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**COUNTY OF SUFFOLK  
DEPARTMENT OF PUBLIC WORKS  
THE CONSTRUCTION OF A  
FISH PASSAGE AT WOODHULL'S DAM**

**IN CRANBERRY BOG COUNTY PARK  
BETWEEN THE NORTHEAST END OF COUNTY  
ROUTE 51 AND WOODHULL AVENUE**

**TOWN OF SOUTHAMPTON  
SUFFOLK COUNTY, NEW YORK**

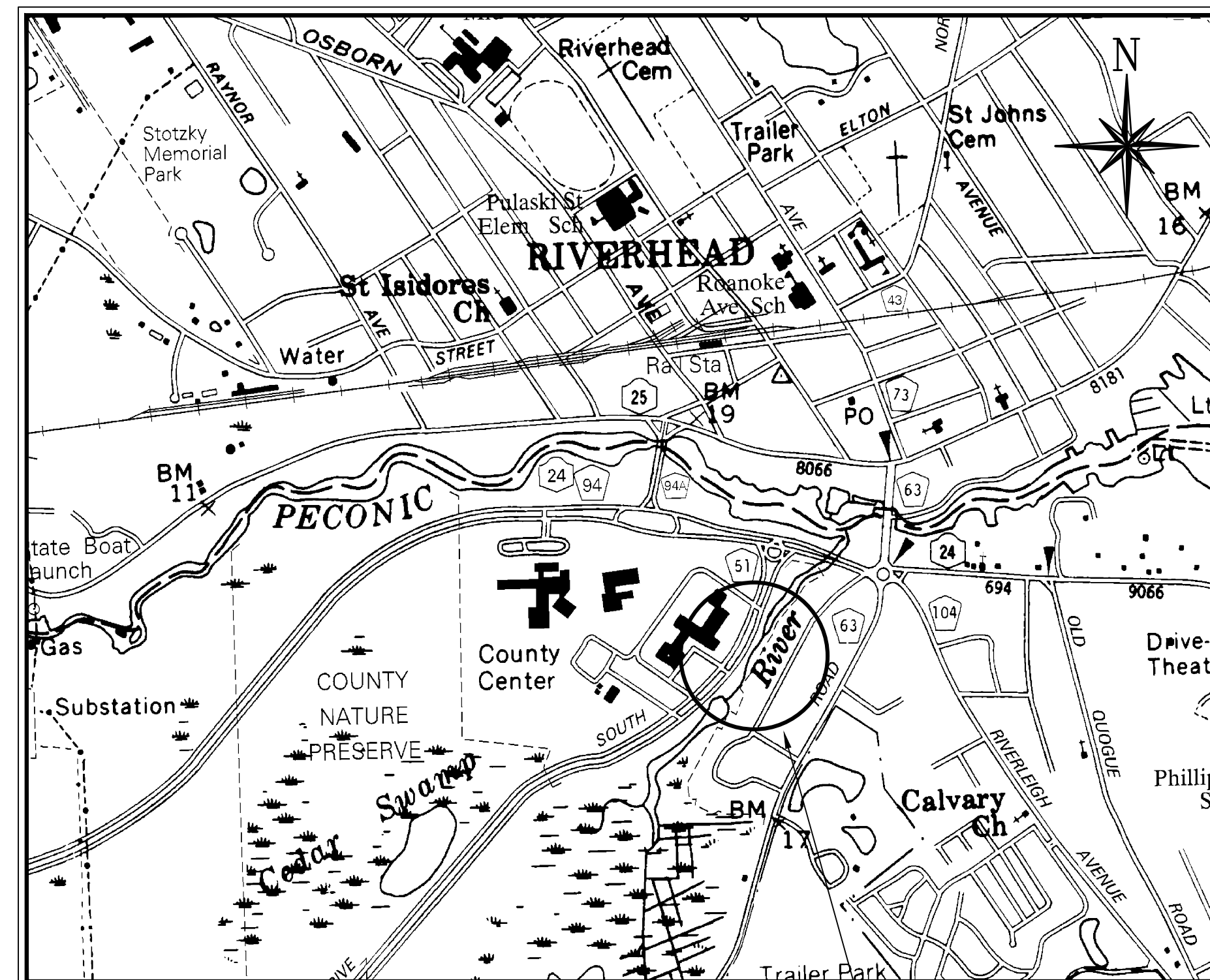
**PROJECT NO. 7180, 7099 & 8235**

SPECIAL NOTE  
THE CONTRACTORS ATTENTION IS DIRECTED TO UTILITIES IN THE AREA. THEIR LOCATION AS SHOWN ON PLAN IS NOT GUARANTEED. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE EXACT LOCATION OF ALL UTILITIES AND WILL TAKE EVERY PRECAUTION NOT TO DISTURB THEM.

CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION STIPULATIONS IS REQUIRED

- ALL WORK SHALL BE IN ACCORDANCE WITH N.Y.S.D.E.C PERMIT NO. 1-4736-06963/00006. COPIES OF THE PERMIT ARE INCLUDED IN THE PROPOSAL. THE COST OF THIS WORK IS TO BE INCLUDED IN ITEMS 209.13, 209.15018 & 209.22.
- TO PROTECT THE SPAWNING RUN OF ALEWIFE AND THE INLAND MIGRATION OF AMERICAN EEL, ALL ACTIVITIES INVOLVING THE DISTURBANCE OF THE BED OR BANKS OF WOODHULL'S POND (A.K.A. LITTLE RIVER), THE PLACEMENT OF FILL IN THE STREAM, OR ANY OTHER ACTIVITY WHICH WILL INCREASE THE TURBIDITY IN THE WATERWAY ARE PROHIBITED BETWEEN THE DATES MARCH 1 AND MAY 31, INCLUSIVE, OF ANY CALENDAR YEAR.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL BE COVERED BY AND IN CONFORMITY WITH THE LATEST EDITION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, EXCEPT AS MODIFIED ON THIS PLAN AND IN THE PROPOSAL.



PREPARED UNDER ARTICLE 6 - SECTION 116 OF THE HIGHWAY LAW.

**LOCATION MAP**  
0 1000 2000  
SCALE IN FEET

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

WILLIAM HILLMAN, P.E., CHIEF ENGINEER

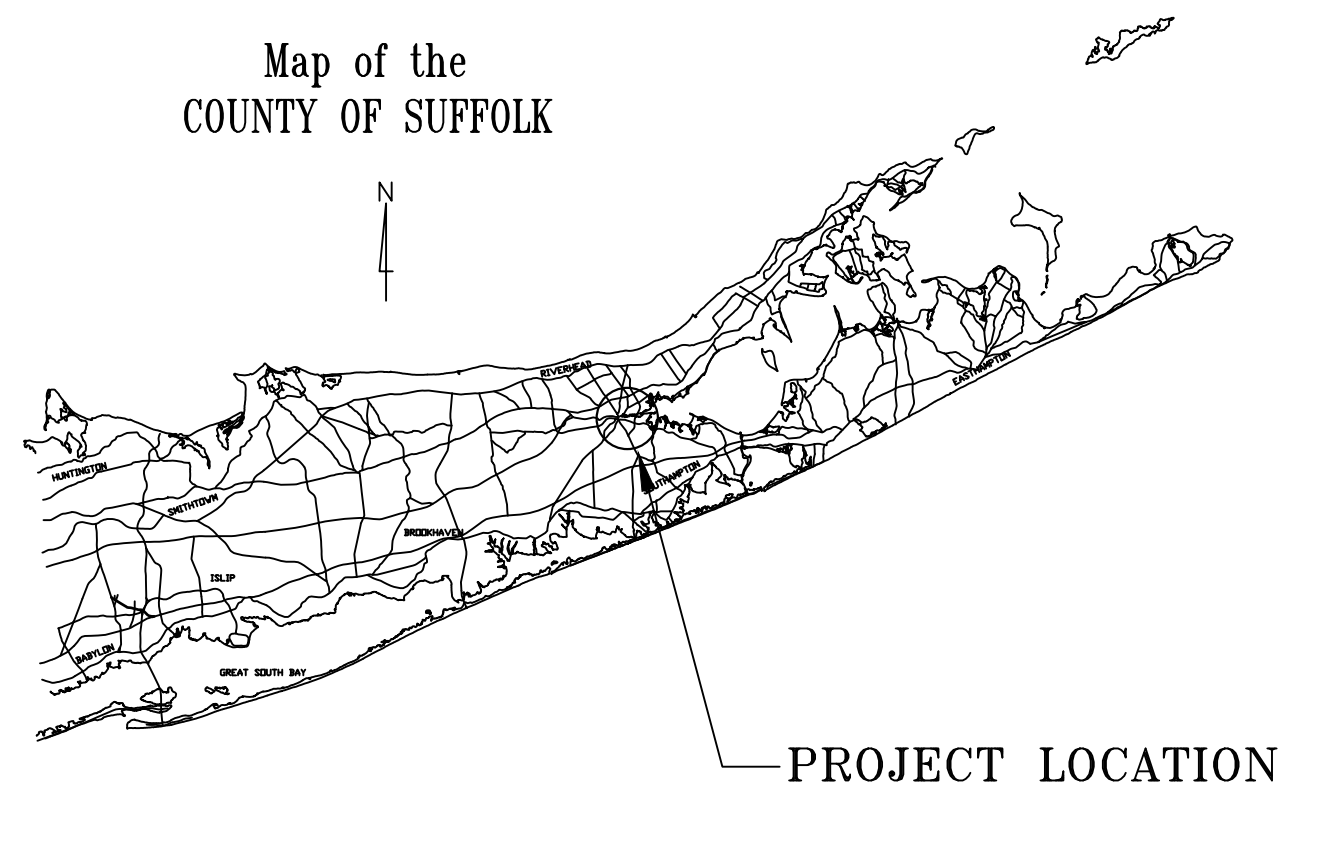
APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

DARNELL TYSON, P.E., ACTING COMMISSIONER OF PUBLIC WORKS

PLAN REVIEWED BY		
SECTION	INITIAL	DATE
HIGHWAY DESIGN		
TRAFFIC SAFETY		
BRIDGES & STRUCTURES		
WATERWAYS		
CONSTRUCTION		

THE EDUCATION LAW OF THE STATE OF NEW YORK PROHIBITS ANY PERSON FROM ALTERING ANYTHING ON THE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATIONS, UNLESS IT'S UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, WHERE SUCH ALTERATIONS ARE MADE, THE PROFESSIONAL ENGINEER MUST SIGN AND SEAL, DATE AND DESCRIBE THE FULL EXTENT OF THE ALTERATION ON THE DRAWING AND/OR IN THE SPECIFICATION (NYS ED. LAW SECTION 7209-2).

Map of the COUNTY OF SUFFOLK



PROJECT LOCATION

THIS PROJECT IS LOCATED BETWEEN THE NORTHEAST END OF COUNTY ROUTE 51 AND WOODHULL AVENUE; DIRECTLY ACROSS FROM SUFFOLK COUNTY SURROGATE COURTS IN THE TOWN OF RIVERHEAD, NEW YORK.

PREPARED AND RECOMMENDED BY: **LKMA** L. K. McLEAN ASSOCIATES, P.C.  
CONSULTING ENGINEERS 437 SOUTH COUNTRY RD., BROOKHAVEN, NEW YORK 11719

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
RAY DiBIASE, P.E. - NYSPE Lic. No. 56985

LETTING DATE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

ENGINEER IN CHARGE: \_\_\_\_\_

COMPLETION DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
COMPARED BY: \_\_\_\_\_

GENERAL NOTES:

- CONTRACTOR SHALL READ AND FOLLOW ALL PERMIT CONDITIONS AND SPECIAL CONDITIONS CONTAINED IN THE PERMIT (1-4736-06963/00006) TO ENSURE COMPLIANCE DURING THE TERM OF THE PERMIT. A COPY OF THE PERMIT CAN BE FOUND IN THE PROJECT MANUAL.
- ALL CONSTRUCTION SHALL BE COMPLETED WITHIN THE TIME FOR COMPLETION STATED IN THE CONTRACT. FAILURE TO MEET THIS DEADLINE MAY RESULT IN A PENALTY AS DEFINED IN THE CONTRACT AGREEMENT.
- ANY DEBRIS OR EXCESS MATERIAL FROM CONSTRUCTION OF THIS PROJECT SHALL BE COMPLETELY REMOVED FROM THE ADJACENT AREA (UPLAND) AND REMOVED AT AN APPROVED UPLAND AREA FOR DISPOSAL. NO DEBRIS IS PERMITTED IN WETLANDS OR PROTECTED BUFFER AREAS.
- UNLESS SPECIFICALLY CALLED FOR ON PLANS, THERE SHALL BE NO DISTURBANCE TO VEGETATED WETLANDS OR PROTECTED BUFFER AREAS AS A RESULT OF THE PERMITTED ACTIVITY.
- ALL AREAS OF SOIL DISTURBANCE RESULTING FROM THIS PROJECT SHALL BE STABILIZED IMMEDIATELY FOLLOWING NECESSARY EARTHWORK AND GRADING OPERATIONS.
- THE STORAGE OF CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE AT LOCATIONS AS SHOWN ON THE PLANS OR A.O.B.E.
- ALL DISTURBED AREAS WHERE SOIL WILL BE TEMPORARILY EXPOSED OR STOCKPILED FOR LONGER THAN ONE (1) WEEK SHALL BE CONTAINED BY A CONTINUOUS LINE OF STAKED STRAW BALES/SILT CURTAIN (OR OTHER NYSDEC APPROVED METHOD) PLACED ON THE SEAWARD SIDE BETWEEN THE FILL AND WETLAND OR PROTECTED BUFFER AREA. TARPS ARE AUTHORIZED TO SUPPLEMENT THESE APPROVED METHODS.
- IF SEEDING IS IMPRACTICAL DUE TO THE TIME OF YEAR, A TEMPORARY MULCH MUST BE APPLIED AND FINAL SEEDING PERFORMED AT THE EARLIEST OPPORTUNITY WHEN WEATHER CONDITIONS FAVOR GERMINATION AND GROWTH, BUT NOT MORE THAN SIX MONTHS AFTER PROJECT COMPLETION. (COST TO BE INCLUDED UNDER ITEM 610.1601)
- ANY NECESSARY FILL UNLESS OTHERWISE NOTED ON THE PLANS SHALL CONSIST OF "CLEAN" SAND, GRAVEL, OR SOIL (NOT ASPHALT, FLYASH, BROKEN CONCRETE OR DEMOLITION DEBRIS).
- THE CONTRACTOR IS ADVISED THAT THE PLANS AND OTHER CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON THE BEST CURRENTLY AVAILABLE FIELD DATA. HOWEVER, ACTUAL FIELD CONDITIONS MAY VARY REQUIRING MODIFICATIONS TO THE CONSTRUCTION DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF VARIATIONS IN FIELD CONDITIONS, AND MODIFY HIS WORK TO CONFORM TO THESE CONDITIONS, AS ORDERED BY THE ENGINEER.
- THE HORIZONTAL DATUM IS REFERENCED TO NAD83 (2011) AND THE VERTICAL DATUM IS NAVD88 (GEOID12A) THROUGH USE OF RTK GPS.
- CLEAR AND GRUB AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER. NO TREES SHALL BE REMOVED UNLESS SO ORDERED BY THE ENGINEER.
- WHENEVER ITEMS IN THE CONTRACT REQUIRE MATERIAL TO BE REMOVED AND DISPOSED OF, THE COST OF SUPPLYING A DISPOSAL AREA AND TRANSPORTATION TO THAT AREA SHALL BE INCLUDED IN THE COST FOR THOSE ITEMS.
- ANY TRENCH, PIT OR OTHER EXCAVATION THAT IS OPEN AND UNATTENDED SHALL BE PROTECTED, AS DIRECTED BY THE ENGINEER, WITH FENCE, BARRICADES OR ANOTHER APPROVED METHOD. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, ALL EXCAVATIONS SHALL BE CONDUCTED IN COMPLIANCE WITH NEW YORK INDUSTRIAL CODE RULE NO. 23-1-33, 2-8, 53 AND OSHA SAFETY AND HEALTH STANDARDS (29CFR 1926/1910).
- AT THE COMPLETION OF WORK COVERED BY THE CONTRACT, THE CONTRACTOR SHALL CLEAR ALL AREAS WITHIN THE R.O.W. OF CONSTRUCTION DEBRIS TO THE SATISFACTION OF THE ENGINEER AND LEAVE THE AREA IN A NEAT, ORDERLY CONDITION.
- GRADE, PLACE SELECT MATERIAL, SEED AND MULCH AS SHOWN ON PLANS OR AS DIRECTED. USE MATERIAL AVAILABLE ON SITE UNLESS OTHERWISE STATED IN THE PLAN.
- ALL SLOPES ARE TO BE TRIMMED AND GRADED TO MEET EXISTING GROUND CONDITIONS AS DIRECTED BY THE ENGINEER. ALL AREAS DISTURBED BY THE CONSTRUCTION SHALL BE GRADED AND FINISHED AS INDICATED ON THE TYPICAL SECTIONS OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR'S ATTENTION IS ALSO DIRECTED TO THE POSSIBILITY OF ENCOUNTERING GROUNDWATER DURING EXCAVATION AND WILL PROCEED WITH THEIR WORK HAVING FULL KNOWLEDGE OF THIS FACT.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE VEHICLE AND TRAFFIC LAW OF THE STATE OF NEW YORK IN REGARD TO THE SIZE AND WEIGHT OF VEHICLES. THE CONTRACTOR IS HEREBY NOTIFIED THAT NO VEHICLE IN EXCESS OF THE LIMITS SET BY THE VEHICLE AND TRAFFIC LAW WILL BE ALLOWED ON ANY PUBLIC ROAD.
- WHERE PROPOSED CURB MEETS EXISTING CURB, THE CONTRACTOR SHALL REPLACE THE EXISTING CURB TO THE NEAREST JOINT BEYOND THE LIMIT SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL PERFORM ALL WORK WITH THE CARE SO THAT ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE COUNTY WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE COUNTY, THE DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED IN A MANNER SATISFACTORY TO THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
- WATCHMAN SERVICE. THE CONTRACTOR SHALL NOT BE REQUIRED TO PROVIDE A WATCHMAN FOR THIS PROJECT HOWEVER, THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSURING THAT THE PROJECT AREA IS IN A SAFE CONDITION ALL TIMES DURING THE COURSE OF THIS PROJECT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY NECESSARY DEWATERING PERMITS.
- GROUND WATER ELEVATIONS SHOWN ON PLAN WERE MEASURED AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY, CONTRACTOR SHALL BE AWARE THAT GROUND WATER ELEVATIONS CAN SIGNIFICANTLY VARY.
- TYPES AND KIND OF MATERIAL TO BE USED IN CONCRETE ITEMS:  
PORTLAND CEMENT: TYPE II, WITH AN APPROVED AIR-ENTRAINING AGENT SHALL BE USED FOR ALL CONCRETE ITEMS. CEMENT SHALL BE NEW YORK STATE APPROVED.  
FINE AGGREGATE: TYPE A OR B SHALL BE USED IN CONCRETE ITEMS.  
COARSE AGGREGATE: CRUSHED STONE OR CRUSHED GRAVEL TYPE A OR B SHALL BE USED IN ALL CONCRETE ITEMS.  
ADMIXTURES: AN APPROVED RETARDING ADMIXTURE AND IDENTIFIER SHALL BE USED IN ALL CONCRETE ITEMS.
- ALL WORK IS TO BE DONE WITHIN THE RIGHT OF WAY. THE CONTRACTOR SHALL ENSURE THAT NO WORKER ENCROACHES ON TO PRIVATE PROPERTY. IF IT IS DEEMED NECESSARY TO ENCROACH OF WORK ON PRIVATE PROPERTY, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND MAY BE REQUIRED TO OBTAIN A WORK RELEASE SIGNED BY THE PROPERTY OWNER.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE UTILITIES IN THE AREA. THE CONTRACTOR SHALL SATISFY THEMSELVES AS TO THE EXACT LOCATION OF ALL UTILITIES AND WILL TAKE EVERY PRECAUTION NOT TO DISTURB THEM.
- CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY CONFLICTS OR OMISSION BETWEEN THE EXISTING CONDITIONS OR THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE WORK. CONTRACTOR IS RESPONSIBLE FOR ALL LINES, ELEVATIONS AND MEASUREMENTS IN CONNECTION WITH THEIR WORK.
- ANY REQUIRED MAINTENANCE OF TRAFFIC AND THE ASSOCIATED WARNING DEVICES SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF THE NEW YORK STATE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."
- UPON PROJECT COMPLETION, THE AREA WITHIN THE COUNTY RIGHT OF WAY SHALL BE CLEANED THOROUGHLY AND FREE OF ALL DEBRIS INCLUDING, BUT NOT LIMITED TO PLASTIC BOTTLES, PAPER CUPS, ETC. PAYMENT FOR THIS ITEM SHALL BE INCLUDED IN ITEM 699.040001.

- HIGH-VISIBILITY SAFETY APPAREL SHALL BE WORN BY ALL FOOT TRAFFIC WORKERS TO PROVIDE CONSPICUITY DURING BOTH THE DAYTIME AND NIGHTTIME USAGE. THIS SAFETY APPAREL SHALL MEET PERFORMANCE CLASS 2 OR 3 REQUIREMENTS OF THE ANSI/ISEA 107 2015 PUBLICATION ENTITLED "AMERICAN NATIONAL STANDARD FOR HIGH-VISIBILITY SAFETY APPAREL AND HEADWEAR."
- A CONSTRUCTION ACCESS WILL BE CONSTRUCTED ON THE EAST SIDE OF CR 51 TO ACCESS THE SITE; A DAYTIME LANE CLOSURE WILL BE PERMITTED NORTHBOUND ON CR 51 FROM 9:00 AM TO 3:00 PM DURING THE CONSTRUCTION AND THE REMOVAL OF THIS CONSTRUCTION ACCESS AS PER NYS DOT STANDARD SHEET 619-30.
- DURING CONSTRUCTION ADD CONSTRUCTION ACCESS AHEAD WARNING SIGN FOR NORTHBOUND CR 51, PRIOR TO THE CONSTRUCTION ACCESS
- THERE WILL BE NO ADDITIONAL PAYMENT MADE FOR MOBILIZING OR DEMOBILIZING THE COFFERDAMS SHOWN ON THE PLAN.

LEGEND					
DESCRIPTION	EXISTING	PROPOSED			
ASPHALT PAVEMENT - FULL DEPTH					
CONCRETE SLAB					
DRAINAGE PIPE, MANHOLE & CATCH BASIN					
TOPSOIL AND SEED					
SUB-EMERGENT NATIVE PLANTS					
REPLACE EXISTING WETLAND PLANTS					
EMERGENT PLANTS					
UPLAND SHRUBS					
SILT FENCE					
LIMITS OF CLEARING AND GRUBBING / LIMITS OF DISTURBANCE					
SHEET PILING					
WATERMAIN AND VALVE					
FENCE					
GUIDE RAIL					
ELEVATION IN PLAN	(27.50)	+ 27.52			
BENCH MARK					
BORING LOCATION					
TAKING LINES & EASEMENTS					
CONTOUR LINES					
BUILDING FOUNDATION			DIRT DRIVEWAY OR ROAD		
SIGN; TRAFFIC, RR, ETC.			BUSH AND SHRUBS		
UTILITY POLE/GUY WIRE			TREE (SIZE & TYPE)		12' Oak
UTILITY POLE/LIGHT			HEDGE		
WATER METER & FIRE HYDRANT			EDGE OF WOODS		
LEACHING BASIN			EDGE OF WATER OR STREAM		
			UNDERGROUND ELECTRIC AND MANHOLE		
			UNDERGROUND TELEPHONE DUCT AND MANHOLE		
			CONCRETE MONUMENT, AND RIGHT OF WAY LINE		
			GAS MAIN AND VALVE		
			DRAINAGE LINE AND CATCH BASIN		
			TREE REMOVAL		

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**COUNTY OF SUFFOLK  
DEPARTMENT OF PUBLIC WORKS  
YAPHANK, NEW YORK**

**DARNELL TYSON, P.E., ACTING COMMISSIONER**

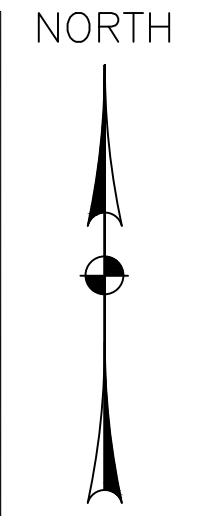
**WOODHULL DAM FISH PASSAGE**

**GENERAL NOTES AND LEGEND**

SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO. 2 OF 15
			MAY 2019	CP #7180	AS NOTED	

**REVISIONS**

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LEGEND

 PHOTOGRAPH LOCATION WITH DIRECTION TAKEN AND NUMBER



PHOTO 5: EXISTING OUTLET STRUCTURE



PHOTO 4: EXISTING INLET STRUCTURE



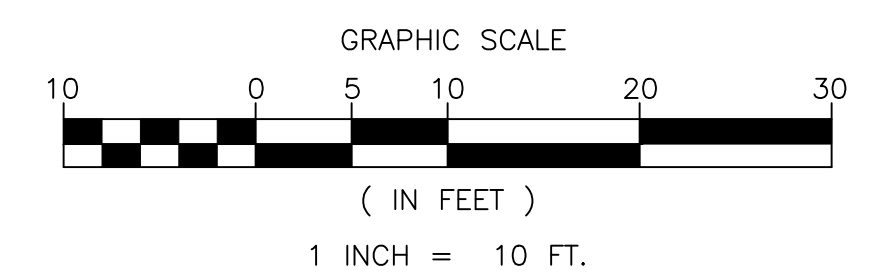
PHOTO 1: EXISTING EARTH BERM



PHOTO 2: UPPER POND



PHOTO 3: LOWER POND



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**YAPHANK, NEW YORK**  
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**WOODHULL DAM FISH PASSAGE**

EXISTING CONDITIONS

SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO.
			MAY 2019	CP #7180	AS NOTED	3 OF 15
<b>REVISIONS</b>						



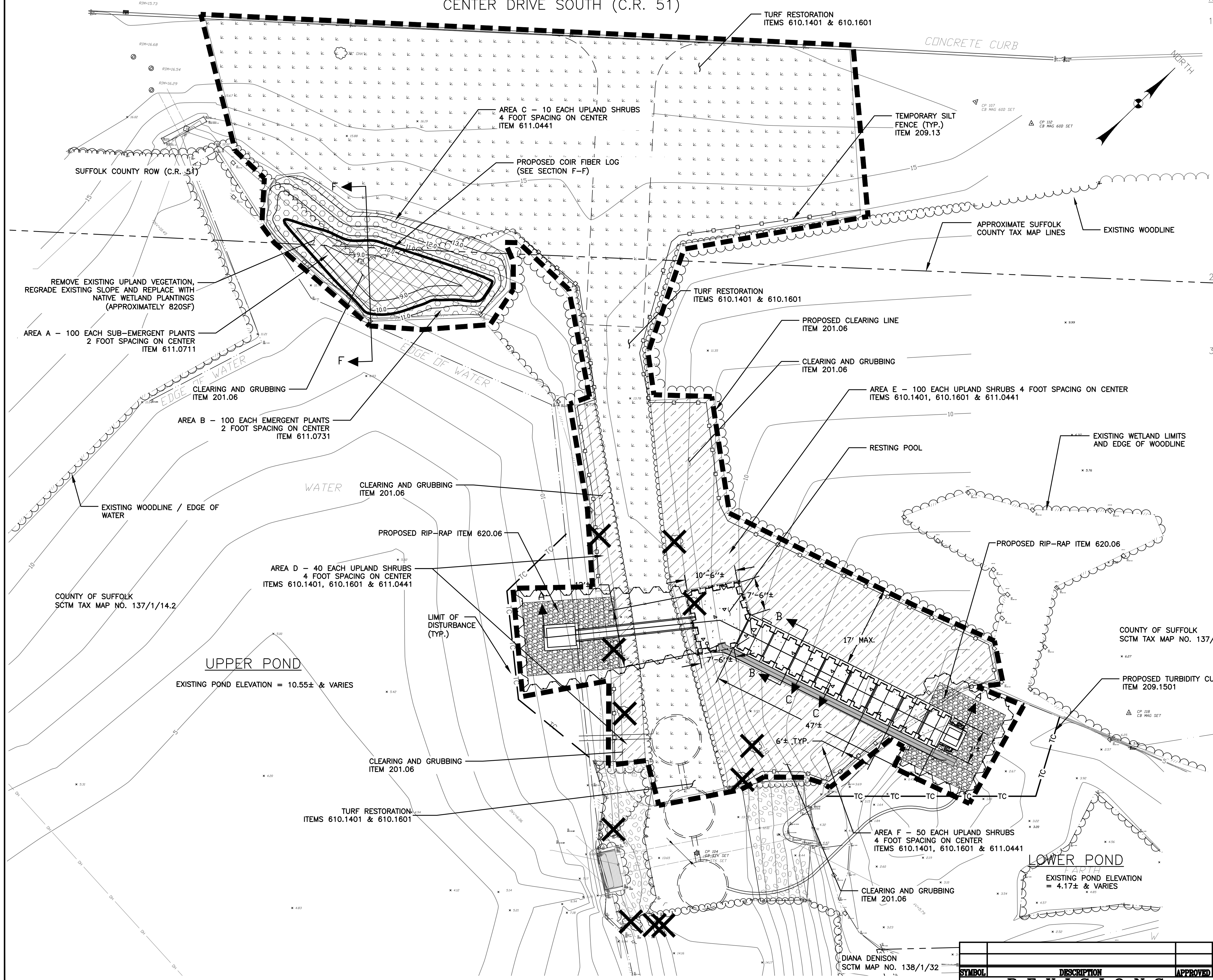
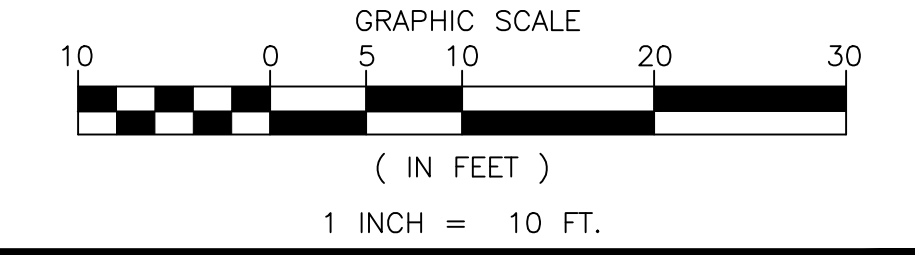
CENTER DRIVE SOUTH (C.R. 51)

NOTES:

- THE CONTRACTOR SHALL INSTALL ORANGE BARRIER CONSTRUCTION FENCING AS FOLLOWS:
  - A: ALONG UPPER POND, TO PROTECT THE SHRUBS AND HERBACEOUS PLANT SPECIES, BETWEEN ELEVATIONS 10.55 (EDGE OF WATER) AND IN VICINITY OF ELEVATION 13.00, AS DIRECTED BY THE ENGINEER.
  - B: ALONG LOWER POND TO PROTECT THE SHRUBS AND HERBACEOUS PLANT SPECIES, BETWEEN ELEVATIONS 4.17 (EDGE OF WATER) AND IN THE VICINITY OF ELEVATION 6.00, AS DIRECTED BY THE ENGINEER.
  - C: THE COST OF THE FENCING AND INSTALLATION SHALL BE INCLUDED IN VARIOUS CONTRACT LANDSCAPE ITEMS. WHEN ALL OF THE WORK IS COMPLETED, THE CONTRACTOR SHALL BE DIRECTED BY THE ENGINEER-IN-CHARGE TO REMOVE THE FENCING WITHOUT DAMAGE TO THE EXISTING WETLAND VEGETATION. UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT/ ENGINEER-IN-CHARGE, THE CONTRACTOR SHALL CUT THE FENCING AROUND THE WOODY SHRUBS TO MINIMIZE DAMAGE TO THE PROTECTED PLANT MATERIALS.
- THE CONTRACTOR SHALL REPLACE ALL DAMAGED AND/OR BADLY IMPAIRED LANDSCAPE MATERIALS, WITHIN THE ORANGE FENCING PROTECTED AREA, AS NOTED BY THE ENGINEER-IN-CHARGE OR NYSDEC. THIS WORK SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND NO ADDITIONAL PAYMENT SHALL BE MADE.
- ALL DOCUMENTED DAMAGED AREAS OUTSIDE THE LIMITS OF WORK, SHALL BE PLANTED WITH SPECIES LISTED ON THE CONTRACT DOCUMENTS AND/OR AS DETERMINED BY NYSDEC STAFF. ALL RESTORATION WORK REQUIRED FOR REMEDIATION OF THE CONTRACTOR'S CONSTRUCTION IMPACTS, SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO ADDITIONAL PAYMENTS SHALL BE MADE FOR THIS WORK REQUIRED TO ACCOMPLISH WETLAND RESTORATIONS AND/OR UPLAND RESTORATIONS.

**LEGEND**

- LIMIT OF DISTURBANCE
- TURF RESTORATION ITEMS 610.1401 & 610.1601
- REPLACE EXISTING WETLAND PLANTS (SEE NOTE 7 ON SHEET 4)
- EXISTING TREE TO BE REMOVED ITEMS 614.060203 & 614.060303
- EXISTING WOODLINE
- AREA A SUB-EMERGENT PLANT 2 FEET SPACING ON CENTER (SEE DETAILS) ITEM 611.0711
- AREA B EMERGENT PLANT 2 FEET SPACING ON CENTER (SEE DETAILS) ITEM 611.0731
- AREA C UPLAND SHRUBS 4 FEET SPACING ON CENTER (SEE DETAILS) ITEM 611.0441
- TEMPORARY SILT FENCE ITEM 209.13
- TURBIDITY CURTAIN ITEM 209.1501



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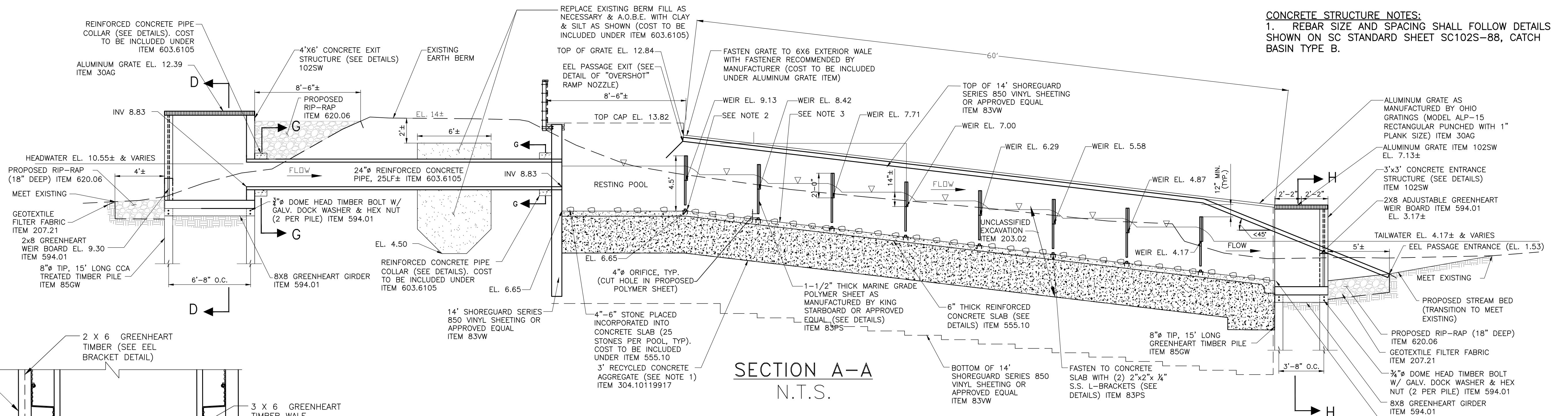
**WOODHULL DAM FISH PASSAGE**

**LANDSCAPE DEVELOPMENT PLAN**

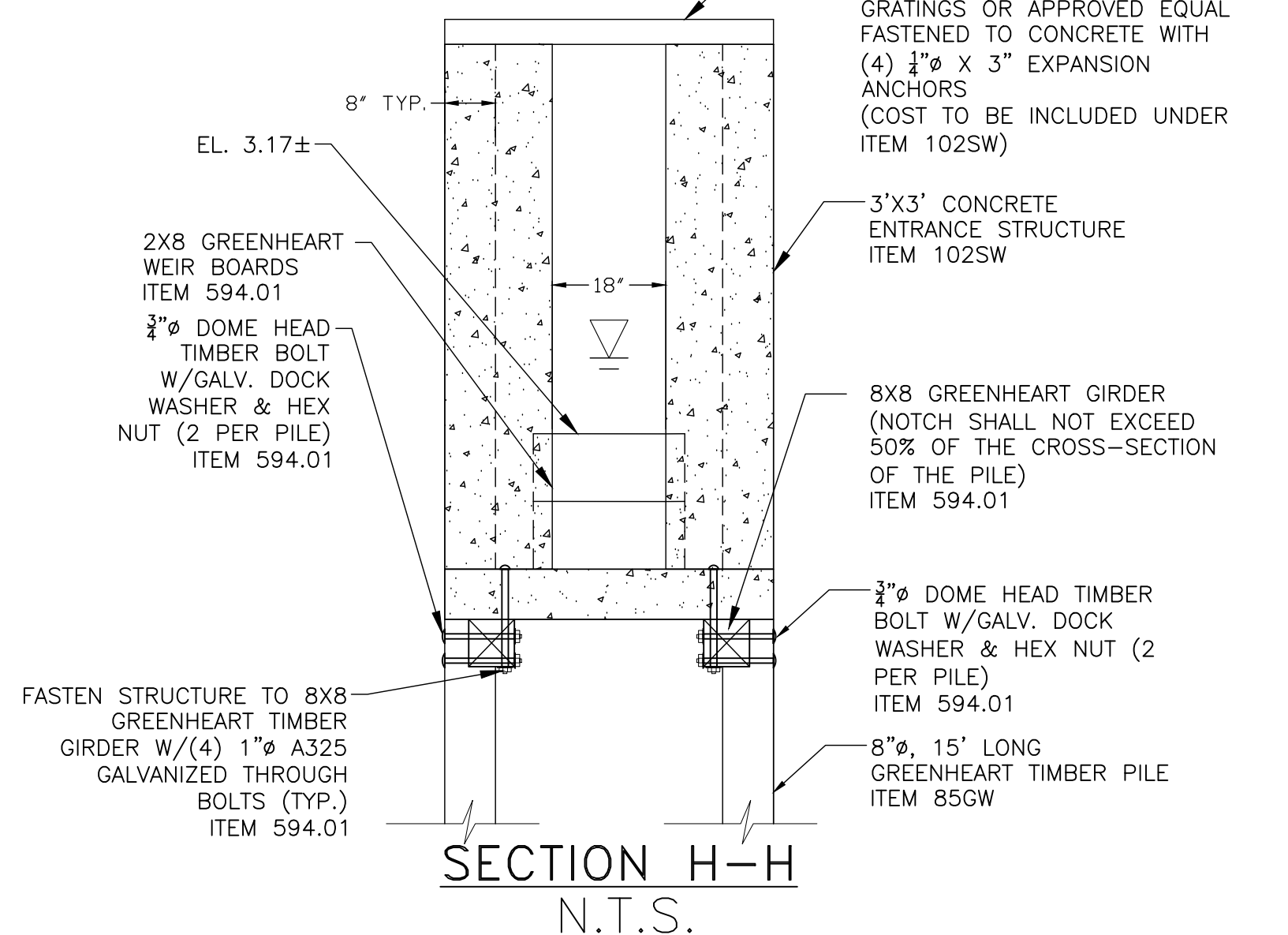
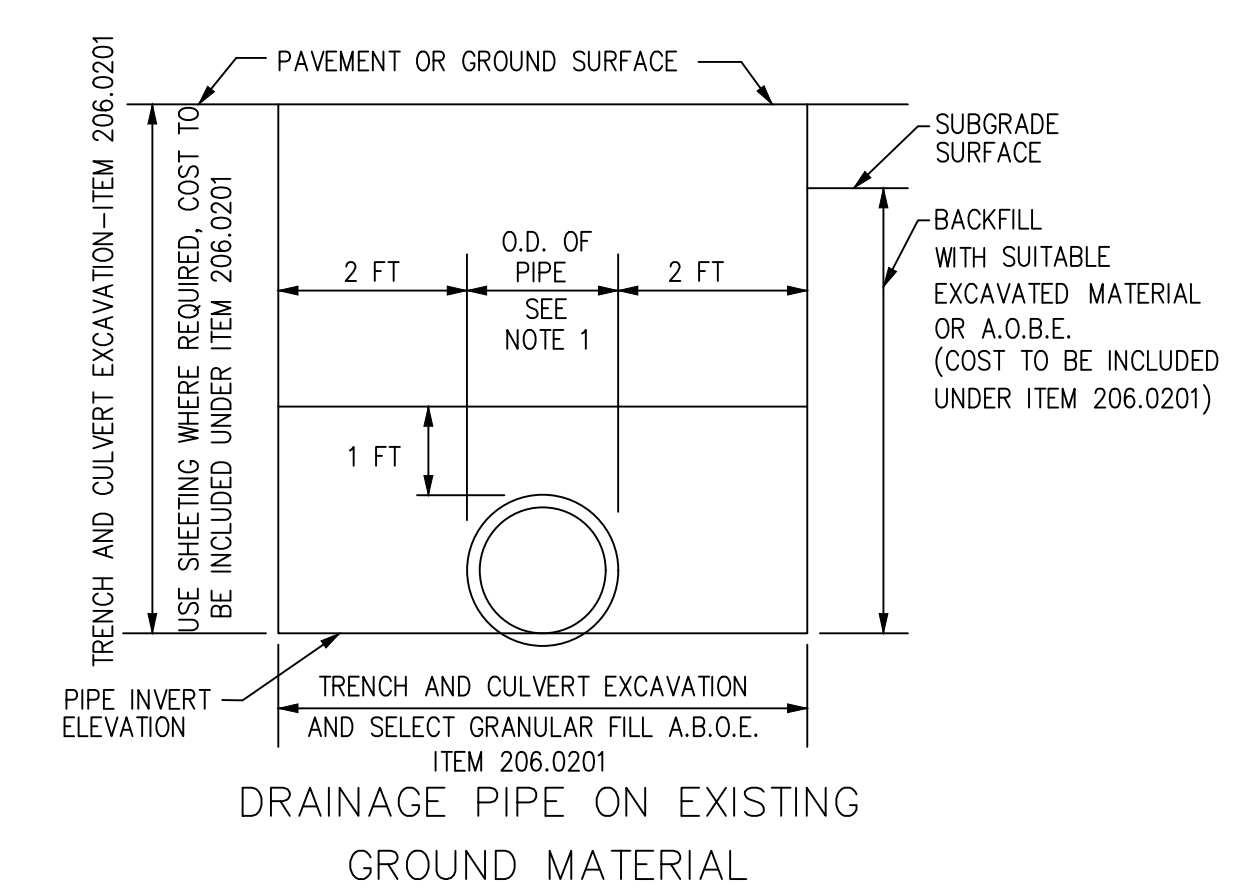
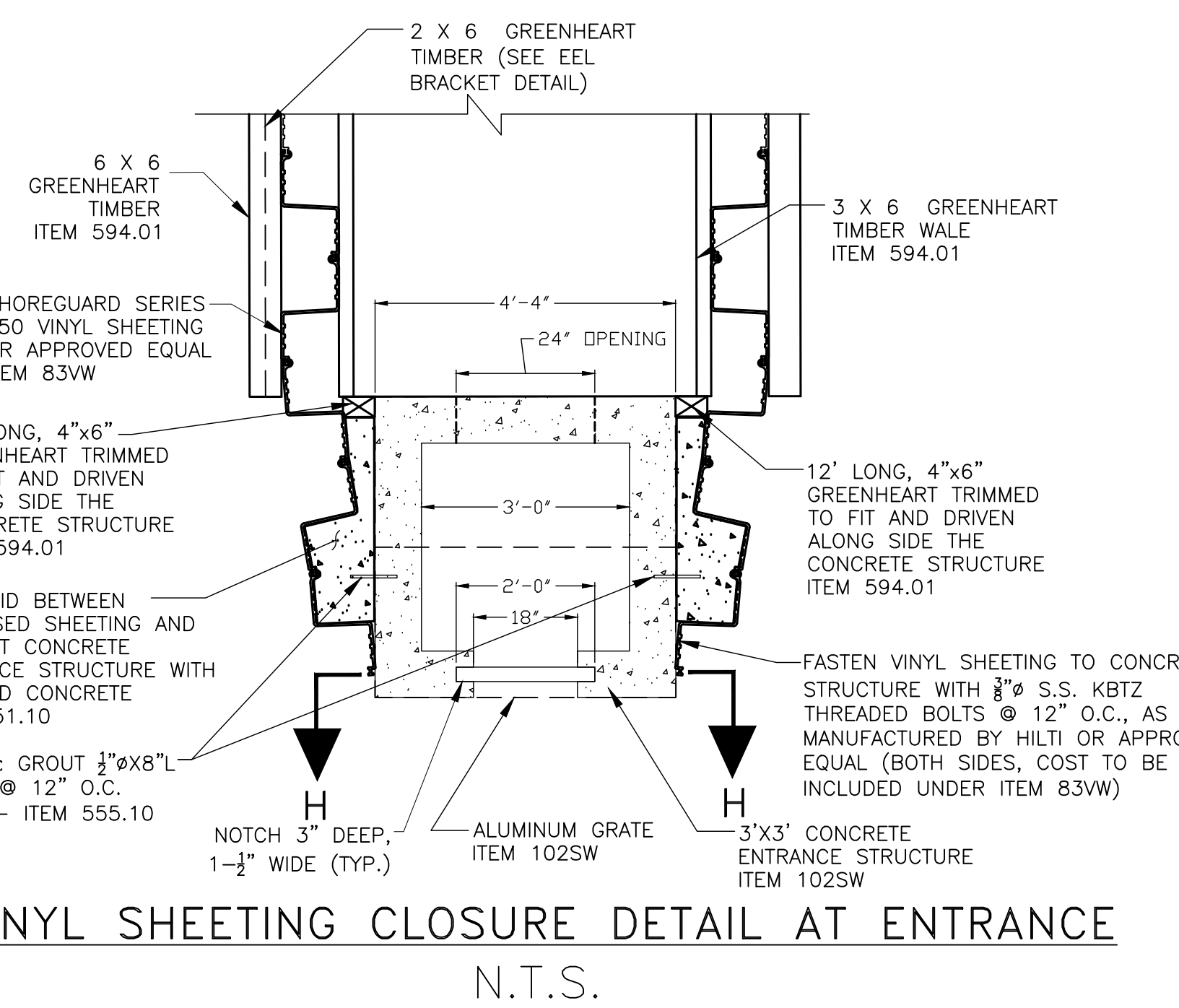
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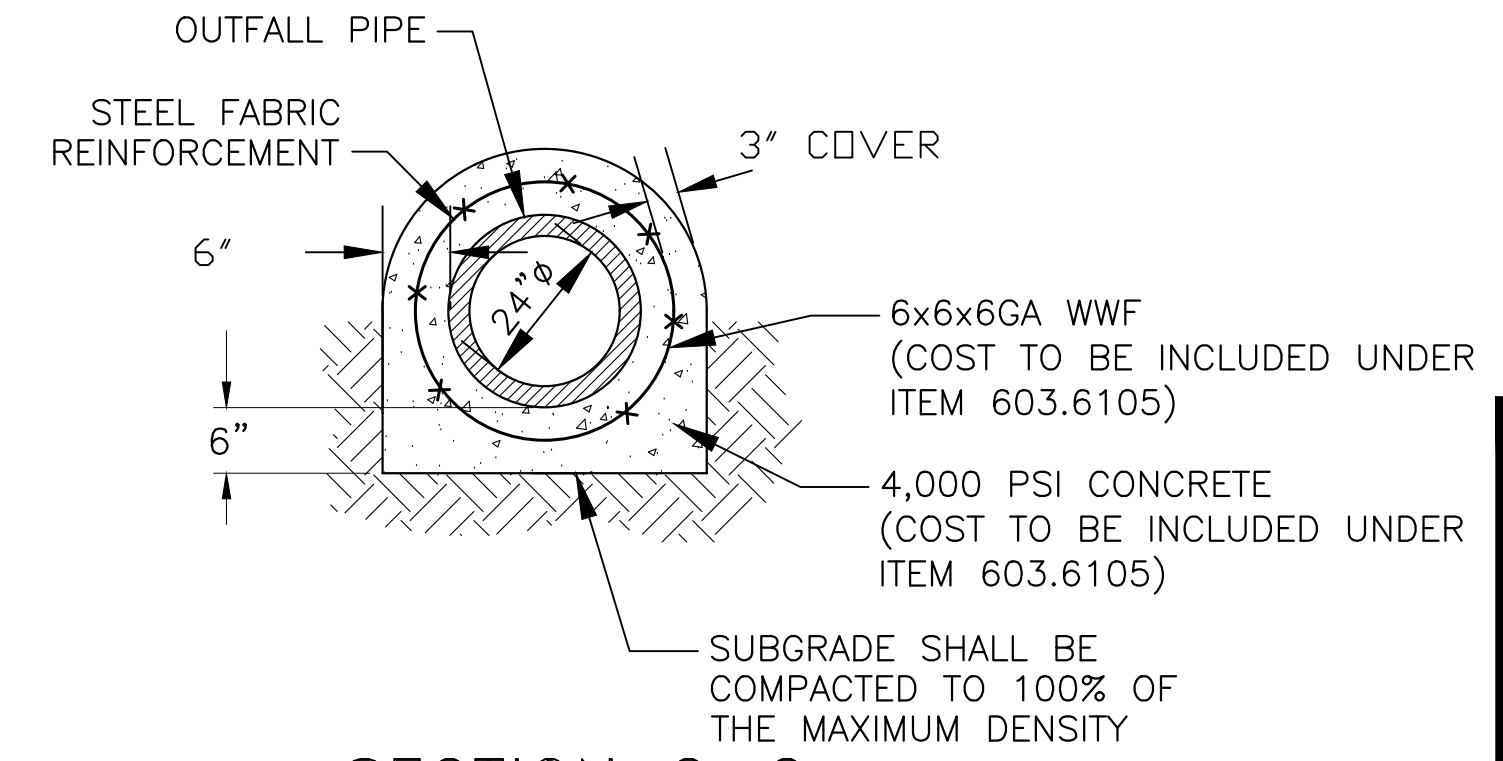
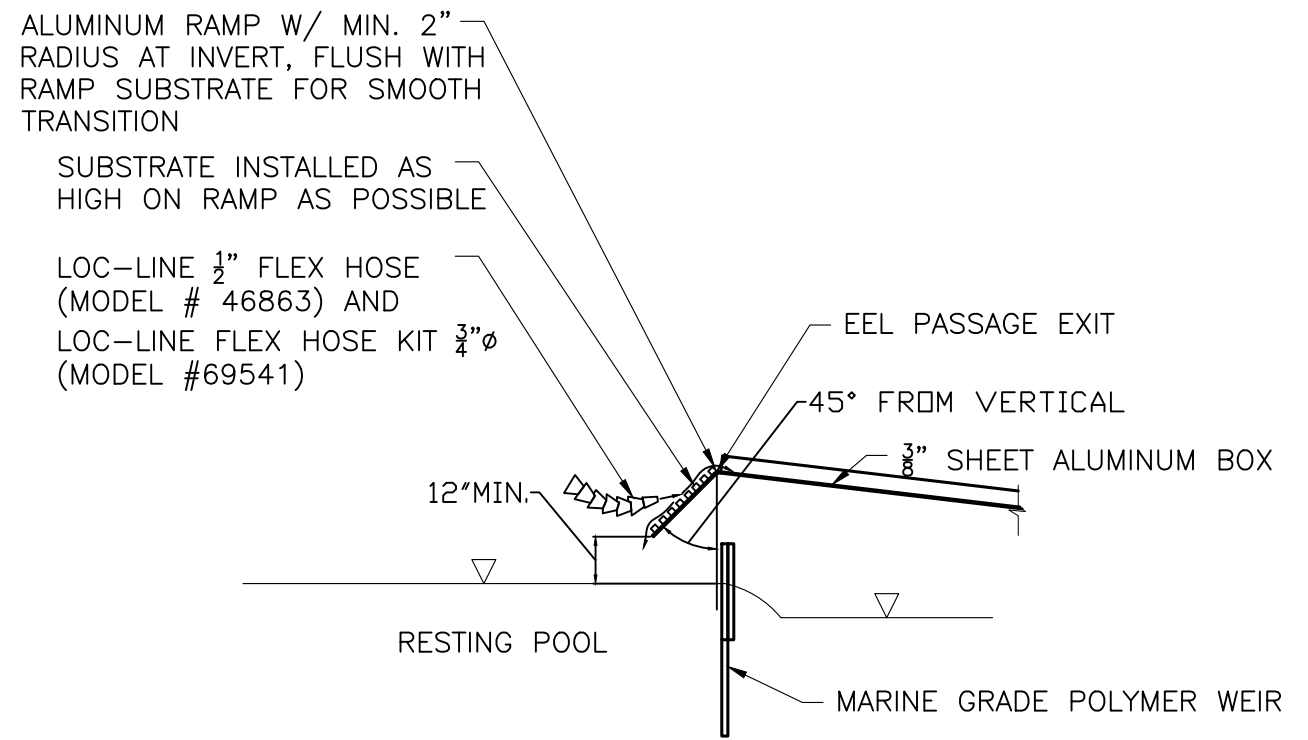
**CONCRETE STRUCTURE NOTES:**  
 1. REBAR SIZE AND SPACING SHALL FOLLOW DETAILS SHOWN ON SC STANDARD SHEET SC102S-88, CATCH BASIN TYPE B.



- GREENHEART LUMBER NOTES:**
- ALL PROPOSED STRUCTURAL LUMBER SHALL BE GREENHEART "DEMERARA GREENHEART"
  - GREENHEART LUMBER SHALL BE OBTAINED FROM AN APPROVED COMMERCIAL DISTRIBUTOR
  - WOOD GENERAL CHARACTERISTICS: HEARTWOOD MAY VARY FROM LIGHT TO DARK OLIVE GREEN OR BLACKISH, OFTEN WITH INTERMINGLING LIGHTER AND DARKER AREAS; NOT SHARPLY DEFINED PALE YELLOW OR GREENISH SAPWOOD. TEXTURE FINE AND UNIFORM; GRAIN STRAIGHT; LUSTROUS; ODORLESS AND TASTELESS WHEN DRY.
  - WEIGHT: BASIC SPECIFIC GRAVITY (OVEN-DRY WEIGHT/ GIVEN VOLUME) 0.80 TO 0.91; AIR-DRY DENSITY 62 TO 70 PCF.
  - MECHANICAL PROPERTIES: (FIRST SET OF DATA BASED ON THE 2-CM STANDARD; SECOND ON THE 2-IN. STANDARD.) JANKA SIDE HARDNESS 1,880 LB. FOR GREEN MATERIAL AND 2,360 LB. AT 12% MOISTURE CONTENT.
  - DRYING AND SHRINKAGE: THE WOOD SHALL BE DRIED VERY SLOWLY TO LIMIT THE MARKED TENDENCY TO CHECK AND END SPLIT.

MOISTURE CONTENT	BENDING STRENGTH (PSI)	MODULUS OF ELASTICITY (1,000 PSI)	MAXIMUM CRUSHING STRENGTH (PSI)
Green (42)	20,300	2,310	9,770
12%	26,200	3,040	13,040
Green (40)	20,900	3,040	10,690
12%	25,500	3,700	13,040

- LUMBER SHOULD BE AIR-SEASON PRIOR TO KILN-DRYING
- PILES SHALL CONFORM TO NYSDOT SECTION 720-01 FOR UNTREATED TIMBER PILES



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 YAPHANK, NEW YORK**

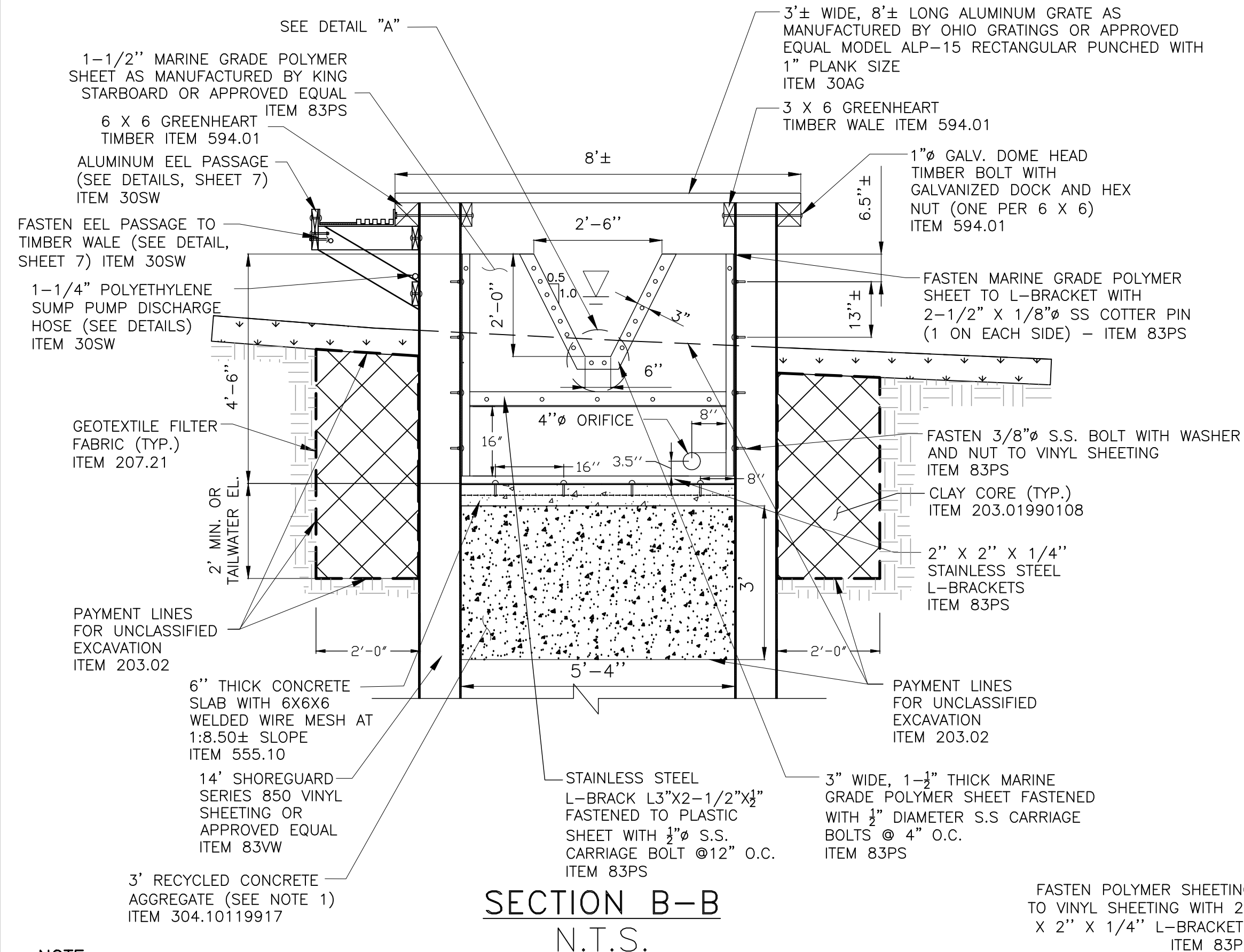
**DARNELL TYSON, P.E., ACTING COMMISSIONER**

**WOODHULL DAM FISH PASSAGE**

MISCELLANEOUS DETAILS - 1

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			MAY 2019	CP #7180	AS NOTED	6 OF 15

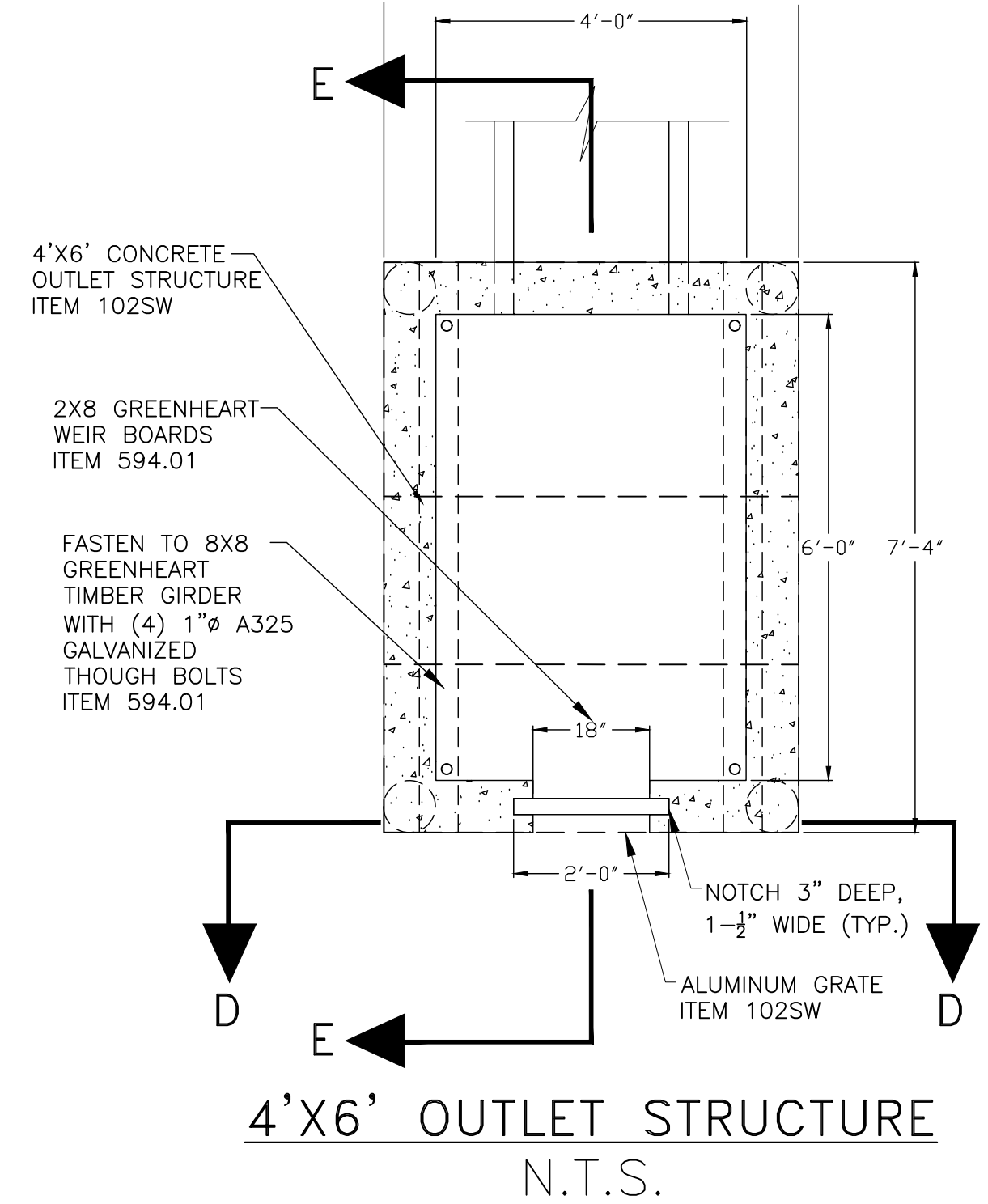
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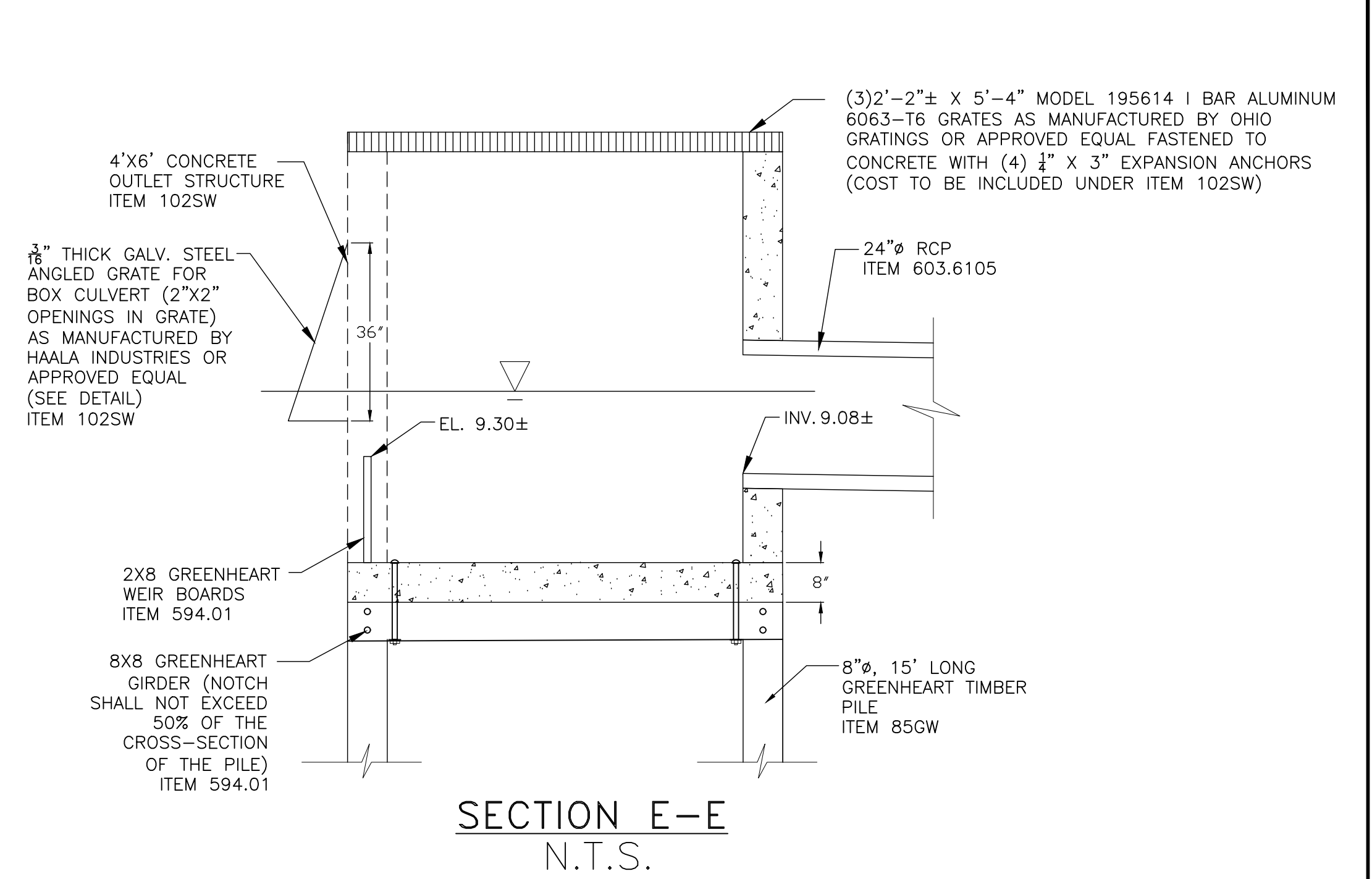
**SECTION B-B**  
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**NOTE:**

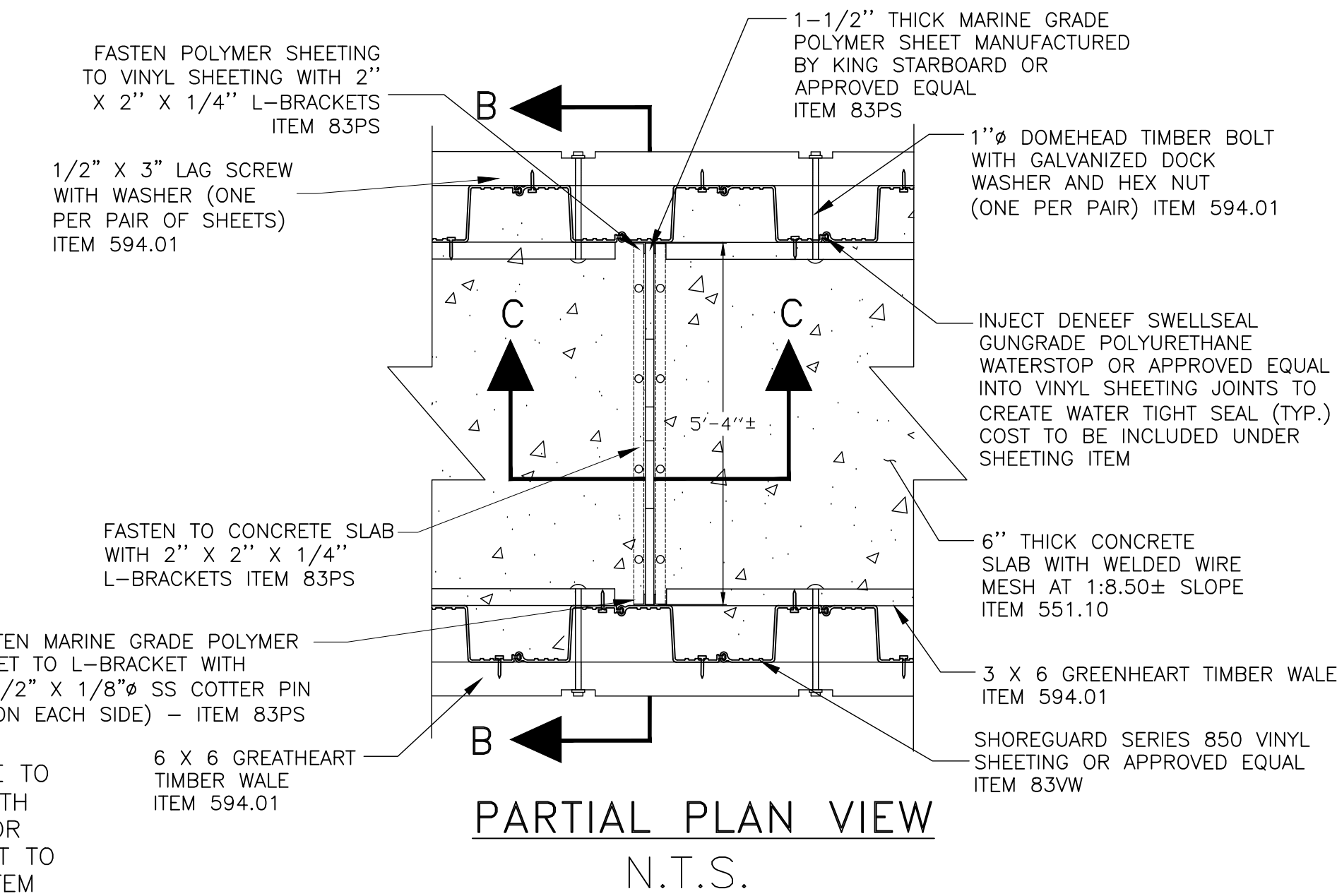
- RCA (RECYCLED CONCRETE AGGREGATE) SHALL BE COMPACTED IN 6 INCH LIFTS TO AT LEAST 95% PROCTOR DENSITY.
- CONTRACTOR SHALL INSTALL A HEAT WELDED WATER JOINT OR RX-101 WHERE THE RESTING POOL MEETS THE FISH LADDER.
- CONTRACTOR SHALL CONSTRUCT THREE JOINTS, SPACED EQUALLY ACROSS THE LADDER SLAB. THEY SHALL BE FILLED WITH AN ELASTOMERIC URETHANE SEALANT SPECIFIED FOR CONTINUOUS IMMERSION IN WATER.
- CONCRETE STRUCTURES - REBAR SIZE AND SPACING SHALL FOLLOW DETAILS SHOWN ON SC STANDARD SHEET SC102S-88, CATCH BASIN TYPE B.



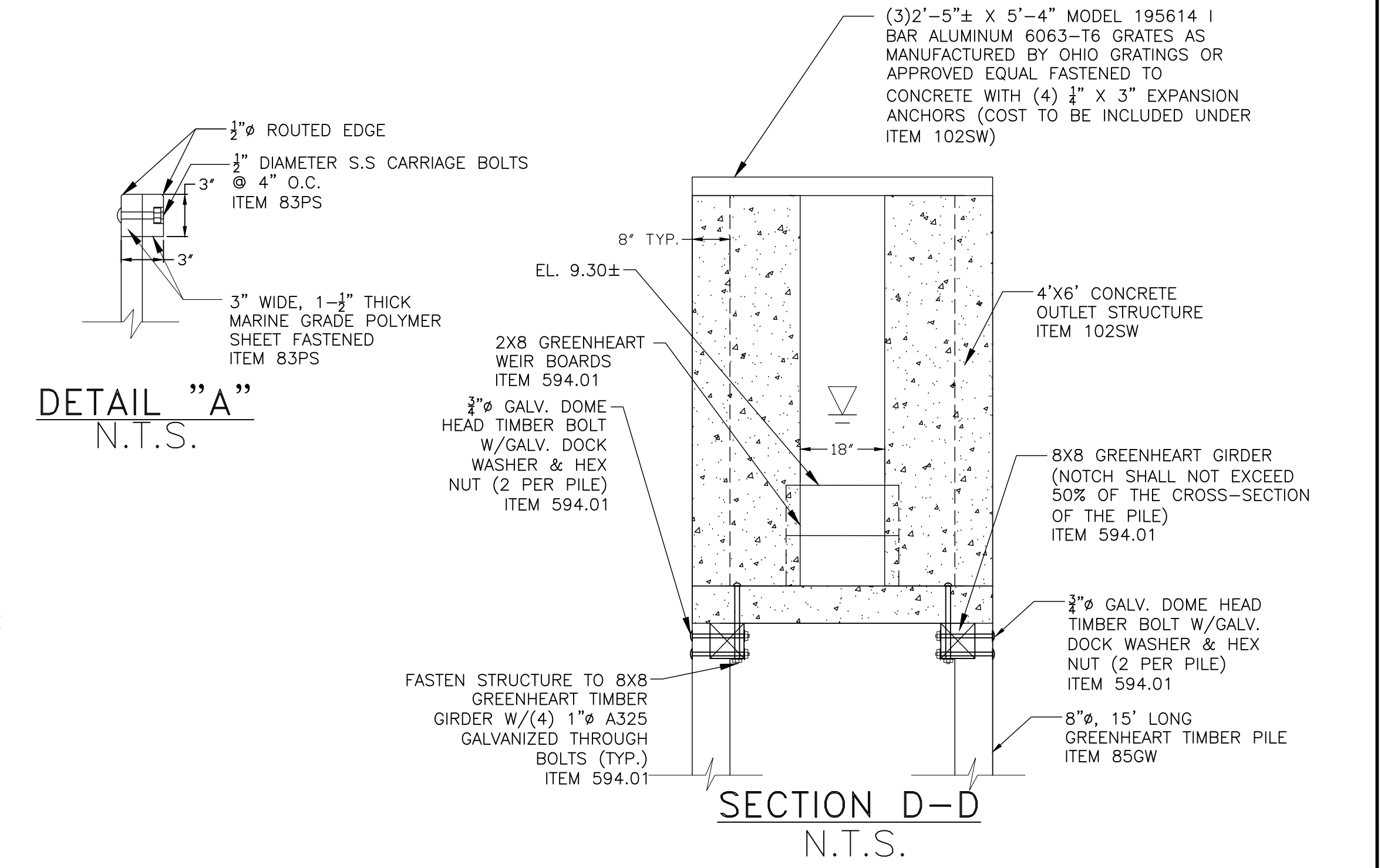
**4'x6' OUTLET STRUCTURE**  
N.T.S.



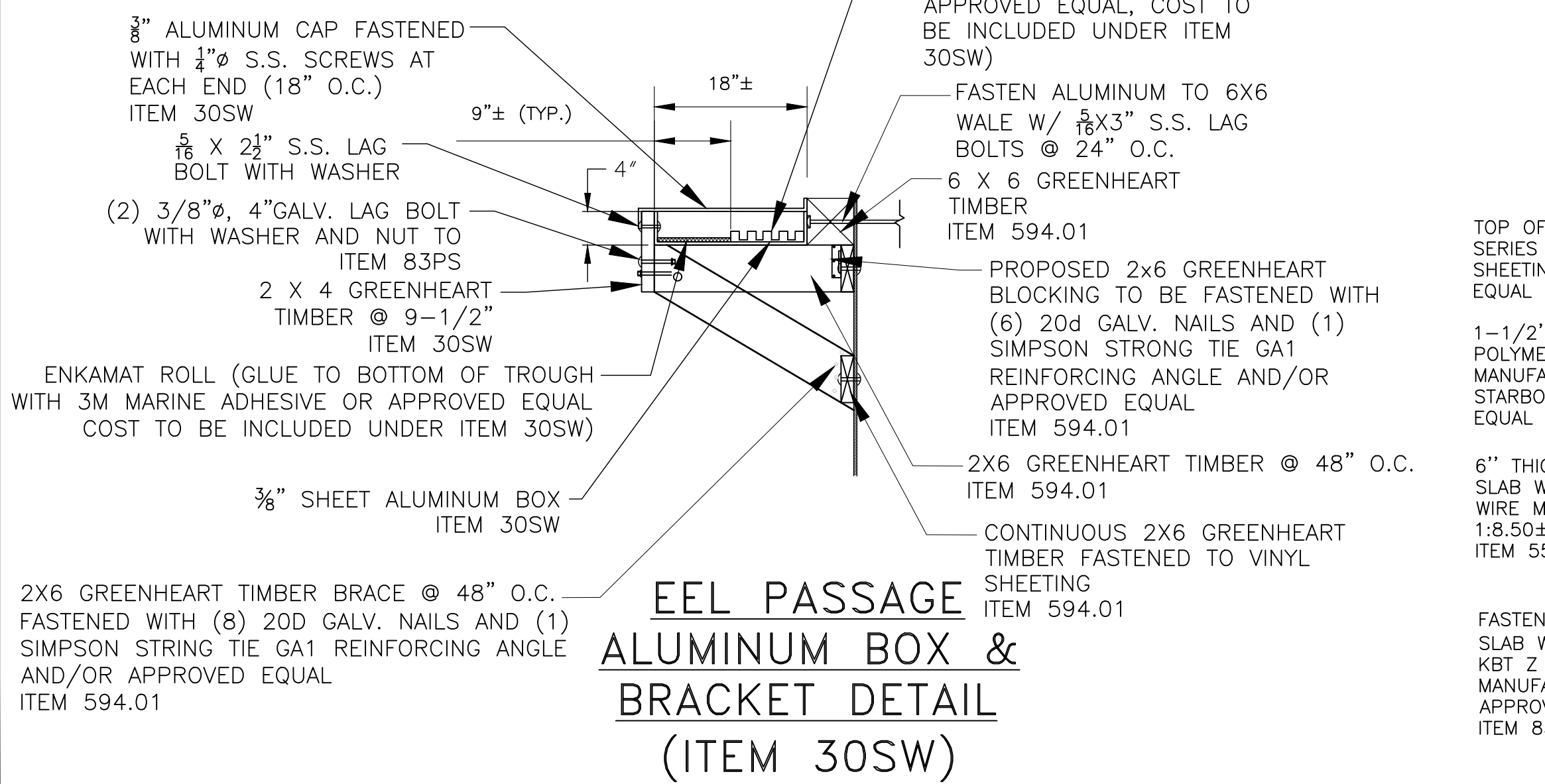
**SECTION E-E**  
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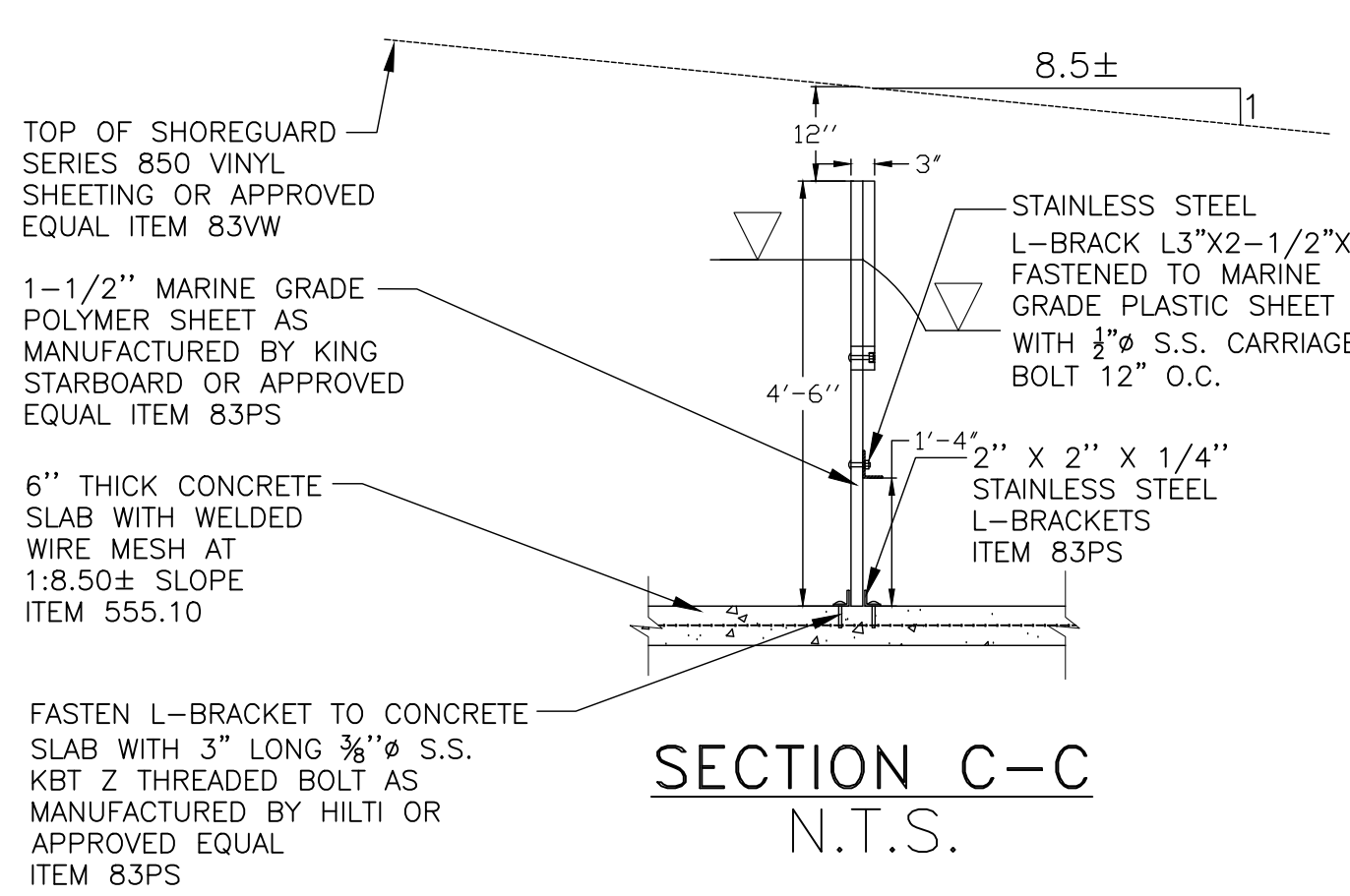
**PARTIAL PLAN VIEW**  
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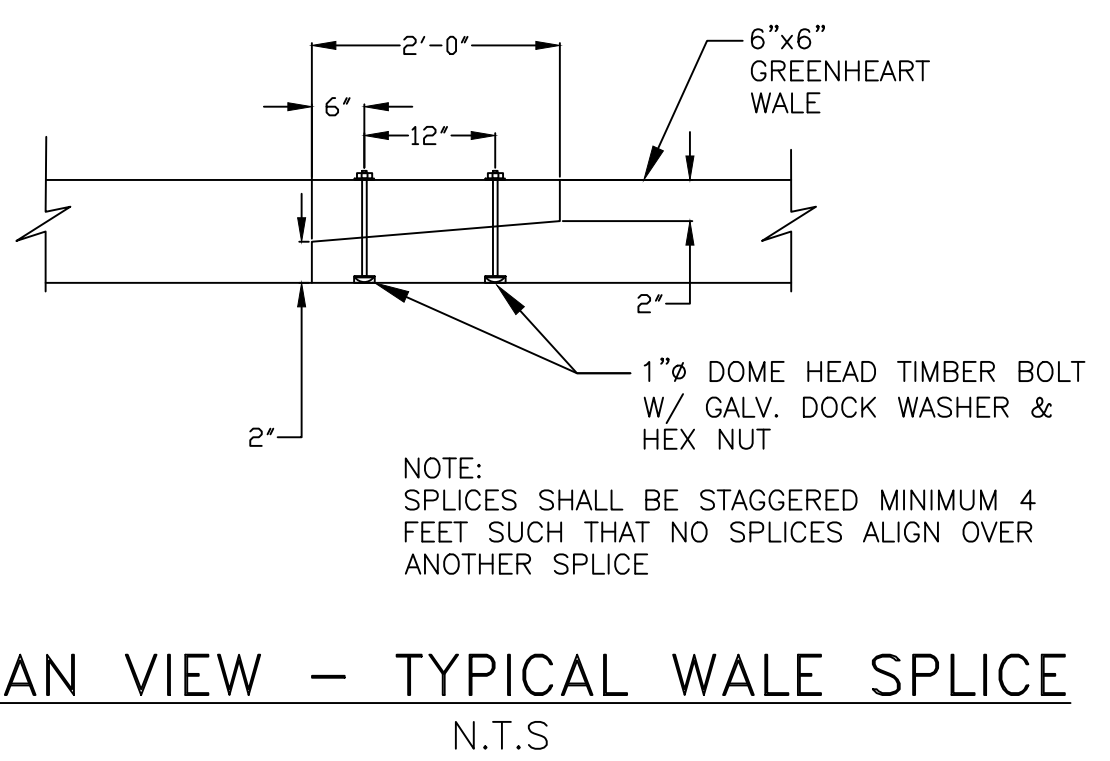
**SECTION D-D**  
N.T.S.



**EEL PASSAGE ALUMINUM BOX & BRACKET DETAIL**  
(ITEM 30SW)



**SECTION C-C**  
N.T.S.



**PLAN VIEW - TYPICAL WALE SPLICE**  
N.T.S.

SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO.
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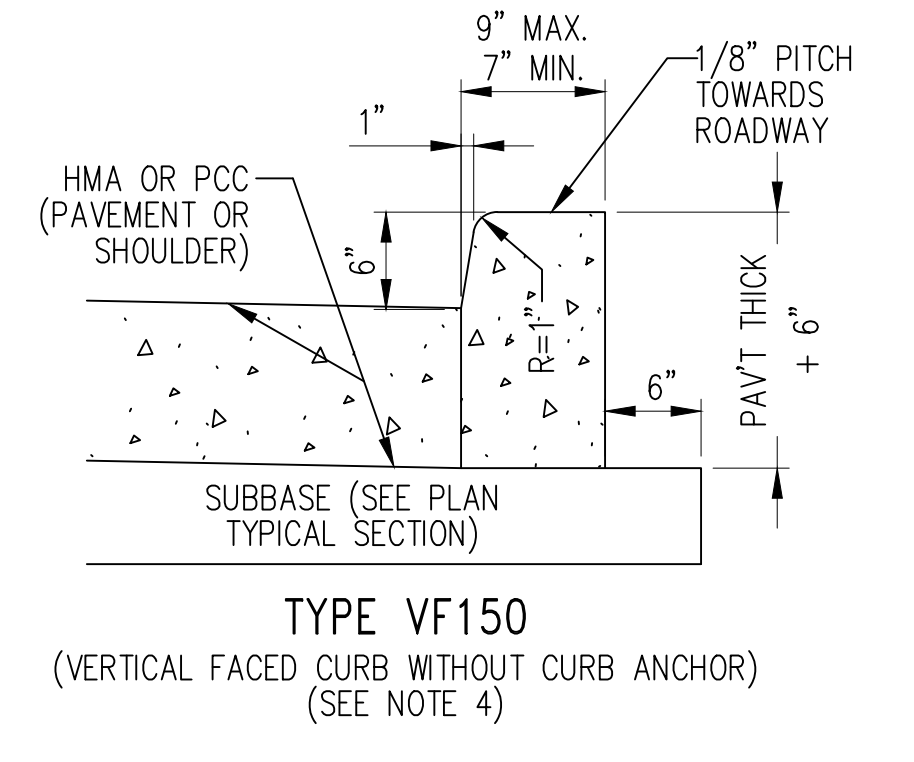
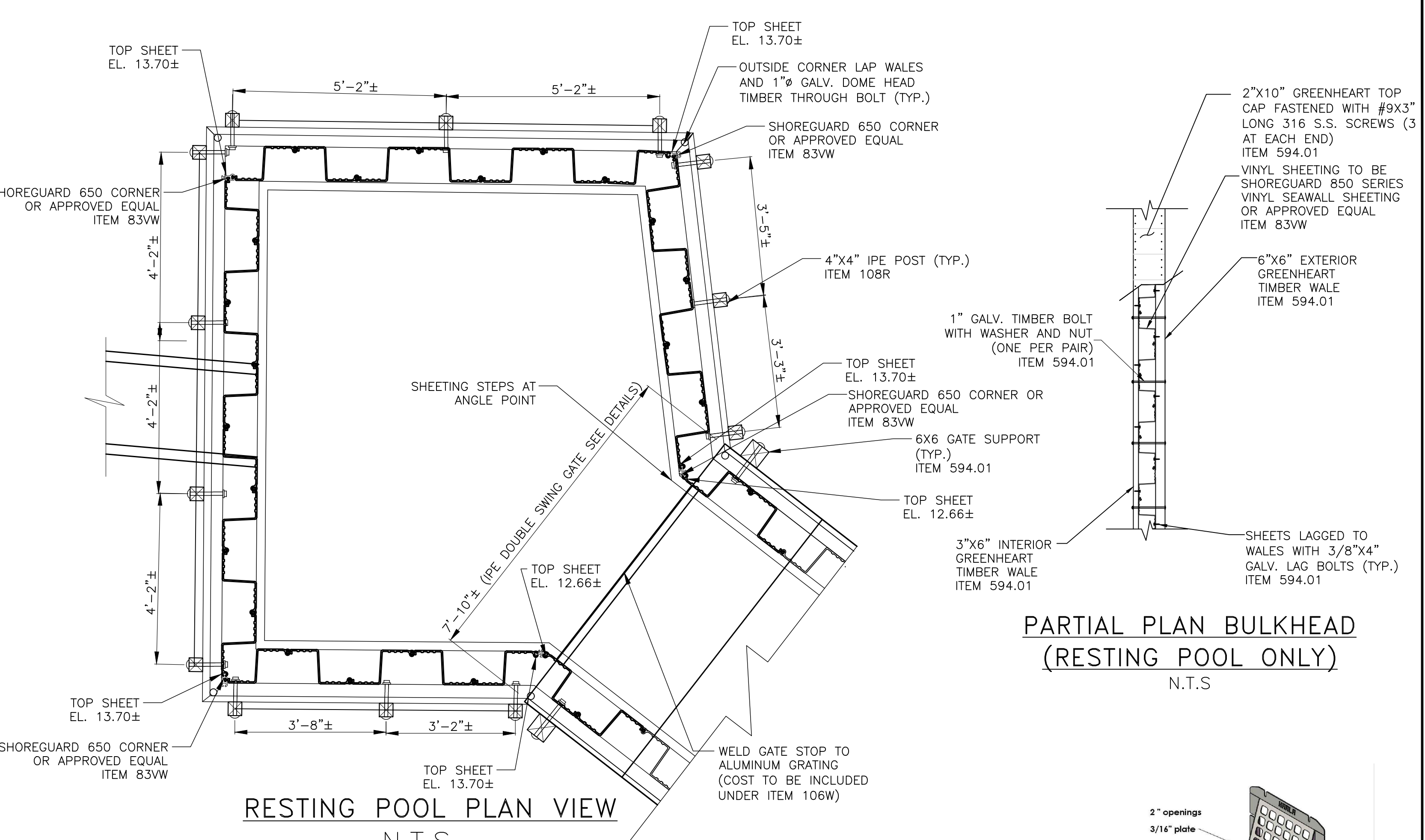
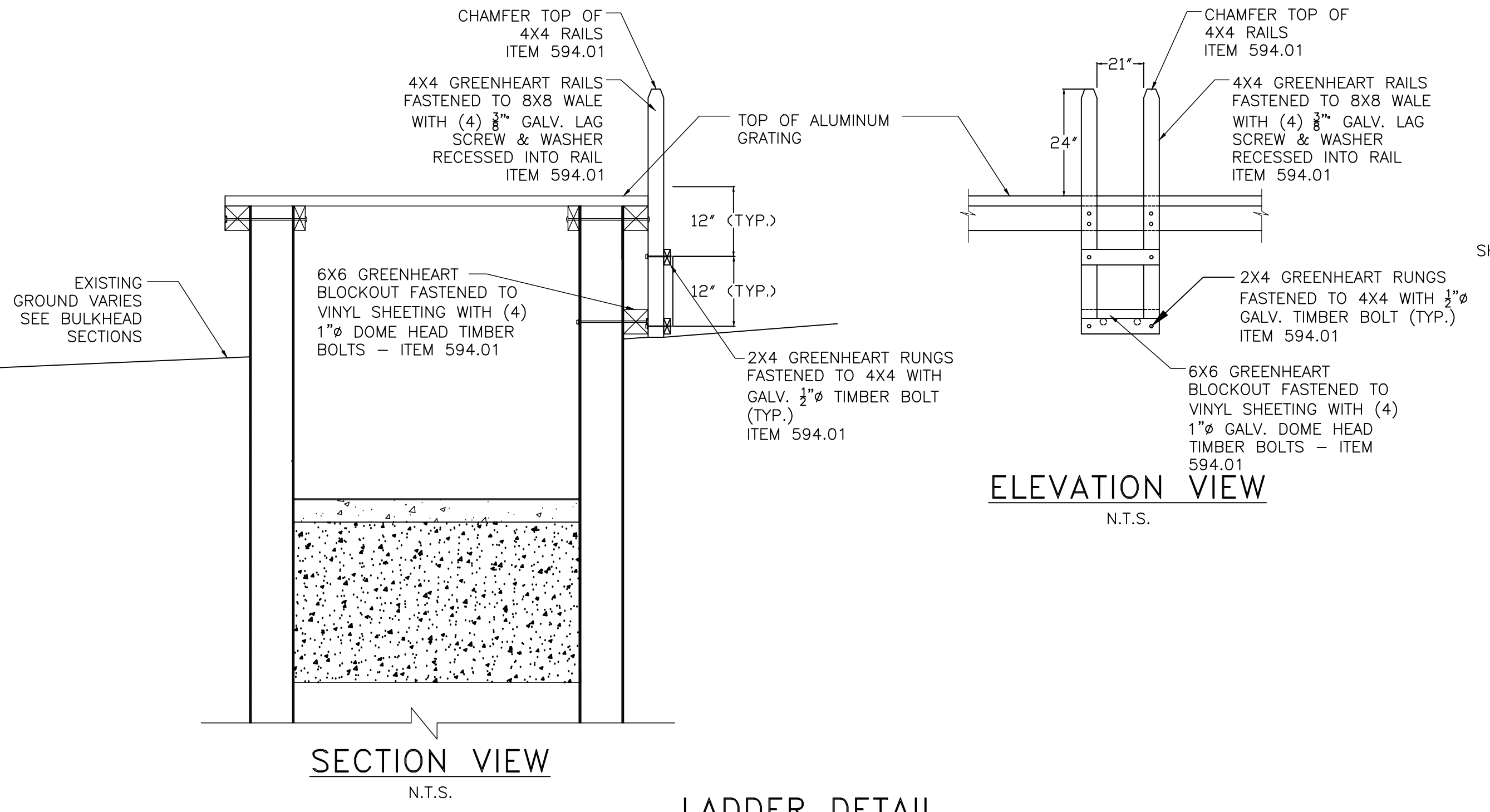
**COUNTY OF SUFFOLK**  
**DEPARTMENT OF PUBLIC WORKS**  
**YAPHANK, NEW YORK**

**DARNELL TYSON, P.E., ACTING COMMISSIONER**

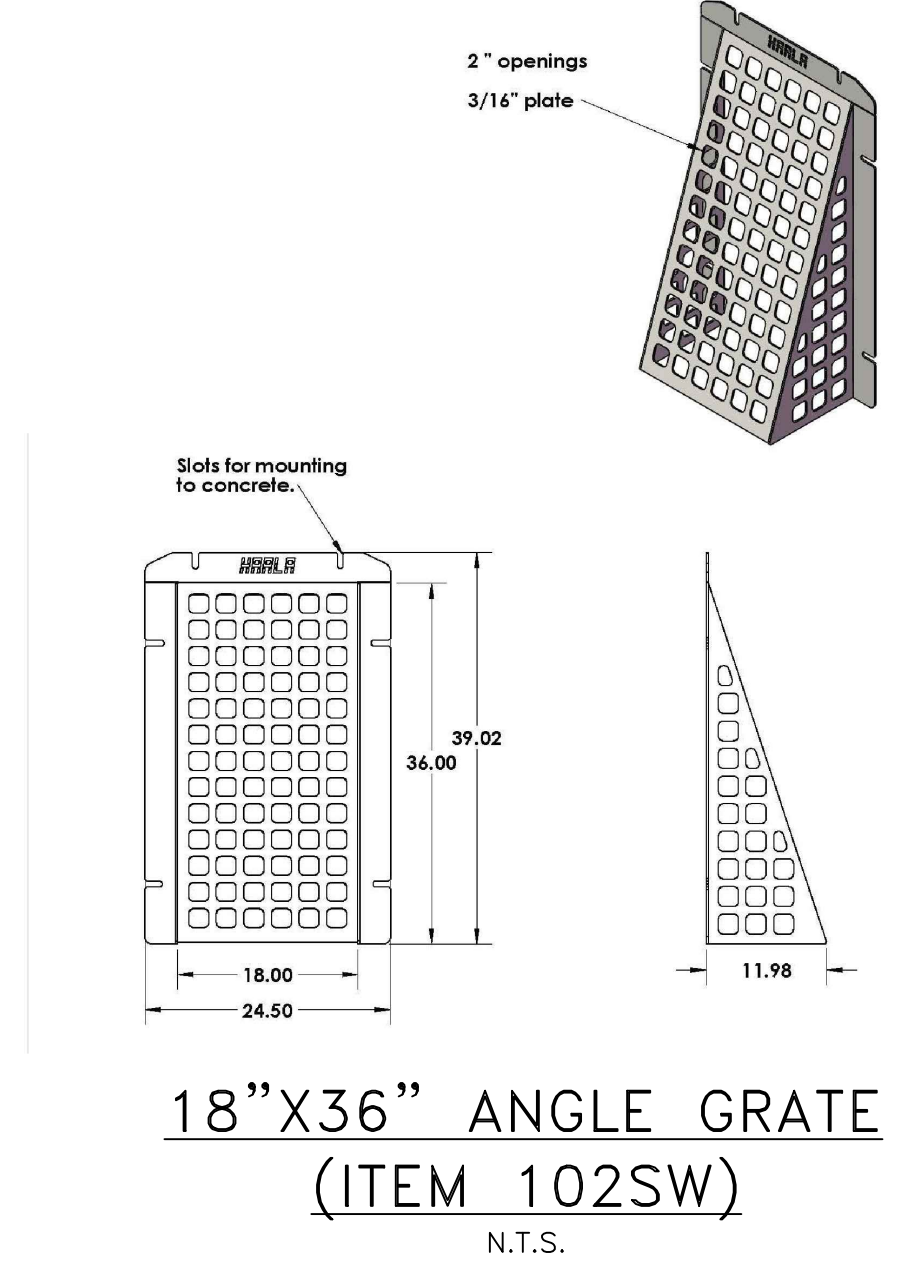
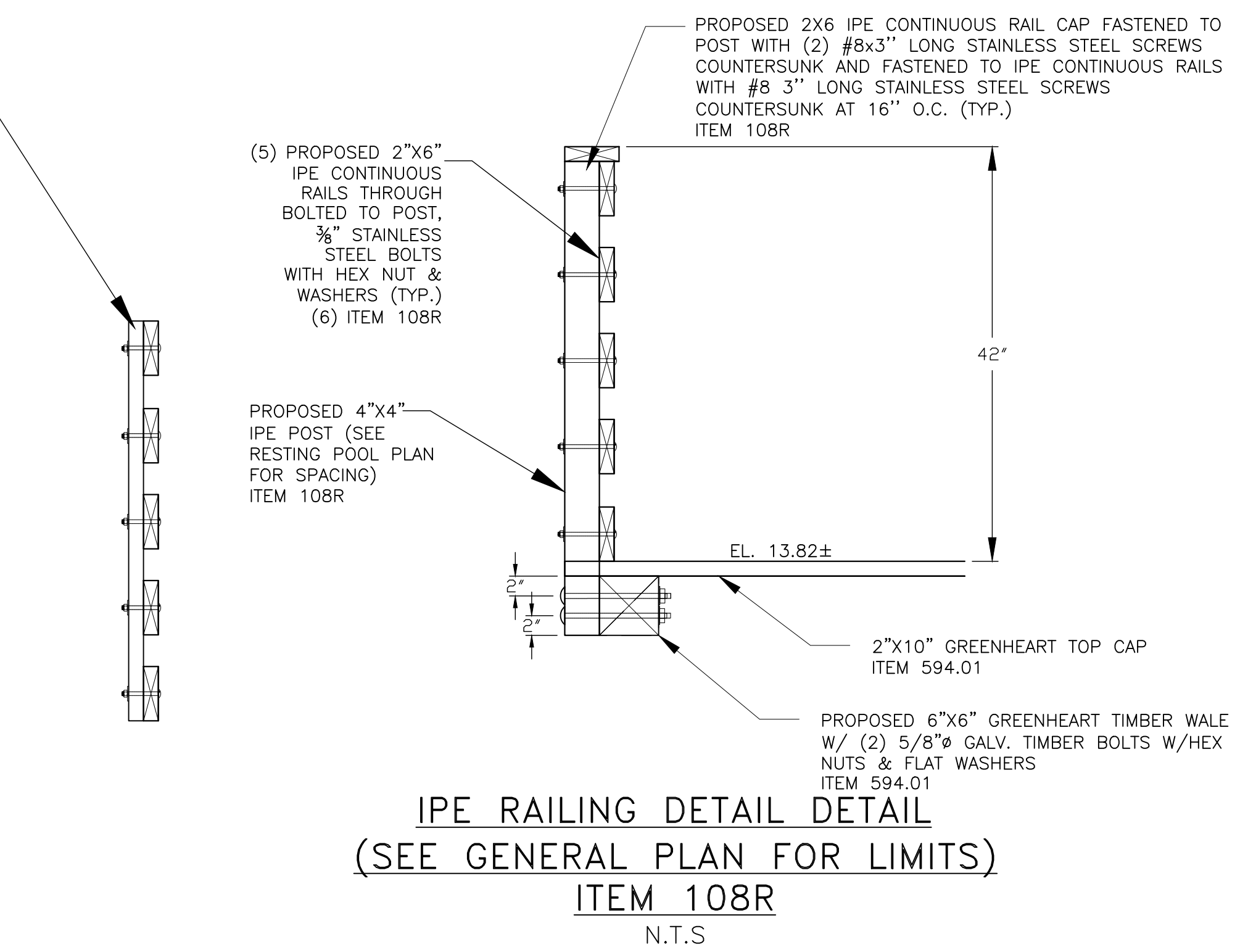
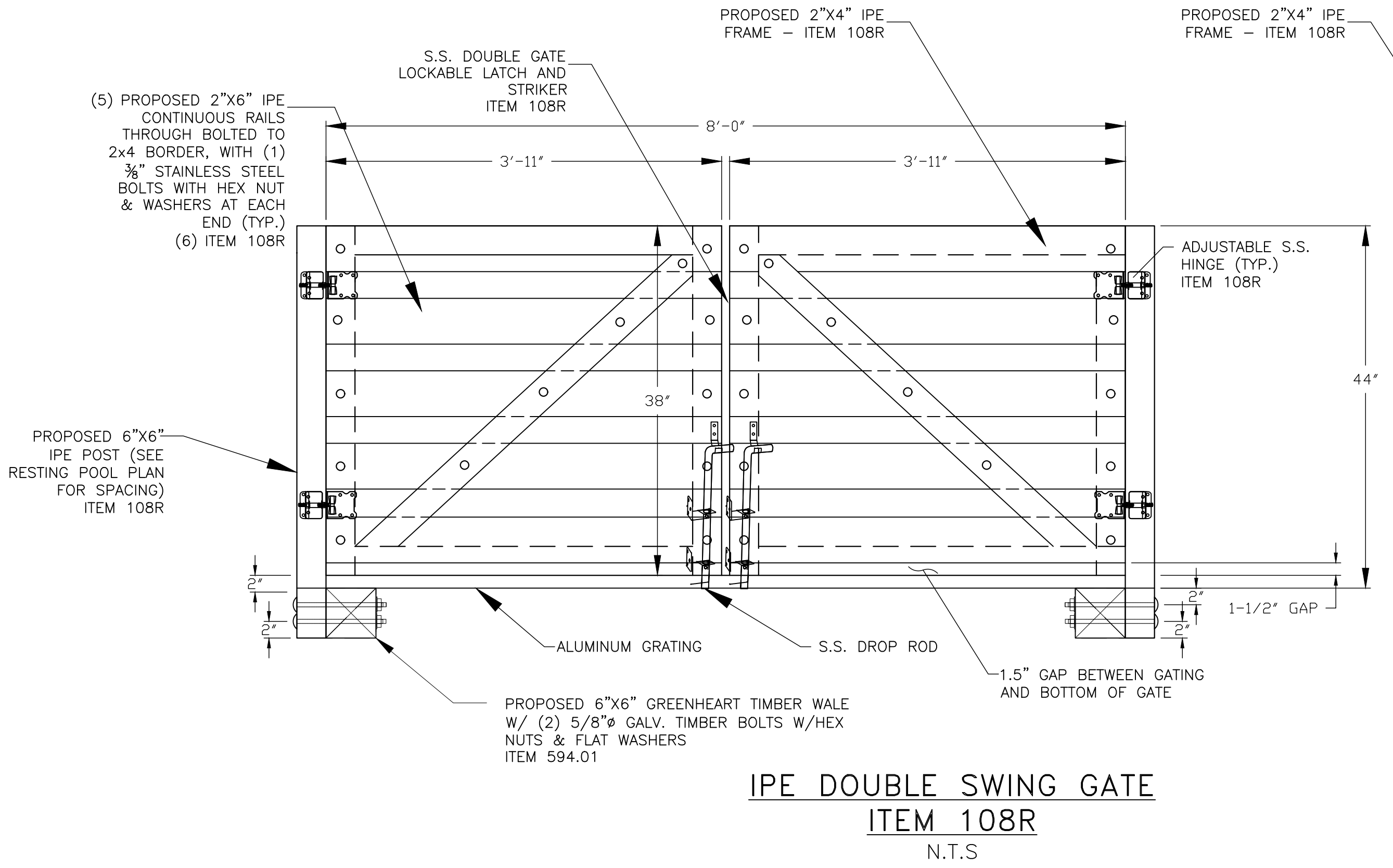
**WOODHULL DAM FISH PASSAGE**

MISCELLANEOUS DETAILS - 2

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- CURB NOTES:**
- USE CURB AND CURB AND GUTTER MEETING THE MATERIAL AND CONSTRUCTION REQUIREMENTS OF SECTION 609 OF THE STANDARD SPECIFICATIONS
  - CURB ANCHOR (NEW CONSTRUCTION). THIS DETAIL SHOWS PLACEMENT OF CURB ANCHORS. PUSH-IN TYPE ANCHORS MAY BE USED (SHOWN ON THE STANDARD SHEET FOR LONGITUDINAL TIES).
  - CURB TYPES M150A, VF150A AND M100A REQUIRE CURB ANCHOR. CURB AND GUTTER TYPES VF150G AND M100G REQUIRE ANCHORS WHEN PLACED ADJACENT TO CONCRETE PAVEMENT OR SHOULDER.
  - WHEN VERTICAL FACED CURB LESS THAN 9" WIDE IS USED WITH CURB BOXES CU1, CU2, AND CU3 AND CONCRETE SIDEWALK IS PLACED ADJACENT TO THIS CURB, SEE STANDARD SHEET MISCELLANEOUS CURB DETAILS FOR CURB BOX JOINTS.
  - USE WITH CURB BOXES, CM1, CM2, AND CM3.



- NOTES:**
- ANGLE GRATE SHALL BE MADE FROM A36 STEEL AND SHALL BE HOT DIP GALVANIZED AS PER ASTM A123.
  - ANGLE GRATE SHALL BE AS MANUFACTURED BY HAALA INDUSTRIES OR APPROVED EQUAL.

**LKMA L. K. McLEAN ASSOCIATES, P.C.**  
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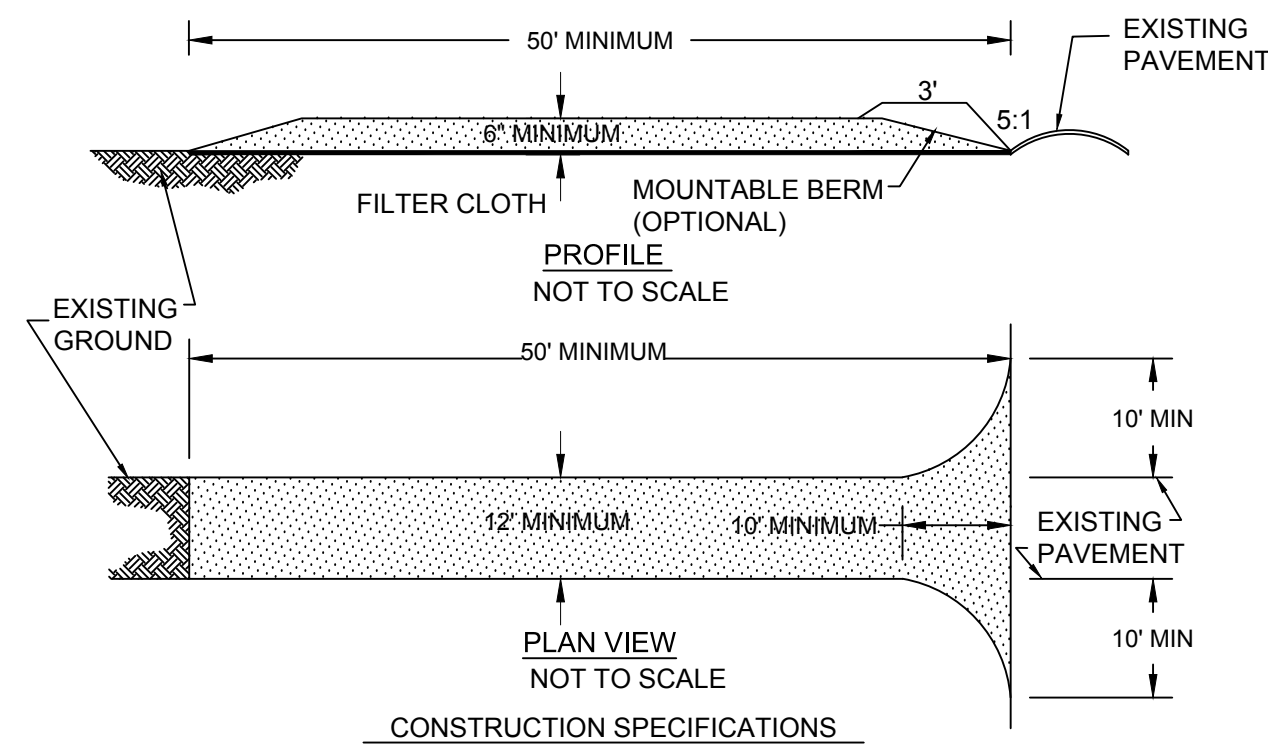
**DARNELL TYSON, P.E., ACTING COMMISSIONER**

**WOODHULL DAM FISH PASSAGE**

MISCELLANEOUS DETAILS - 3

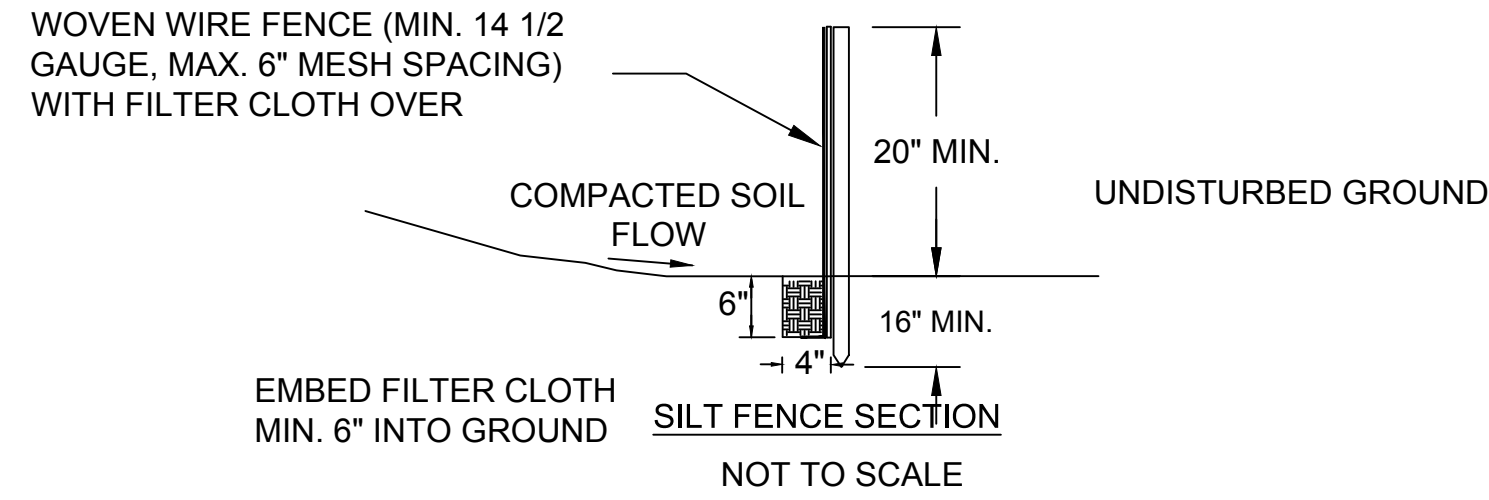
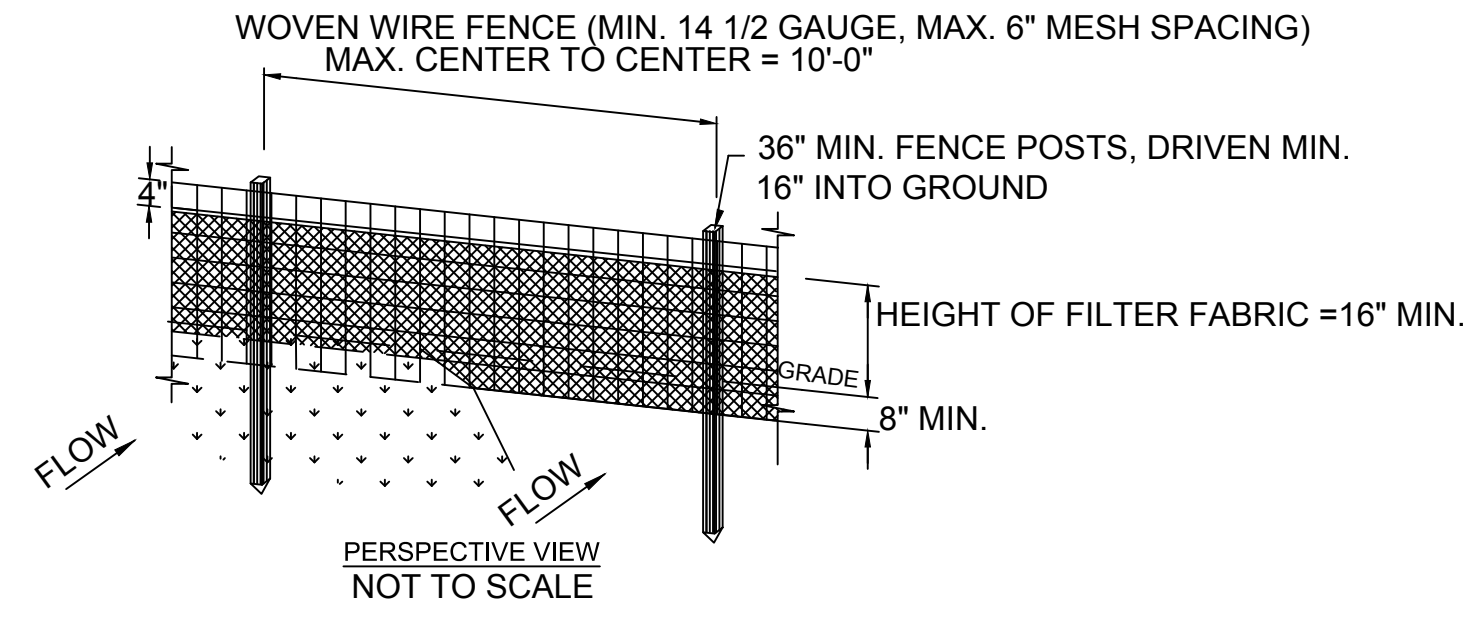
SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO.
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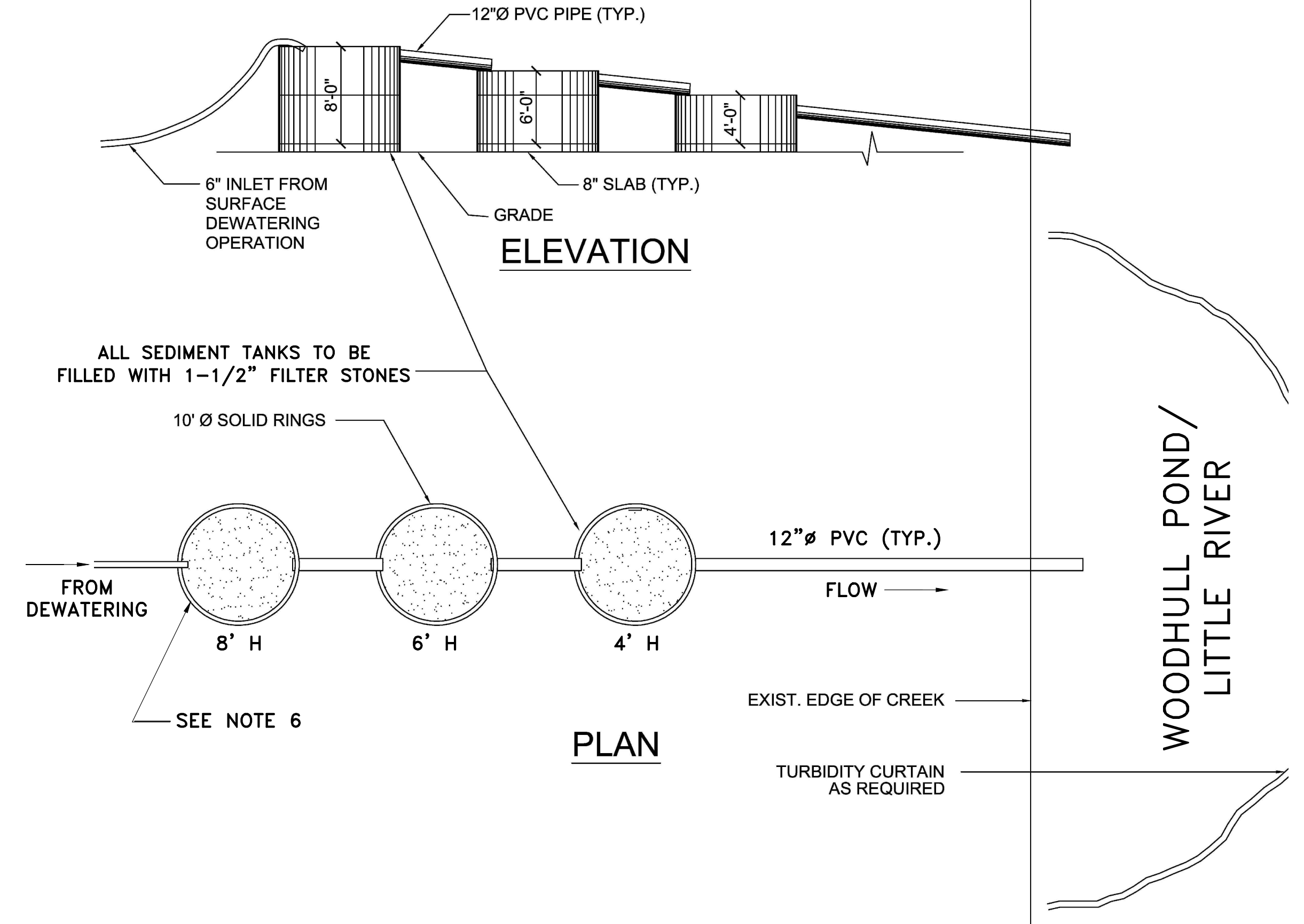
- AGGREGATE SIZE - USE 2 INCH STONE OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH: AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM WOULD APPLY).
- THICKNESS: NOT LESS THAN SIX (6) INCHES.
- WIDTH: 12 FOOT MINIMUM BUT NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF THERE IS ONLY ONE ACCESS TO THE SITE.
- FILTER CLOTH: TO BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY OR STREETS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL AGGREGATE. ALL SEDIMENT SPILLED, DROPPED, OR WASHED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

**STABILIZED CONSTRUCTION ENTRANCE DETAILS**  
**ITEM 209.22**  
 N.T.S.



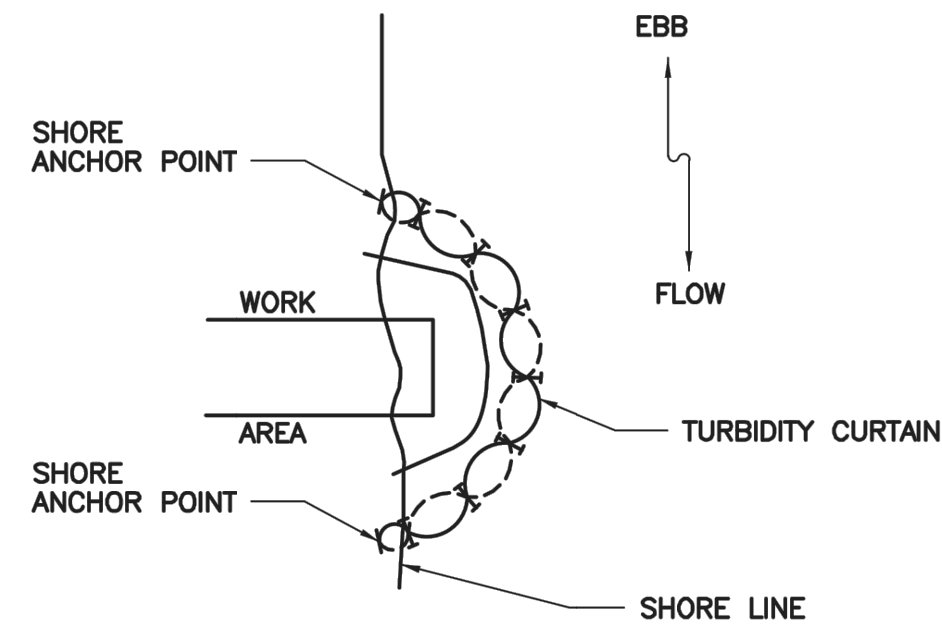
- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.  
 POST: STEEL EITHER 'T' OR 'U' TYPE OR 2" HARDWOOD
  - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.  
 FENCE: WOVEN WIRE, 14-1/2 GAGE, 6" MAX. MESH OPENING  
 FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
  - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.  
 PREFABRICATED UNIT: GEOFAB. ENVIROFENCE OR APPROVED EQUAL.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**SILT FENCE DETAILS**  
**ITEM 209.13**  
 N.T.S.



**SEDIMENT FILTER DETAIL**  
 (COST TO BE INCLUDED UNDER ITEM 553.02001)  
 N.T.S.

- NOTES:**
- TIGHT SHEETING WILL BE REQUIRED TO SEPARATE THE AREAS OF EXCAVATION FROM THE EXISTING STREAM. THE COST OF ALL TEMPORARY SHEETING SHALL BE INCLUDED UNDER ITEM 553.02001.
  - THE ACTUAL CONFIGURATION OF THE TEMPORARY SHEETING ON THE PLAN MAY VARY. THERE WILL BE NO ADDITIONAL PAYMENT MADE FOR CHANGE IN CONFIGURATION, MOBILIZING, OR DEMOBILIZING THE SHEETING.
  - WHEN EXCAVATED SOILS ARE SATURATED WITH WATER, THE CONTRACTOR SHALL STAGE HIS OPERATIONS AND STOCKPILE SOIL FOR DRYING WITH A HAY BALE/SILT FENCE PERIMETER OR AN ALTERNATIVE METHOD APPROVED BY THE ENGINEER. NO TRUCKING OF SATURATED SOILS WILL BE ALLOWED.
  - THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE TEMPORARY SHEETING AND SHALL SUBMIT THE DESIGN TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
  - ALL NYSDEC PERMIT SPECIAL CONDITIONS SHALL BE MET AND INCLUDED IN THE COST OF THE UNIT PRICES IN THIS CONTRACT.
  - LOCATIONS OF POOLS SHALL BE A.O.B.E.



**TURBIDITY CURTAIN**  
 ITEM 209.1501  
 N.T.S.

**TURBIDITY CURTAIN NOTES:**

- VERTICAL SUPPORTS SHALL BE PLACED A MAXIMUM OF 100 FEET ON CENTER TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE CURTAIN, OR AS ORDERED BY THE ENGINEER.
- TURBIDITY CURTAINS SHALL BE IN PLACE ONLY DURING ACTIVE CONSTRUCTION WORK IN THE WATER AS SHOWN ON PLANS, AND SHALL BE REMOVED IMMEDIATELY AFTER REQUIRED WORK.
- THE TURBIDITY CURTAIN SHALL OVERLAP THE SILT FENCE A MINIMUM OF 5 FEET AS ORDERED BY THE ENGINEER AND THE COST OF SUCH WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 209.1501, TURBIDITY CURTAIN.
- THE CONTRACTOR SHALL SUBMIT A PROPOSED PLAN AND/OR SCHEDULE OF OPERATION OUTLINING HOW THE WORK WILL BE ACCOMPLISHED TO THE ENGINEER PRIOR TO INSTALLATION.
- FOR FLOW VELOCITIES > 5ft/s, INSTALL A REDIRECTION BARRIER PRIOR TO CURTAIN INSTALLATION SUCH THAT FLOW EXPANDING AT 20" FROM THE BARRIER WILL REACH THE CURTAIN AT A POINT WHERE THE CURTAIN IS ESSENTIALLY PARALLEL TO STREAM FLOW.
- THE REDIRECTION BARRIER MAY CONSIST OF CONCRETE BARRIER, PLANKING OR OTHER MATERIAL SUCH THAT IT CAN BE QUICKLY REMOVED OR WASHED OUT IN THE EVENT OF HIGH FLOWS. IT SHOULD NOT BE SUCH THAT IT WILL REMAIN IN PLACE AND OVERTOPPED.
- CONCENTRATED FLOW OUTLETS SUCH AS CULVERT OUTLETS, DITCHES, ETC. SHALL NOT BE LOCATED BEHIND TURBIDITY CURTAIN.
- THE TURBIDITY CURTAIN SHALL BE PLACED AS CLOSE TO THE WORK AS POSSIBLE WITHOUT INTERFERING WITH CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL CONTINUALLY MONITOR THE INSTALLATION, TAKING INTO ACCOUNT WEATHER PATTERNS AND PREVAILING WIND DIRECTIONS THAT MAY AFFECT WATER LEVELS, VELOCITY AND MOVEMENT OF THE TURBIDITY CURTAIN.
- THE TURBIDITY CURTAIN SHALL BE REMOVED BY PULLING TOWARD THE SHORE TO MINIMIZE ESCAPE OF SEDIMENTS INTO THE WATERWAY.
- THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE THAT ALLOWS THE CURTAIN TO CONFORM TO THE CONTOUR OF THE BOTTOM ON THE WATERWAY.

**LKMA L. K. McLEAN ASSOCIATES, P.C.**  
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**YAPHANK, NEW YORK**

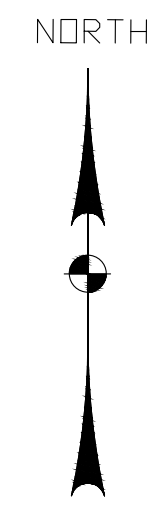
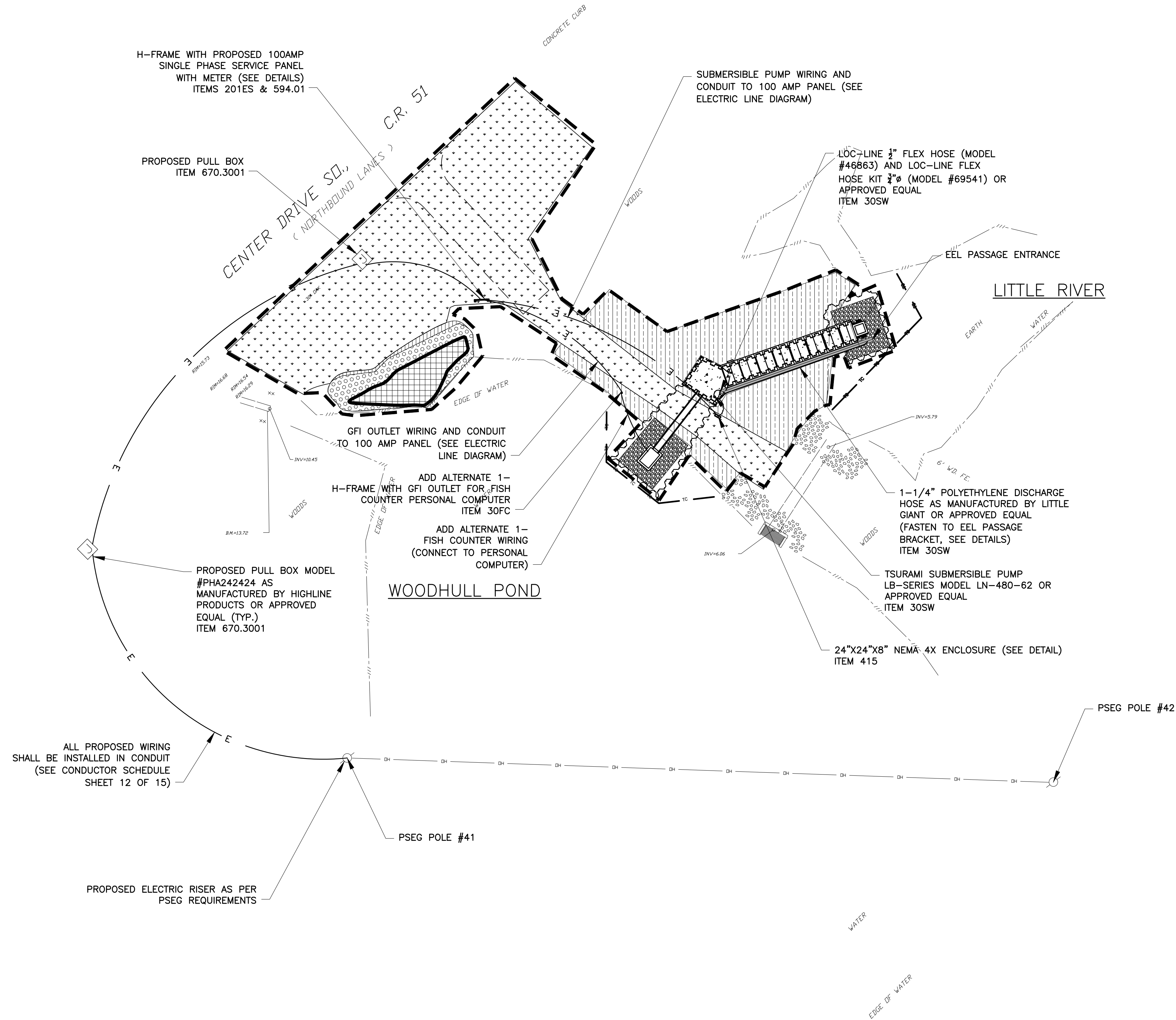
**DARNELL TYSON, P.E., ACTING COMMISSIONER**

**WOODHULL DAM FISH PASSAGE**

**SEDIMENT AND EROSION CONTROL**  
**DETAILS**

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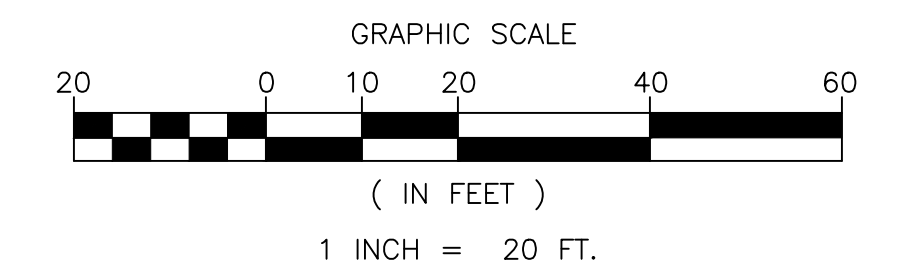


**NOTES:**

1. SEE SHEET 10 FOR UTILITY DETAILS.
2. IF THE FISH CAMERA ADD ALTERNATE IS CHOSEN THEN THE FISH CAMERA CONDUIT AND THE SUBMERSIBLE PUMP CONDUIT SHALL BE INSTALLED IN THE SAME TRENCH.
3. PULL BOX AND COVER SHALL BE RATED FOR H-20 LOADING. THE COVER SHALL BE LABELED WITH THE TEXT "ELECTRIC" ON THE LOGO AREA.
4. CLEARING AND GRUBBING REQUIRED ACCESS TO PSEG POLE #41 TO BE INCLUDED UNDER ITEM 201.06.

**LEGEND**

- PROPOSED SECONDARY POWER SUPPLY
- PROPOSED PULL BOX - ITEM 670.3001



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**WOODHULL DAM FISH PASSAGE**

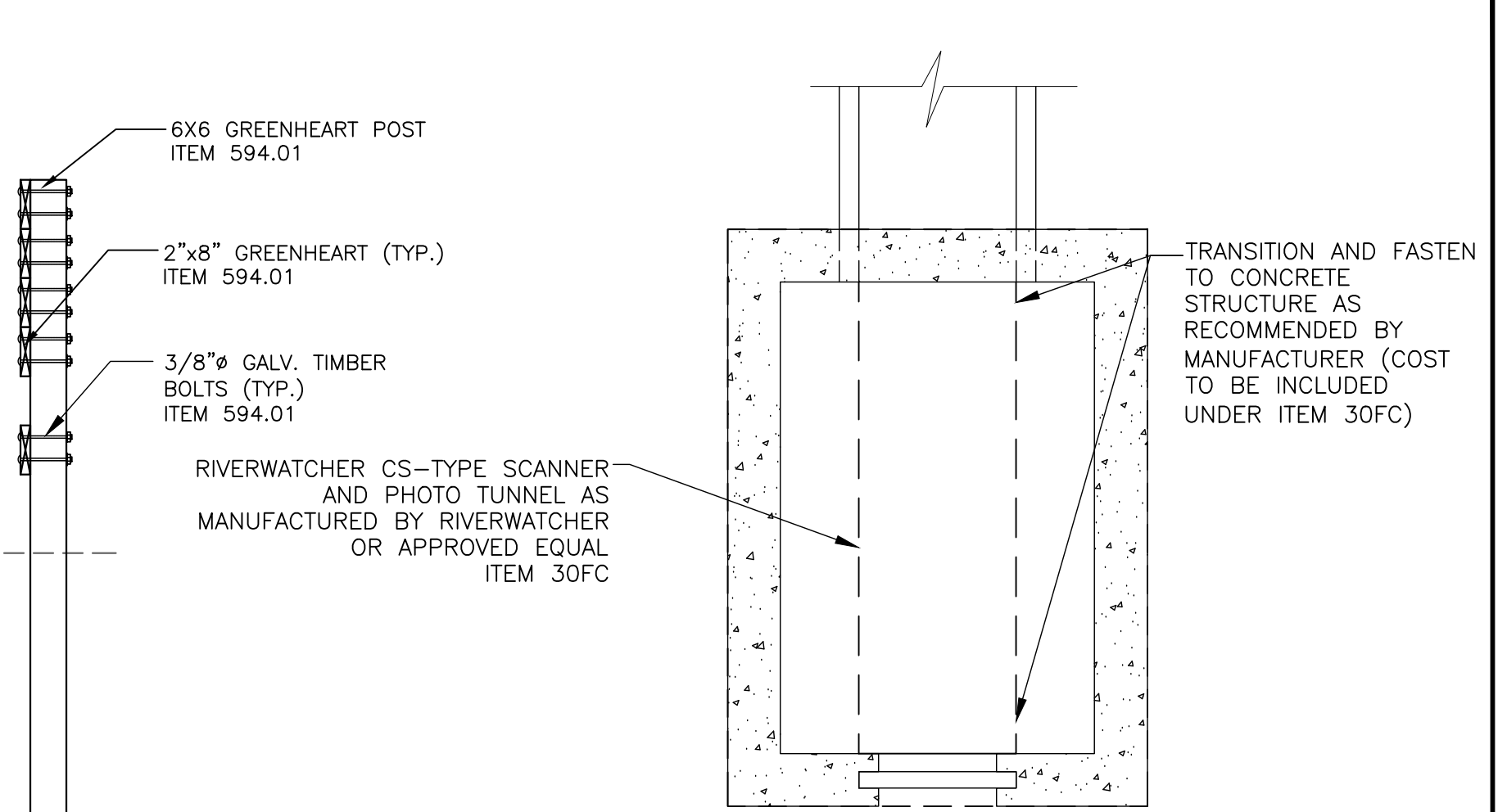
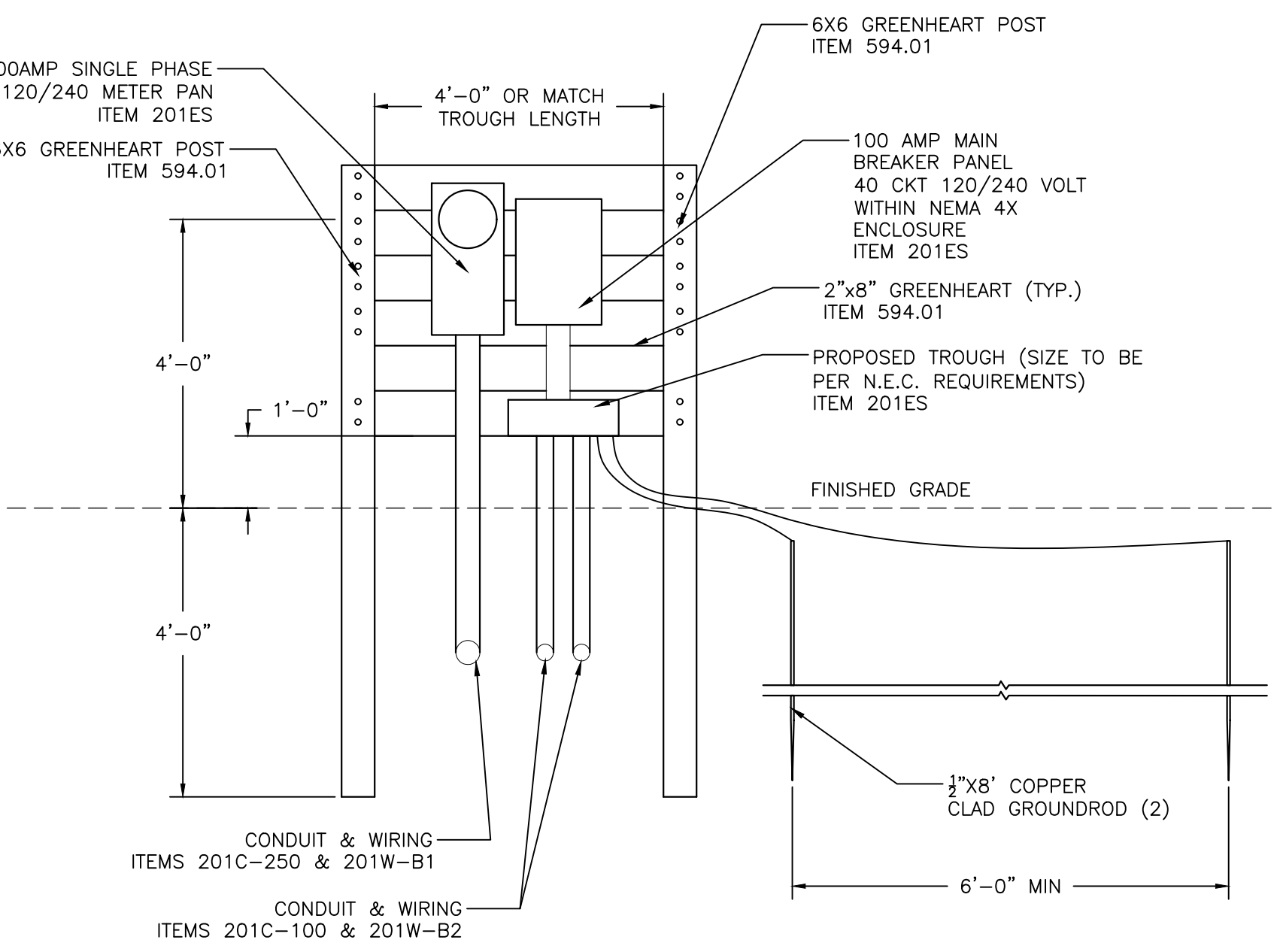
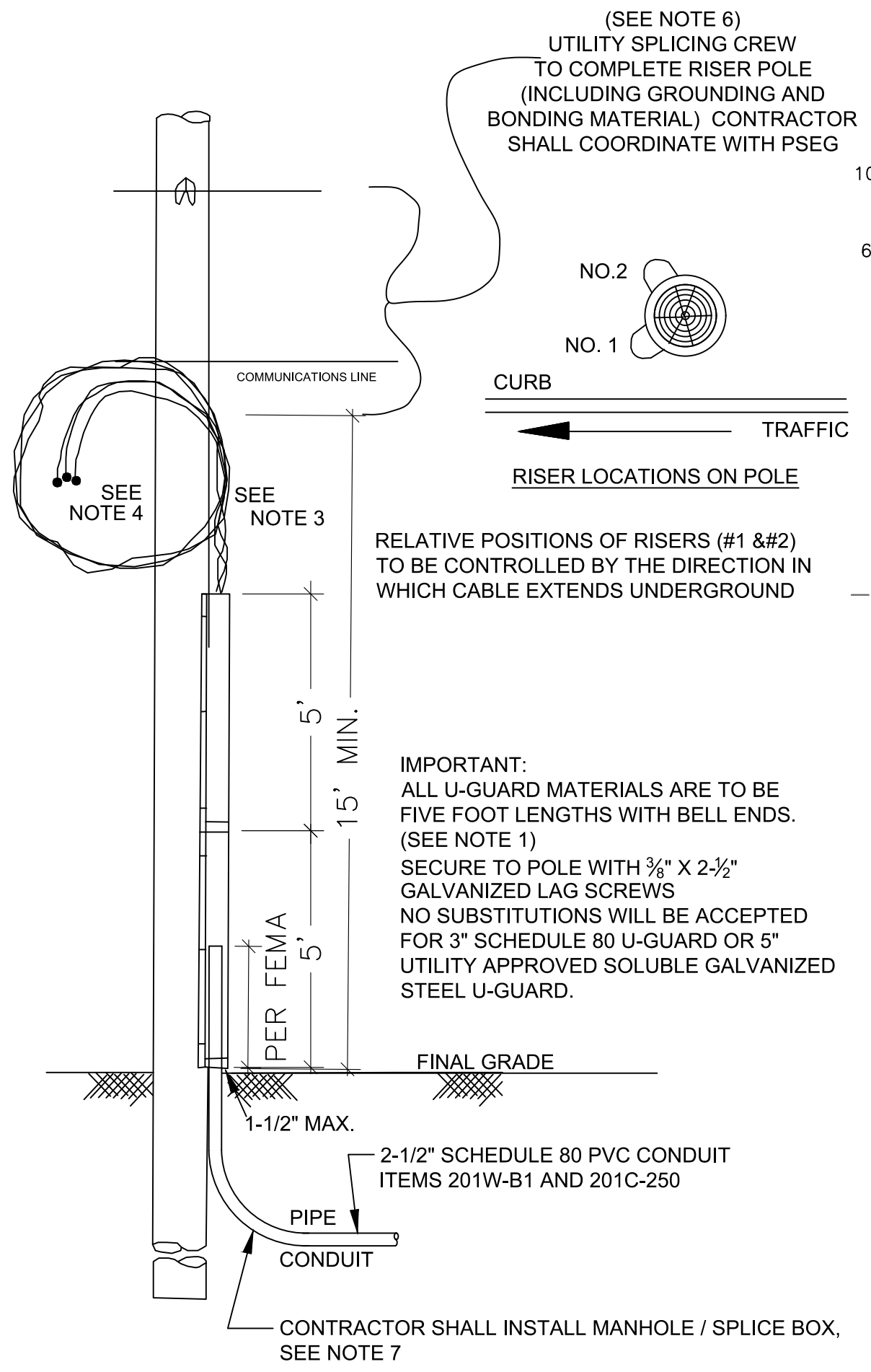
**UTILITY PLAN**

SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO. 10 OF 15
	<b>REVISIONS</b>		MAY 2019	CP #7180	AS NOTED	

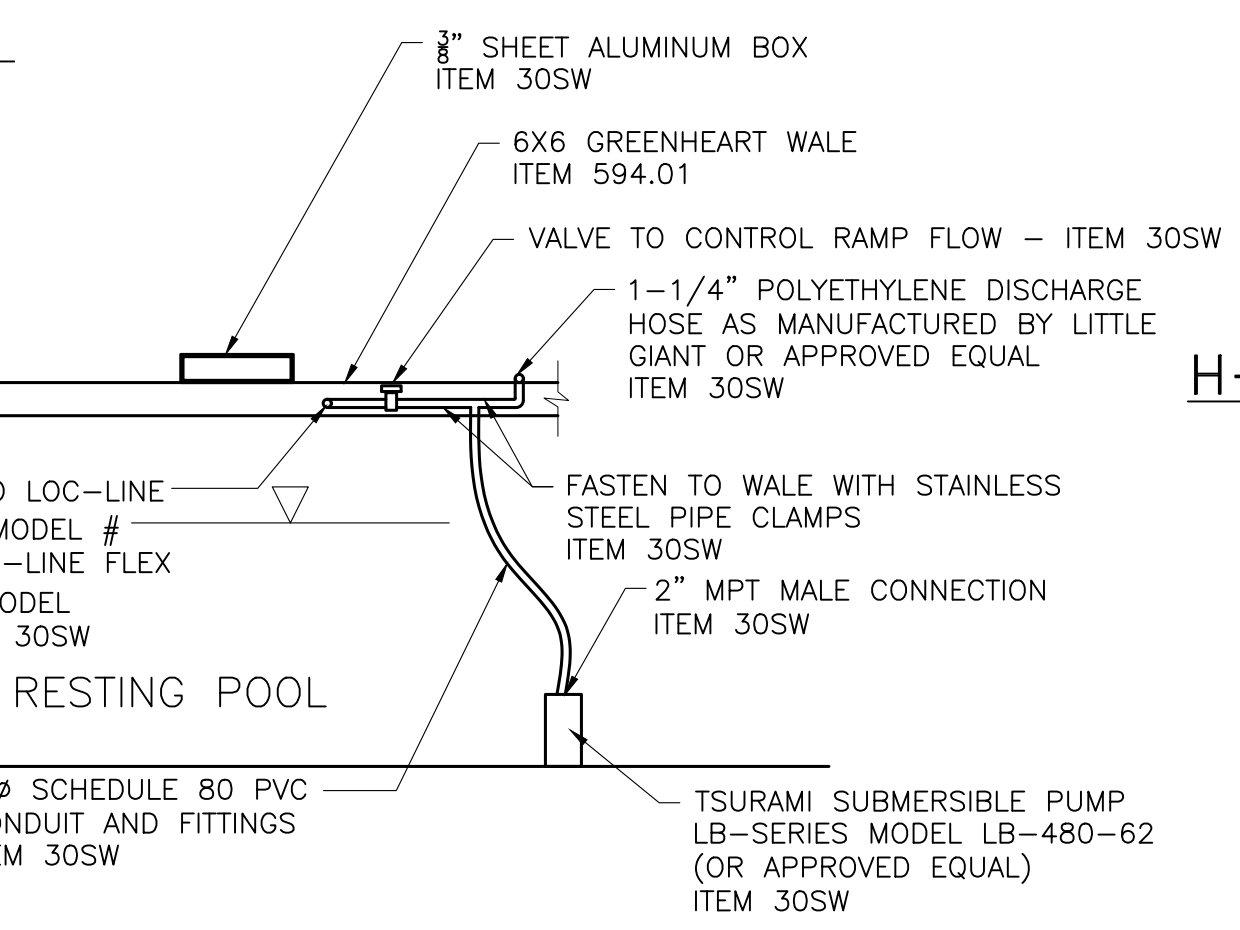
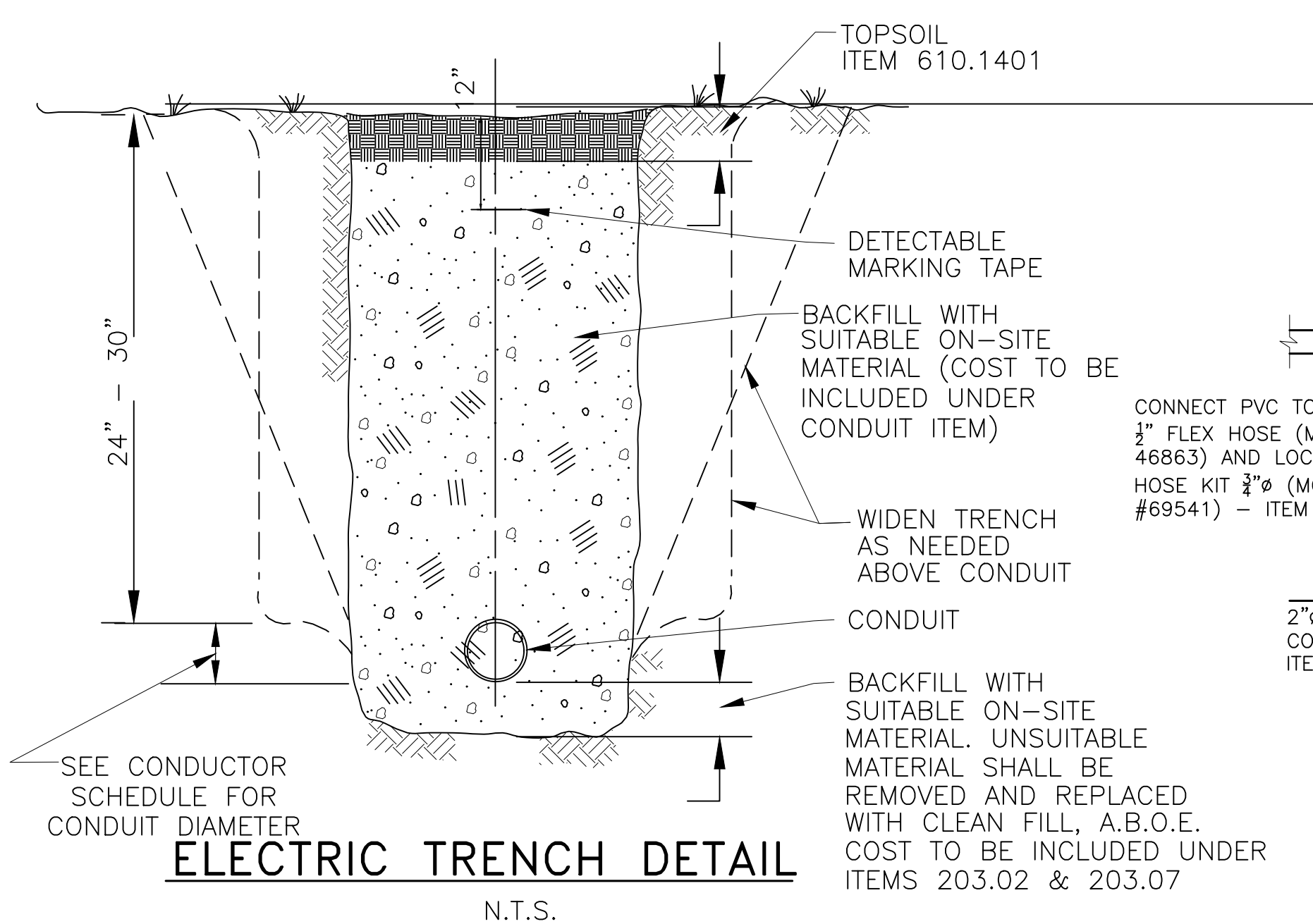
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**NOTES:**

- CONTRACTORS SHALL MOUNT ONLY THE UTILITY SPECIFIED RISER MATERIAL ON THE POLE, TO A HEIGHT OF 9 TO 10 FEET ABOVE GRADE. ONLY ONE RISER IS PERMITTED FOR EACH SERVICE.  
 U-GUARD - 3" PE OR 3" PVC SCHD. 80 OR 3" DBL. GALV. STEEL - 10' LONG W/ BELL ENDS  
 SECONDARY CABLE MAX.      PRIMARY CABLE MAX  
 6 - 1/C 350 KCM              3 - 2/C #1/0 AWG  
  
 5" DOUBLE GALVANIZED STEEL U-GUARD - 5' LONG W/ BELL ENDS OR 5" PE OR 5" PVC SCHD.80  
 SECONDARY CABLE MIN.      SECONDARY CABLE MAX.      PRIMARY CABLE MAX.  
 8 - 1/C 4/0                      8 - 1/C 500 KCM                      3-2/C 750 KCM
  - A) THE LOCATION OF THE U-GUARD ON THE POLE SHALL BE IDENTIFIED FOR THE CONTRACTOR OR THE PSEG LONG ISLAND REPRESENTATIVE ASSIGNED TO THE JOB PRIOR TO INSTALLATION OF THE CABLE / RISER.  
 B) THE LENGTH OF THE CABLE REQUIRED FOR PSEG LONG ISLAND TO MAKE FINAL CONNECTIONS AT THE POLE SHALL BE IDENTIFIED FOR THE CONTRACTOR BY THE PSEG LONG ISLAND REPRESENTATIVE.
  - A) THE CABLE SUPPLIED BY THE CONTRACTOR FOR USE ON THE POLE SHALL BE INSTALLED AND PROPERLY SECURED TO THE POLE BY THE ELECTRICAL CONTRACTOR TO PREVENT DAMAGE AND/OR ANY ACTS OF VANDALISM FROM DAMAGING THE CABLE PRIOR TO HOOK-UP.  
 B) CABLE IS TO BE ATTACHED TO THE POLE WELL ABOVE THE TOP OF THE RISER WITH A KELLUMS GRIP BASKET OR LENGTH OF LINE TIED IN A "ROWING BEND KNOT" TO PROTECT THE CABLE FROM MECHANICAL BENDING DAMAGE.
  - ALL CABLE SHALL BE PROPERLY END CAPPED AT BOTH ENDS BY THE CONTRACTOR WITH APPROVED TIGHT FITTING WATERTIGHT SEALING CAPS OR IN STRICT COMPLIANCE WITH NEC 300-5 (e). \*\*
  - POLYETHYLENE AND PVC U-GUARD SHALL BE FASTENED WITH 1/4" X 2 1/2" LAG SCREWS WITH CUSHION. STEEL U-GUARD SHALL BE FASTENED WITH 3/8" X 2 1/2" LAG SCREWS.
  - PSEG LONG ISLAND SHALL COMPLETE THE CONSTRUCTION OF THE RISER PER THE APPROPRIATE SCALE CONSTRUCTION STANDARDS.
  - IF CONDUIT IS USED, MANHOLES ARE REQUIRED, CONTACT PSEG LONG ISLAND FOR DETAILS (COST TO BE INCLUDED UNDER ELECTRICAL ITEMS).
- \*\* THE CONCERN FOR RELIABLE ELECTRIC SERVICE REQUIRES THAT PSEG LONG ISLAND RESERVE THE RIGHT TO REFUSE TO ACCEPT OR ENERGIZE ANY CABLES THAT HAVE BEEN LEFT WITH 'ENDS' UNCAPPED. MOISTURE INTRUSION HAS BEEN DETERMINED TO BE A SUBSTANTIAL CAUSE OF PREMATURE CABLE FAILURES; UNCAPPED CABLE ENDS ARE THE LEADING CAUSE OF THIS PROBLEM.

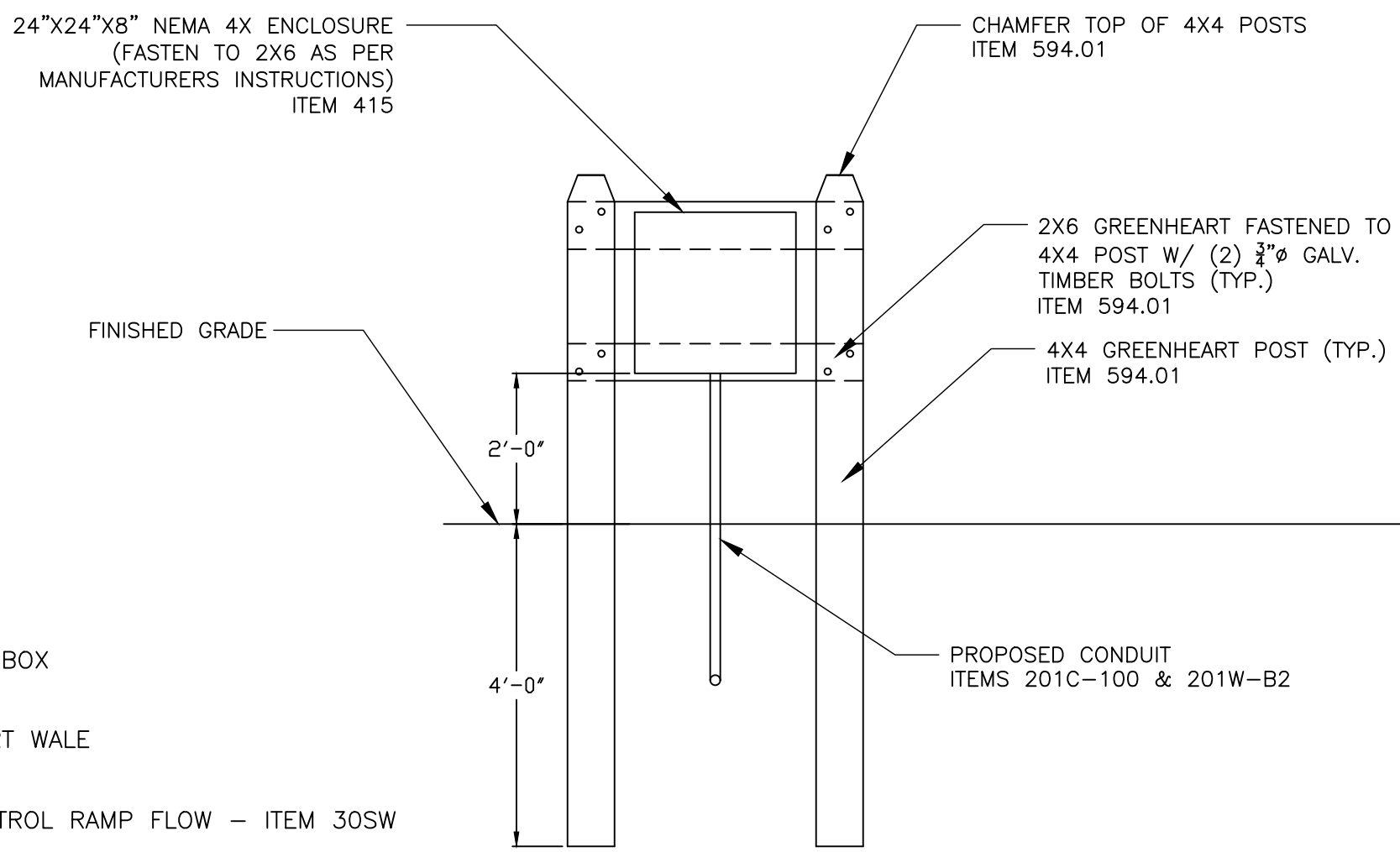


**PSEG LI APPROVED CABLE RISER**  
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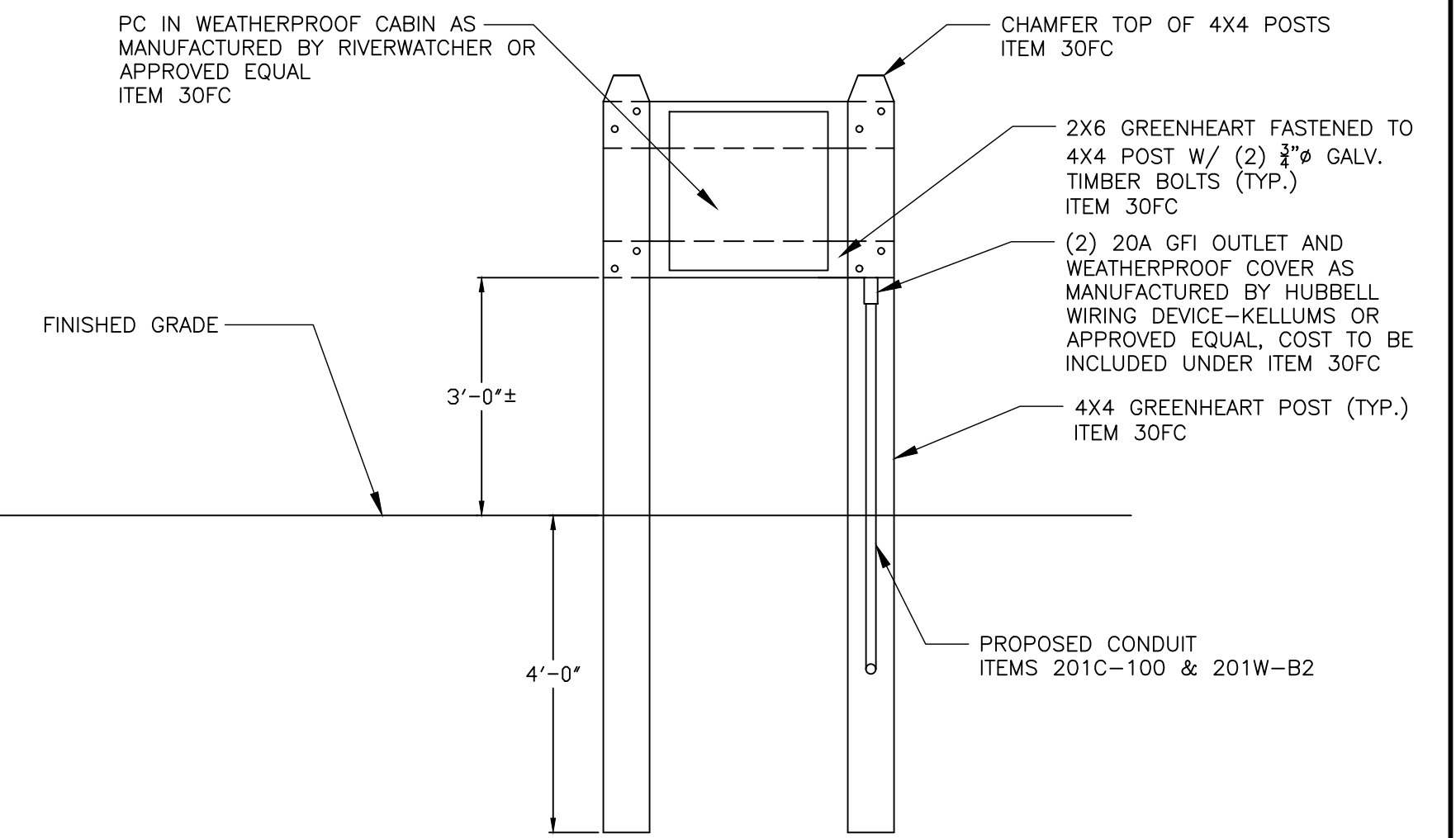


**EEL PASSAGE HOSE SUPPLY DETAIL**  
N.T.S.

**H-FRAME AND SERVICE PANEL MOUNTING DETAIL**  
N.T.S.



**H-FRAME AND 24\"/>N.T.S.**



**H-FRAME FOR PC AND WEATHERPROOF CABIN (ITEM 30FC)**  
N.T.S.

**LKMA L. K. McLEAN ASSOCIATES, P.C.**  
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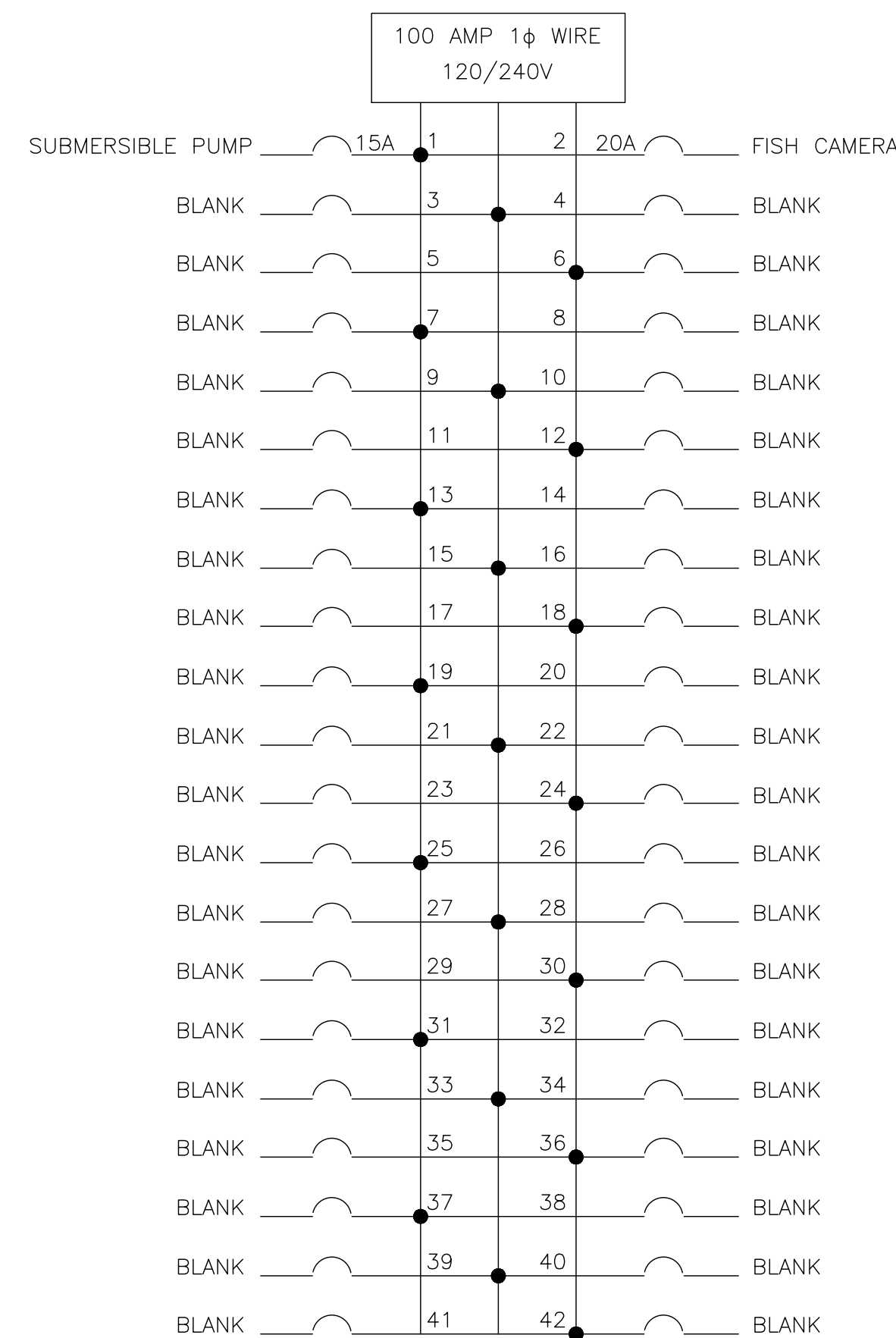
**WOODHULL DAM FISH PASSAGE**

UTILITY DETAILS

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**PROPOSED BREAKER  
PANEL LAYOUT**



NOTE: CIRCUIT BREAKERS ABOVE TO BE INCLUDED IN COST OF ITEM 201ES

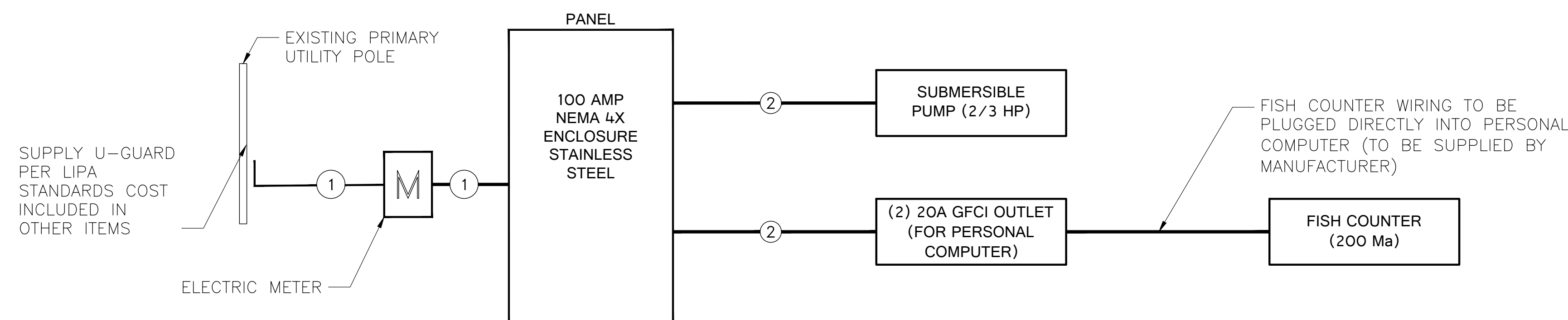
NOTES:  
 1. PROPOSED SERVICE PANEL AND METER SHALL BE MOUNTED ON GREENHEART H-FRAME AS PER NEC REQUIREMENTS AT LOCATION SHOWN ON THE PLAN (SEE DETAILS).

**CONDUCTOR SCHEDULE**

①	3-4/0 AWG (TYPE THWN-2) (ITEM 201W-B1) 2-1/2"Ø SCH 80 PVC CONDUIT (ITEM 201C-250)
②	2-#10 AWG WITH #10 GROUND (TYPE THWN-2) (ITEM 201W-B2) 1"Ø SCH 80 PVC CONDUIT (ITEM 201C-100)

**LEGEND**

① CONDUCTOR SCHEDULE



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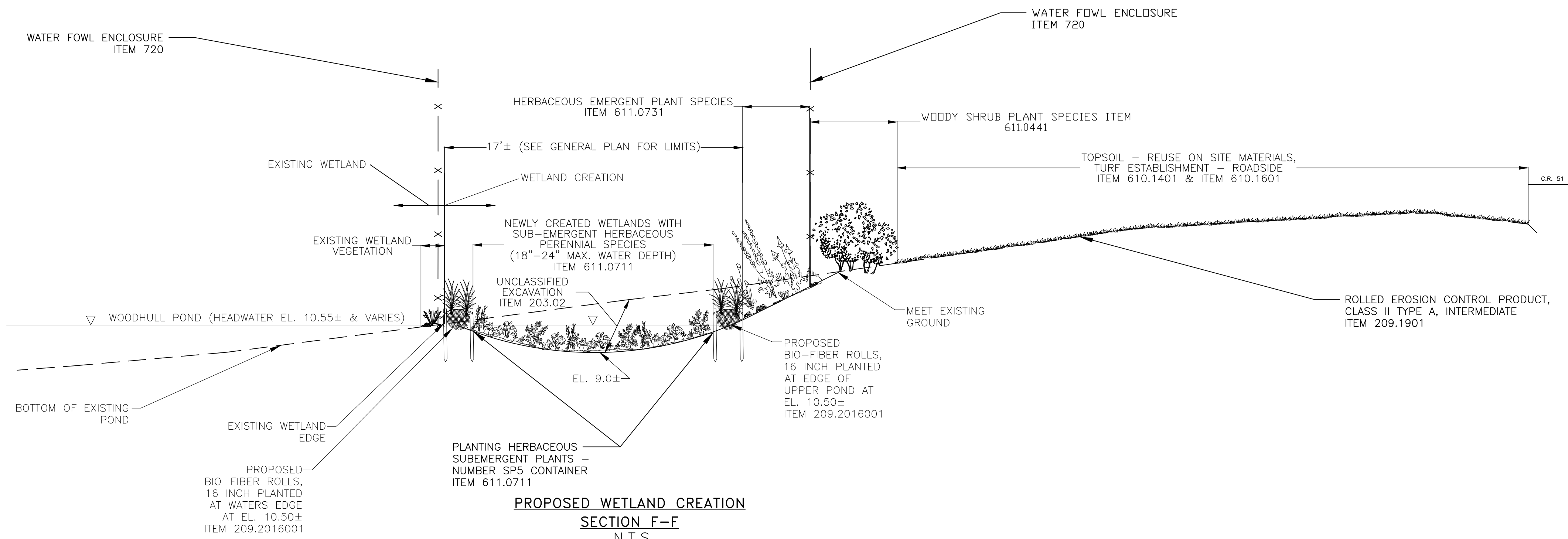
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 YAPHANK, NEW YORK**

**DARNELL TYSON, P.E., ACTING COMMISSIONER**

**WOODHULL DAM FISH PASSAGE**

**ELECTRIC LINE DIAGRAM**

SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO. 12 OF 15
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**PROPOSED WETLAND CREATION**  
SECTION F-F  
N.T.S.

**610 - 2.03 TURF ESTABLISHMENT:**

**610 - 2.03 HYDRO -SEEDING:**

**1. DESCRIPTION:**

THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS NECESSARY FOR SEED PLACEMENT/BROADCASTING, HYDRO -SEEDING, LIMING, FERTILIZING, MULCHING AND MAINTENANCE AS PER TRADE STANDARDS TO INSURE A SATISFACTORY STAND OF TURF/WILDFLOWERS.

**2. MATERIALS:**

**A. SEED - SEED SHALL BE VARIETIES AS SPECIFIED AS FOLLOWS:**

- 50% INFERNO TALL FESCUE
- 30% BEACON HARD FESCUE
- 10% FULTS ALKALIGRASS
- 10% VIRGINIA WILD RYE

**B. SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO THE START OF WORK. THE SEED RATE SHALL BE 300 POUNDS OF BULK SEED PER ACRE, AND SHALL BE DELIVERED IN UNOPENED BAGS WITH THE LABEL SPECIFICATION SEWED ACROSS THE TOP OF THE BAG. ALL OPEN BAGS SHALL BE REJECTED FOR USE ON THE SITE. SEED SHALL BE INCORPORATED INTO A BONDED FIBER MATRIX FOR APPLICATION IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S SPECIFICATIONS**

**C. TOPSOIL - SHALL BE A 4" DEPTH FROM AN APPROVED SOURCE, WITH TESTING DOCUMENTATION REQUIRED. THE ENGINEER SHALL APPROVE SAMPLES THREE WEEKS PRIOR TO BRINGING THE MATERIAL UNTO THE SITE.**

**D. LIME - THE CONTRACTOR SHALL APPLY LIME AT AN ADEQUATE RATE, BASED ON THE PH TEST RESULTS, TO ACHIEVE A PH OF BETWEEN 5.5 TO 6.4. LIME SHALL BE INCORPORATED INTO THE BONDED FIBER MATRIX FOR APPLICATION IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S SPECIFICATIONS.**

**E. MULCH - HYDRO -MULCH SHALL BE "FLEX TERRA" BONDED FIBER MATRIX (BFM) OR AN APPROVE EQUAL, APPLIED AT A RATE OF 3,000 POUNDS PER ACRE. TACKIFIER IS NOT REQUIRED WHEN USING FLEX TERRA.**

**F. FERTILIZER - ORGANIC STARTER FERTILIZER 18 -24 -12 AT 200 LBS. PER ACRE.**

**3. CONSTRUCTION DETAILS:**

**A. THE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE IS PREPARED TO THE SATISFACTION OF THE COUNTY'S ENGINEER AND IS READY TO RECEIVE THE FINAL SUB-GRADE ELEVATIONS.**

**B. CONTRACTOR SHALL GRADE TOPSOIL TO THE LINES AND GRADES AS SHOWN ON THE PLANS TO PROVIDE POSITIVE DRAINAGE. ALL AREAS IN THE WETLAND BUFFER/MITIGATION AREAS SHALL NOT BE ROLLED OR COMPACTED.**

**C. TEMPORARY HYDRO SEEDING SHALL BE APPLIED TO ALL IMMEDIATE COVER MATERIALS THAT WILL BE EXPOSED IN EXCESS OF TWO WEEKS AND TO FINAL COVER MATERIALS ONLY OUTSIDE THE PLANTING DATES FOR THE PERMANENT SEEDING AND PENDING PRIOR APPROVAL BY THE ENGINEER. CONTRACTOR SHALL AVOID APPLICATION DURING PERIODS OF RAIN OR WITHIN TWENTY FOUR (24) HOURS PRECEDING EXPECTED RAINFALL.**

**D. THE BONDED FIBER MATRIX (BFM) SHALL BE APPLIED BY A CONTRACTOR CERTIFIED BY THE PRODUCT MANUFACTURER TO HAVE BEEN TRAINED IN THE PROPER PROCEDURES FOR THE MIXING AND APPLICATION OF THE PRODUCT.**

**E. THE CONTRACTOR SHALL HYDRO-SEED THE WETLAND SEEDING AREAS IN THE SPRING BETWEEN MARCH 15 THROUGH JUNE 15 OR IN THE FALL BETWEEN SEPTEMBER 15 AND OCTOBER 31.**

**F. CONTRACTOR SHALL MAINTAIN ALL SEEDED AREAS IMMEDIATELY AFTER SOWING/PLACEMENT UNTIL VEGETATION IS SUFFICIENTLY ESTABLISHED AND EXHIBITS A VIGOROUS GROWING CONDITION.**

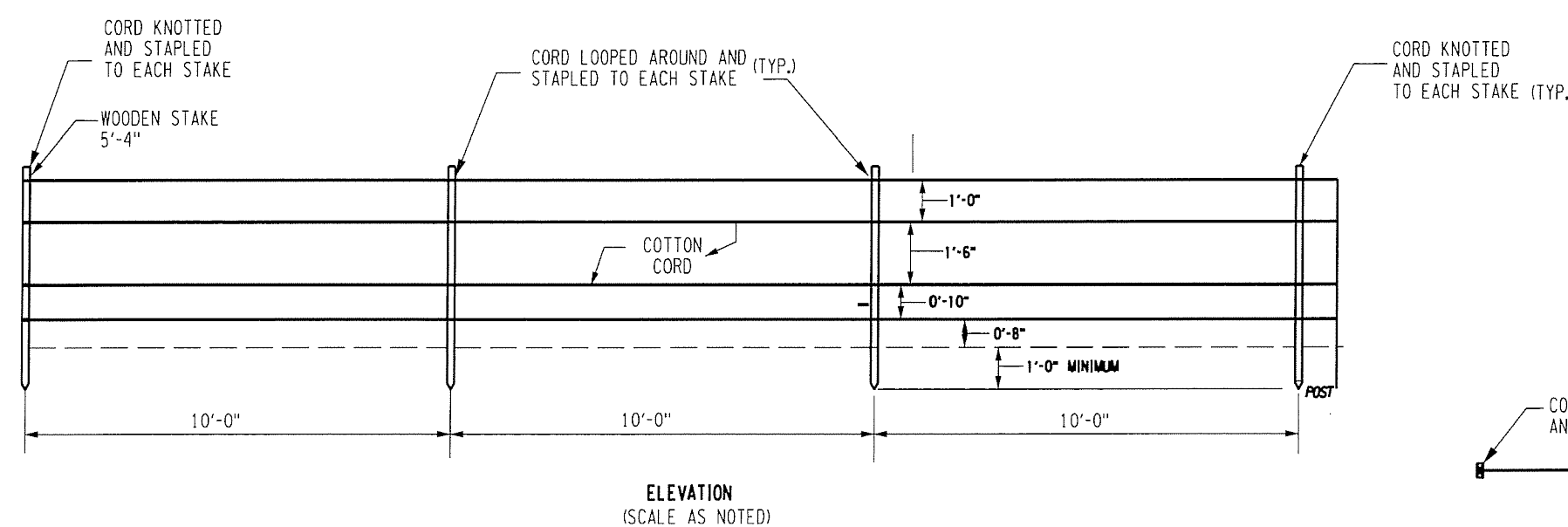
**4. MAINTENANCE:**

**A. THE CONTRACTOR SHALL MAINTAIN ALL SEEDED AREAS IMMEDIATELY AFTER SOWING/PLACEMENT UNTIL VEGETATION IS SUFFICIENTLY ESTABLISHED AND EXHIBITS A VIGOROUS GROWING CONDITION.**

**B. CONTRACTOR SHALL IMMEDIATELY REPAIR ANY SEEDED AREA DAMAGED BY EROSION. THE CONTRACTOR IN REPAIRING ANY SEEDED AREAS DAMAGED BY EROSION SHALL RESEED AREAS WHICH FAILED TO GERMINATE AND WITHIN THE NEXT CONSECUTIVE SPECIFIED PLANTING DATE. ALL SUCH WORK SHALL BE COMPLETED A MINIMUM OF ONE MONTH PRIOR TO THE PROJECT CLOSE -OUT.**

**5. PAYMENT:**

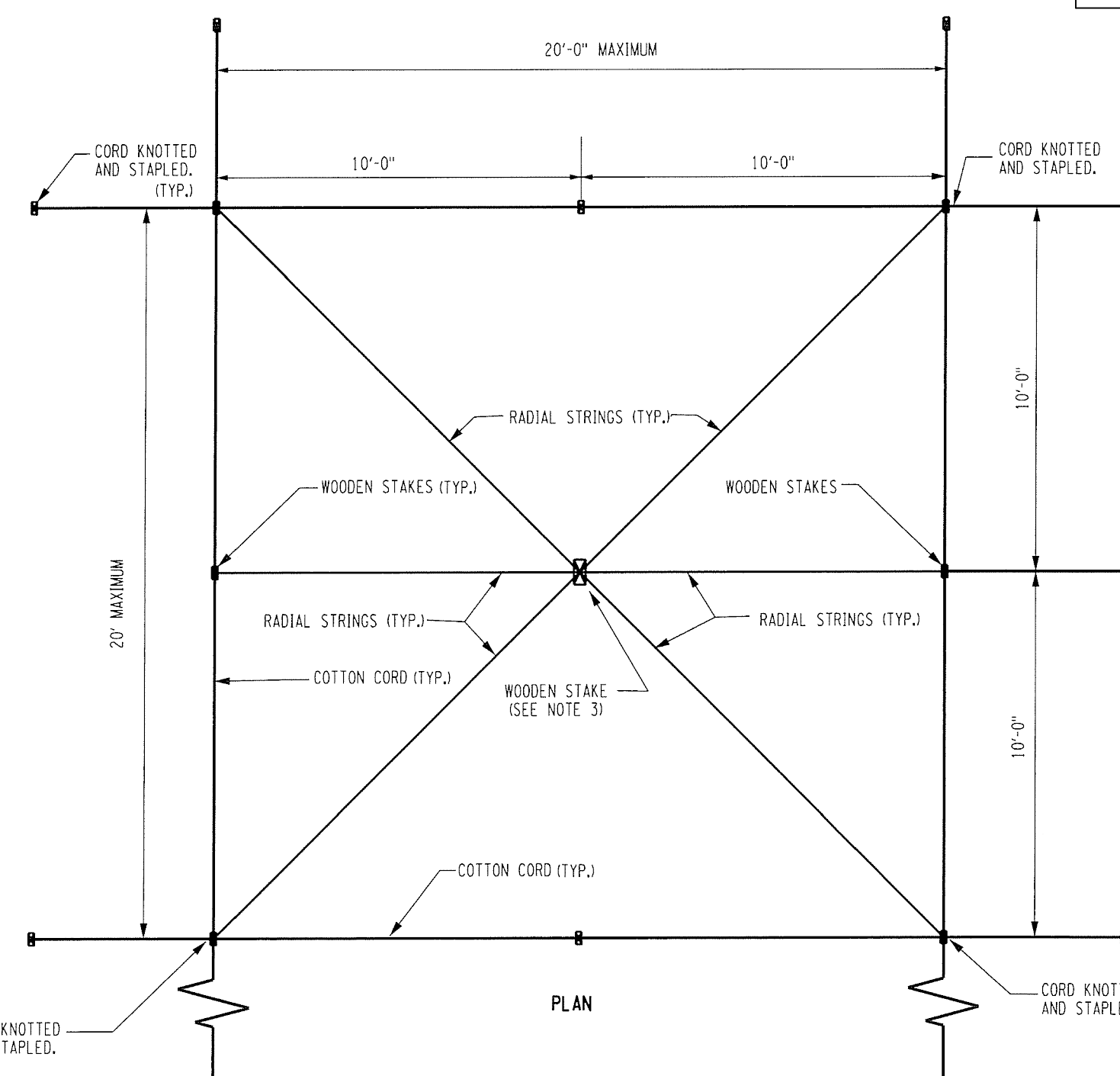
**A. QUANTITY OF SEEDING TO BE PAID FOR UNDER THIS ITEM SHALL BE THE NUMBER OF SQUARE YARDS SEEDED AND MAINTAINED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.**



**WATERFOWL FENCE DETAILS**  
ITEM 720

**NOTES:**

1. CONTRACTOR SHALL REPAIR FENCE AS NECESSARY AND SHALL ADD ADDITIONAL CORDING AS NECESSARY TO PREVENT ENTRANCE BY WATERFOWL.
2. PAYMENT FOR MATERIALS INSTALLATION AND REPAIRS UNDER ITEM 720.
3. RADIAL STRINGS SHALL BE ATTACHED TO NAIL IN TOP OF WOODEN STRINGS



HERBACEOUS SUB-EMERGENT PLANT SPECIES (AREA A) - ITEM 611.0711			
* NO MORE THAN 20% PER SPECIES AND SHALL BE PLANTED IN GROUPS OF 3, 5, 7'S ETC.			
BOTANICAL NAME	COMMON NAME	PLUG	SIZE
1	CAREX COMOSA	ONG HAIR SEDGE	PLUG SP 5 (5"x2')
2	CAREX LURIDA	SHALLOW SEDGE	PLUG SP 5 (5"x2')
3	ACORUS AMERICANUS	SWEET FLAG IRIS	PLUG SP 5 (5"x2')
4	ASCLEPIAS INCARNATA	SWAMP MILKWEED	PLUG SP 5 (5"x2')
5	HISBICUS MOSCHEUTOS	ROSE MALLOW	PLUG SP 5 (5"x2')
6	IRIS VERSICOLOR	HARLEQUIN BLUE FLAG IRIS	PLUG SP 5 (5"x2')
7	SCIRPUS CYPERIMUS	WOOLGRASS	PLUG SP 5 (5"x2')
8	CHELONE LYONII	PINK TURTLE HEAD	PLUG SP 5 (5"x2')
9	LOBELIA CARDINALIS	CARDINAL FLOWER	PLUG SP 5 (5"x2')
10	EUPATORIUM DUBIUM	COASTAL PLAIN JOE PYE WEED	PLUG SP 5 (5"x2')
HERBACEOUS EMERGENT PLANT SPECIES (AREA B) - ITEM 611.0731			
* NO MORE THAN 30% PER SPECIES AND SHALL BE PLANTED IN GROUPS OF 3, 5, 7'S ETC.			
BOTANICAL NAME	COMMON NAME	PLUG	SIZE
1	RUDBECKIA LACINATA	CUTLEAF CONEFLOWER	PLUG SP 5 (5"x2')
2	SOLIDAGO SEMPERVIRENS	SEASIDE GOLDENROD	PLUG SP 5 (5"x2')
3	ASTER NOVI-BELGII	NEW YORK ASTER	PLUG SP 5 (5"x2')
4	PYCNANTHEMUM FLEXUOSUM	APPALACHIAN MOUNTAIN MINT	PLUG SP 5 (5"x2')
5	DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	PLUG SP 5 (5"x2')
6	ELYMUS VIRGINICUS	VIRGINIA WILD RYE	PLUG SP 5 (5"x2')
7	MONARDA BRADBURIANA	EASTERN BEEBALM	PLUG SP 5 (5"x2')
8	RUDBECKIA TRILOBA	BROWNEYED SUSAN	PLUG SP 5 (5"x2')
9	THELYPTERIS NOVEBORACENSIS	NEW YORK FERN	PLUG SP 5 (5"x2')
10	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	PLUG SP 5 (5"x2')
UPLAND WOODY SHRUB PLANT SPECIES (AREAS C, D, E, & F) - ITEM 611.0441			
* NO MORE THAN 20% PER SPECIES AND SHALL BE PLANTED IN GROUPS OF 3, 5, 7'S ETC.			
BOTANICAL NAME	COMMON NAME	CONTAINER	SIZE
1	ARONIA ARBUTIFOLRA	RED CHOKEBERRY	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
2	CEPHALANTHUS OCCIDENTALIS	BUTTON BUSH	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
3	CLETHRA ALNIFOLIA	SUMMER SWEET	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
4	CORNUS SERICA	RED TWIG DOGWOOD	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
5	ILEX GLABRA	INKBERRY HOLLY	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
6	LINDERA BENZOIN	SPICE BUSH	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
7	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
8	PRUNUS MARITIMA	BEACH PLUM	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
9	ROSA PALUSTRIS	SWAMP ROSE	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
10	SAMBUCUS CANADENSIS	ELDERBERRY	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
11	SPIREA TOMENTOSA	STEEPLE BUSH	3 GAL CONTAINER MIN HEIGHT 24" TO 36"
12	VACCINIUM CORYMBOSUM	HIGH BUSH BLUEBERRY	3 GAL CONTAINER MIN HEIGHT 24" TO 36"

**LKMA L. K. McLEAN ASSOCIATES, P.C.**  
CONSULTING ENGINEERS 437 SOUTH COUNTRY RD., BROOKHAVEN, NY 11719

**COUNTY OF SUFFOLK**  
**DEPARTMENT OF PUBLIC WORKS**  
**YAPHANK, NEW YORK**

**DARNELL TYSON, P.E., ACTING COMMISSIONER**

**WOODHULL DAM FISH PASSAGE**

**LANDSCAPING DETAILS 1**

SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO. 13 OF 15
			MAY 2019	CP #7180	AS NOTED	

**611 LANDSCAPE SPECIFICATIONS:**

**611 - 2.02 PLANTING:**

ALL PLANT LOCATION SHOWN ON THE PLANS ARE APPROXIMATE AND THE EXACT LOCATION WILL BE DETERMINED BY THE CONSULTING LANDSCAPE ARCHITECT AND THE ENGINEER -IN -CHARGE, WHEN ALL AREAS ARE BACKFILLED AND FINAL GRADES ESTABLISHED.

**611 - 3 CONSTRUCTION**

**611 - 3.01 GENERAL:**

**PLANTING:**

SEE THE LANDSCAPE PLANT LIST ON THE PLANS. ALL PLANTS SHALL BE CONTAINER GROWN. CONTAINER GROWN PLANTS WITH ROOT BALL 25% LESS IN DIAMETER AND DEPTH THAN THAT SPECIFIED FOR B&B MATERIAL WILL BE ACCEPTABLE FOR PLANTS SPECIFIED AS B&B. A 15% TOLERANCE WILL BE ALLOWED IN DIAMETER AND DEPTH PROVIDING THAT THE VOLUME OF THE RESULTANT ROOT BALL IS NOT LESS THAN THE VOLUME OF THE ROOT BALL SPECIFIED.

THE CONTRACTOR SHALL SUBMIT ALL SOURCES OF NURSERY STOCK PRIOR TO THE START OF WORK TO THE CONSULTING LANDSCAPE ARCHITECT, AND THE ENGINEER -IN -CHARGE.

ALL PLANT MATERIAL SHALL BE SUBJECT TO INSPECTION AND REJECTION BY THE EIC / CONSULTING LANDSCAPE ARCHITECT, BEFORE SHIPMENT TO THE PROJECT SITE AND/OR UPON ARRIVAL AT THE PROJECT SITE IF PLANT MATERIAL DOES NOT MEET THE SPECIFICATIONS, INVOICES FOR THE MATERIAL ARE NOT PROVIDED, AND IF WATER IS NOT APPLIED IMMEDIATELY FOLLOWING PLANTING, AS PER THE WATERING SPECIFICATIONS. NO PLANTS SHALL BE STORED ON SITE LONGER THAN 24 HOURS, AND IF NOT PLANTED THE CONTRACTOR SHALL WATER AND PROTECT PLANT MATERIALS OFFSITE. THOSE PLANTS NOT INSTALLED WITHIN THE 24 HOURS SHALL BE MARKED BY THE ENGINEER/LANDSCAPE ARCHITECT TO DOCUMENT THE PERIOD BETWEEN DELIVERY AND INSTALLATION. ALL PLANTS MARKED AND SHOWING SYMPTOMS OF STRESS SHALL BE REJECTED BY THE ENGINEER/LANDSCAPE ARCHITECT AND REMOVED FROM THE PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL PLANT MATERIAL IN A STATE OF GOOD HEALTH AT ALL TIMES BEFORE AND AFTER INSTALLATION.

**PLANTING MATERIALS:**

**WETLAND BACKFILL:**

APPROVED WETLAND BACKFILL MATERIAL (NYSOT APPROVED SUPPLIER) SHALL BE SUBMITTED FOR APPROVALS PRIOR TO DELIVERY TO THE SITE. CONTAINER GROWN SHRUBS SHALL BE PLANTED IN APPROVED WETLAND BACKFILL SOIL, WITH THE INCORPORATION OF AN APPROVED ORGANIC MATERIAL EQUAL TO ONE QUARTER (1/4) THE PIT VOLUME A.O.B.E. WETLAND SP5 PLUGS SHALL BE PLANTED INTO THE APPROVED WETLAND BACKFILL MATERIAL AS PER THE PROJECT DETAILS.

PLANTING SEASON: MARCH 1 TO MAY 1  
 UPLAND DECIDUOUS B&B MATERIAL: OCTOBER 15 TO DECEMBER 15  
 SUB -EMERGENT AND EMERGENT MARCH 1 TO JUNE 15  
 HERBACEOUS C.G. MATERIAL: SP5 PLUGS AUGUST 15 TO DECEMBER 15

ALL LANDSCAPE PLANTING INSTALLED OUTSIDE THE CONTRACT PLANTING DATES, NOT DIRECTED IN WRITING BY THE ENGINEER -IN -CHARGE / CONSULTING LANDSCAPE ARCHITECT, SHALL BE AT THE CONTRACTOR'S OWN RISK AND WATERED WITH A BIO STIMULANT LIQUID COMPLEX OF SEAWEED EXTRACT, HUMIC ACID EXTRACT ENZYMES, AND NON -IONIC WETTING AGENTS OR AN APPROVED EQUAL. ALL RATES ARE AS SPECIFIED BY THE MANUFACTURER.

PLANTS THAT ARE NOT PROTECTED AS SPECIFIED OR THAT HAVE NOT BEEN PLANTED WITHIN TWO (2) CALENDAR DAYS OF DELIVERY SHALL BE REJECTED AS ORDERED BY THE ENGINEER (A.O.B.E), ALL 2" PLUGS SHALL BE MOIST AT ALL TIMES PRIOR TO PLANTING; AND PLANTS THAT ARE VISIBLY DRY SHALL BE REJECTED AND REMOVED FROM THE SITE IMMEDIATELY.

**LAYOUT - SETBACK RESTRICTIONS:**

LAYOUT SHALL BE PERFORMED BY THE CONTRACTOR WITH FINAL REVIEW AND/OR APPROVAL BY THE ENGINEER -IN -CHARGE/CONSULTING LANDSCAPE ARCHITECT. ALL SHRUB BEDS SHALL BE LAID OUT, OUTLINED IN THE FIELD USING SPRAY PAINT, AS APPROVED BY THE ENGINEER IN CHARGE. ALL PLANTS SHALL BE PLANTED IN IRREGULAR PATTERNS TO SIMULATE A NATURALISTIC SETTING OR AS DIRECTED BY THE CONSULTING LANDSCAPE ARCHITECT.

**PLANT PIT DIAMETER:**

THE MINIMUM PLANT PIT DIAMETER SHALL BEAR THE FOLLOWING RELATIONSHIP TO THE DIAMETER OF THE ROOT SPREAD OR ROOT BALLS OF THE PLANTS TO BE PLANTED IN THEM UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ROOT BALL DIAMETER	PLANT PIT DIAMETER
0 - 24"	TWICE THE ROOT/BALL DIAMETER
24" - 48"	EQUAL TO THE ROOT/BALL DIAMETER + 24"
> 48"	1 -1/2 TIMES THE ROOT/BALL DIAMETER

ALL AREAS OF PAVEMENT REMOVAL TO BE PLANTED SHALL HAVE THE SOIL MADE LOOSE AND FRIABLE TO A DEPTH OF 36"

**PLANTING BEDS:**

ALL SHRUB PLANTING AREAS ARE CONSIDERED PLANTING BEDS AND SHALL BE MULCHED. PLANTING BED AREAS SHALL BE LOOSE AND FRIABLE A MINIMUM DEPTH OF 8 INCHES. ALL BEDS SHALL BE MADE WEED FREE PRIOR TO PLANTING THROUGH REPEATED METHODS AS APPROVED BY THE LANDSCAPE ARCHITECT.

**DISPOSAL OF EXCESS SOIL:**

AS MATERIAL IS EXCAVATED FROM TREE PITS, IT SHALL BE IMMEDIATELY REMOVED FROM THE PLANTING AREAS AND DISPOSED OF IN A MANNER ACCEPTABLE TO THE ENGINEER.

**SETTING PLANTS:**

THE CONTRACTOR SHALL SUBMIT A WORK ORDER TO ESTABLISH THE NUMBER OF DAYS TO OBTAIN MATERIALS, START DATES, COMPLETION SCHEDULE, SCHEDULE OF PLANTING OPERATIONS, WITHIN 10 WORKING DAYS PRIOR TO THE START OF WORK. ALL SUBSTITUTIONS AND CHANGES SHALL BE IN WRITING BY THE CONTRACTOR TO THE ENGINEER -IN -CHARGE / CONSULTING LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL NOT BE ALLOWED TO PLANT UNLESS THE PLANTING SCHEDULE AND WATERING SCHEDULE AREA APPROVED AND ALL MATERIALS, INVOICES ARE APPROVED BY ENGINEER -IN -CHARGE / CONSULTING LANDSCAPE ARCHITECT.

**GENERAL:**

FOR ALL SHRUBS, SAUCERS SHALL BE CONSTRUCTED 3 INCHES LARGER THAN THE PIT SIZES. SAUCERS SHALL REMAIN IN PLACE FOR THE DURATION OF THE CONTRACT. AT LEAST THREE WATERINGS FOR THE COMPACTION OF THE PLANTING SOIL, AFTER SETTING PLANTS AND BEFORE APPLYING MULCH SHALL BE PROVIDED BY THE ENGINEER -IN -CHARGE/ CONSULTING LANDSCAPE ARCHITECT. ALL THE PROVISIONS FOR PLANTING PLANTS SHALL BE ACCOMPLISHED WITHIN FIVE (5) CALENDAR DAYS AFTER THE PLANT IS SET IN THE PIT EXCEPT THAT THE ENGINEER -IN -CHARGE(EIC) SHALL TAKE INTO CONSIDERATION UNEXPECTED INTERRUPTIONS IN WORK DUE TO EMERGENCIES, STORMS, ETC. SEVERE ENOUGH TO STOP WORK. SCHEDULED NON -WORK DAYS SUCH AS WEEKENDS, HOLIDAYS, ETC. SHALL NOT BE A REASON FOR EXTENDING THE FIVE (5) DAY LIMITATION. IF THIS SEQUENCE IS NOT ADHERED TO AND AS A RESULT THE OPERATIONS SUBSEQUENT TO SETTING AND BACKFILLING ARE NOT BEING ACCOMPLISHED WITHIN THE SPECIFIED TIME, THE ENGINEER -IN -CHARGE MAY STOP ALL SETTING AND BACKFILLING OF PLANTS, AND ANY OTHER PLANTING OPERATIONS HE MAY DEEM NECESSARY, UNTIL SUCH TIME AS HE IS SATISFIED THAT THE SEQUENCE OF PLANTING OPERATIONS IS AGAIN ON SCHEDULE.

**PRUNING:**

NO LANDSCAPE PLANT MATERIAL SHALL BE PRUNED PRIOR TO SHIPMENT TO THE SITE, UNLESS INSPECTED IN THE NURSERY BY THE CONSULTING LANDSCAPE ARCHITECT. ALL PLANT MATERIAL SHALL MEET SPECIFIED SIZES AFTER PRUNING.

**MULCHING:** A FOUR (4) INCH LAYER OF MULCH SHALL BE UNIFORMLY PLACED IN THE AREA OF ALL SHRUB BEDS. AFTER MULCHING, ORGANIC FERTILIZER (10 - 6 - 4) SHALL BE EVENLY APPLIED TO ALL MULCHED AREAS AT A RATE OF 3 OZ. OF FERTILIZER PER SQUARE METER. A SECOND APPLICATION OF 10 - 6 - 4, AT THE SAME RATE SHALL BE MADE ON THE MULCHED AREAS AT THE END OF THE PERIOD OF ESTABLISHMENT.

**WATERING:**

ALL PLANTS SHALL BE WATERED IMMEDIATELY FOLLOWING PLANTING. WATERING FOR COMPACTION SHALL BE LIMITED TO TWO (2) WATERINGS WITHIN ONE DAY, WITH A MINIMUM ALLOWANCE OF FIVE (5) HOURS DRAW DOWN TIME. PLANTS SHALL HAVE A MINIMUM OF 14 WATERINGS BETWEEN APRIL 1 AND OCTOBER 1 (EVERY OTHER WEEK). THE INTERVALS BETWEEN WATERING OPERATIONS CAN BE MODIFIED IN WRITING BY THE LANDSCAPE ARCHITECT. EACH WATERING SHALL PROVIDE 2 GALLONS/ SQ. FT. (3" LAYER OF WATER). APPROXIMATE QUANTITIES FOR THE FULL CONTRACT CONSIST OF 14 WATERINGS, WITH EACH WATERING AS FOLLOWS: WETLAND PLANTING PLUGS (SP5) - 1 GALLON PER WATERING - AS NEEDED FOR ESTABLISHMENT. ALL LANDSCAPE MATERIAL PLANTED OUT OF SEASONS SHALL BE WATERED WITH A BIO STIMULANT LIQUID COMPLEX OF SEAWEED EXTRACT, HUMIC ACID EXTRACT, ENZYMES AND NON -IONIC WETTING AGENTS, AS APPROVED BY THE LANDSCAPE ARCHITECT. THE PRICE FOR THIS WORK SHALL BE INCLUDED IN THE COST OF THE LANDSCAPE ITEMS AND SHALL BE APPLIED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

**WEEDING:**

PLANT BED WEEDING SHALL BEGIN ON JUNE 1 AND PLANTING BEDS SHALL BE WEED FREE BY JULY 1 AND BEGIN AGAIN ON AUGUST 14 AND PLANTING BEDS SHALL BE WEED FREE BY SEPTEMBER 1.

**611 - 4 METHOD OF MEASUREMENT:**

**PERIOD OF ESTABLISHMENT:**

THE CONTRACTOR SHALL BE REQUIRED TO CONTINUE THE WORK SPECIFIED UNDER THE ONE (1) YEAR PERIOD OF ESTABLISHMENT, FOLLOWING THE SATISFACTORY COMPLETION OF THE PLANTING ON THE CONTRACT AS CONFIRMED IN WRITING BY THE ENGINEER/CONSULTING LANDSCAPE ARCHITECT, OR FOR THE DURATION OF THE CONTRACT, WHICHEVER IS LATER. THE PERIOD OF ESTABLISHMENT APPLIES TO ALL PLANTINGS, UNLESS OTHERWISE SPECIFIED. THIS INCLUDES REPLACEMENT OF DEAD MATERIAL BEFORE THE END OF EACH SPRING AND FALL PLANTING SEASON FOR ONE YEAR.

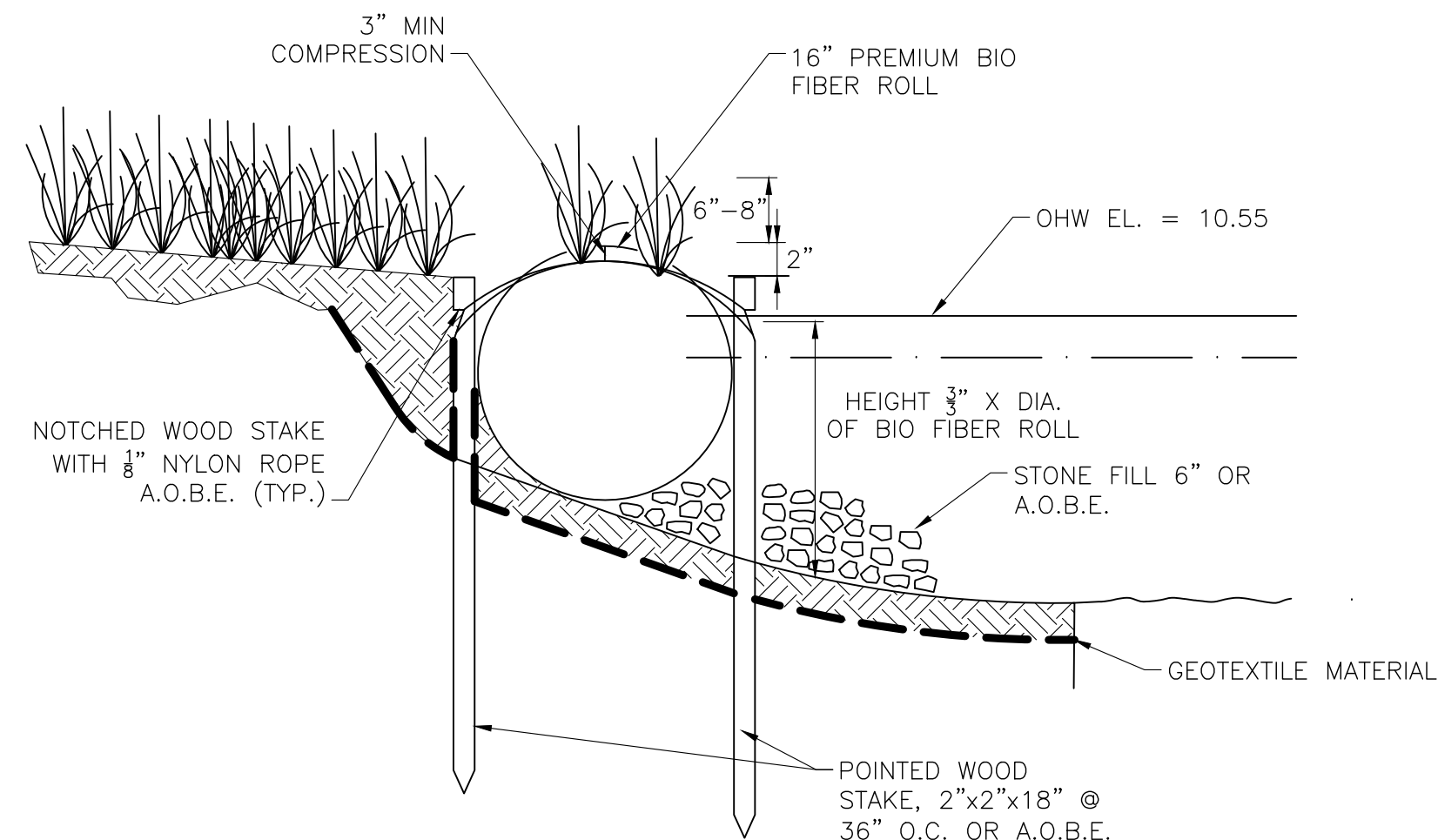
**REQUIREMENTS:**

ALL PLANTS THAT ARE DEAD, MISSING, OR IN AN UNHEALTHY OR BADLY IMPAIRED CONDITION, AS DETERMINED IN WRITING BY THE CONSULTING LANDSCAPE ARCHITECT SHALL BE REMOVED AND REPLACED WITH NEW HEALTHY PLANT MATERIAL AS SPECIFIED WITHIN TWO (2) WEEKS OF THAT DETERMINATION OR DURING THE FIRST TWO (2) WEEKS OF THE SUCCEEDING PLANTING SEASON IF THE DETERMINATION IS NOT MADE DURING A FAVORABLE PLANTING SEASON. ALL PLANTS SHALL RECEIVE THE SAME CARE AS REQUIRED FOR THE ORIGINAL PLANTS THROUGH THE PERIOD OF ESTABLISHMENT.

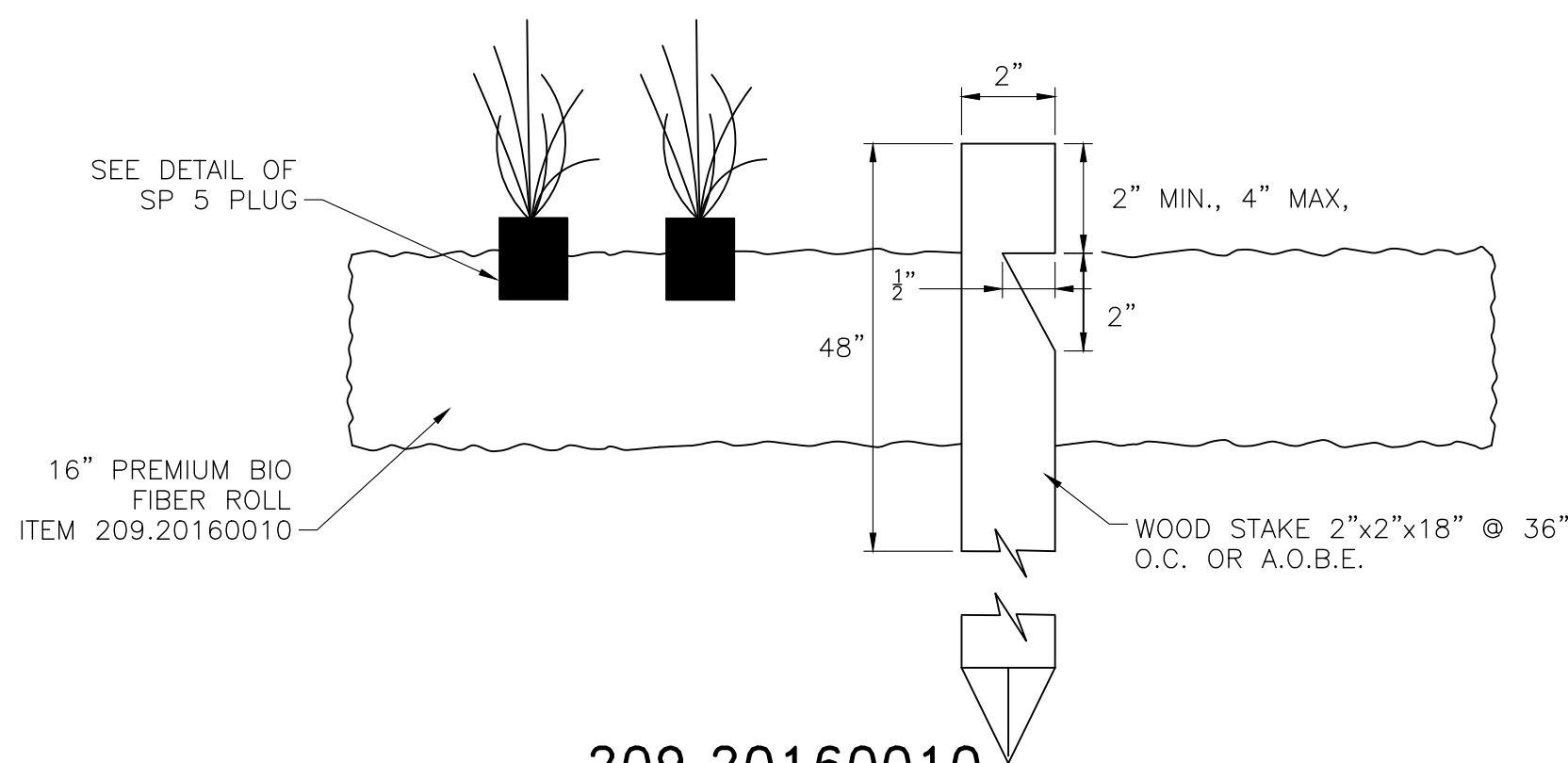
**611 - 5 BASIS OF PAYMENT:**

**611 - 5.01 PLANTING:**

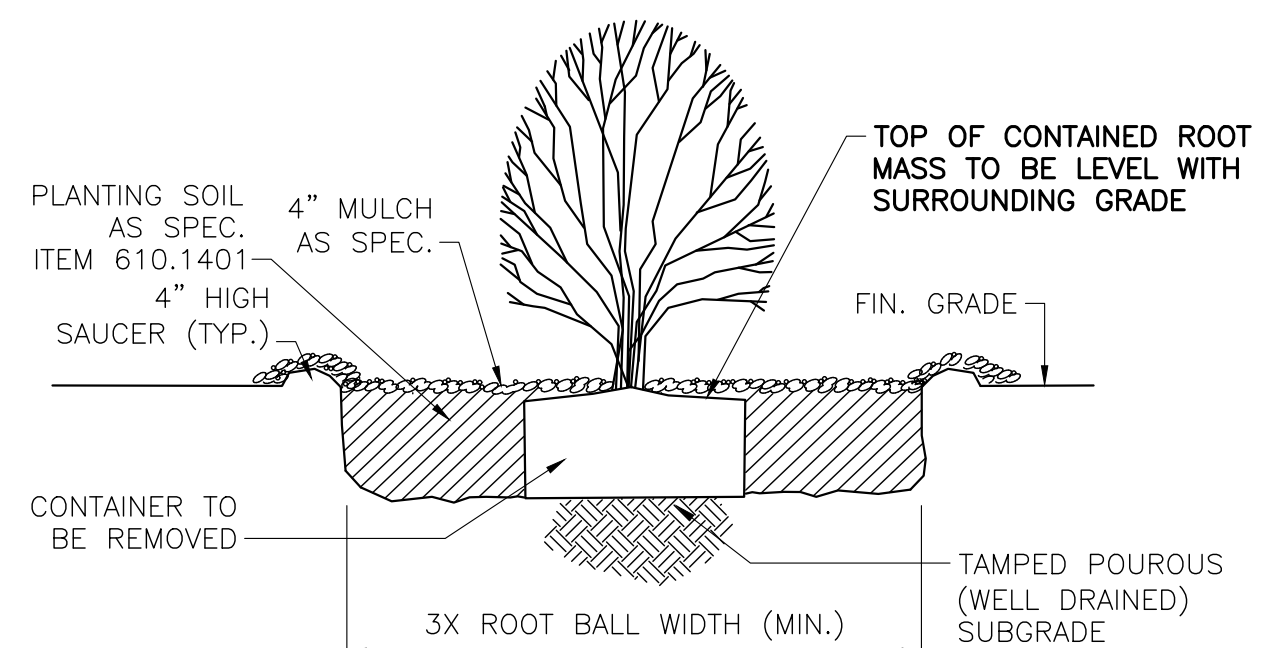
NO EXTRA PAYMENT WILL BE MADE FOR EXCAVATION OF PLANT PITS IN AREAS WHERE ROCK, STUMPS OR OTHER UNDESIRABLE MATERIAL IS ENCOUNTERED. NO PAYMENTS SHALL BE MADE TO THE CONTRACTOR UNTIL ALL PLANTINGS HAVE BEEN FULLY PLANTED, FERTILIZED, MULCHED, AND WATERED. WATERING DURING THE PERIOD OF ESTABLISHMENT WILL BE PAID FOR UNTIL FINAL ACCEPTANCE. NO SEPARATE PAYMENT WILL BE MADE FOR WATERING AFTER FINAL ACCEPTANCE.



**PLANTING & STAKING DETAILS FOR BIO-FIBER ROLLS**  
N.T.S



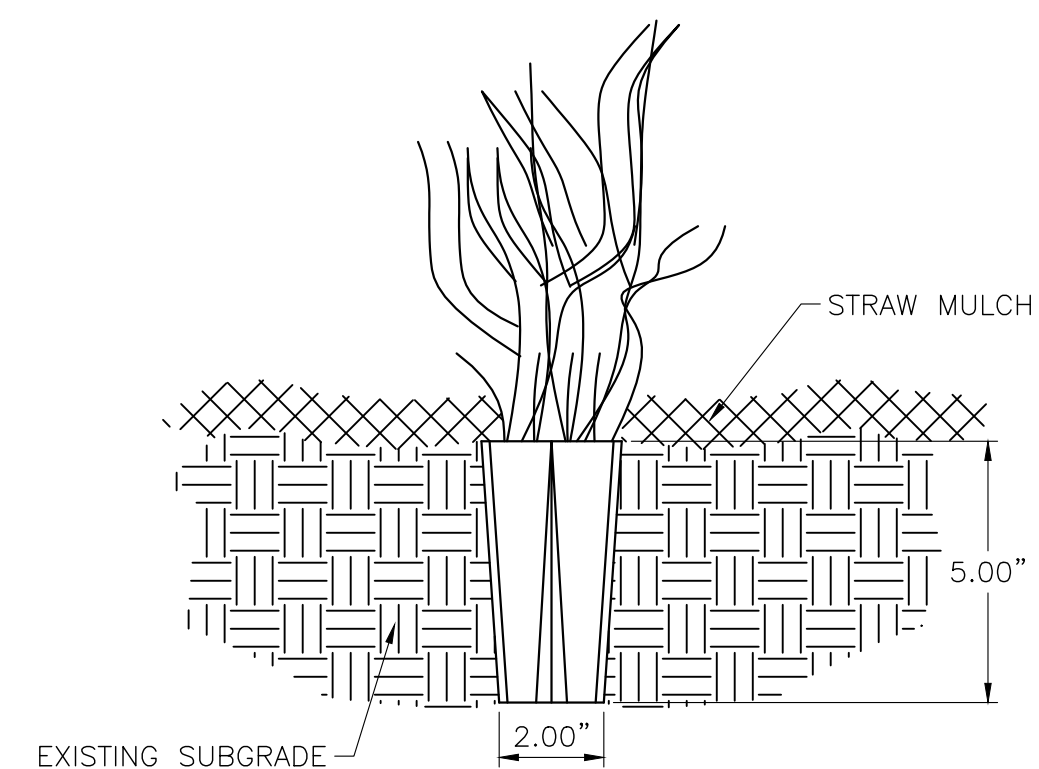
**209.20160010 NOTCHED WOOD STAKE DETAIL**  
N.T.S



**NOTE:**

- DIG 2'(MIN.) DEPTH TEST HOLE TO VERIFY SUBGRADE MATERIAL BELOW ROOT BALL. THE E.I.C. AND/OR LANDSCAPE ARCHITECT SHALL INSPECT THE HOLE PRIOR TO PLANT INSTALLATION.

**CONTAINER PLANTING DETAIL**  
NOT TO SCALE



**FRESHWATER WETLAND SP 5 HERBACEOUS PLANTING PLUG DETAIL**  
NOT TO SCALE

**NOTES:**

- FRESHWATER WETLAND PLUGS PLANTED WITHIN THE BIO-LOGS DO NOT REQUIRE MULCH
- ALL 2" PLUGS, UPLAND OF THE BIO-LOGS, SHALL HAVE 2" OF STRAW MULCH PLANTED WITH AN APPROVED TACKIFIER MATERIAL
- LIMITS OF EXCAVATION & DISTURBANCE TO REMAIN LANDWARD OF EXISTING WATERLINE.

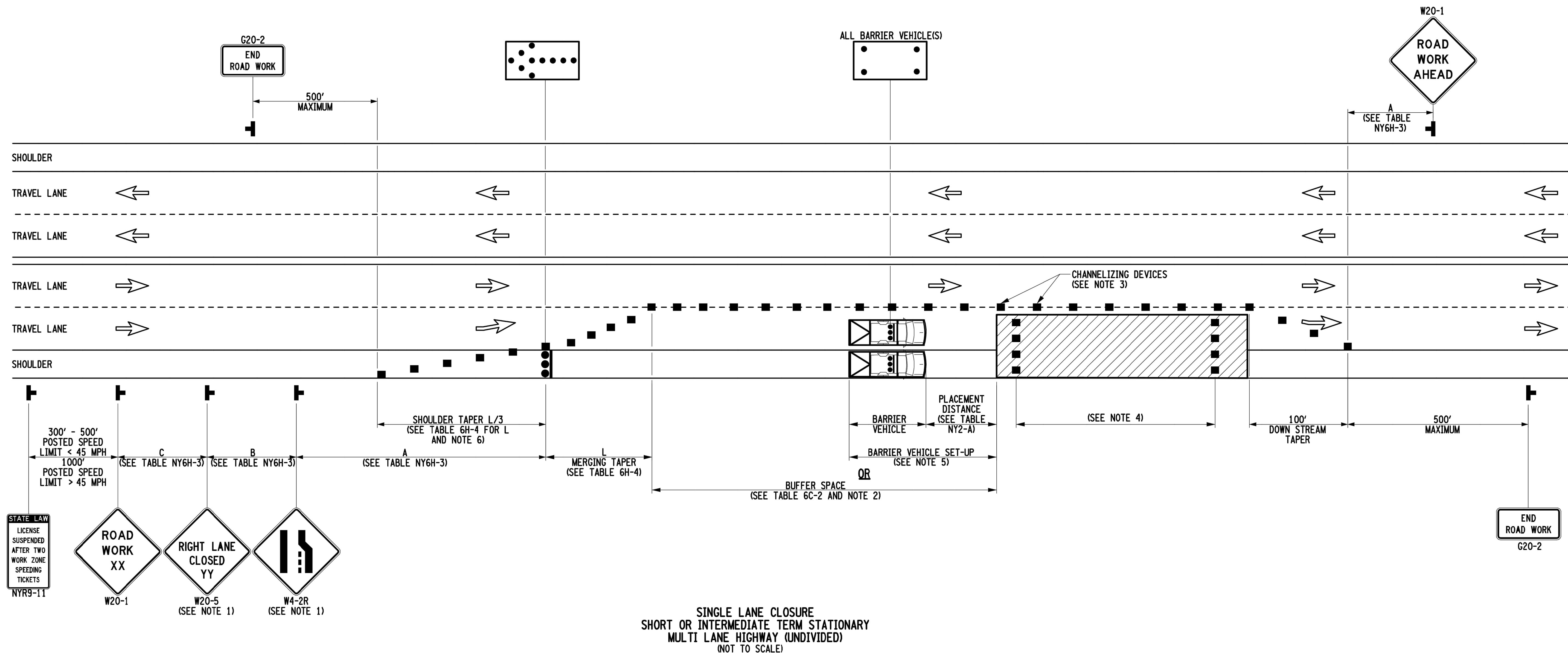
**PLANTING NOTES:**

- ALL PLANTS SHALL MEET THE MOST RECENT STANDARDS FOR NURSERY STOCK AS PUBLISHED BY THE AMERICAN NURSERYMEN ASSOCIATION.
- AFTER SETTING PLANT IN HOLE, REMOVE TOP 1/3 OF BURLAP. REMOVE AND DISCARD ALL SYNTHETIC FABRIC. CUT AND REMOVE ALL STRING, NURSERY CONTAINERS OR TOP 1/3 OF WIRE BASKETS. TO REMOVE NURSERY CONTAINERS, TIP PLANT ON SIDE AND HIT POT SIDES WITH FIST TO LOOSEN. SLIDE POT OFF. IF CONTAINER GROWN, CHECK FOR GIRDLING, CIRCLING ROOTS, AND IF FOUND CUT INTO ROOTMASS WITH KNIFE AT 3 EQUALLY SPACED INTERVALS AND LOOSEN ROOTS. IF TRANPLANTING WITH MECHANICAL TREE SPADE OR AUGER, SCORE OR CULTIVATE SIDES TO REMOVE GLAZING OF SOIL.
- PLANTING SOIL** - PLANTING SOIL SHALL BE GOOD TOPSOIL WITH NO ADMIXTURE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH AND SHALL BE FREE FROM SUBSOIL, STUMPS, ROOTS, BRUSH, STONES, CLAY, LUMPS OR SIMILAR OBJECTS LARGER THAN 2 INCHES IN GREATEST DIAMETER. THE ORGANIC CONTENT SHALL NOT BE LESS THAN 5%, NOR MORE THAN 20% AS DETERMINED BY LOSS ON IGNITION OF MOISTURE FREE SAMPLES DRIED AT 100 DEGREES. IF SOIL IS EXCESSIVELY SANDY OR CLAYEY, AMEND WITH COMPOST/PEAT MOSS. CONTRACTOR SHALL SUBMIT HIS RESULTS TO THE EIC.
- ALL PLANTS SHALL HAVE A 3"-6" RAISED SAUCER AROUND PIT TO HOLD WATER.
- UPLAND PLANTING SHALL BE MULCHED WITH 2" TO 4" CLEAN MULCH OR WOOD CHIPS THAT EXTENDS FOR 6" OUTSIDE OF SOIL SAUCER. TURF AND WEEDS MUST BE REMOVED WHERE MULCH EXTENDS OUTSIDE PLANTING PIT. PULL MULCH AWAY FROM TRUNK TO AVOID MOISTURE BUILDING UP AGAINST IT. ALL SHRUB BEDS ARE CONSIDERED PLANTING BEDS AND THE ENTIRE AREA SHALL BE MULCHED TO THE LIMITS SHOWN ON THE PLANS. WHERE BEDS STAND ALONE WITHIN THE PROJECT, MULCH SHALL EXTEND 5'-0" PAST THE WATERING SAUCER AS ORDERED BY THE EIC (ENGINEER IN CHARGE).
- ONLY PRUNE OUT DAMAGED OR DEAD BRANCHES. LEAVES OR NEEDLES SHOULD NOT BE WILTED OR BROWNED. ALL PLANT MATERIALS SHOULD BE IN GOOD HEALTH. THE HEIGHT SPECIFIED ON THE PLANS IS THE HEIGHT AFTER PRUNING AND/OR THE PLANT HEIGHT AS MEASURED IN THE FIELD AFTER PLANTING.
- CONTRACTOR SHALL WATER PLANTINGS AND SEEDED AREAS AS PER SPEC.
- STAKED TREES SHALL HAVE TIES AROUND 1/2" NOTCH IN STAKE. CONTRACTOR IS RESPONSIBLE FOR CHECKING TIES 1 MONTH AFTER PLANTING.

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<b>LIKMA L. K. McLEAN ASSOCIATES, P.C.</b> CONSULTING ENGINEERS 437 SOUTH COUNTRY RD., BROOKHAVEN, NY 11719	
<b>COUNTY OF SUFFOLK DEPARTMENT OF PUBLIC WORKS YAPHANK, NEW YORK</b>	
<b>DARNELL TYSON, P.E., ACTING COMMISSIONER</b>	
<b>WOODHULL DAM FISH PASSAGE</b>	
<b>LANDSCAPING DETAILS 2</b>	
<b>SYMBOL</b>	<b>DESCRIPTION</b>
<b>APPROVED DATE</b>	<b>DATE</b>
<b>PROJECT NO.</b>	<b>SCALE</b>
<b>SHEET NO. 14 OF 15</b>	<b>REVISIONS</b>

May 08, 2019 - 03:31pm  
 P:\15084.000 Woodhull Dam Fish Ladder\Vault Files\Design Files\Contract Drawings\15084.000\_DFF\_Work Zone Traffic Control.dwg



**NOTES:**

1. LEFT LANE CLOSURES ARE SYMMETRICAL TO RIGHT LANE CLOSURES. SUBSTITUTE LEFT LANE CLOSED SIGN (W20-5) AND THE CORRESPONDING LANE ENDS SIGN (W4-2L).
2. NO WORK ACTIVITY, EQUIPMENT, OR STORAGE OF VEHICLES, OR MATERIAL SHALL OCCUR WITHIN THE BUFFER SPACE AT ANY TIME.
3. CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 40' IN THE ACTIVE WORK SPACE.
4. TRANSVERSE DEVICES SHALL BE REQUIRED (AS PER 619 STANDARD SPECIFICATIONS) WHEN A PAVED SHOULDER HAVING A WIDTH OF 8' OR GREATER IS CLOSED FOR A DISTANCE GREATER THAN 1500'.
5. FOR BARRIER VEHICLE USE REQUIREMENTS SEE TABLES NY1-A AND NY2-A ON THE STANDARD SHEET TITLED "WORK ZONE TRAFFIC CONTROL LEGENDS AND NOTES".
6. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8' OR MORE ARE CLOSED, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK SPACE AND TO DIRECT VEHICULAR TRAFFIC TO REMAIN IN THE TRAVELED WAY.

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**COUNTY OF SUFFOLK**  
**DEPARTMENT OF PUBLIC WORKS**  
 YAPHANK, NEW YORK  
 DARNELL TYSON, P.E., ACTING COMMISSIONER

WOODHULL DAM FISH PASSAGE

WORK ZONE TRAFFIC CONTROL

SYMBOL	DESCRIPTION	APPROVED DATE	DATE	PROJECT NO.	SCALE	SHEET NO. 15 OF 15
<b>REVISIONS</b>						
			MAY 2019	CP #7180	AS NOTED	