# NextEra Energy Transmission New York, Inc.

(NEETNY)

**Empire State Line** 

Case 18-T-0499

Appendix C
ESL Summary Documents



September 2020

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#### ACRONYM LIST

BMP Best Management Practice

EM&CP Environmental Management and Construction Plan

kV kilovolt

NEETNY NextEra Energy Transmission New York, Inc.

NRD Tie-Ins Niagara-Rochester Dysinger 345 kV Tie-Ins

NYISO New York Independent System Operator

NYPA Power Authority of the State of New York

NYSDEC New York State Department of Environmental Conservation

NYSEG New York State Electric & Gas

ROW right-of-way

SWPPP Storm Water Pollution Prevention Plan

UCA Unrestricted Construction Access

#### 1. PROJECT DESCRIPTION AND CONSTRUCTION SEQUENCE

### 1.1 Project Description

- All steel tangent structures will be steel monopole in a vertical configuration and direct embedded.
- All angles, strain structures, and dead-end structures will be steel monopoles in a vertical configuration on a concrete caisson.
- All structures will be dulled galvanized steel poles with grey insulators.
- Conductor for the Empire State Line will utilize bundled (2 each) "Drake" 795 kcmil aluminum conductor steel reinforced conductors.
- All conductors utilized will be non-specular conductors.
- Conductors for all tie lines will utilize the existing conductors identified.
- Shields for all tie lines will be utility approved optical ground wire and overhead shieldwire.
- To the extent practicable, centerline-to-centerline spacing for the Empire State Line to the existing L65 New York State Electric & Gas (NYSEG) line will be 100 feet.
- Centerline to clearing limits will be 55 feet from nearest energized conductor.
- Access roads and travel routes will be in accordance to the Environmental Management and Construction Plan (EM&CP) Plan and Profile Drawings and will be cleared and constructed in accordance with the construction schedule.
- Project Schematics and Structure lists are attached hereto as Attachments A and B, respectively.

#### 1.2 Construction Sequence

A construction schedule will be finalized upon all agency and permit approvals prior to the start of construction. Multiple factors will impact the timing of construction. Such factors include, but are not limited to, the following:

- Environmental impacts for tree clearing and construction.
- Local impacts related to road use/closings due to construction.
- Coordination with local municipalities for maintenance and protection of traffic.
- Landowner impacts or restrictions.
- Access to existing right-of-way (ROW).
- New York Independent System Operator (NYISO)/NYSEG/Power Authority of the State of New York (NYPA) outage restrictions.
- Seasonal weather conditions.
- Construction best practices and safety.

NextEra Energy Transmission New York, Inc. (NEETNY) is targeting to have Unrestricted Construction Access (UCA) by January 2021. UCA is achieved upon the issuance of all necessary agency approvals and associated permits for construction of the Project. Upon achieving UCA, NEETNY will mobilize for construction. Three distinct construction projects will be conducted simultaneously: (1) Dysinger Switchyard in the town of Royalton; (2) East Stolle Road Switchyard in the town of Elma; and (3) the new 345 kilovolt (kV) transmission line. Construction will be completed in a continuous build with multiple contractors providing support across the Project.

Construction will begin with the new 345 kV transmission line running approximately 20 miles north and south from Niagara County to Erie County. The first sequence of construction will include implementation of the Storm Water Pollution Prevention Plan (SWPPP), building of new access roads or improvements to existing access roads, followed by vegetation clearing to accommodate the future line installation. Vegetation clearing will start within a 5-mile radius of the Akron Mine (between structure No. 25-84) and is anticipated to take place between the months of January 2021 and March 2021 to avoid impacts on the bat hibernacula identified within the area. Once this section of the Project line is cleared, the contractor will continue to clear the required route north to Dysinger switchyard (structure No. 1 -24) and south to East Stolle Road switchyard (structure No. 85-155). After vegetation clearing and site preparations are complete, foundations and structures will be installed sequentially from north to south followed by the stringing of conductor. For several foundations and structures located near Dysinger switchyard, NYSEG and NYPA transmission line outages will be required for installation. Line commissioning and energization will follow completion of the Dysinger and East Stolle Road Switchyards.

In parallel to the construction for the new transmission line, SWPPP, clearing, and grading activities will also commence for the Dysinger Switchyard in Niagara County and the East Stolle Road Switchyard in Erie County. Site preparations including fill and grade work will be followed by security fence and gate installation, ground grid installation, foundation and oil containment installation, steel erection, bus work, conduit and wiring, grounding attachments, major equipment installation, and final testing and commissioning. A phase angle regulator will be installed at the Dysinger Switchyard and a shunt reactor will be installed at East Stolle Road Switchyard soon after their respective foundations cure. The two new Project 345 kV switchyards will be constructed in parallel and targeted for completion by early 2022.

Upon completion of the new Dysinger and East Stolle Road Switchyards, existing NYSEG and NYPA lines will be cut into the switchyards. Outages will be coordinated with NYISO, NYSEG, and NYPA to complete these ties.

Project Construction Sequence for the new 345 kV Transmission Line:

- 1) Incorporate the SWPPP and Best Management Practices (BMPs)
- 2) Access Road and Entrance Plan Construction

- 3) Vegetation Clearing
- 4) Laydown Yard, Security Fence, Gate Installation and Grounding Construction
- 5) Project Gas Line Mitigation and Construction
- 6) Foundation and Structure Installation
- 7) Conductor Stringing and Installation
- 8) Outages to Tie-in to New Dysinger and East Stolle Road Switchyards
- 9) Testing and Commissioning of New 345 kV Transmission Line (with associated outages)
- 10) Site Restoration and SWPPP Compliance through Permit Close-out

#### Project Construction Sequence for Dysinger Switchyard:

- 1) Incorporate SWPPP and BMPs
- 2) Vegetation Clearing and Grading
- 3) Foundation and Oil Containment Installation
- 4) Phase Angle Reactor and Major Equipment Installation
- 5) Steel Erection
- 6) Substation Construction
- 7) NYSEG/NYPA Existing Transmission Line Tie-in Construction (with associated outages)
- 8) Testing and Commissioning of Substation and associated Transmission Line Tie-ins
- 9) Site Restoration and SWPPP Compliance through Permit Close-out

#### Project Construction Sequence for East Stolle Switchyard:

- 1) Incorporate SWPPP and BMPs
- 2) Vegetation Clearing and Grading
- 3) Foundation and Oil Containment Installation
- 4) Shunt Reactor Installation
- 5) Steel Erection
- 6) Substation Construction
- 7) NYSEG Existing Transmission Line Tie-in Construction (with associated outages)
- 8) Testing and Commissioning of Substation and associated Transmission Line Tie-ins
- 9) Site Restoration and SWPPP Compliance through Permit Close-out

#### 2. SCOPE OF WORK

# 2.1 Empire State 345 kV Line, Dysinger 345 kV switchyard, East Stolle 345 kV switchyard, and Kintigh-Dysinger Tie-Ins

NEETNY will construct, own, operate and maintain the new 20-mile 345 kV Transmission Line, the Dysinger 345 kV Switchyard, the East Stolle Road 345 kV Switchyard, and the Kintigh-Dysinger 345 kV Tie-Ins, in accordance with this EM&CP.

The scope of work involved with these components include to:

- Implement the EM&CP with proper SWPPP materials installed to New York State Department of Environmental Conservation (NYSDEC) permit requirements.
- Install access roads and laydown yards including security fencing, gates, grounding, and additional SWPPP measures as outlined in EM&CP for these areas.
- Manage tree clearing and vegetation per guidelines outlined in the Construction Schedule to meet New York State Department of Public Service, NYSDEC, and New York State Department of Agriculture and Markets requirements.
- Install Project mitigation for protection of existing gas facilities.
- Design/Procure/Install Project foundations and structures for the new 345 kV transmission line from new Dysinger Switchyard to new East Stolle Switchyard.
- Design/Procure/Install Project 345 kV Underground Crossing Section at the New York State Thruway Authority.
- Design/Procure/Install new Dysinger Switchyard equipment and materials.
- Design/Procure/Install new East Stolle Switchyard equipment and materials.
- Design/Procure/Install structures and foundations for 345 kV tie-in of NYSEG L38 and 39 345 kV lines into the new Dysinger Switchyard.
- Removal of approximately 0.5 miles of the NYSEG#38 and #39 345 kV lines

#### 2.2 Niagara-Rochester Dysinger Tie-Ins

NEETNY will construct the Niagara-Rochester Dysinger 345 kV Tie-Ins (NRD Tie-Ins) in accordance with this EM&CP and any requirements agreed to in the NYPA Interconnection Agreement. NEETNY will transfer ownership of the NRD 345 kV Tie-Ins to the NYPA in accordance with the NYPA Interconnection Agreement after the completion of construction of the NRD Tie-Ins. NEETNY will be responsible for maintaining the ROW according to its Long Range ROW Management Plan prior to the transfer of ownership in the NRD Tie-Ins to the NYPA. After ownership of the NRD Tie-Ins is transferred to the NYPA, the ROW for the NRD Tie-Ins will be managed by the NYPA in accordance to NYPA's Long Range ROW Management Plan.

NEETNY will be responsible for any post-construction requirements set forth in this EM&CP. NYPA will not be responsible for any post-construction requirements identified in this EM&CP.

The scope of work for the Niagara-Rochester Dysinger 345 kV Tie-Ins include:

- Design/Procure/Install structures and foundations for 345 kV tie-in of NYPA Moses-Niagara to Rochester 345 kV lines.
- Removal of existing section of NYSEG and NYPA 345 kV lines to accommodate new tie-in for the Dysinger Switchyard, as required.

#### 2.3 East Stolle 345 kV Tie-Lines

NEETNY will construct the East Stolle 345 kV Tie-Ins (East Stolle Tie-Ins) in accordance with this EM&CP and any requirements set forth in its Interconnection Agreement with NYSEG. After construction is complete, NEETNY will transfer ownership of the East Stolle Tie-Ins to NYSEG in accordance with the NYSEG Interconnection Agreement. Prior to the transfer of ownership in the East Stolle Tie-Ins to NYSEG, NEETNY will be responsible for maintaining the ROW according to its Long Range ROW Management Plan. After transfer of ownership of the East Stolle Tie-Ins to NYSEG, the ROW for these assets will be managed by NYSEG in accordance to NYSEG's Long Range ROW Management Plan.

NEETNY will be responsible for any post-construction requirements set forth in this EM&CP. NYSEG will not be responsible for any post construction requirements in this EM&CP.

The scope of work for the Niagara-Rochester Dysinger 345 kV Tie-Ins include:

- Design/Procure/Install structures and foundations for re-route of NYSEG Five-mile to Stolle Road 345 kV line into the East Stolle Switchyard.
- Design/Procure/Install new 345 kV tie-line from the East Stolle Switchyard to the existing Stolle Road Substation.
- Removal of the first 345 kV structure just outside of Stolle Road 345 kV substation

# ATTACHMENT A: SCHEMATIC ONE LINE

[Attachment A is submitted under separate cover for confidential treatment, because these pages contain confidential information]

# ATTACHMENT B: STRUCTURE LIST



STRUCTURE	STRUCTURE TYPE	AGL	LINE ANGLE (+) Rt, (-) Lt	AHEAD SPAN	BACK SPAN		COMMENTS		
NUMBER				(FT)	(FT)	X	NAD83 3103 NEW YORK WES	Z	
DYSINGER TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	98.2	-	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
1	DEADEND STRUCTURE (75°-105°)	131	89.5	231.7	98.2	1153858.1	1133177.0	597.3	SPLICE BOX
2	HEAVY TANGENT STRUCTURE (1°-3°)	155	0.0	420.5	231.7	1154089.6	1133187.4	596.9	
3	DEADEND STRUCTURE (75°-105°)	156	82.6	398.8	420.5	1154509.7	1133206.3	594.6	SPLICE BOX
3A	DEADEND STRUCTURE (15°-45°)	121	-16.4	664.8	398.8	1154578.9	1132813.5	597.7	
4	TANGENT STRUCTURE (0°-1°)	110	0.0	557.9	664.8	1154874.4	1132218.0	596.3	
5	TANGENT STRUCTURE (0°-1°)	110	0.0	540.9	557.9	1155122.4	1131718.3	598.0	
6	TANGENT STRUCTURE (0°-1°)	115	0.0	542.1	540.9	1155362.8	1131233.8	598.4	
7	CROSSING STRUCTURE (22°-24°)	126	23.2	378.3	542.1	1155603.8	1130748.1	599.0	SPLICE BOX
8	CROSSING STRUCTURE (22°-24°)	126	-22.8	519.5	378.3	1155625.2	1130370.4	598.6	SPLICE BOX
9	TANGENT STRUCTURE (0°-1°)	120	-0.3	381.1	519.5	1155853.6	1129903.8	598.8	5. E.G. 20%
10	TANGENT STRUCTURE (0°-1°)	120	0.2	583.0	381.1	1156023.1	1129562.5	599.5	
11	HEAVY TANGENT STRUCTURE (1°-3°)	110	-1.3	627.8	583.0	1156280.4	1129039.4	598.5	
12	TANGENT STRUCTURE (0°-1°)	115	0.0	590.7	627.8	1156569.9	1128482.4	598.3	
13	RUNNING ANGLE STRUCTURE (15°-40°)	121	21.2	710.3	590.7	1156842.4	1127958.3	598.9	
14	TANGENT STRUCTURE (0°-1°)	125	0.0	623.3	710.3	1156919.9	1127358.3	593.0	
15	HEAVY TANGENT STRUCTURE (1°-3°)	125	-1.1	763.2	623.3	1156987.9	1126632.7	597.7	
16	TANGENT STRUCTURE (0°-1°)	120	0.0	784.3	763.2	1157085.1	1125875.8	597.6	
17	TANGENT STRUCTURE (0°-1°)	120	0.0	677.8	784.3	1157184.9	1125097.8	602.2	
18	TANGENT STRUCTURE (0°-1°)	115	0.0	702.4	677.8	1157271.0	1124425.5	596.4	
19	TANGENT STRUCTURE (0°-1°)	115	0.0	724.2	702.4	1157360.4	1123728.8	595.9	
20	TANGENT STRUCTURE (0°-1°)	115	0.0	699.1	724.2	1157452.4	1123010.6	595.8	
21	, ,		0.0	727.7	699.1	1157432.4	1123010.6	595.8	
	TANGENT STRUCTURE (0°-1°)	115 120		727.7	727.7	1157541.3	1122317.2	603.2	
22	TANGENT STRUCTURE (0°-1°)		0.0						
23	STRAIN STRUCTURE (0°-1°)	116	0.0	716.2	714.7	1157724.8	1120886.5	601.1	
24	TANGENT STRUCTURE (0°-1°)	120	0.0	779.6	716.2	1157815.8	1120176.0	602.7	
25	TANGENT STRUCTURE (0°-1°)	120	0.0	755.2	779.6	1157915.0	1119402.7	608.9	
26	TANGENT STRUCTURE (0°-1°)	115	0.0	700.2	755.2	1158011.0	1118653.7	602.8	
27	TANGENT STRUCTURE (0°-1°)	120	0.0	767.9	700.2	1158100.0	1117959.2	604.8	
28	TANGENT STRUCTURE (0°-1°)	120	0.0	697.7	767.9	1158197.7	1117197.5	600.6	
29	TANGENT STRUCTURE (0°-1°)	120	0.0	799.8	697.7	1158286.4	1116505.5	602.7	
30	HEAVY TANGENT STRUCTURE (1°-3°)	120	-1.5	589.0	799.8	1158388.1	1115712.2	605.4	
31	TANGENT STRUCTURE (0°-1°)	110	0.0	675.8	589.0	1158478.0	1115130.1	607.3	
32	DEADEND STRUCTURE (0°-15°)	121	11.2	725.2	675.8	1158581.2	1114462.2	608.0	SPLICE BOX
33	TANGENT STRUCTURE (0°-1°)	120	0.0	707.2	725.2	1158551.0	1113737.7	608.5	
34	HEAVY TANGENT STRUCTURE (1°-3°)	115	-1.7	710.4	707.2	1158521.6	1113031.1	610.3	
35	TANGENT STRUCTURE (0°-1°)	125	0.4	730.3	710.4	1158513.0	1112320.8	609.2	
36	TANGENT STRUCTURE (0°-1°)	115	0.4	722.8	730.3	1158498.6	1111590.6	612.2	
37	TANGENT STRUCTURE (0°-1°)	115	-0.4	726.8	722.8	1158479.7	1110868.0	616.4	
38	TANGENT STRUCTURE (0°-1°)	115	0.0	599.8	726.8	1158465.7	1110141.3	620.6	
39	TANGENT STRUCTURE (0°-1°)	110	0.0	615.9	599.8	1158454.1	1109541.6	631.2	
40	TANGENT STRUCTURE (0°-1°)	120	0.0	642.2	615.9	1158442.2	1108925.8	630.0	
41	TANGENT STRUCTURE (0°-1°)	125	0.0	721.7	642.2	1158429.8	1108283.6	632.2	
42	TANGENT STRUCTURE (0°-1°)	115	0.0	664.8	721.7	1158415.8	1107562.0	631.0	
43	TANGENT STRUCTURE (0°-1°)	115	0.0	746.1	664.8	1158403.0	1106897.3	635.3	
44	TANGENT STRUCTURE (0°-1°)	115	0.0	668.2	746.1	1158388.5	1106151.4	640.2	
45	STRAIN STRUCTURE (0°-1°)	116	0.0	614.3	668.2	1158375.6	1105483.3	646.3	
46	TANGENT STRUCTURE (0°-1°)	115	-0.1	541.8	614.3	1158363.7	1104869.1	650.7	
47	TANGENT STRUCTURE (0°-1°)	115	0.0	754.2	541.8	1158354.1	1104327.4	648.7	
48	TANGENT STRUCTURE (0°-1°)	120	0.0	713.9	754.2	1158340.6	1103573.4	645.9	
49	TANGENT STRUCTURE (0°-1°)	115	0.0	716.3	713.9	1158327.9	1102859.6	648.2	
50	TANGENT STRUCTURE (0°-1°)	120	0.0	759.4	716.3	1158315.2	1102143.4	645.6	
51	TANGENT STRUCTURE (0°-1°)	115	0.0	626.7	759.4	1158301.6	1101384.1	646.1	



STRUCTURE	STRUCTURE TYPE	AGL	LINE	AHEAD SPAN	BACK SPAN	COORDINATES			601111111
NUMBER	STRUCTURE TYPE	AGL	ANGLE	(FT)	(57)	NAD83 3103 NEW YORK WEST			COMMENTS
F2	TANCENT CTRUCTURE (0° 1°)	110	(+) Rt, (-) Lt	(FT)	(FT) 626.7	1150200 F	1100757.5	<b>Z</b> 646.5	
52	TANGENT STRUCTURE (0°-1°)	110	0.0	641.1	+	1158290.5	1100757.5		
53	TANGENT STRUCTURE (0°-1°)	110	0.0	627.4	641.1	1158279.1	1100116.5	645.7	
54	TANGENT STRUCTURE (0°-1°)	110	0.0	706.6	627.4	1158267.9	1099489.2	647.0	
55	TANGENT STRUCTURE (0°-1°)	120	0.0	733.1	706.6	1158255.3	1098782.7	648.4	
56	TANGENT STRUCTURE (0°-1°)	120	0.0	616.0	733.1	1158242.2	1098049.7	649.3	
57	DEADEND STRUCTURE (15°-45°)	116	-24.1	583.1	616.0	1158231.3	1097433.8	651.3	SPLICE BOX
58	TANGENT STRUCTURE (0°-1°)	110	0.0	607.8	583.1	1158459.7	1096897.3	656.4	
59	TANGENT STRUCTURE (0°-1°)	110	0.0	621.8	607.8	1158697.8	1096338.0	657.6	
60	TANGENT STRUCTURE (0°-1°)	110	0.0	629.3	621.8	1158941.4	1095765.9	672.9	
61	HEAVY TANGENT STRUCTURE (1°-3°)	110	-2.0	602.6	629.3	1159188.0	1095186.9	677.2	
62	TANGENT STRUCTURE (0°-1°)	110	0.0	636.6	602.6	1159443.1	1094641.0	678.5	
63	RUNNING ANGLE STRUCTURE (15°-40°)	121	27.9	588.6	636.6	1159712.7	1094064.3	697.7	
64	TANGENT STRUCTURE (0°-1°)	110	0.0	624.0	588.6	1159683.3	1093476.4	704.9	
65	HEAVY TANGENT STRUCTURE (1°-3°)	115	-1.9	648.8	624.0	1159652.2	1092853.2	710.2	
66	TANGENT STRUCTURE (0°-1°)	125	0.0	786.5	648.8	1159641.8	1092204.5	726.0	
67	TANGENT STRUCTURE (0°-1°)	125	0.0	552.0	786.5	1159629.2	1091418.1	768.4	
68	TANGENT STRUCTURE (0°-1°)	130	0.0	816.4	552.0	1159620.3	1090866.1	756.7	
69	TANGENT STRUCTURE (0°-1°)	110	0.0	670.3	816.4	1159607.2	1090049.8	780.0	
70	TANGENT STRUCTURE (0°-1°)	120	0.0	802.8	670.3	1159596.4	1089379.6	782.2	
71	STRAIN STRUCTURE (0°-1°)	116	0.0	646.6	802.8	1159583.6	1088576.9	791.6	
72	TANGENT STRUCTURE (0°-1°)	120	0.0	794.1	646.6	1159573.2	1087930.3	793.2	
73	TANGENT STRUCTURE (0°-1°)	120	0.0	731.8	794.1	1159560.5	1087136.4	789.7	
74	TANGENT STRUCTURE (0°-1°)	115	0.0	621.9	731.8	1159548.7	1086404.7	789.0	
75	TANGENT STRUCTURE (0°-1°)	110	0.0	646.7	621.9	1159538.7	1085782.8	784.0	
76	TANGENT STRUCTURE (0°-1°)	110	0.0	650.1	646.7	1159528.4	1085136.3	777.1	
77	TANGENT STRUCTURE (0°-1°)	115	0.0	690.1	650.1	1159517.9	1084486.3	768.4	
78	TANGENT STRUCTURE (0°-1°)	120	0.0	647.4	690.1	1159506.9	1083796.3	768.3	
79	TANGENT STRUCTURE (0°-1°)	115	0.0	733.0	647.4	1159496.5	1083149.1	786.6	
81	DEADEND STRUCTURE (0°-15°)	121	0.0	336.7	733.0	1159484.7	1082416.2	783.1	
82	TRANSITION STRUCTURE	91	-0.1	0.0	336.7	1159479.1	1082410.2	782.8	SPLICE BOX
83			-0.1	90.6	0.0		<u> </u>	787.5	SPLICE BUX
	TRANSITION STRUCTURE	91			-	1159443.9	1079811.9		
84	DEADEND STRUCTURE (0°-15°)	121	-0.9	893.3	90.6	1159443.4	1079721.3	787.0	CDLICE DOV
85	DEADEND STRUCTURE (45°-75°)	136	68.4	855.6	893.3	1159453.3	1078828.0	782.3	SPLICE BOX
86	HEAVY TANGENT STRUCTURE (1°-3°)	125	-1.5	912.0	855.6	1158661.3	1078504.3	782.5	
87	TANGENT STRUCTURE (0°-1°)	130	0.0	888.3	912.0	1157826.6	1078136.7	784.2	
88	TANGENT STRUCTURE (0°-1°)	125	0.0	775.6	888.3	1157013.6	1077778.7	779.3	
89	TANGENT STRUCTURE (0°-1°)	125	0.0	699.7	775.6	1156303.8	1077466.1	779.8	
90	TANGENT STRUCTURE (0°-1°)	120	0.0	717.4	699.7	1155663.5	1077184.2	776.2	
91	DEADEND STRUCTURE (15°-45°)	121	-32.5	757.3	717.4	1155007.0	1076895.1	777.4	
92	TANGENT STRUCTURE (0°-1°)	125	0.0	730.4	757.3	1154586.7	1076265.1	781.0	
93	TANGENT STRUCTURE (0°-1°)	120	0.0	759.8	730.4	1154181.3	1075657.6	780.4	
94	TANGENT STRUCTURE (0°-1°)	115	0.0	763.0	759.8	1153759.6	1075025.6	778.6	
95	TANGENT STRUCTURE (0°-1°)	115	0.0	782.2	763.0	1153336.1	1074390.9	777.7	
96	TANGENT STRUCTURE (0°-1°)	130	0.0	786.1	782.2	1152901.9	1073740.2	774.4	
97	HEAVY TANGENT STRUCTURE (1°-3°)	130	0.0	963.9	786.1	1152465.6	1073086.3	782.4	
98	DEADEND STRUCTURE (15°-45°)	131	-34.0	799.0	963.9	1151930.6	1072284.4	750.1	
99	TANGENT STRUCTURE (0°-1°)	120	0.0	746.6	799.0	1151934.1	1071485.4	771.6	
100	TANGENT STRUCTURE (0°-1°)	115	0.0	723.8	746.6	1151937.4	1070738.8	767.8	
101	TANGENT STRUCTURE (0°-1°)	125	0.0	869.5	723.8	1151940.5	1070015.0	764.3	
102	TANGENT STRUCTURE (0°-1°)	130	0.0	790.1	869.5	1151944.4	1069145.5	764.8	
103	TANGENT STRUCTURE (0°-1°)	130	0.0	740.2	790.1	1151947.8	1068355.4	767.2	
	TANGENT STRUCTURE (0°-1°)	115	0.0	626.6	740.2	1151951.1	1067615.3	773.5	
104	IANGENI SIKUCIUKE IU - i i	1 115							



STRUCTURE	STRUCTURE TYPE	AGL	LINE ANGLE (+) Rt, (-) Lt	AHEAD SPAN	BACK SPAN	COORDINATES NAD83 3103 NEW YORK WEST			COMMENTS
NUMBER				(FT)	(FT)	Х	Υ	Z	-
106	TANGENT STRUCTURE (0°-1°)	115	0.0	774.7	616.7	1151956.5	1066372.0	776.3	
107	HEAVY TANGENT STRUCTURE (1°-3°)	120	-1.8	724.4	774.7	1151959.9	1065597.3	779.4	
108	DEADEND STRUCTURE (75°-105°)	116	75.1	707.4	724.4	1151985.9	1064873.4	781.7	
109	HEAVY TANGENT STRUCTURE (1°-3°)	120	-1.9	649.3	707.4	1151309.1	1064667.3	779.6	SPLICE BOX
110	TANGENT STRUCTURE (0°-1°)	110	0.0	634.7	649.3	1150694.5	1064458.0	776.0	
111	TANGENT STRUCTURE (0°-1°)	120	0.0	603.7	634.7	1150093.7	1064253.4	771.1	
112	TANGENT STRUCTURE (0°-1°)	125	0.0	637.5	603.7	1149522.3	1064058.8	765.9	
113	TANGENT STRUCTURE (0°-1°)	115	0.0	628.2	637.5	1148918.8	1063853.3	762.4	
114	DEADEND STRUCTURE (45°-75°)	126	-65.1	969.7	628.2	1148324.1	1063650.8	759.9	
115	TANGENT STRUCTURE (0°-1°)	130	0.0	850.7	969.7	1148222.0	1062686.5	756.0	SPLICE BOX
116	TANGENT STRUCTURE (0°-1°)	125	0.0	740.6	850.7	1148132.4	1061840.5	756.3	
117	TANGENT STRUCTURE (0°-1°)	120	0.0	780.6	740.6	1148054.4	1061104.1	752.3	
118	TANGENT STRUCTURE (0°-1°)	130	0.0	806.4	780.6	1147972.2	1060327.8	752.3	
119	TANGENT STRUCTURE (0°-1°)	115	0.0	693.3	806.4	1147887.3	1059525.9	757.8	
120	TANGENT STRUCTURE (0°-1°)	110	0.0	619.9	693.3	1147814.2	1058836.5	754.6	
121	TANGENT STRUCTURE (0°-1°)	110	0.0	705.5	619.9	1147749.0	1058220.1	744.1	
122	TANGENT STRUCTURE (0°-1°)	115	0.0	593.6	705.5	1147674.7	1057518.5	737.9	
123	TANGENT STRUCTURE (0°-1°)	120	0.0	920.7	593.6	1147612.1	1056928.2	738.9	
124	TANGENT STRUCTURE (0°-1°)	125	0.0	910.7	920.7	1147515.2	1056012.6	744.7	
125	STRAIN STRUCTURE (0°-1°)	131	0.0	915.7	910.7	1147419.2	1055107.0	746.3	
126	TANGENT STRUCTURE (0°-1°)	125	0.0	880.7	915.7	1147322.8	1054196.4	735.5	
127	TANGENT STRUCTURE (0°-1°)	130	0.0	920.7	880.7	1147230.0	1053320.6	734.6	
128	TANGENT STRUCTURE (0°-1°)	125	0.0	840.6	920.7	1147133.1	1052405.0	735.8	
129	TANGENT STRUCTURE (0°-1°)	125	0.0	950.7	840.6	1147044.5	1051569.0	745.1	
130	HEAVY TANGENT STRUCTURE (1°-3°)	130	0.0	782.0	950.7	1146944.4	1050623.6	748.3	
131	LIGHT ANGLE STRUCTURE (3°-15°)	116	-8.7	555.8	782.0	1146862.0	1049845.9	763.3	
132	HEAVY TANGENT STRUCTURE (1°-3°)	150	0.0	754.5	555.8	1146887.6	1049290.7	731.8	
133	TANGENT STRUCTURE (0°-1°)	120	0.0	799.8	754.5	1146922.2	1048537.0	765.9	
134	TANGENT STRUCTURE (0°-1°)	120	0.0	709.9	799.8	1146958.9	1047738.1	768.9	
135	TANGENT STRUCTURE (0°-1°)	120	-0.3	632.4	709.9	1146991.5	1047029.0	770.7	
136	TANGENT STRUCTURE (0°-1°)	120	0.0	650.2	632.4	1147024.2	1046397.4	771.8	
137	DEADEND STRUCTURE (15°-45°)	131	-28.6	665.5	650.2	1147057.7	1045748.1	772.0	
138	TANGENT STRUCTURE (0°-1°)	115	0.0	615.3	665.5	1147406.4	1045181.2	774.5	SPLICE BOX
139	TANGENT STRUCTURE (0°-1°)	110	0.0	721.7	615.3	1147728.8	1044657.2	775.8	
140	HEAVY TANGENT STRUCTURE (1°-3°)	110	-2.0	606.0	721.7	1148106.9	1044042.5	793.3	
141	TANGENT STRUCTURE (0°-1°)	120	0.0	665.8	606.0	1148442.4	1043537.8	796.4	
142	DEADEND STRUCTURE (15°-45°)	116	33.4	704.2	665.8	1148811.0	1042983.4	801.3	
143	TANGENT STRUCTURE (0°-1°)	115	0.0	652.8	704.2	1148814.3	1042279.3	802.9	
144	HEAVY TANGENT STRUCTURE (1°-3°)	110	-1.8	616.1	652.8	1148817.3	1041626.5	810.6	
145	TANGENT STRUCTURE (0°-1°)	115	0.0	812.8	616.1	1148839.7	1041010.8	826.2	
146	TANGENT STRUCTURE (0°-1°)	125	0.0	867.9	812.8	1148869.4	1040198.6	826.9	
147	TANGENT STRUCTURE (0°-1°)	125	0.0	790.3	867.9	1148901.0	1039331.2	833.3	
148	TANGENT STRUCTURE (0°-1°)	120	0.0	706.5	790.3	1148929.8	1038541.4	833.9	
149	TANGENT STRUCTURE (0°-1°)	110	0.0	527.3	706.5	1148955.6	1037835.4	846.8	
150	TANGENT STRUCTURE (0°-1°)	105	0.0	630.0	527.3	1148974.8	1037308.4	834.3	
151	HEAVY TANGENT STRUCTURE (1°-3°)	140	-1.7	764.6	630.0	1148997.8	1036678.9	787.7	
152	TANGENT STRUCTURE (0°-1°)	150	0.0	729.4	764.6	1149047.8	1035916.0	776.8	
153	TANGENT STRUCTURE (0°-1°)	115	0.0	512.4	729.4	1149095.6	1035188.1	838.9	
154	TANGENT STRUCTURE (0°-1°)	130	0.0	538.8	512.4	1149129.2	1034676.9	842.4	
155	DEADEND STRUCTURE (0°-15°)	131	2.3	324.4	538.8	1149164.5	1034139.2	842.6	

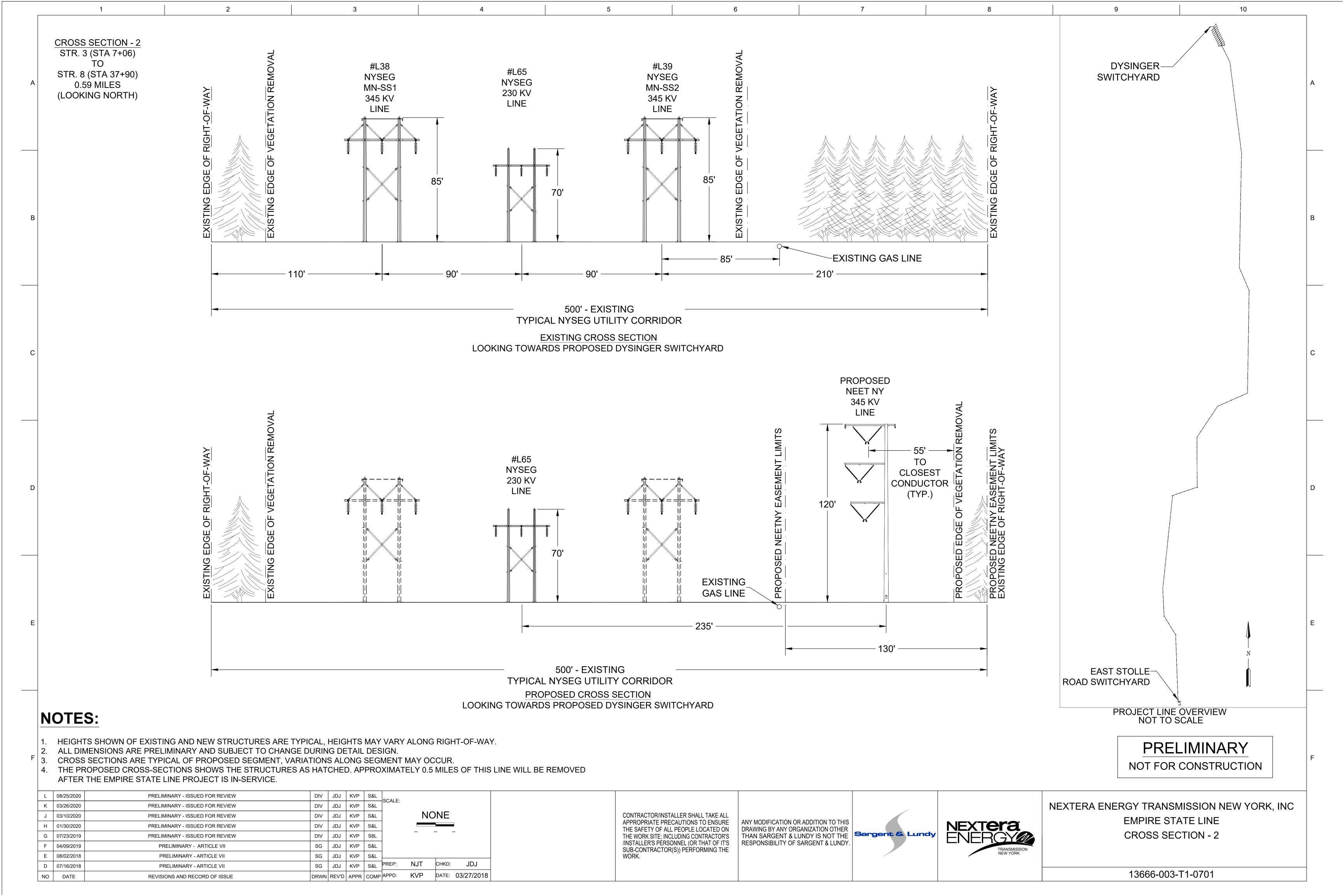


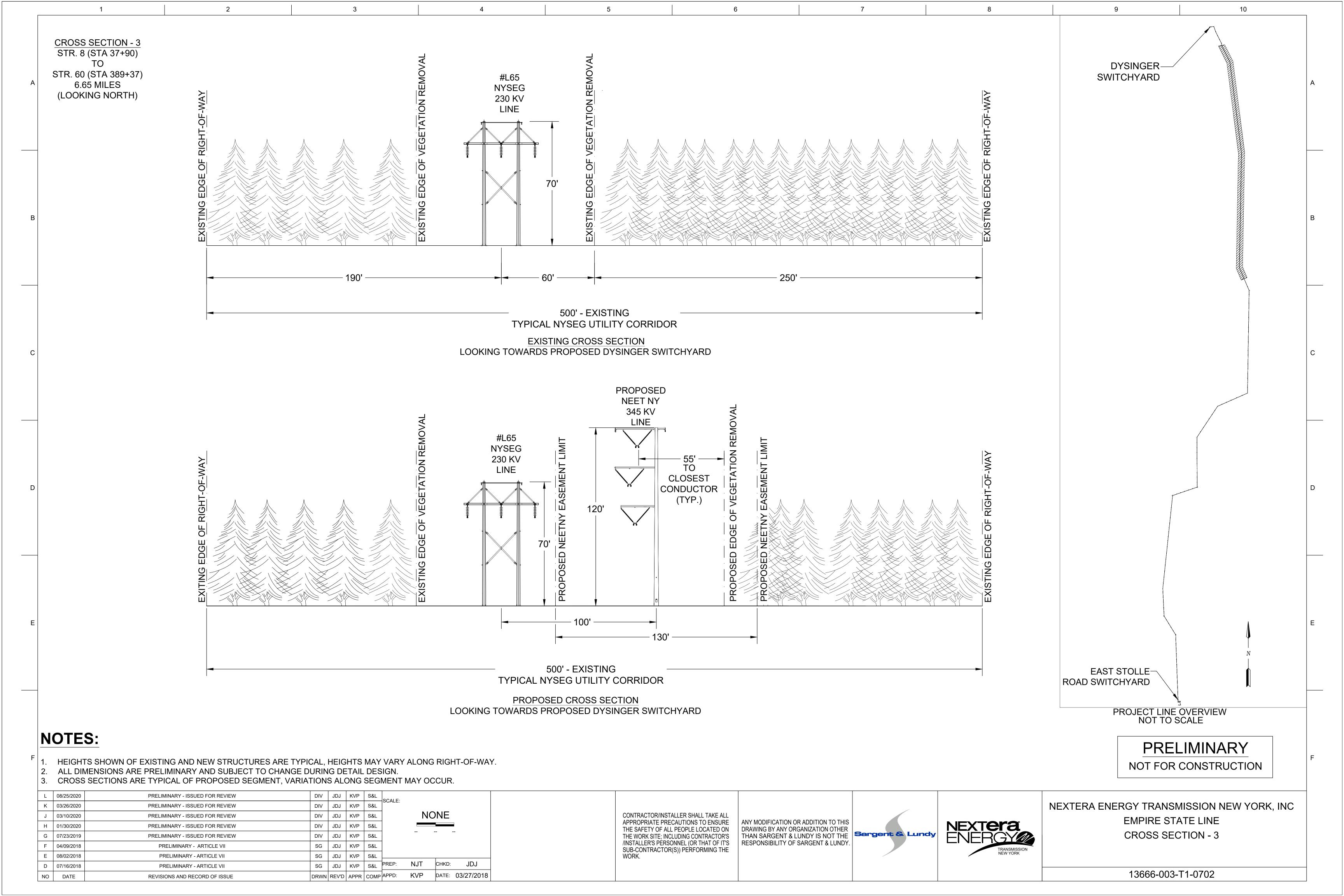
STRUCTURE	STRUCTURE TYPE	AGL	LINE ANGLE (+) Rt, (-) Lt	AHEAD SPAN (FT)	BACK SPAN (FT)	COORDINATES NAD83 3103 NEW YORK WEST			COMMENTS
NUMBER						X	Υ	Z	
1		1	NYSEG TAP	LINES	, , ,		1		
			EAST STOLLE TO S	STOLLE TAP					
ES-S1 TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	#N/A	#REF!	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
ES-S-1	DEADEND STRUCTURE (75°-105°)	126	-88.6	264.7	#N/A	1149176.5	1033162.5	842.1	
ES-S-2	DEADEND STRUCTURE (75°-105°)	131	83.9	591.6	264.7	1149441.1	1033160.7	837.7	
ES-S1-3	345 KV EAST STOLLE TAP STRUCTURE	126	87.2	243.4	591.6	1149500.4	1032572.0	840.5	
STOLLE RD TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	0.0	262.5	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
ES-S1-3 2	DEADEND STRUCTURE (0°-15°)	141	0.2	864.3	0.0	1149539.3	1032540.6	837.6	
ES-H-2	DEADEND STRUCTURE (75°-105°)	131	-86.9	264.4	864.3	1149508.8	1033213.4	840.6	
ES-H-1	DEADEND STRUCTURE (75°-105°)	126	89.2	133.4	264.4	1149244.4	1033215.8	840.7	
ES-S2 TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	0.0	133.4	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
<u>'</u>			DYSINGER TAKE-OFF TO	DYSINGER S2 TAP			1		
DYSINGER TAKE OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	227.0	-	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
D-S2-1	345 KV 3-POLE DEADEND STRUCTURE (75°-105°)	126	91.2	521.8	227.0	1153804.3	1133291.5	595.9	
D-S2-2	345 KV 3-POLE DEADEND STRUCTURE (75°-105°)	121	-85.7	215.0	521.8	1154310.7	1133417.1	597.0	
l	,	-	DYSINGER S1 TAKE-OFF T	O DYSINGER S1 TAP			1	<u> </u>	
D-S1 TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	331.9	215.0	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
D-S1-1	DEADEND STRUCTURE (75°-105°)	121	75.8	592.8	331.9	1153542.1	1133335.3	593.4	
D-S1-2	345 KV 3-POLE DEADEND STRUCTURE (75°-105°)	71	-86.7	134.0	592.8	1154119.6	1133469.3	598.1	
-		•	NYPA TAP I	LINES	<u>,                                      </u>			-	
MN1&2-DC_TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	142.9	0.0	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
MN1&2-D4	345 KV DOUBLE CIRCUIT DEADEND NYPA	125-145	3.9	419.5	142.9	1153544.8	1132380.6	595.8	
MN1&2-D-3	345 KV DOUBLE CIRCUIT TANGENT STRUCTURE (0°-1°) NYPA	140-155	-2.2	616.6	419.5	1153503.4	1131963.1	596.1	
MN1&2-D-2	345 KV DOUBLE CIRCUIT TANGENT STRUCTURE (0°-1°) NYPA	140-155	-2.2	512.2/360	616.6	1153465.9	1131347.7	596.3	
MN2-D-1	345 KV DEADEND TAP STRUCTURE (75°-105°) NYPA	130-145	91.9	597.5	360.0	1153424.1	1130990.1	596.5	SPLICE BOX
MN1-D-1	345 KV DEADEND TAP STRUCTURE (75°-105°) NYPA	130-145	97.1	651.1	512.2	1153454.8	1130835.6	597.0	
R1-TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	179.7	0.0	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
R2-TAKE-OFF	345 KV TAKE-OFF STRUCTURE	BY SUB CONTRACTOR	BY SUB CONTRACTOR	151.5	0.0	BY SUB CONTRACTOR	BY SUB CONTRACTOR	BY SUB CONTRACTOR	
R1&2-D-4	345 KV DOUBLE CIRCUIT DEADEND NYPA	125-145	9.8	424.9	179.7/151.5	1153714.1	1132375.8	595.8	
R1&2-D-3	345 KV DOUBLE CIRCUIT TANGENT STRUCTURE (0°-1°) NYPA	140-155	-2.6	617.3	424.9	1153672.4	1131953.0	595.7	
R1&2-D-2	345 KV DOUBLE CIRCUIT TANGENT STRUCTURE (0°-1°) NYPA	140-155	2.2	527.1/380.6	617.3	1153640.2	1131336.5	596.3	
R1-D-1	345 KV DEADEND TAP STRUCTURE (75°-105°) NYPA	130-145	-81.3	662.4	380.6	1153640.4	1130956.0	596.4	
R2-D-1	345 KV DEADEND TAP STRUCTURE (75°-105°) NYPA	130-145	-86.5	748.9	527.1	1153592.8	1130811.6	597.0	SPLICE BOX

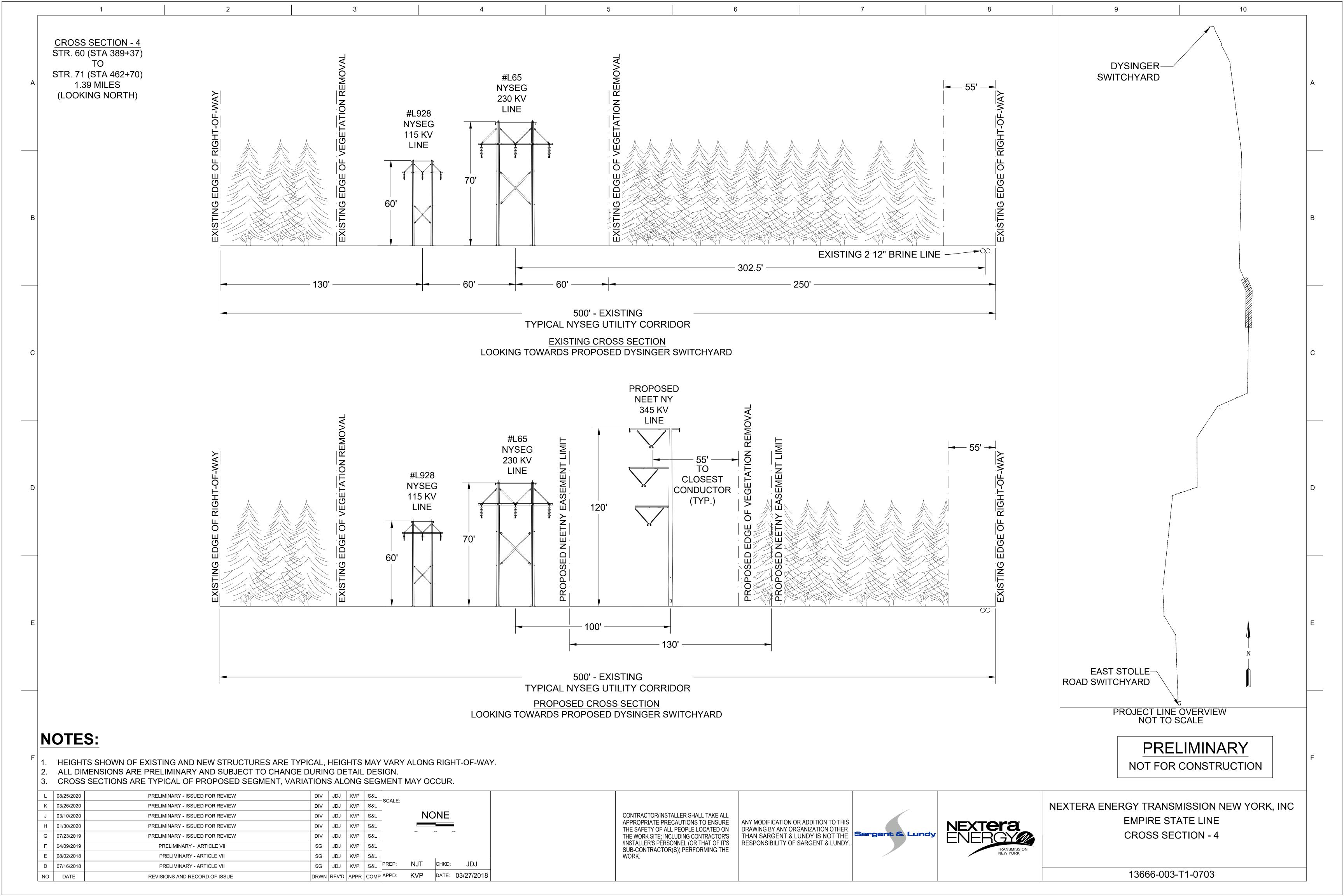
4 of 4 PRELIMINARY - ISSUED FOR PERMIT

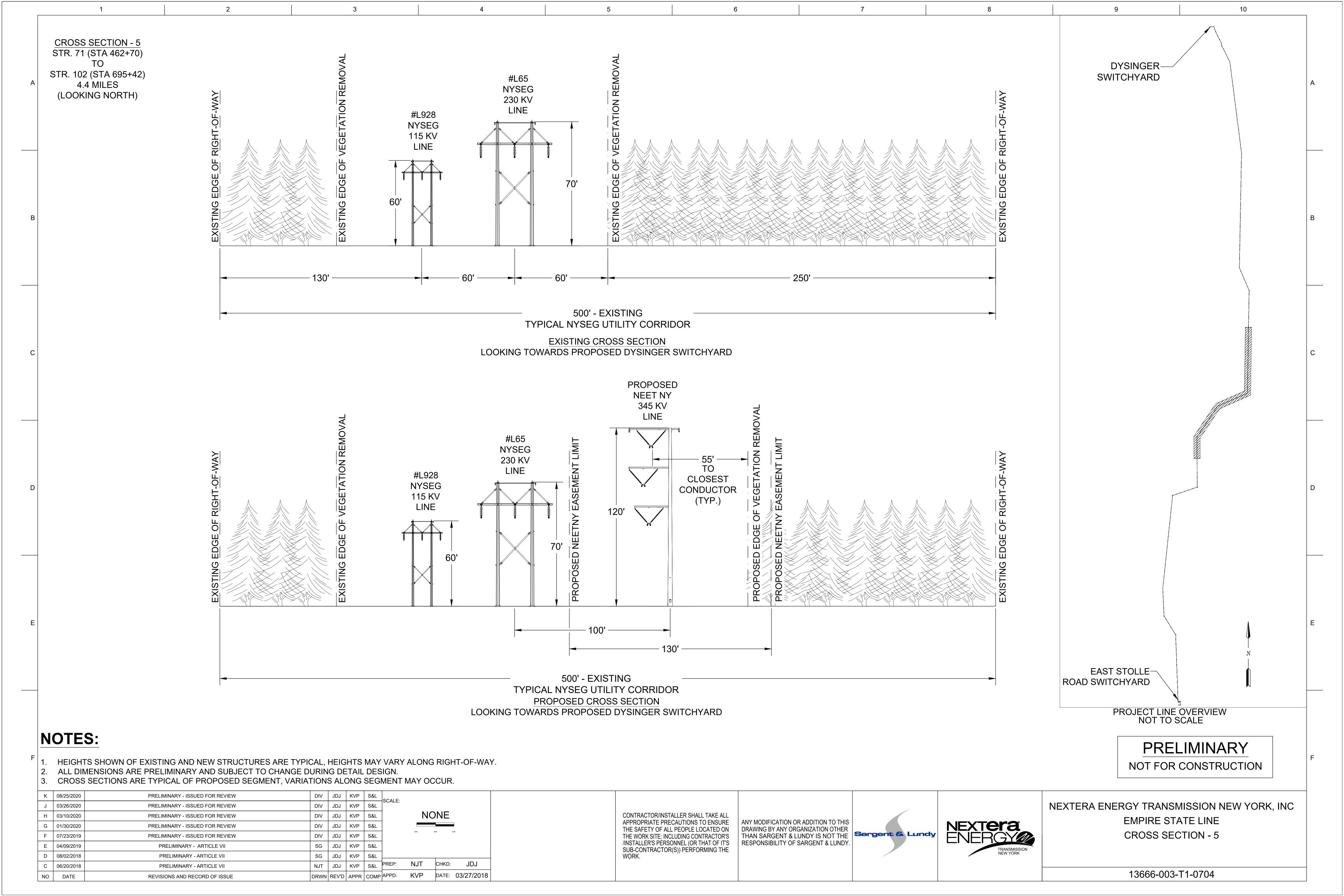
## ATTACHMENT C: CROSS SECTION DRAWINGS

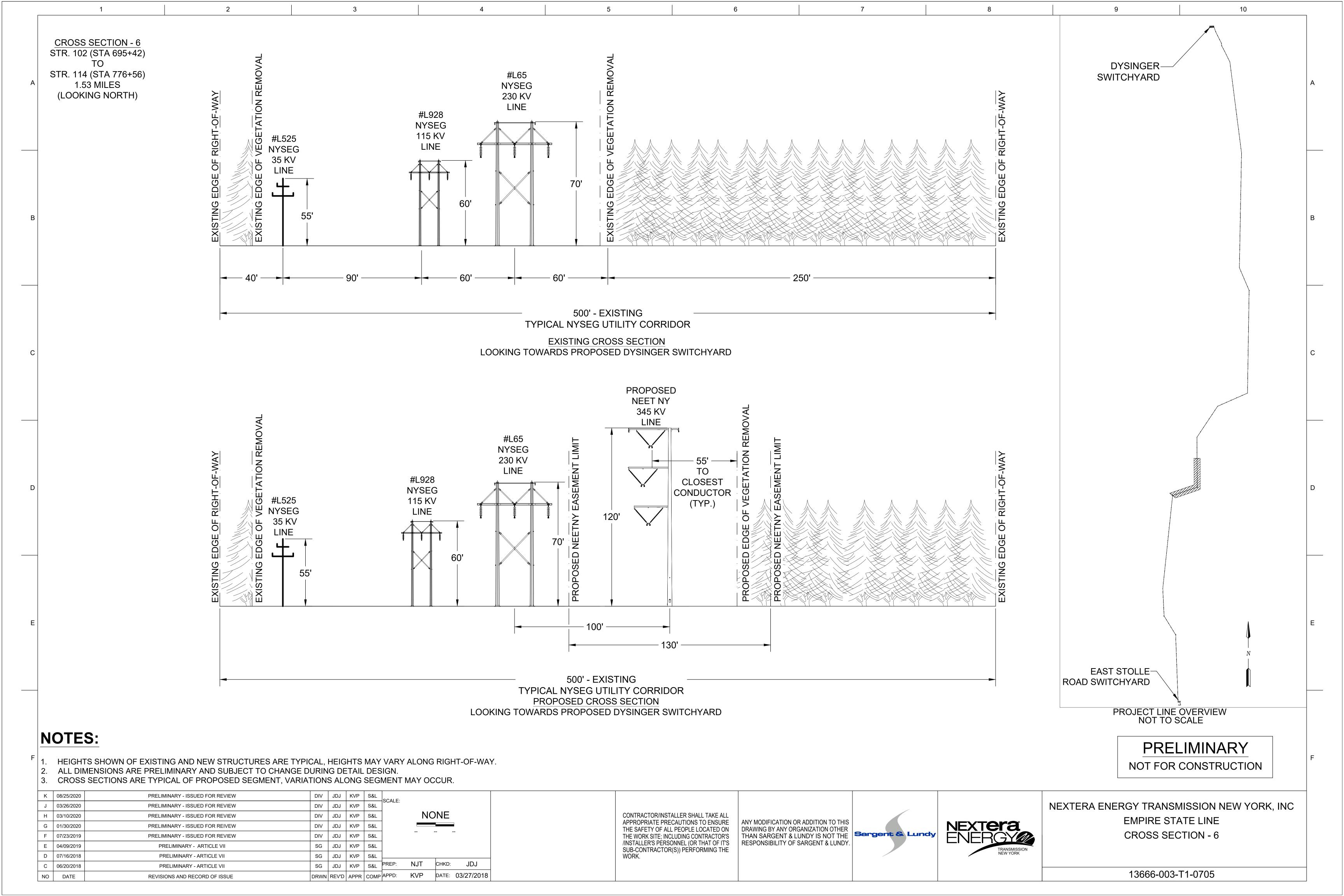
CROSS SECTION - 1 PROPOSED DYSINGER TAKE-OFF (STA 0+00) DYSINGER-TO SWITCHYARD STR. 3 (STA 7+06) 0.134 MILES (LOOKING WEST) **EXISTING CROSS SECTION** LOOKING TOWARDS PROPOSED DYSINGER SWITCHYARD DYSINGER DYSINGER TIE-IN: TIE-IN: **PROPOSED** DYSINGER DYSINGER NEET NY TO TO 345 KV KINTIGH 2 KINTIGH 1 LINE 345 KV 345 KV LINE LINE CLOSEST 当 CLOSES → CONDUCTOR TO CLOSEST CONDUCTOR (TYP.) - 55' -PROPOSED CROSS SECTION EAST STOLLE LOOKING TOWARDS PROPOSED DYSINGER SWITCHYARD ROAD SWITCHYARD PROJECT LINE OVERVIEW NOT TO SCALE NOTES: **PRELIMINARY** HEIGHTS SHOWN OF NEW STRUCTURES ARE TYPICAL, HEIGHTS MAY VARY ALONG RIGHT-OF-WAY. NOT FOR CONSTRUCTION ALL DIMENSIONS ARE PRELIMINARY AND SUBJECT TO CHANGE DURING DETAIL DESIGN. CROSS SECTIONS ARE TYPICAL OF PROPOSED SEGMENT, VARIATIONS ALONG SEGMENT MAY OCCUR. H 08/25/2020 PRELIMINARY - ISSUED FOR REVIEW DIV JDJ KVP S&L NEXTERA ENERGY TRANSMISSION NEW YORK, INC DIV JDJ KVP S&L G 03/26/2020 PRELIMINARY - ISSUED FOR REVIEW NONE CONTRACTOR/INSTALLER SHALL TAKE ALL F 03/13/2020 PRELIMINARY - ISSUED FOR REVIEW EMPIRE STATE LINE NEXTERA ENERGY ANY MODIFICATION OR ADDITION TO THIS APPROPRIATE PRECAUTIONS TO ENSURE PRELIMINARY - ISSUED FOR REVIEW DIV JDJ KVP S&L E 03/10/2020 DRAWING BY ANY ORGANIZATION OTHER THAN SARGENT & LUNDY IS NOT THE THE SAFETY OF ALL PEOPLE LOCATED ON **CROSS SECTION - 1** PRELIMINARY - ARTICLE VII SG JDJ KVP S&L D 07/16/2018 THE WORK SITE; INCLUDING CONTRACTOR'S /INSTALLER'S PERSONNEL (OR THAT OF IT'S SUB-CONTRACTOR(S)) PERFORMING THE WORK. SG JDJ KVP S&L RESPONSIBILITY OF SARGENT & LUNDY. PRELIMINARY - ARTICLE VII C 06/20/2018 SG JDJ KVP S&L B 05/09/2018 PRELIMINARY - ARTICLE VII NJT CHKD: NJT JDJ KVP S&L A 03/27/2018 PRELIMINARY - ARTICLE VII 13666-003-T1-0700 DRWN REV'D APPR COMP APPD: DATE: 03/27/2018 REVISIONS AND RECORD OF ISSUE NO DATE

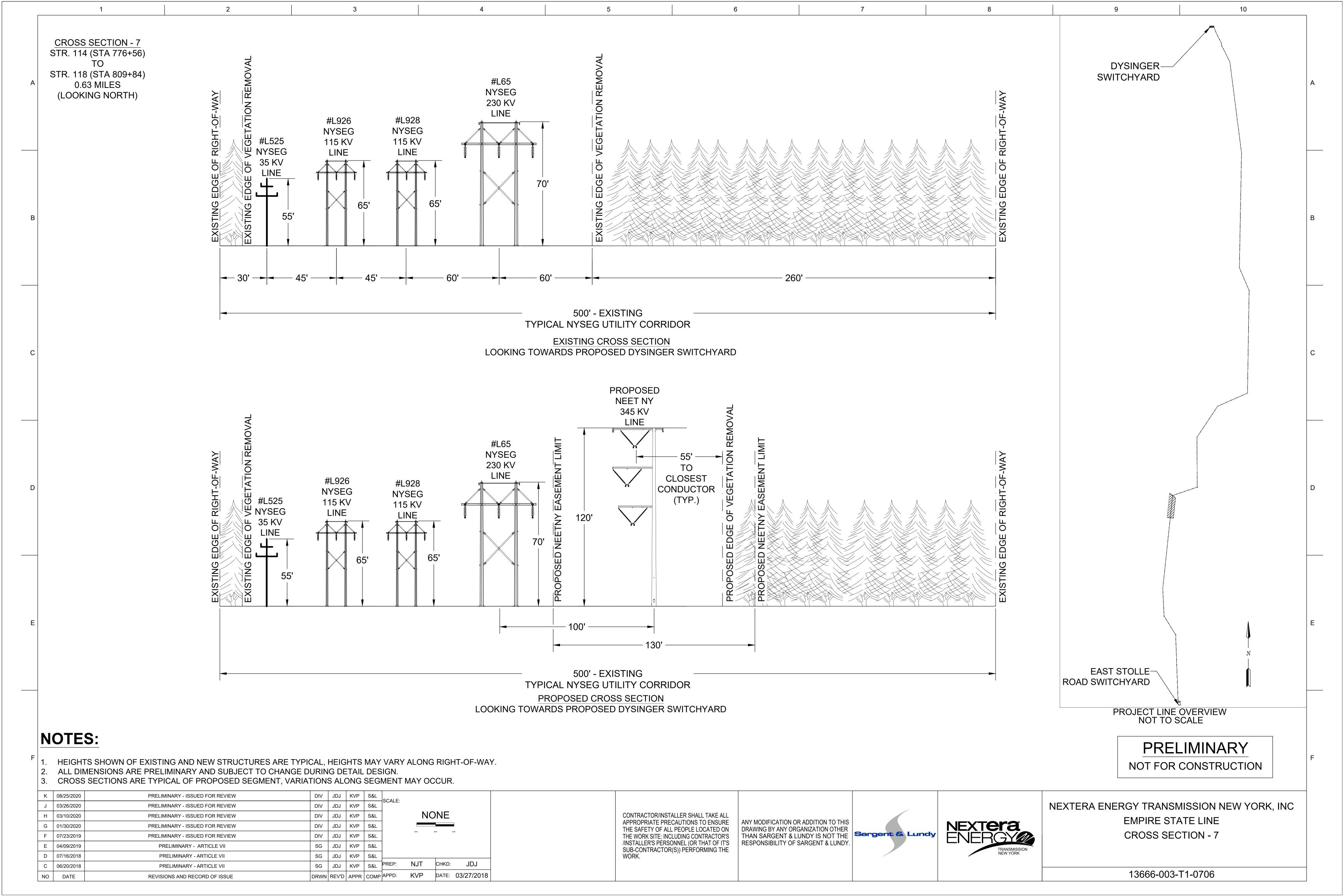


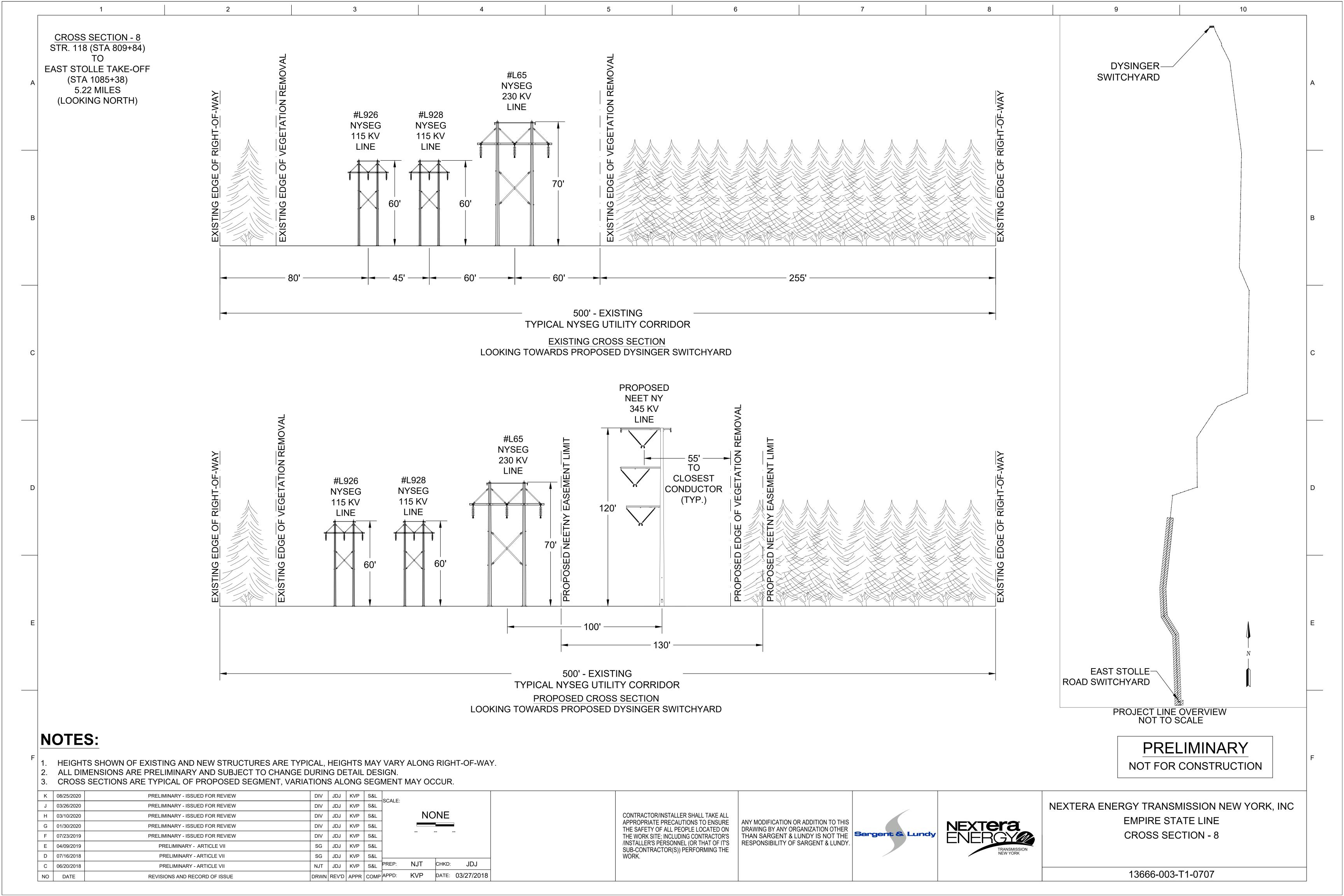












CROSS SECTION - 9 NYPA TAP TO DYSINGER-PROPOSED DYSINGER SUBSTATION TAKE-OFF 0.30 MILES (LOOKING NORTH) **EXISTING CROSS SECTION** LOOKING TOWARDS PROPOSED DYSINGER SUBSTATION **DYSINGER** TIE-IN: **DYSINGER MOSES-**TIE-IN: **DYSINGER** NIAGARA TO TO ROCHESTER **DYSINGER** 1 & 2 1 & 2 468' EAST STOLLE ROAD SUBSTATION PROPOSED CROSS SECTION LOOKING TOWARDS PROPOSED DYSINGER SUBSTATION PROJECT LINE OVERVIEW
NOT TO SCALE NOTES: **PRELIMINARY** HEIGHTS SHOWN OF EXISTING AND NEW STRUCTURES ARE TYPICAL, HEIGHTS MAY VARY ALONG RIGHT-OF-WAY. 2. ALL DIMENSIONS ARE PRELIMINARY AND SUBJECT TO CHANGE DURING DETAIL DESIGN. NOT FOR CONSTRUCTION CROSS SECTIONS ARE TYPICAL OF PROPOSED SEGMENT, VARIATIONS ALONG SEGMENT MAY OCCUR. 4. NEETNY WILL TRANSFER OWNERSHIP OF TRANSMISSION LINE TO NYPA IN ACCORDANCE WITH THE INTERCONNECTION AGREEMENT. NEXTERA ENERGY TRANSMISSION NEW YORK, INC NONE EMPIRE STATE LINE NEXTERA ENERGY ANY MODIFICATION OR ADDITION TO THIS E 08/25/2020 PRELIMINARY - ISSUED FOR REVIEW DRAWING BY ANY ORGANIZATION OTHER
THAN SARGENT & LUNDY IS NOT THE
RESPONSIBILITY OF SARGENT & LUNDY. NYPA/DYSINGER CROSS SECTION D 3/26/2020 PRELIMINARY - ISSUED FOR REVIEW /INSTALLER'S PERSONNEL (OR THAT OF IT'S SUB-CONTRACTOR(S)) PERFORMING THE WORK. C 03/13/2020 PRELIMINARY - ISSUED FOR REVIEW B 03/10/2020 PRELIMINARY - ISSUED FOR REVIEW CHKD: A 05/09/2018 PRELIMINARY - ARTICLE VII 13666-003-T1-0708 DATE: 05/09/2018 REVISIONS AND RECORD OF ISSUE NO DATE

