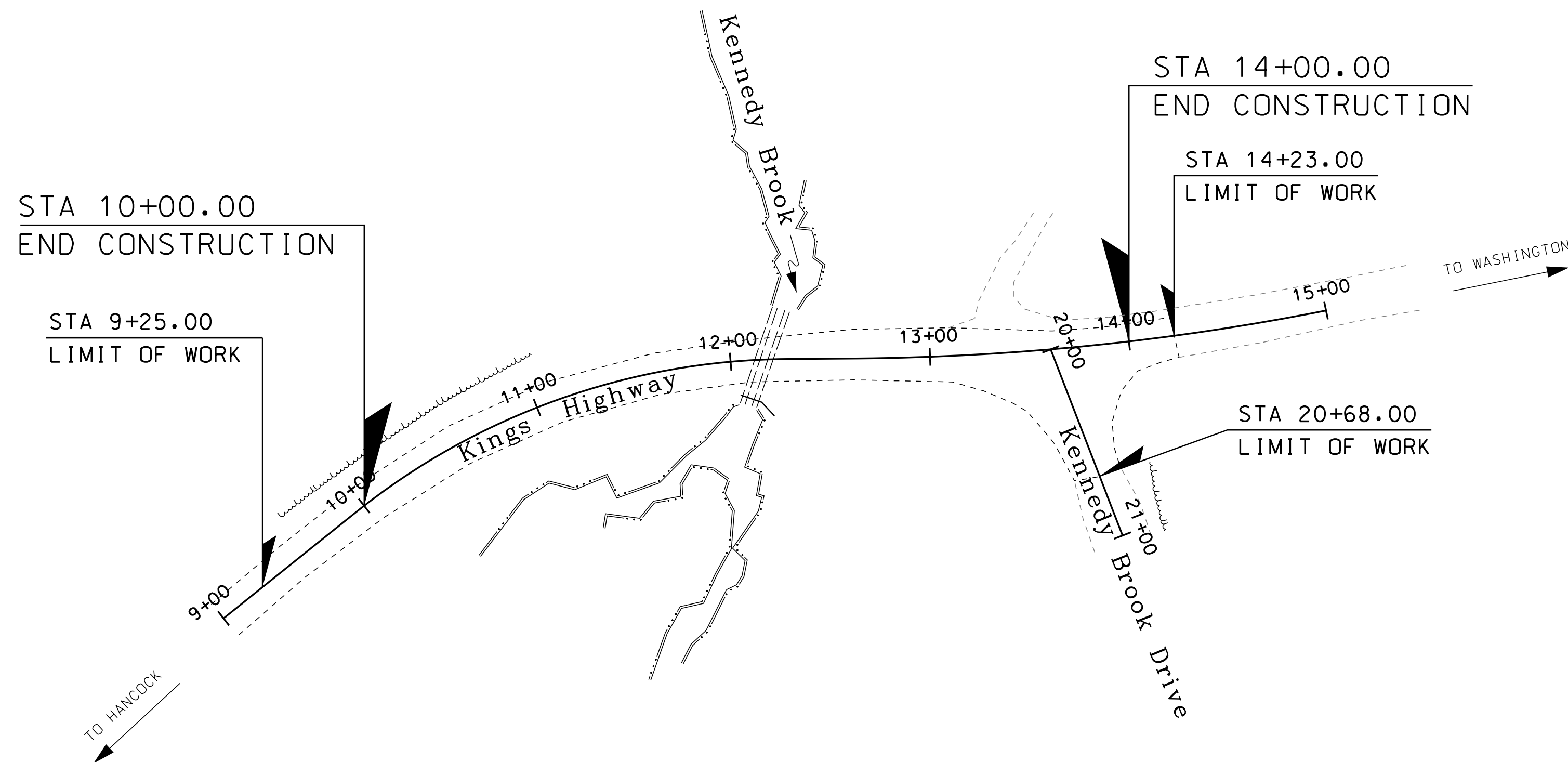
TOWN OF STODDARD, NEW HAMPSHIRE KINGS HIGHWAY CULVERT REPLACEMENT OVER KENNEDY BROOK NOVEMBER 2020



LOCATION MAP



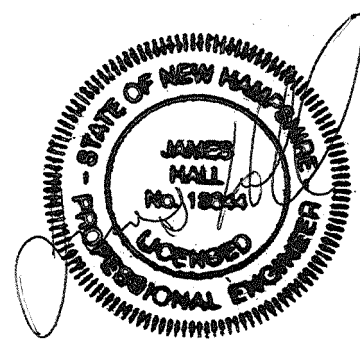
GRAPHIC SCALE



DRAWN BY: GMC
CHECKED BY: JCH
DATE: 12/8/2020
DATE: 12/8/2020

DuBois & King Inc.

ENGINEERING • PLANNING •
MANAGEMENT • DEVELOPMENT
15 CONSTITUTION DRIVE
BEDFORD, NH 03110
TEL: (603) 637-1043
FAX: (603) 783-7101
www.dubois-king.com
LACONIA, NH
SPRINGFIELD, VT
RANDOLPH, VT
SOUTH BURLINGTON, VT
© Copyright 2020 Dubois & King Inc.



**TOWN OF STODDARD
COUNTY OF CHESHIRE
SCALE: 1" = 50'**

FINAL PLANS
ISSUED FOR BID
[NOT FOR CONSTRUCTION]
DATE 11/20/2020

TOWN OF STODDARD, NEW HAMPSHIRE			
DUBOIS & KING PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
325288	--	1	31

GENERAL NOTES

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS AND GENERAL NOTES
3 - 4	STANDARD SYMBOLS
5	PROJECT NOTES
6	SUMMARY OF QUANTITIES
7	ROADWAY TYPICAL SECTION AND PROFILE
8	GENERAL PLAN & ELEVATION
9	SURVEY LAYOUT PLAN
10	IMPACT SITE PLAN
11	BORING LOGS
12	TRAFFIC CONTROL PLANS
13	TRAFFIC PHASING TYPICAL SECTIONS
14	RIGHT-OF-WAY PLAN
15	BRIDGE RAIL LAYOUT
16	ABUTMENT A WINGWALL DETAILS
17	ABUTMENT B WINGWALL DETAILS
18	BRIDGE TYPICAL SECTIONS
19	FOOTING LAYOUT AND REINFORCING DETAILS
20	FRAME LAYOUT AND REINFORCING DETAILS
21 - 25	ROADWAY CROSS SECTIONS
26	T101 BRIDGE & APPROACH RAIL (STEEL POSTS)
27	TL 2-25' EAGRT PLATFORM DETAILS
28	TERMINAL UNIT DELINEATION
29 - 30	EROSION CONTROL NOTES
31	EROSION CONTROL DETAILS

- ① FOR STANDARD PLANS, SEE "STANDARD PLANS FOR ROAD CONSTRUCTION" DATED 2010 (A BOUND BOOK).
- ② HIGH TENSION OVERHEAD TRANSMISSION LINES ARE LOCATED THROUGHOUT THE PROJECT WITH CROSSINGS AT VARIOUS LOCATIONS AND RUNNING ALONG THE ROAD THROUGHOUT THE PROJECT EVEN ON REGULAR POLES. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, ESPECIALLY CRANES AND PILE DRIVING EQUIPMENT.
- ③ MODIFY SUPERELEVATION ON EXISTING CURVES BY THE USE OF A LEVELING COURSE TO THE RATES INDICATED ON THE PLANS OR AS ORDERED.
- ④ EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE REMOVED AND DETERMINED BY THE ENGINEER TO BE IN ACCEPTABLE CONDITION SHALL BE RESET (SUBSIDIARY). ADDITIONAL DELINEATORS AND WITNESS MARKERS ORDERED WILL BE PAID UNDER THE APPROPRIATE ITEMS OF THE CONTRACT.
- ⑤ NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
- ⑥ PERFORM ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER.
- ⑦ REMOVE UNPROTECTED PROJECT MARKERS (SUBSIDIARY).
- ⑧ SURVEY DATA FOR THIS PROJECT WAS COLLECTED BY SDR AND THE FIELD NOTES CAN BE FOUND IN THE FIELD BOOK(S) _____, COORDINATES ARE NEW HAMPSHIRE STATE PLANE COORDINATES OF NAD83, 1986 ADJUSTMENT AND THE BEARINGS ARE GRID. ELEVATIONS ARE REFERENCED TO NGVD 1929.
- ⑨ QUANTITIES FOR EMBANKMENT AND EXCAVATION FOR SLOPE ROUNDINGS AS SHOWN ON THE TYPICALS HAVE NOT BEEN CALCULATED AND ARE NOT INCLUDED IN THE QUANTITY SUMMARIES, AND ARE CONSIDERED SUBSIDIARY TO THE APPROPRIATE 203 ITEMS.

THE FOLLOWING GENERAL NOTES WILL BE USED ON THIS PROJECT:											
①	○	○	○	⑤	⑥	⑦	○	⑨	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○

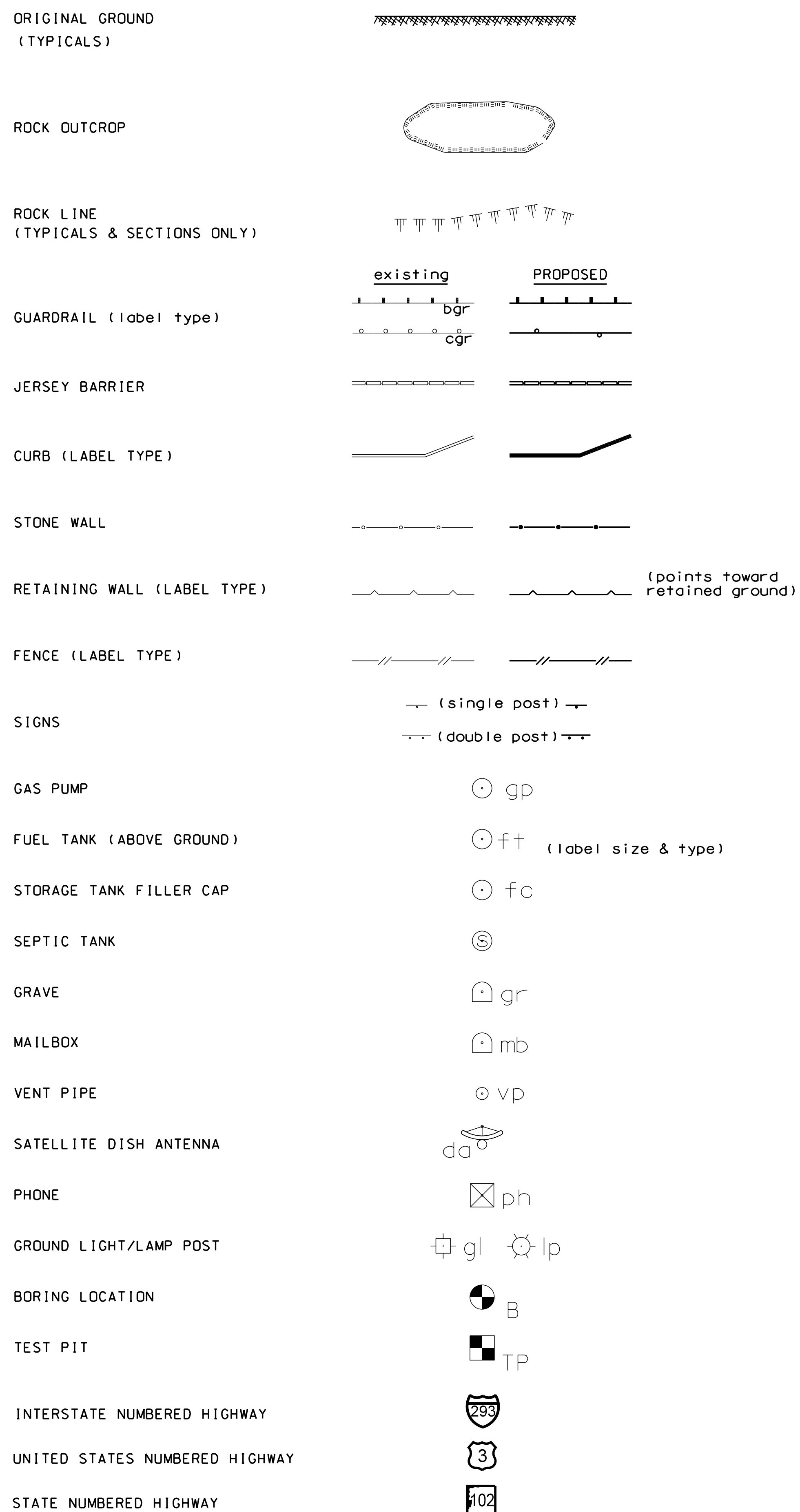
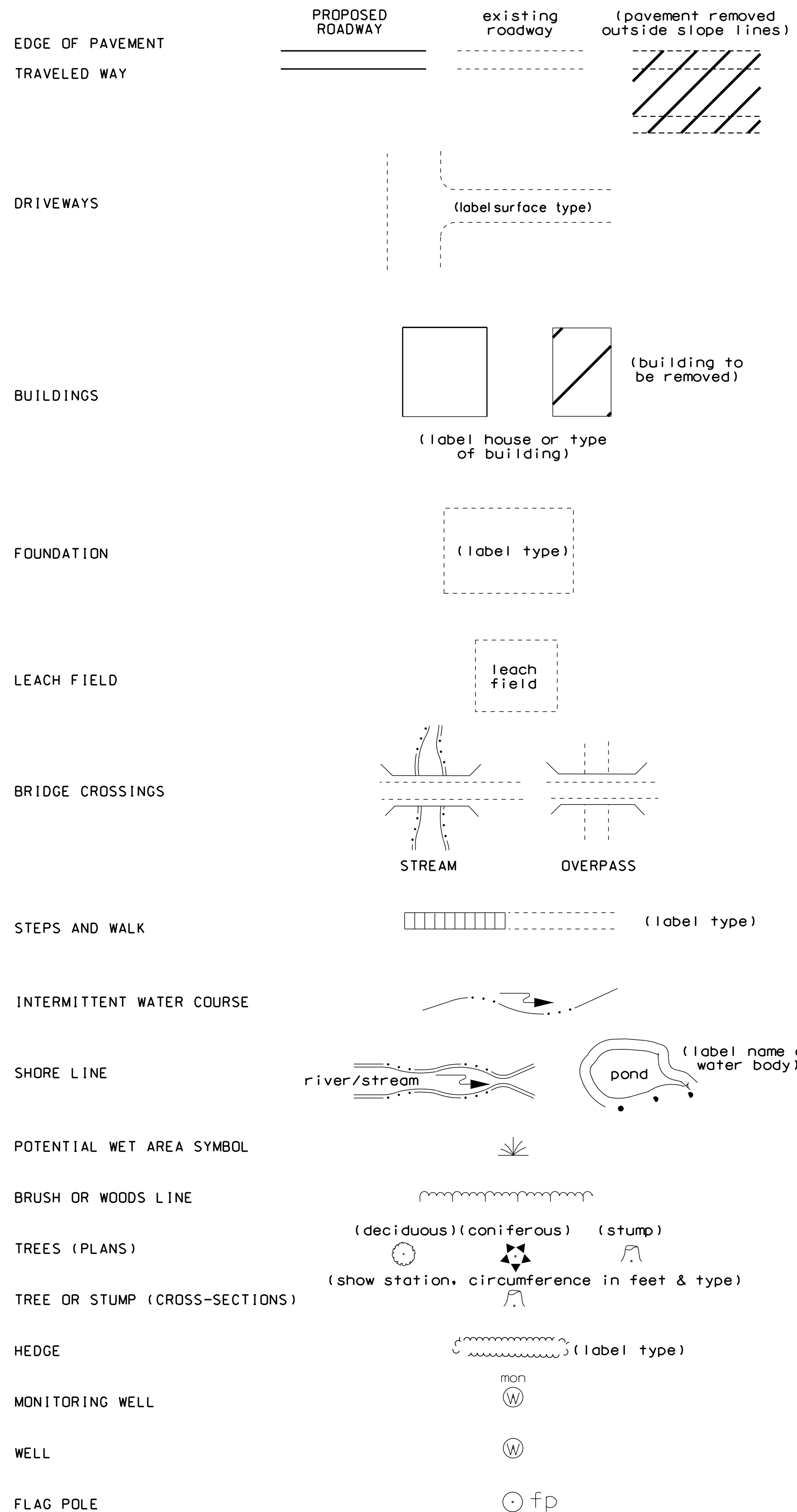
TOWN OF STODDARD, NEW HAMPSHIRE

INDEX OF SHEETS AND GENERAL NOTES

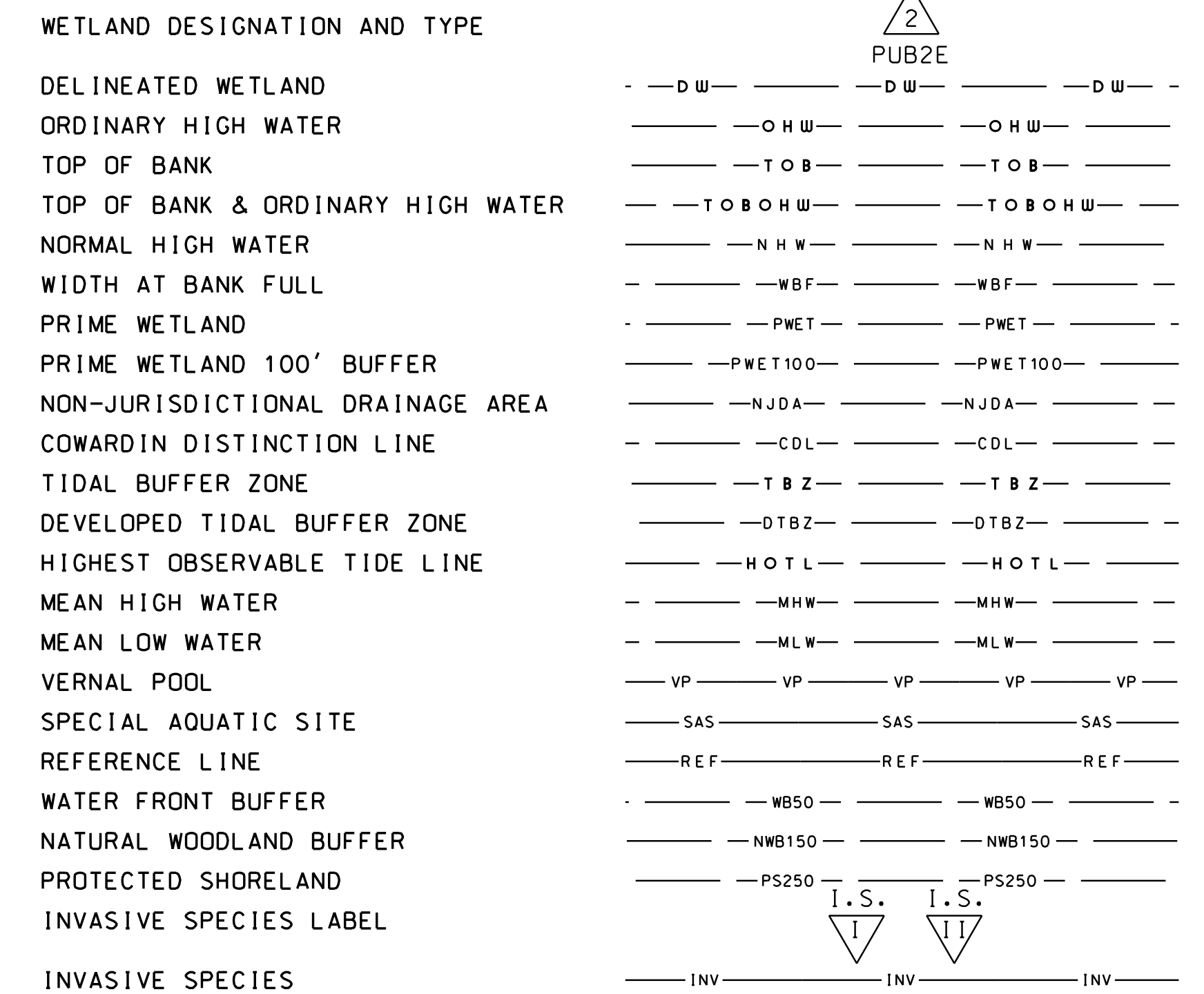


REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
4-28-20	index_sheet	--	2	31

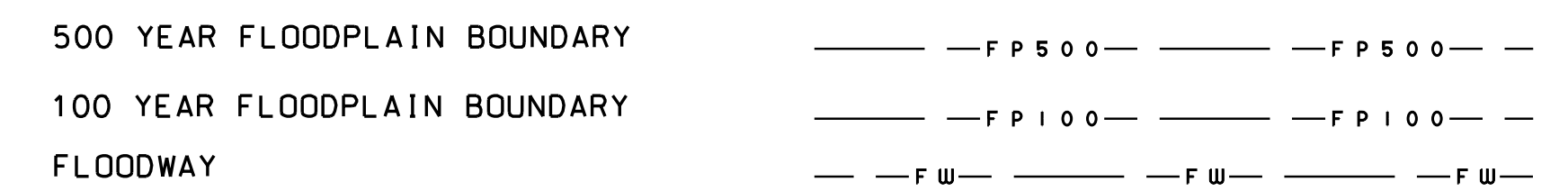
GENERAL



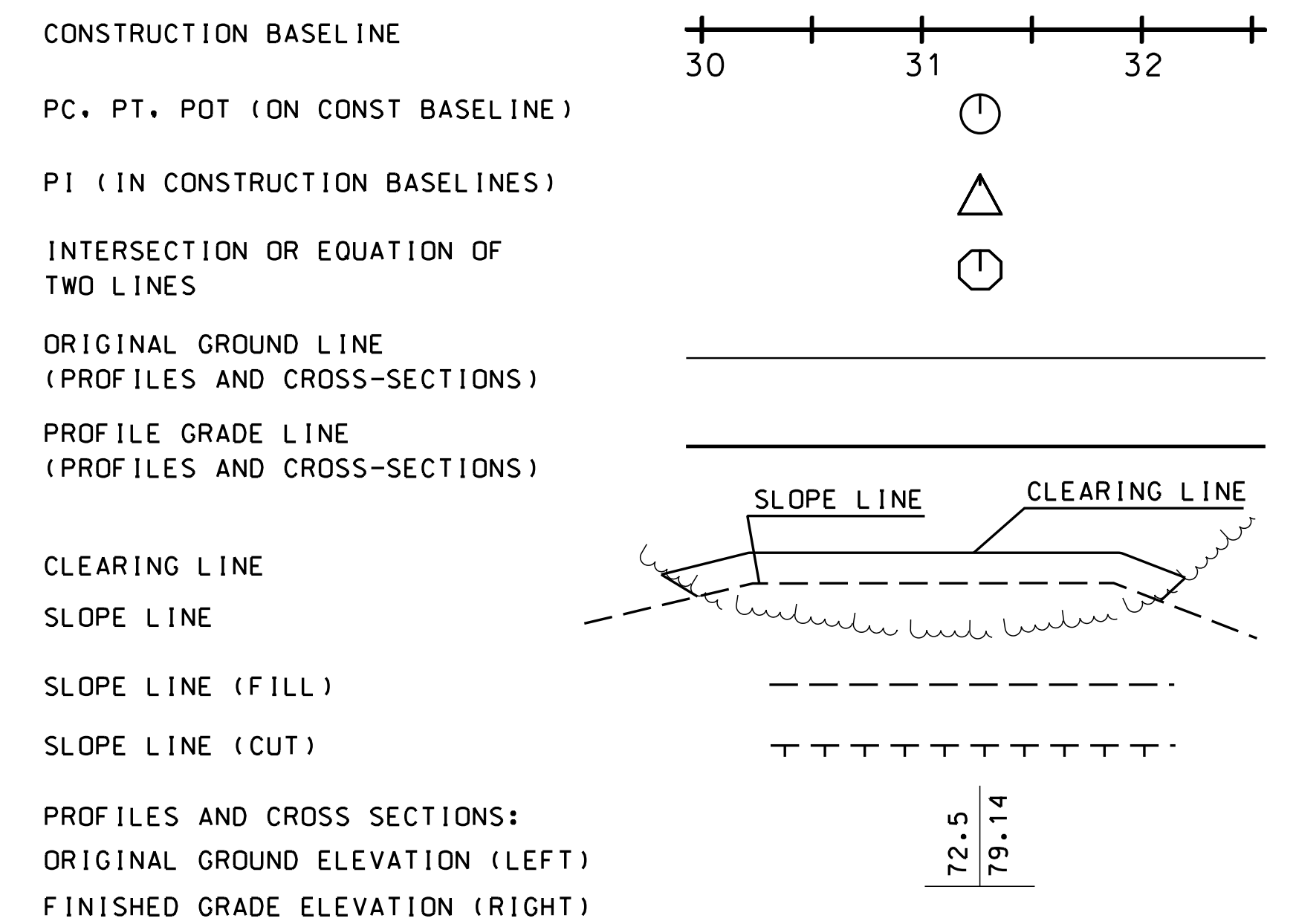
SHORELAND - WETLAND



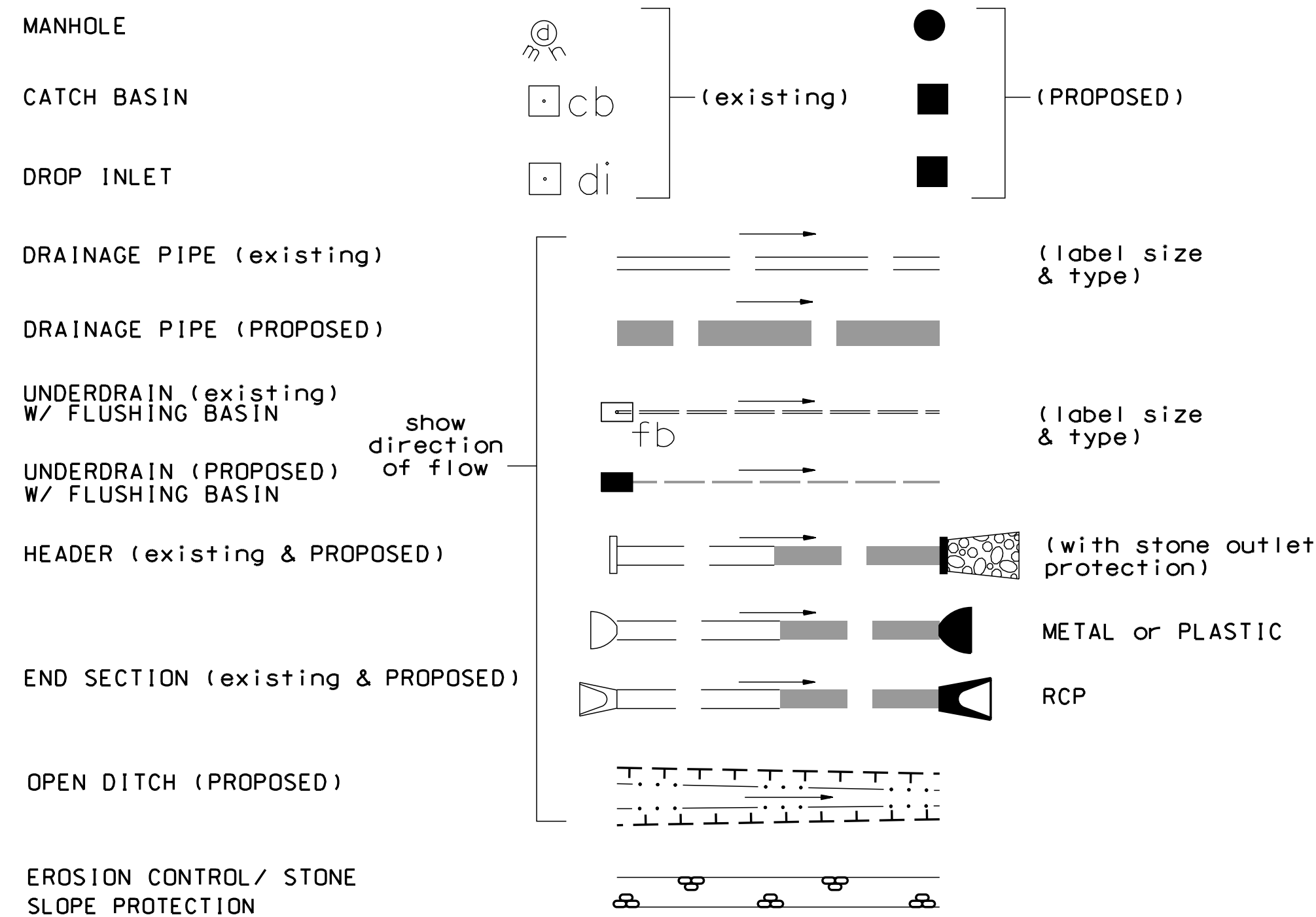
FLOODPLAIN / FLOODWAY



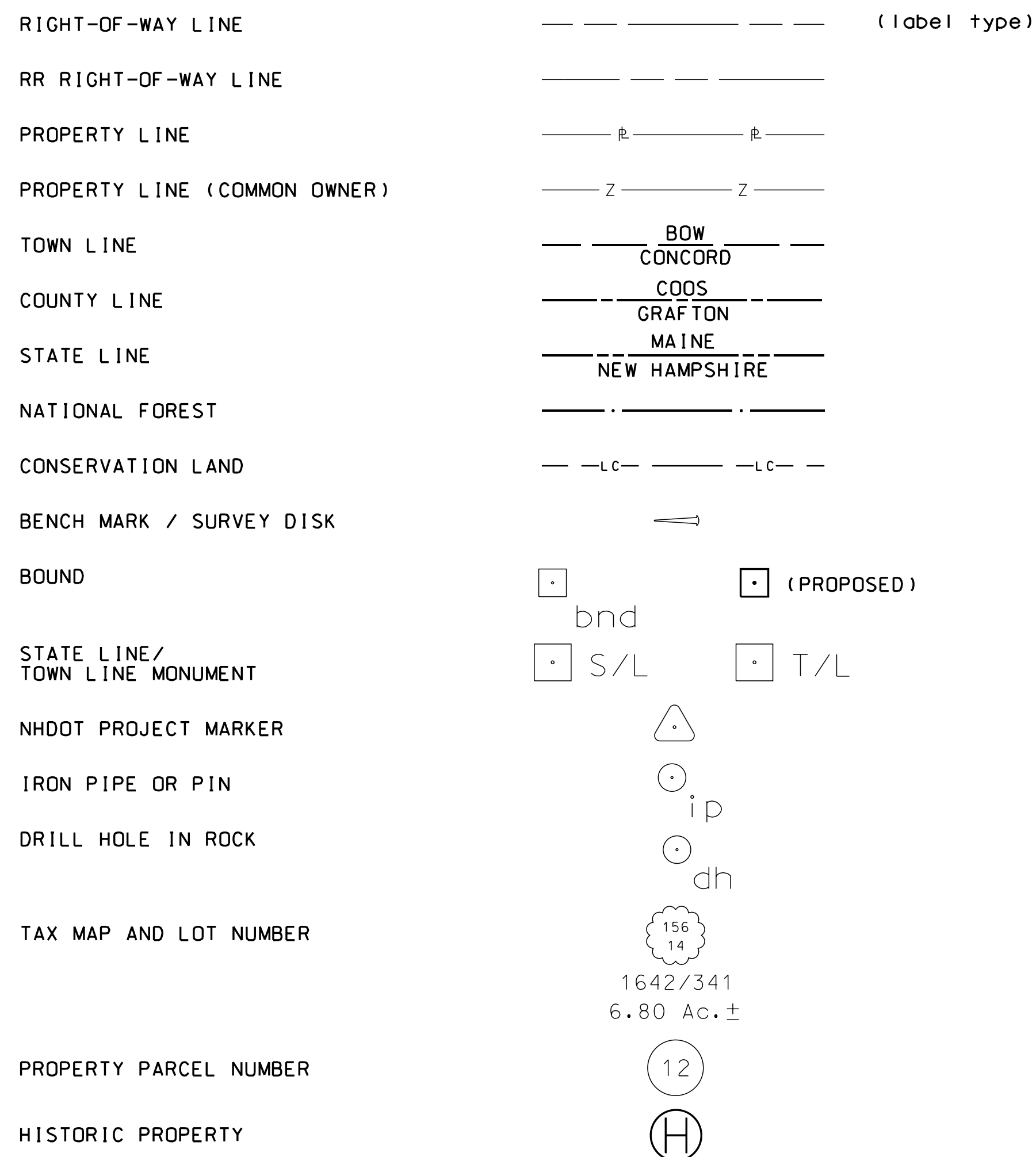
ENGINEERING



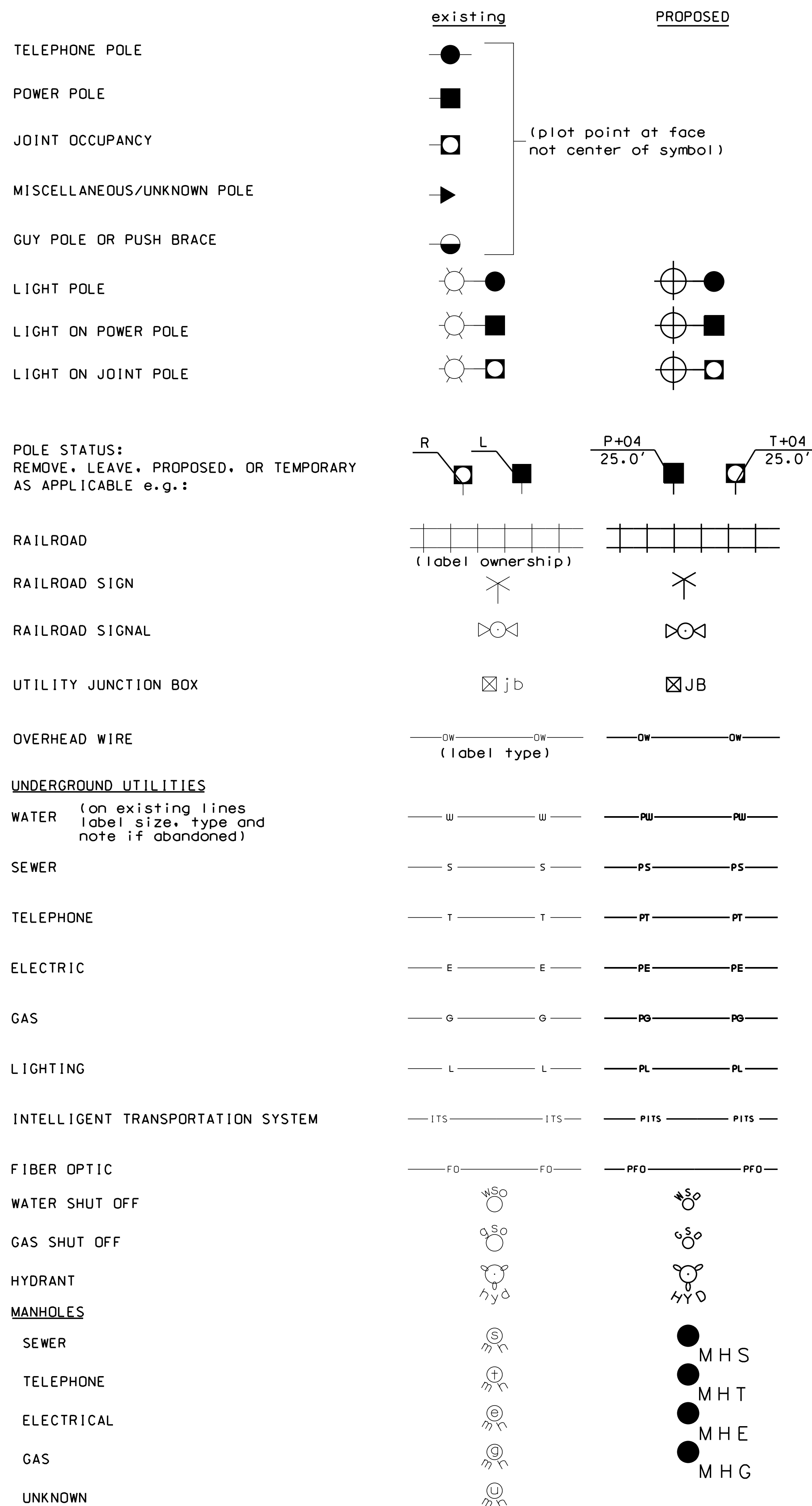
DRAINAGE



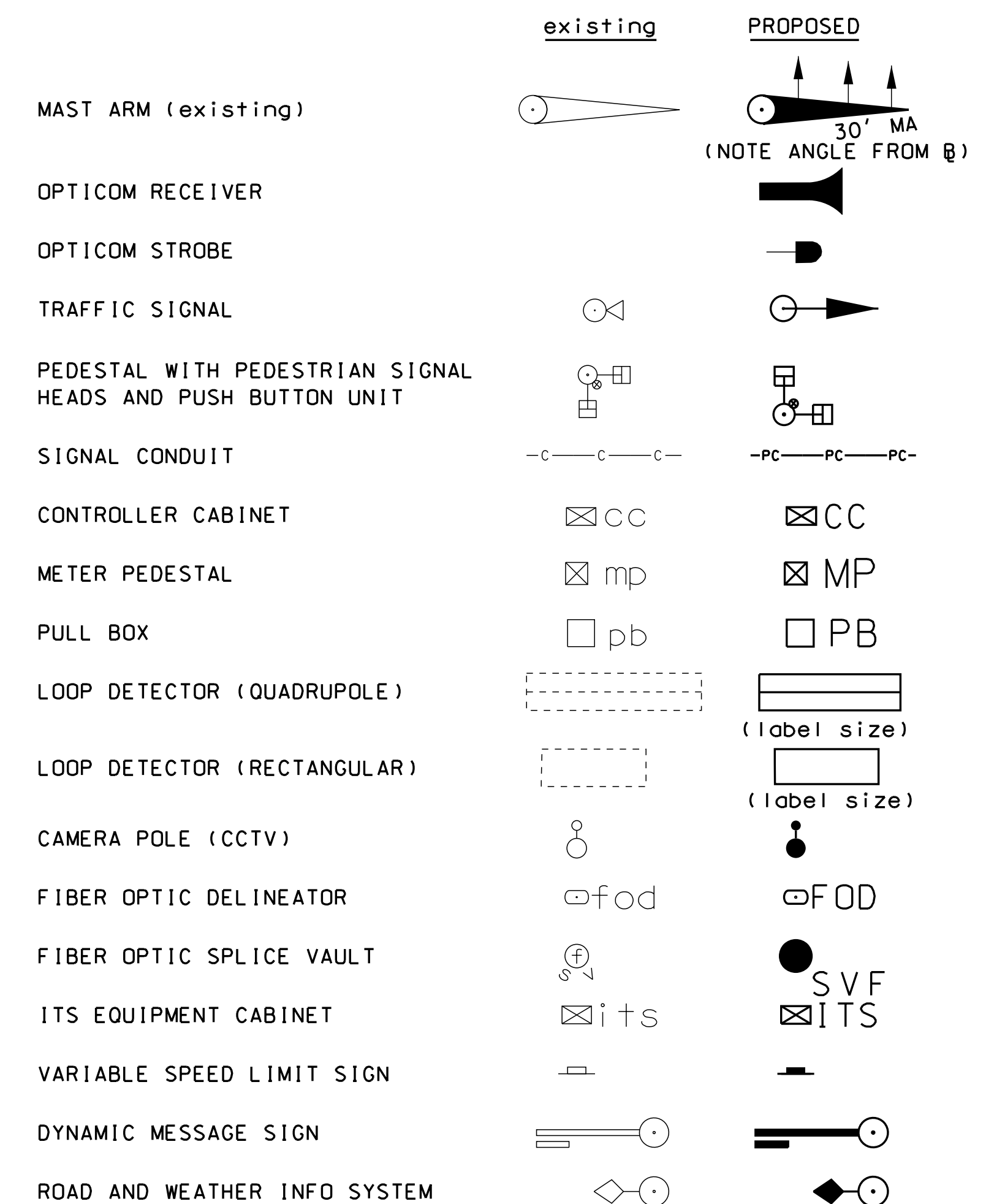
BOUNDARIES / RIGHT-OF-WAY



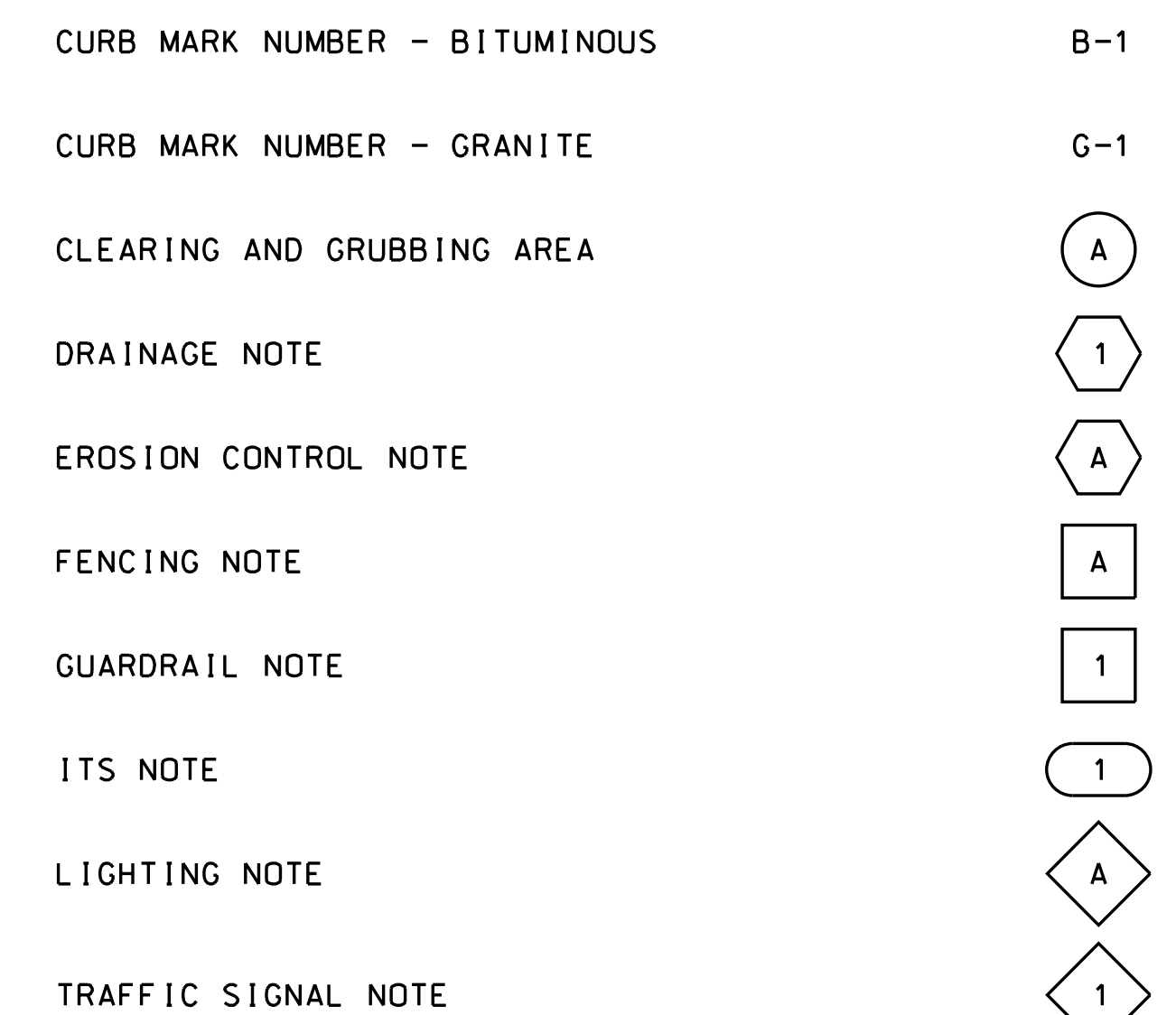
UTILITIES



TRAFFIC SIGNALS / ITS



CONSTRUCTION NOTES



SHEET 2 OF 2

STATE OF NEW HAMPSHIRE
TOWN OF STODDARD
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

STANDARD SYMBOLS

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	stdsymbol_2	--	4	31

SDR PROCESSED	NEW DESIGN	CEB/GMC	DATE	12/8/2020	STATION	
	SHEET CHECKED	JCH	DATE	12/8/2020	STATION	
AS BUILT DETAILS				DATE		

GENERAL NOTES:

- DESIGN LOADING: HL-93
- DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD)
- LOAD RATING METHOD: LOAD AND RESISTANCE FACTOR RATING METHOD (LRFR)
- DESIGN SPEED = 30 MPH
- DESIGN SPECIFICATIONS:
 - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH ED. 2017
 - NHDOT BRIDGE DESIGN MANUAL, 2015/2000 AS AMENDED
 - NHDOT 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH LATEST REVISIONS
- FOUNDATION DATA:
 - RIGID FRAME AND WINGWALLS SUPPORTED BY SPREAD FOOTINGS
 - FOOTINGS SUPPORTED ON LEDGE
 - NOMINAL BEARING RESISTANCE = 18 KSF (ASSUMED)
 - RESISTANCE FACTOR = 0.45 (ASSUMED)
- CONCRETE:
 - CAST-IN-PLACE RIGID FRAME AND HEADWALLS SHALL BE PAID UNDER ITEM 520.001: f'c = 5,000 PSI (CLASS AAA)
 - CAST-IN-PLACE CONCRETE WINGWALLS SHALL BE PAID UNDER ITEM 520.1: f'c = 3,000 PSI (CLASS A)
 - CAST-IN-PLACE CONCRETE FOOTINGS SHALL BE PAID UNDER ITEM 520.2: f'c = 3,000 PSI (CLASS B)
 - CAST-IN-PLACE CONCRETE SUBFOOTINGS SHALL BE PAID UNDER ITEM 520.211: f'c = 3,000 PSI (CLASS B, FOOTINGS ON ROCK)
- REINFORCING STEEL: AASHTO M31 (ASTM A 615) GRADE 60. ALL REINFORCING SHALL BE EPOXY COATED.
- EXISTING DIMENSIONS AND ELEVATIONS: EXISTING DIMENSIONS ARE FROM FIELD MEASUREMENTS AND FIELD SURVEY.
- TRAFFIC CONTROL: SEE SPECIFICATIONS FOR BRIDGE CLOSURE REQUIREMENTS. ITEM 619.1 SHALL BE USED AS REQUIRED DURING CONSTRUCTION PHASING.

HYDRAULIC DATA:

- DRAINAGE AREA: 2.07 SQUARE MILES
- DESIGN FLOOD: Q₅₀ = 887 CFS
- DESIGN VELOCITY: 4.9 FPS
- DESIGN FLOOD ELEVATION: = 1527.0 FT
- BRIDGE WATERWAY OPENING: 125.0 SF

PROJECT NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2016, AND ITS LATEST REVISIONS.
- ALL DIMENSIONS ARE HORIZONTAL AND VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT.
- ALL DIMENSIONS AND FIELD CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF THE WORK.
- ALL WORK PERFORMED BY THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND REQUIREMENTS.
- THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONSTRUCTION CONDITIONS ARE MET.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SAFETY, AND MEANS AND METHODS TO PERFORM AND COMPLETE THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING ALL UTILITIES (ABOVE AND BELOW GROUND) WITHIN THE PROJECT LIMITS, AND TO TAKE THE NECESSARY PRECAUTIONS TO PROTECT UTILITIES DURING CONSTRUCTION. CONTACT DIG-SAFE AT 1-888-DIG-SAFE (WWW.DIGSAFE.COM).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING OVERHEAD UTILITIES' CONFORMANCE TO SECTION XI.A.3 OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S UTILITY ACCOMMODATION MANUAL, DATED FEBRUARY 2010, WITHIN THE PROJECT LIMITS. EXISTING OVERHEAD UTILITIES MAY NEED TO BE VERIFIED AND/OR ADJUSTED TO MEET MINIMUM VERTICAL CLEARANCES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTY OUTSIDE THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS CAUSED BY THE CONTRACTOR, AT THE SOLE COST TO THE CONTRACTOR.
- THE CONTRACTOR SHALL SUBMIT LITERATURE (MANUFACTURER'S LITERATURE, CUT SHEETS, APPLICATION PROCEDURES, ETC.) FOR ALL PRODUCTS PROPOSED FOR USE ON THE PROJECT, FOR APPROVAL BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY SAMPLES OF THE FOLLOWING MATERIALS TO THE OWNER (TOWN) FOR REVIEW AND ACCEPTANCE PRIOR TO USE FOR THE PROJECT:
 - ITEM 209.201 - GRANULAR BACKFILL (BRIDGE)
 - ITEM 304.3 - CRUSHED GRAVEL

PROJECT NOTES (CONTINUED):

- THE CONTRACTOR SHALL COMPACT THE ROADWAY SUBGRADE AFTER EXISTING MATERIAL IS REMOVED AND PRIOR TO THE PLACEMENT OF ANY ADDITIONAL OR NEW MATERIAL. SUBGRADE SHALL MEET 95% COMPACTION (STANDARD PROCTOR).
 - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED TO 3/4". UNLESS OTHERWISE NOTED.
 - SHEAR KEYS SHALL BE 3" HIGH BY ONE-THIRD THE WIDTH OF THE WALL.
 - ITEM 534.3, WATER REPELLENT (SILANE/SILOXANE), SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES AS SHOWN IN THE PLANS (CURBS, WINGWALLS, OUTSIDE FRAME FACE) OR AS DIRECTED BY THE ENGINEER.
 - SUITABLE EXCAVATED CHANNEL MATERIAL SHALL BE STOCKPILED IN SUFFICIENT QUANTITY TO BE PLACED THROUGH THE 3-SIDED RIGID FRAME CULVERT OPENING. ALL COSTS FOR PLACEMENT OF THIS MATERIAL SHALL BE SUBSIDIARY TO ITEM 504.1.
 - WEEPERS SHALL BE PLACED 1 PER 10' OF LENGTH ALONG THE WINGWALLS AND RIGID FRAME STEM. ALL COSTS SHALL BE SUBSIDIARY TO ITEMS 520.001 AND 520.1.
 - FOR SURVEY LAYOUT SEE SHEET 9.
- BRIDGE REMOVAL NOTES:**
- THE CONTRACTOR SHALL SUBMIT, FOR DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02, A DETAILED OUTLINE OR PLAN OF THE PROPOSED METHOD FOR REMOVAL OF THE EXISTING BRIDGE COMPONENTS PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK.
 - ALL COSTS FOR THE ENTIRE REMOVAL OF THE TWO (2) EXISTING 60" CORRUGATED METAL PIPE CULVERTS SHALL BE SUBSIDIARY TO ITEM 504.1. NO PAYMENT SHALL BE MADE FOR THE VOLUME DISPLACED BY THE EXISTING PIPES.
 - REMOVAL OF EXISTING BRIDGE STRUCTURE, EXCEPT AS OTHERWISE SHOWN IN THE PLANS, SHALL INCLUDE:
 - A) COMPLETE REMOVAL AND DISPOSAL OF ANY FILL MATERIALS OVER THE EXISTING METAL PIPES.
 - B) COMPLETE REMOVAL AND DISPOSAL OF THE (2) EXISTING METAL PIPES.
 - C) ANY EXCAVATION (COMPLETE REMOVAL AND DISPOSAL) OF ANY FILL MATERIALS REQUIRED TO CONSTRUCT THE PROPOSED RIGID FRAME AND WINGWALLS. LIMITS OF EXCAVATION TO BE 1FT OUTSIDE THE NEAT LINES OF THE RIGID FRAME & WINGWALL SPREAD FOOTINGS, FROM BEDROCK TO EXISTING GROUND.

MOBILIZATION AREAS:

- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL LAY OUT LIMITS OF ALL EASEMENTS AND TOWN'S RIGHT-OF-WAY WITHIN THE PROJECT LIMITS. COST IS INCLUDED UNDER ITEM 692, MOBILIZATION.
- THE CONTRACTOR SHALL BE LIMITED TO MOBILIZATION WITHIN THE TOWN'S RIGHT-OF-WAY AND EASEMENT LIMITS, UNLESS NOTED OTHERWISE. ADDITIONAL MOBILIZATION AREAS REQUIRED BY THE CONTRACTOR SHALL BE COORDINATED BY THE CONTRACTOR WITH THE AFFECTED PROPERTY OWNERS AND SHALL BE AT NO COST TO THE TOWN.

COFFERDAM NOTES:

- COFFERDAMS OR WATER DIVERSION STRUCTURES ARE REQUIRED AT EACH ABUTMENT LOCATION TO CONTROL THE BROOK INFLOW AND ADEQUATELY DEWATER TO CONSTRUCT RIGID FRAME, ABUTMENT A AND B WINGWALLS, AND STONE FILLS. THE PIEZOMETRIC WATER LEVEL WITHIN THE EXCAVATION LIMITS SHALL BE MAINTAINED AT A DEPTH AT LEAST 2 FT BELOW THE EXCAVATION SUBGRADE. ALL COSTS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND REMOVAL SHALL BE INCLUDED IN ITEM 503.201, COFFERDAMS. ALL WORK REQUIRED TO MAINTAIN A DEWATERED CONDITION SHALL BE INCLUDED IN ITEM 503.201.
- ALL ITEMS COVERED UNDER SECTION 503 OF THE SPECIFICATIONS SHALL BE DESIGNED BY A NH LICENSED PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL SUBMIT STAMPED WORKING DRAWINGS AND CALCULATIONS FOR DOCUMENTATION IN ACCORDANCE WITH 105.02 PRIOR TO CONSTRUCTION.
- ALL COSTS ASSOCIATED WITH THE RE-DESIGN AND RE-INSTALLATION OF COFFERDAMS DUE TO SUBSURFACE CONDITIONS ENCOUNTERED DURING THE COFFERDAM INSTALLATION THAT ARE DIFFERENT FROM WHAT THE COFFERDAM DESIGNER ASSUMED AND/OR INTERPRETED FROM THE AVAILABLE SUBSURFACE INFORMATION, SHALL BE SUBSIDIARY TO THE ASSOCIATED COFFERDAM ITEM. SECTION 102.05 SHALL BE REFERENCED REGARDING THE SUBSURFACE INFORMATION PROVIDED IN THE CONTRACT.

REINFORCEMENT NOTES:

- REINFORCEMENT IN THE FOOTINGS AND FACE OF CONCRETE CURB SHALL HAVE 3" CLEAR COVER. ALL OTHER REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS OTHERWISE NOTED.
- PLACE REINFORCING STEEL TO AVOID WEEPERS AND RAIL POST ANCHOR ASSEMBLIES.
- ANY EPOXY COATED REBARS CUT TO FIT SHALL BE TOUCHED UP WITH AN APPROVED EPOXY COATING MATERIAL. ALL COSTS SHALL BE INCLUDED IN ITEM 544.201.
- THE MECHANICAL CONNECTORS IN THE RIGID FRAME SHALL BE EPOXY COATED AND THE COSTS SHALL BE SUBSIDIARY TO ITEM 544.201, REINFORCING STEEL, EPOXY COATED.
- REINFORCING LEGEND:

ALT = ALTERNATE	BOT = BOTTOM	BRG = BEARING
CLR = CLEAR	DOW = DOWEL	EO = EQUAL
FS = FAR SIDE	MAX = MAXIMUM	MC = MECHANICAL CONNECTOR
MID = MIDDLE	MIN = MINIMUM	NS = NEAR SIDE
SECT = SECTION	SP = SPACE	SPL = SPLICE
SYM = SYMMETRICAL	TYP = TYPICAL	E = EPOXY COATED

FOUNDATION NOTES:

- THE THICKNESS OF THE FOOTINGS SUPPORTING THE RIGID FRAME AND WINGWALLS SHALL BE 2'-0". THE TOP OF FOOTING ELEVATION SHALL VARY BASED ON THE EXISTING LEDGE CONDITIONS AND SUBFOOTING (LEVELING SLAB) CAST BELOW.
- THE FOOTING DESIGN FOR THE RIGID FRAME IS BASED ON A MAXIMUM STRUCTURAL RISE OF 10'-0" WITH A FOOTING THICKNESS OF 2'-0". THE REINFORCEMENT SHALL BE PLACED AS SHOWN IN THE PLANS.
- THE FOOTING DESIGN FOR THE WINGWALLS IS BASED ON A MAXIMUM TOTAL HEIGHT OF 14.5' WITH A FOOTING THICKNESS OF 2'-0". THE REINFORCEMENT SHALL BE PLACED AS SHOWN IN THE PLANS.

FOUNDATION ON SUBFOOTING NOTES:

- A CONCRETE SUBFOOTING SHALL BE USED ONLY WHERE THE EXISTING BEDROCK LINE IS MORE THAN 6" BELOW BOTTOM OF FOOTING. NO PAYMENT SHALL BE MADE FOR CONCRETE SUBFOOTINGS WHERE THE CONTRACTOR HAS REMOVED ROCK BELOW THE PAY LIMITS FOR ITEM 504.1, COMMON BRIDGE EXCAVATION, EXCEPT WHERE BEDROCK HAS BEEN REMOVED TO MINIMIZE STEEP SLOPES AS DESCRIBED IN FOUNDATION SUBFOOTING NOTE 3. THE CONCRETE SUBFOOTING, IF NECESSARY, SHALL BE PAID AS ITEM 520.211.
- THE TOP OF CONCRETE SUBFOOTINGS THAT ARE TO BE IN CONTACT WITH FOOTINGS SHALL HAVE A ROUGHENED SURFACE.
- THE FINAL BEDROCK SURFACE SHALL BE NO STEEPER THAN 5H:1V AND FREE OF ANY SHARP PROTRUSIONS. TRANSVERSE AND LONGITUDINAL BEDROCK SLOPES STEEPER THAN 5H:1V SHALL BE STEPPED IN LEVEL INCREMENTS WITH A MINIMUM HORIZONTAL STEP LENGTH OF 2 FEET, OR AS DIRECTED BY THE ENGINEER.
- ALL SUBFOOTING AND FOOTING CONCRETE SHALL BE PLACED IN THE DRY.
- PRIOR TO PLACEMENT OF CONCRETE, THE BEDROCK SURFACE SHALL BE COMPLETELY CLEANED OF LOOSE BEDROCK AND DEBRIS. ANY OPEN JOINTS OR SEAMS SHALL BE CLEANED AND GROUTED IN ACCORDANCE WITH SECTION 504. THIS WORK SHALL BE SUBSIDIARY TO ITEM 504.1.
- ALL SUBFOOTING CONCRETE SHALL BE PAID AS ITEM 520.211, CONCRETE CLASS B, FOOTINGS (ON ROCK).

GENERAL CONCRETE NOTES:

- PRECAST UNITS MAY BE SUBSTITUTED FOR ALL CAST-IN-PLACE UNITS (RIGID FRAME, FOOTINGS, HEADWALLS, WINGWALLS, ETC.) AT NO ADDITIONAL COST. NO ADJUSTMENTS TO QUANTITIES OR PAYMENTS WILL BE MADE FOR ANY ITEM AS A RESULT OF FABRICATING AND INSTALLING PRECAST UNITS SIZED DIFFERENTLY THAN SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 24 HOURS IN ADVANCE OF ALL CONCRETE OPERATIONS.
- THE ENGINEER SHALL BE NOTIFIED OF CURING METHOD AND PERIOD PRIOR TO CASTING.
- FOR CONSTRUCTION DURING COLD WEATHER, ALL CONCRETE SHALL REQUIRE PROTECTION FROM FREEZING TEMPERATURES IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS.
- FOR CONSTRUCTION DURING HOT WEATHER, ALL CONCRETE SHALL REQUIRE PROTECTION FROM HIGH TEMPERATURES IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS.

RIGID FRAME NOTES:

- THE WALL HEIGHT OF THE RIGID FRAME MAY VARY. THE DESIGN FOR THE RIGID FRAME IS BASED ON A STRUCTURAL RISE OF 7'-0" MINIMUM AND 10'-0" MAXIMUM. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF THESE CONDITIONS ARE NOT MET (AS-BUILT DIMENSIONS EXCEED THE DESIGN VALUES STATED PREVIOUSLY).
- THE CONTRACTOR SHALL SUBMIT A WORKING PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER FOR ALL CONCRETE PLACEMENTS FOR THE RIGID FRAME AND SUPPORTING SPREAD FOOTINGS BELOW. THE WORKING PLAN SHALL CONFORM TO SECTION 520 OF THE STANDARD SPECIFICATIONS AND INCLUDE THE ANTICIPATED SCHEDULE, AND PROPOSED CURING METHODS.
- THE SPREAD FOOTINGS FOR THE RIGID FRAME SHALL ATTAIN 80% OF DESIGN STRENGTH (BASED ON FIELD CURED TEST CYLINDERS) BEFORE ANY SUBSEQUENT CONCRETE PLACEMENTS FOR THE RIGID FRAME WILL BE PERMITTED. CONTRACTOR MAY SUBMIT AN ALTERNATIVE CURING PROCEDURE CONFORMING TO SECTION NHDOT 520 FOR REVIEW AND APPROVAL BY THE ENGINEER.
- THE RIGID FRAME SHALL ATTAIN 100% OF DESIGN STRENGTH (BASED ON FIELD CURED TEST CYLINDERS) BEFORE ANY TRAFFIC LOADS WILL BE PERMITTED DIRECTLY ON THE SUPERSTRUCTURE. CONTRACTOR MAY SUBMIT AN ALTERNATIVE CURING PROCEDURE CONFORMING TO SECTION NHDOT 520 FOR REVIEW AND APPROVAL BY THE ENGINEER.
- THE CONTRACTOR SHALL RESTRICT ALL POTENTIALLY HARMFUL ACTIVITIES FOR A MINIMUM OF 6 HOURS FOLLOWING THE CONCRETE PLACEMENT FOR THE RIGID FRAME (SUPERSTRUCTURE ONLY). DAMAGING ACTIVITY INCLUDES CONSTRUCTION EQUIPMENT IN THE IMMEDIATE AREA AND ALL VEHICULAR TRAFFIC ON THE ADJACENT SUPERSTRUCTURE (DETOURED TRAFFIC OVER THE COMPLETED FRAME SECTION, PHASE II TRAFFIC CONDITION).
- THE SECOND PHASE RIGID FRAME SECTION SHALL ATTAIN 80% OF DESIGN STRENGTH (BASED ON FIELD CURED TEST CYLINDERS) BEFORE ANY HEAVY TRAFFIC LOADS WILL BE PERMITTED ON THE ADJACENT SUPERSTRUCTURE (DETOURED TRAFFIC OVER THE COMPLETED FRAME SECTION, PHASE II TRAFFIC CONDITION). HEAVY TRAFFIC LOADS ARE ANY VEHICLE OVER 3 TONS.
- THE CONSTRUCTION JOINT AND EXPOSED SURFACE OF THE RIGID FRAME TOP SLAB SHALL BE COATED WITH A HIGH MOLECULAR WEIGHT METHACRYLATE (HMM) CRACK SEALER (DURAGUARD 401 BY CHEMMASTERS, INC. OR APPROVED EQUIVALENT). METHACRYLATE SEALER SHALL BE APPLIED AFTER CONCRETE CURING PERIOD IS COMPLETE AND IN ACCORDANCE WITH REQUIREMENTS OF PRODUCT MANUFACTURER AND SPECIFICATIONS.

TOWN OF STODDARD, NEW HAMPSHIRE

PROJECT NOTES



DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
BrNotes	--	5	31

SDR PROCESSED
 NEW DESIGN CEB/GMC
 SHEET CHECKED JCH
 AS BUILT DETAILS

DATE 12/9/2020
 DATE 12/9/2020
 DATE

REVISIONS AFTER PROPOSAL
 STATION 10+00.00
 STATION 14+00.00
 DESCRIPTION
 ADDENDUM 3

BRIDGE ITEMS			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203.1	COMMON EXCAVATION	CY	325
203.5572	GUARDRAIL EAGRT OFFSET PLATFORM ALTERNATE, TL 2 - 25'	U	4
203.6	EMBANKMENT-IN-PLACE	CY	290
207.3	UNCLASSIFIED CHANNEL EXCAVATION	CY	140
209.201	GRANULAR BACKFILL (BRIDGE)	CY	250
214.	FINE GRADING	U	1
304.3	CRUSHED GRAVEL	CY	570
304.35	CRUSHED GRAVEL FOR DRIVES	CY	10
503.201	COFFERDAMS	U	1
504.1	COMMON BRIDGE EXCAVATION	CY	650
504.2	ROCK BRIDGE EXCAVATION	CY	20
520.001	CONCRETE CLASS AAA	CY	75
520.1	CONCRETE CLASS A	CY	23
520.2	CONCRETE CLASS B	CY	60
520.211	CONCRETE CLASS B, FOOTINGS (ON ROCK)	CY	20
534.3	WATER REPELLENT (SILANE/SILOXANE)	GAL	5
538.2	BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES	SY	5
544.201	REINFORCING STEEL - EPOXY COATED	LB	23500
563.3	BRIDGE RAIL T101	LF	55
585.2	STONE FILL, CLASS B	CY	145
593.421	GEOTEXTILE; PERM CONTROL CL. 2, NON-WOVEN	SY	500
606.12551	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 2 - 25') (STEEL POST)	U	4
606.1285	BEAM GUARDRAIL (BRIDGE APPROACH UNIT)	U	4
606.18001	31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)	LF	262.5
615.03	TRAFFIC SIGN TYPE C	SF	5
615.033	REMOVING TRAFFIC SIGN, TYPE C	U	2
619.1	MAINTENANCE OF TRAFFIC	U	1
645.531	SILT FENCE	LF	410
645.7	STORM WATER POLLUTION PREVENTION PLAN	U	1
645.711	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	VISIT	16
646.31	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	SY	475
647.1	HUMUS	CY	52
670.046	CONSTRUCT AND REMOVE TEMPORARY WIDENING	U	1
670.067	RELOCATE MULTIPLE MAILBOXES	U	1
692.1	MOBILIZATION	U	1
699	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	\$	3000
1008.11	ALTERATIONS AND ADDITIONS AS NEEDED - UNANTICIPATED WORK	\$	10000

SUBSIDIARY ITEMS		
SECTION NUMBER	DESCRIPTION	QUANTITY
201	CLEARING AND GRUBBING	0.1± A
207	SALVAGE AND INSTALLATION OF STREAMBED MATERIAL	-
583	REMOVE AND RESET EXISTING RIPRAP	-
621	SINGLE DELINEATOR WITH POST	2 EA
621	DOUBLE DELINEATOR WITH POST	2 EA
628	SAWED BITUMINOUS PAVEMENT	20 LF
-	UTILITY POLE RELOCATION/ADJUSTMENTS	-

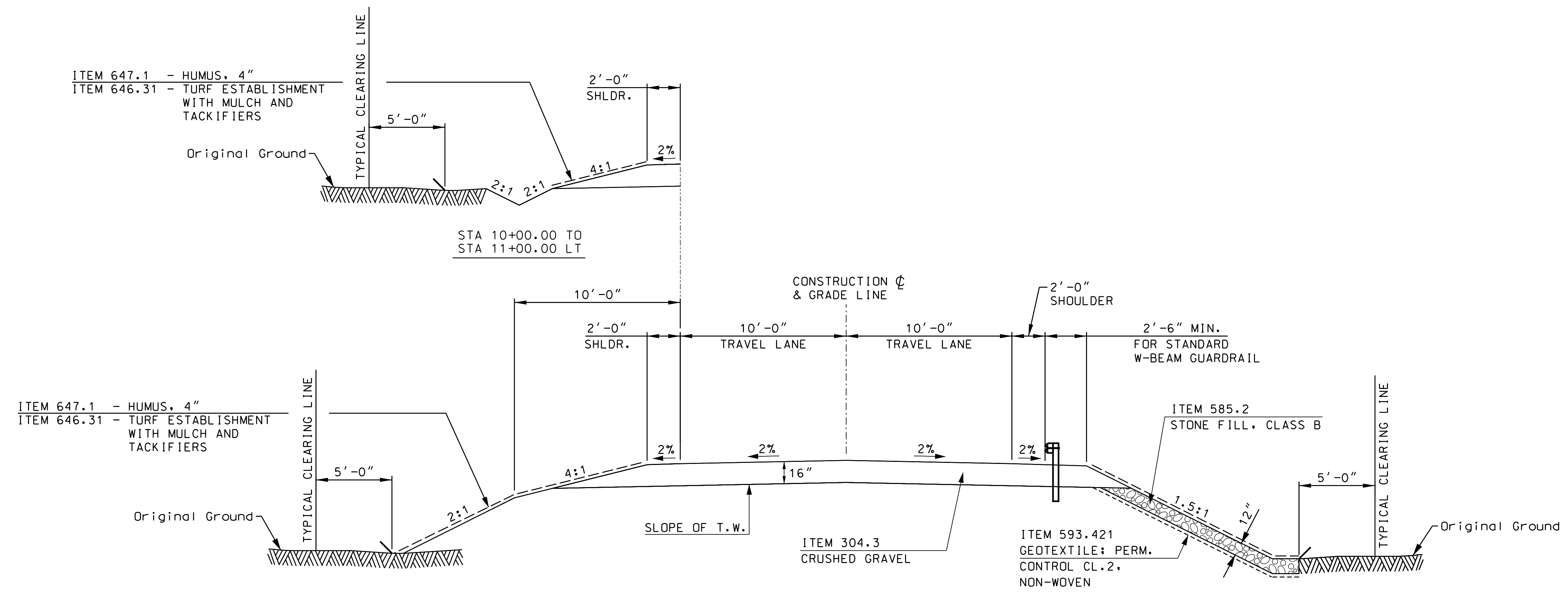
NOTE: THIS LIST OF SUBSIDIARY ITEMS SHOULD NOT BE CONSIDERED AS A COMPLETE LISTING OF SUBSIDIARY WORK PRESENT IN THE PROJECT. REFER TO PLANS, PROPOSAL, SPECIAL PROVISIONS, AND STANDARD SPECIFICATIONS.

TOWN OF STODDARD, NEW HAMPSHIRE			
<i>SUMMARY OF QUANTITIES</i>			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
SUM	--	6	31

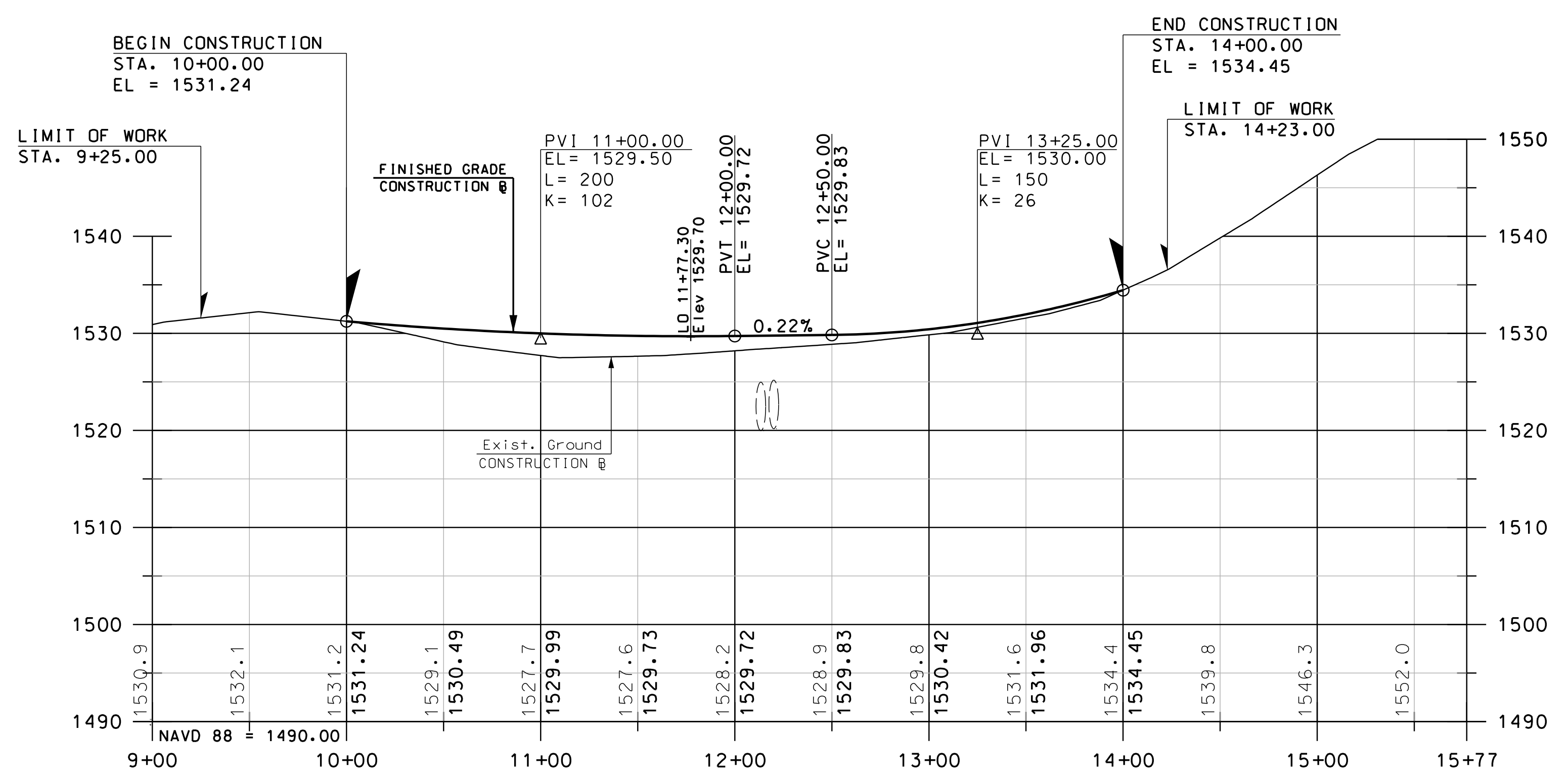


THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

SDR PROCESSED	DATE	DATE	DATE	DATE
NEW DESIGN	CEB/GMC	12/8/2020	12/8/2020	12/8/2020
SHEET CHECKED	JCH			
AS BUILT DETAILS				



KINGS HIGHWAY
FULL DEPTH RECONSTRUCTION NORMAL CROWN
 STA 10+00.00 TO STA 14+00.00



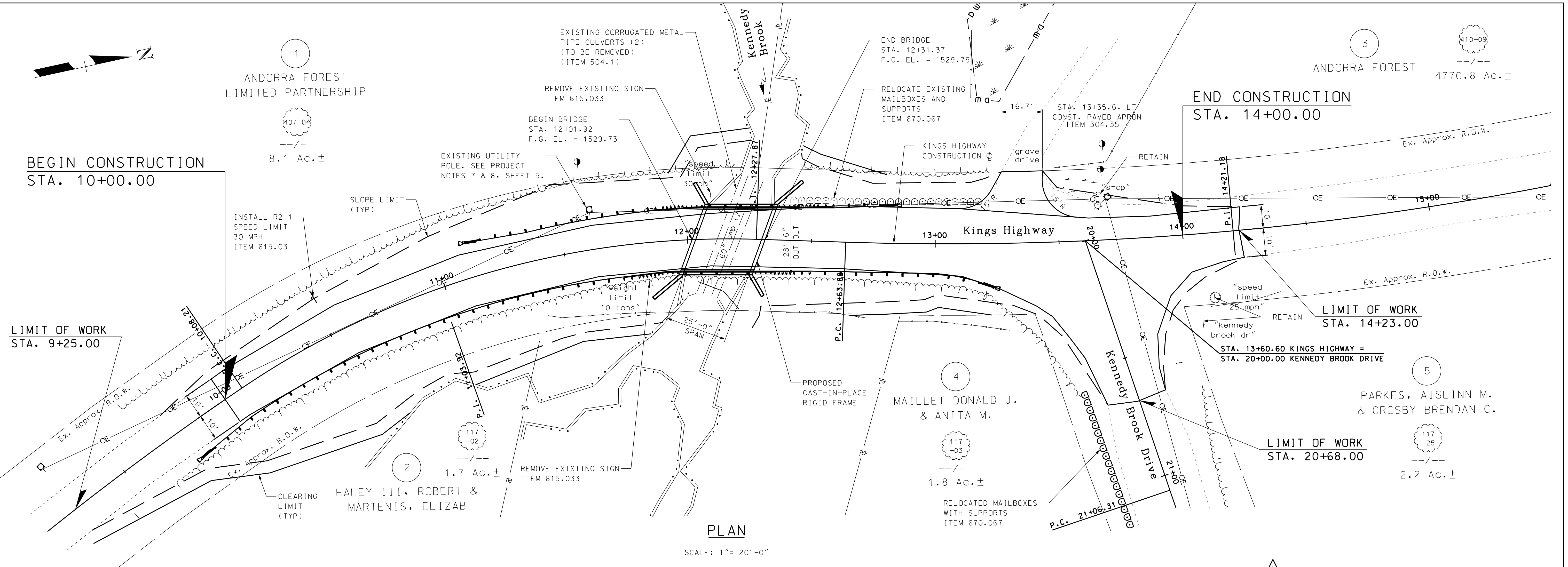
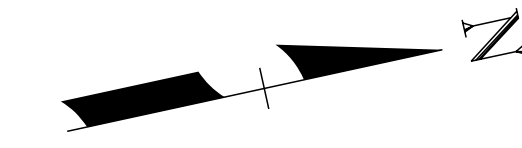
PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 10' VERT.



TOWN OF STODDARD, NEW HAMPSHIRE			
ROADWAY TYPICAL SECTION AND PROFILE			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
typ	--	7	31

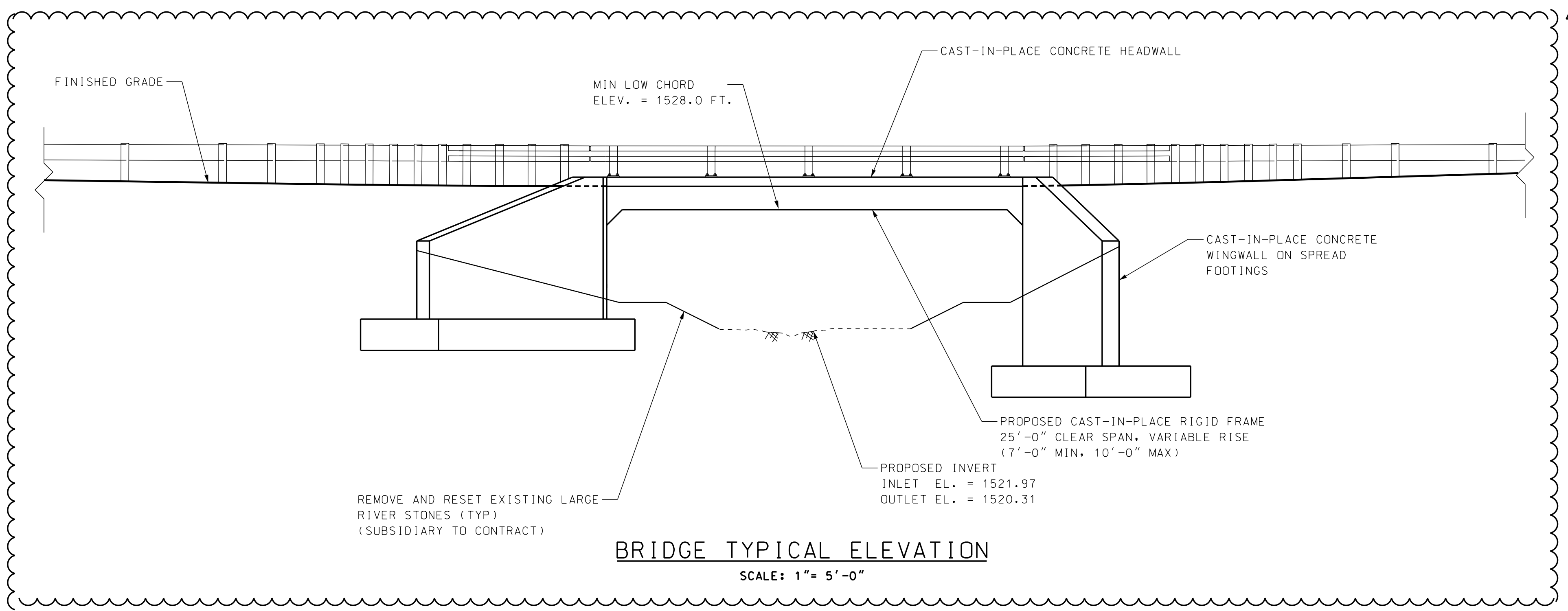
SDR PROCESSED	DATE	12/8/2020
NEW DESIGN	DATE	12/8/2020
SHEET CHECKED	DATE	12/8/2020
AS BUILT DETAILS	DATE	

REVISIONS AFTER PROPOSAL	DESCRIPTION	STATION
1	ADDENDUM 3	14+00.00
		10+00.00
		14+00.00



PLAN

SCALE: 1" = 20'-0"



BRIDGE TYPICAL ELEVATION

SCALE: 1" = 5'-0"

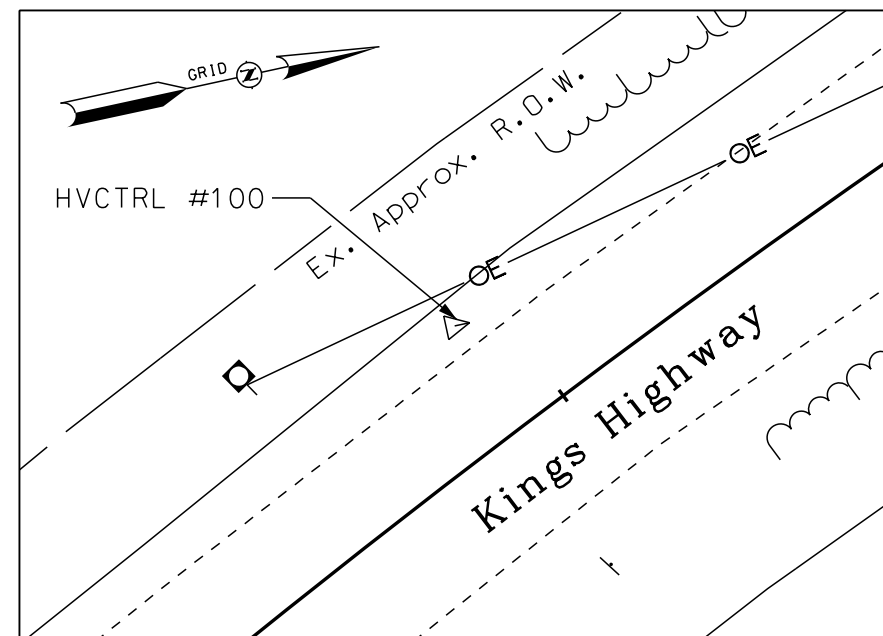
HYDRAULIC DATA:

DRAINAGE AREA = 2.07 SQUARE MILES
 DESIGN FLOOD Q_{50} = 887 CFS
 DESIGN FLOOD ELEVATION = 1527.0 FT
 Q_{100} FLOOD ELEVATION = 1528.0

TOWN OF STODDARD, NEW HAMPSHIRE			
GENERAL PLAN & ELEVATION			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Pre-gen	--	8	31

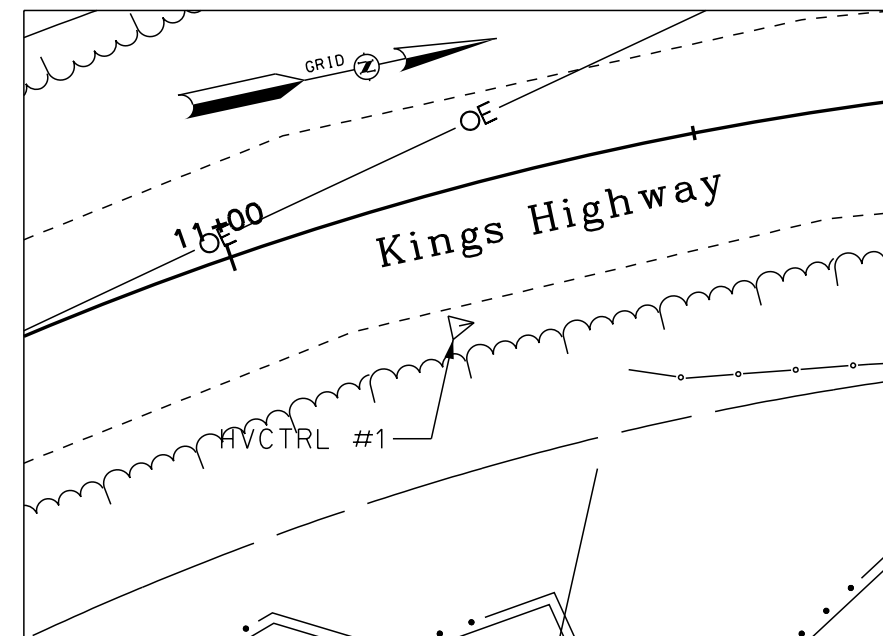


SDR PROCESSED	DATE	12/8/2020		
NEW DESIGN	DATE	12/8/2020		
SHEET CHECKED	DATE	12/8/2020		
AS BUILT DETAILS	DATE			
REVISIONS AFTER PROPOSAL	NUMBER	DATE	STATION	DESCRIPTION
	1	12/9/2020	10+00.00	
			14+00.00	ADDENDUM 3



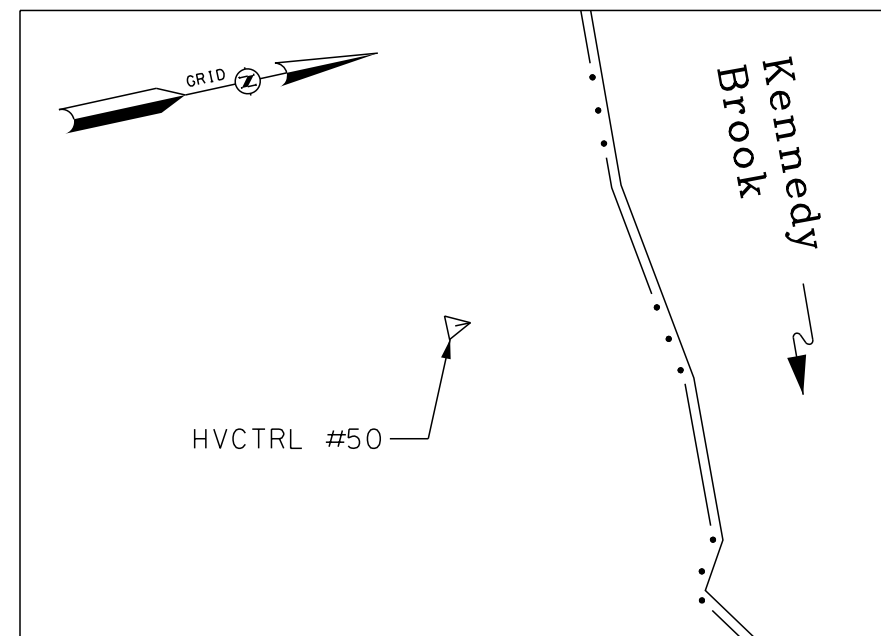
HVCTRL 100		
NORTHING	EASTING	ELEVATION
218078.6716	865672.7327	1532.1288

SCALE 1" = 20'



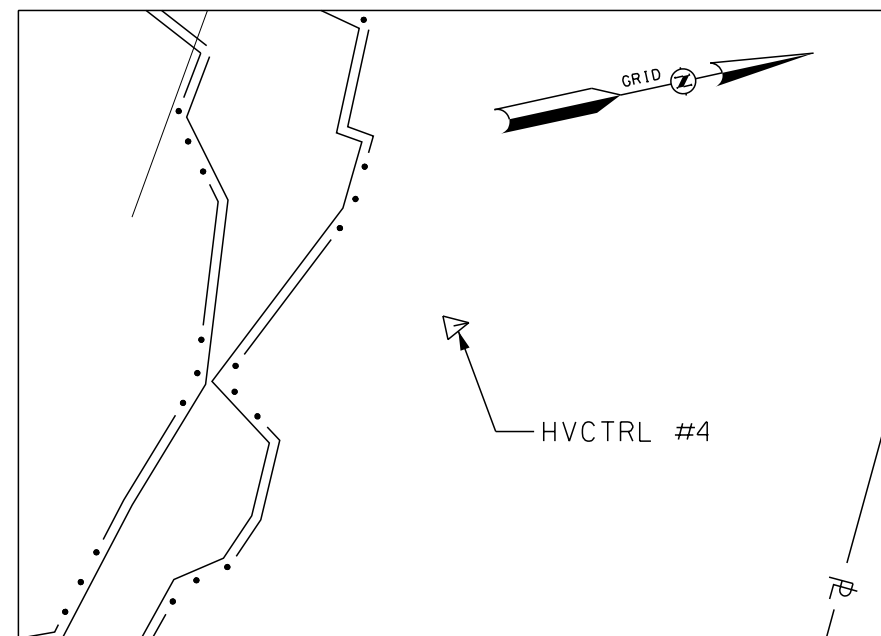
HVCTRL 1		
NORTHING	EASTING	ELEVATION
218252.0629	865648.6692	1526.7548

SCALE 1" = 20'



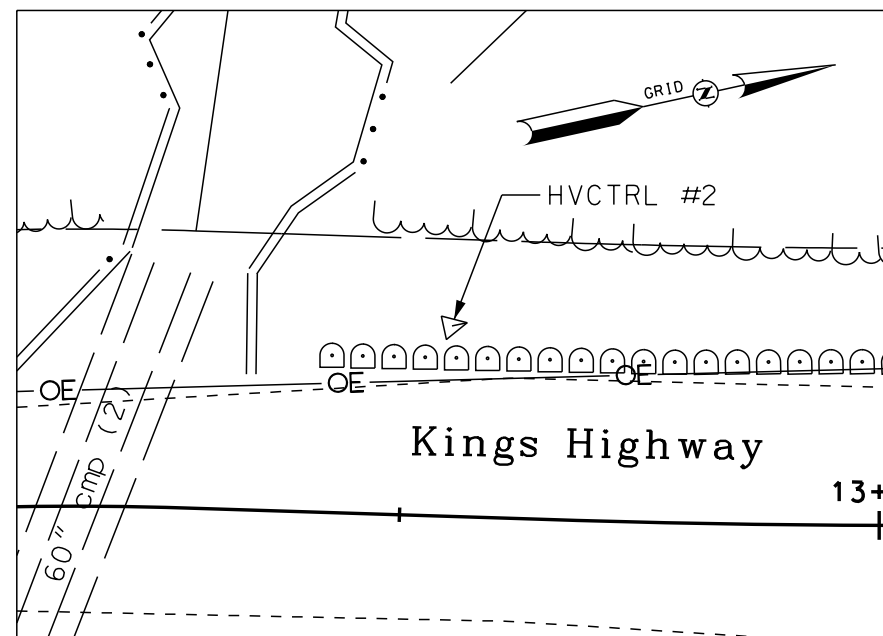
HVCTRL 50		
NORTHING	EASTING	ELEVATION
218339.6345	865499.3176	1529.4348

SCALE 1" = 20'



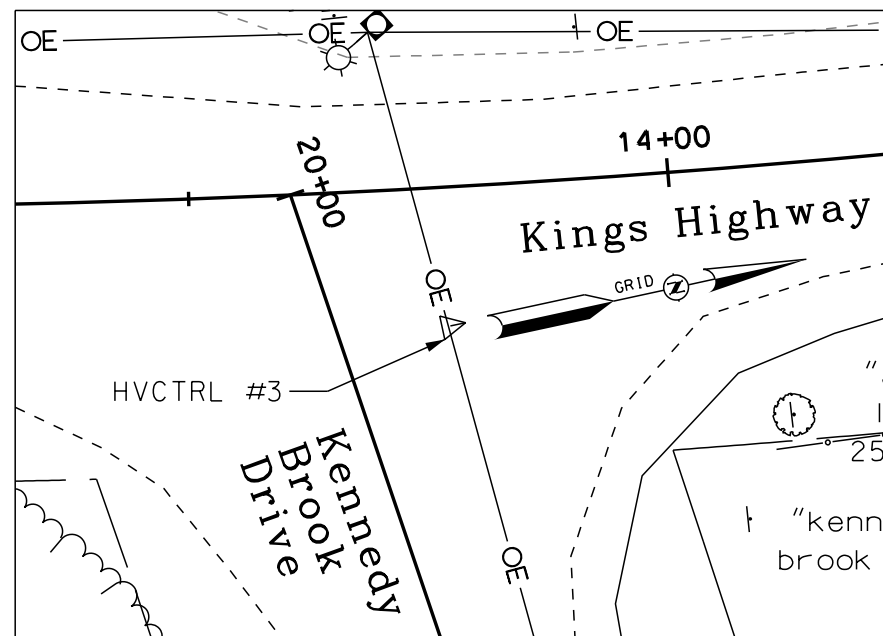
HVCTRL 4		
NORTHING	EASTING	ELEVATION
218333.2081	865729.3338	1522.2178

SCALE 1" = 20'



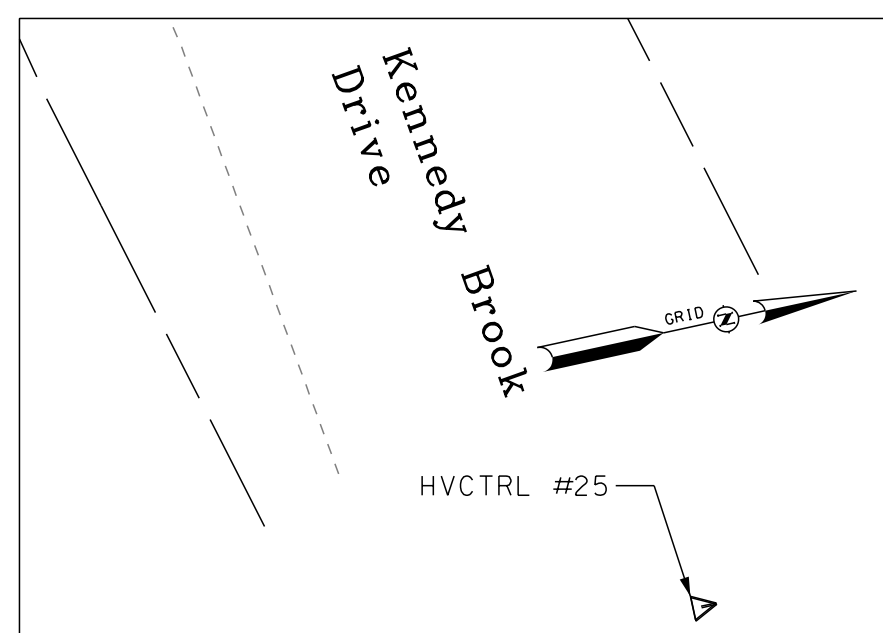
HVCTRL 2		
NORTHING	EASTING	ELEVATION
218388.2495	865632.0297	1528.2778

SCALE 1" = 20'



HVCTRL 3		
NORTHING	EASTING	ELEVATION
218500.1798	865690.3355	1532.8808

SCALE 1" = 20'



HVCTRL 25		
NORTHING	EASTING	ELEVATION
218548.3163	865971.3570	1535.2968

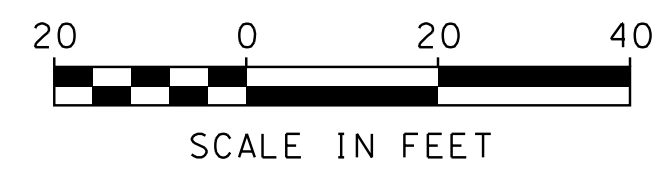
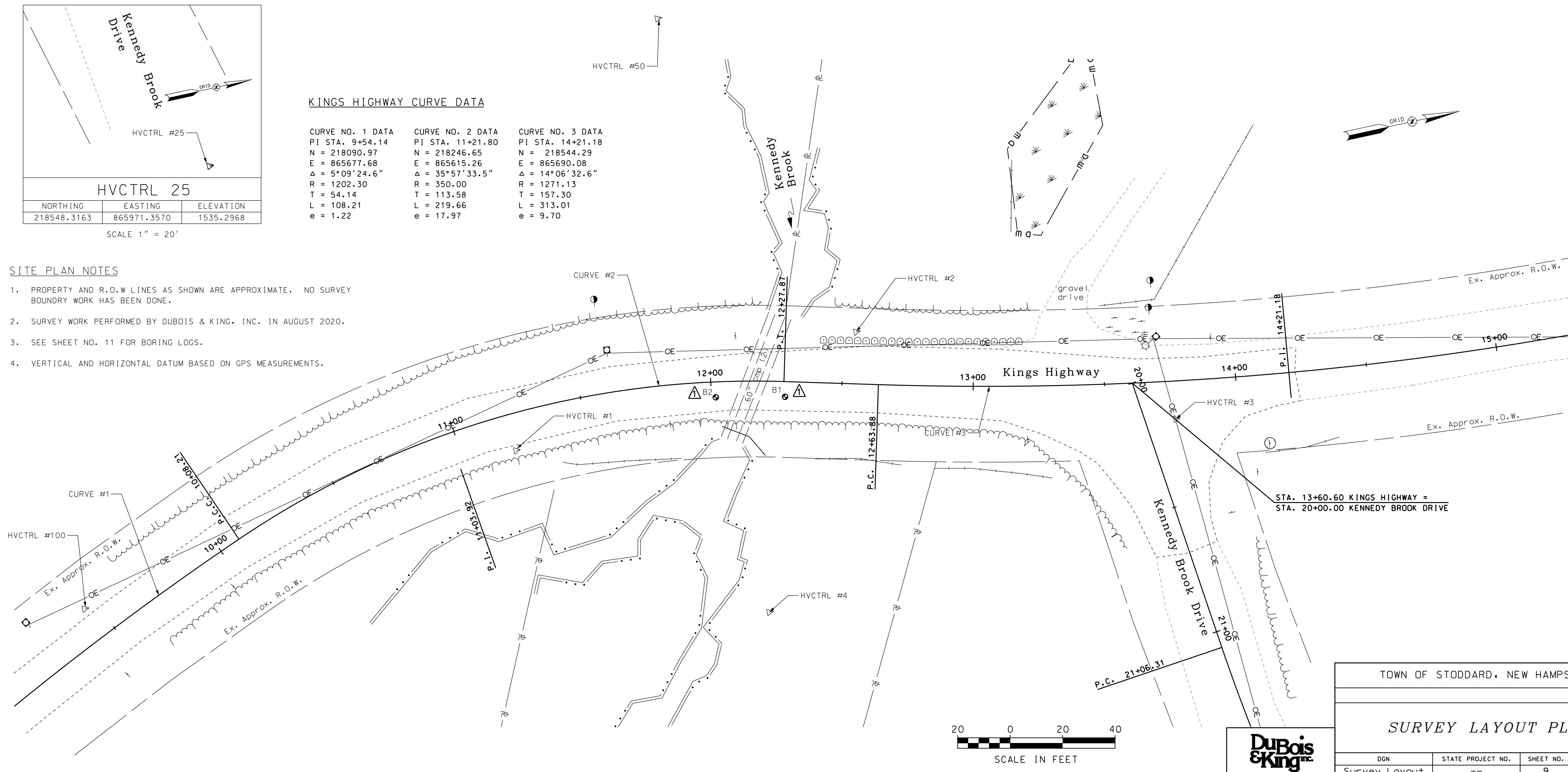
SCALE 1" = 20'

KINGS HIGHWAY CURVE DATA

CURVE NO. 1 DATA	CURVE NO. 2 DATA	CURVE NO. 3 DATA
PI STA. 9+54.14	PI STA. 11+21.80	PI STA. 14+21.18
N = 218090.97	N = 218246.65	N = 218544.29
E = 865677.68	E = 865615.26	E = 865690.08
Δ = 5°09'24.6"	Δ = 35°57'33.5"	Δ = 14°06'32.6"
R = 1202.30	R = 350.00	R = 1271.13
T = 54.14	T = 113.58	T = 157.30
L = 108.21	L = 219.66	L = 313.01
e = 1.22	e = 17.97	e = 9.70

SITE PLAN NOTES

1. PROPERTY AND R.O.W LINES AS SHOWN ARE APPROXIMATE. NO SURVEY BOUNDARY WORK HAS BEEN DONE.
2. SURVEY WORK PERFORMED BY DUBOIS & KING, INC. IN AUGUST 2020.
3. SEE SHEET NO. 11 FOR BORING LOGS.
4. VERTICAL AND HORIZONTAL DATUM BASED ON GPS MEASUREMENTS.



TOWN OF STODDARD, NEW HAMPSHIRE			
SURVEY LAYOUT PLAN			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Survey Layout	--	9	31

SDR PROCESSED DATE 12/8/2020 DATE 12/8/2020 DATE 12/8/2020 DATE
 NEW DESIGN CEB/GMC SHEET CHECKED JCH AS BUILT DETAILS
 REVISIONS AFTER PROPOSAL STATION 14+00.00 STATION 10+00.00 DATE 12/9/2020 NUMBER 1

BORING LOG												
PROJECT: King's Highway Culvert Replacement						JOB NO. 325288						
LOCATION: Stoddard, NH						HOLE NO. B1			GRND ELEV. 1528.48± ¹			
CONTRACTOR: New England Boring Contractors						START DATE 8/25/2020			FINISH DATE 8/25/2020			
TYPE		CASING	SAMPLE	CORE	GROUNDWATER		DEPTH TO					
SIZE ID		4"	2"		DATE	TIME	WATER	BOT. OF CASING	BOT OF			
HAMMER WT.		300lb	140lb					9.5'	17'			
HAMMER FALL		30"	30"									
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLE			SAMPLE BLOWS PER 6" ON SAMPLER				SOIL DESCRIPTION			
		No.	Depth	Recovery	0-6	6-12	12-18	18-24				
1		1	0'-2'	10"	18	20	25	38	Sand			
2												
3												
4												
5		2	4'-6'	<1"	100	-	-	-	Gravel/Rock fractures from drill head			
10		3	9'-11'	<1"	50	-	-	-	Rock refusal from drill head			
15		C1	12.5' - 15'	2.5'	-	-	-	-	2.5' Rock Core			
20												
25												
30												
35												

¹ APPROXIMATE PROPOSED ABUTMENT B BOTTOM OF FOOTING EL. 1515.98

NOTES:
 - 26.2' to southernmost mailbox
 - 30.1' to speed limit sign southwest sign of crossing

BORING LOG												
PROJECT: King's Highway Culvert Replacement						JOB NO. 325288						
LOCATION: Stoddard, NH						HOLE NO. B2			GRND ELEV. 1528.15± ¹			
CONTRACTOR: New England Boring Contractors						START DATE 8/27/2020			FINISH DATE 8/27/2020			
TYPE		CASING	SAMPLE	CORE	GROUNDWATER		DEPTH TO					
SIZE ID		4"	2"		DATE	TIME	WATER	BOT. OF CASING	BOT OF HOLE			
HAMMER WT.		300lb	140lb					9'	10'			
HAMMER FALL		30"	30"									
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLE			SAMPLE BLOWS PER 6" ON SAMPLER				SOIL DESCRIPTION			
		No.	Depth	Recovery	0-6	6-12	12-18	18-24				
1		4 & 5	0'-2'	13"	17	13	11	12	Top 6" sand (S4) bottom 7" gravel (S5)			
2												
3												
4												
5		6	4'-6'	8"	15	19	20	20	Silty Sand			
10		7	9'	<1"	100				Rock refusal from drill head @ 9'			
15												
20												
25												
30												
35												

APPROXIMATE PROPOSED ABUTMENT A BOTTOM OF FOOTING EL. 1519.15 ¹

NOTES:
 - 24.6' to speed limit sign southwest side of crossing
 - 44.8' to first electric pole on south side of crossing and western side of road
 - 20.0' to Weight limit sign western side of road

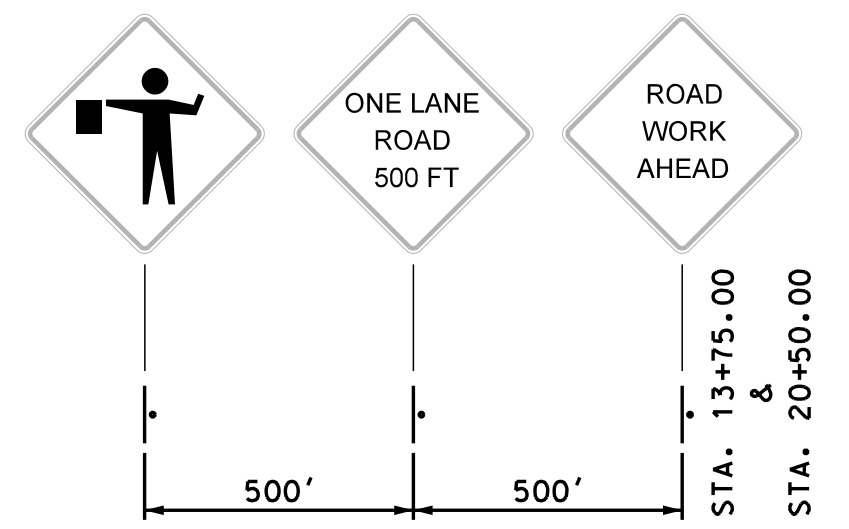
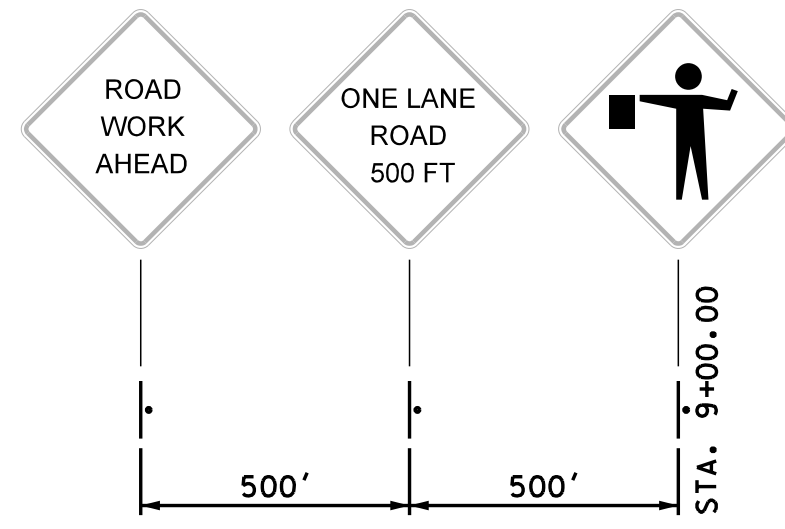
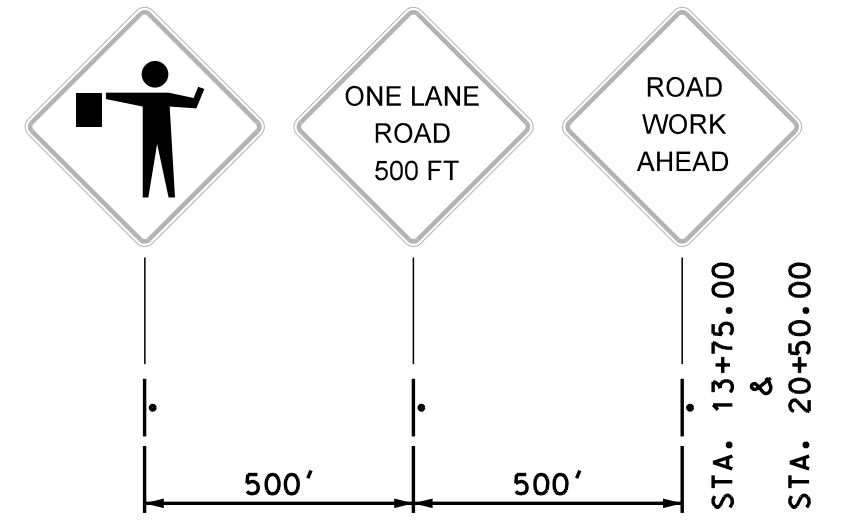
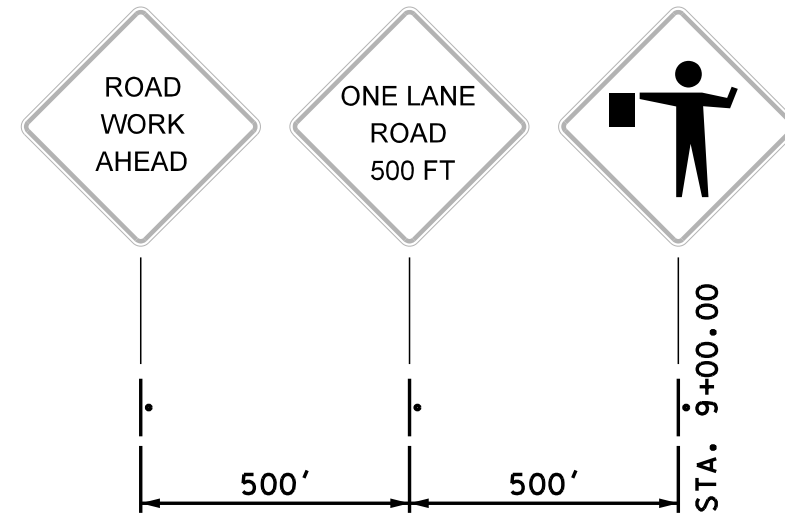
BORING NOTES:

- BORINGS WERE MADE BY NEW ENGLAND BORING COMPANY.
- BORINGS ARE FOR DESIGN PURPOSES SHOWING CONDITIONS AT BORING POINTS ONLY, AND DO NOT NECESSARILY INDICATE MATERIAL TO BE ENCOUNTERED DURING CONSTRUCTION.
- ENGINEERING JUDGEMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HEREIN. ANALYSIS AND INTERPRETATION OF SUBSURFACE DATA WAS PERFORMED FOR DESIGN AND ESTIMATING PURPOSES. PRESENTATION OF THE INFORMATION IN THE CONTRACT IS INTENDED TO PROVIDE THE CONTRACTOR ACCESS TO THE SAME DATA AVAILABLE TO THE OWNER. THE SUBSURFACE INFORMATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION, INDEPENDANT INTERPRETATION, INDEPENDANT ANALYSIS OR JUDGEMENT BY CONTRACTOR.
- PICTORIAL STRUCTURE DETAILS SHOWN ON THE BORING PLAN LAYOUT ARE FOR ILLUSTRATIVE PURPOSES ONLY AND MAY NOT ACCURATELY PORTRAY FINAL CONTRACT DETAILS.
- SEE SHEET NO. 9 FOR BORING LOCATIONS.



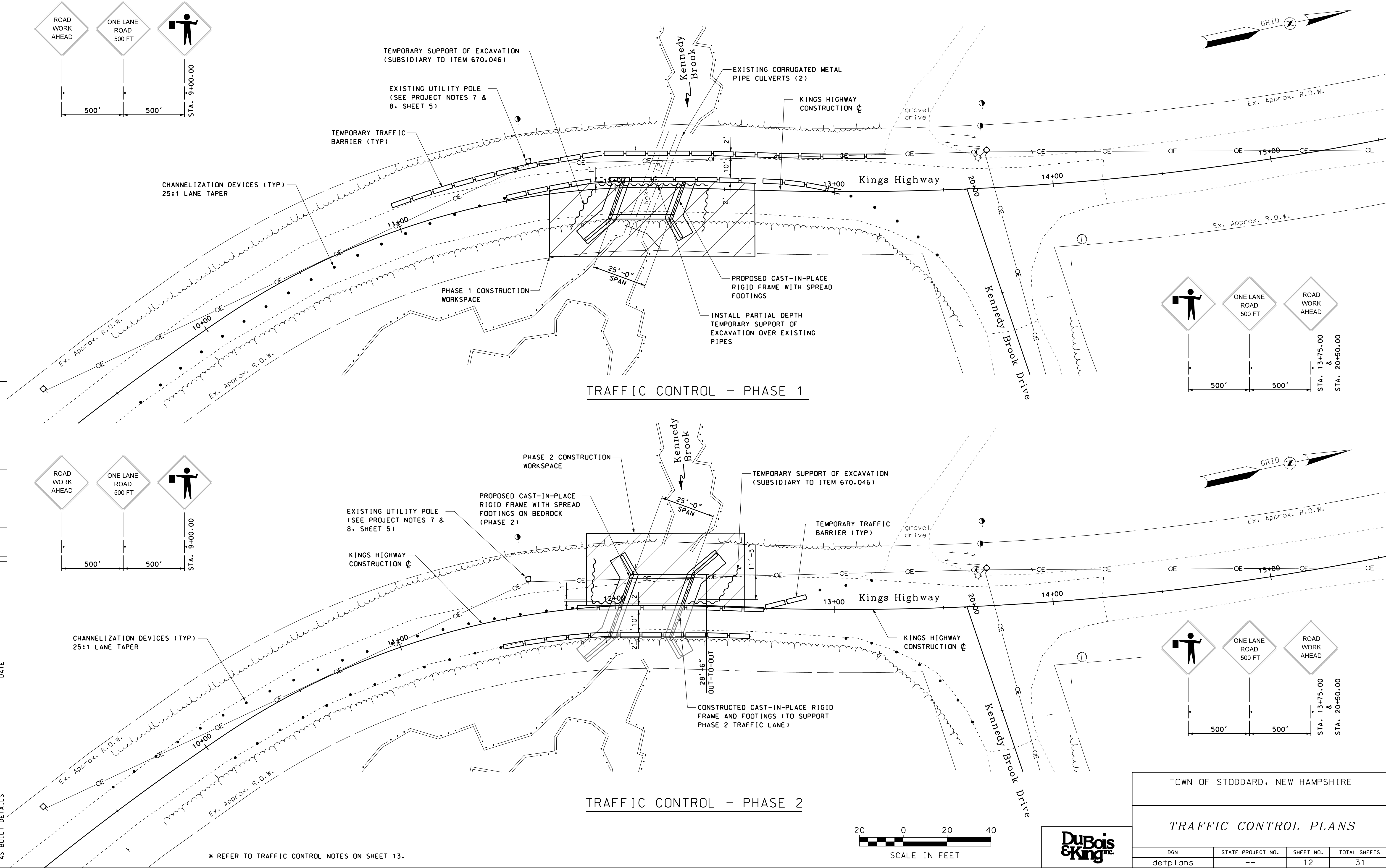
TOWN OF STODDARD, NEW HAMPSHIRE			
<i>BORING LOGS</i>			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Borings	--	11	31

SDR PROCESSED	DATE	12/8/2020
NEW DESIGN	DATE	12/8/2020
SHEET CHECKED	DATE	12/8/2020
AS BUILT DETAILS	DATE	



TRAFFIC CONTROL - PHASE 1

TRAFFIC CONTROL - PHASE 2

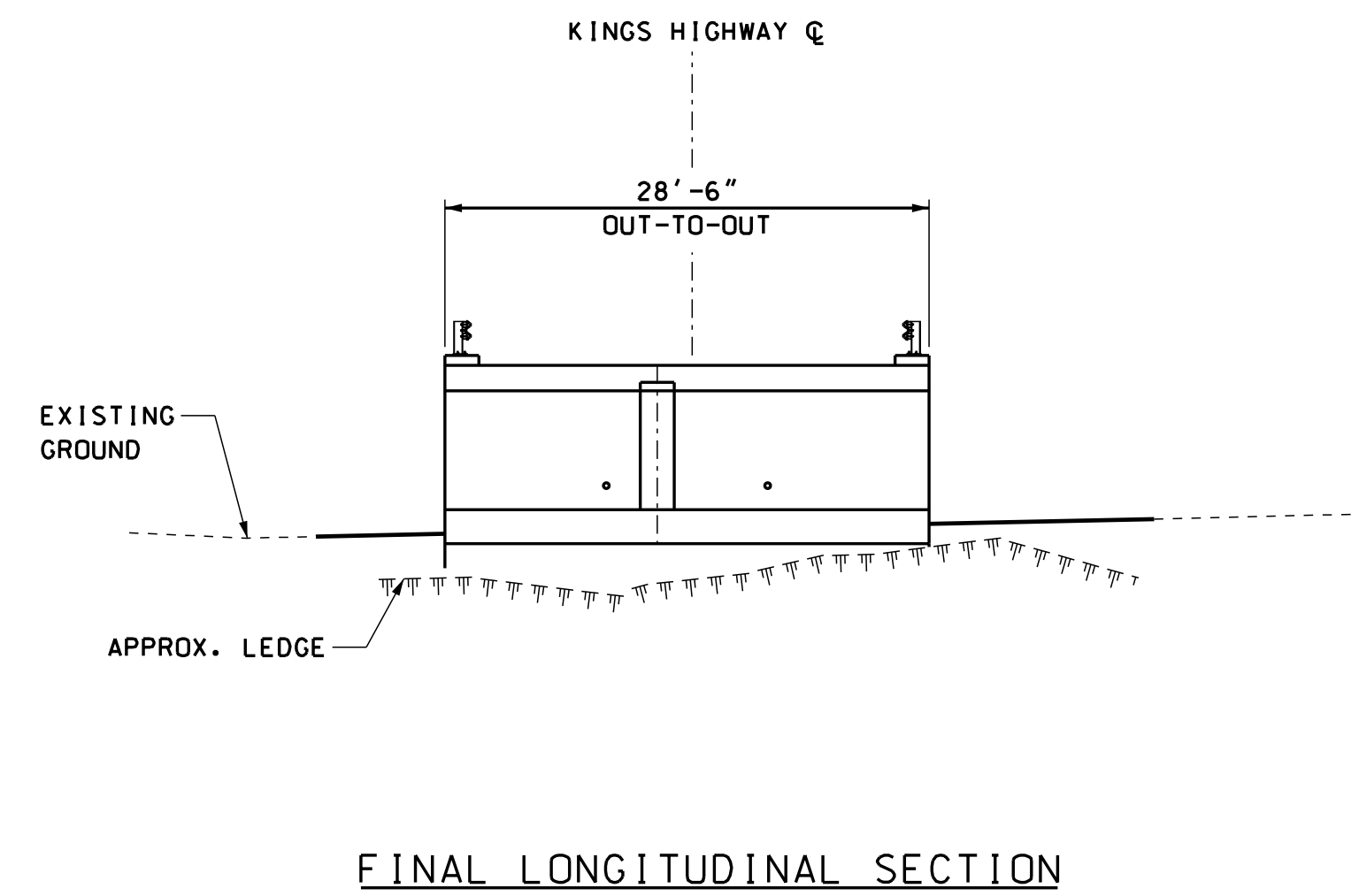
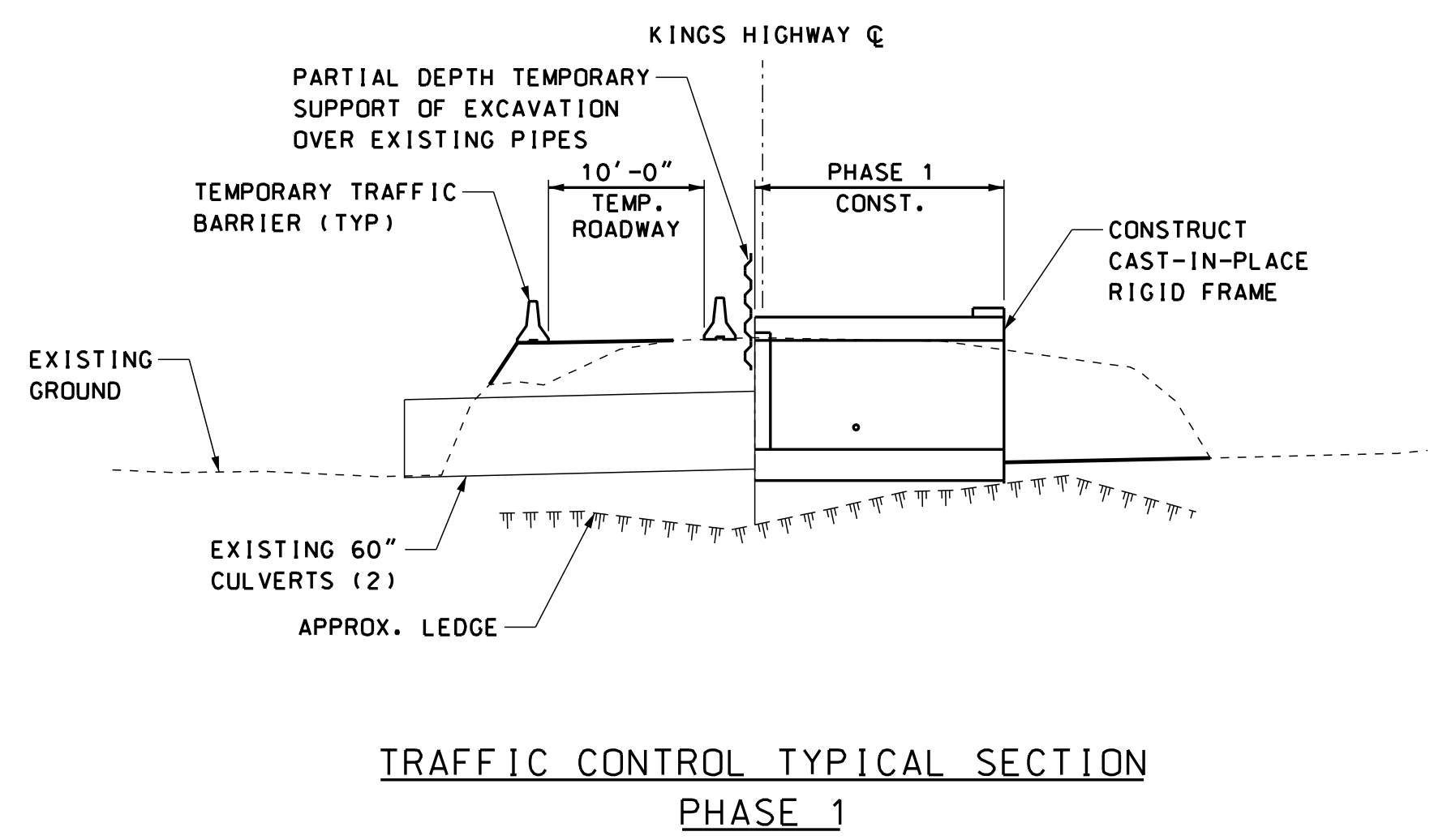
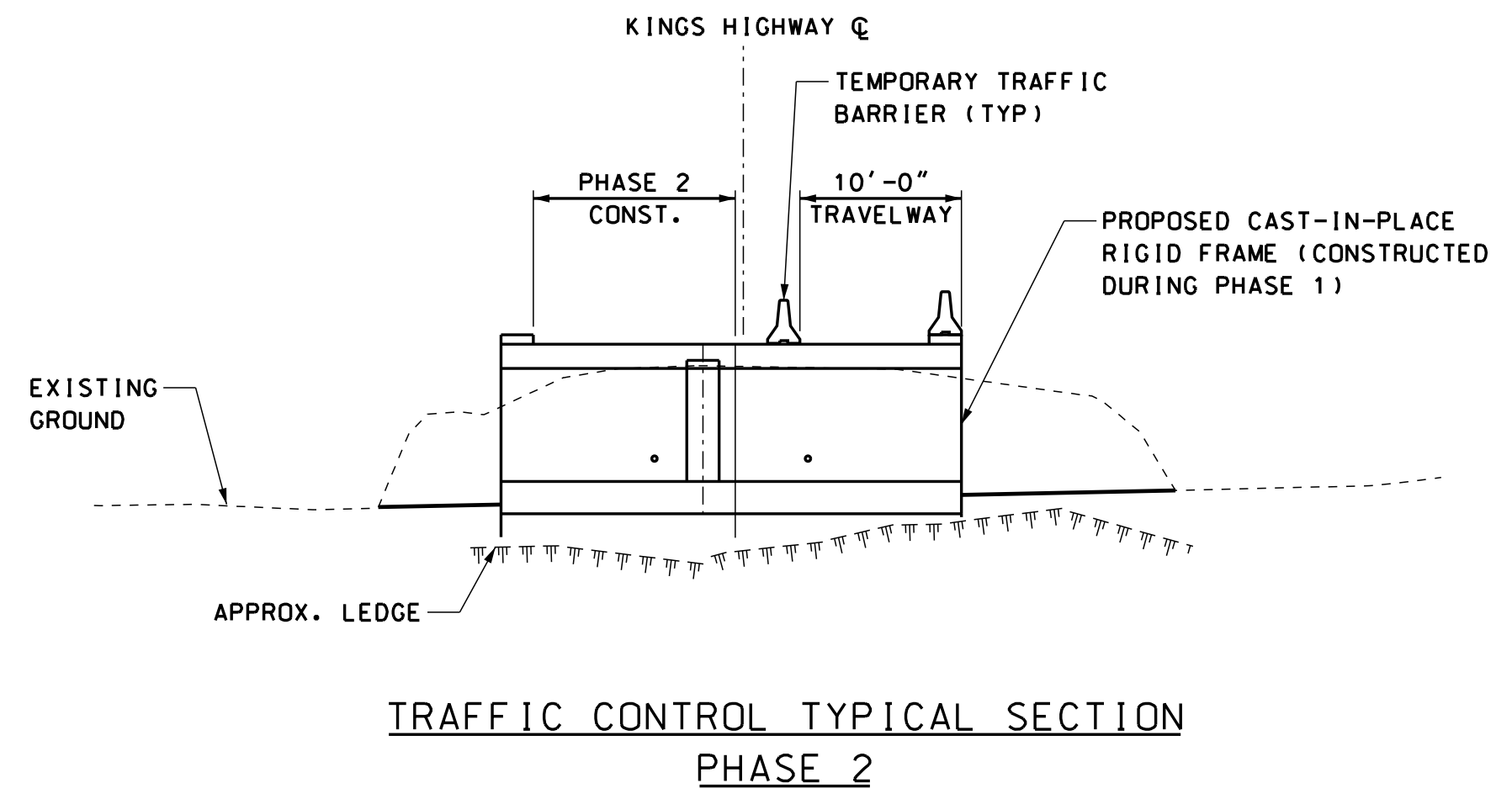
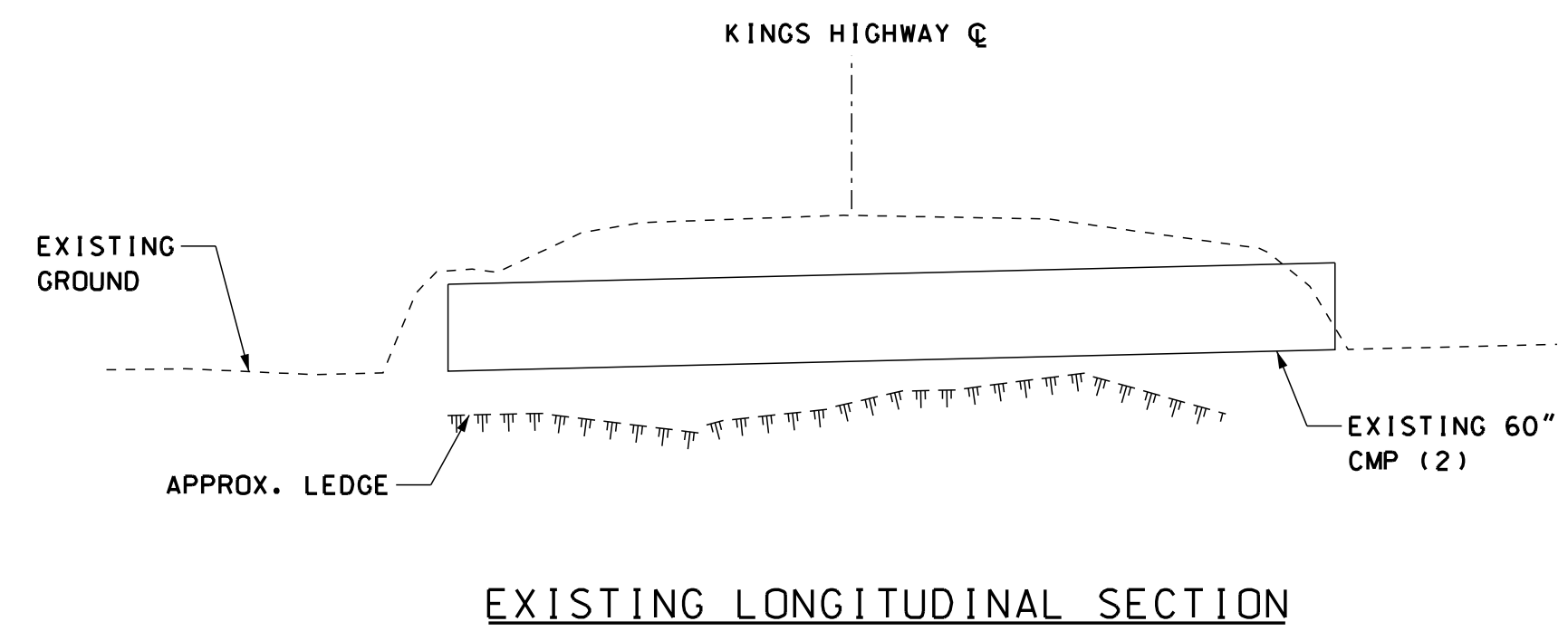


* REFER TO TRAFFIC CONTROL NOTES ON SHEET 13.



TOWN OF STODDARD, NEW HAMPSHIRE			
TRAFFIC CONTROL PLANS			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
detplans	--	12	31

SDR PROCESSED	DATE	12/8/2020	REVISIONS AFTER PROPOSAL	STATION	DESCRIPTION
NEW DESIGN	DATE	12/8/2020			
SHEET CHECKED	DATE	12/8/2020			
AS BUILT DETAILS	DATE				



TRAFFIC CONTROL NOTES:

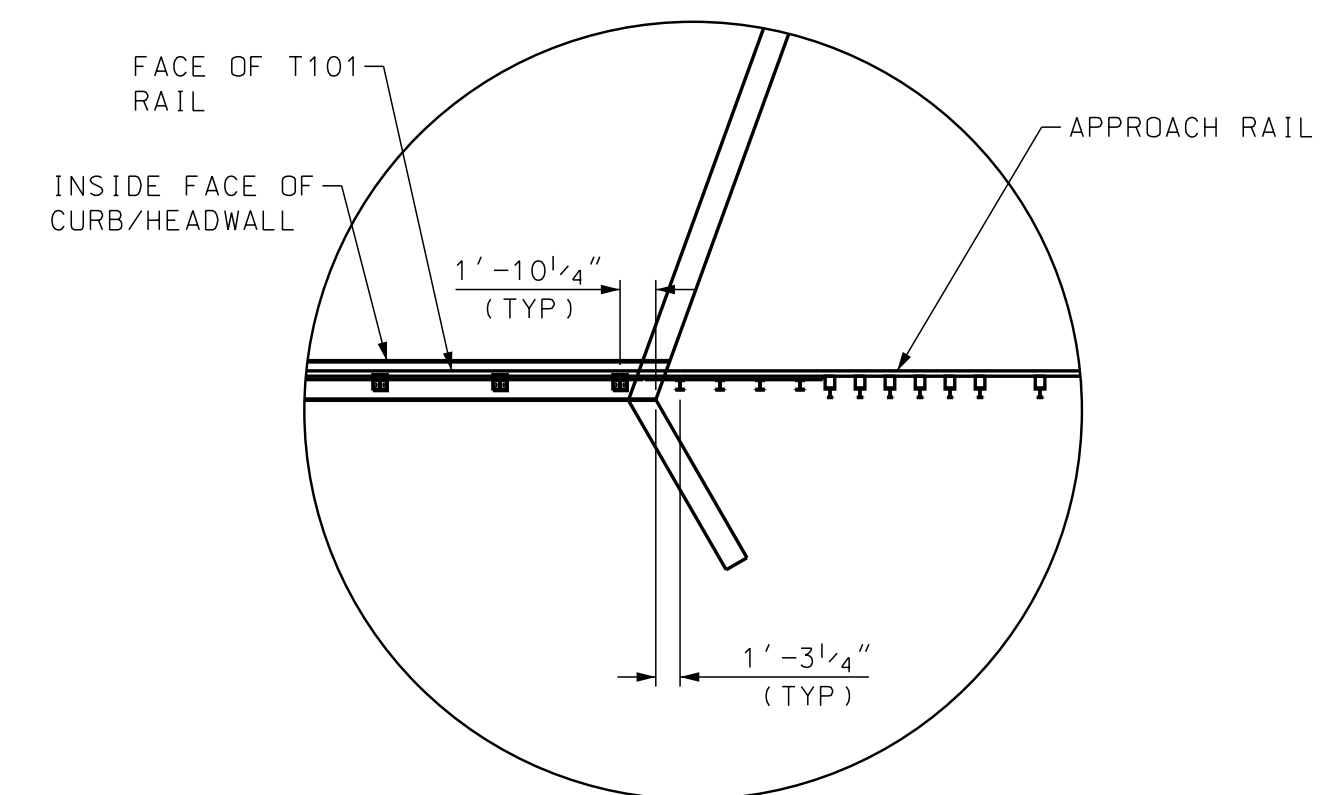
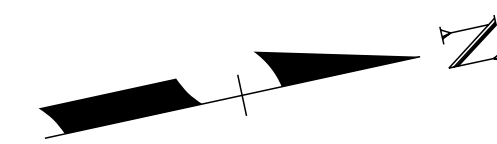
1. ALL COSTS FOR THE DESIGN, CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE TEMPORARY WIDENING OF ROADWAY (PHASED CONSTRUCTION) SHALL BE INCLUDED IN ITEM 670.046. ALL WORK REQUIRED FOR THE TEMPORARY SUPPORT OF EXCAVATION SHALL BE INCLUDED IN ITEM 670.046.
2. THE MATERIALS USED FOR TEMPORARY ROADWAY SHALL CONSIST OF SUITABLE MATERIAL, CONFORMING TO ITEM 203.6 AND SHALL BE INCLUDED IN ITEM 670.046.
3. THE BID PRICE FOR ITEM 619.1, MAINTENANCE OF TRAFFIC, SHALL INCLUDE ANY SIGNAGE FOR THE TEMPORARY ROADWAY, CONSTRUCTION ACTIVITIES, BARRIERS, BARRELS, CONES, TEMPORARY REGULATORY AND WARNING SIGNS AND POSTS AS DETAILED IN THE NHDOT STANDARDS. ALL ADJUSTING, RELOCATING, MAINTAINING, AND REMOVING OF THESE DEVICES AS DEEMED NECESSARY BY THE CONTRACTOR OR AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING, ERECTING AND MAINTAINING ALL PERMANENT AND OPERATIONAL CONSTRUCTION SIGNS AND WARNING DEVICES AS LISTED IN THE PLANS OR FOR HIS/HER PLANNED METHODS OF OPERATION. THE METHODS OF OPERATION BY THE CONTRACTOR SHALL BE IN CONFORMANCE WITH THE MUTCD.
5. TRAFFIC CONTROL DEVICES SHALL BE REMOVED OR COVERED WHEN THEY NO LONGER APPLY TO THE SITE CONDITIONS.
6. WORK ON THE PROJECT, OR ANY SEPARATE ACTIVITY THEREIN, SHALL NOT START UNTIL THE REQUIRED SIGNAGE AND WARNING DEVICES ARE INSTALLED AND APPROVED BY THE ENGINEER.
7. SIGN LOCATIONS SHOWN WITHIN THESE PLANS ARE RECOMMENDED AND MAY BE ADJUSTED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN FOR REVIEW BY THE ENGINEER.



TOWN OF STODDARD, NEW HAMPSHIRE			
TRAFFIC PHASING TYPICAL SECTIONS			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
detplans	--	13	31

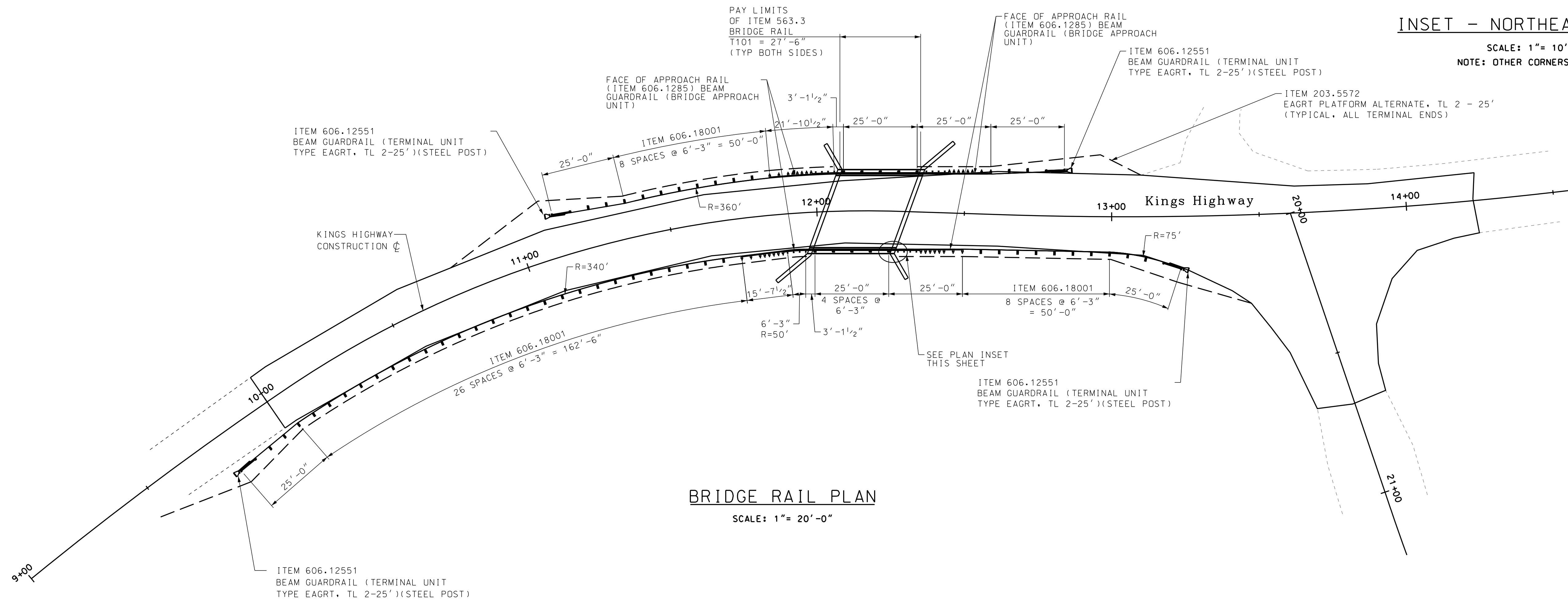
NOTES:

1. SEE STANDARD SHEET "T101 BRIDGE AND APPROACH RAIL (STEEL POSTS)" FOR ADDITIONAL DETAILS AND NOTES.
2. SHOP BEND RAIL ELEMENTS TO FORM A SMOOTH CURVE.



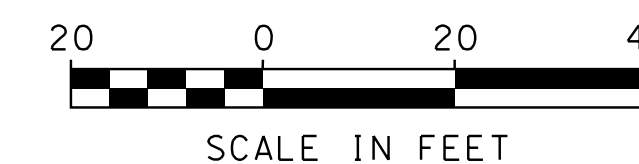
INSET - NORTHEAST CORNER

SCALE: 1" = 10'-0"
NOTE: OTHER CORNERS SIMILAR



BRIDGE RAIL PLAN

SCALE: 1" = 20'-0"



SCALE IN FEET



TOWN OF STODDARD, NEW HAMPSHIRE

BRIDGE RAIL LAYOUT

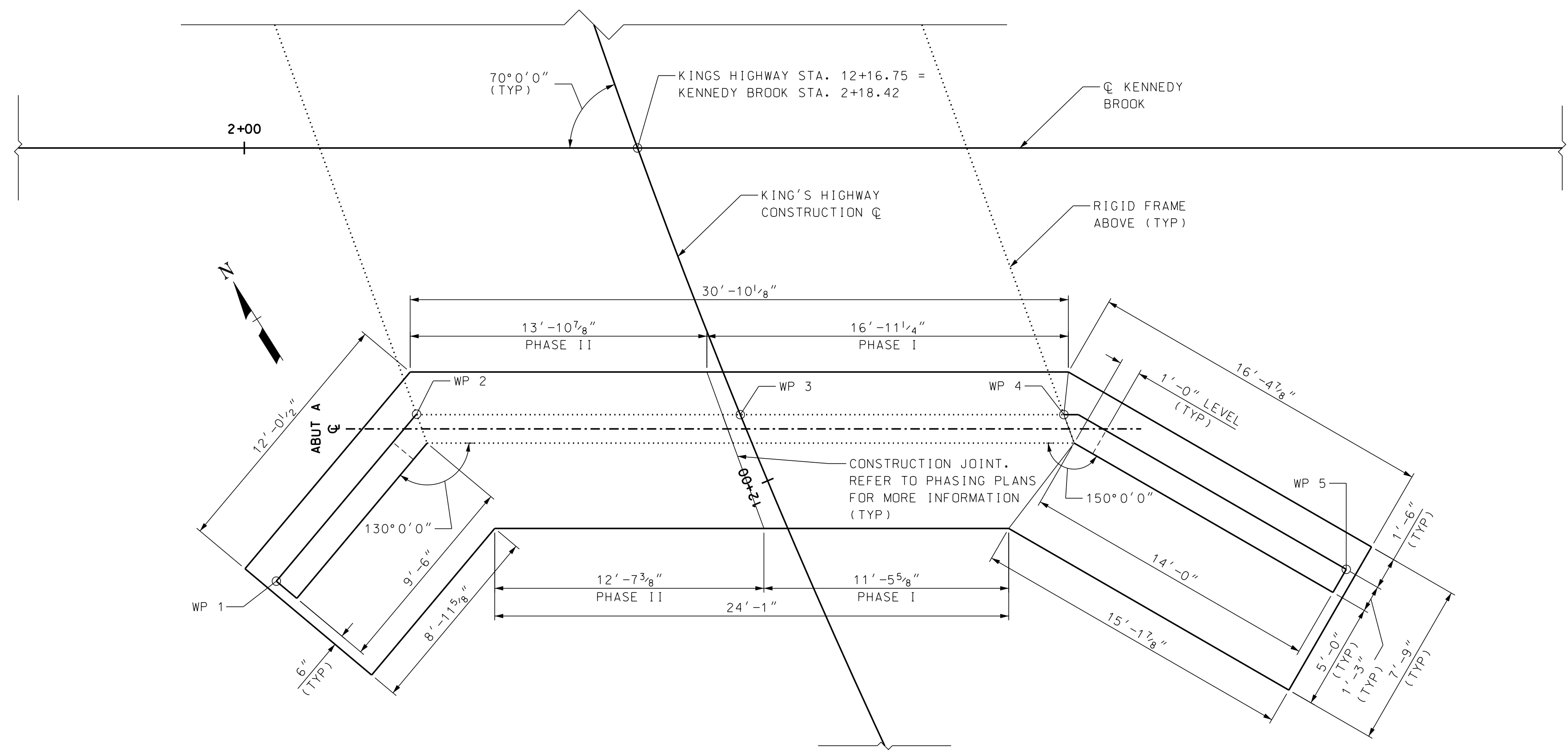
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Br rail	--	15	31

SDR PROCESSED	DATE	NEW DESIGN	DATE	SHEET CHECKED	DATE	AS BUILT DETAILS	DATE
		CEB/GMC	12/8/2020	JCH	12/8/2020		

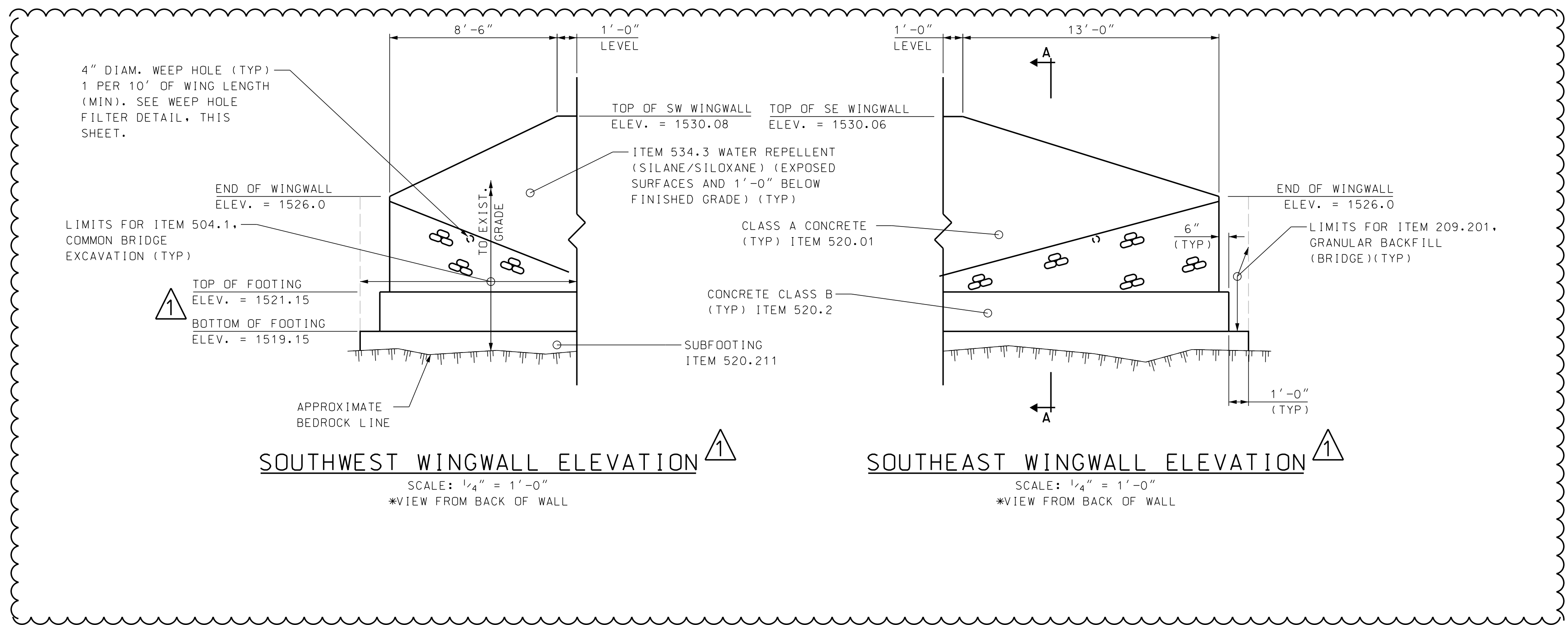
REVISIONS AFTER PROPOSAL	STATION	DESCRIPTION

SDR PROCESSED	DATE	12/8/2020	DATE	12/8/2020	DATE	
NEW DESIGN	CEB/GMC					
SHEET CHECKED	JCH					
AS BUILT DETAILS						

REVISIONS AFTER PROPOSAL	STATION	DESCRIPTION
1	14+00.00	ADDENDUM 3
	10+00.00	



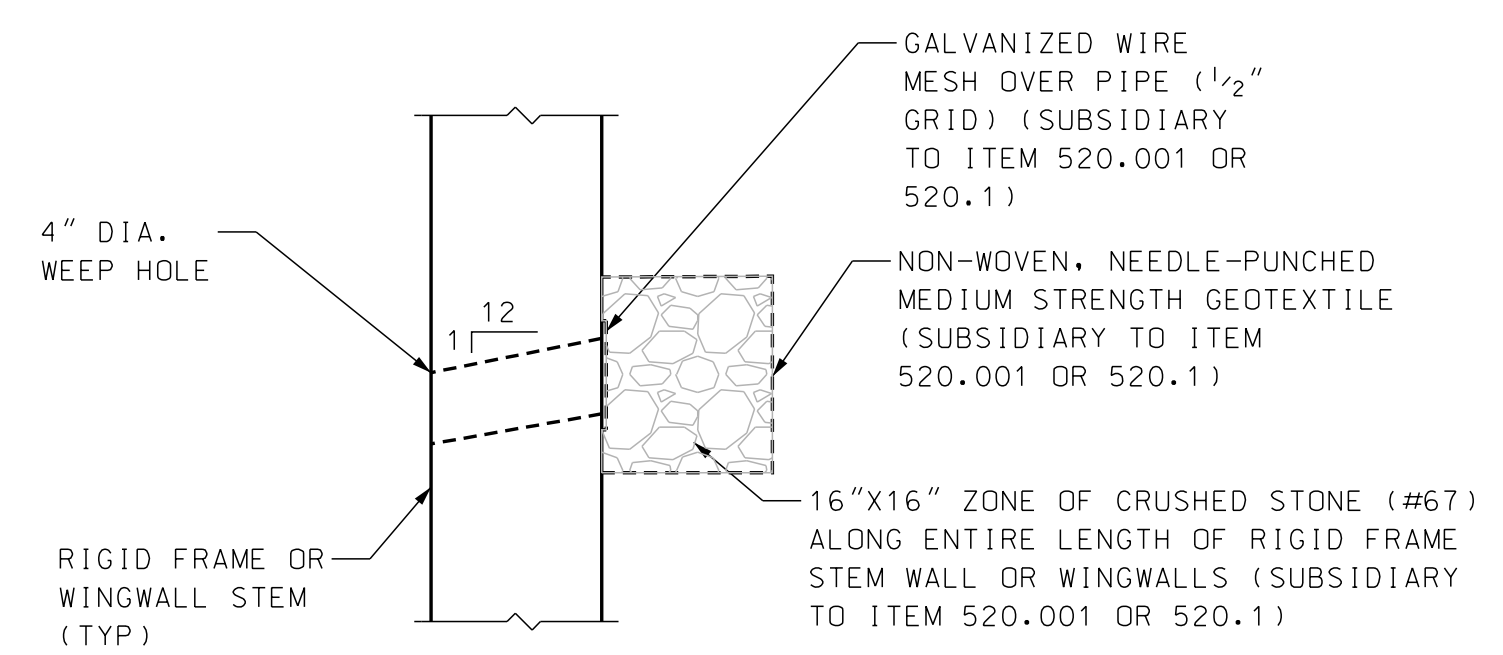
ABUTMENT A PLAN
SCALE: 1/4" = 1'-0"



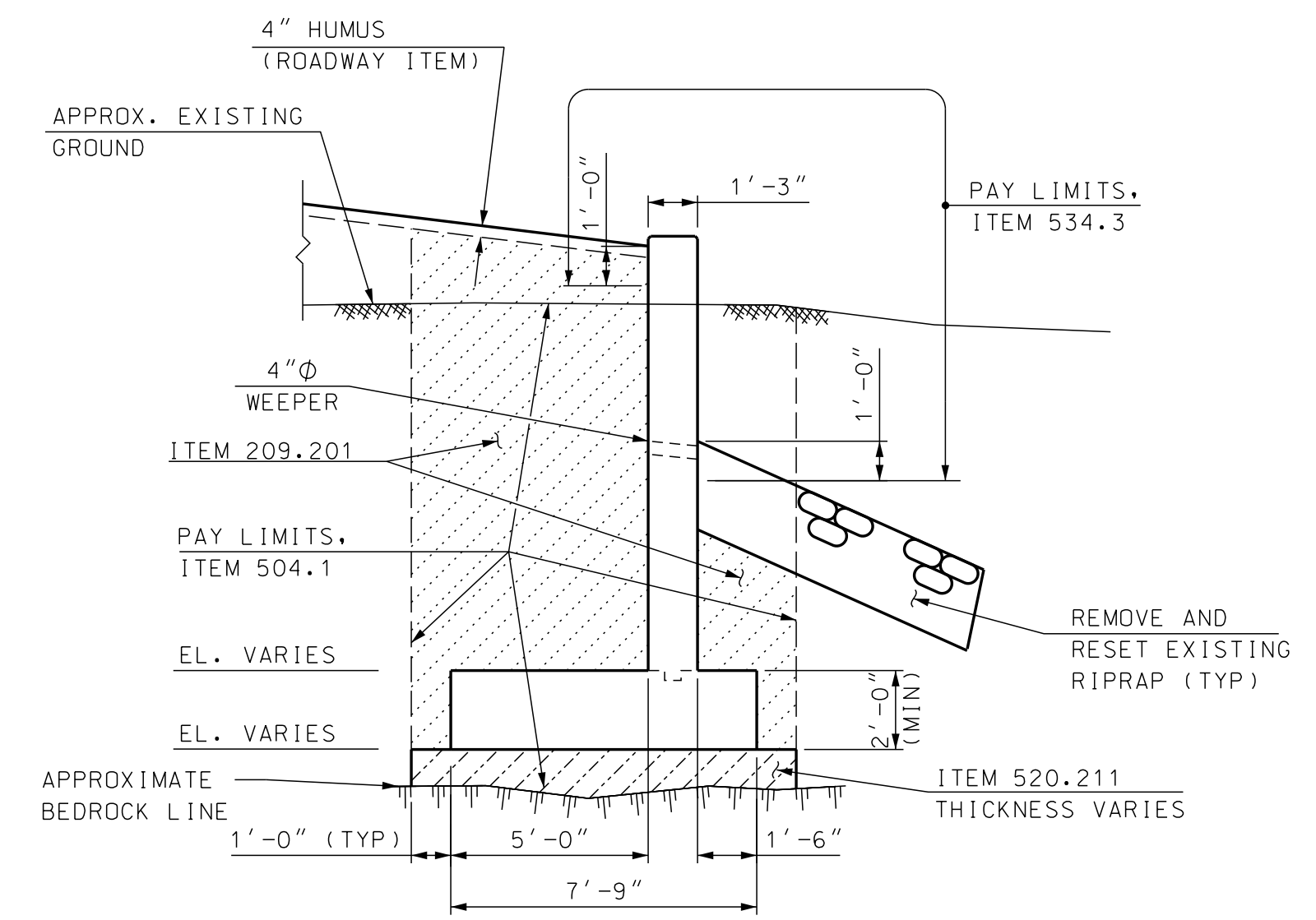
SOUTHWEST WINGWALL ELEVATION
SCALE: 1/4" = 1'-0"
*VIEW FROM BACK OF WALL

SOUTHEAST WINGWALL ELEVATION
SCALE: 1/4" = 1'-0"
*VIEW FROM BACK OF WALL

WP	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING
#1	12+04.27	23.07' LT	END OF SOUTHWEST WINGWALL	218337.85	865615.26
#2	12+08.86	14.09' LT	SOUTHWEST WW CORNER	218340.94	865624.99
#3	12+03.36	0.00'	FACE OF ABUT A AT CENTERLINE	218332.85	865637.81
#4	11+97.40	14.00' RT	SOUTHEAST WW CORNER	218324.75	865650.64
#5	11+84.69	23.10' RT	END OF SOUTHEAST WINGWALL	218311.56	865657.96



WEEP HOLE FILTER DETAIL
NOT TO SCALE

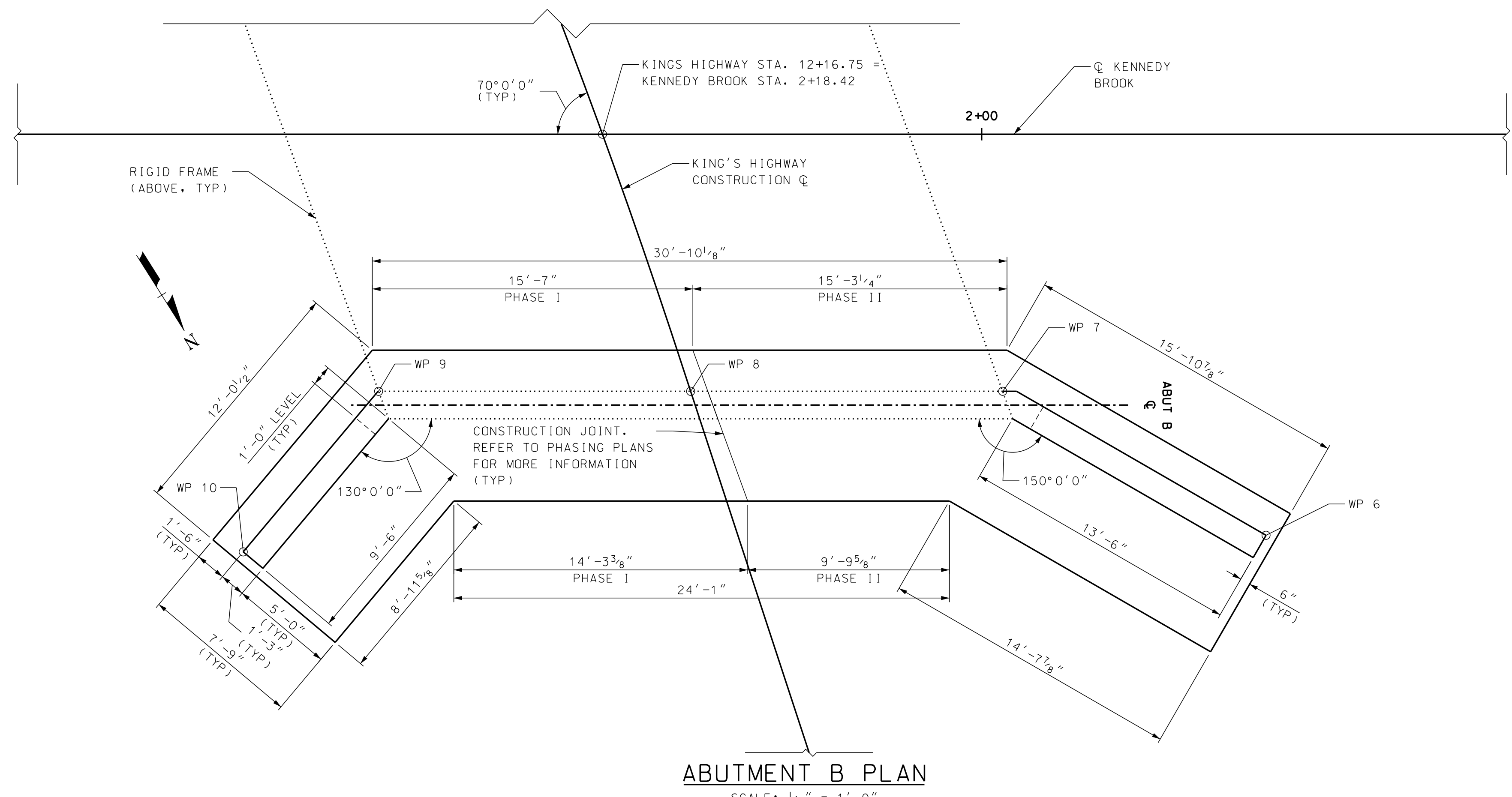


SECTION A-A
TYPICAL WING SECTION
SCALE: 1/4" = 1'-0"

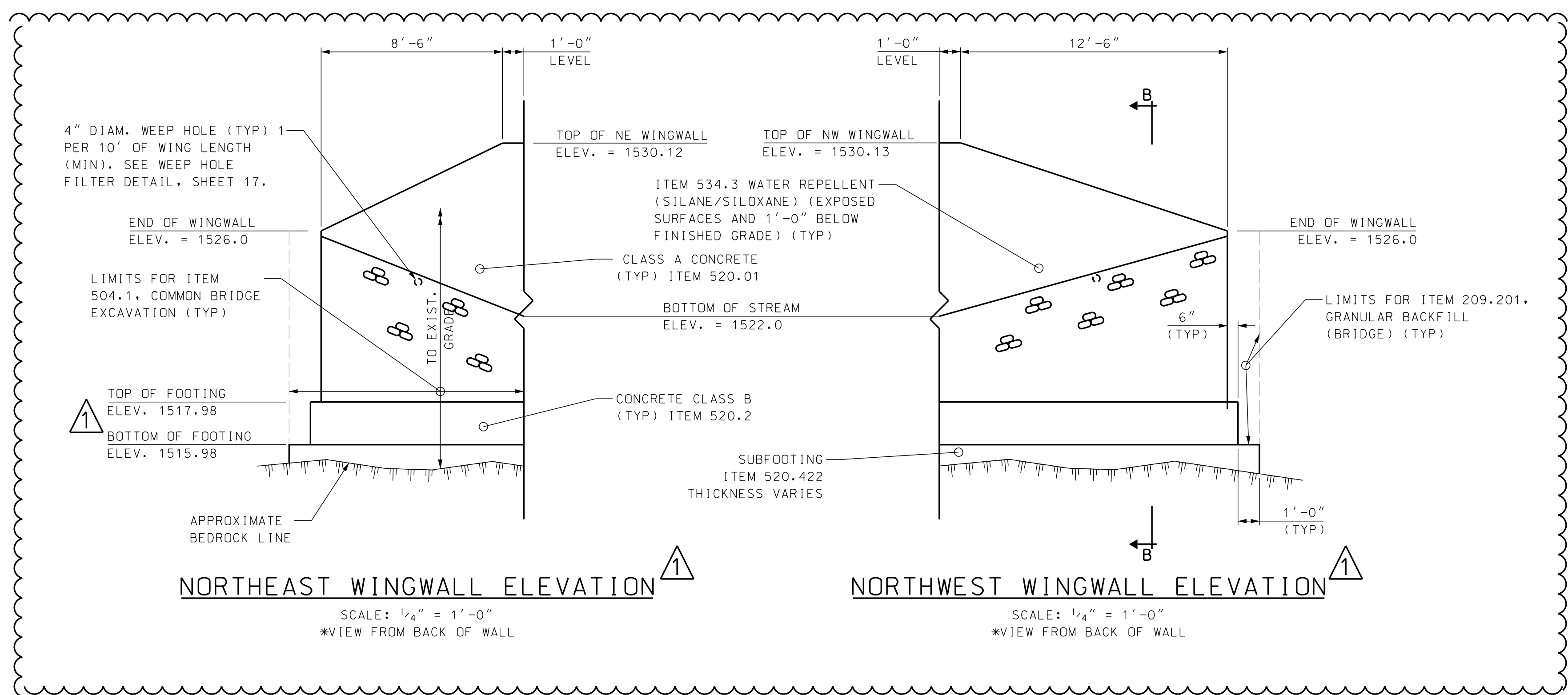
TOWN OF STODDARD, NEW HAMPSHIRE			
ABUTMENT A WINGWALL DETAILS			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
FR-WINGS_A	--	16	31



SDR PROCESSED	DATE	12/8/2020	DATE	12/8/2020	DATE	12/8/2020	DATE	AS BUILT DETAILS
NEW DESIGN	DATE	12/8/2020	DATE	12/8/2020	DATE	12/8/2020	DATE	
SHEET CHECKED	CEB/GMC	JCH						
REVISIONS AFTER PROPOSAL	DESCRIPTION	STATION	STATION	DATE	DATE	DATE	DATE	
	ADDENDUM 3	14+00.00	10+00.00	12/9/2020				



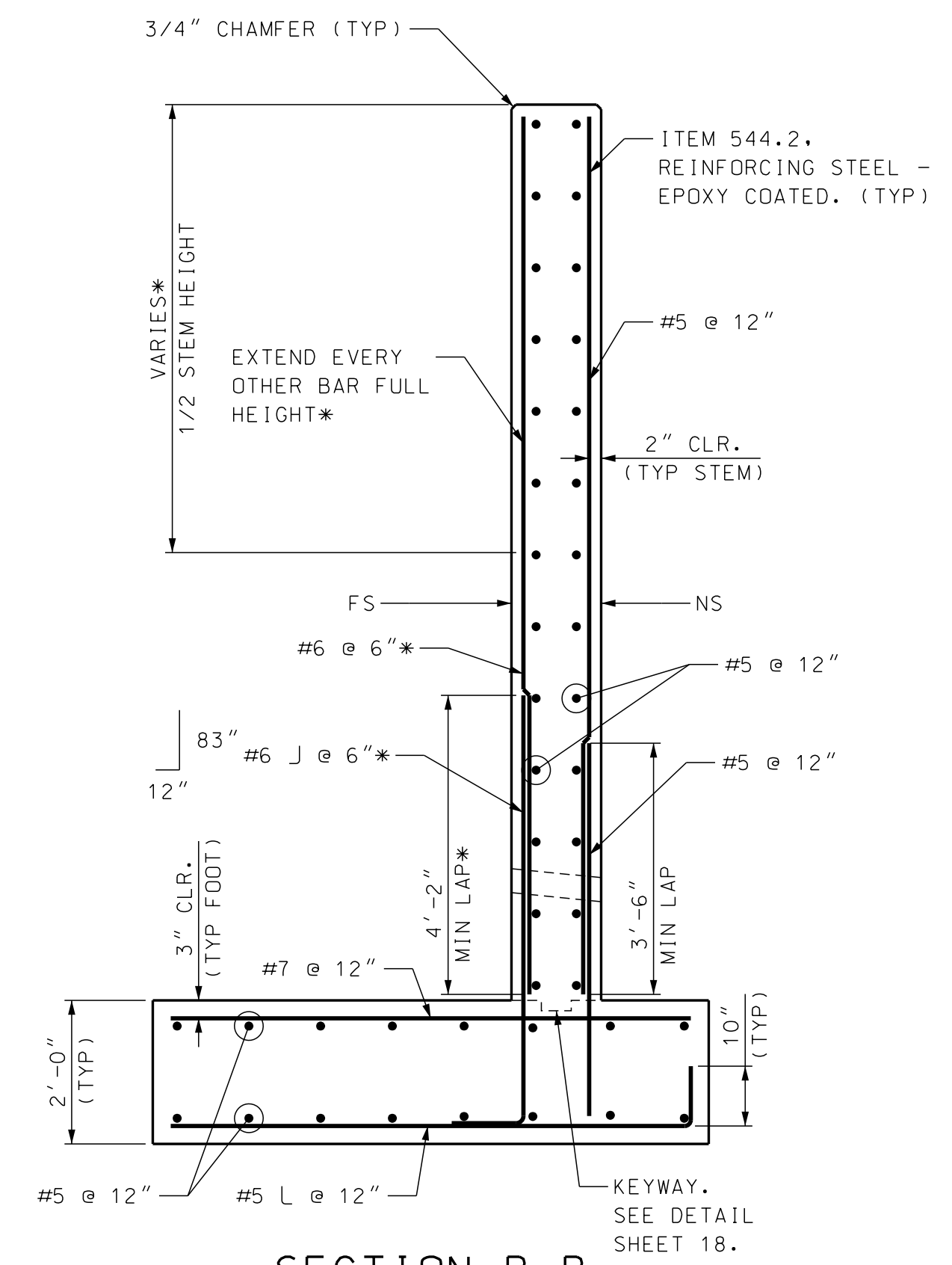
ABUTMENT B PLAN
SCALE: 1/4" = 1'-0"



NORTHEAST WINGWALL ELEVATION
SCALE: 1/4" = 1'-0"
*VIEW FROM BACK OF WALL

NORTHWEST WINGWALL ELEVATION
SCALE: 1/4" = 1'-0"
*VIEW FROM BACK OF WALL

WP	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING
#6	12+45.33	24.39' LT	END OF NORTHWEST WINGWALL	218379.69	865623.55
#7	12+34.69	14.41' LT	NORTHWEST WW CORNER	218366.94	865630.64
#8	12+29.97	0.00'	FACE OF ABUT B AT CENTERLINE	218358.84	865643.46
#9	12+25.13	14.40' RT	NORTHEAST WW CORNER	218350.75	865656.29
#10	12+30.61	23.09' RT	END OF NORTHEAST WINGWALL	218353.84	865666.02



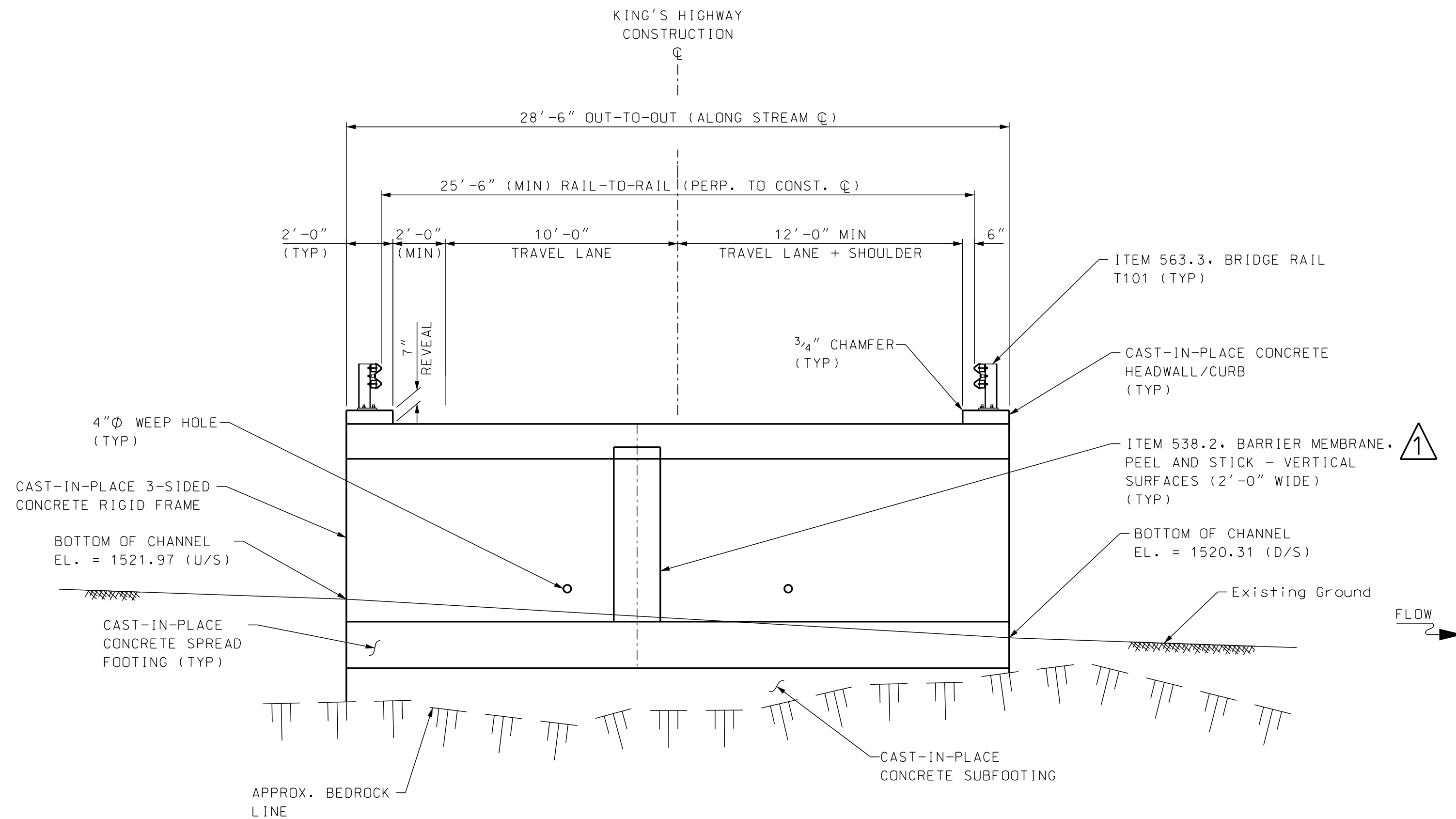
SECTION B-B
TYPICAL WING REINFORCING SECTION
SCALE: 1/2" = 1'-0"

* NOTE: WALL HEIGHT VARIES WITH EXISTING LEDGE CONDITIONS. A SINGLE DOWEL BAR (#6 J) MAY BE SUBSTITUTED FOR THE VERTICAL FS AND DOWEL REINFORCING BARS WHEN APPROPRIATE.

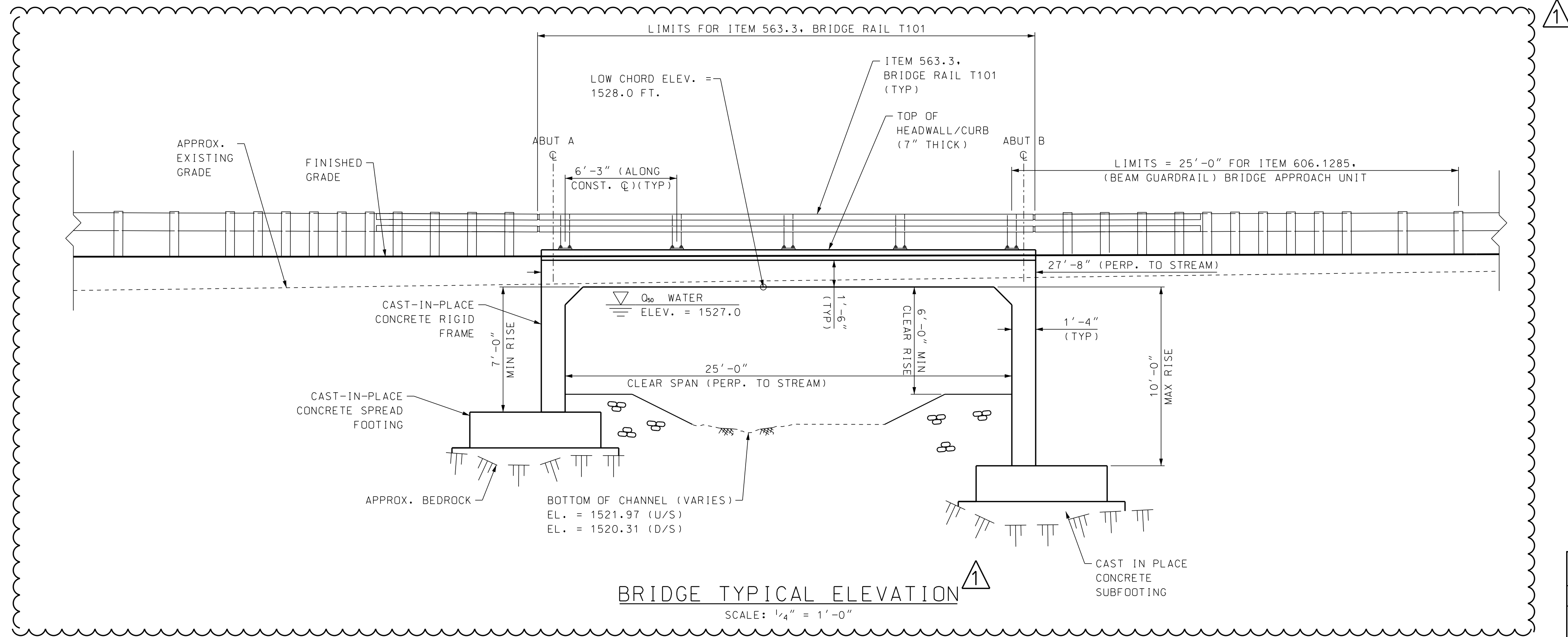


TOWN OF STODDARD, NEW HAMPSHIRE			
ABUTMENT B WINGWALL DETAILS			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
FR-WINGS_B	--	17	31

REVISIONS AFTER PROPOSAL		STATION	DESCRIPTION
NUMBER	DATE	STATION	ADDENDUM 3
1	12/9/2020	10+00.00	
1	12/9/2020	14+00.00	
DATE	DATE	DATE	DATE
12/8/2020	12/8/2020		
CEB/GMC	JCH		
SHEET CHECKED	AS BUILT DETAILS		



BRIDGE TYPICAL SECTION
SCALE: 1/4" = 1'-0"

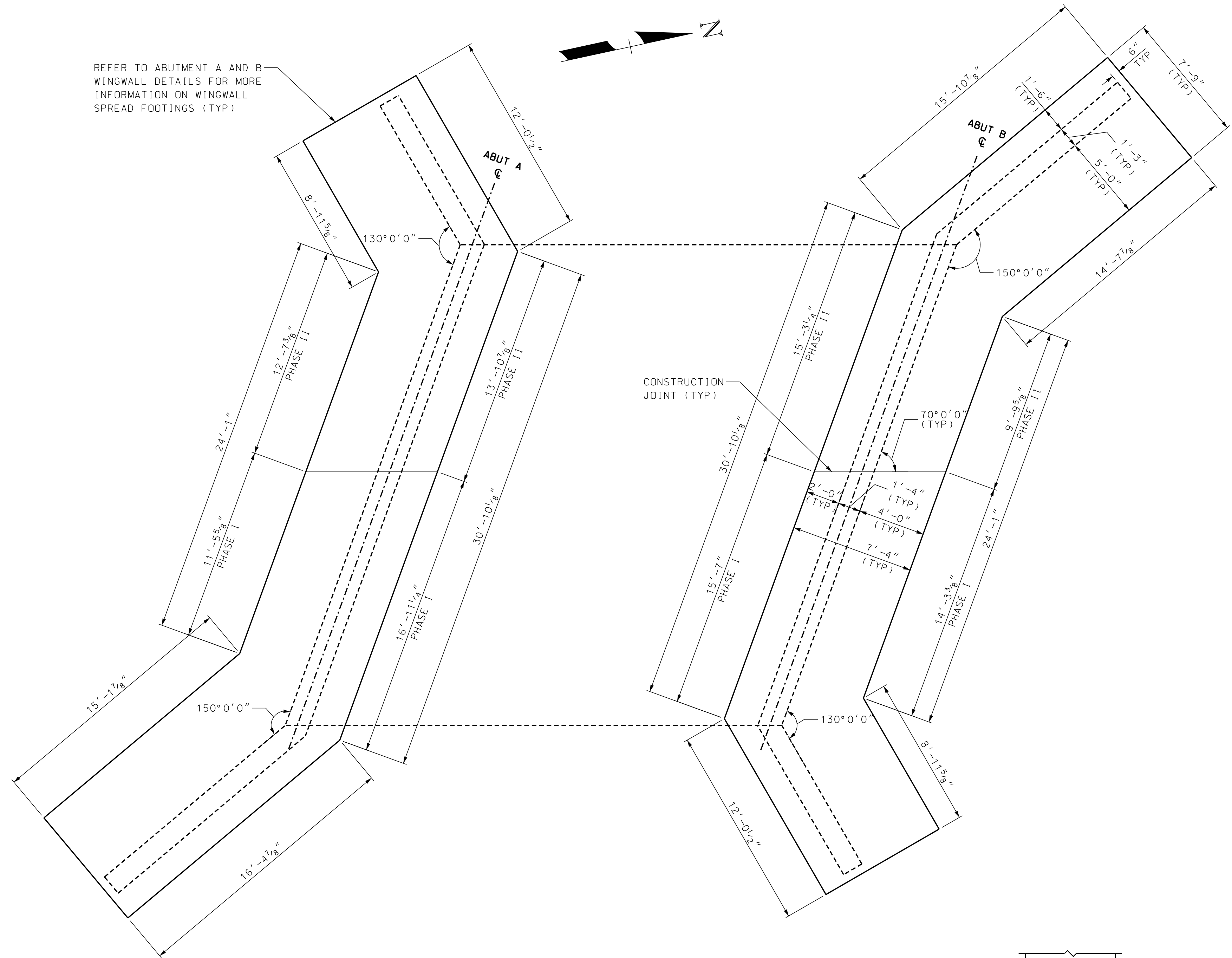


BRIDGE TYPICAL ELEVATION
SCALE: 1/4" = 1'-0"

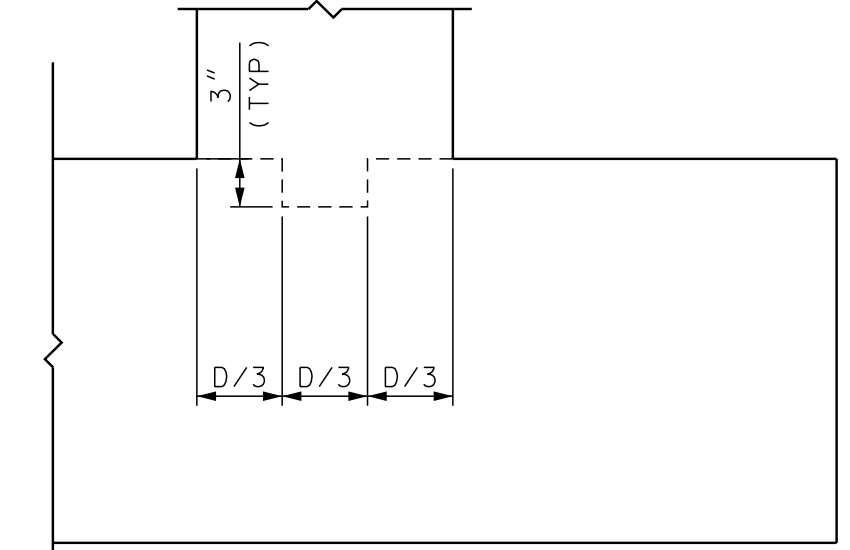
TOWN OF STODDARD, NEW HAMPSHIRE			
BRIDGE TYPICAL SECTIONS			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Typ2	--	18	31



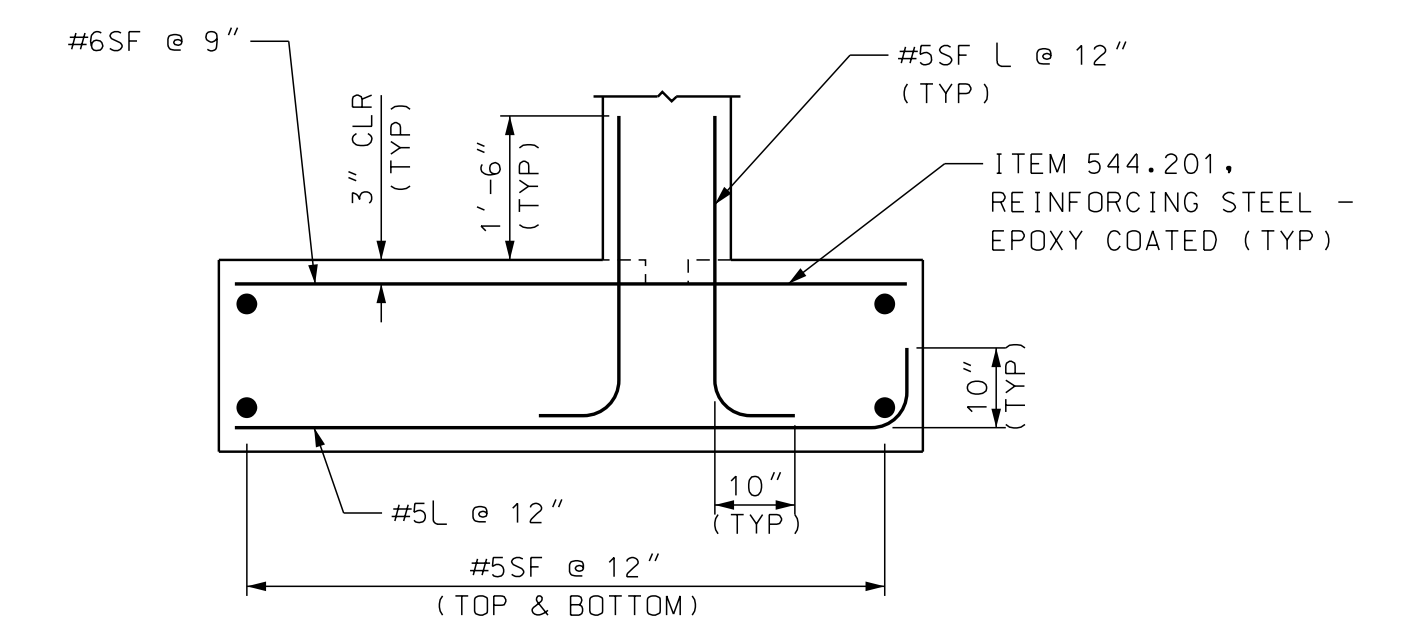
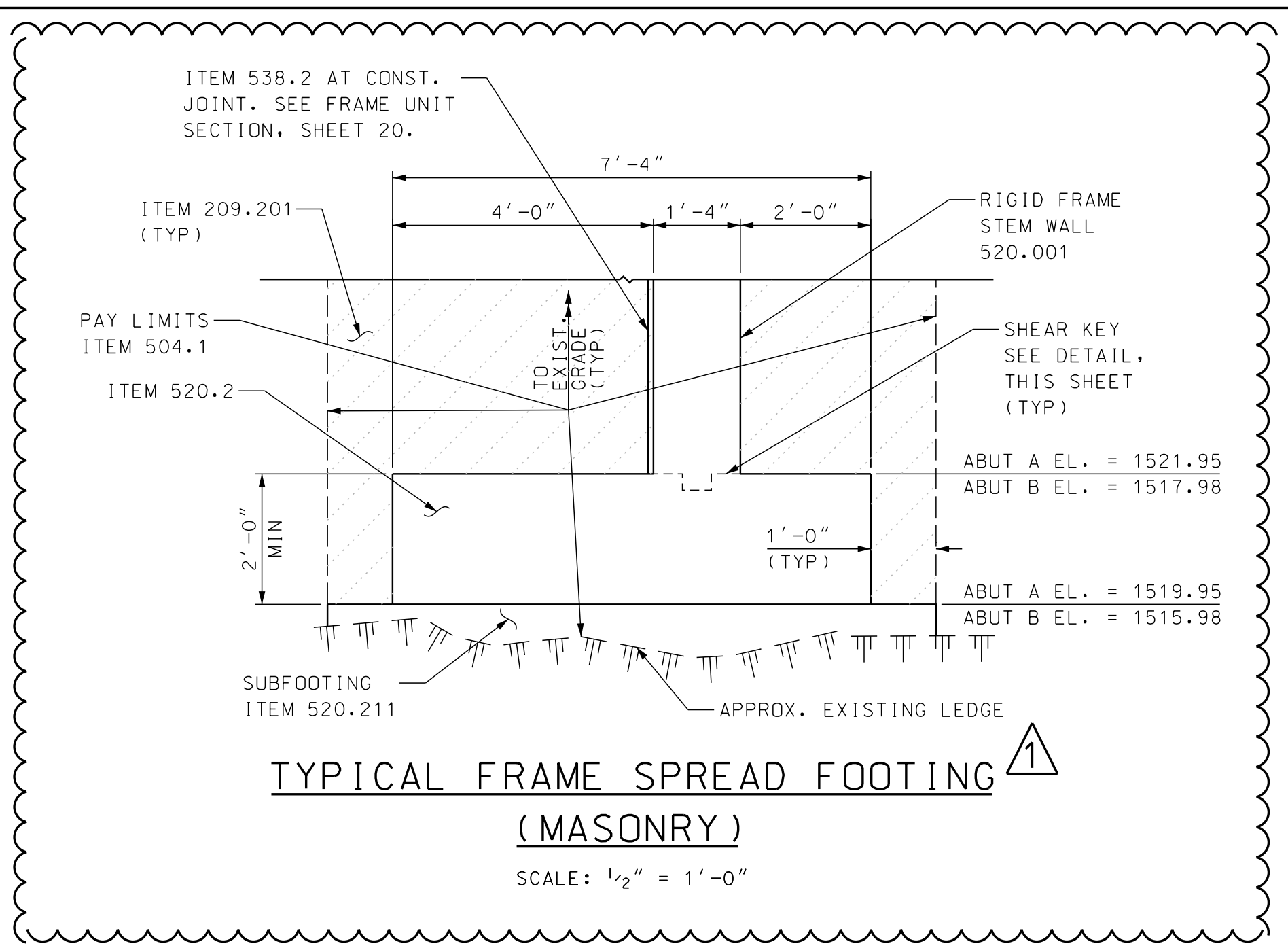
SDR PROCESSED	DATE	12/8/2020	STATION	14+00.00
NEW DESIGN	DATE	12/8/2020	STATION	10+00.00
SHEET CHECKED	DATE	12/8/2020	DATE	12/9/2020
AS BUILT DETAILS	DATE		NUMBER	1
			REVISIONS AFTER PROPOSAL	
			DESCRIPTION	ADDENDUM 3



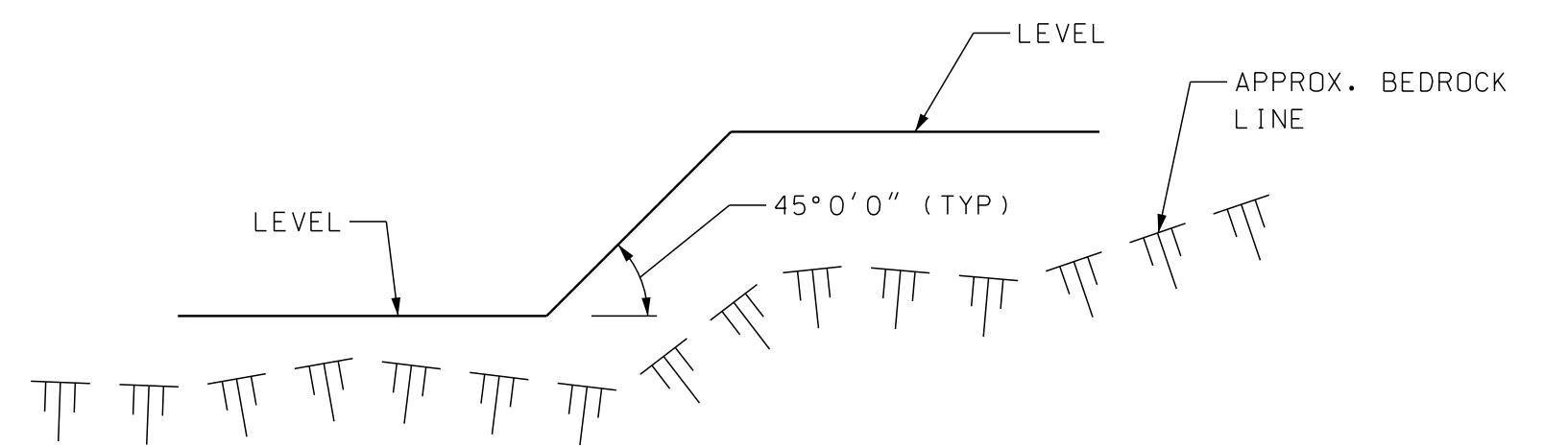
RIGID FRAME FOOTING PLAN
SCALE: 1/4" = 1'-0"



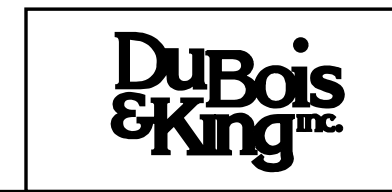
TYPICAL FOOTING KEYWAY DETAIL
SCALE: 1" = 1'-0"



TYPICAL FRAME SPREAD FOOTING (REINFORCEMENT)
SCALE: 1/2" = 1'-0"

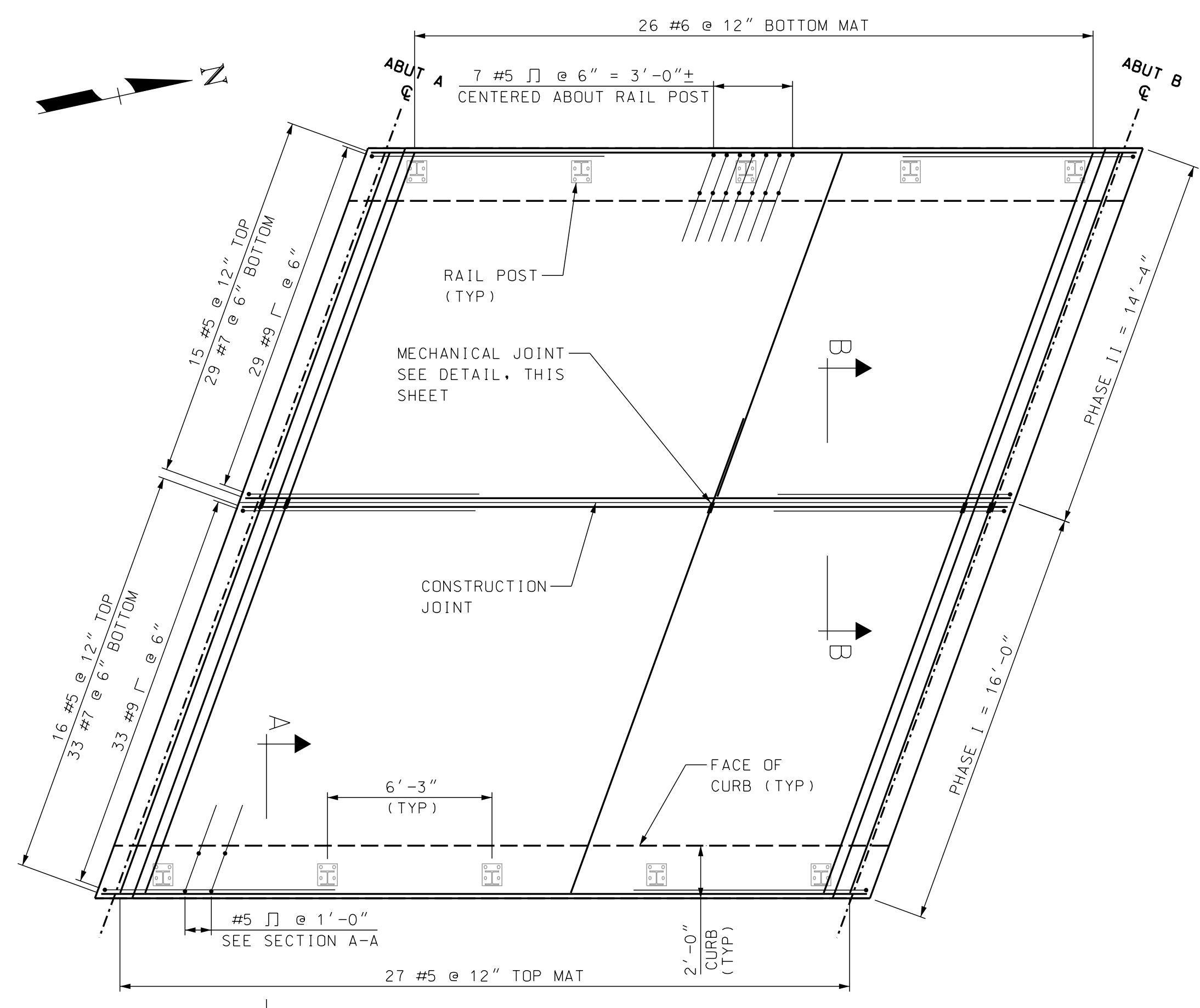


TYPICAL SUBFOOTING STEP DETAIL
SCALE: 1" = 1'-0"
REFER TO FOUNDATION ON SUBFOOTING NOTES, SHEET 5.



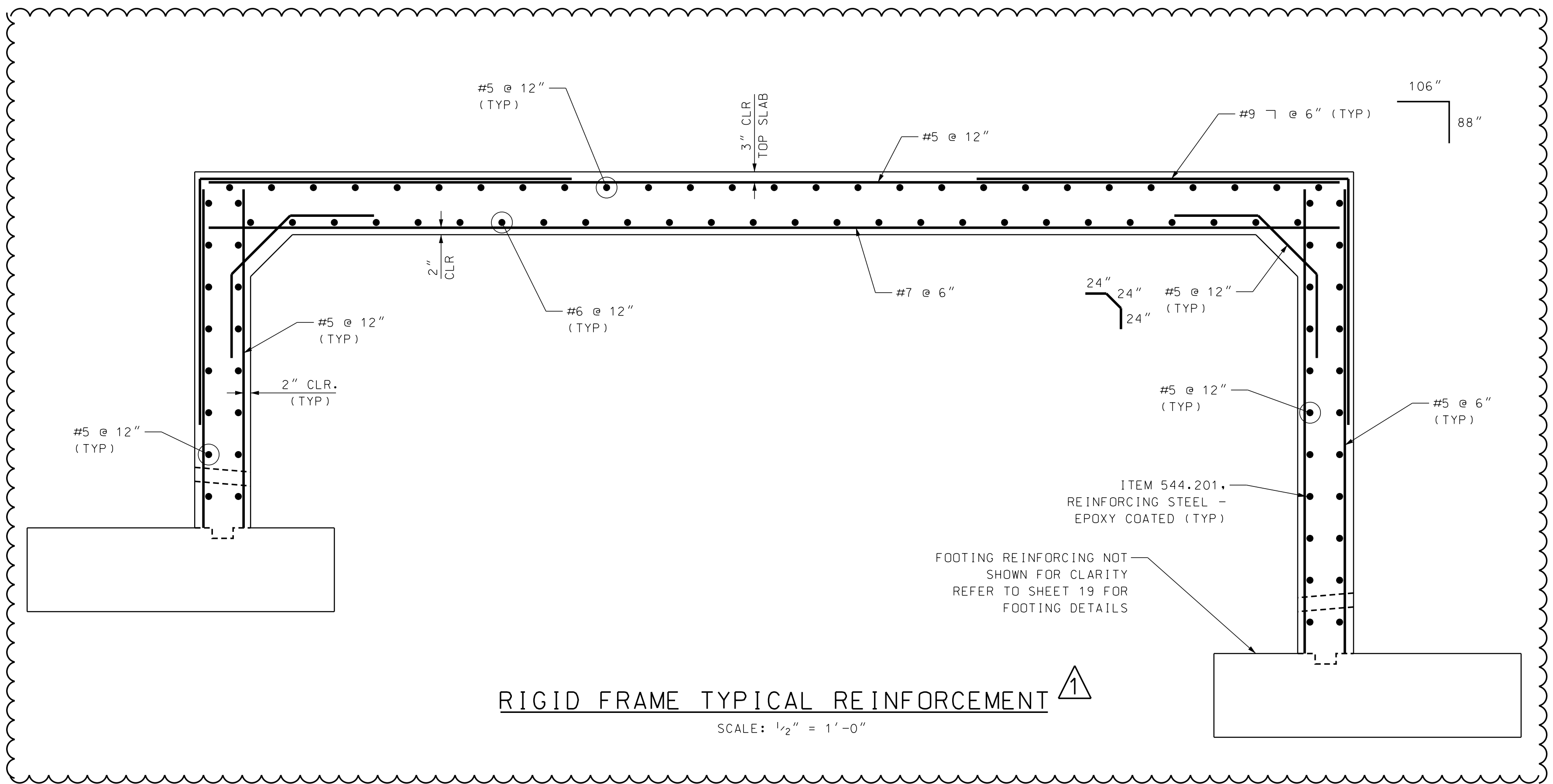
TOWN OF STODDARD, NEW HAMPSHIRE			
FOOTING LAYOUT AND REINFORCING DETAILS			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
FR-FOOT	--	19	31

REVISIONS AFTER PROPOSAL		DESCRIPTION	STATION	DATE	NUMBER
		ADDENDUM 3	14+00.00	12/9/2020	1
			10+00.00		
SDR PROCESSED	DATE	DATE	DATE	DATE	DATE
NEW DESIGN	12/8/2020	12/8/2020			
SHEET CHECKED	CEB/GMC	JCH			
AS BUILT DETAILS					

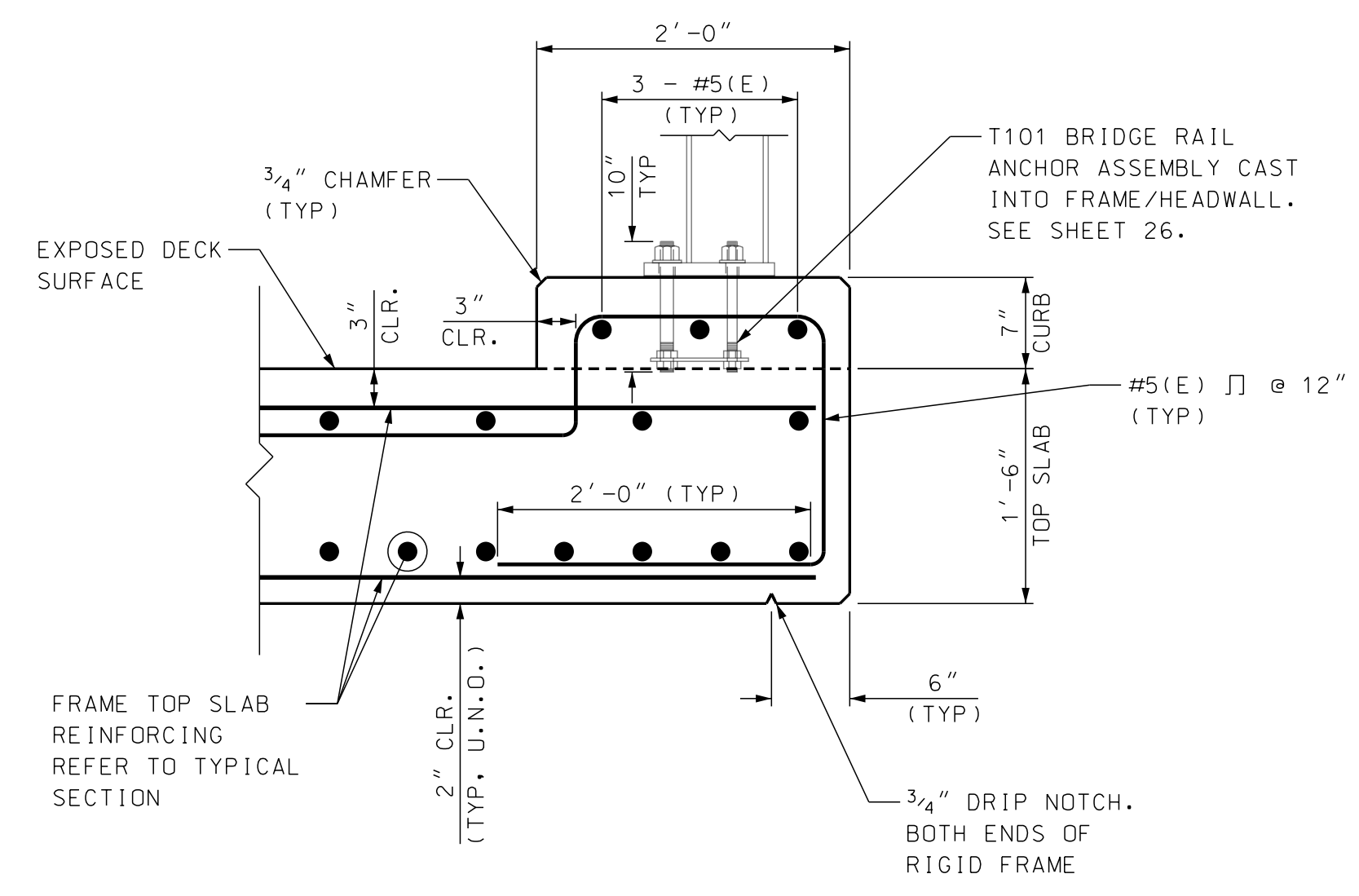


RIGID FRAME PLAN
SCALE: 1/4" = 1'-0"

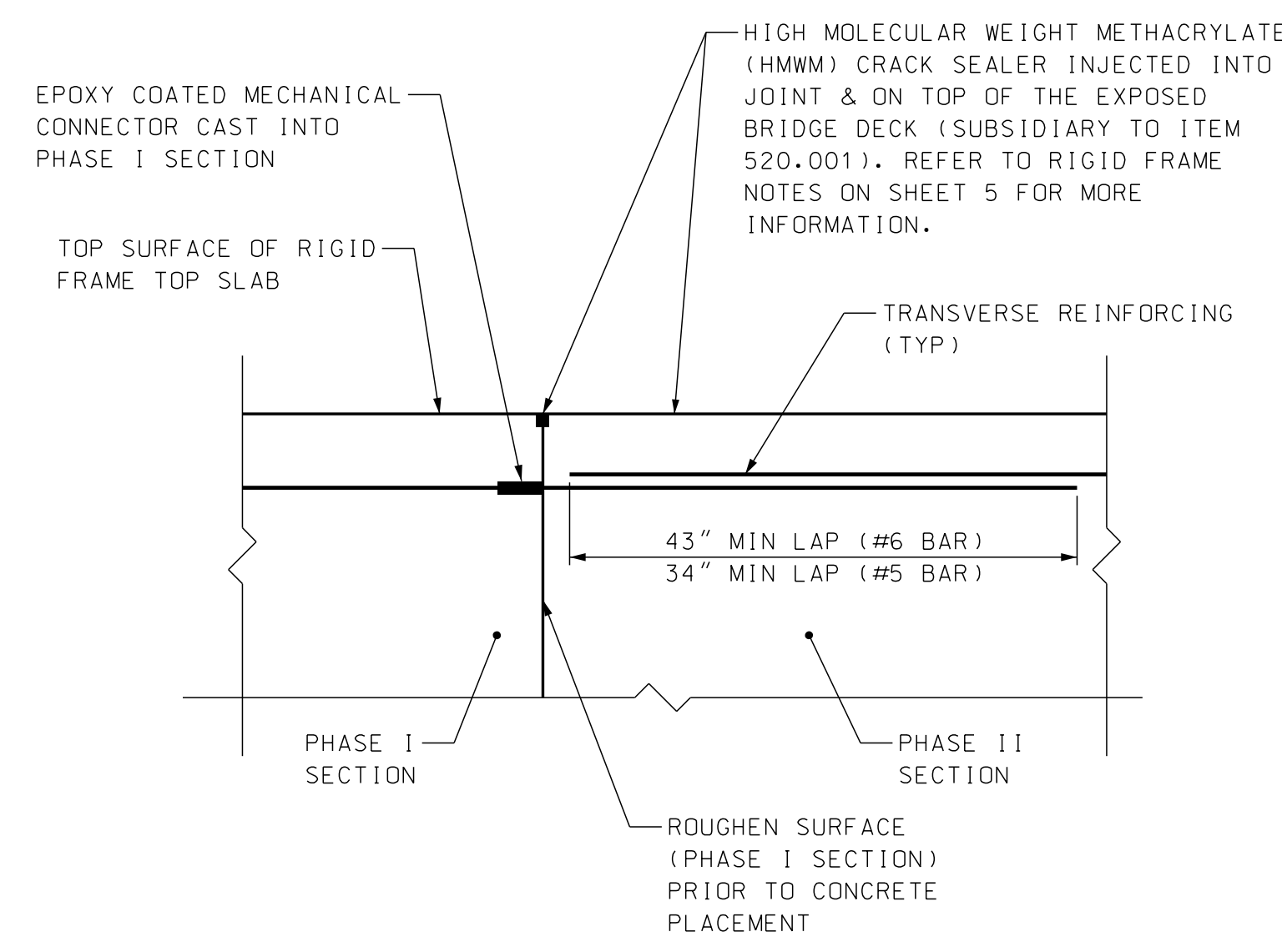
*WALL REINFORCING NOT SHOWN FOR CLARITY. REFER TO REINFORCEMENT DETAIL, THIS SHEET.



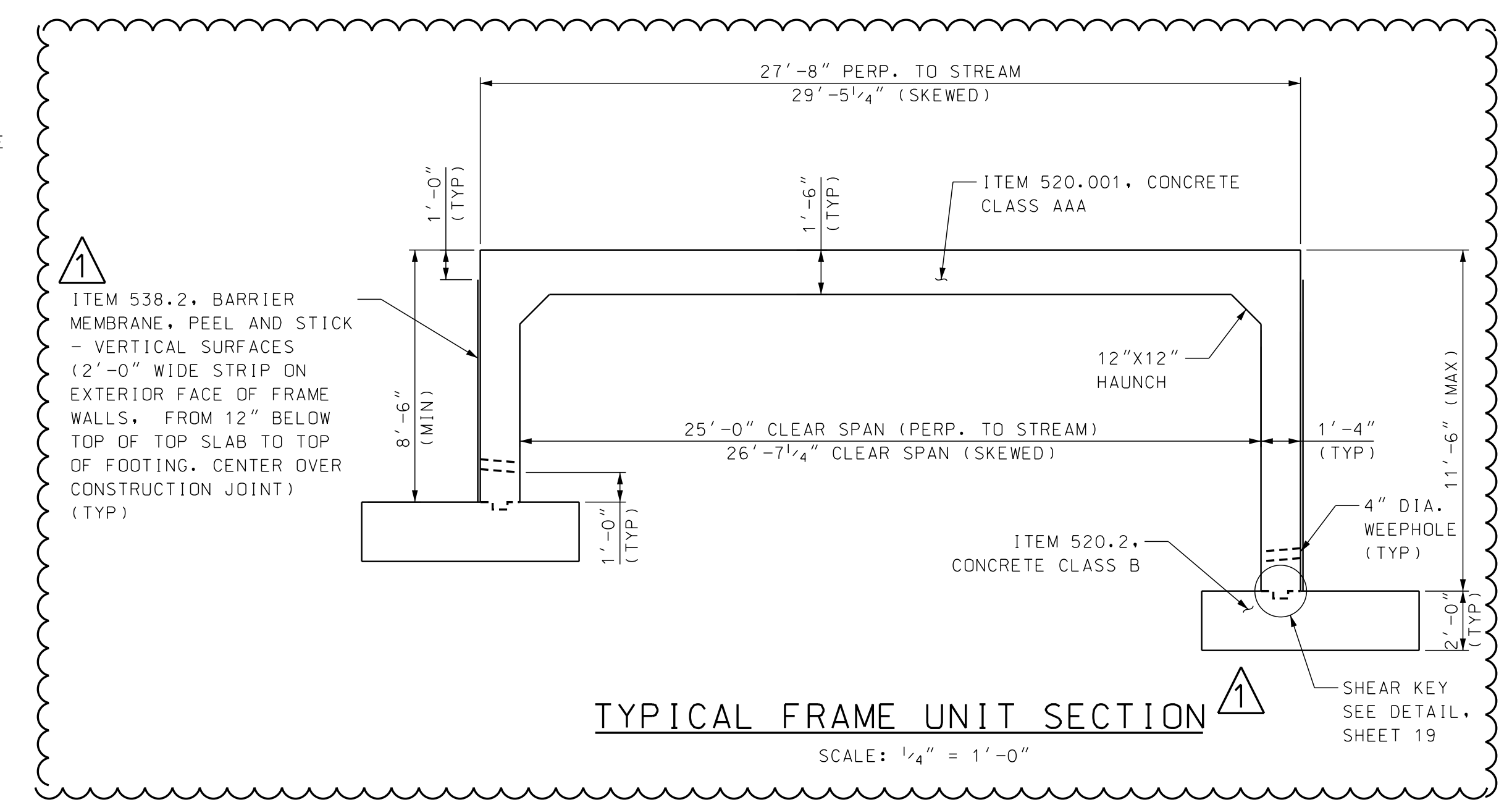
RIGID FRAME TYPICAL REINFORCEMENT
SCALE: 1/2" = 1'-0"



HEADWALL REINFORCING DETAIL SECTION A-A
SCALE: 1" = 1'-0"



CONSTRUCTION JOINT DETAIL SECTION B-B
SCALE: 1" = 1'-0"



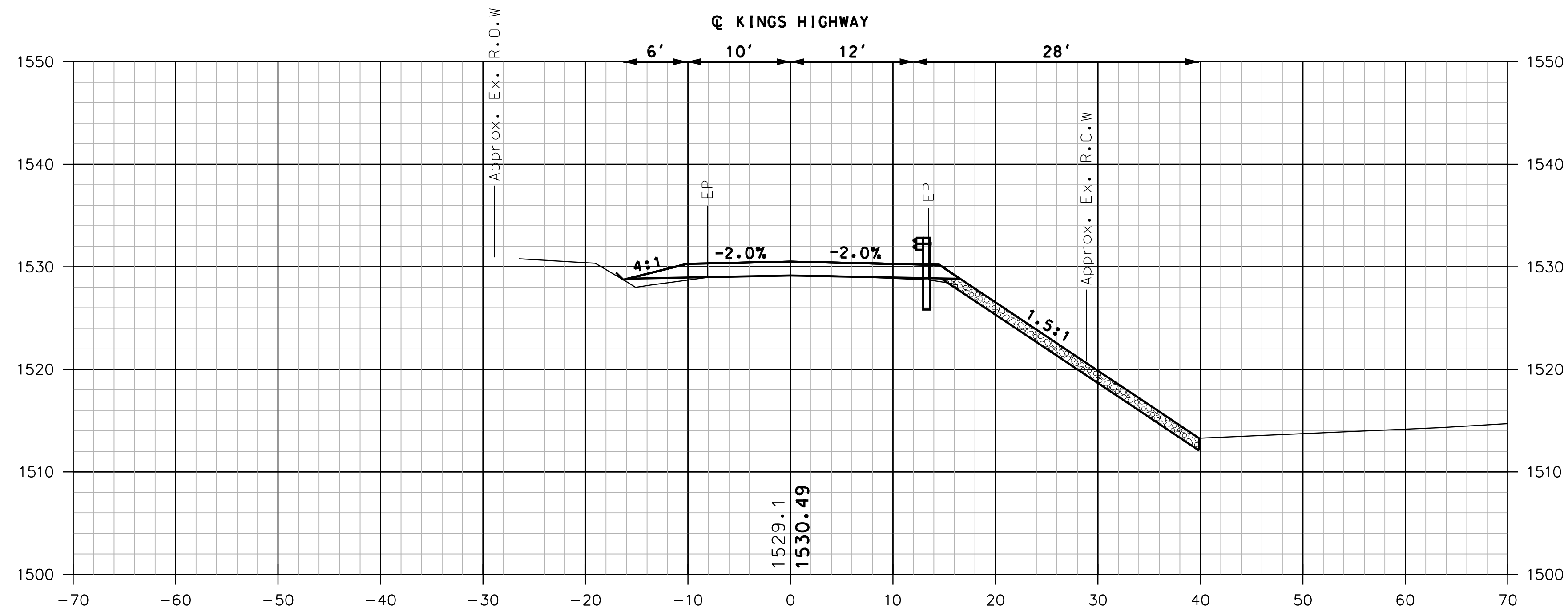
TYPICAL FRAME UNIT SECTION
SCALE: 1/4" = 1'-0"

TOWN OF STODDARD, NEW HAMPSHIRE			
FRAME LAYOUT & REINFORCING DETAILS			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
FR-DETL5	--	20	31

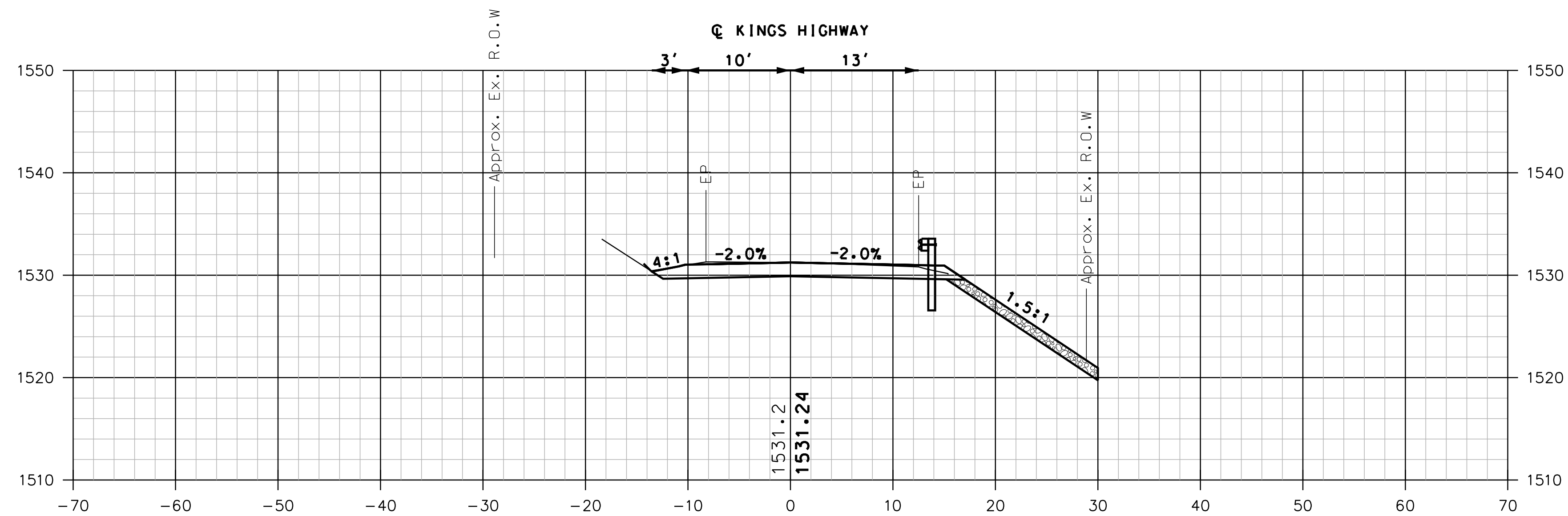


REVISIONS AFTER PROPOSAL		STATION	DESCRIPTION
NUMBER	DATE	STATION	DESCRIPTION

SDR PROCESSED	DATE	GMC	DATE
NEW DESIGN	12/8/2020	CEB/JCH	12/8/2020
SHEET CHECKED			
AS BUILT DETAILS			



10+50



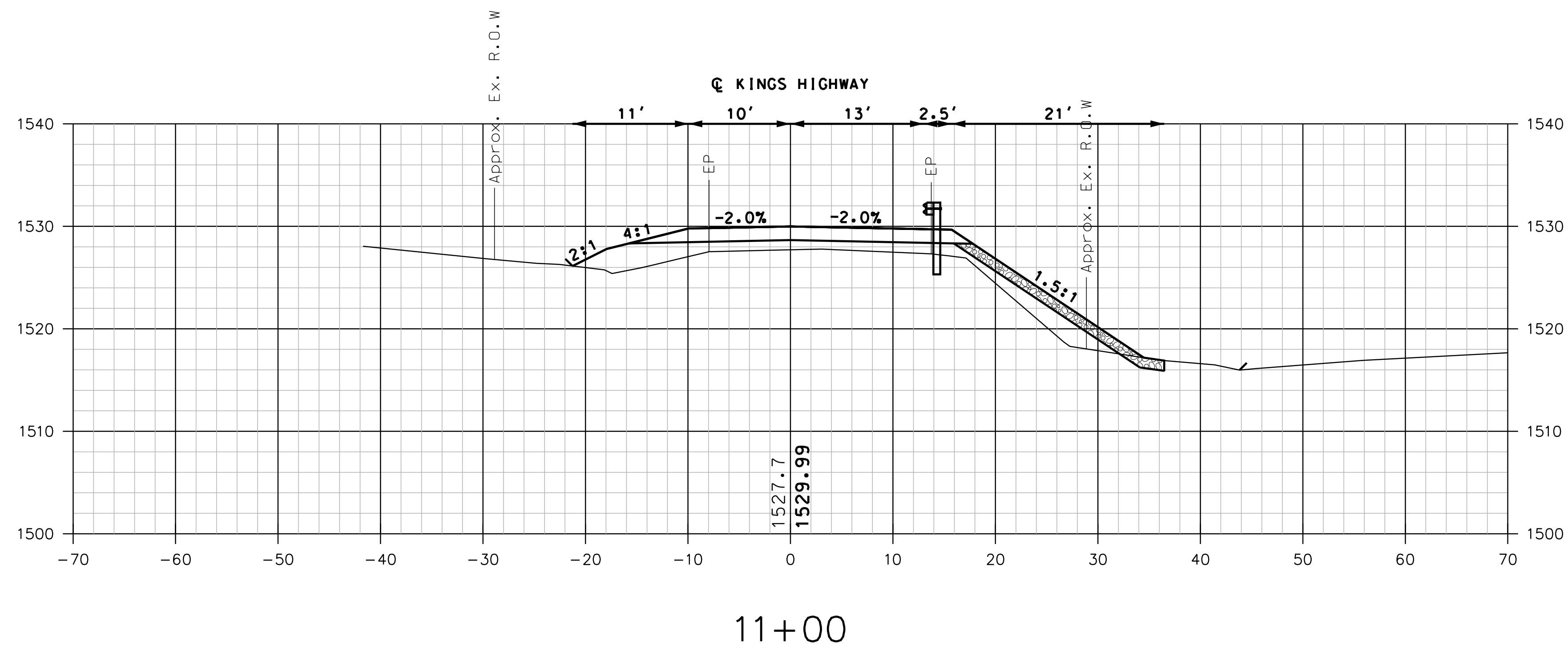
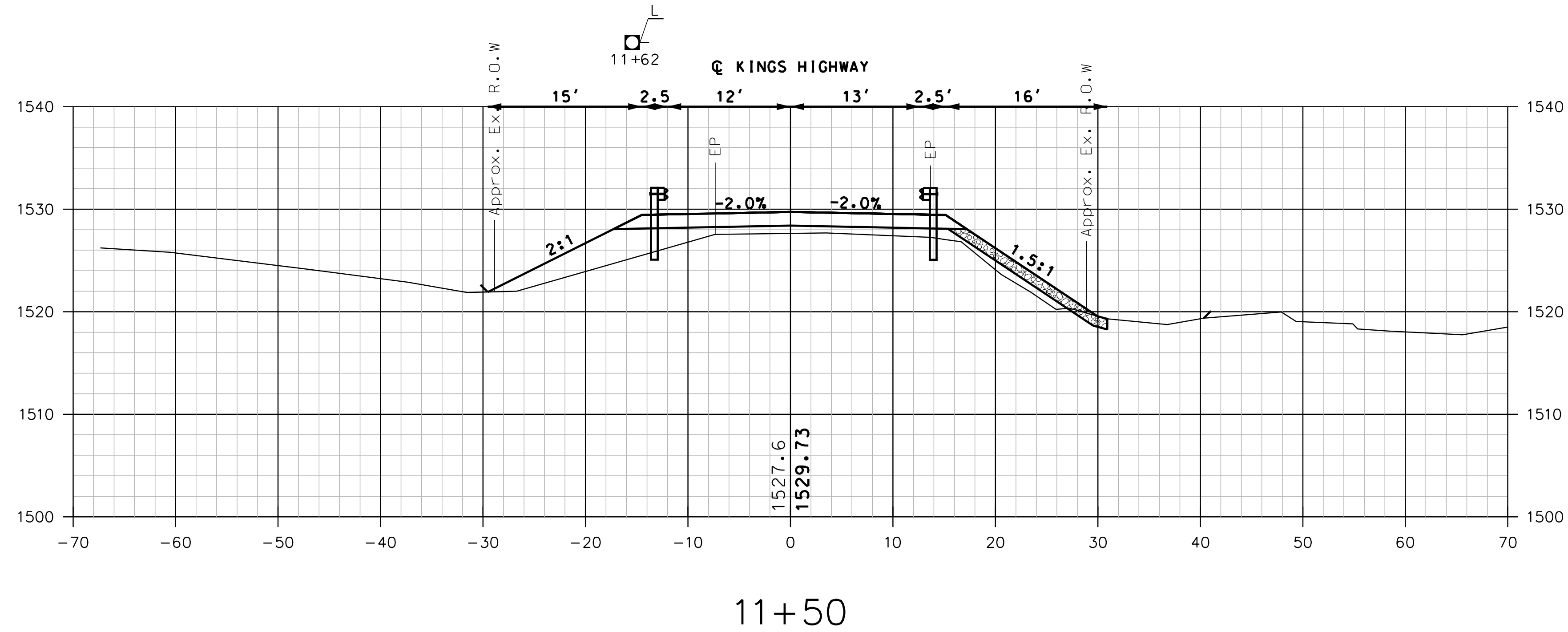
10+00

STA. 10+00.00 - BEGIN CONSTRUCTION
 STA. 9+25.00 - LIMIT OF WORK

SHEET TOTALS					
COMMON EXCAV.	-	C.Y.	ROCK EXCAV.	-	C.Y.
FILL	-	C.Y.	MUCK EXCAV.	-	C.Y.
DGN	XS	STATE PROJECT NO.	--	SHEET NO.	21
				TOTAL SHEETS	31

REVISIONS AFTER PROPOSAL		STATION	DESCRIPTION
NUMBER	DATE	STATION	DESCRIPTION

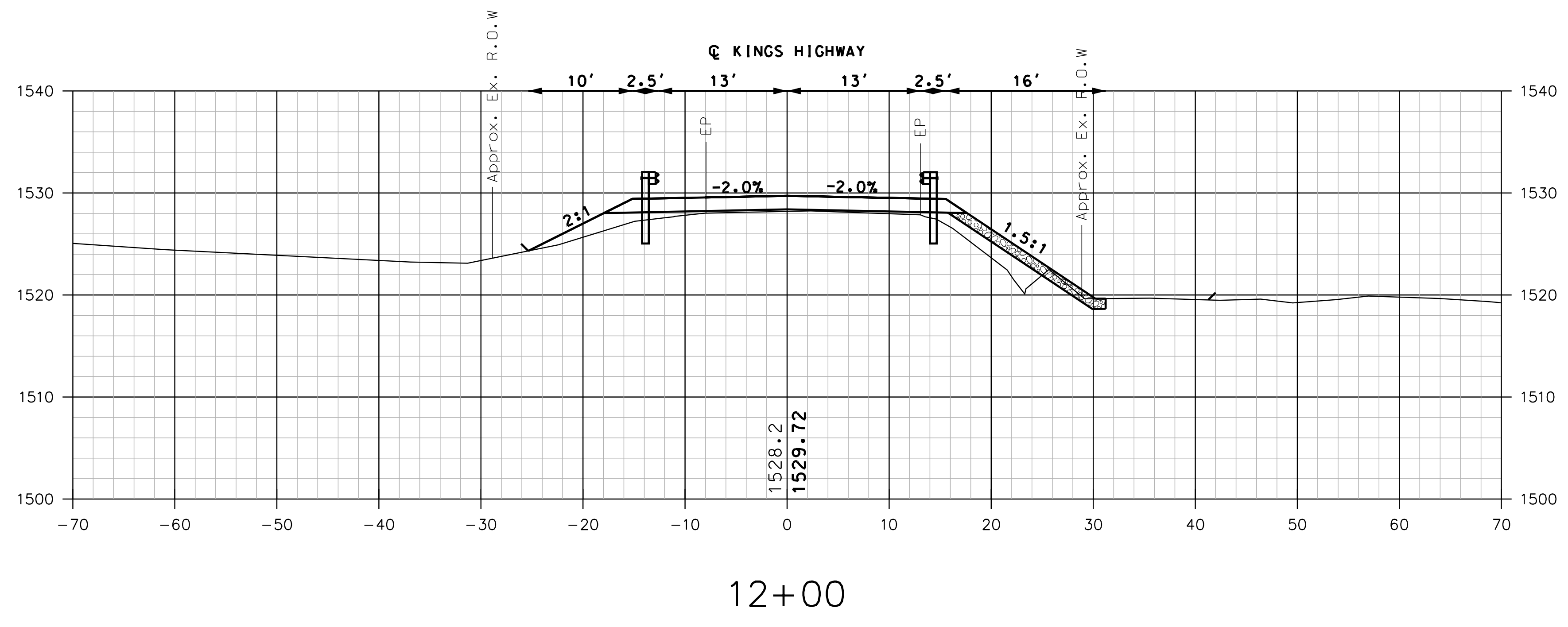
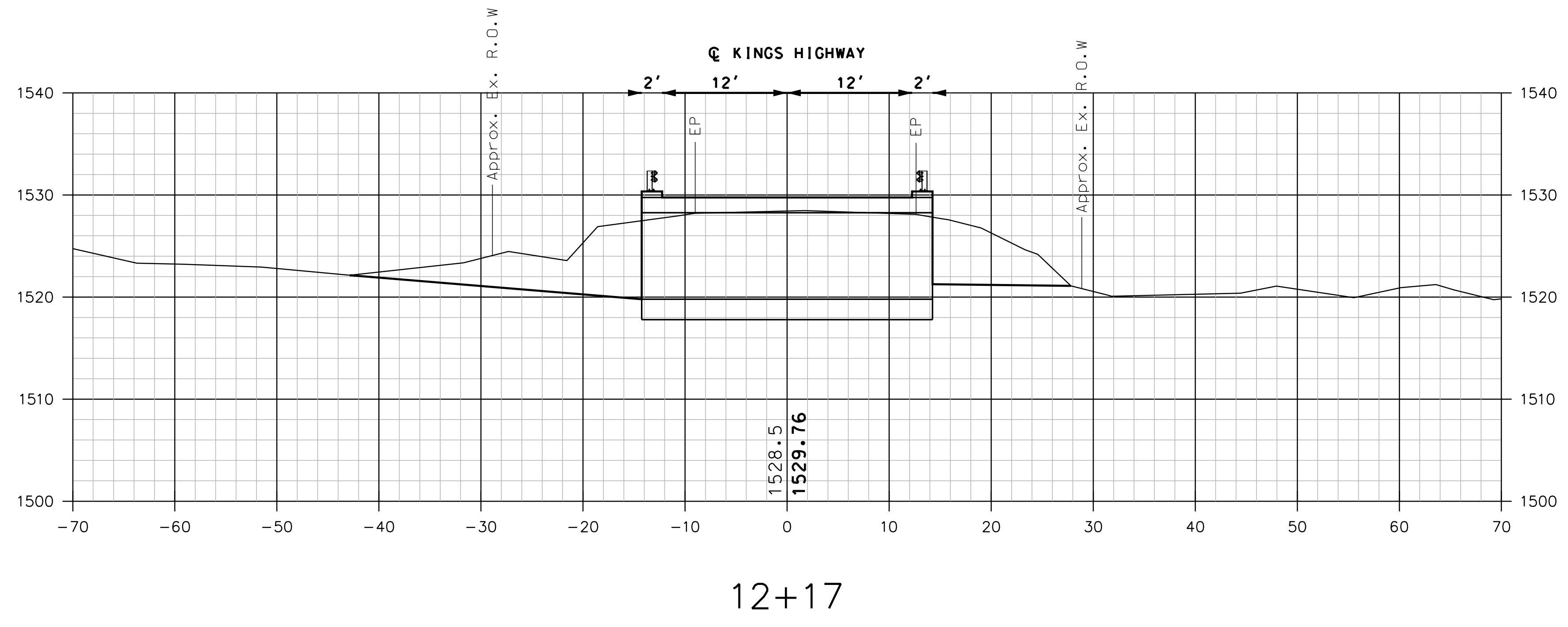
SDR PROCESSED	DATE	12/8/2020	
NEW DESIGN	GMC	DATE	12/8/2020
SHEET CHECKED	CEB/JCH	DATE	12/8/2020
AS BUILT DETAILS	DATE		



SHEET TOTALS					
COMMON EXCAV.	-	C.Y.	ROCK EXCAV.	-	C.Y.
FILL	-	C.Y.	MUCK EXCAV.	-	C.Y.
DGN	XS	STATE PROJECT NO.	--	SHEET NO.	22
				TOTAL SHEETS	31

REVISIONS AFTER PROPOSAL		STATION	DESCRIPTION
NUMBER	DATE	STATION	DESCRIPTION

SDR PROCESSED	DATE	NEW DESIGN	DATE	AS BUILT DETAILS	DATE
GMC	12/8/2020	CEB/JCH	12/8/2020		



SHEET TOTALS					
COMMON EXCAV.	—	C.Y.	ROCK EXCAV.	—	C.Y.
FILL	—	C.Y.	MUCK EXCAV.	—	C.Y.
DGN	XS	STATE PROJECT NO.	23	SHEET NO.	23
				TOTAL SHEETS	31

REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

STATION

DATE

NUMBER

DATE 12/8/2020

SDR PROCESSED

NEW DESIGN

SHEET CHECKED

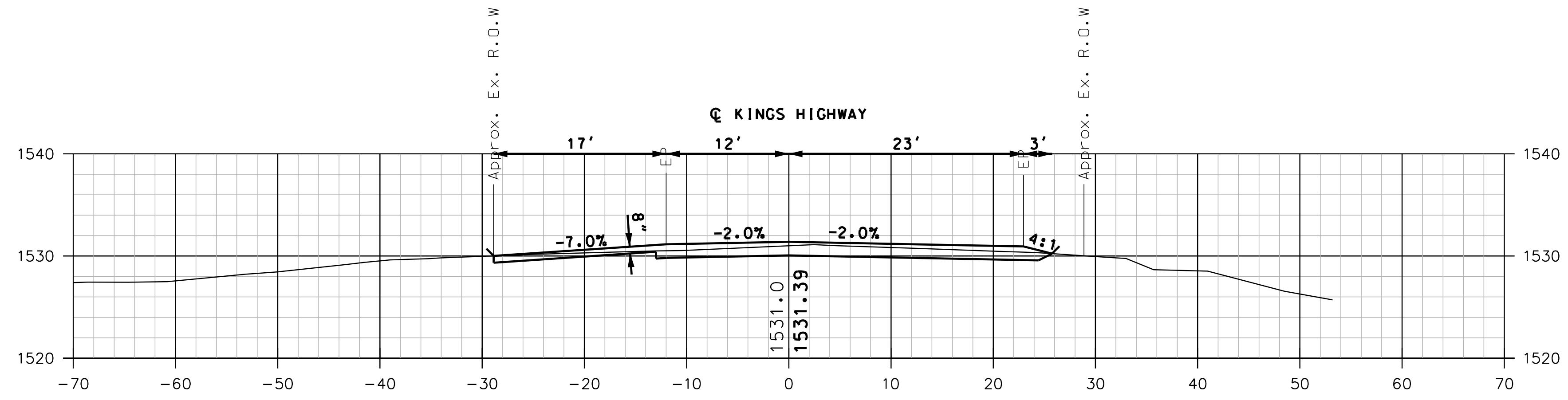
AS BUILT DETAILS

GMC

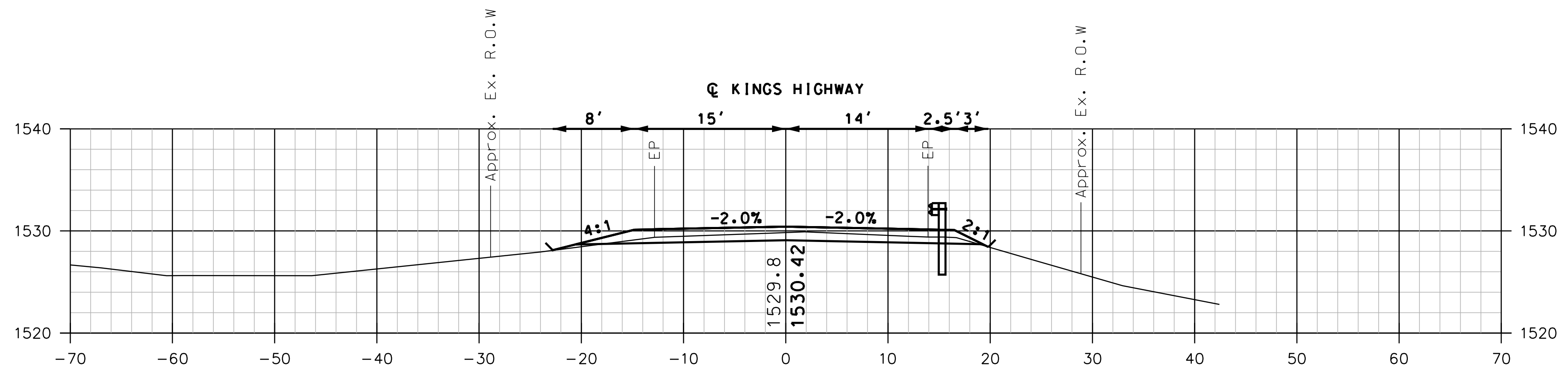
CEB/JCH

DATE 12/8/2020

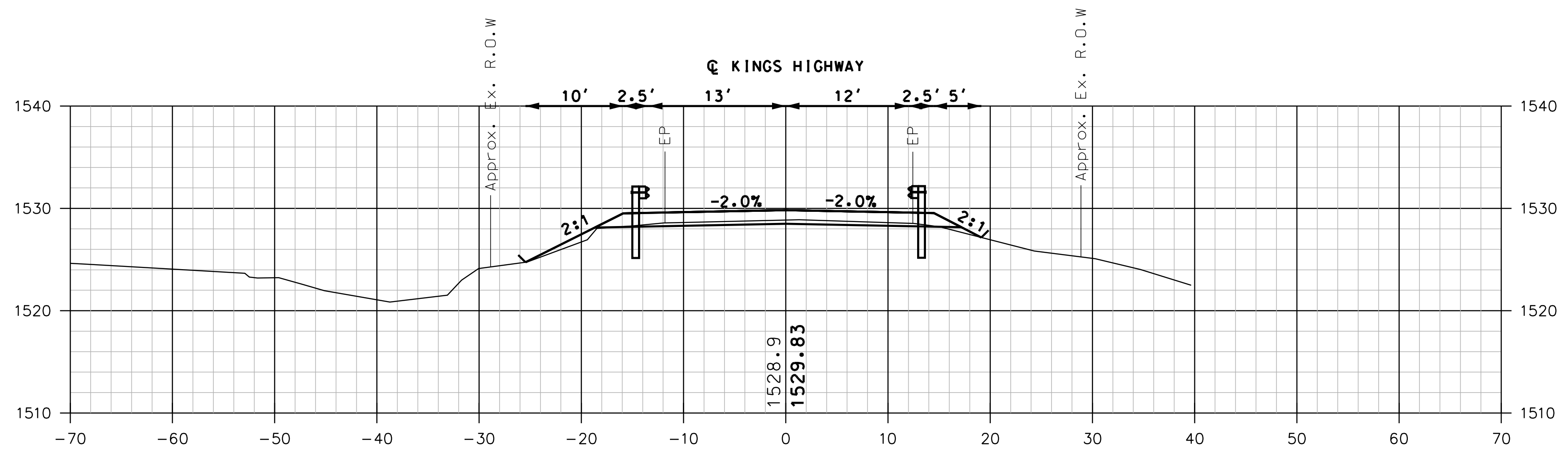
DATE



13+35
DRIVEWAY LT



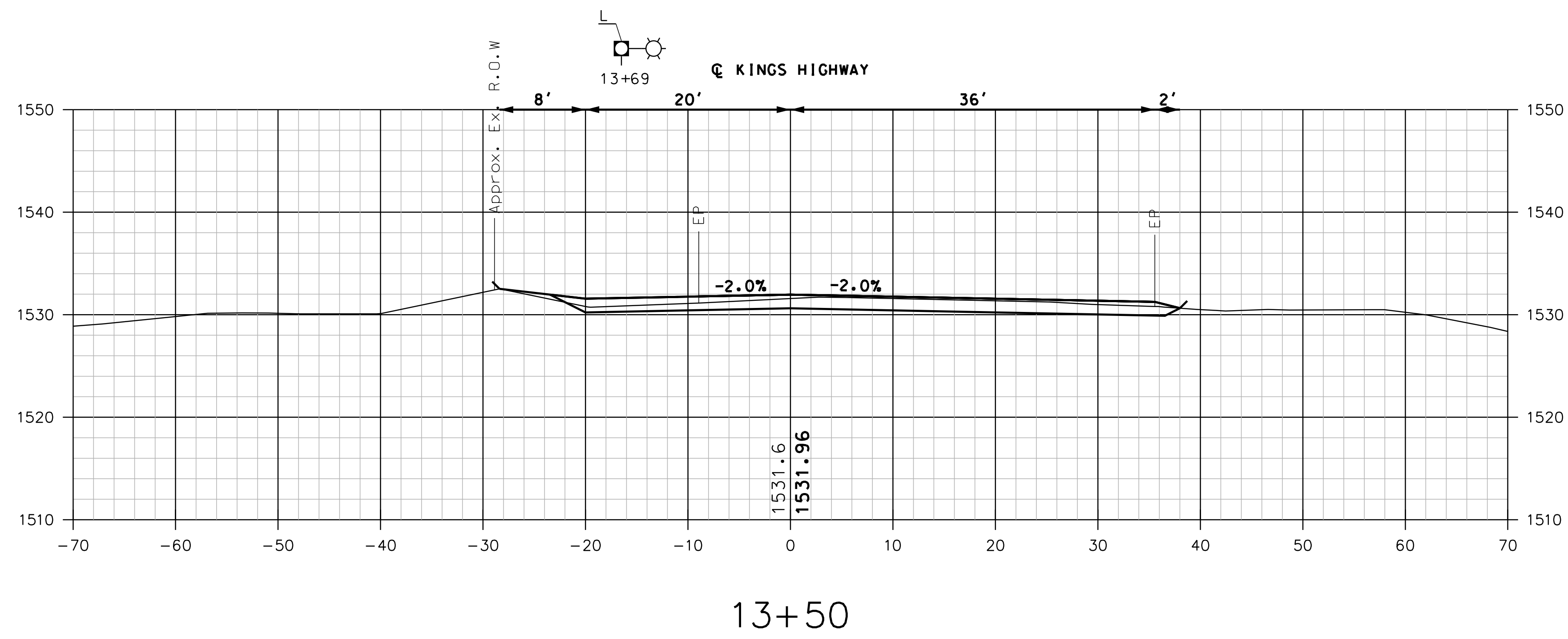
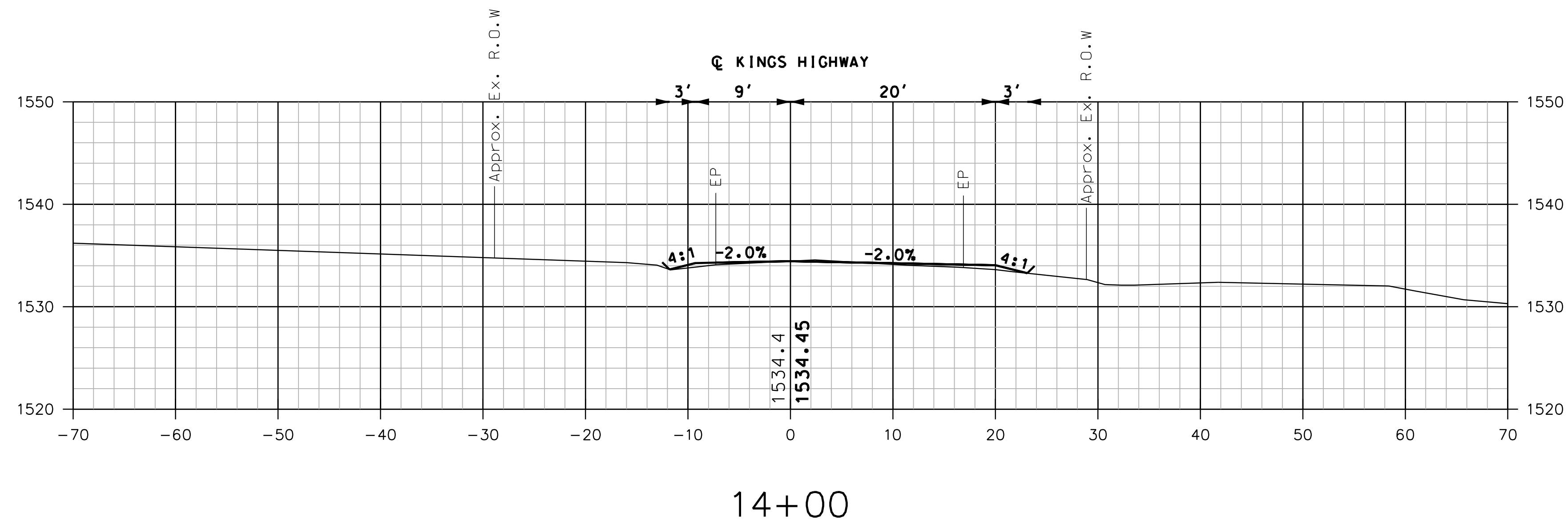
13+00



12+50

SHEET TOTALS					
COMMON EXCAV.	—	C.Y.	ROCK EXCAV.	—	C.Y.
FILL	—	C.Y.	MUCK EXCAV.	—	C.Y.
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS		
XS	--	24	31		

STA. 14+23.00 – LIMIT OF WORK
 STA. 14+00.00 – END CONSTRUCTION



REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

STATION

DATE

NUMBER

DATE 12/8/2020

DATE 12/8/2020

DATE

SDR PROCESSED

NEW DESIGN

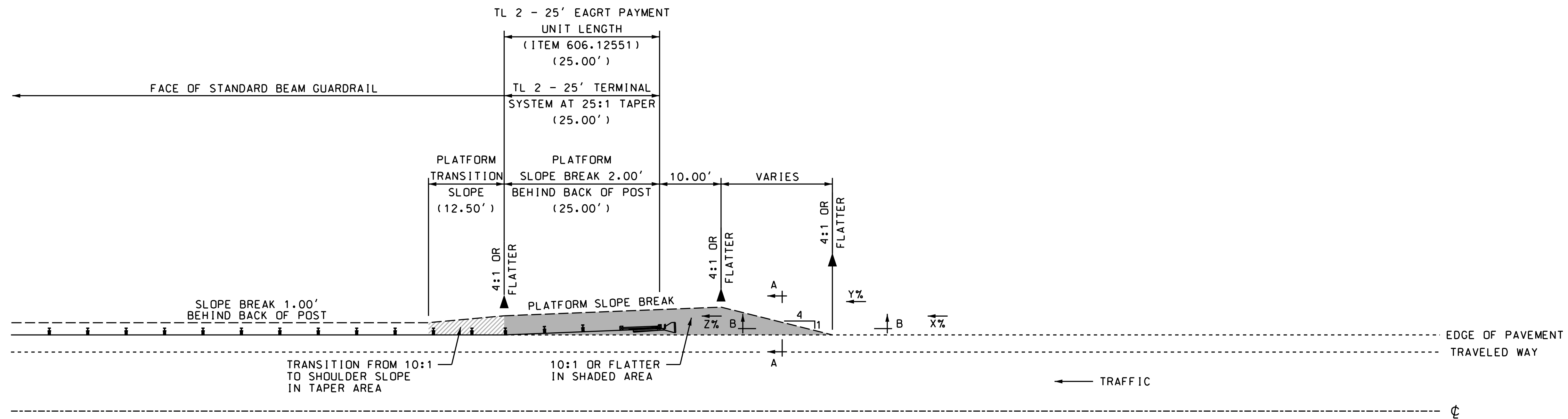
SHEET CHECKED

AS BUILT DETAILS

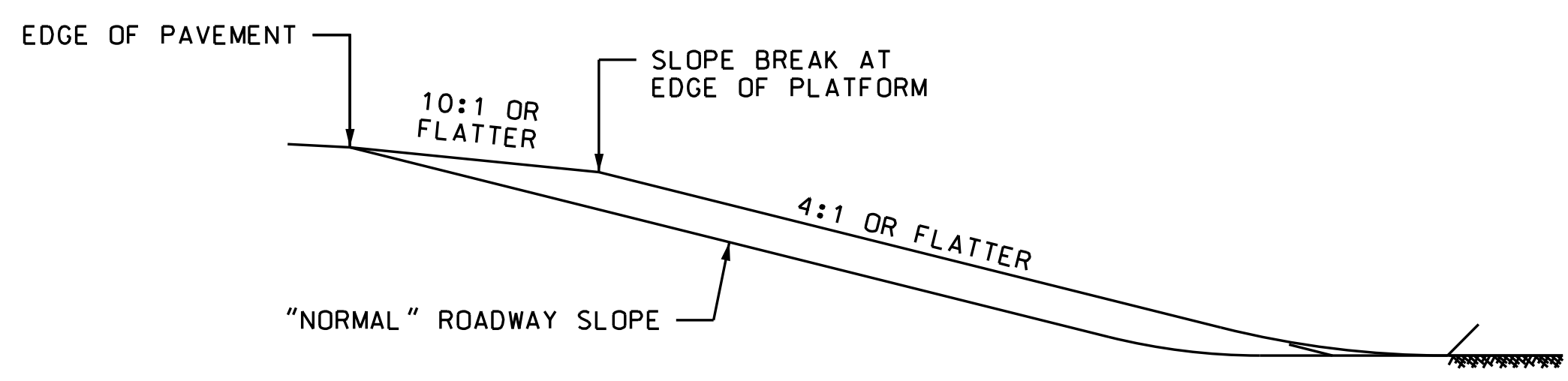
GMC

CEB/JCH

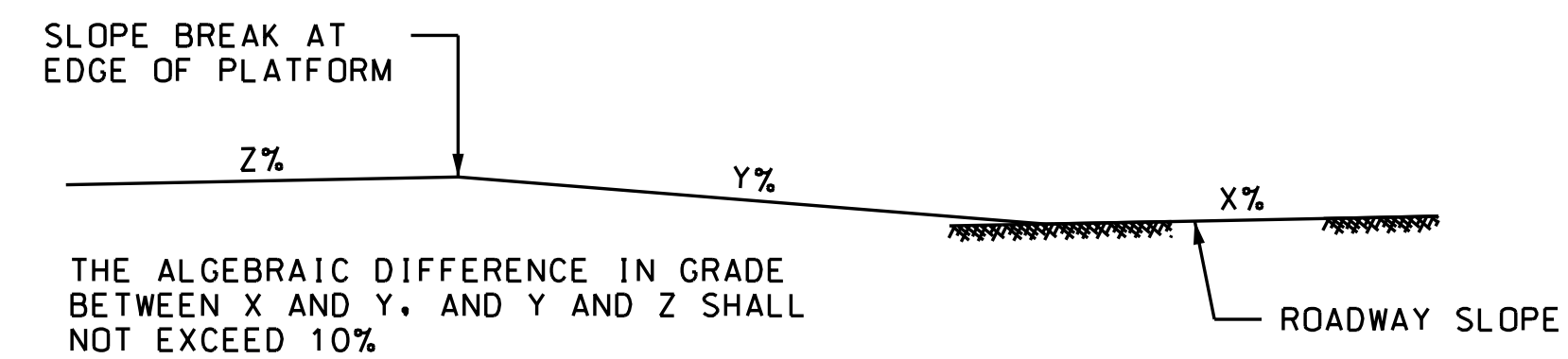
SHEET TOTALS					
COMMON EXCAV.	—	C.Y.	ROCK EXCAV.	—	C.Y.
FILL	—	C.Y.	MUCK EXCAV.	—	C.Y.
DGN	XS	STATE PROJECT NO.	--	SHEET NO.	25
				TOTAL SHEETS	31



ITEM 203.5572 - EAGRT PLATFORM
ALTERNATE, TL 2 - 25'

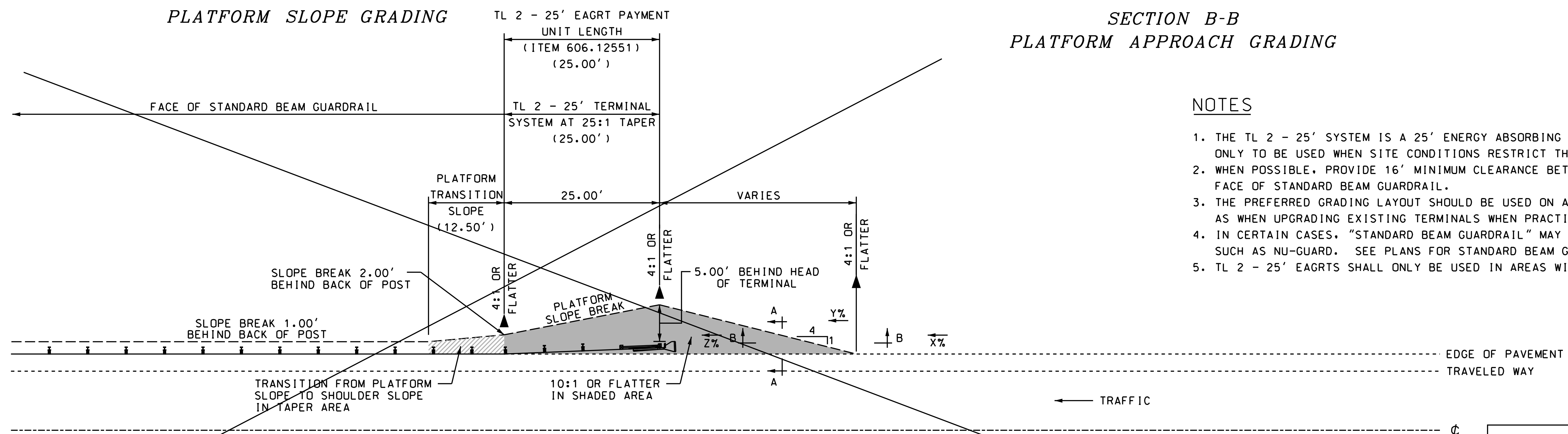


SECTION A-A
PLATFORM SLOPE GRADING



SECTION B-B
PLATFORM APPROACH GRADING

X% = LONGITUDINAL GRADE OF ROADWAY SLOPE IN ADVANCE OF PLATFORM
Y% = LONGITUDINAL GRADE OF PLATFORM APPROACH
Z% = LONGITUDINAL GRADE OF PLATFORM



ITEM 203.5571 - EAGRT PLATFORM
PREFERRED, TL 2 - 25'

NOTES

1. THE TL 2 - 25' SYSTEM IS A 25' ENERGY ABSORBING GUARDRAIL TERMINAL (EAGRT) UNIT ONLY TO BE USED WHEN SITE CONDITIONS RESTRICT THE USE OF A STANDARD TL 2 SYSTEM.
2. WHEN POSSIBLE, PROVIDE 16' MINIMUM CLEARANCE BETWEEN ROADWAY CENTERLINE AND FACE OF STANDARD BEAM GUARDRAIL.
3. THE PREFERRED GRADING LAYOUT SHOULD BE USED ON ALL NEW CONSTRUCTION, AS WELL AS WHEN UPGRADING EXISTING TERMINALS WHEN PRACTICAL.
4. IN CERTAIN CASES, "STANDARD BEAM GUARDRAIL" MAY BE A PROPRIETARY ITEM SUCH AS NU-GUARD. SEE PLANS FOR STANDARD BEAM GUARDRAIL TYPE.
5. TL 2 - 25' EAGRTS SHALL ONLY BE USED IN AREAS WITH DESIGN SPEEDS OF 45 MPH AND UNDER.

NOT TO SCALE

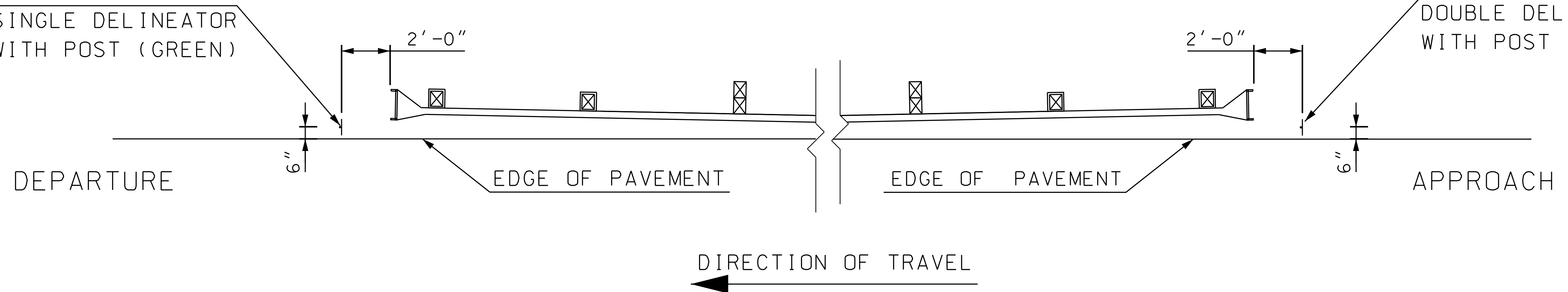
STATE OF NEW HAMPSHIRE STODDARD				
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN				
TL 2 - 25' EAGRT PLATFORM DETAILS				

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
01/22/19	+12_25	--	27	31

Terminal Unit Delineation

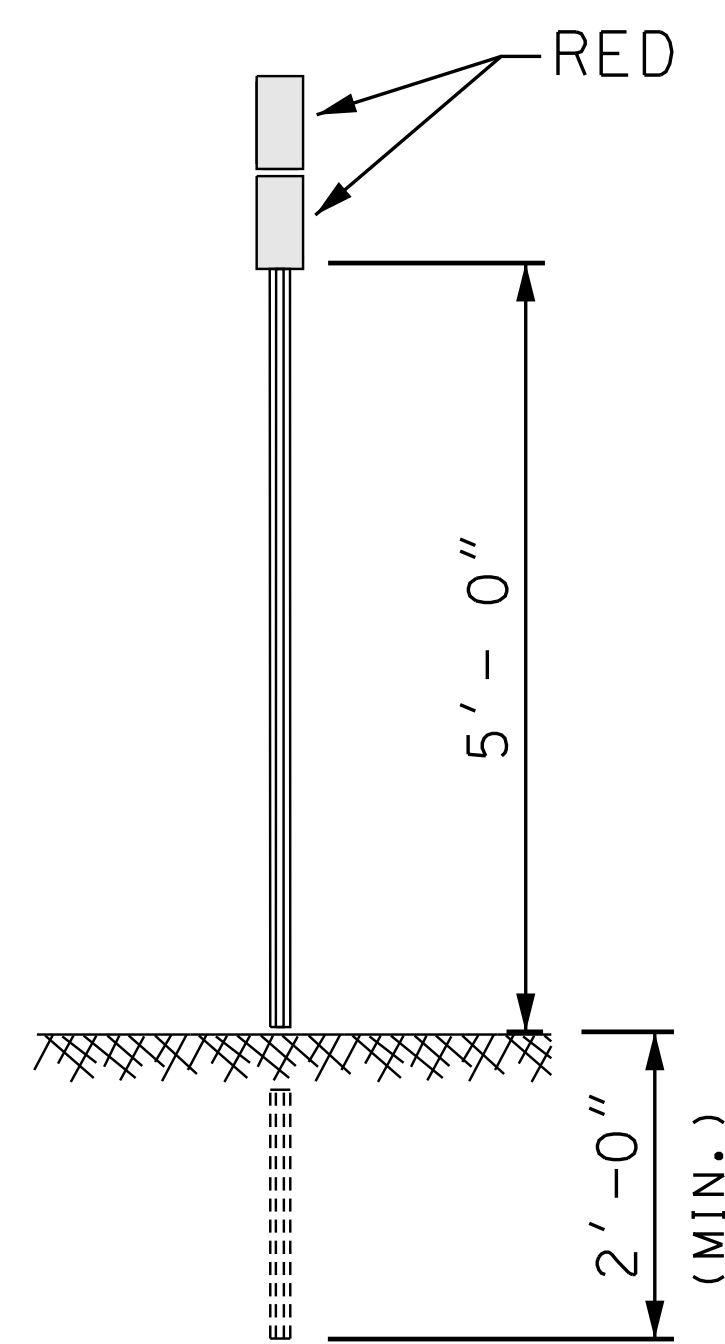
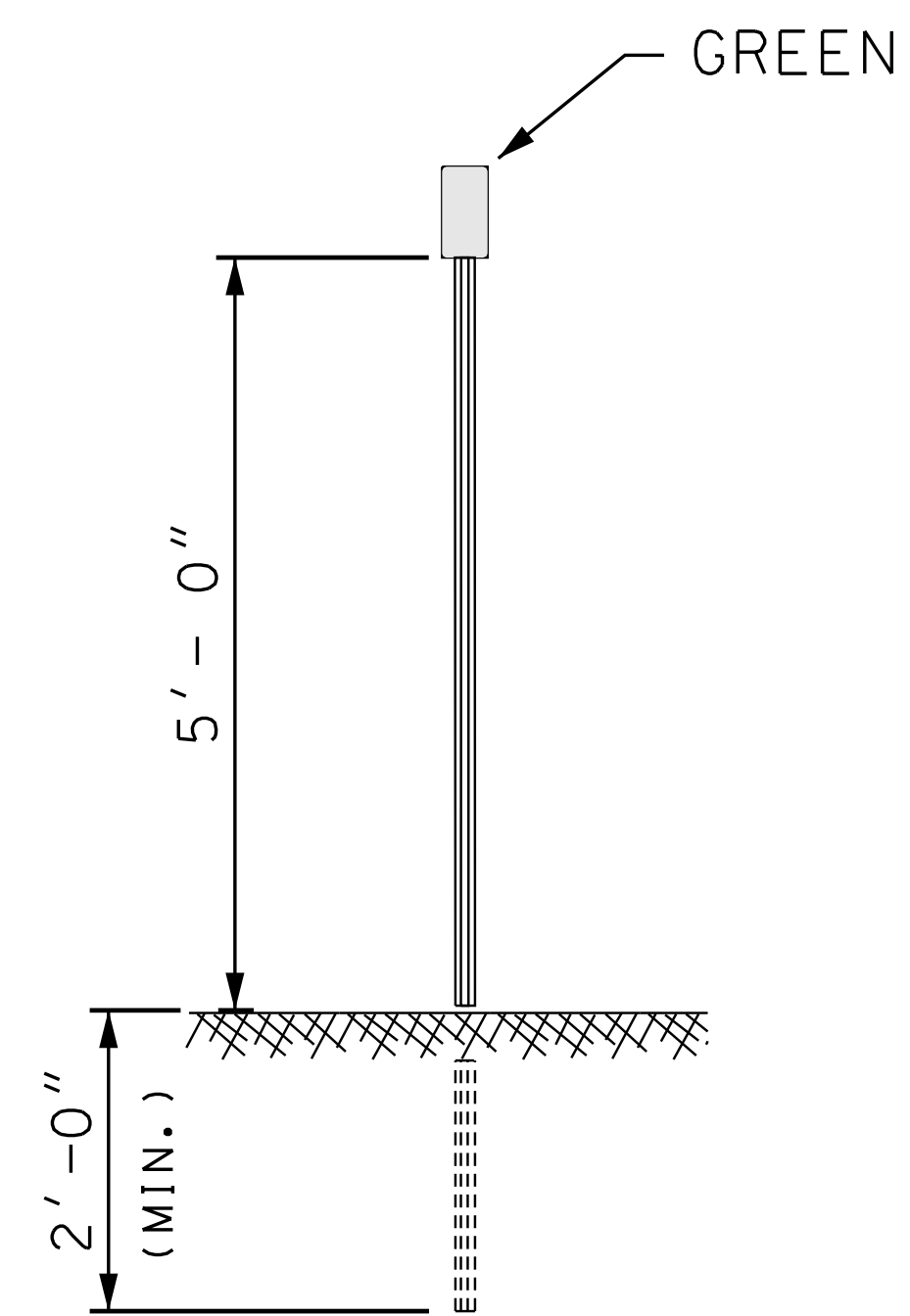
ITEM 621.31 -
SINGLE DELINEATOR
WITH POST (GREEN)

ITEM 621.32 -
DOUBLE DELINEATOR
WITH POST (RED)



ITEM 621.31 - SINGLE
DELINEATOR WITH POST

ITEM 621.32 - DOUBLE
DELINEATOR WITH POST



TYPICAL INSTALLATION

STATE OF NEW HAMPSHIRE
STODDARD
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

Terminal Unit Delineation

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
09-01-16	term_unit_delin	--	28	31

SDR PROCESSED NEW DESIGN SHEET CHECKED AS BUILT DETAILS	DATE	12/8/2020	DATE	12/8/2020	DATE	
	CEB/GMC		JCH			
	NUMBER		DATE		STATION	
	STATION		STATION		DESCRIPTION	

EROSION CONTROL NOTES:

- CONTRACTOR SHALL PREPARE A SWPPP IN ACCORDANCE WITH DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 645.
- THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF DISTURBED SOIL EXPOSED TO EROSION FROM STORM WATER AND WIND AT ANY TIME BY USING VEGETATIVE AND STRUCTURAL CONTROLS AND PROPER TIMING AND SEQUENCING OF CONSTRUCTION ACTIVITIES.
- ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR IMMEDIATE CONSTRUCTION ACTIVITY. FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED. EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
- IF PROJECT IS GREATER THAN 5-ACRES, THE AREA OF UNSTABILIZED SOIL SHALL NOT EXCEED 5 ACRES AT ANY TIME UNLESS PROJECT PERMITS SPECIFICALLY PROVIDE FOR A GREATER AREA OF DISTURBANCE.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES TO BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THESE DRAWINGS, PER THESE NOTES AND DETAILS, AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL USE PROPER EROSION AND SEDIMENT CONTROL MEASURES TO ENSURE NO SEDIMENT IS TRACKED OFF-SITE (E.G. NHDOT STABILIZED CONSTRUCTION ENTRANCE).
- DISTURBED AREAS WITH POTENTIAL TO DISCHARGE SEDIMENT-LADEN WATER INTO SURFACE WATERS OR OFF THE SITE MUST BE PROTECTED WITH TEMPORARY EROSION CONTROL MEASURES (E.G., SILT FENCE).
- AREAS TO BE FILLED SHALL BE CLEARED GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS.
- EXCAVATED TOPSOIL GRADE MATERIAL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED TEMPORARILY IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING (WITHIN PROPOSED CONSTRUCTION LIMITS) AND USED IN CONJUNCTION WITH SEEDING AND PLANTING THE PROJECT AREA.
- ALL STOCKPILES, BORROW AREAS, AND SPOILS SHALL BE PROTECTED FROM EROSION AND SURROUNDED BY SILT FENCE AND STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES" AS SPECIFIED ON THESE DRAWINGS OR IN THE NH STORMWATER MANAGEMENT MANUAL, VOLUME 3: CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROL (DECEMBER 2008).
- SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGES.
- FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN THESE MATERIALS TO BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
- REPAIR OR REPLACEMENT OF EROSION CONTROL MEASURES SHALL BE MADE PROMPTLY AS NEEDED, AND AS DESCRIBED IN THE INSPECTION, MONITORING AND MAINTENANCE NOTES ON THESE DRAWINGS.
- THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED, COMPACTED, OR BLADED SMOOTH. ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION, AND FACILITATE VEGETATION ESTABLISHMENT. SEE "SURFACE ROUGHENING" SPECIFICATIONS ON THESE DRAWINGS OR NH STORMWATER MANAGEMENT MANUAL, VOLUME 3: CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROL (DECEMBER 2008).
- USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE, TO REDUCE THE LENGTH OF CUT-AND-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES TO BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
- AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL TO BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
- SEE TEMPORARY EROSION BLANKET SPECIFICATIONS ON THESE DRAWINGS OR IN THE NH STORMWATER MANAGEMENT MANUAL, VOLUME 3: CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROL (DECEMBER 2008).
- STABILIZE ALL GRADED AREAS WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETED OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
- ALL GRADED AREAS TO BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
- PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, SEED SHOULD BE PLACED FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS (NOVEMBER THROUGH MARCH). SEE WINTER CONSTRUCTION NOTES, PLANT ANNUAL RYE GRASS PRIOR TO OCTOBER 15TH.
- AFTER OCTOBER 15TH: WHERE MULCH IS USED, IT SHALL BE APPLIED AT TWICE THE RATE AS DURING REGULAR CONSTRUCTION SEASON TO PROVIDE ADDITIONAL PROTECTION. SNOW AND ICE SHALL BE REMOVED TO A THICKNESS LESS THAN ONE INCH BEFORE APPLYING MULCH (IF APPLICABLE) TO DISTURBED SOILS. WHERE FINISHED GRADE IS ACHIEVED, OR BEFORE FORECASTED THAW OR SPRING MELT, MULCH MUST BE SECURED WITH EROSION CONTROL NETTING, TRACKING, OR OTHER METHOD. DIVERSION SWALES OR DITCHES WITHOUT STABILIZED VEGETATION BY OCTOBER 15TH SHALL BE STABILIZED WITH RIPRAP OR EROSION CONTROL NETTING AS APPROVED BY OWNER OR OWNER'S DESIGNATED REPRESENTATIVE.
- ONCE DISTURBED AREAS HAVE BEEN STABILIZED AND VEGETATION IS ESTABLISHED, ALL TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE SHALL BE REMOVED. AREAS DISTURBED BY REMOVAL OF THESE MEASURES SHALL BE IMMEDIATELY SEEDED ACCORDING TO SEEDING SPECIFICATIONS ON THESE DRAWINGS.

EROSION CONTROL NOTES (CONT'D):

- AN AREA IS CONSIDERED "STABLE" IF ONE OF THE FOLLOWING HAS OCCURRED: BASE COURSE GRAVEL'S HAVE BEEN INSTALLED IN AREAS TO BE PAVED; A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED; A MINIMUM OF 3" OF NON-EROSIVE MATERIAL (SUCH AS STONE RIP RAP OR A CERTIFIED COMPOST BLANKET) HAS BEEN INSTALLED. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- ALL AREAS OF EXPOSED OR DISTURBED SOIL TO BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT, OR AN INDEPENDENT MONITOR.
- ALL AREAS OF EXPOSED OR DISTURBED SOIL TO BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
- ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH NH STORMWATER MANAGEMENT MANUAL, VOLUME 3: CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROL (DECEMBER 2008).

SOIL STOCKPILE PRACTICES:

PURPOSE
INCLUDE MEASURES TO LOCATE, MANAGE, AND PROTECT STOCKPILED EARTH MATERIALS, TO REDUCE OR ELIMINATE WIND AND WATER EROSION, AND PREVENT RESULTING AIR AND WATER POLLUTION FROM DISPLACED SEDIMENT.

CONDITIONS WHERE PRACTICE APPLIES
TOPSOIL, EXCAVATED MATERIALS, BORROW MATERIALS IMPORTED TO THE SITE, AND CONSTRUCTION AGGREGATES AND PAVING MATERIALS THAT ARE STOCKPILED ON THE SITE PRIOR TO USE IN THE CONSTRUCTION WORK.

PLANNING CONSIDERATIONS

- TO BE SITED ON THE SITE IN COMPLIANCE WITH ALL PERMIT CONDITIONS GOVERNING SETBACKS FROM ADJACENT PROPERTY LINES AND WATER RESOURCES (INCLUDING WETLANDS).
- SOIL AND EROSION CONTROL PRACTICES AT STOCKPILES SHOULD BE REGULARLY INSPECTED AND SHOULD BE ADJUSTED IMMEDIATELY TO RESPOND TO ONGOING CONSTRUCTION OPERATIONS, AS THE DELIVERY OF NEW MATERIALS OR THE REMOVAL OF MATERIALS FOR INCORPORATION INTO THE WORK MAY REQUIRE MODIFICATION AND UPDATING OF THE PROTECTIVE MEASURES TO KEEP THEM EFFECTIVE.

SPECIFICATIONS

- GENERAL:
 - LOCATE A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES, AND INLETS.
 - PROTECT FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS, OR OTHER APPROVED PRACTICE.
 - TO BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THESE DRAWINGS OR IN THE NH STORMWATER MANAGEMENT MANUAL, VOLUME 3: CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROL (DECEMBER 2008), TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.
 - IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
 - PLACE BAGGED MATERIALS ON PALLETS AND UNDER COVER.
- PROTECTION OF INACTIVE STOCKPILES:
 - COVER WITH ANCHORED TARPS OR PROTECT WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS AT ALL TIMES.
 - CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND OTHER SIMILAR MATERIALS TO BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY ARE TO BE COVERED.
- PROTECTION OF ACTIVE STOCKPILES:
 - SURROUND WITH TEMPORARY LINEAR SEDIMENT BARRIERS PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS TO BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER TO BE INSPECTED AT THE END OF EACH WORKING DAY.
 - WHEN A STORM EVENT IS PREDICTED, STOCKPILES TO BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

MAINTENANCE REQUIREMENTS

- INSPECT ALL SOIL STOCKPILES IMMEDIATELY AFTER STORM EVENTS AND AT THE FREQUENCIES SPECIFIED IN THE PROJECT EROSION AND SEDIMENT CONTROL PLAN AND IN APPLICABLE PERMITS. AT A MINIMUM, INSPECT WEEKLY DURING WET WEATHER PERIODS TO VERIFY THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND FUNCTIONING PROPERLY.
- REPAIR AND/OR REPLACE PERIMETER CONTROLS AND STOCKPILE COVERINGS AS NEEDED TO KEEP THEM FUNCTIONING PROPERLY.

TEMPORARY EROSION CONTROL BLANKET:

GENERAL DESCRIPTION
INSTALLED ON PREPARED SOIL SURFACES TO PROVIDE EROSION PROTECTION AND SURFACE STABILITY ON STEEP SLOPES, VEGETATED CHANNELS, OR SHORELINES DURING VEGETATION ESTABLISHMENT.

PURPOSE

- EROSION CONTROL BLANKETS TEMPORARILY STABILIZE AND PROTECT DISTURBED SOIL FROM RAINDROP IMPACT AND SURFACE EROSION.
- HELP INCREASE INFILTRATION, DECREASE COMPACTION AND SOIL CRUSTING, AND CONSERVE SOIL MOISTURE.
- INCREASES THE GERMINATION RATES FOR GRASSES AND LEGUMES AND PROMOTE VEGETATION ESTABLISHMENT.
- PROTECT SEEDS FROM PREDATORS AND REDUCE DESICCATION AND EVAPORATION BY INSULATING THE SOIL AND SEED ENVIRONMENT.

TEMPORARY EROSION CONTROL BLANKET (CONT'D):

CONDITIONS WHERE PRACTICE APPLIES
CAN BE APPLIED TO STEEP SLOPES, VEGETATED WATERWAYS, AND OTHER AREAS SENSITIVE TO EROSION, TO SUPPLEMENT VEGETATION DURING INITIAL ESTABLISHMENT AND HELP PROVIDE FOR SAFE CONVEYANCE OF RUNOFF OVER THE PROTECTED SURFACE.

PLANNING CONSIDERATIONS

- DURING THE GROWING SEASON (APRIL 15 - SEPTEMBER 15) USE MATS (OR MULCH AND NETTING) ON:
 - THE BASE OF GRASSED WATERWAYS
 - STEEP SLOPES (15% OR GREATER)
 - ANY DISTURBED SOIL WITHIN 100 FEET OF LAKES, STREAMS AND WETLANDS
- DURING THE LATE FALL AND WINTER (SEPTEMBER 15 - APRIL 15) USE HEAVY GRADE MATS ON ALL AREAS NOTED ABOVE PLUS USE LIGHTER GRADE MATS (OR MULCH AND NETTING) ON:
 - SIDE SLOPES OF GRASSED WATERWAYS
 - MODERATE SLOPES (GREATER THAN 8%) THERE MAY BE CASES WHERE MATS WILL BE NEEDED ON SLOPES FLATTER THAN 8%, DEPENDING ON SITE CONDITIONS AND THE LENGTH OF THE SLOPE.
- THE MOST CRITICAL ASPECT OF INSTALLING MATS IS OBTAINING FIRM CONTINUOUS CONTACT BETWEEN THE MAT AND THE SOIL. WITHOUT SUCH CONTACT, THE MAT IS USELESS AND EROSION OCCURS.
- INSTALL MATS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

SPECIFICATIONS

- SITE PREPARATION:
 - PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL.
 - GRADE AND SHAPE AREA OF INSTALLATION.
 - REMOVE ALL ROCKS, CLODS, TRASH, VEGETATIVE OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
 - PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
 - INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN (IF PROVIDED).
- SEEDING:
 - SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND RE-VEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATION. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK SLOTS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEED.
 - WHERE SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.
- INSTALLING AND ANCHORING BLANKETS
 - BLANKETS SHALL BE PLACED WITHIN 24 HOURS AFTER SOWING SEED IN THAT AREA.
 - EROSION CONTROL BLANKETS MUST BE 100% BIODEGRADABLE (PLASTIC NETTING WILL NOT BE ALLOWED).
 - BLANKETS SHALL BE INSTALLED AND ANCHORED PER THE MANUFACTURER'S SPECIFICATIONS. IF THE MANUFACTURER DOES NOT PROVIDE INSTRUCTIONS, FOLLOW THOSE CONTAINED WITHIN THE NH STORMWATER MANAGEMENT MANUAL VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS (DECEMBER 2008).
 - EROSION CONTROL BLANKET SHALL BE INSTALLED AND SECURED WITH BIOSTAKES (OR AN EQUIVALENT APPROVED BY THE ENGINEER) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL BLANKET IS ADEQUATELY SECURED TO FINISHED GRADE SURFACE.
 - U-SHAPED WIRE STAPLES, METAL GEOTEXTILE STAKE PINS, OR TRIANGULAR WOODEN STAKES CAN BE USED TO ANCHOR MATS TO THE GROUND SURFACE ONLY IF BIOSTAKES DO NOT PROVIDE APPROPRIATE ANCHORING AND ENGINEER'S APPROVAL IS OBTAINED.
 - STAPLES AND STAKES SHOULD BE DRIVEN FLUSH TO THE SOIL SURFACE. ALL ANCHORS SHOULD HAVE SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT. LONGER ANCHORS MAY BE REQUIRED FOR LOOSE SOILS.

MAINTENANCE REQUIREMENTS

- ALL BLANKET AND MATS SHOULD BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1 INCH IN A 24-HOUR PERIOD.
- ANY FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEED, AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED OR REPLACED.

WINTER CONSTRUCTION NOTES:

FOR SITE WORK CONSTRUCTION BETWEEN OCTOBER 15TH AND EARLY APRIL THE CONTRACTOR SHALL FOLLOW WINTER CONSTRUCTION EROSION PROTECTION METHODS AS DESCRIBED BELOW:

- CHECK ALL PERIMETER EROSION CONTROL MEASURES AND COMPLETE ANY REQUIRED MAINTENANCE AND REPAIR BEFORE THE GROUND FREEZES.
- PUT IN PLACE ANY ADDITIONALLY NECESSARY EROSION CONTROL MEASURES: DIVERSION DIKES, HAY BALES, SILT FENCE, SEDIMENT TRAPS AND/OR BASINS, ETC. TO PROTECT DOWNSTREAM WATER QUALITY FROM ANTICIPATED WINTER WORK PRIOR TO GROUND FREEZING.

TOWN OF STODDARD, NEW HAMPSHIRE			
<i>EROSION CONTROL NOTES</i>			
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
ENV Notes	--	29	31



SDR PROCESSED
 NEW DESIGN
 SHEET CHECKED
 AS BUILT DETAILS

DATE
 DATE
 DATE
 DATE

NUMBER
 DATE
 STATION
 STATION
 DESCRIPTION

REVISIONS AFTER PROPOSAL

WINTER CONSTRUCTION NOTES (CONT'D):

3. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
4. ALL DITCHES OR SWALES THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH OR THAT ARE DISTURBED AFTER OCTOBER 15TH SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
5. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.
6. INSPECT THE EROSION AND SEDIMENT CONTROL MEASURES MORE FREQUENTLY THAN IS SPECIFIED IN THE EROSION CONTROL INSPECTION, MONITORING, AND MAINTENANCE SPECIFICATIONS FOUND ON THIS SHEET DURING THE WINTER AND SPRING THAW MONTHS TO PREVENT FAILURE AND/OR OVERLOADING.
7. BEFORE PREDICTED THAWS AND/OR HEAVY RAIN EVENTS CHECK ALL MEASURES TO ENSURE THAT THEY WILL BE ABLE TO HANDLE POTENTIALLY HEAVY AND INTENSE RUNOFF AND SEDIMENTATION.
8. CONTRACTOR SHALL BE PREPARED TO INSTALL A SECOND LINE OF DEFENSE IF PROBLEMS WITH IN-PLACE EROSION CONTROL MEASURES OCCUR DURING WINTER THAW AND SPRING RAIN EVENTS.
9. AS EARLY AS PRACTICAL AT THE BEGINNING OF THE NEXT GROWING SEASON, CONTRACTOR SHALL STABILIZE COMPLETED AREAS WITH PERMANENT VEGETATIVE CONTROLS AS SPECIFIED ON THESE DRAWINGS.

GENERAL SEEDING FOR LONG TERM COVER SPECIFICATIONS:

REFERENCE: STORMWATER MANAGEMENT AND EROSION SEDIMENT CONTROL HANDBOOK FOR URBAN DEVELOPING AREAS IN NEW HAMPSHIRE (AUGUST 1992)

DEFINITION

ESTABLISHING GRASSES AND LEGUMES ON HIGHLY ERODIBLE SOILS OR CRITICALLY ERODING AREAS.

PURPOSE

1. TO STABILIZE SOIL.
2. TO REDUCE DAMAGE FROM SEDIMENT.
3. TO MAINTAIN OR IMPROVE WATER QUALITY.
4. TO REDUCE STORMWATER RUNOFF.

CONDITIONS WHERE PRACTICE APPLIES

ON ALL AREAS WHERE PERMANENT VEGETATIVE COVER IS NEEDED TO ACCOMPLISH ONE OR MORE OF THE ABOVE PURPOSES.

PLANNING CONSIDERATIONS

1. IT IS IMPORTANT TO SELECT THE PROPER SEED MIXTURE FOR THE INTENDED USE OF THE AREA, THE SOIL CONDITIONS ON THE SITE, AND THE CLIMATE.
2. WARM SEASON GRASSES SHOULD BE CONSIDERED FOR SANDY AND DROUGHTY SITES SUCH AS ROADSIDES AND SAND PITS.

SEEDING RECOMMENDATIONS

1. GRADING AND SHAPING
 - A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
 - A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
 - B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
 - A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED: AGRICULTURE LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ. FT. NITROGEN (N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ. FT. PHOSPHATE (P205), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT. POTASH (K2O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT. (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRES OF 5-10-10.)
 - B. FERTILIZER SHOULD BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 FEET AND 250 FEET FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25 FEET OF A SURFACE WATER BODY.
 - C. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH 0.25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
 - D. REFER TO TABLE 7-35 FOR APPROPRIATE SEED MIXTURES AND TABLE 7-36 FOR RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDFOOT, TREFOLI AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.

E. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

4. MULCH

HAY OR STRAW
 1.5 TO 2 TONS PER ACRE. 70 TO 90 LBS. PER 1,000 SQ. FT. CAN BE SPREAD BY HAND OR BY MACHINE. MUST BE DRY AND FREE OF MOLD. MAY BE USED WITH PLANTINGS OR FOR EROSION CONTROL ALONE. SUBJECT TO BLOWING AND SLIPPING ON STEEP SLOPES UNLESS ANCHORED.

5. MAINTENANCE TO ESTABLISH A STAND

- A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
- B. FERTILIZATION NEED SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
- C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION

SEEDING FOR TEMPORARY PROTECTION OF DISTURBED AREAS

SPECIFICATIONS:

REFERENCE: STORMWATER MANAGEMENT AND EROSION SEDIMENT CONTROL HANDBOOK FOR URBAN DEVELOPING AREAS IN NEW HAMPSHIRE (AUGUST 1992)

DEFINITION

SEEDING OF GRASS OR SMALL GRAIN SUCH AS RYE, OATS, OR RYEGRASS ON A DISTURBED AREA TO PROVIDE PROTECTION FOR A LIMITED PERIOD OF TIME, USUALLY NOT MORE THAN ONE YEAR.

PURPOSE

1. TO PROVIDE TEMPORARY PROTECTION AGAINST WIND OR WATER EROSION.
2. TO IMPROVE WATER QUALITY BY REDUCING SEDIMENTATION OF SURFACE WATERS.
3. TO FURTHER REDUCE DAMAGE FORM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS.

PLANNING CONSIDERATIONS

1. PREVENTING EROSION IS ALWAYS PREFERRED OVER SEDIMENT CONTROL. WHEN A DISTURBED AREA WILL BE INACTIVE FOR A PROLONGED PERIOD OF TIME, EROSION CONTROL MEASURES SHOULD BE USED.
2. TEMPORARY SEEDING IS ONLY EFFECTIVE FOR EROSION CONTROL WHILE THE VEGETATION IS ESTABLISHED. ANNUAL PLANTS THAT SPROUT QUICKLY AND GROW FOR ONLY ONE YEAR ARE USED FOR THIS PRACTICE.
3. ADEQUATE SEEDBED PREPARATION, USE OF QUALITY SEED, AND TIMELY PLANTING ARE REQUIRED TO ACHIEVE A GOOD STAND OF VEGETATION TO CONTROL EROSION.

SEEDING RECOMMENDATIONS

1. GRADING AND TEMPORARY STRUCTURE
 ALL ESSENTIAL GRADING AND ALL TEMPORARY STRUCTURES, SUCH AS DIVERSIONS DAMS, DITCHES, AND DRAINS NEEDED TO PREVENT GULLYING AND REDUCE SILTATION SHOULD BE COMPLETED PRIOR TO SEEDING.

2. SEEDBED PREPARATION

REMOVE STONES AND TRASH THAT WILL INTERFERE WITH SEEDING THE AREA. WHERE FEASIBLE, TILL THE SOIL TO A DEPTH OF ABOUT 3 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

3. FERTILIZERS

SHOULD BE UNIFORMLY SPREAD OVER THE AREA PRIOR TO BEING INCORPORATED INTO THE SOIL. A MINIMUM OF 300 POUNDS PER ACRE (7 POUNDS PER 1,000 SQUARE FEET) OF 10-10-10 FERTILIZER, OR ITS EQUIVALENT, SHOULD BE APPLIED.

FERTILIZER SHOULD BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 FEET AND 250 FEET FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25 FEET OF A SURFACE WATER BODY.

4. SEED AND SEEDING

SEED AND SEEDING RATES MAY BE SELECTED FROM THE TABLE BELOW. THE SELECTION WILL BE BASED ON THE TIME OF YEAR OF THE SEEDING IS TO BE MADE AND THE LENGTH OF TIME THE VEGETATION IS TO AFFORD THE PROTECTION. THE SEED SHOULD BE SPREAD UNIFORMLY OVER THE AREA. AFTER SEEDING, THE SOIL SHOULD BE FIRMED BY ROLLING OR PACKING. WHERE ROLLING OR PACKING IS NOT FEASIBLE, THE SEED SHOULD BE COVERED LIGHTLY BY RAKING, DISKING, OR DRAGGING.

5. MULCHING

WHERE IT IS IMPRACTICABLE TO INCORPORATE FERTILIZER AND SEED INTO MOIST SOIL, THE SEEDED AREA SHOULD BE MULCHED TO FACILITATE GERMINATION.

6. PLANT SELECTION AND SEEDING RATES

SPECIES	PER ACRE	PER 1000 SF	
WINTER RYE	2 BU. OR OR 120 LBS	2.5 LBS	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 5 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU. OR 80 LBS	2 LBS MAY 15	BEST FOR SPRING SEEDINGS. SEED NO LATER THAN FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYEGRASS	40 LBS	1 LB.	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEE EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER SEED WITH NO MORE THAN 0.25 INCH OF SOIL.

TABLE 7-35 -- SEEDING GUIDE

USE	SEEDING MIXTURE 1/	DROUGHTY	SOIL DRAINAGE		
			WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS.	A	FAIR	GOOD	GOOD	FAIR
BORROW AND DISPOSAL AREAS	B C D E	POOR POOR FAIR FAIR	GOOD GOOD FAIR EXCELLENT	GOOD FAIR EXCELLENT EXCELLENT	FAIR FAIR GOOD POOR

(TOPSOIL IS ESSENTIAL FOR GOOD TURF.)

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE 7-36

TABLE 7-36 -- SEEDING MIXTURES AND RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 SQ. FT.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH OR FLATPEA	15 30	0.35 0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDFOOT TREFOLI	8	0.20
TOTAL	48	1.1
D. BIRDFOOT TREFOLI	20	0.25
READTOP	10	0.10
TOTAL	30	0.70
E. TALL FESCUE	20	0.45
FLATPEA	30	0.75
TOTAL	50	1.20

MAINTENANCE

1. IF THE SEEDING FAILS TO GROW, IT MAY NEED TO BE RE-ESTABLISHED TO PROVIDE ADEQUATE EROSION CONTROL.
2. IF WEEDS BECOME A PROBLEM, THEY MAY NEED TO BE CONTROLLED BY MOWING.

EROSION CONTROL INSPECTION MONITORING, AND MAINTENANCE:

1. AT LEAST ONCE EVERY 7 CALENDAR DAYS AND DURING OR WITHIN 24 HOURS OF ANY RAIN EVENT IN WHICH 1/2 INCH OF PRECIPITATION OR MORE FALLS WITHIN A 24-HOUR PERIOD. THE CONTRACTOR SHALL HAVE QUALIFIED PERSONNEL INSPECT ALL CLEARED AND GRADED AREAS OF THE CONSTRUCTION SITE AND ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.
2. THIS INSPECTION WILL VERIFY THAT ALL EROSION CONTROL DEVICES ARE IN GOOD AND WORKING CONDITION. DISCHARGE LOCATIONS WILL BE INSPECTED TO VERIFY THAT SEDIMENTS ARE NOT ENTERING THE DRAINAGE SYSTEM AND ARE NOT EXITING THE PROJECT SITE. VEHICLE ACCESS LOCATIONS WILL BE INSPECTED FOR EVIDENCE OF SEDIMENT TRACKING INTO THE PUBLIC RIGHT-OF-WAY.
3. ANY OBSERVED ACCUMULATION OF SEDIMENT OFF THE SITE WILL BE IMMEDIATELY REMOVED AND THE AREA RESTORED TO PRE-CONSTRUCTION CONDITIONS.
4. THE CONTRACTOR SHALL MAINTAIN INSPECTION AND REPAIR REPORTS OF EROSION AND SEDIMENT CONTROL MONITORING AND THESE SHALL BE KEPT AT THE PROJECT SITE DURING CONSTRUCTION. THE REPORTS SHALL INCLUDE THE FOLLOWING:
 - * THE INSPECTION DATE;
 - * NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION;
 - * WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING AT THE TIME OF THE INSPECTION;
 - * LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE;
 - * LOCATION(S) OF BMPS THAT NEED TO BE MAINTAINED;
 - * LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;
 - * LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND
 - * CORRECTIVE ACTION REQUIRED INCLUDING IMPLEMENTATION DATES
5. TEMPORARY MEASURES
 INSPECTION SHALL VERIFY THAT ANY TEMPORARY MEASURES BEING USED BY THE CONTRACTOR ARE CONSTRUCTED AND OPERATING IN ACCORDANCE WITH APPROVED STANDARDS AND SPECIFICATIONS. MEASURES SHALL BE REPAIRED AND ACCUMULATION OF SEDIMENTS SHALL BE CLEAN.

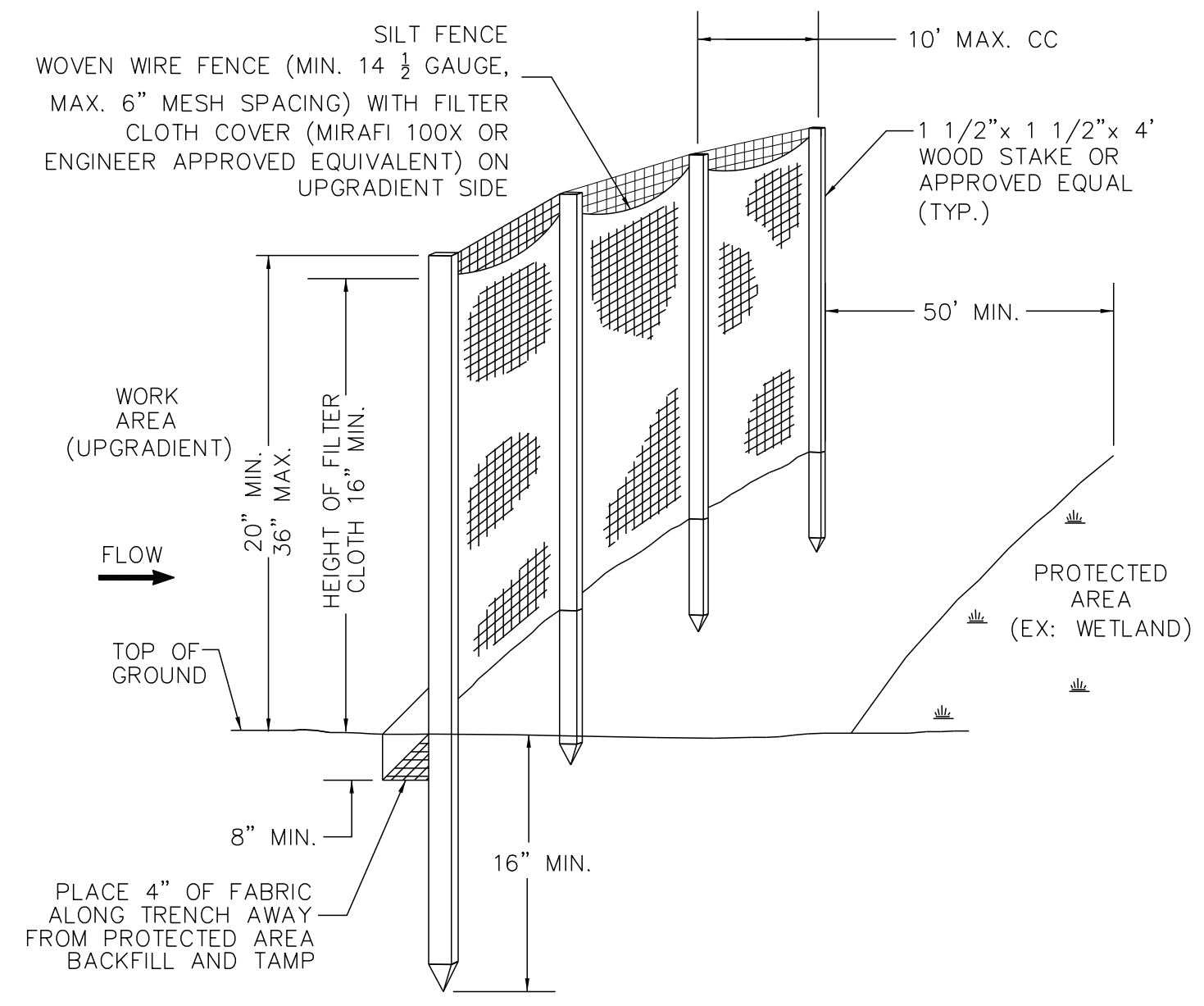
TOWN OF STODDARD, NEW HAMPSHIRE

EROSION CONTROL NOTES



DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
ENV Notes	--	30	31

SDR PROCESSED	NEW DESIGN	CEB/GMC	DATE	12/8/2020	
	SHEET CHECKED	JCH	DATE	12/8/2020	
	AS BUILT DETAILS				
	DATE				
REVISIONS AFTER PROPOSAL	DESCRIPTION	STATION	STATION	DATE	NUMBER



SILT FENCE

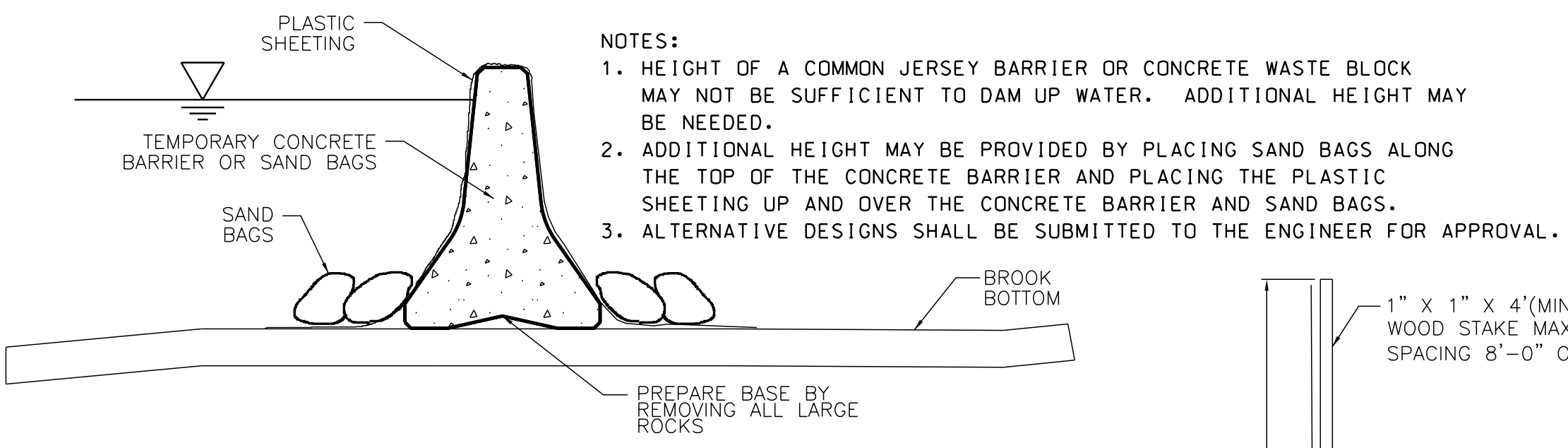
GENERAL DESCRIPTION
 TEMPORARY SEDIMENT BARRIER CONSISTING OF FILTER FABRIC ATTACHED TO SUPPORTING POSTS AND ENTRENCHED IN SOIL. INSTALLED ACROSS OR AT THE TOE OF A SLOPE TO INTERCEPT AND RETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED OR UNPROTECTED AREAS.

PURPOSE
 1. FUNCTIONS PRIMARILY TO SLOW AND POND WATER AND ALLOW SOIL PARTICLES TO SETTLE. USE LIMITED TO AREAS WHERE OVERLAND SHEET FLOWS ARE EXPECTED. DO NOT USE ACROSS STREAMS, CHANNELS, SWALES, DITCHES OR OTHER DRAINAGE WAYS.
 2. IS A SEDIMENT CONTROL PRACTICE, NOT AN EROSION CONTROL PRACTICE. INTENDED TO BE USED IN CONJUNCTION WITH OTHER PRACTICES THAT DO PREVENT OR CONTROL EROSION.

CONSIDERATIONS
 SILT FENCE USED WHERE:
 * MAXIMUM LENGTH OF SLOPE ABOVE THE BARRIER IS 100 FEET; AND
 * MAXIMUM GRADIENT ABOVE THE BARRIER IS 50 PERCENT (2:1); AND
 * CONTRIBUTING DRAINAGE AREA IS LESS THAN 1/4 ACRE PER 100 FEET OF BARRIER LENGTH; AND
 * IF ANY OF THESE CONDITIONS ARE EXCEEDED, OTHER MEASURES MAY BE NECESSARY

- SPECIFICATIONS**
- INSTALL PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
 - INSTALL FOLLOWING CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE.
 - SET SILT FENCES PLACED AT THE TOE OF A SLOPE AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND MAINTENANCE ACCESS WITHOUT DISTURBING THE SLOPE.
 - EMBED FABRIC A MINIMUM OF 4 INCHES IN DEPTH AND 4 INCHES IN WIDTH IN TRENCH EXCAVATED INTO THE GROUND ALONG THE LINE OF POSTS AND UPGRADIENT FROM BARRIER. IF SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, EMBED BASE OF FABRIC WITH A MINIMUM THICKNESS OF 8 INCHES OF 3/4-INCH STONE.
 - BACKFILL TRENCH AND COMPACT SOIL OVER THE FILTER FABRIC.
 - SIZE AND ANCHOR SUPPORT POSTS ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SPACING OF 6 FEET.
 - FILTER FABRIC TO BE A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, SPLICE FILTER CLOTH TOGETHER ONLY AT SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP (24 INCHES PREFERRED), AND STAPLE TO SUPPORT POST. IF METAL POSTS USED, WIRE-TIE FABRIC DIRECTLY TO THE POSTS WITH THREE DIAGONAL TIES.
 - SILT FENCING NOT TO BE STAPLED OR NAILED TO TREES.
 - FILTER FABRIC TO BE PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
 - FILTER FABRIC TO CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
 - POSTS FOR SILT FENCES TO BE EITHER 4-INCH DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS TO HAVE PROJECTIONS FOR FASTENING WIRE TO THEM. POSTS TO BE PLACED ON THE DOWNSLOPE SIDE OF THE FABRIC.
 - HEIGHT OF A SILT FENCE NOT TO EXTEND MORE THAN 36 INCHES ABOVE ORIGINAL GROUND SURFACE
 - MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
 - SILT FENCES TO BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND. FLARE ENDS OF FENCE UPSLOPE.

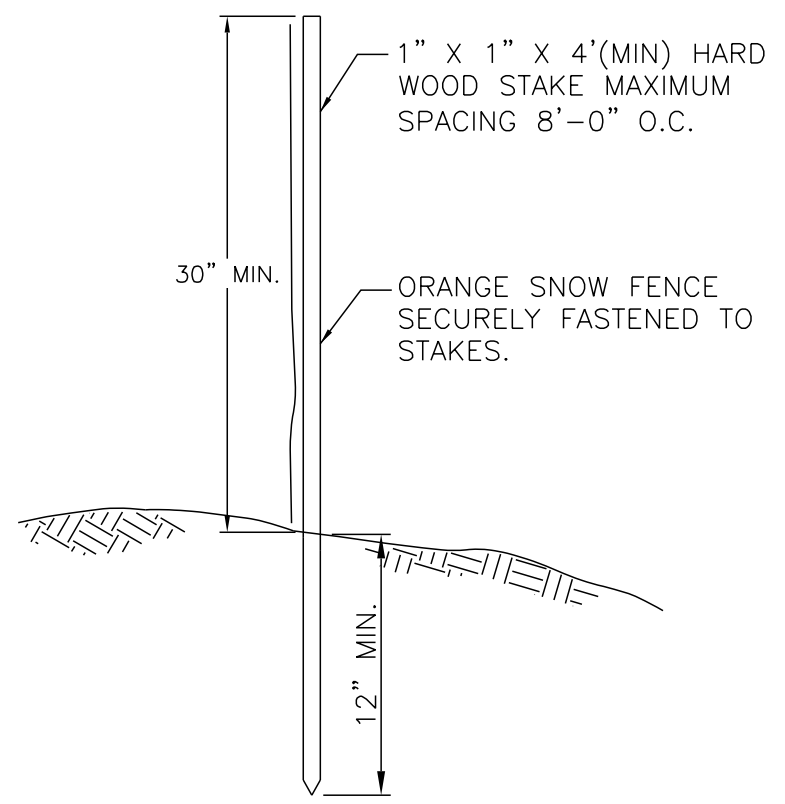
- MAINTENANCE REQUIREMENTS**
- INSPECT AND MAINTAIN IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
 - REMOVE SEDIMENT DEPOSITION, AT A MINIMUM, WHEN DEPOSITION ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FENCE, AND MOVE SO SEDIMENT NOT READILY TRANSPORTED BACK TOWARD THE SILT FENCE.
 - REPAIR SILT FENCE IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS TO BE REPLACED WITH A TEMPORARY CHECK DAM.
 - IF SILT FENCE FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, REPLACE FABRIC PROMPTLY.
 - DRESS REMAINING SEDIMENT DEPOSITS AFTER SILT FENCE IS NO LONGER REQUIRED TO CONFORM TO THE EXISTING GRADE, PREPARE, AND SEED.
 - IF EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
 - SILT FENCES HAVE USEFUL LIFE OF ONE SEASON. ON LONGER CONSTRUCTION PROJECTS, SILT FENCE TO BE REPLACED PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS.



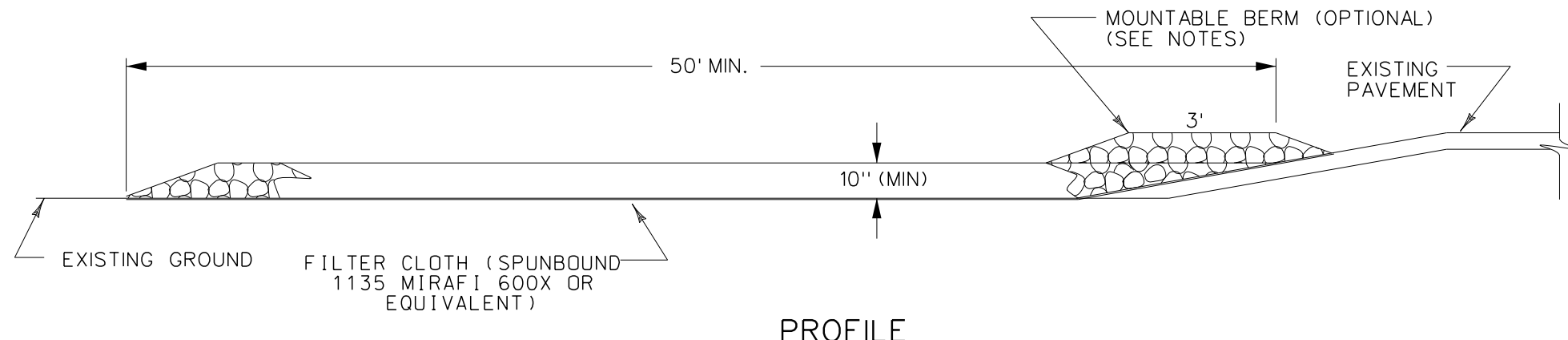
SUGGESTED COFFERDAM

CONTROL OF WATER NOTES

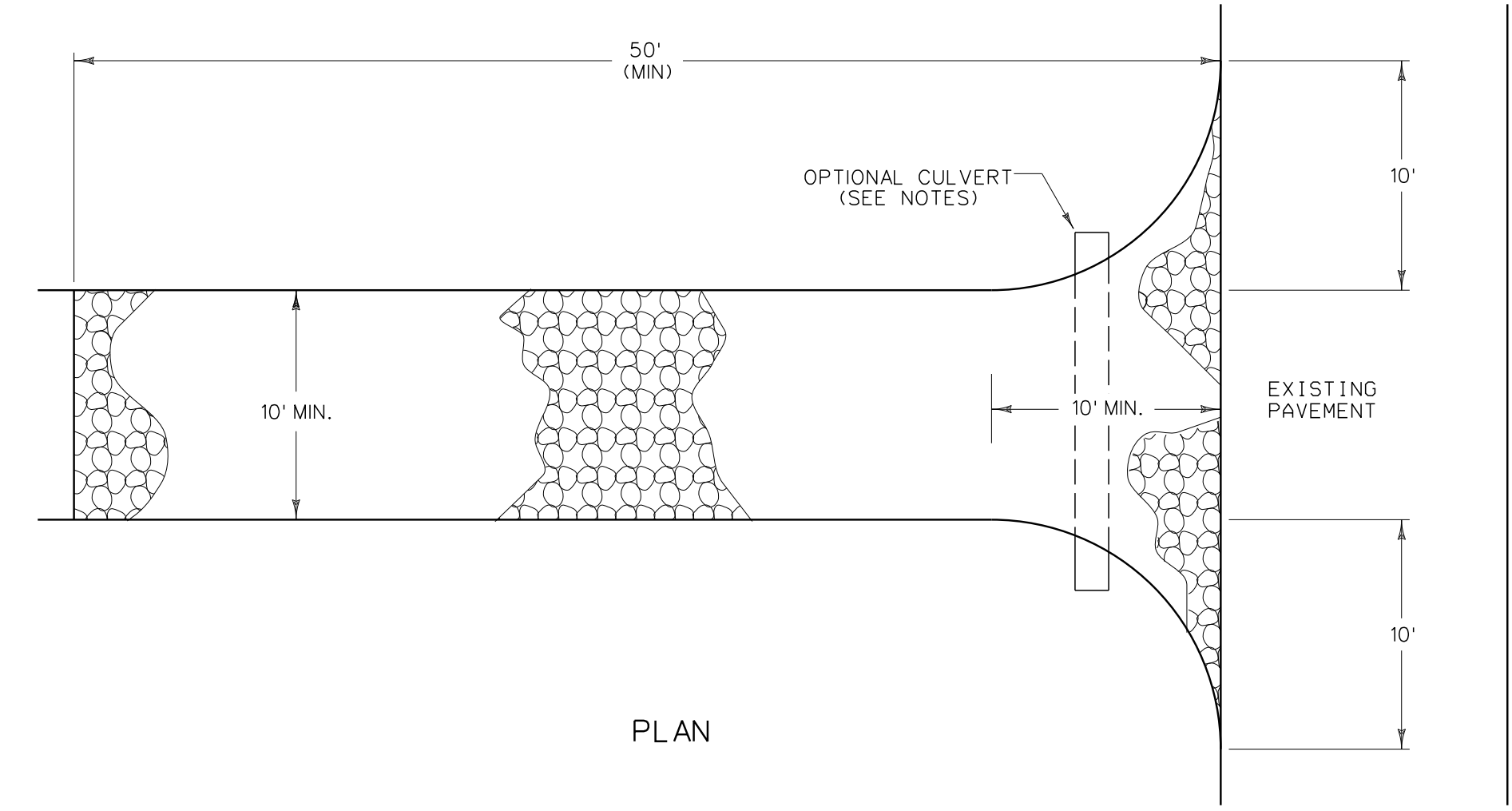
- COFFERDAMS AND PUMPING WILL BE REQUIRED ADJACENT TO ABUTMENTS TO CONTROL THE FLOW OF WATER AND DEWATERING OF THE WORK AREA. IT IS ASSUMED THAT A CONCRETE BARRIER, STONE OR SANDBAG COFFERDAM OR SIMILAR METHOD WILL PROVIDE ADEQUATE PROTECTION AGAINST WATER FLOW THROUGH THE WORK AREA (SEE SUGGESTED TEMPORARY COFFERDAM DETAIL). A COFFERDAM DESIGN WITH ADDITIONAL HEIGHT MAY BE REQUIRED. SUMP PUMPING MAY BE REQUIRED TO ADEQUATELY CONTROL THE GROUNDWATER WITHIN ANY AND ALL EXCAVATIONS.
- THE CONTRACTOR SHALL SUBMIT DETAILS, INDICATING HIS/HER METHOD OF DEWATERING AND HIS/HER PROPOSED METHOD OF HANDLING THE WATER FROM THE WORK AREA.
- THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF WATER DIVERSION STRUCTURES AND COFFERDAM SHALL BE IN ACCORDANCE WITH NHDOT SPECIFICATION 503.



DEMARCATION FENCE



PROFILE



PLAN

USDA - SCS STABILIZED CONSTRUCTION ENTRANCE (TYP.)

- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
- ALL COSTS FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE INCIDENTAL TO ITEM 692, MOBILIZATION.

CONSTRUCTION SEQUENCE

- THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY DUBOIS & KING, INC. DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HERE ON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
- CONSTRUCT TEMPORARY CONSTRUCTION ACCESS TO BROOK AND STAGING AREA.
- INSTALL DEMARCATION FENCE, SILT FENCE AND OTHER EROSION CONTROL MEASURES.
- INSTALL CONTROL OF WATER MEASURES. THE CONTRACTOR SHALL UTILIZE THE PLAN PROVIDED OR SUBMIT A DETAILED SEQUENCED CONTROL OF WATER PLAN FOR APPROVAL.
- PERFORM CONTROL OF WATER SEQUENCING AND SUBSTRUCTURE CONSTRUCTION SEQUENCE IN THE ORDER PROVIDED IN THE RECOMMENDED CONTROL OF WATER SEQUENCING.
- CONSTRUCT BRIDGE STRUCTURE.
- CONSTRUCT ROADWAY APPROACHES TO THE BRIDGE.

RECOMMENDED CONTROL OF WATER SEQUENCING

BELOW IS A RECOMMENDED SEQUENCED CONTROL OF WATER OPERATIONS AND SHALL GENERALLY BE FOLLOWED. PROPOSED CHANGES TO THIS PLAN MUST RECEIVE PRIOR APPROVAL BY THE NHDES AND THE ENGINEER. COST FOR CONTROL OF WATER OPERATIONS SHALL BE INCLUDED UNDER ITEM 503.201, COFFERDAMS.

- INSTALL COFFERDAMS AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE EXISTING PIPE CULVERTS, MAINTAINING BROOK FLOW THROUGH EXISTING PIPE CULVERTS. WORK TO BE PERFORMED IN THE DRY ON EITHER SIDE OF THE EXISTING PIPE CULVERTS.
- EXCAVATE MATERIAL TO THE SPECIFIED LIMITS SHOWN ON THE PLANS.
- PUMPING MAY BE REQUIRED TO MAINTAIN A DRY WORK AREA. INSTALL TEMPORARY SUPPORTS AS NECESSARY, AS THE AREA IS EXCAVATED.
- CONSTRUCT NEW FOOTINGS AT BOTH ABUTMENTS AS SPECIFIED. BACKFILL EXCAVATION TO TOP OF FOOTING (OR PROPOSED STREAMBED ELEVATION).
- CONSTRUCT/INSTALL NEW 3-SIDED FRAME STRUCTURE ON TOP OF FOOTINGS. BACKFILL EXCAVATION TO FINISHED GRADE.
- REMOVE COFFERDAMS (INCLUDING EXISTING PIPE CULVERTS) AND RESTORE BROOK BOTTOM CONDITIONS ACCORDING TO THE PLAN PROVIDED.

BROOK BOTTOM RESTORATION PLAN

ALL CONSTRUCTION TRAFFIC IS TO UTILIZE THE TEMPORARY CONSTRUCTION ACCESS TO BROOK AS SHOWN ON THE PLANS.

- ALL CONSTRUCTION TRAFFIC SHALL BE MAINTAINED WITHIN THE INDICATED CONSTRUCTION LIMITS.
- NO EXISTING BROOK BOTTOM MATERIAL OUTSIDE OF THE LIMITS OF EXCAVATION IS TO BE REMOVED FROM ITS CURRENT LOCATION.
- NO FILL IS PROPOSED FOR THE BROOK BOTTOM.
- ANY AREAS OF THE STREAM COMPACTED DOWN BY CONSTRUCTION TRAFFIC SHALL BE LOOSENED UP VIA USE OF APPROPRIATE MECHANICAL EQUIPMENT TO A CONDITION PRIOR TO CONSTRUCTION.
- ANY DISTURBED AREAS SHALL BE RESTORED/REGRADED BACK TO THEIR GENERAL EXISTING GRADES. COSTS ARE INCLUDED UNDER ITEM 503.201, COFFERDAMS.

TOWN OF STODDARD, NEW HAMPSHIRE

EROSION CONTROL DETAILS



DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
ENV Notes	--	31	31