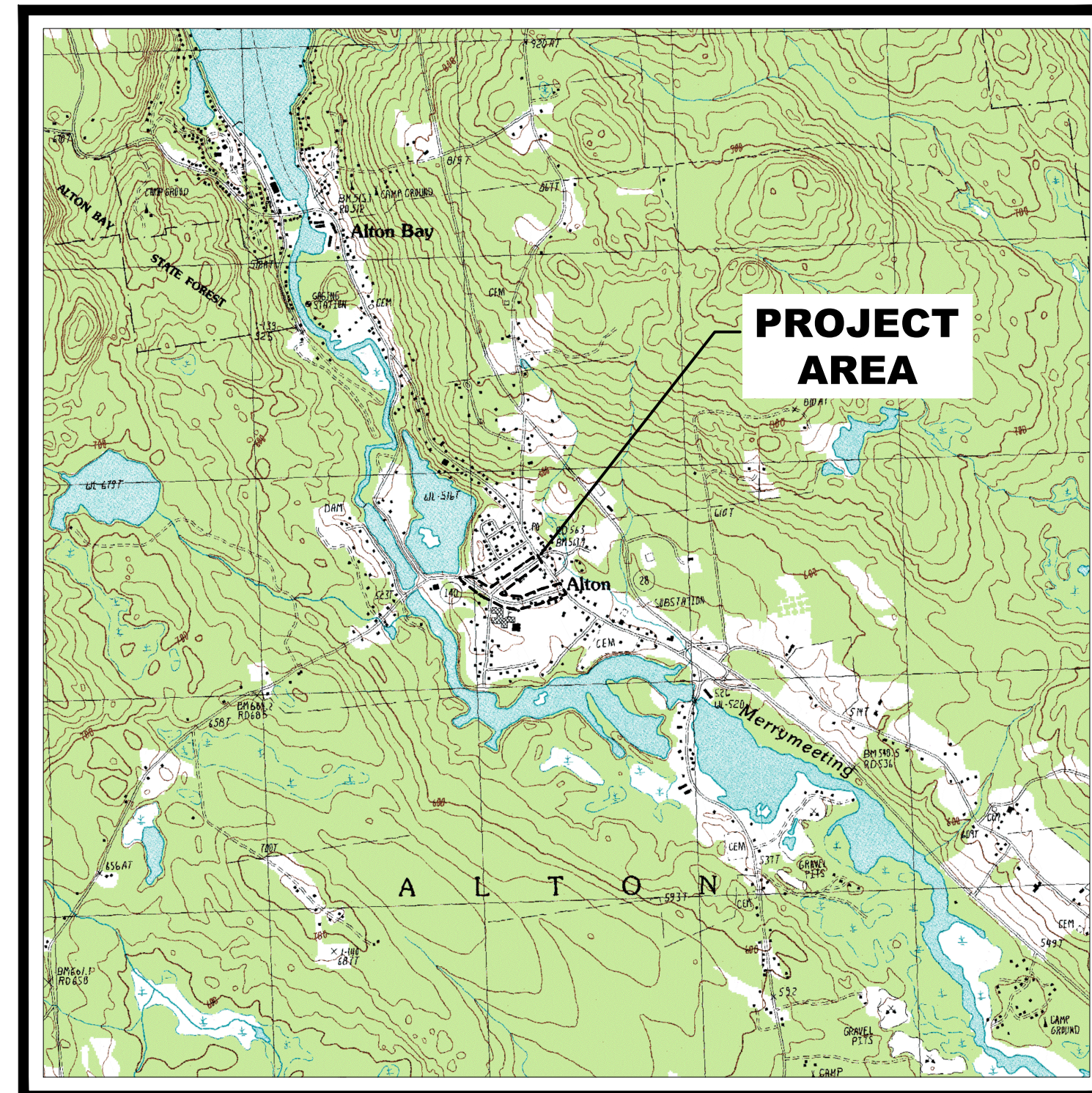


TOWN OF ALTON NEW HAMPSHIRE

SCHOOL STREET AND CHURCH STREET ROADWAY AND WATER SYSTEM IMPROVEMENTS

INDEX

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2	GENERAL NOTES
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Locus Map
Not to Scale



3-19-2021

KVPPartners **LLC**



















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MARCH 2021

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL RELEVANT ANGLES, LENGTHS, ELEVATIONS, AND INVERTS PRIOR TO CONSTRUCTION.
- THE LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES AS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND APPROPRIATE UTILITY AUTHORITY OF ANY DISCREPANCY WITH THE DRAWINGS. NEITHER THE ENGINEER NOR THE OWNER WARRANTS OR GUARANTEES THE CONDITIONS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SUBSURFACE STRUCTURES AND UTILITIES THROUGH THE APPROPRIATE AGENCY. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL CALL THE DIG-SAFE CENTER (1-888-344-7233) AT LEAST 72 BUSINESS HOURS PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITY WITH THE VARIOUS AFFECTED UTILITY AUTHORITIES TO PREVENT UNNECESSARY DELAY OF WORK OR INTERRUPTION OF SERVICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND SUPPORTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING SUCH ACTIVITY WITH THE APPROPRIATE UTILITY AUTHORITY. UTILITIES DESTROYED OR DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE UTILITY AUTHORITY AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER AT ALL TIMES DURING CONSTRUCTION AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND AS REQUIRED BY THE NHDOT. IT IS UNDERSTOOD THAT NO ROADWAYS WILL BE CLOSED AND NO DETOURS WILL BE PERMITTED TO ACCOMMODATE CONSTRUCTION AND THE CONTRACTOR SHALL PLAN THE CONSTRUCTION ACTIVITIES ACCORDINGLY.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN ACCESS TO ALL ABUTTING PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL CONFINE ALL OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES TO THE TOWN'S RIGHT-OF-WAY OR IN STAGING/STOCKPILE AREAS APPROVED BY THE TOWN. THE CONTRACTOR SHALL LOCATE STAGING AREAS THROUGH AGREEMENTS WITH AFFECTED PROPERTY OWNERS, OR PROVIDE ALTERNATE MEANS TO STORE MATERIAL AT THE WORK AREA AS REQUIRED.
- DURING NON-WORKING HOURS, THE CONTRACTOR SHALL SECURE ALL EQUIPMENT AND MATERIALS WITHIN THE LIMITS OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT, ROADWAYS, SIGNS, CURBS, SIDEWALKS, DRIVEWAYS, MAILBOXES, FENCES, PLANTINGS OR OTHER PHYSICAL FEATURES CAUSED BY THE CONTRACTOR'S ACTIVITIES AND SHALL REPAIR THEM AT NO ADDITIONAL COST TO THE OWNER. ALL AREAS BEYOND THE LIMITS OF CONSTRUCTION WHICH ARE DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS DURING CONSTRUCTION TO MINIMIZE THE AMOUNT OF DEBRIS THAT COLLECTS IN CATCH BASINS, CULVERTS AND MANHOLES. THE CONTRACTOR SHALL CLEAN ALL CATCH BASINS, CULVERTS AND MANHOLES AFFECTED BY CONSTRUCTION IN ORDER TO MAINTAIN AN OPERATING SYSTEM.
- ALL EXISTING CURB, SIGNS, DRAINAGE STRUCTURES, UTILITIES AND ANY OTHER MATERIALS WITHIN THE RIGHT OF WAY THAT ARE REMOVED BY THE CONTRACTOR MAY BE INSPECTED BY THE OWNER. THE OWNER RESERVES THE RIGHT TO RETAIN OWNERSHIP AND MAY DIRECT THE CONTRACTOR TO SALVAGE AND STOCKPILE ANY SUCH EXISTING MATERIALS AT NO ADDITIONAL COST TO THE OWNER. ANY EXISTING MATERIALS THE OWNER CHOOSES NOT TO SALVAGE AND STOCKPILE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FROM APPLICABLE GOVERNMENTAL AGENCIES, INCLUDING THE OWNER, PRIOR TO THE START OF ANY CONSTRUCTION.
- THE CONTRACTOR IS REQUIRED TO PROVIDE ADEQUATE SHORING FOR THE SOIL CONDITIONS AND DEPTHS ENCOUNTERED DURING CONSTRUCTION.
- IN THE EVENT THE CONTRACTOR ENCOUNTERS EXISTING MATERIAL REASONABLY BELIEVED TO BE HAZARDOUS WHICH HAS NOT BEEN RENDERED HARMLESS, THE CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND REPORT THE CONDITION TO THE OWNER AND ENGINEER. WORK IN THE AFFECTED AREA SHALL NOT RESUME UNTIL WRITTEN VERIFICATION BY THE OWNER THAT THE MATERIAL HAS BEEN REMOVED OR OTHERWISE BEEN RENDERED HARMLESS.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS. ALL DRAWINGS OF ANY PARTICULAR TRADE SHALL BE USED IN CONJUNCTION WITH DRAWINGS OF ALL OTHER TRADES TO COORDINATE THE CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED WORK. ANY PROPOSED CHANGES, VARIATIONS, OR SUBSTITUTIONS MUST BE REVIEWED AND ACCEPTED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
- ALL PROPOSED WORK WILL BE COMPLETED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS AND DETAILS (LATEST VERSION AND ALL AMENDMENTS) UNLESS OTHERWISE NOTED ON THESE PLANS OR SPECIFIED IN THE CONTRACT DOCUMENTS.
- ALL CATCH BASIN GRATES AND FRAMES SHALL BE TYPE "B" IN ACCORDANCE WITH NHDOT STANDARD DR-1.
- IMPLEMENT THE FOLLOWING MEASURES AS A MINIMUM PRIOR TO THE WINTER SUSPENSION OF WORK:
 - MAINTAIN TRAFFIC ON NEW PAVEMENT WITH APPROPRIATE PAVEMENT MARKINGS FOR THE WINTER.
 - PAVE ALL DRIVES THAT HAVE HAD PAVEMENT REMOVED DURING CONSTRUCTION.
 - STABILIZE AND/OR VEGETATE ALL DISTURBED SLOPES.
 - REMOVE TEMPORARY TRAFFIC CONTROL BARRIERS THAT HINDER WINTER MAINTENANCE.
 - PRIOR TO WINTER MAINTENANCE SEASON (BEGINNING NOVEMBER 1), ARRANGE A REVIEW OF THIS PROJECT WITH THE TOWN TO ENSURE THE ROADWAY IS ACCEPTABLE FOR WINTER MAINTENANCE.
- ALL WATER GATES, MANHOLES AND CATCH BASINS WITHIN THE PROJECT LIMITS WILL BE ADJUSTED TO GRADE BY THE CONTRACTOR. GAS GATES AND TELEPHONE MANHOLES WILL BE ADJUSTED BY THE EFFECTED UTILITY COMPANY. THE CONTRACTOR WILL COORDINATE ALL UTILITY RELOCATIONS (BY OTHERS) WITH THE APPROPRIATE UTILITY COMPANY.
- ALL EXISTING DRAINAGE PIPES WILL BE ABANDONED IN PLACE UNLESS OTHERWISE NOTED ON THE PLANS. ALL UPSTREAM DRAINAGE SYSTEMS AT THE PROJECT LIMITS WILL BE CONNECTED TO THE PROPOSED DRAINAGE SYSTEM AS NOTED ON THE PLANS OR AS FOUND DURING CONSTRUCTION. EXISTING PIPES TO BE ABANDONED WILL BE PLUGGED AT THE ENDS (A CLEAN PIPE END WILL BE CREATED) WITH BRICK AND MORTAR TO CREATE A TIGHT SEAL OR BY ANOTHER METHOD APPROVED BY THE ENGINEER. ALL PIPE PLUGS SHALL BE CONSTRUCTED TO A DEPTH EQUAL TO THE PIPE DIAMETER. PAYMENT FOR PIPE ABANDONMENT AND PLUGS WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE FOR THAT WORK.

SURVEY LEGEND

-----	RIGHT-OF-WAY LINE		CONIFEROUS TREE
=====	EDGE OF PAVEMENT		SHRUB
- - - - -	EDGE OF GRAVEL		DECIDUOUS TREE
OH	OVERHEAD UTILITY LINES		ARTESIAN WELL
D	DRAINAGE LINE		IRON PIPE OR REBAR
S	SEWER LINE		GRANITE OR CONCRETE BOUND (GB OR CB)
G	GAS LINE		UTILITY POLE
T	TEL. LINE		LIGHT POLE
UG	UNDERGROUND ELECT.		SEWER MANHOLE
DYL	DOUBLE YELLOW LINE		DRAIN MANHOLE
SWL	SINGLE WHITE LINE		CATCH BASIN
VGC OR SGC	VERTICAL OR SLOPED GRANITE CURB		HYDRANT
=====	SHORE LINE		WATER SHUTOFF
-----	CHAIN LINK FENCE		IRRIGATION CONTROL VALVE
-----	STOCKADE FENCE		GAS SHUTOFF
-----	STONE WALL		SIGN HC-HANDICAPPED
-----	EDGE OF WOODS		HCV-VAN ACCESSIBLE
-----	CONCRETE		NP-NO PARKING

SURVEY DRIANAGE NOTES

CATCH BASIN 1 RIM 562.09 INV. 559.19 (NE) INV. 558.59 (SW) SUMP 557.29	CATCH BASIN 9 RIM 529.56 INV. 525.26 (S) INV. 525.28 (SE) INV. 525.16 (NW) SUMP 524.56
CATCH BASIN 2 RIM 562.29 INV. 559.99 (NE) INV. 559.94 (SW) SUMP 558.79	CATCH BASIN 10 RIM 529.08 INV. 525.53 (SE) INV. 525.53 (N) SUMP 523.48
CATCH BASIN 3 RIM 562.20 COULD NOT MEASURE INV (NE) INV. 560.00 (SW) INV. 559.90 (N) SUMP 559.35	CATCH BASIN 11 RIM 530.83 INV. 526.98 (SE) INV. 525.83 (NW) SUMP 525.73
CATCH BASIN 4 RIM 561.85 INV. 556.65 (NE) INV. 558.55 (N) INV. 556.65 (SW) SUMP 555.75	CATCH BASIN 12 RIM 530.80 INV. 527.40 (SE) INV. 526.70 (NW) SUMP 523.70
CATCH BASIN 5 RIM 561.60 INV. 558.70 (S)	CATCH BASIN 13 RIM 538.24 INV. 534.64 (SE) INV. 534.04 (NW) SUMP 533.84
CATCH BASIN 6 RIM 560.65 INV. 557.45 (N) INV. 557.15 (NE) INV. 555.15 (SE) INV. 555.05 (SW) SUMP 553.95	DMH 14 RIM 544.61 UNABLE TO OPEN
CATCH BASIN 7 RIM 560.14 UNABLE TO OPEN	CATCH BASIN 15 RIM 545.18 COULD NOT MEASURE INV (NW) SUMP 541.38
CATCH BASIN 8 RIM 553.59 INV. 549.69 (NE) INV. 549.79 (SW) SUMP 549.79	CATCH BASIN 16 RIM 544.36 INV. 541.66 (SE) INV. 541.66 (SW) INV. 541.56 (NW) SUMP 539.86
	CATCH BASIN 17 RIM 547.92 INV. 543.67 (E) INV. 544.52 (S) INV. 543.52 (NW) SUMP 542.82
	CATCH BASIN 18 RIM 547.85 INV. 544.65 (N) SUMP 544.65
	CATCH BASIN 19 RIM 554.67 INV. 550.37 (E) INV. 550.27 (W) SUMP 547.67
	CATCH BASIN 20 RIM 557.19 INV. 552.69 (E) INV. 552.59 (W) SUMP 551.89
	CATCH BASIN 21 RIM 558.92 INV. 553.22 (NE) INV. 553.22 (SW) SUMP 551.82
	CATCH BASIN 22 RIM 558.80 INV. 554.30 (NE) INV. 554.05 (SW) SUMP 552.30
	CATCH BASIN 23 RIM 558.79 INV. 554.89 (SW) SUMP 553.09

SURVEY NOTES

- SURVEY BY TOTAL STATION BETWEEN THE DATES OF MAY 27 AND JUNE 26, 2020. CONTROL TRAVERSE ERROR OF CLOSURE LESS THAN 1:15,000.
- HORIZONTAL DATUM IS BASED ON NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD 83 BASED ON GPS OBSERVATIONS AND OPUS SOLUTIONS.
- VERTICAL DATUM IS BASED ON NAVD 88.
- THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND PLOTTED FROM EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTION OF THE UTILITIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, ANY UTILITY COMPANY AND APPROPRIATE GOVERNMENTAL AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE AT 811.

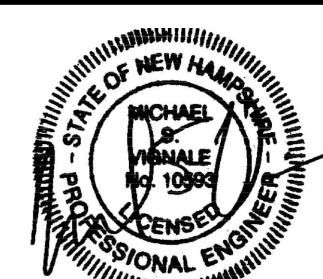
ABBREVIATIONS

ABAN.	ABANDON
ADJ.	ADJUST
EXIST.	EXISTING
PROP.	PROPOSED
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
R.C.P.	REINFORCED CONCRETE PIPE (CLASS III UNLESS NOTED)
CB	CATCH BASIN
MH	MANHOLE
WG	WATER GATE
GG	GAS GATE
BIT.	BITUMINOUS
CEM.	CEMENT
PVMT.	PAVEMENT
CONC.	CONCRETE
GRAN.	GRANITE
INV.	INVERT
EL.	ELEVATION
DWY.	DRIVEWAY
SDWK.	SIDEWALK
WCR	WHEELCHAIR RAMP

WATER SYSTEM NOTE

THE WATER DEPARTMENT WILL SUPPLY THE 6" AND 8" PIPE AND HYDRANTS FOR THE WATER SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE PIPE AND HYDRANTS, ALL FITTINGS, VALVES, BOXES, AND OTHER APPURTENANCES REQUIRED TO COMPLETE THE WORK AS INDICATED ON THE PLANS AND IN THE SPECIFICATIONS.

REVISIONS			
NUMBER	DATE	BY	DESCRIPTION



3-19-2021

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SCALE 1" = 20'

ALTON ROADWAY
IMPROVEMENT PROJECT

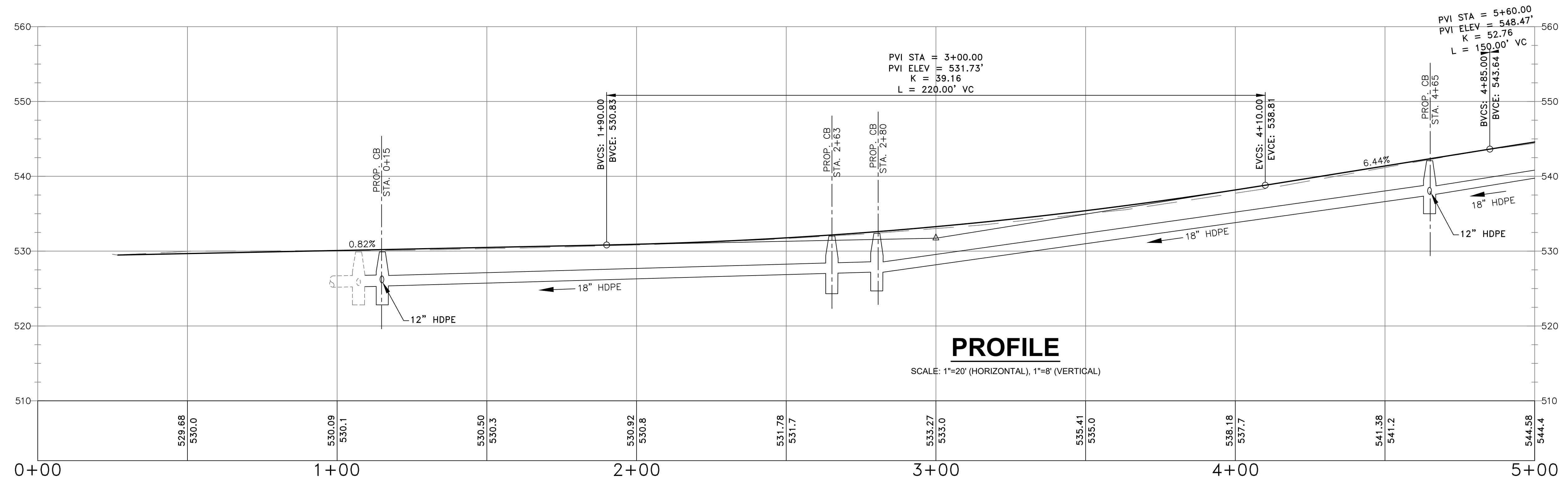
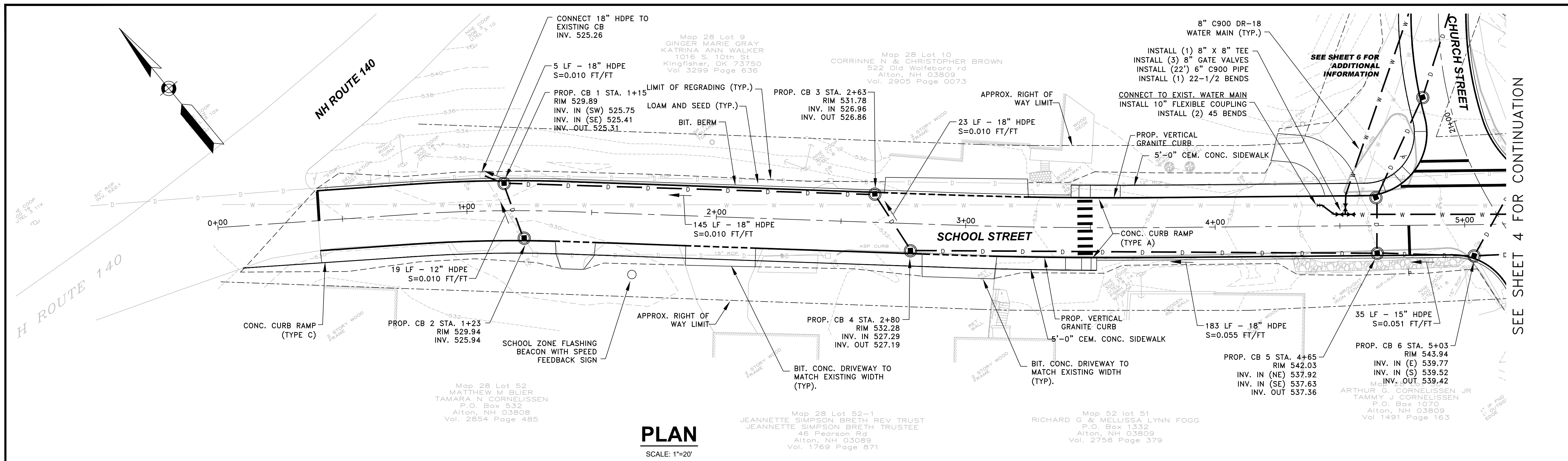
ALTON, NEW HAMPSHIRE

GENERAL NOTES

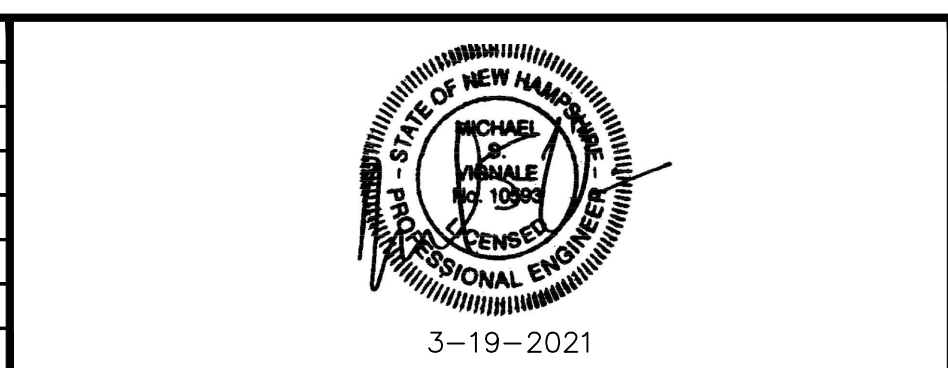
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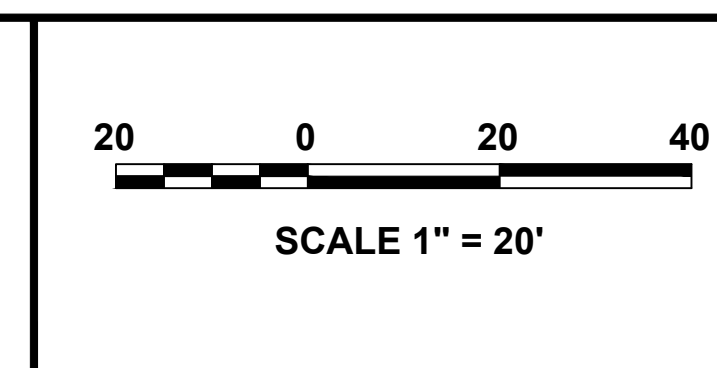
MARCH 2021



REVISIONS			
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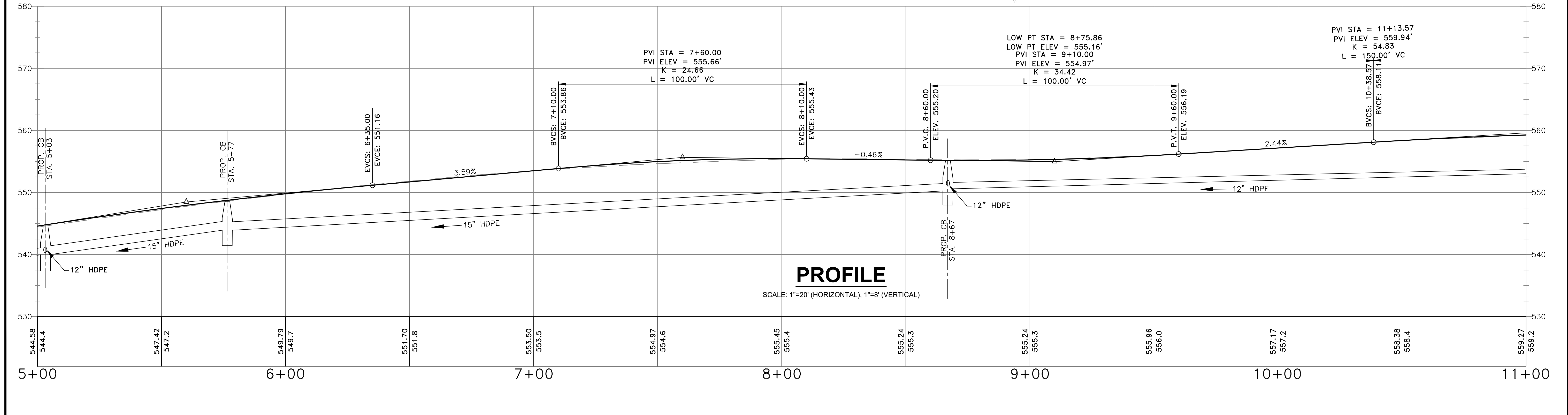
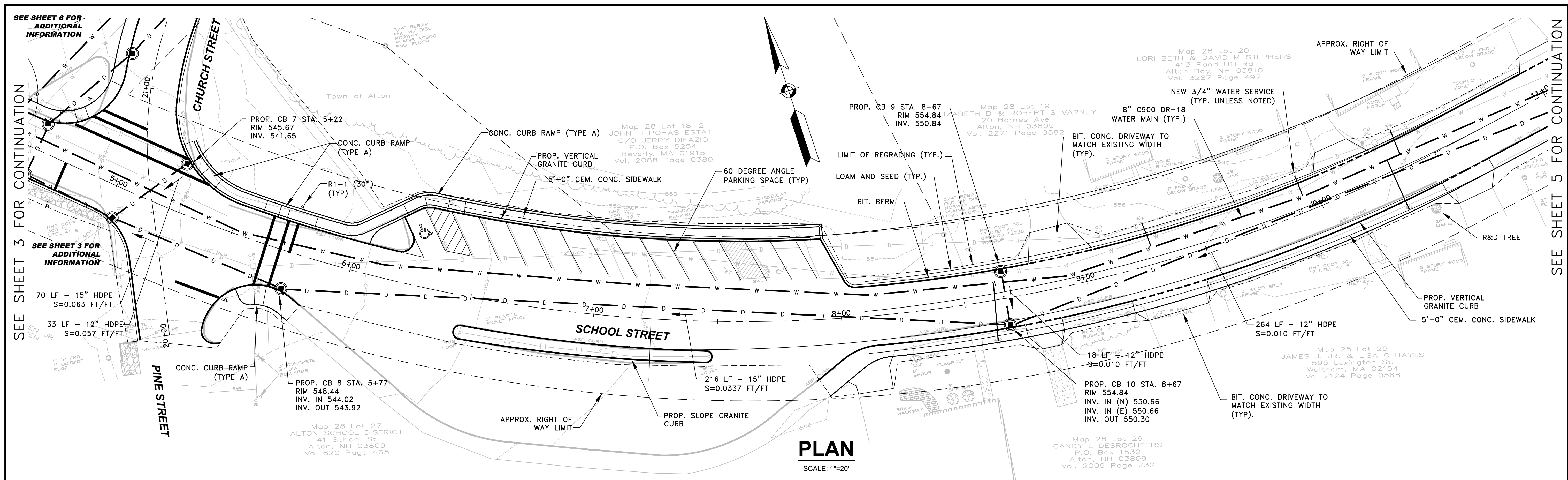


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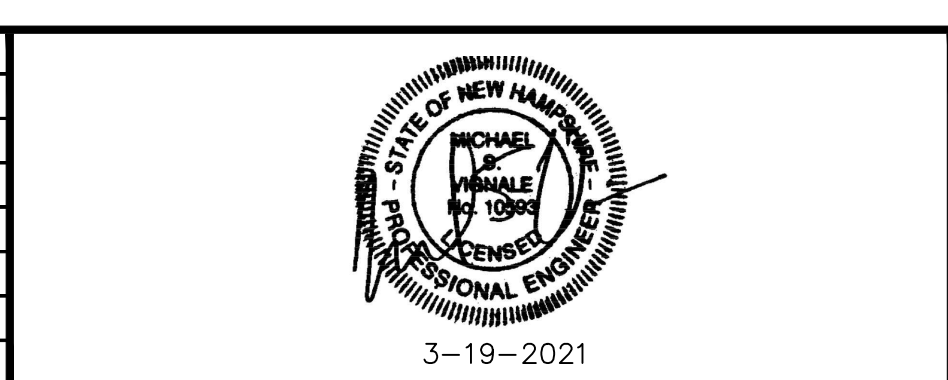


ALTON ROADWAY
IMPROVEMENT PROJECT
ALTON, NEW HAMPSHIRE
CONSTRUCTION PLAN - 1

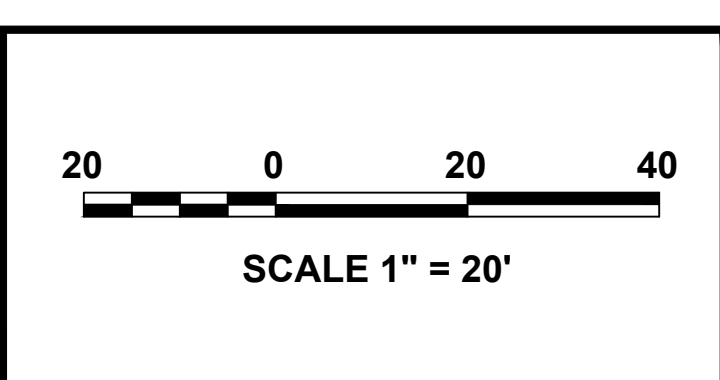
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MARCH 2021



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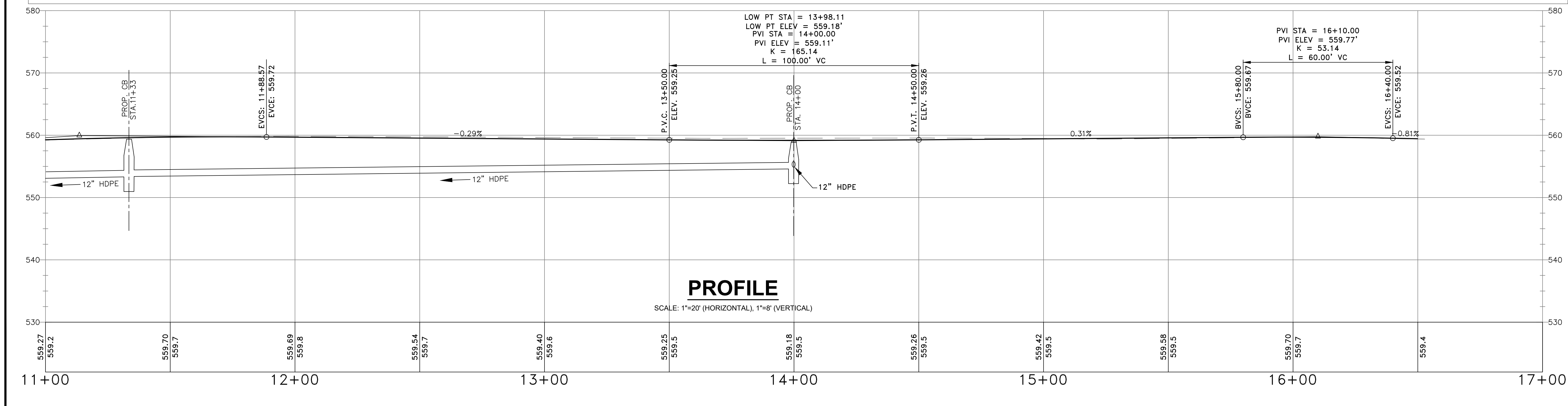
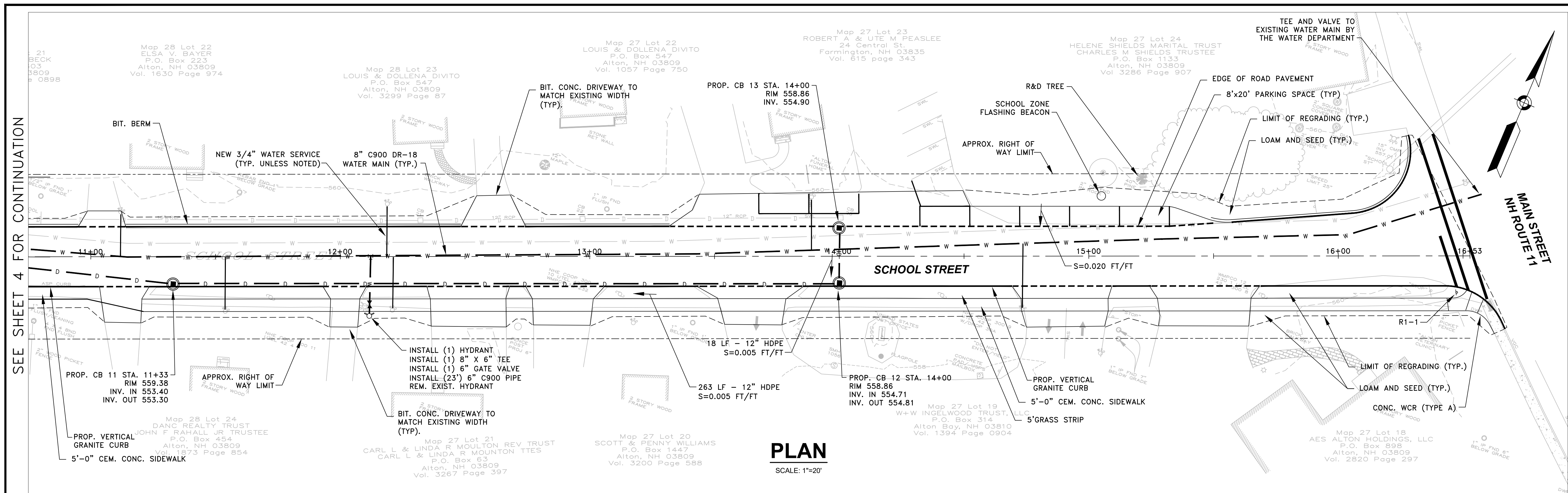


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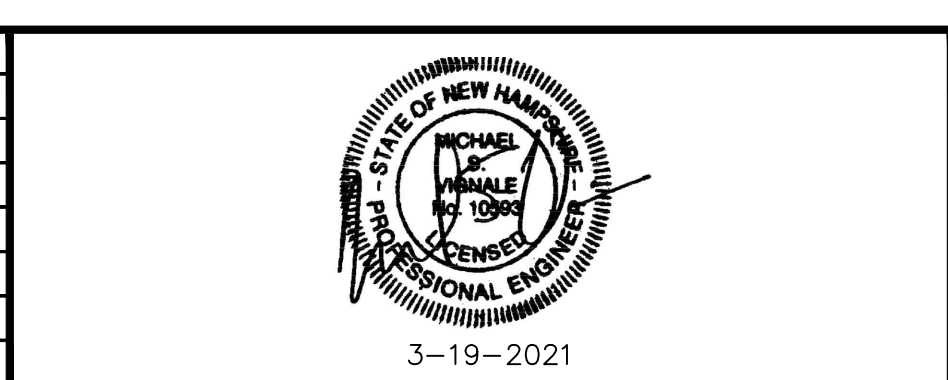


ALTON ROADWAY
IMPROVEMENT PROJECT
ALTON, NEW HAMPSHIRE
CONSTRUCTION PLAN - 2

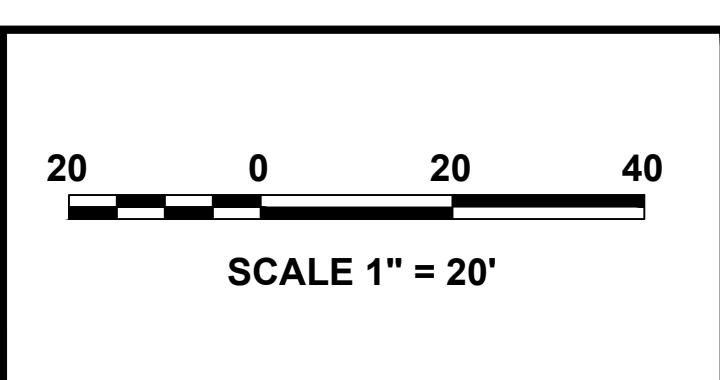
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MARCH 2021



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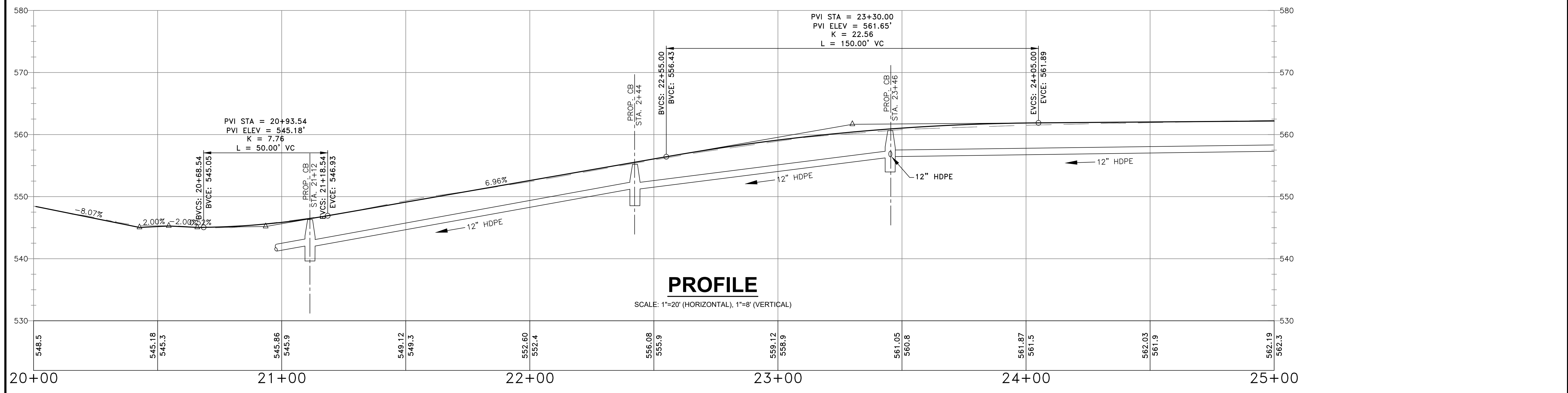
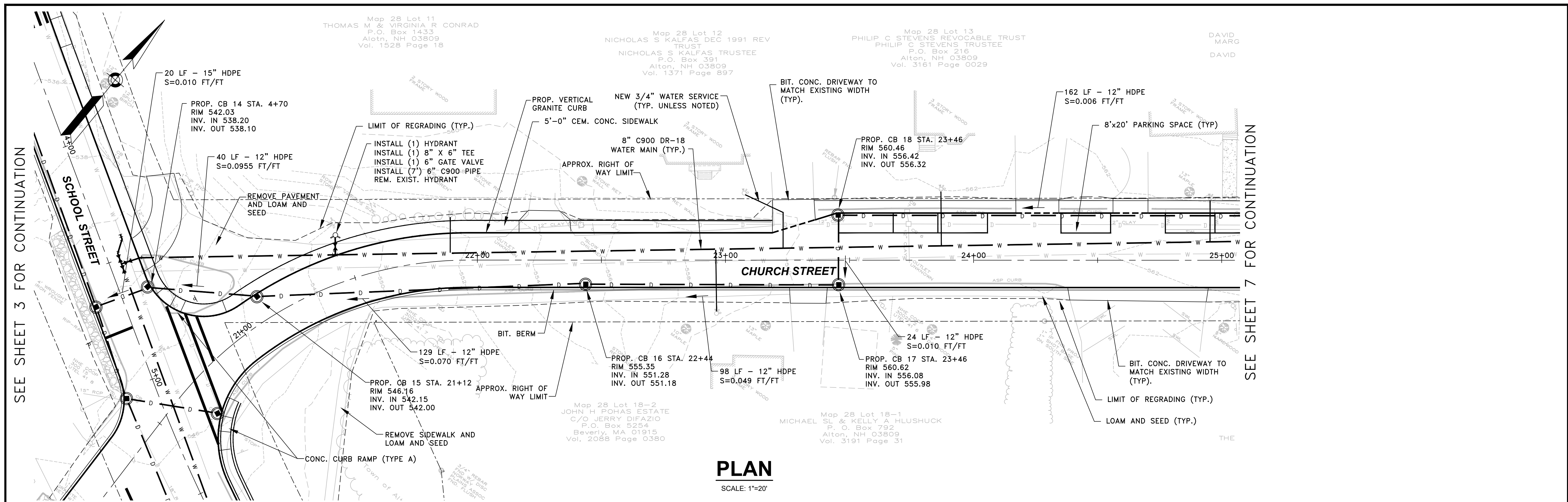


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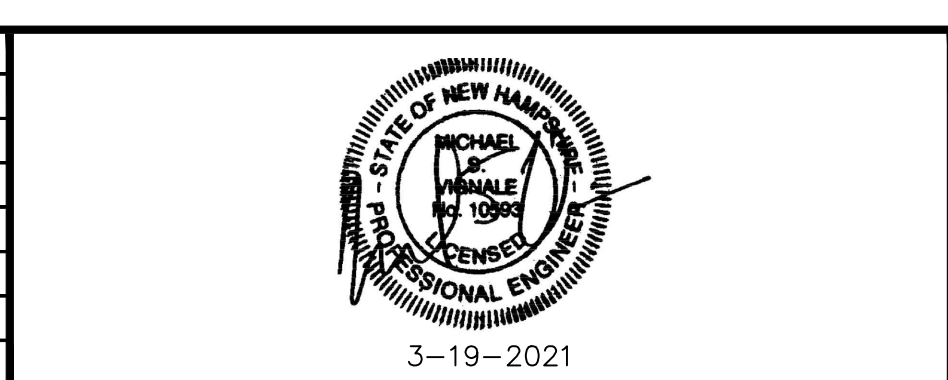


ALTON ROADWAY
 IMPROVEMENT PROJECT
 ALTON, NEW HAMPSHIRE
 CONSTRUCTION PLAN - 3

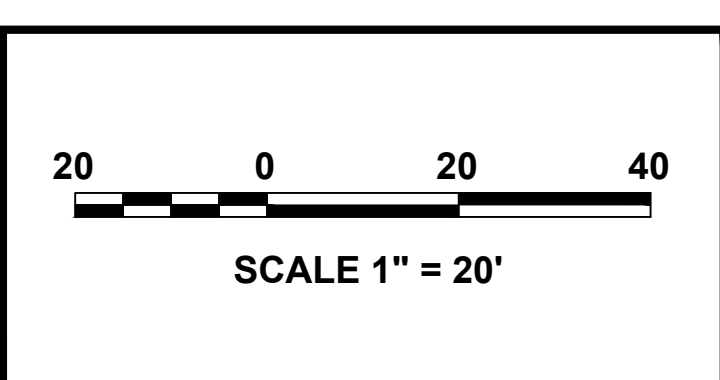
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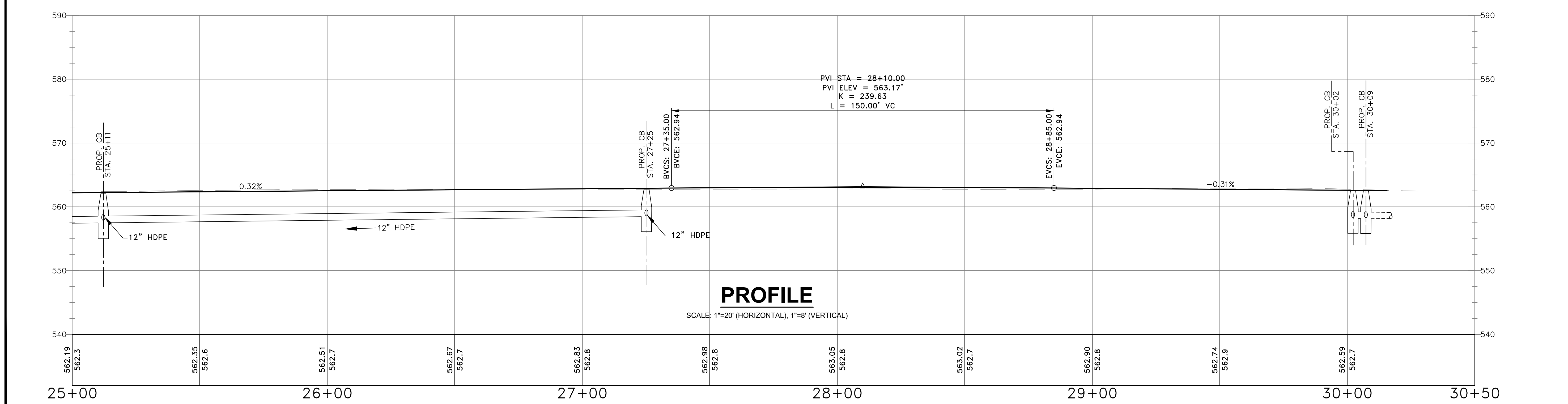
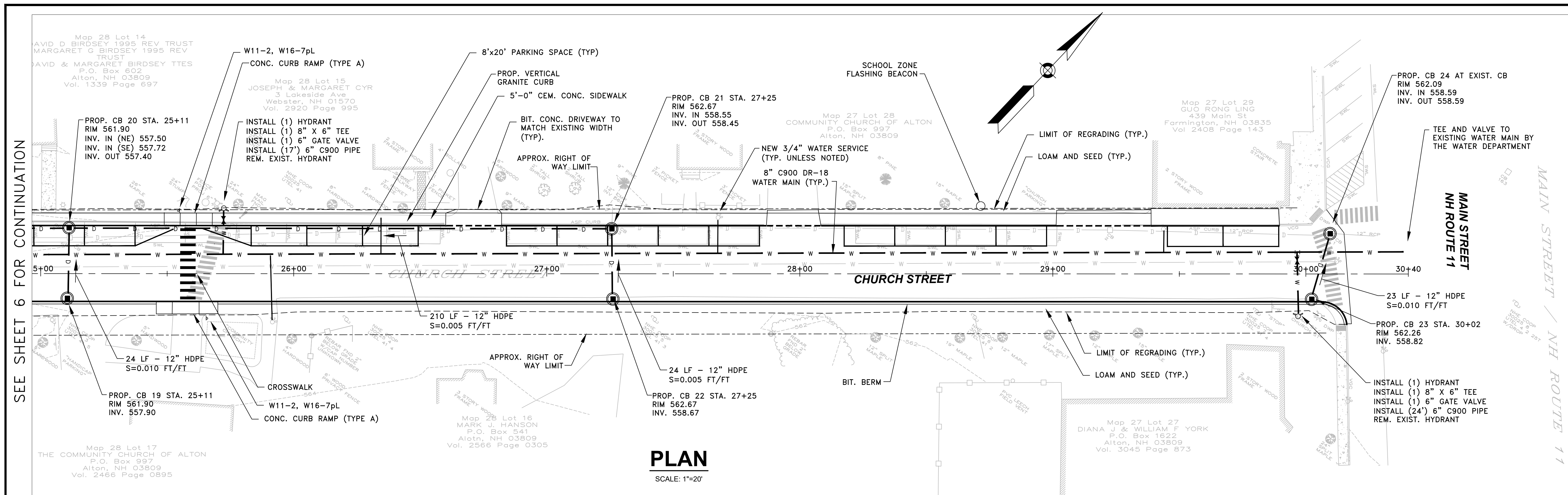


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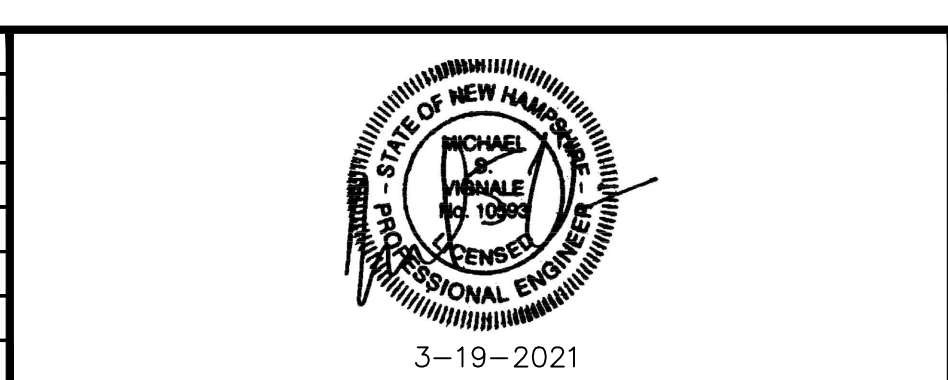


ALTON ROADWAY
IMPROVEMENT PROJECT
ALTON, NEW HAMPSHIRE
CONSTRUCTION PLAN - 4

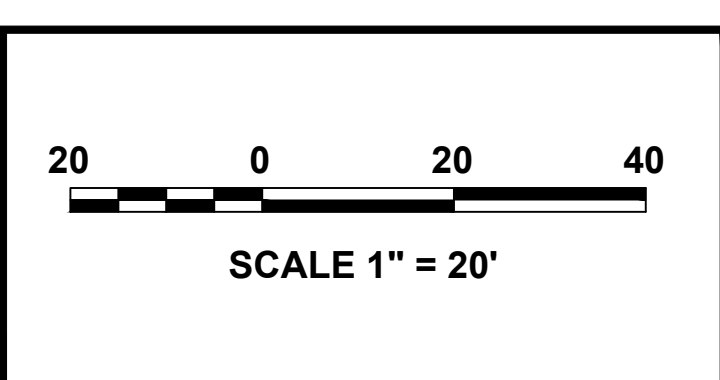
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MARCH 2021



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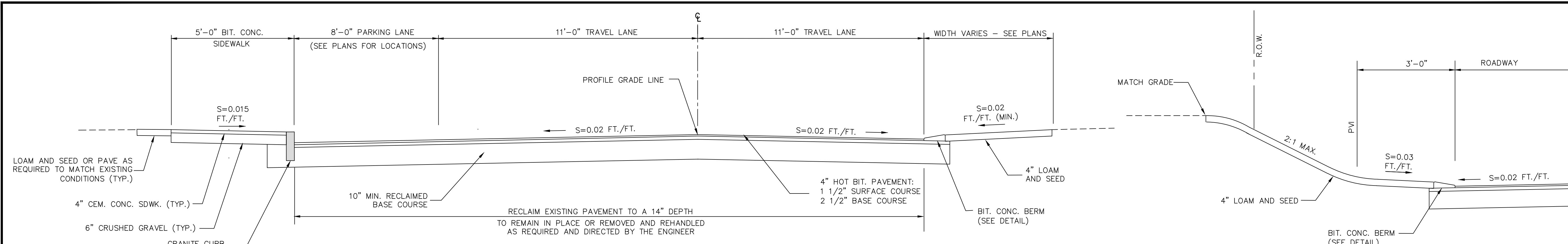


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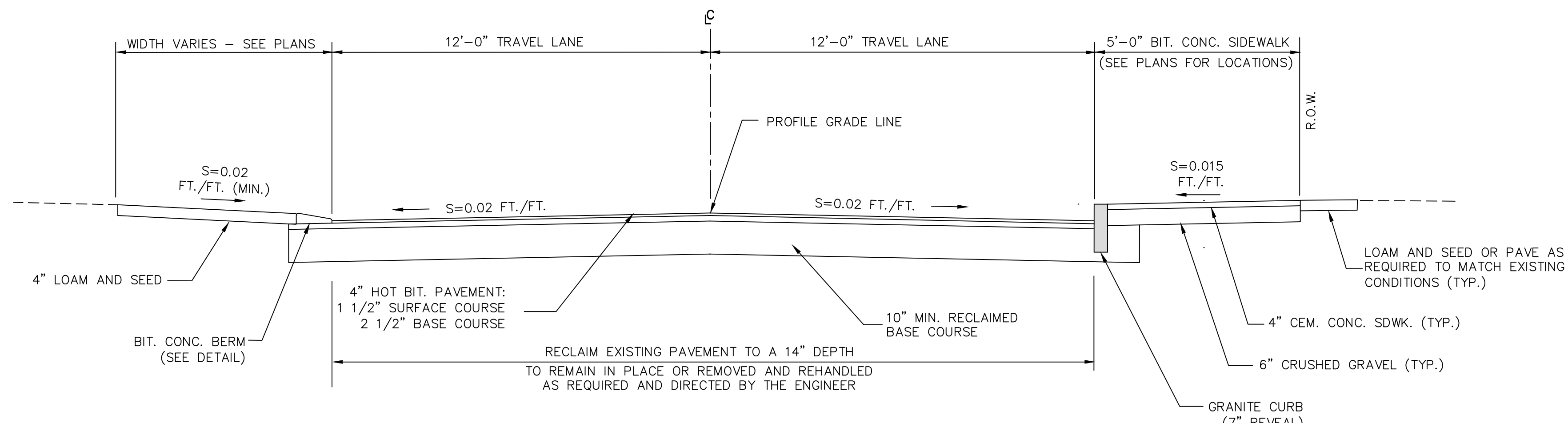
ALTON ROADWAY
IMPROVEMENT PROJECT
ALTON, NEW HAMPSHIRE
CONSTRUCTION PLAN - 5

SHEET NO.
7
MARCH 2021

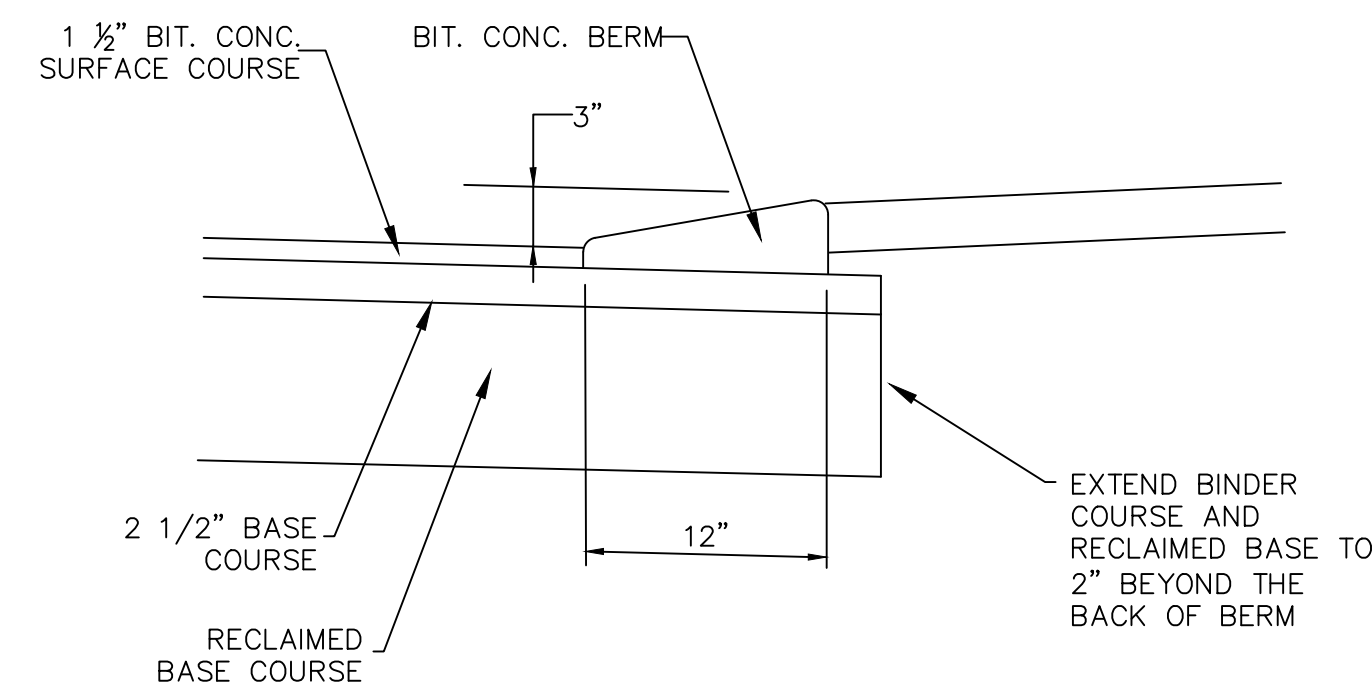


TYPICAL ROADWAY SECTION - CHURCH STREET
NOT TO SCALE

TYPICAL SLOPE CONSTRUCTION SECTION
NOT TO SCALE

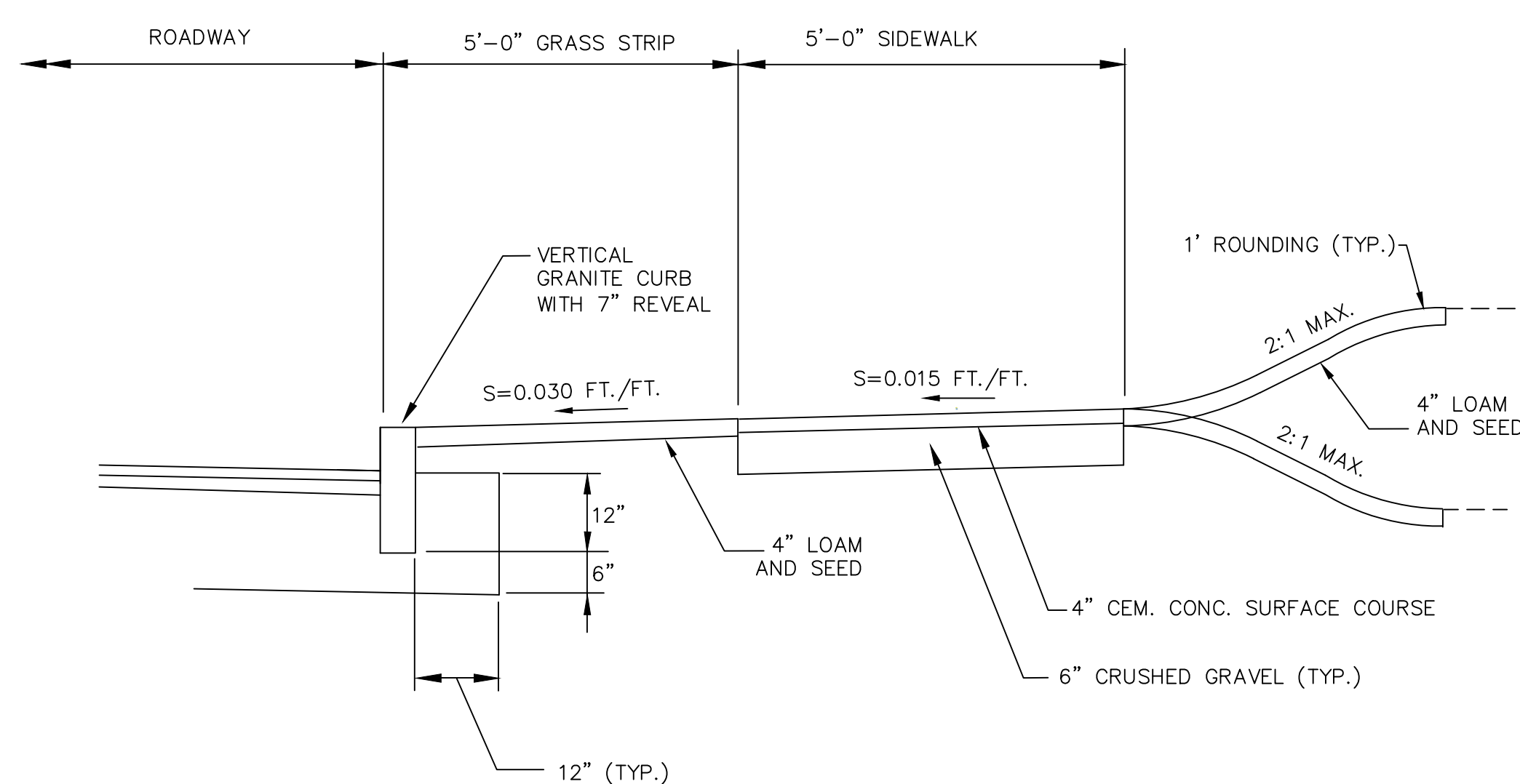


TYPICAL ROADWAY SECTION - SCHOOL STREET
NOT TO SCALE



BITUMINOUS BERM DETAIL
NOT TO SCALE

BASE COURSE NOTE:
IF RECLAIMED BASE COURSE IS NOT AVAILABLE FOR USE AS A BASE COURSE 6" OF CRUSHED GRAVEL ON 12" OF GRAVEL WILL BE USED. THIS WILL BE USED ONLY IN AREAS WHERE RECLAIMED MATERIALS ARE NOT AVAILABLE AS DIRECTED BY THE ENGINEER OR TOWN. IF THE CONTRACTOR DAMAGES OR CONTAMINATES THE RECLAIMED BASE COURSE BY UNSUITABLE OPERATIONS (I.E. COMBINING TRENCH EXCAVATED MATERIALS WITH THE RECLAIMED MATERIALS) THE RECLAIMED MATERIAL WILL BE MODIFIED TO MEET PROJECT SPECIFICATIONS OR REPLACED AT THE CONTRACTORS EXPENSE.



TYPICAL SIDEWALK SECTION WITH GRASS STRIP
NOT TO SCALE

REVISIONS				
NUMBER	DATE	BY	DESCRIPTION	

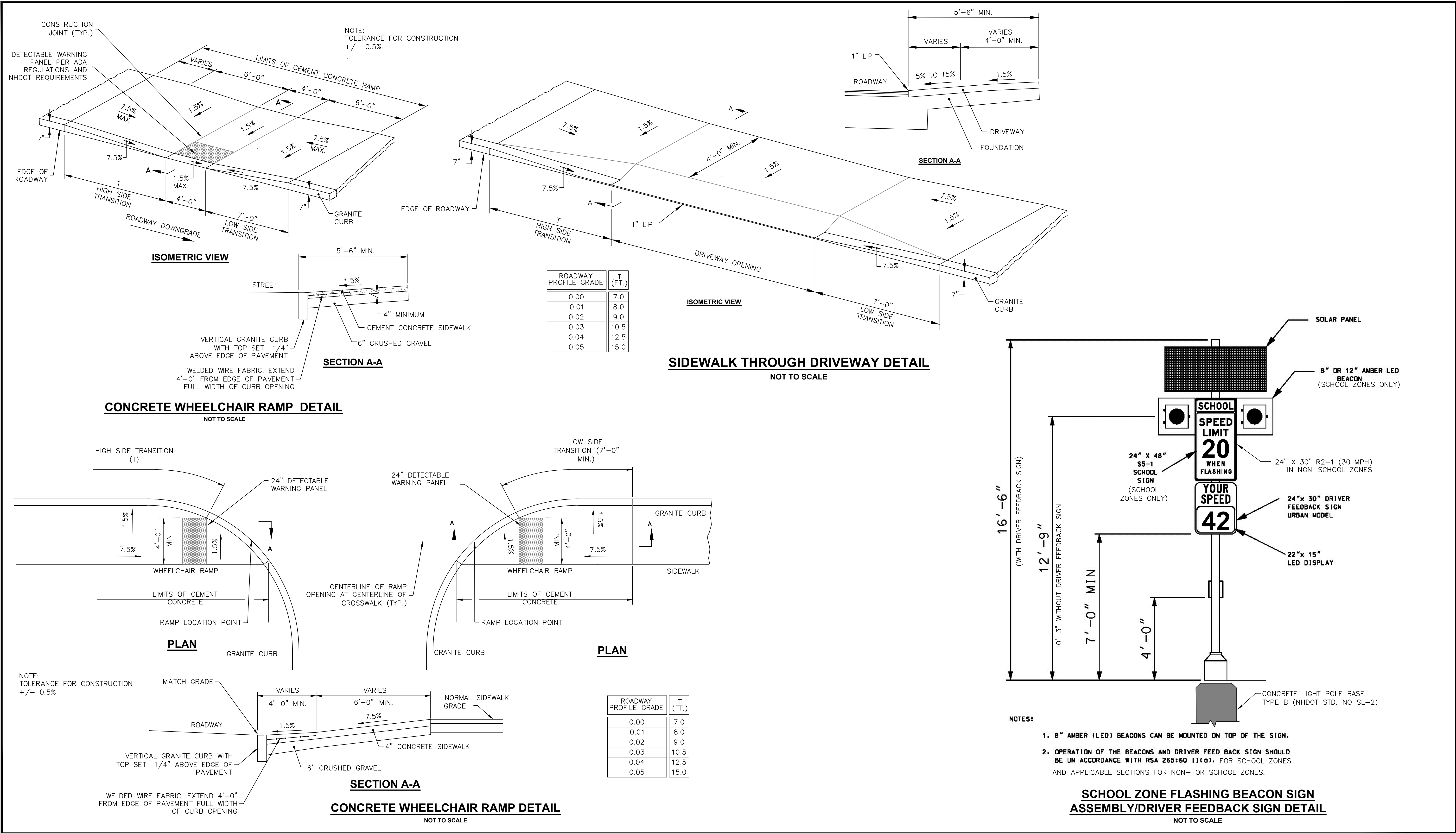


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SCALE AS NOTED

**ALTON ROADWAY
IMPROVEMENT PROJECT**
ALTON, NEW HAMPSHIRE
CONSTRUCTION DETAILS - 1

SHEET NO.
8
MARCH 2021



REVISIONS				
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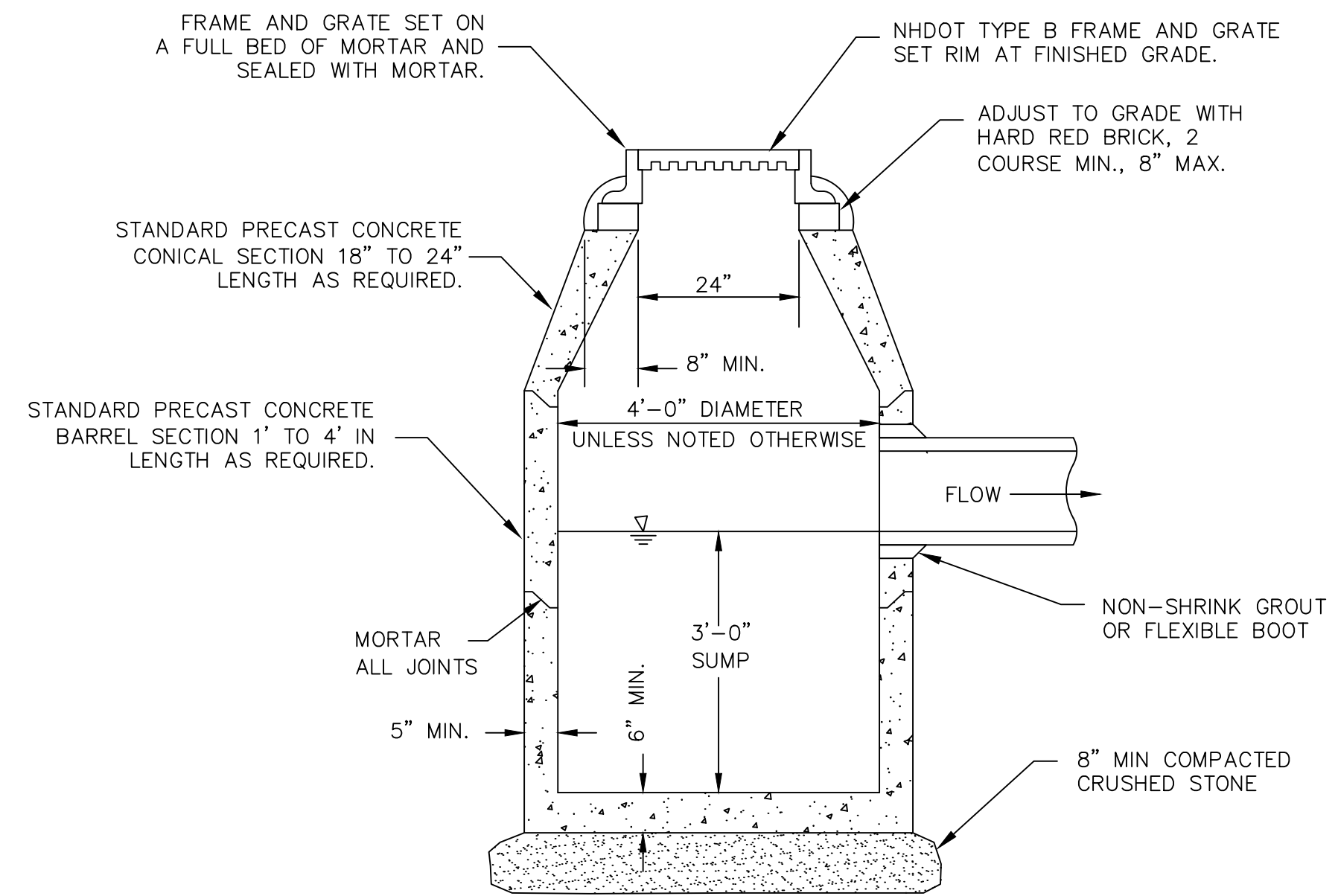
3-19-2021

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SCALE AS NOTED

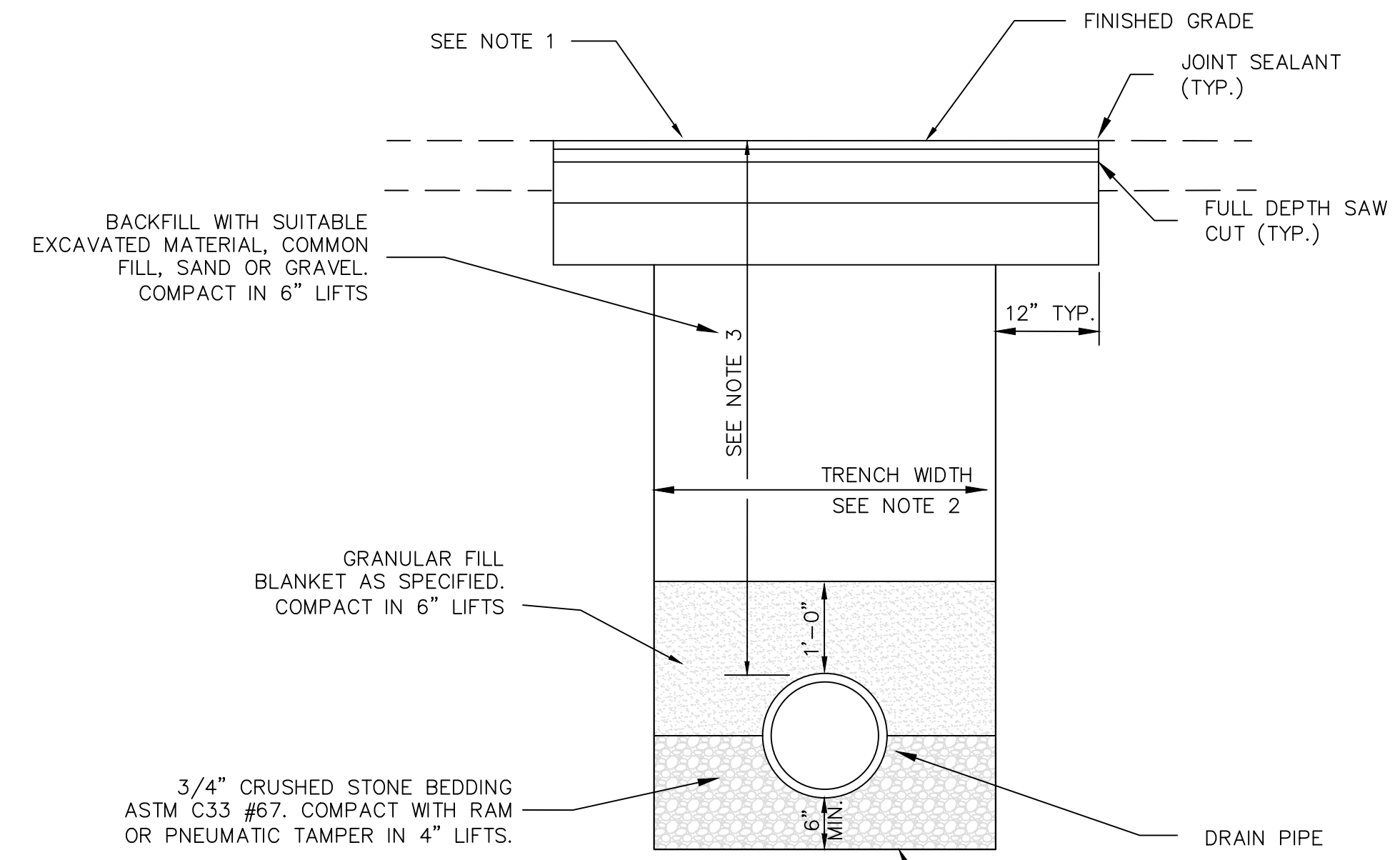
ALTON ROADWAY
IMPROVEMENT PROJECT
ALTON, NEW HAMPSHIRE
CONSTRUCTION DETAILS - 2

SHEET NO.
9
MARCH 2021



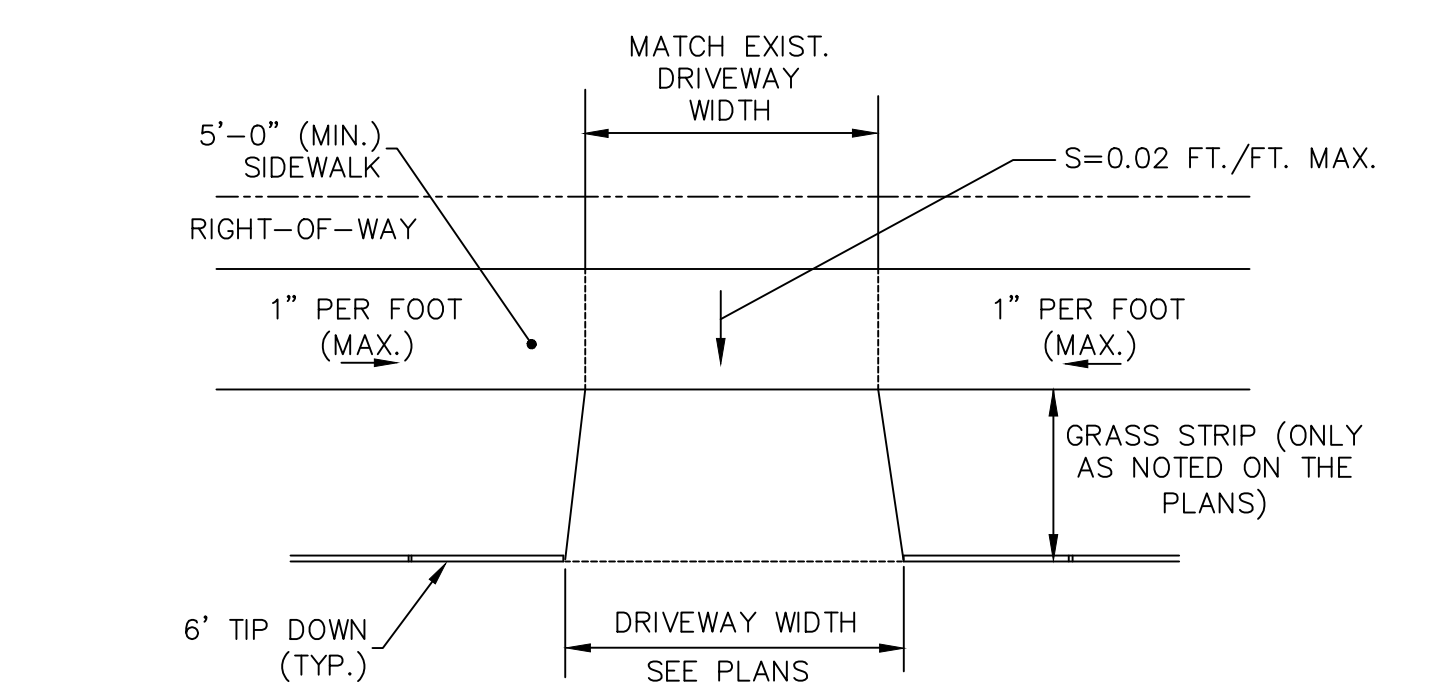
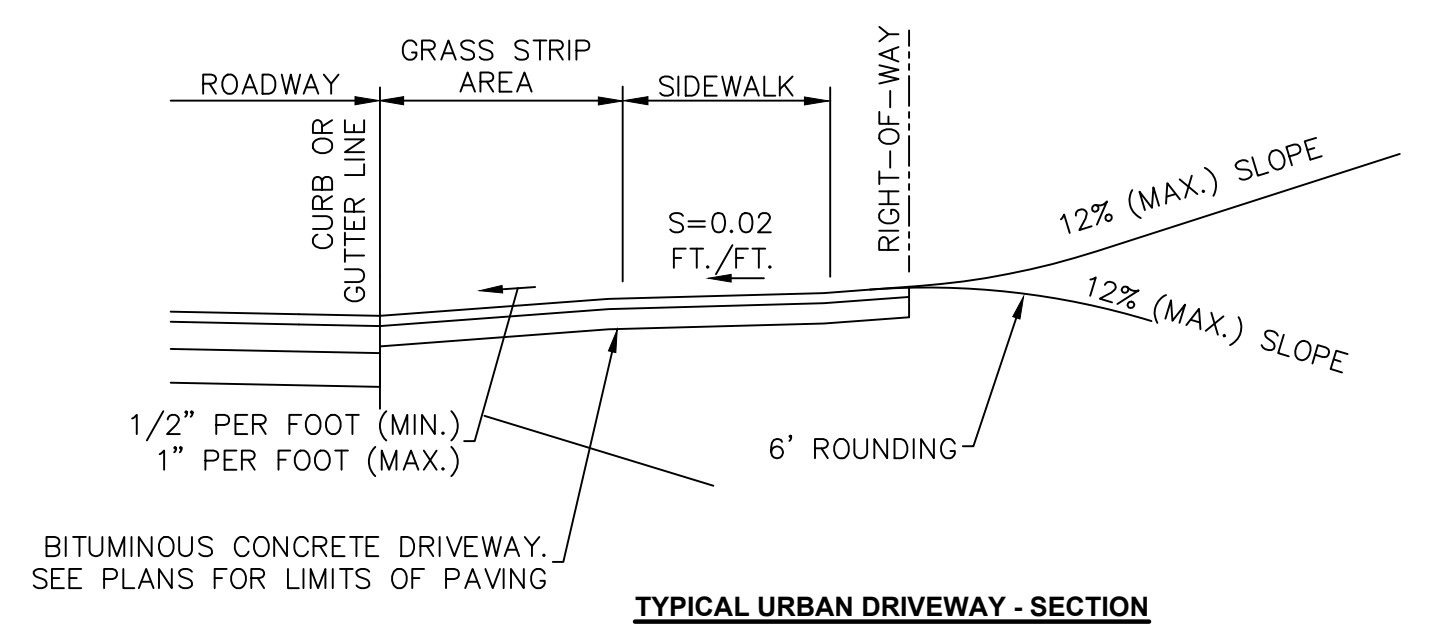
NOTES:
 1. PRECAST CONCRETE SECTION ASSEMBLIES SHALL WITHSTAND H-20 LOADING AND SHALL CONFORM TO ASTM C478.

TYPICAL CATCH BASIN DETAIL
 NOT TO SCALE



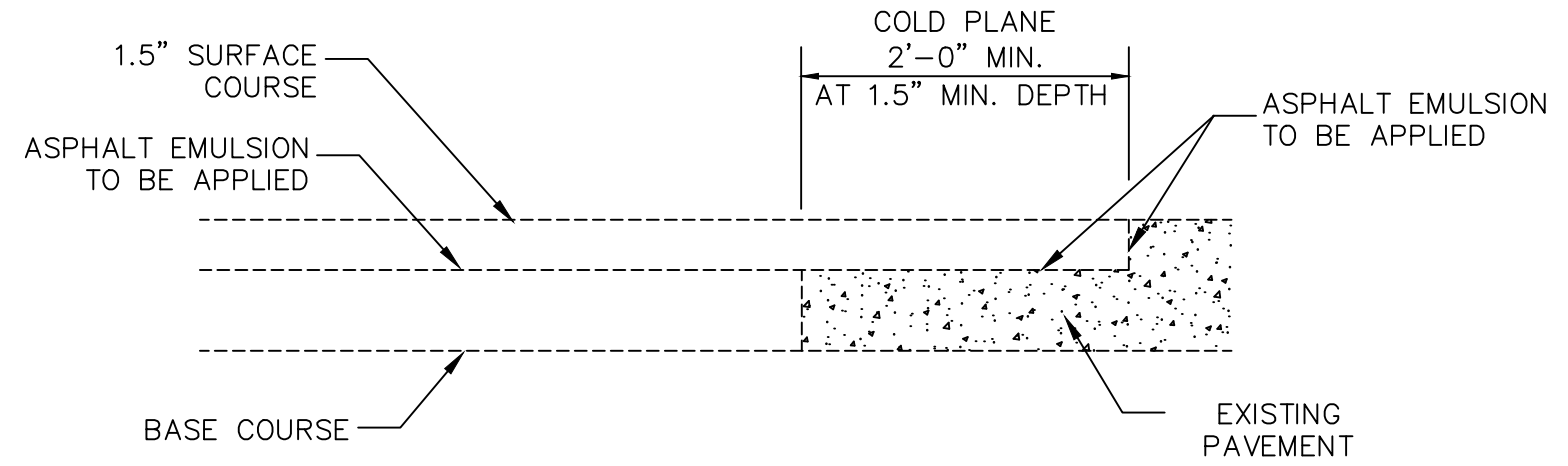
NOTES:
 1. REFER TO PAVEMENT PATCH NOTES. GRAVELS AND PAVEMENT MATERIALS AND THICKNESS SHALL MATCH EXISTING ROADWAY PAVEMENT STRUCTURE.
 2. ALLOWABLE TRENCH WIDTH:
 a. FOR PIPE LESS THAN OR EQUAL TO 12 INCHES IN DIAMETER, THE ALLOWABLE TRENCH WIDTH 12 INCHES ABOVE PIPE SHALL BE NO MORE THAN 36 INCHES.
 b. FOR PIPE GREATER THAN 12 INCHES IN DIAMETER THE ALLOWABLE TRENCH WIDTH SHALL BE EQUAL TO THE PIPE OUTSIDE DIAMETER PLUS 24 INCHES.
 3. MINIMUM PIPE COVER SHALL BE 3'-0"
 4. BACKFILL SHALL BE COMPACTED TO 95% AS DETERMINED BY AASHTO T-99, METHOD C.

TYPICAL DRAIN PIPE TRENCH DETAIL
 NOT TO SCALE

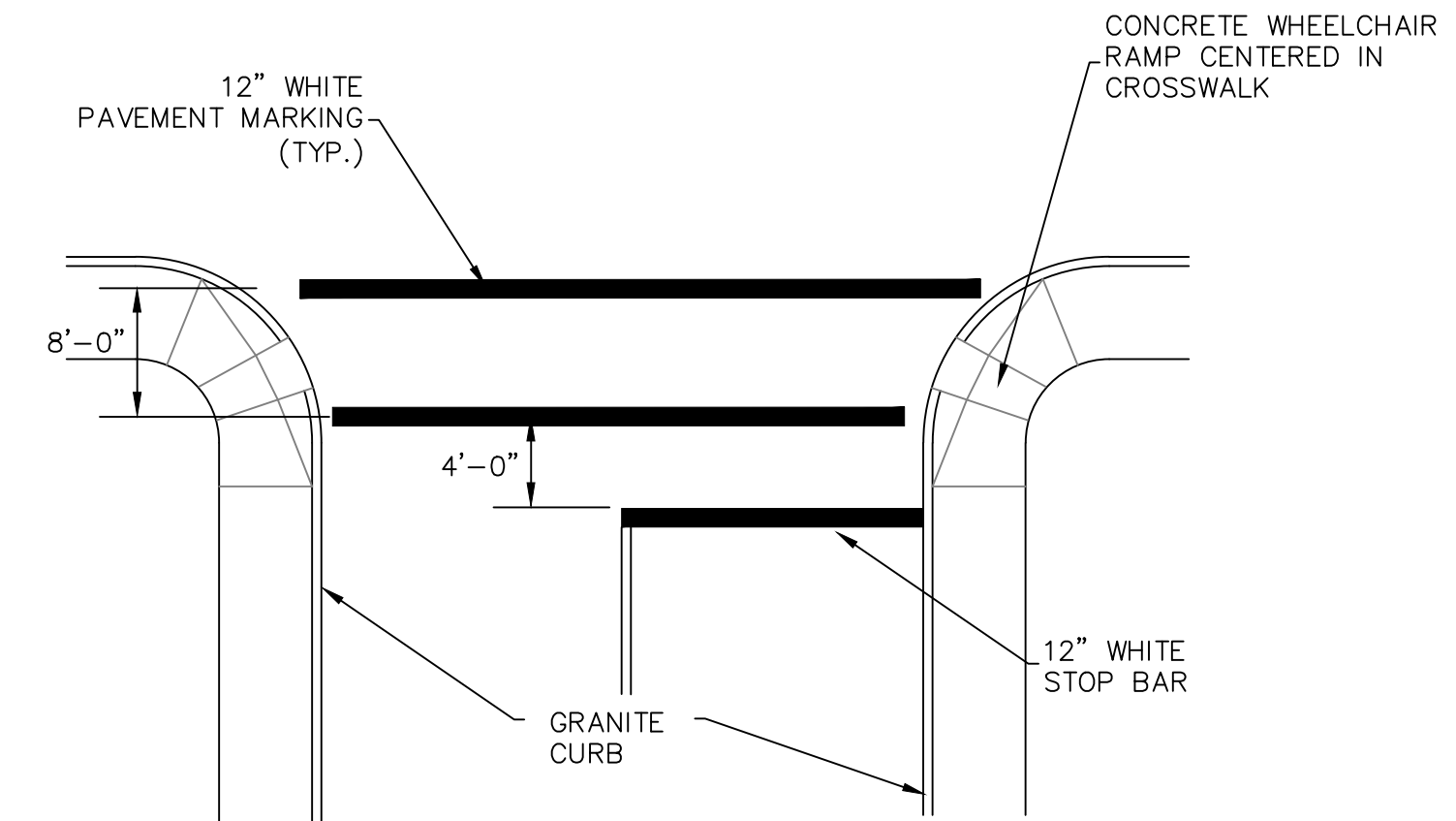


NOTES:
 1. ALL RESIDENTIAL DRIVEWAYS WILL BE PAVED WITH BITUMINOUS CONCRETE FROM THE ROADWAY PAVEMENT TO THE RIGHT-OF-WAY LINE WITH MINIMUM OF 1" SURFACE COURSE, 2" BASE COURSE AND 6" OF CRUSHED GRAVEL. COMMERCIAL DRIVEWAYS WILL HAVE HEAVY DUTY PAVEMENT, IF REQUIRED, BY THE TOWN.

TYPICAL DRIVEWAY DETAILS - SIDEWALK AREAS
 NOT TO SCALE



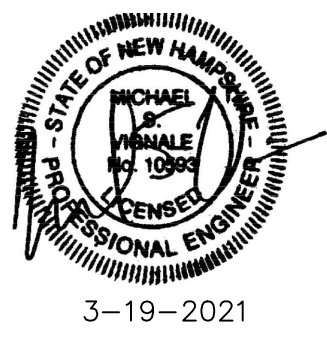
TYPICAL PAVEMENT JOINT DETAILS
 NOT TO SCALE



1. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) INCLUDING ALL ADDENDA.
 2. PAVEMENT MARKINGS SHALL BE RETROREFLECTIVE PAINT IN ACCORDANCE WITH NHDOT STANDARDS.

PAINTED CROSSWALK DETAIL
 NOT TO SCALE

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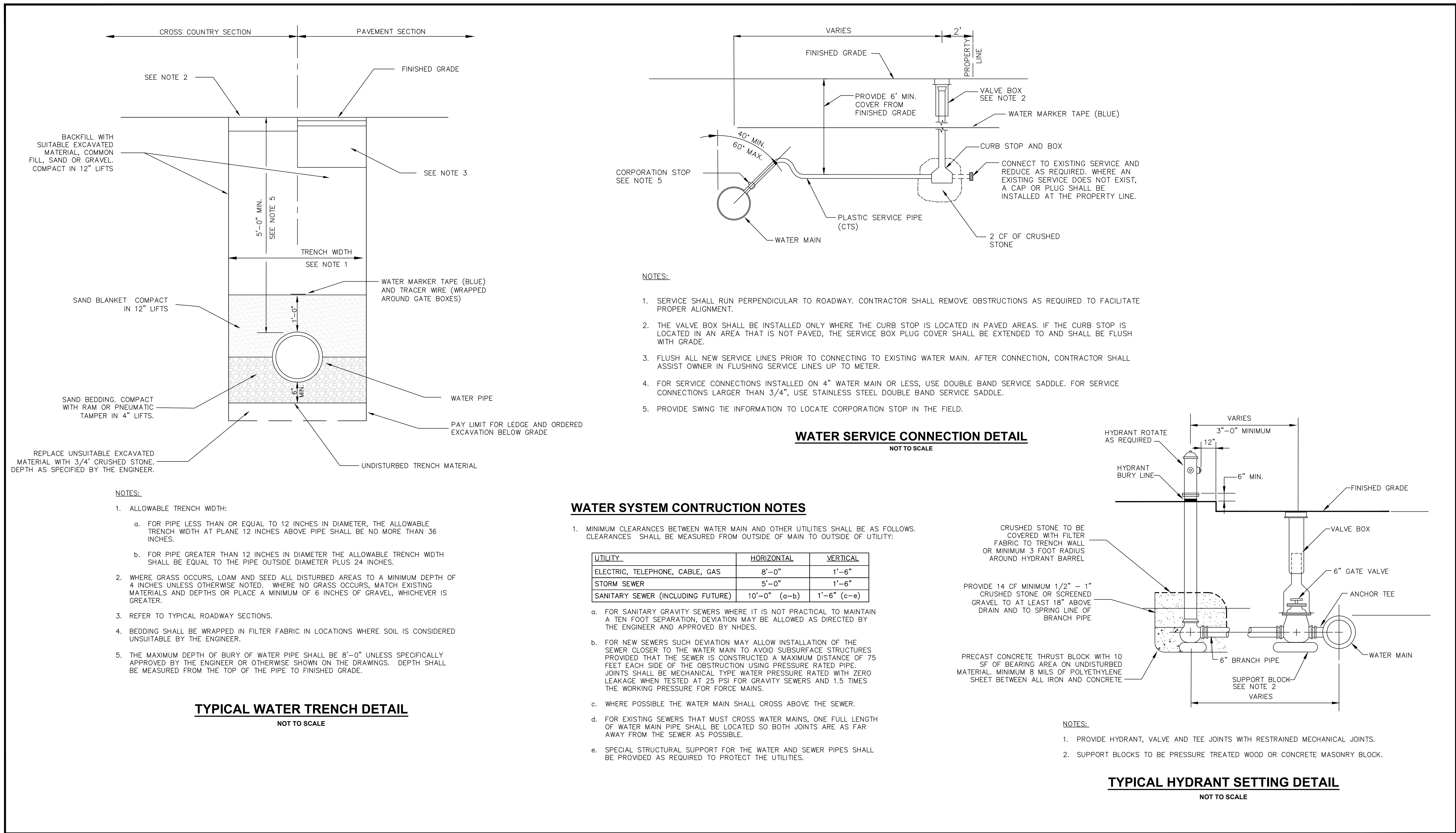


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SCALE AS NOTED

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NOTES:

1. ALLOWABLE TRENCH WIDTH:
 - a. FOR PIPE LESS THAN OR EQUAL TO 12 INCHES IN DIAMETER, THE ALLOWABLE TRENCH WIDTH AT PLANE 12 INCHES ABOVE PIPE SHALL BE NO MORE THAN 36 INCHES.
 - b. FOR PIPE GREATER THAN 12 INCHES IN DIAMETER THE ALLOWABLE TRENCH WIDTH SHALL BE EQUAL TO THE PIPE OUTSIDE DIAMETER PLUS 24 INCHES.
2. WHERE GRASS OCCURS, LOAM AND SEED ALL DISTURBED AREAS TO A MINIMUM DEPTH OF 4 INCHES UNLESS OTHERWISE NOTED. WHERE NO GRASS OCCURS, MATCH EXISTING MATERIALS AND DEPTHS OR PLACE A MINIMUM OF 6 INCHES OF GRAVEL, WHICHEVER IS GREATER.
3. REFER TO TYPICAL ROADWAY SECTIONS.
4. BEDDING SHALL BE WRAPPED IN FILTER FABRIC IN LOCATIONS WHERE SOIL IS CONSIDERED UNSUITABLE BY THE ENGINEER.
5. THE MAXIMUM DEPTH OF BURY OF WATER PIPE SHALL BE 8'-0" UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OR OTHERWISE SHOWN ON THE DRAWINGS. DEPTH SHALL BE MEASURED FROM THE TOP OF THE PIPE TO FINISHED GRADE.

TYPICAL WATER TRENCH DETAIL
NOT TO SCALE

NOTES:

1. SERVICE SHALL RUN PERPENDICULAR TO ROADWAY. CONTRACTOR SHALL REMOVE OBSTRUCTIONS AS REQUIRED TO FACILITATE PROPER ALIGNMENT.
2. THE VALVE BOX SHALL BE INSTALLED ONLY WHERE THE CURB STOP IS LOCATED IN PAVED AREAS. IF THE CURB STOP IS LOCATED IN AN AREA THAT IS NOT PAVED, THE SERVICE BOX PLUG COVER SHALL BE EXTENDED TO AND SHALL BE FLUSH WITH GRADE.
3. FLUSH ALL NEW SERVICE LINES PRIOR TO CONNECTING TO EXISTING WATER MAIN. AFTER CONNECTION, CONTRACTOR SHALL ASSIST OWNER IN FLUSHING SERVICE LINES UP TO METER.
4. FOR SERVICE CONNECTIONS INSTALLED ON 4" WATER MAIN OR LESS, USE DOUBLE BAND SERVICE SADDLE. FOR SERVICE CONNECTIONS LARGER THAN 3/4", USE STAINLESS STEEL DOUBLE BAND SERVICE SADDLE.
5. PROVIDE SWING TIE INFORMATION TO LOCATE CORPORATION STOP IN THE FIELD.

WATER SERVICE CONNECTION DETAIL
NOT TO SCALE

WATER SYSTEM CONTRUCTION NOTES

1. MINIMUM CLEARANCES BETWEEN WATER MAIN AND OTHER UTILITIES SHALL BE AS FOLLOWS. CLEARANCES SHALL BE MEASURED FROM OUTSIDE OF MAIN TO OUTSIDE OF UTILITY:

UTILITY	HORIZONTAL	VERTICAL
ELECTRIC, TELEPHONE, CABLE, GAS	8'-0"	1'-6"
STORM SEWER	5'-0"	1'-6"
SANITARY SEWER (INCLUDING FUTURE)	10'-0" (a-b)	1'-6" (c-e)

- a. FOR SANITARY GRAVITY SEWERS WHERE IT IS NOT PRACTICAL TO MAINTAIN A TEN FOOT SEPARATION, DEVIATION MAY BE ALLOWED AS DIRECTED BY THE ENGINEER AND APPROVED BY NHDES.
- b. FOR NEW SEWERS SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO THE WATER MAIN TO AVOID SUBSURFACE STRUCTURES PROVIDED THAT THE SEWER IS CONSTRUCTED A MAXIMUM DISTANCE OF 75 FEET EACH SIDE OF THE OBSTRUCTION USING PRESSURE RATED PIPE. JOINTS SHALL BE MECHANICAL TYPE WATER PRESSURE RATED WITH ZERO LEAKAGE WHEN TESTED AT 25 PSI FOR GRAVITY SEWERS AND 1.5 TIMES THE WORKING PRESSURE FOR FORCE MAINS.
- c. WHERE POSSIBLE THE WATER MAIN SHALL CROSS ABOVE THE SEWER.
- d. FOR EXISTING SEWERS THAT MUST CROSS WATER MAINS, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR AWAY FROM THE SEWER AS POSSIBLE.
- e. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES SHALL BE PROVIDED AS REQUIRED TO PROTECT THE UTILITIES.

NOTES:

1. PROVIDE HYDRANT, VALVE AND TEE JOINTS WITH RESTRAINED MECHANICAL JOINTS.
2. SUPPORT BLOCKS TO BE PRESSURE TREATED WOOD OR CONCRETE MASONRY BLOCK.

TYPICAL HYDRANT SETTING DETAIL
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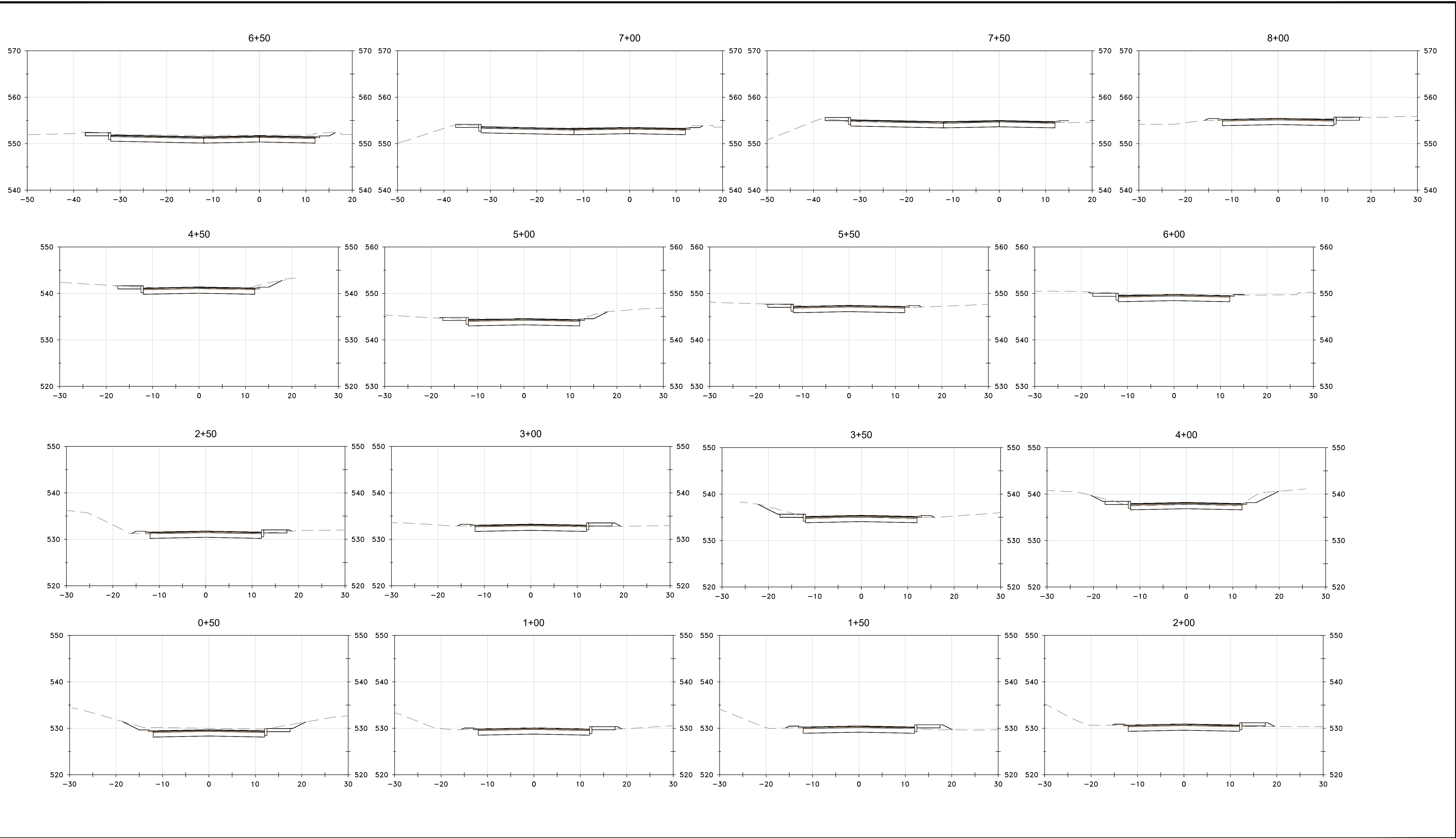


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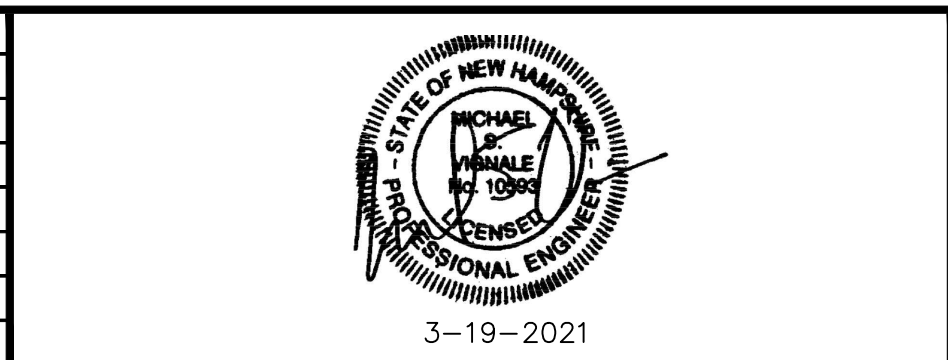
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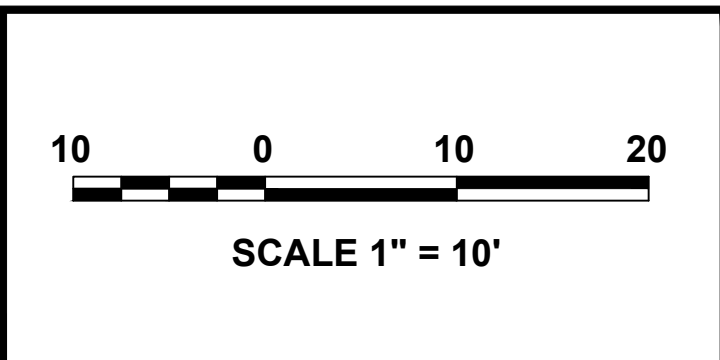
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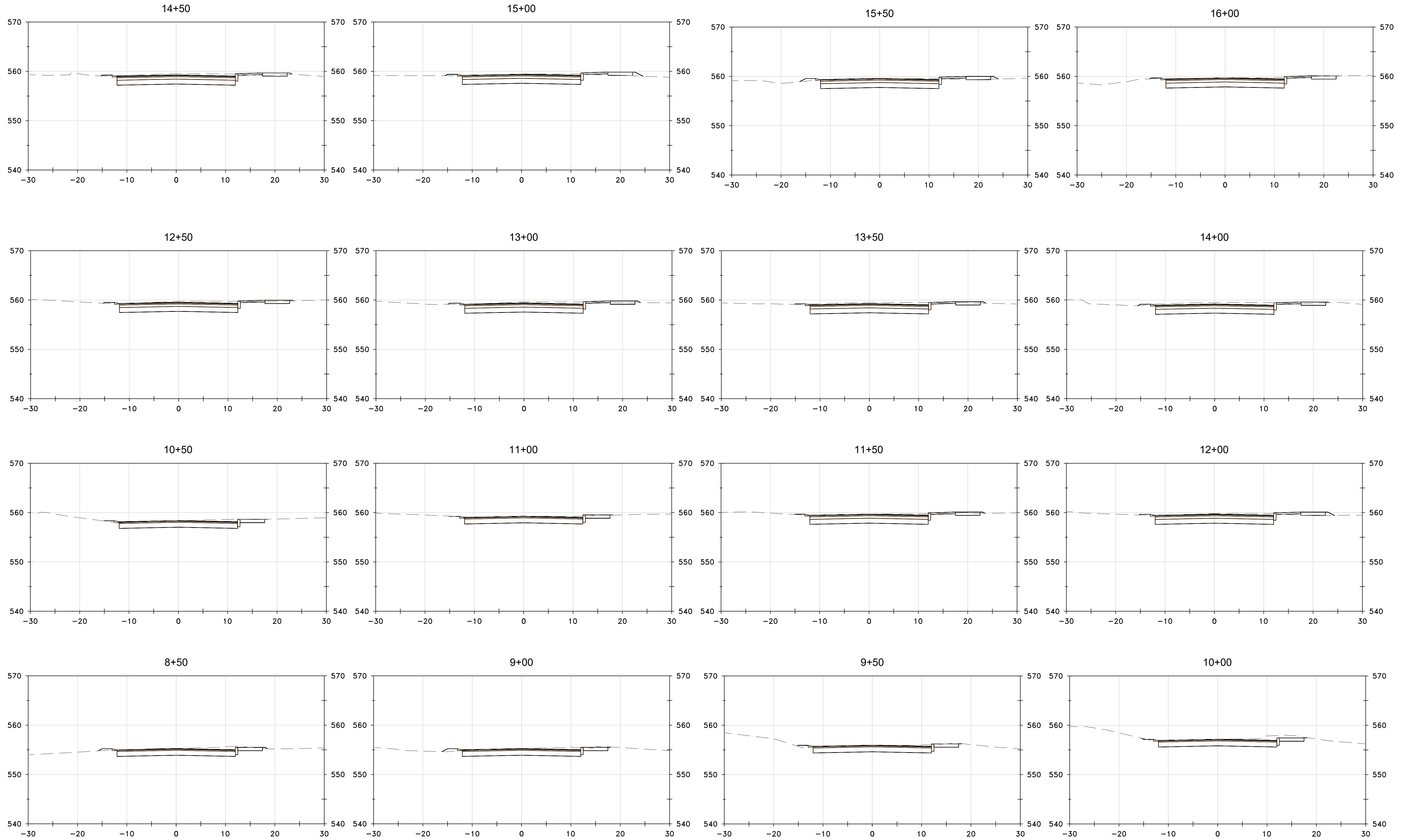


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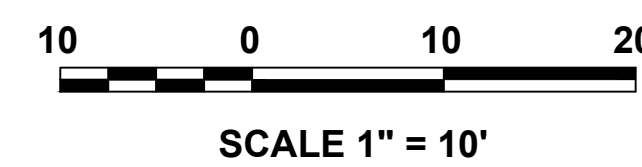
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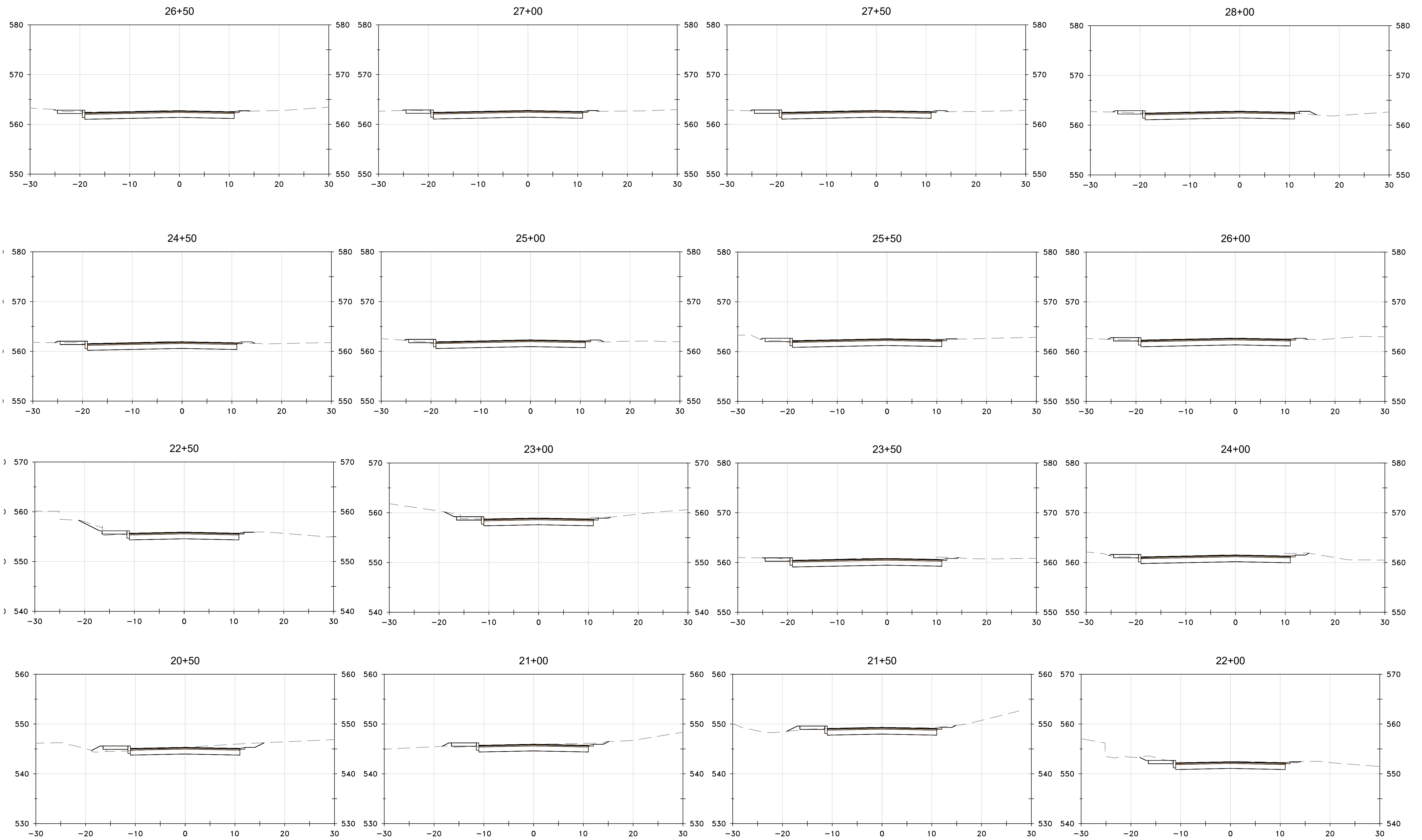


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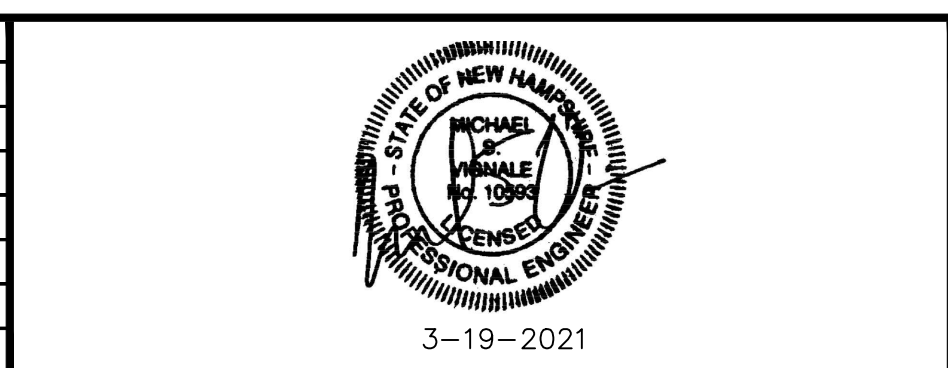


ALTON ROADWAY
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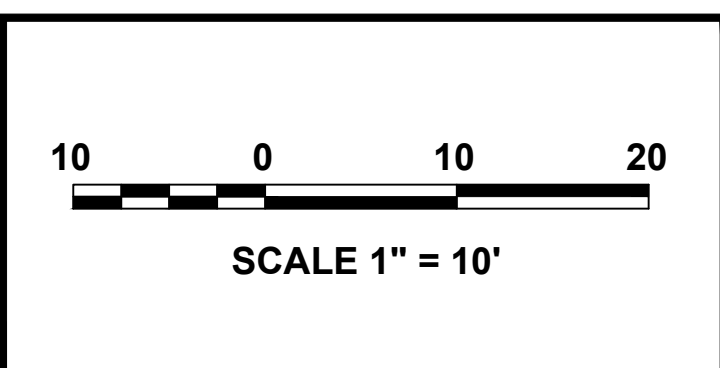
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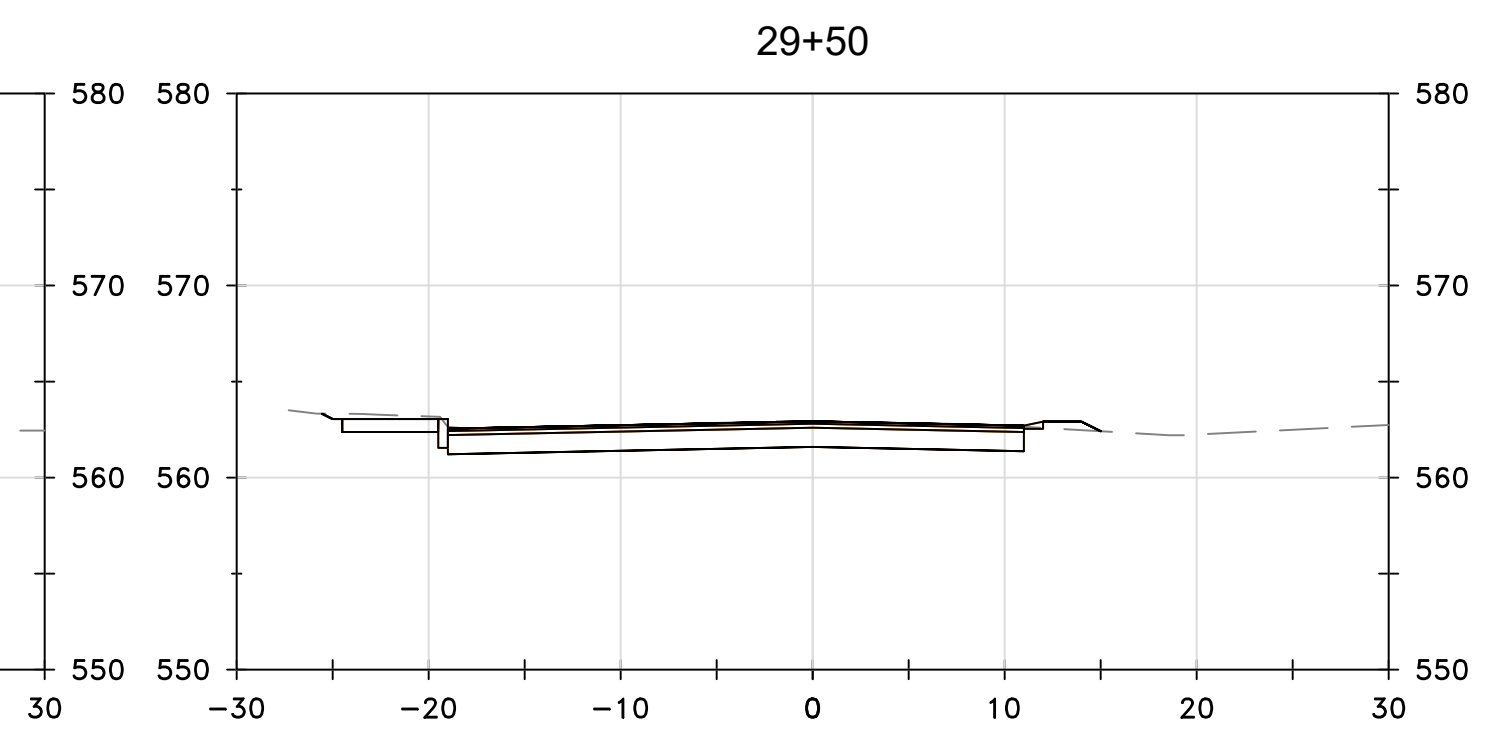
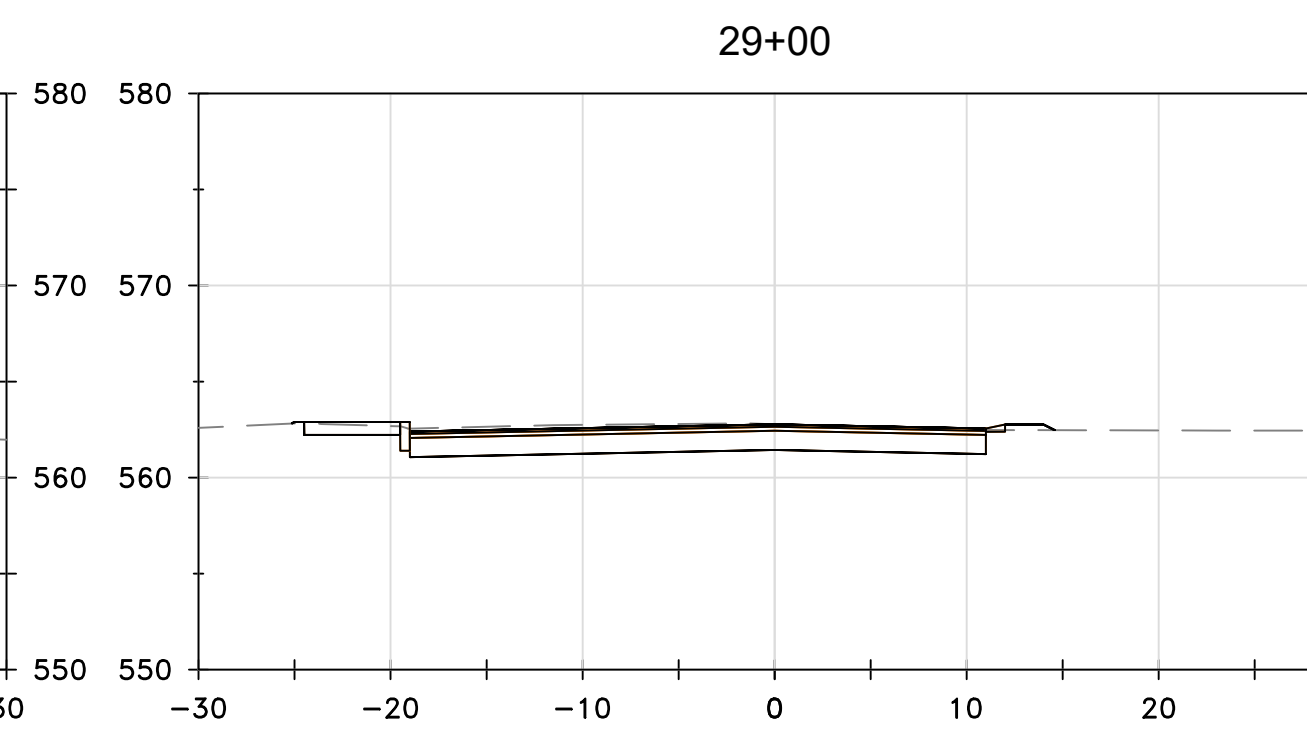
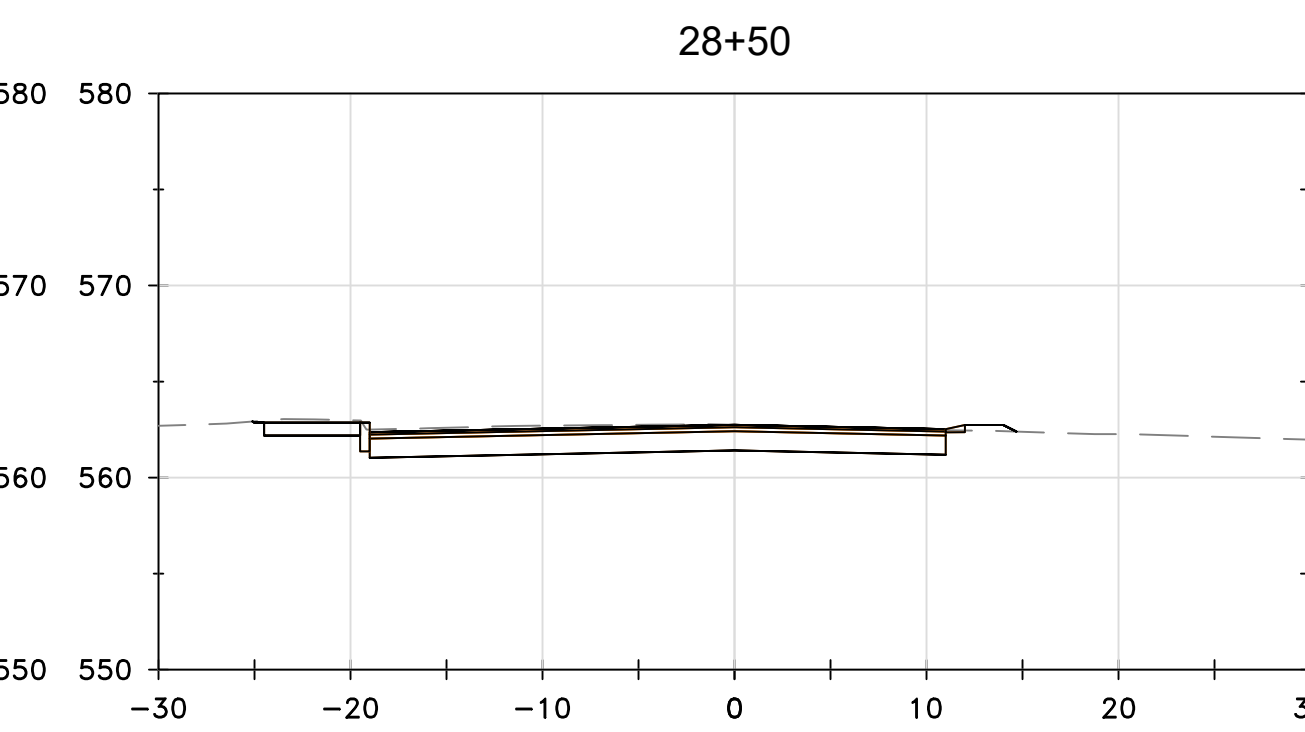
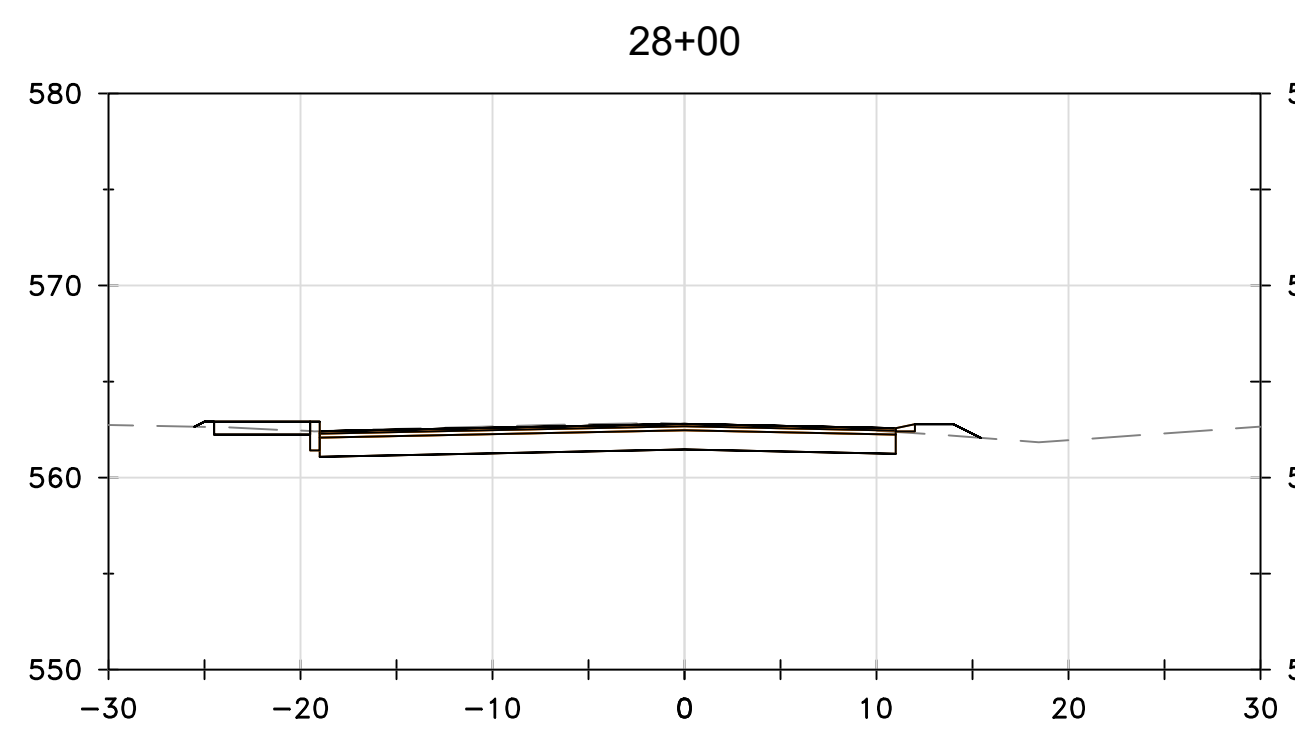
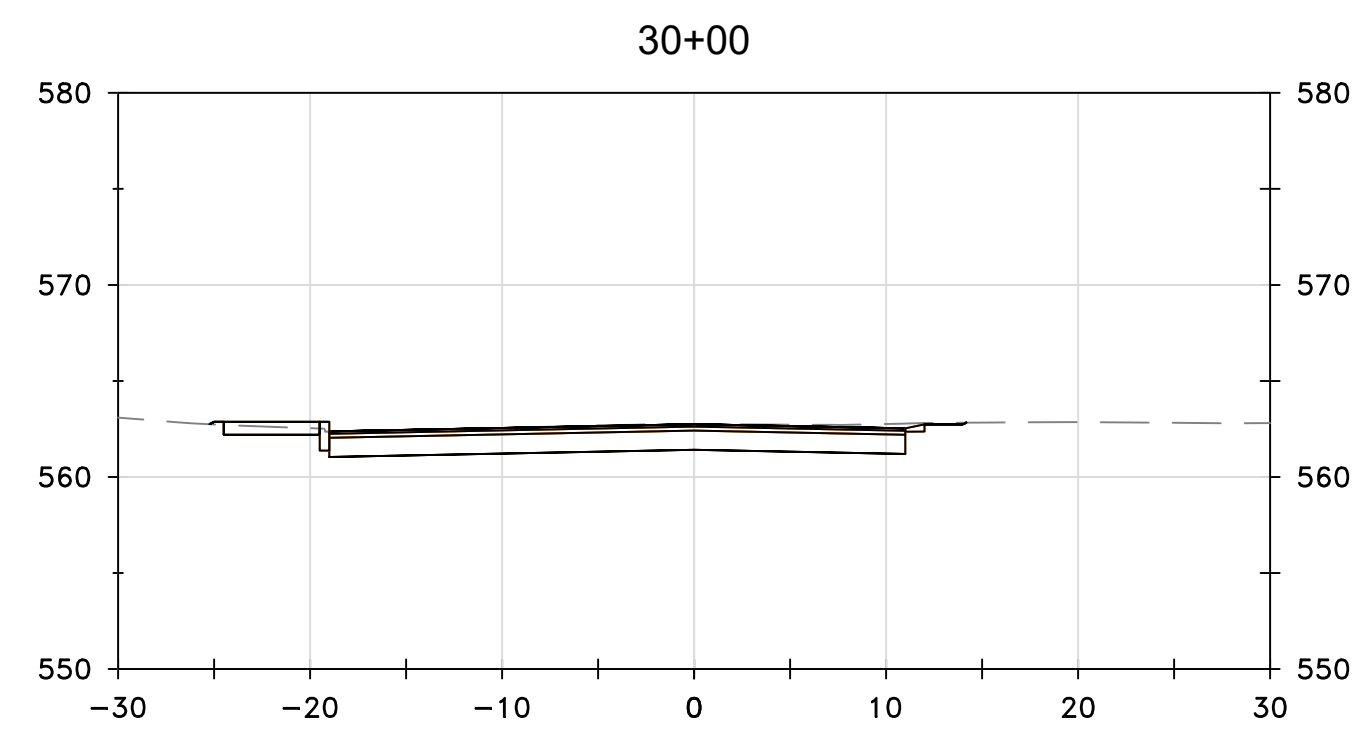
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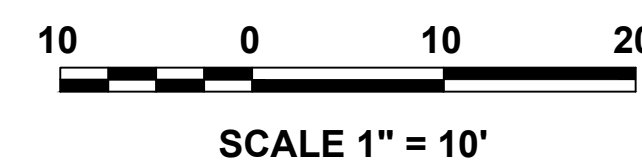
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