CITY OF PORTLAND
PUBLIC WORKS DEPARTMENT

CONTRACT DRAWINGS

MACKWORTH-OCEAN-WALTON
CSO SEPARATION PROJECT
PHASE 1
VOLUME 1

YEAR
APPROVED
2019

ISSUED FOR BID
JANUARY 22, 2019

NATHANIEL SMITH
CITY OF PORTLAND PROJECT ENGINEER

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STATE OF MAINE
DANIEL L RILEY
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LOCATION MAP

NOT TO SCALE

PLANTING SCHEDULE

STREET	STATION	OFFSET	TYPE	APPLICATION	SIZE
MACKWORTH	4+58	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	4+58	RT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	5+81	RT	MED. DECIDUOUS TREE		2.0"
MACKWORTH	6+44	RT	MED. DECIDUOUS TREE		2.0"
MACKWORTH	7+36	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	7+36	RT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	9+86	RT	MED. DECIDUOUS TREE		2.0"
MACKWORTH	10+87	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	10+87	RT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	13+94	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	13+94	RT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MACKWORTH	14+91	RT	MED. DECIDUOUS TREE		2.0"
MACKWORTH	15+45	RT	MED. DECIDUOUS TREE		2.0"
WALTON	2+18	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
WALTON	4+29	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
WALTON	4+29	RT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
WALTON	6+73	RT	MED. DECIDUOUS TREE		2.0"
WALTON	7+06	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
WALTON	7+34	RT	MED. DECIDUOUS TREE		2.0"
WALTON	8+86	RT	MED. DECIDUOUS TREE		2.0"
WALTON	10+29	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
WALTON	13+76	LT	MED. DECIDUOUS TREE	(TREE FILTER)	2.0"
MAYLAND	7+24	LT	MED. DECIDUOUS TREE		2.0"
SAWYER	1+69	LT	MED. DECIDUOUS TREE		2.0"
SAWYER	3+12	LT	MED. DECIDUOUS TREE		2.0"
SAWYER	5+80±	RT	MED. DECIDUOUS TREE		2.0"
SAWYER	6+17±	RT	MED. DECIDUOUS TREE		2.0"

SIGN SCHEDULE

REMOVE AND RESET SIGN AT THESE LOCATIONS

STREET	STATION	OFFSET
MACKWORTH	4+97	RT
MACKWORTH	15+61	RT
MACKWORTH	15+92	RT
OCEAN NORTH	0+52	LT
OCEAN NORTH	0+57	RT
OCEAN NORTH	0+63	LT
OCEAN NORTH	3+70	LT
OCEAN NORTH	3+71	RT
WALTON	0+36	LT
WALTON	4+14	LT
WALTON	4+34	RT
WALTON	4+37	LT
WALTON	7+47	RT
SAWYER	0+29	LT
SAWYER	1+73	LT
FOREST AVE	–	–

LEGEND

GENERAL LINE TYPE

CENTERLINE

EDGE OF PAVEMENT

LEDGE PROFILE

STREET LINE

SURVEY BASE LINE

EXISTING SYMBOLS / PROPOSED SYMBOLS

UNDERDRAIN

STORM DRAIN

SANITARY SEWER

COMBINED SEWER

HOUSE LATERAL

GAS LINE

WATER LINE

CURB

CHAIN LINK FENCE

GUARD RAIL

WOOD RAIL FENCE

STOCKADE FENCE

HYDRAULIC LINE

EXISITING SYMBOLS

CATCH BASIN

SEWER MANHOLE

DRAIN MANHOLE

UTILITY POLE

LIGHT POLE

WATER GATE OR VALVE

WATER SHUT OFF

HYDRANT

GAS VALVE

HANDICAP

HEDGE

SHRUB OR BUSH

DECIDUOUS TREE

CONIFER TREE

PK FOUND

DRILL HOLE FOUND

MONUMENT FOUND

HUB FOUND

TEST PIT

BORING TEST

S1 = TRAFFIC STOP SIGN

PROPOSED SYMBOLS

CATCH BASIN

SEWER MANHOLE

DRAIN MANHOLE

UTILITY POLE

LIGHT POLE

HYDRANT

HANDICAP

HEDGE

SHRUB OR BUSH

DECIDUOUS TREE

CONIFER TREE

PK SET

DRILL HOLE SET

PROPOSED MONUMENT

HUB SET

TEST PIT

REPAIR WITH LOAM AND SEED
PAY ITEM 633.05 W10 THRU W18

RECONSTRUCT BRICK SIDEWALK,
PAY ITEM 608.15

RECONSTRUCT CONCRETE SIDEWALK,
PAY ITEM 608.08

BITUMINOUS PAVEMENT, SEE PLANS

GENERAL NOTES

1. LOCATIONS OF UTILITIES ARE APPROXIMATE AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL THE UTILITIES LOCATE THEIR SERVICES PRIOR TO THE START OF CONSTRUCTION. THE LOCATION, TYPE AND SIZE OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND UTILITIES AND STRUCTURES SHOWN ON THE DRAWINGS ARE NOT WARRANTED TO BE EXACT NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. INFORMATION SHOWN IS CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION AND IS INDICATED ON THE DRAWINGS TO GIVE BIDDERS A GENERAL IDEA OF EXISTING CONDITIONS. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR SHALL NOT RELY UPON THESE DRAWINGS FOR SUCH INFORMATION AND SHALL MAKE EXAMINATIONS IN THE FIELD BY VARIOUS AVAILABLE METHODS AND SHALL OBTAIN INFORMATION FROM UTILITY CORPORATIONS AND INDIVIDUALS AS TO THE LOCATION OF ALL SUBSURFACE STRUCTURES, BOTH PUBLIC AND PRIVATE PRIOR TO COMMENCEMENT OF CONSTRUCTION. DEPTH OF SERVICES ARE UNKNOWN AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. EXCAVATING TEST PITS AS NECESSARY TO VERIFY UTILITY LOCATIONS AND DEPTHS SHALL BE INCIDENTAL TO THIS PROJECT.

2. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL SECURE A STREET OPENING PERMIT FROM THE PORTLAND PUBLIC WORKS DEPARTMENT. NO FEE WILL BE CHARGED FOR THIS PERMIT.

3. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AND SHALL NOT BE DISTURBED. IF DISTURBED, THEY SHALL BE REPLACED BY A LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.

4. DEMOLITION SHALL BE COMPLETED IN COORDINATION WITH NEW INFRASTRUCTURE.

5. ALL EXISTING CATCH BASINS, MANHOLES, CONNECTIONS, CONDUIT AND PIPING SHALL BE CLEANED AND LEFT IN SATISFACTORY OPERATING CONDITION AFTER CONSTRUCTION HAS BEEN COMPLETED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.

6. ALL LAWN AREAS, WALKWAYS, AND DRIVEWAYS OUTSIDE THE WORK AREA, DAMAGED BY THE CONTRACTOR, SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL TREES AND SHRUBS ON THE PROJECT WHICH ARE NOT TO BE REMOVED.

8. EXISTING PAVEMENT SHALL BE SAW CUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED. DRIVEWAY BUTT JOINTS ARE INCIDENTAL TO THE CONTRACT AND SHALL NOT REQUIRE MEASUREMENT.

9. EXISTING DRAINAGE STRUCTURES SHALL NOT BE DISTURBED UNLESS OTHERWISE NOTED IN THE DRAWINGS OR BY THE CITY REPRESENATIVE.

10. BEFORE CONNECTING NEW PIPES TO AN EXISTING SEWER LINE, THE CONTRACTOR SHALL NOTIFY THE SEWER MAINTENANCE DIVISION OR THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT. NO WORK SHALL BE DONE WITHOUT THEIR APPROVAL.

11. NO ADDITIONAL PAYMENT WILL BE MADE FOR GRADING SIDE SLOPES OF DRIVEWAYS.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY TRENCH PAVEMENT THAT HAS EXPERIENCED EXCESSIVE SETTLEMENT, CRACKING, OR OPENING OF JOINTS. REPAIRS MAY INCLUDE OVERLAY, REMOVAL OF UNACCEPTABLE MATERIALS, COMPLETE REPLACEMENT, JOINT SEALING, OR REBUTTING PAVEMENT AS REQUIRED. THIS WORK MAY BE NECESSARY AFTER THE FINAL ACCEPTANCE OF WORK OR PRIOR TO THE END OF THE ONE YEAR GUARANTEE. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

13. THE FINISHED PAVEMENT SURFACE GRADE SHALL MATCH EXISTING GRADE UNLESS NOTED OTHERWISE.

14. ALL MANHOLE FRAMES SHALL BE SUPPLIED WITH H–20 LOADING AND SOLID MANHOLE COVERS. THE RIM ELEVATION OF PROPOSED STORM AND SEWER MANHOLES SHALL BE SET AT FINISHED PAVEMENT SURFACE GRADE. WINTERIZATION WILL BE REQUIRED. SEE STANDARD DETAIL.

15. NEW CATCH BASINS SHALL BE INSTALLED WITH A TYPE A–4 CATCH BASIN INLET STONE INCIDENTAL TO PAY ITEM 604.131. RIM ELEVATIONS SHOWN ON THE PLANS FOR PROPOSED CATCH BASINS ARE GIVEN AT THE FACE OF CURB AND DO NOT TAKE INTO ACCOUNT THE 3" DEPRESSION FROM THE NORMAL GUTTER LINE GRADE AS SHOWN IN THE DETAILS. CONTRACTOR SHALL INSTALL PROPOSED CATCH BASINS WITH RIM ELEVATIONS 3" LOWER THAN THE ELEVATIONS SHOWN ON PLANS.

16. ON ALL "REMOVE" STRUCTURES, THE CONTRACTOR SHALL REMOVE THE STRUCTURE ENTIRELY. ALL EXISTING GRANITE CATCH BASIN STONES, MANHOLE FRAMES AND COVERS TO BE REMOVED SHALL BE DELIVERED TO THE CITY STOCK YARD AS DIRECTED. REMOVAL OF EXISTING STRUCTURAL CONCRETE, CONCRETE, EXCAVATED STRUCTURES, MANHOLES, CATCH BASINS, MORTARED STONE MASONRY, CONCRETE MASONRY, WOODEN TIMBERS/PILES AND ANY OTHER STRUCTURAL ELEMENTS ENCOUNTERED DURING CONSTRUCTION ARE INCIDENTAL TO THE ASSOCIATED PIPE PAY ITEMS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.

17. REMOVAL OF EXISTING STORM DRAINS, SEWER PIPES OR OTHER PIPE STRUCTURES, BACKFILLING AND ALL ASSOCIATED WORK SHALL BE CONSIDERED INCIDENTAL TO THE COSTS OF CONSTRUCTION. NO EXTRA PAYMENT WILL BE MADE

18. ALL TERMINAL MANHOLES SHALL HAVE BRICK CHANNELS CONSTRUCTED STRAIGHT THROUGH THE MANHOLE.

19. THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS AS REQUIRED TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL CODES.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS (CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF STRUCTURE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF STRUCTURE.) ADDITIONALLY, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL "AS–BUILT" INFORMATION AS REQUIRED IN THE SPECIFICATION

21. THE QUANTITY OF HOUSE AND STORM DRAIN LATERALS INCLUDES A QUANTITY FOR EVERY HOUSE WITHIN PROJECT LIMITS INCLUDING PROPERTIES WHERE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE FINAL DETERMINATION OF THE QUANTITY INSTALLED WILL BE DETERMINED IN THE FIELD BY RESIDENT.

22. THE EXISTING COLLECTION SYSTEM INCLUDING GRAVITY SEWERS AND STORM DRAINS SHALL REMAIN FULLY OPERATIONAL DURING CONSTRUCTION UNTIL PROJECT IS COMPLETED AND ACCEPTED BY OWNER. THE CONTRACTOR SHALL FULLY COORDINATE CONSTRUCTION ACTIVITIES WITH THE OWNER'S OPERATIONS TO MINIMIZE ADVERSE IMPACTS ON THEIR EXISTING OPERATIONS. THE COST OF ADDITIONAL WORK REQUIRED TO MAINTAIN EXISTING OPERATIONS THROUGHOUT CONSTRUCTION OPERATIONS WILL NOT BE ELIGIBLE FOR PAYMENT AS AN EXTRA UNDER A CHANGE ORDER; RATHER, THESE COSTS WILL BE CONSIDERED AS "INCIDENTAL" TO THE BIDS SUBMITTED FOR THIS CONTRACT. ALSO, THE NECESSITY TO COORDINATE CONSTRUCTION ACTIVITIES WITH OWNER OPERATIONS WILL NOT BE CONSIDERED A VALID OR MERITORIOUS REASON FOR A DELAY CLAIM OR TIME EXTENSION ON THIS PROJECT.

23. THERE MAY BE ONE OR MORE CONTRACTORS PERFORMING WORK IN THE PROJECT AREA. COORDINATION BETWEEN CONTRACTORS IS A PRIMARY RESPONSIBILITY OF EACH CONTRACTOR WITH THE INTENT TO AVOID DELAYS, COMPLICATIONS AND UNDO DISRUPTION OF CONSTRUCTION ACTIVITY.

24. THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER AT ALL TIMES DURING CONSTRUCTION. THE MOST CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) MANUAL FOR BOTH WORK ZONE AND TRAFFIC CONTROL REQUIREMENTS SHALL APPLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CREATING A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH SECTION 652 (PAY ITEM 652.39).

25. EXISTING FACILITIES AND IMPROVEMENTS (I.E. LIGHT POLES, SIGNS, ETC.) SHALL BE REMOVED AND REPLACED OR PROTECTED AS REQUIRED DURING CONSTRUCTION AND SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS. BRACING OF UTILITY POLES, WHERE REQUIRED, SHALL BE INCIDENTAL TO THE PROJECT.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL TREES ON THE PROJECT WHICH ARE NOT CALLED TO BE REMOVED. EQUIPMENT AND MATERIALS SHALL NOT BE STORED OVER THE ROOT ZONE WHICH SHALL BE DEFINED AS THE AREA ENCOMPASSED BY THE DRIPLINE. WHENEVER POSSIBLE, OTHER PLANTINGS SHALL BE PRESERVED BY WHATEVER METHOD NECESSARY INCLUDING TRANSPLANTING AND/OR TEMPORARY RELOCATION. THE ASSOCIATED COSTS ARE INCIDENTAL TO THE PROJECT. ANY TREES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED USING APPROVED TREE DRESSING OR PAINT IN ACCORDANCE WITH THE APPROPRIATE PROVISIONS OF SECTION 201 OF THE STANDARD SPECIFICATIONS. ANY TREE DAMAGED BY THE CONTRACTOR SHALL RESULT IN A FINANCIAL PENALTY OF $1,500 FOR EACH INCIDENCE. DAMAGE SHALL INCLUDE ANY AND ALL IMPACTS TO TREES TO INCLUDE BUT NOT LIMITED TO LIMB/TREE BREAKAGE, DAMAGE TO TREE TRUNKS, ROOTS STRUCTURE AND ANY INCIDENTAL IMPACTS.

27. CONNECTIONS OF NEW PIPING TO EXISTING FACILITIES SHALL BE PAID FOR AS A MODIFY STRUCTURE. THIS INCLUDES ALL WORK REQUIRED TO CORE HOLE, INSTALL WATERTIGHT CONNECTIONS, AND ALL ASSOCIATED WORK.

28. DELIVERED WITHIN TEN (10) CALENDAR DAYS OF THE CONTRACT SIGNING, THE CONTRACTOR SHALL SUBMIT THREE (3) COPIES OF A CONSTRUCTION OPERATIONS PLAN TO THE ENGINEER, AND CITY OF PORTLAND. THE COST OF THE OPERATIONS PLAN SHALL BE INCIDENTAL.

29. ALL PIPE TRENCH EXCAVATIONS SHALL BE BACKFILLED AND "CLOSED" DURING CONTRACTOR NON–WORKING HOURS INCLUDING NIGHTS, HOLIDAYS AND WEEKENDS. THE CONTRACTOR MAY REQUEST IN WRITING TO THE ENGINEER AND OWNER TO SECURE OPEN EXCAVATION IN LIEU OF BACKFILLED AND "CLOSED." NOT ALLOWING A SECURE OPEN EXCAVATION SHALL NOT BE A BASIS FOR CLAIMS AGAINST THE OWNER.

30. BORINGS WERE COMPLETED IN NOVEMBER 2017 AND ARE INCLUDED IN THE APPENDICES TO THE SPECIFICATIONS.

31. TEST PITS SHALL BE EXCAVATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL OBTAIN THE LOCATION OF THE UTILITY/STRUCTURE IN QUESTION WITH TIES TO SURROUNDING FEATURES AND THE ELEVATION OF BOTH THE TOP AND BOTTOM OF THE UTILITY/STRUCTURE. COSTS FOR TEST PITS WILL BE PAID THROUGH THE BID ITEM 203.28.

32. ANY EXCAVATION BY CONTRACTOR THAT UNCOVERS A HISTORICAL OR ARCHAEOLOGICAL ARTIFACT SHALL BE IMMEDIATELY REPORTED TO OWNER AND A REPRESENTATIVE OF AGENCY. CONSTRUCTION SHALL BE TEMPORARILY HALTED PENDING THE NOTIFICATION PROCESS AND FURTHER DIRECTIONS ISSUED BY AGENCY AFTER CONSULTATION WITH THE STATE HISTORIC PRESERVATION OFFICER (SHPO). CONTRACTOR SHALL NOT BE ENTITLED TO PAY COMPENSATION DUE TO DELAY ASSOCIATED WITH THIS ITEM. COST SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

33. ANY REQUIRED PROJECT WORK NOT IDENTIFIED UNDER A PAY ITEM OR RELATED TO A PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. NO EXTRA PAYMENT WILL BE MADE.

34. IF WORK IS NECESSARY BEYOND THE SAW CUT LINES SHOWN ON CONTRACT PLANS TO ACCOMMODATE PROJECT CONSTRUCTION, COSTS SHALL BE CONSIDERED INCIDENTAL TO COSTS OF CONSTRUCTION AND NO EXTRA PAYMENT WILL MADE. ALL REQUIRED PROJECT WORK ASSOCIATED WITH CONTRACT DRAWINGS, DETAILS, GENERAL CONDITIONS AND SPECIFICATIONS SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAYS ITEMS. NO EXTRA PAYMENT WILL BE MADE FOR ANY DIRECT OR INCIDENTAL WORK REQUIRED TO COMPLETE THE PROJECT IN ITS ENTIRETY AND READY FOR OWNER ACCEPTANCE.

35. EXISTING CONDITIONS GROUND SURFACE FEATURES SHOWN ON THIS PLAN ARE BASED ON SURVEYS BY SEBAGO TECHNICS, INC. AND ARE SHOWN ON THE CITY OF PORTLAND'S PLANS FOR REFERENCE ONLY. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE, WEST ZONE 1082–NAD83, ELEVATIONS DEPICTED HEREON ARE NGVD29, BASED ON DUAL FREQUENCY GPS OBSERVATIONS. ELEVATIONS WERE CONVERTED FROM NAVD88 TO NGVD29 UTILIZING THE U.S. ARMY CORPS CORPSCON6.0.1 SOFTWARE, THE DIFFERENCE IN THIS VICINITY IS +0.705 FEET.

36. NEW SEWER LATERALS SHALL BE INSTALLED WITH 1' VERTICAL SEPARATION FROM THE PROPOSED WATER MAIN AT ITS DESIGN DEPTH WHERE POSSIBLE. EXISTING SEWER LATERALS TO BE REPLACED MAY BE IN CONFLICT WITH THE PROPOSED WATER MAIN. THE CONTRACTOR SHALL COORDINATE THE WORK TO PROVIDE ADEQUATE VERTICAL SEPARATION AT THE CROSSINGS.

Civil 3D 2013 Drawing Name:
17113 N.dwg, TAB:N1

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	DRAWN BY:	CHECKED BY:	SCALE:	DATE:
STI	BVD	DLR	AS NOTED	1/22/2019

STATE OF MAINE · DANIEL L RILEY · No. 996 · LICENSED · PROFESSIONAL ENGINEER

01/22/2019

MACKWORTH -
OCEAN - WALTON
CSO SEPARATION PROJECT
GENERAL NOTES AND LEGEND

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM · CITY OF PORTLAND, MAINE

SHEET #
2 OF 45

PLAN NUMBER

EROSION AND SEDIMENTATION CONTROL PLAN

THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES WILL BE IMPLEMENTED AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. WINTER CONSTRUCTION IS NOT ANTICIPATED, BUT IF CONSTRUCTION IS NECESSARY IN THE WETLAND IMPACT AREA BETWEEN SEPTEMBER 15 AND APRIL 15 THE CONTRACTOR IS REFERRED TO SECTION 8.4 –WINTER STABILIZATION PLAN AND 8.5 –STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITE DURING WINTER. FOR FURTHER REFERENCE, SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES.

A. TEMPORARY EROSION CONTROL MEASURES

1. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE CITY. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON–SITE INSPECTIONS OF THE CITY OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE CITY.
2. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.
3. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL EROSION CONTROL BMPs AS SHOWN OR NOTED ON THE PLANS.
4. SILTATION FENCE SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF–BORNE SEDIMENTS UNTIL GRASS AREAS ARE REVEGETATED. THE SILT FENCE SHALL BE INSTALLED PER THE DETAILS PROVIDED ON THIS PLAN AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.
5. FOR WORK WHICH IS CONDUCTED BETWEEN SEPTEMBER 15TH AND APRIL 15TH OF ANY CALENDAR YEAR, ALL DISTURBED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX, APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 7 DAYS FOR ALL AREAS.
6. PUBLIC WAYS SHALL BE SWEPT, AS NECESSARY, TO CONTROL MUD AND DUST.
7. SILT FENCING WITH A MINIMUM STAKE SPACING OF 6 FEET SHOULD BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHALL BE EMBEDDED IN A SOIL TRENCH.
8. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MAINE DOT SPECIFICATIONS – SECTION 637 – DUST CONTROL.
9. LOAM AND SEED IS INTENDED TO SERVE AS THE PRIMARY PERMANENT REVEGETATIVE MEASURE FOR ALL DISTURBED AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES, SUCH AS RIPRAP.
10. ALL CATCH BASINS WITH DISTURBED TEMPORARY AREA SHALL HAVE CATCH BASIN INLET FILTERS INSTALLED. CATCH BASIN INLET FILTERS SHALL BE MAINTAINED PRIOR TO AND AFTER ALL RAINFALL EVENTS.

B. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE IMPLEMENTED AS PART OF THE EROSION AND SEDIMENTATION CONTROL PLAN:

1. ALL AREAS DISTURBED DURING CONSTRUCTION NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) SHALL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING ANCHORED WITH STAPLES SHALL BE PLACED OVER THE MULCH IN AREAS AS NOTED IN PARAGRAPH 8.3.5.A.3. ALL AREAS WITHIN 100 FEET OF UNDISTURBED WETLANDS SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 7–DAY WINDOW. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION IF DEEMED TO BE OF SUFFICIENT QUALITY.
2. CATCH BASINS SHALL BE PROVIDED WITH SEDIMENT (SEE DETAILS) AND SEDIMENT HOODS IF CALLED FOR ON THE PLANS.

8.4 WINTER STABILIZATION PLAN

THE WINTER CONSTRUCTION PERIOD BEGINS SEPTEMBER 15 AND ENDS APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, ROAD GRAVEL BASE, 75 PERCENT MATURE VEGETATION COVER, OR RIPRAP BY NOVEMBER 15, ALL EXPOSED AREAS SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. AN EXPOSED AREA IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MAT, RIPRAP, OR GRAVEL BASE (ROAD ONLY).

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT ANY AREA LEFT EXPOSED CAN BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE THIRD PARTY EROSION CONTROL INSPECTOR. EXPOSED AREAS SHALL BE LIMITED TO THOSE AREAS IN WHICH WORK IS EXPECTED TO COMMENCE AND COMPLETE IN THE NEXT FIFTEEN (15) DAYS AND THAT CAN BE MULCHED WITHIN ONE DAY PRIOR TO ANY SNOW EVENT.

ALL FUTURE ROADWAY AREAS SHALL BE CLASSIFIED EXPOSED UNTIL SUBBASE GRAVEL HAS BEEN INSTALLED; ALL FUTURE LOAM AND SEED AREAS SHALL BE CLASSIFIED EXPOSED UNTIL THEY HAVE BEEN LOAMED, SEEDED, AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT TWICE THE NORMAL RATE, OR 150 LBS./1,000 S.F. (3 TONS/ACRE) MINIMUM, AND SHALL BE PROPERLY ANCHORED.

THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL MEASURES AS NECESSARY TO CONTROL EROSION AND SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. EARTHWORK OPERATIONS ON OTHER AREAS SHALL NOT COMMENCE UNTIL THE EXPOSED SOIL SURFACE ON PREVIOUS AREAS BEING WORKED ON HAS BEEN STABILIZED IN ORDER TO MINIMIZE THE QUANTITY OF EXPOSED AREA AT ANY GIVEN TIME.

8.4.1 SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER–WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE –150 LBS/1,000 S.F. (3 TONS/ACRE) –OR WITH A 4–INCH LAYER OF WOODWASTE EROSION CONTROL MIX. THIS MULCHING SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND SHALL BE RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL EVENT. NO SOIL STOCKPILE, MULCHED OR OTHERWISE, SHALL BE PLACED WITHIN 100 FEET OF ANY NATURAL RESOURCE.

8.4.2 NATURAL RESOURCE PROTECTION

ANY AREA WITHIN 100 FEET OF A NATURAL RESOURCE THAT IS NOT STABILIZED WITH A MINIMUM 75 PERCENT MATURE VEGETATION CATCH SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. A DOUBLE–LINE SEDIMENT BARRIER –SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX –SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. ANY NATURAL RESOURCE CROSSINGS SHALL BE PROTECTED TO MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE OF THE RESOURCE.

8.4.3 GENERAL MULCHING

ALL FUTURE LOAM AND SEED AREAS SHALL BE CONSIDERED DENUDED UNTIL THEY HAVE BEEN LOAMED, SEEDED, AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT TWICE THE NORMAL RATE, OR 150 LBS/1,000 S.F. (3 TONS/ACRE), AND SHALL BE PROPERLY ANCHORED. IN NO INSTANCE SHALL MULCH BE SPREAD ON TOP OF SNOW; SNOW SHALL BE REMOVED DOWN TO A MAXIMUM DEPTH OF ONE (1) INCH PRIOR TO MULCH APPLICATION.

AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY, STRAW, OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED STABILIZED WHEN EXPOSED SURFACES HAVE BEEN MULCHED WITH STRAW OR HAY AT A RATE OF 150 LBS/1,000 S.F. (3TONS/ACRE) AND ADEQUATELY ANCHORED TO THE EXTENT THAT THE GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH. ALL MULCH SHALL BE ANCHORED BY PEG LINE, MULCH NETTING, TRACKING, OR WOOD CELLULOSE FIBER. MULCH SHALL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NO LONGER VISIBLE.

8.4.4 SLOPE AND DITCH MULCHING

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED PERIOD OF TIME UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR EROSION CONTROL BLANKET. MULCH SHALL BE APPLIED TO ALL SLOPES GREATER THAN 8 PERCENT AT A RATE OF 230 LBS/1,000 S.F. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAT 3 PERCENT, FOR ALL SLOPES EXPOSED TO DIRECT WINDS, AND FOR ALL OTHER SLOPES GREATER THAN 8 PERCENT. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN OR EQUAL TO 8 PERCENT. EROSION CONTROL MIX MAY BE SUBSTITUTED FOR EROSION CONTROL BLANKETS ON ALL SLOPES NOT ASSOCIATED WITH DITCHES.

8.4.5 SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM AND SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE–FREEZING TEMPERATURES, FINISHED AREAS SHALL BE FINE GRADED AND PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL FINAL TREATMENT CAN BE APPLIED. IF AFTER NOVEMBER 1 THE EXPOSED AREA HAS BEEN LOAMED AND FINAL GRADED WITH A UNIFORM SURFACE, THE AREA MAY BE DORMANT–SEEDED AT A RATE THREE TIMES THAT SPECIFIED FOR PERMANENT SEEDING AND MULCHED. DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND STAPLE–ANCHORED FABRIC NETTING. ALL DISTURBED AREAS RECEIVING DORMANT SEEDING SHALL RECEIVE FOUR (4) INCHES OF LOAM AND SHALL BE SEEDED AT A RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED AT THIS TIME (LESS THAN 75 PERCENT CATCH) SHALL BE RE–VEGETATED WITH LOAM, SEED, AND MULCH. IF DORMANT SEEDING IS NOT USED, ALL DISTURBED AREAS SHALL BE RE–VEGETATED IN THE SPRING.

8.4.6 DEWATERING AND TEMPORARY STREAM DIVERSION

WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION SHALL PASS THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE LINED POOL) PRIOR TO DISCHARGE. A DISCHARGE LOCATION SHALL BE SELECTED THAT AVOIDS FLOODING, ICING, AND SEDIMENT DISCHARGE TO ANY PROTECTED RESOURCE. IN NO INSTANCE SHALL FILTER BAGS OR CONTAINMENT STRUCTURES BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

8.4.7 INSPECTION AND MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED THROUGHOUT THE ENTIRE CONSTRUCTION PHASE. AFTER EACH RAINFALL EVENT, SNOWFALL EVENT, OR PERIOD OF THAWING AND RUNOFF, CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO ENSURE THEIR PROPER CONTINUOUS FUNCTION. IN THE SPRING FOLLOWING TEMPORARY AND/OR FINAL SEEDING AND MULCHING, CONTRACTOR SHALL INSPECT AND REPAIR ANY DAMAGED AND/OR UNESTABLISHED AREAS. VEGETATIVE COVER IS CONSIDERED ESTABLISHED WHEN A MINIMUM 85 TO 90 PERCENT OF VEGETATED AREAS EXHIBIT VIGOROUS GROWTH.

RIPRAP OUTLET CONSTRUCTION NOTES

(REFER TO RIPRAP APRON DETAIL ON DETAIL SHEET)

PRE–CONSTRUCTION

1. MEET ON SITE WITH OWNER, SITE CONTRACTOR, AND THE DESIGN ENGINEER TO DISCUSS SCOPE OF WORK AND EXPECTATIONS. DETERMINE LIMITS OF TIDAL "SPARTINA" GRASS.
2. CONTRACTOR SHALL HAVE ALL MATERIALS APPROVED BY THE DESIGN ENGINEER PRIOR TO INSTALLATION.

CONSTRUCTION PHASE

1. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL BMP MANUAL, LATEST EDITION. SEE THE EROSION & SEDIMENT CONTROL NOTES AND PLAN FOR ADDITIONAL REQUIREMENTS. . PROTECT NEARBY TREES, WHICH ARE PROPOSED TO REMAIN. TO THE EXTENT PRACTICAL, PROTECT THE ROOT ZONE OF THESE TREES.
2. THE CONTRACTOR SHALL CONSIDER THE TIDE SCHEDULE CAREFULLY; AND SHALL SCHEDULE WORK TO AVOID INTERRUPTIONS OF DAYLIGHT WORKING HOURS WITH HIGH TIDES. WORKING WITHIN TIDAL WATERS IS NOT PERMITTED.
3. THE CONTRACTOR SHALL ONLY WORK IN AREAS THAT CAN BE COMPLETED DURING EACH CONSTRUCTION DAY. NO AREAS SHALL BE EXCAVATED BY THE CONTRACTOR AND LEFT EXPOSED, AS THESE AREAS WILL BE SUBJECT TO EROSION FROM TIDAL SURGES OR STORM EVENTS.
4. WITHIN VEGETATIVE AREA PROPOSED TO BE DISTURBED, CAREFULLY REMOVE THE TOP ORGANIC LAYER (12"±) BELOW ELEVATION DETERMINED AT PRECONSTRUCTION MEETING. REMOVE USING METHOD THAT WILL KEEP THE VEGETATION SYSTEM INTACT. STOCKPILE THE ORGANIC LAYER IN A MANNER SO THAT MATERIAL CAN BE REUSED. REMOVE ONLY ENOUGH VEGETATION NEEDED TO INSTALL THE TIDE GATE VAULT AND SEWER PIPE IN ACCORDANCE WITH THE CROSS–SECTION. ORGANIC LAYER REMOVAL, STORAGE AND PLACEMENT SHALL BE INCIDENTAL TO THE RELATED PIPE PAY ITEM.
5. PIPE INSTALLATION: LOW PERMEABILITY DAMS OF NATURAL CLAY, BETONITE OR FLOWABLE FILL SHALL BE INSTALLED AS SHOWN TO MINIMIZE TIDAL FLOW THROUGH THE BACKFILL. DAMS SHALL EXTEND A MINIMUM 1 FOOT BELOW THE TRENCH BOTTOM, 1 FOOT BEYOND THE SIDEWALLS AND UP TO ELEVATION 7.4 OR TOP OF FINISHED GRADE. DAMS SHALL BE A MINIMUM OF 2 FEET THICKNESS. COSTS OF LOW PERMEABILITY DAMS SHALL BE INCIDENTAL TO THE CONTRACT.
6. INSTALL RIPRAP SLOPE IN ACCORDANCE WITH THE DETAILS. ONCE THE CHECK VALVE VAULT, SEWER PIPE, STORAGE CONDUIT AND RIPRAP SLOPE ARE COMPLETELY INSTALLED, THE CONTRACTOR SHALL GRADE THE DISTURBED AREAS UNIFORMLY TO MATCH EXISTING TOPOGRAPHY (U.N.O.) AND THE NEW RIPRAP EDGE.
7. PLACE EXISTING ORGANIC MATERIAL IN DISTURBED VEGETATIVE AREAS BELOW ELEVATION 10, WORKING FROM THE OUTFALL TO THE VAULT. DISTURBED VEGETATIVE AREAS ABOVE ELEVATION 10 SHALL HAVE LOAM AND SEED. ORGANIC LAYER REMOVAL, STORAGE AND PLACEMENT SHALL BE INCIDENTAL TO THE RELATED PIPE PAY ITEM.
8. INSPECT THE SITE EVERY TWO WEEKS FOR SIGNS OF EROSION AND ESTABLISHMENT OF VEGETATION. REPAIR ERODED AREAS AND REPLANT VEGETATION TO ESTABLISH 75% VEGETATION CATCH, AS REQUIRED.
9. IN AREAS REQUIRING REPLANTING, INSTALL NORTH AMERICAN GREEN C125BN EROSION CONTROL FABRIC OR APPROVED EQUAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (PAY ITEM 613.319).
10. USING RAZOR BLADE, CAREFULLY CUT HOLES 1 FOOT O.C. AND IN ROWS SPACED 1 FOOT APART. LOOSELY OFFSET HOLES BETWEEN ROWS FOR APPROXIMATELY 6–8 HOLES PER SQUARE YARD. PLANT CORD GRASS SPARTINA PATENS (SALT MEADOW GRASS) AND SPARTINA ALTERNIFLORA (SMOOTH CORDGRASS) PLUGS IN ALTERNATING FASHION. COSTS ASSOCIATED WITH CUTTING FABRIC AND PLANTING GRASS PLUGS WILL BE PAID THROUGH THE BID ITEM 615.072.
11. ALL WHEELED OR TRACKED EQUIPMENT THAT MUST TRAVEL OR WORK IN VEGETATED WETLAND AREAS MUST TRAVEL AND WORK ON MATS OR PLATFORMS IN ORDER TO PROTECT THE WETLAND VEGETATION.

DEMOLITION NOTES

1. DEMOLITION OF EXISTING SEWER AND STORMDRAIN PIPE TO BE INCIDENTAL TO PIPE INSTALLATION.
2. EACH EXISTING DRAINAGE STRUCTURE OR SEWER STRUCTURE TO BE ABANDONED OR REMOVED WILL BE INCIDENTAL TO THE INSTALLATION OF NEW STRUCTURES.
3. DEMOLITION SHALL BE COMPLETED IN COORDINATION WITH NEW INFRASTRUCTURE. CONTRACTOR SHALL ENSURE EXISTING ROAD SURFACE DRAINAGE IS MAINTAINED DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY DRAINAGE PROVISIONS. COSTS FOR TEMPORARY DRAINAGE PROVISIONS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

PERMITTIMING NOTES – BACK COVE OUTFALL

1. ALL WORK EAST OF BAXTER BOULEVARD MUST BE COMPLETED MARCH 15 AND MAY 31, UNLESS OTHERWISE APPROVED BY MAINE DEPARTMENT OF MARINE RESOURCES.
2. SEE APPENDICES TO THE CONTRACT SPECIFICATIONS FOR FULL PERMITS.

PORTLAND WATER DISTRICT NOTES

1. CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED PIPING AND APPURTENANCES.
2. ALL MAINS AND SERVICES SHALL BE INSTALLED WITH 5.5' OF COVER MEASURED FROM PROPOSED ROAD GRADE UNLESS OTHERWISE APPROVED BY A PWD REPRESENTATIVE.
3. THE PORTLAND WATER DISTRICT WILL NOTIFY CUSTOMERS FOR ALL WORK INVOLVING TEMPORARY SHUT DOWN OF SERVICE. CUSTOMERS MUST RECEIVE AT LEAST 48 HOURS NOTIFICATION PRIOR TO ANY SHUT DOWN. THE DISTRICT MUST RECEIVE NOTICE FROM THE CONTRACTOR OF THE SHUT DOWN AT LEAST 48 HOURS PRIOR TO CUSTOMER NOTIFICATION.
4. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLYWRAPPED PER SPECIFICATIONS.
5. THE COST OF PROVIDING TEMPORARY WATER SERVICE TO THE BUILDINGS INDICATED ON THE PLAN SHALL BE LUMP SUM PAY ITEM. IF PROPERTIES REQUIRING A TEMPORARY WATER CONNECTION HAVE MALFUNCTIONING SILLCOCKS OR NO EXTERIOR PLUMBING, IT MAY BE NECESSARY TO EXCAVATE AND CONNECT INTO THE EXISTING SERVICE LINE BEHIND THE EXISTING SHUT–OFF VALVE TO PROVIDE TEMPORARY SERVICE.
6. PROVIDE TEMPORARY MAIN CONNECTION TO HYDRANT USING LL BRASS OR 304SS ADAPTER, 304SS NPT TO HDPE TRANSITION, AND FLANGED HDPE PIPING TO BRING PIPING ELEVATION FROM HYDRANT PORT TO GRADE. PROVIDING PIPING SUPPORTS/BLOCKING AT FITTINGS. HDPE SHALL BE AWWA C906, SDR11 WITH IPS FLANGE ADAPTERS AN DI BACKUP RINGS, DIMENSIONS PER AWWA C207. ALL PIPING AND FITTING SHALL BE NSF 61. PROVIDE FLANGED LL DOUBLE CHECK VALVE BACKFLOW DEVICE, SAME NOMINAL SIZE AS TEMP MAIN, AT EACH HYDRANT CONNECTED TO A TEMPORARY MAIN. PROVIDE FLANGED RESILIENT SEATED GATE VALVES FOR ISOLATION AND PROVIDE UPSTREAM AND DOWNSTREAM TAPS. REMOVE BACKFLOW ONLY UPON OWNER'S REQUEST AND PROVIDE FLANGED HDPE REPLACEMENT SPOOL PIECE. HDPE SHALL BE AWWA C906, SDR11, WITH IPS FLANGE ADAPTERS AND DI BACKUP RINGS. FLANGE DIMENSIONS PER AWWA C207. ALL PIPING AND FITTINGS SHALL BE NSF61. PROVIDE DOCUMENTATION OF ANNUAL INSPECTION BY A PERSON CERTIFIED BY THE NEW ENGLAND WATER WORKS ASSOCIATION OR AMERICAN BACKFLOW PREVENTION ASSOCIATION.
7. INSTALL 4" TEMPORARY FIRE DEPT CONNECTION (TYP.), 4" GATE VALVE, 90° ELBOW, RISER PIPE, 90° ELBOW, AND 4–1/2" NPT STEAMER PORT CONNECTION WITH CAP. ALL JOINTS TO BE RESTRAINED. STEAMER PORT, RISER AND TEE TO BE ANCHORED TO THE GROUND. OUTLET TO BE BETWEEN 1' AND 2' OFF THE GROUND.
8. REMOVE ALL OLD PIPING NOT EXPLICITLY CALLED OUT FOR ABANDONMENT.
9. TEMPORARY WATER SYSTEM SHALL ONLY BE ACTIVE BETWEEN APRIL 15TH AND OCTOBER 15TH. ALL WATER MAIN, EITHER EXISTING OR NEWLY INSTALLED, MUST BE ACTIVE, BETWEEN OCTOBER 16TH AND APRIL 14TH.
10. CONTRACTOR MUST ALLOW OWNERS SUFFICIENT TIME TO TRANSFER WATER SERVICES FROM EXISTING WATER MAIN TO TEMPORARY WATER SERVICES INSTALLED BY CONTRACTOR AND TO TRANSFER SERVICE TO NEW WATER MAIN/SERVICE LINE UPON SUCCESSFUL TESTING OF SAMPLE FOR ABSENCE OF BACTERIA. THE CONTRACTOR SHALL NOT CLAIM ANY DELAY–RELATED COSTS OR TIME RELATED TO THIS WORK.
11. REPLACE ALL SERVICES FROM MAIN TO STREET LINE, WITH 1" COPPER PIPING, UNLESS CALLED OUT TO BE REPLACED DIFFERENTLY.
12. VARIABLE MESSAGE BOARDS ARE TO BE PROVIDED AT EACH END OF THE PROJECT, IN PLACE AND ACTIVE AT LEAST ONE WEEK BEFORE CONSTRUCTION STARTS, AND SHALL REMAIN ACTIVE UNTIL THE WORK IS COMPLETE.
13. SIDEWALKS MUST REMAIN OPEN AT ALL TIMES OR MEASURABLE DETOURS PROVIDED.
14. LOCATIONS OF UTILITIES OTHER THAN WATER ARE APPROXIMATE, AND NOT ALL UTILITIES ARE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UTILITIES DURING INSTALLATION OF THE WATER MAIN.
15. HYDRANTS TO BE REMOVED SHALL BE SALVAGED FOR PORTLAND WATER DISTRICT USE & DELIVERED TO THEIR OFFICE AS PART OF CONTRACT.

UTILITY RELOCATION NOTES

1. THE FOLLOWING TABLE REPRESENTS A LIST OF ADDRESSES IN THE PROJECT AREA WITH A GAS SERVICE, ACTIVE OR INACTIVE AS REPORTED BY UNITIL. THIS LIST IS PROVIDED FOR REFERENCE AND COORDINATION ONLY. SERVICES LISTED MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE GAS SERVICE LOCATIONS AND RELOCATIONS WITH UNITIL. NEITHER THE CITY OF PORTLAND OR PORTLAND WATER DISTRICT WILL BE RESPONSIBLE FOR TIME OR COST INCREASES RELATED TO UNMARKED OR MISMARKED GAS SERVICE OR GAS MAINS.

Location	Status 1	Status 2	Location	Status 1	Status 2
89 Mackworth St Portland	Active		139 Ocean Ave Portland	Active	
89 Mackworth St Portland Garage	Active		150 Ocean Ave Portland Ocean Avenue School	Active	
7 Mackworth St Portland	Active		153 Ocean Ave Portland		Inactive
15 Mackworth St Portland	Active		153 Ocean Ave Portland	Active	
18 Mackworth St Portland	Active		159 Ocean Ave Portland	Active	
21 Mackworth St Portland	Active		160 Ocean Ave Portland	Active	
24 Mackworth St Portland	Active		165 Ocean Ave Portland	Active	
31 Mackworth St Portland	Active		173 Ocean Ave Portland • 10 Austin St Portland	Active	
35 Mackworth St Portland	Active		13-15 Walton St Portland		Inactive
36 Mackworth St Portland	Active		13-15 Walton St Portland • 11-15 Walton St Portland	Active	
45 Mackworth St Portland	Active		14 Walton St Portland • 12-14 Walton St Portland	Active	
52 Mackworth St Portland	Active		18 Walton St Portland • 16-18 Walton St Portland	Active	
56 Mackworth St Portland	Active		19 Walton St Portland	Active	
76 Mackworth St Portland		Inactive	23-25 Walton St Portland	Active	
76 Mackworth St Portland	Active		29 Walton St Portland	Active	
77 Mackworth St Portland	Active		39-43 Walton St Portland Units 1-2	Active	
82 Mackworth St Portland	Active		39-43 Walton St Portland Units 3-4 • Portland	Active	
89 Mackworth St Portland	Active		39-43 Walton St Portland Units 5-6 • Portland	Active	
89 Mackworth St Portland Garage	Active		39-43 Walton St Portland Units 7-8 • Portland	Active	
107 Mackworth St Portland		Inactive	39-43 Walton St Portland Units 9-10 • Portland	Active	
107 Mackworth St Portland	Active		39-43 Walton St Portland Units 11-12 • Portland	Active	
110 Mackworth St Portland	Active		52 Walton St Portland	Active	
114 Mackworth St Portland	Active		53 Walton St Portland • Portland	Active	
114 Mackworth St Portland		Inactive	57 Walton St Portland • Portland	Active	
699 Forest Ave Portland Thurston's Burgers (Ocean)	Active		60R Walton St Portland • Portland	Active	
139 Ocean Ave Portland	Active		60 Walton St Portland	Active	
1 Codman ST Portland (Ocean)	Active		61 Walton St Portland • Portland	Active	
701 Forest Ave Portland Rite Aid (Ocean)	Active		63 Walton St Portland • Portland	Active	
29 Ocean Ave Portland	Active		68 Walton St Portland		Inactive
38-40 Ocean Ave Portland	Active		72 Walton St Portland		Inactive
42 Ocean Ave Portland	Active		72 Walton St Portland	Active	
47-51 Ocean Ave Portland	Active		73 Walton St Portland • Portland	Active	
56 Ocean Ave Portland	Active		76 Walton St Portland		Inactive
59 Ocean Ave Portland		Inactive	76 Walton St Portland	Active	
59 Ocean Ave Portland	Active		81 Walton St Portland		Inactive
62 Ocean Ave Portland	Active		81 Walton St Portland • Portland	Active	
66 Ocean Ave Portland	Active		83 Walton St Portland	Active	
74 Ocean Ave Portland	Active		86 Walton St Portland	Active	
77 Ocean Ave Portland	Active		89 Walton St Portland • 87-95 Walton St Portland	Active	
86 Ocean Ave Portland	Active		94 Walton St Portland	Active	
89 Ocean Ave Portland Back Cove Eatery	Active		97 Walton St Portland	Active	
90 Ocean Ave Portland	Active		100 Walton St Portland • Portland	Active	
95 Ocean Ave Portland	Active		101 Walton St Portland	Active	
110 Ocean Ave Portland		Inactive	102 Walton St Portland • 100-102 Walton St Portland	Active	
116 Ocean Ave Portland		Inactive	107 Walton St Portland • 103-109 Walton St Portland	Active	
116 Ocean Ave Portland	Active		108 Walton St Portland • Portland	Active	
121 Ocean Ave Portland	Active		116 Walton St Portland • Portland	Active	
124 Ocean Ave Portland		Inactive	121 Walton St Portland • 1-13 Canco Rd Portland	Active	
124 Ocean Ave Portland	Active		124 Walton St Portland • Portland	Active	
125 Ocean Ave Portland		Inactive	130 Walton St Portland • Portland	Active	
132 Ocean Ave Portland	Active		135 Walton St Portland		Inactive
136 Ocean Ave Portland	Active				

Civil 3D 2013 Drawing Name:
17113 N.dwg, TAB:N2

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DLR
SCALE: AS NOTED
DATE: 1/22/2019

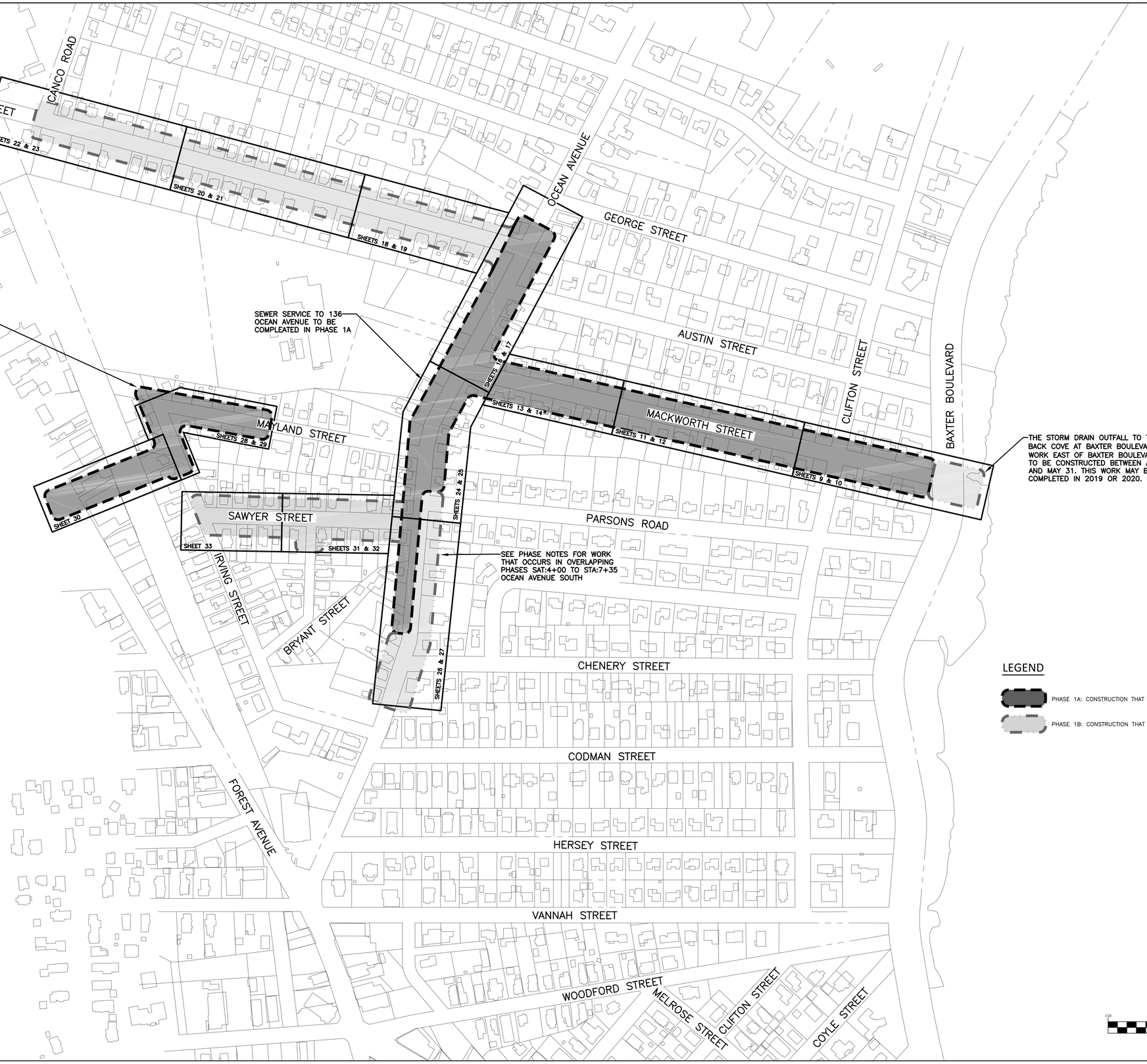
STATE OF MAINE
DANIEL L RILEY
No. 9967
LICENSED PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
GENERAL NOTES AND PORTLAND WATER DISTRICT NOTES

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

SHEET #
3 OF 45

PLAN NUMBER



PHASE NOTES:

SEQUENCE REQUIREMENTS

1. THE STORM DRAIN OUTFALL TO THE BACK COVE AT BAXTER BOULEVARD (ALL WORK EAST OF BAXTER BOULEVARD) IS TO BE CONSTRUCTED BETWEEN APRIL 1 AND MAY 31. THIS WORK MAY BE COMPLETED IN 2019 OR 2020.
2. THE CSO IN MACKWORTH STREET, MUST REMAIN IN OPERATION UNTIL THE FOLLOWING WORK IS COMPLETED:
   - A. NEW SEWER IS INSTALLED IN MACKWORTH STREET FROM CLIFTON STREET TO OCEAN AVENUE
   - B. NEW SEWER IS INSTALLED IN OCEAN AVENUE (NORTH) FROM MACKWORTH TO WALTON STREET AND TEMPORARILY RECONNECTED TO EXISTING MANHOLE ESMH 4242 AT WALTON STREET
   - C. THE EXISTING CATCH BASINS IN WALTON STREET AT STA 4+17 AND 5+36 MAY BE BLOCKED AND RUNOFF ALLOWED TO BYPASS TO THE CATCH BASINS IN WALTON STREET AT OCEAN AVENUE.
   - D. NEW SEWER IN OCEAN AVENUE SOUTH FROM MACKWORTH STREET TO SAWYER STREET (STA 0+00 TO STA 7+35)
   - E. THE CSO STRUCTURE IN FOREST AVENUE (ESMH–7247) IS REMOVED AND THE FOREST AVENUE SEWER IS SEPARATED FROM THE STORM DRAIN IN FOREST AVENUE
   - F. RELOCATED WATER MAIN IN MAYLAND STREET STA 5+75 TO 8+75 IS IN SERVICE
3. WATER SHUTDOWN FOR THE MAYLAND STREET WATER MAIN CONSTRUCTION REQUIRES TEMPORARY WATER FROM BOTH SAWYER STREET AND OCEAN AVENUE. THE EXISTING WATER MAIN IN OCEAN AVENUE MUST REMAIN UNDISTURBED, ACTIVE AND IN SERVICE UNTIL THE NEW MAYLAND STREET WATER MAIN IS IN SERVICE.

SCHEDULE

PHASE 1A: CONSTRUCTION THAT MUST BE COMPLETED IN 2019

1. WATER MAIN, SANITARY SEWER, AND STORM DRAINAGE ON MAYLAND STREET AND IRVING STREET.
2. ALL WORK IN FOREST AVENUE
3. ALL SEWER, STORM DRAINAGE, WATER MAIN WORK AND STREET RECONSTRUCTION THROUGH BASE PAVEMENT ON:
   - A. MACKWORTH STREET FROM CLIFTON TO OCEAN AVENUE. THIS REQUIRES RECONNECTION OF NEW STORM DRAIN TO EXISTING CSO, EAST OF CLIFTON STREET
   - B. OCEAN AVENUE (NORTH) FROM MACKWORTH STREET TO WALTON STREET (STA 0+00 TO STA 5+50)
   - C. OCEAN AVENUE (SOUTH) FROM MACKWORTH STREET STAT 0+00 TO STA 4+00
4. SEWER INSTALLATION WITH TRENCH REPAIR IN OCEAN AVENUE SOUTH FROM 4+00 TO 7+35

PHASE 1B: CONSTRUCTION THAT MAY BE DEFERRED TO 2020

1. MACKWORTH STREET: STORM DRAINAGE EAST OF CLIFTON STREET INCLUDING
   - A. OUTFALL AT BAXTER BOULEVARD TO CLIFTON STREET
   - B. REMOVAL OF MACKWORTH STREET CSO.
2. CURB, SIDEWALK (AT INTERSECTIONS AND CROSSWALKS) AND DRIVEWAYS ON 2019 PROJECT STREETS
   - A. MACKWORTH STREET FROM CLIFTON STREET TO OCEAN AVENUE
   - B. OCEAN AVENUE NORTH STA 0+00 TO 5+50
   - C. OCEAN AVENUE SOUTH STA 0+00 TO 7+35
3. WATER MAIN, CURB ,SIDEWALK AND DRIVEWAYS IN OCEAN AVENUE (SOUTH) STA 4+00 TO 11+00
4. FINISH PAVEMENT ON OCEAN AVENUE
   - A. FULL LENGTH OF PROJECT FROM CHENERY STREET (STA 11+00 SOUTH) TO WALTON STREET (STA 5+50 NORTH)
5. WALTON STREET: ALL WORK
   - A. SEWER, WATER MAIN AND STORM DRAINAGE
   - B. STREET RECONSTRUCTION THROUGH BASE PAVEMENT
   - C. CURB SIDEWALK AND DRIVEWAYS.
   - D. FINISH PAVEMENT
6. SAWYER STREET: ALL WORK
   - A. SEWER
   - B. WATER MAIN
   - C. TRENCH REPAIR THROUGH FINISH PAVEMENT

LEGEND

- PHASE 1A: CONSTRUCTION THAT MUST BE COMPLETED IN 2019
- PHASE 1B: CONSTRUCTION THAT MAY BE DEFERRED TO 2020

GRAPHIC SCALE
150 0 75 150 300
(IN FEET)
1 INCH = 150 FT.

Civil 3D 2013 Drawing Name:
17113 S – Key Plan.dwg, TAB:OAS–Key

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9661 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

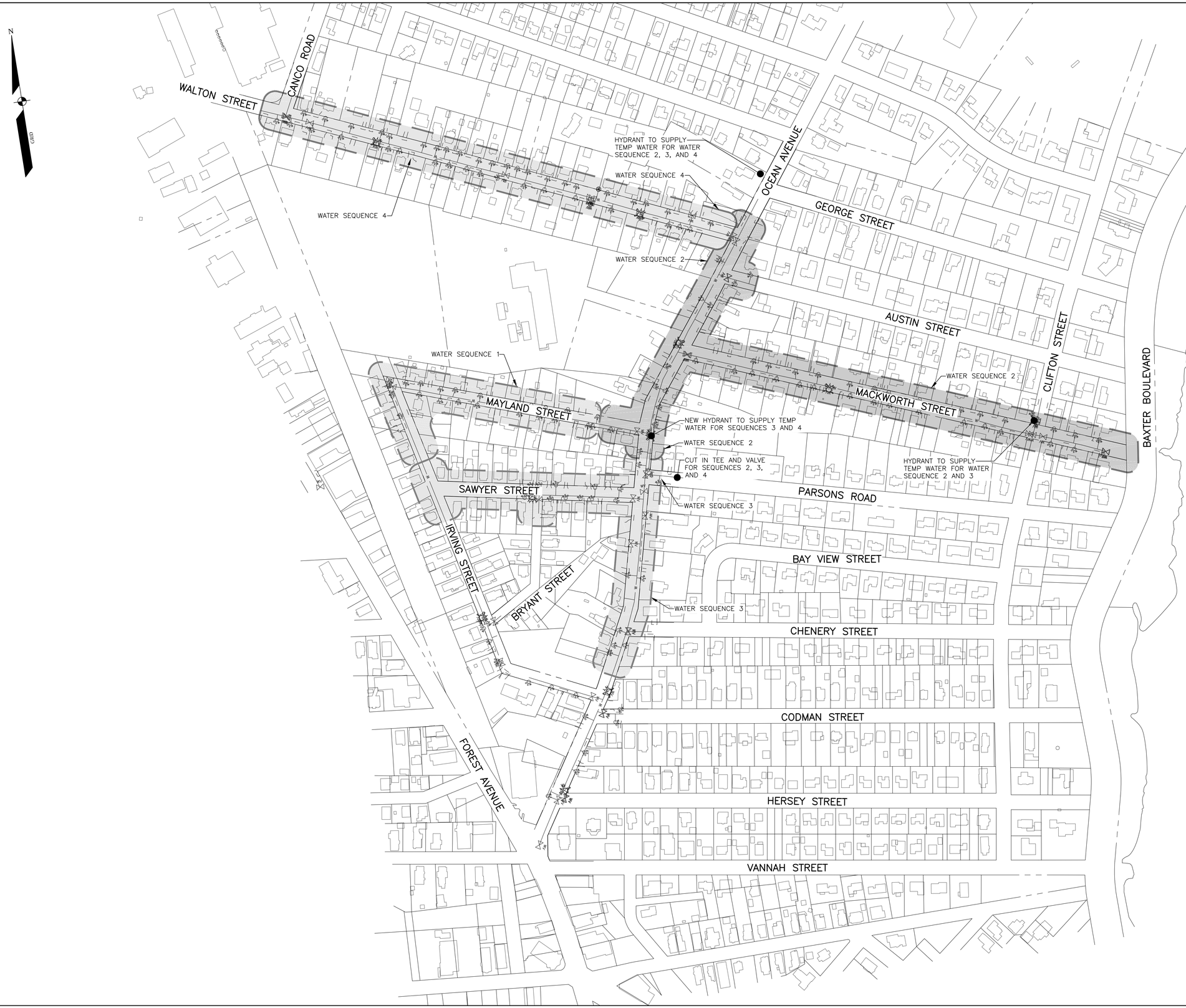
PROJECT KEY MAP AND PHASING PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 4 OF 45

PLAN NUMBER



PWD SEQUENCE 1 – MAYLAND

TEMPORARY WATER (INCLUIDING SERVICES) SHALL BE ACTIVE ALONG MAYLAND STREET FROM OCEAN AVENUE TO IRVING STREET. TEMPORARY WATER SHALL CONNECT TO THE EXISTING MAIN WITH A 1.5" TAP, TO BE CONVERTED TO AN AIR RELEASE VALVE UPON COMPLETE OF THE RENEWAL WORK. REPLACEMENT WORK (MAIN, SERVICES, APPURTENANCES, ETC) TO BE INSTALLED WITHIN SEQUENCE 1 LIMITS, WATER MAIN SHALL BE PRESSURE/LEAK TESTED, DISINFECTED AND HAVE A SUCCESSFUL TEST SAMPLE FOR ABSENSE OF BACTERIA BEFORE SEQUENCE 2 MAY COMMENCE. LAYOUT OF THE TEMPORARY WATER (INCLUDING SERVICES) FOR SEQUENCE 2 CAN OCCUR CONCURRENTLY WITH SEQUENCE 1 WATER MAIN REPLACEMENT WORK.

PWD SEQUENCE 2 – MACKWORTH/OCEAN

TEMPORARY WATER (INCLUIDING SERVICES) SHALL BE ACTIVE ALONG MACKWORTH STREET FROM CLIFTON STREET TO OCEAN AVENUE, AND ALONG OCEAN AVENUE FROM WALTON STREET TO MAYLAND STREET. TEMPORARY WATER SHALL CONNECT TO EXISTING HYDRANTS ON CLIFTON STREET AND OCEAN AVENUE AT WALTON STREET. REPLACEMENT WORK (MAIN, SERVICES, APPURTENANCES, ETC) TO BE INSTALLED WITHIN SEQUENCE 2 LIMITS, WATER MAIN SHALL BE PRESSURE/LEAK TESTED, DISINFECTED AND HAVE A SUCCESSFUL TEST SAMPLE FOR ABSENSE OF BACTERIA BEFORE SEQUENCE 3 MAY COMMENCE. LAYOUT OF THE TEMPORARY WATER (INCLUDING SERVICES) FOR SEQUENCE 3 CAN OCCUR CONCURRENTLY WITH SEQUENCE 2 WATER MAIN REPLACEMENT WORK.

PWD SEQUENCE 3 – OCEAN SOUTH/SAWYER

TEMPORARY WATER (INCLUIDING SERVICES) SHALL BE ACTIVE ALONG OCEAN AVENUE FROM MAYLAND STREET SO CHENERY STREET AND ALONG SAWYER STREET FROM OCEAN AVENUE TO IRVING STREET. TEMPORARY WATER SHALL CONNECT TO THE NEWLY INSTALLED HYDRANT ON OCEAN AVENUE FROM SEQUENCE 2 AND AN EXISTING HYDRANT AT CLIFTON STREET. REPLACEMENT WORK (MAIN, SERVICES, APPURTENANCES, ETC) TO BE INSTALLED WITHIN SEQUENCE 3 LIMITS, WATER MAIN SHALL BE PRESSURE/LEAK TESTED, DISINFECTED AND HAVE A SUCCESSFUL TEST SAMPLE FOR ABSENSE OF BACTERIA BEFORE SEQUENCE 4 MAY COMMENCE. LAYOUT OF THE TEMPORARY WATER (INCLUDING SERVICES) FOR SEQUENCE 4 CAN OCCUR CONCURRENTLY WITH SEQUENCE 3 WATER MAIN REPLACEMENT WORK.

PWD SEQUENCE 4 – WALTON

TEMPORARY WATER (INCLUIDING SERVICES) SHALL BE ACTIVE ALONG WALTON STREET FROM OCEAN AVENUE TO CANCO ROAD. TEMPORARY WATER SHALL CONNECT AN EXISTING HYDRANT ON OCEAN AVENUE AT WALTON STREET AND THE NEWLY INSTALLED HYDRANT ON OCEAN AVENUE FROM SEQUENCE 2. REPLACEMENT WORK (MAIN, SERVICES, APPURTENANCES, ETC) TO BE INSTALLED WITHIN SEQUENCE 4 LIMITS, WATER MAIN SHALL BE PRESSURE/LEAK TESTED, DISINFECTED AND HAVE A SUCCESSFUL TEST SAMPLE FOR ABSENSE OF BACTERIA BEFORE REMOVAL OF TEMPORARY WATER INFRASTRUCTURE.

GRAPHIC SCALE

150 0 75 150 300

(IN FEET)
1 INCH = 150 FT.

Civil 3D 2013 Drawing Name:
17113 U – Temp Water.dwg, TAB:OAW

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE
DANIEL J. RILEY
No. 5951
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

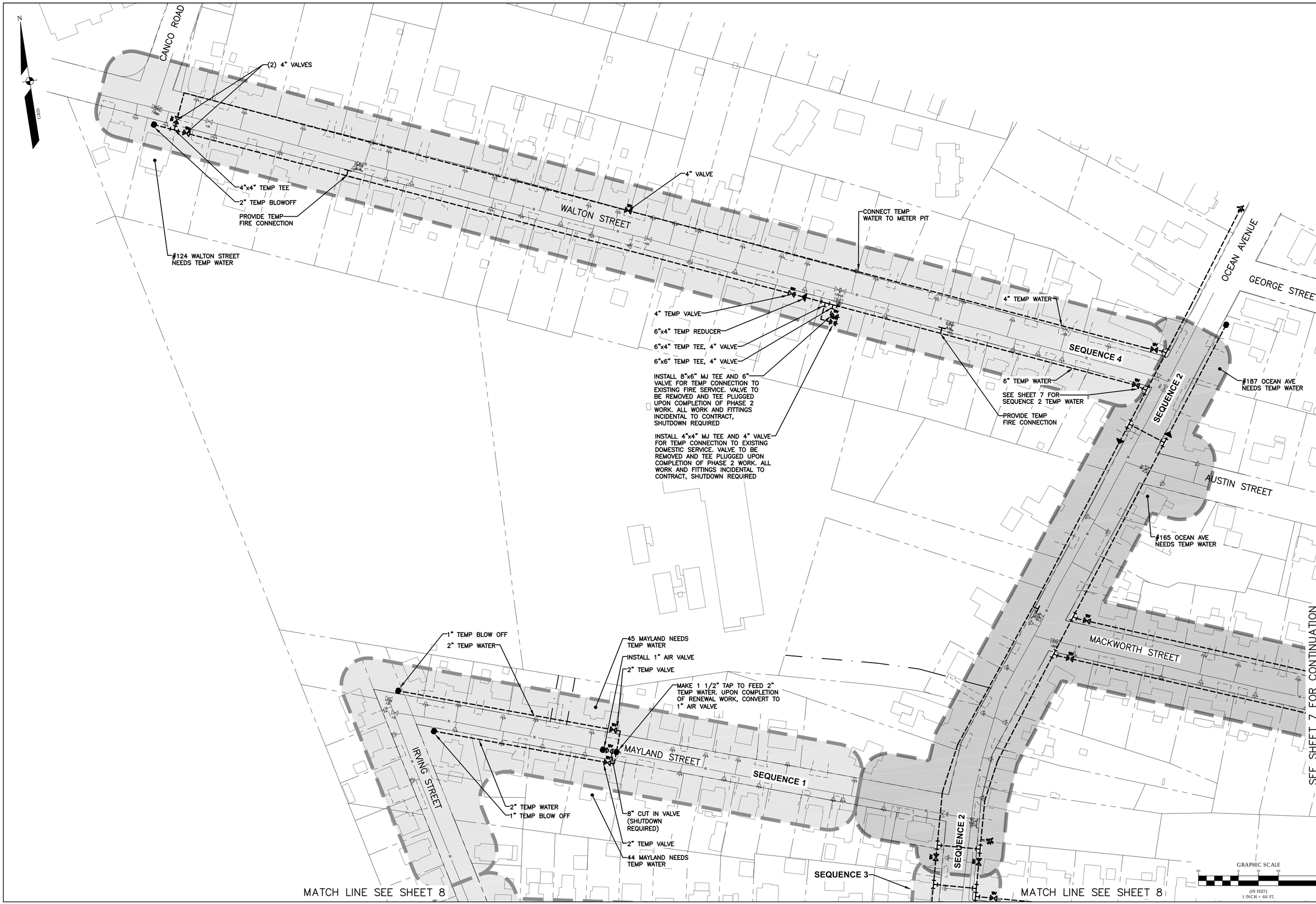
TEMP WATER SEQUENCE PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND MAINE

SHEET #
5 OF 45

PLAN NUMBER



REFERENCES:

Civil 3D 2013 Drawing Name: 17113 U – Temp Water.dwg, TAB:W1

CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DLR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE DANIEL L. RILEY No. 9941 PROFESSIONAL ENGINEER
01/22/2019

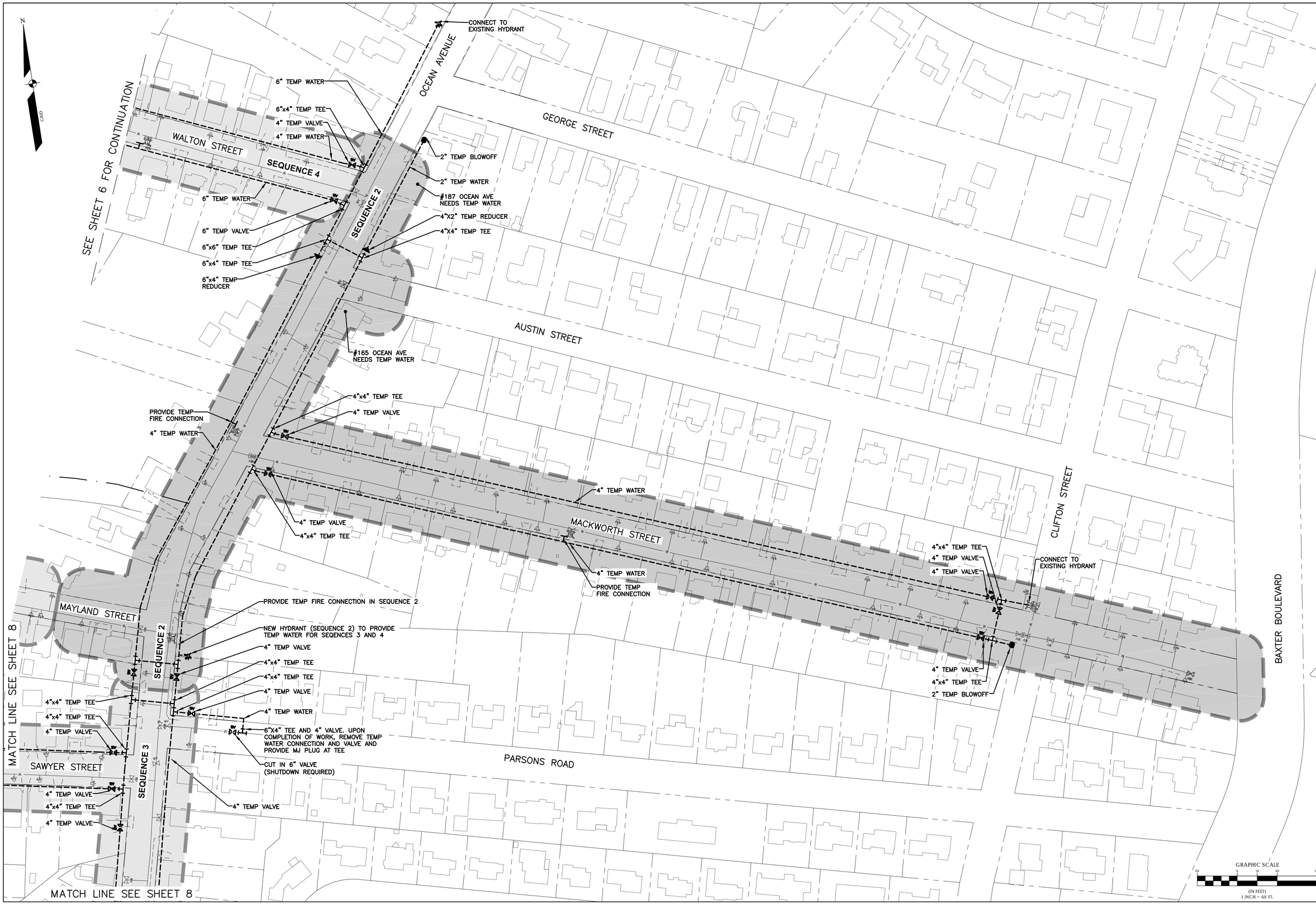
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
TEMP WATER PLAN - SEQUENCE 1, 2, AND 4 - OCEAN & WALTON

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 6 OF 45

PLAN NUMBER



REFERENCES:

Civil 3D 2013 Drawing Name: 17113 U – Temp Water.dwg, TAB:W2

CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DLR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE DANIEL L. RILEY No. 9941 PROFESSIONAL ENGINEER
01/22/2019

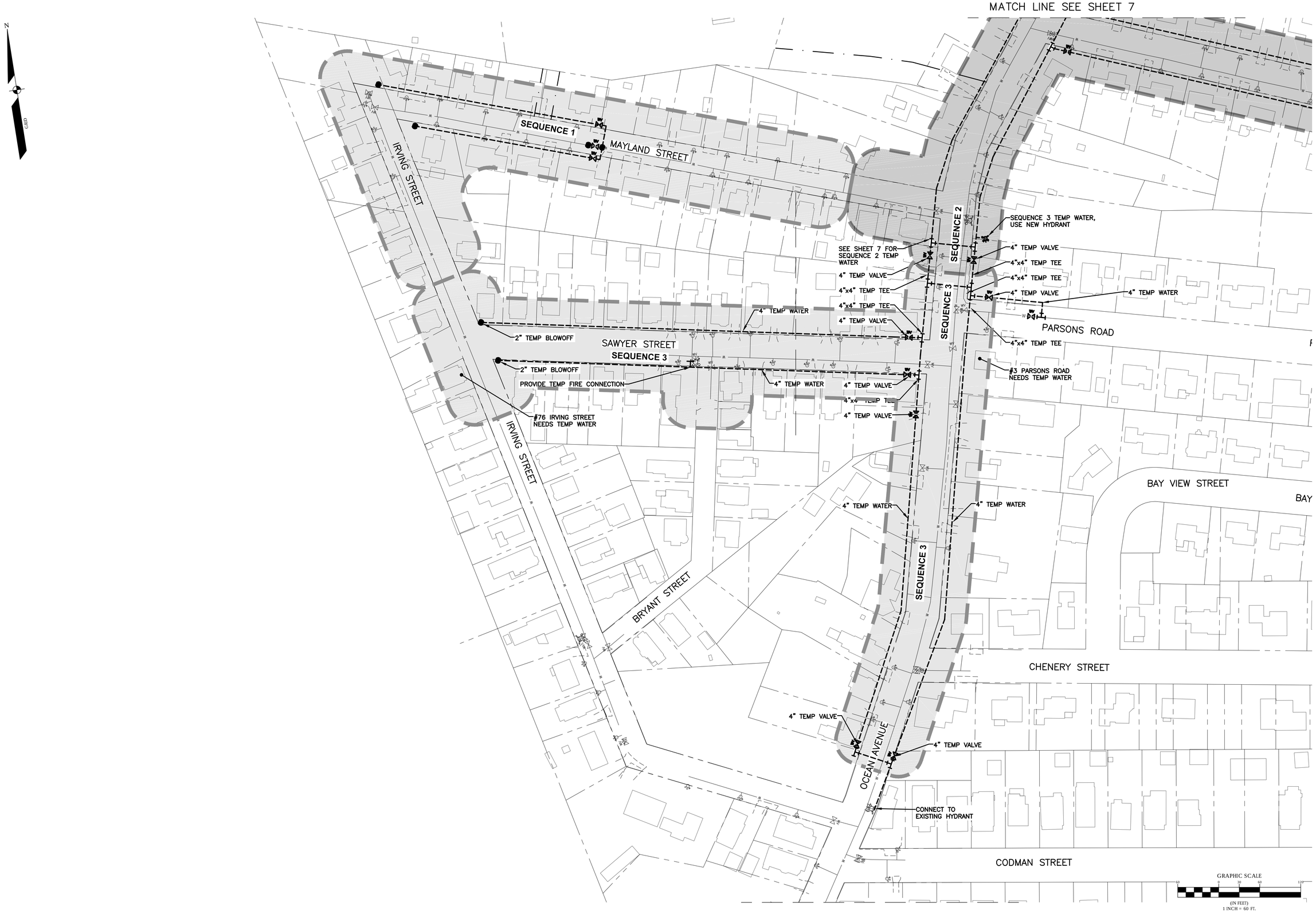
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
TEMP WATER PLAN - SEQUENCE 2 - MACKWORTH & OCEAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 7 OF 45

PLAN NUMBER



REFERENCES:

Civil 3D 2013 Drawing Name: 17113 U – Temp Water.dwg, TAB:W3

CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DLR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE DANIEL L. RILEY No. 9947 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
TEMP WATER PLAN - SEQUENCE 3 - OCEAN, SAWYER, & IRVING

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE RESURGAM

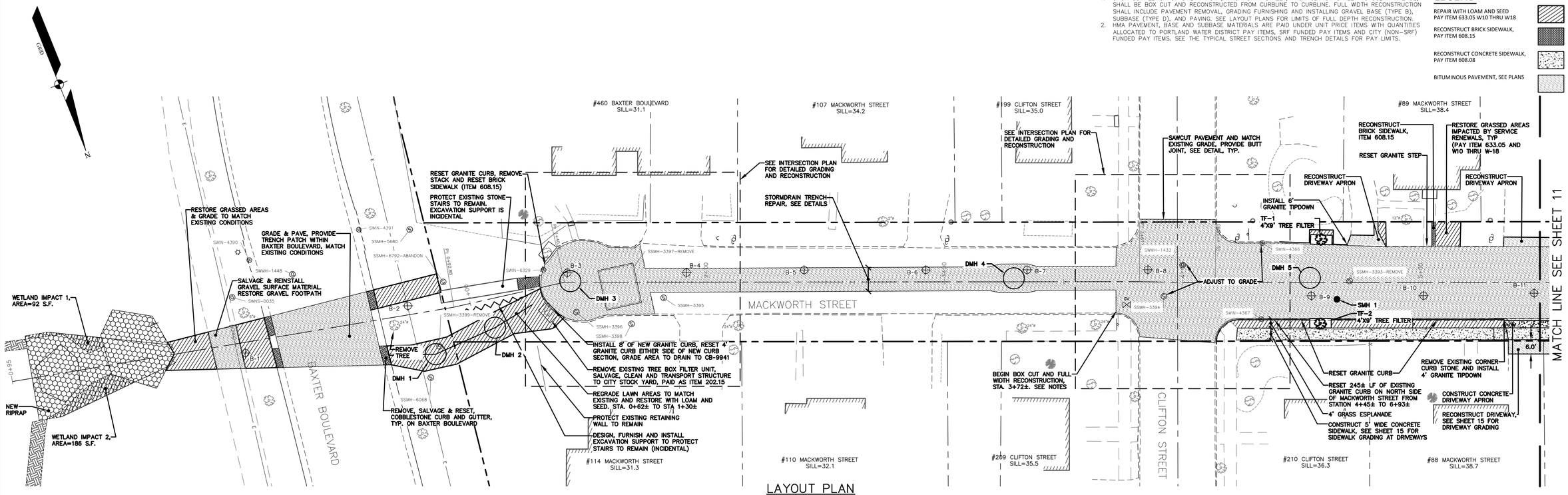
SHEET # 8 OF 45

PLAN NUMBER

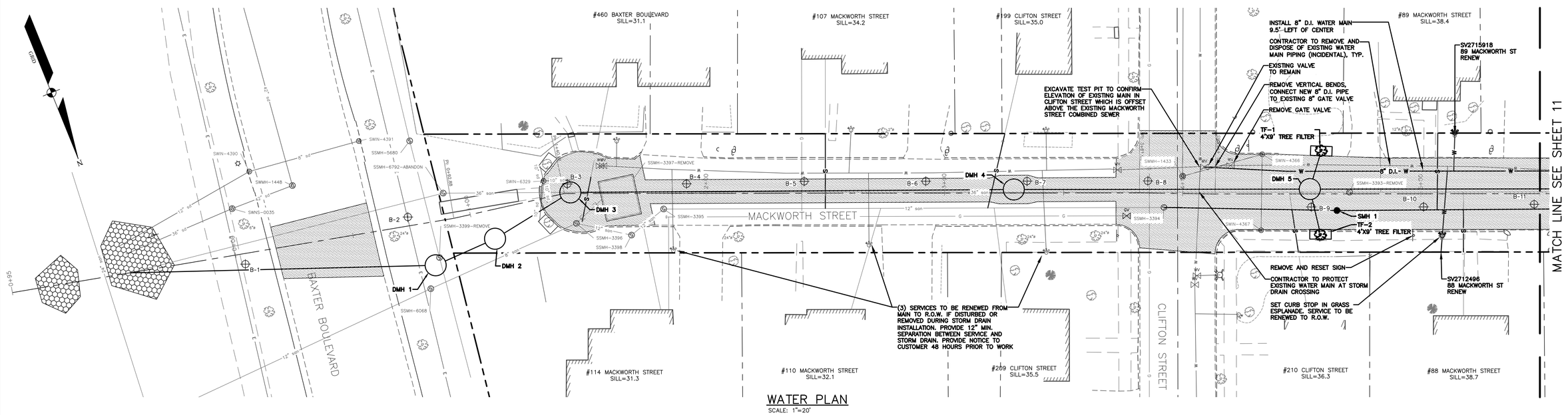
NOTES:
1. UPON COMPLETION OF UTILITY WORK, MACKWORTH STREET, FROM CLIFTON STREET TO OCEAN AVENUE, SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

LEGEND

- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS



LAYOUT PLAN
SCALE: 1"=20'



WATER PLAN
SCALE: 1"=20'

REFERENCES:
Civil 3D 2013 Drawing Name: 17113 PP MACKWORTH.dwg, TAB:MACKWORTH LO1
CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	L. DANIEL
CHECKED BY:	BVD
DLR	RILEY
SCALE:	AS NOTED
DATE:	1/22/2019

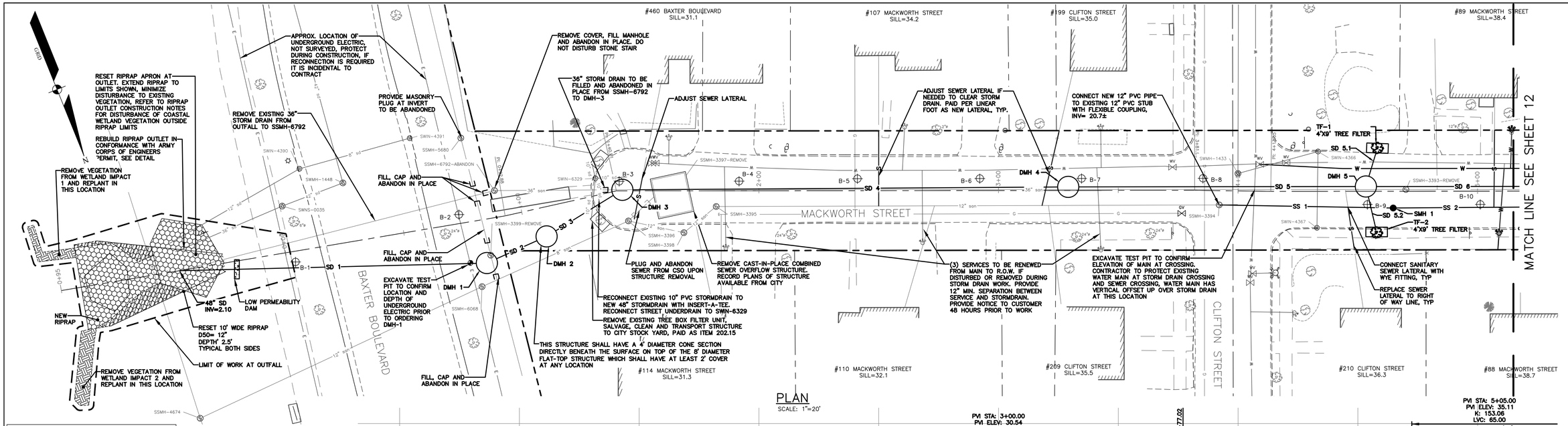
STATE OF MAINE — LEON DANIEL RILEY — No. 9667 — LICENSED PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT
MACKWORTH ST - STA. 0+00 TO 5+15 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND MAINE — RESURGAM

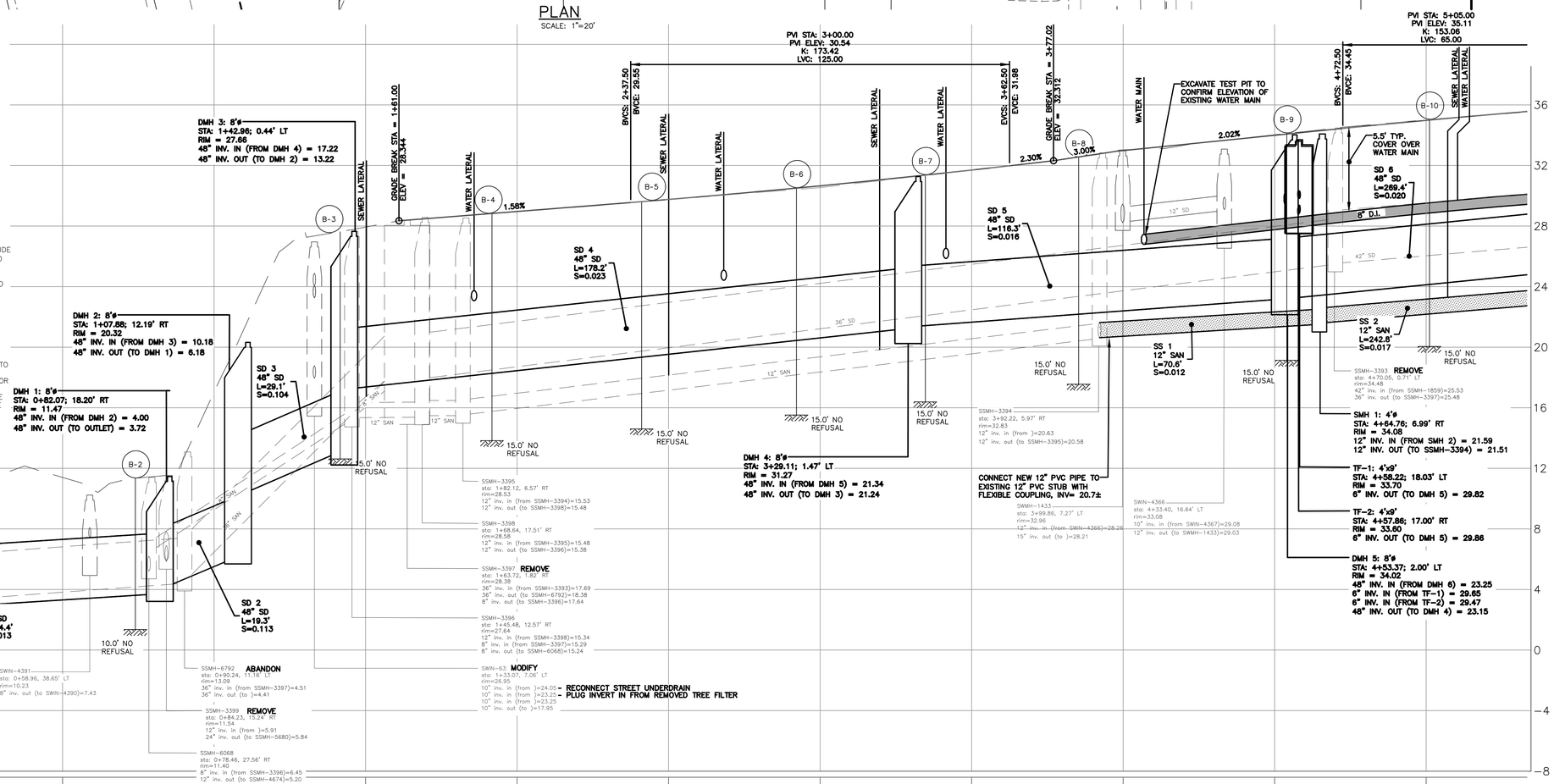
SHEET # 9 OF 45
PLAN NUMBER



PLAN
SCALE: 1"=20'

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 1	48"	124'	1.26%	HDPE
SD 3	48"	29'	8.19%	HDPE
SD 4	48"	178'	2.16%	HDPE
SD 5	48"	116'	1.49%	HDPE
SD 5.1	6"	11'	1.01%	HDPE
SD 5.2	6"	14'	2.02%	HDPE
SD 6	48"	269'	1.99%	HDPE
SS 1	12"	71'	1.21%	PVC
SS 2	12"	243'	1.67%	PVC

NOTES:
1. UPON COMPLETION OF UTILITY WORK, MACKWORTH STREET, FROM CLIFTON STREET TO OCEAN AVENUE, SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL-DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILITY COORDINATION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. CONTRACTOR MAY BE REQUIRED TO INSTALL NEW SEWER LATERALS BELOW NEW STORMDRAIN IF NECESSARY TO ENSURE MINIMUM 1% SLOPE THROUGH LATERAL.
7. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
8. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.



PROFILE
SCALE: HORZ. 1"=20'
VERT 1"=4'

REFERENCES:

Civil 3D 2013 Drawing Name: 17113 PP MACKWORTH.dwg, TAB:MACKWORTH PP1

CITY PROPERTY PLAN BOOK SHEETS: I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9661 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

MACKWORTH ST - STA. 0+00 TO 5+15 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

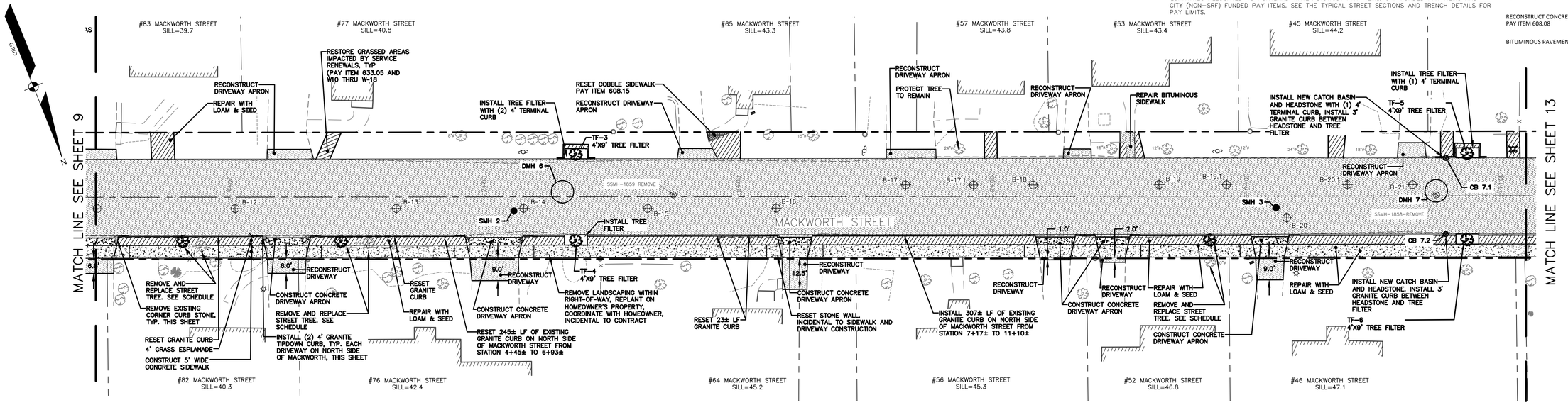
RESURGAM CITY OF PORTLAND, MAINE

SHEET # 10 OF 45

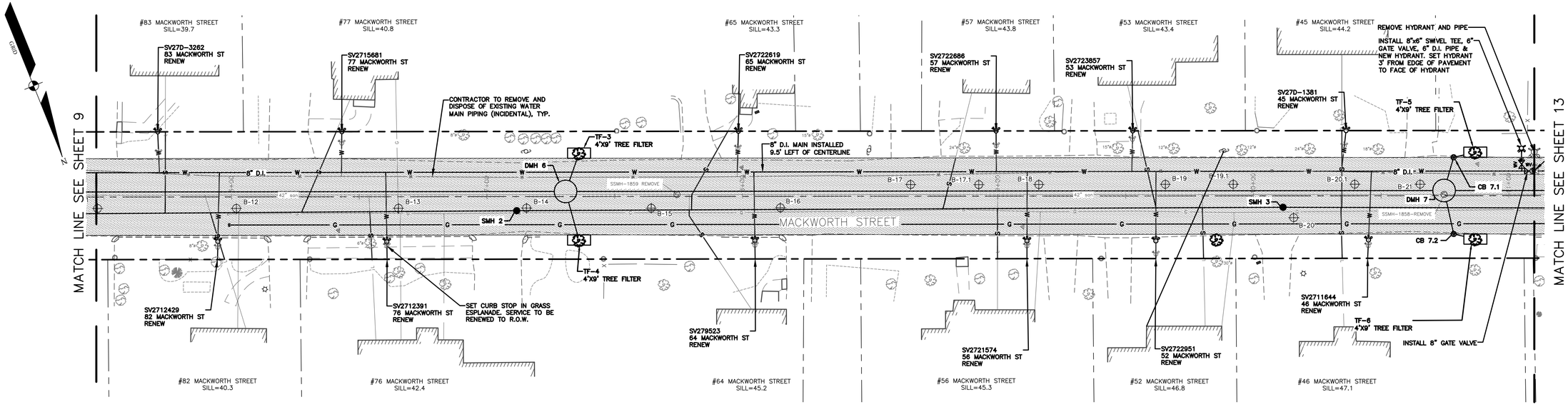
PLAN NUMBER

NOTES:
1. UPON COMPLETION OF UTILITY WORK, MACKWORTH STREET, FROM CLIFTON STREET TO OCEAN AVENUE, SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

LEGEND
- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS



LAYOUT PLAN
SCALE: 1"=20'



WATER PLAN
SCALE: 1"=20'

Civil 3D 2013 Drawing Name: 17113 PP MACKWORTH.dwg, TAB:MACKWORTH L02

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9561 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

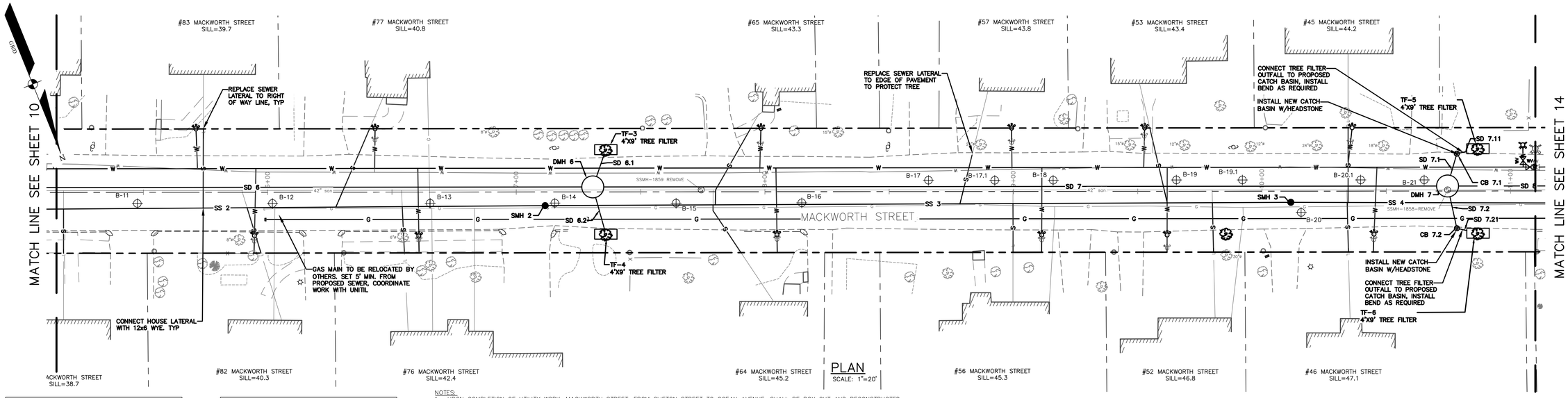
MACKWORTH ST - STA. 5+15 TO 11+10 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE RESURGAM

SHEET # 11 OF 45

PLAN NUMBER



PLAN

SCALE: 1"=20'

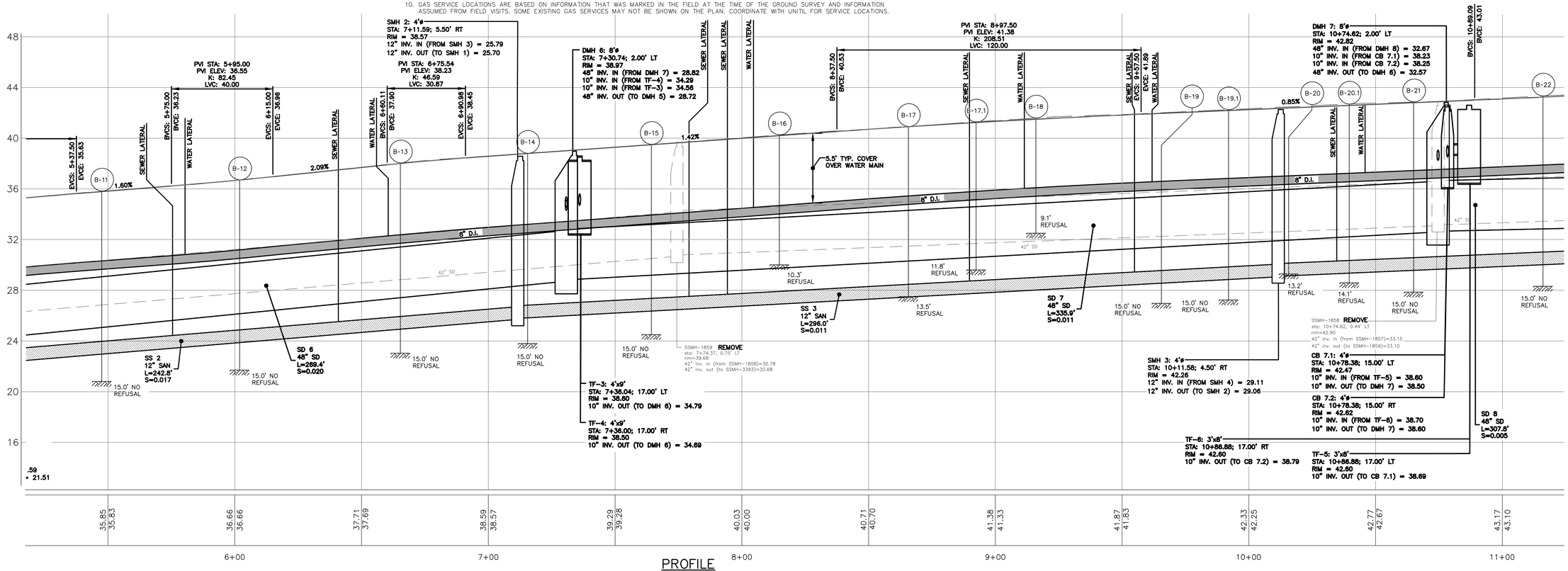
PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 6	48"	269'	1.99%	HDPE
SD 6.1	10"	10'	1.95%	HDPE
SD 6.2	10"	14'	2.03%	HDPE
SD 7	48"	336'	1.10%	HDPE
SD 7.1	10"	8'	1.97%	HDPE
SD 7.2	10"	11'	2.03%	HDPE
SD 7.11	10"	3'	1.00%	HDPE

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 7.21	10"	3'	1.00%	HDPE
SD 8	48"	308'	0.45%	HDPE
SS 2	12"	243'	1.67%	PVC
SS 3	12"	296'	1.09%	PVC
SS 4	12"	296'	0.87%	PVC

NOTES:

1. UPON COMPLETION OF UTILITY WORK, MACKWORTH STREET, FROM CLIFTON STREET TO OCEAN AVENUE, SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL-DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILITY COORDINATION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. PROVIDE 4' GRANITE TIPDOWN ON BOTH SIDES OF PROPOSED HEADSTONE FOR PROPOSED CATCH BASINS IN UNCURBED AREAS. TIPDOWN CURBS SHALL BE PAID AT UNIT PRICE IN THE BID.
6. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
7. CONTRACTOR MAY BE REQUIRED TO INSTALL NEW SEWER LATERALS BELOW NEW STORMDRAIN IF NECESSARY TO ENSURE MINIMUM 1% SLOPE THROUGH LATERAL.
8. GAS MAIN IN MACKWORTH STREET IS TO BE RELOCATED BY UNITIL. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH HIS SCHEDULE.
9. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
10. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.

ROADWAY CROSS SLOPE TABLE		
LEFT LANE	STATION	RIGHT LANE
-2.00%	START	-3.00%
-2.00%	7+75	-3.00%
-3.00%	8+25	-2.00%
-3.00%	9+00	-2.00%
-2.00%	9+50	-2.00%
-2.00%	12+75	-2.00%



PROFILE

SCALE: HORIZ. 1"=20'
VERT 1"=4'

REFERENCES:

Civil 3D 2013 Drawing Name: 17113 PP MACKWORTH.dwg, TAB:MACKWORTH PP2

CITY PROPERTY PLAN BOOK SHEETS: I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9561 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

MACKWORTH ST - STA. 5+15 TO 11+10 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

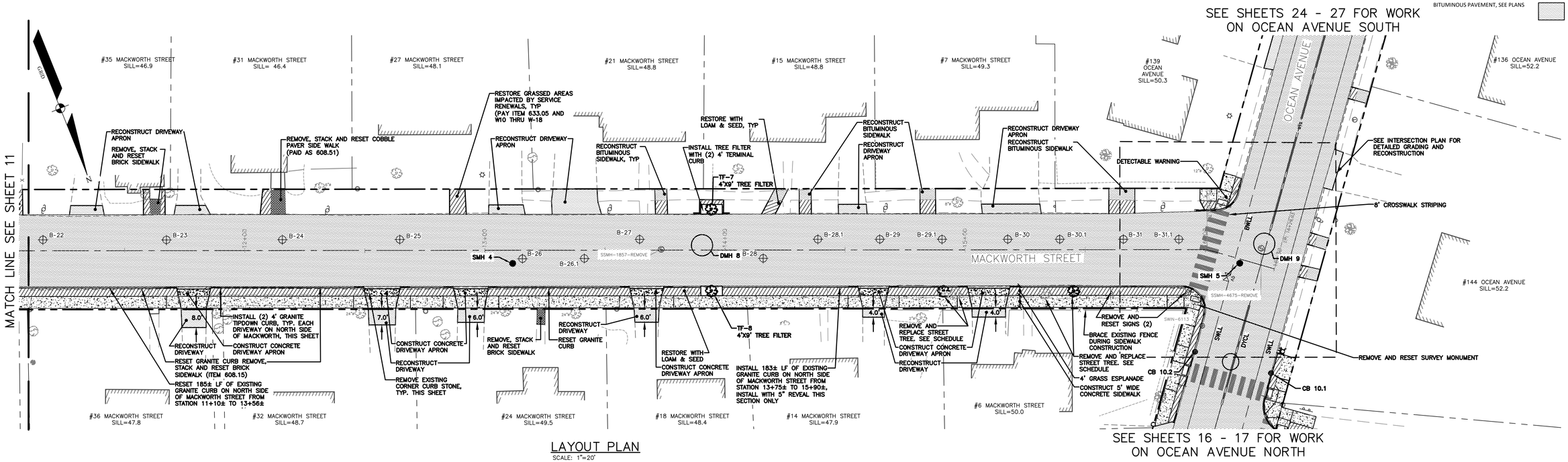
SHEET # 12 OF 45

PLAN NUMBER

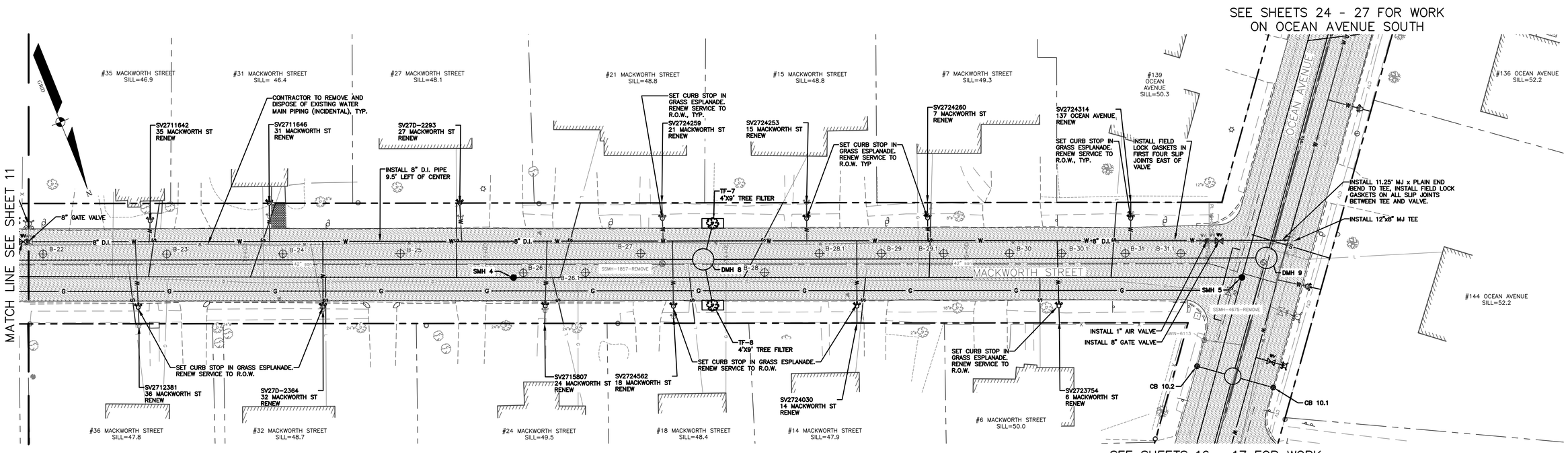
NOTES:
1. UPON COMPLETION OF UTILITY WORK, MACKWORTH STREET, FROM CLIFTON STREET TO OCEAN AVENUE, SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

LEGEND

- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS



LAYOUT PLAN
SCALE: 1"=20'



WATER PLAN
SCALE: 1"=20'

Civil 3D 2013 Drawing Name: 17113 PP MACKWORTH.dwg, TAB:MACKWORTH LO3

CITY PROPERTY PLAN BOOK SHEETS: I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5957 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

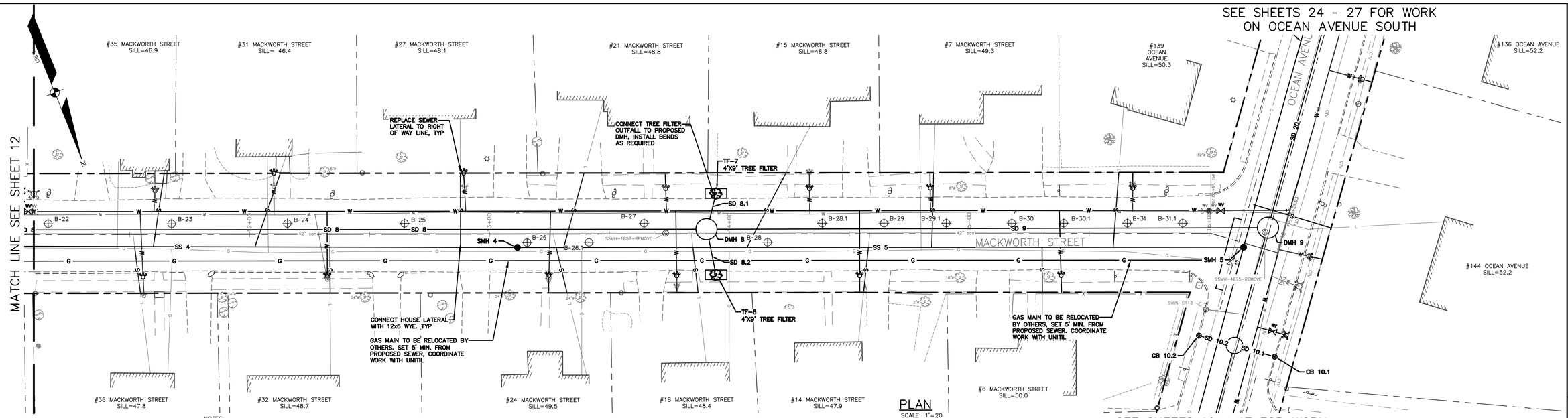
MACKWORTH ST - STA. 11+10 TO 15+90 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 13 OF 45

PLAN NUMBER



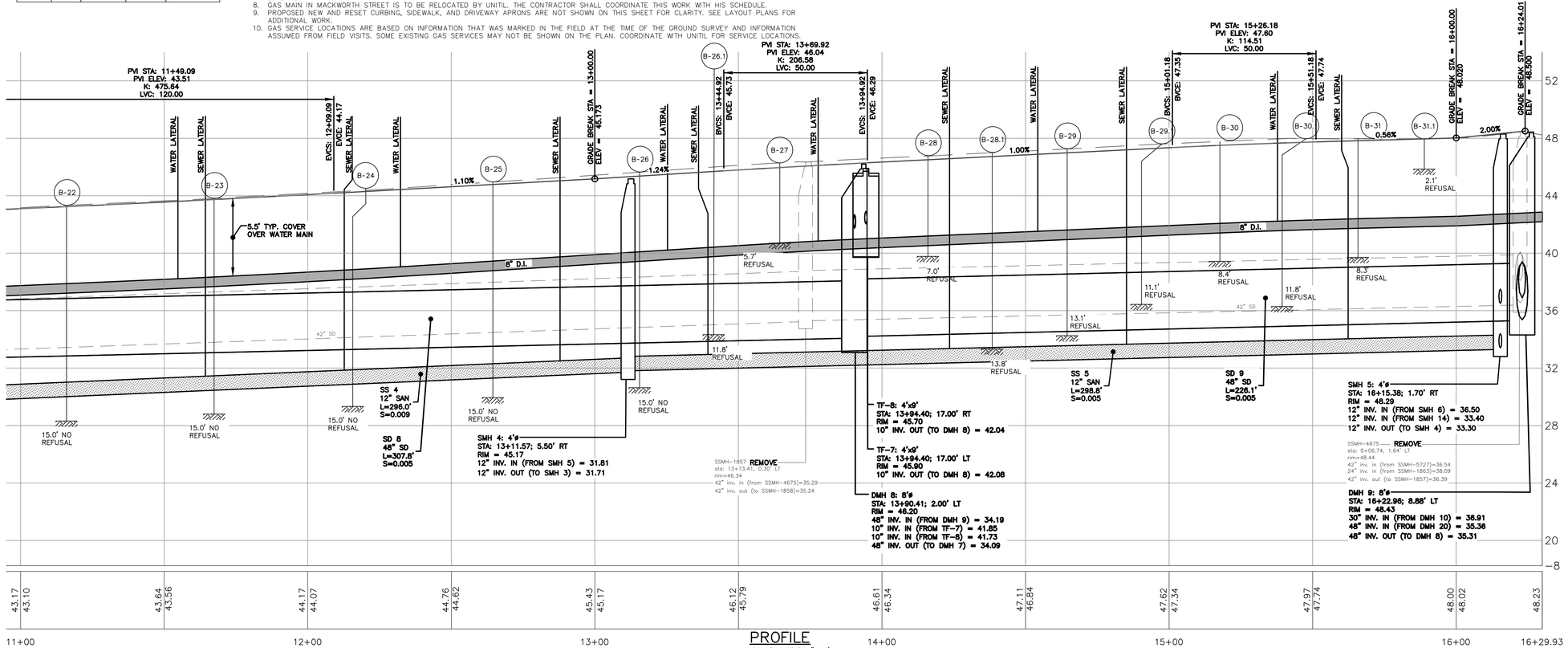
PLAN
SCALE: 1"=20'

SEE SHEETS 16 - 17 FOR WORK ON OCEAN AVENUE NORTH

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 8	48"	308'	0.45%	HDPE
SD 8.1	10"	10'	1.99%	HDPE
SD 8.2	10"	14'	2.01%	HDPE
SD 9	48"	226'	0.48%	HDPE
SS 4	12"	296'	0.87%	PVC
SS 5	12"	299'	0.49%	PVC

NOTES:
1. UPON COMPLETION OF UTILITY WORK, MACKWORTH STREET, FROM CLIFTON STREET TO OCEAN AVENUE, SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL-DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILITY COORDINATION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. PROVIDE 4' GRANITE TIPDOWN ON BOTH SIDES OF PROPOSED HEADSTONE FOR PROPOSED CATCH BASINS IN UNCURBED AREAS. TIPDOWN CURBS SHALL BE PAID AT UNIT PRICE IN THE BID.
6. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
7. CONTRACTOR MAY BE REQUIRED TO INSTALL NEW SEWER LATERALS BELOW NEW STORMDRAIN IF NECESSARY TO ENSURE MINIMUM 1% SLOPE THROUGH LATERAL.
8. GAS MAIN IN MACKWORTH STREET IS TO BE RELOCATED BY UNITIL. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH HIS SCHEDULE.
9. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
10. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.

ROADWAY CROSS SLOPE TABLE		
LEFT LANE	STATION	RIGHT LANE
-2.00%	9+50	-2.00%
-2.00%	12+75	-2.00%
-2.00%	13+25	-3.00%
-2.00%	13+50	-3.00%
-3.00%	14+00	-3.00%
-3.00%	END	-3.00%



PROFILE
SCALE: HORIZ. 1"=20'
VERT 1"=4'

REFERENCES:
Civil 3D 2013 Drawing Name: 17113 PP MACKWORTH.dwg, TAB:MACKWORTH PP3
CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DJR
SCALE: AS NOTED
DATE: 1/22/2019

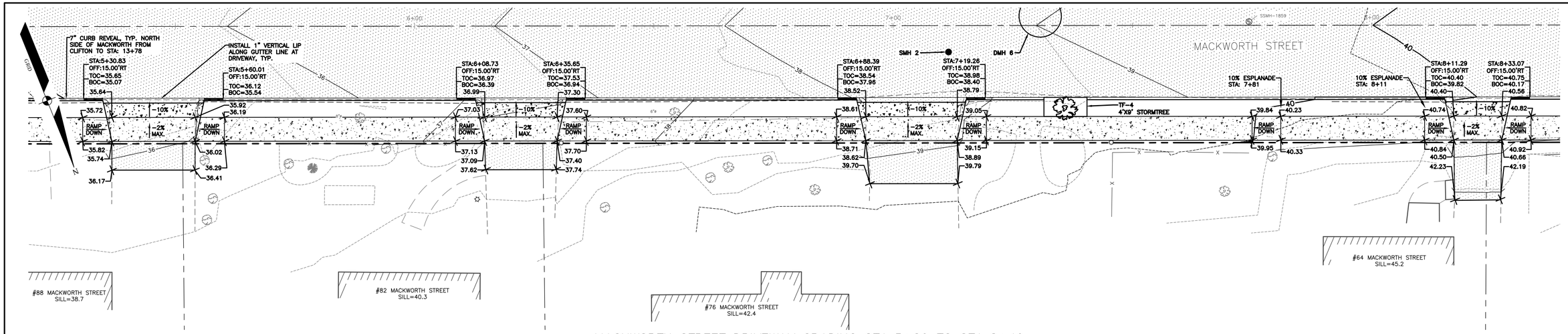
STATE OF MAINE DANIEL J. RILEY No. 5969 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
MACKWORTH ST - STA. 11+10 TO 15+90 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

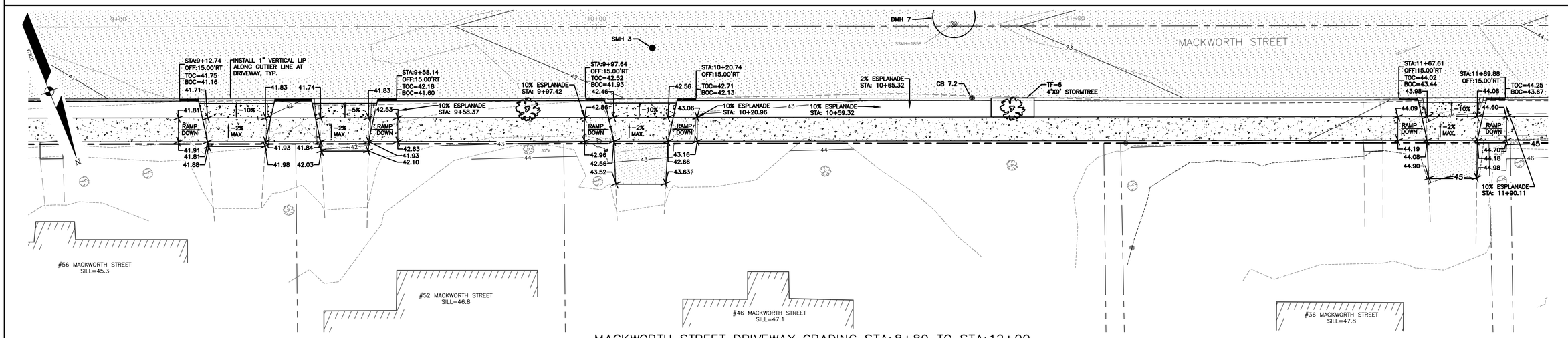
RESURGAM CITY OF PORTLAND, MAINE

SHEET # 14 OF 45
PLAN NUMBER



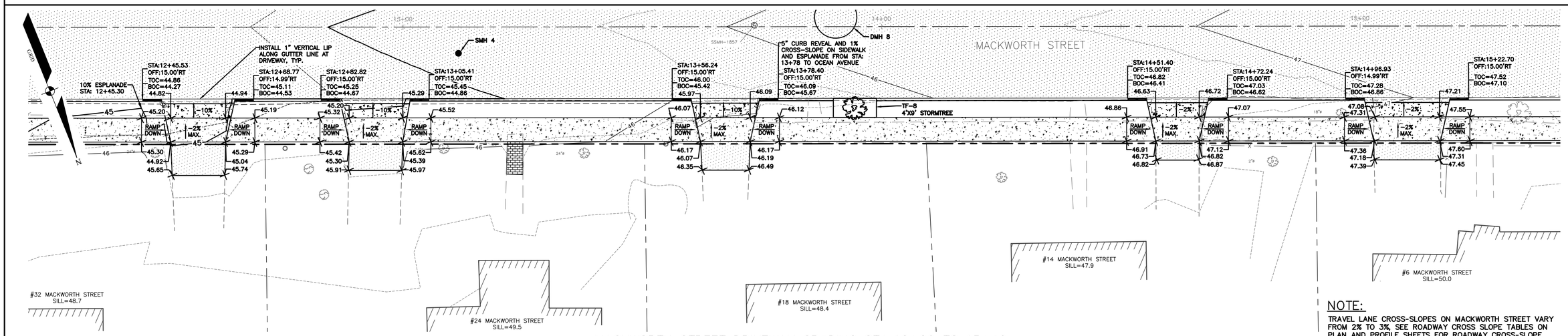
MACKWORTH STREET DRIVEWAY GRADING STA:5+20 TO STA:8+40

SCALE: 1"=10'



MACKWORTH STREET DRIVEWAY GRADING STA:8+80 TO STA:12+00

SCALE: 1"=10'



MACKWORTH STREET DRIVEWAY GRADING STA:12+20 TO 15+40

SCALE: 1"=10'

NOTE:

TRAVEL LANE CROSS-SLOPES ON MACKWORTH STREET VARY FROM 2% TO 3%, SEE ROADWAY CROSS SLOPE TABLES ON PLAN AND PROFILE SHEETS FOR ROADWAY CROSS-SLOPE TRANSITION LOCATIONS

Civil 3D 2013 Drawing Name:
17113 INTERSECTION PLAN.dwg, TAB:MACKWORTH SIDEWALK

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-13, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DLR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL L. RILEY No. 5969 PROFESSIONAL ENGINEER 01/22/2019

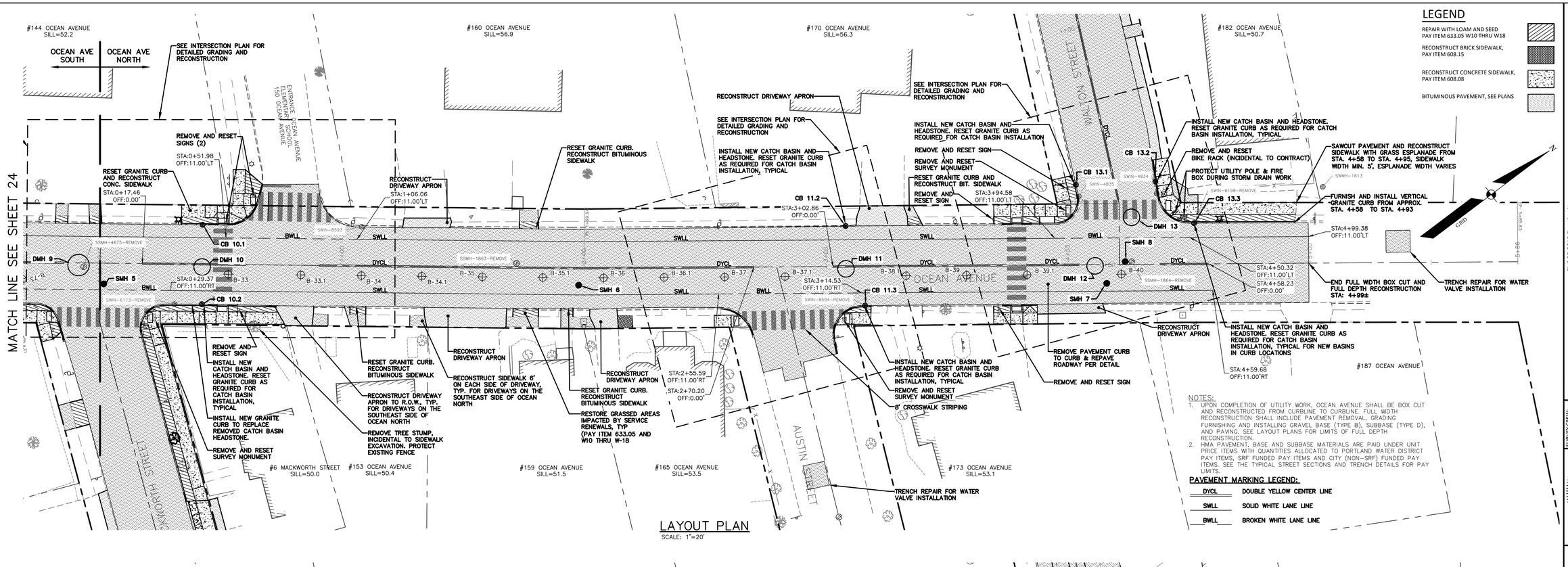
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
MACKWORTH ST DRIVEWAY AND SIDEWALK GRADING

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

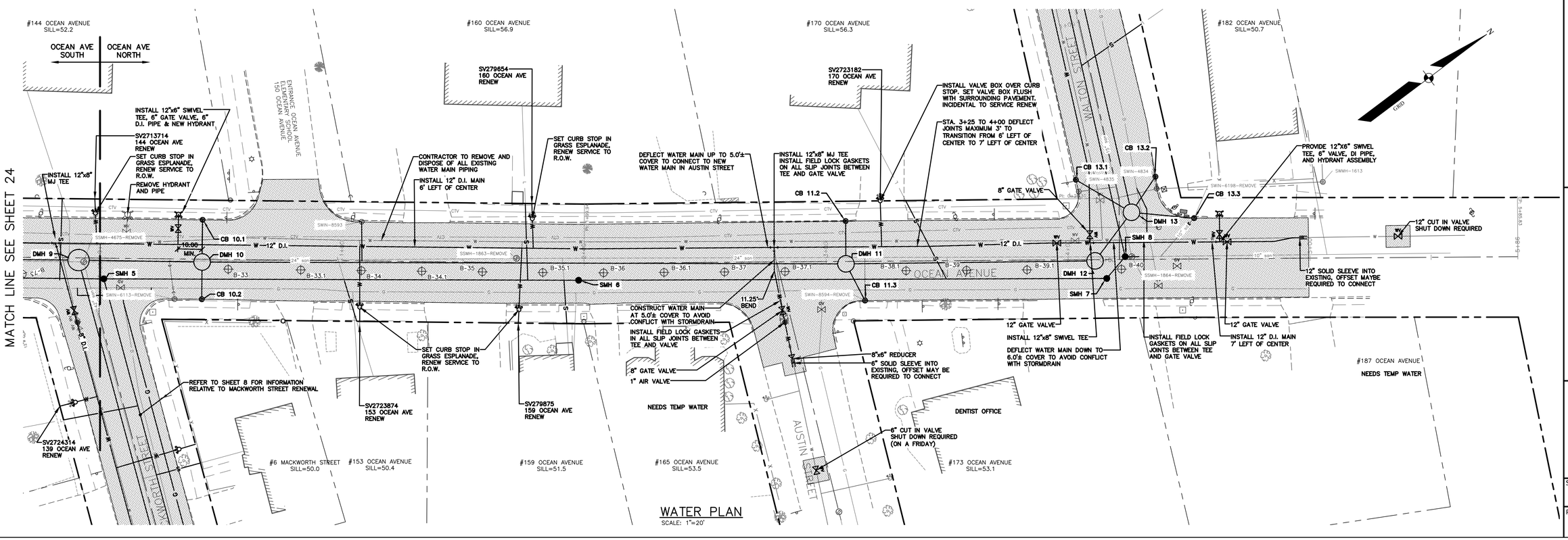
CITY OF PORTLAND, MAINE RESURGAM

SHEET # 15 OF 45

PLAN NUMBER



LAYOUT PLAN
SCALE: 1"=20'



WATER PLAN
SCALE: 1"=20'

Civil 3D 2013 Drawing Name:
17113 PP OCEAN AVE.dwg, TAB:NORTH - L01

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5969 PROFESSIONAL ENGINEER
01/22/2019

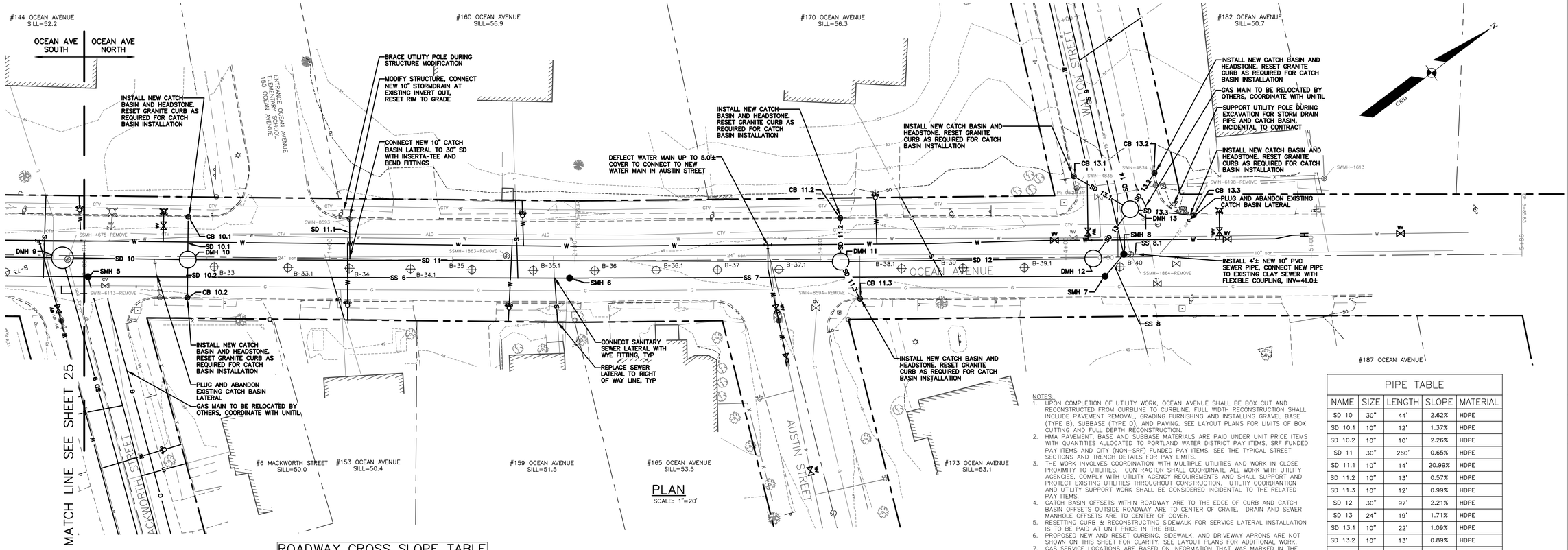
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
OCEAN AVE NORTH - STA. 0+00 TO 5+93 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE — RESURGAM

SHEET # 16 OF 45

PLAN NUMBER

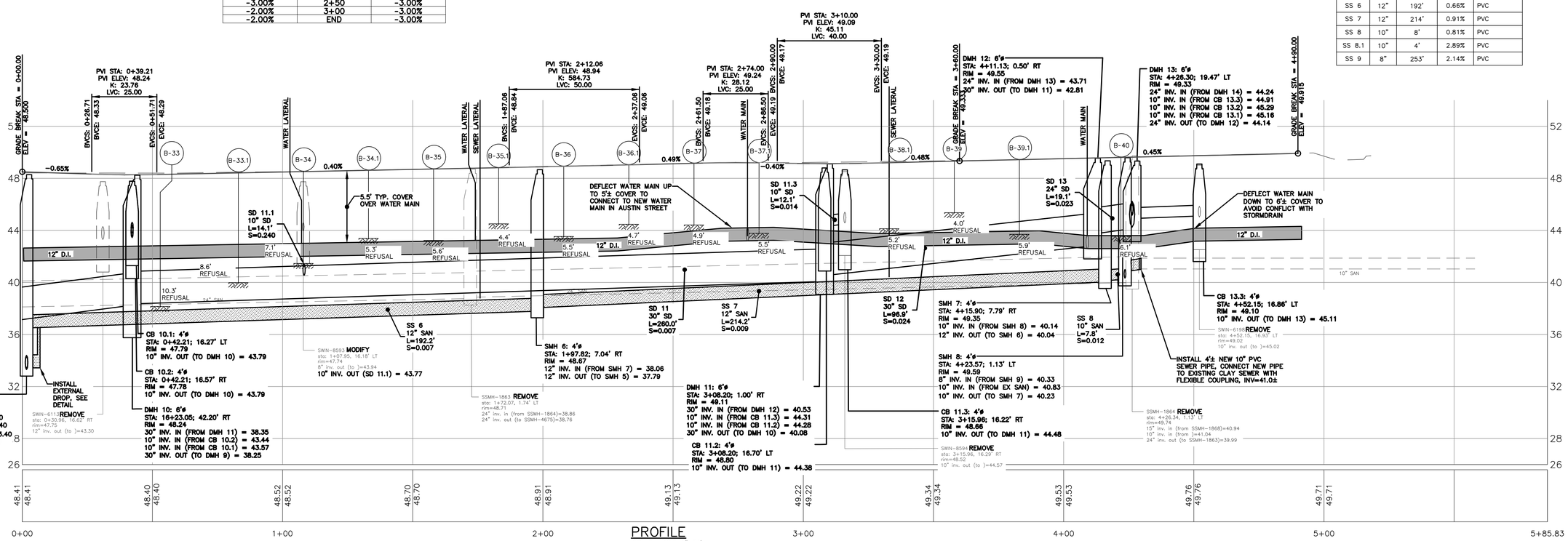


PLAN
SCALE: 1"=20'

ROADWAY CROSS SLOPE TABLE		
LEFT LANE	STATION	RIGHT LANE
-3.00%	START	-3.00%
-3.00%	2+50	-3.00%
-2.00%	3+00	-3.00%
-2.00%	END	-3.00%

NOTES:
1. UPON COMPLETION OF UTILITY WORK, OCEAN AVENUE SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF BOX CUTTING AND FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILTIY COORDIANTION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
7. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 10	30"	44'	2.62%	HDPE
SD 10.1	10"	12'	1.37%	HDPE
SD 10.2	10"	10'	2.26%	HDPE
SD 11	30"	260'	0.65%	HDPE
SD 11.1	10"	14'	20.99%	HDPE
SD 11.2	10"	13'	0.57%	HDPE
SD 11.3	10"	12'	0.99%	HDPE
SD 12	30"	97'	2.21%	HDPE
SD 13	24"	19'	1.71%	HDPE
SD 13.1	10"	22'	1.09%	HDPE
SD 13.2	10"	13'	0.89%	HDPE
SD 13.3	10"	21'	0.74%	HDPE
SD 14	24"	190'	1.38%	HDPE
SS 6	12"	192'	0.66%	PVC
SS 7	12"	214'	0.91%	PVC
SS 8	10"	8'	0.81%	PVC
SS 8.1	10"	4'	2.89%	PVC
SS 9	8"	253'	2.14%	PVC



PROFILE
SCALE: HORZ. 1"=20'
VERT. 1"=4'

REFERENCES:
Civil 3D 2013 Drawing Name: 17113 PP OCEAN AVE.dwg, TAB:NORTH – PP1
CITY PROPERTY PLAN BOOK SHEETS: I & J SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DJR
SCALE: AS NOTED
DATE: 1/22/2019

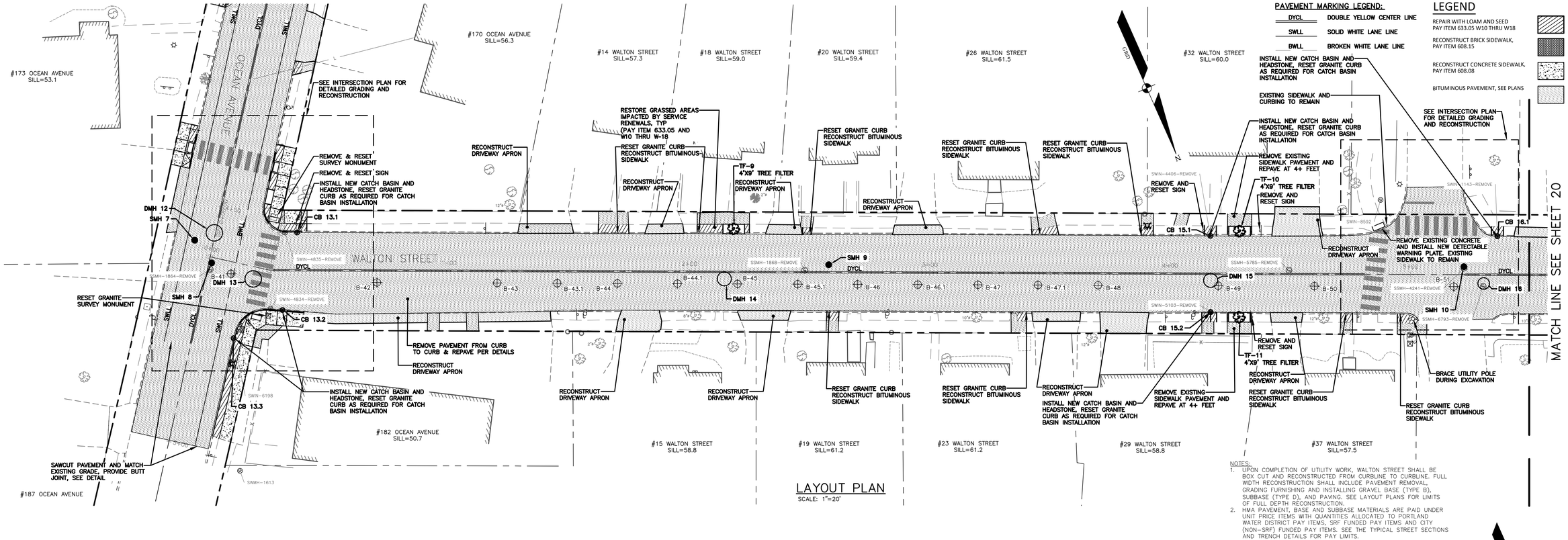
STATE OF MAINE DANIEL J. RILEY No. 9561 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT
OCEAN AVE NORTH - STA. 0+00 TO 5+93 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 17 OF 45
PLAN NUMBER



LAYOUT PLAN

SCALE: 1"=20'

PAVEMENT MARKING LEGEND:

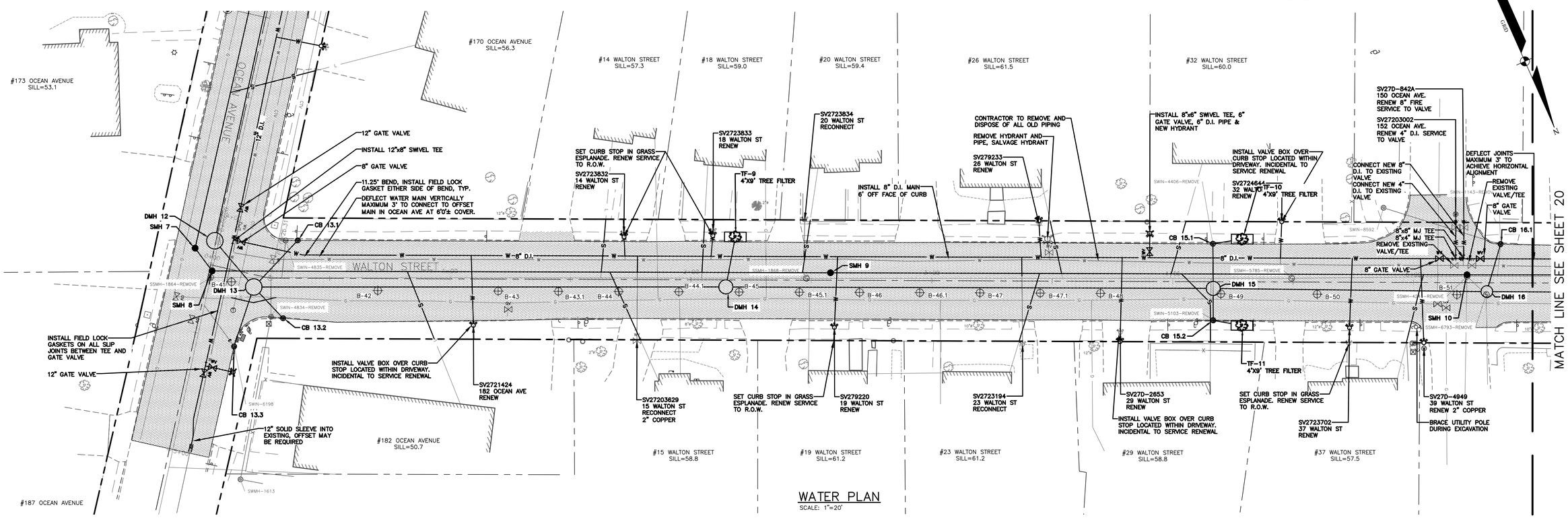
DYCL	DOUBLE YELLOW CENTER LINE
SWLL	SOLID WHITE LANE LINE
BWLL	BROKEN WHITE LANE LINE

LEGEND

- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS

NOTES:

1. UPON COMPLETION OF UTILITY WORK, WALTON STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.



WATER PLAN

SCALE: 1"=20'

REFERENCES:

Civil 3D 2013 Drawing Name: 17113 PP WALTON.dwg, TAB:WALTON ST L01

CITY PROPERTY PLAN BOOK SHEETS: I & J SHEETS: 10-11, 11-12, 11-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9661 LICENSED PROFESSIONAL ENGINEER 01/22/2019

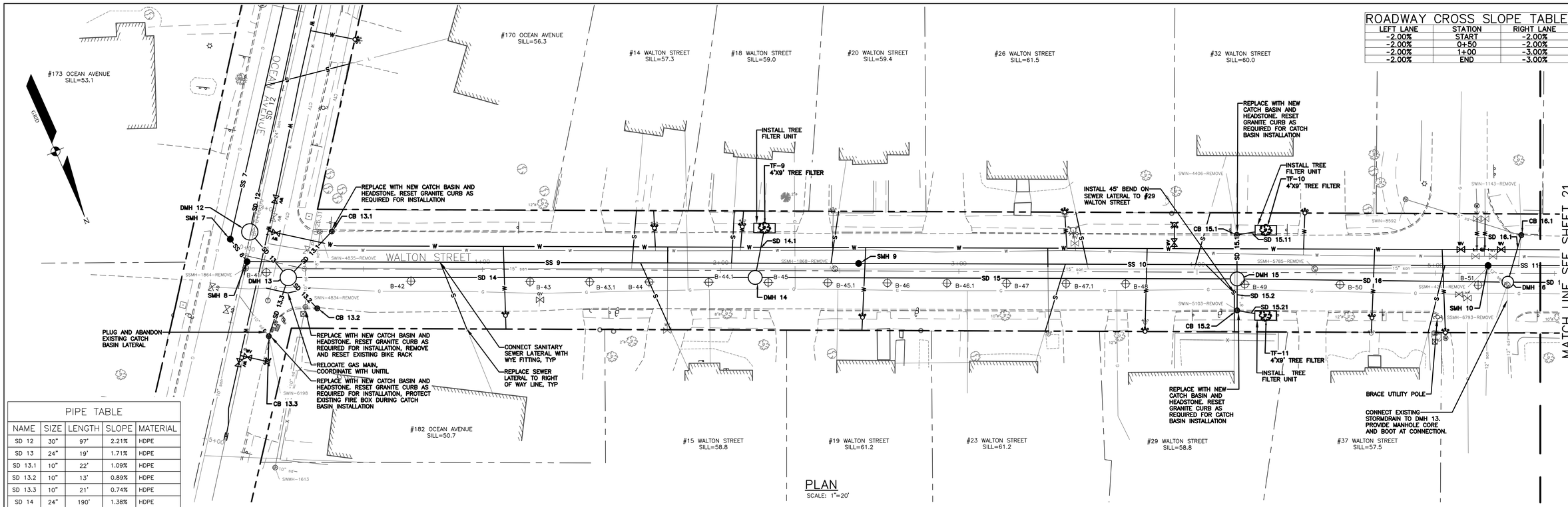
MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

WALTON ST - STA. 0+00 TO 5+50 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

SHEET # 18 OF 45

PLAN NUMBER



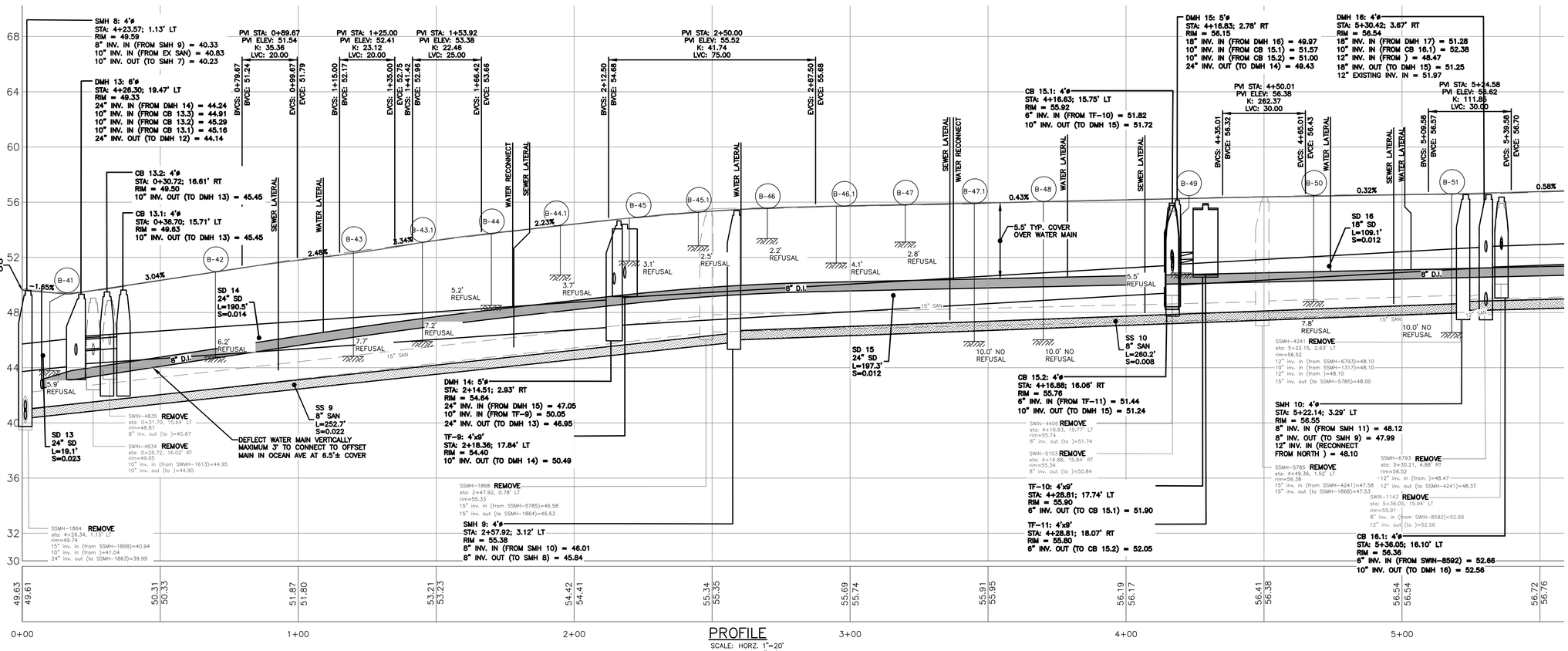
PLAN
SCALE: 1"=20'

ROADWAY CROSS SLOPE TABLE		
LEFT LANE	STATION	RIGHT LANE
-2.00%	START	-2.00%
-2.00%	0+50	-2.00%
-2.00%	1+00	-3.00%
-2.00%	END	-3.00%

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 12	30"	97'	2.21%	HDPE
SD 13	24"	19'	1.71%	HDPE
SD 13.1	10"	22'	1.09%	HDPE
SD 13.2	10"	13'	0.89%	HDPE
SD 13.3	10"	21'	0.74%	HDPE
SD 14	24"	190'	1.38%	HDPE
SD 14.1	10"	17'	2.07%	HDPE
SD 15	24"	197'	1.17%	HDPE
SD 15.1	10"	14'	0.81%	HDPE
SD 15.2	10"	9'	1.81%	HDPE
SD 15.11	6"	6'	0.65%	HDPE
SD 15.21	6"	6'	5.04%	HDPE
SD 16	18"	109'	1.12%	HDPE
SD 16.1	10"	17'	0.86%	HDPE
SD 17	18"	157'	0.71%	HDPE
SS 7	12"	214'	0.91%	PVC
SS 8	10"	8'	0.81%	PVC
SS 9	8"	253'	2.14%	PVC
SS 10	8"	260'	0.75%	PVC
SS 11	8"	273'	0.53%	PVC

NOTES:

1. UPON COMPLETION OF UTILITY WORK, WALTON STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF BOX CUTTING AND FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILITY COORDIANTION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. RENEWED WATER SERVICES SHALL BE CONSTRUCTED WITH AT LEAST 12" VERTICAL SEPARATION FROM STORMDRAIN. WATER SERVICES MAY NEED TO BE INSTALLED BELOW THE PROPOSED STORMDRAIN TO MAINTAIN REQUIRED SEPARATION.
7. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
8. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.



PROFILE
SCALE: HORZ. 1"=20'
VERT 1"=4'

REFERENCES:
CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13
Civil 3D 2013 Drawing Name:
17113 PP WALTON.dwg, TAB:WALTON ST PP1

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

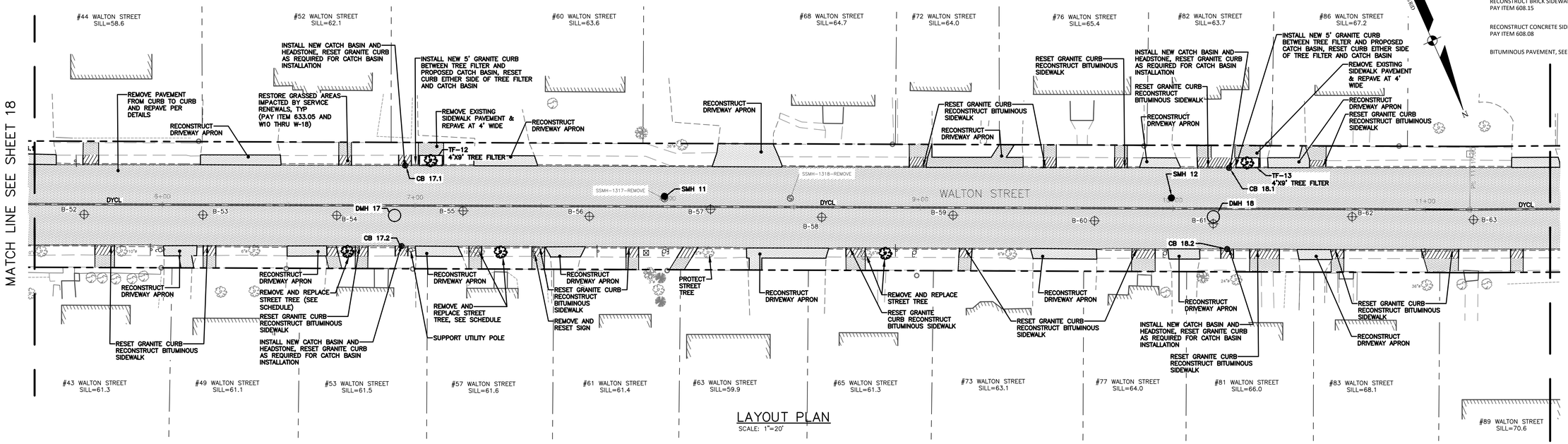
STATE OF MAINE
DANIEL J. RILEY
No. 5969
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
WALTON ST - STA. 0+00 TO 5+50 -
PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE
RESURGAM

SHEET #
19 OF 45
PLAN NUMBER



LAYOUT PLAN

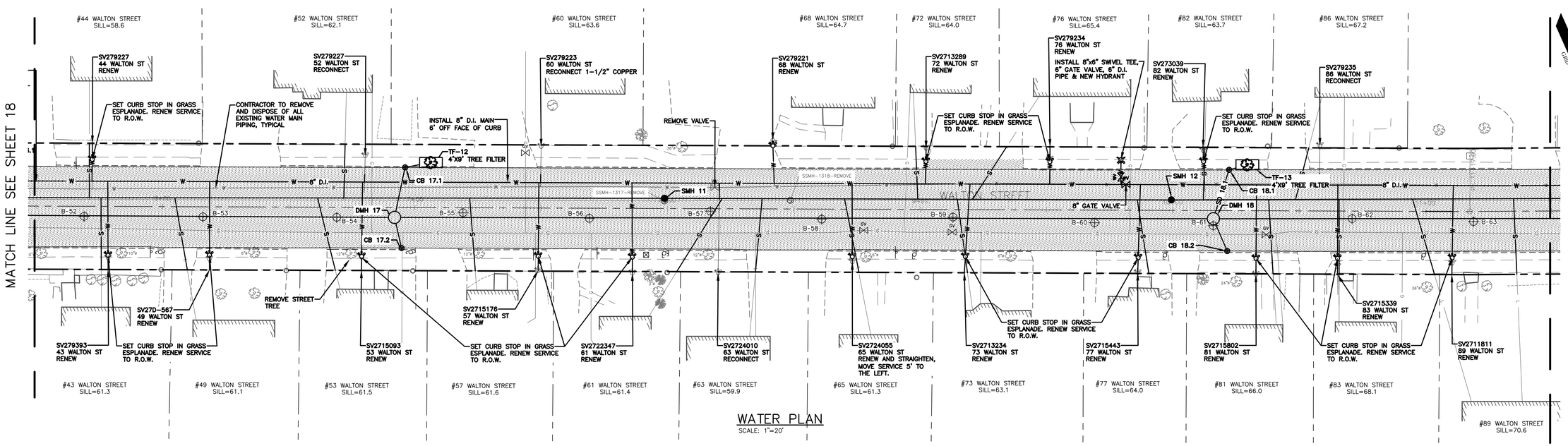
SCALE: 1"=20'

NOTES:

1. UPON COMPLETION OF UTILITY WORK, WALTON STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

PAVEMENT MARKING LEGEND:

DYCL	DOUBLE YELLOW CENTER LINE
SWLL	SOLID WHITE LANE LINE
BWLL	BROKEN WHITE LANE LINE



WATER PLAN

SCALE: 1"=20'

Civil 3D 2013 Drawing Name:
17113 PP WALTON.dwg, TAB:WALTON ST LO2

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: 10-11, 10-12, 10-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5951 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

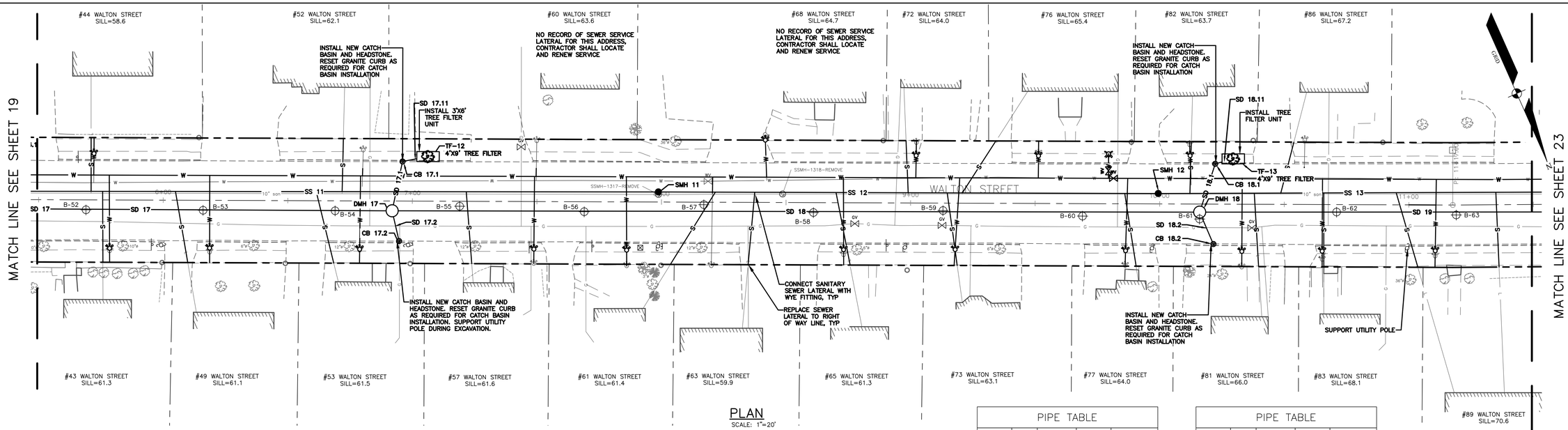
WALTON ST - STA. 5+50 TO 11+50 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 20 OF 45

PLAN NUMBER



PLAN

SCALE: 1"=20'

NOTES:

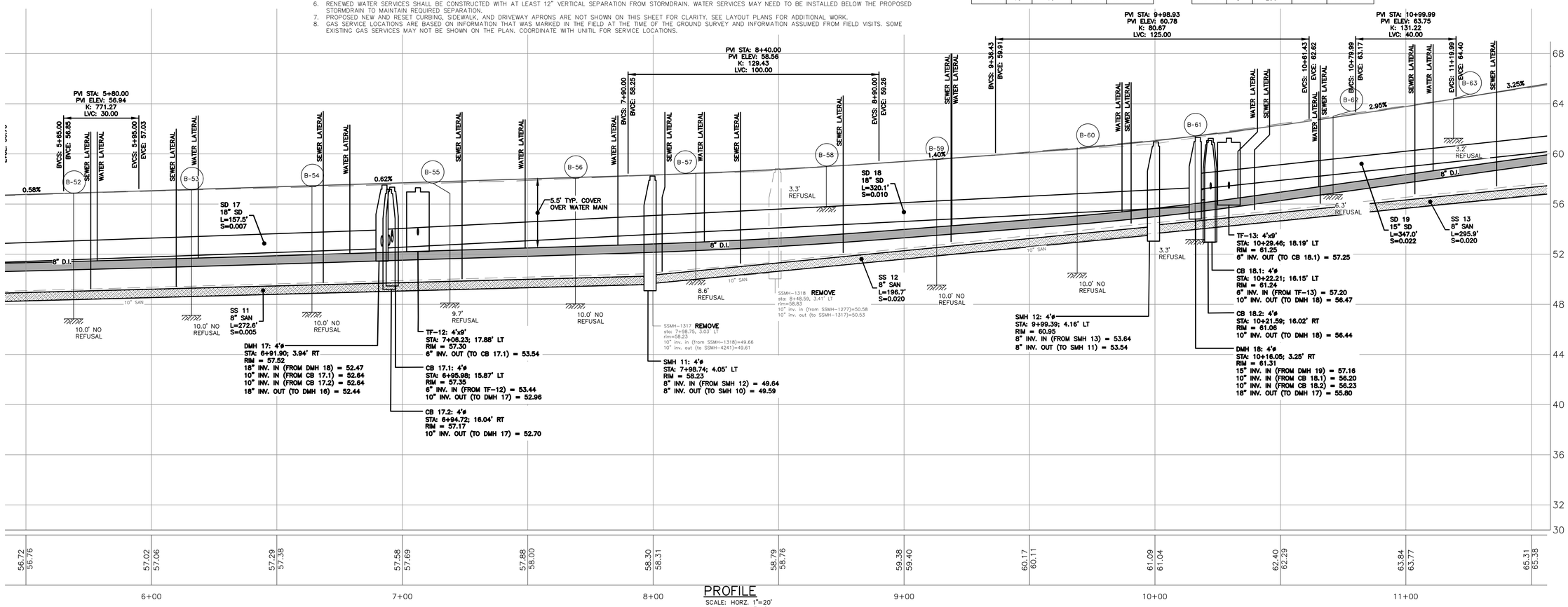
1. UPON COMPLETION OF UTILITY WORK, WALTON STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF BOX CUTTING AND FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILTIY COORDIANTION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. RENEWED WATER SERVICES SHALL BE CONSTRUCTED WITH AT LEAST 12" VERTICAL SEPARATION FROM STORMDRAIN. WATER SERVICES MAY NEED TO BE INSTALLED BELOW THE PROPOSED STORMDRAIN TO MAINTAIN REQUIRED SEPARATION.
7. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
8. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.

PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 17	18"	157'	0.71%	HDPE
SD 17.1	10"	16'	1.60%	HDPE
SD 17.2	10"	8'	0.48%	HDPE
SD 17.11	6"	4'	0.96%	HDPE
SD 18	18"	320'	1.03%	HDPE
SD 18.1	10"	16'	1.33%	HDPE

PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 18.2	10"	10'	1.47%	HDPE
SD 18.11	6"	1'	0.66%	HDPE
SD 19	15"	347'	2.15%	HDPE
SS 11	8"	273'	0.53%	PVC
SS 12	8"	197'	1.94%	PVC
SS 13	8"	296'	2.01%	PVC



PROFILE

SCALE: HORZ. 1"=20'
VERT 1"=4'

Civil 3D 2013 Drawing Name:
17113 PP WALTON.dwg, TAB:WALTON ST PP2

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9561 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

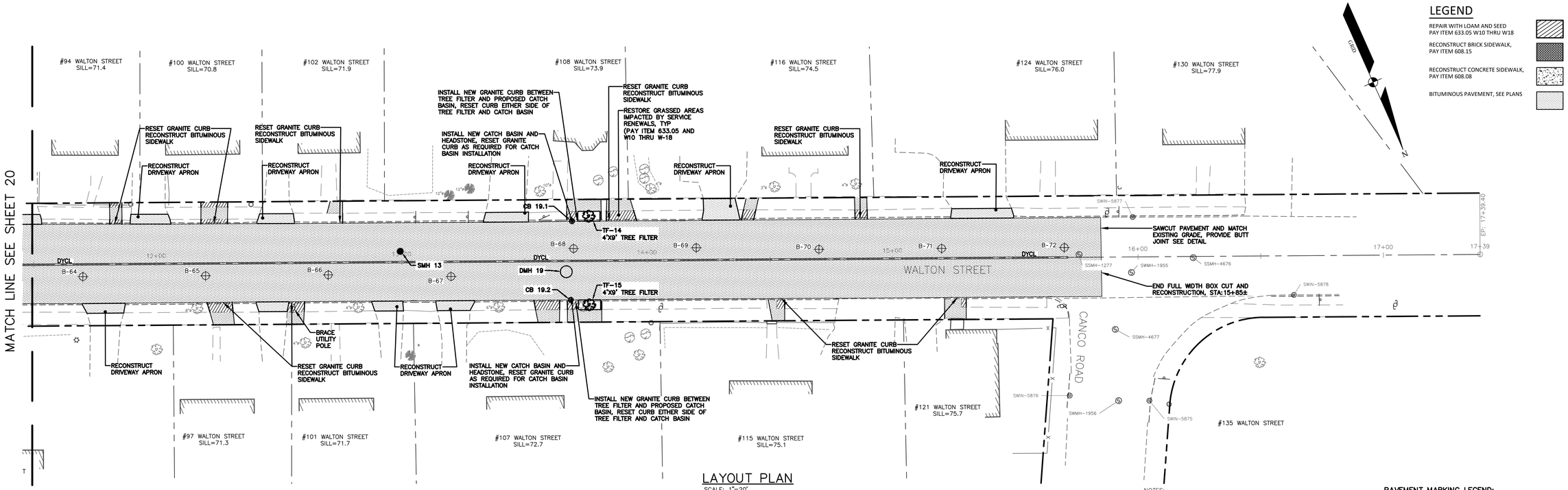
WALTON ST - STA. 5+50 TO 11+50 -
PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE RESURGAM

SHEET #
21 OF 45

PLAN NUMBER



LAYOUT PLAN

SCALE: 1"=20'

LEGEND

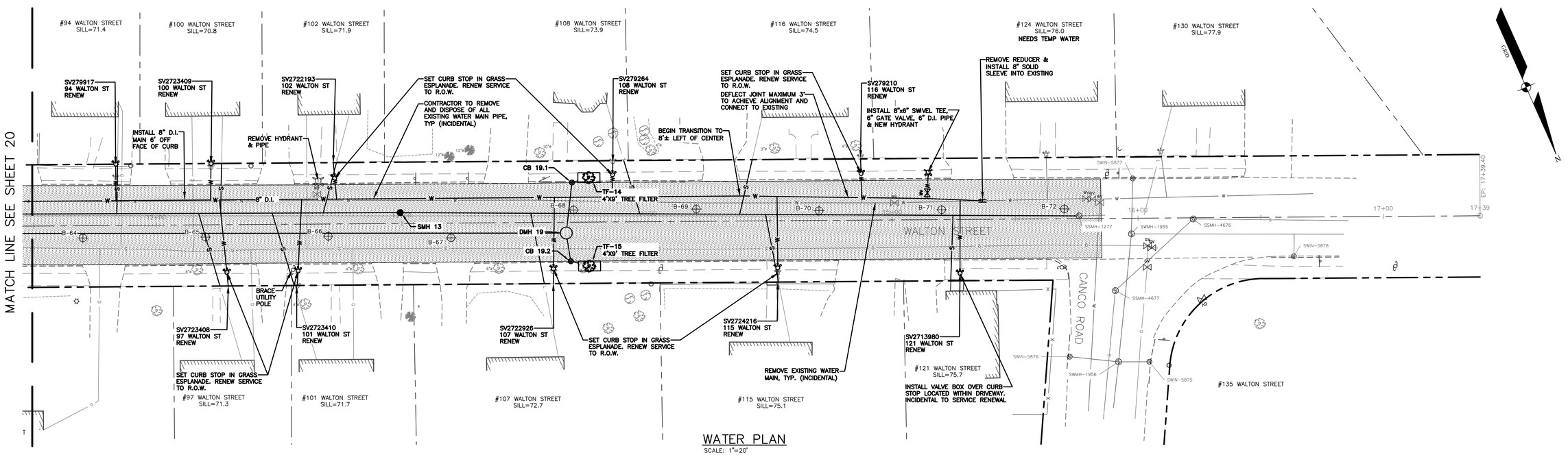
- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS

NOTES:

1. UPON COMPLETION OF UTILITY WORK, WALTON STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

PAVEMENT MARKING LEGEND:

DYCL	DOUBLE YELLOW CENTER LINE
SWLL	SOLID WHITE LANE LINE
BWLL	BROKEN WHITE LANE LINE



WATER PLAN

SCALE: 1"=20'

Civil 3D 2013 Drawing Name:
17113 PP WALTON.dwg, TAB:WALTON ST LO3

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5958 LICENSED PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

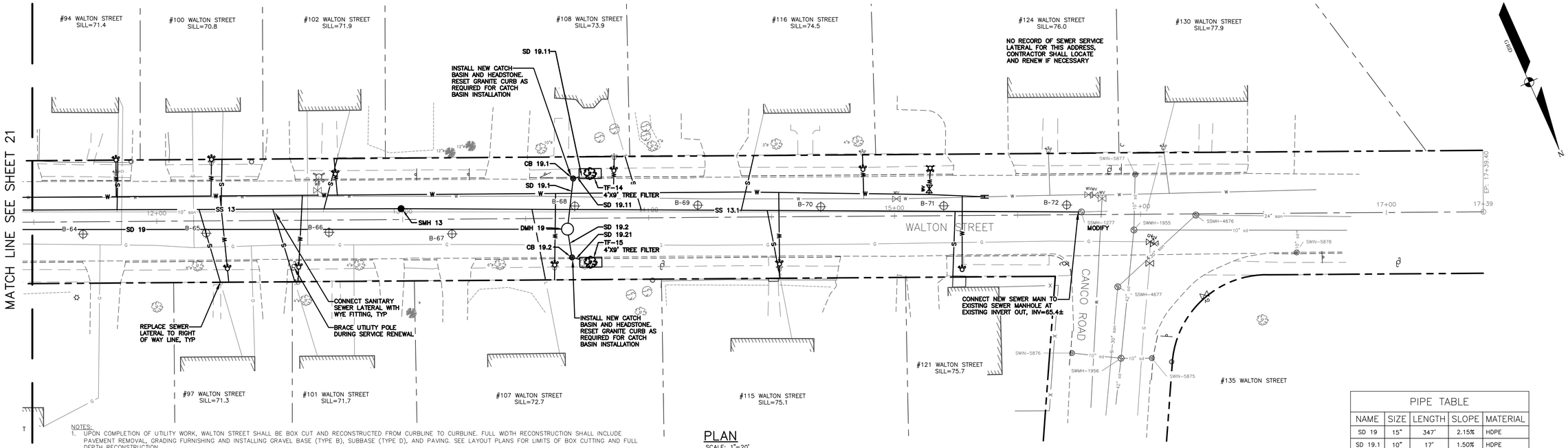
WALTON ST - STA. 11+50 TO 17+40
- LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 22 OF 45

PLAN NUMBER



PLAN

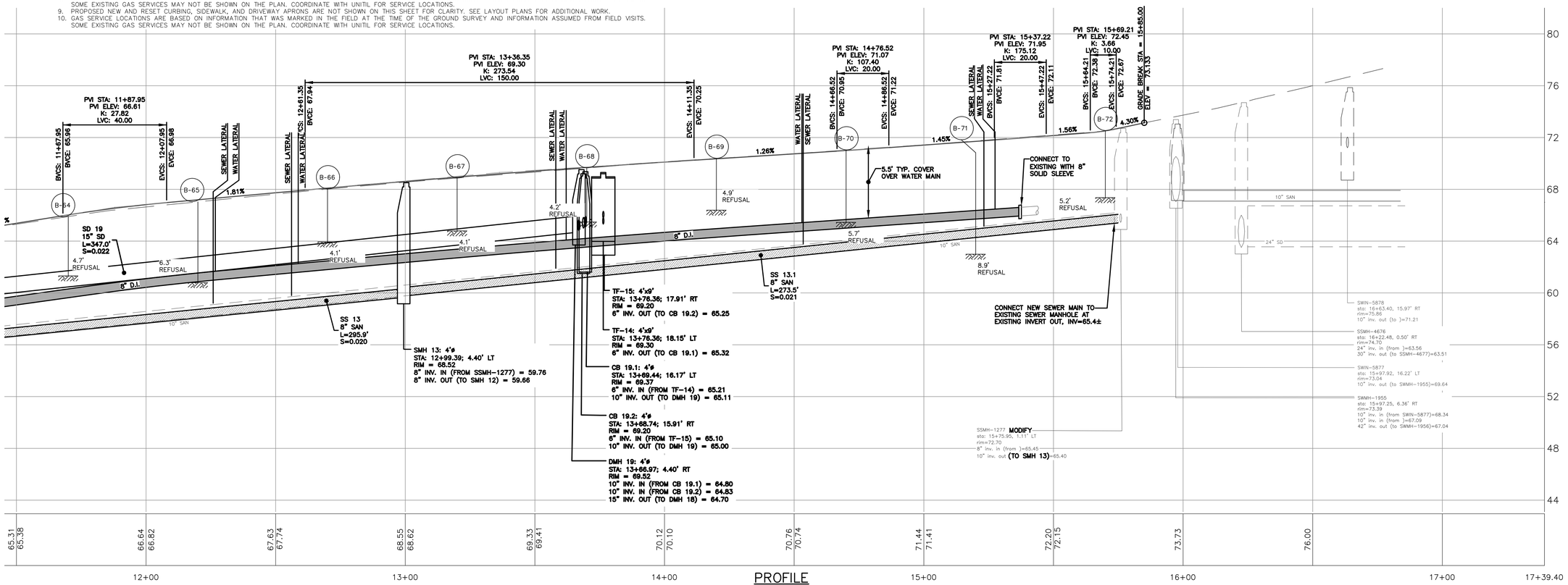
SCALE: 1"=20'

NOTES:

1. UPON COMPLETION OF UTILITY WORK, WALTON STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF BOX CUTTING AND FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILTIY COORDIANTION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WTHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. RENEWED WATER SERVICES SHALL BE CONSTRUCTED WITH AT LEAST 12" VERTICAL SEPARATION FROM STORMDRAIN. WATER SERVICES MAY NEED TO BE INSTALLED BELOW THE PROPOSED STORMDRAIN TO MAINTAIN REQUIRED SEPARATION.
7. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
8. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.
9. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
10. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.

PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 19	15"	347'	2.15%	HDPE
SD 19.1	10"	17'	1.50%	HDPE
SD 19.2	10"	8'	1.50%	HDPE
SD 19.11	6"	1'	1.50%	HDPE
SD 19.21	6"	2'	2.60%	HDPE
SS 13	8"	296'	2.01%	PVC
SS 13.1	8"	274'	2.05%	PVC



PROFILE

SCALE: HORZ. 1"=20'
VERT 1"=4'

REFERENCES:

Civil 3D 2013 Drawing Name:
17113 PP WALTON.dwg, TAB:WALTON ST PP3

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DJR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9561 LICENSED PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

WALTON ST - STA. 11+50 TO 17+40
- PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE RESURGAM

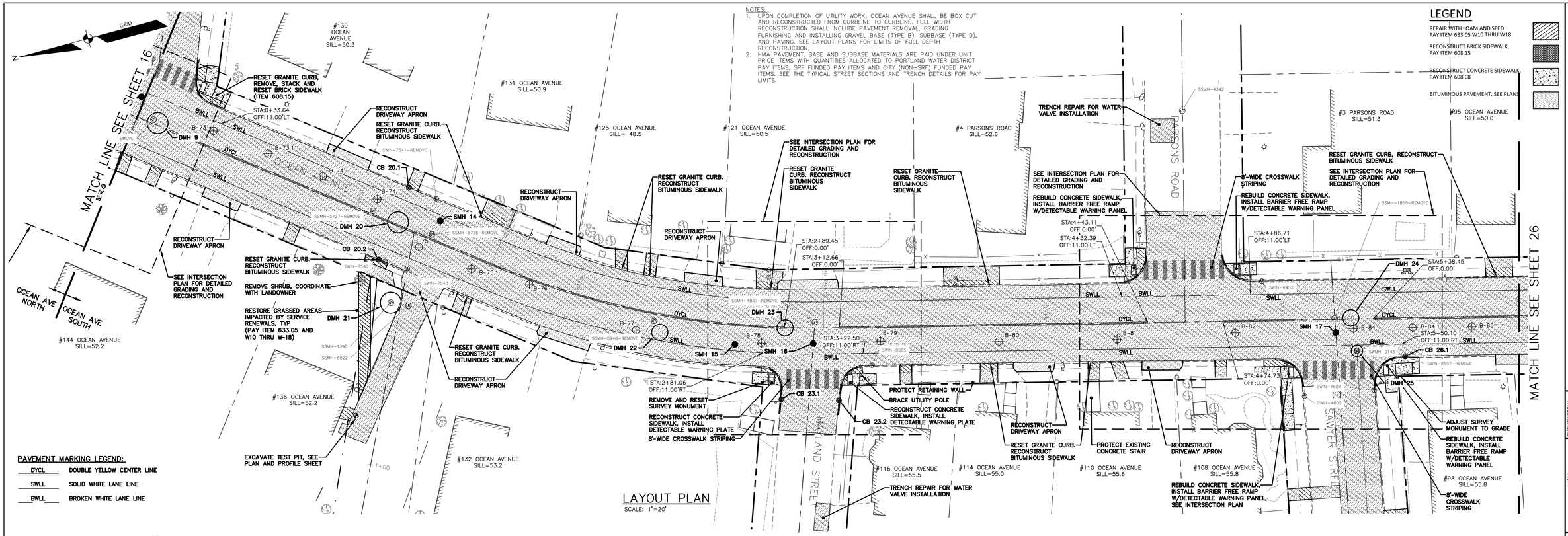
SHEET # 23 OF 45

PLAN NUMBER

NOTES:
1. UPON COMPLETION OF UTILITY WORK, OCEAN AVENUE SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

LEGEND

- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS

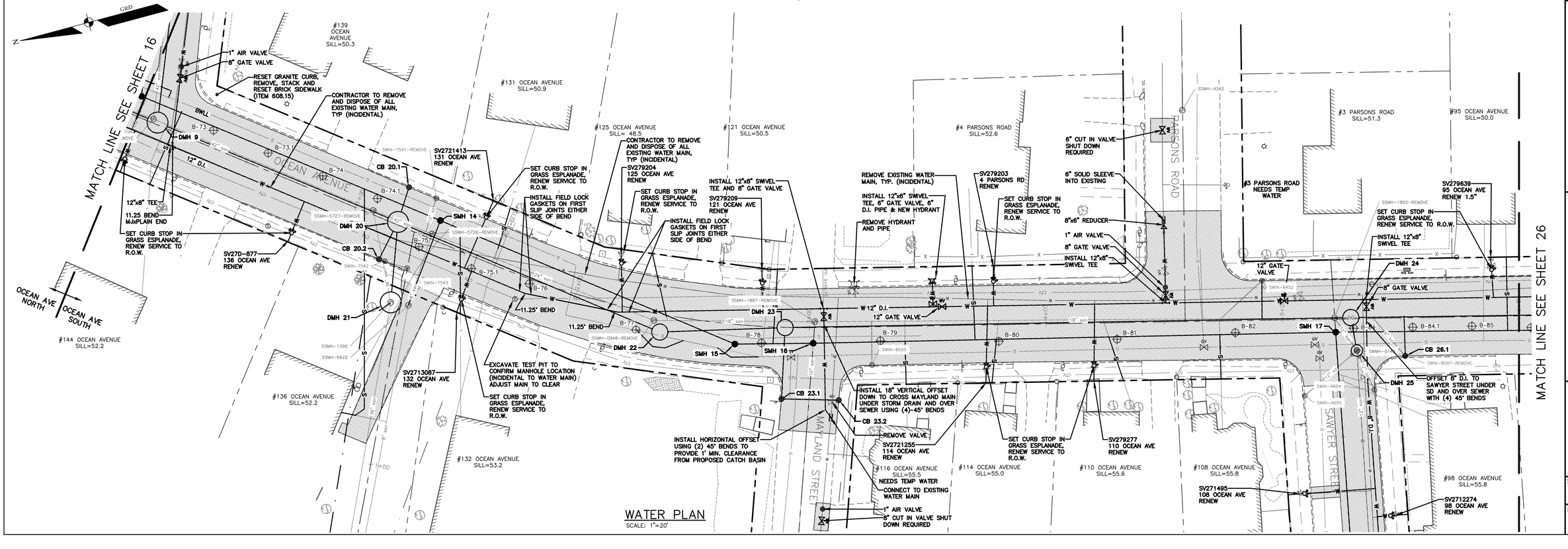


LAYOUT PLAN

SCALE: 1"=20'

PAVEMENT MARKING LEGEND:

DYCL	DOUBLE YELLOW CENTER LINE
SWLL	SOLID WHITE LANE LINE
BWLL	BROKEN WHITE LANE LINE



WATER PLAN

SCALE: 1"=20'

Civil 3D 2013 Drawing Name: 17113 PP OCEAN AVE.dwg, TAB:SOUTH - L01

CITY PROPERTY PLAN BOOK SHEETS: I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5969 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

OCEAN AVE SOUTH - STA 0+00 TO 6+00 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE RESURGAM

SHEET # 24 OF 45

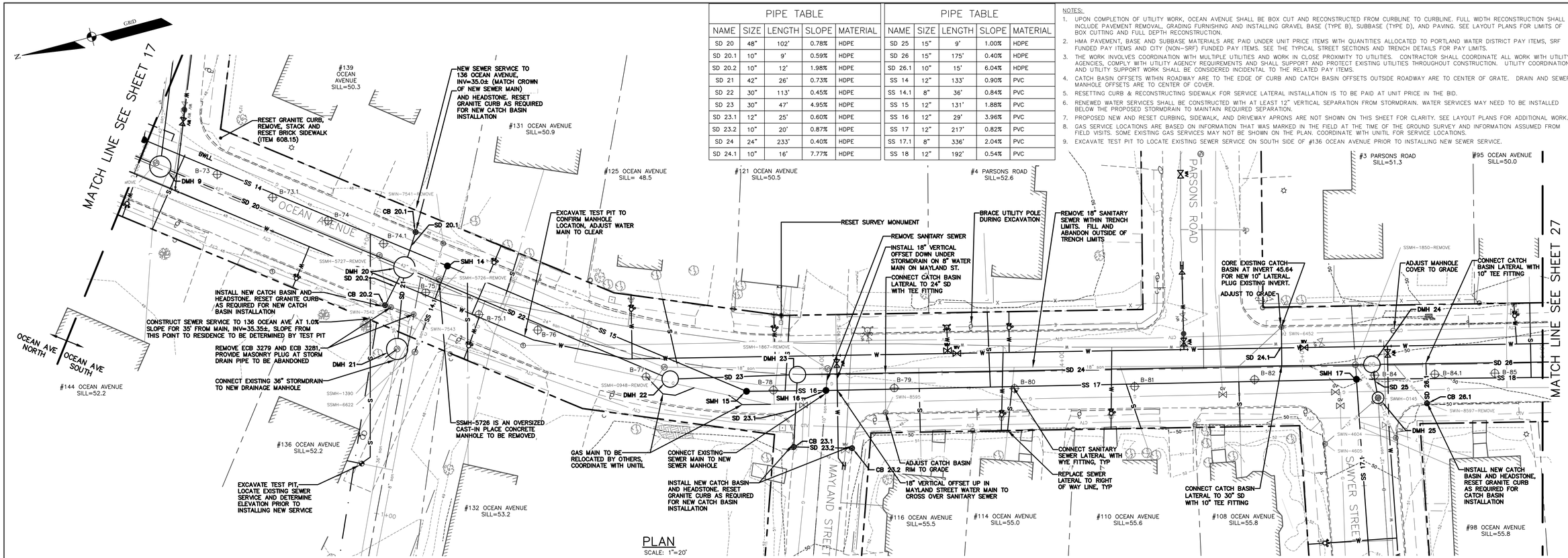
PLAN NUMBER

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 20	48"	102'	0.78%	HDPE
SD 20.1	10"	9'	0.59%	HDPE
SD 20.2	10"	12'	1.98%	HDPE
SD 21	42"	26'	0.73%	HDPE
SD 22	30"	113'	0.45%	HDPE
SD 23	30"	47'	4.95%	HDPE
SD 23.1	12"	25'	0.60%	HDPE
SD 23.2	10"	20'	0.87%	HDPE
SD 24	24"	233'	0.40%	HDPE
SD 24.1	10"	16'	7.77%	HDPE

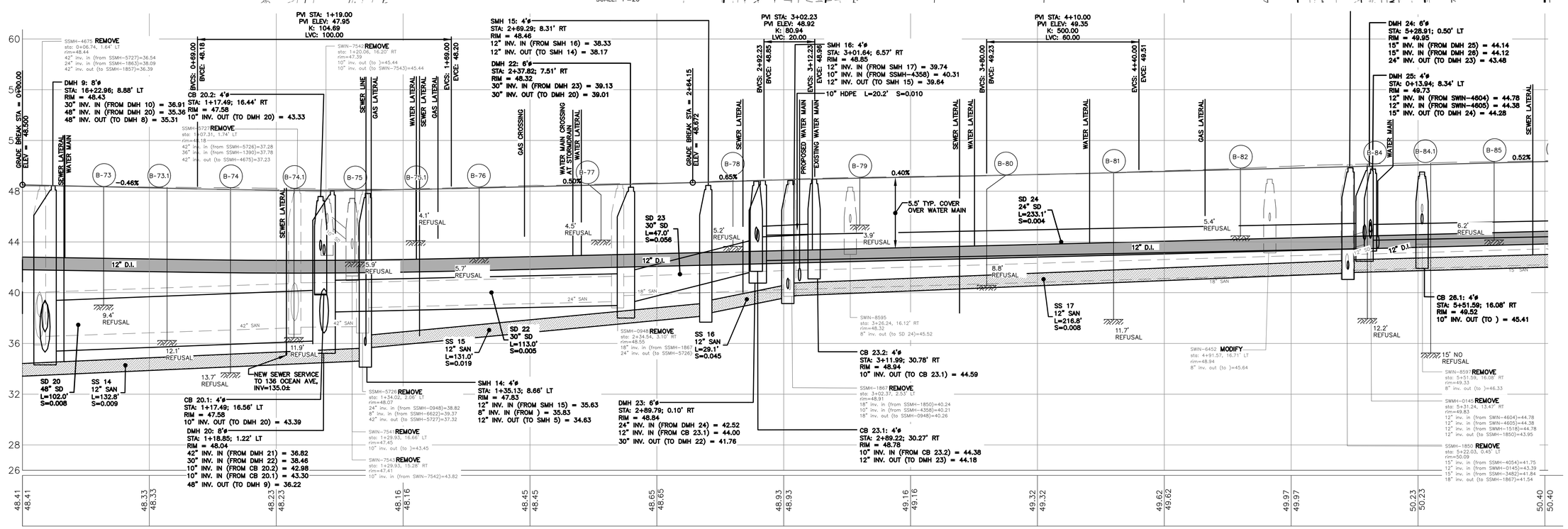
PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 25	15"	9'	1.00%	HDPE
SD 26	15"	175'	0.40%	HDPE
SD 26.1	10"	15'	6.04%	HDPE
SS 14	12"	133'	0.90%	PVC
SS 14.1	8"	36'	0.84%	PVC
SS 15	12"	131'	1.88%	PVC
SS 16	12"	29'	3.96%	PVC
SS 17	12"	217'	0.82%	PVC
SS 17.1	8"	336'	2.04%	PVC
SS 18	12"	192'	0.54%	PVC

NOTES:

1. UPON COMPLETION OF UTILITY WORK, OCEAN AVENUE SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF BOX CUTTING AND FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILITY COORDINATION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. RENEWED WATER SERVICES SHALL BE CONSTRUCTED WITH AT LEAST 12" VERTICAL SEPARATION FROM STORMDRAIN. WATER SERVICES MAY NEED TO BE INSTALLED BELOW THE PROPOSED STORMDRAIN TO MAINTAIN REQUIRED SEPARATION.
7. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
8. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.
9. EXCAVATE TEST PIT TO LOCATE EXISTING SEWER SERVICE ON SOUTH SIDE OF #136 OCEAN AVENUE PRIOR TO INSTALLING NEW SEWER SERVICE.



PLAN
SCALE: 1"=20'



PROFILE
SCALE: HORZ. 1"=20'
VERT 1"=4'

REFERENCES:

Civil 3D 2013 Drawing Name:
17113 PP OCEAN AVE.dwg, TAB:SOUTH – PP1

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE
DANIEL J. RILEY
No. 5951
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
OCEAN AVE SOUTH - STA 0+00 TO 6+00 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM EX CINERE
CITY OF PORTLAND, MAINE

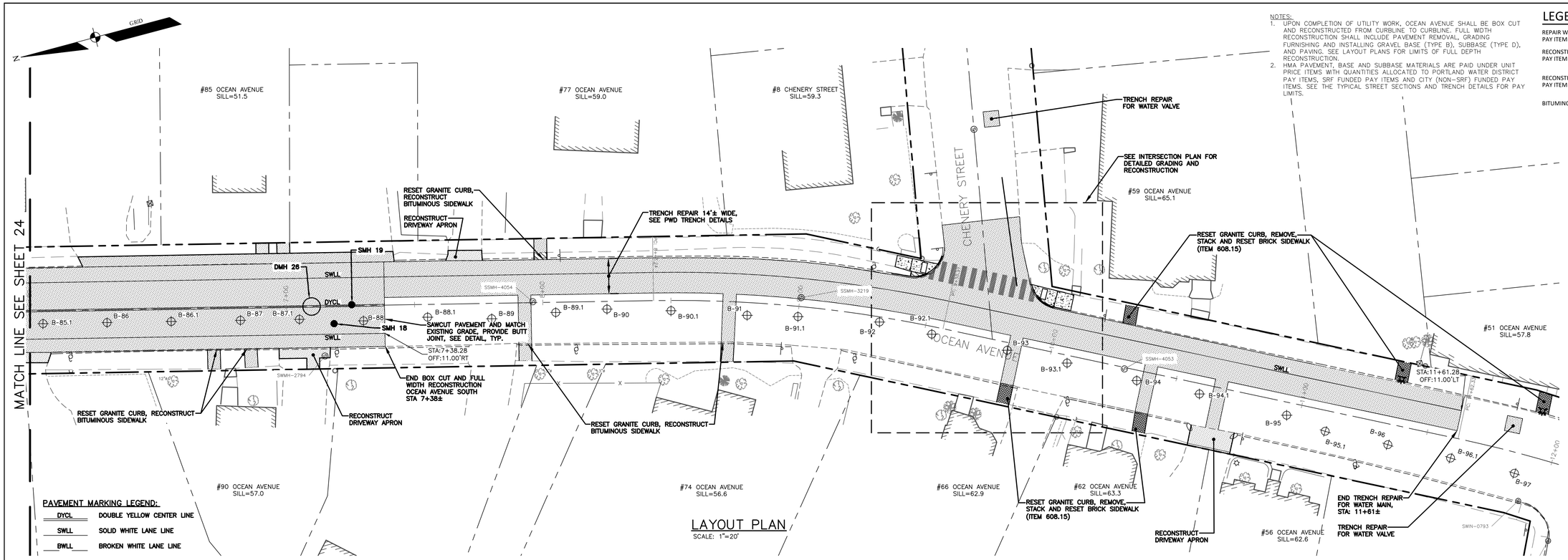
SHEET # 25 OF 45

PLAN NUMBER

NOTES:
1. UPON COMPLETION OF UTILITY WORK, OCEAN AVENUE SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

LEGEND

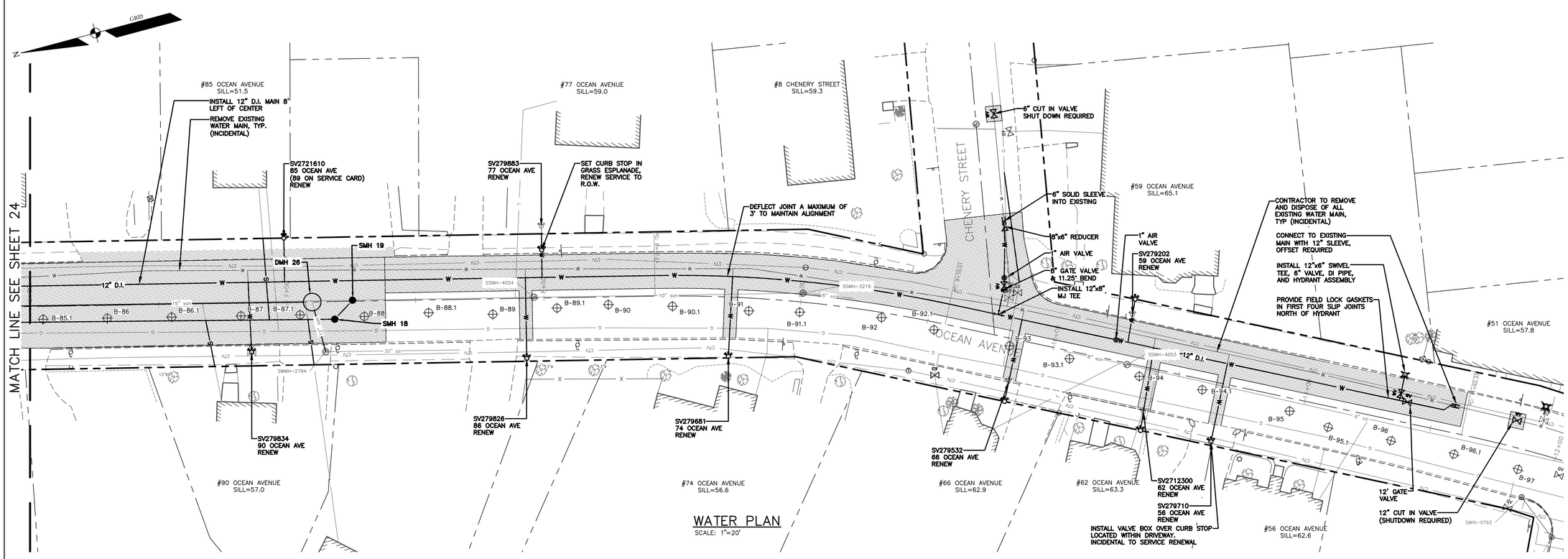
- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS



PAVEMENT MARKING LEGEND:

DYCL	DOUBLE YELLOW CENTER LINE
SWLL	SOLID WHITE LANE LINE
BWLL	BROKEN WHITE LANE LINE

LAYOUT PLAN
SCALE: 1"=20'



WATER PLAN
SCALE: 1"=20'

Civil 3D 2013 Drawing Name:
17113 PP OCEAN AVE.dwg, TAB:SOUTH - L02

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE ★ DANIEL J. RILEY No. 9661 ★ REGISTERED PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

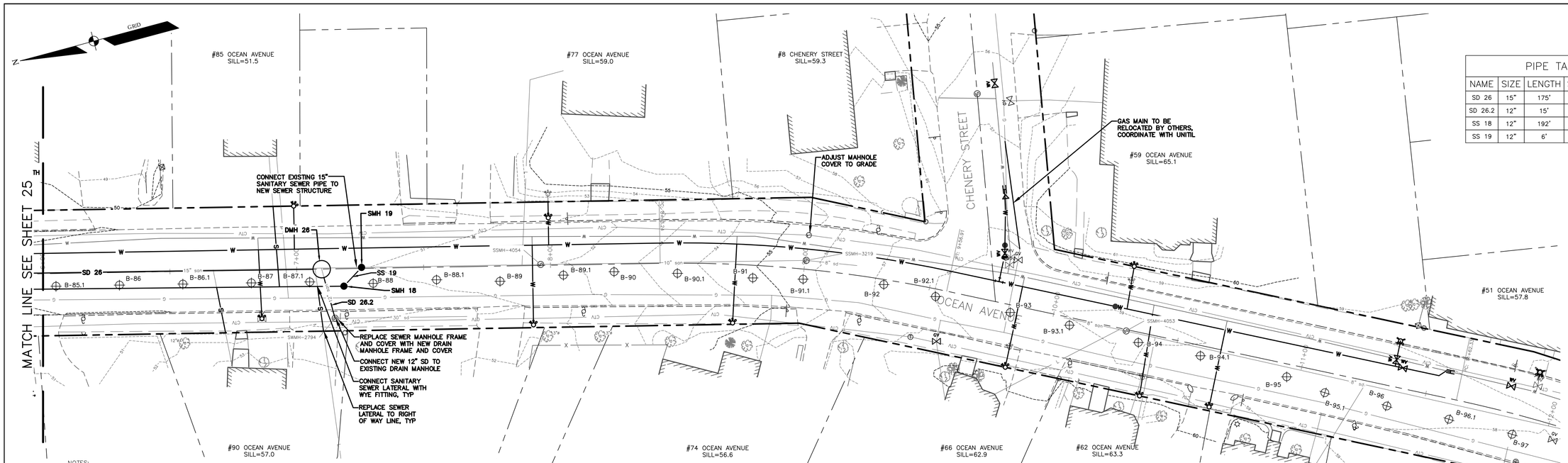
OCEAN AVE SOUTH - STA. 6+00 TO 12+00 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE - RESURGAM

SHEET # 26 OF 45

PLAN NUMBER



PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 26	15"	175'	0.40%	HDPE
SD 26.2	12"	15'	1.94%	HDPE
SS 18	12"	192'	0.54%	PVC
SS 19	12"	6'	0.82%	PVC

NOTES:

1. UPON COMPLETION OF UTILITY WORK, OCEAN AVENUE SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF BOX CUTTING AND FULL DEPTH RECONSTRUCTION.
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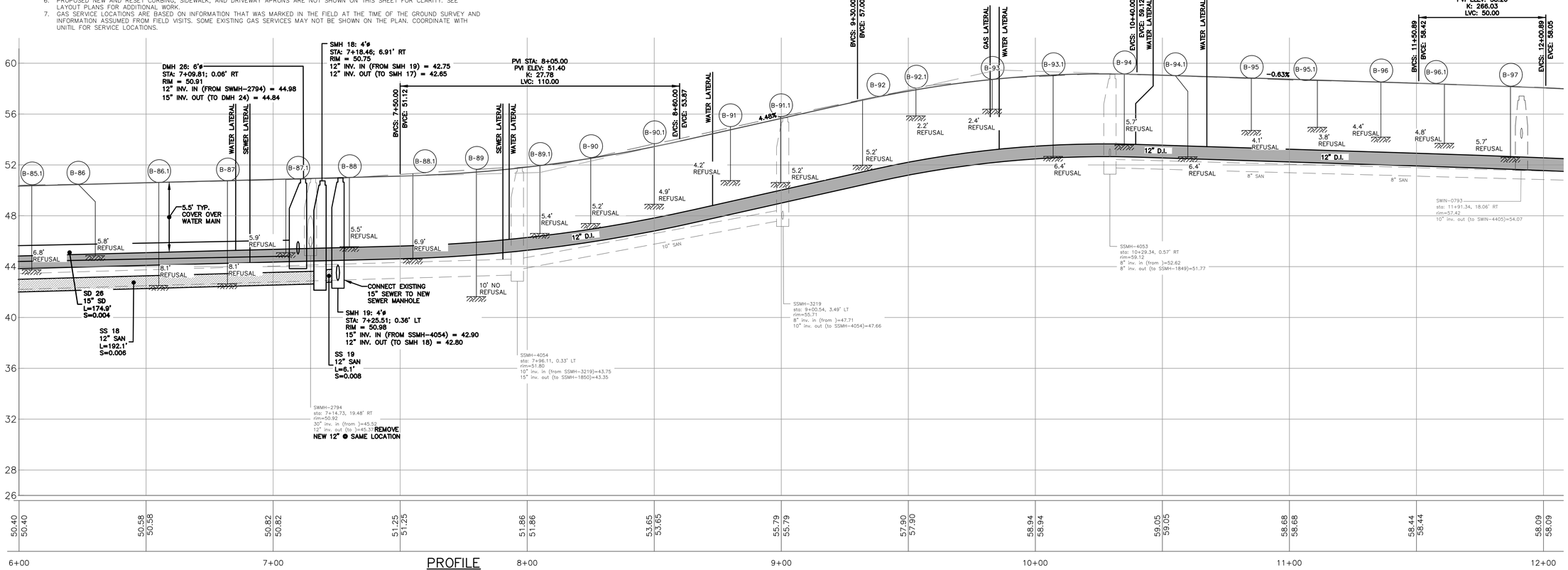
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
7. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.

PLAN
SCALE: 1"=20'



PROFILE
SCALE: HORZ. 1"=20'
VERT 1"=4'

REFERENCES:

Civil 3D 2013 Drawing Name:
17113 PP OCEAN AVE.dwg, TAB:SOUTH – PP2

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DJR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE
DANIEL J. RILEY
No. 9661
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
OCEAN AVE SOUTH - STA. 6+00 TO 12+00 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM
CITY OF PORTLAND, MAINE

SHEET #
27 OF 45

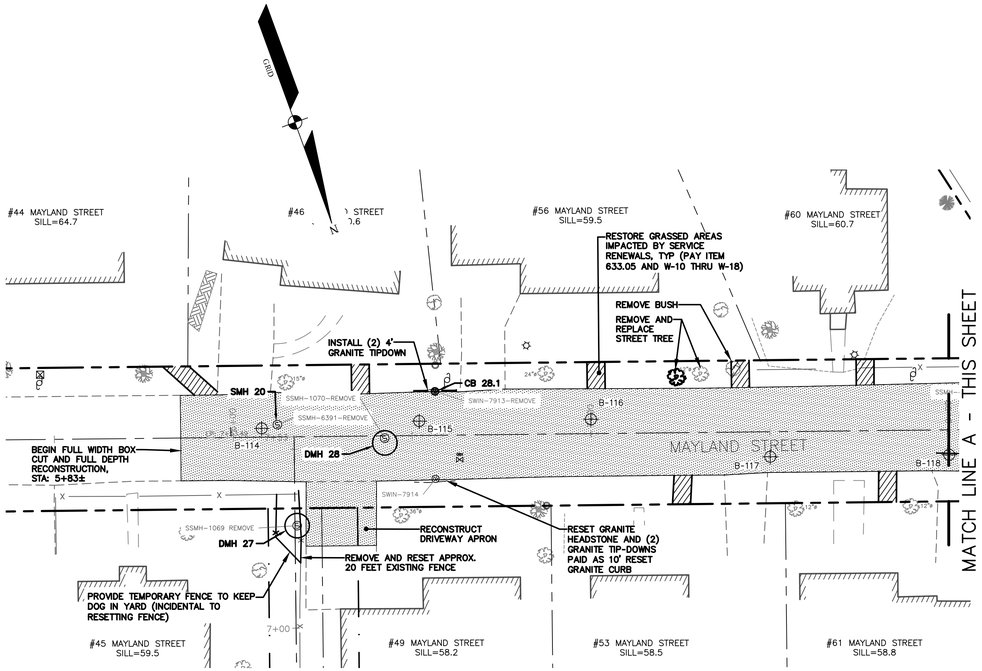
PLAN NUMBER

NOTES:

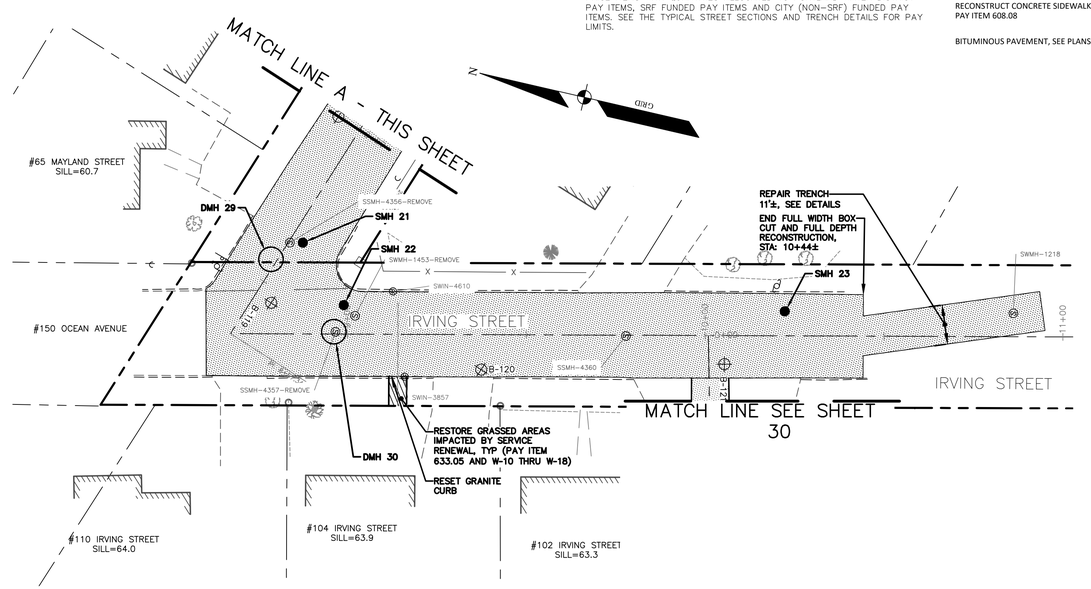
1. UPON COMPLETION OF UTILITY WORK, MAYLAND STREET AND IRVING STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

LEGEND

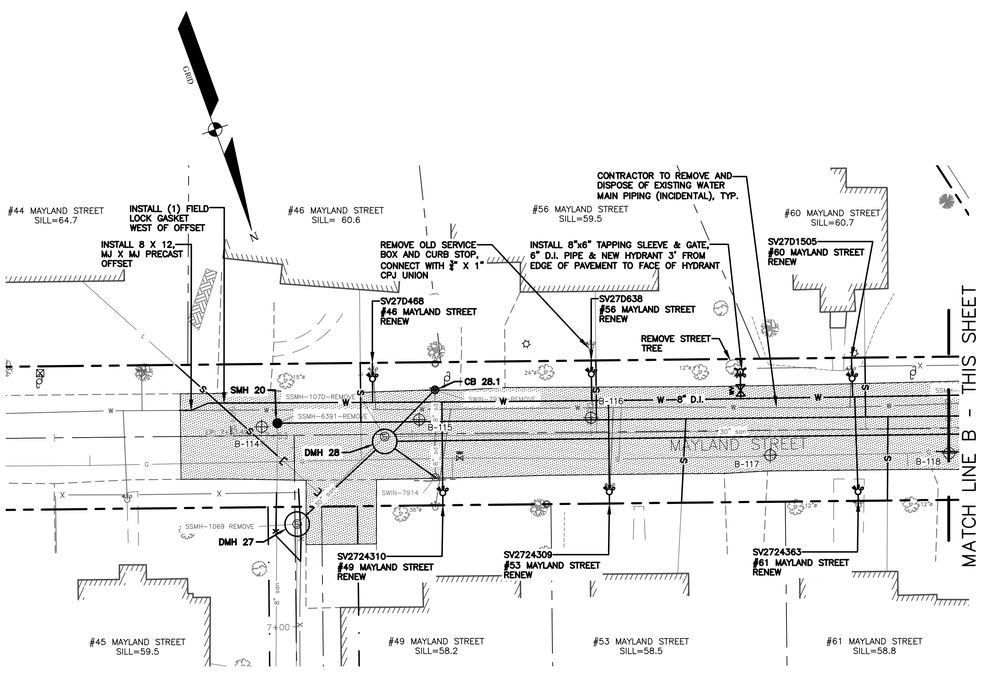
- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS



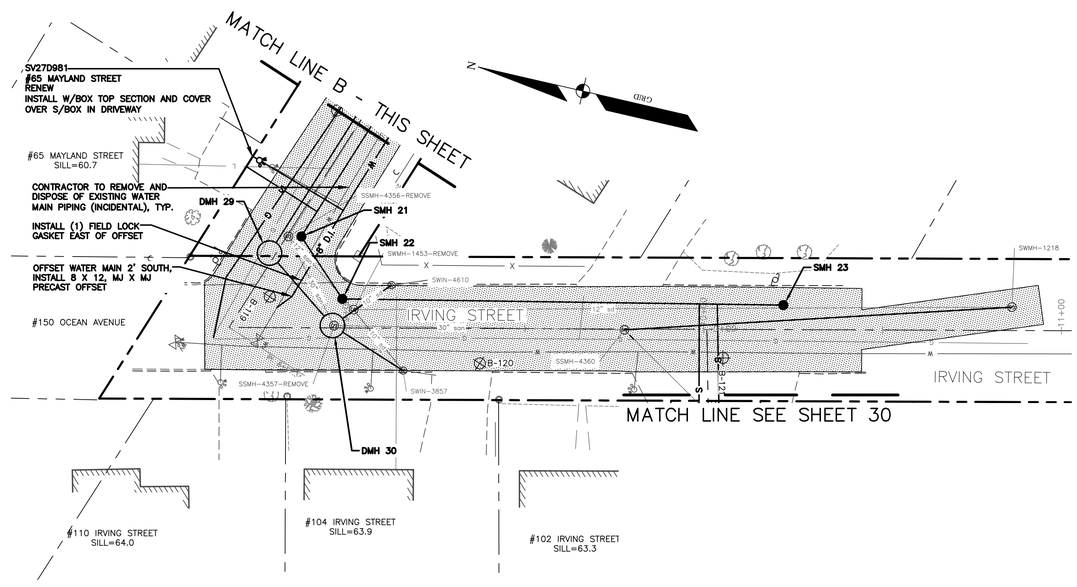
LAYOUT PLAN
SCALE: 1"=20'



LAYOUT PLAN
SCALE: 1"=20'



WATER PLAN
SCALE: 1"=20'



WATER PLAN
SCALE: 1"=20'

Civil 3D 2013 Drawing Name:
17113 PP MAYLAND.dwg, TAB:MAYLAND L02

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5951 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

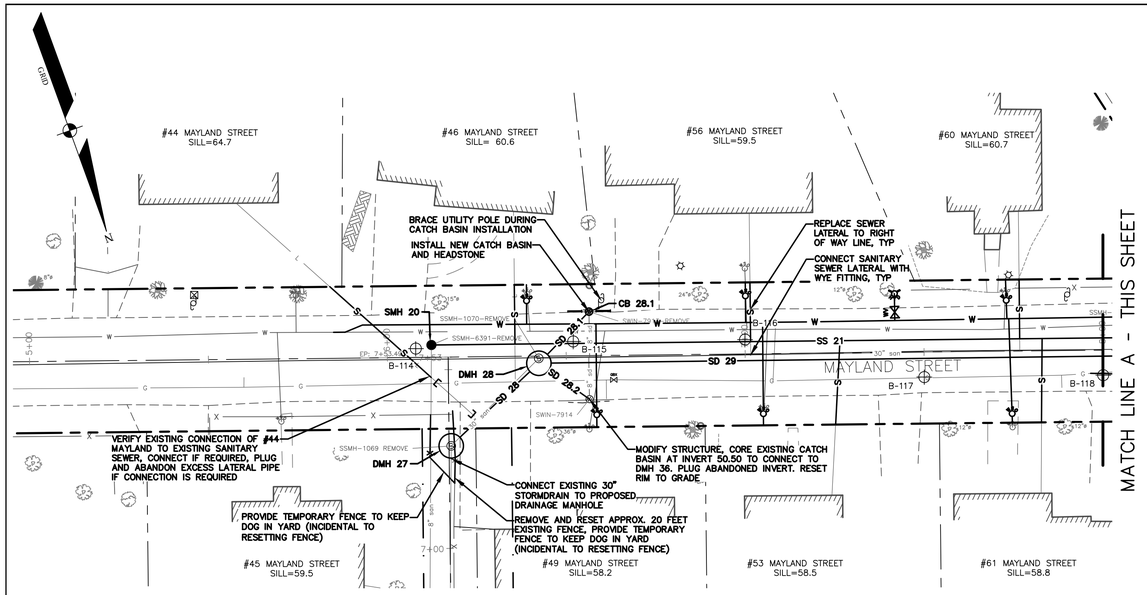
MAYLAND ST - STA. 0+00 TO 9+65 - LAYOUT & WATER PLAN

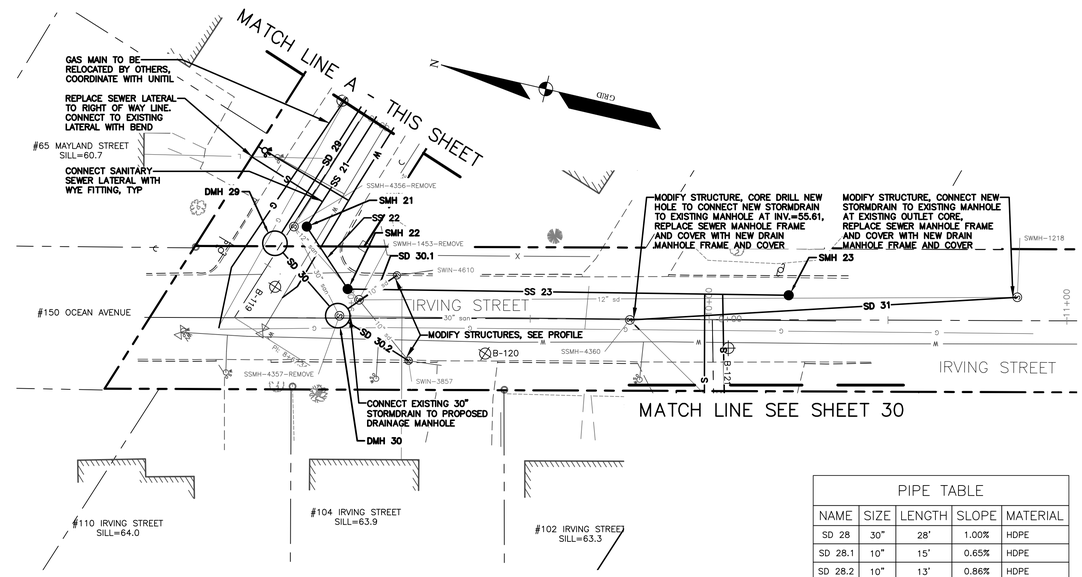
CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE RESURGAM

SHEET # 28 OF 45

PLAN NUMBER



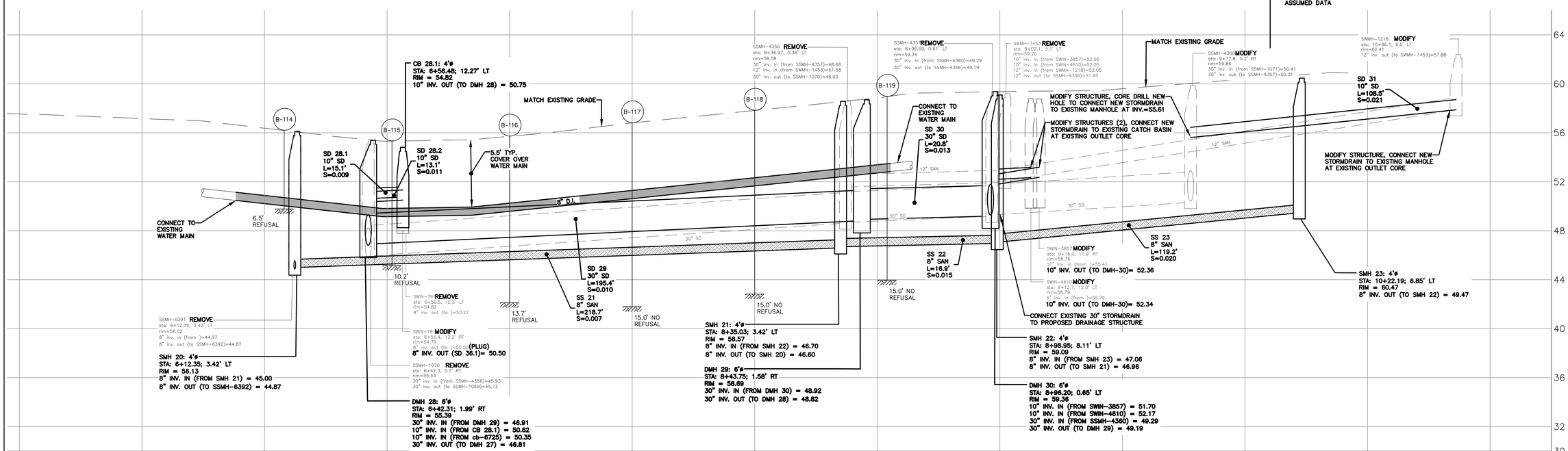


NOTES:
1. UPON COMPLETION OF UTILITY WORK, MAYLAND STREET AND IRVING STREET SHALL BE BOX CUT AND RECONSTRUCTED FROM CURBLINE TO CURBLINE. FULL WIDTH RECONSTRUCTION SHALL INCLUDE PAVEMENT REMOVAL, GRADING FURNISHING AND INSTALLING GRAVEL BASE (TYPE B), SUBBASE (TYPE D), AND PAVING. SEE LAYOUT PLANS FOR LIMITS OF BOX CUTTING AND FULL DEPTH RECONSTRUCTION.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.

PLAN
SCALE: 1"=20'

PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
SD 28	30"	28'	1.00%	HDPE
SD 28.1	10"	15'	0.65%	HDPE
SD 28.2	10"	13'	0.86%	HDPE
SD 29	30"	195'	0.95%	HDPE
SD 30	30"	21'	0.99%	HDPE
SD 30.1	10"	16'	0.85%	HDPE
SD 30.2	10"	19'	2.81%	HDPE
SD 31	10"	108'	2.09%	HDPE
SS 21	8"	219'	0.72%	PVC
SS 22	8"	17'	1.25%	PVC
SS 23	8"	119'	1.95%	PVC



PROFILE
SCALE: HORZ. 1"=20'
VERT 1"=4'

REFERENCES:
Civil 3D 2013 Drawing Name: 17113 PP MAYLAND.dwg, TAB:MAYLAND PP2
CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DJR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9561 PROFESSIONAL ENGINEER
01/22/2019

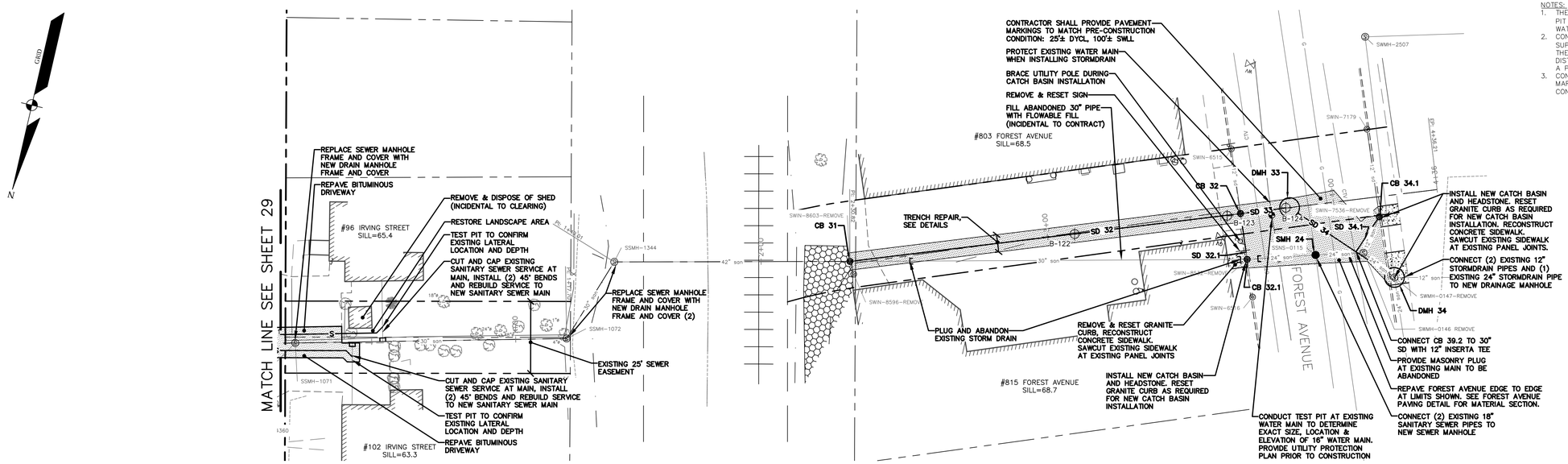
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
MAYLAND ST - STA. 0+00 TO 9+65 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

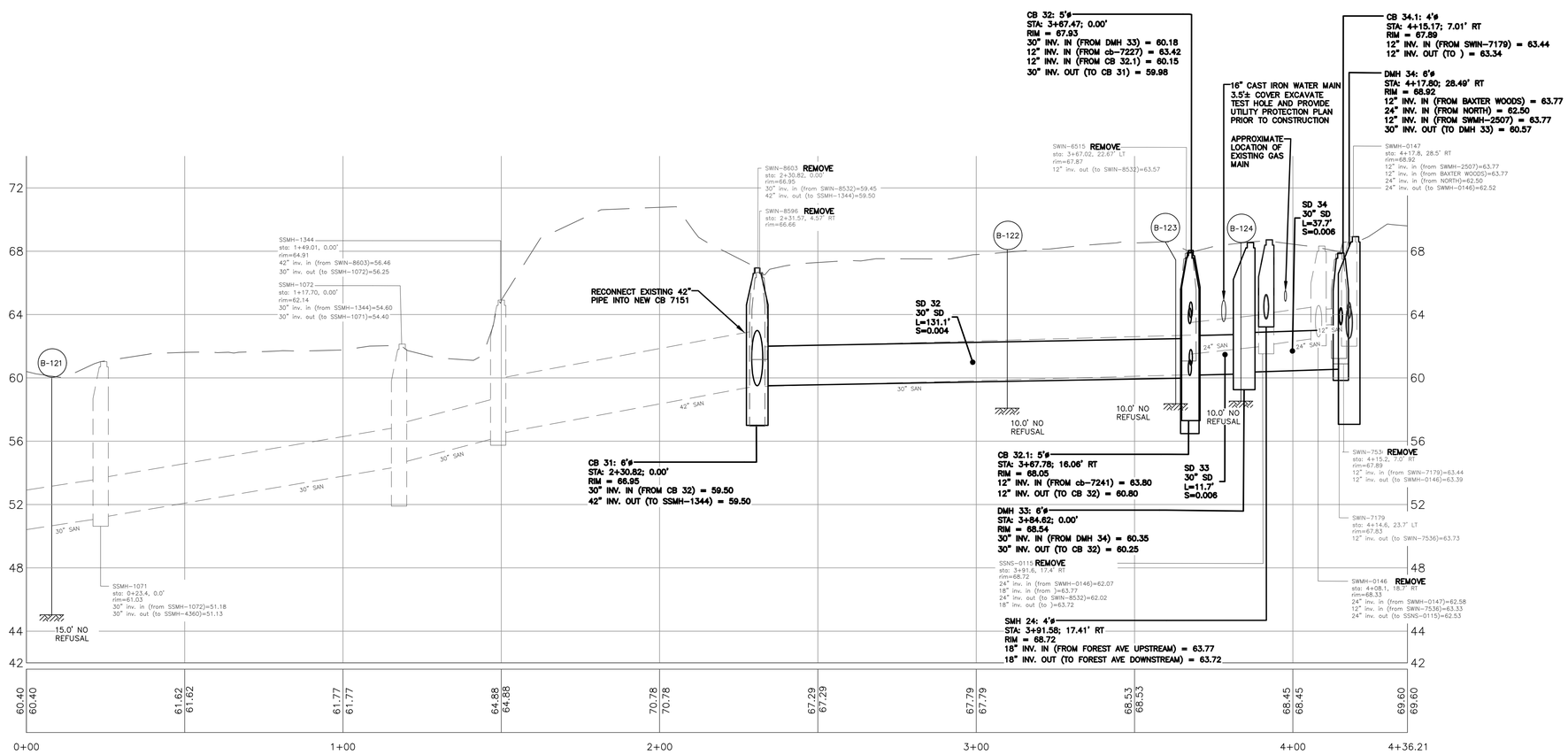
RESURGAM CITY OF PORTLAND, MAINE

SHEET # 29 OF 45
PLAN NUMBER

NOTES:
1. THE CONTRACTOR SHALL EXCAVATE A TEST PIT TO CONFIRM DEPTH AND LOCATION OF 16" WATER MAIN CROSSING SD 38.1
2. CONTRACTOR SHALL SUBMIT A UTILITY SUPPORT PLAN FOR THE 16" WATER MAIN FOR THE APPROVAL BY THE PORTLAND WATER DISTRICT. THIS PLAN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN MAINE.
3. CONTRACTOR SHALL PROVIDE PAVEMENT MARKINGS TO MATCH PRE-CONSTRUCTION CONDITION: 25'± DYCL, 100'± SWLL



PLAN
SCALE: 1"=20'



PROFILE
SCALE: HORZ. 1"=20'
VERT 1"=4'

Civil 3D 2013 Drawing Name:
17113 PP MAYLAND.dwg, TAB-MAYLAND PP3

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9561 PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
FOREST AVE & IRVING ST - STA 0+00 TO 4+25 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

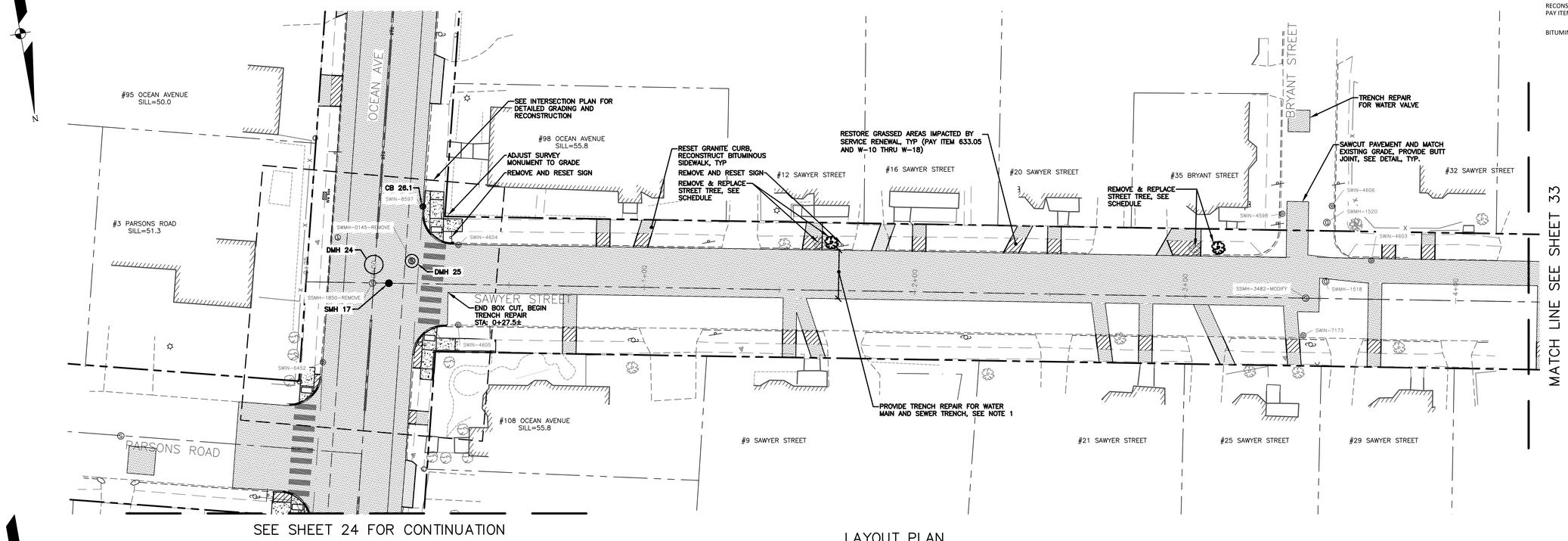
RESURGAM CITY OF PORTLAND, MAINE

SHEET #
30 OF 45
PLAN NUMBER

NOTES:
1. REMOVE ANY REMAINING PAVEMENT BETWEEN THE SEWER AND WATER TRENCH AND RE-PAVE FULL WIDTH OF EXCAVATED AREA. PAYMENT FOR MATERIALS BETWEEN TRENCH PAY ITEMS ARE PAID UNDER NON-SRF PAY ITEMS.

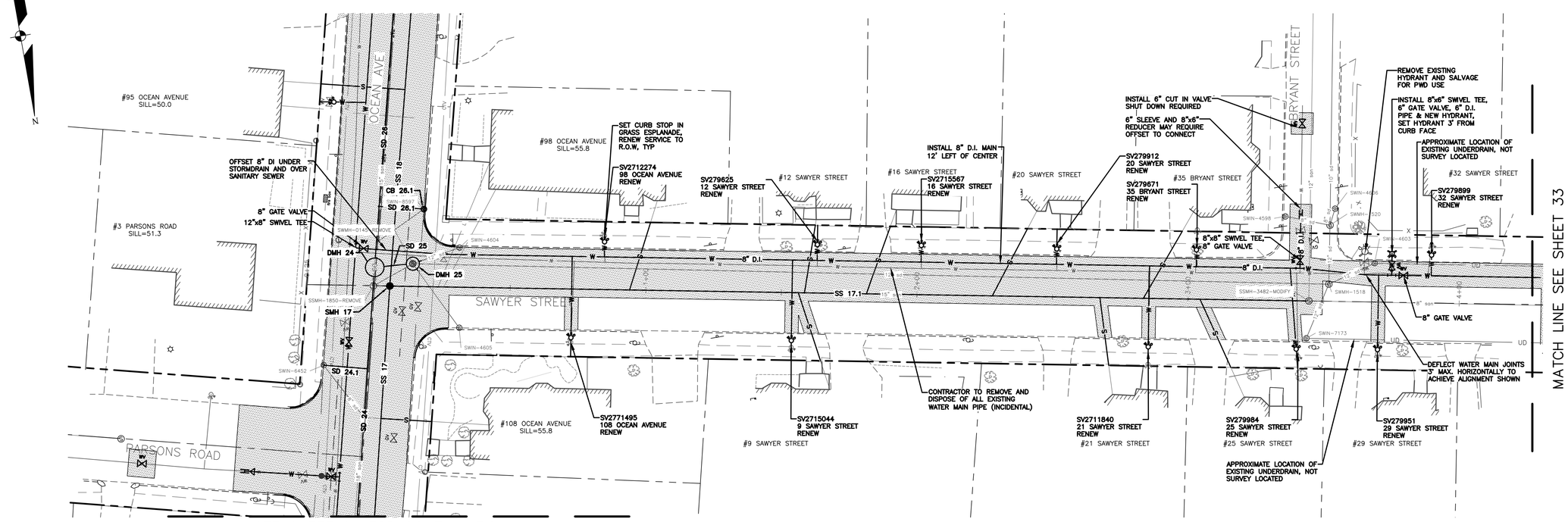
LEGEND

- REPAIR WITH LOAM AND SEED PAY ITEM 633.05 W10 THRU W18
- RECONSTRUCT BRICK SIDEWALK, PAY ITEM 608.15
- RECONSTRUCT CONCRETE SIDEWALK, PAY ITEM 608.08
- BITUMINOUS PAVEMENT, SEE PLANS



SEE SHEET 24 FOR CONTINUATION

LAYOUT PLAN
SCALE: 1"=20'



SEE SHEET 24 FOR CONTINUATION

WATER PLAN
SCALE: 1"=20'

Civil 3D 2013 Drawing Name:
17113 PP SAWYER.dwg, TAB:SAWYER LO1

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE
DANIEL J. RILEY
No. 5957
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

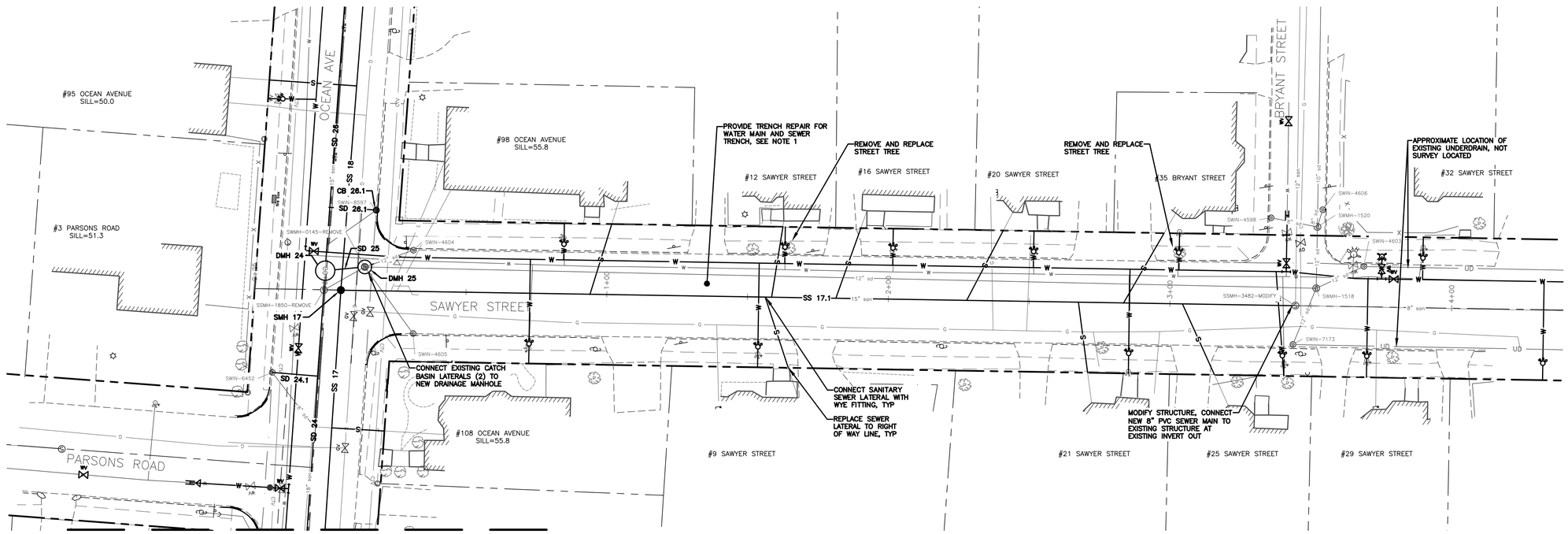
SAWYER ST - STA. 0+00 TO 4+00 - LAYOUT & WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM · CITY OF PORTLAND, MAINE

SHEET #
31 OF 45

PLAN NUMBER



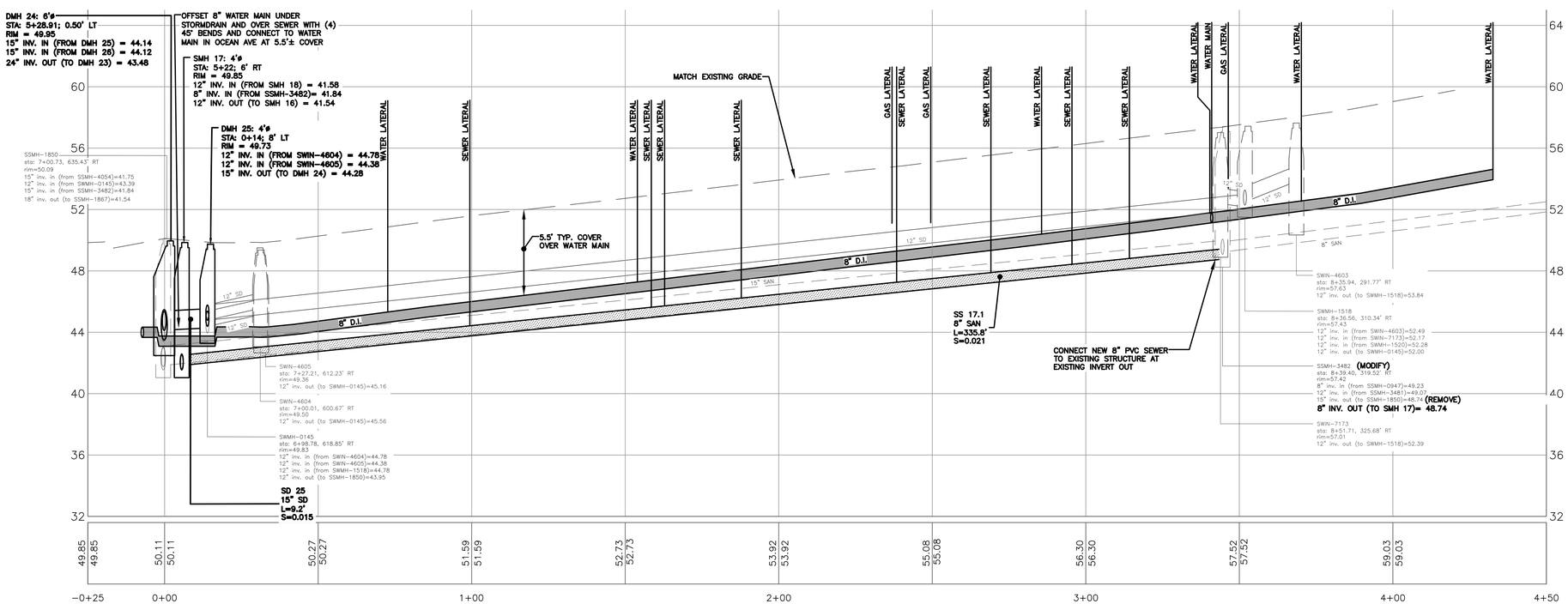
MATCH LINE SEE SHEET 25

PLAN
SCALE: 1"=20'

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SS 17.1	8"	336'	2.04%	PVC

NOTES:

1. REMOVE ANY REMAINING PAVEMENT BETWEEN THE SEWER AND WATER TRENCH AND RE-PAVE FULL WIDTH OF EXCAVATED AREA. PAYMENT FOR MATERIALS BETWEEN TRENCH PAY ITEMS ARE PAID UNDER NON-SRF PAY ITEMS.
2. HMA PAVEMENT, BASE AND SUBBASE MATERIALS ARE PAID UNDER UNIT PRICE ITEMS WITH QUANTITIES ALLOCATED TO PORTLAND WATER DISTRICT PAY ITEMS, SRF FUNDED PAY ITEMS AND CITY (NON-SRF) FUNDED PAY ITEMS. SEE THE TYPICAL STREET SECTIONS AND TRENCH DETAILS FOR PAY LIMITS.
3. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILTIY COORDIANTION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
4. CATCH BASIN OFFSETS WITHIN ROADWAY ARE TO THE EDGE OF CURB AND CATCH BASIN OFFSETS OUTSIDE ROADWAY ARE TO CENTER OF GRATE. DRAIN AND SEWER MANHOLE OFFSETS ARE TO CENTER OF COVER.
5. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
6. RENEWED WATER SERVICES SHALL BE CONSTRUCTED WITH AT LEAST 12" VERTICAL SEPARATION FROM STORMDRAIN AND SEWER.
7. PROPOSED NEW AND RESET CURBING, SIDEWALK, AND DRIVEWAY APRONS ARE NOT SHOWN ON THIS SHEET FOR CLARITY. SEE LAYOUT PLANS FOR ADDITIONAL WORK.
8. GAS SERVICE LOCATIONS ARE BASED ON INFORMATION THAT WAS MARKED IN THE FIELD AT THE TIME OF THE GROUND SURVEY AND INFORMATION ASSUMED FROM FIELD VISITS. SOME EXISTING GAS SERVICES MAY NOT BE SHOWN ON THE PLAN. COORDINATE WITH UNITIL FOR SERVICE LOCATIONS.



PROFILE
SCALE: HORZ. 1"=20'
VERT 1"=4'

Civil 3D 2013 Drawing Name:
17113 PP SAWYER.dwg, TAB:SAWYER PP1

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE
DANIEL J. RILEY
No. 5969
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

SAWYER ST - STA. 0+00 TO 4+00 - PLAN & PROFILE

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE
RESURGAM

SHEET # 32 OF 45

PLAN NUMBER

LEGEND

REPAIR WITH LOAM AND SEED
PAY ITEM 633.05 W10 THRU W18

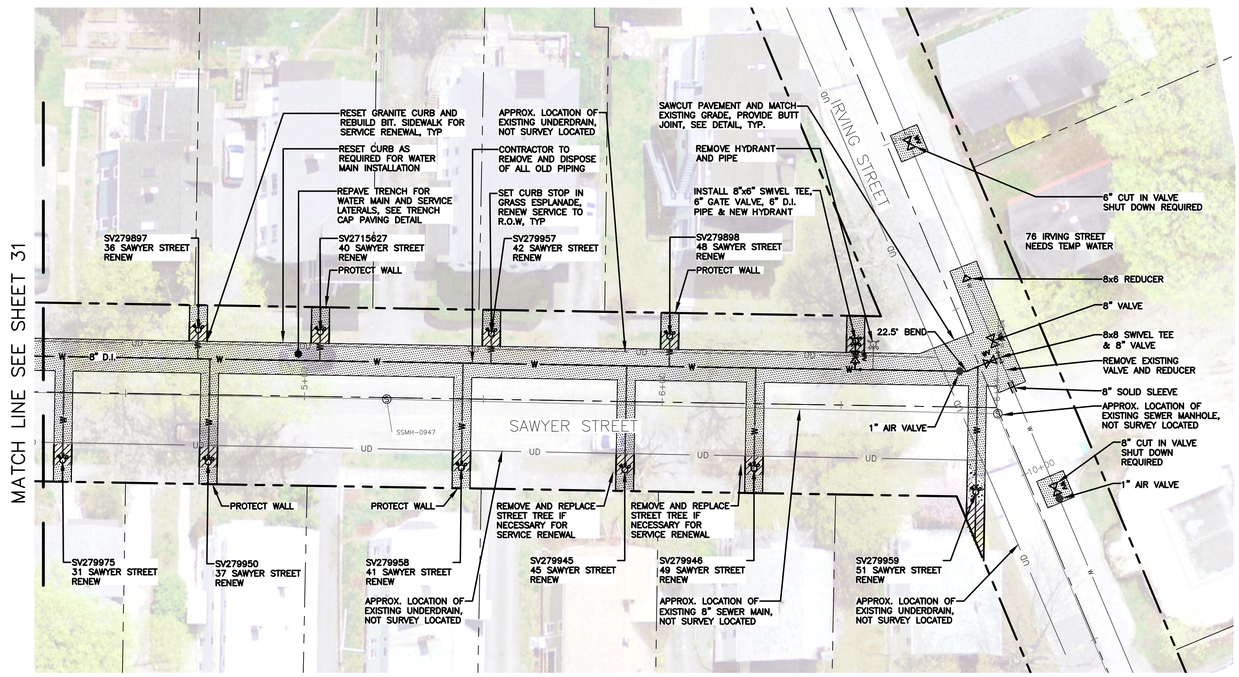
RECONSTRUCT BRICK SIDEWALK,
PAY ITEM 608.15

RECONSTRUCT CONCRETE SIDEWALK,
PAY ITEM 608.08

BITUMINOUS PAVEMENT, SEE PLANS

NOTES:

1. THE PORTIONS OF SAWYER STREET AND IRVING STREET SHOWN ON THIS PLAN SHALL RECEIVE TRENCH CAP PAVING. SEE PORTLAND WATER DISTRICT TRENCH DETAILS.
2. THE WORK INVOLVES COORDINATION WITH MULTIPLE UTILITIES AND WORK IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY AGENCIES, COMPLY WITH UTILITY AGENCY REQUIREMENTS AND SHALL SUPPORT AND PROTECT EXISTING UTILITIES THROUGHOUT CONSTRUCTION. UTILITY COORDINATION AND UTILITY SUPPORT WORK SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEMS.
3. RESETTING CURB & RECONSTRUCTING SIDEWALK FOR SERVICE LATERAL INSTALLATION IS TO BE PAID AT UNIT PRICE IN THE BID.
4. RENEWED WATER SERVICES SHALL BE CONSTRUCTED WITH AT LEAST 12" VERTICAL SEPARATION FROM STORMDRAIN AND SEWER.
5. EXISTING SANITARY SEWER AND UNDERDRAINS SHOWN ON THIS PLAN HAVE NOT BEEN SURVEY LOCATED. THE LOCATIONS SHOWN ARE ASSUMED BASED ON GIS INFORMATION PROVIDED BY THE CITY OF PORTLAND. CONTRACTOR SHALL VERIFY THE LOCATION OF THE CITY'S SEWER AND UNDERDRAIN PRIOR TO EXCAVATION FOR THE NEW WATER MAINS AND SERVICES.



WATER PLAN
SCALE: 1"=20'

REFERENCES:

Civil 3D 2013 Drawing Name:
17113 PP SAWYER.dwg, TAB:SAWYER LO2

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DLR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE
DANIEL L. RILEY
No. 9947
LICENSED PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
SAWYER ST - STA. 4+00 TO 6+94 - WATER PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

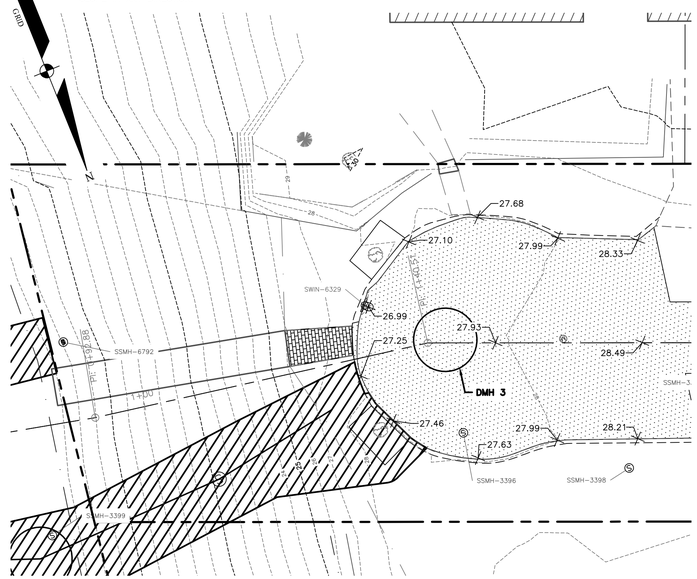
CITY OF PORTLAND, MAINE
RESURGAM

SHEET #
33 OF 45

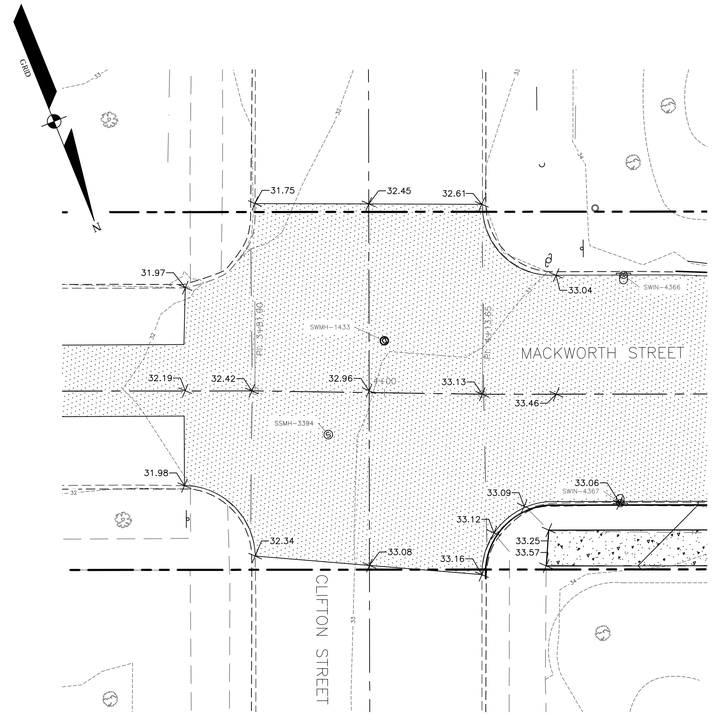
PLAN NUMBER

NOTES:

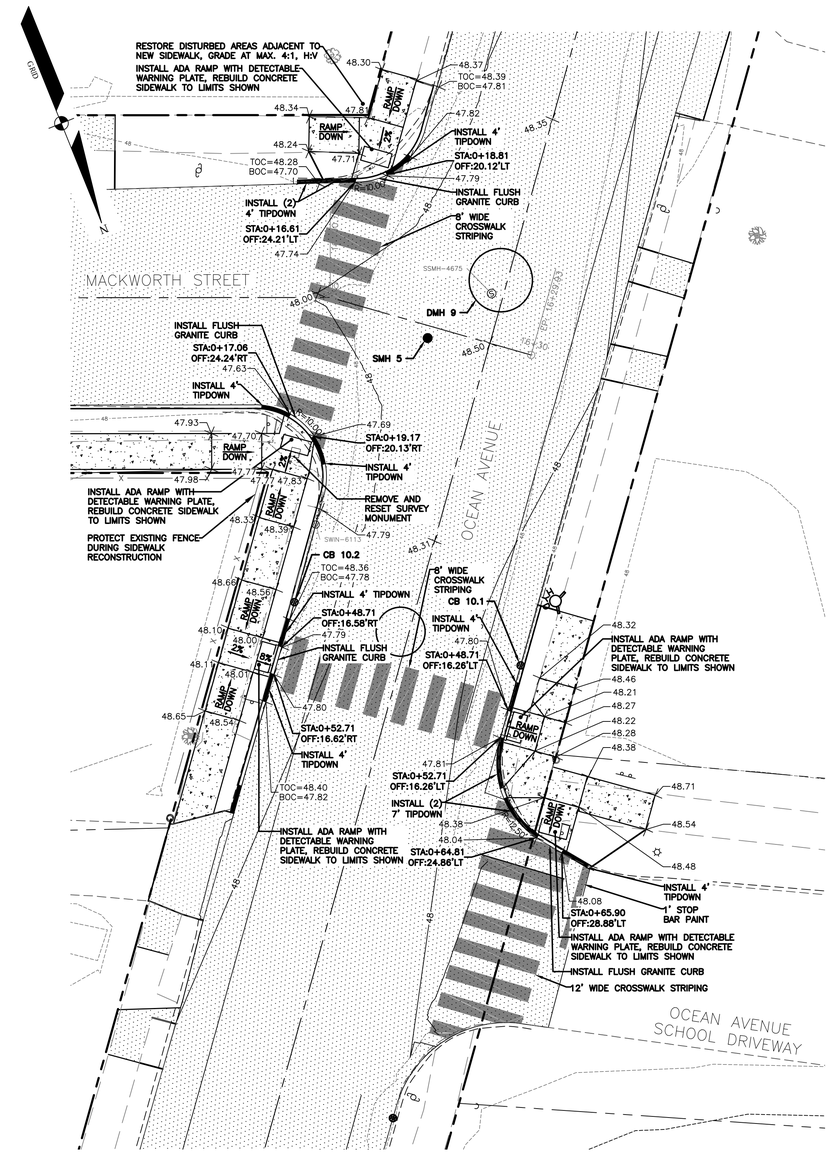
1. ADA RAMPS SHALL NOT EXCEED GRADE OF 1:12.
2. ADA LANDINGS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION.



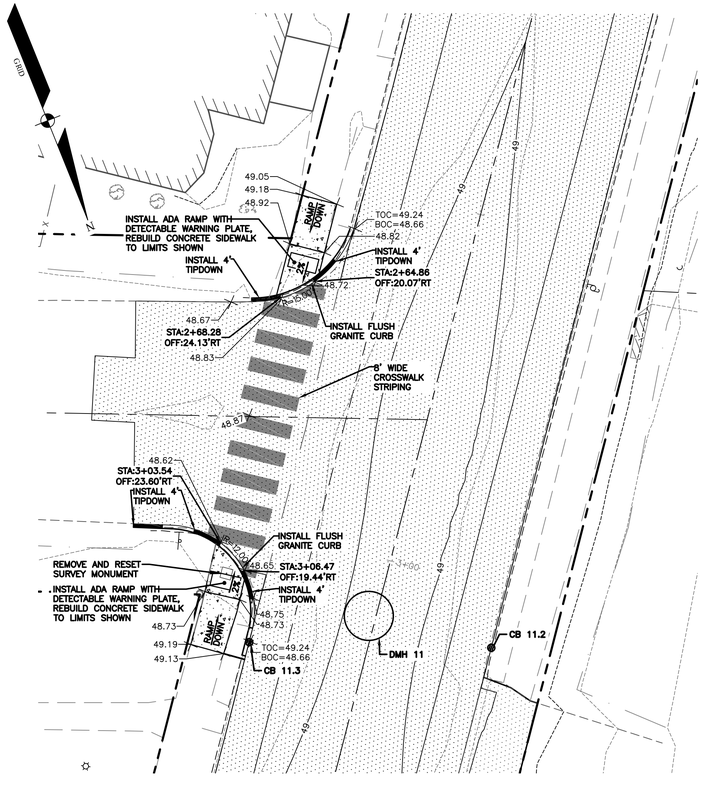
EAST END OF MACKWORTH
SCALE: 1"=10'



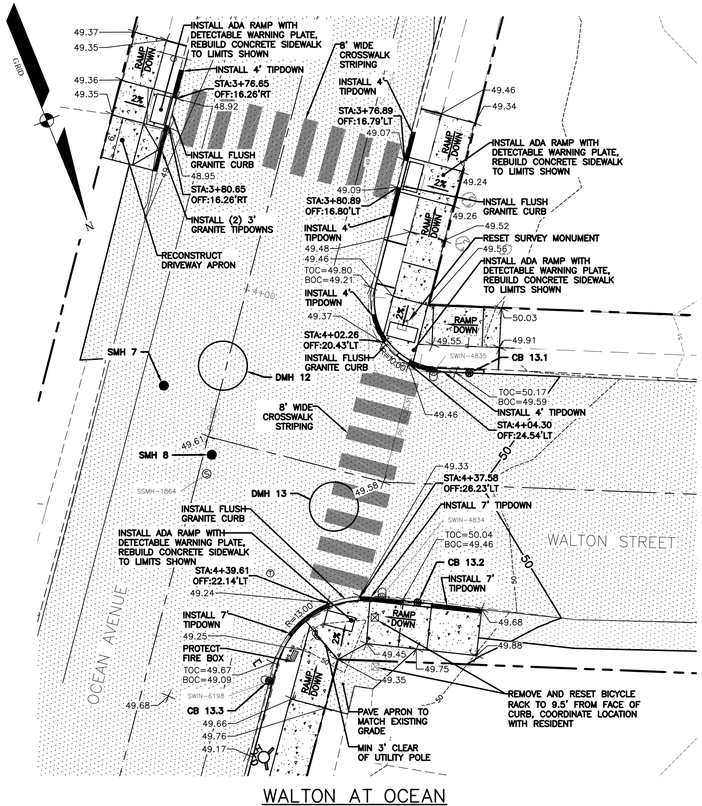
MACKWORTH AT CLIFTON
SCALE: 1"=10'



MACKWORTH AT OCEAN
SCALE: 1"=10'



AUSTIN AT OCEAN
SCALE: 1"=10'



WALTON AT OCEAN
SCALE: 1"=10'

Civil 3D 2013 Drawing Name:
17113 INTERSECTION PLAN.dwg, TAB:K1

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-13, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DLR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE — DANIEL L. RILEY — No. 5969 — REGISTERED PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
INTERSECTION PLAN

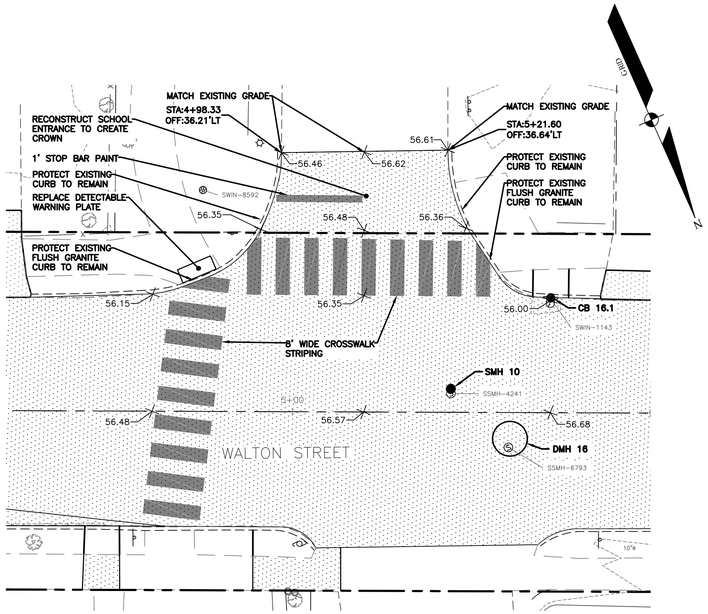
CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

CITY OF PORTLAND, MAINE — RESURGAM

SHEET #
34 OF 45
PLAN NUMBER

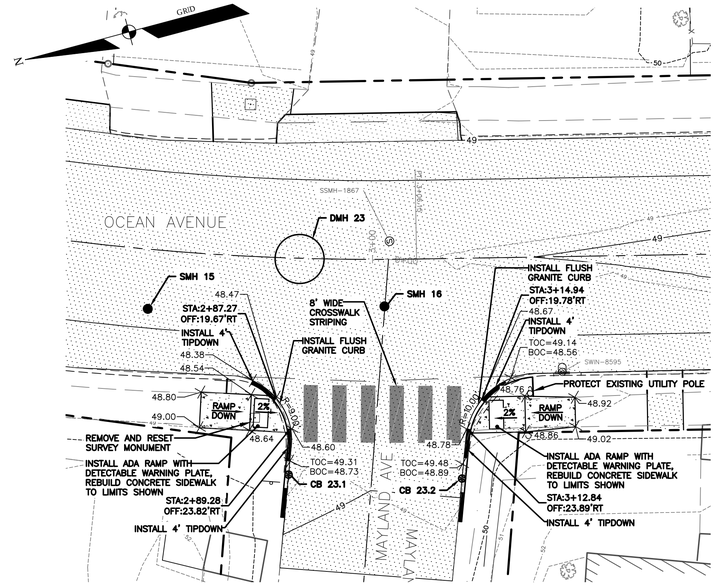
NOTES:

1. ADA RAMPS SHALL NOT EXCEED GRADE OF 1:12.
2. ADA LANDINGS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION.



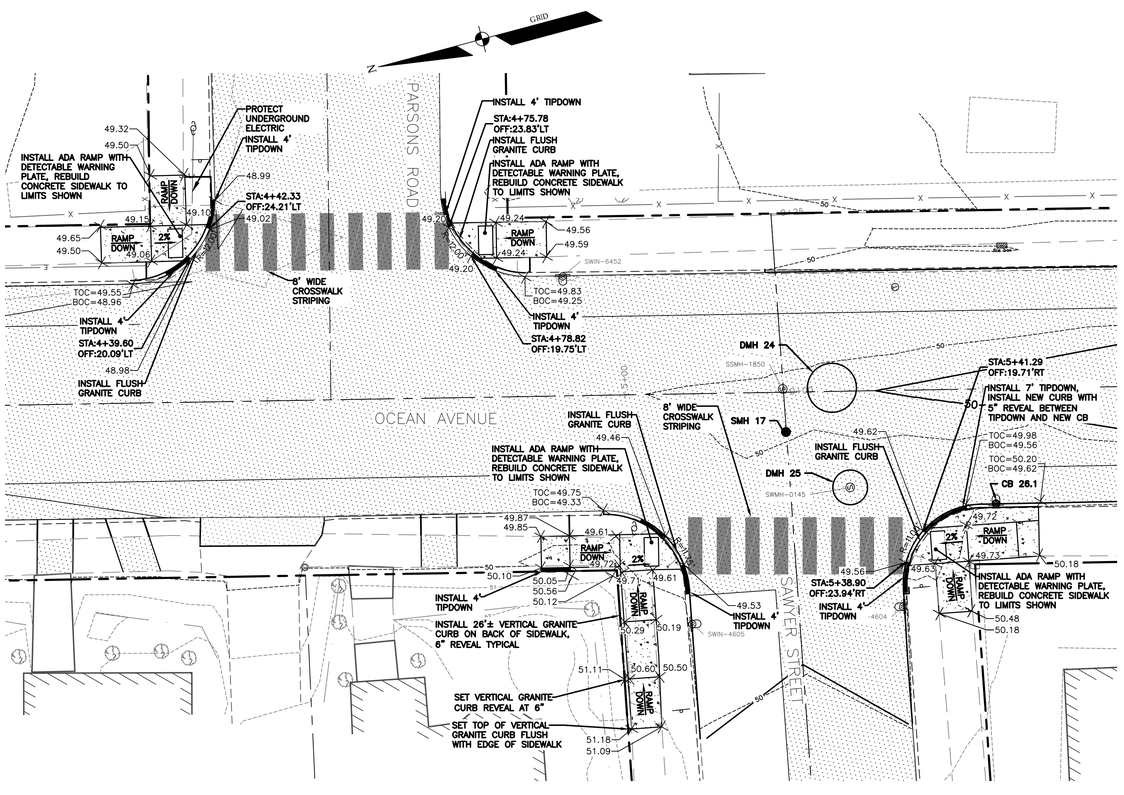
WALTON AT OCEAN AVE ELEMENTARY

SCALE: 1"=10'



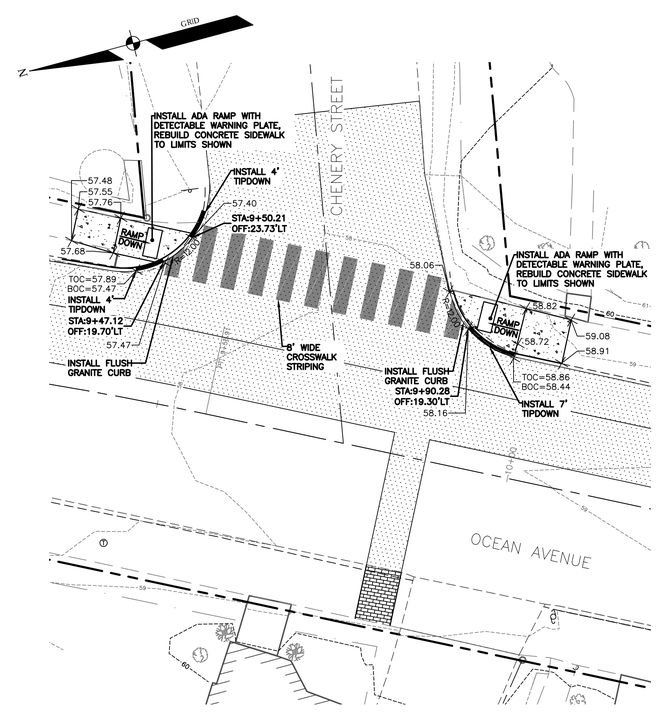
OCEAN AT MAYLAND

SCALE: 1"=10'



OCEAN AT PARSONS AND OCEAN AT SAWYER

SCALE: 1"=10'



OCEAN AT CHENERY

SCALE: 1"=10'

REFERENCES:

Civil 3D 2013 Drawing Name: 17113 INTERSECTION PLAN.dwg, TAB:K2

CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-13, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DLR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL L. RILEY No. 9661 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT

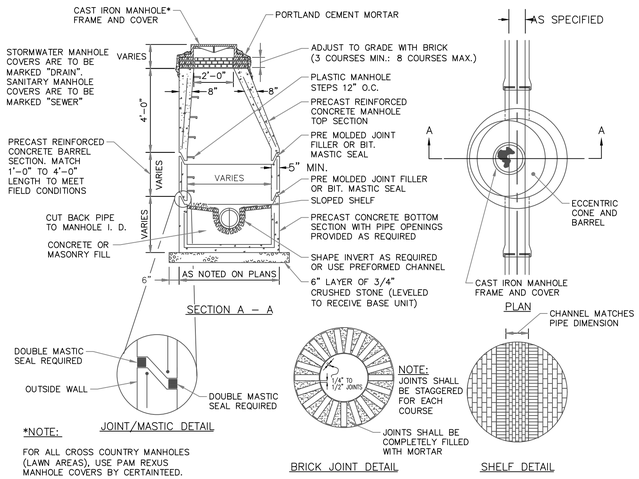
INTERSECTION PLAN

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM NE CITY OF PORTLAND, MAINE

SHEET # 35 OF 45

PLAN NUMBER



*NOTE:

FOR ALL CROSS COUNTRY MANHOLES (LAWN AREAS), USE PAM REXUS MANHOLE COVERS BY CERTAINTEED.

NOTE:

MANHOLE CHANNELS REQUIRING CHANGE OF ALIGNMENT, TO BE BUILT ON SMOOTH RADIUS. IF SIDE PIPES ENTER, CHANNEL TO BE SHAPED TO RECEIVE ADDED SIDE FLOW.

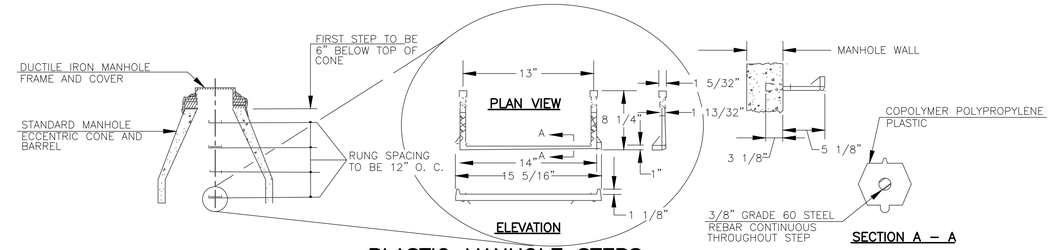
NOTES:

1. MANHOLE CHANNELS REQUIRING CHANGE OF ALIGNMENT, TO BE BUILT ON SMOOTH RADIUS. IF SIDE PIPES ENTER, CHANNEL TO BE SHAPED TO RECEIVE ADDED SIDE FLOW.

2. ALL CROSS COUNTRY (LAWN AREA) MANHOLES SHALL HAVE PAM REXUS FRAMES AND COVERS WITH APPROPRIATE UTILITY NAME ON COVER.

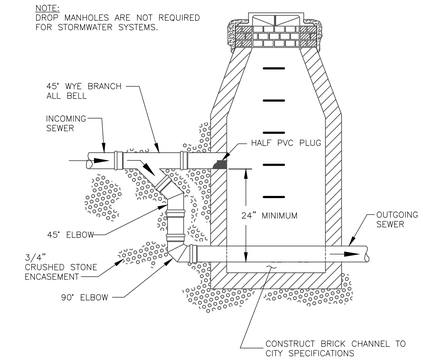
PRECAST CONCRETE MANHOLE

NOT TO SCALE



PLASTIC MANHOLE STEPS

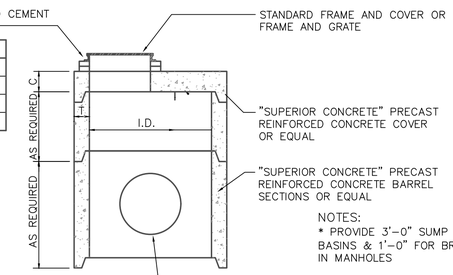
NOT TO SCALE



TYPICAL OUTSIDE DROP MANHOLE

NOT TO SCALE

I.D	C	T
5'	8"	6"
6'	9"	7"
8'	10"	8"



DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS
2. DESIGN FOR H–20 WHEEL LOADING
3. CATCH BASIN TO CONFORM TO ASTM–C478 SPECIFICATIONS
4. REINFORCE TO .12 IN. SQ./L.F.
5. SEE GENERAL NOTES FOR MANHOLES AND CATCH BASINS ON SHEET 25.
6. CATCH BASIN FRAMES AND COVER AND INLET STONE SHALL MATCH DETAIL FOR PRECAST CONCRETE CATCH BASIN TYPE 'E'.

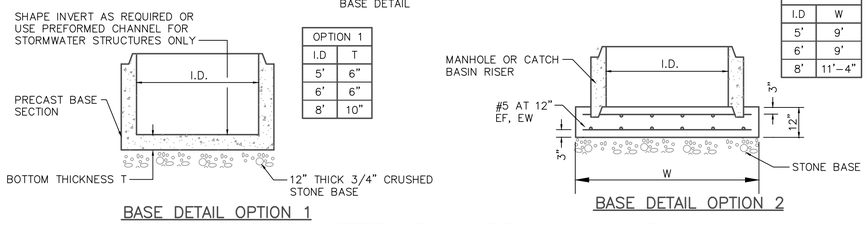
NOTE:
FOR BASE CONSTRUCTION SEE BASE DETAIL

NOTES:
* PROVIDE 3'–0" SUMP FOR CATCH BASINS & 1'–0" FOR BRICK CHANNEL IN MANHOLES

* SEE GENERAL NOTES FOR MANHOLES AND CATCH BASINS ON THIS SHEET

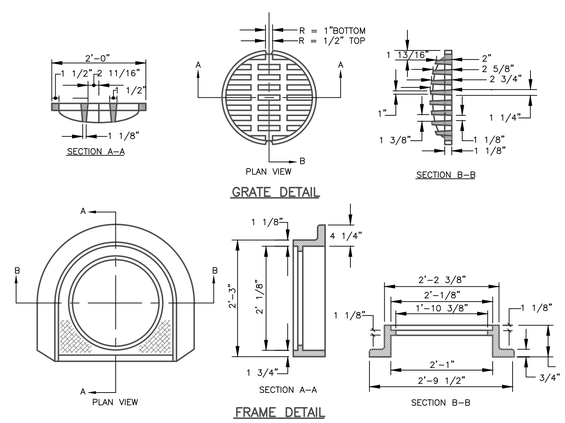
OPTION 1	
I.D	T
5'	6"
6'	6"
8'	10"

OPTION 2	
I.D	W
5'	9'
6'	9'
8'	11'–4"



LARGE DIAMETER STORM DRAIN MANHOLE AND CATCH BASIN WITH FLAT TOP

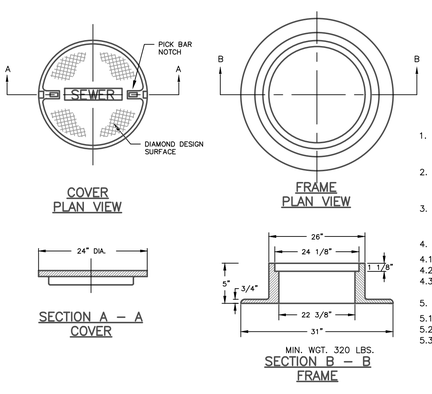
NOT TO SCALE



1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48–CLASS 35.
3. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
4. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP.
5. APPROVED CATCH BASIN FRAMES:
   5.1. EAST JORDAN = 7375Z
   5.2. NEENAH = R–3248
   5.3. OR APPROVED EQUAL
6. APPROVED CATCH BASIN GRATES
   6.1. EAST JORDAN = 2440M
   6.2. NEENAH = R–3248
   6.3. OR APPROVED EQUAL

CATCH BASIN FRAME AND GRATE

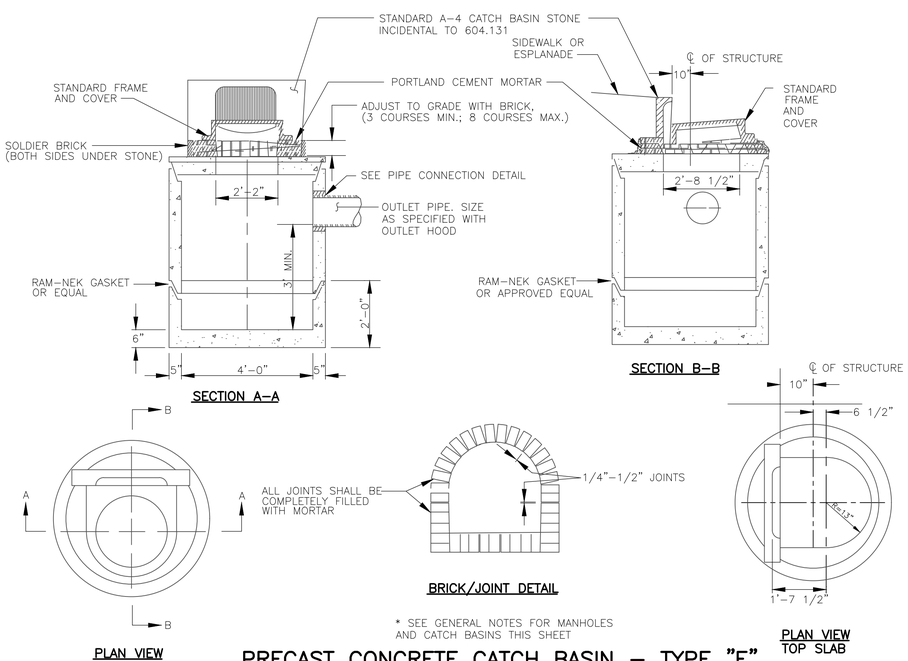
NOT TO SCALE



1. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
2. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
3. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
4. APPROVED MANHOLE FRAMES:
   4.1. EAST JORDAN = 1690Z
   4.2. NEENAH = R–1496
   4.3. OR APPROVED EQUAL
5. APPROVED MANHOLE COVERS
   5.1. EAST JORDAN = 2160A
   5.2. NEENAH = R–1496
   5.3. OR APPROVED EQUAL

CAST IRON MANHOLE COVER AND FRAME

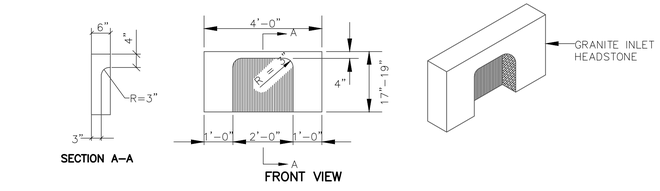
NOT TO SCALE



* SEE GENERAL NOTES FOR MANHOLES AND CATCH BASINS THIS SHEET

PRECAST CONCRETE CATCH BASIN – TYPE "E"

NOT TO SCALE



4' GRANITE HEADSTONE FOR CATCH BASIN INLET

NOT TO SCALE

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C–478.
4. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
5. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
6. ALL MANHOLE RISERS SHALL BE 24" CLEAR OPENING OR APPROVED EQUAL.
7. SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C–32–63, GRADE MA AND SA.
8. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
9. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE DR5A OR APPROVED EQUAL.
10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48–CLASS 35.
11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CATCH BASIN HOOD.

Civil 3D 2013 Drawing Name: 17113 D.dwg, TAB:D1

CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5951 PROFESSIONAL ENGINEER 01/22/2019

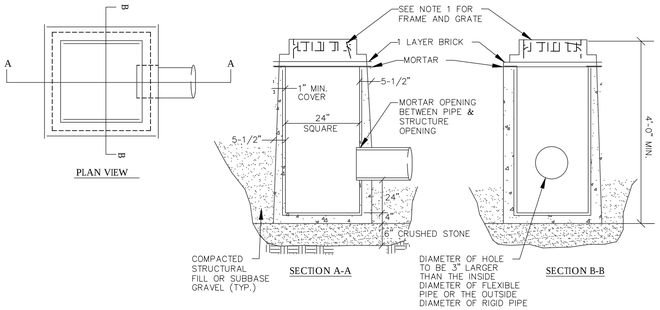
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
STANDARD CONSTRUCTION DETAILS

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 36 OF 45

PLAN NUMBER

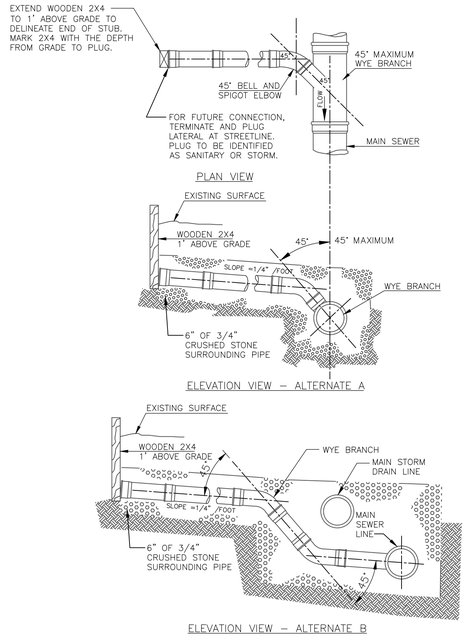


NOTES:
1. FRAME SHALL BE FOR 24" SQUARE GRATE-LEBARON TYPE "F" SQUARE FRAME (LF 245) 4 FLANGE. GRATE SHALL BE 24"x24" CAST IRON.

2. ENTIRE CATCH BASIN WITH EXCEPTION OF LEVELING BRICK FRAME AND GRATE TO BE PRECAST AS SINGLE PORTLAND CEMENT CONCRETE UNIT.

TYP. TYPE "F" CATCH BASIN

NOT TO SCALE

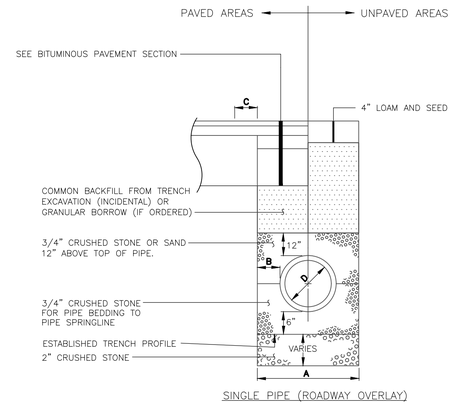


TYPICAL HOUSE LATERAL TEE/WYE CONNECTION

NOT TO SCALE

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES..



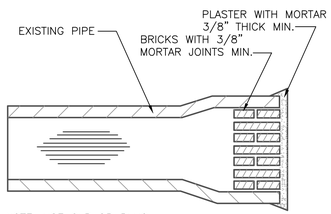
NOTES

1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, REFER TO BITUMINOUS PAVEMENT SECTION FOR DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT.
3. DIMENSION "B" SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES "B" SHALL BE AT LEAST 9".
4. DIMENSION "A" IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION "A" SHALL BE BASED ON PIPE DIAMETER "D", AS SET FORTH IN THE FOLLOWING TABLE.
5. EXCAVATION BELOW ESTABLISHED TRENCH PROFILE (IF ORDERED). PAY ITEM 205.061.
6. EXCAVATION INCIDENTAL TO PIPE PAY ITEMS (PAVED AND SEEDED AREAS)

PIPE DIAMETER, "D" (INCHES)	MAX. TRENCH WIDTH, "A" (FEET)	PAVEMENT WIDTH OUTSIDE TRENCH, "C" (FEET)
4	4.0	2.5
6	4.0	2.5
8	4.0	2.5
10	4.0	2.5
12	4.0	2.5
15	4.0	2.5
18	5.0	2.0
21	5.0	2.0
24	5.5	1.75
27	6.0	1.5
30	6.0	1.5
36	7.0	1.0
42	8.0	1.0
48	8.0	1.0

TYPICAL PIPE TRENCH INSTALLATION

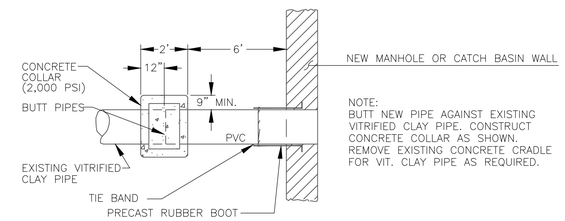
NOT TO SCALE



NOTE: USE CAP OR PLUG FOR PVC PIPE

MASONRY PLUG

NOT TO SCALE



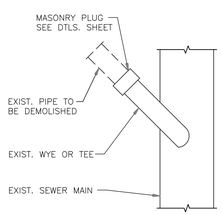
NOTE:
BUTT NEW PIPE AGAINST EXISTING VITRIFIED CLAY PIPE. CONSTRUCT CONCRETE COLLAR AS SHOWN. REMOVE EXISTING CONCRETE CRADLE FOR VIT. CLAY PIPE AS REQUIRED.

NOTE:
LOCATION / WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.

EXISTING VITRIFIED CLAY PIPE INTO NEW STRUCTURE

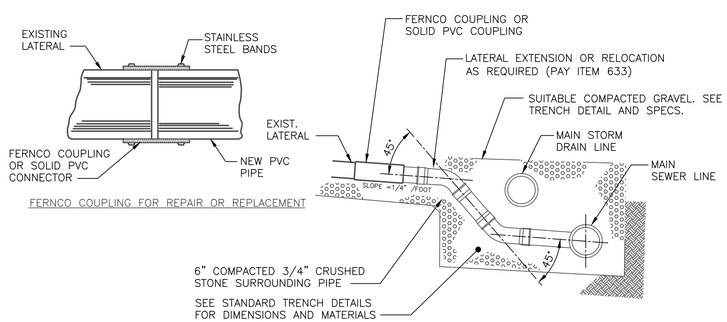
NOT TO SCALE

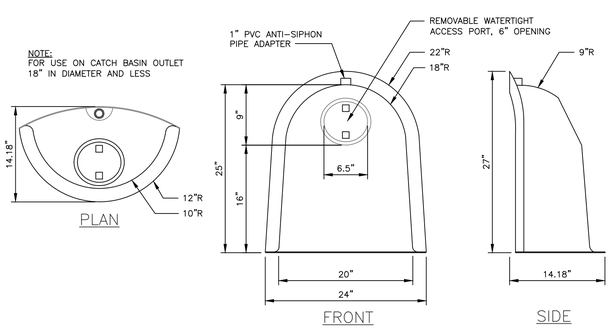
1. LOCATIONS AND ELEVATIONS OF STUBS SHOWN ON THE PLANS ARE TO BE CONSIDERED AS APPROXIMATE AND MAY BE ADJUSTED AS DIRECTED TO SUIT FIELD CONDITIONS.
2. HOUSE CONNECTIONS AND CATCH BASIN CONNECTIONS TO THE MAIN LINE OF THE SEWER SHALL CONSIST OF AN APPROPRIATE "Y" BRANCH CONNECTION AS SHOWN ON THE PLANS, OR AS DIRECTED. ACTUAL "Y" LOCATIONS FOR HOUSE CONNECTIONS AND CATCH BASIN CONNECTIONS SHALL BE DETERMINED DURING CONSTRUCTION. THE CONTRACTOR SHALL KEEP A COMPLETE RECORD OF "Y" LOCATIONS WHICH SHALL BE GIVEN TO THE CITY OF PORTLAND UPON COMPLETION OF THE CONTRACT. ALL PVC COUPLING SHALL BE "SOLID PVC COUPLINGS".



MASONRY PLUG @ MAIN

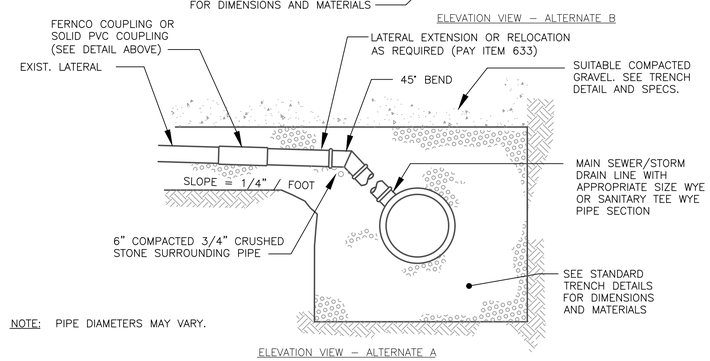
NOT TO SCALE





CATCH BASIN HOOD

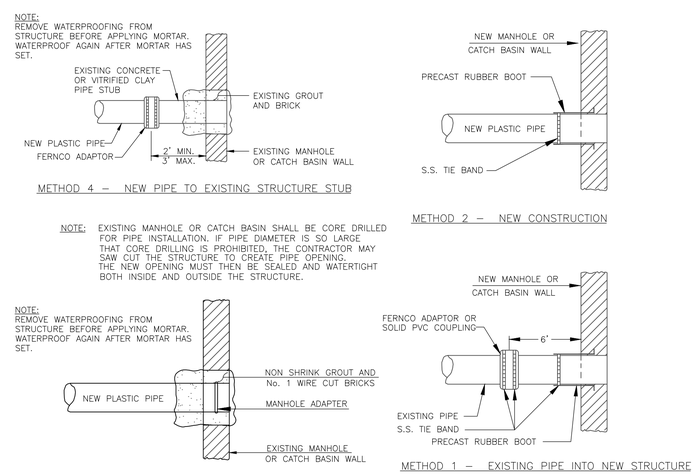
NOT TO SCALE



NOTE: PIPE DIAMETERS MAY VARY.

TYPICAL EXISTING LATERAL CONNECTION

NOT TO SCALE



PLASTIC PIPE CONNECTIONS

NOT TO SCALE

Civil 3D 2013 Drawing Name: 17113 D.dwg, TAB:D2

CITY PROPERTY PLAN BOOK SHEETS: I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 9661 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON CSO SEPARATION PROJECT
STANDARD CONSTRUCTION DETAILS

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

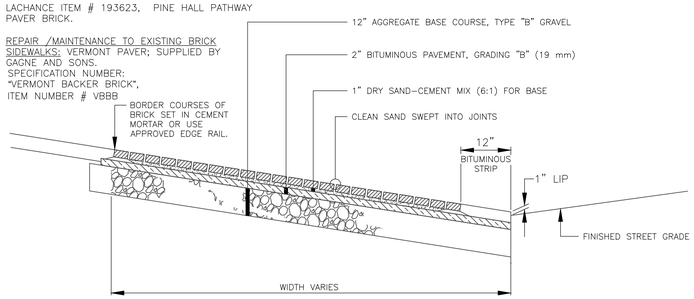
SHEET # 37 OF 45

PLAN NUMBER

BRICKS TO BE USED:

NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA.
LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

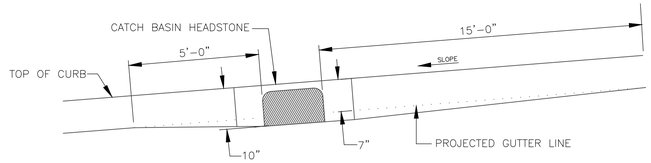
REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER:
"VERMONT BACKER BRICK",
ITEM NUMBER # VBBB



BRICK DRIVEWAY APRON WITH BITUMINOUS BASE

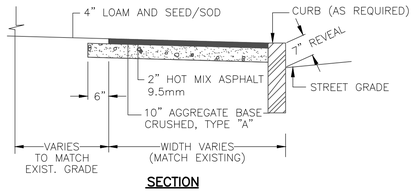
NOT TO SCALE

NOTE:
DISH 10' EITHER SIDE OF HEADSTONE FOR CATCH BASIN AT LOW POINT



TYPICAL PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET

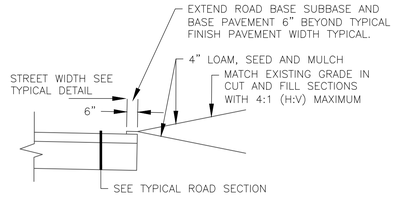
NOT TO SCALE



SECTION

BITUMINOUS SIDEWALK DETAIL – NO ESPLANADE

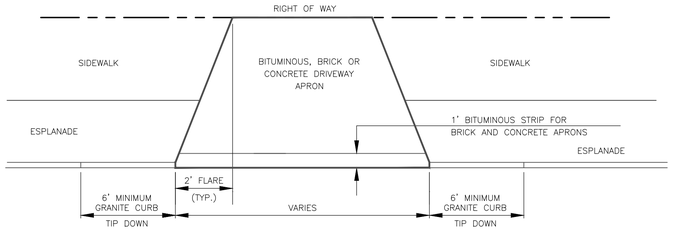
NOT TO SCALE



TYPICAL EDGE TREATMENT FOR UN-CURBED STREET

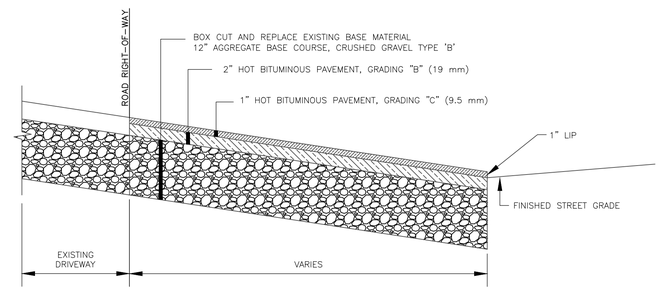
NOT TO SCALE

NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R. O. W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY CITY ENGINEER.

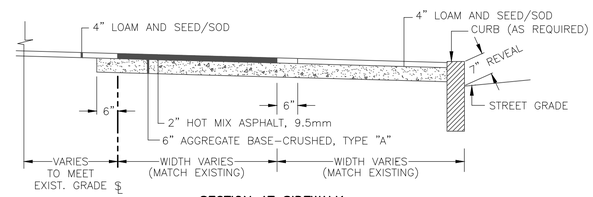


DRIVEWAY APRON LAYOUT

NOT TO SCALE



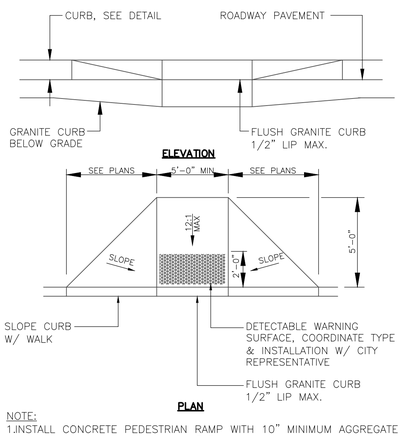
BITUMINOUS DRIVEWAY APRON



SECTION AT SIDEWALK

BITUMINOUS SIDEWALK WITH ESPLANADE

NOT TO SCALE

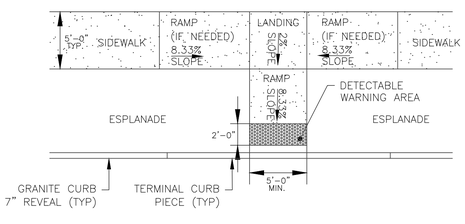


NOTE:
1.INSTALL CONCRETE PEDESTRIAN RAMP WITH 10" MINIMUM AGGREGATE BASE COURSE, GRAVEL – TYPE "B".

2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE TILE AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.

CONCRETE PEDESTRIAN RAMP @ CROSSWALK

NOT TO SCALE



NOTES:

ALL RAMPS SHALL COMPLY WITH ADA STANDARDS.

GRANITE CURB ADJACENT TO LANDING SHALL BE FLUSH WITH STREET.

SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

PERPENDICULAR ADA RAMP LAYOUT FOR NARROW SIDEWALK WITH ESPLANADE

NOT TO SCALE

NOTES:

ALL RAMPS SHALL COMPLY WITH ADA STANDARDS.

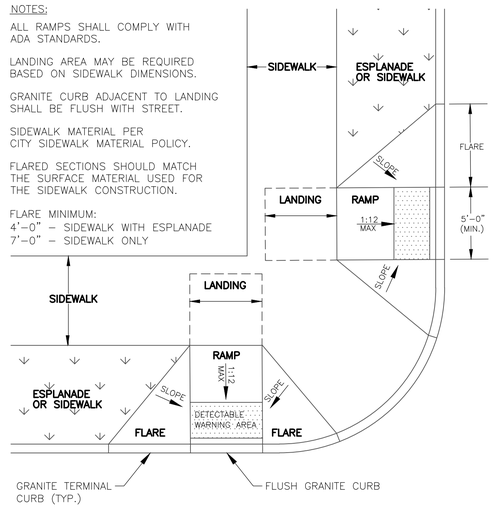
LANDING AREA MAY BE REQUIRED BASED ON SIDEWALK DIMENSIONS.

GRANITE CURB ADJACENT TO LANDING SHALL BE FLUSH WITH STREET.

SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

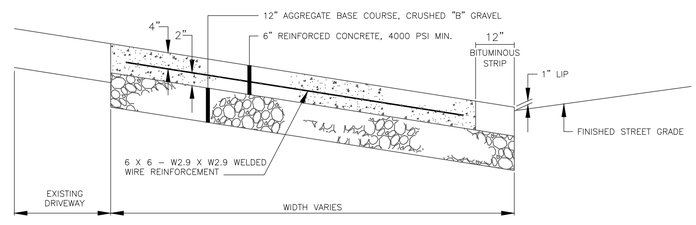
FLARED SECTIONS SHOULD MATCH THE SURFACE MATERIAL USED FOR THE SIDEWALK CONSTRUCTION.

FLARE MINIMUM:
4'-0" – SIDEWALK WITH ESPLANADE
7'-0" – SIDEWALK ONLY



PREFERRED SIDEWALK RAMP AT INTERSECTION

NOT TO SCALE



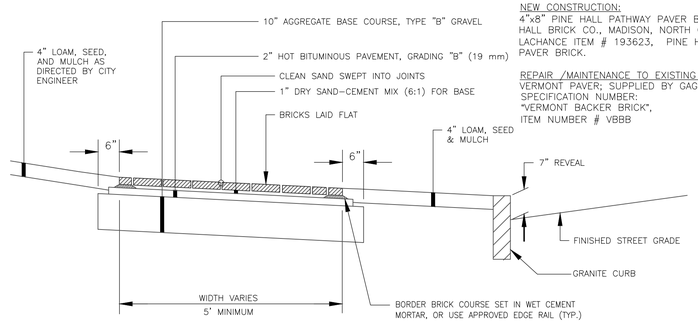
REINFORCED CONCRETE DRIVEWAY APRON

NOT TO SCALE

BRICKS TO BE USED:

NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA.
LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

REPAIR /MAINTENANCE TO EXISTING BRICK SIDEWALKS: VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER:
"VERMONT BACKER BRICK",
ITEM NUMBER # VBBB



BRICK SIDEWALK WITH BITUMINOUS BASE

NOT TO SCALE

Civil 3D 2013 Drawing Name: 17113 D.dwg, TAB:D3

CITY PROPERTY PLAN BOOK SHEETS: I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5957 PROFESSIONAL ENGINEER 01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
STANDARD CONSTRUCTION DETAILS

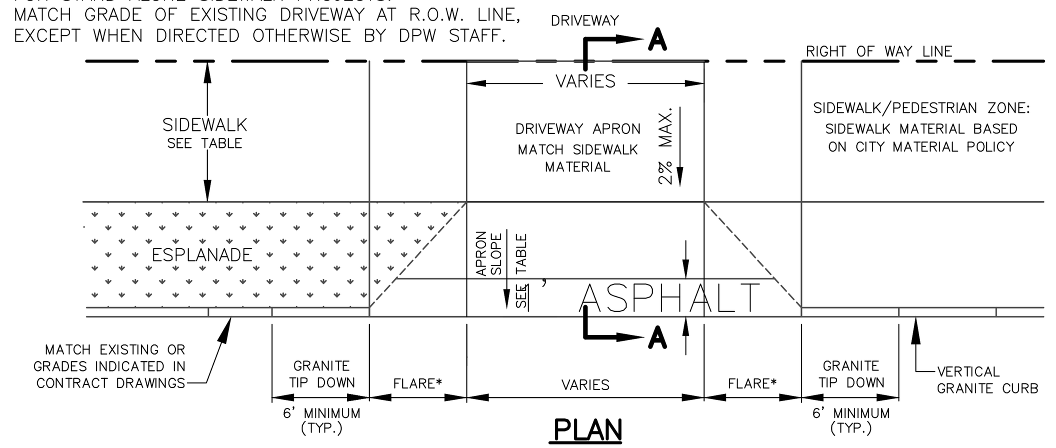
CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

SHEET # 38 OF 45

PLAN NUMBER

NOTE:
FOR STAND ALONE SIDEWALK PROJECTS:
MATCH GRADE OF EXISTING DRIVEWAY AT R.O.W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY DPW STAFF.



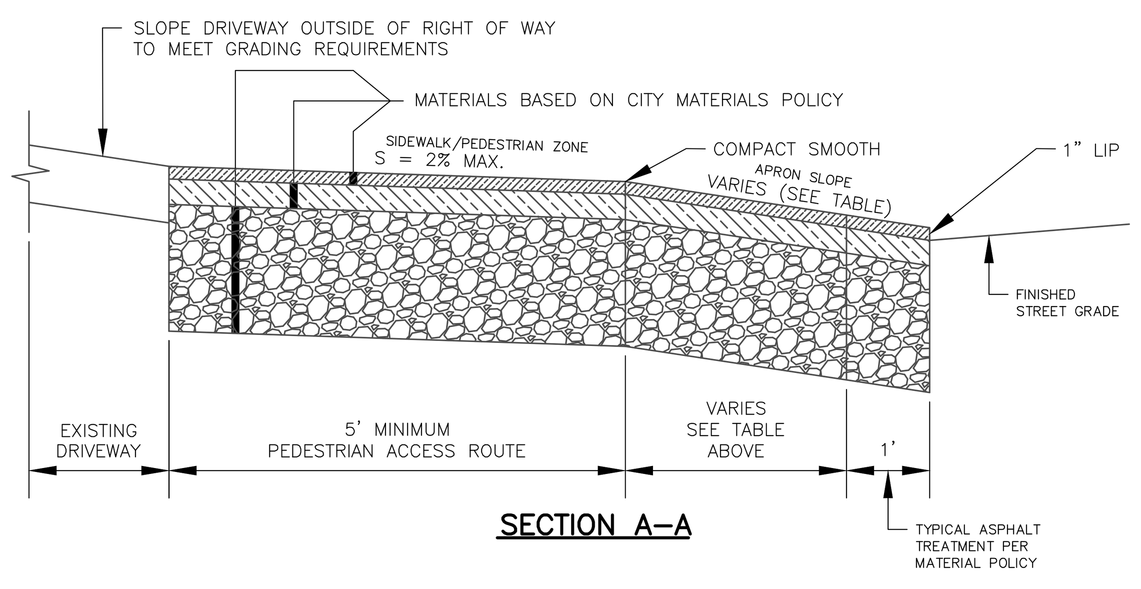
PLAN

2% CROSS-SLOPE MAXIMUM ALONG PEDESTRIAN ACCESS ROUTE

*A TWO-FOOT RADIUS CORNER GRANITE PIECE MAY BE ALLOWABLE AT RESIDENTIAL DRIVEWAYS WITH DPW PERMISSION IN LIEU OF THE STANDARD FLARE/TIPDOWN TREATMENT.

PRIMARY VEHICLE USE	MAXIMUM RECOMMENDED GRADE CHANGE AT STREET (G)	FLARE (2' TYP.)
CARS/SUVs	16%	2' MINIMUM DESIGNED AS NEEDED
TRUCKS/BUSES	12%	

G=(APRON SLOPE)−(STREET CROSS SLOPE)
EX. G = 10% − (−2%) = 12%

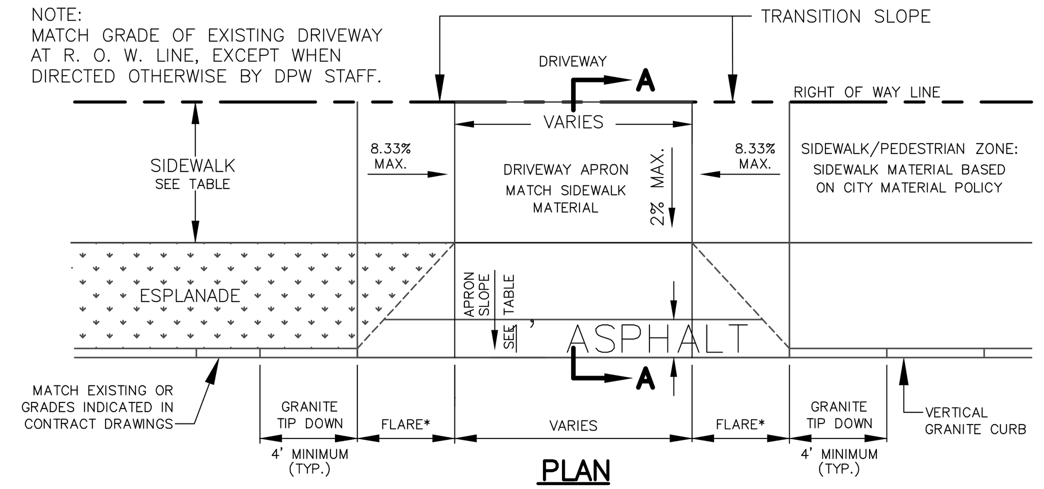


SECTION A–A

DRIVEWAY APRON W/ PEDESTRIAN ACCESS ROUTE

NOT TO SCALE

NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R. O. W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY DPW STAFF.



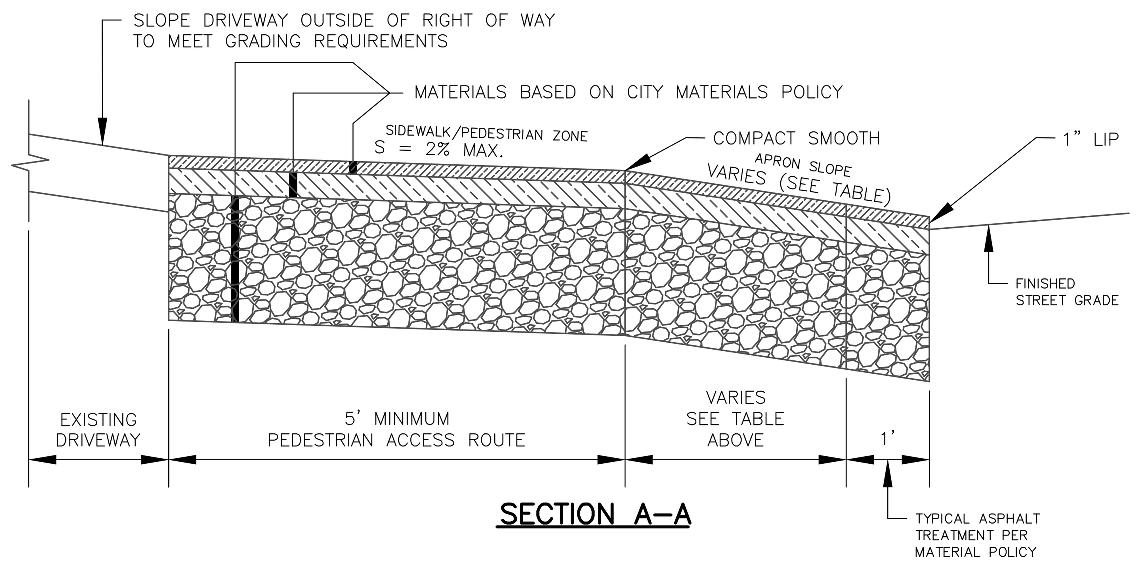
PLAN

2% CROSS-SLOPE MAXIMUM ALONG PEDESTRIAN ACCESS ROUTE

*A TWO-FOOT RADIUS CORNER GRANITE PIECE MAY BE ALLOWABLE AT RESIDENTIAL DRIVEWAYS WITH DPW PERMISSION IN LIEU OF THE STANDARD FLARE/TIPDOWN TREATMENT.

PRIMARY VEHICLE USE	MAXIMUM RECOMMENDED GRADE CHANGE AT STREET (G)	FLARE (2' TYP.)
CARS/SUVs	16%	2' MINIMUM DESIGNED AS NEEDED
TRUCKS/BUSES	12%	

G=(APRON SLOPE)−(STREET CROSS SLOPE)
EX. G = 10% − (−2%) = 12%

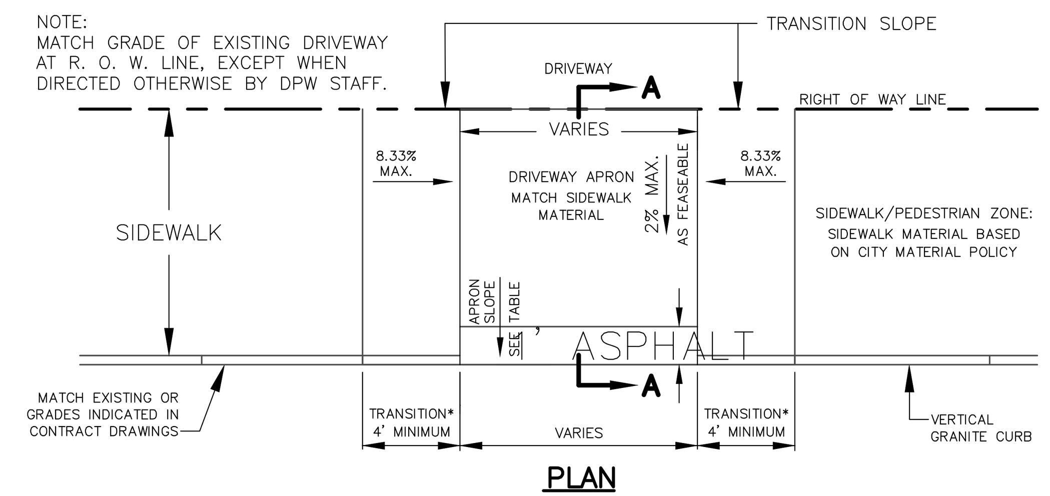


SECTION A–A

DRIVEWAY APRON W/ PEDESTRIAN ACCESS ROUTE (DEPRESSED DRIVEWAY W/ SEPARATED SIDEWALK

NOT TO SCALE

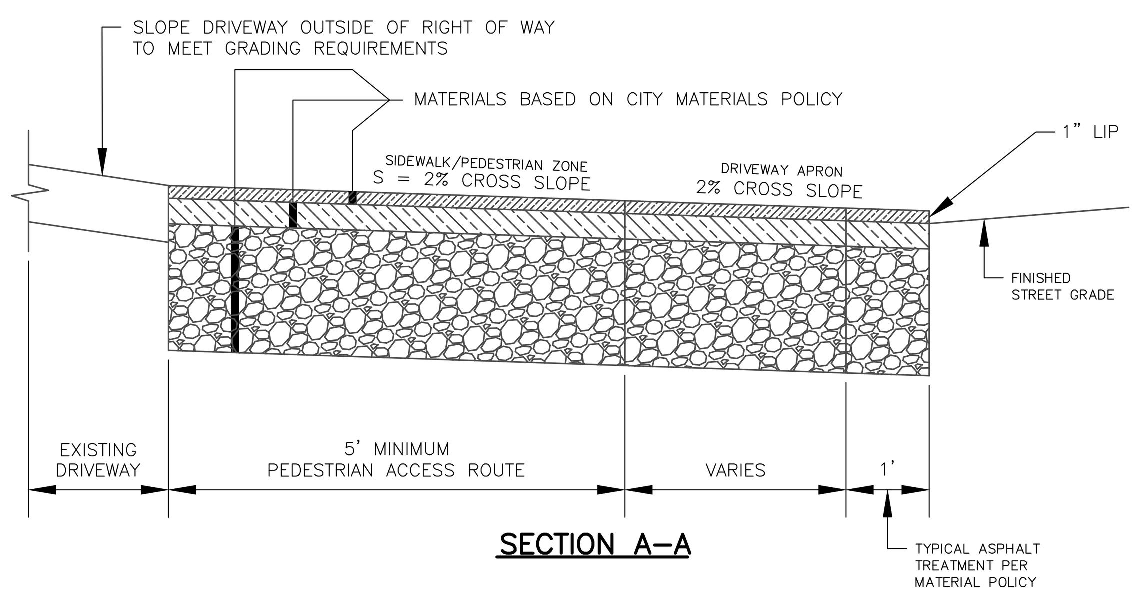
NOTE:
MATCH GRADE OF EXISTING DRIVEWAY AT R. O. W. LINE, EXCEPT WHEN DIRECTED OTHERWISE BY DPW STAFF.



PLAN

2% CROSS-SLOPE MAXIMUM ALONG PEDESTRIAN ACCESS ROUTE

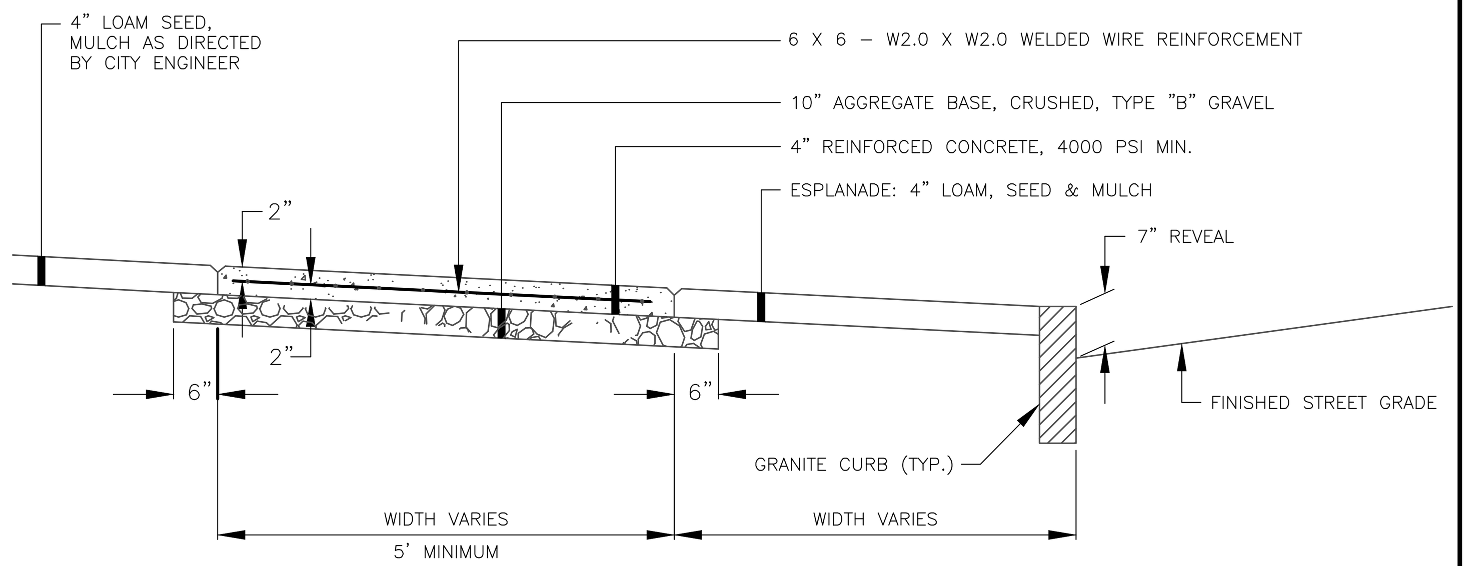
*A TWO-FOOT RADIUS CORNER GRANITE PIECE MAY BE ALLOWABLE AT RESIDENTIAL DRIVEWAYS WITH DPW PERMISSION IN LIEU OF THE STANDARD FLARE/TIPDOWN TREATMENT.



SECTION A–A

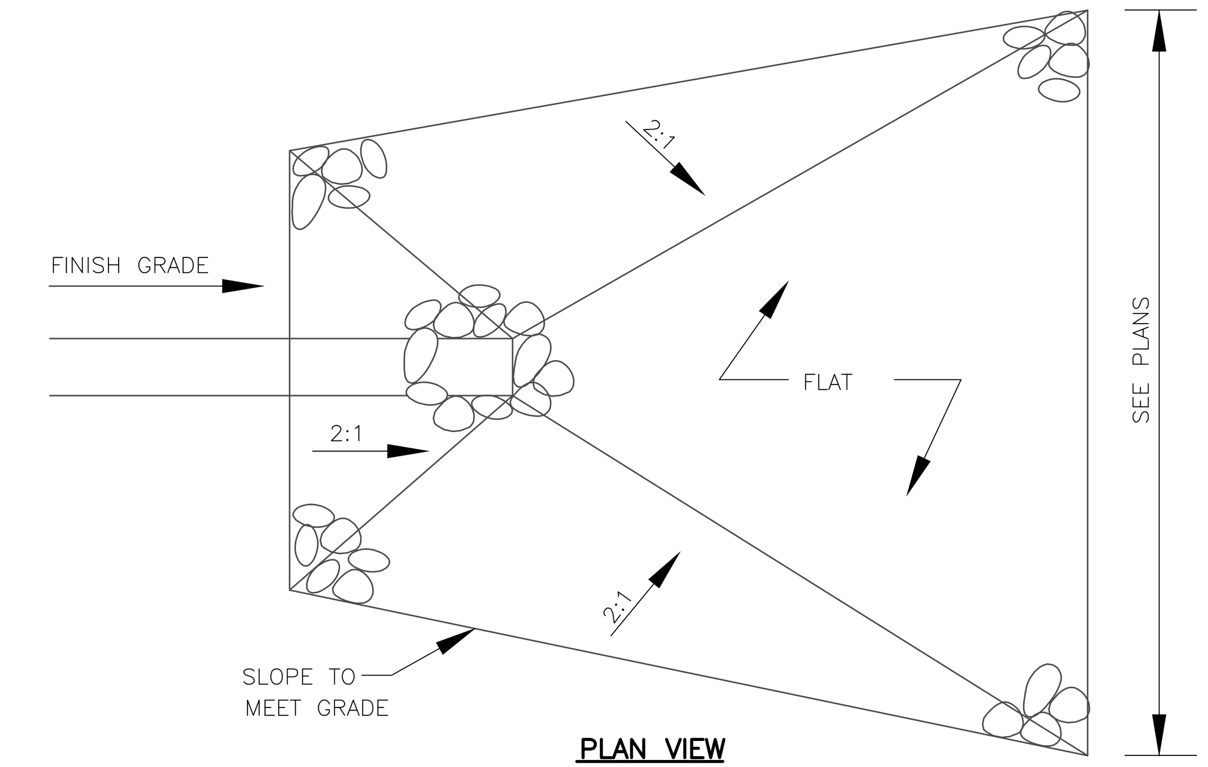
DRIVEWAY APRON W/ PEDESTRIAN ACCESS ROUTE (DEPRESSED DRIVEWAY W/ CONSTRAINED SIDEWALK

NOT TO SCALE

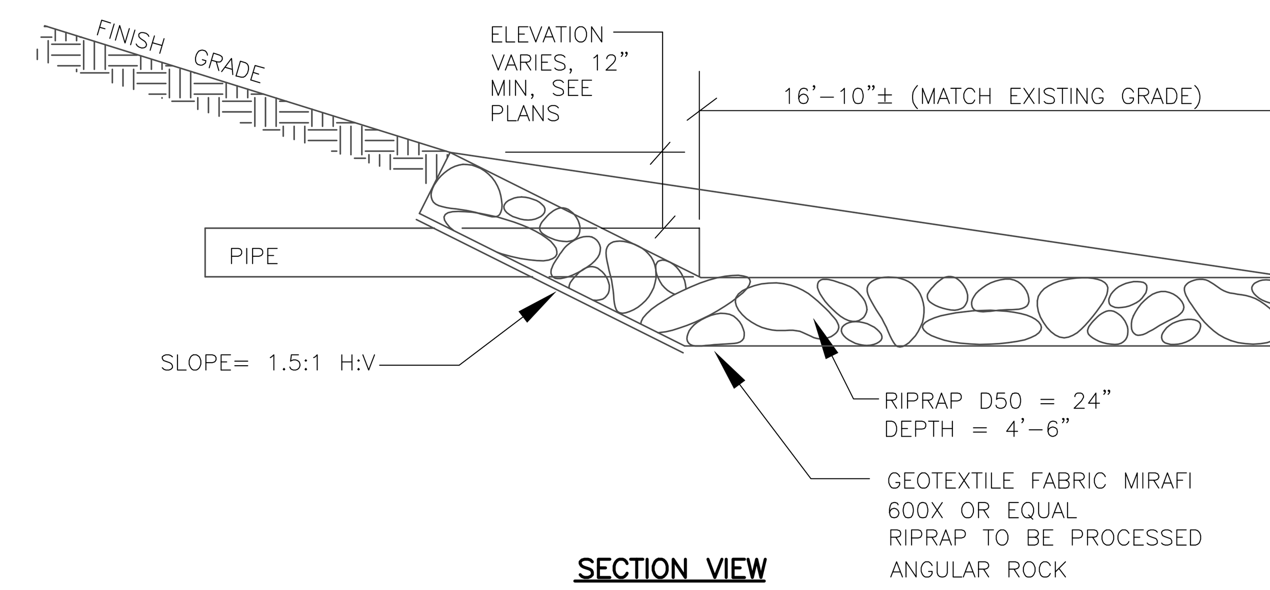


REINFORCED CONCRETE SIDEWALK

NOT TO SCALE



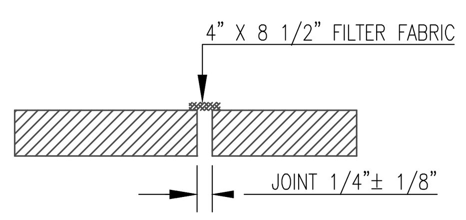
PLAN VIEW



SECTION VIEW

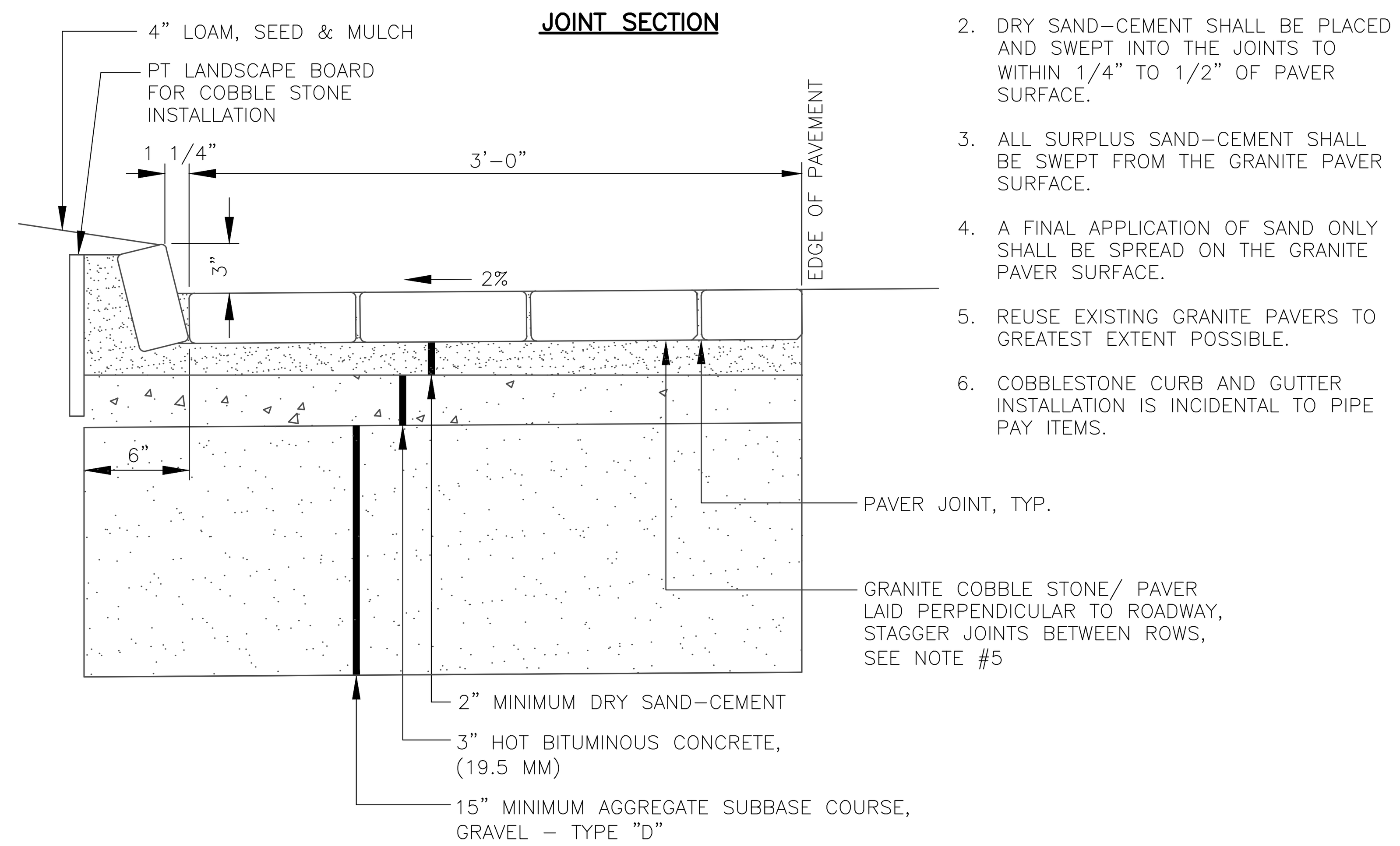
RIPRAP APRON

NOT TO SCALE



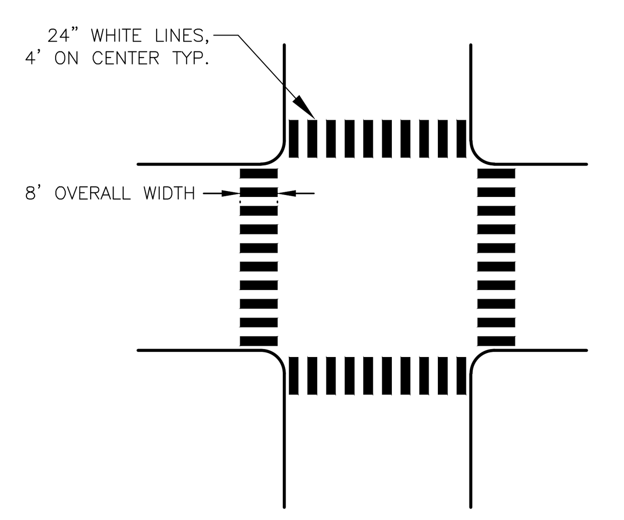
JOINT SECTION

NOTES:
1. DRY SAND–CEMENT MIX SHALL BE: SIX (6) PARTS OF WASHED MORTAR SAND TO ONE (1) PART PORTLAND CEMENT.
2. DRY SAND–CEMENT SHALL BE PLACED AND SWEPT INTO THE JOINTS TO WITHIN 1/4" TO 1/2" OF PAVER SURFACE.
3. ALL SURPLUS SAND–CEMENT SHALL BE SWEPT FROM THE GRANITE PAVER SURFACE.
4. A FINAL APPLICATION OF SAND ONLY SHALL BE SPREAD ON THE GRANITE PAVER SURFACE.
5. REUSE EXISTING GRANITE PAVERS TO GREATEST EXTENT POSSIBLE.
6. COBBLESTONE CURB AND GUTTER INSTALLATION IS INCIDENTAL TO PIPE PAY ITEMS.



COBBLESTONE GUTTER DETAIL

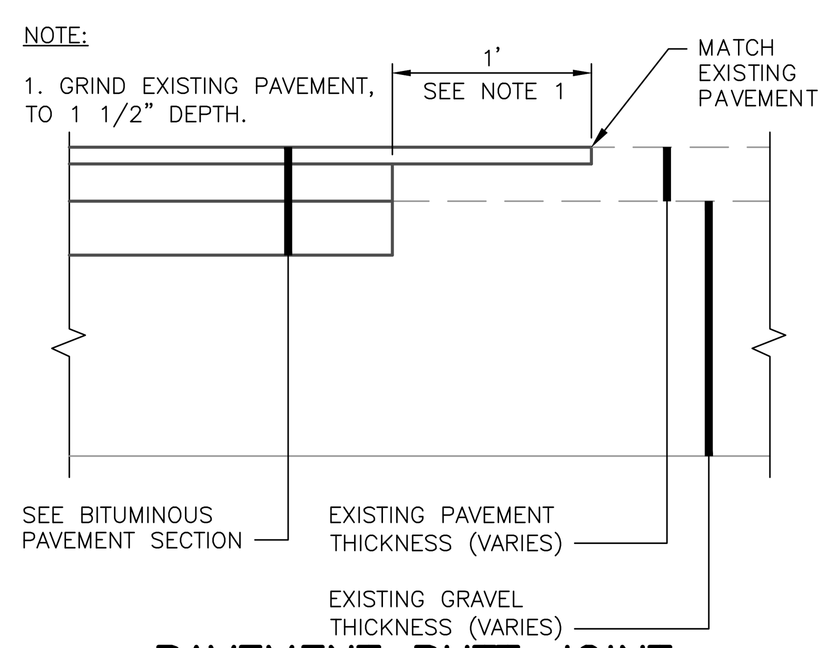
NOT TO SCALE



CROSSWALK MARKINGS

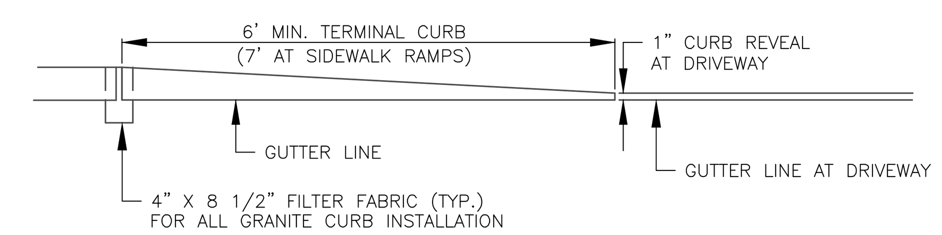
NOT TO SCALE

NOTE:
1. GRIND EXISTING PAVEMENT, TO 1 1/2" DEPTH.

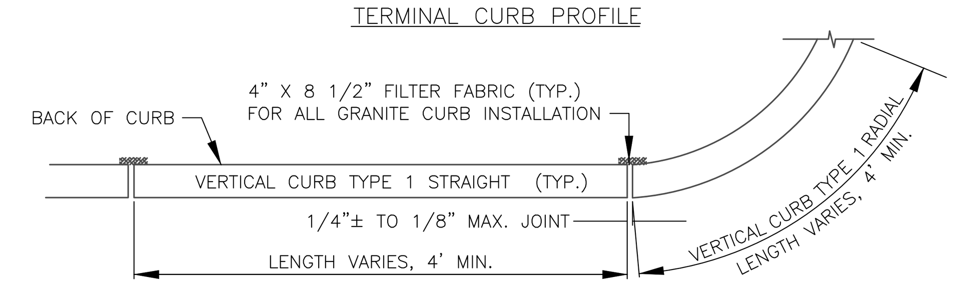


PAVEMENT BUTT JOINT

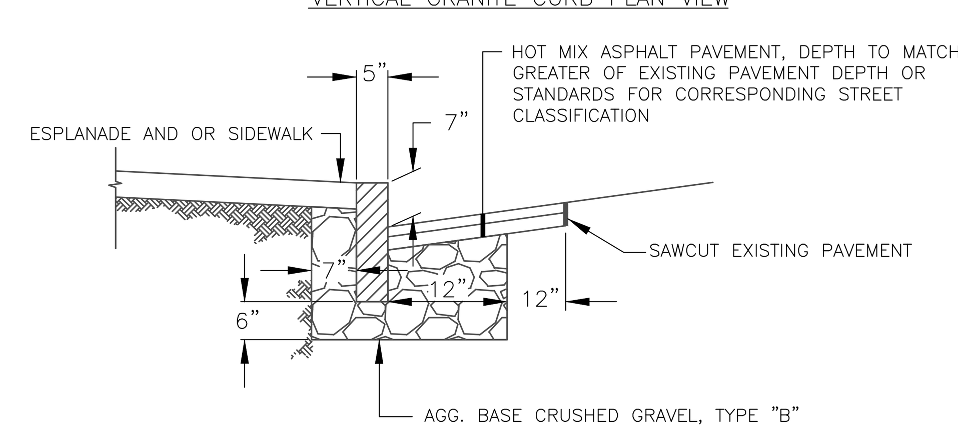
NOT TO SCALE



TERMINAL CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS

NOT TO SCALE

RIPRAP OUTLET CONSTRUCTION NOTES

PRE–CONSTRUCTION
1. MEET ON SITE WITH OWNER, SITE CONTRACTOR, AND THE DESIGN ENGINEER TO DISCUSS SCOPE OF WORK AND EXPECTATIONS. DETERMINE LIMITS OF TIDAL "SPARTINA" GRASS.
2. CONTRACTOR SHALL HAVE ALL MATERIALS APPROVED BY THE DESIGN ENGINEER PRIOR TO INSTALLATION.

CONSTRUCTION PHASE
1. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL BMP MANUAL, LATEST EDITION. SEE THE EROSION & SEDIMENT CONTROL NOTES AND PLAN FOR ADDITIONAL REQUIREMENTS. PROTECT NEARBY TREES, WHICH ARE PROPOSED TO REMAIN. TO THE EXTENT PRACTICAL, PROTECT THE ROOT ZONE OF THESE TREES.
2. THE CONTRACTOR SHALL CONSIDER THE TIDE SCHEDULE CAREFULLY; AND SHALL SCHEDULE WORK TO AVOID INTERRUPTIONS OF DAYLIGHT WORKING HOURS WITH HIGH TIDES. WORKING WITHIN TIDAL WATERS IS NOT PERMITTED.
3. THE CONTRACTOR SHALL ONLY WORK IN AREAS THAT CAN BE COMPLETED DURING EACH CONSTRUCTION DAY. NO AREAS SHALL BE EXCAVATED BY THE CONTRACTOR AND LEFT EXPOSED, AS THESE AREAS WILL BE SUBJECT TO EROSION FROM TIDAL SURGES OR STORM EVENTS.
4. WITHIN VEGETATIVE AREA PROPOSED TO BE DISTURBED, CAREFULLY REMOVE THE TOP ORGANIC LAYER (12"±) BELOW ELEVATION DETERMINED AT PRECONSTRUCTION MEETING. REMOVE USING METHOD THAT WILL KEEP THE VEGETATION SYSTEM INTACT. STOCKPILE THE ORGANIC LAYER IN A MANNER SO THAT MATERIAL CAN BE REUSED. REMOVE ONLY ENOUGH VEGETATION NEEDED TO INSTALL THE TIDE GATE VAULT AND SEWER PIPE IN ACCORDANCE WITH THE CROSS–SECTION. ORGANIC LAYER REMOVAL, STORAGE AND PLACEMENT SHALL BE INCIDENTAL TO THE RELATED PIPE PAY ITEM.
5. PIPE INSTALLATION: LOW PERMEABILITY DAMS OF NATURAL CLAY, BETONITE OR FLOWABLE FILL SHALL BE INSTALLED AS SHOWN TO MINIMIZE TIDAL FLOW THROUGH THE BACKFILL. DAMS SHALL EXTEND A MINIMUM 1 FOOT BELOW THE TRENCH BOTTOM, 1 FOOT BEYOND THE SIDEWALLS AND UP TO ELEVATION 7.4 OR TOP OF FINISHED GRADE. DAMS SHALL BE A MINIMUM OF 2 FEET THICKNESS. COSTS OF LOW PERMEABILITY DAMS SHALL BE INCIDENTAL TO THE CONTRACT.
6. INSTALL RIPRAP APRON IN ACCORDANCE WITH THE DETAILS. ONCE THE RIPRAP SLOPE IS COMPLETELY INSTALLED, THE CONTRACTOR SHALL GRADE THE DISTURBED AREAS UNIFORMLY TO MATCH EXISTING TOPOGRAPHY (U.N.O.) AND THE NEW RIPRAP EDGE.
7. PLACE EXISTING ORGANIC MATERIAL IN DISTURBED VEGETATIVE AREAS BELOW ELEVATION 10, WORKING FROM THE OUTFALL TO THE VAULT. DISTURBED VEGETATIVE AREAS ABOVE ELEVATION 10 SHALL HAVE LOAM AND SEED. ORGANIC LAYER REMOVAL, STORAGE AND PLACEMENT SHALL BE INCIDENTAL TO THE RELATED PIPE PAY ITEM.
8. INSPECT THE SITE EVERY TWO WEEKS FOR SIGNS OF EROSION AND ESTABLISHMENT OF VEGETATION. REPAIR ERODED AREAS AND REPLANT VEGETATION TO ESTABLISH 75% VEGETATION CATCH, AS REQUIRED.
9. IN AREAS REQUIRING REPLANTING, INSTALL NORTH AMERICAN GREEN C125BN EROSION CONTROL FABRIC OR APPROVED EQUAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (PAY ITEM 613.319).
10. USING RAZOR BLADE, CAREFULLY CUT HOLES 1 FOOT O.C. AND IN ROWS SPACED 1 FOOT APART. LOOSELY OFFSET HOLES BETWEEN ROWS FOR APPROXIMATELY 6–8 HOLES PER SQUARE YARD. PLANT CORD GRASS SPARTINA PATENS (SALT MEADOW GRASS) AND SPARTINA ALTERNIFLORA (SMOOTH CORDGRASS) PLUGS IN ALTERNATING FASHION. COSTS ASSOCIATED WITH CUTTING FABRIC AND PLANTING GRASS PLUGS WILL BE PAID THROUGH THE BID ITEM 615.072.

Civil 3D 2013 Drawing Name:
17113 D.dwg, TAB:D4

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DLR
SCALE: AS NOTED
DATE: 1/22/2019

STATE OF MAINE
DANIEL L RILEY
No. 996?
LICENSED PROFESSIONAL ENGINEER
01/22/2019

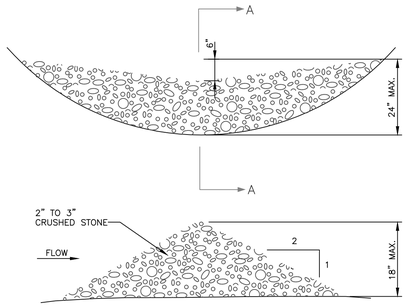
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
STANDARD CONSTRUCTION DETAILS

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

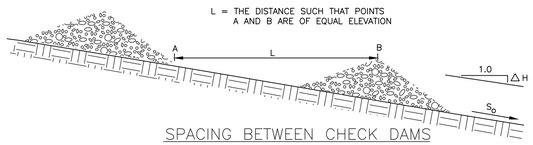
RESURGAM
CITY OF PORTLAND, MAINE

SHEET #
39 OF 45

PLAN NUMBER



SECTION A–A

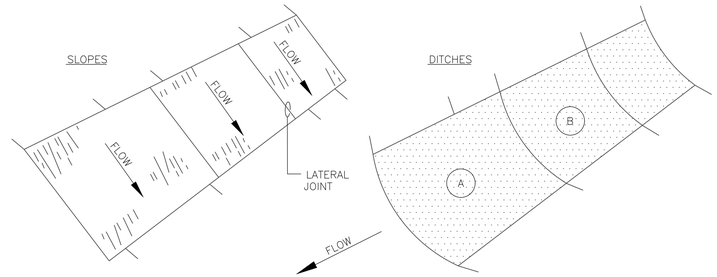


SPACING BETWEEN CHECK DAMS

S_o (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM

NOT TO SCALE

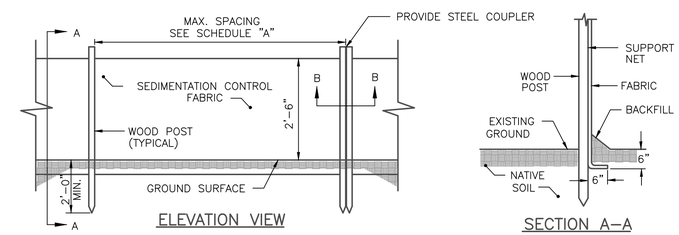


NOTES:

1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.
5. WIRE STAPLES TO BE MIN. OF # 11 WIRE 6" LONG AND 1–1/2" WIDE.
6. USE NORTH AMERICAN GREEN 125BN OR APPROVED EQUAL.
7. WHERE EROSION CONTROL BLANKET IS REQUIRED OR NEEDED, IT SHALL BE CONSIDERED INCIDENTAL TO THE RELATED PAY ITEM OR COSTS OF CONSTRUCTION.

EROSION CONTROL BLANKET DETAIL

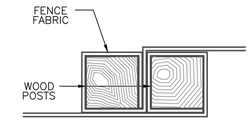
NOT TO SCALE



ELEVATION VIEW

SECTION A–A

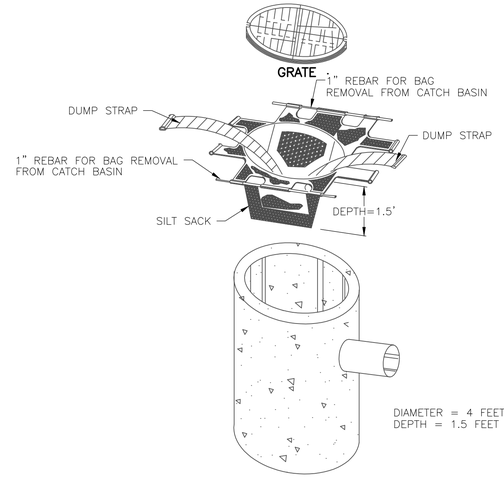
SCHEDULE "A"	
SILT FENCE REINFORCEMENT	MAX. SPACING
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

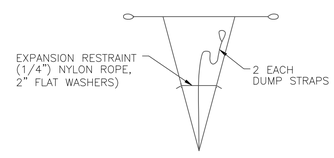


SECTION B–B

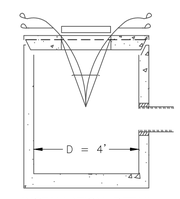
SILTATION FENCE

NOT TO SCALE





BAG DETAIL



INSTALLATION DETAIL

NOTES:

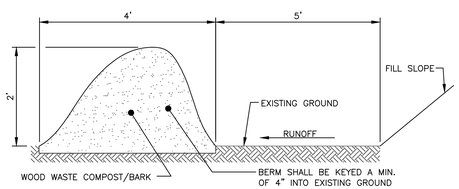
1. REMOVE THE CATCH BASIN GRATE AND PLACE THE SACK INTO THE OPENING. HOLD OUT APPROXIMATELY SIX (6) INCHES OF THE SACK BEYOND THE BASIN FRAME TO ALLOW ACCESS TO THE "SILT SACK" LIFTING STRAPS. REPLACING THE GRATE BACK INSIDE OF ITS FRAME WILL HOLD THE SACK IN PLACE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND MAINTAINING THIS SEDIMENT CONTROL DEVICE. THE SACK IS CONSIDERED FULL AND READY TO EMPTY WHEN THE THE "RESTRAINT CORD" IS NO LONGER VISIBLE.
3. THE "SILT SACK" IS REMOVED BY PLACING TWO (2) PIECES IF 1 INCH DIAMETER REBAR THROUGH THE LIFTING LOOPS LOCATED ON EACH SIDE OF THE SACK AND LIFTING WITH AN APPROPRIATE PIECE OF CONSTRUCTION EQUIPMENT. THE LIFTING STRAPS ARE CONNECTED TO THE BOTTOM OF THE SACK AND THE LIFTING ACTION WILL CAUSE THE SACK TO TURN INSIDE OUT, AND EMPTYING THE CONTENTS. THE SACK SHOULD THEN BE CLEANED, RINSED AND RETURNED TO ITS ORIGINAL SHAPE AND PLACED BACK IN THE BASIN.
4. THE "SILT SACK" IS REUSABLE, THEREFORE, ONCE THE CONSTRUCTION CYCLE IS COMPLETE, REMOVE THE SACK FROM THE BASIN, CLEAN AND STORE OUT OF DIRECT SUNLIGHT UNTIL ITS NEXT USE.
5. THE "SILT SACK" SEDIMENT CONTROL DEVICE IS MANUFACTURED BY: ACF ENVIRONMENTAL 1801–A WILLIS ROAD RICHMOND, VA. 23237 PHONE: 800–644–9223 FAX: 804–271–3074

SEDIMENT CONTROL DEVICE "SILT SACK" FOR CATCH BASINS

NOT TO SCALE

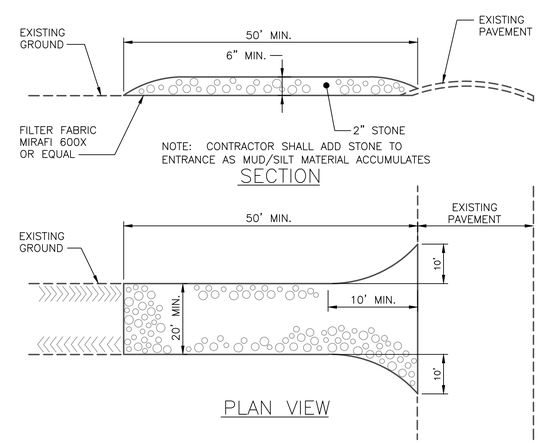
NOTES:

1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:
   A. MOISTURE CONTENT – 30–60%.
   B. pH – 5.0 – 8.0.
   C. SCREEN SIZE – 100% LESS THAN 3", MAX. 70% LESS THAN 1".
   D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION.
   E. NO STONES LARGER THAN 2" IN DIAMETER.
   F. SILTS, CLAYS OR SUGAR SANDS ARE NOT ACCEPTABLE IN THE MIX.
2. THE COMPOST BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
3. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.
5. WOODWASTE COMPOST BARK FILTER SHALL NOT BE USED IN WETLAND AREAS.



WOOD WASTE COMPOST/BARK FILTER BERM DETAIL

NOT TO SCALE



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

Civil 3D 2013 Drawing Name:
17113 D.dwg, TAB:D5

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5951 PROFESSIONAL ENGINEER 01/22/2019

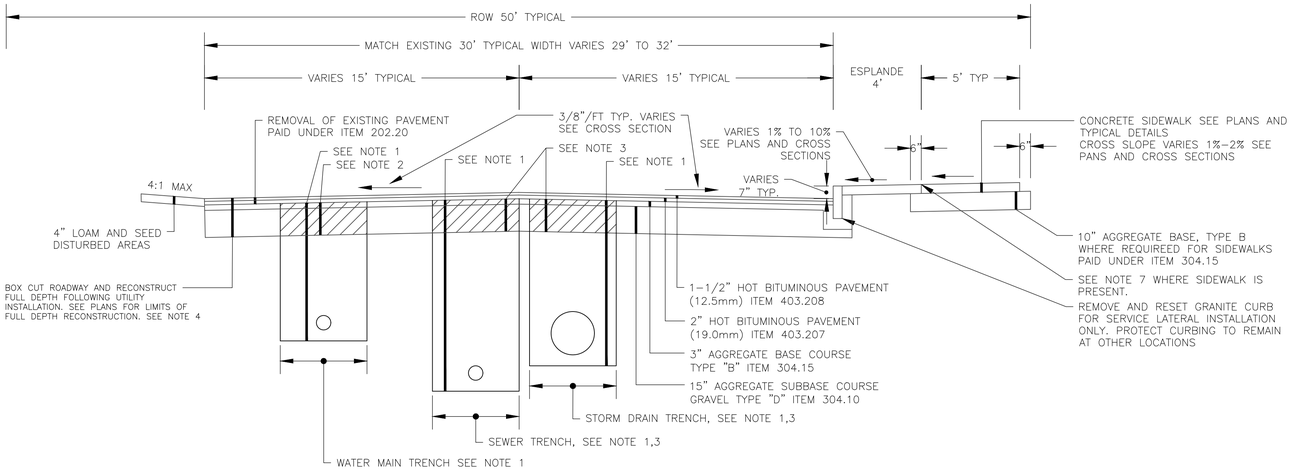
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
STANDARD CONSTRUCTION DETAILS

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM CITY OF PORTLAND, MAINE

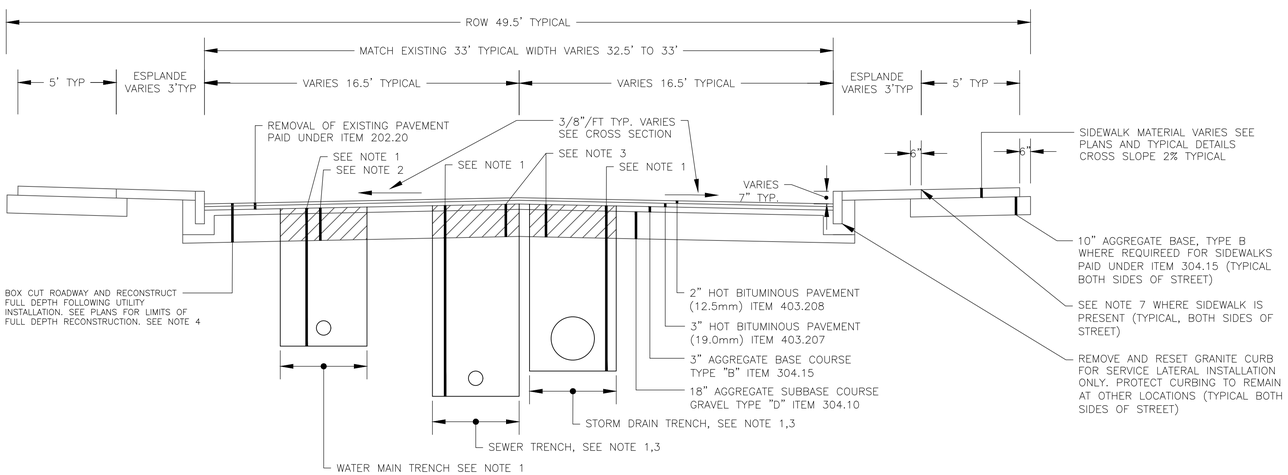
SHEET # 40 OF 45

PLAN NUMBER



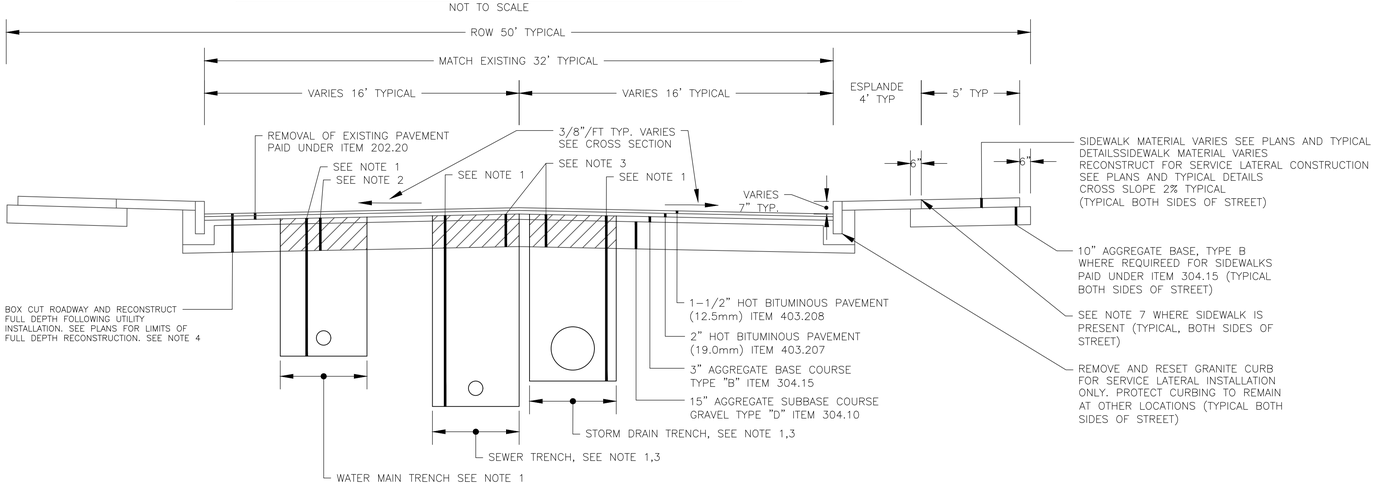
TYPICAL ROADWAY SECTION – MACKWORTH STREET

NOT TO SCALE



TYPICAL ROADWAY SECTION – OCEAN AVENUE

NOT TO SCALE



TYPICAL ROADWAY SECTION –WALTON STREET

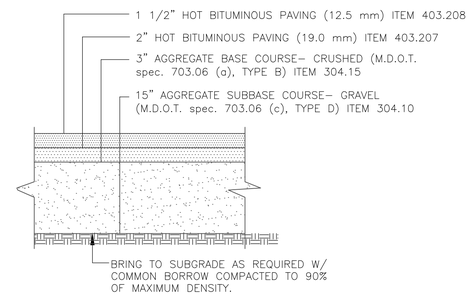
NOT TO SCALE

NOTES:
1. TRENCH EXCAVATION AND BACKFILL FOR STORM DRAIN, SEWER AND WATERMAIN IS INCIDENTAL TO THE PIPE AND SEPARATE PAYMENT WILL NOT BE MADE.
2. BASE AND SUBBASE GRAVEL FOR WATERMAIN SHALL BE PAID AS A PLAN QUANTITY UNDER THE WATER DISTRICT PAY ITEMS. REFER TO TYPICAL TRENCH DETAILS FOR GRAVEL DEPTH REQUIRED.
3. BASE GRAVEL WITHIN STORM DRAIN AND SANITARY SEWER TRENCH PAY LIMITS SHALL BE PAID AS ITEM 304.15. SUBBASE GRAVEL WITHIN STORM DRAIN AND SANITARY SEWER TRENCH PAY LIMITS SHALL BE PAID AS ITEM 304.10. BASE GRAVEL FOR STREET RECONSTRUCTION, OUTSIDE OF TRENCH PAY LIMITS, SHALL BE PAID AS ITEM 304.151 (AGGREGATE BASE COURSE TYPE B– NON SRF). SUB BASE GRAVEL FOR STREET RECONSTRUCTION, OUTSIDE OF TRENCH LIMITS, SHALL BE PAID AS ITEM 304.101 (AGGREGATE SUBBASE COURSE TYPE D– NON SRF).
4. BOX CUTTING OF STREET, WHERE INDICATED ON THE PLANS OR ORDERED BY THE RESIDENT, SHALL BE PAID AS COMMON EXCAVATION. THE PAY LIMITS FOR BOX CUT EXCAVATION SHALL BE MEASURED FROM THE BOTTOM OF ASPHALT TO THE BOTTOM OF BASE GRAVEL. REMOVAL OF PAVEMENT SHALL BE PAID UNDER ITEMS 202.20 AND 202.201 (NON–SRF). SAWCUTTING PAVEMENT IS INCIDENTAL TO PAVEMENT REMOVALS.
5. BASE GRAVEL FOR SHIMMING ROADS TO BE REPAVED FULL WIDTH, WITHOUT BOX CUTTING SHALL BE PAID AS ITEM 304.151 (NON SRF).
6. SAWCUTTING, REMOVAL OF CONCRETE AND EXCAVATION TO SUBGRADE OF SIDEWALK IS INCIDENTAL TO THE CONSTRUCT SIDEWALK ITEMS.
7. REMOVING AND RECONSTRUCTING SIDEWALKS WHERE PRESENT FOR SERVICE LATERAL CONSTRUCTION IS PAID AT TRENCH WIDTH UNDER THE APPLICABLE SIDEWALK ITEM. REINFORCED CONCRETE SIDEWALKS SHALL BE SAWCUT AT NEAREST EXISTING PANEL JOINT PRIOR TO REMOVAL AND PAID AS THE ACTUAL QUANTITY CONSTRUCTED

RECOMMENDED MINIMUM PLACEMENT TEMPERATURES FOR PAVEMENT

BASE[1] TEMPERATURE °F	MAT THICKNESS, IN INCHES					
	1/2	3/4	1	1 1/2	2	3
+40 – 50	–	–	310	300	285	275
+50 – 60	–	310	300	295	280	270
+60 – 70	310	300	290	285	275	265
+70 – 80	300	290	285	280	270	265
+80 – 90	290	280	275	270	265	260
+90	280	275	270	265	260	255
ROLLING TIME MIN.	4	6	8	12	15	15

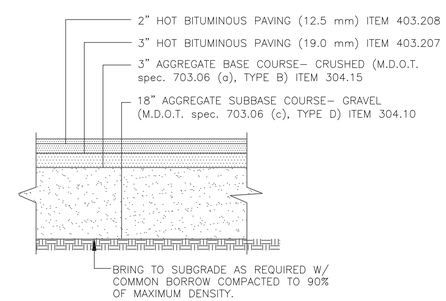
[1] BASE ON WHICH MIX IS PLACED.
[2] AND GREATER



NOTES:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

TYPICAL ROADWAY AREA SECTION (LOCAL STREET)

NOT TO SCALE



NOTES:
1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 92% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.

BAXTER BOULEVARD, OCEAN AVENUE AND FOREST AVENUE SECTION

NOT TO SCALE

Civil 3D 2013 Drawing Name:
17113 D.dwg, TAB:D6

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5958 PROFESSIONAL ENGINEER 01/22/2019

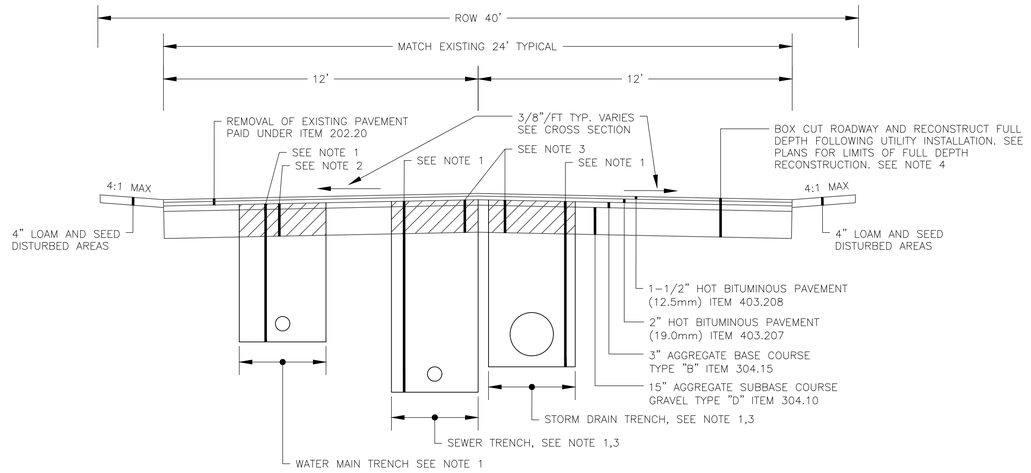
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
TYPICAL STREET SECTIONS

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM NE CIVITAS PORTLANDIA

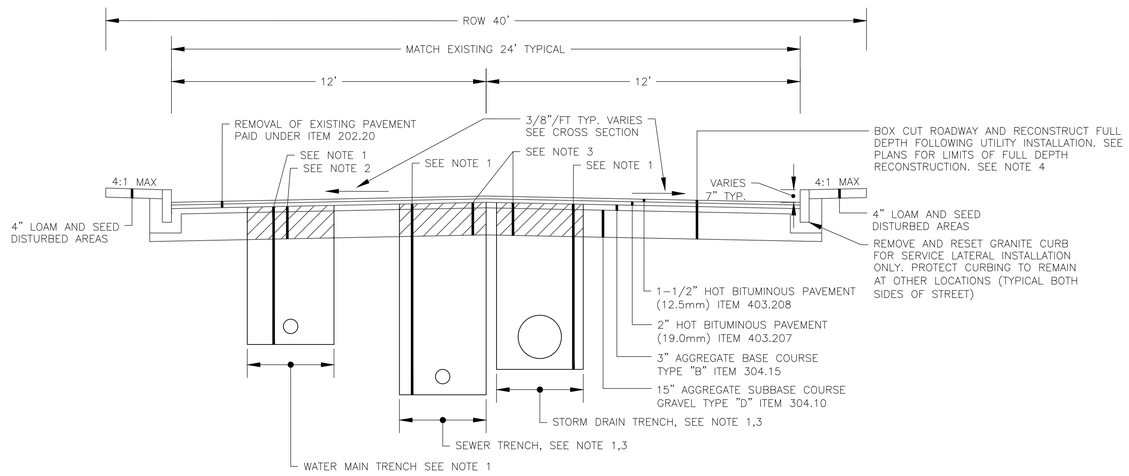
SHEET # 41 OF 45

PLAN NUMBER



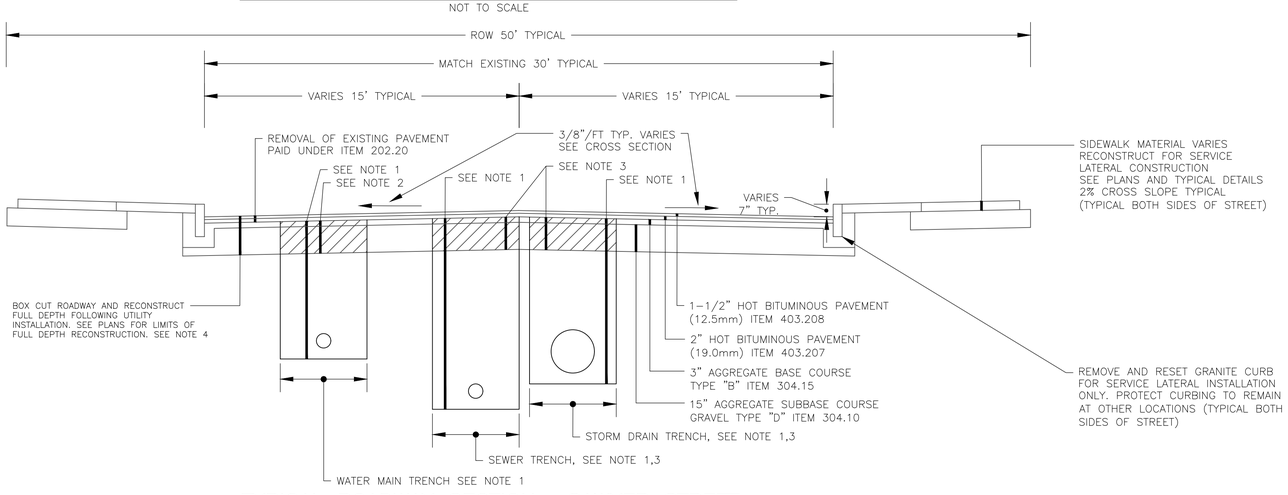
TYPICAL ROADWAY SECTION – MAYLAND STREET

NOT TO SCALE



TYPICAL ROADWAY SECTION – IRVING STREET

NOT TO SCALE

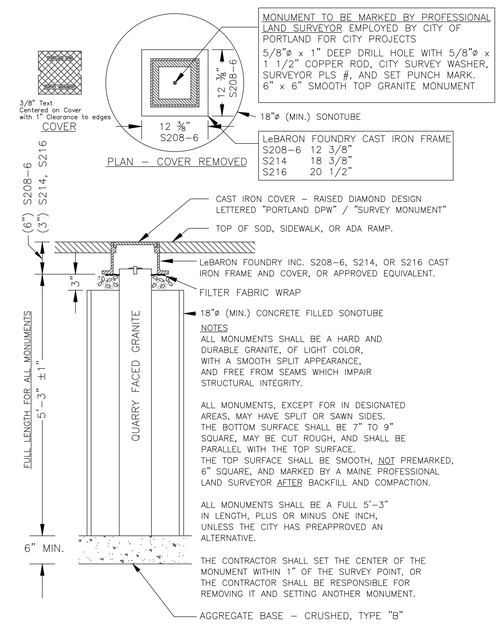


TYPICAL ROADWAY SECTION –SAWYER STREET

NOT TO SCALE

NOTES:

1. TRENCH EXCAVATION AND BACKFILL FOR STORM DRAIN, SEWER AND WATERMAIN IS INCIDENTAL TO THE PIPE AND SEPARATE PAYMENT WILL NOT BE MADE.
2. BASE AND SUBBASE GRAVEL FOR WATERMAIN SHALL BE PAID AS A PLAN QUANTITY UNDER THE WATER DISTRICT PAY ITEMS. REFER TO TYPICAL TRENCH DETAILS FOR GRAVEL DEPTH REQUIRED.
3. BASE GRAVEL WITHIN STORM DRAIN AND SANITARY SEWER TRENCH PAY LIMITS SHALL BE PAID AS ITEM 304.15. SUBBASE GRAVEL WITHIN STORM DRAIN AND SANITARY SEWER TRENCH PAY LIMITS SHALL BE PAID AS ITEM 304.10. BASE GRAVEL FOR STREET RECONSTRUCTION, OUTSIDE OF TRENCH PAY LIMITS, SHALL BE PAID AS ITEM 304.151 (AGGREGATE BASE COURSE TYPE B– NON SRF). SUB BASE GRAVEL FOR STREET RECONSTRUCTION, OUTSIDE OF TRENCH LIMITS, SHALL BE PAID AS ITEM 304.101 (AGGREGATE SUBBASE COURSE TYPE D– NON SRF).
4. BOX CUTTING OF STREET, WHERE INDICATED ON THE PLANS OR ORDERED BY THE RESIDENT, SHALL BE PAID AS COMMON EXCAVATION. THE PAY LIMITS FOR BOX CUT EXCAVATION SHALL BE MEASURED FROM THE BOTTOM OF ASPHALT TO THE BOTTOM OF BASE GRAVEL. REMOVAL OF PAVEMENT SHALL BE PAID UNDER ITEMS 202.20 AND 202.201 (NON–SRF). SAWCUTTING PAVEMENT IS INCIDENTAL TO PAVEMENT REMOVALS.
5. BASE GRAVEL FOR SHIMMING ROADS TO BE REPAVED FULL WIDTH, WITHOUT BOX CUTTING SHALL BE PAID AS ITEM 304.151 (NON SRF).
6. SAWCUTTING, REMOVAL OF CONCRETE AND EXCAVATION TO SUBGRADE OF SIDEWALK IS INCIDENTAL TO THE CONSTRUCT SIDEWALK ITEMS.
7. REMOVING AND RECONSTRUCTING SIDEWALKS WHERE PRESENT FOR SERVICE LATERAL CONSTRUCTION IS PAID AT TRENCH WIDTH UNDER THE APPLICABLE SIDEWALK ITEM. REINFORCED CONCRETE SIDEWALKS SHALL BE SAWCUT AT NEAREST EXISTING PANEL JOINT PRIOR TO REMOVAL AND PAID AS THE ACTUAL QUANTITY CONSTRUCTED



NOTES
ALL MONUMENTS SHALL BE A HARD AND DURABLE GRANITE, OF LIGHT COLOR, WITH A SMOOTH SPLIT APPEARANCE, AND FREE FROM SEAMS WHICH IMPAIR STRUCTURAL INTEGRITY.

ALL MONUMENTS, EXCEPT FOR IN DESIGNATED AREAS, MAY HAVE SPLIT OR SAWN SIDES. THE BOTTOM SURFACE SHALL BE 7" TO 9" SQUARE, MAY BE CUT ROUGH, AND SHALL BE PARALLEL WITH THE TOP SURFACE. THE TOP SURFACE SHALL BE SMOOTH, NOT PREMARKED, 6" SQUARE, AND MARKED BY A MAINE PROFESSIONAL LAND SURVEYOR AFTER BACKFILL AND COMPACTION.

ALL MONUMENTS SHALL BE A FULL 5'–3" IN LENGTH, PLUS OR MINUS ONE INCH, UNLESS THE CITY HAS PREAPPROVED AN ALTERNATIVE.

THE CONTRACTOR SHALL SET THE CENTER OF THE MONUMENT WITHIN 1" OF THE SURVEY POINT, OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING IT AND SETTING ANOTHER MONUMENT.

GRANITE STREET MONUMENT

NOT TO SCALE

Civil 3D 2013 Drawing Name:
17113 D.dwg, TAB:D7

REFERENCES:

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE DANIEL J. RILEY No. 5951 PROFESSIONAL ENGINEER
01/22/2019

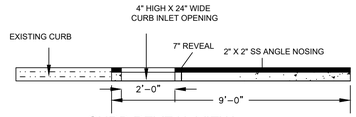
MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
TYPICAL STREET SECTIONS

CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

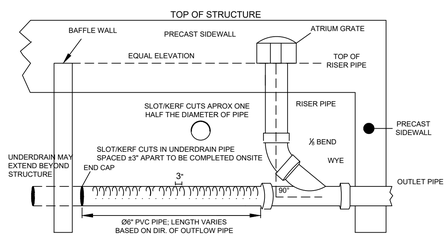
CITY OF PORTLAND, MAINE – RESURGAM

SHEET #
42 OF 45

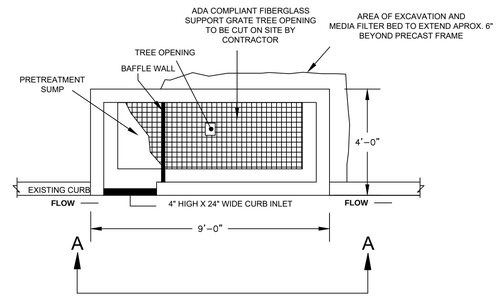
PLAN NUMBER



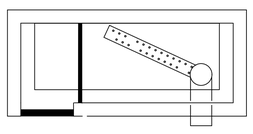
CURB REVEAL VIEW
NTS



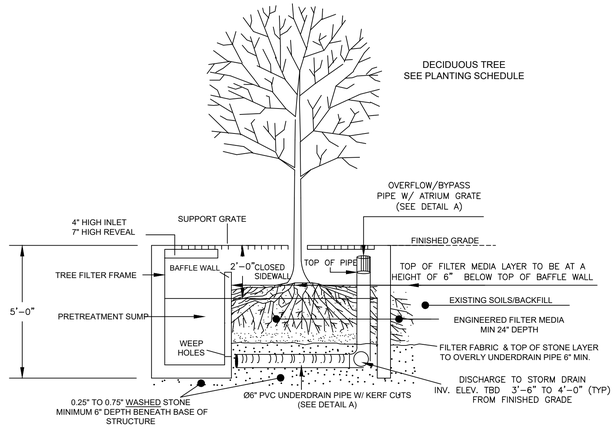
- IF PERF PIPE IS UNAVAILABLE, KERF CUTS WILL BE REQUIRED
- REDUCER MAY BE REQUIRED BETWEEN WYE AND UNDERDRAIN PIPE OR OUTFLOW PIPE
- ADDITIONAL BENDS MAY BE REQUIRED DEPENDING UPON POSITION OF THE UNDERDRAIN PIPE AND OUTLET DIRECTION



PLAN VIEW
NOT TO SCALE



DETAIL A
PROPOSED INTERIOR PIPE LAYOUT
NTS



SECTION A-A
NOT TO SCALE

MATERIAL SCHEDULE

CONTRACTOR TO PROVIDE THE FOLLOWING UNLESS PREVIOUSLY DISCUSSED:

- 0.25"-0.75" WASHED ANGULAR STONE
- INTERNAL PIPE AND FITTINGS

FILTER VENDOR TO PROVIDE THE FOLLOWING:

- PRECAST STRUCTURE
- ENGINEERED MEDIA
- ADA COMPLIANT FIBERGLASS GRATE
- SOIL SEPARATOR FABRIC
- HARDWARE

ESPLANDE TREE FILTER
NOT TO SCALE

NOTES:

THE BASIS OF DESIGN PRODUCT FOR ESPLANADE TREE FILTERS MODEL ST-4x9x5 BY STORMTREE 24 CORLISS STREET SUITE 9092 PROVIDENCE, RI 02940 (401) 629-8999 WWW.STORM-TREE.COM. EQUALS ARE PERMITTED. DETERMINATION OF EQUIVALENTS TO THE BASIS OF DESIGN PRODUCT IS AT THE SOLE DISCRETION OF THE CITY OF PORTLAND.

1) TREE FILTER VENDOR SHALL PROVIDE AND DELIVER TO THE SITE TREE FILTER SYSTEM COMPONENTS TO INCLUDE PRECAST TREE FRAME, FIBERGLASS SUPPORT GRATE, ENGINEERED MEDIA, SOIL SEPARATOR FABRIC, AND ALL RELATED HARDWARE NECESSARY FOR INSTALLATION.

2) CONTRACTOR TO PROVIDE WASHED STONE, AND ALL PIPING AND FITTINGS (UNDERDRAIN TO BE 6" DIAMETER) (OVERFLOW/DISCHARGE TO BE PER THE PLANS) NON-GASKETED FITTINGS ARE ACCEPTABLE.

3) CONTRACTOR TO PROVIDE ALL PIPING AND FITTINGS INTERIOR/EXTERIOR OF TREE FILTER SYSTEM TO BE CONNECTED TO THE RECIEVING CATCH BASIN OR MANHOLE OR AS INDICATED ON THE PLANS.

4) CONTRACTOR TO PROVIDE 0.25"-0.75" WASHED STONE. QUANTITY OF STORM IS TO BE DETERMINED BY THE TREE FILTER VENDOR.

5) DEPTH OF FILTER MEDIA BED SHALL BE A MINIMUM OF 24" DEEP AND NO MORE THAN A MAXIMUM OF 36" DEEP TO BE DETERMINED BY TREE FILTER VENDOR. AREAL DIMENSIONS OF FILTER MEDIA BED TO BE AS SHOWN ON THE PLANS AND DETAILS.

6) THE INTEGRATION OF ADJOINING FEATURES AND LAND SURFACES CONTIGUOUS TO THE TREE FILTER SYSTEMS (E.G., LANDSCAPING, SIDEWALKS, CURBING, PAVEMENT, PAVERS, ETC.) ARE TO BE COORDINATED BY THE CONTRACTOR, WITH THE TREE FILTER VENDOR AND OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

7) TREE FILTER UNITS SHALL BE"OFFLINE" OR PROTECTED FROM CONSTRUCTION DEBRIS, EROSION, EXCESSIVE SEDIMENT ENTRY, ETC. UNTIL SUCH TIME THAT THE SITE IS SECURED AND PAVED. EROSION CONTROL MEASURES MUST BE PUT IN PLACE (E.G., SEDIMENTATION FENCING, HAY BALES. CONTRACTOR SHALL PLACE A BARRIER SUCH AS METAL PLATES OR WOOD PLANKING/BOARDS ACROSS BOTH THE THROAT OPENING, AND THE TOP HORIZONTAL SURFACE OF THE UNIT.

INSTALLATION NOTES:

THE FOLLOWING NOTES ARE SUBJECT TO CHANGE BASED ON VARIATIONS IN SITE CONDITIONS OR SPECIFIC INSTALLATION REQUIREMENTS.

1) EXCAVATION TO BE APROX. 10' X 5' X 6' (LWH). I

2) PROVIDE BASE OF BETWEEN 6" TO 12" OF WASHED STONE (DEPENDING UPON FINAL GRADE, INVERTS, ETC).

3) PRECAST UNIT TO BE SET, POSITIONED, AND ORIENTATED AS REQUIRED.

4) INTERIOR PIPING AND FITTINGS TO BE CONSTRUCTED AND POSITIONED PER DETAIL.

5) INLET AND OUTLET CONNECTIONS SHALL BE ALIGNED AND GROUTED/SEALED TO MEET THE APPROVED DRAWINGS WITH MODIFICATIONS NECESSARY TO MEET SITE CONDITIONS AND LOCAL REGULATIONS.

6) A MINIMUM 6" LAYER OF WASHED STONE SHALL BE PLACED AND OVERLAY THE UNDERDRAIN PIPE.

7) SOIL SEPARATOR FABRIC TO BE CUT AND PLACED OVER THE TOP OF THE STONE LAYER (BOTH INTERIOR/EXTERIOR OF PRECAST UNIT). FABRIC TO COVER THE ENTIRE STONE SURFACE, OVERLAPPING AS NECESSARY.

8) ENGINEERED MEDIA TO BE BE BACKFILLED WITHIN THE INTERIOR OF THE UNIT AND EXTERIOR OF THE UNIT TO THE EXCAVATED SIDEWALLS. MEDIA TO BE INSTALLED IN APROX. 6" LIFTS IN ALL AREAS TO AN ELEVATION OF APROX. 16" BELOW THE TOP OF THE UNIT OR AS DIRECTED BY STORMTREE.

9) THE MEDIA LAYER WITHIN THE INTERIOR OF THE UNIT SHALL BE LIGHTLY COMPRESSED OR "WALKED". THE FINAL MEDIA DEPTH WITHIN THE INTERIOR OF THE SYSTEM SHOULD BE NO LESS THAN 3" BELOW THE UNDERSIDE OF THE INFLUENT PIPE.

10) THE MEDIA EXTERIOR OF THE UNIT SHALL BE COMPRESSED, PREFERABLY VIA VIBRATORY EQUIPMENT.

11) BACKFILL TO FINISHED GRADE.

12) FIBERGLASS GRATING TO BE CUT AT TIME OF SYSTEM INSTALLATION OR FOLLOWING TREE INSTALLATION. STORMTREE TO PROVIDE GRATE CUTTING INSTRUCTIONS.

13) REFER TO LANDSCAPE NOTES FOR TREE INSTALLATION, MULCH PLACEMENT AND MULCH HOLD DOWN MATTING PLACEMENT (IF REQUIRED).

ESPLANADE TREE FILTER SCHEDULE:

STRUCTURE NAME	REFERENCE ALIGNMENT	STATION	OFFSET	CURB INLET ELEVATION	TOP OF STRUCTURE ELEVATION	OUTLET PIPE SIZE	OUTLET PIPE INVERT
TF-1	MACKWORTH STREET	4+58.22'	-18.031'	33.70'	34.28'	6"	29.82'
TF-2	MACKWORTH STREET	4+57.86'	17.000'	33.60'	34.18'	6"	29.86'
TF-3	MACKWORTH STREET	7+36.04'	-17.000'	38.60'	39.18'	10"	34.79'
TF-4	MACKWORTH STREET	7+36.00'	17.000'	38.50'	39.08'	10"	34.69'
TF-5	MACKWORTH STREET	10+86.88'	-17.000'	42.60'	43.18'	10"	38.69'
TF-6	MACKWORTH STREET	10+86.88'	17.000'	42.60'	43.18'	10"	38.79'
TF-7	MACKWORTH STREET	13+94.40'	-17.000'	45.90'	46.48'	10"	42.08'
TF-8	MACKWORTH STREET	13+94.40'	17.000'	45.70'	46.28'	10"	42.04'
TF-9	WALTON STREET	2+18.36'	-17.842'	54.40'	54.98'	10"	50.49'
TF-10	WALTON STREET	4+28.81'	-17.740'	55.90'	56.48'	6"	51.90'
TF-11	WALTON STREET	4+28.81'	18.072'	55.80'	56.38'	6"	52.05'
TF-12	WALTON STREET	7+06.23'	-17.877'	57.30'	57.88'	6"	53.54'
TF-13	WALTON STREET	10+29.46'	-18.187'	61.25'	61.83'	6"	57.25'
TF-14	WALTON STREET	13+76.36'	-18.150'	69.30'	69.88'	6"	65.32'
TF-15	WALTON STREET	13+76.36'	17.913'	69.20'	69.78'	6"	65.25'

Civil 3D 2013 Drawing Name:
17113 D.dwg, TAB:D8

CITY PROPERTY PLAN BOOK SHEETS:
I & J SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW: STI
DRAWN BY: BVD
CHECKED BY: DJR
SCALE: AS NOTED
DATE: 1/22/2019

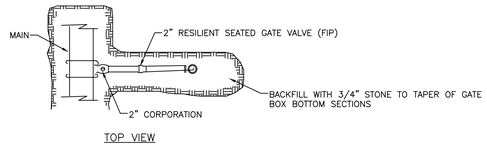
STATE OF MAINE
DANIEL J. RILEY
No. 5951
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
STANDARD CONSTRUCTION DETAILS

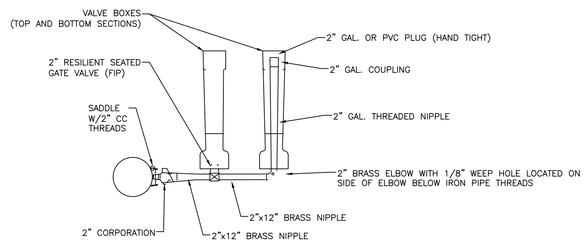
CITY OF PORTLAND, MAINE
PUBLIC WORKS DEPARTMENT
WATER RESOURCES DIVISION

RESURGAM
CITY OF PORTLAND, MAINE

SHEET #
43 OF 45
PLAN NUMBER

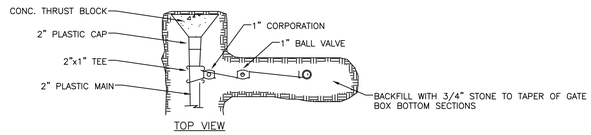


TOP VIEW

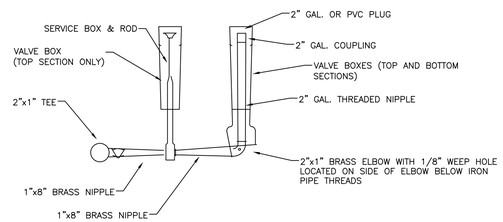


SIDE VIEW

SIDE-ARM BLOW-OFF
4" & LARGER MAINS

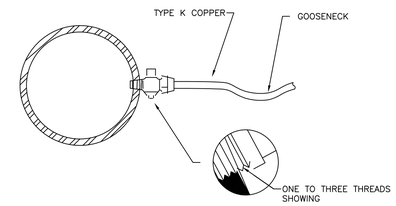


TOP VIEW

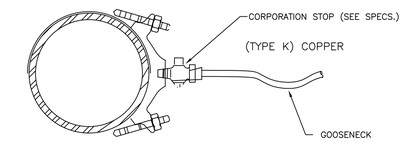


SIDE VIEW

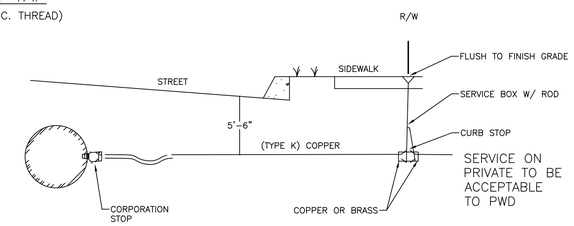
SIDE-ARM BLOW-OFF
2" MAIN



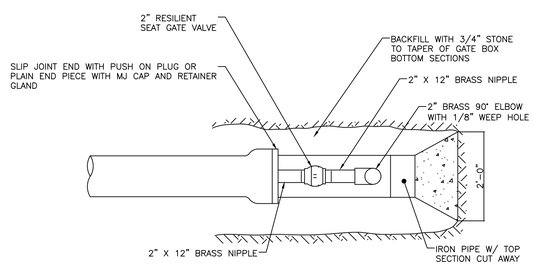
SERVICE TAP
(3/4" AND 1" C.C. THREAD)



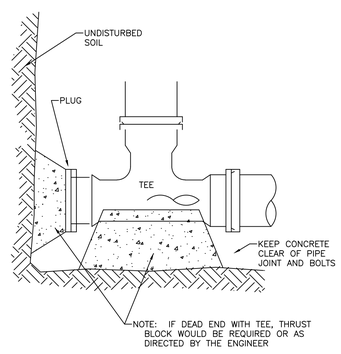
SERVICE SADDLE
(1-1/2" AND 2" C.C. THREAD)

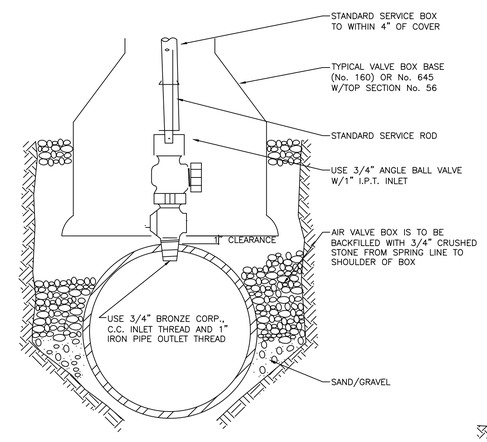


TYPICAL SERVICE CONNECTION

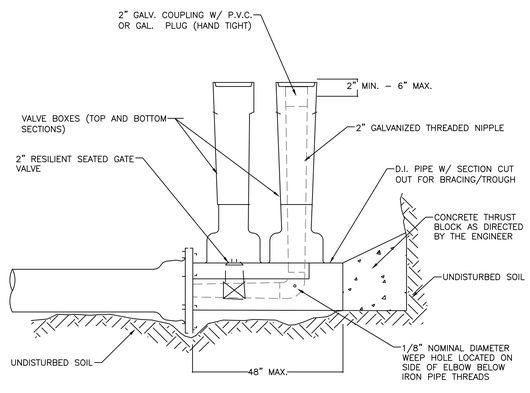


TOP VIEW

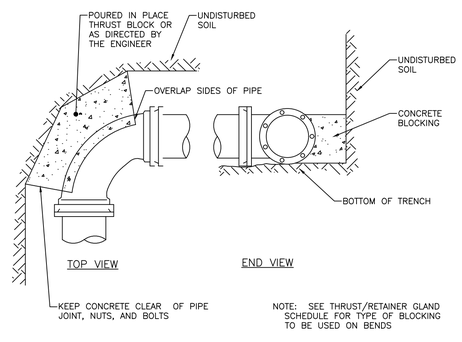




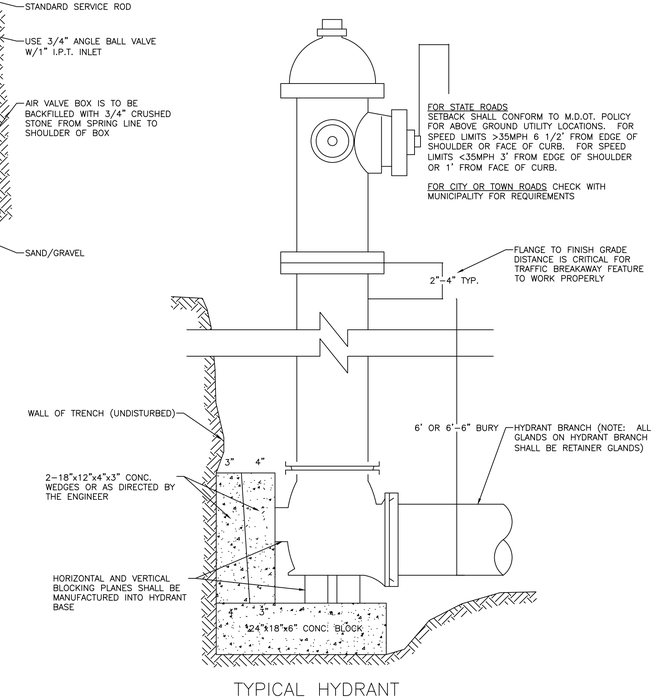
TYPICAL AIR VALVE (1")



STANDARD 2" BLOW OFF



STANDARD BEND BLOCKING



TYPICAL HYDRANT
INSTALLATION DETAIL

Civil 3D 2013 Drawing Name:
17113 D.dwg, TAB:D9

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DJR
SCALE:	AS NOTED
DATE:	1/22/2019

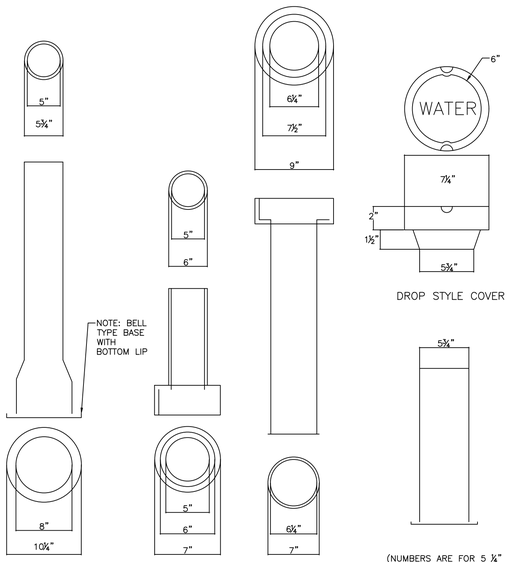
STATE OF MAINE ★ DANIEL J. RILEY No. 5969 ★ PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
PORTLAND WATER DISTRICT
DETAILS

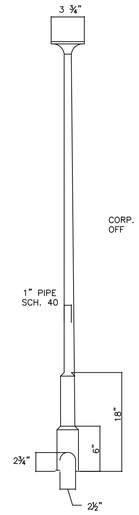
PORTLAND WATER DISTRICT

SHEET #
44 OF 45

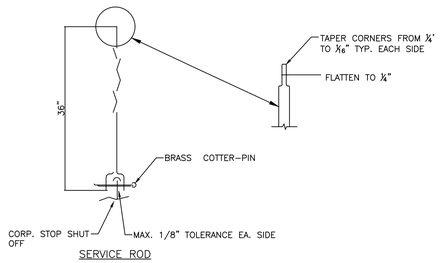
PLAN NUMBER



VALVE BOX & COVER

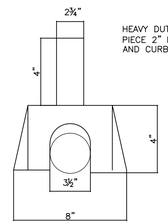


SERVICE BOX



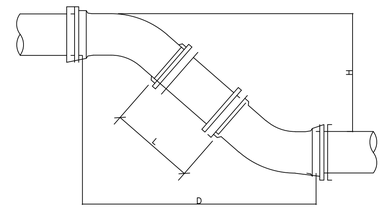
SERVICE ROD

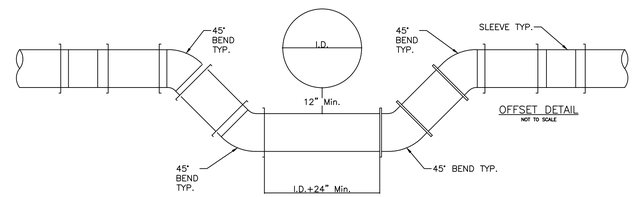
COVER



FOOT PIECE

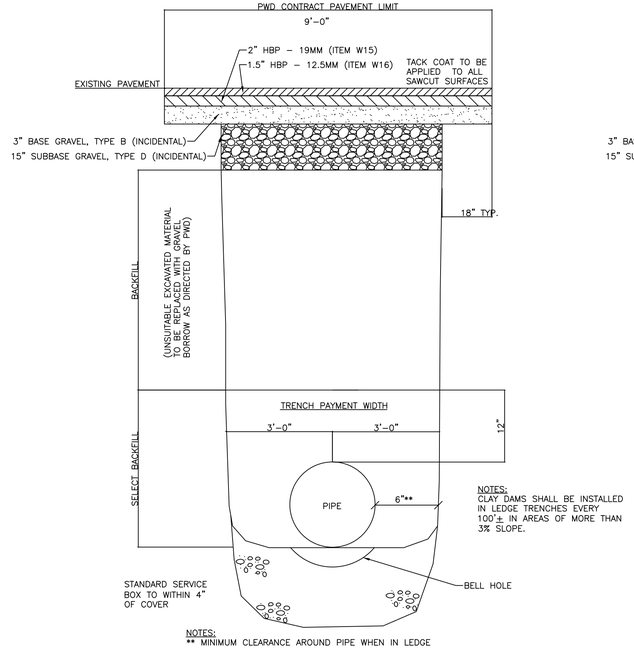
NOTE : ANY EXTENSION OF SERVICE BOX REQUIRES:
1. 1" FEMALE IRON PIPE COUPLING
2. 1" THREADED PIPE (THIS IS TO BE A NON-WELDED, TWO PIECE ARRANGEMENT. SLIP ON ADAPTERS ARE NOT PERMISSIBLE.)





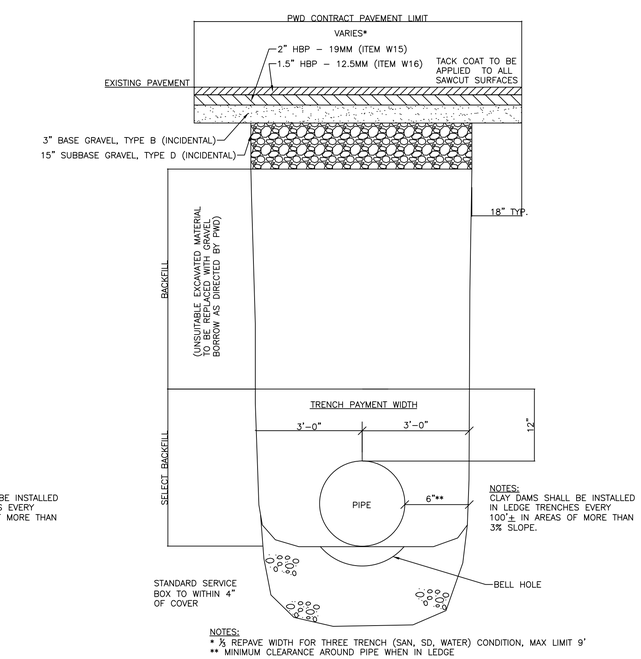
OFFSET DETAIL
NOT TO SCALE

NOTE:
DIMENSIONS APPLICABLE FOR SIGMA COMPACT BENDS. FOR TYLER COMPACT BENDS, ADD 1/2" TO "D" DIMENSION AND SUBTRACT 1/2" FROM "L" DIMENSION. FOR OTHER FITTINGS REFER TO MANUFACTURER'S RECOMMENDATIONS.



NOTES:
** MINIMUM CLEARANCE AROUND PIPE WHEN IN LEDGE

SECTION THRU EARTH TRENCH PERMANENT TRENCH REPAIR
N.T.S.



NOTES:
* ⅓ REPAVE WIDTH FOR THREE TRENCH (SAN, SD, WATER) CONDITION, MAX LIMIT 9'
** MINIMUM CLEARANCE AROUND PIPE WHEN IN LEDGE

SECTION THRU EARTH TRENCH ROAD REPAVE
N.T.S.

	6" PIPE		8" PIPE		12" PIPE	
H	D	L	D	L	D	L
12"	1' 6-1/2"	0' 10-1/2"	1' 7-1/2"	0' 9-1/2"	1' 11-1/2"	0' 5-1/2"
13"	1' 7-1/2"	0' 11-7/8"	1' 8-1/2"	0' 10-7/8"	2' 0-1/2"	0' 6-7/8"
14"	1' 8-1/2"	1' 1-5/16"	1' 9-1/2"	1' 0-5/16"	2' 1-1/2"	0' 8-5/16"
15"	1' 9-1/2"	1' 2-11/16"	1' 10-1/2"	1' 1-11/16"	2' 2-1/2"	0' 9-11/16"
16"	1' 10-1/2"	1' 4-1/8"	1' 11-1/2"	1' 3-1/8"	2' 3-1/2"	0' 11-1/8"
17"	1' 11-1/2"	1' 5-9/16"	2' 0-1/2"	1' 4-9/16"	2' 4-1/2"	1' 0-9/16"
18"	2' 0-1/2"	1' 6-15/16"	2' 1-1/2"	1' 5-15/16"	2' 5-1/2"	1' 1-15/16"
19"	2' 1-1/2"	1' 8-3/8"	2' 2-1/2"	1' 7-3/8"	2' 6-1/2"	1' 3-3/8"
20"	2' 2-1/2"	1' 9-13/16"	2' 3-1/2"	1' 8-13/16"	2' 7-1/2"	1' 4-13/16"
21"	2' 3-1/2"	1' 11-3/16"	2' 4-1/2"	1' 10-3/16"	2' 8-1/2"	1' 6-3/16"
22"	2' 4-1/2"	2' 0-5/8"	2' 5-1/2"	1' 11-5/8"	2' 9-1/2"	1' 7-5/8"
23"	2' 5-1/2"	2' 2"	2' 6-1/2"	2' 1"	2' 10-1/2"	1' 9"
24"	2' 6-1/2"	2' 3-7/16"	2' 7-1/2"	2' 2-7/16"	2' 11-1/2"	1' 10-7/16"
25"	2' 7-1/2"	2' 4-7/8"	2' 8-1/2"	2' 3-7/8"	3' 0-1/2"	1' 11-7/8"
26"	2' 8-1/2"	2' 6-1/4"	2' 9-1/2"	2' 5-1/4"	3' 1-1/2"	2' 1-1/4"
27"	2' 9-1/2"	2' 7-11/16"	2' 10-1/2"	2' 6-11/16"	3' 2-1/2"	2' 2-11/16"
28"	2' 10-1/2"	2' 9-1/8"	2' 11-1/2"	2' 8-1/8"	3' 3-1/2"	2' 4-1/8"
29"	2' 11-1/2"	2' 10-1/2"	3' 0-1/2"	2' 9-1/2"	3' 4-1/2"	2' 5-1/2"
30"	3' 0-1/2"	2' 11-15/16"	3' 1-1/2"	2' 10-15/16"	3' 5-1/2"	2' 6-15/16"
31"	3' 1-1/2"	3' 1-5/16"	3' 2-1/2"	3' 0-5/16"	3' 6-1/2"	2' 8-5/16"
32"	3' 2-1/2"	3' 2-3/4"	3' 3-1/2"	3' 1-3/4"	3' 7-1/2"	2' 9-3/4"
33"	3' 3-1/2"	3' 4-3/16"	3' 4-1/2"	3' 3-3/16"	3' 8-1/2"	2' 11-3/16"
34"	3' 4-1/2"	3' 5-9/16"	3' 5-1/2"	3' 4-9/16"	3' 9-1/2"	3' 0-9/16"
35"	3' 5-1/2"	3' 7"	3' 6-1/2"	3' 6"	3' 10-1/2"	3' 2"
36"	3' 6-1/2"	3' 8-7/16"	3' 7-1/2"	3' 7-7/16"	3' 11-1/2"	3' 3-7/16"
37"	3' 7-1/2"	3' 9-13/16"	3' 8-1/2"	3' 8-13/16"	4' 0-1/2"	3' 4-13/16"
38"	3' 8-1/2"	3' 11-1/4"	3' 9-1/2"	3' 10-1/4"	4' 1-1/2"	3' 6-1/4"
39"	3' 9-1/2"	4' 0-11/16"	3' 10-1/2"	3' 11-11/16"	4' 2-1/2"	3' 7-11/16"
40"	3' 10-1/2"	4' 2-1/16"	3' 11-1/2"	4' 1-1/16"	4' 3-1/2"	3' 9-1/16"
41"	3' 11-1/2"	4' 3-1/2"	4' 0-1/2"	4' 2-1/2"	4' 4-1/2"	3' 10-1/2"
42"	4' 0-1/2"	4' 4-7/8"	4' 1-1/2"	4' 3-7/8"	4' 5-1/2"	3' 11-7/8"
43"	4' 1-1/2"	4' 6-5/16"	4' 2-1/2"	4' 5-5/16"	4' 6-1/2"	4' 1-5/16"
44"	4' 2-1/2"	4' 7-3/4"	4' 3-1/2"	4' 6-3/4"	4' 7-1/2"	4' 2-3/4"
45"	4' 3-1/2"	4' 9-1/8"	4' 4-1/2"	4' 8-1/8"	4' 8-1/2"	4' 4-1/8"
46"	4' 4-1/2"	4' 10-9/16"	4' 5-1/2"	4' 9-9/16"	4' 9-1/2"	4' 5-9/16"
47"	4' 5-1/2"	4' 11-15/16"	4' 6-1/2"	4' 10-15/16"	4' 10-1/2"	4' 6-15/16"
48"	4' 6-1/2"	5' 1-3/8"	4' 7-1/2"	5' 0-3/8"	4' 11-1/2"	4' 8-3/8"
49"	4' 7-1/2"	5' 2-13/16"	4' 8-1/2"	5' 1-13/16"	5' 0-1/2"	4' 9-13/16"
50"	4' 8-1/2"	5' 4-3/16"	4' 9-1/2"	5' 3-3/16"	5' 1-1/2"	4' 11-3/16"
51"	4' 9-1/2"	5' 5-5/8"	4' 10-1/2"	5' 4-5/8"	5' 2-1/2"	5' 0-5/8"
52"	4' 10-1/2"	5' 7-1/16"	4' 11-1/2"	5' 6-1/16"	5' 3-1/2"	5' 2-1/16"
53"	4' 11-1/2"	5' 8-7/16"	5' 0-1/2"	5' 7-7/16"	5' 4-1/2"	5' 3-7/16"
54"	5' 0-1/2"	5' 9-7/8"	5' 1-1/2"	5' 8-7/8"	5' 5-1/2"	5' 4-7/8"
55"	5' 1-1/2"	5' 11-5/16"	5' 2-1/2"	5' 10-5/16"	5' 6-1/2"	5' 6-5/16"

TYPICAL MAIN OFFSET

Civil 3D 2013 Drawing Name:
17113 D.dwg, TAB:D10

CITY PROPERTY PLAN BOOK SHEETS:
I & I SHEETS: III-11, III-12, III-13

REFERENCES:

SURVEY CREW:	STI
DRAWN BY:	BVD
CHECKED BY:	DLR
SCALE:	AS NOTED
DATE:	1/22/2019

STATE OF MAINE
DANIEL L. RILEY
No. 5951
PROFESSIONAL ENGINEER
01/22/2019

MACKWORTH - OCEAN - WALTON
CSO SEPARATION PROJECT
PORTLAND WATER DISTRICT
DETAILS

PORTLAND WATER DISTRICT

SHEET #
45 OF 45

PLAN NUMBER