

# CITY OF MIDDLETOWN, CONNECTICUT COMBINED SEWER OVERFLOW SEPARATION PROJECT

CONTRACT No. 17A1

## PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS

BID No. TBD



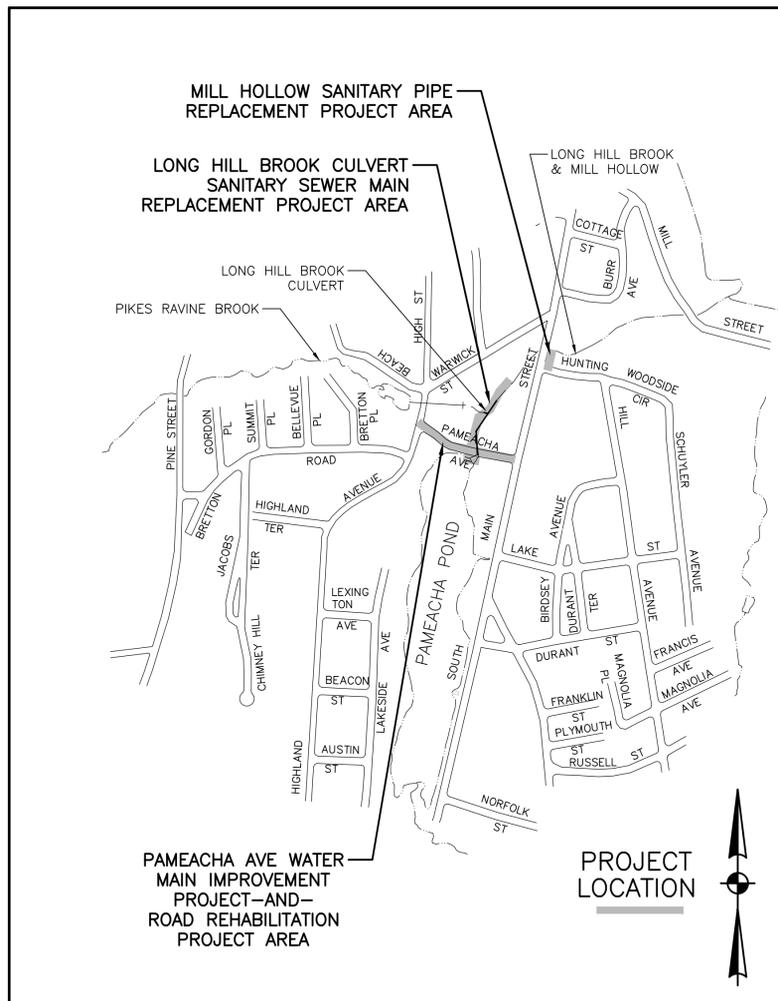
*HONORABLE BEN FLORSHEIM, MAYOR*  
*WATER POLLUTION CONTROL AUTHORITY*

DALE ALDIERI, CHAIRMAN  
SCOTT BISHEL, VICE CHAIRMAN  
PHIL PESSINA  
EUGENE NOCERA  
JACK PIEPER  
BRIAN GARTNER

### *WATER & SEWER DEPARTMENT*

JOSEPH S. FAZZINO, P.E., DIRECTOR  
BRIAN ROBILLARD, P.E., CHIEF ENGINEER

*FINANCE DEPARTMENT*  
CARL ERLACHER, DIRECTOR



LOCATION MAP  
NOT TO SCALE

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June 2020

LEGEND

DESCRIPTION

EXISTING

PROPOSED

BASE LINE		
CENTER LINE		
R.O.W. LINE or STREET LINE (APPROX)		
PROPERTY LINE or PARCEL BOUNDARY		
CONTOUR		
FENCE		
RETAINING WALL		
WALL		
TREES OR SHRUBS		
HEDGES		
PARKING METER		
WATER MAIN		
COMBINED SEWER		
SANITARY SEWER (SIZE AND MATERIAL AS NOTED)		
DEMOLISHED SANITARY SEWER		
STORM SEWER (SIZE AND MATERIAL AS NOTED)		
MANHOLE (TYPE IDENTIFIED BY NAME)		
CATCH BASIN or INLET		
UTILITY VAULT (OWNER IDENTIFIED BY NAME)		
UTILITY SERVICE (OWNER IDENTIFIED BY NAME)		
UTILITY OVERHEAD WIRES		
GAS GATE or WATER GATE		
UTILITY POLE		
UTILITY POLE WITH LIGHT		
HYDRANT		
TEST PIT & NO.		
SLOPE LIMIT		
CURB LINE		
EDGE OF PAVEMENT (NO CURB)		
TRAFFIC CONTROL BOX		
POLICE CALL BOX		
SOIL BORING LOCATION		
OIL FILLER		
ANY STRUCTURE or PIPE TO BE ABANDONED (SYMBOL PLACED ON STRUCTURE)		
MONUMENT		
CONTROL POINTS		
FIRE ALARM BOX		
CONDUIT (TYPE IDENTIFIED BY LETTER)		
SIGN		
SPOT ELEVATION (X INDICATES SPOT LOCATION)		
PERMANENT EASEMENT LINE		
TEMPORARY CONSTRUCTION EASEMENT LINE		
SANITARY SERVICE CONNECTION		
BUILDINGS		
BITUMINOUS DRIVEWAY		
BITUMINOUS WALK		
CONCRETE DRIVEWAY/ WALK		
DEPRESSED CURB & CONC. APRON		

STANDARD ABBREVIATIONS

N.I.C.	Not In Contract	Exist. Ex.	Existing
Sta	Station	Prop	Proposed
Off	Offset	San	Sanitary
TF	Top of Frame	Stm	Storm
INV	Invert	Bldg	Building
BM	Bench Mark	Tel	Telephone
Mon	Monument	Elec.	Electric
Hor	Horizontal	Std	Standard
Vert	Vertical	ROW	Right of Way
E.G.	Existing Grade	R	Radius
F.G.	Finished Grade	BIT.	Bituminous
BCLC	Bituminous Concrete Lip Curb	GG	Gas Gate
Pvm't	Pavement	WG	Water Gate
A.O.B.E.	As Ordered By the Engineer	Hyd	Hydrant
Conc	Concrete	MB	Mail Box
CC	Concrete Curb	HELCO	Hartford Electric Light Co.
CO	Clean Out	SNET	Southern New England Telephone
℄	Survey Baseline	CL&P	Connecticut Light & Power
℄	Center Line	PC	Point of Curvature
℄	Street Line	PCCP	Prestressed Concrete Cylinder Pipe
℄	Property Line	PT	Point of Tangent
EL	Elevation	PI	Point of Intersection
LP	Low Point Elevation	PVC	Polyvinyl Chloride Pipe
HP	High Point Elevation	CO	Clean Out
PL. LP	Plastic Low Pressure	G	Gas
CB	Catch Basin	W	Water
BS	Blue Stone	T	Telephone
CW	Conc Walk	CTV	Cable Television
SW	Slate Walk	S	Sanitary Sewer
MH	Manhole	SDYL	Solid Double Yellow Line
RCP	Reinforced Concrete Pipe	SF	Square Feet
CIP	Cast Iron Pipe	S.S.	Stainless Steel
DIP	Ductile Iron Pipe	SWL	Solid White Line
VCP	Vitrified Clay Pipe		
VIF	Verify In Field		

ABBREVIATIONS FOR EXISTING AND PROPOSED SANITARY SEWER PIPE NUMBERING SYSTEM:

NOTE: The exiting pipe carrying the flow from a manhole usually has the same number as the manhole.

EP-xxx EXISTING PIPE xxx=pipe number  
 P-xxx PROPOSED PIPE xxx=pipe number

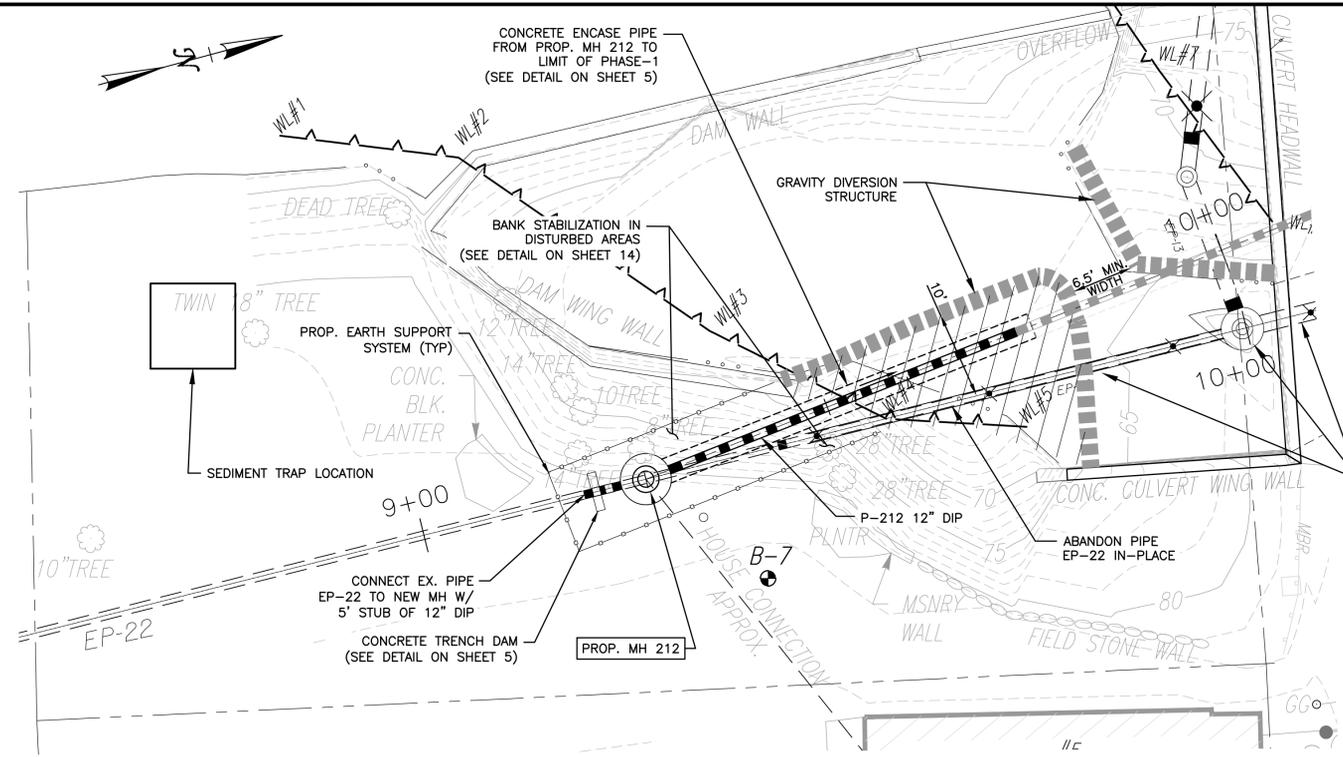
GENERAL NOTES

- ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929. COORDINATES REFER TO THE STATE OF CONNECTICUT COORDINATE SYSTEM.
- SURVEY AND TOPOGRAPHIC DATA IS FROM FIELD SURVEY BY UNITED INTERNATIONAL CORPORATION, PERFORMED APRIL 1997, UPDATED JUNE 2010 AND MAY 2011. REVISION BY PRIME AE GROUP, INC, FEBRUARY 2020.
- WETLANDS FLAGGED ON 6/22/2010 BY JAMES S. SIPPERLY C.S.S LOCATED BY UNITED INTERNATIONAL CORPORATION (UIC) 6/25/2010.
- WATER MAIN AND SANITARY SEWER MAIN INSTALLATION SHALL BE PER CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT GENERAL REQUIREMENTS FOR WATER MAIN AND SERVICE INSTALLATION, GENERAL REQUIREMENTS FOR SANITARY SEWER MAIN AND LATERAL INSTALLATION AND THE PROJECT SPECIFICATIONS AND PLANS.
- ROAD SURFACE IMPROVEMENTS SHALL BE PER THE CITY OF MIDDLETOWN PUBLIC WORKS DEPARTMENT STANDARD DETAILS & SPECIFICATIONS AND THE PROJECT SPECIFICATIONS AND PLANS.
- IMPROVEMENTS IN ANY STATE HIGHWAY SHALL BE PER THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 816, LATEST EDITION.
- IF IT IS NECESSARY TO REMOVE, RELOCATE AND/OR REPLACE STREET SIGNS, MAIL BOXES, TRAFFIC SIGNS OR OTHER SIGNS DURING OR AFTER CONSTRUCTION, IT SHALL BE DONE BY THE CONTRACTOR AS PROVIDED FOR IN THE ITEM "RESTORATION OF UNPAVED AREAS".
- TEMPORARY LAND OWNER CONSTRUCTION EASEMENTS AND ACCESS RIGHTS TO BE OBTAINED BY THE CITY OF MIDDLETOWN. SHOULD THE CONTRACTOR DESIRE OR REQUIRE ADDITIONAL CONSTRUCTION EASEMENTS OR ACCESS RIGHTS, BEYOND THAT PROVIDED BY THE OWNER, HE SHALL OBTAIN THEM AT HIS OWN EXPENSE AND FORWARD COPIES TO THE ENGINEER.
- LOCATIONS OF EXISTING UTILITY LINES AS SHOWN HAVE BEEN TAKEN FROM UTILITY COMPANY MAPS AND THE FIELD SURVEY AND AS SUCH ARE APPROXIMATE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL FIELD LOCATIONS. THE CONTRACTOR SHALL NOTIFY CALL BEFORE YOU DIG (1-800-922-4455) OF ALL PROPOSED EXCAVATIONS AT LEAST FOUR FULL WORKING DAYS PRIOR TO COMMENCING WORK.
- ALL UTILITY LINES DAMAGED BY CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE PERTINENT UTILITY COMPANY IMMEDIATELY NOTIFIED. COST OF WORK TO REPAIR THE UTILITY SHALL BE AT THE CONTRACTOR'S EXPENSE.
- OVERHEAD UTILITY LINES OR GUY LINES, WHICH REQUIRE TEMPORARY OR PERMANENT RELOCATION DUE TO THE CONTRACTOR'S WORK, SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITY COMPANY.
- ALL OPEN EXCAVATIONS SHALL BE PROTECTED TO ELIMINATE PEDESTRIAN CONFLICT AND FOR PROTECTION OF WORKERS. PLATES SHALL COVER OPEN EXCAVATION WHEN CONSTRUCTION ENDS FOR THE DAY. PLATES IN VEHICULAR TRAFFIC AREAS SHALL HAVE EDGE PROTECTION AS NECESSARY.
- CONTRACTOR SHALL SUPPORT ALL UTILITIES EXCAVATED PER INDIVIDUAL UTILITY COMPANY REQUIREMENTS.
- ALL NEW SANITARY PIPES SHALL BE PVC ASTM-D 3034 OR ASTM F679 SDR 35 OR DUCTILE IRON ANSI/AWWA C 151/A21.51 CLASS 52 "PROTECTO 401" LINED UNLESS SHOWN OTHERWISE ON THE PLANS OR AS DIRECTED OTHERWISE BY THE ENGINEER.
- NEW WATER PIPES SHALL BE DUCTILE IRON ANSI A21.51/ AWWA C151 CLASS 52 STANDARD CEMENT LINED PIPE, UNLESS NOTED OTHERWISE.
- ALL NEW WATER MAINS SHALL HAVE MINIMUM BURY DEPTH OF 4'-6", IF THE EXISTING MAIN BEING REPLACED IS GREATER THAN MINIMUM BURY DEPTH, THEN MATCH EXISTING OR AS DIRECTED BY THE ENGINEER.
- WHERE A NEW MANHOLE IS TO BE CONSTRUCTED ON AN EXISTING SEWER, SAID SEWER SHALL BE KEPT IN SERVICE UNTIL THE NEW MANHOLE IS COMPLETE AND ACCEPTED IN ACCORDANCE WITH THE SPECIFICATIONS.
- WHEN WORKING IN CLOSE PROXIMITY TO OR CROSSING EXISTING WATER MAINS, THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN ACCORDANCE WITH SECTION 2.83 OF THE "GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS" AS PREPARED BY THE TECHNICAL ADVISORY BOARD OF THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION. ALSO, SEE SECTION 140-"GRAVITY SEWER PIPING" OF THE DETAILED SPECIFICATIONS. WHERE COMPLIANCE IS NOT POSSIBLE,

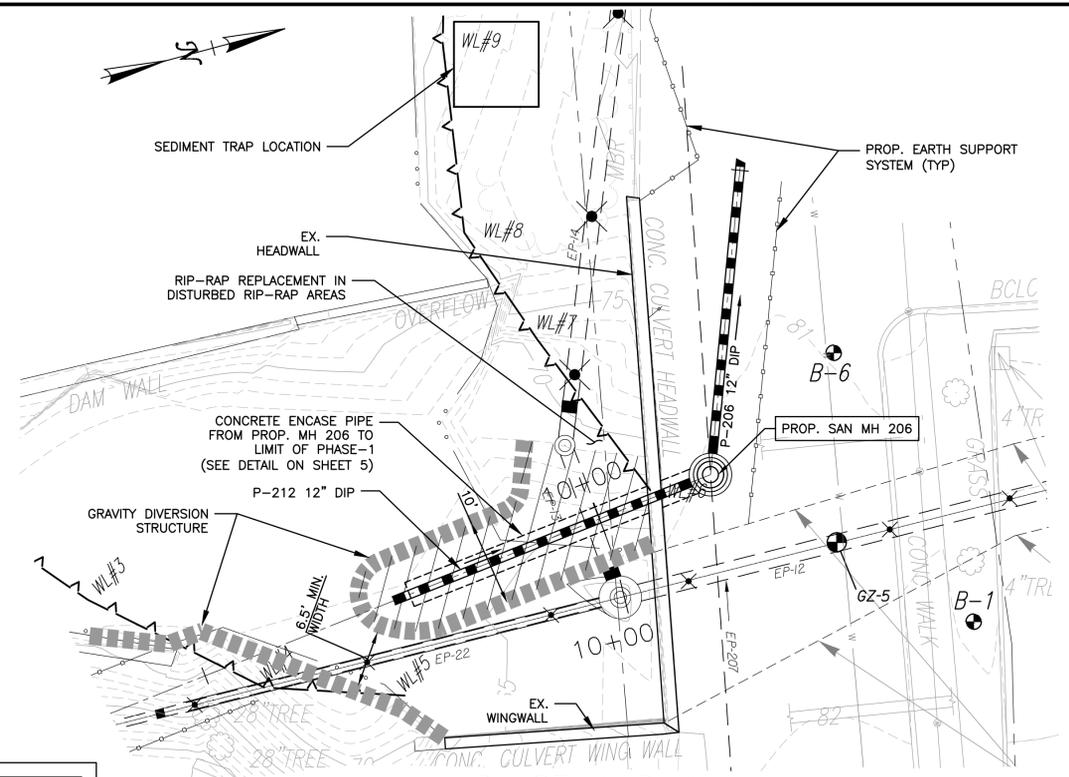
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- CONTRACTOR IS RESPONSIBLE FOR ALL ROAD SURFACE REPAIRS INVOLVED WITH THE CONSTRUCTION AND ANY CITY WORK ASSOCIATED WITH THIS PROJECT. THE CITY ROAD SECTION SHALL HAVE A TEMPORARY PAVEMENT PATCH, THEN A PERMANENT PATCH, OR A FULL DEPTH PAVEMENT RECONSTRUCTION (SEE DETAILS AND ROAD SURFACE IMPROVEMENT PLANS). PATCHING IN STATE HIGHWAYS SHALL BE PER CTDOT REQUIREMENTS (SEE DETAILS).
  - REPAINT ALL PAVEMENT MARKINGS AND STRIPING DISTURBED BY CONSTRUCTION.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES, UNLESS THEY ARE DESIGNATED TO BE REMOVED.
  - ALL STORM DRAIN LATERALS FROM BUILDINGS SHALL BE 6" PVC SDR-35 PIPE AND SHALL HAVE A MINIMUM SLOPE OF 2%, UNLESS OTHERWISE NOTED OR DIRECTED. LOCATION OF STORM DRAIN LATERALS MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
  - EXISTING SANITARY SEWER PIPE AND MANHOLES REMOVED DURING CONSTRUCTION SHALL BE PROPERLY DISPOSED OF AT A LANDFILL IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND AT NO EXTRA COST TO THE OWNER.
  - SCREENED TOPOGRAPHY, LINework AND LETTERING INDICATES EXISTING CONDITIONS, BOLD LINework AND LETTERING INDICATES PROPOSED WORK.
  - IN THOSE LOCATIONS WHERE NEW SANITARY SEWER IS REPLACING EXISTING SEWER AND WHERE THE NEW SEWER IS NOT IN THE SAME ALIGNMENT AS THE EXISTING SEWER SYSTEM, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND TRANSFERRING ALL EXISTING AND LIVE SERVICE LATERALS TO THE NEW SEWER SYSTEM. THE COST OF TELEVISION OR OTHER LOCATING METHODS, SHALL BE PAID UNDER THE APPROPRIATE BID ITEM. REFER TO SECTION 147 OF THE DETAILED SPECIFICATIONS. THE COST OF NEW SERVICE LATERAL PIPE, REQUIRED TO CONNECT THE EXISTING LATERAL TO NEW SEWER, SHALL BE PAID AT THE UNIT PRICE BID FOR 6" PVC HOUSE CONNECTION.
  - TYPICAL MINIMUM BURY DEPTHS FOR UTILITIES ARE:
    - GAS 3'
    - TELEPHONE 2.5'
    - ELECTRIC 2.5'
    - TRAFFIC CONDUITS 1.5'
    - CABLE (CTV) 2'
    - WATER MAIN 4'-6"
    - SANITARY 8'
  - BUILDING WATER SERVICE CONNECTIONS SHOWN ON THE PLANS WERE COMPILED FROM FIELD SURVEY, CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT WATER SERVICE CONNECTION RECORDS AND CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT DRAWINGS. MORE WATER SERVICE CURB STOPS EXIST THAN ARE REPRESENTED IN THE CITY WATER SERVICE CONNECTION RECORDS. SOME CURB STOPS MAY NOT HAVE BEEN FOUND, HAVE BEEN RELOCATED OR ABANDONED IN-PLACE. COORDINATION BY THE CONTRACTOR WITH THE WATER AND SEWER DEPARTMENT TO VERIFY ALL ACTIVE SERVICES ARE FOUND IS REQUIRED FOR TEMPORARY BYPASS SERVICE CONNECTIONS AND RECONNECTION DURING WATER MAIN CONSTRUCTION. WHERE ABANDONED SERVICES ARE EXCAVATED AND ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE CAPPED PER REQUIREMENTS OF THE CITY WATER AND SEWER DEPARTMENT OR A.O.B.E.
  - IN ACCORDANCE WITH THE SPECIFICATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS TO CONNECT AND DISCONNECT THE TEMPORARY BY-PASS SERVICES FROM THE OWNER/ CUSTOMER PLACED ON THE BY-PASS SYSTEM.
  - ALL TAPS TO NEW WATER MAINS, INCLUDING FIRE SERVICES, SHALL BE MADE BY THE CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT PERSONNEL. THE CONTRACTOR SHALL INCLUDE THE COST OF THE TAPS BY THE CITY IN THE BID.
  - PROJECT SIGNS SHALL BE PLACED AT LOCATIONS DESIGNATED ON THE "TRAFFIC CONTROL PLAN".

100 Great Meadow Road   Sixth Floor Wethersfield, Connecticut 06109 P: 860 436 5600 F: 860 436 5601		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT	
		GENERAL NOTES, LEGEND AND STANDARD ABBREVIATIONS	
DESIGNED CCC/GHM	DRAWN GHM/MJS	CHECKED ATB	COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1
DATE 2/29/2020	SCALE NONE	PROJECT NO. 19482	
ARTHUR T. BATES CT P.E. No. 34066	REVISIONS		



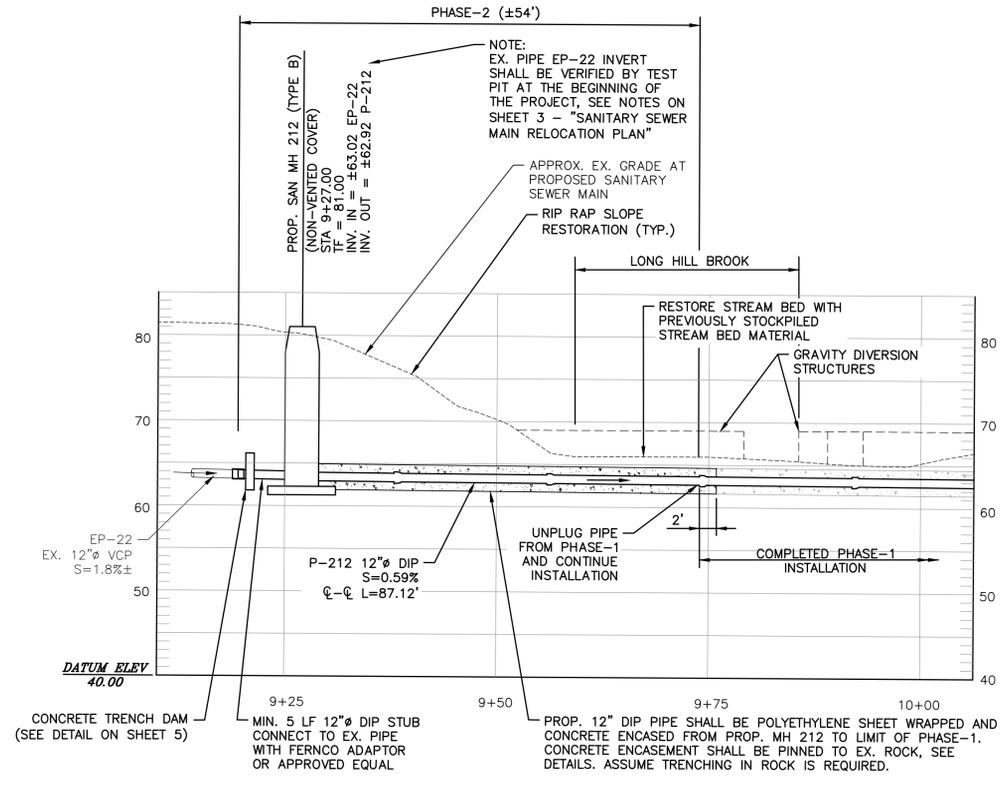


**PHASE-2 PLAN**  
SCALE: 1"=10'

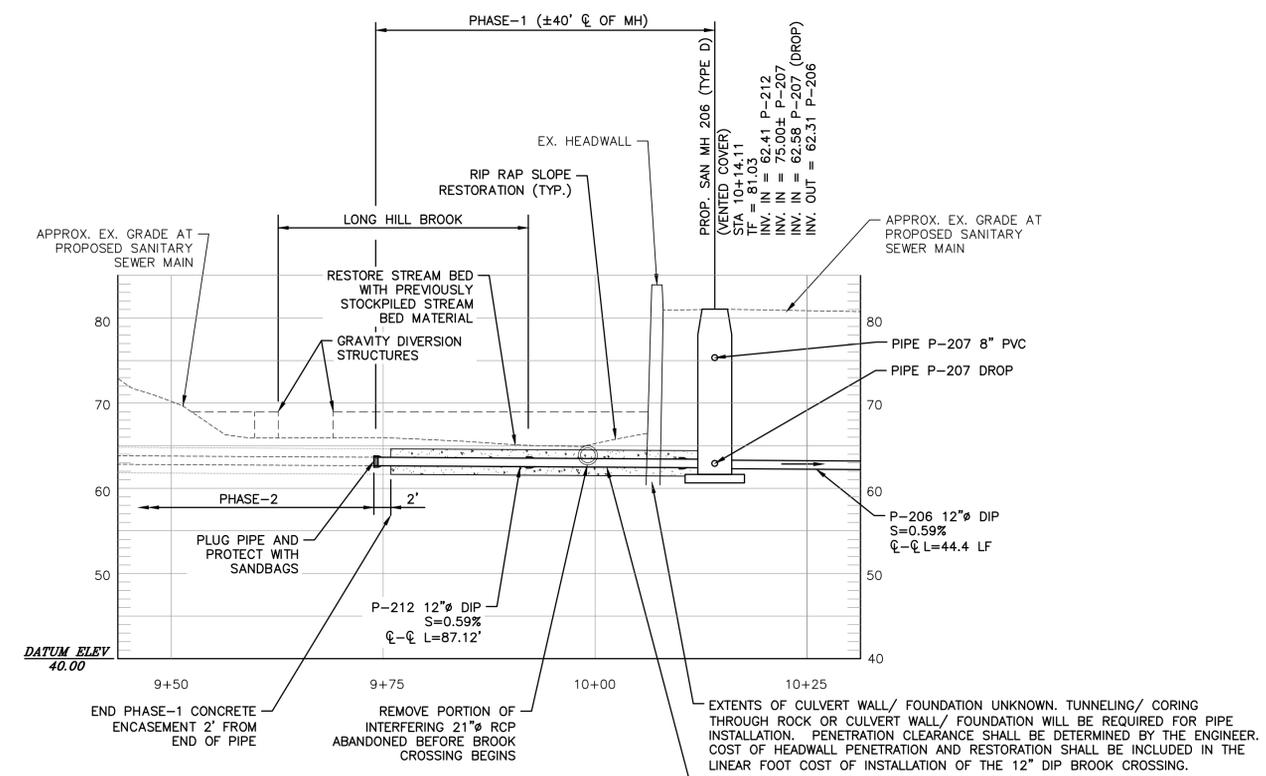


**PHASE-1 PLAN**  
SCALE: 1"=10'

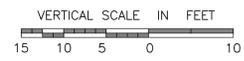
**NOTE:**  
1. CONTRACTOR SHALL SUBMIT TO OWNER A DEWATERING PLAN FOR PHASE-1 AND 2 FOR APPROVAL PRIOR TO WORK.  
2. CONTRACTOR SHALL SUBMIT METHOD OF GRAVITY DIVERSION STRUCTURES FOR REVIEW AND APPROVAL BEFORE BROOK CROSSING CONSTRUCTION BEGINS.



**PHASE-2 PROFILE**  
SCALE: HORIZ. 1"=10' VERT. 1"=10'

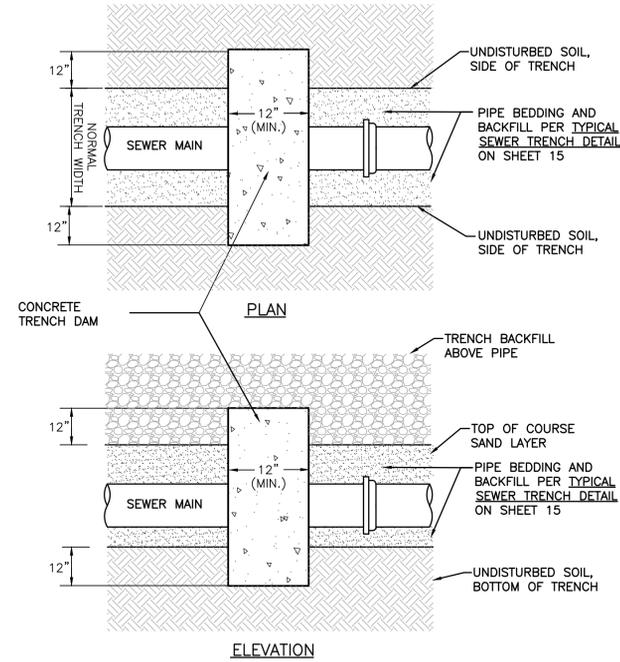


**PHASE-1 PROFILE**  
SCALE: HORIZ. 1"=10' VERT. 1"=10'



Xref (s): X=PAMEACHA; X=DESIGN-SANITARY; X=Border; X=09-EROSION CONTROL PLAN-REVISED; X=M111C; X=2004-design PAMEACHA WATER  
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 PLOT DATE: Jun 29, 2020 14:56pm  
 CONSULTANT FILE NAME: I:\001 - Projects\Middletown\19482 - Pameacha Reservoir\5 Civil\CAD\Working - combined with PWD\04-05-CROSSING PLAN.dwg

		<b>PRIMELLI</b> 100 Great Meadow Road   Sixth Floor Wethersfield, Connecticut 06109 P: 860 436 5600 F: 860 436 5601		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT	
		DESIGNED CCC/GHM	DRAWN GHM/MJS	CHECKED ATB	<b>SANITARY SEWER MAIN CROSSING PLAN &amp; PROFILE</b>
ARTHUR T. BATES CT P.E. No. 34066	DATE 2/29/2020	DATE AS SHOWN	SCALE PROJECT NO. 19482	COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1	

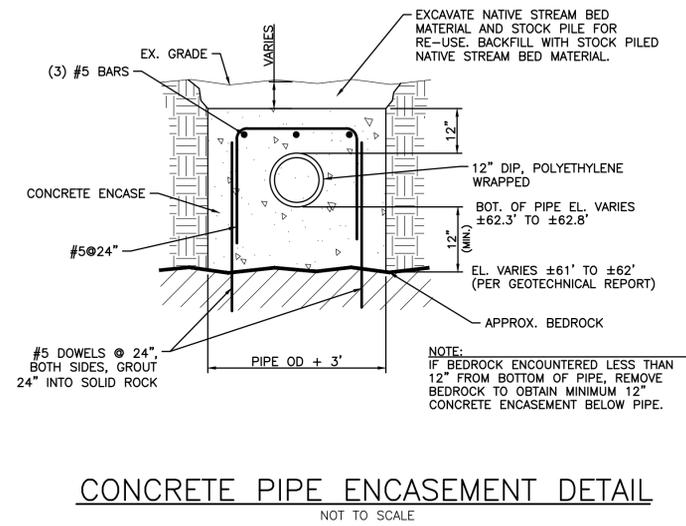


**NOTES:**

1. CONCRETE TRENCH DAM: MAY BE CONSTRUCTED FROM LEAN CONCRETE, LEAN CONCRETE SHOULD MEET THE FOLLOWING REQUIREMENTS: 8-INCH SLUMP, FLOWABLE FILL THAT DOES NOT REQUIRE RODDING OR VIBRATING TO PLACE, 100 PSI COMPRESSIVE STRENGTH AFTER 7 DAYS, MIX DESIGN SUBMITTED FOR APPROVAL BY ENGINEER.
2. ALL PROPOSED FILL MATERIAL SHALL BE TESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO USE IN THE WORK.
3. THIS DETAIL MAY BE MODIFIED TO MATCH TRENCH CONDITIONS WITH ENGINEER'S APPROVAL. CONTRACTOR SHALL SUBMIT ALTERNATIVES FOR APPROVAL.
4. SEE TYPICAL SEWER TRENCH DETAIL ON SHEET 15 FOR TRENCH NORMAL DIMENSIONS.

**CONCRETE SANITARY SEWER MAIN TRENCH DAM DETAIL**

NOT TO SCALE



**CONCRETE PIPE ENCASEMENT DETAIL**

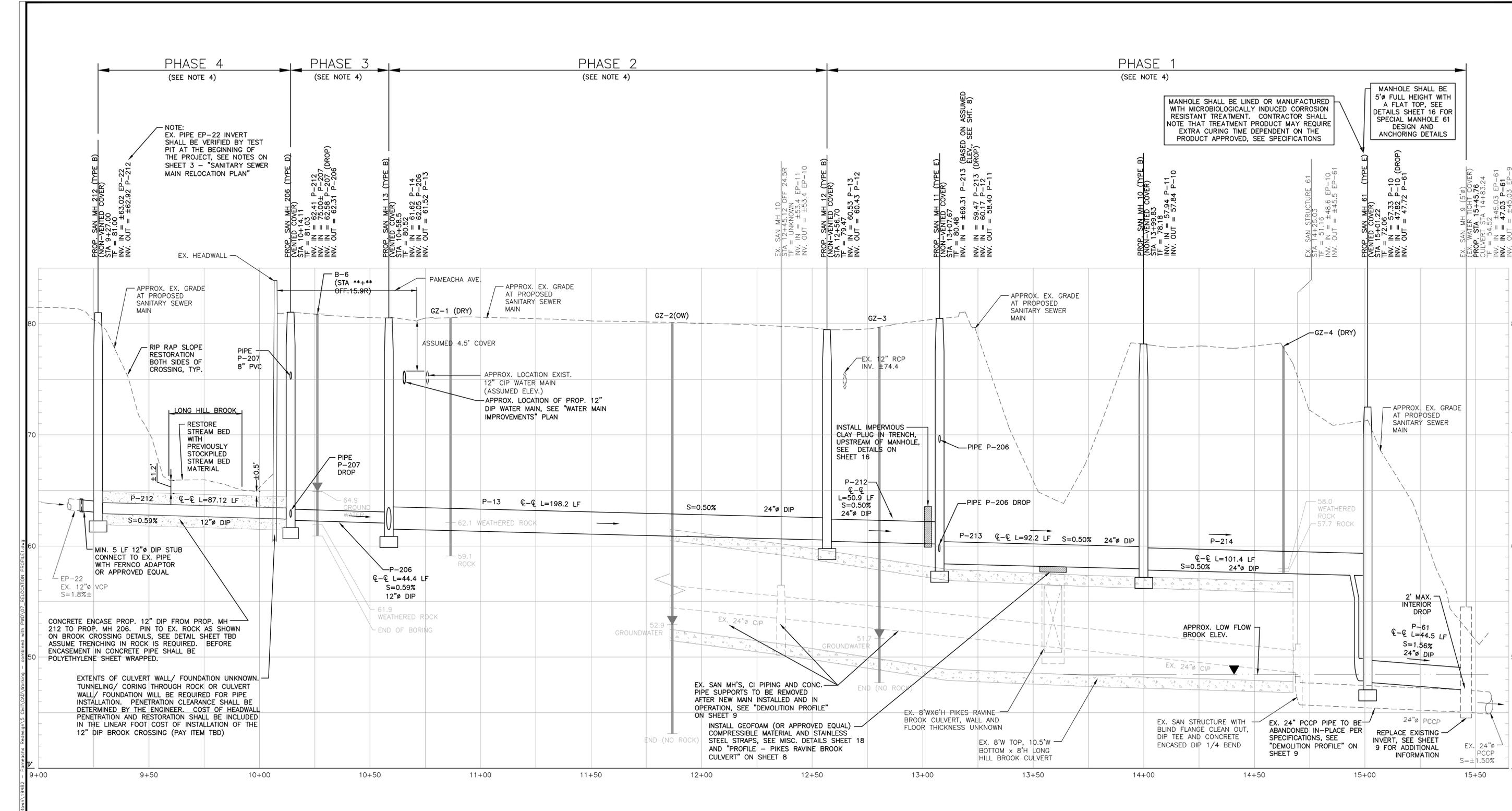
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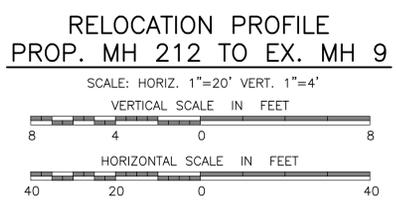
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						SANITARY SEWER MAIN CROSSING DETAILS	
ARTHUR T. BATES CT P.E. No. 34066		DATE 2/29/2020		SCALE AS SHOWN		PROJECT NO. 19482	
REVISIONS		DATE		DESCRIPTIONS		COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1	

**PRIMELLI**  
 100 Great Meadow Road | Sixth Floor  
 Wethersfield, Connecticut 06109  
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ALL WORK WITHIN THE DRAINAGE CULVERT IS "CONFINED SPACE ENTRY" AND SHALL BE PERFORMED DURING LOW FLOW PERIODS

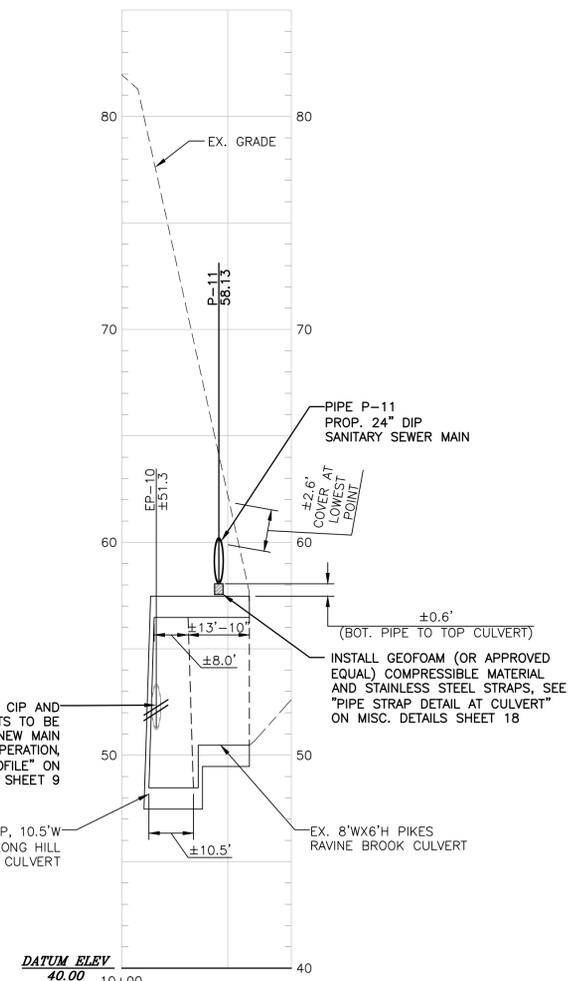


- NOTES:**
- SEE SHEET 2 - GENERAL NOTES, LEGEND AND STANDARD ABBREVIATIONS.
  - ALL PIPE LENGTHS ARE GIVEN  $\ell$  TO  $\ell$  OF MANHOLE, HORIZONTAL DISTANCES (NOT SLOPED DISTANCE).
  - PIPE LENGTHS AND INVERTS ARE SHOWN  $\ell$  TO  $\ell$  OF NEW MANHOLES AND PROVIDE A MINIMUM OF 0.1' FALL AT THE MANHOLE  $\ell$ . ACTUAL FALL ACROSS INSIDE OF MANHOLE DEPENDS ON PIPE SLOPE AND MANHOLE DIAMETER.
  - SEE "SUGGESTED SEQUENCE OF CONSTRUCTION" NOTES ON SHEET 3 FOR INSTALLATION PHASING.

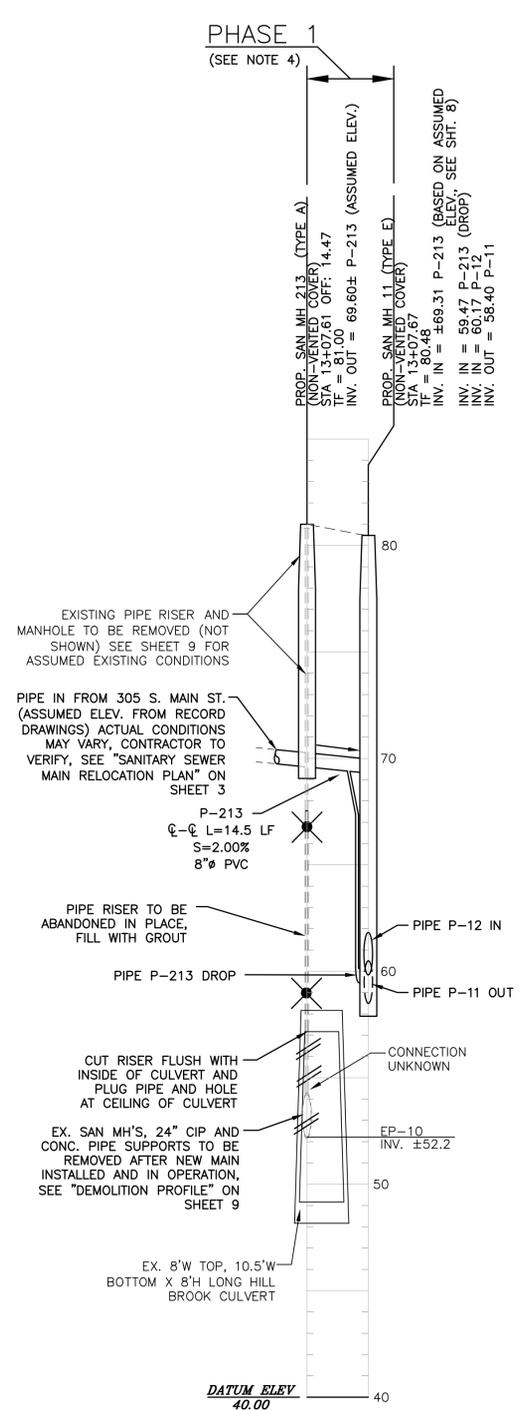
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 CONSULTANT FILE NAME: 13.001 - Projects\Middletown\19482 - Remediation\Station\5 Civil\CAD\Working - combined with PWD\07-RELOCATION PROFILE.dwg

DESIGNED CCC/GHM DATE ARTHUR T. BATES CT P.E. No. 34066		DRAWN GHM/MJS SCALE AS SHOWN		CHECKED ATB PROJECT NO. 19482		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT <b>SANITARY SEWER MAIN          RELOCATION PROFILE - SHEET 1</b> COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1

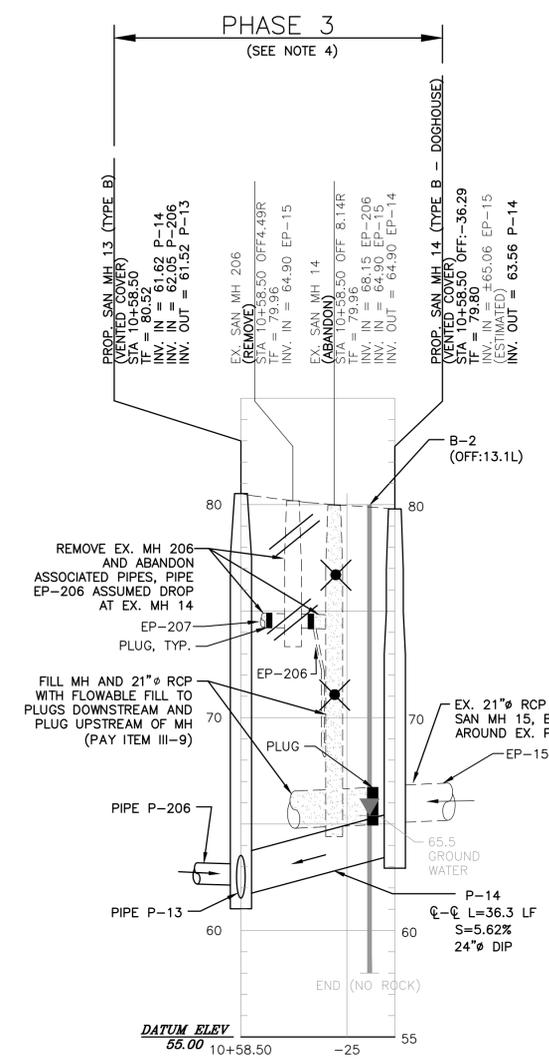
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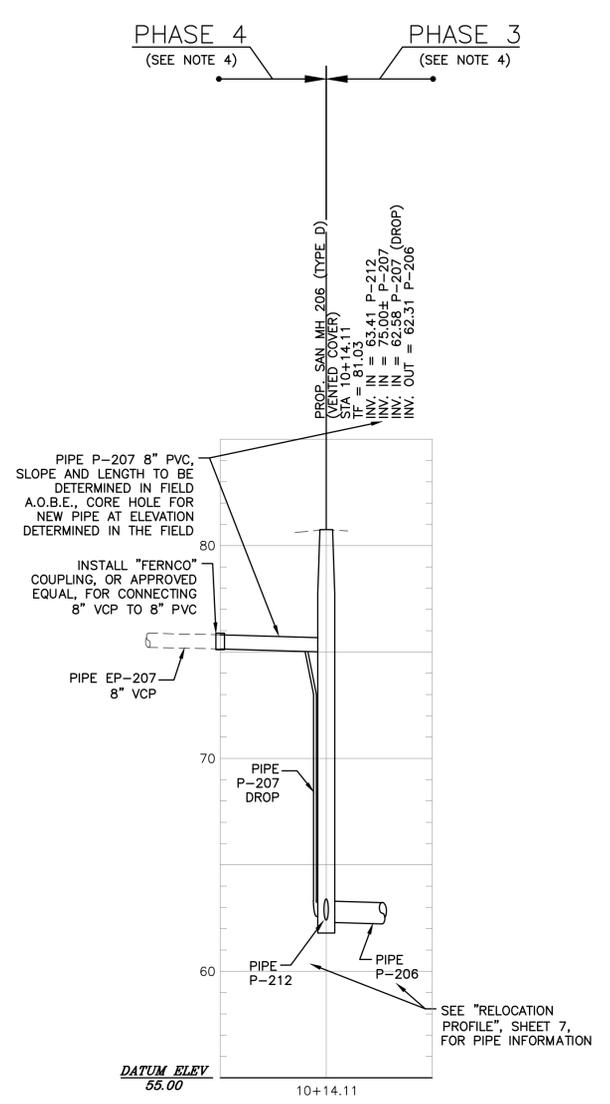
**PROFILE - PIKES RAVINE BROOK CULVERT**  
 SCALE: HORIZ. 1"=20' VERT. 1"=4'  
 VERTICAL SCALE IN FEET  
 HORIZONTAL SCALE IN FEET



**PROFILE - PROP. MH 213 TO PROP. MH 11**  
 SCALE: HORIZ. 1"=20' VERT. 1"=4'  
 VERTICAL SCALE IN FEET  
 HORIZONTAL SCALE IN FEET



**PROFILE - PROP. MH 14 TO PROP. MH 13**  
 SCALE: HORIZ. 1"=20' VERT. 1"=4'  
 VERTICAL SCALE IN FEET  
 HORIZONTAL SCALE IN FEET



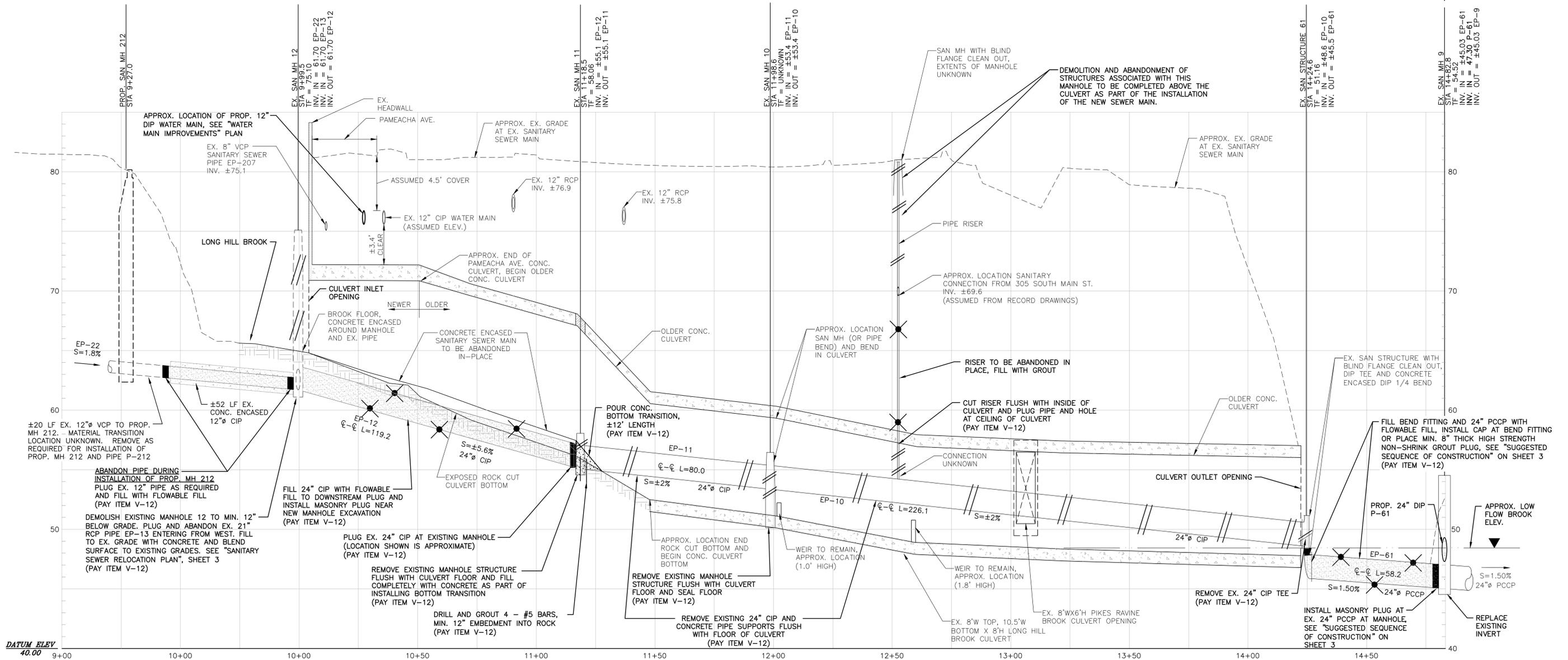
**PROFILE - PROP. MH 206 DROP CONNECTION TO PIPE EP-207**  
 SCALE: HORIZ. 1"=20' VERT. 1"=4'  
 VERTICAL SCALE IN FEET  
 HORIZONTAL SCALE IN FEET

ALL WORK WITHIN THE DRAINAGE CULVERT IS "CONFINED SPACE ENTRY" AND SHALL BE PERFORMED DURING LOW FLOW PERIODS

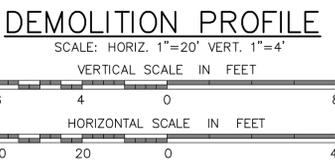
- NOTES:**
- SEE SHEET 2 - GENERAL NOTES, LEGEND AND STANDARD ABBREVIATIONS.
  - ALL PIPE LENGTHS ARE GIVEN  $\phi$  TO  $\phi$  OF MANHOLE, HORIZONTAL DISTANCES (NOT SLOPED DISTANCE).
  - PIPE LENGTHS AND INVERTS ARE SHOWN  $\phi$  TO  $\phi$  OF NEW MANHOLES AND PROVIDE A MINIMUM OF 0.1' FALL AT THE MANHOLE  $\phi$ . ACTUAL FALL ACROSS INSIDE OF MANHOLE DEPENDS ON PIPE SLOPE AND MANHOLE DIAMETER.
  - SEE "SUGGESTED SEQUENCE OF CONSTRUCTION" NOTES ON SHEET 3 FOR INSTALLATION PHASING.

		100 Great Meadow Road   Sixth Floor Wethersfield, Connecticut 06109 P: 860 436 5600 F: 860 436 5601		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT	
		DESIGNED: CCC/GHM DRAWN: GHM/MJS CHECKED: ATB		<b>SANITARY SEWER MAIN RELOCATION PROFILE - SHEET 2</b>	
ARTHUR T. BATES CT P.E. No. 34066	DATE: 2/29/2020 REVISIONS:	SCALE: AS SHOWN	PROJECT NO: 19482	COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1	

PHASE 5  
 APPROX. LIMITS OF EXISTING SEWER MAIN ABANDONMENT/DEMOLITION  
 PAY ITEM V-12



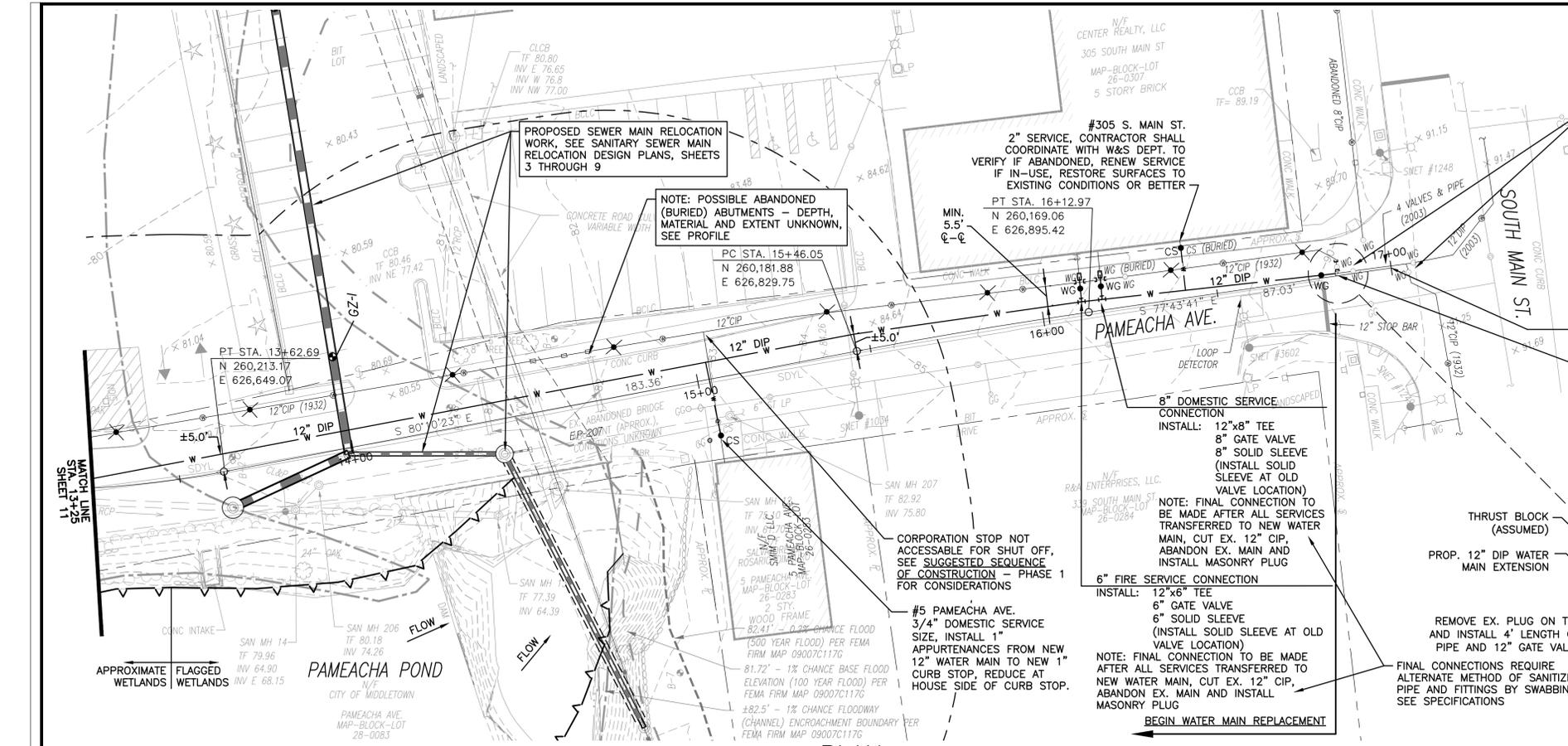
ALL WORK WITHIN THE  
 DRAINAGE CULVERT IS  
 "CONFINED SPACE ENTRY"  
 AND SHALL BE PERFORMED  
 DURING LOW FLOW PERIODS



- NOTES:**
- SEE SHEET 2 - GENERAL NOTES, LEGEND AND STANDARD ABBREVIATIONS.
  - ALL PIPE LENGTHS ARE GIVEN  $\phi$  TO  $\phi$  OF MANHOLE, HORIZONTAL DISTANCES (NOT SLOPED DISTANCE).
  - PIPE LENGTHS AND INVERTS ARE SHOWN  $\phi$  TO  $\phi$  OF NEW MANHOLES AND PROVIDE A MINIMUM OF 0.1' FALL AT THE MANHOLE  $\phi$ . ACTUAL FALL ACROSS INSIDE OF MANHOLE DEPENDS ON PIPE SLOPE AND MANHOLE DIAMETER.
  - SEE "SUGGESTED SEQUENCE OF CONSTRUCTION" NOTES ON SHEET 3 FOR INSTALLATION PHASING.
  - DEMOLITION OF THE EXISTING SANITARY SEWER MAIN SHALL BE COMPLETED ONLY AFTER THE NEW SANITARY SEWER MAIN IS IN OPERATION.
  - DEMOLITION WORK WITHIN THE STORM CULVERT CONTAINING THE OLD SANITARY SEWER MAIN AND OUTSIDE THE CULVERT, SHALL TAKE PLACE AS QUICKLY AS POSSIBLE TO LIMIT POTENTIAL IMPACTS UPON THE WATERCOURSE.

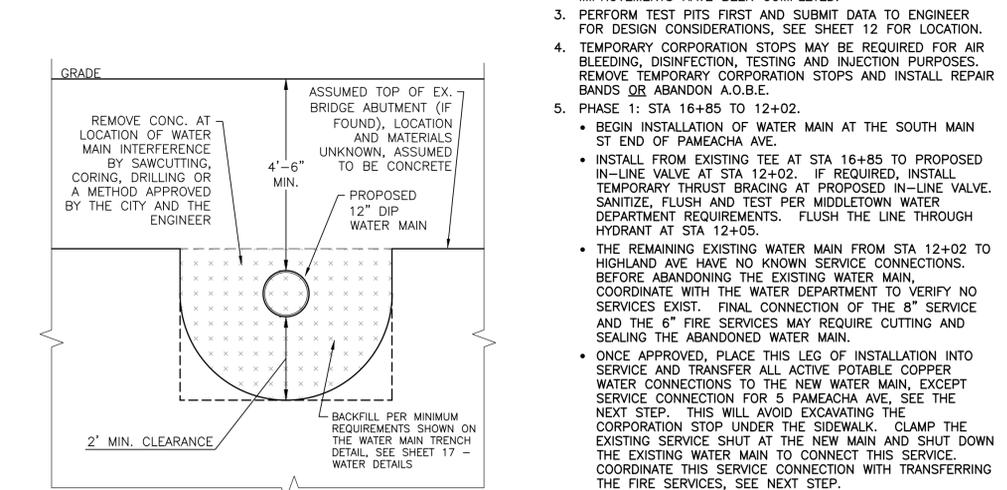
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 PLOT DATE: Jun 29, 2020 10:48pm  
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DESIGNED CCC/GHM		DRAWN GHM/MJS		CHECKED ATB	
DATE 2/29/2020		SCALE AS SHOWN		PROJECT NO. 19482	
ARTHUR T. BATES CT P.E. No. 34066		REVISIONS		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT SANITARY SEWER MAIN DEMOLITION PROFILE COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1	

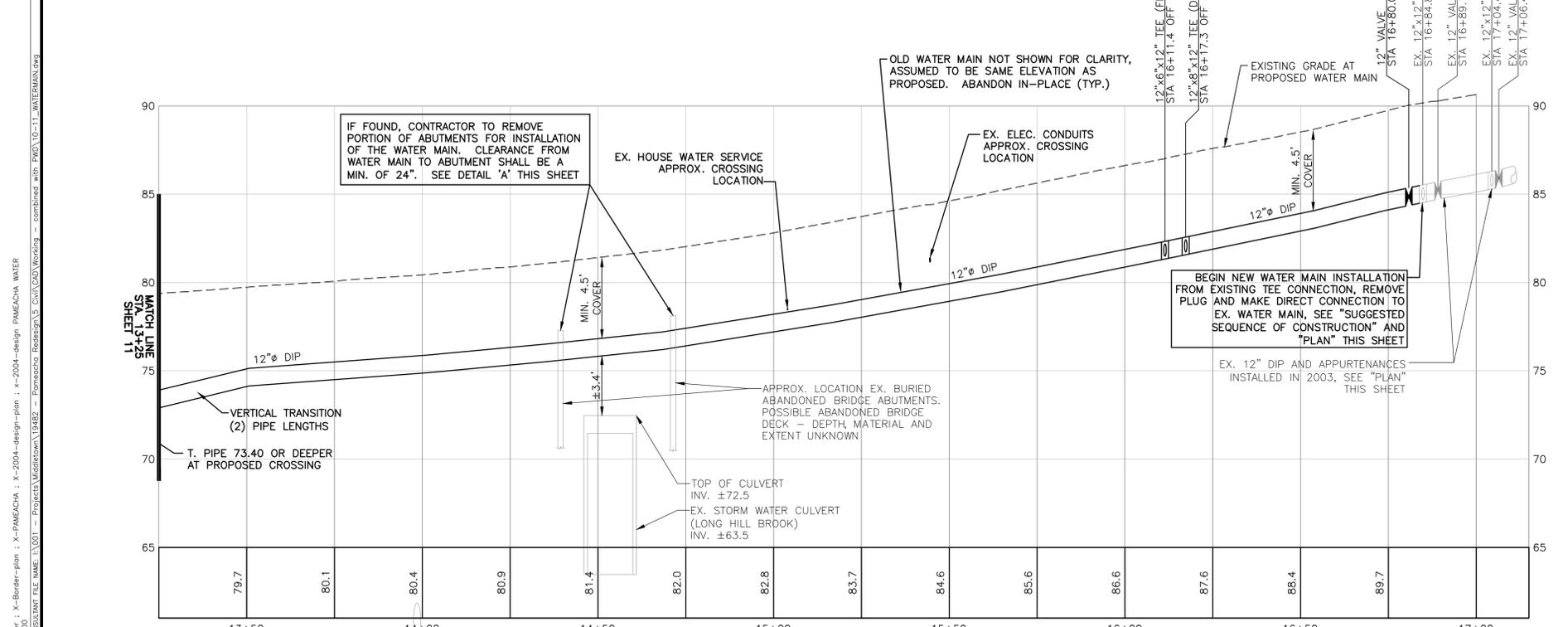


**PLAN**  
SCALE: 1"=20'  
HORIZONTAL SCALE IN FEET

- NOTES:**
- SEE SHEET 2 - GENERAL NOTES, LEGEND AND STANDARD ABBREVIATIONS. SEE "SANITARY SEWER MAIN RELOCATION PLAN" DESIGN PLANS FOR SANITARY SEWER MAIN WORK.
  - WATER MAIN SHALL BE PER CITY OF MIDDLETOWN WATER DEPARTMENT GENERAL REQUIREMENTS FOR WATER MAIN AND SERVICE INSTALLATION AND THE PROJECT SPECIFICATIONS AND PLANS.
  - THE SANITARY SEWER MAIN RELOCATION SHALL BE COMPLETED BEFORE THE WATER MAIN INSTALLATION.
  - WATER MAIN INSTALLATION SHALL BE KEPT WITHIN THE RIGHT OF WAY HARD SURFACES AND ARE NOT TO PROCEED OUTSIDE PAVED AREAS. ALL STORM DRAINAGE INLET STRUCTURES SHALL BE MAINTAINED WITH SILT SACK INSERTS.
  - A MINIMUM OF 1 WATER MAIN SHUTDOWN AND TRANSFERENCE OF POTABLE SUPPLY CONNECTIONS ARE REQUIRED. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE PROPERTY OWNERS AND NOTIFY OCCUPANTS OF PROPERTIES AFFECTED BY WATER SUPPLY INTERRUPTIONS IN ADVANCE AS DETAILED IN THE SPECIFICATIONS. FIRE SERVICES WILL BE AFFECTED AND THE FIRE DEPARTMENT SHALL ALSO BE CONTACTED.
  - THE WATER DEPARTMENT SHALL BE CONTACTED A MINIMUM OF 48 HOURS IN ADVANCE TO OPERATE ALL VALVES, INCLUDING FIRE SERVICES.
  - SEE EROSION AND SEDIMENTATION CONTROL PLAN AND NOTES FOR WORK TO BE COMPLETED BEFORE CONSTRUCTION BEGINS.
  - WETLANDS FLAGGED ON 6/22/2010 BY JAMES S. SIPPERLY C.S.S. AND LOCATED BY IUC 6/25/2010.
  - 100' WETLAND UPLAND REVIEW AREAS SHOWN ARE FROM SURFICIAL WETLANDS ONLY. NO SETBACK IS SHOWN FROM SUBSURFACE WATERCOURSE IN CONCRETE CURB.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A GENERAL PERMIT FOR THE HANDLING AND DISPOSAL OF ANY CONTAMINATED WATER FROM DEWATERING OPERATIONS AND ANY CONTAMINATED EXCAVATED MATERIAL.
  - THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED BY THEIR WORK TO ITS ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE ENGINEER AND THE OWNER.
  - THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOBSITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY, AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
  - THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION, TRENCHING, AND TRENCH PROTECTION REQUIREMENTS.
- SUGGESTED SEQUENCE OF CONSTRUCTION:**
- VERIFY EXISTING CONDITIONS. BRING ANY DISCREPANCIES THAT MAY INTERFERE WITH INSTALLATION, AS DESIGNED, TO THE ATTENTION OF THE ENGINEER FOR CONSIDERATION OF EFFECT ON THE PROJECT.
  - INSTALL THE WATER MAIN AFTER ALL SANITARY SEWER IMPROVEMENTS HAVE BEEN COMPLETED.
  - PERFORM TEST PITS FIRST AND SUBMIT DATA TO ENGINEER FOR DESIGN CONSIDERATIONS, SEE SHEET 12 FOR LOCATION.
  - TEMPORARY CORPORATION STOPS MAY BE REQUIRED FOR AIR BLEEDING, DISINFECTION, TESTING AND INJECTION PURPOSES. REMOVE TEMPORARY CORPORATION STOPS AND INSTALL REPAIR BANDS OR ABANDON A.O.B.E.
  - PHASE 1: STA 16+85 TO 12+02.
    - BEGIN INSTALLATION OF WATER MAIN AT THE SOUTH MAIN ST END OF PAMEACHA AVE.
    - INSTALL FROM EXISTING TEE AT STA 16+85 TO PROPOSED IN-LINE VALVE AT STA 12+02. IF REQUIRED, INSTALL TEMPORARY THRUST BRACING AT PROPOSED IN-LINE VALVE. SANITIZE, FLUSH AND TEST PER MIDDLETOWN WATER DEPARTMENT REQUIREMENTS. FLUSH THE LINE THROUGH HYDRANT AT STA 12+05.
    - THE REMAINING EXISTING WATER MAIN FROM STA 12+02 TO HIGHLAND AVE HAVE NO KNOWN SERVICE CONNECTIONS. BEFORE ABANDONING THE EXISTING WATER MAIN, COORDINATE WITH THE WATER DEPARTMENT TO VERIFY NO SERVICES EXIST. FINAL CONNECTION OF THE 8" SERVICE AND THE 6" FIRE SERVICES MAY REQUIRE CUTTING AND SEALING THE ABANDONED WATER MAIN.
    - ONCE APPROVED, PLACE THIS LEG OF INSTALLATION INTO SERVICE AND TRANSFER ALL ACTIVE POTABLE COPPER WATER CONNECTIONS TO THE NEW WATER MAIN, EXCEPT SERVICE CONNECTION FOR 5 PAMEACHA AVE, SEE THE NEXT STEP. THIS WILL AVOID EXCAVATING THE CORPORATION STOP UNDER THE SIDEWALK. CLAMP THE EXISTING SERVICE SHUT AT THE NEW MAIN AND SHUT DOWN THE EXISTING WATER MAIN TO CONNECT THIS SERVICE. COORDINATE THIS SERVICE CONNECTION WITH TRANSFERRING THE FIRE SERVICES, SEE NEXT STEP.
    - ABANDON OLD WATER MAIN AND IMMEDIATELY TRANSFER THE 8" POTABLE WATER SUPPLY AT 305 S. MAIN ST., SERVICE CONNECTION FOR 5 PAMEACHA AVE. AND THEN THE FIRE SERVICES FOR 56 PAMEACHA AND 305 S. MAIN ST. TO THE NEW WATER MAIN.
  - PHASE 2: STA 12+02 TO 10+11.
    - INSTALL VALVE AT EXISTING TEE CONNECTION STA 10+11 AS A REPAIR. PROVIDE TEMPORARY THRUST BRACING AS REQUIRED UNTIL PROPOSED WATER MAIN IS CONNECTED.
    - THIS INSTALLATION PHASE MAY BE PERFORMED FROM EITHER DIRECTION. IF INSTALLING FROM HIGHLAND AVE, THE SOLID SLEEVE SHOWN AT STA 10+18 SHOULD BE LOCATED NEAR THE VALVE AT STA 12+02.
    - TEMPORARY SHUTDOWNS WILL BE REQUIRED TO RELIEVE PRESSURE ON VALVES DURING CONTINUATION AND FINAL CONNECTION. CONTINUE INSTALLATION OF WATER MAIN FROM VALVE INSTALLED AT STA 12+02 TO VALVE INSTALLED AT STA 10+11. SANITIZE, FLUSH AND TEST THIS LEG OF INSTALLATION PER MIDDLETOWN WATER DEPARTMENT REQUIREMENTS. FLUSH THE LINE THROUGH HYDRANT AT STA 12+05.
    - ONCE APPROVED, PLACE THIS PORTION OF INSTALLATION INTO SERVICE.



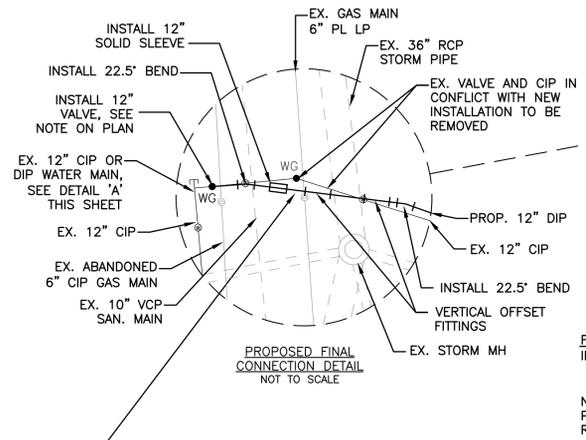
**WATER MAIN CROSSING (A) DETAIL AT BRIDGE ABUTMENT(S)**  
NOT TO SCALE



**PROFILE**  
SCALE: HORIZ. 1"=20' VERT. 1"=4'  
VERTICAL SCALE IN FEET  
HORIZONTAL SCALE IN FEET

		100 Great Meadow Road   Sixth Floor Wethersfield, Connecticut 06109 P: 860 436 5600 F: 860 436 5601	
DESIGNED CCC/GHM		DRAWN GHM/MJS	
CHECKED ATB		SCALE AS SHOWN	
PROJECT NO. 19482		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT <b>WATER MAIN IMPROVEMENTS          STA. 13+25 TO 17+10</b> COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1	
ARTHUR T. BATES CT P.E. No. 34066	DATE REVISIONS	DATE 2/29/2020	PROJECT NO. 19482

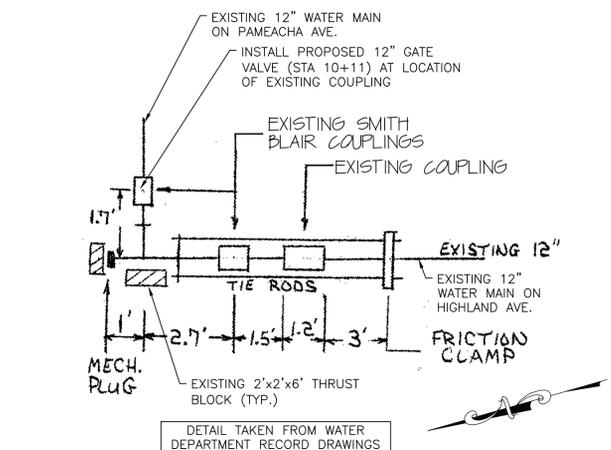
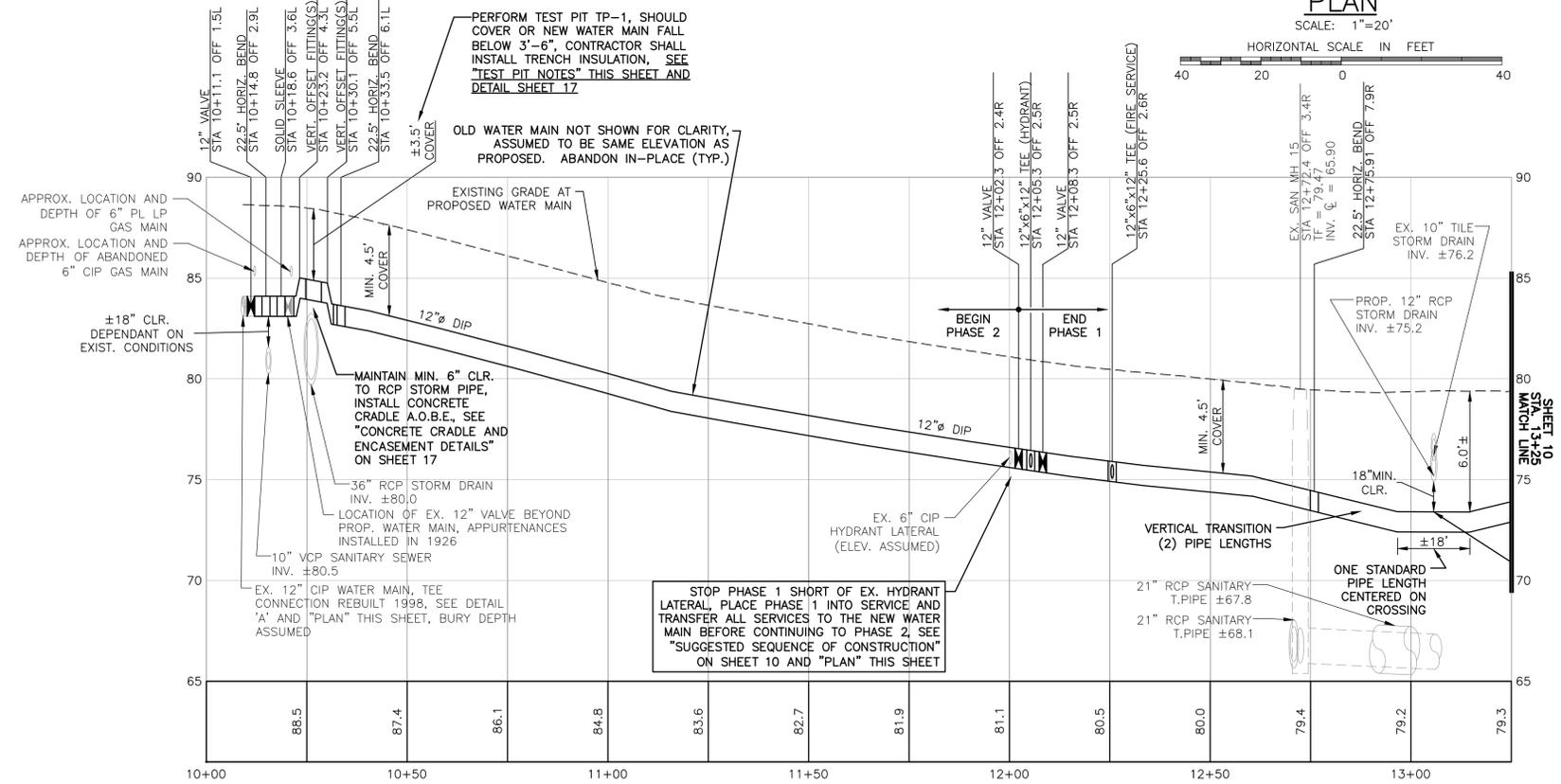
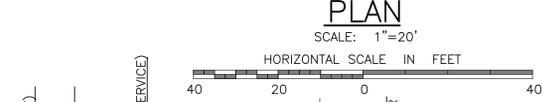
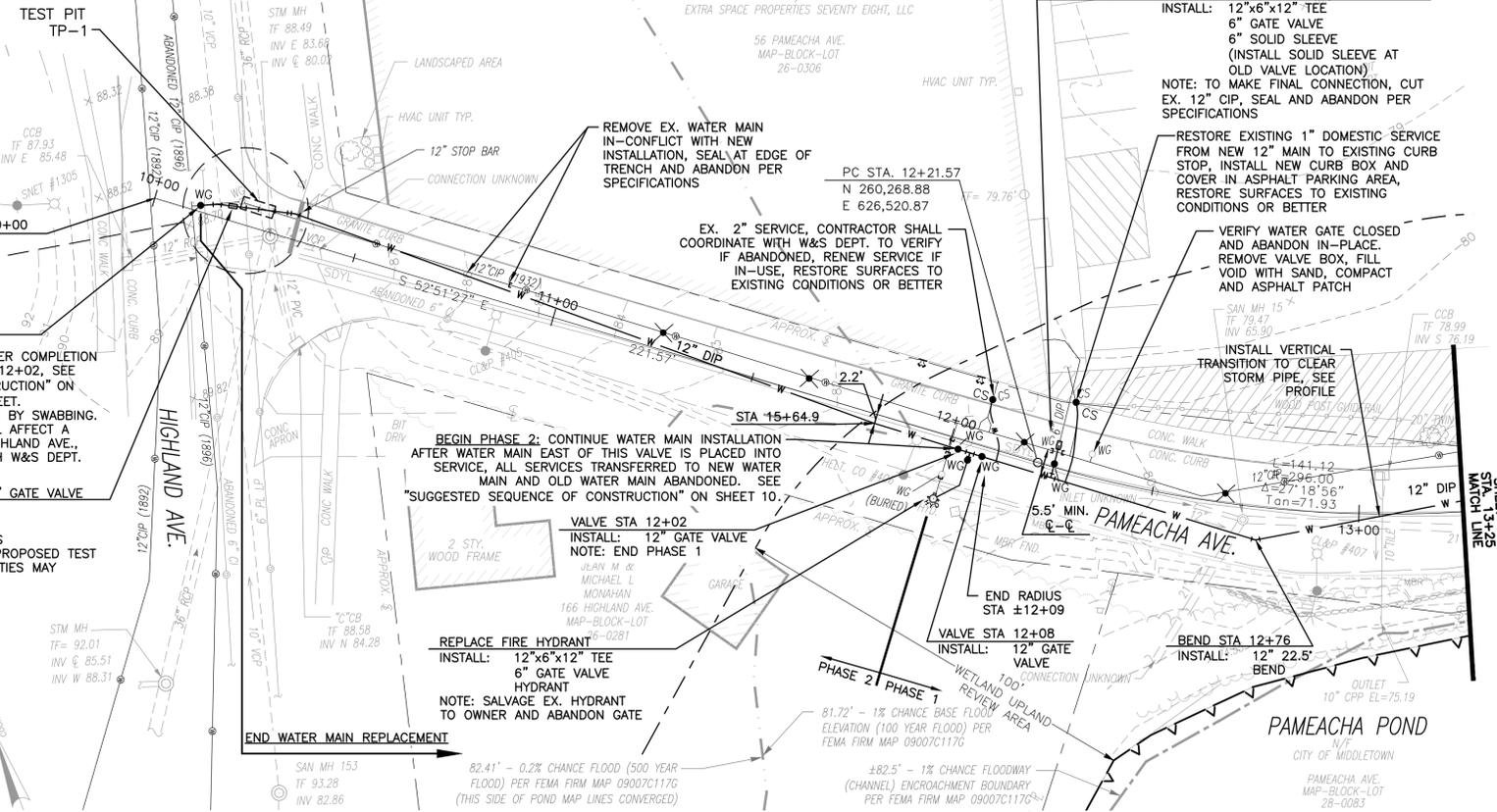
**TEST PIT NOTES:**  
 TP-1: COORDINATE WITH ENGINEER 2 DAYS IN ADVANCE OF MAKING TEST PIT TO ALLOW ENGINEER TO BE ON-SITE DURING EXCAVATION. EXCAVATE A 3' WIDE x 6' LONG TRENCH WITHIN 6" OF THE EXISTING ROAD SURFACE AT LOCATION OF PROPOSED WATER MAIN TO LOCATE THE CONDITIONS AND DEPTH OF THE EXISTING 36" RCP STORM PIPE, 6" PL LP GAS MAIN AND ELEVATION OF EXISTING WATER MAIN AT THE VALVE AND STORM PIPE. MAKE PHOTOGRAPHIC RECORDS AND REPORT DEPTH FINDINGS IN RELATION TO NEARBY STORM MANHOLE TO ENGINEER AS SOON AS POSSIBLE.



**12" VALVE INSTALLATION**  
 INSTALL: 12" GATE VALVE  
 NOTE: VALVE TO BE INSTALLED AFTER COMPLETION OF WATER MAIN TO VALVE AT STA 12+02, SEE "SUGGESTED SEQUENCE OF CONSTRUCTION" ON SHEET 10 AND DETAIL 'A' THIS SHEET. INSTALL VALVE AS REPAIR, SANITIZE BY SWABBING. SHUT DOWN IS REQUIRED AND WILL AFFECT A MINIMUM OF 3 PROPERTIES ON HIGHLAND AVE., COORDINATE SHUTDOWN LIMITS WITH W&S DEPT.

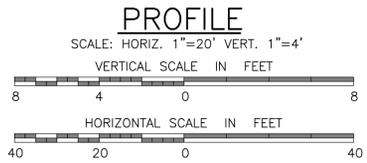
**FINAL CONNECTION TO PROPOSED 12" GATE VALVE**  
 INSTALL: (2) 12" 22.5' BENDS  
 (1) 12" SOLID SLEEVE  
 (2) 12" VERTICAL OFFSETS  
 NOTE: BASED ON THE OUTCOME OF PROPOSED TEST PIT TP-1, FITTING TYPES AND QUANTITIES MAY REQUIRE MODIFICATION

WHEN MAKING FINAL CONNECTIONS TO EXISTING WATER MAIN, THE CONTRACTOR SHALL NOTE THE FOLLOWING:  
 - MAKE CONNECTION TO NEW 12" VALVE INSTALLED PREVIOUSLY.  
 - CONTRACTOR SHALL DISINFECT NEW PAMEACHA AVE WATER MAIN BY MEANS APPROVED BY THE ENGINEER, THIS MAY REQUIRE INSTALLATION OF CORPORATION STOPS FOR AIR BLEEDING, TESTING AND INJECTION PURPOSES. ANY ADDITIONAL FITTINGS REQUIRED FOR SANITATION PURPOSES SHALL BE INCLUDED IN THE UNIT PRICE OF THE WATER MAIN.  
 - ONCE DISINFECTION IS COMPLETED, CONTRACTOR SHALL FLUSH THE WATER MAIN FROM THE NEW HYDRANT AT STA 12+05.  
 - PHASE 2 OF THE INSTALLATION HAS NO KNOWN SERVICES TO BE TRANSFERRED.



**DETAIL A** PAMEACHA AVE AND HIGHLAND AVE DETAIL OF WATER MAIN CONNECTION EXIST. CONDITIONS  
 NOT TO SCALE

SEE SHEET 10 FOR NOTES AND SUGGESTED CONSTRUCTION SEQUENCE



		100 Great Meadow Road   Sixth Floor Wethersfield, Connecticut 06109 P: 860 436 5600 F: 860 436 5601	
DESIGNED: CCC/GHM DATE: ARTHUR T. BATES CT P.E. No. 34066		DRAWN: GHM/MJS SCALE: AS SHOWN	
CHECKED: ATB PROJECT NO: 19482		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT <b>WATER MAIN IMPROVEMENTS</b> STA. 10+00 TO 13+25 COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1	

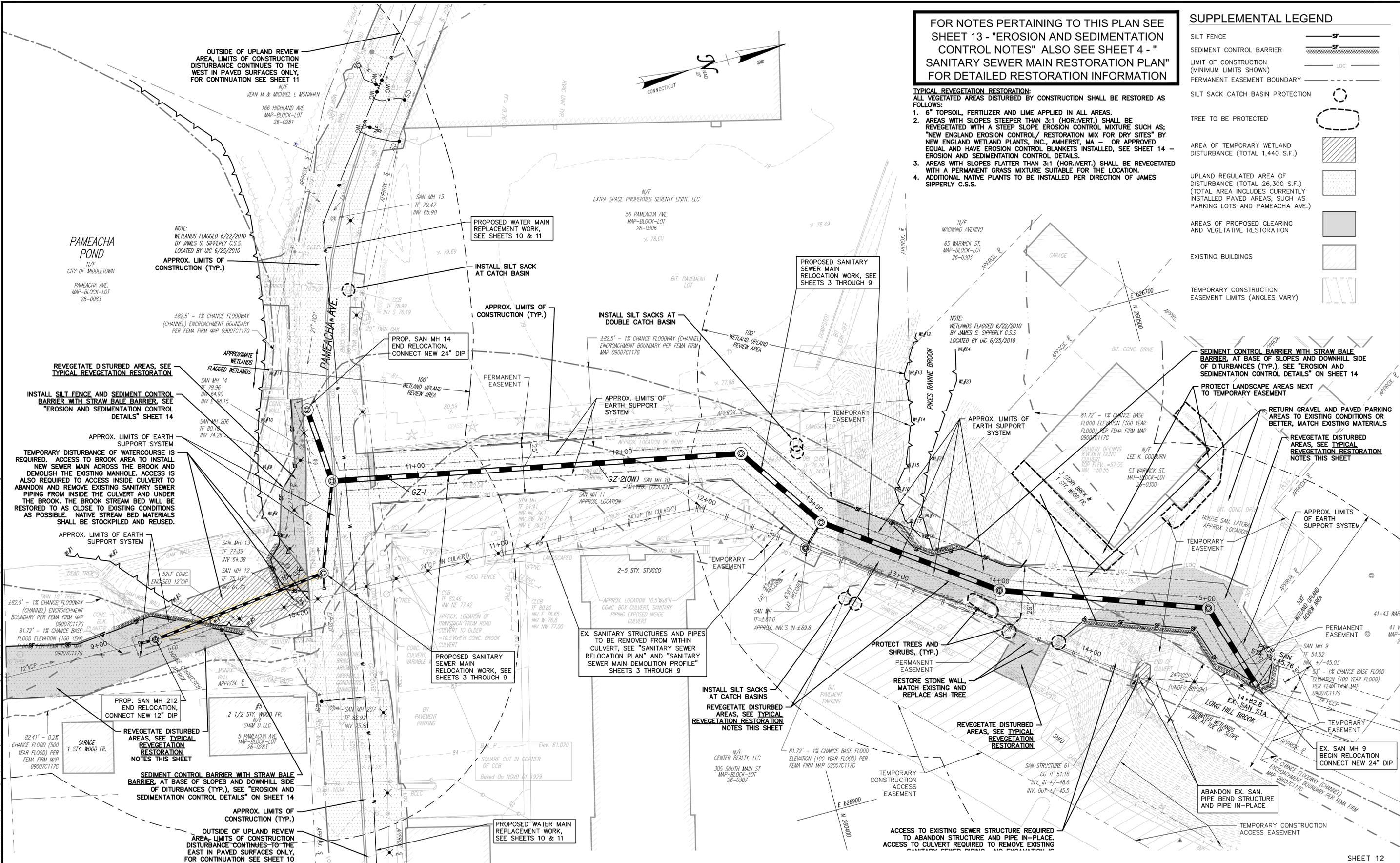
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 PLOT DATE: Jun 29 2020 3:49pm  
 CONSULTANT FILE NAME: \3\001 - Projects\Middletown\19482 - Pameacha Re-design\5 Civil\CAD Working - combined with PWD\10-11-WATERMAIN.dwg

**FOR NOTES PERTAINING TO THIS PLAN SEE SHEET 13 - "EROSION AND SEDIMENTATION CONTROL NOTES" ALSO SEE SHEET 4 - "SANITARY SEWER MAIN RESTORATION PLAN" FOR DETAILED RESTORATION INFORMATION**

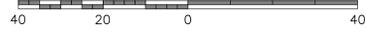
**SUPPLEMENTAL LEGEND**

SILT FENCE	
SEDIMENT CONTROL BARRIER	
LIMIT OF CONSTRUCTION (MINIMUM LIMITS SHOWN)	
PERMANENT EASEMENT BOUNDARY	
SILT SACK CATCH BASIN PROTECTION	
TREE TO BE PROTECTED	
AREA OF TEMPORARY WETLAND DISTURBANCE (TOTAL 1,440 S.F.)	
UPLAND REGULATED AREA OF DISTURBANCE (TOTAL 26,300 S.F.) (TOTAL AREA INCLUDES CURRENTLY INSTALLED PAVED AREAS, SUCH AS PARKING LOTS AND PAMEACHA AVE.)	
AREAS OF PROPOSED CLEARING AND VEGETATIVE RESTORATION	
EXISTING BUILDINGS	
TEMPORARY CONSTRUCTION EASEMENT LIMITS (ANGLES VARY)	

- TYPICAL VEGETATION RESTORATION:**  
ALL VEGETATED AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AS FOLLOWS:
- 6" TOPSOIL, FERTILIZER AND LIME APPLIED IN ALL AREAS.
  - AREAS WITH SLOPES STEEPER THAN 3:1 (HOR. VERT.) SHALL BE REVEGETATED WITH A STEEP SLOPE EROSION CONTROL MIXTURE SUCH AS "NEW ENGLAND EROSION CONTROL/ RESTORATION MIX FOR DRY SITES" BY NEW ENGLAND WETLAND PLANTS, INC., AMHERST, MA - OR APPROVED EQUAL AND HAVE EROSION CONTROL BLANKETS INSTALLED, SEE SHEET 14 - EROSION AND SEDIMENTATION CONTROL DETAILS.
  - AREAS WITH SLOPES FLATTER THAN 3:1 (HOR. VERT.) SHALL BE REVEGETATED WITH A PERMANENT GRASS MIXTURE SUITABLE FOR THE LOCATION.
  - ADDITIONAL NATIVE PLANTS TO BE INSTALLED PER DIRECTION OF JAMES SIPPERLY C.S.S.



**PLAN**  
SCALE: 1"=20'  
HORIZONTAL SCALE IN FEET



SHEET 12

**PRIMELLI**  
100 Great Meadow Road | Sixth Floor  
Wethersfield, Connecticut 06109  
P: 860 436 5600 F: 860 436 5601

**CITY OF MIDDLETOWN**  
WATER AND SEWER DEPARTMENT  
**EROSION AND SEDIMENTATION CONTROL PLAN**

DESIGNED	CCC/GHM	DRAWN	GHM/MJS	CHECKED	ATB
DATE	2/29/2020	SCALE	1"=20'	PROJECT NO.	19482
ARTHUR T. BATES	DATE	DESCRIPTIONS	REVISIONS		
CT P.E. No. 34066					

COMBINED SEWER OVERFLOW SEPARATION PROJECT  
PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS  
PROBLEM AREA No. 12 - CONTRACT No. 17A1

Xref (A) : X-PAMEACHA-SAN DESIGN : X-2004-Design PAMEACHA WATER : X-PAMEACHA WATER : X-305 SANIAN LLC2010 : 2004-EASEMENTS FOR SURVEY : X-04-RELOCATION PLAN : 26-34-RWD PAMEACHA 3D Design  
 insularie Layout: 12-EROSION PLAN  
 PLOT DATE: Jun. 29. 2020 15:50pm  
 CONSULTANT FILE NAME: I:\001 - Projects\Middletown\19482 - Pameacha Water\12-EROSION CONTROL PLAN-REVISED.dwg

**EROSION AND SEDIMENTATION CONTROL PLAN NOTES**

- SEE SHEET 2 – GENERAL NOTES, LEGEND AND STANDARD ABBREVIATIONS.
- OTHER PERMANENT EASEMENTS ARE KNOWN TO EXIST ON THE AFFECTED PROPERTIES AND ARE NOT REPRESENTED ON THIS PLAN.
- WETLANDS FLAGGED ON 6/22/2010 BY JAMES S. SIPPERLY C.S.S. AND LOCATED BY UIC 6/25/2010.
- 100' WETLAND UPLAND REVIEW AREAS SHOWN ARE FROM SURFICIAL WETLANDS ONLY. NO REVIEW LIMITS ARE SHOWN FROM SUBSURFACE WATERCOURSE IN CONCRETE CULVERT.
- NO WORK ON THIS SITE SHALL BE INITIATED BY THE CONTRACTOR UNTIL A PRE-CONSTRUCTION MEETING WITH OWNER AND THE PROJECT ENGINEER IS PERFORMED. THE DEMOLITION CONTRACTOR SHOULD BE AWARE OF ANY SITE INFORMATION AVAILABLE SUCH AS GEOTECHNICAL AND ENVIRONMENTAL REPORTS, AS WELL AS HAVE CALL BEFORE YOU DIG MARK OUTS OF EXISTING UTILITIES COMPLETED PRIOR TO MEETING.
- THE DEMOLITION OF PIPES AND CONCRETE SHALL CONFORM TO CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CTDEEP) PERMIT REQUIREMENTS AND CITY OF MIDDLETOWN INLAND WETLANDS AND WATERCOURSE AGENCY PERMIT REQUIREMENTS.
- CONTRACTOR TO COMPLY WITH REQUIREMENTS OF CGS SECTION 22A, 430B GENERAL PERMITS FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES AND WITH CTDEEP RECORD KEEPING AND INSPECTION REQUIREMENTS.
- THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING CONSTRUCTION ACTIVITIES. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, AND OR PROPERTY CORNERS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT (800) 922-4455, 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND DRAINAGE LOCATIONS.
- THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOBSITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY, AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
- THE CONTRACTOR SHALL ADHERE TO ALL OSHA FEDERAL STATE AND LOCAL REGULATIONS, INCLUDING CONFINED SPACE, WHILE REMOVING SANITARY SEWER PIPE FROM WITHIN CONCRETE CULVERT. IF THE CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID BY THE CONTRACTOR.
- THE EROSION AND SEDIMENTATION CONTROL DRAWING IS ONLY INTENDED TO DESCRIBE THE EROSION AND SEDIMENTATION CONTROL TREATMENT FOR THIS SITE. SEE EROSION AND SEDIMENTATION CONTROL PLAN, DETAILS AND CONSTRUCTION SEQUENCE.
- THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THIS EROSION AND SEDIMENTATION CONTROL PLAN. CONTRACTOR SHALL SUPPLY 24 HOUR CONTACT FOR EROSION AND SEDIMENTATION REPRESENTATIVE. THIS RESPONSIBILITY INCLUDES THE PROPER INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED WITH CONSTRUCTION ON THE SITE OF THE REQUIREMENTS AND OBJECTIVES OF THIS PLAN, INFORMING THE GOVERNING AUTHORITY OR INLAND WETLANDS AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
- A BOND MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION AND SEDIMENTATION CONTROL INSTALLATION AND MAINTENANCE. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY OF MIDDLETOWN REGARDING THE EROSION CONTROL BOND.
- THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENTATION CONTROLS IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE CITY OF MIDDLETOWN. THE CONTRACTOR SHALL KEEP A COPY OF THE GUIDELINES ON-SITE FOR REFERENCE DURING CONSTRUCTION.
- SILT FENCE AND OTHER SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO WORK.
- ADDITIONAL AND/OR ALTERNATIVE EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, CITY OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED.
- THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROLS BEFORE AND AFTER EACH STORM, OR AT LEAST WEEKLY, TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND SHALL MAKE REPAIRS WHERE NECESSARY.
- THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIALS (HAY BALES, SILT FENCE, JUTE MESH, ETC.) ON-SITE FOR MAINTENANCE AND EMERGENCY REPAIRS.
- PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING AT THE DRIP LINE OR AS SHOWN WITH SNOW FENCE, ORANGE SAFETY FENCE, OR

- EQUIVALENT FENCING. ANY LIMB TRIMMING SHOULD BE DONE BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.
- INSTALL PERIMETER EROSION AND SEDIMENTATION CONTROLS PRIOR TO CLEARING OR CONSTRUCTION. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SILT FENCE UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE FENCE.
  - STOCKPILING OF EXCAVATED MATERIAL WILL BE ALLOWED PER SPECIFICATION SECTION 100 AND SHEETS 21 AND 22. ONLY CLEAN SOIL WILL BE ALLOWED FOR BACKFILL AND FINISHING PURPOSES, UNLESS NOTED OTHERWISE.
  - THE CONTRACTOR SHALL MINIMIZE LAND DISTURBANCES, AND SHALL SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE, MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
  - MAINTAIN EXISTING PAVED AREAS FOR CONSTRUCTION STAGING. STORMWATER CATCH BASIN STRUCTURES SHALL BE MAINTAINED WITH THE USE OF SILT SACKS.
  - EXCAVATED MATERIAL FROM SILT FENCE INSTALLATION SHALL BE STOCKPILED ON UPHILL SIDE OF SILT FENCE.
  - INSTALL SILT FENCE ACCORDING TO MANUFACTURER'S INSTRUCTION. ENSURE THAT LOWER EDGE OF FABRIC IS BURIED INTO THE GROUND. SILT FENCE SHALL BE MIRAFI ENVIROFENCE, AMOCO SILT STOP OR EQUIVALENT APPROVED BY SITE ENGINEER. FILTER FABRIC USED SHALL BE MIRAFI 100X OR EQUIVALENT.
  - USE NEW HAY BALES AND REPLACE THEM WHENEVER THEIR CONDITION DETERIORATES BEYOND REASONABLE USABILITY. STAKE HAY BALES SECURELY INTO GROUND AND BUTT TIGHTLY TOGETHER TO PREVENT UNDERCUTTING AND BYPASSING.
  - DEWATERING OF ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CTDEEP) GUIDELINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CTDEEP PERMITS REQUIRED FOR DEWATERING DISCHARGES.
  - WATER REMOVED DURING DEWATERING ACTIVITIES SHOULD NOT BE DISCHARGED TO THE GROUND SURFACE, A SURFACE WATER BODY OR TO GROUNDWATER IF THE GROUNDWATER SAMPLE COLLECTED FROM A WELL WITHIN THE PROPOSED SEWER MAIN ALIGNMENT EXCEEDS THE SURFACE WATER PROTECTION CRITERIA (SWPC) AND GROUNDWATER PROTECTION CRITERIA (GWPC). HOWEVER, IF SETTLING OR FILTERING OF GROUNDWATER RESULTS IN GROUNDWATER QUALITY THAT MEETS THE REMEDIATION STANDARD REGULATION (RSRs), THEN DISCHARGE TO THE GROUND, A SURFACE WATER BODY OR TO GROUNDWATER IS AN OPTION (DEPENDENT ON LOCAL REGULATIONS CONCERNING DEWATERING DISCHARGES). COLLECTED GROUNDWATER FROM DEWATERING ACTIVITIES REQUIRES A PERMIT TO DISCHARGE TO GROUND, SANITARY SEWER OR AREA STORM DRAINS IF THE GROUNDWATER IS NOT TREATED AND THE QUALITY OF GROUNDWATER IS CONSISTENT WITH THE ANALYTICAL RESULTS FROM THE ENVIRONMENTAL STUDY. LOCAL AND STATE REGULATIONS MAY REQUIRE FILTERING AND/OR OTHER PRETREATMENT TO MEET DISCHARGE PERMIT REQUIREMENTS REGARDLESS OF PRE-CHARACTERIZATION ANALYTICAL RESULTS FOR GROUNDWATER. CONSIDERATION SHOULD BE GIVEN TO CLEANING SEDIMENT FROM STORAGE TANK(S) USED DURING DEWATERING AND THESE SEDIMENT MATERIALS SHALL BE INCLUDED IN THE SOIL MANAGEMENT PLAN FOR THE PROJECT. SEE THE "ENVIRONMENTAL SERVICES, PAMEACHA AVENUE SANITARY SEWER, MIDDLETOWN, CONNECTICUT" AND THE "GEOTECHNICAL REPORT PAMEACHA AVENUE SANITARY SEWER, MIDDLETOWN, CONNECTICUT" PREPARED BY GZA GEOENVIRONMENTAL, INC. AND INCLUDED IN THE CONTRACT DOCUMENTS.
  - ANY ALLOWED DEWATERING PUMP DISCHARGE SHALL BE DIRECTED TO A SEDIMENT CONTROL DEVICE SUCH AS TEMPORARY PITS, SEDIMENT BASINS, GEOTEXTILE SLUDGE AND SEDIMENT FILTER TUBES (SILT BAGS) OR GRASS FILTERS WITHIN THE APPROVED LIMIT OF DISTURBANCE. DISCHARGE TO STORM SEWERS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR.
  - SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. OTHER DUST CONTROL MEASURES TO BE USED AS NECESSARY INCLUDES WATERING DOWN DISTURBED AREAS, USING CALCIUM CHLORIDE, AND COVERING LOADS ON DUMP TRUCKS.
  - PERIODICALLY CHECK ACCUMULATED SEDIMENT LEVELS AT THE CONTROL MEASURES DURING CONSTRUCTION AND CLEAN ACCUMULATED SILT WHEN NECESSARY OR WHEN ONE FOOT OF SEDIMENT HAS ACCUMULATED. CLEAN ACCUMULATED SEDIMENT FROM CATCH BASIN SUMPS AS NECESSARY. REMOVE ACCUMULATED SEDIMENT FROM BEHIND HAY BALES AND SILT FENCE WHEN LEVEL REACHES HALF THE HEIGHT OF THE HAY BALE OR FENCE. DISPOSE OF SEDIMENT LEGALLY EITHER ON OR OFF SITE.
  - MAINTAIN ALL PERMANENT AND TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK, SWEEP PARKING LOT AND REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS WHEN AUTHORIZED BY LOCAL GOVERNING AUTHORITY.

**EROSION CONTROL NOTES**

**EROSION AND SEDIMENTATION CONTROL NARRATIVE**  
 THE EROSION AND SEDIMENTATION CONTROL MEASURES WERE DEVELOPED TO PROTECT THE EXISTING BROOKS, ROADWAYS AND STORM DRAINAGE SYSTEMS, FROM SEDIMENT LADEN SURFACE RUNOFF CAUSED BY EROSION. A CONSTRUCTION SEQUENCE IS PROVIDED TO SHOW SURFACE RUNOFF CONTROLS PRIOR TO AND DURING THE PROJECT CONSTRUCTION.

**CONSTRUCTION SCHEDULE**  
 THE ANTICIPATED STARTING DATE FOR CONSTRUCTION IS APRIL 2021 WITH COMPLETION ANTICIPATED BY APRIL 2022. APPROPRIATE EROSION AND SEDIMENTATION CONTROL MEASURES AS DESCRIBED HEREIN, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITY.

**CONTINGENCY EROSION AND SEDIMENTATION CONTROL PLAN**  
 THE CONTRACTOR SHALL INSTALL SPECIFIED EROSION AND SEDIMENTATION CONTROL MEASURES AND WILL BE REQUIRED TO MAINTAIN THEM IN THEIR INTENDED FUNCTIONING CONDITION. THE AGENTS OF THE DIRECTOR OF PUBLIC WORKS, ZONING ENFORCEMENT OFFICER AND/OR SITE ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE SUPPLEMENTAL MAINTENANCE OR ADDITIONAL MEASURES IF WARRANTED BY FIELD CONDITIONS.

**CONSTRUCTION SEQUENCE**  
 THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:  
 1. CONTACT CITY OF MIDDLETOWN AGENT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT.

- INSTALL SILT SACKS AT ALL CATCH BASINS AFFECTED BY THE CONSTRUCTION. INSTALL HAY BALES AND SILT FENCE AT PERIMETER OF PROPOSED SITE DISTURBANCE AND INSTALL ALL EROSION CONTROL MEASURES INDICATED ON THE EROSION AND SEDIMENTATION CONTROL PLAN. INSTALL SEDIMENT BASINS IF REQUIRED AT LOW AREAS OF SITE OR AS ORDERED BY THE ENGINEER OR AS SHOWN ON THESE PLANS.
- REMOVE ALL OVERGROWTH AND VEGETATION NOT TO REMAIN. REMOVE DEBRIS FROM SITE.
- INSTALLATION OF PROPOSED SANITARY SEWER SHALL BEGIN AT THE DOWNSTREAM MANHOLE AND PROGRESS TOWARD PAMEACHA AVE.
- CONTRACTOR SHALL STAGE THE INSTALLATION OF THE SANITARY SEWER TO ALLOW THE RE-ESTABLISHMENT OF ORIGINAL GRADES AND INSTALL FINISHED SURFACES IN AREAS THAT WILL NOT REQUIRE FURTHER DISTURBANCE AS SOON AS POSSIBLE.
- REMOVE SEDIMENT FROM BEHIND SILT FENCES AND HAY BALES. SEDIMENT REMOVAL SHALL BE ON A PERIODIC BASIS AS DETERMINED BY INSPECTIONS. INSPECTION OF EROSION CONTROL MEASURES SHALL BE ON A WEEKLY BASIS OR EVERY SIGNIFICANT RAINFALL OF 1/2" OR MORE IN A 24 HOUR PERIOD. SEDIMENT COLLECTED SHALL BE DEPOSITED AND SPREAD EVENLY UPLAND ON SLOPES DURING CONSTRUCTION, OR DISPOSED OFF-SITE IN AN APPROVED DISPOSAL AREA.
- DEMOLITION OF THE EXISTING SANITARY SEWER MAIN SHALL BE COMPLETED ONLY AFTER THE NEW SANITARY SEWER MAIN IS IN OPERATION.
- DEMOLITION WORK WITHIN THE STORM CULVERT CONTAINING THE OLD SANITARY SEWER MAIN AND OUTSIDE THE CULVERT, SHALL TAKE PLACE AS QUICKLY AS POSSIBLE TO LIMIT POTENTIAL IMPACTS UPON THE WATERCOURSE.
- ONCE THE SANITARY SEWER INSTALLATION PORTION OF THE PROJECT IS COMPLETE THE WATER MAIN INSTALLATION SHALL PROCEED.
- WATER MAIN INSTALLATION SHALL BE KEPT WITHIN THE RIGHT OF WAY HARD SURFACES AND ARE NOT TO PROCEED OUTSIDE PAVED AREAS. ALL STORM DRAINAGE INLET STRUCTURES SHALL BE MAINTAINED WITH SILT SACK INSERTS.
- ALL EROSION AND SEDIMENTATION MEASURES ARE TO REMAIN IN PLACE UNTIL THE DISTURBED AREAS ARE STABILIZED. FOLLOWING STABILIZATION OF THE SITE AND UPON DIRECTION OF THE CITY OF MIDDLETOWN AGENT, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

**SEQUENCE OF OPERATIONS**

- OPERATION I – CLEARING**  
 1. ALL PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSTALLED PRIOR TO THE START OF CLEARING OPERATIONS.  
 2. FOLLOWING INSTALLATION OF THE INITIAL EROSION AND SEDIMENTATION CONTROL MEASURES, THE CONTRACTOR SHALL NOT PROCEED WITH OPERATION II UNTIL THE ENGINEER HAS INSPECTED AND APPROVED ALL INSTALLATIONS.  
 3. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING OPERATION I SO AS NOT TO DISTURB EROSION AND SEDIMENTATION CONTROL STRUCTURES.  
 4. FOLLOWING THE COMPLETION OF OPERATION I, ALL AREAS SHALL BE STABILIZED WITH TOPSOIL AND SEEDING OR PROCESSED AGGREGATE AS SOON AS PRACTICAL.
- OPERATION II – ROUGH GRADING**  
 1. DURING THE INSTALLATION OF NEW SANITARY SEWER MAINS AND STRUCTURES, GRADES SHALL BE RETURNED TO THEIR ORIGINAL CONDITION, UNLESS NOTED OTHERWISE.  
 2. ALL EXCAVATED MATERIAL SHALL BE STOCKPILED AND REUSED AS BACKFILL IN THE TRENCH AS SHOWN IN THE STANDARD TRENCH DETAILS. ALL SURPLUS CONTROLLED MATERIALS SHALL BE CLASSIFIED AND REMOVED FROM THE SITE TO AN APPROVED DISPOSAL FACILITY. ONLY CLEAN SOIL WILL BE ALLOWED FOR FINISHING PURPOSES.
- OPERATION III – BACKFILLING**  
 1. PRIOR TO BACKFILLING, ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PROPERLY IMPLEMENTED, MAINTAINED AND FULLY INSTALLED, AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THIS PLAN.  
 2. EXCEPT WHERE EXISTING TRENCH MATERIAL IS REUSED. ALL BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN CONTRACT SPECIFICATIONS.
- OPERATION IV – STABILIZATION OF SITE.**  
 1. ONCE ROUGH GRADING IS COMPLETE, INSTALL FINISH SURFACES TO STABILIZE SITE. MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES AS NECESSARY.  
 2. SEED SITE WITH GRASS IF NEXT PHASE OF PROJECT WILL NOT START FOR MORE THAN 1 MONTH.  
 3. REMOVE ALL TEMPORARY EROSION CONTROL DEVICES ONLY AFTER ALL AREAS HAVE BEEN WELL ESTABLISHED WITH VEGETATION AND THE SITE HAS BEEN INSPECTED AND APPROVED BY THE CITY'S AGENT.

**SEQUENCE FOR INSTALLATION OF SOIL EROSION & SEDIMENTATION CONTROL MEASURES**

- PHASE 1**
- ERECT SILTATION FENCES.
  - PERFORM CLEARING ACTIVITIES.
  - REMOVE DEBRIS FROM THE SITE TO AN APPROVED DUMPING FACILITY.
- PHASE 2**
- INSPECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROL STRUCTURES.
  - BEGIN INSTALLATION OF SANITARY SEWER MAIN AND APPURTENANCES.
- PHASE 3**
- INSPECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROL STRUCTURES.
  - PERFORM FILLING OF EXCAVATIONS FOR INSTALLATION OF SEWER MAIN ACTIVITIES.
- PHASE 4**
- INSPECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROL STRUCTURES.
  - PERFORM FINAL GRADING AND UNIMPROVED AREAS STABILIZATION AND RESTORE HARD SURFACES TO ORIGINAL CONDITION OR BETTER.
- PHASE 5**
- MAINTAIN SILTATION FENCES UNTIL COVER IS COMPLETELY STABILIZED.
  - PERFORM FINAL INSPECTION.
  - REMOVE SILTATION FENCES, CLEAN, AND RESTORE ALL AREAS.

**INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES**

- SILTATION FENCE
  - DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.
  - POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND HAMMER THE POST AT LEAST 1.5 FEET INTO THE GROUND.
  - LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN-OFF.
  - BACKFILL THE TRENCH AND COMPACT.
- HAY BALES
  - BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PARALLEL TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
  - BALES SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER.
  - EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES.
  - THE GAPS BETWEEN BALES SHALL BE WEDGED WITH STRAW TO PREVENT WATER LEAKAGE.
  - THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE, TO ENSURE THAT RUN-OFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER, BUT NOT AROUND IT.
- SILT SACKS
  - REMOVE DRAIN GRATE.
  - INSERT SILT SACK.
  - REPLACE GRATE TO HOLD SILT SACK IN POSITION.

**OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES**

- SILTATION FENCE
  - ALL SILTATION FENCES SHALL BE INSPECTED WEEKLY OR AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POSTS SHALL BE REPLACED AND PROPERLY REPOSITIONED IN ACCORDANCE WITH THIS PLAN.
  - SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THEY EXCEED A HEIGHT OF ONE FOOT.
- HAY BALES
  - ALL HAY BALE RINGS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE PROMPTLY MADE AS NEEDED.
  - DEPOSITS SHALL BE REMOVED AND CLEANED—OUT IF ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.
- SILT SACKS
  - ALL STORMWATER INLET STRUCTURES SHALL HAVE SILT SACKS INSPECTED FOLLOWING EACH RAINFALL. REMOVE SEDIMENT FROM SILT SACK WHEN FULL, CLEAN AND RE-INSTALL.
  - REPLACE SILT SACKS IF THEY BECOME DAMAGED OR WORN OUT.

THE RESPONSIBLE PARTY TO INSTALL/ MAINTAIN THE EROSION/ SEDIMENTATION CONTROLS SHALL BE THE CONTRACTOR. THE CITY OF MIDDLETOWN ZONING ENFORCEMENT OFFICER WILL BE NOTIFIED IMMEDIATELY UPON ANY CHANGE OF THE RESPONSIBLE PARTY.

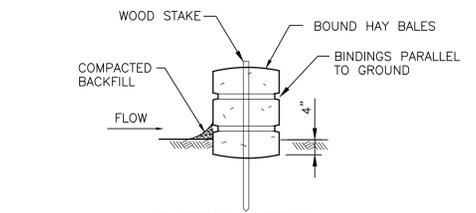


**CITY OF MIDDLETOWN  
 WATER AND SEWER DEPARTMENT  
 EROSION AND SEDIMENTATION  
 CONTROL NOTES**

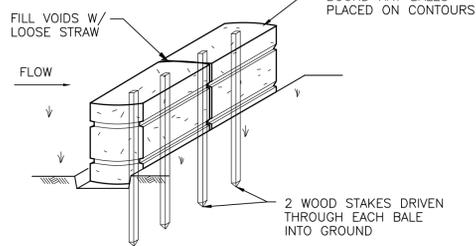
COMBINED SEWER OVERFLOW SEPARATION PROJECT  
 PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS  
 PROBLEM AREA No. 12 – CONTRACT No. 17A1

DESIGNED CCC/GHM	DRAWN GHM/MJS	CHECKED ATB
DATE ARTHUR T. BATES CT P.E. No. 34066	DATE 2/29/2020	PROJECT NO. 19482
REVISIONS		

Xref (s): X-BORDER  
 mauliere Layout: 13-EROSION NOTES.NTS  
 PLOT DATE: Jun 29 2020 3:51pm  
 CONSISTANT FILE NAME: I:\001 - Projects\Middletown\19482 - Pameacha Realign\5 Civil\CAD Working - combined with PWD\13-Erosion Control Notes.dwg



**EMBEDDING DETAIL**

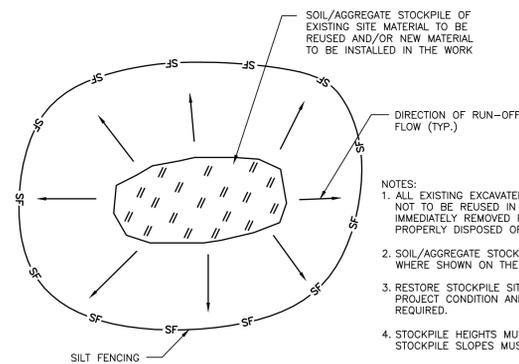


**ANCHORING DETAIL**

- NOTES:**
1. STRAW BALE BARRIERS SHOULD NOT BE USED FOR MORE THAN 3 MONTHS.
  2. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BARRIER.

**STRAW BALE DETAIL**

NOT TO SCALE



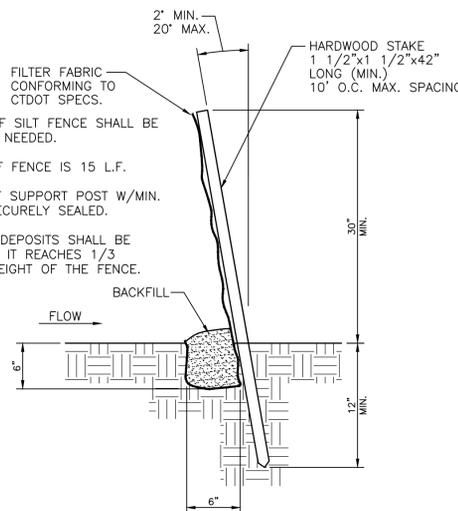
**MATERIALS STOCKPILE DETAIL**

NOT TO SCALE

- NOTES:**
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
  2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
  3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
  4. STOCKPILE HEIGHTS MUST NOT EXCEED 12'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
  5. ALL STOCKPILES OF REGULATED MATERIALS SHALL BE PROTECTED AS SPECIFIED BY THE SOILS AND MATERIAL MANAGEMENT PLAN.

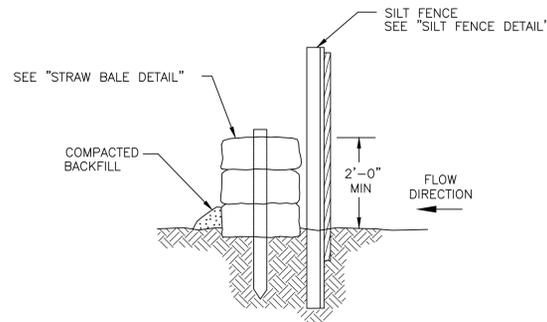
**NOTES:**

1. MAINTENANCE OF SILT FENCE SHALL BE PERFORMED AS NEEDED.
2. MIN. LENGTH OF FENCE IS 15 L.F.
3. JOINTS ONLY AT SUPPORT POST W/MIN. 6" OVERLAP. SECURELY SEALED.
4. SEDIMENTATION DEPOSITS SHALL BE REMOVED WHEN IT REACHES 1/3 THE GROUND HEIGHT OF THE FENCE.



**SILT FENCE DETAIL**

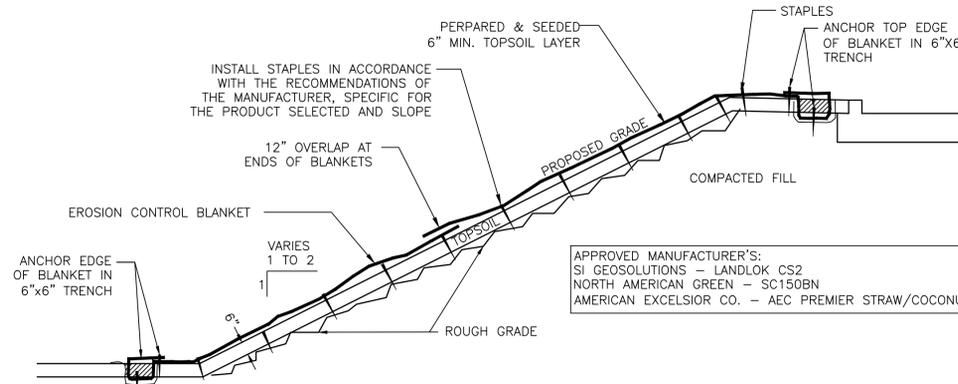
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**SEDIMENT CONTROL BARRIER WITH STRAW BALE BARRIER**

NOT TO SCALE

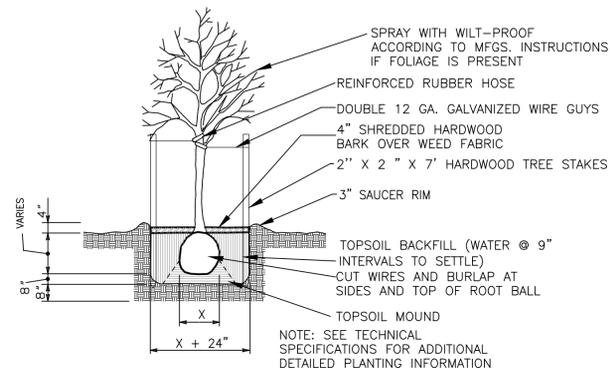
BACKFILL AND COMPACT THE EXCAVATED SOIL AS SHOWN ON THE UPHILL SIDE OF THE BARRIER TO PREVENT PIPING



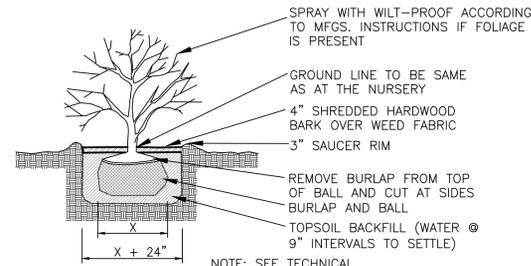
**EROSION CONTROL BLANKET SECTION DETAIL**

NOT TO SCALE

APPROVED MANUFACTURER'S:  
SI GEOSOLUTIONS - LANDLOK CS2  
NORTH AMERICAN GREEN - SC150BN  
AMERICAN EXCELSIOR CO. - AEC PREMIER STRAW/COCONUT

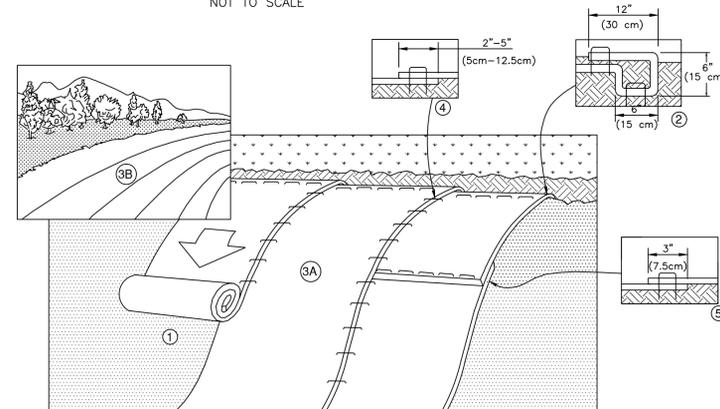


**TREE PLANTING DETAIL**



**SHRUB PLANTING DETAIL**

NOTE: SEE TECHNICAL SPECIFICATIONS FOR ADDITIONAL DETAILED PLANTING INFORMATION

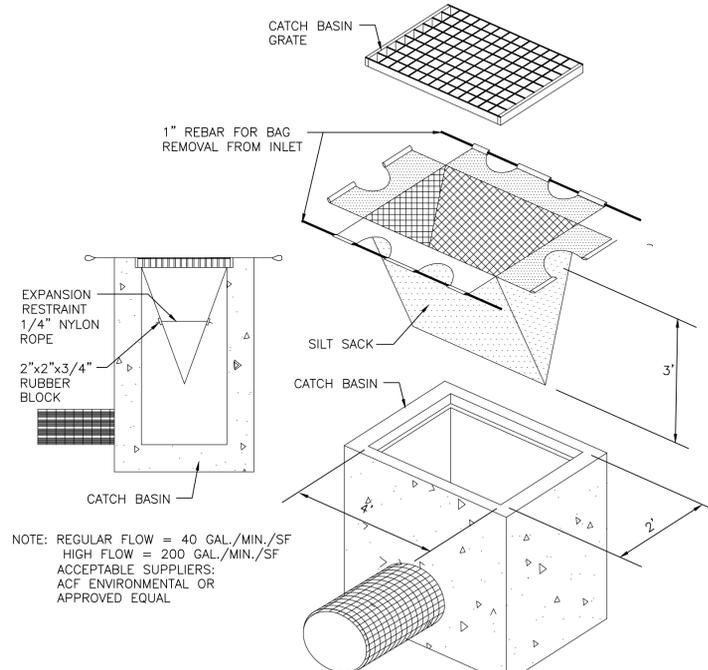


1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.

NOTE: \*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

**EROSION CONTROL BLANKET SLOPE STABILIZATION DETAIL**

NOT TO SCALE



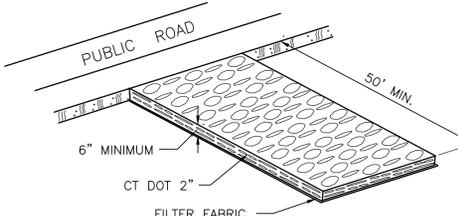
**SILT SACK DETAIL**

NOT TO SCALE

NOTE: REGULAR FLOW = 40 GAL./MIN./SF  
HIGH FLOW = 200 GAL./MIN./SF  
ACCEPTABLE SUPPLIERS:  
ACF ENVIRONMENTAL OR  
APPROVED EQUAL

GRADATION TABLE						
SQUARE MESH SIEVES	CONN. DOT NO. 3 2" CRUSHED GRAVEL		ASTM C-33 NO. 2		ASTM C-33 NO. 3	
	% FINER	% FINER	% FINER	% FINER	% FINER	% FINER
2 1/2 INCHES	100	90-100	100	100	100	100
2 INCHES	95-100	35-70	90-100	90-100	90-100	90-100
1 1/2 INCHES	35-70	0-15	35-70	35-70	35-70	35-70
1 1/4 INCHES	0-25	---	0-25	---	---	---
1 INCHES	0-10	---	0-15	---	0-15	---
3/4 INCHES	---	0-5	---	0-5	---	0-5
1/2 INCHES	---	0-5	---	0-5	---	0-5
3/8 INCHES	---	---	---	---	---	---

SOURCE: 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL



**CONSTRUCTION ENTRANCE (ANTI-TRACKING PAD)**

NOT TO SCALE

		100 Great Meadow Road   Sixth Floor Wethersfield, Connecticut 06109 P: 860 436 5600 F: 860 436 5601		CITY OF MIDDLETOWN WATER AND SEWER DEPARTMENT	
		DESIGNED CCC/GHM	DRAWN GHM	CHECKED ATB	<b>EROSION AND SEDIMENTATION CONTROL DETAILS</b>
ARTHUR T. BATES CT P.E. No. 34066	DATE REVISIONS	DATE 2/29/2020	SCALE NOT TO SCALE	PROJECT NO. 19482	COMBINED SEWER OVERFLOW SEPARATION PROJECT PAMEACHA AVENUE CULVERT & WATER MAIN IMPROVEMENTS PROBLEM AREA No. 12 - CONTRACT No. 17A1

Xref (s): 1=Border  
 msclosure  
 RFP DATE: Jun 29, 2020 3:51pm  
 CONSULTANT FILE NAME: 13,001 - Projects\Middletown\19482 - Pameacha Re-design\5 Civil\CAD Working - combined with PWD\14\_erosion\_details.dwg

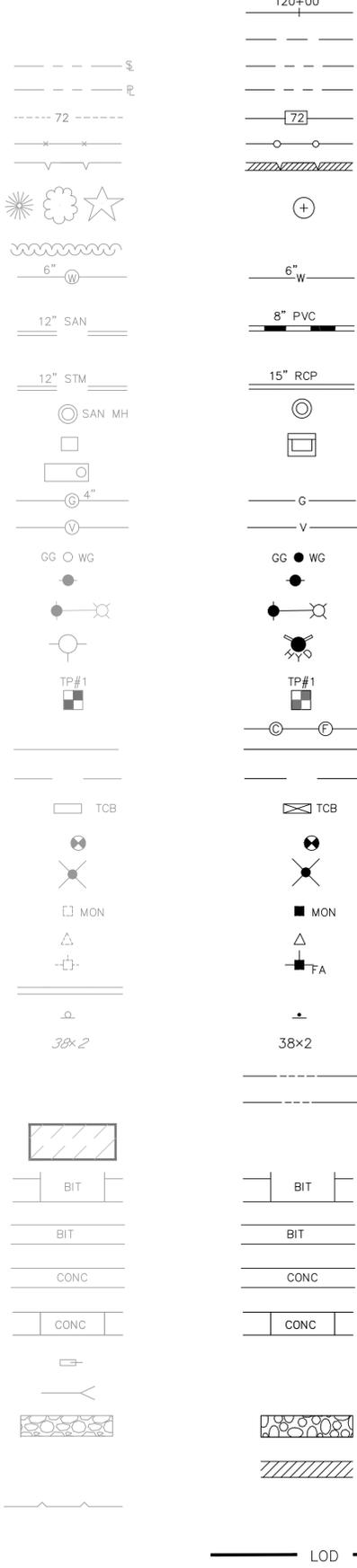


LEGEND

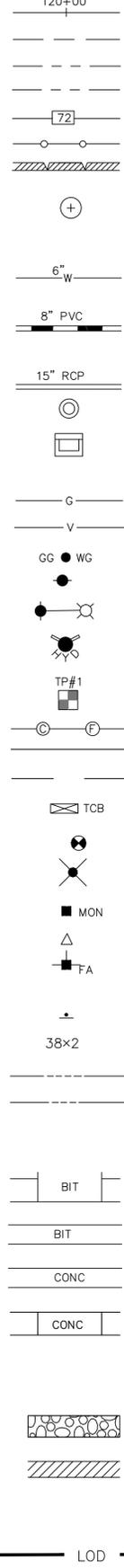
DESCRIPTION

BASE LINE  
 CENTER LINE  
 R.O.W. LINE or STREET LINE (APPROX)  
 PROPERTY LINE or PARCEL BOUNDARY  
 CONTOUR  
 FENCE  
 RETAINING WALL  
 TREES OR SHRUBS  
 HEDGES  
 WATER MAIN  
 SANITARY SEWER (SIZE AND MATERIAL AS NOTED)  
 STORM SEWER (SIZE AND MATERIAL AS NOTED)  
 MANHOLE (TYPE IDENTIFIED BY NAME)  
 CATCH BASIN or INLET  
 UTILITY VAULT (OWNER IDENTIFIED BY NAME)  
 UTILITY SERVICE (OWNER IDENTIFIED BY NAME)  
 UTILITY OVERHEAD WIRES  
 GAS GATE or WATER GATE  
 UTILITY POLE  
 UTILITY POLE WITH LIGHT  
 HYDRANT  
 TEST PIT & NO.  
 SLOPE LIMIT (CUT OR FILL)  
 CURB LINE  
 EDGE OF PAVEMENT (NO CURB)  
 TRAFFIC CONTROL BOX  
 SOIL BORING LOCATION  
 ANY STRUCTURE or PIPE TO BE ABANDONED (SYMBOL PLACED ON STRUCTURE)  
 MONUMENT  
 CONTROL POINTS  
 FIRE ALARM BOX  
 CONDUIT (TYPE IDENTIFIED BY LETTER)  
 SIGN  
 SPOT ELEVATION (X INDICATES SPOT LOCATION)  
 PERMANENT EASEMENT LINE  
 TEMPORARY CONSTRUCTION EASEMENT LINE  
 BUILDINGS  
 BITUMINOUS DRIVEWAY  
 BITUMINOUS WALK  
 CONCRETE DRIVEWAY/ WALK  
 DEPRESSED CURB & CONC. APRON  
 MAIL BOX  
 GUY WIRE  
 RIP RAP  
 PAVEMENT MILLING TRANSITION AREA  
 WETLANDS  
 LIMIT OF DISTURBANCE (MINIMUM LIMITS SHOWN)

EXISTING



PROPOSED



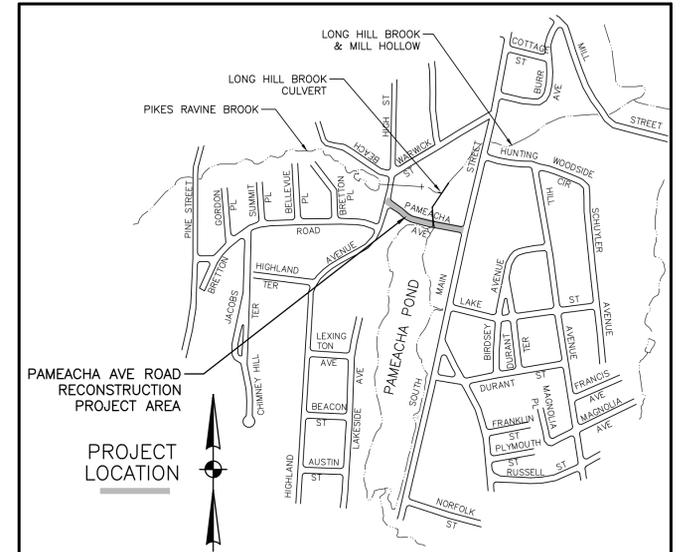
LOD

STANDARD ABBREVIATIONS

APPROX. A.O.B.E.	APPROXIMATE AS ORDERED BY THE ENGINEER	MAX. MB	MAXIMUM MAIL BOX
ASPH.	ASPHALT	MBR	METAL BEAM RAIL
BCLC	BITUMINOUS CONC. LIP CURB	MIN.	MINIMUM
BIT.	BITUMINOUS	MH	MANHOLE
BRD.	BOARD	MISC.	MISCELLANEOUS
BLDG.	SURVEY BASELINE	MON.	MONUMENT
BLK'G	BLOCKING	MTD.	MOUNTED
BM	BENCH MARK	MTL.	METAL
BM.	BEAM	N	NORTH/NORTHING
B.O.	BOTTOM OF	NAD	NORTH AMERICAN DATUM
BOT.	BOTTOM	NE	NORTHEAST
B.S.	BOTH SIDES	N/F NF	NOT FOUND
BS	BLUE STONE	NGVD	NATIONAL GEODETIC VERTICAL DATUM
BWL	BROKEN WHITE LINE	N.I.C.	NOT IN CONTRACT
C	CUT	NO.	NUMBER
CB	CATCH BASIN	N.T.S.	NOT TO SCALE
CC	CONCRETE CURB	NW	NORTHWEST
CCB	TYPE "C" CATCH BASIN	O.D.	OUTSIDE DIAMETER
C.I.	CAST IRON	OFF.	OFFSET
CIP	CAST IRON PIPE	OH.	OVERHEAD
CPP	CORRUGATED PLASTIC PIPE	OPP.	OPPOSITE
CL	CENTER LINE	O.C.	ON CENTER
CLF	CHAIN LINK FENCE	OPN'G	OPENING
CL&P	CONNECTICUT LIGHT & POWER CO.	PC	POINT OF CURVATURE
CLCB	TYPE "CL" CATCH BASIN	PCC	POINT OF COMPOUND CURVE
CLR.	CLEAR	PI	POINT OF INTERSECTION
CMP	CORRUGATED METAL PIPE	PL	PLATE
CMU	CONCRETE MASONRY UNIT	PL	PROPERTY LINE
C.O.	CLEAN OUT	P.O.T.	POINT OF TRANSITION
COMB	COMBINED	PROP.	PROPOSED
CONC.	CONCRETE	PT	POINT OF TANGENT
CONTR.	CONTRACTOR	PVC	POLYVINYL CHLORIDE PIPE -OR- POINT OF VERTICAL CURVATURE
CONT.	CONTINUOUS	PVI	POINT OF VERTICAL INTERSECTION
COR	CORNER	PVT	POINT OF VERTICAL TANGENT
CP	CONTROL POINT	PVM'T	PAVEMENT RADIUS
C.P.	CONCRETE PLUG	R/RAD.	RADIUS
CS	CURB STOP	RCE	REINFORCED CONCRETE CULVERT END
CTDOT	CONNECTICUT DEPT. OF TRANSPORTATION	RCP	REINFORCED CONCRETE PIPE
CTR.	CENTER	REQ'D	REQUIRED
CW	CONCRETE WALK	REINF.	REINFORCED
D	DRAINAGE	ROW	RIGHT OF WAY
DBL.	DOUBLE	S/SAN.	SOUTH OR SANITARY
DIA.	DIAMETER	SDR	STANDARD DIMENSION RATIO
DIP	DUCTILE IRON PIPE	SDYL	SOLID WHITE STOP BAR
DH	DRILL HOLE	SE	SOUTHEAST
DHN	DOUBLE HEAD NAIL	SF/S.F.	SQUARE FEET
DMH	DRAINAGE MANHOLE	SHT.	SHEET
DN.	DOWN	SMH	SANITARY MANHOLE
DWG.	DRAWING	SNET	SOUTHERN NEW ENGLAND TELEPHONE
E	EAST/EASTING	ST.	STREET
E/ELEC.	ELECTRIC	STA	STATION
EA.	EACH	STL.	STEEL
ECC	EXTRUDED CONCRETE CURB	STD.	STANDARD
E.G.	EXISTING GRADE	STM	STORM
EL/ELEV.	ELEVATION	STRUCT.	STRUCTURAL
EXIST./EX.	EXISTING	§	STREET LINE
EQ.	EQUAL	SW	SLATE WALK OR SOUTHWEST
F	FILL	SWL	SOLID WHITE LINE
F.G.	FINISHED GRADE	SWSB	SOLID DOUBLE YELLOW LINE
FT/FT.	FEET	T/TEL.	TELEPHONE OR TANGENT DISTANCE FOR CURVE
G	GAS	T.B.D.	TO BE DETERMINED
GC	GENERAL CONSTRUCTION CONTRACTOR	TF	TOP OF FRAME
GG	GAS GATE	T.O.	TOP OF
GRD.	GRADE	TRM	TURF REINFORCING MAT
HVAC	HEAT VENTILATION/ AIR CONDITIONING	TYP.	TYPICAL
HELT	HARTFORD ELECTRIC LIGHT CO.	U.O.N.	UNLESS OTHERWISE NOTED
HOR	HORIZONTAL	UTIL.	UTILITY
HP	HIGH POINT	VC	VERTICAL CURVE
HT.	HEIGHT	VCP	VITRIFIED CLAY PIPE
HYD.	FIRE HYDRANT	VERT	VERTICAL
INV	INVERT	V.I.F.	VERIFY IN FIELD
L	LENGTH OF CURVE	VTP	VITRIFIED TILE PIPE
LBF	POUNDS PER FOOT	W	WATER OR WEST
LF	LINEAR FEET	W/	WITH
LP	LOW POINT/ LOW PRESSURE/ LIGHT POLE	WG	WATER GATE
LVC	LENGTH OF VERTICAL CURVE	WV	WATER VALVE
		WL	WETLAND FLAG DESIGNATION

GENERAL NOTES

- ALL ELEVATIONS REFER TO THE NORTH AMERICAN DATUM OF 1929. COORDINATES REFER TO THE STATE OF CONNECTICUT COORDINATE SYSTEM.
- SURVEY AND TOPOGRAPHIC DATA IS FROM FIELD SURVEY BY UNITED INTERNATIONAL CORPORATION, PERFORMED APRIL 1997, UPDATED JUNE 2010, MAY 2011, SEPTEMBER 2016.
- NORTH ARROW AND BEARINGS ARE BASED UPON CONNECTICUT COORDINATE SYSTEM (NAD 1927 & NGVD 1929).
- WETLANDS FLAGGED ON 6/22/2010 BY JAMES S. SIPPERLY C.S.S LOCATED BY UNITED INTERNATIONAL CORPORATION (UIC) 6/25/2010.
- ROAD SURFACE IMPROVEMENTS SHALL BE PER THE CITY OF MIDDLETOWN PUBLIC WORKS DEPARTMENT STANDARD DETAILS & SPECIFICATIONS AND THE PROJECT SPECIFICATIONS AND PLANS.
- IMPROVEMENTS IN ANY STATE HIGHWAY SHALL BE PER THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 816, LATEST EDITION.
- SCREENED TOPOGRAPHY, LINWORK AND LETTERING INDICATES EXISTING CONDITIONS, BOLD LINWORK AND LETTERING INDICATES PROPOSED WORK.
- THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOBSITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY, AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
- IF IT IS NECESSARY TO REMOVE, RELOCATE AND/OR REPLACE STREET SIGNS, MAIL BOXES, TRAFFIC SIGNS OR OTHER SIGNS DURING OR AFTER CONSTRUCTION, IT SHALL BE DONE BY THE CONTRACTOR AND INCLUDED FOR IN THE GENERAL COST OF THE WORK.
- TEMPORARY LAND OWNER CONSTRUCTION EASEMENTS AND ACCESS RIGHTS TO BE OBTAINED BY THE CITY OF MIDDLETOWN. SHOULD THE CONTRACTOR DESIRE OR REQUIRE ADDITIONAL CONSTRUCTION EASEMENTS OR ACCESS RIGHTS, BEYOND THAT PROVIDED BY THE OWNER, HE SHALL OBTAIN THEM AT HIS OWN EXPENSE AND FORWARD COPIES TO THE ENGINEER.
- LOCATIONS OF EXISTING UTILITY LINES AS SHOWN HAVE BEEN TAKEN FROM UTILITY COMPANY MAPS AND THE FIELD SURVEY AND AS SUCH ARE APPROXIMATE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL FIELD LOCATIONS. THE CONTRACTOR SHALL NOTIFY CALL BEFORE YOU DIG (1-800-922-4455) OF ALL PROPOSED EXCAVATIONS AT LEAST FOUR FULL WORKING DAYS PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL DIG TEST PITS, AS SHOWN ON THE PLANS AND WHEN DIRECTED BY THE ENGINEER, TO DETERMINE THE SIZE, LOCATION AND DEPTH OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. ANY CONFLICTS FOUND WITH THE PROPOSED CONSTRUCTION SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IF REDESIGN IS REQUIRED TO AVOID CONFLICTS, THE CONTRACTOR SHALL BEGIN WORK IN NON - CONFLICT AREAS. THE CONTRACTOR SHALL NOT BE ENTITLED TO PAYMENT FOR ANY DELAY CAUSED BY THE REDESIGN.
- ALL UTILITY LINES DAMAGED BY CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE PERTINENT UTILITY COMPANY IMMEDIATELY NOTIFIED. COST OF WORK TO REPAIR THE UTILITY SHALL BE AT THE CONTRACTOR'S EXPENSE.
- OVERHEAD UTILITY LINES OR GUY LINES, WHICH REQUIRE TEMPORARY OR PERMANENT RELOCATION DUE TO THE CONTRACTOR'S WORK, SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITY COMPANY.
- ALL OPEN EXCAVATIONS SHALL BE PROTECTED TO ELIMINATE PEDESTRIAN CONFLICT AND FOR PROTECTION OF WORKERS. PLATES SHALL COVER OPEN EXCAVATION WHEN CONSTRUCTION ENDS FOR THE DAY. PLATES IN VEHICULAR TRAFFIC AREAS SHALL HAVE EDGE PROTECTION AS NECESSARY.
- CONTRACTOR SHALL SUPPORT ALL UTILITIES EXCAVATED PER INDIVIDUAL UTILITY COMPANY REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR ALL ROAD SURFACE REPAIRS INVOLVED WITH THE CONSTRUCTION AND ANY CITY WORK ASSOCIATED WITH THIS PROJECT. THE CITY ROAD SECTION IS AS DETAILED ON THESE PLANS. PATCHING IN STATE HIGHWAYS SHALL BE PER CTOT REQUIREMENTS.
- THE CITY WILL REPAINT ALL PAVEMENT MARKINGS AND STRIPING AFTER THE ROAD RECONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES, UNLESS THEY ARE DESIGNATED TO BE REMOVED.
- ALL STORM DRAIN LATERALS FROM BUILDINGS SHALL BE 6" PVC SDR-35 PIPE AND SHALL HAVE A MINIMUM SLOPE OF 2%, UNLESS OTHERWISE NOTED OR DIRECTED. LOCATION OF STORM DRAIN LATERALS MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- EXISTING STORM SEWER PIPES, CATCH BASINS AND OTHER MATERIALS REMOVED DURING CONSTRUCTION SHALL BE PROPERLY DISPOSED OF AT A LANDFILL IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. ALL COSTS FOR DISPOSAL SHALL BE INCLUDED IN THE PERTINENT PAY ITEMS AND AT NO EXTRA COST TO THE OWNER.
- TYPICAL MINIMUM BURY DEPTHS FOR UTILITIES ARE:
  - GAS 3'
  - TELEPHONE 2.5'
  - ELECTRIC 2.5'
  - TRAFFIC CONDUITS 1.5'
  - CABLE (CTV) 2'
  - WATER MAIN 4'-6"
  - SANITARY 8'
- REINFORCED CONCRETE STORM PIPE SHALL BE CLASS IV, WALL 'B', UNLESS OTHERWISE NOTED ON THE PLANS. WHERE REINFORCED CONCRETE PIPE (OR PERFORATED PLASTIC PIPE) IS TO BE SLOTTED, WRAP FILTER FABRIC AROUND THE PIPE, AS DETAILED.
- ALL CATCH BASINS SHALL BE TYPE 'C' UNLESS OTHERWISE NOTED.
- ALL STORM SEWER LENGTHS ARE MEASURED HORIZONTALLY, BETWEEN CATCH BASIN OR MANHOLE CENTERS, ALL INVERTS ARE COMPUTED AS DETAILED FROM THE INSIDE FACE OF THE STRUCTURE. PIPE SLOPES ARE SHOWN IN PERCENT GRADE.
- ALL DRAINAGE STRUCTURES, NEW OR EXISTING SHALL BE CLEARED OF ALL DEBRIS, DIRT LEAVES, ETC. PRIOR TO THE COMPLETION OF THE PROJECT.
- ALL NEW STREET CURBING SHALL BE EXTRUDED CONCRETE, EXCEPT AS OTHERWISE NOTED.
- PROJECT SIGNS SHALL BE PLACED AT LOCATIONS DESIGNATED ON THE "TRAFFIC CONTROL PLAN".



LOCATION MAP NOT TO SCALE

ARTHUR T. BATES CT P.E. No. 34066	Date	Description
		REVISIONS

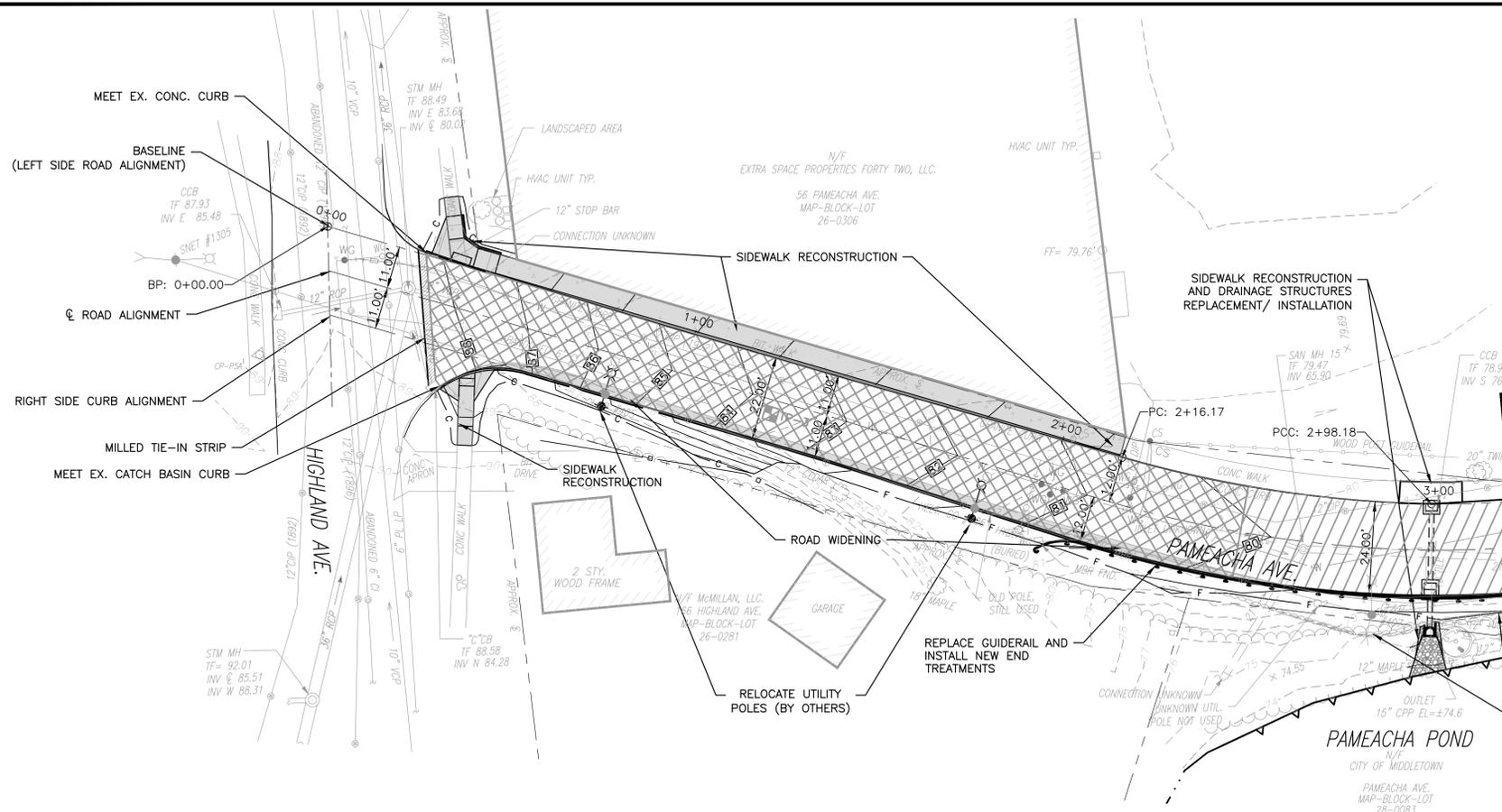
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Drawn:	GM
Checked:	ATB
Date:	6/30/17
Scale:	AS NOTED
Project No.:	16009

**PRIMEAL**  
 100 Great Meadow Road | Sixth Floor  
 Wethersfield, Connecticut 06109  
 P: 860 436 5600 F: 860 436 5601

CITY OF MIDDLETOWN  
 PUBLIC WORKS DEPARTMENT  
**PAMEACHA AVENUE  
 ROAD REHABILITATION PROJECT**  
 GENERAL NOTES, LEGEND  
 AND STANDARD ABBREVIATIONS

Sheet: **25**

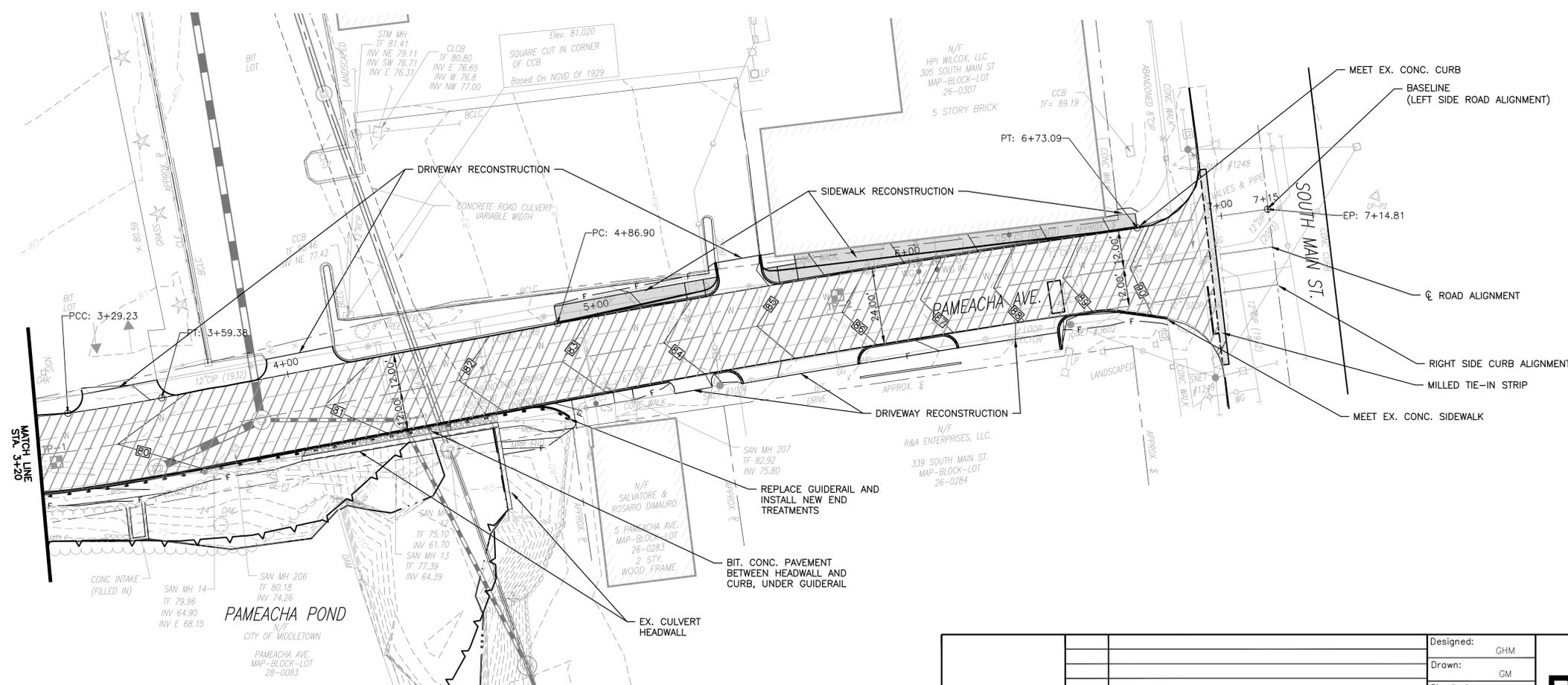
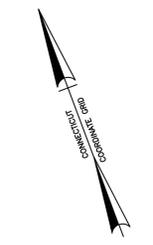
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### SUPPLEMENTAL LEGEND

- APPROXIMATE AREA ±12" THICK BITUMINOUS CONC. PAVEMENT
- APPROXIMATE AREA ±6" THICK BITUMINOUS CONC. PAVEMENT
- AREAS OF ROAD WIDENING AND SIDEWALK RECONSTRUCTION

- ### NOTES
- THIS PLAN IS A SIMPLIFIED VIEW OF THE RECONSTRUCTION REQUIREMENTS. REFER TO THE SHEETS 24-31 FOR MORE DETAILED INFORMATION. SEE SHEET 25 FOR PROJECT GENERAL NOTES.
  - THE ROAD RECONSTRUCTION PART OF THIS PROJECT SHALL TAKE PLACE AFTER ALL THE SEWER AND WATER MAIN WORK IS COMPLETED, SEE SHEETS 1-24, WITH EXCEPTION THAT THE PERMANENT PAVEMENT TRENCH REPAIRS IN THE STREET FOR THAT PORTION OF THE PROJECT WILL NOT BE COMPLETED.
  - THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN.
  - CONTRACTOR SHALL MAINTAIN EXISTING PAVED SURFACES FOR AS LONG AS POSSIBLE AND CONSTRUCT ROAD WIDENING AREAS AND SIDEWALK RECONSTRUCTION BEFORE REHABILITATING THE ENTIRE ROAD LIMITS.
  - CONTRACTOR SHALL SAW CUT EXISTING BITUMINOUS PAVEMENT WHENEVER POSSIBLE TO FACILITATE REMOVAL AND INSTALLATION OF ALL PROPOSED SIDEWALKS.
  - THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL BITUMINOUS CONCRETE AND ROAD BASE MATERIALS AS REQUIRED WITHIN THE LIMITS OF ROAD RECONSTRUCTION.
  - RESTORATION NOTES: LIMITS OF CUT/ FILL AND WHERE PROPOSED IMPROVEMENTS MEET EX. STRUCTURES ARE THE LIMITS OF CONSTRUCTION.



Designed:	GHM
Drawn:	GM
Checked:	ATB
Date:	6/30/17
Scale:	1" = 20'
Project No.:	16009

Date	Description
ARTHUR T. BATES CT P.E. No. 34066	REVISIONS

100 Great Meadow Road | Sixth Floor  
Wethersfield, Connecticut 06109  
P: 860 436 5600 F: 860 436 5601

CITY OF MIDDLETOWN  
PUBLIC WORKS DEPARTMENT

PAMEACHA AVENUE  
ROAD REHABILITATION PROJECT

ROAD RECONSTRUCTION  
OVERVIEW PLAN

Sheet: **26**

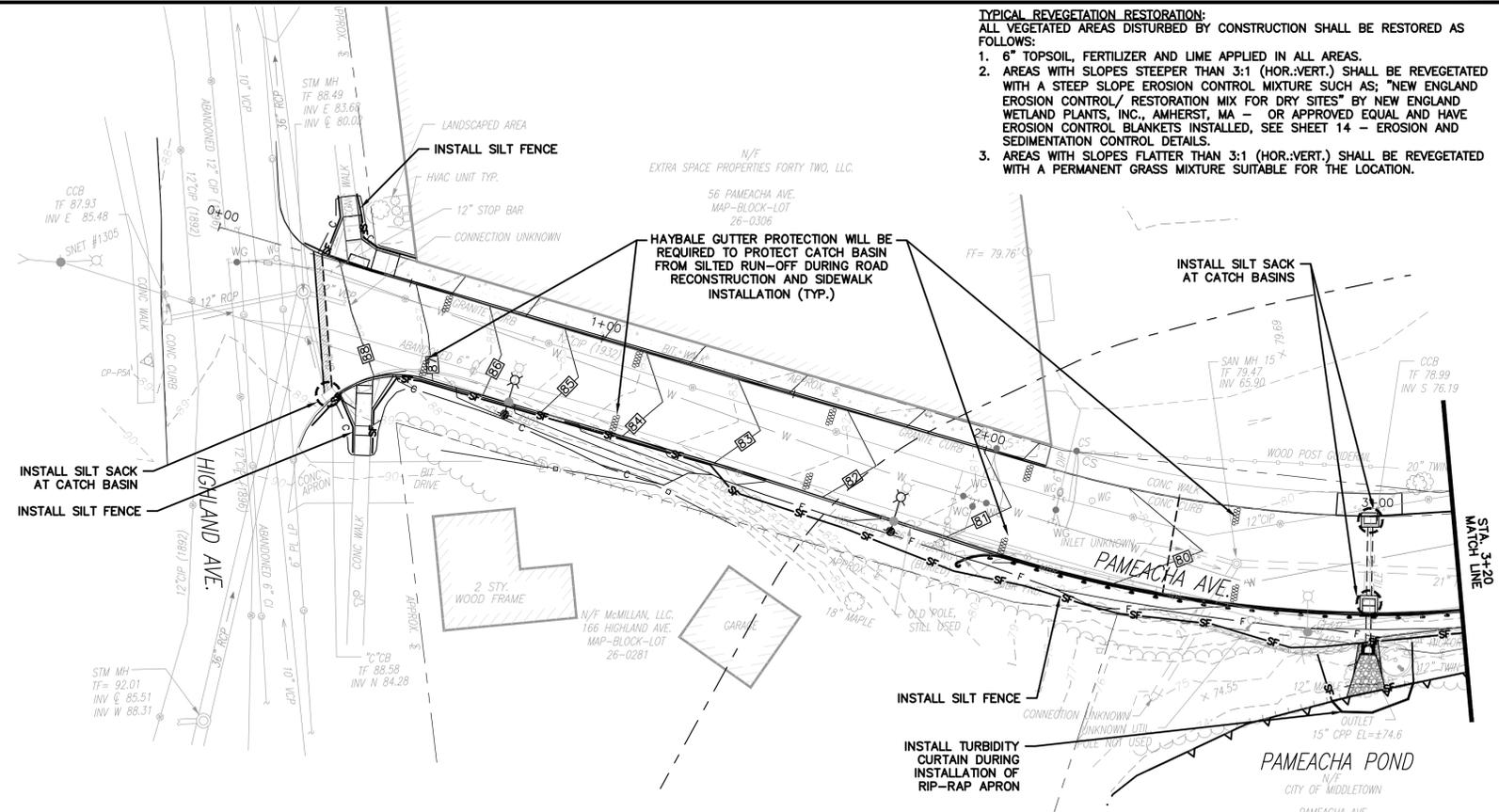
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 msc: Layout: 26-Reliab Pon  
 PLOT DATE: Jun 29, 2017 10:53am  
 CONSULTANT FILE NAME: 13.001 - Project:Middletown\16009 - Pameacha PWD\16 Civil\2017 Working\26-Reliab Pameacha

**EROSION AND SEDIMENTATION CONTROL PLAN NOTES**

- SEE SHEET 25 - GENERAL NOTES, LEGEND AND STANDARD ABBREVIATIONS.
- WETLANDS FLAGGED ON 6/22/2010 BY JAMES S. SIPPERLY C.S.S. AND LOCATED BY UIC 6/25/2010.
- 100' WETLAND UPLAND REVIEW AREAS SHOWN ARE FROM SURFICIAL WETLANDS ONLY. NO REVIEW LIMITS ARE SHOWN FROM SUBSURFACE WATERCOURSE IN CONCRETE CULVERT.
- NO WORK ON THIS SITE SHALL BE INITIATED BY THE CONTRACTOR UNTIL A PRE-CONSTRUCTION MEETING WITH OWNER AND THE PROJECT ENGINEER IS PERFORMED. THE DEMOLITION CONTRACTOR SHOULD BE AWARE OF ANY SITE INFORMATION AVAILABLE SUCH AS GEOTECHNICAL AND ENVIRONMENTAL REPORTS, AS WELL AS HAVE CALL BEFORE YOU DIG MARK OUTS OF EXISTING UTILITIES COMPLETED PRIOR TO MEETING.
- THE DEMOLITION OF PIPES AND CONCRETE SHALL CONFORM TO CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CTDEEP) PERMIT REQUIREMENTS AND CITY OF MIDDLETOWN INLAND WETLANDS AND WATERCOURSE AGENCY PERMIT REQUIREMENTS.
- CONTRACTOR TO COMPLY WITH REQUIREMENTS OF CGS SECTION 22A, 430B GENERAL PERMITS FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES AND WITH CDEEP RECORD KEEPING AND INSPECTION REQUIREMENTS.
- THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING CONSTRUCTION ACTIVITIES. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, AND OR PROPERTY CORNERS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- THE EROSION AND SEDIMENTATION CONTROL DRAWING IS ONLY INTENDED TO DESCRIBE THE EROSION AND SEDIMENTATION CONTROL TREATMENT FOR THIS SITE. SEE EROSION AND SEDIMENTATION CONTROL PLAN, DETAILS AND CONSTRUCTION SEQUENCE.
- THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THIS EROSION AND SEDIMENTATION CONTROL PLAN. CONTRACTOR SHALL SUPPLY 24 HOUR CONTACT FOR EROSION AND SEDIMENTATION REPRESENTATIVE. THIS RESPONSIBILITY INCLUDES THE PROPER INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED WITH CONSTRUCTION ON THE SITE OF THE REQUIREMENTS AND OBJECTIVES OF THIS PLAN, INFORMING THE GOVERNING AUTHORITY OR INLAND WETLANDS AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
- A BOND MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION AND SEDIMENTATION CONTROL INSTALLATION AND MAINTENANCE. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY OF MIDDLETOWN REGARDING THE EROSION CONTROL BOND.
- THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENTATION CONTROLS IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE CITY OF MIDDLETOWN. THE CONTRACTOR SHALL KEEP A COPY OF THE GUIDELINES ON-SITE FOR REFERENCE DURING CONSTRUCTION.
- SILT FENCE AND OTHER SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO WORK.
- ADDITIONAL AND/OR ALTERNATIVE EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, CITY OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED.
- THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROLS BEFORE AND AFTER EACH STORM, OR AT LEAST WEEKLY, TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND SHALL MAKE REPAIRS WHERE NECESSARY.
- THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIALS (HAY BALES, SILT FENCE, JUTE MESH, ETC.) ON-SITE FOR MAINTENANCE AND EMERGENCY REPAIRS.
- INSTALL PERIMETER EROSION AND SEDIMENTATION CONTROLS PRIOR TO CLEARING OR CONSTRUCTION. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SILT FENCE UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE FENCE.

- STOCKPILING OF EXCAVATED MATERIAL WILL BE ALLOWED PER SPECIFICATION SECTION 100. ONLY CLEAN SOIL WILL BE ALLOWED FOR BACKFILL AND FINISHING PURPOSES, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL MINIMIZE LAND DISTURBANCES, AND SHALL SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDING WITH TACKIFIER.
- MAINTAIN EXISTING PAVED AREAS FOR CONSTRUCTION STAGING. STORMWATER CATCH BASIN STRUCTURES SHALL BE MAINTAINED WITH THE USE OF SILT SACKS.
- EXCAVATED MATERIAL FROM SILT FENCE INSTALLATION SHALL BE STOCKPILED ON UPHILL SIDE OF SILT FENCE.
- INSTALL SILT FENCE ACCORDING TO MANUFACTURER'S INSTRUCTION. ENSURE THAT LOWER EDGE OF FABRIC IS BURIED INTO THE GROUND. SILT FENCE SHALL BE MIRAFI ENVROFENCE, AMOCO SILT STOP OR EQUIVALENT APPROVED BY SITE ENGINEER. FILTER FABRIC USED SHALL BE MIRAFI 100X OR EQUIVALENT.
- USE NEW HAY BALES AND REPLACE THEM WHENEVER THEIR CONDITION DETERIORATES BEYOND REASONABLE USABILITY. STAKE HAY BALES SECURELY INTO GROUND AND BUTT TIGHTLY TOGETHER TO PREVENT UNDERCUTTING AND BYPASSING.
- DEWATERING OF ALL EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CTDEEP) GUIDELINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CTDEEP PERMITS REQUIRED FOR DEWATERING DISCHARGES.
- ANY ALLOWED DEWATERING PUMP DISCHARGE SHALL BE DIRECTED TO A SEDIMENT CONTROL DEVICE SUCH AS TEMPORARY PITS, SEDIMENT BASINS, GEOTEXTILE SLUDGE AND SEDIMENT FILTER TUBES (SILT BAGS) OR GRASS FILTERS WITHIN THE APPROVED LIMIT OF DISTURBANCE. DISCHARGE TO STORM SEWERS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR.
- SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. OTHER DUST CONTROL MEASURES TO BE USED AS NECESSARY INCLUDES WATERING DOWN DISTURBED AREAS, USING CALCIUM CHLORIDE, AND COVERING LOADS ON DUMP TRUCKS.
- PERIODICALLY CHECK ACCUMULATED SEDIMENT LEVELS AT THE CONTROL MEASURES DURING CONSTRUCTION AND CLEAN ACCUMULATED SILT WHEN NECESSARY OR WHEN ONE FOOT OF SEDIMENT HAS ACCUMULATED. CLEAN ACCUMULATED SEDIMENT FROM CATCH BASIN SALS AS NECESSARY. REMOVE ACCUMULATED SEDIMENT FROM BEHIND HAY BALES AND SILT FENCE WHEN LEVEL REACHES HALF THE HEIGHT OF THE HAY BALE OR FENCE. DISPOSE OF SEDIMENT LEGALLY EITHER ON OR OFF SITE.
- MAINTAIN ALL PERMANENT AND TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK, SWEEP PARKING LOT AND REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS WHEN AUTHORIZED BY LOCAL GOVERNING AUTHORITY.

- TYPICAL VEGETATION RESTORATION:**  
ALL VEGETATED AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AS FOLLOWS:
- 6" TOPSOIL, FERTILIZER AND LIME APPLIED IN ALL AREAS.
  - AREAS WITH SLOPES STEEPER THAN 3:1 (HOR.:VERT.) SHALL BE REVEGETATED WITH A STEEP SLOPE EROSION CONTROL MIXTURE SUCH AS: "NEW ENGLAND EROSION CONTROL/ RESTORATION MIX FOR DRY SITES" BY NEW ENGLAND WETLAND PLANTS, INC., AMHERST, MA - OR APPROVED EQUAL AND HAVE EROSION CONTROL BLANKETS INSTALLED, SEE SHEET 14 - EROSION AND SEDIMENTATION CONTROL DETAILS.
  - AREAS WITH SLOPES FLATTER THAN 3:1 (HOR.:VERT.) SHALL BE REVEGETATED WITH A PERMANENT GRASS MIXTURE SUITABLE FOR THE LOCATION.



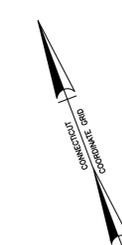
**SUGGESTED CONSTRUCTION SEQUENCE:**

- OBTAIN ALL PERMITS REQUIRED FOR THE PROJECT.
- INSTALL ALL TRAFFIC DETOUR SIGNS AND APPURTENANCES AND CLOSE STREET WHEN ALLOWED BY CITY.
- INSTALL ALL EROSION AND SEDIMENTATION CONTROLS REQUIRED BEFORE BEGINNING CONSTRUCTION. OBTAIN ENGINEER AND CITY APPROVAL FOR INSTALLATION BEFORE BEGINNING WORK.
- BEGIN CONSTRUCTION - REMOVE AND INSTALL PROPOSED STORM WATER STRUCTURES AT STA 2+98 AND RESET LARGE BLOCK STONE WALL AS REQUIRED.
- SAW CUT PAVEMENT IN AREAS REQUIRED FOR SIDEWALK RECONSTRUCTION AND ROAD WIDENING AREAS.
- REMOVE EXISTING SIDEWALK, RAMPS, ETC. IN AREAS OF PROPOSED WORK AND EXCAVATE AS REQUIRED FOR AREAS OF ROAD WIDENING.
- INSTALL ALL PROPOSED SIDEWALKS AND RAMPS.
- REMOVE AND DISPOSE BITUMINOUS ASPHALT PAVEMENT. EXCAVATE AND STOCKPILE EXISTING BASE MATERIAL, TEST STOCKPILES TO DETERMINE DISPOSAL LOCATION. INSTALL NEW BASE MATERIALS AND COMPACT/ GRADE AS REQUIRED.
- INSTALL NEW ROAD PAVEMENTS TO LIMITS AS REQUIRED.
- REPLACE TRAFFIC SIGNAL LIGHT LOOP DETECTORS.
- INSTALL NEW DRIVEWAY CONNECTIONS AND OTHER APPURTENANCES SUCH AS, BUT NOT LIMITED TO, NEW EXTRUDED CONCRETE CURB, BITUMINOUS LIP CURB, GUIDE RAIL, AND RESTORATION OF NON-PAVED SURFACES.
- CONTRACTOR SHALL COORDINATE WITH THE CITY TO INSTALL PAVEMENT MARKINGS.
- ONCE THE CITY AND ENGINEER APPROVES THE PROJECT, CONTRACTOR SHALL REMOVE ALL TRAFFIC DETOUR SIGNS AND APPURTENANCES AND RE-OPEN THE STREET.

THE RESPONSIBLE PARTY TO INSTALL/ MAINTAIN THE EROSION/ SEDIMENTATION CONTROLS SHALL BE THE CONTRACTOR. THE CITY OF MIDDLETOWN ZONING ENFORCEMENT OFFICER WILL BE NOTIFIED IMMEDIATELY UPON ANY CHANGE OF THE RESPONSIBLE PARTY.

**SUPPLEMENTAL LEGEND**

- SILT FENCE — SF —
- CUT LINE — C —
- FILL LINE — F —
- HAYBALE GUTTER PROTECTION — [Symbol] —
- SILT SACK CATCH BASIN PROTECTION — [Symbol] —



Designed:	GHM
Drawn:	GM
Checked:	ATB
Date:	6/30/17
Scale:	1" = 20'
Project No.:	16009

Date	Description

**PRIMEAL**  
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Wethersfield, Connecticut 06109  
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CITY OF MIDDLETOWN  
PUBLIC WORKS DEPARTMENT  
PAMEACHA AVENUE  
ROAD REHABILITATION PROJECT  
EROSION AND SEDIMENTATION CONTROL PLAN AND NOTES

Sheet: **27**

Xref (s): X-BORDER : PWD Pameacha Design : X-PAMEACHA-PR-SEWER : X-PAMEACHA-PR-WATER  
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