

**Exception Request No.: 130**  
**Section: SHEB**  
**Town: Easton**  
**Highway: NH 116 (Tier 3)**  
**Station: 656+25 to 669+75**  
**Drawing No.: SHEB C159 to C161**  
**Survey Report Cross Reference No.: SHEB C157 to C158**  
**Exception Type: Alignment in Pavement**  
**Splice Enclosure in Pavement**  
**Road Crossing**

Traffic Information

NHS: No  
ADT: 666  
Traffic Control Type: Alt 1-way  
Traffic Control Duration: Traffic control duration is estimated to be 18 days for the proposed installation, during which one lane will be closed.

Summary of Justification for Exception

NPT is requesting an exception from the UAM guidelines for the location of the cable trench in the pavement on NH 116, Easton Road from station 656+25 to 669+75 of the NPT SHEB Underground Alignment.

Due to limited ROW space outside the pavement in several locations, construction outside the paved area is not practicable because NPT does not have the necessary property rights to construct outside the NHDOT ROW on private property. The proposed alignment is located beneath the pavement where sufficient space is not available to construct the duct bank beyond the pavement. Where possible the proposed alignment will be re-routed to maximize the amount of duct bank installed outside the pavement.

In addition, our exception request in this area includes a splice enclosure in the pavement at station 656+50. The proposed location of the splice enclosure is set back from edge of the ROW to allow for the needed construction work space. (See Exhibit B.)

Technical Discussion of Justification of Exception

*Alignment in Pavement*

The roadway alignment at this location is constrained by a narrow ROW on the eastern side of NH 116. Installation of the cable trench outside the paved area would require additional rights on private property outside the NHDOT ROW. The ductbank has been re-routed out of the pavement to the maximum extent.

Due to limited space between the edge of pavement and the limits of the NHDOT ROW the duct bank will be located within the pavement or partially in the pavement from approximately 656+25 to 660+00.

NPT also evaluated placing the cable trench alignment on the western side of the road in this area, however similar to the east side the limited space plus the presence of the overhead utility line does not allow sufficient space for construction of the duct bank outside of the pavement. Due to the limited space, relocation of utility will not provide the space required.

In addition, the alignment will enter the pavement from approximately 669+00 to 669+75 to accommodate a road crossing. The road crossing at 669+00 is proposed to avoid the limited space between the edge of pavement and the limits of the NHDOT ROW that begin at approximately 670+00, as well as the overhead distribution line that also transitions to the east side of the road at that location. The road crossing is located to maximize the amount of the duct bank that is located outside the pavement.

Note: NPT is requesting an exception for the portion of the alignment from station 656+25 to 660+00 and 669+00 to 669+75. In the original permit drawings, NPT proposed an alignment within the pavement for a longer portion of the roadway in this area. In response to NHDOT comments, NPT has reduced the length of the alignment within the paved area by approximately 1200 feet in this area. The revised alignment will be reflected in revised drawings to be submitted at a later date.

#### *Splice Enclosure in Pavement*

To construct the splice enclosure, a minimum 10-foot work area is required on all sides. At the location of this splice enclosure, the narrow ROW prohibits construction outside the pavement within the ROW.

The location of each splice enclosure along the alignment is constrained by the maximum cable reel length of 2,100 feet. The limited ROW width constraining the enclosure's location extends over 2,100 feet in this area. This distance will require that a splice enclosure be located within the pavement in this section.

NPT evaluated options for moving the splice enclosures to the opposite side of the road (west) and along the alignment, but the same space constraints exist on both sides of the road.

Excavation limits and work areas are shown on the attached drawings. (Exhibit A.) During construction, one lane will remain open to traffic at all times.

#### Impacts

##### *Alignment in Pavement*

The design, as proposed, will not adversely affect the design, construction, stability, traffic, safety, environmental commitments, maintenance, or operation of the highway. The installation of the duct bank and pavement restoration will be designed and constructed in accordance with conditions outlined in the NHDOT's April 3, 2017 letter to the New Hampshire Site Evaluation Committee. The installation's proposed depth meets NHDOT's criteria relating to the structural box to minimize any potential conflicts with maintenance and future highway projects. A traffic control plan has been submitted to the NHDOT for this design and complies with the Manual on Uniform Traffic Control Devices.

##### *Splice Enclosure in Pavement*

The design, as proposed, will not adversely affect the design, construction, stability, traffic, safety, environmental commitments, maintenance, or operation of the highway. The proposed splice enclosure

and ancillary closures will be of a minimum rating of HS-20, in accordance with NHDOT requirements. The installation of the enclosure and pavement restoration will be designed and constructed in accordance with conditions outlined in the NHDOT's April 3, 2017 letter to the New Hampshire Site Evaluation Committee. The installation's proposed depth meets NHDOT's criteria relating to the structural box to minimize any potential conflicts with maintenance and future highway projects.

#### Supporting Documentation

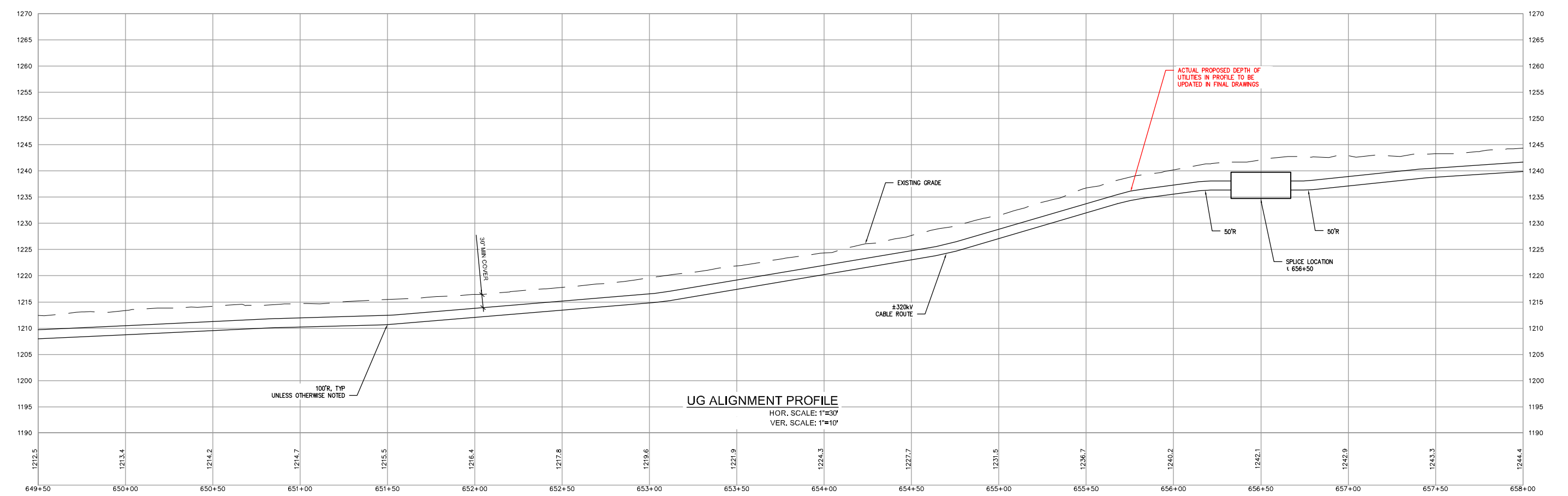
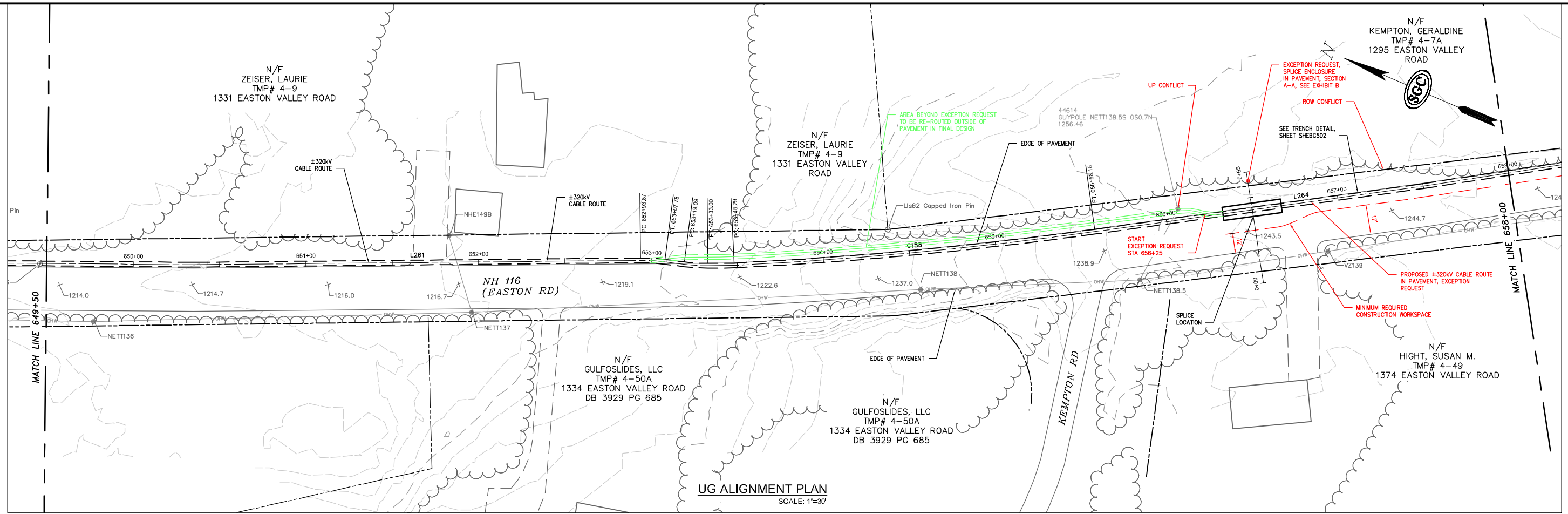
##### *Alignment in Pavement*

See attached Exhibit A showing a plan and profile view.

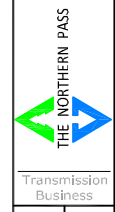
##### *Splice Enclosure in Pavement*

See attached Exhibits A and B showing a plan, profile and section view.

**PRELIMINARY - NOT FOR CONSTRUCTION**

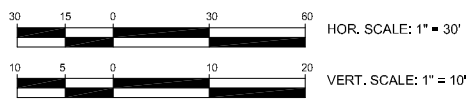


NO.	DATE	REVISION	BY	CHKD	APPRV.
0	05/20/17	EXCEPTION REQUEST	TDD	DMW	CHD

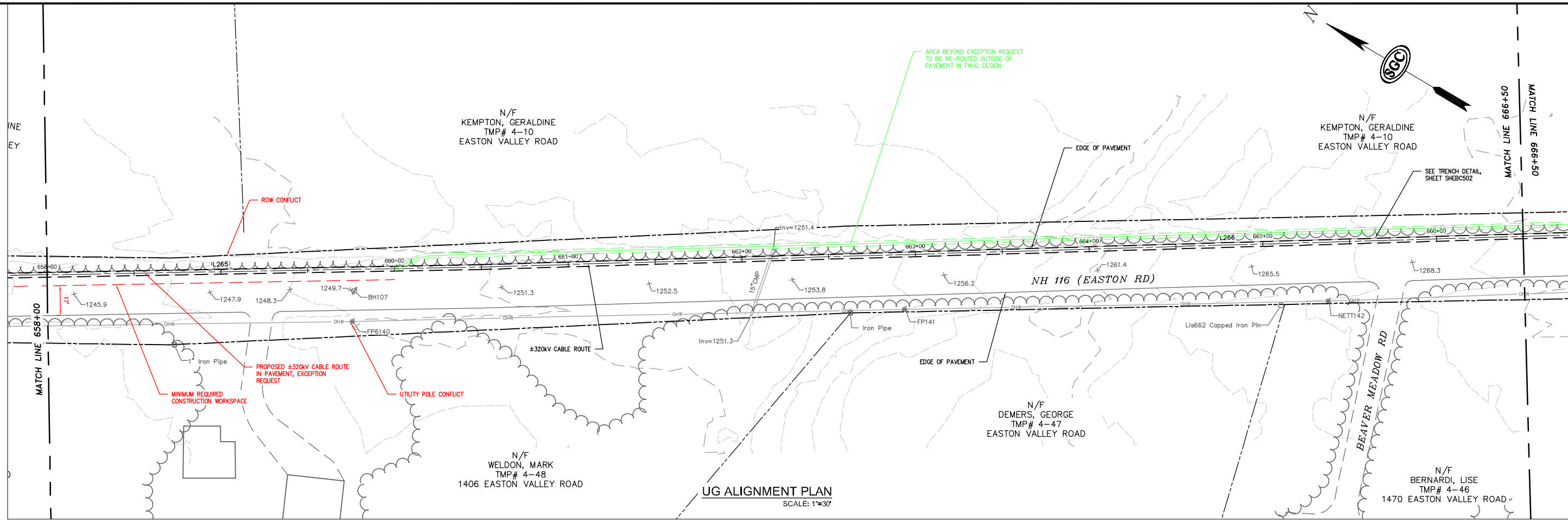


EXCEPTION 130-ALIGNMENT IN PAVEMENT  
NPT SHEB-UNDERGROUND ALIGNMENT  
SHEB SECTION STA 656+25 TO 669+75  
SCALE: H. 1"=30', V. 1"=10'  
DATE: 12/12/2016

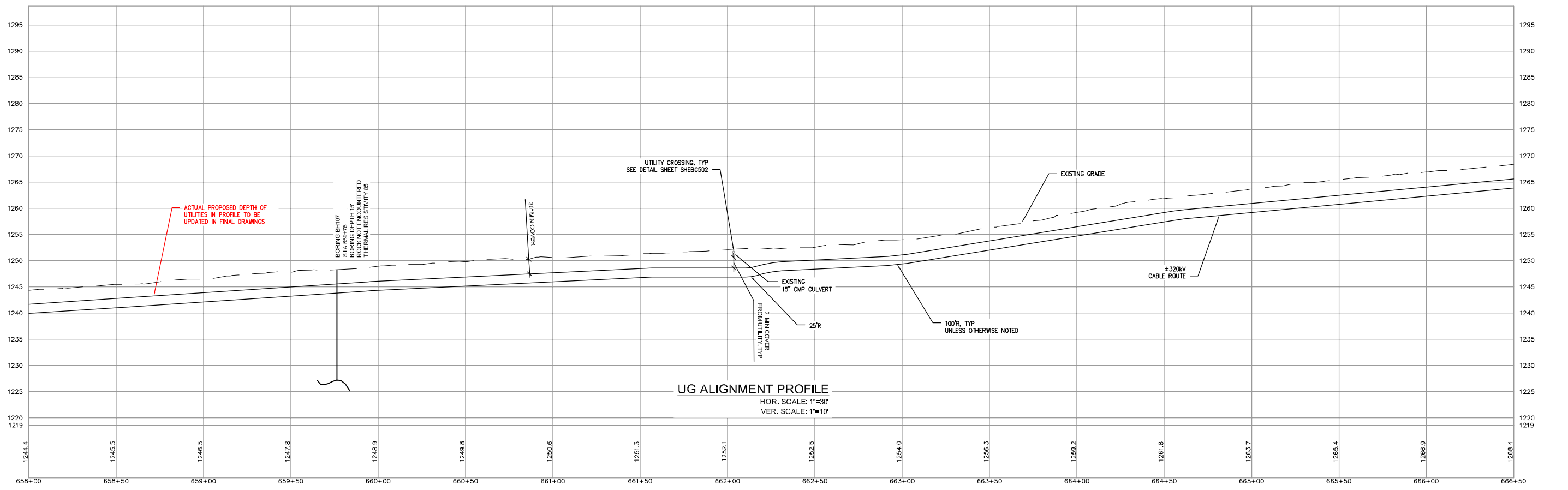
DES: TDD  
CHK: MRR  
DRW: TDD  
APR: TMH  
TOWN: EASTON  
TRANSMISSION LINE: SHEB  
EXHIBIT A.1



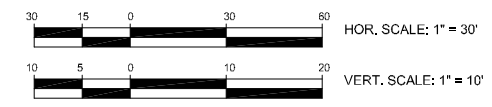
**PRELIMINARY - NOT FOR CONSTRUCTION**



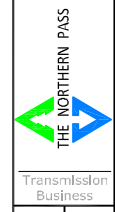
**UG ALIGNMENT PLAN**  
SCALE: 1"=30'



**UG ALIGNMENT PROFILE**  
HOR. SCALE: 1"=30'  
VER. SCALE: 1"=10'

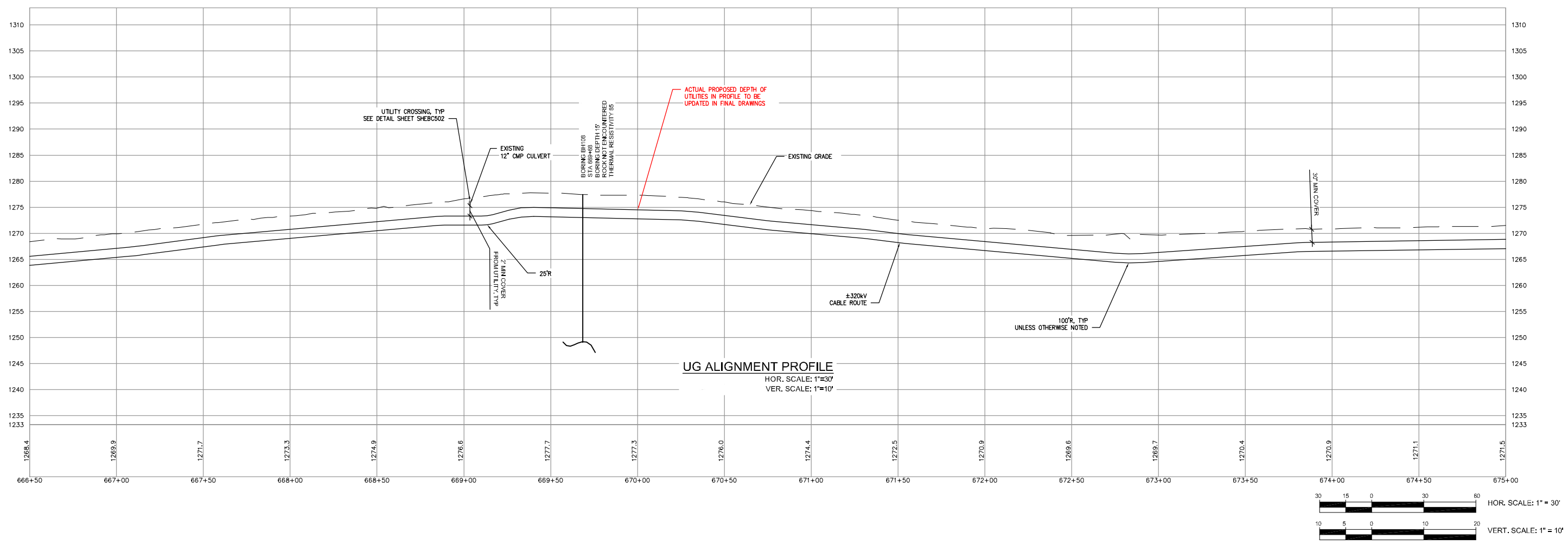
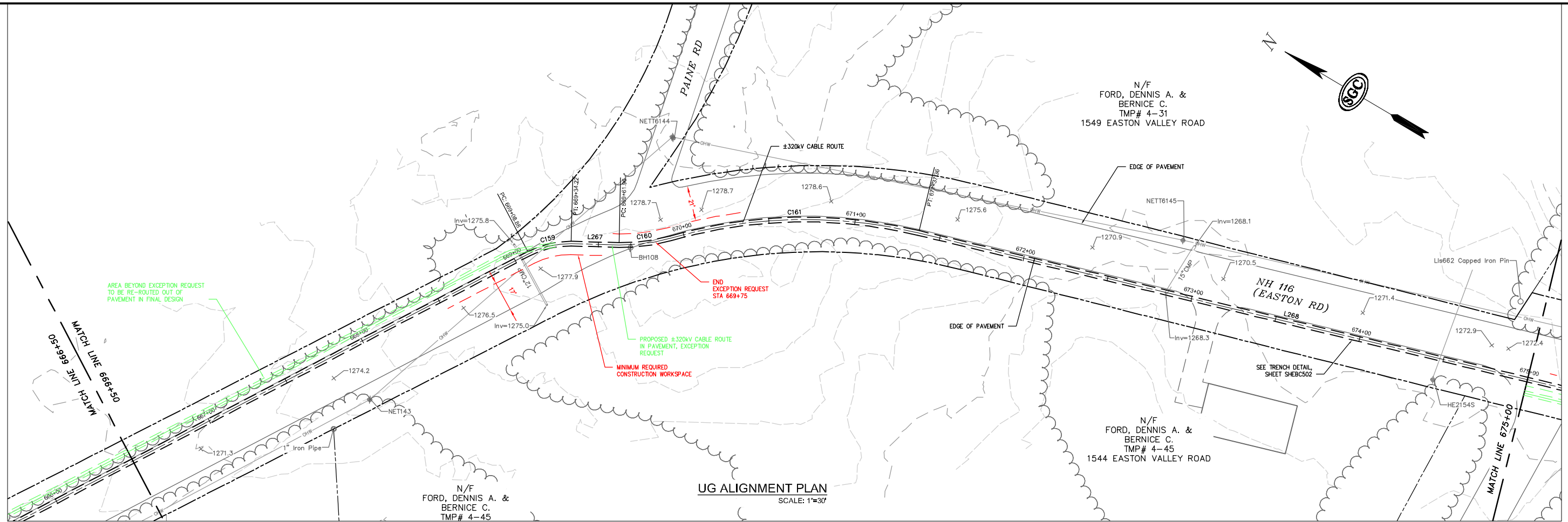


NO.	DATE	REVISION	BY	CHKD	APPV.
0	05/21/17	TDD	MR	CHD	TMH

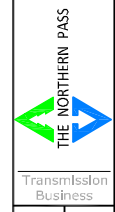


EXCEPTION 130-ALIGNMENT IN PAVEMENT  
NPT SHEB-UNDERGROUND ALIGNMENT  
SHEB SECTION STA 656+25 TO 669+75  
SCALE: H: 1"=30', V: 1"=10'  
DATE: 11/12/2016

DES: TDD  
CHK: MR  
DRW: TDD  
APP: TMH  
TOWN: EASTON  
TRANSMISSION LINE: SHEB  
EXHIBIT A.2

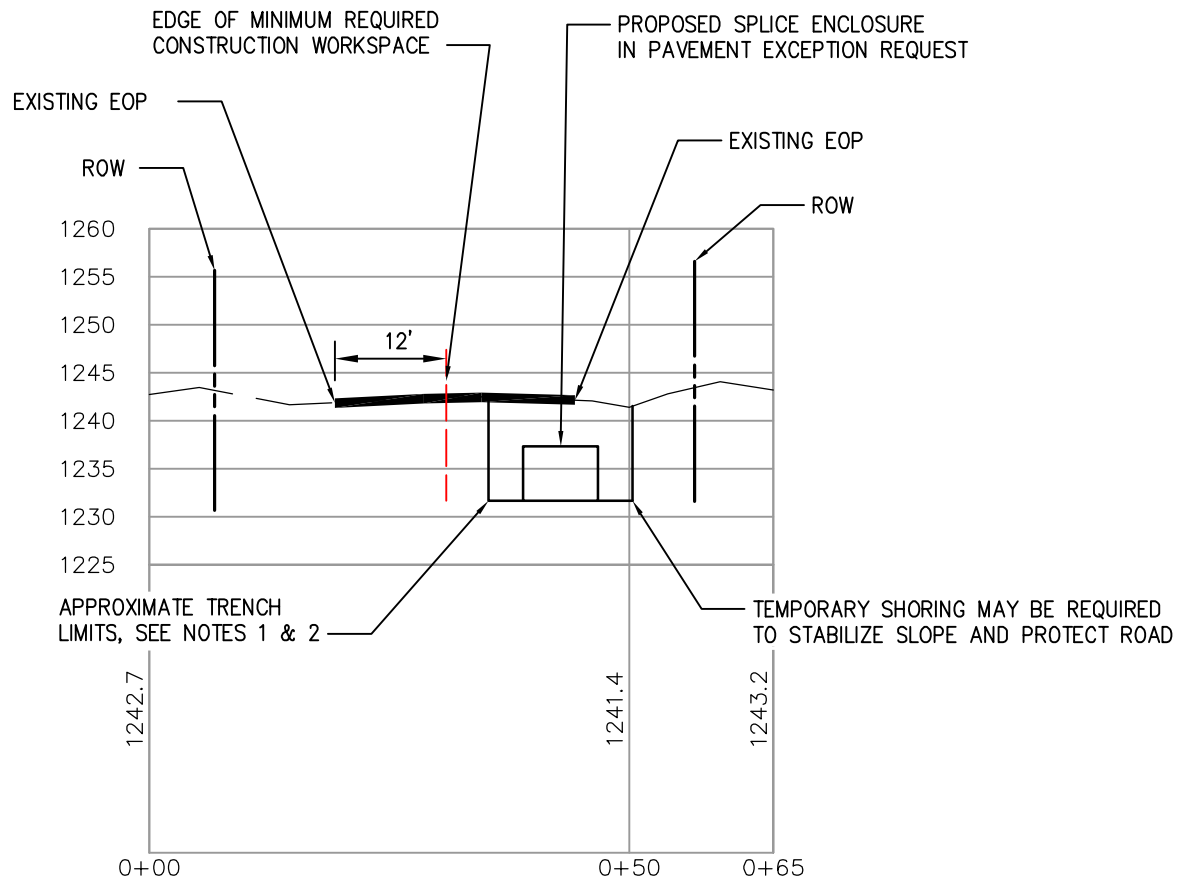


NO.	REVISION	DATE	BY	CHKD	APPRV.
0	EXCEPTION REQUEST	05/21/21	TD	DOWN	CHD



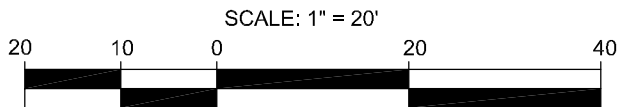
EXCEPTION 130-ALIGNMENT IN PAVEMENT  
NPT SHEB-UNDERGROUND ALIGNMENT  
SHEB SECTION STA 666+25 TO 669+75  
SCALE: H. 1"=30', V. 1"=10'  
DATE: 12/13/2016

DES: TD  
CHK: MRR  
DRAW: TD  
APR: TMH  
TOWN: EASTON



**SECTION A-A**  
SCALE: 1"=20'

- NOTES:
1. PROPOSED CABLE ROUTE AND SPLICE ENCLOSURE TO MAINTAIN 5 FEET OF SEPARATION FROM RIGHT-OF-WAY.
  2. TRENCH WIDTH AS SHOWN TO BE MAINTAINED USING TRENCH BOXES.



JOB NO.: 1384001

**TITLE:**  
EXCEPTION 130  
SPLICE ENCLOSURE IN PAVEMENT  
NPT-SHEB UNDERGROUND ALIGNMENT  
SHEB SECTION-STA 656+50±  
TOWN: EASTON

**PREPARED FOR:**  
NH DOT  
7 HAZEN DRIVE  
CONCORD, NH

**REVISIONS:**

NO.	DATE	EXCEPTION REQUEST
0	06/29/2017	



**SGC ENGINEERING, LLC**  
 • Civil Design & Survey Engineering  
 • Environmental & Regulatory Permitting  
 • Electrical Power Systems Engineering

SERVING OUR CLIENTS IN THE U.S.A. & CANADA

501 County Road  
Westbrook, Maine 04092  
Tel: 207-547-8100  
Fax: 207-547-8101

40 Harbor Street, Suite 2  
Bangor, Maine 04401  
Tel: 207-217-6799  
Fax: 207-217-0018

14 School Street, Suite 203-A  
Bristol, VT 05443  
Tel: 802-736-9298

Galinda Tower 1, Suite 2478  
2700 Post Oak Boulevard  
Houston, TX 77056

EXHIBIT NO.: B

DATE: 05/2017

DRAWN: MRR

SCALE: 1" = 20'