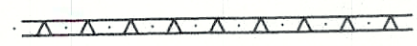



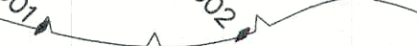


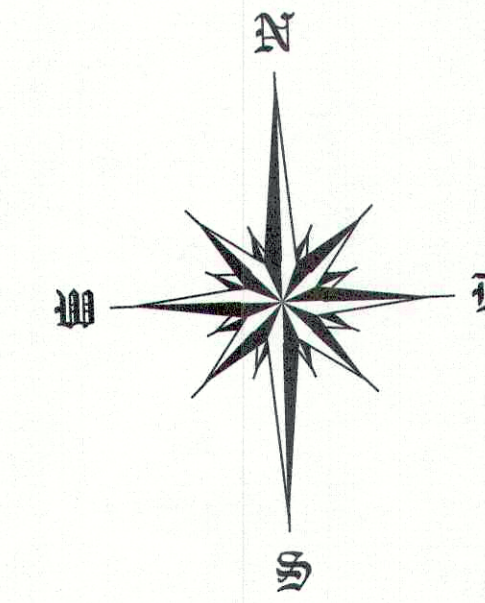






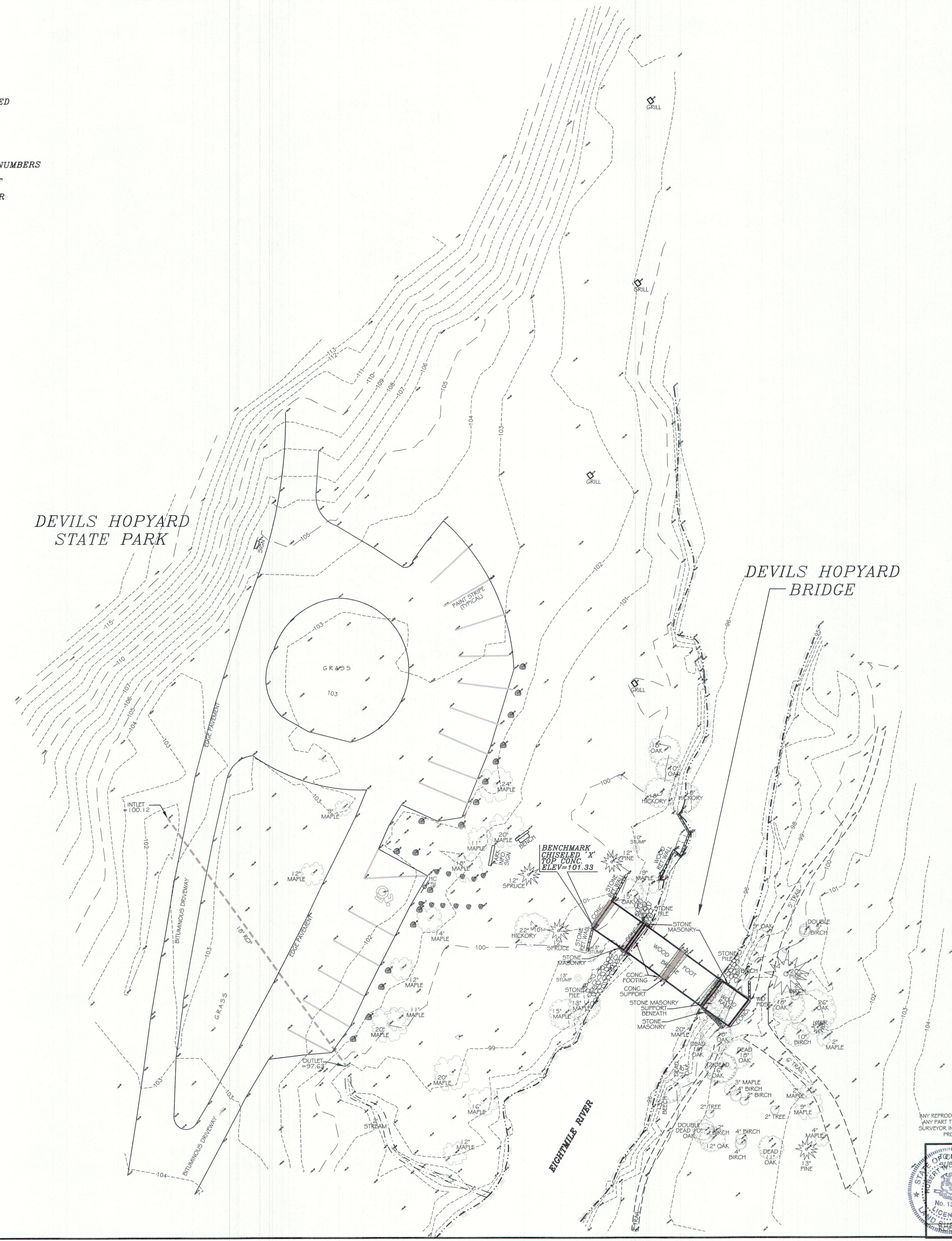
**LEGEND**

-  RETAINING WALL AS MARKED
-  EXISTING CONTOUR
-  SPOT ELEVATION
-  EDGE WOODLINE
-  EDGE WETLANDS / FLAG NUMBERS
-  SURVEYOR CONTROL POINT
-  LANDSCAPE ROCK/BOULDER



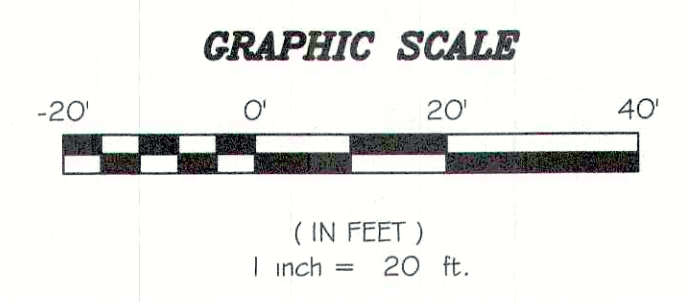
DEVILS HOPYARD  
STATE PARK

DEVILS HOPYARD  
BRIDGE



**MAP STANDARD NOTES**

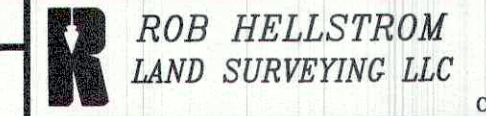
1. THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.
2. TOPOGRAPHIC FEATURES, IF SHOWN HEREON, WERE PREPARED IN ACCORDANCE WITH CLASS T-2.



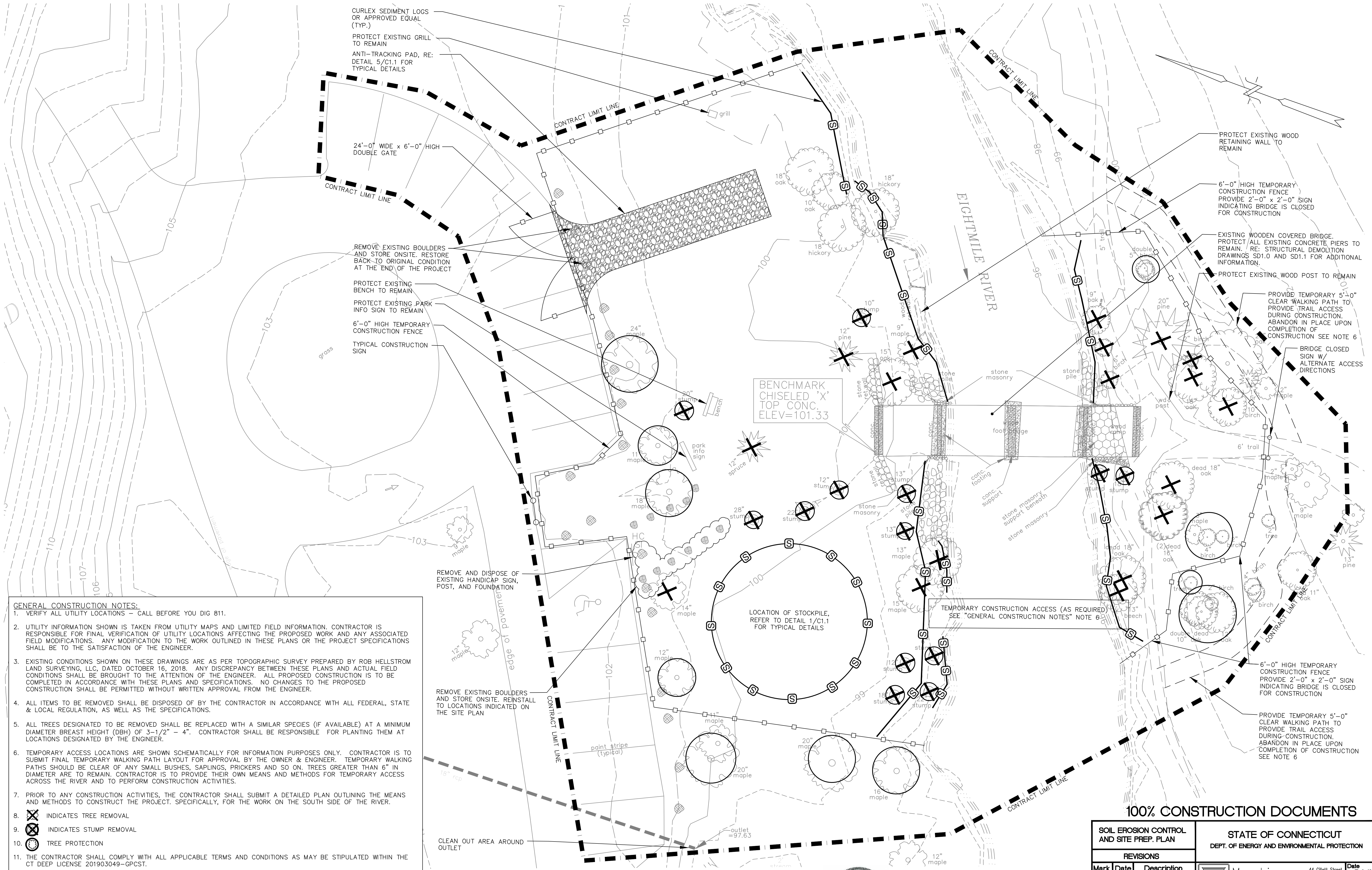
ALL RIGHTS RESERVED  
 ANY REPRODUCTION, POSSESSION OR USE OF THIS DRAWING OR ANY PART THEREOF WITHOUT THE WRITTEN PERMISSION OF THE SURVEYOR INDICATED BELOW IS PROHIBITED. VIOLATORS WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW.

KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

NO. 13626  
 LICENSED LAND SURVEYOR  
 ROB HELLSTROM, L.S. #13626

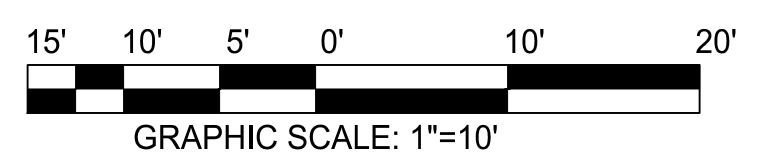
SURVEY		STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS			
Mark	Date	Description	
			
		Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E119 (DOT # 06323) LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT	
		DEEP CONTRACT ID: 12PSX0219AZ	
		Date 7-2-19	Scale 1"=20'
		Drawn By rwh	Drawing No 1 OF 1
		Approved	





- GENERAL CONSTRUCTION NOTES:**
1. VERIFY ALL UTILITY LOCATIONS - CALL BEFORE YOU DIG 811.
  2. UTILITY INFORMATION SHOWN IS TAKEN FROM UTILITY MAPS AND LIMITED FIELD INFORMATION. CONTRACTOR IS RESPONSIBLE FOR FINAL VERIFICATION OF UTILITY LOCATIONS AFFECTING THE PROPOSED WORK AND ANY ASSOCIATED FIELD MODIFICATIONS. ANY MODIFICATION TO THE WORK OUTLINED IN THESE PLANS OR THE PROJECT SPECIFICATIONS SHALL BE TO THE SATISFACTION OF THE ENGINEER.
  3. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE AS PER TOPOGRAPHIC SURVEY PREPARED BY ROB HELLSTROM LAND SURVEYING, LLC, DATED OCTOBER 16, 2018. ANY DISCREPANCY BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. ALL PROPOSED CONSTRUCTION IS TO BE COMPLETED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. NO CHANGES TO THE PROPOSED CONSTRUCTION SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
  4. ALL ITEMS TO BE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL FEDERAL, STATE & LOCAL REGULATION, AS WELL AS THE SPECIFICATIONS.
  5. ALL TREES DESIGNATED TO BE REMOVED SHALL BE REPLACED WITH A SIMILAR SPECIES (IF AVAILABLE) AT A MINIMUM DIAMETER BREAST HEIGHT (DBH) OF 3-1/2" - 4". CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING THEM AT LOCATIONS DESIGNATED BY THE ENGINEER.
  6. TEMPORARY ACCESS LOCATIONS ARE SHOWN SCHEMATICALLY FOR INFORMATION PURPOSES ONLY. CONTRACTOR IS TO SUBMIT FINAL TEMPORARY WALKING PATH LAYOUT FOR APPROVAL BY THE OWNER & ENGINEER. TEMPORARY WALKING PATHS SHOULD BE CLEAR OF ANY SMALL BUSHES, SAPLINGS, PRICKERS AND SO ON. TREES GREATER THAN 6" IN DIAMETER ARE TO REMAIN. CONTRACTOR IS TO PROVIDE THEIR OWN MEANS AND METHODS FOR TEMPORARY ACCESS ACROSS THE RIVER AND TO PERFORM CONSTRUCTION ACTIVITIES.
  7. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A DETAILED PLAN OUTLINING THE MEANS AND METHODS TO CONSTRUCT THE PROJECT. SPECIFICALLY, FOR THE WORK ON THE SOUTH SIDE OF THE RIVER.
  8. INDICATES TREE REMOVAL
  9. INDICATES STUMP REMOVAL
  10. TREE PROTECTION
  11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE TERMS AND CONDITIONS AS MAY BE STIPULATED WITHIN THE CT DEEP LICENSE 201903049-GPCST.
  12. ALL ACTIVITIES HAVE BEEN PERMITTED AND SHALL BE CONDUCTED IN ACCORDANCE WITH PLANS ENTITLED: STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENT PROTECTION, DEVIL'S HOPYARD STATE PARK, REPLACEMENT OF CT DEEP BRIDGE #E118, LOOP TRAIL OVER EIGHTMILE RIVER, EAST HADDAM, CONNECTICUT, CONTRACT ID: 12PSX0213AZ, 11 SHEETS, PREPARED BY MACCHI ENGINEERS, DECEMBER 7, 2018, SUBMITTED AS PART OF THE APPLICATION.

SITE PLAN



100% CONSTRUCTION DOCUMENTS

SOIL EROSION CONTROL AND SITE PREP. PLAN		STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS			
Mark	Date	Description	
		44 Gillett Street Hartford, Connecticut 06105 (860) 549-6190	Date: 7-2-19 Scale: 1"=10' Drawn By: JWK Approved: HEM Drawing No: C1.0
Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE #E118 (DOT # 06322) LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT			CT DEEP CONTRACT ID: 12PSX0213AZ



**SEDIMENT AND EROSION CONTROL PLAN**

**A. PROJECT DESCRIPTION**

THIS PROJECT INVOLVES REPLACING THE EXISTING SUPERSTRUCTURE OF THE DEVIL'S HOPYARD WOODEN COVERED BRIDGE, AND MINOR SITE IMPROVEMENTS.

SPECIFIC WORK INCLUDES THE DEMOLITION OF THE EXISTING SUPERSTRUCTURE, RESTORATION OF EXISTING W8 STEEL BEAMS, AND BASE PLATES. WORK ALSO INCLUDES CLEARING IN DESIGNATED AREAS, PROTECTING EXISTING PLANTINGS TO REMAIN, TOPSOIL STRIPPED AND STOCKPILED, SITE LANDSCAPING, SITE GRADING AND ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED.

**B. MAINTENANCE/REPAIR OF EROSION & SEDIMENTATION CONTROL MEASURES**

DURING ALL STAGES OF CONSTRUCTION, AS WELL AS AFTER CONSTRUCTION IS COMPLETE, MAINTENANCE AND REPAIR OF EROSION & SEDIMENTATION CONTROL DEVICES IS ESSENTIAL. THE FOLLOWING ARE MINIMUM REQUIREMENTS:

**DURING CONSTRUCTION**

- INSPECTION OF EROSION PRONE AREAS SHOULD OCCUR WITHIN 12 HOURS AFTER RAINFALL EVENTS IN EXCESS OF ONE INCH PER HOUR INTENSITY OR A RAINFALL EVENT WITH A TOTAL PRECIPITATION OF 1/2 INCH OR MORE. NOTE THAT THIS WILL REQUIRE THE INSTALLATION OF A RAINFALL GAUGE ON THE SITE, WHICH SHOULD BE MONITORED AND A RECORD KEPT OF EACH RAINFALL EVENT. CONCERNS SHOULD BE LOGGED AND REPAIRS SHOULD BE MADE IMMEDIATELY. FOR RAINFALL EVENTS OVER A PERIOD OF MORE THAN ONE DAY, INSPECTIONS AS DESCRIBED ABOVE SHOULD BE PERFORMED EACH DAY.
- WEEKLY INSPECTIONS OF ALL EROSION & SEDIMENTATION CONTROL DEVICES, EROSION PRONE AREAS OR OTHER AREAS OF CONCERN SHOULD BE PERFORMED. INSPECTIONS SHOULD INCLUDE ALL SILT FENCE, HAY BALES, STONE CHECK DAMS, CATCH BASIN SUMPS, TEMPORARY SEDIMENTATION BASINS, DETENTION PONDS, HAY SLOPE MATTING, ETC. AND REPAIRS SHOULD BE MADE AS NECESSARY.
- LOGS OF ALL INSPECTIONS AND REPAIRS SHOULD BE KEPT ON SITE, INCLUDING DATES & CONCERNS NOTED DURING INSPECTIONS, TIMING OF REPAIRS & ACTIONS TO BE TAKEN, DATES OF ACTUAL ACTIVITIES & RESPONSES, AND INITIALS OF THOSE INVOLVED.
- ALL SILT FENCING, HAY MATTING AND OTHER EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.

**POST CONSTRUCTION**

- EROSION PRONE AREAS- INSPECT MONTHLY FOR THE FIRST SIX (6) MONTHS, AND BI-MONTHLY FOR THE SECOND SIX (6) MONTHS. AFTER CONSTRUCTION IS COMPLETE, ALL SILT FENCING AND EROSION CONTROL DEVICES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.
- ANY ERODED AREAS, OR MALFUNCTIONING COMPONENTS OF THE DRAINAGE SYSTEM, SHOULD BE REPAIRED IMMEDIATELY.

**A. STANDARDS & GUIDELINES**

- CT DEEP GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES.
- REQUIREMENTS, SPECIFICATIONS, DETAILS AND INSTRUCTIONS AS SET FORTH IN THESE DOCUMENTS.
- CONNECTICUT GUIDELINES FOR SOIL EROSION & SEDIMENT CONTROL (2002), AS AMENDED, AND THE CONNECTICUT D.O.T. "ON SITE MITIGATION FOR CONSTRUCTION ACTIVITIES".
- CONNECTICUT D.O.T. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, FORM B17 SHALL BE USED FOR MATERIAL REQUIREMENTS, TECHNICAL SPECIFICATIONS AND CONSTRUCTION METHODS.

**C. GENERAL NOTES**

- GRADING & CLEARING: THE SEQUENCE OF GRADING AND CONSTRUCTION ACTIVITIES MAY BE MODIFIED TO SUIT ACTUAL CONDITIONS ENCOUNTERED IN THE FIELD DURING CONSTRUCTION WHEN APPROVED BY THE ENGINEER. OTHERWISE THE FOLLOWING SEQUENCE OF EROSION & SEDIMENTATION CONTROL WILL BE IMPLEMENTED FOR EACH PROPOSED PHASE OF CONSTRUCTION. THE FOLLOWING NOTES WILL APPLY SEPARATELY TO EACH OF THE PROPOSED PHASES AND CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
- INSTALLATION OF TEMPORARY BASINS SHALL BE DONE ONLY WHEN A SAFE AND STABILIZED OUTLET EXISTS OR CAN BE INSTALLED PRIOR TO INSTALLATION. FOR EXAMPLE STABILIZED OUTFALL CHANNELS OR THE INSTALLATION OF A FUNCTIONING DRAINAGE SYSTEM MUST EXIST PRIOR TO CONSTRUCTION OF A SEDIMENT/DISCHARGE BASIN. SEDIMENT/DISCHARGE BASINS SHALL BE GRADED SO AS TO RETAIN WATER TO A DEPTH OF NO MORE THAN 2 FEET.
- LIMIT CLEARING OF VEGETATION AND TOPSOIL TO AREAS DESIGNATED FOR IMMEDIATE CONSTRUCTION AREAS TO BE LEFT EXPOSED TO EROSION FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY SEEDED AFTER ROUGH GRADING AS MAY BE SHOWN ON THE CONSTRUCTION PLANS.
- KEEP SOIL EXPOSED TO EROSION AT A MINIMUM IN AREA AND TIME.
- MAINTAIN THE MAXIMUM ATTAINABLE BUFFER BETWEEN CONSTRUCTION ACTIVITIES AND WETLANDS AND WATERCOURSES. MINIMUM BUFFER ZONES SHALL BE ADHERED TO UNLESS PREVIOUSLY APPROVED OR PERMITTED.
- CLEAN DEPOSITED MATERIAL AS REQUIRED. THIS TYPICALLY SHALL MEAN WHEN SILT REACHES 50% OF THE CAPACITY OF A SEDIMENT BASIN, 1 FOOT DEEP IN THE SUMP OF A CATCH BASIN, AND HALF THE HEIGHT OF AN EROSION AND SEDIMENT CONTROL DIKE OR BERM, CONTROL DIKE OR BERM.
- EXPOSED AREA IN FINAL GRADED SHAPE SHOULD BE DRESSED WITH TOPSOIL AND SEEDED, SEASON PERMITTING OR MULCHED FOR EROSION PROTECTION.
- MAINTAIN ALL EROSION AND SEDIMENT CONTROLS UNTIL SUCCESSFUL RE-ESTABLISHMENT OF VEGETATIVE COVER AND THE CESSATION OF EROSION.
- HAY BALE BARRIERS MAY REMAIN IN PLACE AFTER SUCCESSFUL RE-ESTABLISHMENT OF VEGETATIVE COVER AND THE CESSATION OF EROSION WHEN THE REMOVAL OF SUCH BARRIERS MAY RESULT IN ADDITIONAL SOIL EROSION UP SLOPE OF WETLANDS, WATERCOURSES OR STORM DRAIN INLETS. ADDITIONALLY, THE BALES MAY ONLY BE RETAINED IN PLACE TO DEGRADE NATURALLY WHEN THE BARRIER WILL NOT RESTRICT THE FLOW OF CONCENTRATED RUNOFF OR INTERFERE WITH THE FUNCTIONING OF STORM DRAINAGE AND OTHER CONSTRUCTED OR EXISTING COMPONENTS OF THE PROPOSED DEVELOPMENT. THE ENGINEER MUST APPROVE OF THE LOCATIONS WHERE HAY BALES MAY BE LEFT IN PLACE.
- AFTER SUCCESSFUL RE-ESTABLISHMENT OF VEGETATIVE COVER AND CESSATION OF EROSION, AND IF NOT LEFT IN PLACE AS NOTED ABOVE, HAY BALES MAY BE BROKEN UP BY HAND AND SPREAD IN THE GENERAL AREA INITIALLY INSTALLED.
- STOCKPILE AREAS: THE FOLLOWING SEQUENCE FOR USE OF STOCKPILE AREAS SHALL BE USED.
  - AREA TO BE USED SHALL BE IDENTIFIED WITH FLAGGING IN THE FIELD & SHALL BE LOCATED OUTSIDE OF ALL WETLANDS AND REGULATED BUFFER ZONES.
  - AREA SHALL THEN BE CLEARED AND GRUBBED AND GENERALLY BE MADE READY FOR USE.
  - THE STOCKPILE AREA SHALL BE IMMEDIATELY SURROUNDED WITH TWO ROWS OF SILT FENCE.
  - DURING USE, THE CONTRACTOR SHALL INSURE THAT THE GENERAL STOCKPILE USE AREA IS MAINTAINED SUCH THAT THERE IS NO SEDIMENTATION OF SURROUNDING AND AREA. THE STOCKPILES SHALL BE COVERED AND/OR TEMPORARILY SEEDED TO PREVENT RUNOFF AND SEDIMENTATION IF NECESSARY.
  - IMMEDIATELY UPON COMPLETION OF USE AS A STOCKPILE AREA, THE LAND SHALL BE RESTORED.

- ALL ROADWAYS IN THE VICINITY OF THE PROPOSED PROJECT SHALL BE KEPT FREE OF DUST AND SEDIMENT, AND SHALL BE CLEANED PERIODICALLY AS REQUIRED BY CONSTRUCTION ACTIVITIES AND PRIOR TO ANY RAINFALL AND RUNOFF EVENT AS DIRECTED BY THE ENGINEER. METHODS USED TO MEET THIS REQUIREMENT SHALL CONFORM TO THE ENVIRONMENTAL MANAGEMENT SPECIFICATIONS AND THE SECTIONS ON STANDARDS & GUIDELINES.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND REPAIR EROSION AND SEDIMENT CONTROL MEASURES DURING ALL STORM EVENTS AS REQUIRED TO PREVENT DAMAGE OR SEDIMENTATION TO ADJACENT LAND, STREAMS AND PROPERTY.
- CONTRACTOR SHALL MAKE ANY REPAIRS OR RESTORATION TO PROPERTY OR ENVIRONMENT CAUSED BY SEDIMENTATION.
- ALL WORK AFFECTING WETLANDS SHALL BE SCHEDULED DURING LOW FLOW MONTHS.
- ALL WORK AND ALL ACTIVITIES SHALL FIRST BE IN COMPLIANCE WITH APPLICABLE PERMITS FOR THIS PROJECT. SECOND ALL WORK AND ACTIVITIES SHALL CONFORM TO THE REQUIREMENTS OF THE ENVIRONMENTAL MANAGEMENT SPECIFICATIONS WHICH ARE PART OF THESE PLANS. LASTLY, WORK AND ACTIVITIES SHALL BE CONSISTENT WITH THESE EROSION AND SEDIMENT CONTROL PLANS AS A MINIMUM.

**D. EROSION AND SEDIMENT CONTROL NOTES**

- LIMITED CLEARING AND GRUBBING ACTIVITIES SHALL COMMENCE FIRST TO ENABLE THE INSTALLATION/CONSTRUCTION OF PERIMETER HAY BALE BARRIERS, CONSTRUCTION ENTRANCES SEDIMENT ANTI-TRACKING PADS, STAGING AREAS AND THE INSTALLATION OF CRUSHED STONE BERMS AT PROPOSED STORM DRAIN OUTFALL AREAS. SILT FENCE SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION WHICH SHOULD BE CLEARLY MARKED BY FLUORESCENT SURVEY FLAGGING OR FENCING BEFORE CLEARING AND GRUBBING TAKES PLACE.
- DURING ALL PHASES, PERMANENT AND/OR TEMPORARY SEDIMENT BASINS SHALL BE CONSTRUCTED AT PROPOSED STORM DRAINAGE INLETS AND/OR OUTFALLS. AT OUTFALLS A DOUBLE STAGGERED ROW OF HAY BALES SHALL BE INSTALLED DOWN SLOPE OF THE OUTFALLS OF ANY TEMPORARY BASINS AND A CRUSHED STONE SEDIMENT FILTER BERM SHALL BE INSTALLED JUST UP SLOPE OF THE DOUBLE STAGGERED ROW OF HAY BALES.
- UPON INSTALLATION OF THE ABOVE MEASURES, INSTALLATION OF CONSTRUCTION ENTRANCE ANTI-TRACKING PADS AND CLEARING AND GRUBBING FOR THE ROADWAY CONSTRUCTION ACTIVITIES MAY COMMENCE. TEMPORARY DIVERSION BERMS/DITCHES SHALL BE CONSTRUCTED AS NECESSARY FOR INTERMEDIATE EXCAVATION STAGES. DIVERSIONS AND OTHER TEMPORARY INTERMEDIATE MEASURES SHALL BE APPROVED BY THE ENGINEER IN ADVANCE AND SHALL OUTFALL RUNOFF TO SWALES WITH CHECK HAY BALE DAMS AND/OR TO TEMPORARY SEDIMENT BASINS.
- EXCAVATION FOR CONSTRUCTION OF THE PROPOSED ROADWAY SHALL NOT COMMENCE UNTIL ASSOCIATED DRAINAGE & SEDIMENTATION DEVICES FOR THE AREA ARE IN PLACE. IT SHOULD BE NOTED THAT EXTENSIVE EXCAVATION WITHIN THE LIMITS OF THE CUT AND FILL LINE INDICATED ON THE PLANS MAY REQUIRE ADDITIONAL TEMPORARY SWALES AND DIVERSIONS IN ORDER TO DIVERT AND DIRECT RUNOFF AND SEEPAGE TO THE PROPOSED DISCHARGE POINTS UNTIL THE PERMANENT STORM DRAINAGE SYSTEM IS INSTALLED. THESE TEMPORARY MEASURES MUST BE APPROVED IN ADVANCE AND SHOULD BE INSPECTED REGULARLY FOR OPERATIONAL EFFICIENCY BY THE CONTRACTOR. UTILIZATION OF TEMPORARY INLETS AND DIVERSION SWALES UNTIL THE DRAINAGE SYSTEM IS COMPLETE IS EXPECTED. THESE INLETS/DIVERSIONS SHALL BE CONSTRUCTED SO AS TO PREVENT EROSION AND SEDIMENTATION.
- MEASURES TO CONTROL CONSTRUCTION DEBRIS AND DUST SHALL BE IMPLEMENTED ON AN AS NEEDED BASIS AND AS DIRECTED BY THE ENGINEER. DUST SHALL BE CONTROLLED BY LIMITING THE AREA OF SOIL EXPOSED AND BY WATERING WITHOUT CHEMICAL ADDITIVES. CONSTRUCTION DEBRIS SHALL BE COLLECTED AS NECESSARY AND AT LEAST PRIOR TO THE END OF WORK EACH WEEK.
- SOIL & ROCK STOCKPILE AREAS SHALL BE APPROVED IN ADVANCE AND HAY BALE AND/OR SILT FENCE BARRIERS SHOULD BE INSTALLED AROUND STOCKPILES AND DOWN SLOPE OF THESE AREA PRIOR TO STOCK PILING MATERIAL. ANY SOIL TO BE STORED FOR MORE THAN A MONTH SHOULD BE COVERED OR SEEDED AND/OR MULCHED AFTER BEING PLACED.
- THE BASE MATERIAL FOR THE DRIVES AND PARKING AREAS SHALL BE PLACED AND WATERED AS REQUIRED BY CONDITIONS OR REQUESTED BY THE DEEP TO CONTROL DUST AS NOTED ABOVE.
- ONCE THE PROPOSED SITE IS IN FINAL GRADED SHAPE, TOPSOIL AND SEEDING SHOULD COMMENCE ALONG WITH THE INSTALLATION OF NEW CHECK HAY BALE BARRIERS AS REQUIRED. CONSTRUCTION TRAFFIC SHOULD BE RUN ON APPROVED SUBBASE, WITH RUNOFF CONTROLLED AS NECESSARY.
- THESE EROSION AND SEDIMENTATION CONTROL PLANS SHALL BE IN COMPLIANCE WITH PERMITS ISSUED AND IN COMPLIANCE WITH THE ENVIRONMENTAL MANAGEMENT SPECIFICATIONS.

**RESPONSIBLE PERSONS:**

DURING CONSTRUCTION - TO BE DESIGNATED BY THE CONTRACTOR.  
LONG TERM MAINTENANCE - TO BE DESIGNATED BY THE DEEP.

**E. EARTH SLOPES**

- ALL EARTH SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL SHALL BE COVERED WITH EROSION CONTROL BLANKET UNTIL VEGETATION IS ESTABLISHED.
- ALL EARTH SLOPES (REGARDLESS OF GRADE) WHERE THE TOP OF SLOPE IS WITHIN 25' OF A WETLAND SHALL BE COVERED WITH EROSION CONTROL BLANKET UNTIL VEGETATION IS ESTABLISHED.

**F. SEEDING**

- TEMPORARY VEGETATIVE COVER: SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF CONNECTICUT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS BRIDGES & INCIDENTAL CONSTRUCTION (FORM B17) AND THE SPECIFICATIONS.
- PERMANENT VEGETATIVE COVER: DISTURBED AREAS SHALL BE FINE GRADED AND COVERED WITH A MINIMUM OF 6 INCHES OF TOPSOIL. FERTILIZER SHALL BE APPLIED AT THE RATE OF 45 LBS. NITROGEN PER ACRE USING 1-2-1 OR EQUIVALENT. APPLY LIME (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT THE RATE OF 3 TONS/ACRE (OR IN ACCORDANCE WITH SPECIFIC SOIL TESTS). WORK FERTILIZER LIMESTONE THOROUGHLY INTO THE TOPSOIL. REFER TO SPECIFICATIONS FOR FURTHER DETAILED FERTILIZER REQUIREMENTS.
- SEED MIXTURE: SEED MIXTURE SHALL BE AS DEFINED IN THE SPECIFICATIONS. CONTRACTOR SHALL SUBMIT THE SEED SUPPLIERS NAME, LOCATION AND SEED MIX TO THE ENGINEER PRIOR TO APPLICATION OF SEED.
- SEEDING DATES: ALL PERMANENT SEEDING SHALL BE DONE DURING THE SEEDING PERIODS OF APRIL 15 THROUGH JUNE 15 AND AUGUST 15 THROUGH OCTOBER 15. WATER, MOW, AND REPAIR VEGETATIVE COVER TO MAINTAIN IT IN A HEALTHY GROWING CONDITION. TEMPORARY SEEDING SHALL BE PERFORMED AS NECESSARY TO STABILIZE SLOPES DURING ALL PERIODS OF CONSTRUCTION. THE CONTRACTOR SHALL WATER AS NECESSARY TO ESTABLISH AND MAINTAIN HEALTHY GROWING CONDITIONS.

**G. RECORDS**

- EROSION AND SEDIMENTATION CONTROL RECORDS SHALL BE KEPT BY THE CONTRACTOR. INSTALLATION, INSPECTION, APPROVAL AND MAINTENANCE OF INSTALLATION RECORDS SHALL INDICATE THE FOLLOWING:
  - LOCATION OF THE EROSION AND SEDIMENTATION CONTROL MEASURE.
  - INSTALLED BY (PRINT NAME AND SIGNATURE) AND DATE OF INSTALLATION.
  - APPROVAL BY DEEP OF THE INSTALLED MEASURE (PRINT NAME AND SIGNATURE) AND DATE OF APPROVAL.
  - SUBSEQUENT INSPECTIONS, DATE OF INSPECTION & REASON FOR INSPECTION.
  - RESULTS OF SUBSEQUENT INSPECTION, ACTION TO BE TAKEN BY THE CONTRACTOR SPECIFIC REQUIREMENTS OF THIS PLAN.

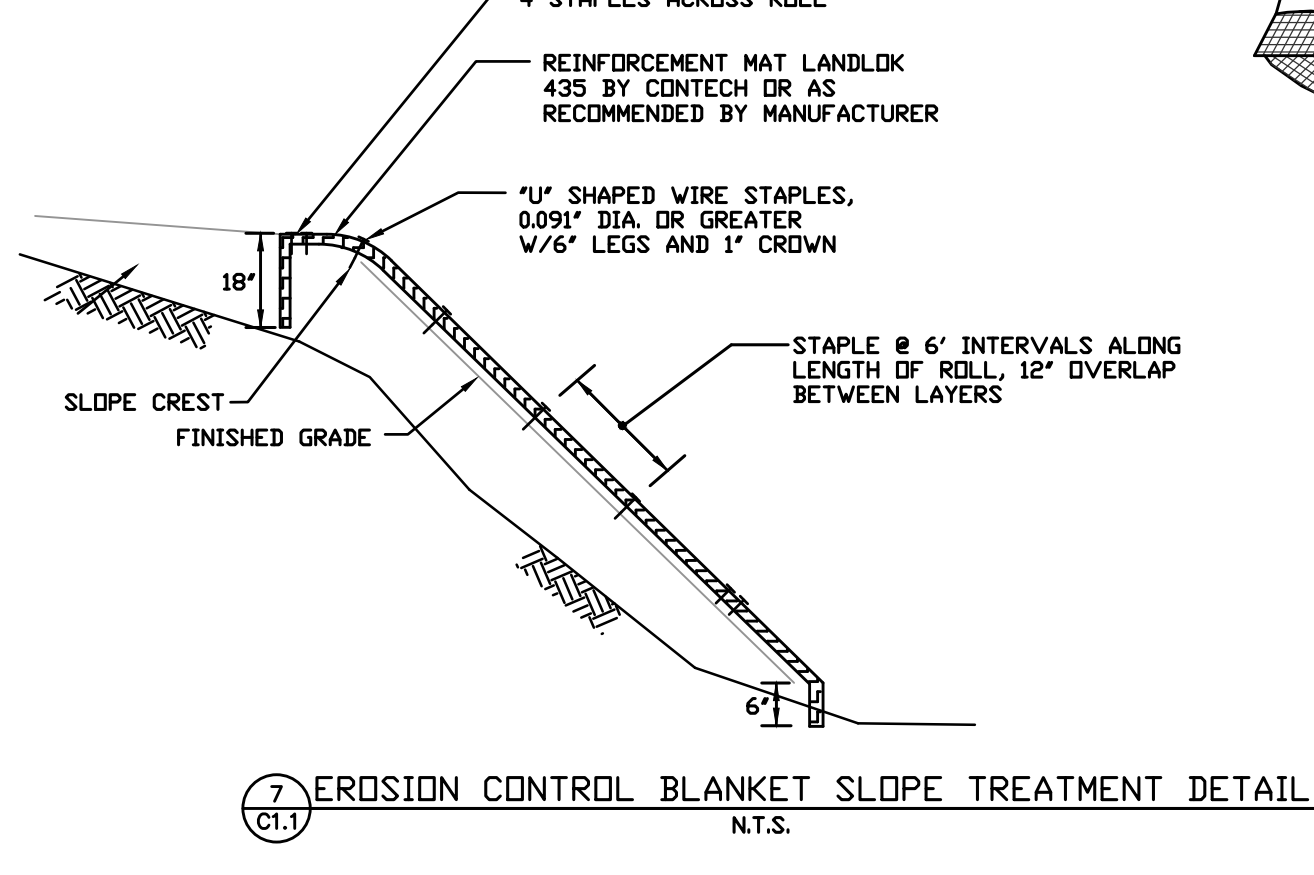
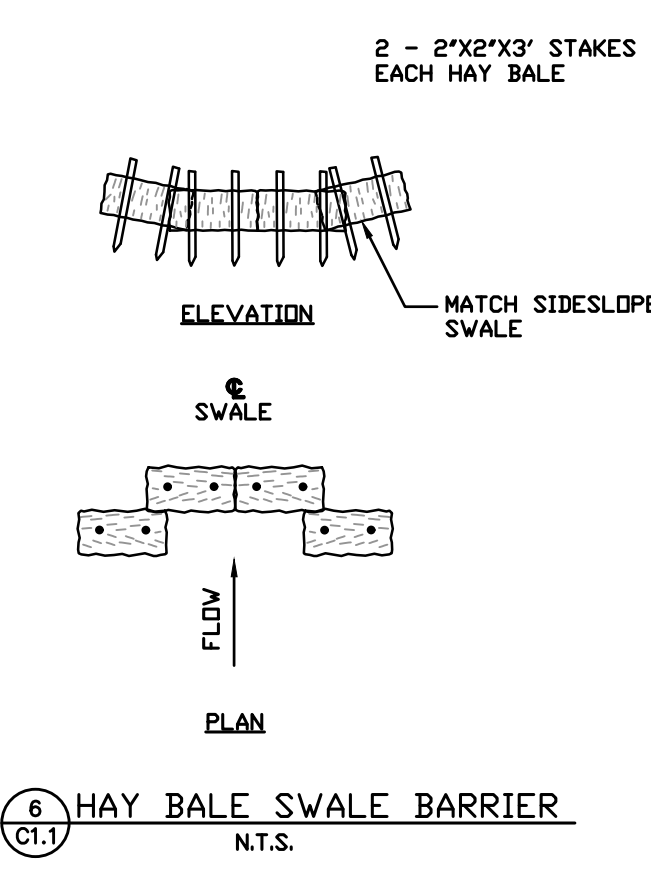
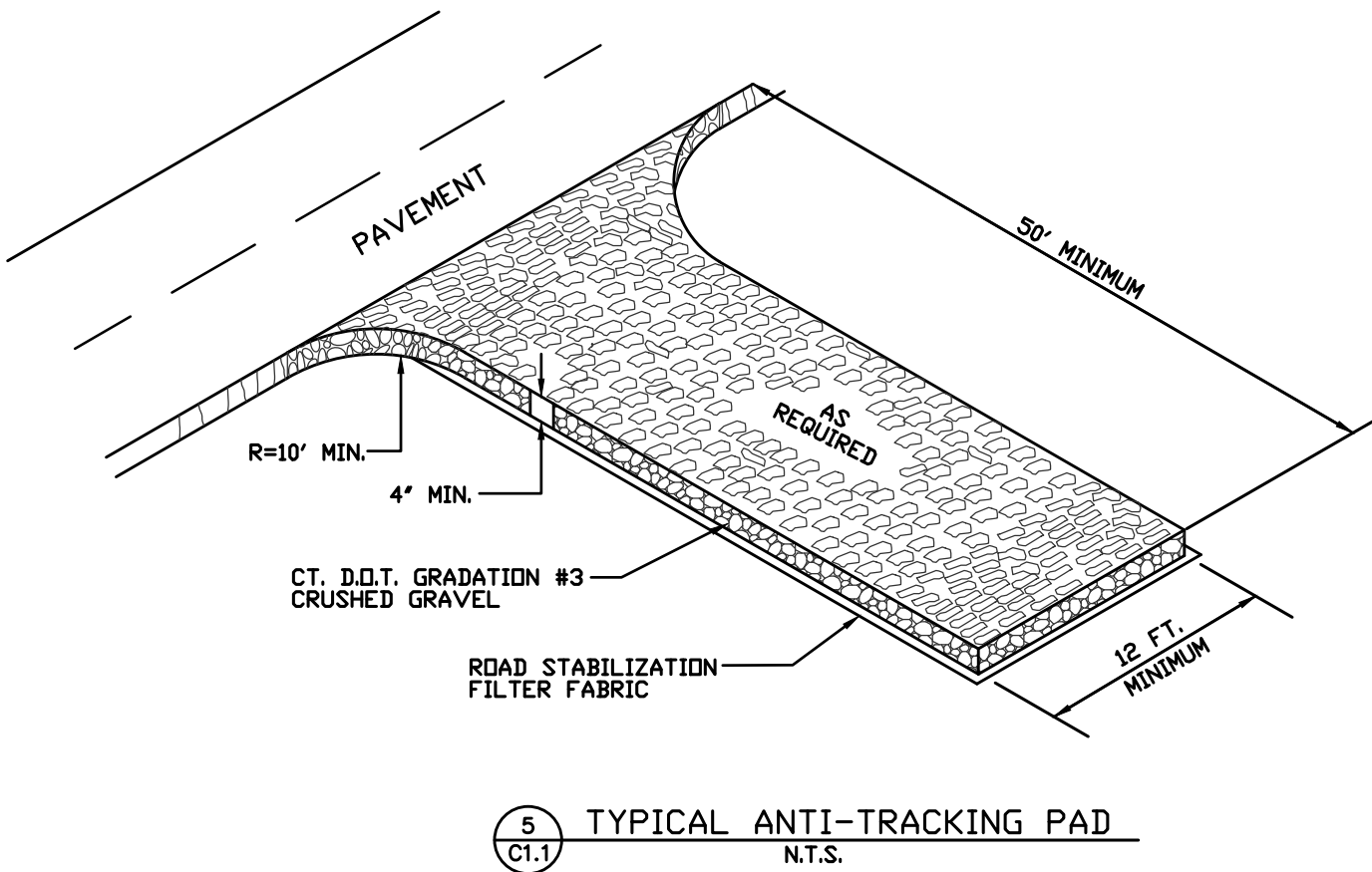
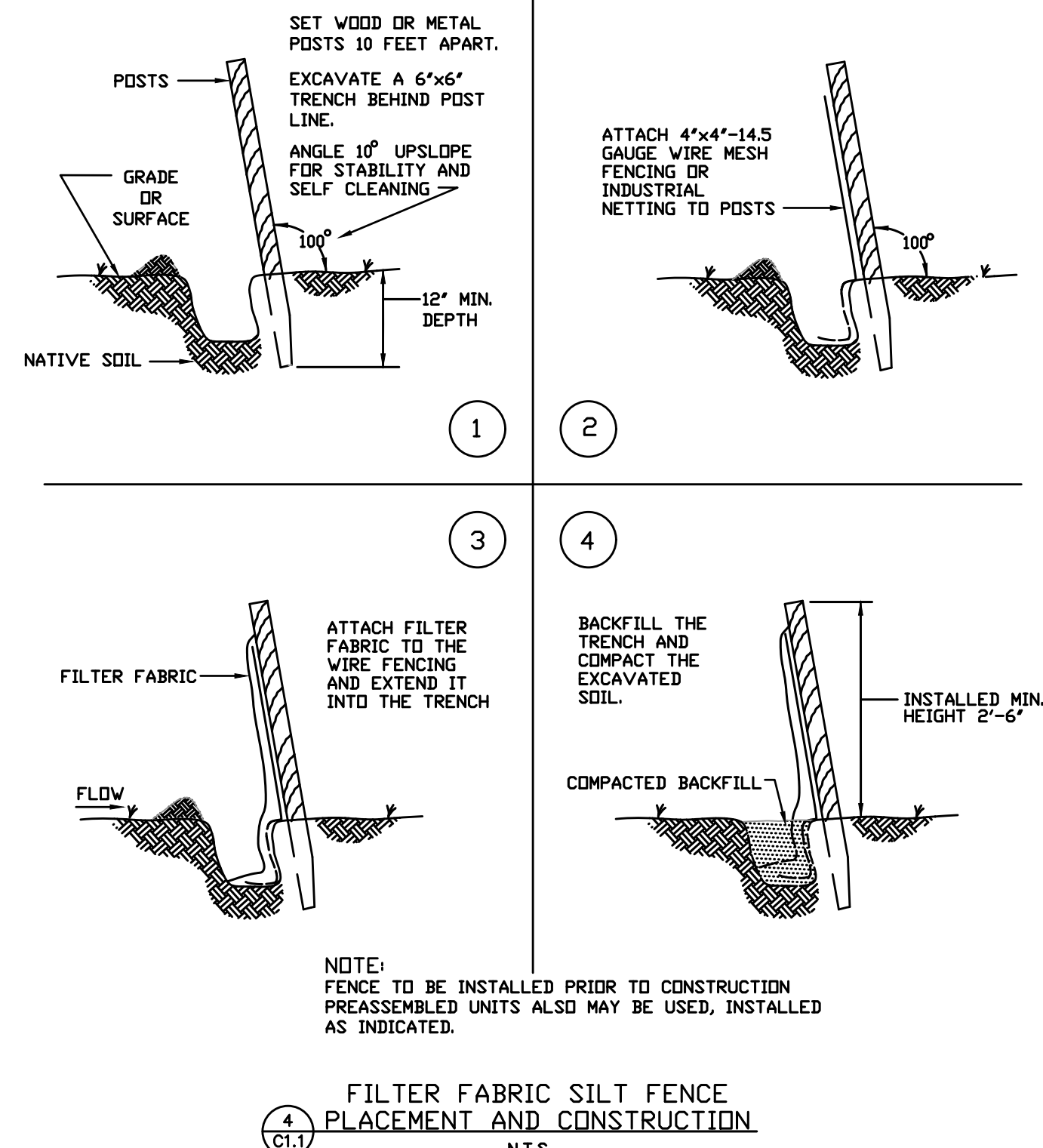
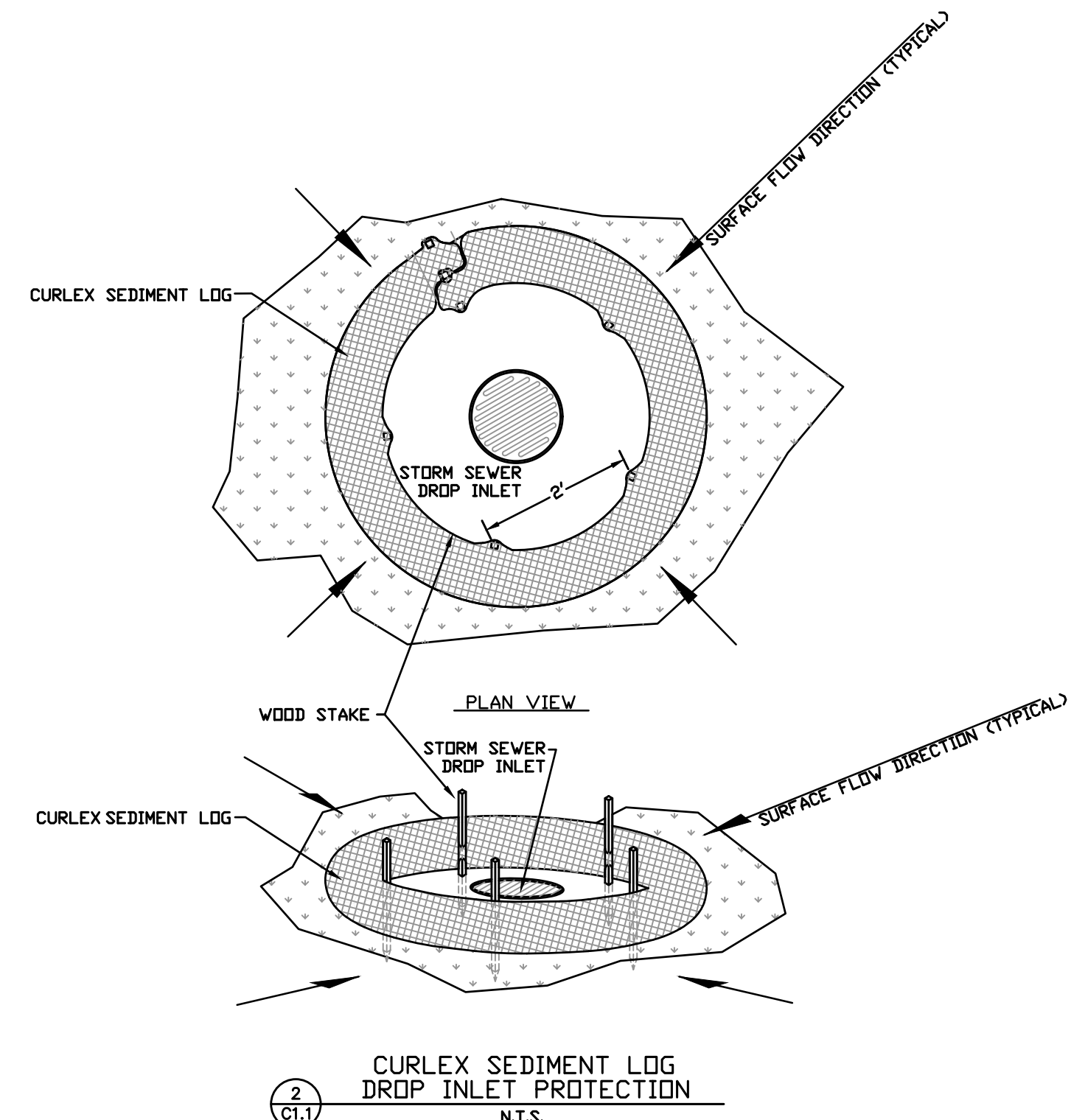
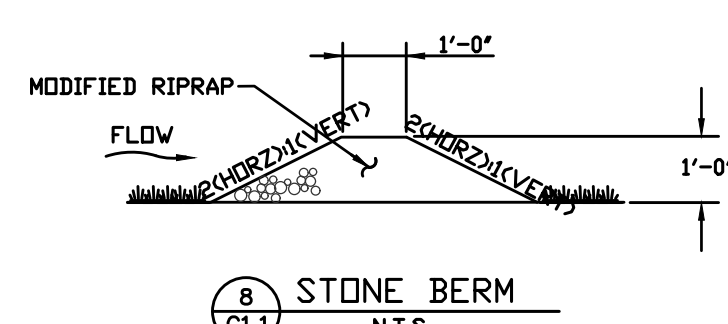
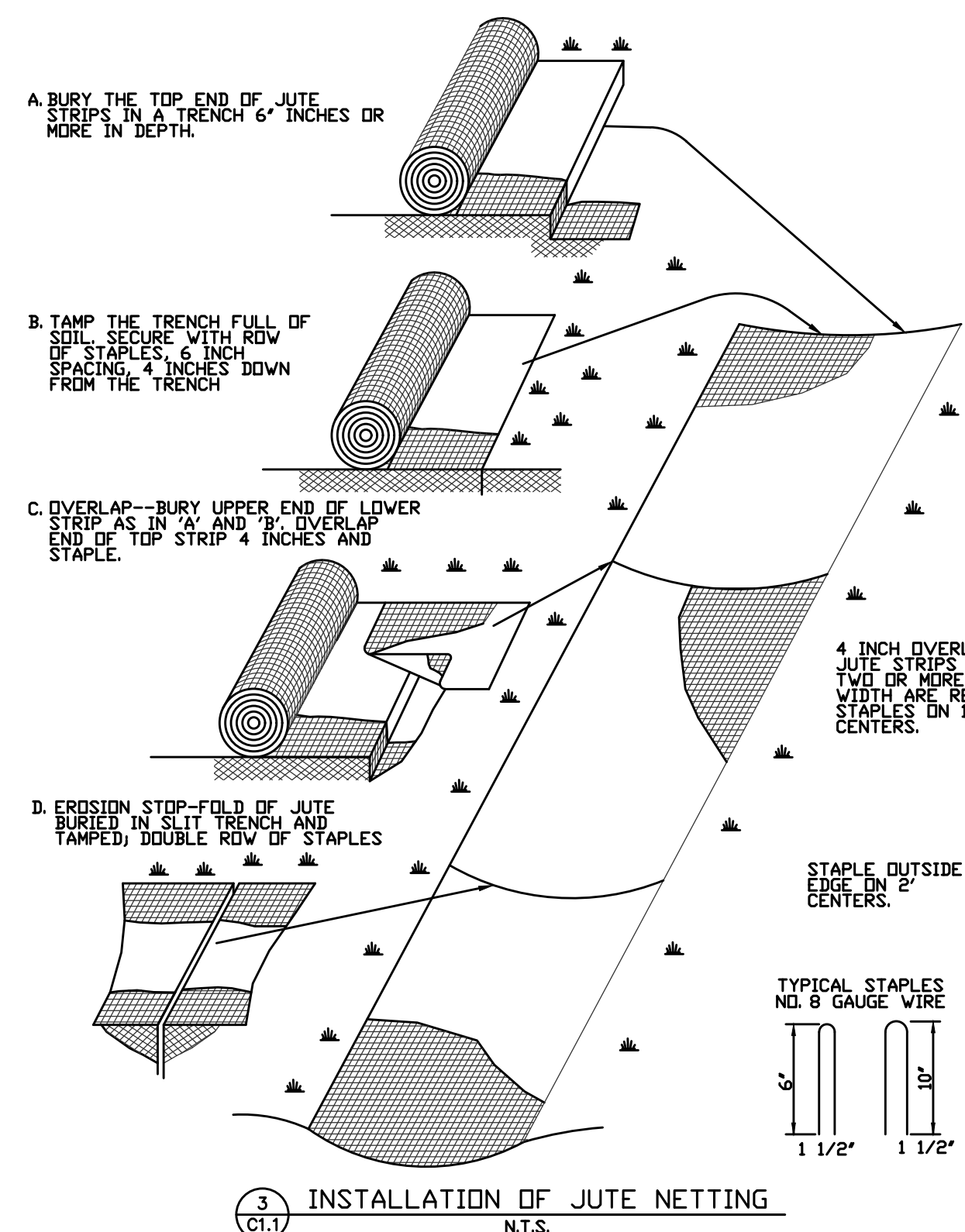
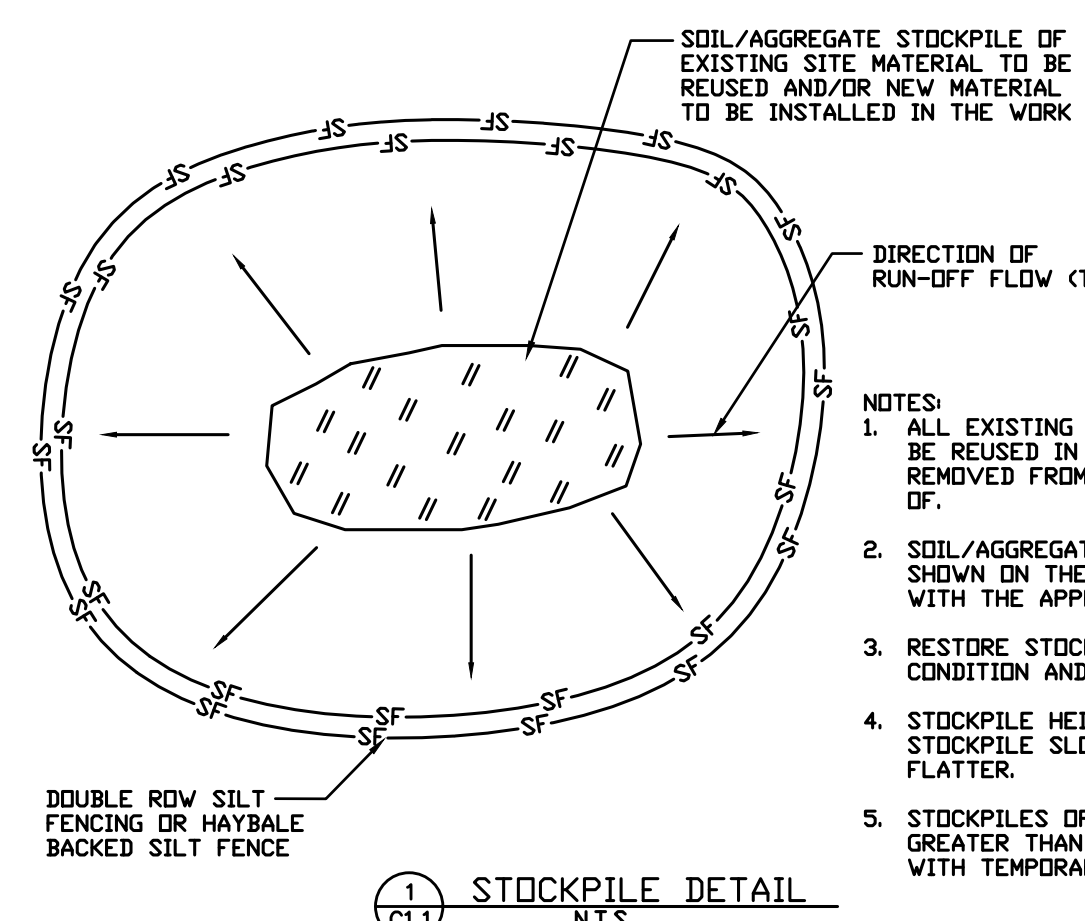
**H. NATURAL DIVERSITY DATA BASE INFORMATION:**

ALL INFORMATION IS TAKEN FROM NDBB DETERMINATION NUMBER 201900828, JANUARY 25, 2019. STATE LISTED SPECIES (RCSA SEC. 26-306) DOCUMENTED WITHIN THE PROPOSED PROJECT AREA:

- EASTERN PEARL SHELL (MARGARITIFERA MARGARITIFERA)
- TIGER SPIKETAIL (CORDULEGASTER ERRONEA)
- MOUSTACHED CLUBTAIL (GOMPHUS ADELPHUS)
- SKILLET CLUBTAIL (GOMPHUS VENTRICOSUS)

THESE SPECIES ARE SENSITIVE TO SEDIMENT DISTURBANCE AND TO THE EFFECTS OF CONSTRUCTION PROJECTS THAT OCCUR IN-STREAM OR ALONG RIVERBANKS.

- USE BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENTATION AND EROSION IN THE PROJECT AREA.
- BEFORE BEGINNING WORK AROUND UNDERWATER SUPPORT STRUCTURES PROTECT FRESHWATER MUSSELS THAT WILL BE EXPOSED.
- AT LEAST TWO WEEKS BEFORE INSTALLATION OF COFFERDAMS OR OTHER IN-STREAM WORK, YOU MUST CONTACT THE WILDLIFE DIVISION. CONTACT LAURA.SAUCIER@CT.GOV AND DEEP.NDBBREQUEST@CT.GOV TO ARRANGE FOR FRESHWATER MUSSELS TO BE MOVED AND RELOCATED.
- COFFERDAM CONSTRUCTION SHOULD EMPLOY CONTAINED STRUCTURES SUCH AS SANDBAGS (I.E. NOT LOOSE GRAVEL).
- ENSURE THAT WATER PUMPED OUT OF THE WORK AREA INCLUDES FILTERING TO REMOVE SEDIMENT.
- USE DEBRIS SHIELD UNDER AREAS OF CONSTRUCTION OR DECONSTRUCTION TO MINIMIZE THE AMOUNT OF DEBRIS FALLING INTO THE RIVER. DISPOSE OF DEBRIS APPROPRIATELY AND NOT IN THE WATER.
- ANY IN-STREAM FISH HABITAT STRUCTURES SHOULD NOT BE CONSIDERED WITHOUT PRIOR CONSULTATION WITH BOTH THE WILDLIFE AND FISHERIES DIVISION IF STATE-LISTED FRESHWATER MUSSELS, DRAGONFLIES OR DAMSELFLIES ARE IN CLOSE PROXIMITY TO THE PROJECT AREA.
- PROTECT NATURAL STREAM BANKS:
  - MINIMIZE REMOVAL OF VEGETATION ON STREAM BANKS.
  - MINIMIZE THE ALTERATION AND/OR HARDENING OF STREAM BANKS (I.E. MINIMIZE RIP-RAP USE).
  - AFTER COMPLETION, ENSURE THAT TRAFFIC FLOW OF PUBLIC IS EFFECTIVELY DIRECTED OVER THE BRIDGE AND DIVERGED OR PREVENTED FROM TRAVELING DOWN BANKS TOWARD THE RIVER.



**100% CONSTRUCTION DOCUMENTS**

SITE EROSION CONTROL NOTES AND DETAILS			STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS				
Mark	Date	Description	Date	Scale
			7-2-19	N.T.S.
			Scale	N.T.S.
			Drawn By	JWK
			Approved	HEM
			Drawing No	C1.1

Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE #18 (DOT # 08323)  
LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT

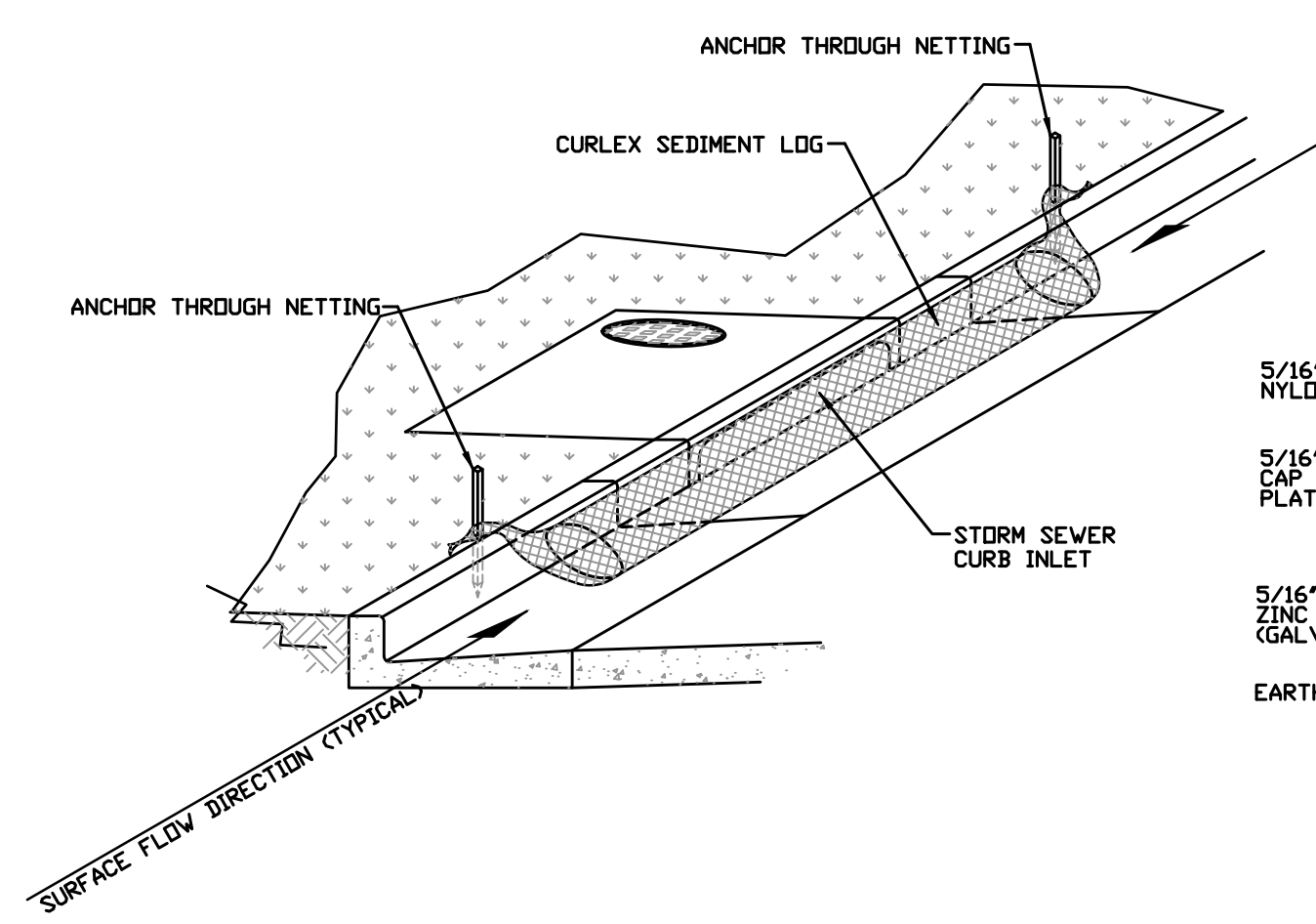
44 Gilbert Street  
Hartford, Connecticut 06105  
(860) 549-6190

Macchi Engineers

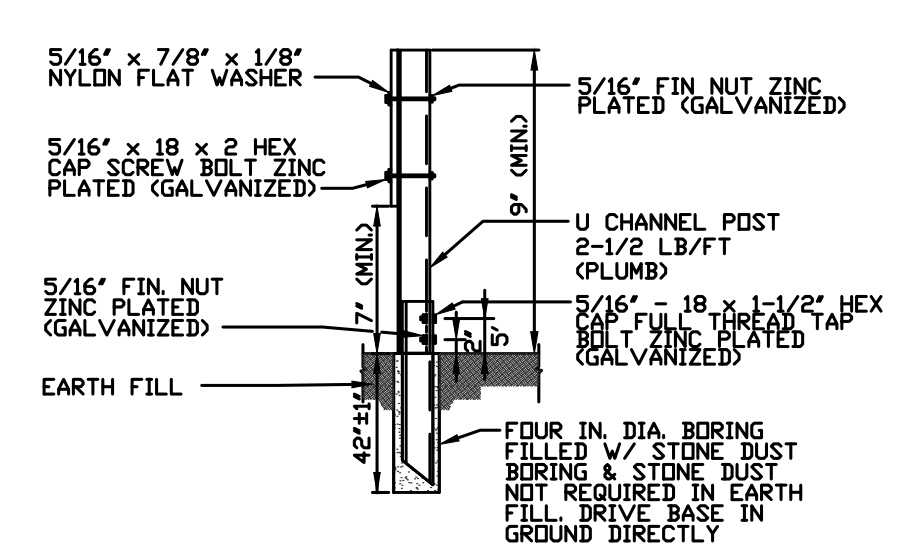
CT DEEP CONTRACT ID: 12P8X028AZ



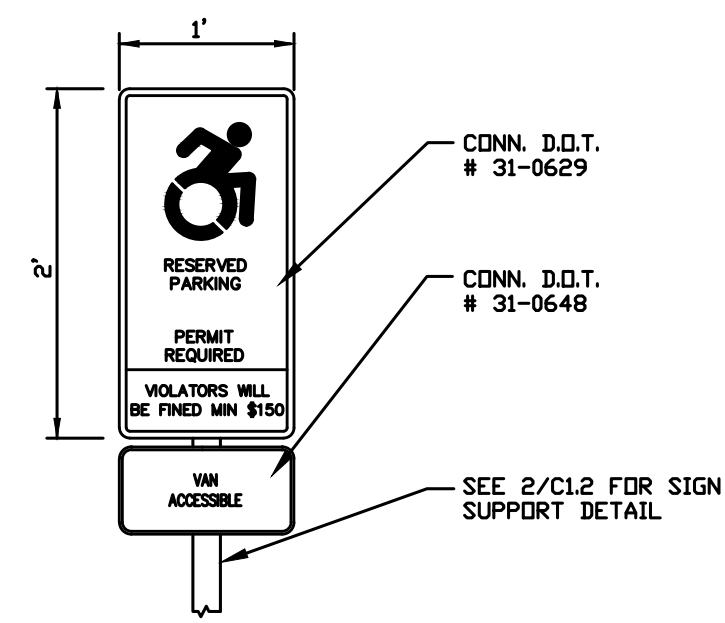




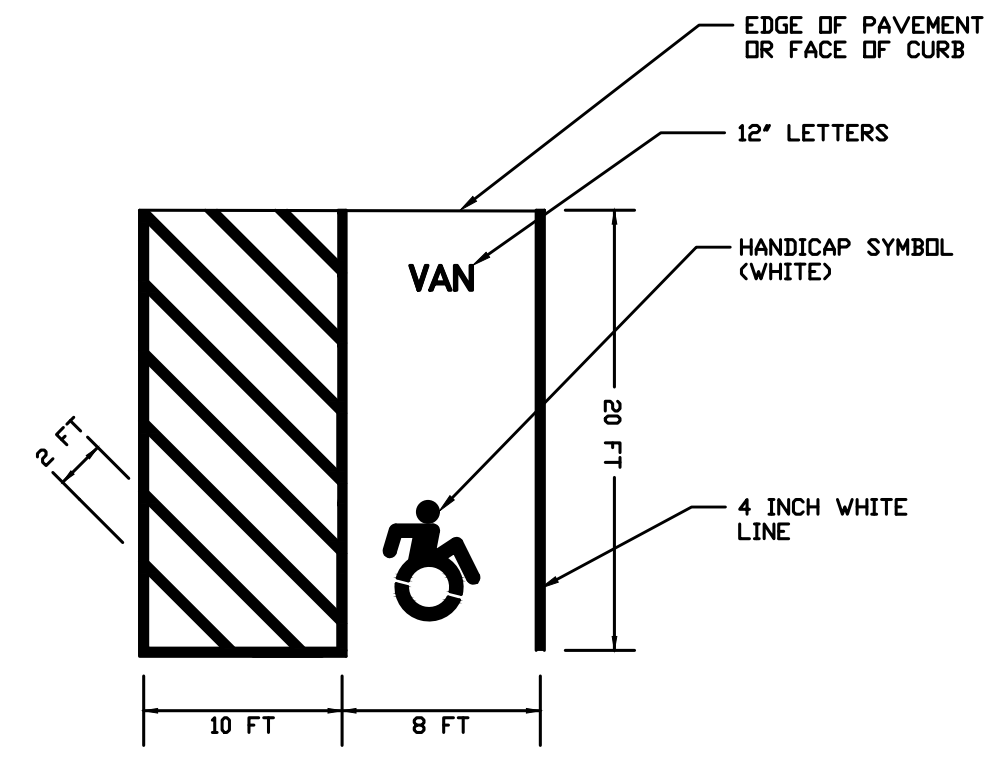
1 STAPLE DETAIL (SIDE VIEW)  
OPTIONAL OVERLAPPING JOINT  
N.T.S.



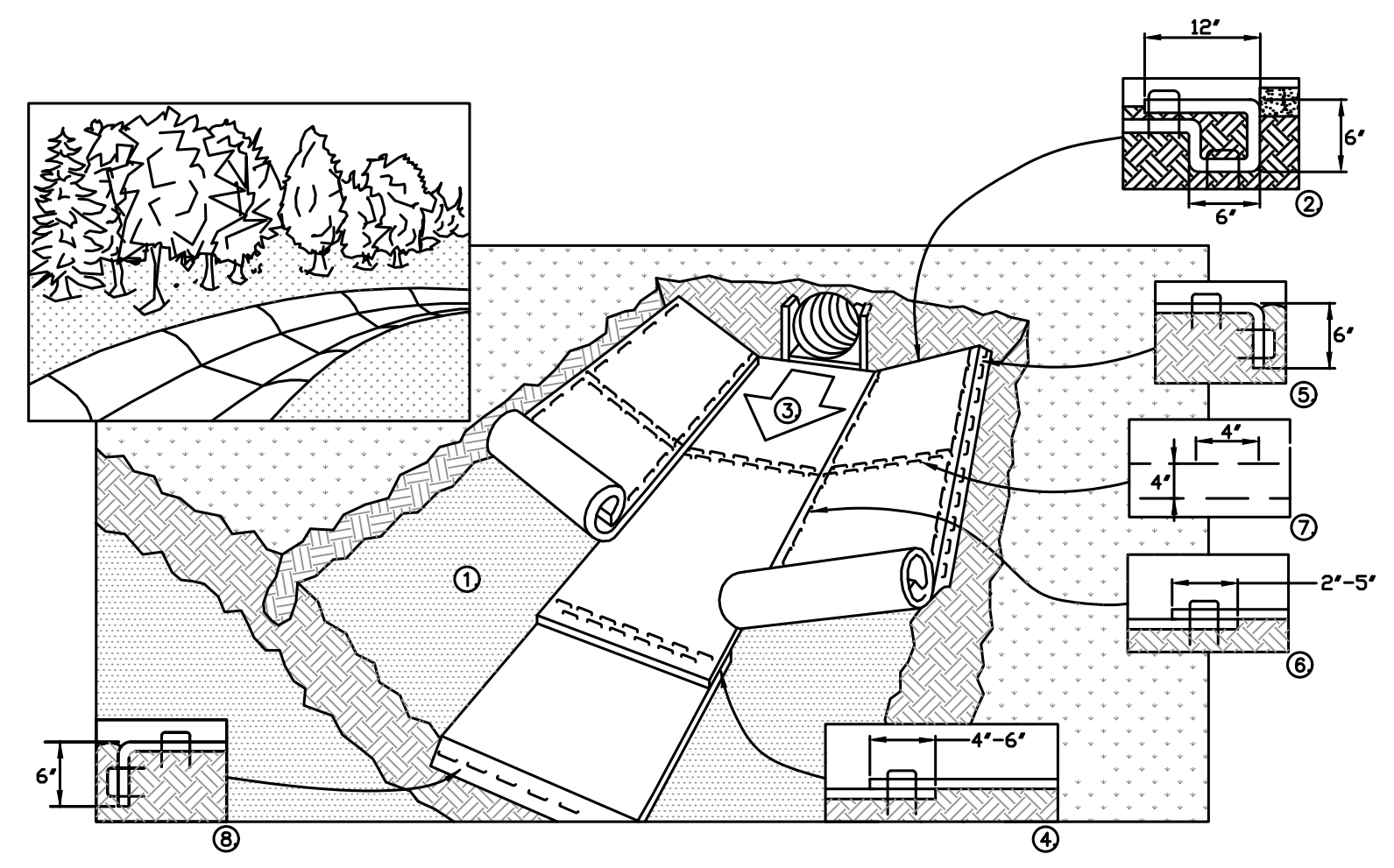
2 TYPICAL SIGN SUPPORT  
N.T.S.



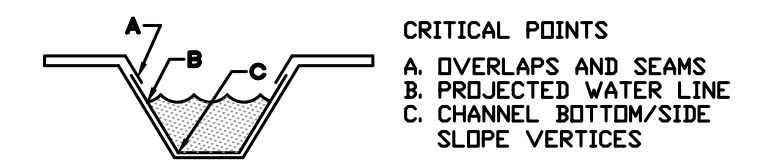
3 TYPICAL HANDICAP PARKING SIGN  
N.T.S.



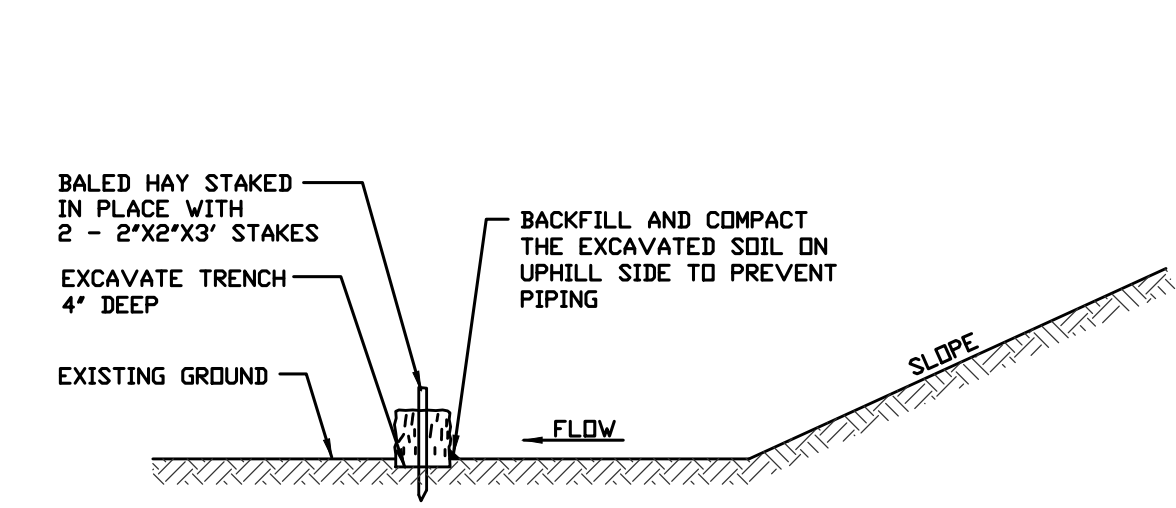
4 VAN ACCESSIBLE PARKING STALL  
N.T.S.



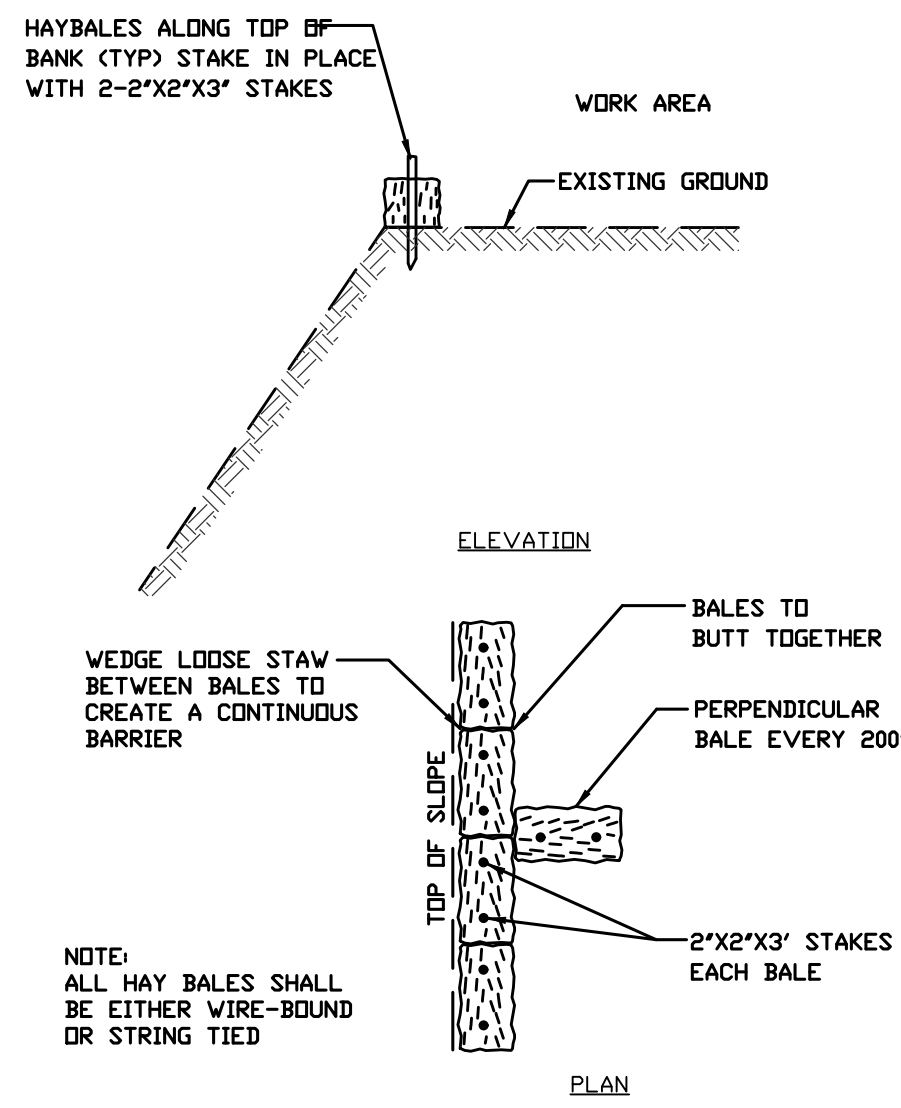
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 6\"/>



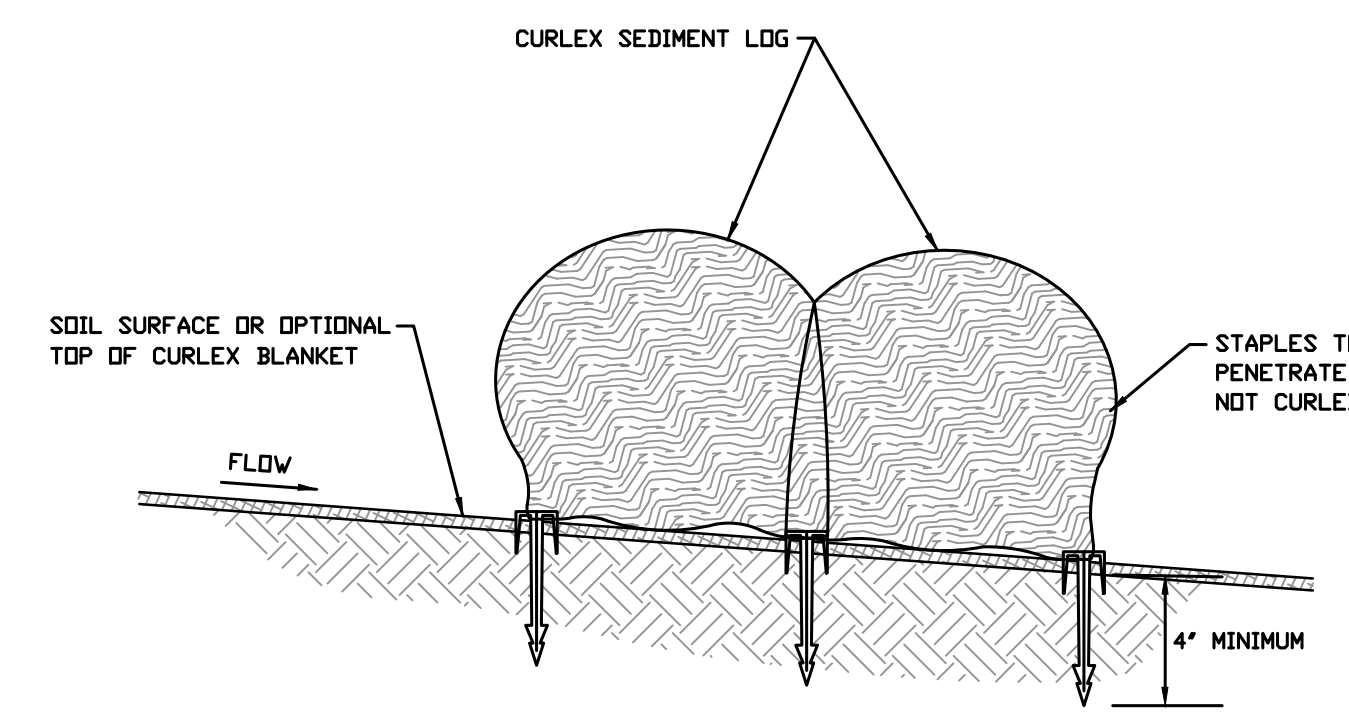
5 INSTALLATION OF EROSION CONTROL BLANKET - DRAINAGE SWALES  
N.T.S.



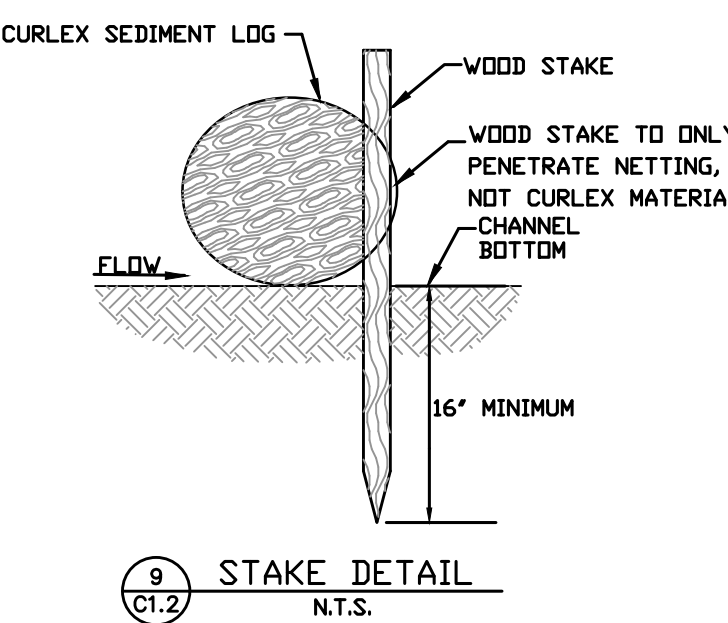
6 TYPICAL HAY BALE SLOPE BARRIER AT TOE OF SLOPE  
N.T.S.



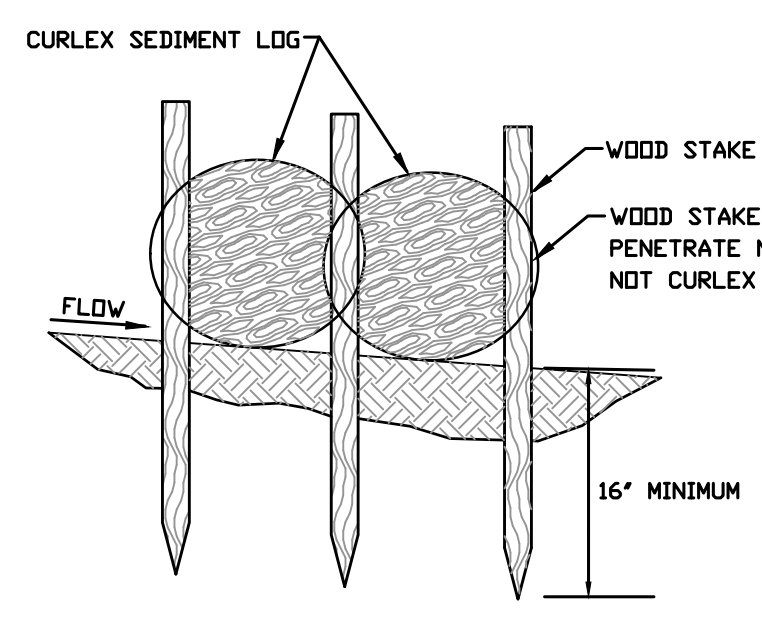
7 TYPICAL HAY BALE SLOPE BARRIER AT TOP OF SLOPE  
N.T.S.



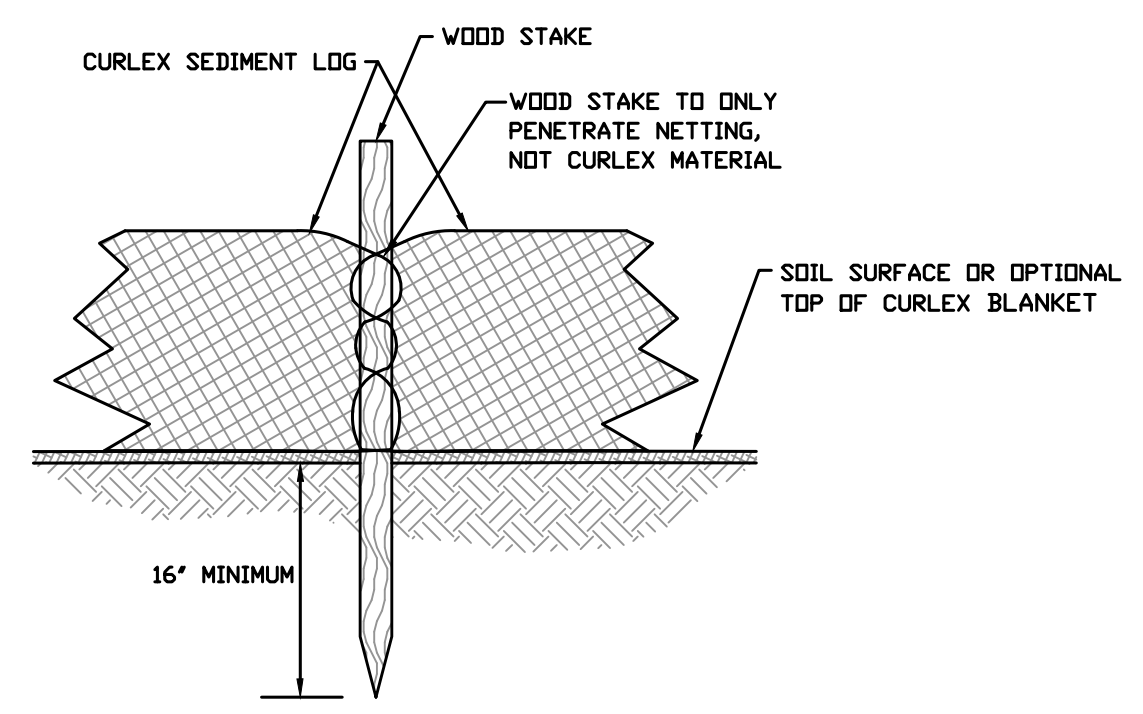
8 STAPLE DETAIL (SIDE VIEW)  
OVERLAPPING JOINT  
N.T.S.



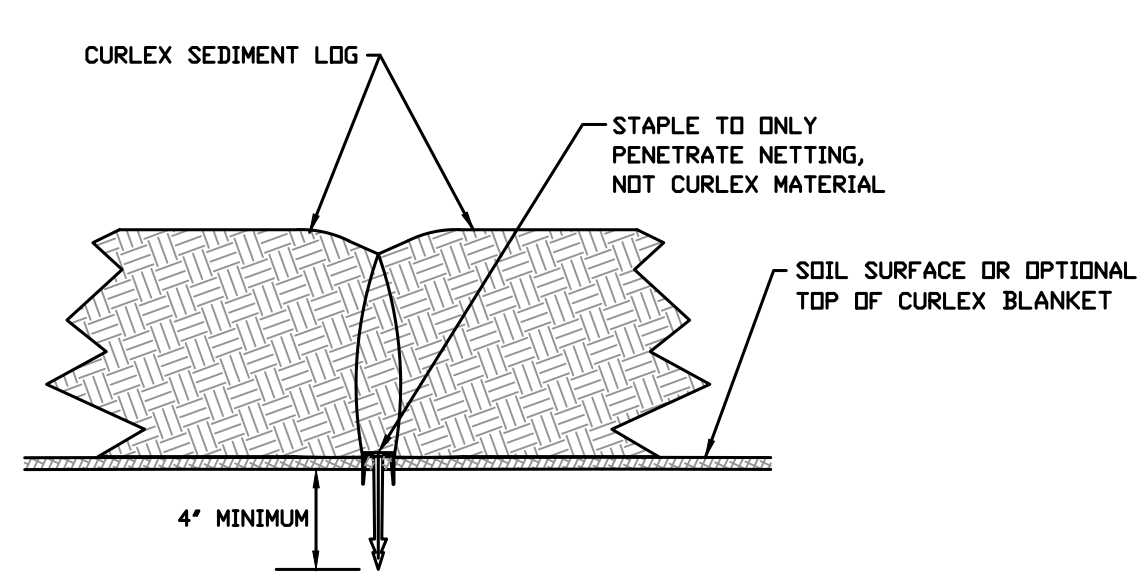
9 STAKE DETAIL  
N.T.S.



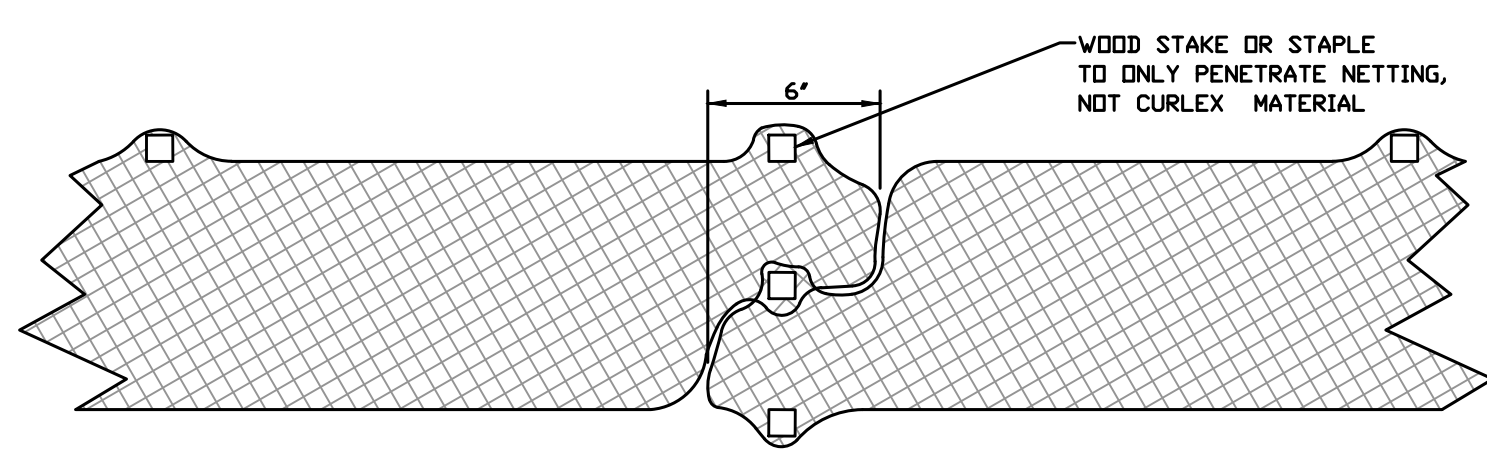
10 STAKE DETAIL  
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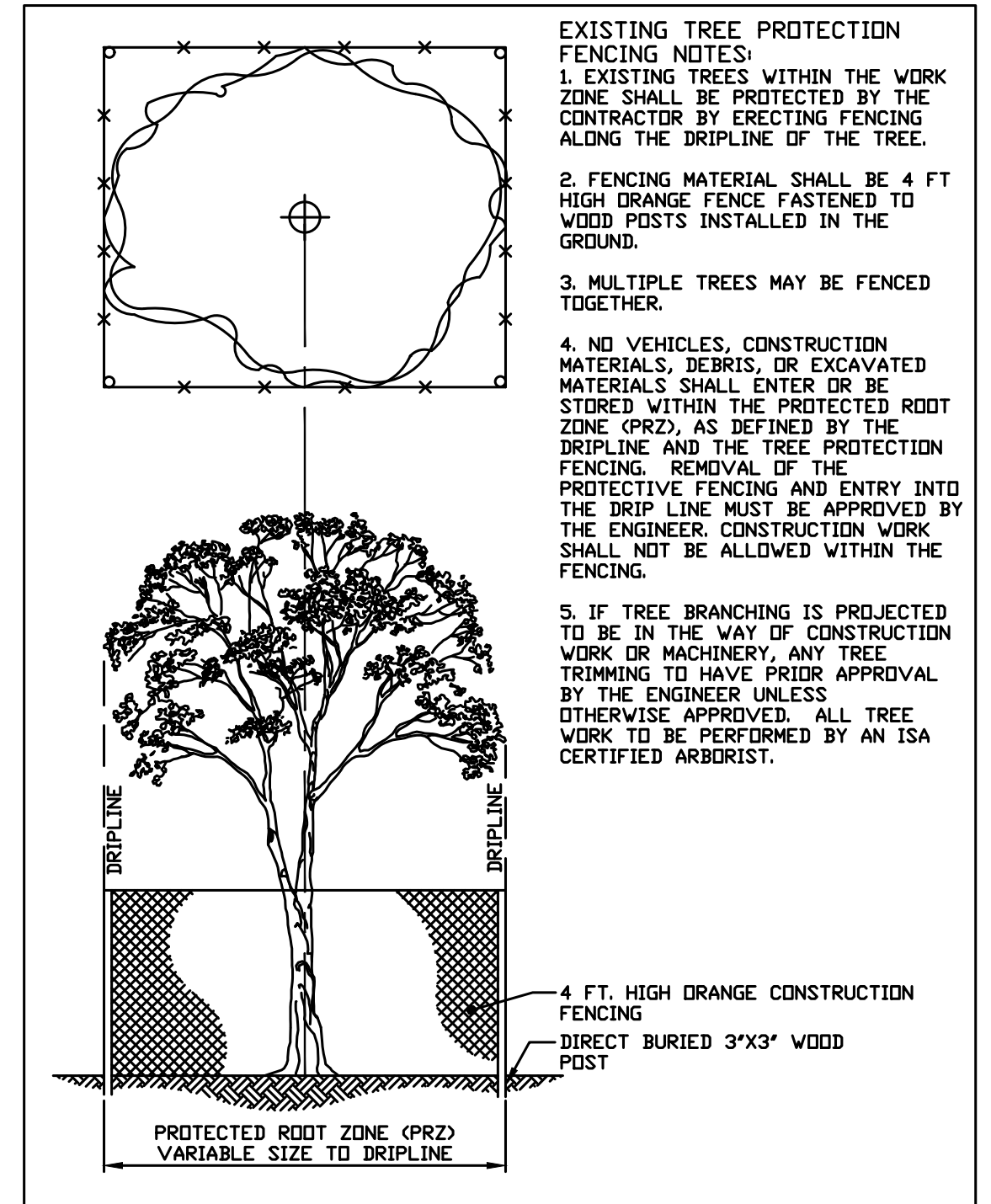
11 STAPLE DETAIL (FRONT VIEW)  
COMMON STAKE ABUTMENT JOINT  
N.T.S.



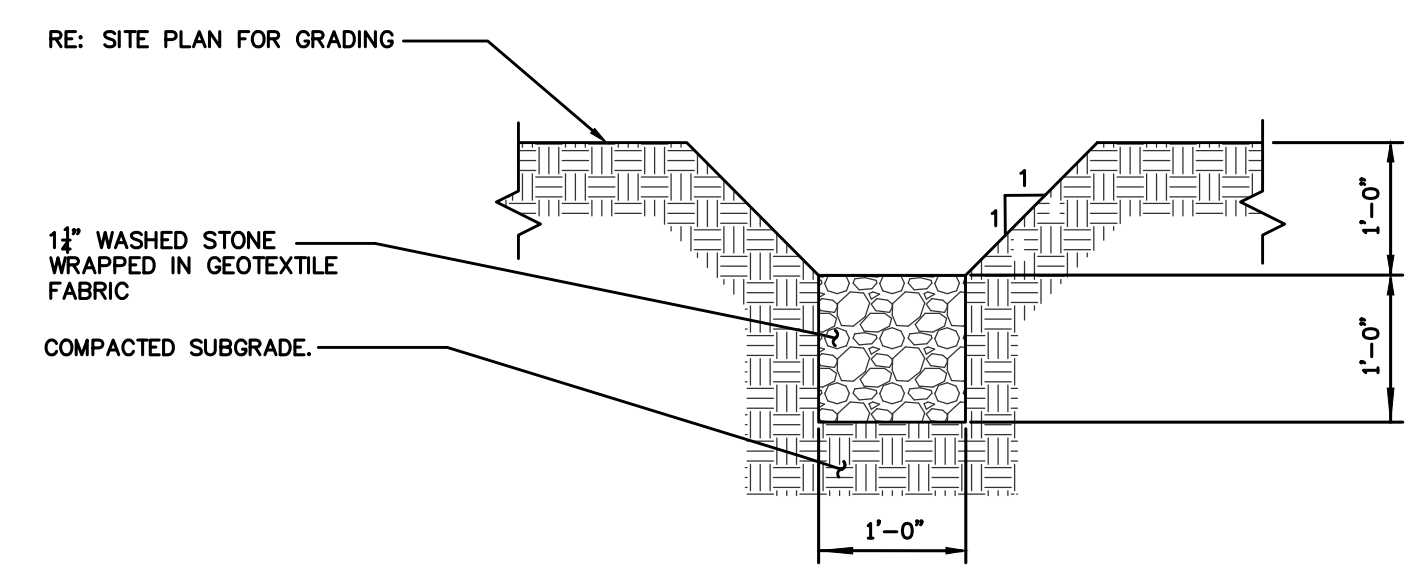
12 STAPLE DETAIL (FRONT VIEW)  
COMMON STAPLE ABUTMENT JOINT  
N.T.S.



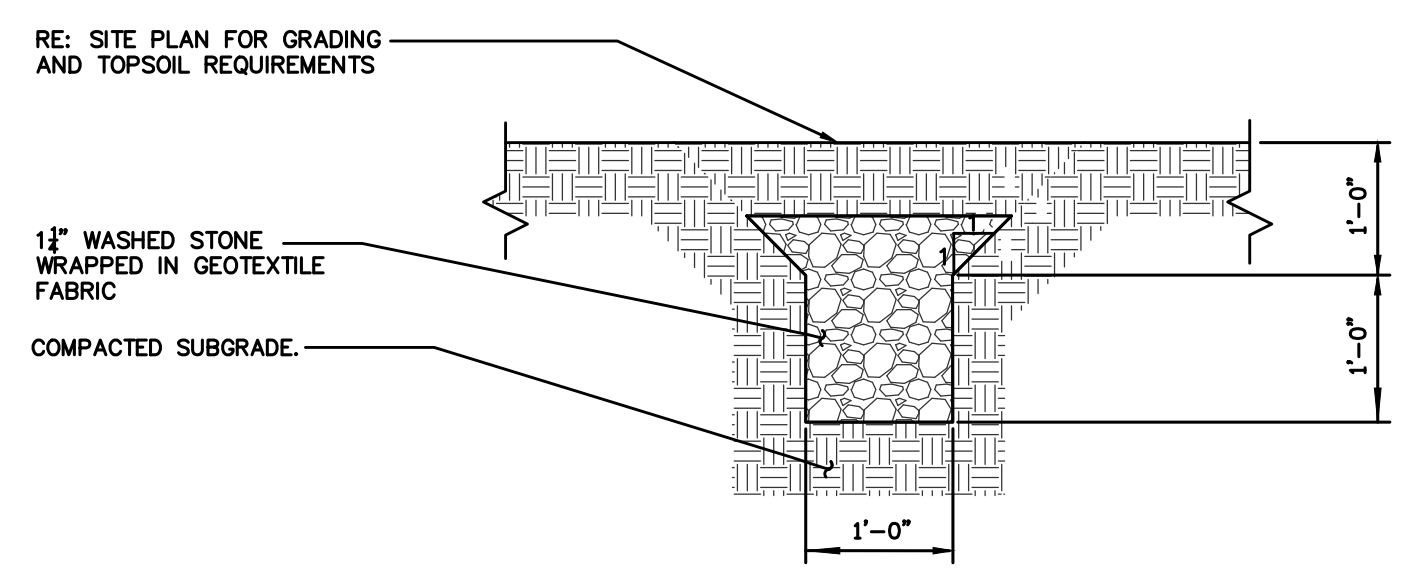
13 ANCHOR DETAIL (PLAN VIEW)  
OPTIONAL OVERLAPPING JOINT  
N.T.S.



14 TREE PROTECTION FENCING DETAIL  
N.T.S.



15 STONE SWALE  
N.T.S.



16 UNDER GRADE STONE SWALE  
N.T.S.



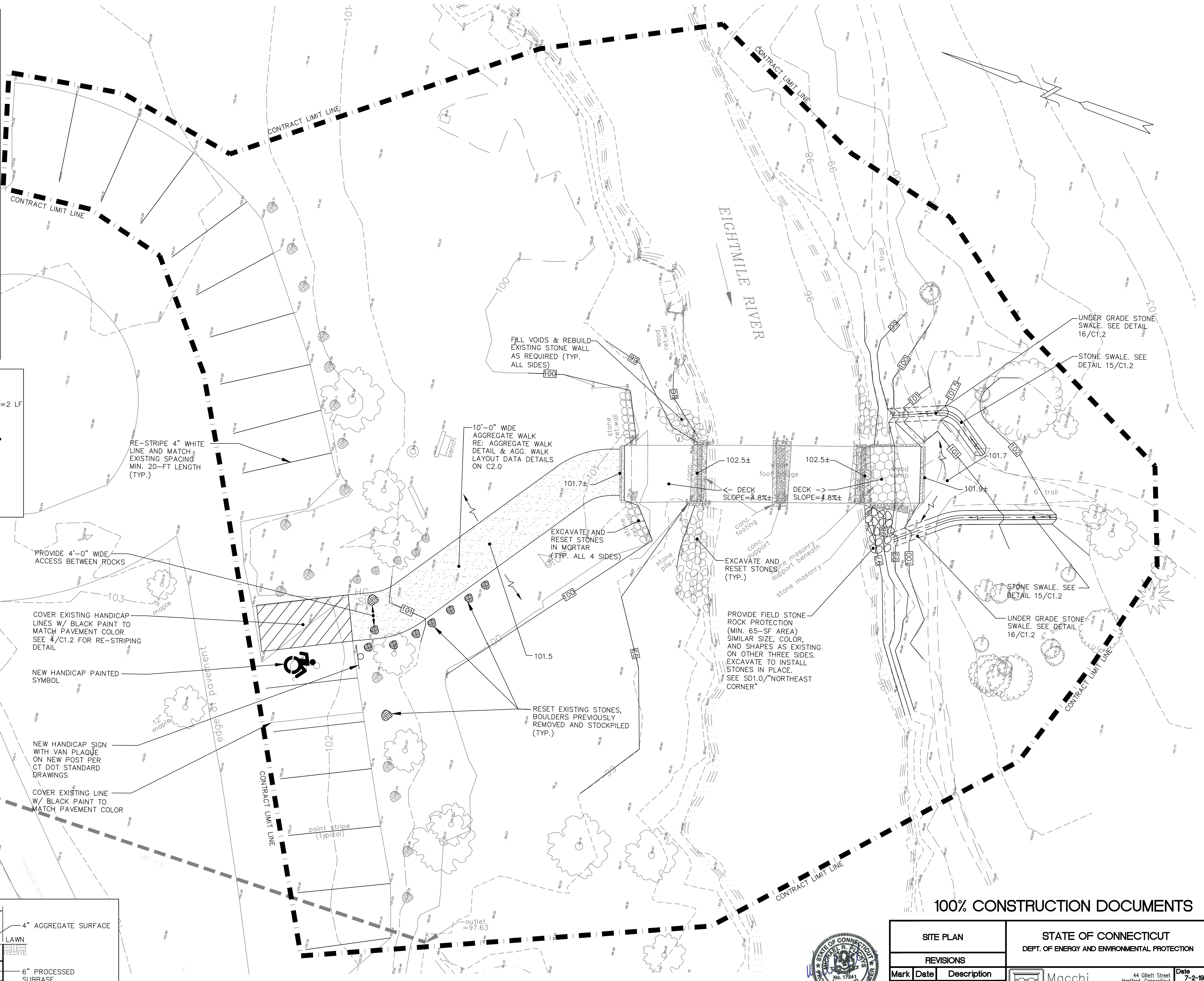
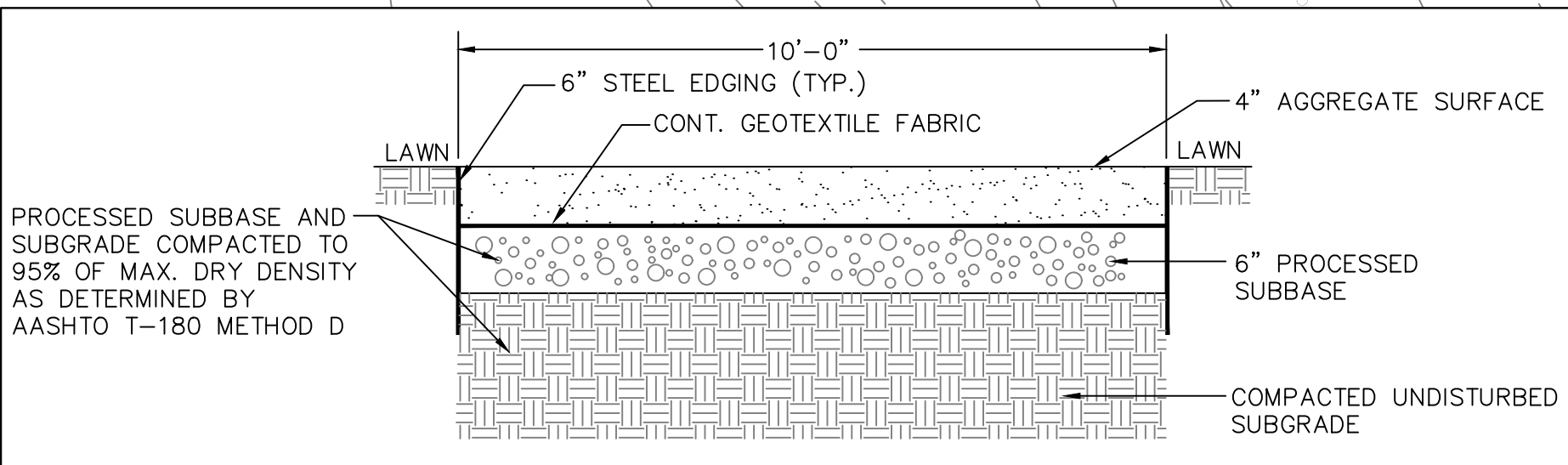
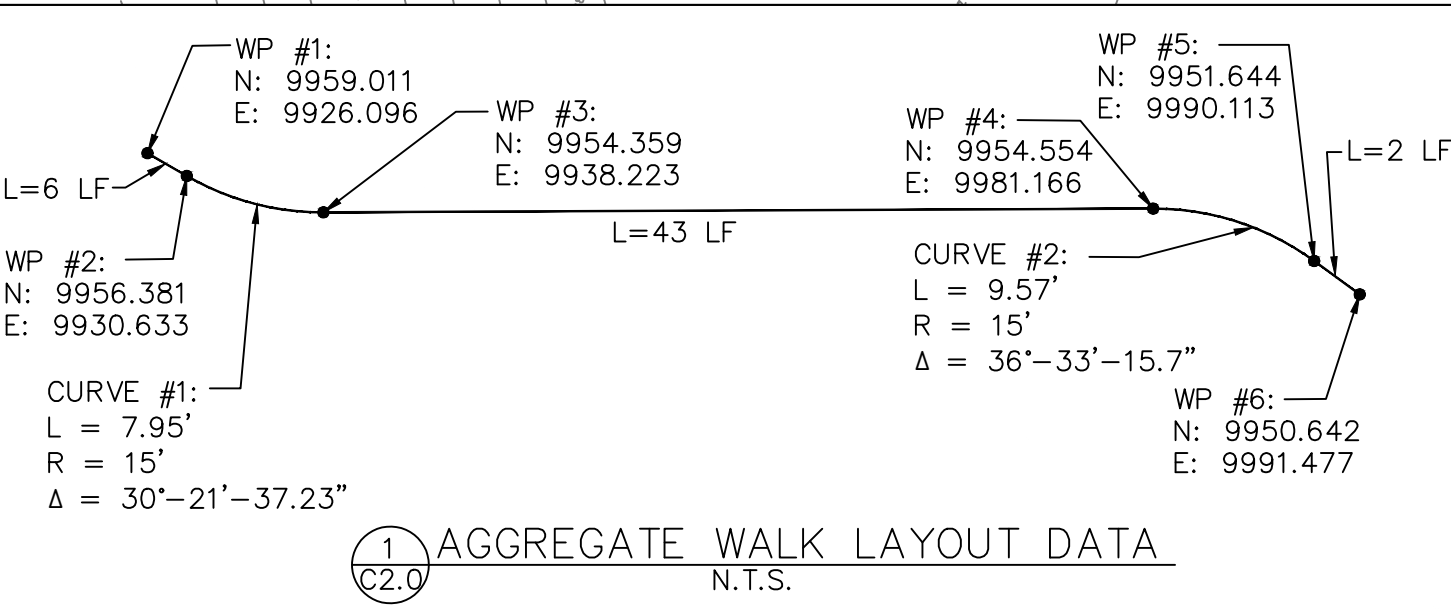
**100% CONSTRUCTION DOCUMENTS**

<b>EROSION CONTROL DETAILS</b>		<b>STATE OF CONNECTICUT</b> DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
<b>REVISIONS</b>			
<b>Mark</b>	<b>Date</b>	<b>Description</b>	
		44 Gillett Street Hartford, Connecticut 06105 (860) 549-6190	Date <b>7-2-19</b> Scale <b>N.T.S.</b> Drawn By <b>JWK</b> Approved <b>HBM</b> Drawing No <b>C1.2</b>
Project <b>SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE #18 (DOT # 06320)</b> <b>LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT</b>		CT DEEP CONTRACT ID: 12P8X028AZ	



**NOTES:**

1. ALL PROPOSED CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THESE DRAWINGS, THE PROJECT MANUAL AND CT DOT FORM 817. NO CHANGES IN THE PROPOSED CONSTRUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER. NO UNAUTHORIZED CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT.
2. PROVIDE POSITIVE DRAINAGE AWAY FROM THE BRIDGE AND AGGREGATE WALK.
3. THE CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING EARTHWORK.
4. CONTRACTOR SHALL VERIFY ALL EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER PRIOR TO STARTING WORK.
5. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
6. ALL DISTURBED AREAS WITHIN THE CONTRACT LIMIT LINES OTHER THAN PAVED AREAS SHALL RECEIVE A MINIMUM OF 6" OF TOPSOIL AND BE SEEDED UNLESS OTHERWISE NOTED.
7. CONTRACTOR TO SWEEP THE PARKING LOT DAILY OF ANY DIRT AND DEBRIS FROM CONTRACTOR ACTIVITY.
8. NO CONSTRUCTION VEHICLE SHALL BE STORED, SERVICED, REFUELED, WASHED OR FLUSHED OUT IN A LOCATION WHERE LEAKS, SPILLAGE, WASTE MATERIALS, CLEANERS, OR WATERS WILL BE INTRODUCED OR FLOW INTO THE WETLANDS OR WATERCOURSES.
9. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SUPPLY OF ABSORBENT SPILL RESPONSE BOOMS AND BLANKETS ON-SITE FOR THE ENTIRE CONSTRUCTION PERIOD.
10. NO EQUIPMENT STORAGE, CLEANING, REPAIRING, OR REFUELING SHALL BE CONDUCTED WITHIN 25 FEET OF THE EMBANKMENT. SHOULD ANY CONTAMINANT SPILLS OCCUR, IMMEDIATELY NOTIFY THE OWNER'S AGENT, THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION'S EMERGENCY RESPONSE UNIT AT (860) 424-3338 AND THE ENGINEER.
11. SURPLUS OR UNSUITABLE SOILS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL ORDINANCES, RULES, REGULATIONS AND CODES.



**100% CONSTRUCTION DOCUMENTS**

SITE PLAN		STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS		Macchi Engineers 44 Gillett Street Hartford, Connecticut 06105 (860) 549-6190	
Mark	Date	Description	Date 7-2-19
			Scale 1"-10'
			Drawn By JWK
			Approved HSM
			Drawing No C2.0
		Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E18 (DOT # 06323) LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT CT DEEP CONTRACT ID: 12P9X023AZ	







EXISTING TIMBER SUPERSTRUCTURE TO BE DEMOLISHED AND DISPOSED OF ACCORDINGLY

NORTH ELEVATION

APPROACH RAMP WALL AND FOOTING TO BE DEMOLISHED AND DISPOSED OF ACCORDINGLY



DEMOLISH AND DISPOSE OF ENTIRE EXISTING WOODEN SUPERSTRUCTURE

EAST ELEVATION

CONTAINMENT TO BE INSTALLED PRIOR TO CONSTRUCTION OR DECONSTRUCTION



APPROACH RAMP WALL AND FOOTING TO BE DEMOLISHED AND DISPOSED OF ACCORDINGLY

SOUTH ELEVATION

SITE WALLS TO REMAIN. RE: SITE DWGS. FOR ADDITIONAL INFORMATION



WEST ELEVATION

RE: SITE DWGS. FOR TREE REMOVAL REQUIREMENTS



ABUTMENT CONDITION

PROTECT EXISTING ABUTMENT TO REMAIN

FILL ANY VOIDS WITH STONES TO MATCH EXISTING AS REQUIRED



WEST APPROACH RAMP

EXISTING WOOD APPROACH RAMP AND RAILING TO BE DEMOLISHED AND DISPOSED OF

PROTECT EXISTING CONCRETE WALL AND STONE RUBBLE ABUTMENT TO REMAIN

DEMOLISH AND DISPOSE OF ENTIRE EXISTING WOODEN SUPERSTRUCTURE

DEMOLISH AND DISPOSE OF ENTIRE APPROACH RAMP & RAILINGS



BRIDGE SECTION



CENTER PIER

SAVE AND REFURBISH EXISTING STEEL BEAMS TO REMAIN. RE: S1.0

EXISTING BASE PL. TO BE SANDBLASTED, PREPPED AND PAINTED IN PLACE

PROTECT EXISTING CONCRETE PIERS TO REMAIN

EXISTING BASE PL. TO BE SANDBLASTED, PREPPED AND PAINTED IN PLACE



BEAM BEARING CONDITION

EXISTING STEEL CLIPS TO BE REMOVED AND WELDS TO BE GROUND SMOOTH FLUSH WITH TOP OF BASE PL.

PROVIDE FIELD STONE ROCK PROTECTION SEE C2.0 FOR LOCATION



NORTHEAST CORNER



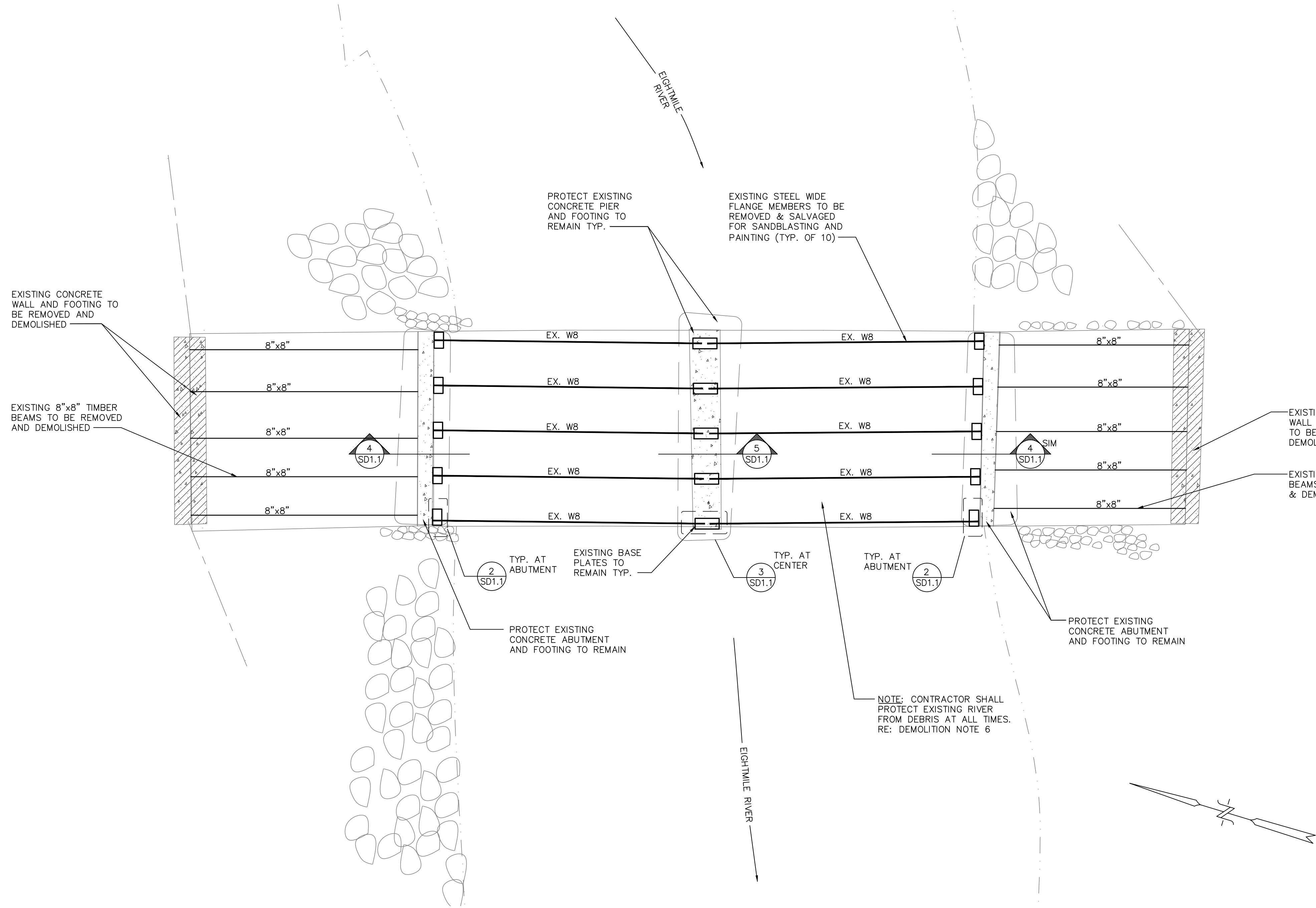
NOTE: FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

100% CONSTRUCTION DOCUMENTS

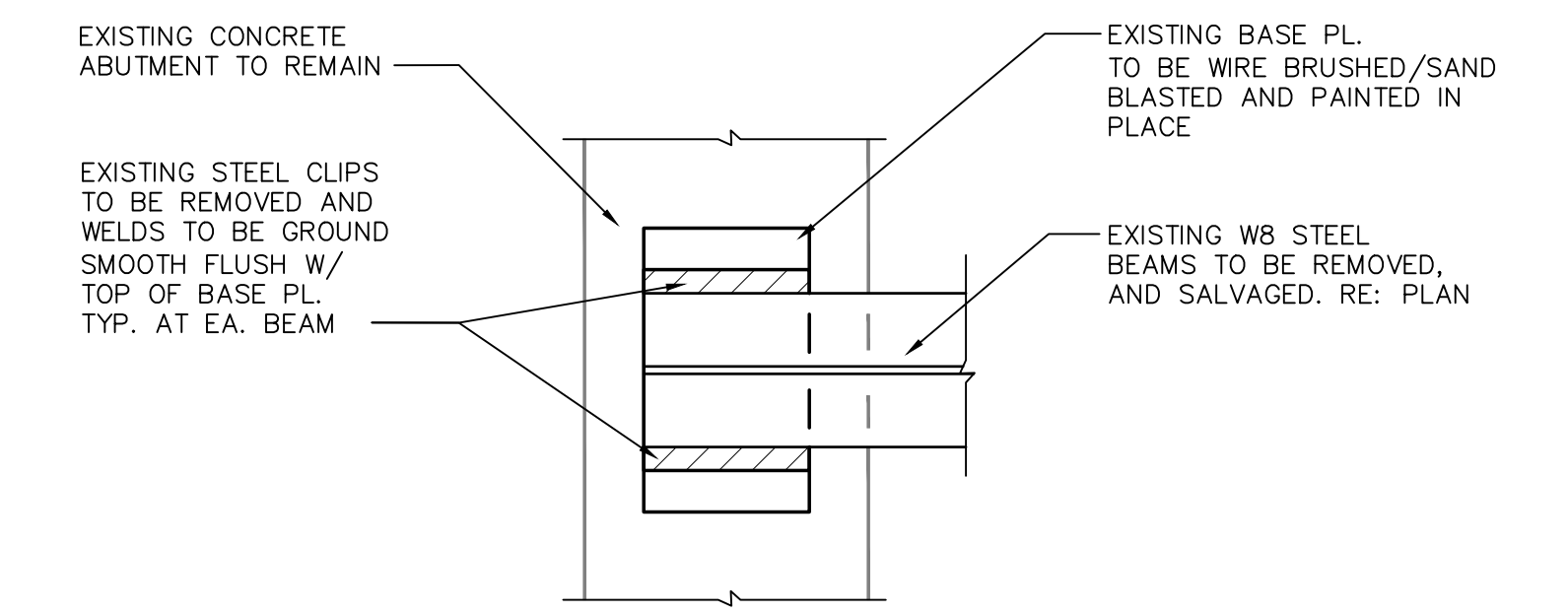
DEMOLITION REFERENCE PHOTOS			STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS				
Mark	Date	Description		
			44 Gillett Street Hartford, Connecticut 06105 (860) 549-6190	
			Date: 7-2-19 Scale: N.T.S. Drawn By: JWK Approved: JAH Drawing No: SD1.0	
			Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE #18 (DOT # 06323) LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT DEEP CONTRACT ID: 12P8X0213AZ	



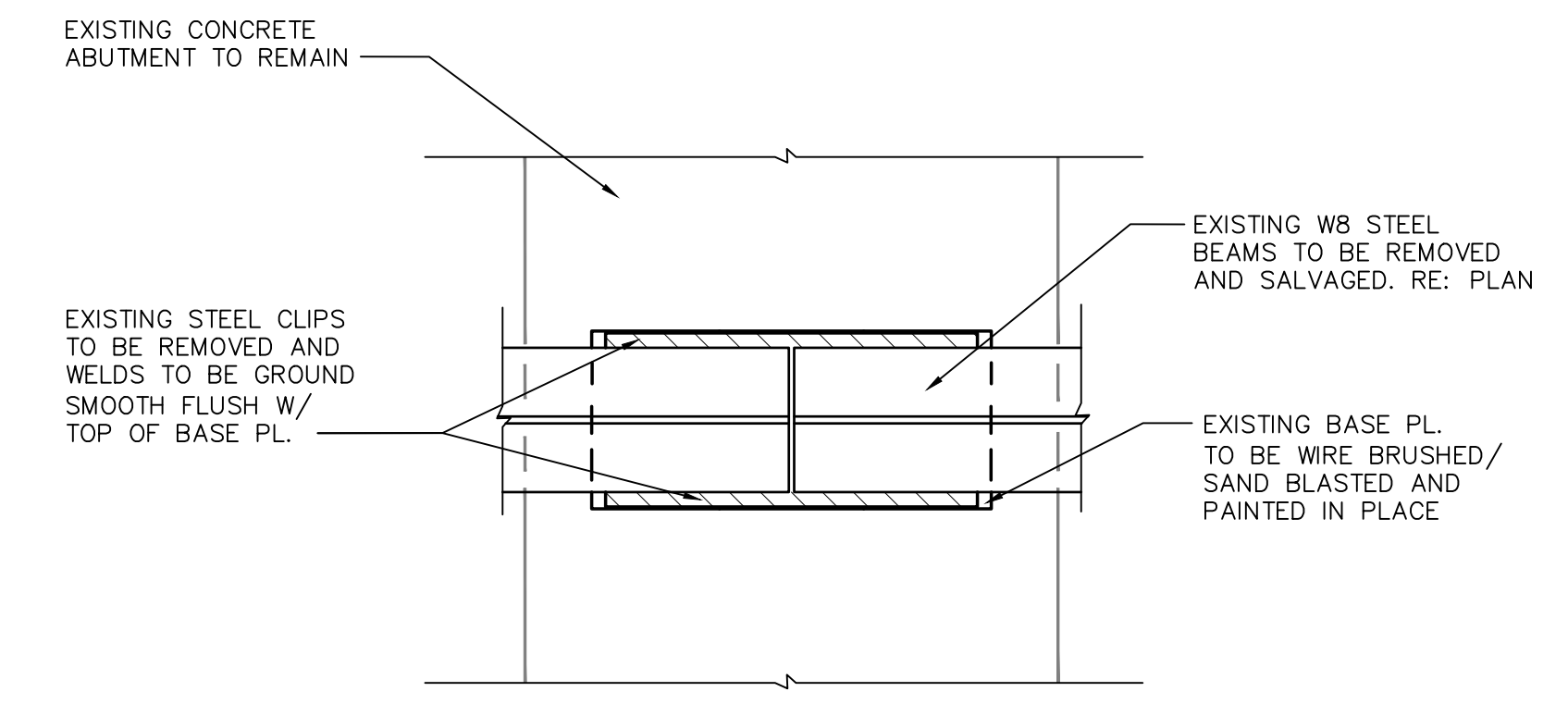
- DEMOLITION NOTES:**
- BRIDGE CONTAINMENT TO REMAIN IN PLACE THROUGHOUT CONSTRUCTION.
  - EXISTING CONCRETE PIER AND ABUTMENTS ARE TO REMAIN IN PLACE AND UNDAMAGED THROUGHOUT CONSTRUCTION UNLESS STATED OTHERWISE.
  - ALL DIMENSIONS ARE TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
  - WOOD BRIDGE SUPERSTRUCTURE TO BE REMOVED, DEMOLISHED & DISPOSED OF IN ITS ENTIRETY.
  - A SURVEY SHALL BE CONDUCTED AFTER BRIDGE DEMOLITION TO VERIFY TOP OF CONCRETE ABUTMENT ELEVATIONS. ELEVATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO STEEL PLACEMENT.
  - ALL DEBRIS TO BE DISPOSED OF APPROPRIATELY AND NO DEBRIS SHALL FALL INTO THE RIVER BELOW. CONTRACTOR SHALL DEVISE A CONTAINMENT PLAN AND SUBMIT TO THE ENGINEER PRIOR TO CONSTRUCTION.
  - REFERENCE SITE DRAWINGS FOR ADDITIONAL DETAILS, REQUIREMENTS, AND INFORMATION.



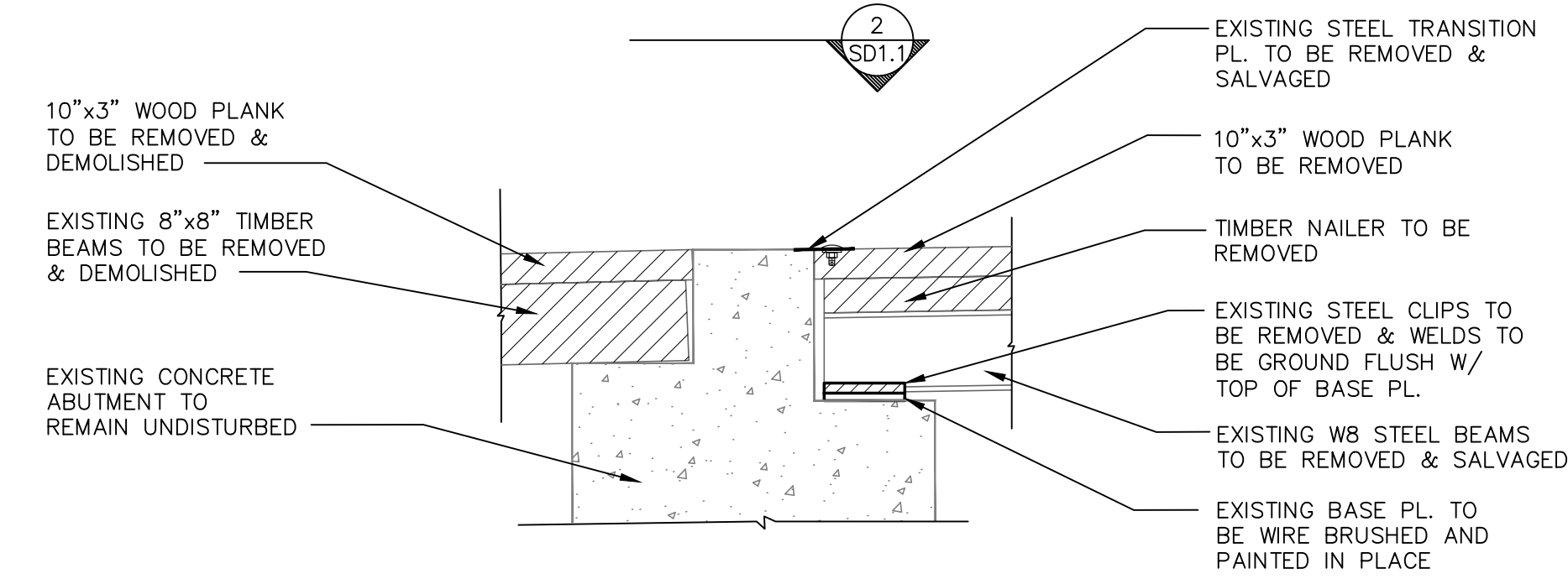
**1 DEMOLITION PLAN**  
SCALE: N.T.S.



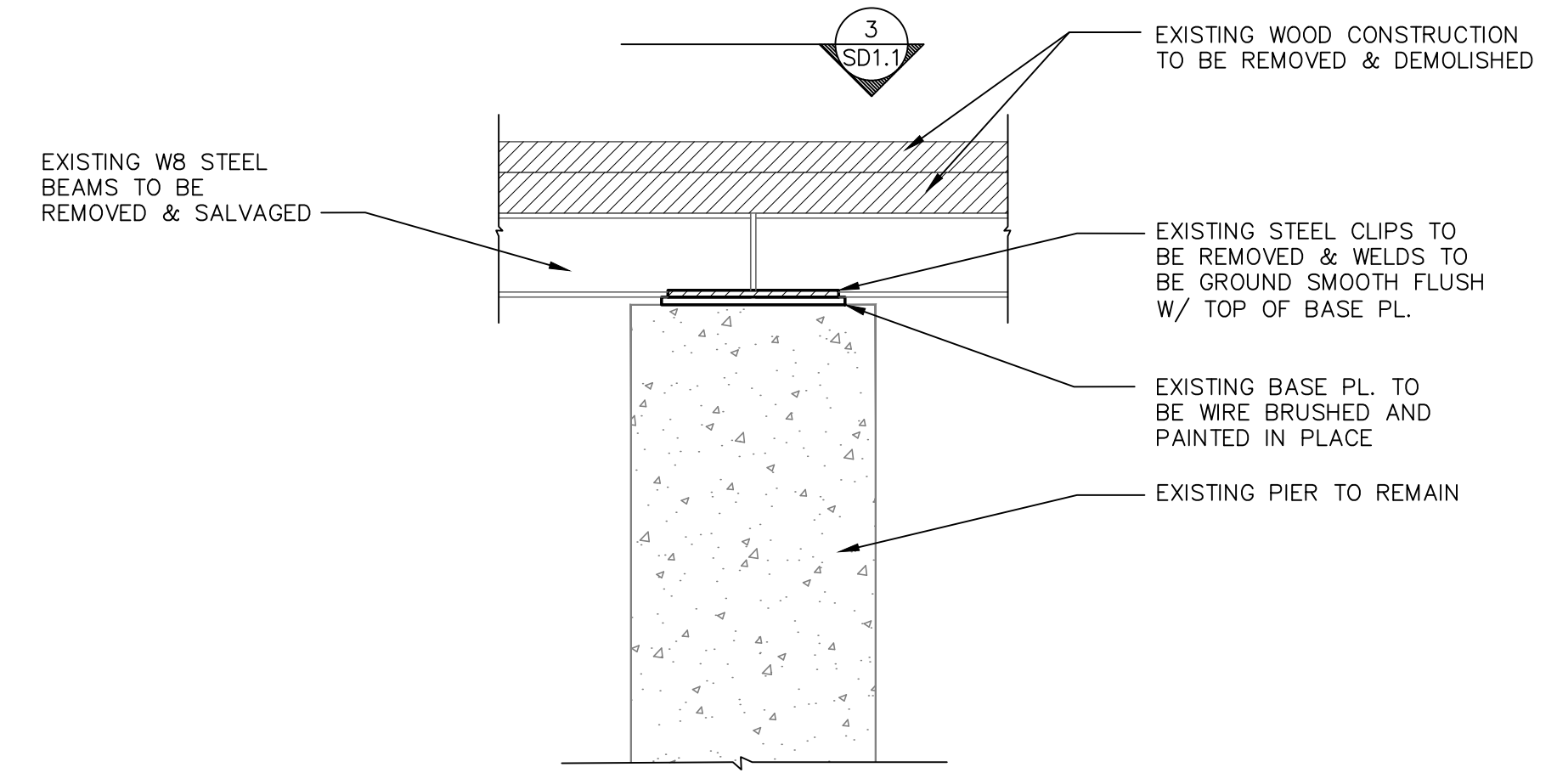
**2 STEEL BEAM BEARING DETAIL**  
SCALE: 1-1/2" = 1'-0"



**3 CENTER PIER DETAIL**  
SCALE: 1-1/2" = 1'-0"



**4 END ABUTMENT SECTION**  
SCALE: 3/4" = 1'-0"

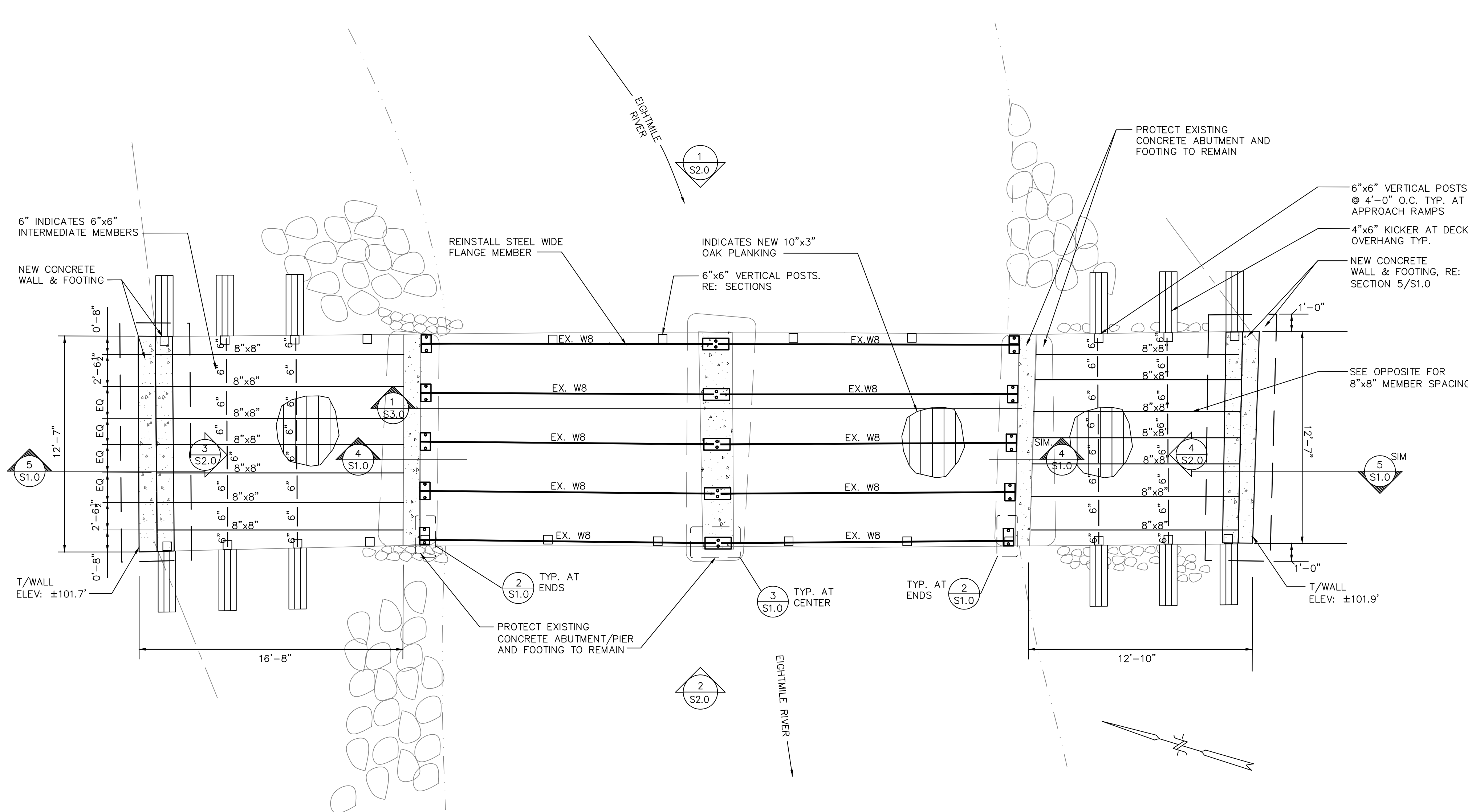


**5 CENTER PIER SECTION**  
SCALE: 3/4" = 1'-0"

**100% CONSTRUCTION DOCUMENTS**

<b>STRUCTURAL DEMOLITION PLAN</b>		<b>STATE OF CONNECTICUT</b> DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
<b>REVISIONS</b>			
<b>Mark</b>	<b>Date</b>	<b>Description</b>	
		44 Gillett Street Hartford, Connecticut 06105 (860) 549-6190	<b>Date</b> 7-2-19 <b>Scale</b> AS NOTED <b>Drawn By</b> JWK <b>Approved</b> JAH <b>Drawing No</b> SD1.1
<b>Project</b> SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE #18 (DOT # 06323) LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT DEEP CONTRACT ID: 12P8X0213AZ			





### GENERAL NOTES

- A. FILL AND BACKFILL**
- ANY PLACED MATERIAL SHALL BE COMPACTED WITH A MECHANICAL VIBRATOR TO A MINIMUM OF 95% PROCTOR DENSITY AS DEFINED BY ASTM D1557.
  - SEE PLANS FOR GRAVEL FILL REQUIREMENTS.
  - NO WALLS ARE TO BE BACKFILLED UNTIL CONCRETE HAS BEEN IN PLACE A MINIMUM OF 7 DAYS UNLESS DIRECTED BY THE ENGINEER.
- B. CONCRETE**
- CONCRETE STRENGTH AT 28 DAYS SHALL BE AS INDICATED IN DESIGN DATA.
  - PROTECTIVE COVER, SPLICE LAP AND EMBEDMENT FOR REINFORCING STEEL SHALL BE PER ACI SPECIFICATION.
- C. FOOTINGS**
- ELEVATION OF BOTTOM OF FOOTINGS TO BE VERIFIED WITH FIELD CONDITIONS. ALL FOOTINGS SHALL BE PLACED A MINIMUM OF 3'-6" BELOW FINAL GRADES.
  - ALL FOOTINGS TO BEAR ON FIRM, UNDISTURBED SOIL HAVING A SAFE BEARING CAPACITY AS STATED IN THE DESIGN DATA.
- D. STRUCTURAL STEEL**
- ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH ALL AWS STANDARDS.
  - ALL WELDING TO BE PERFORMED USING E70-XX ELECTRODES.
  - THE STEEL ERECTOR IS RESPONSIBLE FOR SUPPLYING TEMPORARY BRACING AND GUYING OF STEEL FRAMING UNTIL ALL CONNECTIONS AND FLOORING HAVE BEEN COMPLETED.
  - RE: PAINTING SPECIFICATION PRIOR TO REINSTALLATION OF STEEL.
- E. GENERAL**
- ALL WOOD MEMBERS INCLUDING BUT NOT LIMITED TO VERTICAL POSTS, RAFTERS AND BRACES, SHALL BE MADE OF WHITE OAK.
  - ALL THRU-BOLTS, CARRIAGE BOLTS, AND ANY OTHER MISCELLANEOUS HARDWARE SHALL BE HOT DIPPED GALVANIZED.
  - NO STORAGE OF MATERIALS SHALL BE ALLOWED ON ROOF MEMBERS DURING CONSTRUCTION.
  - CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
  - DO NOT DRILL THROUGH EXISTING RIPRAP.
  - ANY PAINTED ELEMENTS THAT GET DAMAGED DURING CONSTRUCTION SHALL BE TOUCHED UP WITH TOUCH UP PAINT.
  - ALL EXISTING CONCRETE PIERS/ABUTMENTS SHALL REMAIN IN PLACE AND UNDAMAGED.
  - CONTAINMENT METHODS SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION.
9. INDICATES SECTION NUMBER  
INDICATES SHEET NUMBER
10. INDICATES ELEVATION NUMBER  
INDICATES SHEET NUMBER

### DESIGN DATA

**CODES AND STANDARDS USED:**

2018 CONNECTICUT BUILDING CODE  
2015 INTERNATIONAL BUILDING CODE  
AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI-318-14)  
AMERICAN INSTITUTE OF STEEL CONSTRUCTION "ALLOWABLE STRESS DESIGN" (AISC-14TH EDITION, ANS/AISC 360-10)  
ACI 530-13 / ASCE 5-13 / TMS 402-11 MASONRY CODES  
ACI 530.1-11 / ASCE 6-11 / TMS 602-11 MASONRY SPECIFICATIONS  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 7TH EDITION

**ALLOWABLE STRESSES:** SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

ANGLES, & PLATES ASTM A36;  
REINFORCING STEEL - ASTM A-615, GRADE 60 & ASTM A-185  
CONCRETE - f<sub>c</sub> AT 28 DAYS  
4,000 PSI FOR ALL FOOTINGS & WALLS  
GROUT - f<sub>c</sub> AT 28 DAYS = 3,000 PSI  
ALLOWABLE SOIL BEARING PRESSURES:  
2 KSF (ASSUMED)

**MINIMUM WOOD PROPERTIES:**

ALL APPROACH RAMP AND DECKING TO BE WHITE OAK; SELECT STRUCTURAL  
MINIMUM F<sub>b</sub> = 1200 PSI  
MINIMUM F<sub>t</sub> = 700 PSI  
MINIMUM F<sub>v</sub> = 205 PSI

ALL OTHER WOOD TO BE WHITE OAK  
MINIMUM F<sub>b</sub> = 875 PSI  
MINIMUM F<sub>t</sub> = 500 PSI  
MINIMUM F<sub>v</sub> = 220 PSI

**WIND LOAD REQUIREMENTS:** (IBC SECTION 1609)

EXPOSURE CATEGORY B (IBC 1609.4)  
ULTIMATE DESIGN WIND SPEED V<sub>ult</sub> = 140 MPH (EAST HADDAM)  
NOMINAL DESIGN WIND SPEED V<sub>osd</sub> = 108 MPH (EAST HADDAM)  
RISK CATEGORY II (IBC 1609.4)  
EXPOSURE CATEGORY B (IBC 1609.4)  
WALL PRESSURES VARY UPON LOCATION - DETERMINED BY ASCE 7-CHAPTER 26-30  
HURRICANE PRONE REGION

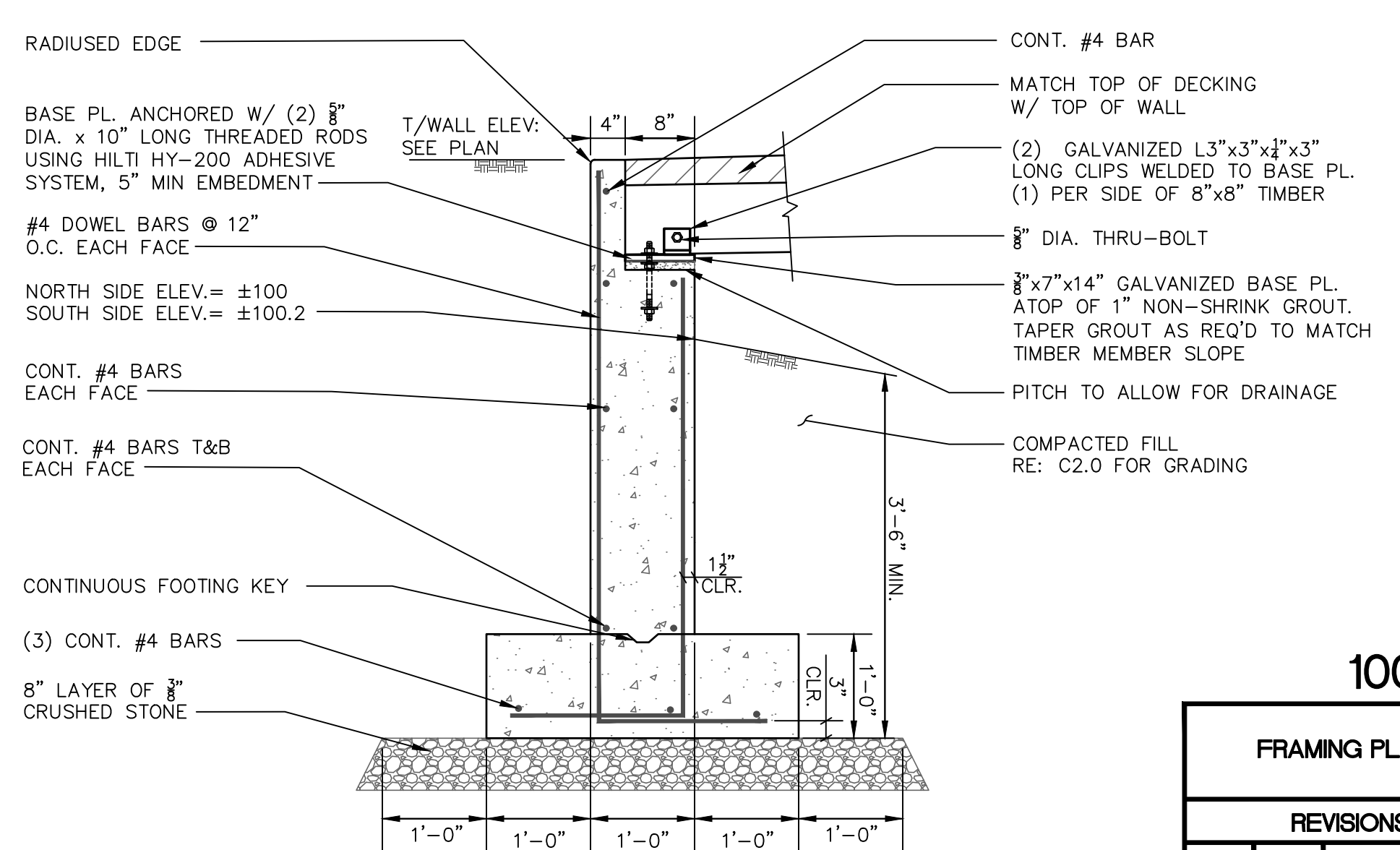
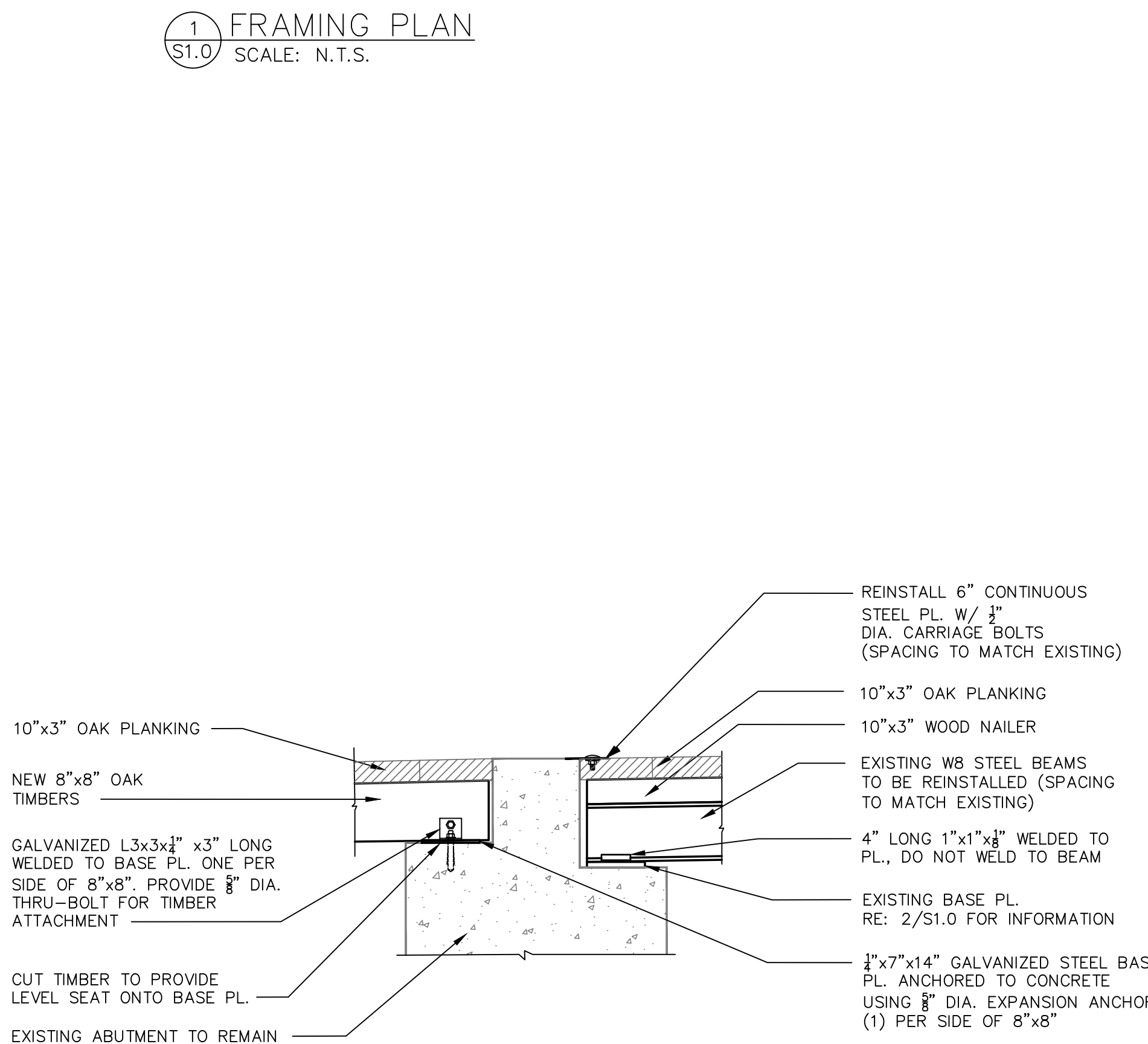
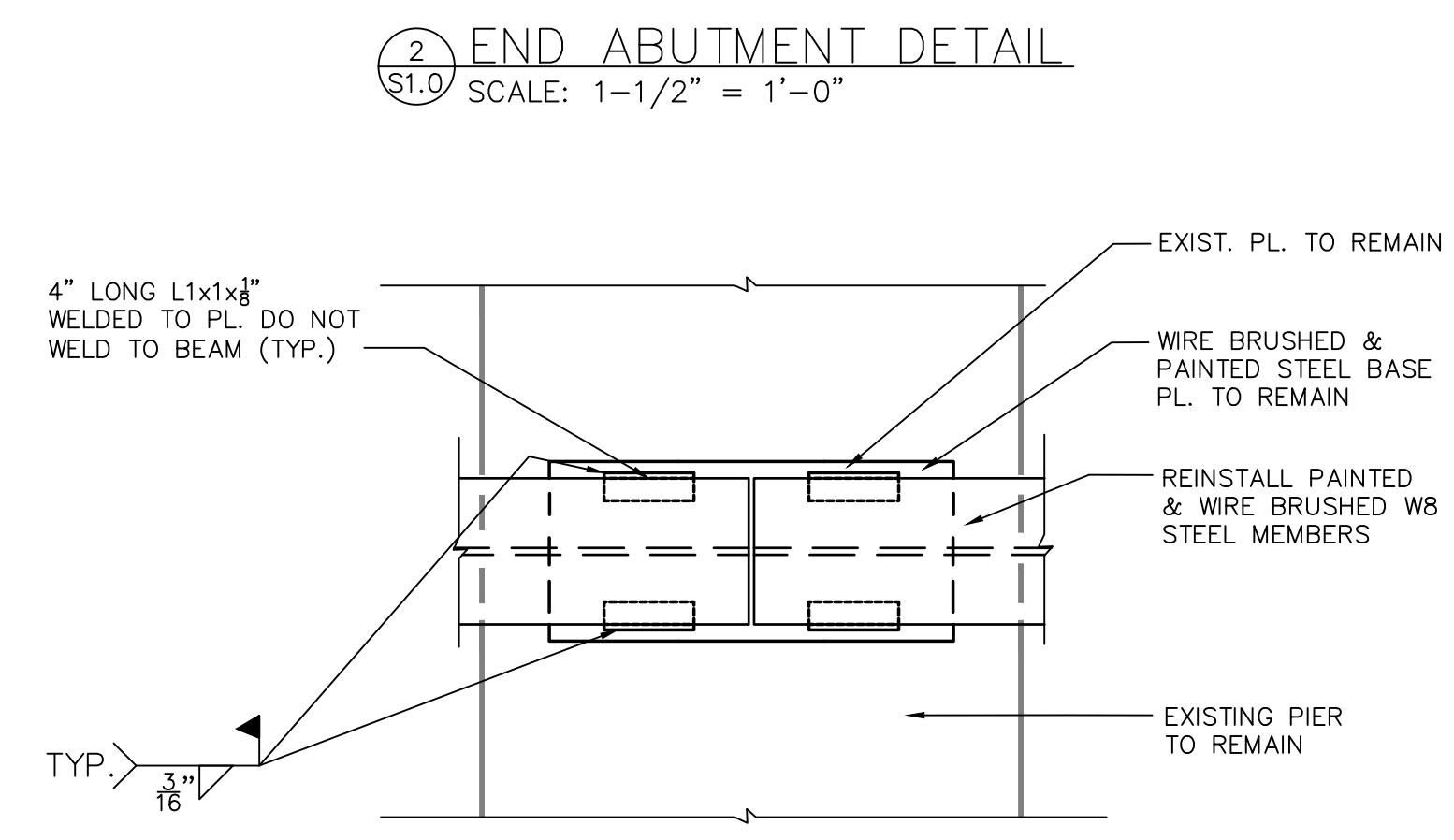
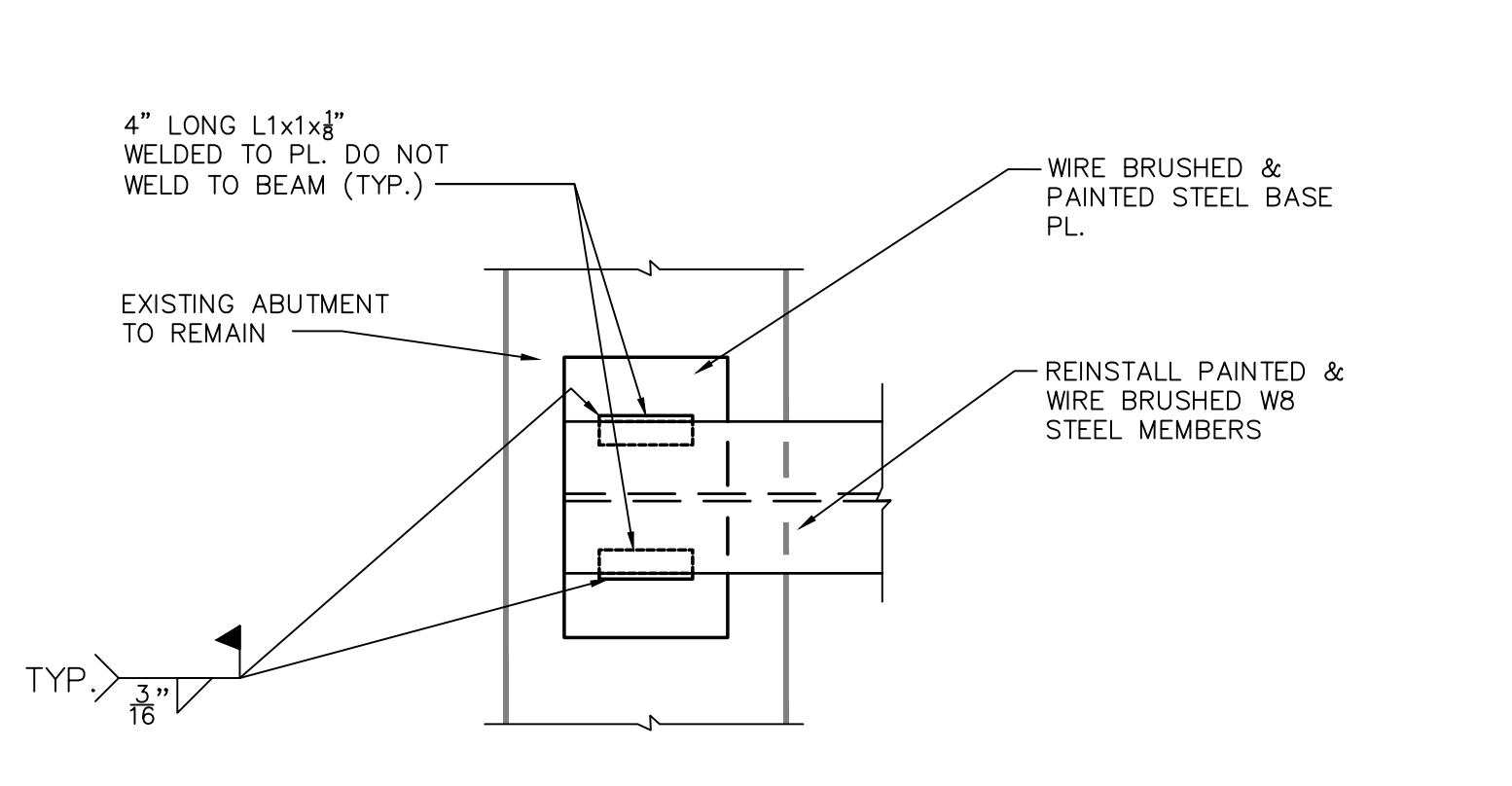
**EARTHQUAKE REQUIREMENTS:** (IBC SECTIONS 1613-1623)

SEISMIC IMPORTANCE FACTOR, I<sub>e</sub> = 1.25  
SITE CLASS = D (ASSUMED)  
S<sub>s</sub> = 0.172 (EAST HADDAM) S<sub>1</sub> = 0.061 (EAST HADDAM)  
S<sub>ds</sub> = 0.18 S<sub>d1</sub> = 0.098  
RISK CATEGORY II

RESPONSE MODIFICATION COEFFICIENT R = 3 (ASSUMED)  
(NO SPECIAL SEISMIC DETAILING REQUIREMENT)  
DEFLECTION AMPLIFICATION FACTOR (ASCE TABLE 12.2-1)  
EQUIVALENT LATERAL FORCE PROCEDURE

**LIVE LOAD:**  
PEDESTRIAN BRIDGE = 90 PSF (PEDESTRIAN)  
H5 LOADING

**SNOW LOAD:**  
ROOF SNOW LOADS: (ASCE 7 - CHAPTER 7)  
GROUND SNOW LOAD P<sub>g</sub> = 30 PSF (EAST HADDAM)  
FLAT ROOF SNOW LOAD, P<sub>f</sub> = 22.68 PSF (MINIMUM)  
TERRAIN CATEGORY B  
SNOW IMPORTANCE FACTOR, I<sub>s</sub> = 1.0  
THERMAL FACTOR = 1.2  
SLIDING SNOW, UNBALANCED SNOW LOADS, DRIFTS ON LOWER ROOFS, ROOF PROJECTIONS PARTIAL LOADING, PONDING INSTABILITY, SLOPED ROOF SNOW LOADS AND RAIN-ON-SNOW SURCHARGE IN ACCORDANCE WITH ASCE 7, CH.7.  
MIN. DESIGN SNOW LOAD 30 PSF

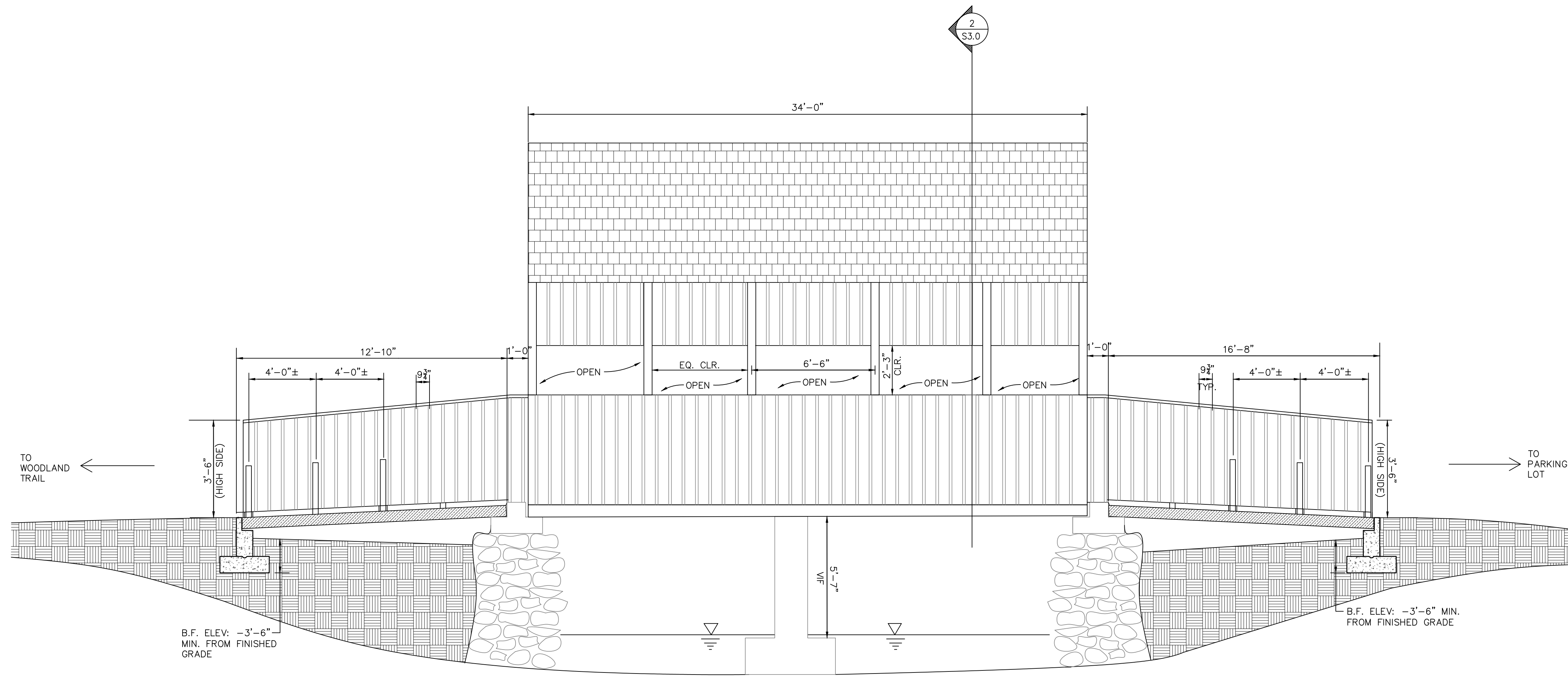


### 100% CONSTRUCTION DOCUMENTS

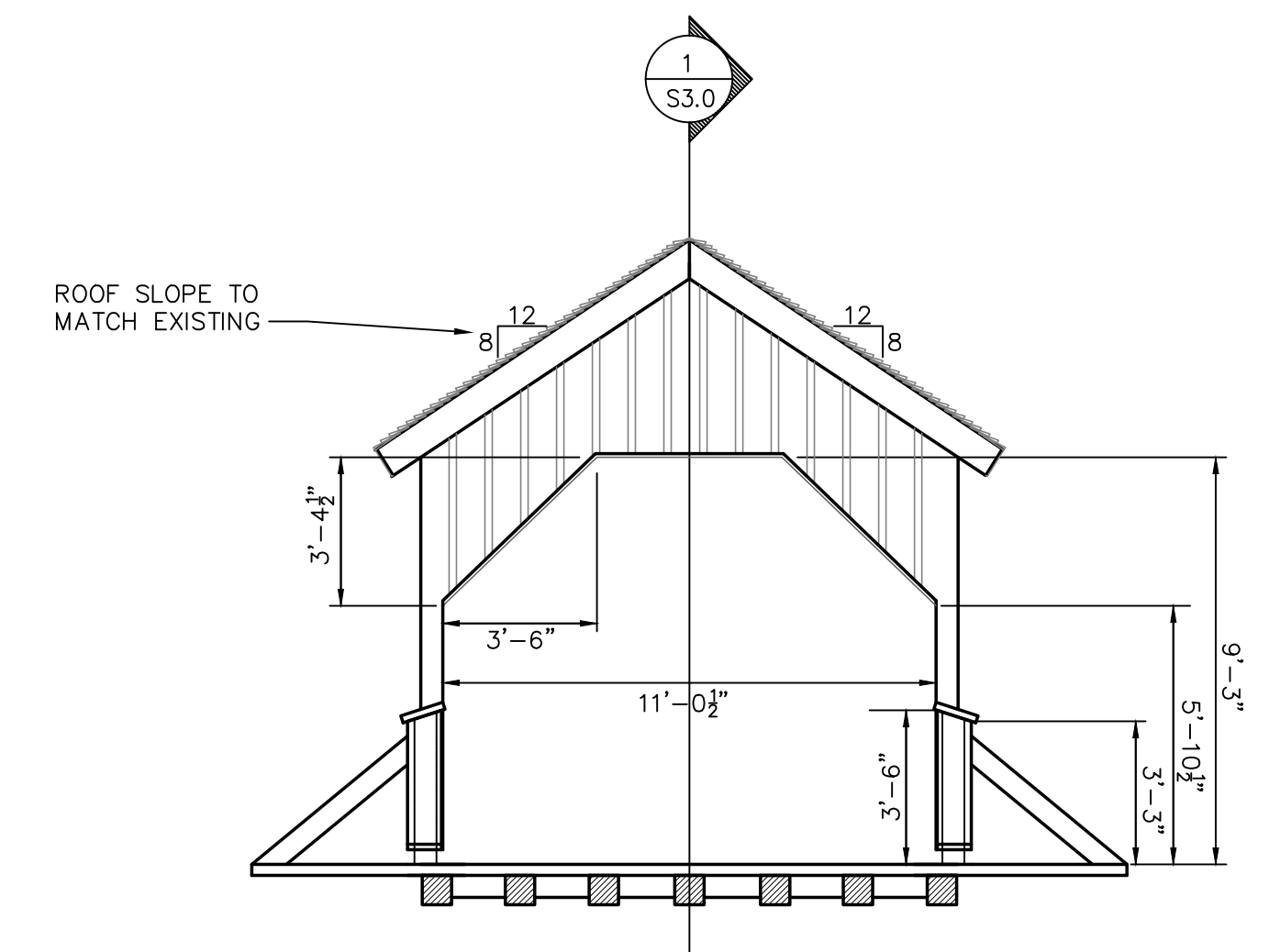
FRAMING PLAN			STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION		
REVISIONS					
Mark	Date	Description	44 Gillett Street Hartford, Connecticut 06103 (860) 549-6190		
			Project	DATE	Scale
			SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E18 (DOT # 06323)	7-2-19	AS NOTED
			LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT	Drawn By	Approved
			DEEP CONTRACT ID: 12P8X0213AZ	JWK	JAH
				Drawing No	
					S1.0



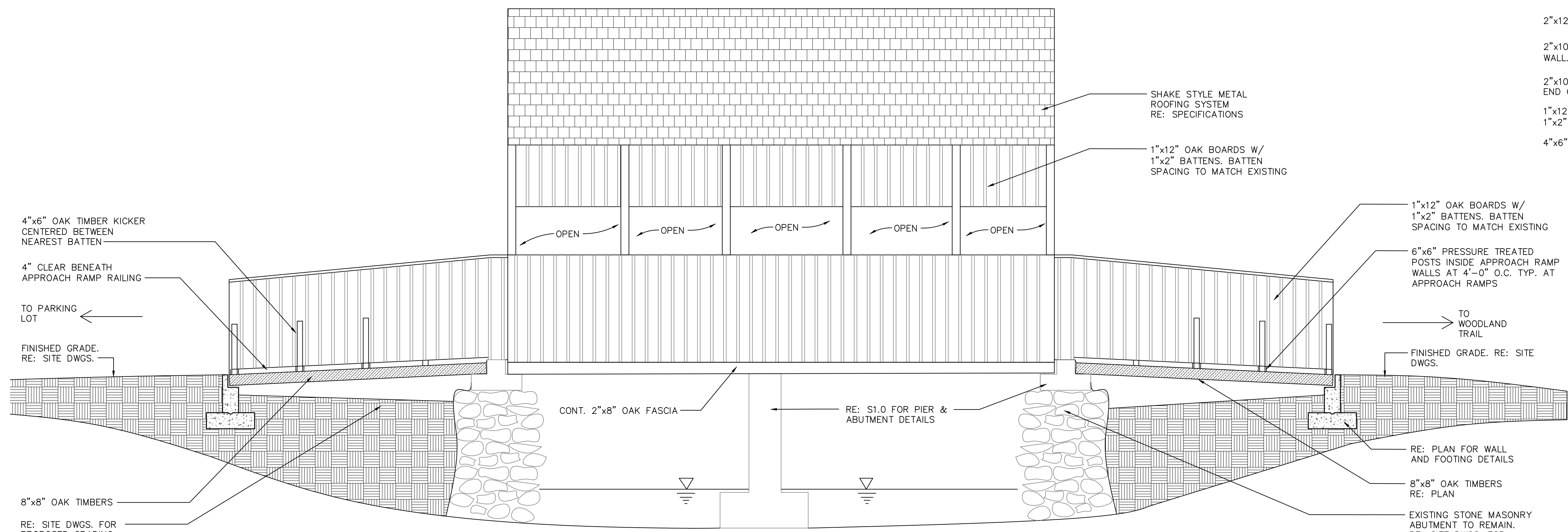




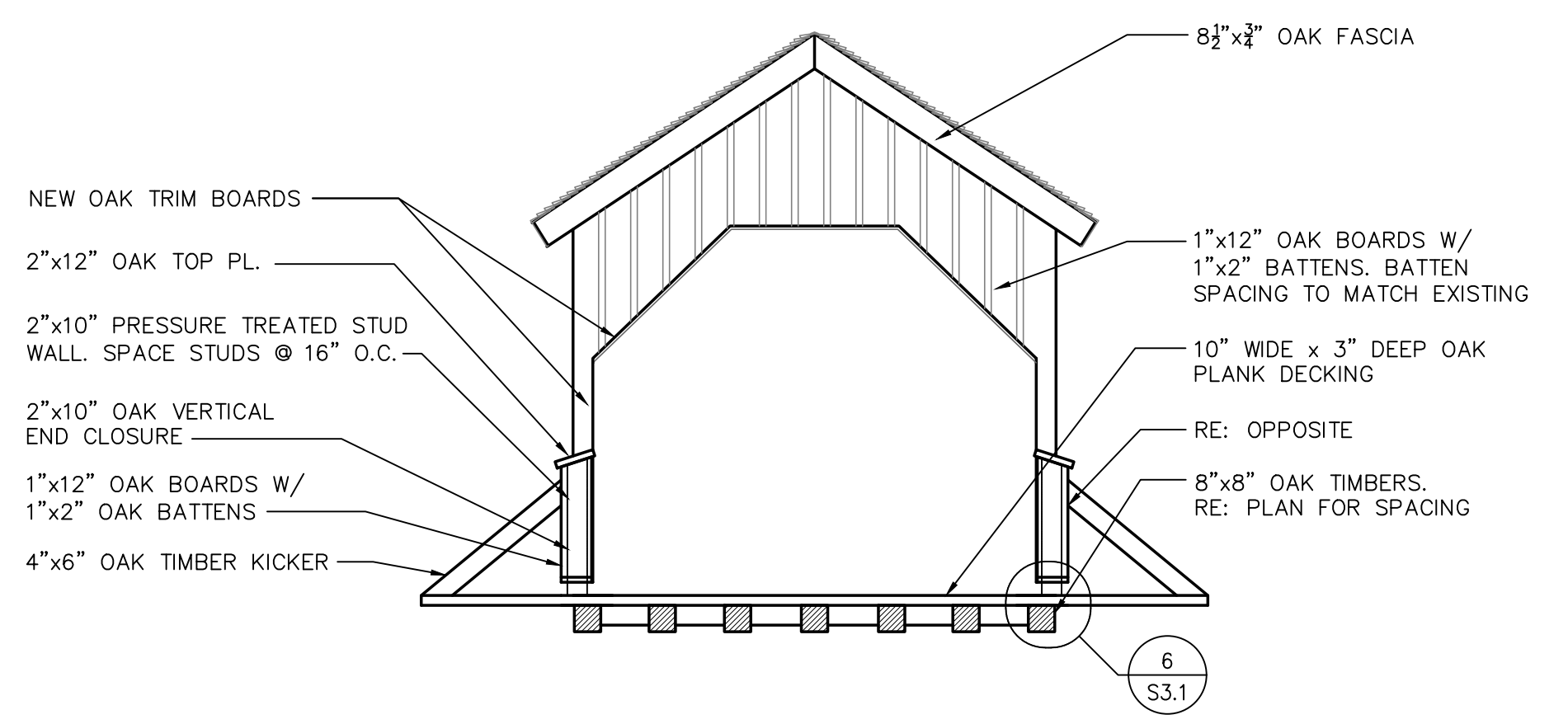
1 EAST ELEVATION  
S2.0 SCALE: N.T.S.



3 NORTH ELEVATION  
S2.0 SCALE: 1/4" = 1'-0"



2 WEST ELEVATION  
S2.0 SCALE: N.T.S.

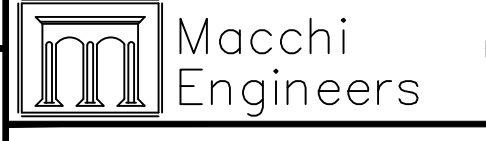


4 SOUTH ELEVATION  
S2.0 SCALE: 1/4" = 1'-0"

- NEW OAK TRIM BOARDS
- 2"x12" OAK TOP PL.
- 2"x10" PRESSURE TREATED STUD WALL. SPACE STUDS @ 16" O.C.
- 2"x10" OAK VERTICAL END CLOSURE
- 1"x12" OAK BOARDS W/ 1"x2" OAK BATTENS
- 4"x6" OAK TIMBER KICKER
- 8 1/2"x2 1/2" OAK FASCIA
- 1"x12" OAK BOARDS W/ 1"x2" BATTENS. BATTEN SPACING TO MATCH EXISTING
- 10" WIDE x 3" DEEP OAK PLANK DECKING
- RE: OPPOSITE
- 8"x8" OAK TIMBERS. RE: PLAN FOR SPACING

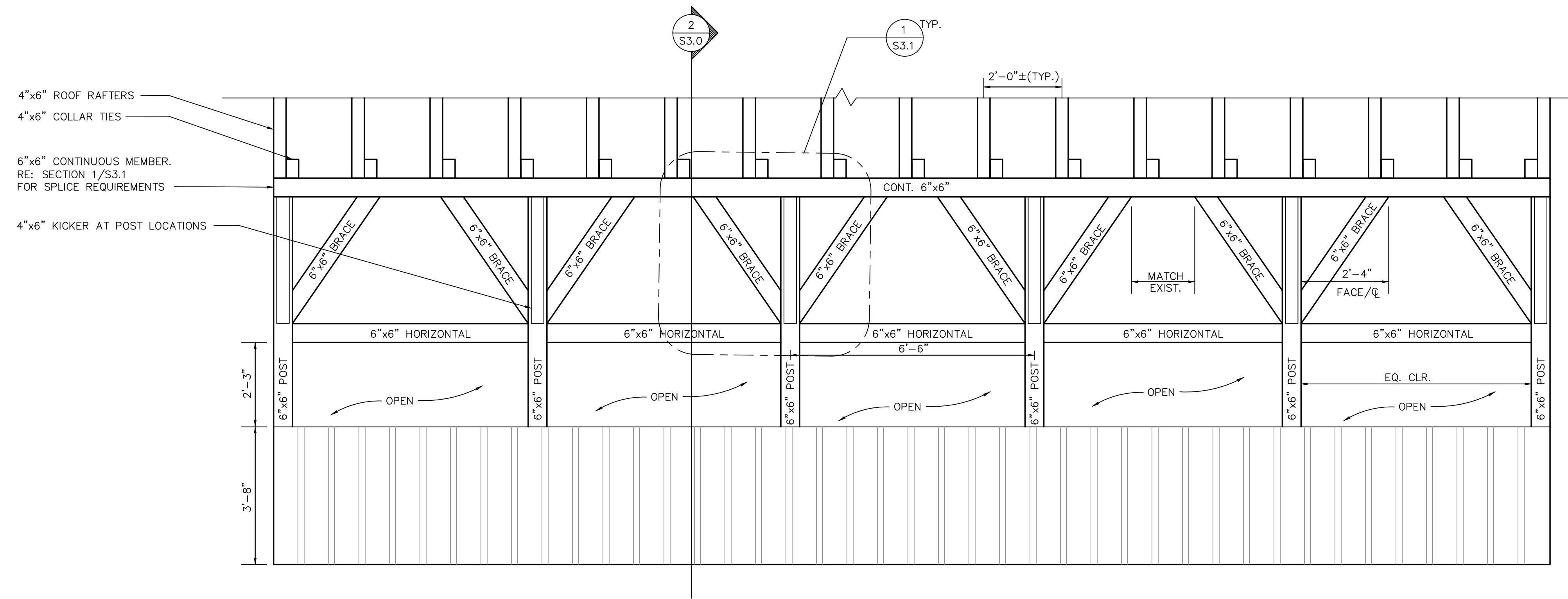
- 4"x6" OAK TIMBER KICKER CENTERED BETWEEN NEAREST BATTEN
- 4" CLEAR BENEATH APPROACH RAMP RAILING
- FINISHED GRADE. RE: SITE DWGS.
- 8"x8" OAK TIMBERS
- RE: SITE DWGS. FOR PROPOSED GRADING BOTH SIDES
- SHAKE STYLE METAL ROOFING SYSTEM RE: SPECIFICATIONS
- 1"x12" OAK BOARDS W/ 1"x2" BATTENS. BATTEN SPACING TO MATCH EXISTING
- 1"x12" OAK BOARDS W/ 1"x2" BATTENS. BATTEN SPACING TO MATCH EXISTING
- 6"x6" PRESSURE TREATED POSTS INSIDE APPROACH RAMP WALLS AT 4'-0" O.C. TYP. AT APPROACH RAMP
- FINISHED GRADE. RE: SITE DWGS.
- TO WOODLAND TRAIL
- TO PARKING LOT
- CONT. 2"x8" OAK FASCIA
- RE: S1.0 FOR PIER & ABUTMENT DETAILS
- RE: PLAN FOR WALL AND FOOTING DETAILS
- 8"x8" OAK TIMBERS RE: PLAN
- EXISTING STONE MASONRY ABUTMENT TO REMAIN. RE: SITE DWGS. FOR ADDITIONAL INFORMATION.

100% CONSTRUCTION DOCUMENTS

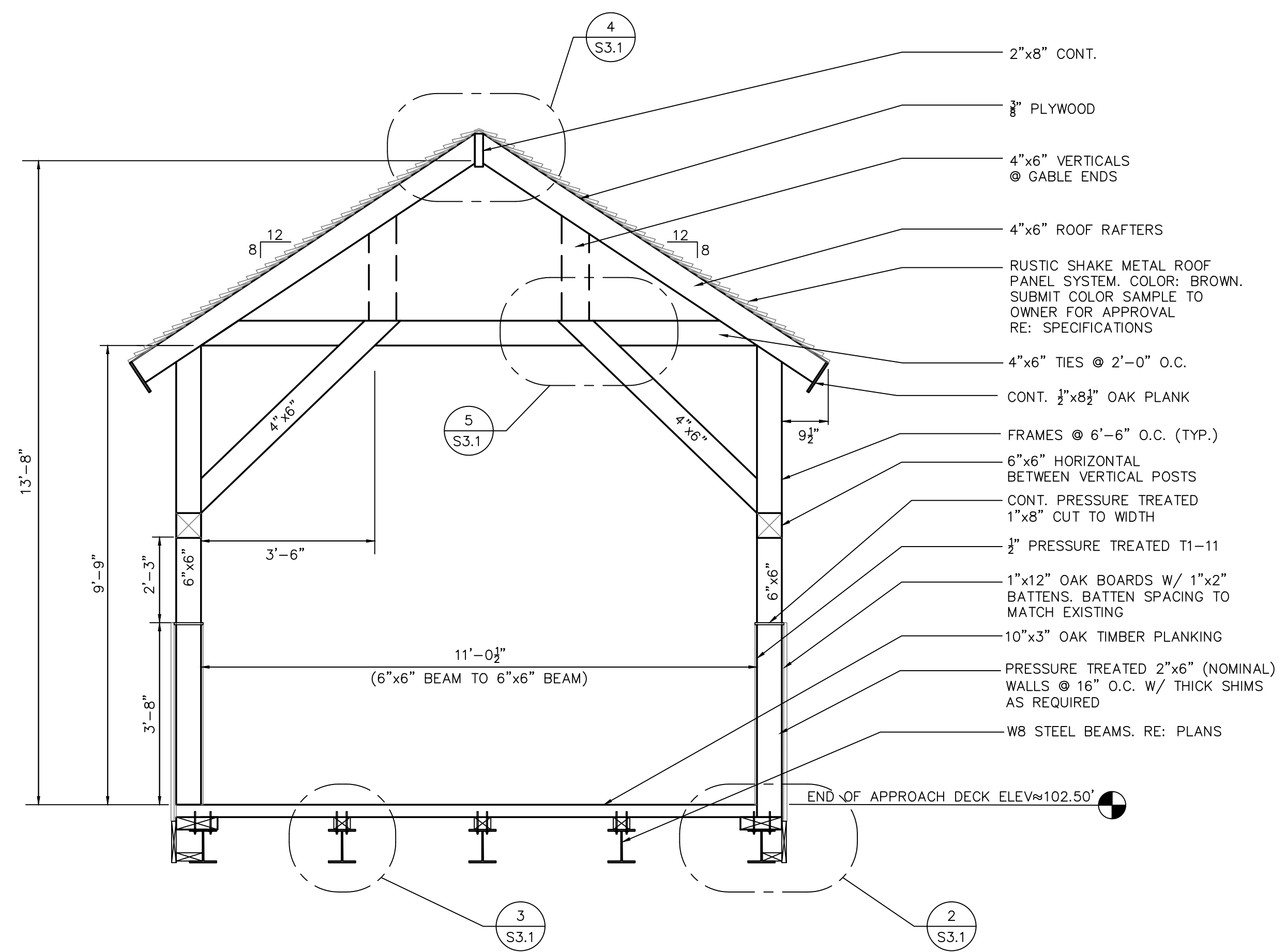
BRIDGE ELEVATIONS			STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS			 44 Gillett Street Hartford, Connecticut 06103 (860) 549-6190	Date 7-2-19
Mark	Date	Description		Scale AS NOTED
Project: SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE E118 (DOT # 06323) LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT			Drawn By JWK	Approved JAH
DEEP CONTRACT ID: 12P8X0218AZ			Drawing No S2.0	







1 BRIDGE SECTION  
S3.0 SCALE: 1/2" = 1'-0"



2 BRIDGE SECTION  
S3.0 SCALE: N.T.S.

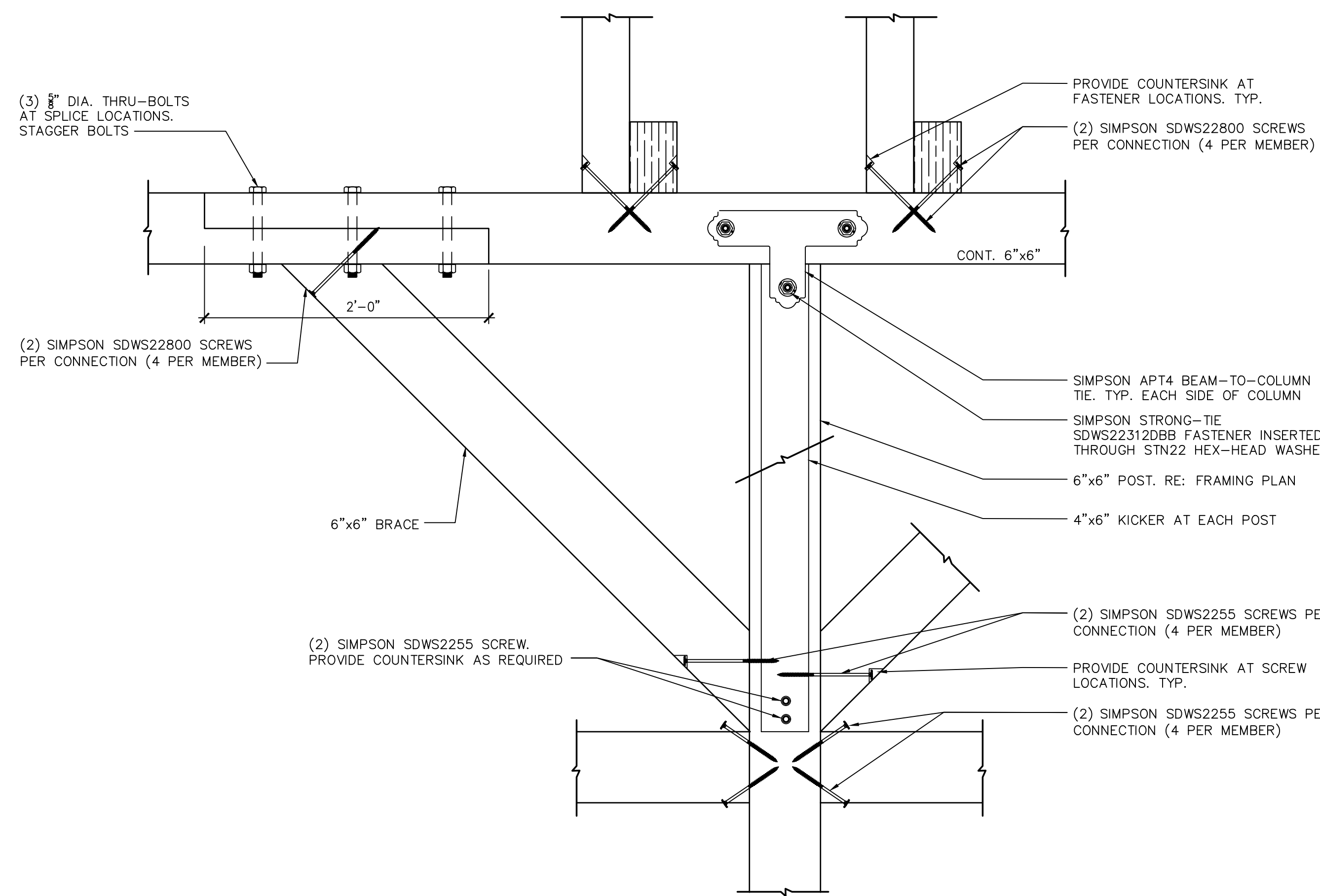
100% CONSTRUCTION DOCUMENTS

BRIDGE SECTIONS			STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS				
Mark	Date	Description		

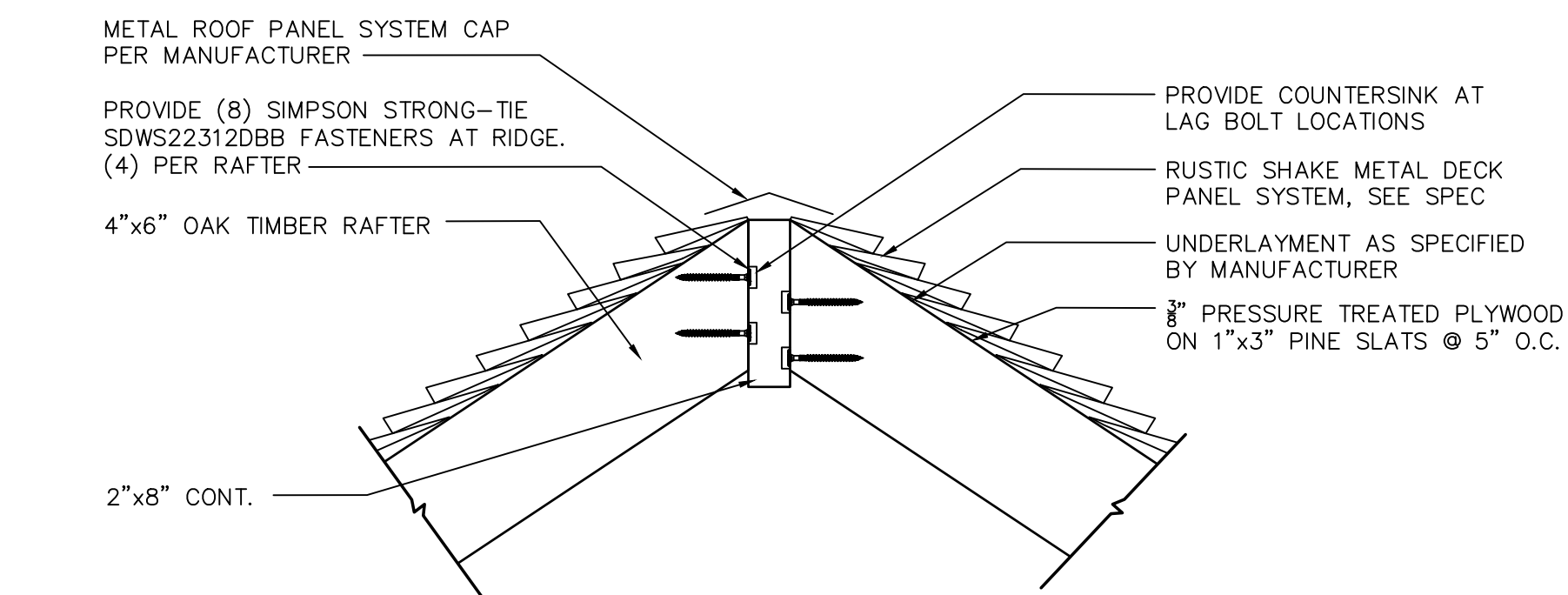
	44 Gillett Street Hartford, Connecticut (860) 549-6190	Date <b>7-2-19</b>
	Project <b>SUPERSTRUCTURE REPLACEMENT OF CT DEEP          BRIDGE E118 (DOT # 06323)          LOOP TRAIL OVER EIGHTMILE RIVER          EAST HADDAM, CT</b>	Scale <b>AS NOTED</b>
Drawn By <b>JWK</b>	Approved <b>JH</b>	Drawing No <b>S3.0</b>
DEEP CONTRACT ID: 12P8X0213AZ		



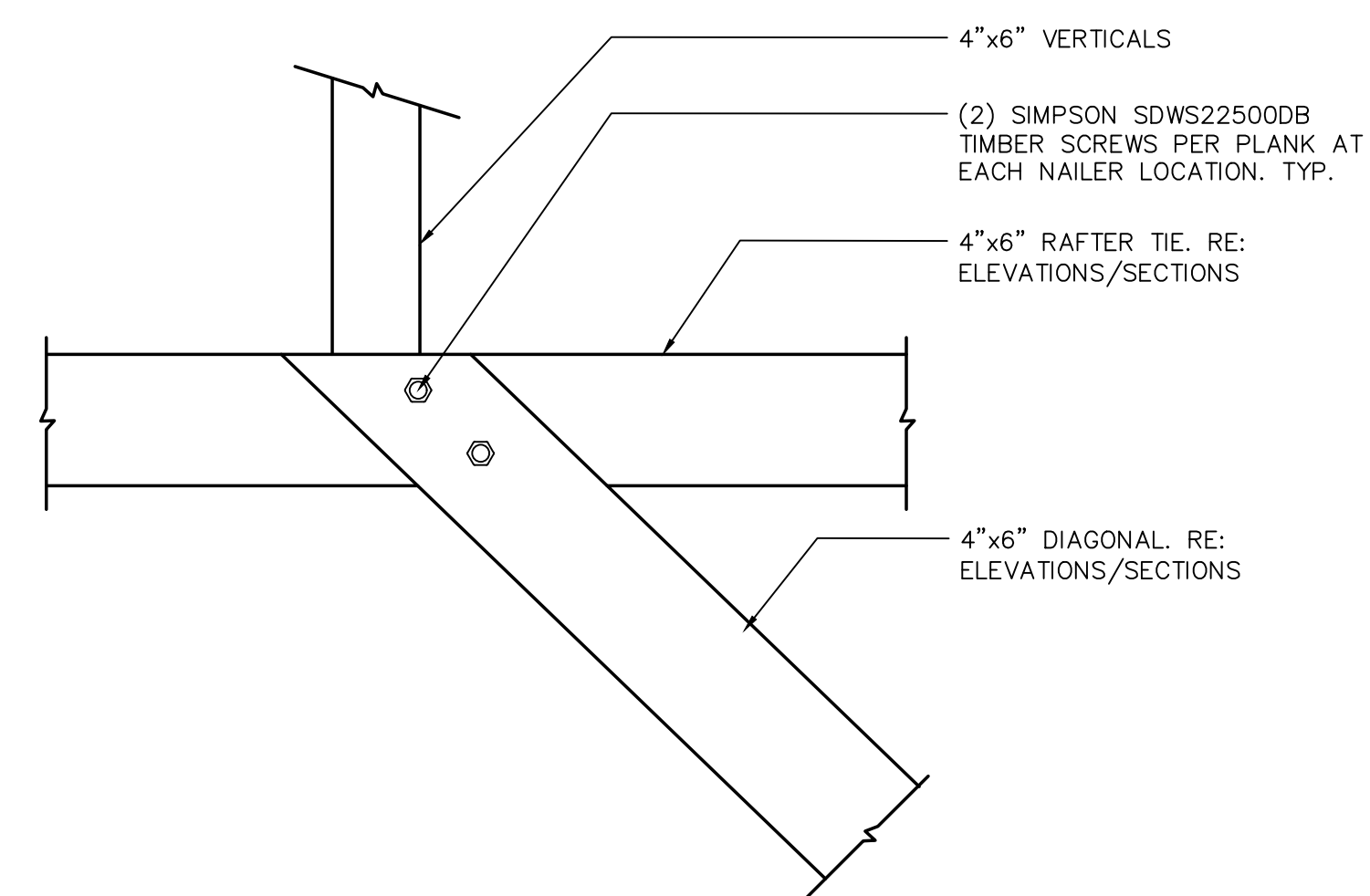




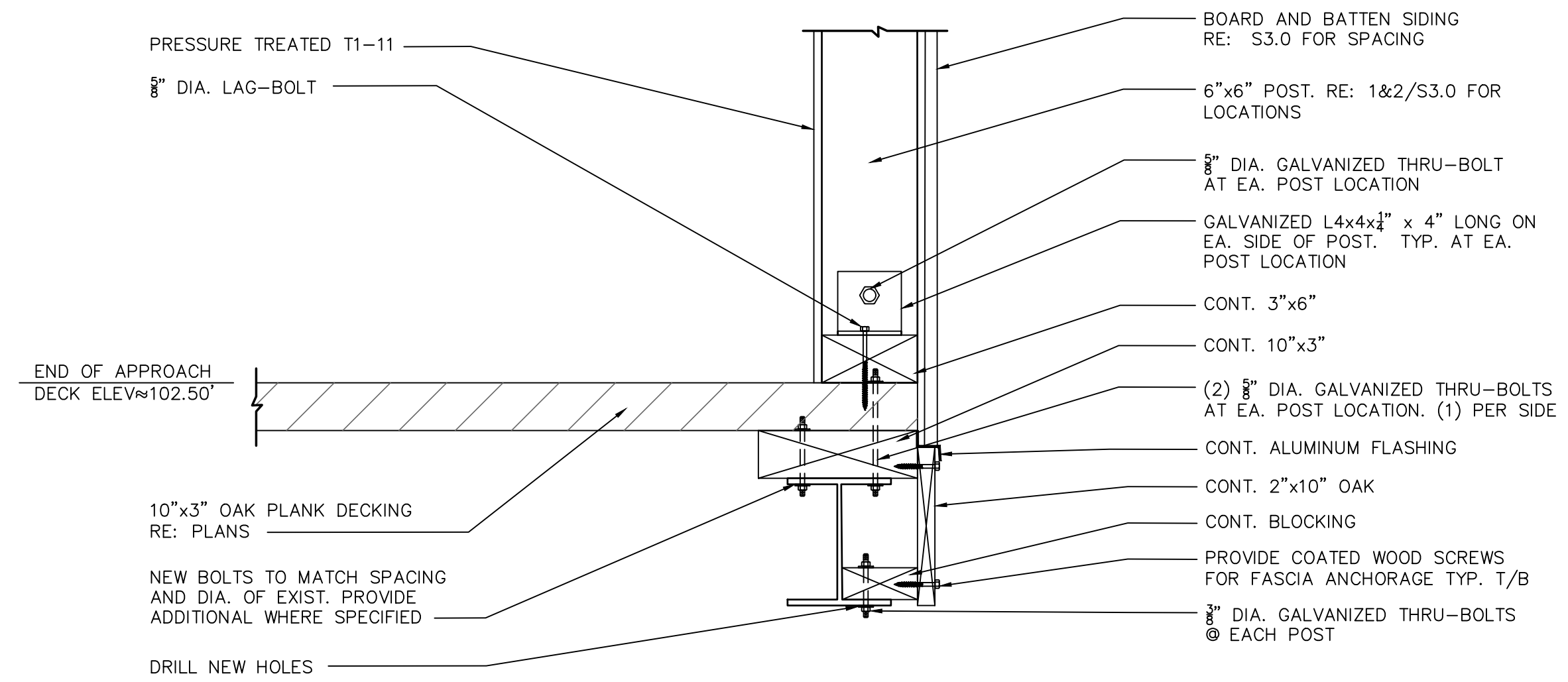
1 POST TOP DETAIL  
S3.1 SCALE: 1-1/2" = 1'-0"



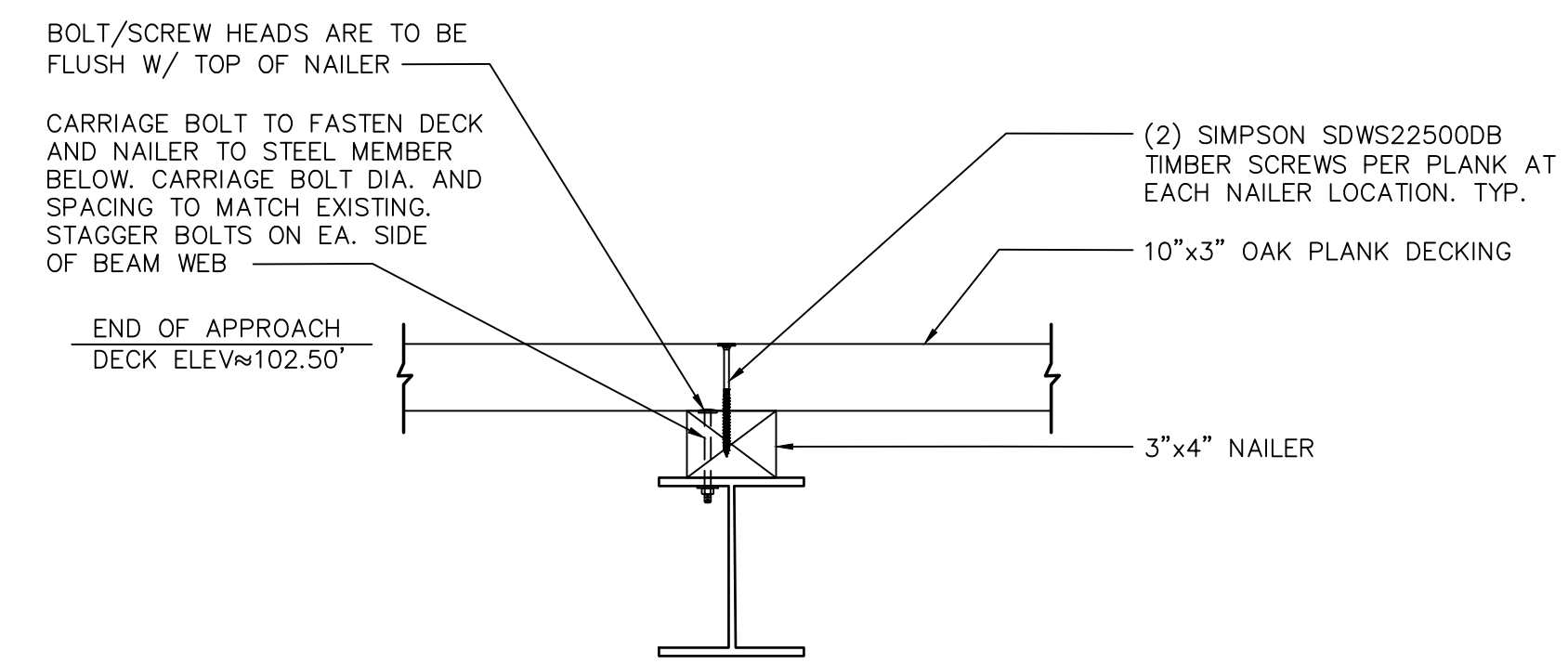
4 DETAIL AT RIDGE  
S3.1 SCALE: 1-1/2" = 1'-0"



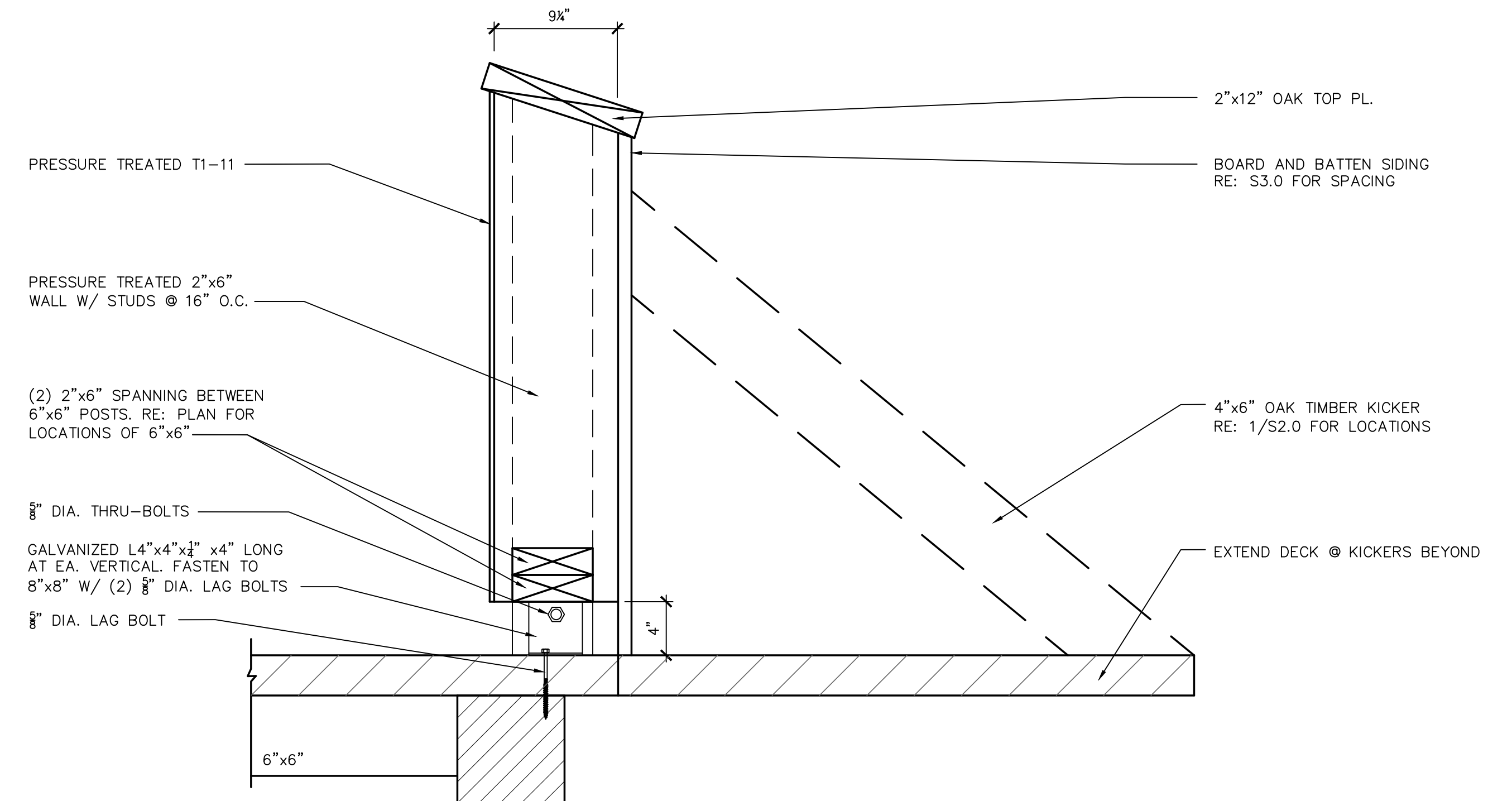
5 DETAIL AT DIAGONAL/TIE  
S3.1 SCALE: 1-1/2" = 1'-0"



2 POST BASE DETAIL  
S3.1 SCALE: 1-1/2" = 1'-0"



3 DECK ATTACHMENT DETAIL  
S3.1 SCALE: 1-1/2" = 1'-0"



6 DETAIL AT APPROACH RAMP WALL  
S3.1 SCALE: 1-1/2" = 1'-0"

100% CONSTRUCTION DOCUMENTS

SECTIONS AND DETAILS			STATE OF CONNECTICUT DEPT. OF ENERGY AND ENVIRONMENTAL PROTECTION	
REVISIONS				44 Gillett Street Hartford, Connecticut 06103 (860) 549-6190
Mark	Date	Description		
			Scale AS NOTED	Drawn By JAH
			Project SUPERSTRUCTURE REPLACEMENT OF CT DEEP BRIDGE #118 (DOT # 06320) LOOP TRAIL OVER EIGHTMILE RIVER EAST HADDAM, CT	Approved JAH
			DEEP CONTRACT ID: 12P8X0213AZ	Drawing No S3.1

