

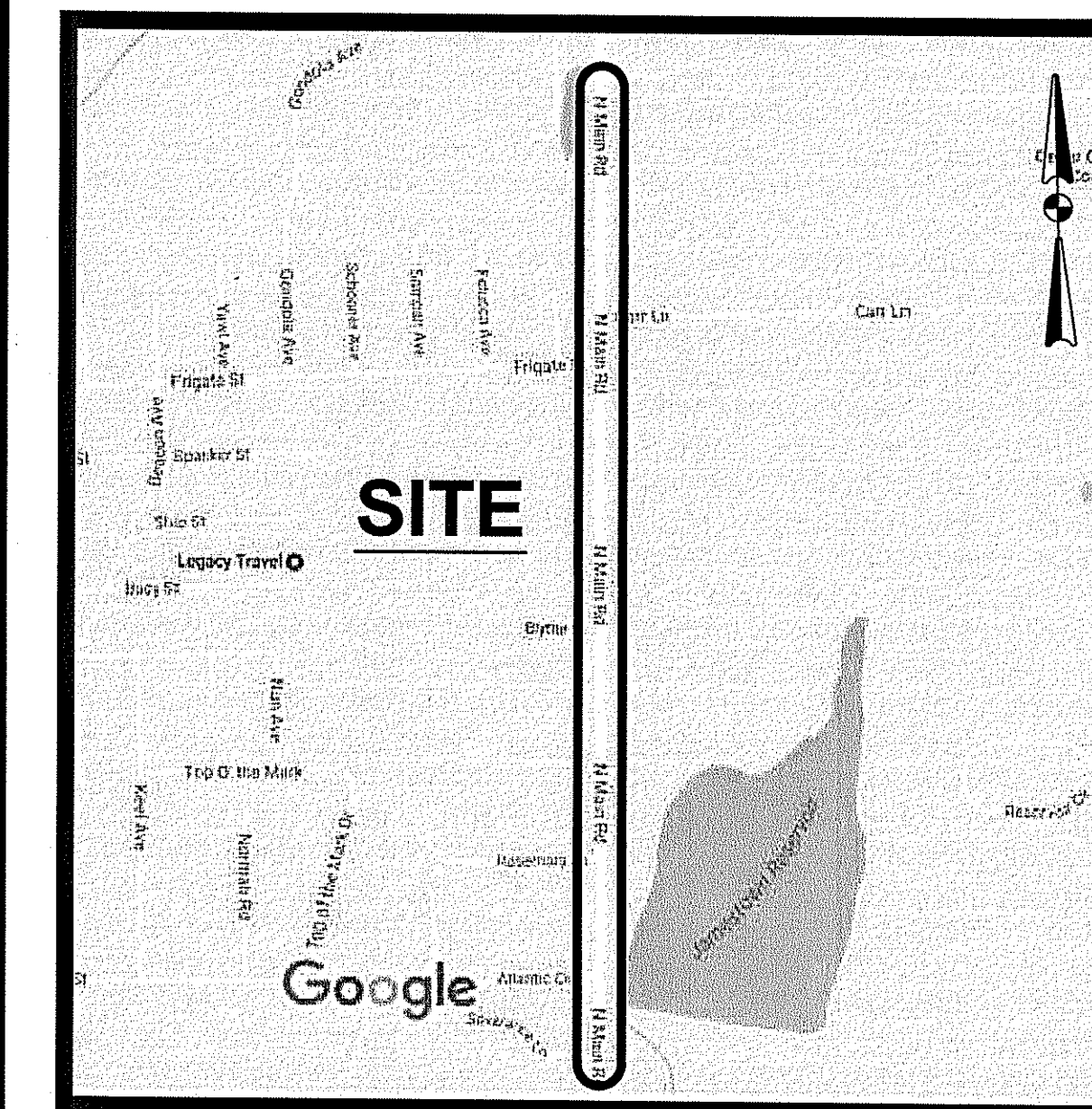
# SITE PLANS

FOR



**TOWN OF JAMESTOWN  
DEPARTMENT OF PUBLIC WORKS**

## **PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH LAUREL LANE TO SEVERANCE LANE JAMESTOWN, RHODE ISLAND**



**LOCATION MAP**  
NOT TO SCALE

### INDEX OF DRAWINGS

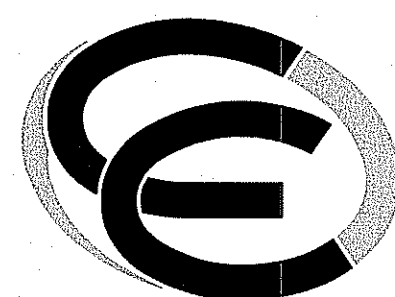
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**PREPARED FOR:**

**TOWN OF JAMESTOWN  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
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**ENGINEERS and LAND SURVEYORS**



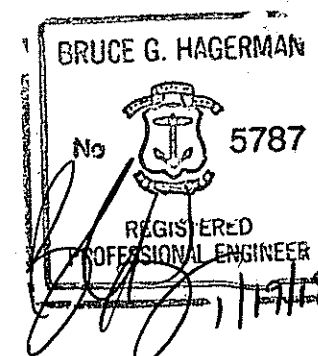
- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
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**AUGUST 2017  
SHEET 1 of 18**



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JAN 26 2018 FILE # 17-0192  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Emyrtan D. Wencsek*

**AGENCY REVIEW SUBMISSION**

**REVISIONS:**

NO.:	DATE:	DESCRIPTION:
1	11/16/17	RIDEM COMMENTS
2	01/19/18	RIDEM COMMENTS

**GENERAL NOTES**

- ALL EXISTING UTILITIES HAVE BEEN PLOTTED BASED UPON BEST AVAILABLE INFORMATION AND REPRESENT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD, BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH "DIG SAFE PROGRAM LAW" ENACTED BY THE R.I. LEGISLATURE AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY CITY, STATE OR FEDERAL AGENCY THAT MAY APPLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SPECIFICATIONS TO GOVERN THIS PROJECT ARE R.I.D.O.T. STANDARD SPECIFICATIONS. FOR ALL EXCAVATION, PLACEMENT OF FILL, PIPE INSTALLATION, BITUMINOUS PAVEMENT, CUTTING INTO CATCHBASIN/MANHOLES, CONCRETE AND SAWCUTTING, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION, WITH LATEST REVISIONS UNLESS OTHERWISE SHOWN ON PLANS. THE "METHOD OF MEASUREMENT" AND "BASIS OF PAYMENT" ARE NOT APPLICABLE. THESE SPECIFICATIONS CAN BE OBTAINED ON-LINE AT:  
  
HTTP://WWW.DOT.STATE.RI.US/ENGINEERING/STANDARDS/INDEX.ASP
- FOR ALL EXCAVATION AND PLACEMENT OF FILL, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE R.I. STANDARD SPECIFICATION SECTION 202.
- RHODE ISLAND STANDARDS REFERENCED ARE ACCORDING TO THE STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS "RHODE ISLAND STANDARD DETAILS" DATED JUNE 27, 2008, WITH ALL REVISIONS AS PREPARED BY THE DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR MUST VERIFY PRIOR TO CONSTRUCTION THAT ALL REQUIRED AUTHORIZATION TO PERFORM WORK HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
- WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.
- CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT PRIOR TO THE INITIATION OF WORK. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS, RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.
- ALL DISTURBED AREAS SHALL BE REPLACED IN KIND UNLESS OTHERWISE SHOWN.
- ANTICIPATED PERMITS REQUIRED FOR THIS SITE INCLUDE; RIDEM WETLANDS AND RIDEM RIPDES.

**CONSTRUCTION NOTES**

- THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION ON SITE. THE COORDINATION IS NECESSARY FOR THE ENGINEER TO SCHEDULE SITE INSPECTIONS. INSTALLATIONS PERFORMED WITHOUT INSPECTIONS BY THE OWNER AND ENGINEER MAY WARRANT COMPLETE REMOVAL AND REINSTALLATION AT THE CONTRACTOR'S SOLE EXPENSE.
- THE CONTRACTOR IS REQUIRED TO MAINTAIN DETAILED AS-BUILT INFORMATION FOR ALL DRAINAGE AND UTILITY INSTALLATIONS. AS-BUILT INFORMATION MUST INCLUDE MATERIAL LIST, PIPE DEPTH AND SWING TIE LOCATIONS (2 MINIMUM) FROM NEW PIPE TO BUILDING CORNERS. ALL PIPE BEND/ELBOW LOCATIONS SHALL BE DIMENSIONED. FINAL PAYMENT WILL NOT BE MADE UNTIL SUITABLE AS-BUILT DATA IS PROVIDED.

**FLOOD ZONE NOTE**

THE NORTH ROAD SITE IS LOCATED WITHIN A FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) DESIGNATED ZONE-X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

**LAYOUT NOTE**

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEM FOUND WHICH DOES NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

**MAINTENANCE AND PROTECTION OF TRAFFIC NOTES**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY CONSTRUCTION SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
- TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS WILL NOT BE PARKED IN THE ROADWAY RIGHT-OF-WAY.
- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, AND SUBSEQUENT ADDENDA.
- SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE STATE D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

**TREE PROTECTION NOTE**

PLANTS LISTED AS SAVE AND PROTECT SHALL BE REVIEWED BY A LICENSED ARBORIST OR AS DIRECTED BY OWNER. CUT BROKEN, DEAD OR INJURED BRANCHES ABOVE THE STEM COLLAR ON THE TRUNK OR LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PAINT CUTS OVER 3/4" IN DIAMETER WITH TREE WOUND PAINT. PRUNING SHALL NOT DEFORM OR OTHERWISE DESTROY THE TYPICAL SHAPE OR SYMMETRY OF THE PLANT, AND SHALL NOT REDUCE THE HEIGHT BY MORE THAN ONE-THIRD.

**PROPOSED DRAINAGE PAVEMENT REPAIR STRUCTURE (PERMANENT)**

- A 2" BITUMINOUS SURFACE COURSE, HOT MIX ASPHALT CLASS 9.5 ASPHALT EMULSION TACK COAT
- 2" BITUMINOUS PAVEMENT BASE COURSE, HOT MIX ASPHALT CLASS 12.5 8" (MIN.) COLD RECYCLED BASE COURSE

**PROPOSED DRAINAGE PAVEMENT REPAIR STRUCTURE (TEMPORARY)**

- B 2" BITUMINOUS PAVEMENT PATCH, TYPE I-1

**PAVEMENT NOTE**

THE PAVEMENT THICKNESS OF 2.0" REPRESENTS THE MINIMUM IN-PLACE THICKNESS. STANDARD TOLERANCES DO NOT APPLY TO THESE VALUES. ANY PAVEMENT INSTALLED WHICH IS LESS THAN THE THICKNESS NOTED WILL NOT BE ACCEPTED.

**DRAINAGE STRUCTURE NOTE**

DUE TO SHALLOW PIPE DEPTHS, CONTRACTOR WILL NEED TO ADJUST/MODIFY NEW AND EXISTING STRUCTURES TO ACCOMMODATE PIPE ENTRANCE/EXIT INTO STRUCTURES. R.I. STANDARD STRUCTURES ARE SPECIFIED BUT THE ABOVE NOTED ALTERATION WILL BE NECESSARY AT SHALLOW PIPE LOCATIONS.

EXISTING	LEGEND	PROPOSED
— R —	PROPERTY LINE	
— E —	EASEMENT LINE	
	CURB	
— O- NO —	UTILITY POLE	
— LP —	LIGHT POLE	
— (SIZE) D —	DRAIN LINE	— (SIZE) D —
— (SIZE) S —	SANITARY SEWER	
— (SIZE) G —	GAS LINE	
— (SIZE) W —	WATER SERVICE	
— OHW —	OVERHEAD WIRES	
— T —	TELEPHONE CONDUIT	
— UETCF —	UNDERGROUND ELEC./TELE/CABLE/FIRE CONDUIT	
— E —	ELECTRIC POWER CONDUIT	
○ DMH	DRAINAGE MANHOLE	● DMH
■ CB	CATCH BASIN	■ CB
○ SMH	SEWER MANHOLE	
○ EMH	ELECTRIC MANHOLE	
○ TMH	TELEPHONE MANHOLE	
Hyd.	HYDRANT	
WG	WATER GATE	
GC	GAS GATE	
GO	CLEAN-OUT TO GRADE	
XXX	CONTOURS	— ELEV. —
X ELEV.	SPOT GRADES	— 00x0 —
HEIGHT	CHAIN LINK FENCE	
HEIGHT	STOCKADE FENCE	
	RETAINING WALL	
	STONE WALL	
	GRADE TO DRAIN	— * —
	GUARDRAIL	
	EDGE OF WOODS	
	TREE	
	BOLLARDS	
	BUILDING/STRUCTURE	
	SAW CUT AND MATCH PAVEMENT (FULL DEPTH)	— / / / / —
	LIMIT OF DISTURBANCE	— - - - - —
	FILTER SOXX	— - - - - —
	WETLAND FLAGGING	
	50' PERIMETER WETLAND	

**PLAN SYMBOLS**

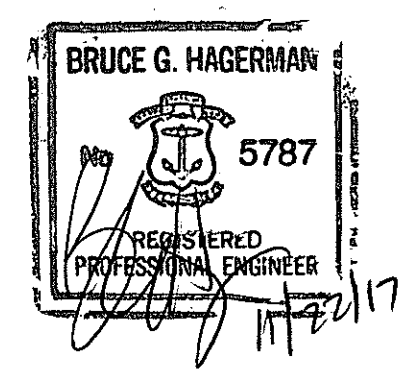
2.3.0	PRECAST CONCRETE FLARED END SECTION	BCD	BITUMINOUS CONCRETE DRIVEWAY
4.2.0	PRECAST 4'-0" ROUND MANHOLE	CCB	3" BITUMINOUS CONCRETE TYPE 1-2
4.2.1	PRECAST 5'-0" ROUND MANHOLE	CCF	8" COLD RECYCLED BASE COURSE
4.3.0	PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN	CRB	CLEAN CATCH BASIN
4.4.0	PRECAST 4'-0", 5'-0" OR 6'-0" ROUND CATCH BASIN	DCB	CLEAN AND FLUSH PIPE
6.1.1	HEAVY DUTY SQUARE FRAME AND ROUND COVER	DFG	COLD RECYCLED BASE (8" MIN. DEPTH)
6.2.1	HEAVY DUTY ROUND FRAME AND COVER	DFP	REMOVE AND DISPOSE CATCH BASIN
6.3.2	SQUARE FRAME AND GRATE (BICYCLE SAFE)	DP	REMOVE AND DISPOSE FRAME AND GRATE
6.3.4	HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)	DT	REMOVE AND DISPOSE FLEXIBLE PAVEMENT
		LS	REMOVE AND DISPOSE PIPE
		R&D	REMOVE AND DISPOSE TREE AND STUMP
		SS	LIMIT OF WORK
		TNP	4" LOAM AND SEED
			REMOVE AND DISPOSE
			SILT SACK INLET PROTECTION
			TIE NEW PIPE INTO EXISTING STRUCTURE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
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DATED JAN 26 2018 FILE # 17-0192  
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Christopher D. Wenczek*

NOV 22 2017  
Office of Water Resources

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**KEY PLAN**

**PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH**

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

PREPARED FOR:  
**TOWN OF JAMESTOWN**  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

**GENERAL NOTES AND LEGEND**

DATE: AUGUST 2017 SCALE: AS NOTED

DWG. NAME: 2145-02-NOTES1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

DRAWING NUMBER  
**C1**  
SHEET: 2 OF 18





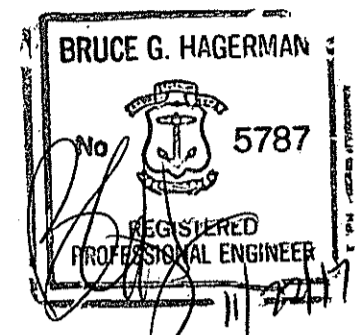
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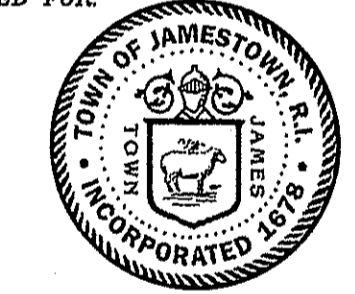
#### KEY PLAN

#### PROJECT TITLE:

### PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

#### PREPARED FOR:



TOWN OF JAMESTOWN  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

#### DRAWING TITLE:

### PLAN AND PROFILE NO. 2

DATE: AUGUST 2017 SCALE: AS NOTED

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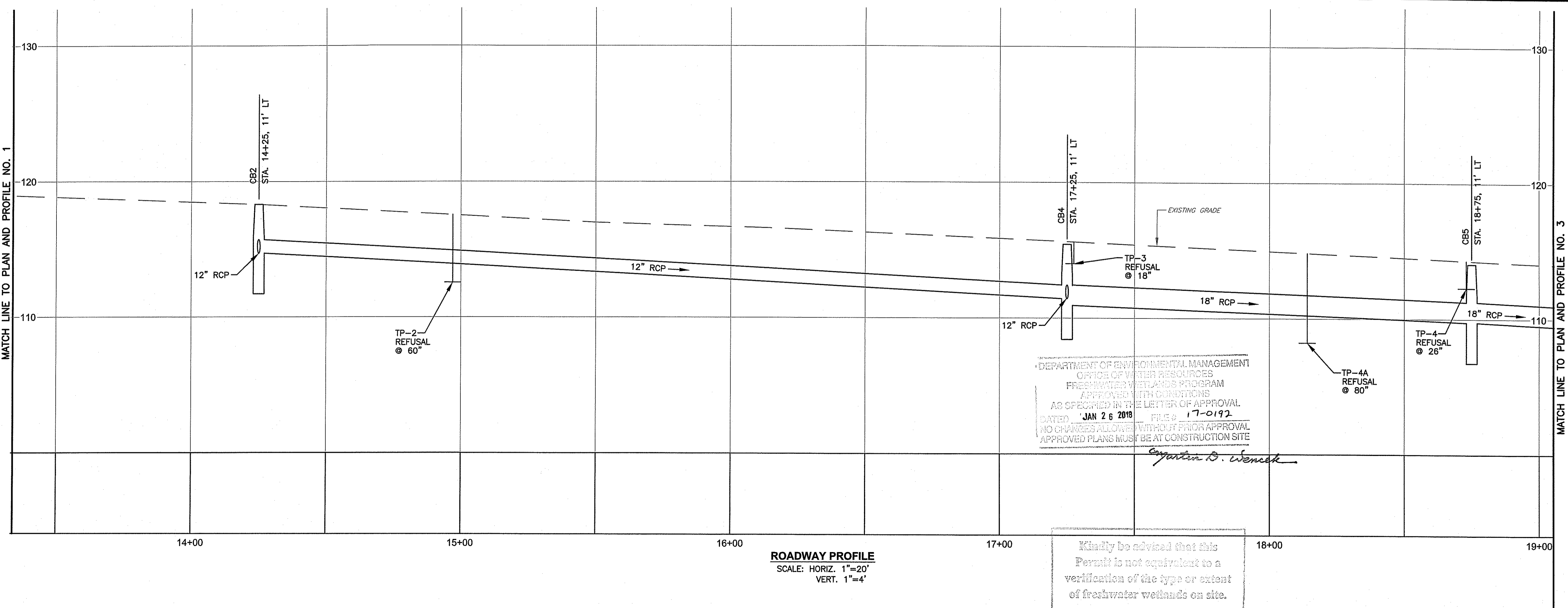
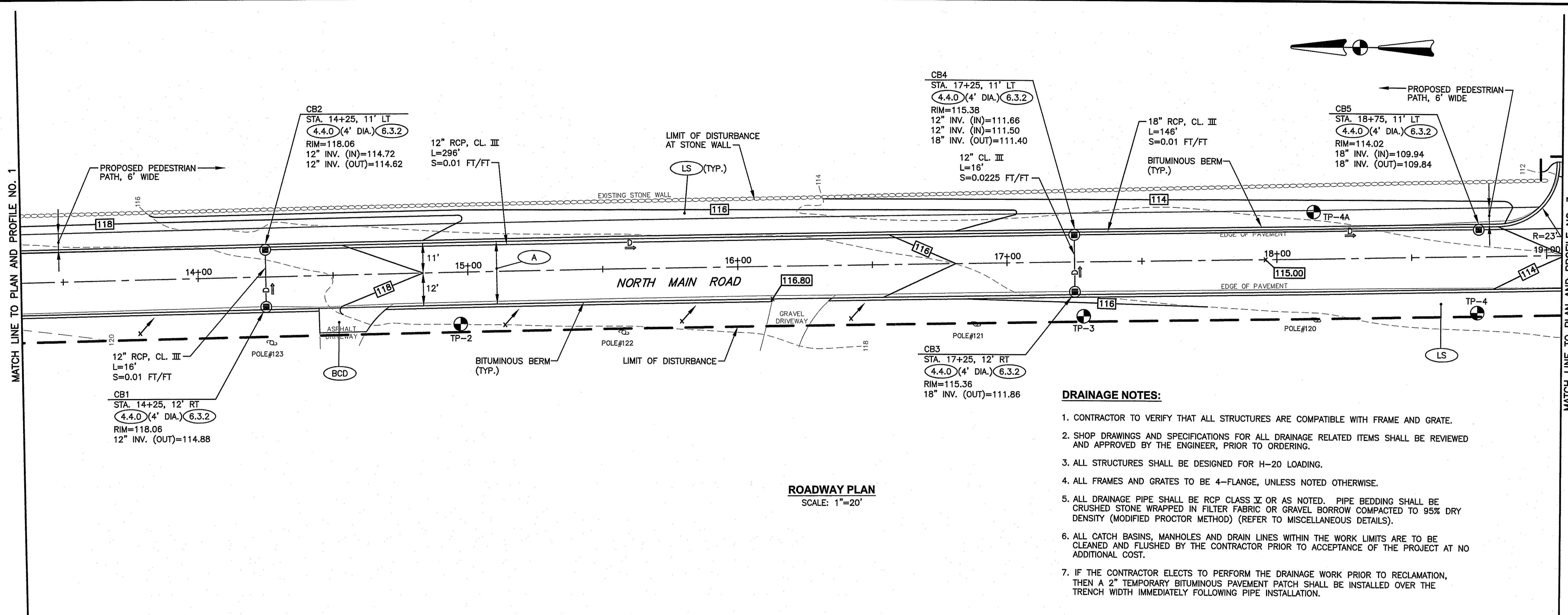
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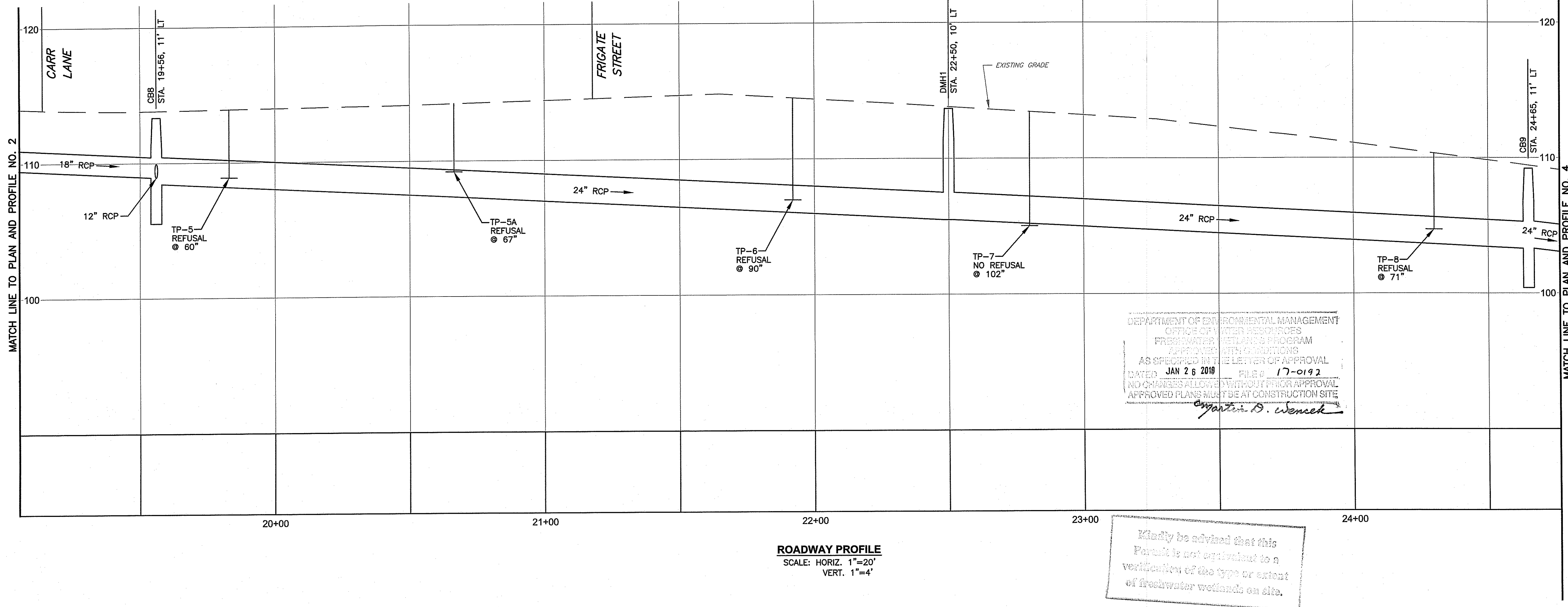
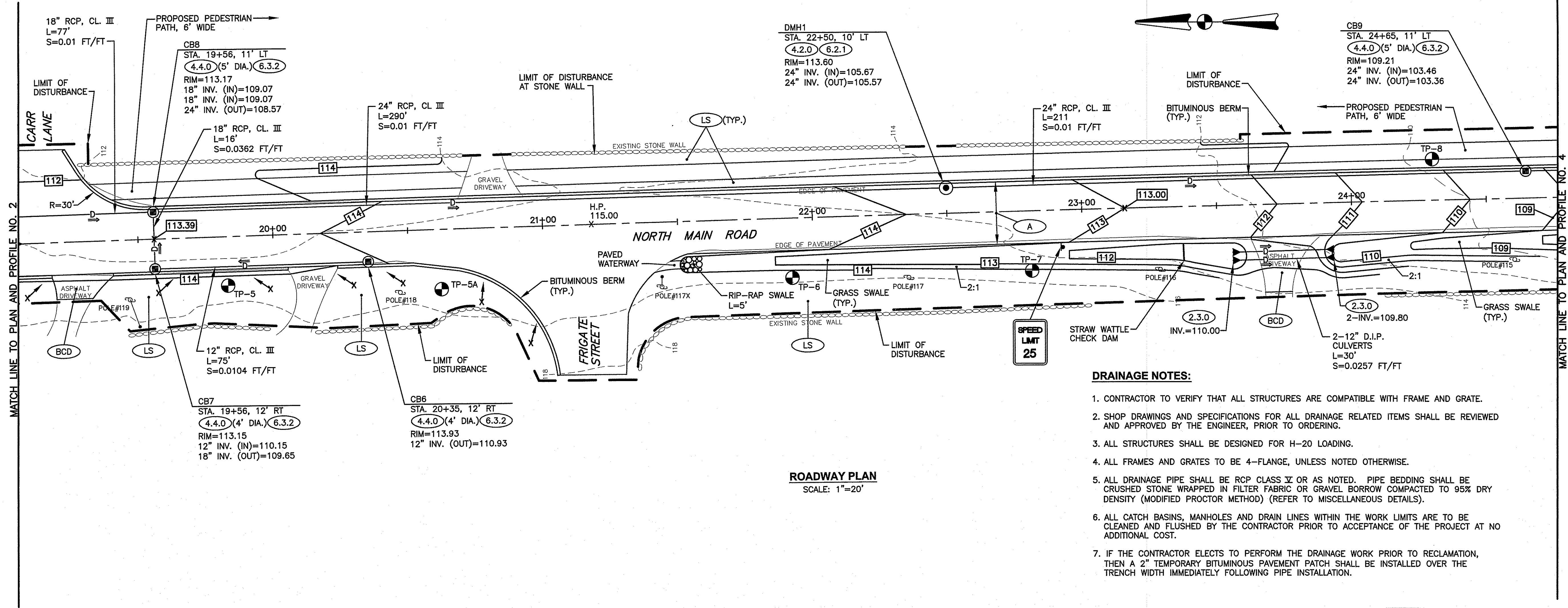
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

#### DRAWING NUMBER

# C3

SHEET: 4 OF 18





DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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*Walter D. Wenczek*

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

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BRUCE G. HAGERMAN  
No. 5787  
REGISTERED PROFESSIONAL ENGINEER

KEY PLAN

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JAMESTOWN, RHODE ISLAND

PREPARED FOR:  
  
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93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

DRAWING TITLE:  
**PLAN AND PROFILE NO. 3**

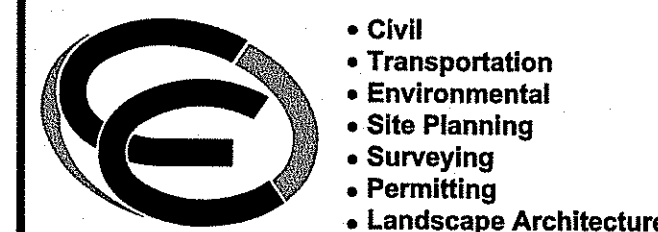
DATE: AUGUST 2017  
SCALE: AS NOTED

DWG. NAME: 2145-05-PLAN\_03.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

DRAWING NUMBER  
**C4**  
SHEET: 5 OF 18



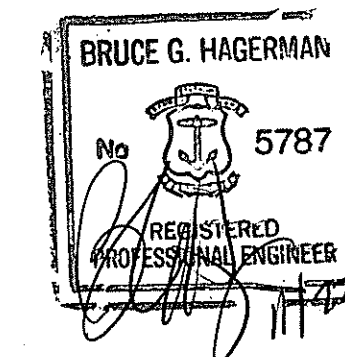
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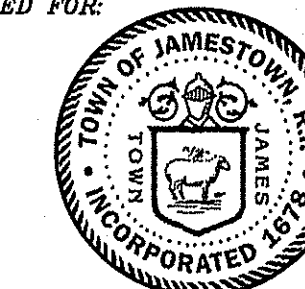


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PREPARED FOR:



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DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

DRAWING TITLE:

**PLAN AND PROFILE NO. 4**

DATE: AUGUST 2017 SCALE: AS NOTED

DWG. NAME: 2145-06-PLAN\_04.dwg

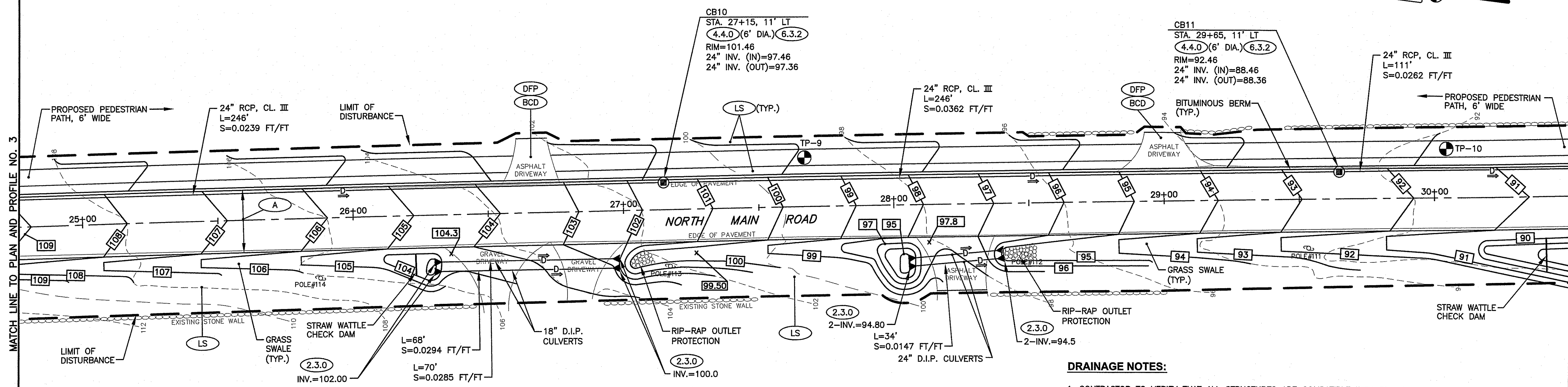
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

DRAWING NUMBER

**C5**

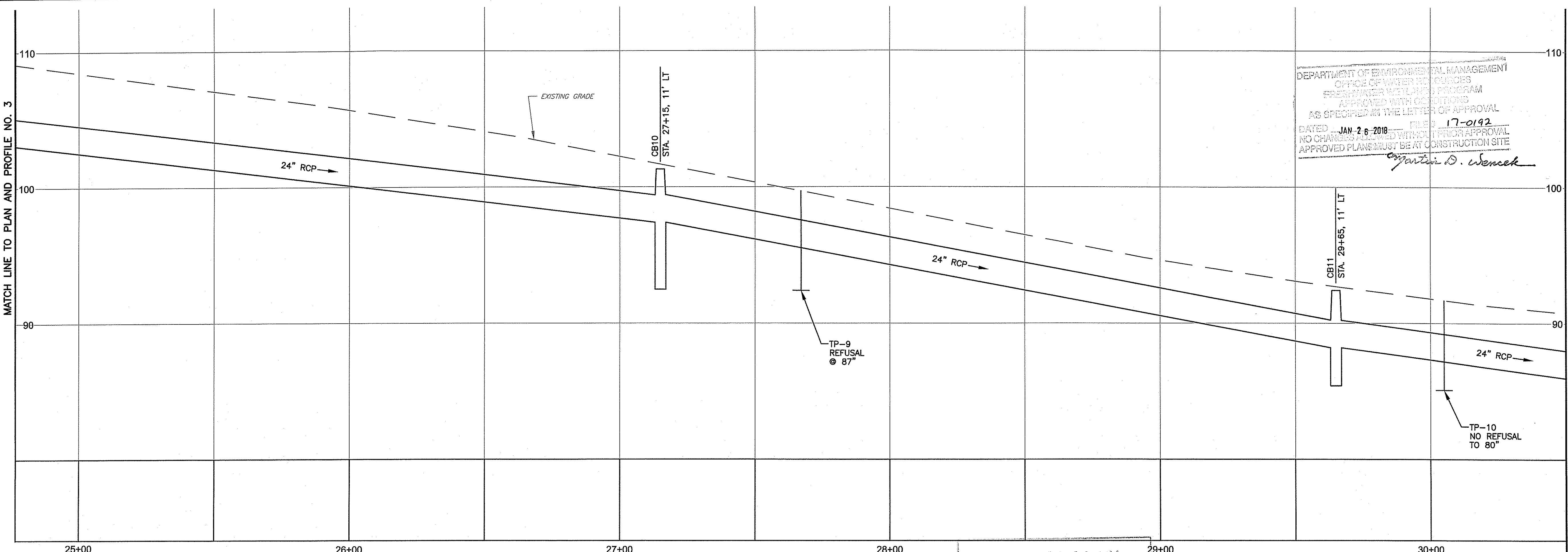
SHEET: 6 OF 18



**DRAINAGE NOTES:**

1. CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRATE.
2. SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER, PRIOR TO ORDERING.
3. ALL STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
4. ALL FRAMES AND GRATES TO BE 4-FLANGE, UNLESS NOTED OTHERWISE.
5. ALL DRAINAGE PIPE SHALL BE RCP CLASS V OR AS NOTED. PIPE BEDDING SHALL BE CRUSHED STONE WRAPPED IN FILTER FABRIC OR GRAVEL BORROW COMPACTED TO 95% DRY DENSITY (MODIFIED PROCTOR METHOD) (REFER TO MISCELLANEOUS DETAILS).
6. ALL CATCH BASINS, MANHOLES AND DRAIN LINES WITHIN THE WORK LIMITS ARE TO BE CLEANED AND FLUSHED BY THE CONTRACTOR PRIOR TO ACCEPTANCE OF THE PROJECT AT NO ADDITIONAL COST.
7. IF THE CONTRACTOR ELECTS TO PERFORM THE DRAINAGE WORK PRIOR TO RECLAMATION, THEN A 2" TEMPORARY BITUMINOUS PAVEMENT PATCH SHALL BE INSTALLED OVER THE TRENCH WIDTH IMMEDIATELY FOLLOWING PIPE INSTALLATION.

**ROADWAY PLAN**  
SCALE: 1"=20'



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

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



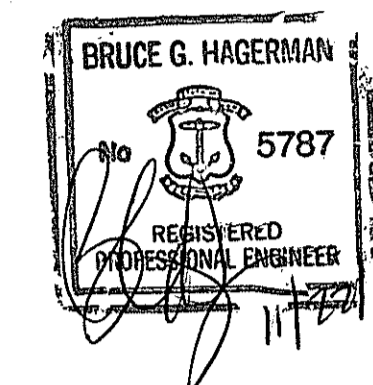
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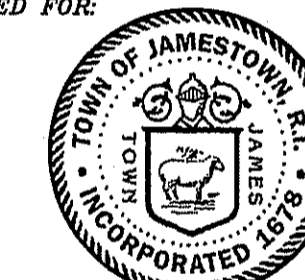


#### KEY PLAN

### PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

#### PREPARED FOR:



TOWN OF JAMESTOWN  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

#### DRAWING TITLE:

### PLAN AND PROFILE NO. 5

DATE: AUGUST 2017 SCALE: AS NOTED

DWG. NAME: 2145-07-PLAN\_05.dwg

#### REVISIONS

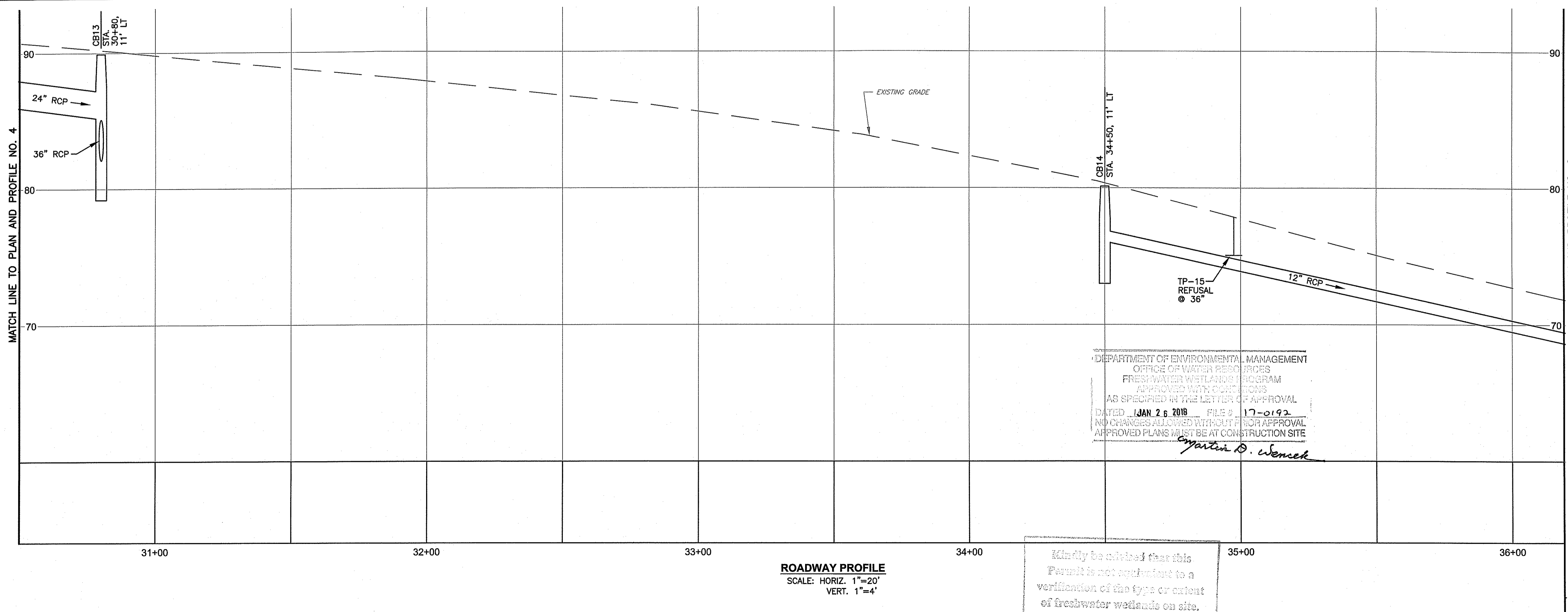
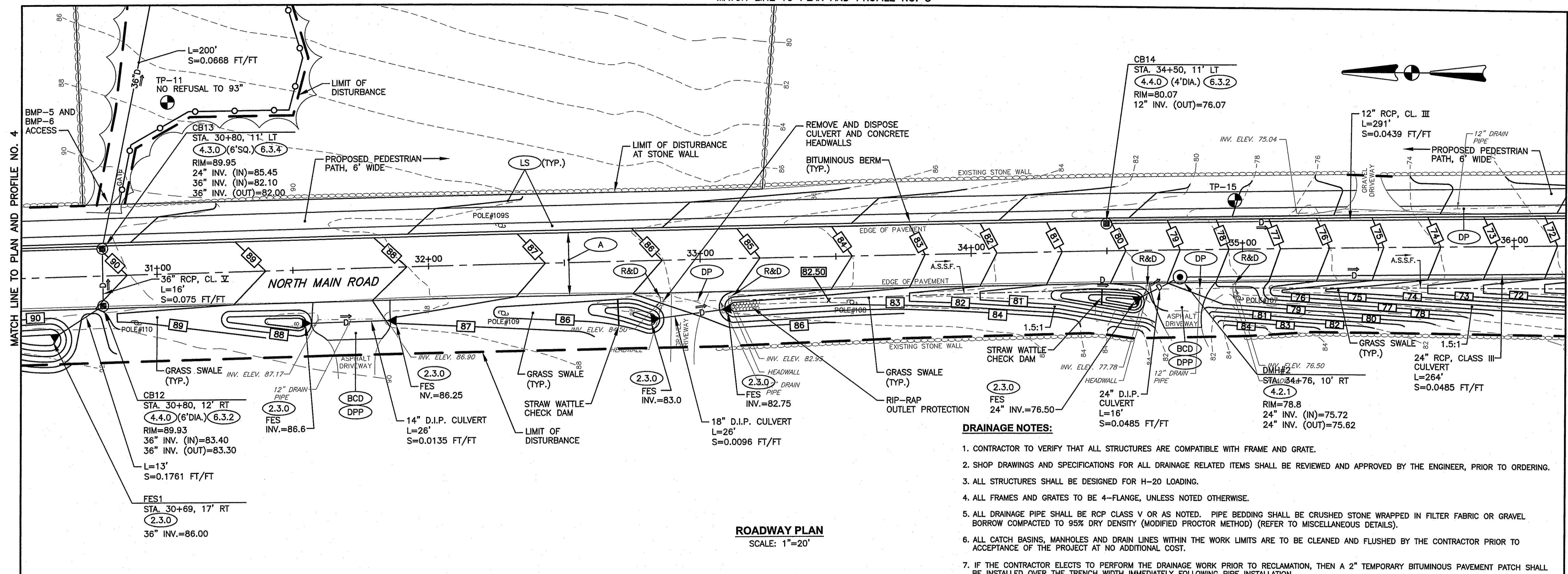
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

#### DRAWING NUMBER

# C6

SHEET: 7 OF 18

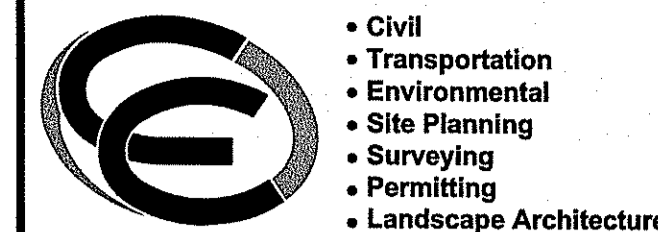
MATCH LINE TO PLAN AND PROFILE NO. 8



Must be noted that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JAN 26 2018 FILE # 17-0192  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Martin D. Wenczek*



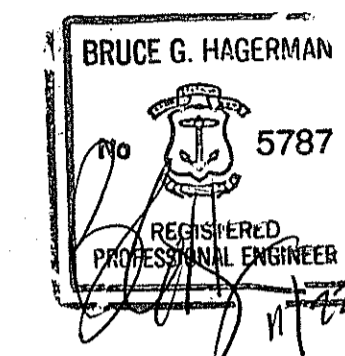
### CROSSMAN ENGINEERING

Rhode Island  
151 Centerville Road  
Warwick, RI 02886  
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Massachusetts  
103 Commonwealth Avenue  
North Attleboro, MA 02763  
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Email: cel@crossmaneng.com

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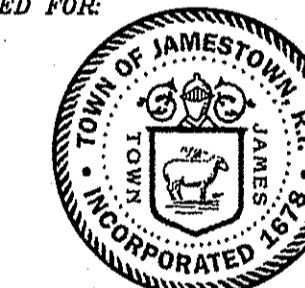


#### KEY PLAN

### PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

#### PREPARED FOR:



TOWN OF JAMESTOWN  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

#### DRAWING TITLE: PLAN AND PROFILE NO. 6

DATE: AUGUST 2017 SCALE: AS NOTED

DWG. NAME: 2145-08-PLAN\_06.dwg

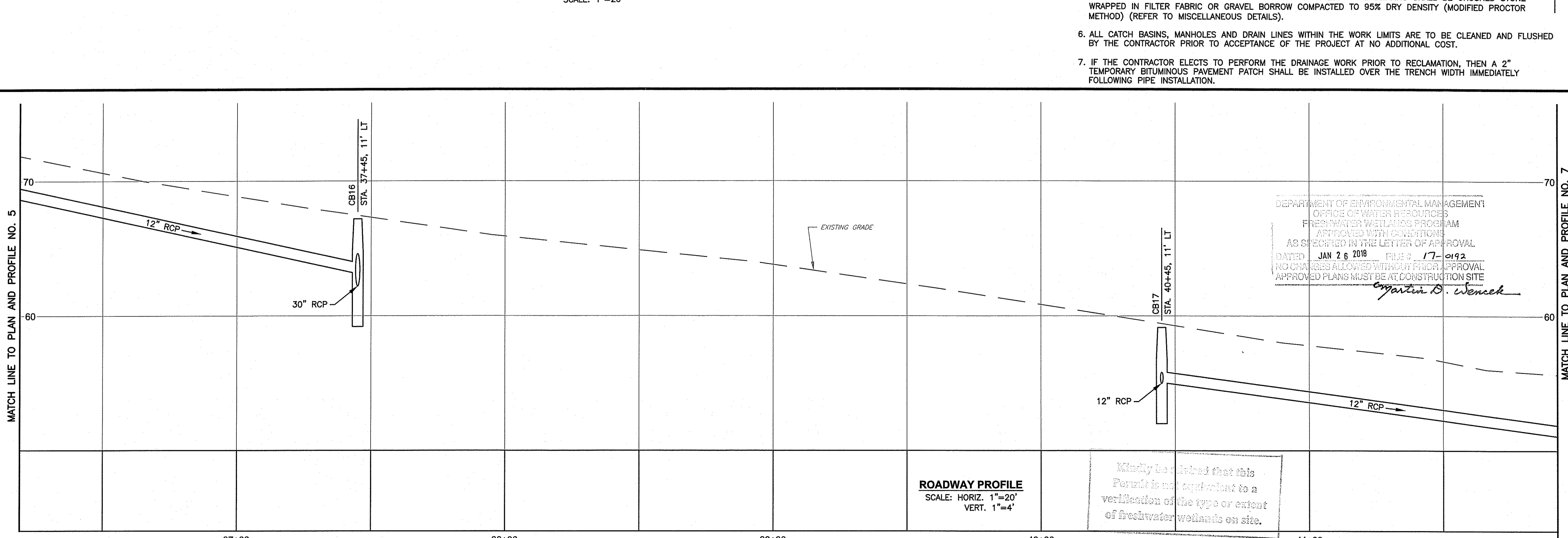
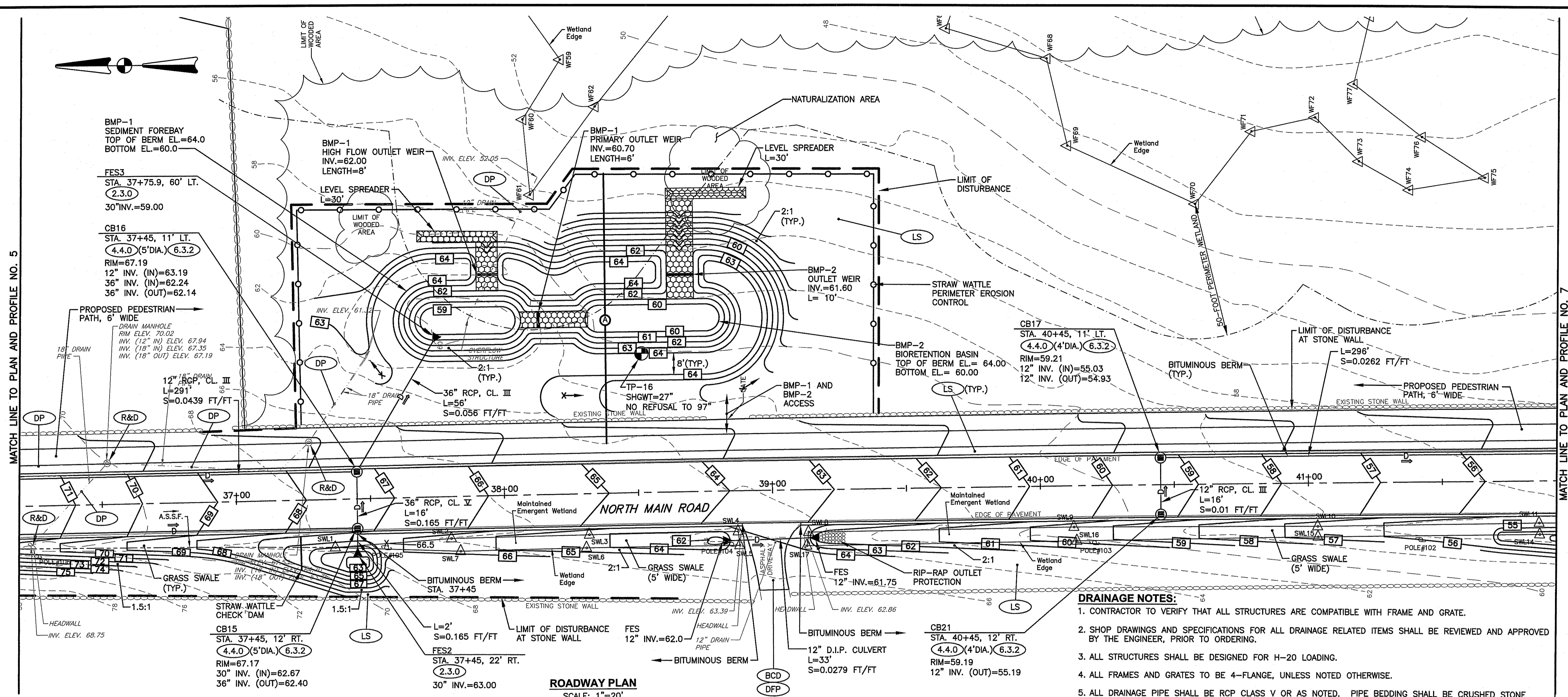
#### REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

#### DRAWING NUMBER

# C7

SHEET: 8 OF 18



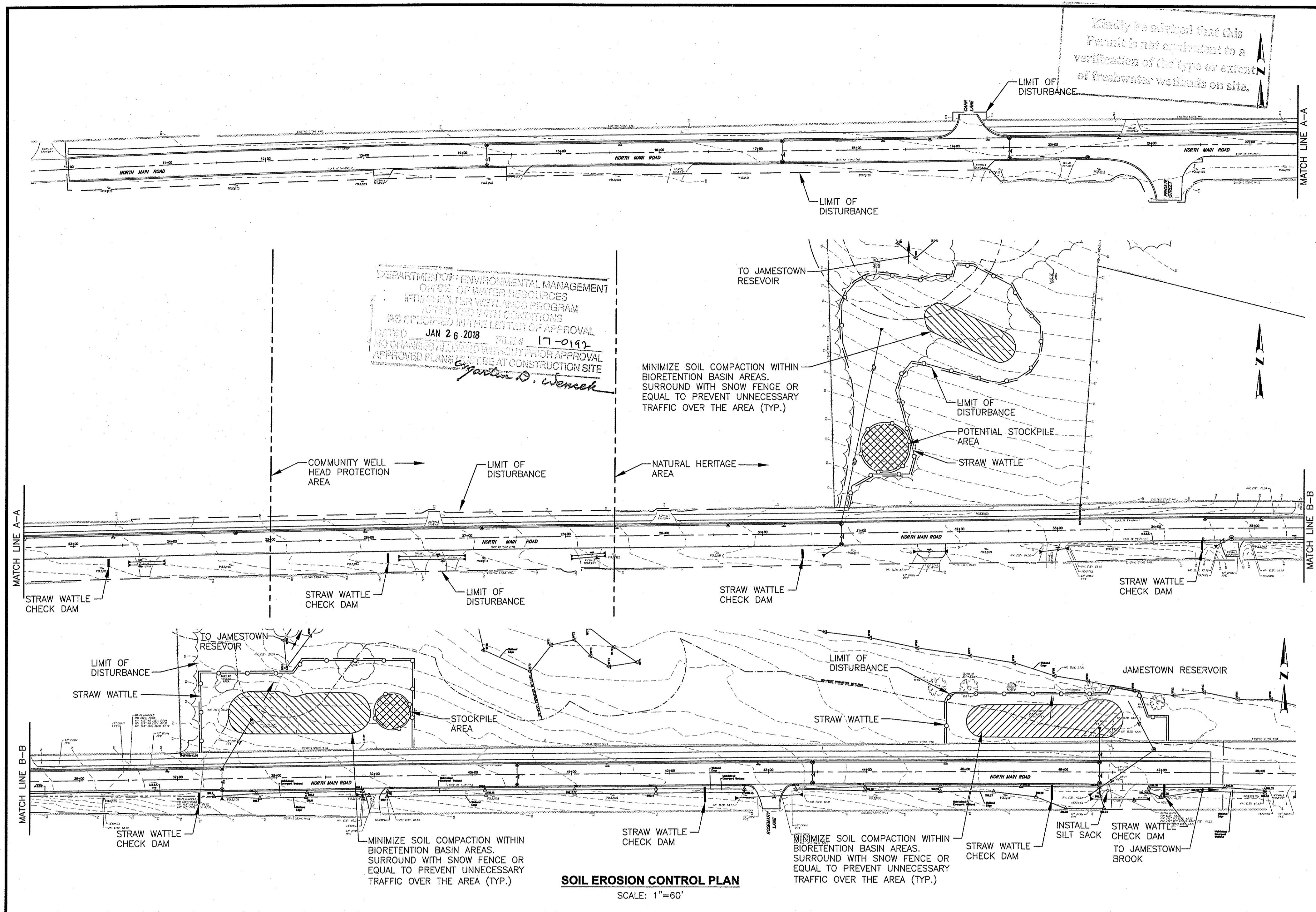
- #### DRAINAGE NOTES:
1. CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRATE.
  2. SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER, PRIOR TO ORDERING.
  3. ALL STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
  4. ALL FRAMES AND GRATES TO BE 4-FLANGE, UNLESS NOTED OTHERWISE.
  5. ALL DRAINAGE PIPE SHALL BE RCP CLASS V OR AS NOTED, PIPE BEDDING SHALL BE CRUSHED STONE WRAPPED IN FILTER FABRIC OR GRAVEL BORROW COMPACTED TO 95% DRY DENSITY (MODIFIED PROCTOR METHOD) (REFER TO MISCELLANEOUS DETAILS).
  6. ALL CATCH BASINS, MANHOLES AND DRAIN LINES WITHIN THE WORK LIMITS ARE TO BE CLEANED AND FLUSHED BY THE CONTRACTOR PRIOR TO ACCEPTANCE OF THE PROJECT AT NO ADDITIONAL COST.
  7. IF THE CONTRACTOR ELECTS TO PERFORM THE DRAINAGE WORK PRIOR TO RECLAMATION, THEN A 2" TEMPORARY BITUMINOUS PAVEMENT PATCH SHALL BE INSTALLED OVER THE TRENCH WIDTH IMMEDIATELY FOLLOWING PIPE INSTALLATION.

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*Martin D. Wenczek*

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**DUST CONTROL NOTES**

ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE TOWN OR ENGINEER, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS (AS RECOMMENDED BY THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK", ISSUED 1989, REVISED 2014) TO CONTROL DUST:

- A. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
- B. CALCIUM CHLORIDE SHOULD BE EITHER LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE.

THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

**INSPECTION/MAINTENANCE NOTES**

1. PRIOR TO COMMENCING GRUBBING OPERATIONS AND EARTHWORK, EROSION CONTROLS SHALL BE PLACED TO PREVENT SEDIMENT FROM ENTERING EXISTING RIVER, BROOK, WETLAND AREAS AND ADJUTING PROPERTIES.
2. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE NEW CULVERTS.
3. ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS RIP-RAP.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS.
6. ADDITIONAL EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE TOWN OR ENGINEER.
7. THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE R.I. STATE CONSERVATION COMMITTEE, REVISED 2014 MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE A STABLE PROJECT.
9. AFTER CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE INSPECTION REPORTS THAT WERE TAKEN DURING THE CONSTRUCTION ACTIVITIES. THE OWNER IS TO RETAIN THE INSPECTION REPORTS FOR 5 YEARS FROM THE DATE ON THE REPORT OR APPLICATION.

**GENERAL PROJECT WIDE NOTES**

1. EROSION CONTROLS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, MAINTAINED ON A REGULAR BASIS, AND SHALL BE PLACED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTY AND WETLANDS OR INTO THE EXISTING RIVER AND BROOK.
2. THE CONTRACTOR MUST REPLACE AND/OR RESEED ANY VEGETATION THAT DOES NOT DEVELOP/SURVIVE WITHIN THE PERIOD OF ONE YEAR AND HE/SHE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. ALL EROSION CONTROLS OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
4. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE; THE AREA BEYOND THE DRIPLINE SHALL BE FENCED OR ROPED OFF TO PROTECT TREES FROM CONSTRUCTION EQUIPMENT.
5. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEED, OR OTHERWISE RESTORED AT THE CONTRACTOR'S EXPENSE.
6. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED STRAW WATTLES OR COVERED WITH A TARP.
7. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING OR APPROVED EQUAL.
8. SILT FENCE, STRAW WATTLES OR STAKED HAYBALES MAY BE USED IN LIEU OF THE SILT SOCK.

**EROSION CONTROL AND SOIL STABILIZATION PROGRAM**

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE ROADWAY DRAINAGE SYSTEM AND OUTSIDE THE LIMIT OF WORK.
2. ALL PERIMETER EROSION CONTROLS SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION. PERIMETER EROSION CONTROLS CAN BE STRAW WATTLES. SILT FENCE CONFORMING TO R.I. STD. 9.2.0, CAN BE SUBSTITUTED FOR THE STRAW WATTLES.
3. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME.
4. ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEED, OR PROTECTED BY THAT DATE.
5. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
6. ALL STRAW WATTLES SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED. ONCE THE AREAS HAVE AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER, AND AFTER APPROVAL OF THE OWNER, THE CONTRACTOR SHALL REMOVE ALL STRAW WATTLES.
7. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE AS NEEDED.
8. ADDITIONAL STRAW WATTLES SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER, OWNER OR TOWN REPRESENTATIVES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DUST CONTROL AT NO ADDITIONAL COST.
10. NEW AND EXISTING CATCH BASINS SHALL BE PROTECTED USING SILT SACKS WHERE NOTED ON THE PLANS.
11. TEMPORARY DEWATERING BASINS SHALL BE UTILIZED AS REQUIRED. THE NUMBER AND SIZE OF DEWATERING BASINS REQUIRED WILL VARY DEPENDING ON SITE CONDITIONS.
12. THE CONTRACTOR SHALL REFERENCE THE "R.I. EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989, REVISED 2014, AS A GUIDE.

**NOTES:**

1. CONTRACTOR SHALL INSTALL TEMPORARY MEASURES SUCH AS: FIBER MATTING, CRUSHED STONE, HAY OR STRAW IN AREAS WHERE SLOPES OR STABILIZATION HAS FAILED.
2. CONTRACTOR SHALL INSTALL SILT SACK OR APPROVED EQUAL UNDER THE EXISTING CATCH BASIN GRATE ON THE SITE IN ADJACENT STREETS DOWN GRADIENT OF THE SITE. REMOVE AFTER CONSTRUCTION. REFER TO SITE PREPARATION PLANS FOR LOCATIONS OF SILT SACKS WITHIN EXISTING CATCH BASINS.
3. STRAW WATTLES SHALL BE INSTALLED AROUND THE PERIMETER OF THE AREA TO BE DISTURBED BY CONSTRUCTION AS NOTED ON THE PLANS. ADDITIONAL APPLICATIONS OF THESE CONTROLS MEASURES MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL INSPECT THE SITE AT A MINIMUM OF ONCE PER WEEK OR WITHIN 24 HOURS AFTER A STORM EVENT.
4. IF EROSION OR EROSION TENDENCIES ARE APPARENT ON THE SITE, THE CONTRACTOR IS RESPONSIBLE TO INSTALL ADDITIONAL CONSTRUCTION BMP'S SUCH AS SAND BAGS AS DIRECTED BY THE OWNER, LOCAL MUNICIPALITY, STATE AGENCIES OR ENGINEER DURING CONSTRUCTION.
5. IF SEDIMENT OR DEBRIS IS TRACKED ONTO EXISTING ROADWAYS AREAS ADJACENT TO THE CONSTRUCTION AREA, THE CONTRACTOR IS REQUIRED TO SWEEP THE PAVEMENT ON A DAILY BASIS. THE AREA SHALL BE INSPECTED DAILY.
6. THE CONTRACTOR IS RESPONSIBLE TO KEEP THE SITE CLEAN OF TRASH. RECOMMENDED DAILY PATROL OF THE CONSTRUCTION SHOULD BE CONDUCTED TO PICK-UP TRASH. THE OPERATOR SHALL REQUIRE THE CONTRACTOR TO HAVE PORTABLE SANITARY FACILITIES ON SITE. ROUTING CLEANING AND WASTE DISPOSAL OF THESE PORTABLE SANITARY FACILITIES IS REQUIRED.
7. THE CONTRACTOR MUST REFERENCE AND FOLLOW THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE PROJECT'S STORM WATER POLLUTION PREVENTION PLAN (SWAPP). A COPY OF THE SWAPP SHOULD BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION.

**RECEIVING WATER DATA:**

- WATERSHED BODY NAME - NORTH CARR POND/JAMESTOWN RESEVOIR, RI0007036L-01 AND JAMESTOWN BROOK RI0007036R-01 (SOURCE: R.I.D.E.M.)
- GROUNDWATER CLASSIFICATION - GAA AND GA
- JAMESTOWN RESEVOIR: NO TMDLS, NO IMPAIRMENTS, COLD/WARM FISHERY-UNASSESSED.
- JAMESTOWN BROOK: IMPAIRMENTS COPPER, IRON, LEAD, FECAL COLIFORM. TMDL FOR FECAL COLIFORM, 9-22-2011.

**SITE CONSTRUCTION SEQUENCE AND SCHEDULE:**

1. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO ANY SOIL DISTURBANCE.
2. PRIOR TO CONSTRUCTION CLEARLY MARK AREAS TO BE LEFT UNDISTURBED.
3. CLEARING OF TREES AND VEGETATION AS SHOWN ON THE SITE PLANS.
4. ESTABLISH EROSION CONTROLS AROUND STOCKPILES (SILT SOCK). COVER STOCKPILES THAT WILL REMAIN FOR LONGER THAN ONE MONTH.
5. INSTALL NEW DRAINAGE SYSTEMS.
6. RECLAIM EXISTING PAVEMENT, RE-GRADE GRAVEL BASE AND INSTALL PAVEMENT BASE LAYER.
7. INSTALL NEW PEDESTRIAN WALKWAY.
8. FINAL PAVING AND LANDSCAPING.
9. ESTIMATED DURATION OF SOIL EXPOSURE JUNE 2018 TO JUNE 2019.

**PROJECT DATA:**

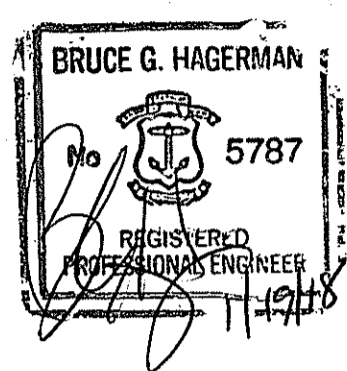
- LIMIT OF DISTURBANCE AREA = 6.50± ACRES
- THE SITE IS PARTIALLY LOCATED WITHIN OR ADJACENT TO A RIDEM NATURAL HERITAGE AREA. (SOURCE: RIDEM)
- THE SITE IS PARTIALLY LOCATED WITHIN A COMMUNITY WELLHEAD PROTECTION AREA. (SOURCE: R.I.D.E.M.)

**ADDITIONAL CONTROLS:**

1. ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
2. THE CONTRACTOR IS REQUIRED TO NOTIFY LOCAL AUTHORITIES AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WASTE MANAGEMENT, OF ANY HAZARDOUS MATERIAL SPILL.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN THE SITE IN AN ORDERLY AND CLEAN STATE. ALL CONSTRUCTION WASTE SHALL BE STORED IN APPROPRIATE CONTAINERS PRIOR TO REMOVAL AND CONTACT WITH PRECIPITATION SHALL BE KEPT TO A MINIMUM.
4. GENERAL MAINTENANCE PROCEDURES ARE OUTLINED IN THE ACCOMPANYING SITE PLANS. IN ADDITION, THE OPERATOR AND CONTRACTOR ARE REQUIRED TO INSPECT ALL EROSION CONTROLS ON THE SITE AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER A RAIN EVENT, WHICH GENERATES 0.25 INCHES OF RAIN IN A TWENTY-FOUR (24) HOUR PERIOD AND/OR AFTER A SIGNIFICANT AMOUNT OF RUNOFF.
5. CONCRETE WASHOUT SHALL BE PERFORMED USING ONE OF THE METHODS LISTED IN SECTION 3 OF THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. THE WASHOUT AREAS ARE DESIGNATED ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
6. VEHICLE AND EQUIPMENT WASHING ON-SITE DURING CONSTRUCTION IS NOT ALLOWED.
7. A SPILL RESPONSE KIT SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.

**CROSSMAN ENGINEERING**  
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151 Centerville Road  
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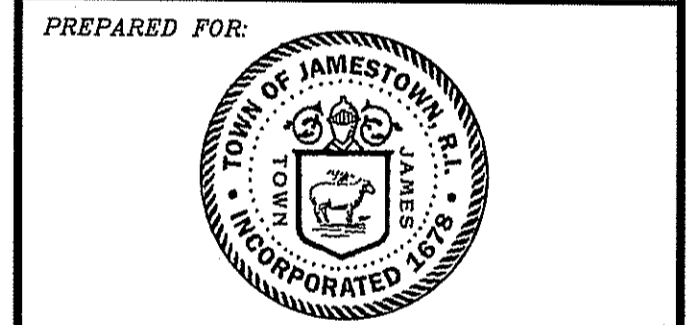
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**KEY PLAN**

**PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH**

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND



**TOWN OF JAMESTOWN**  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

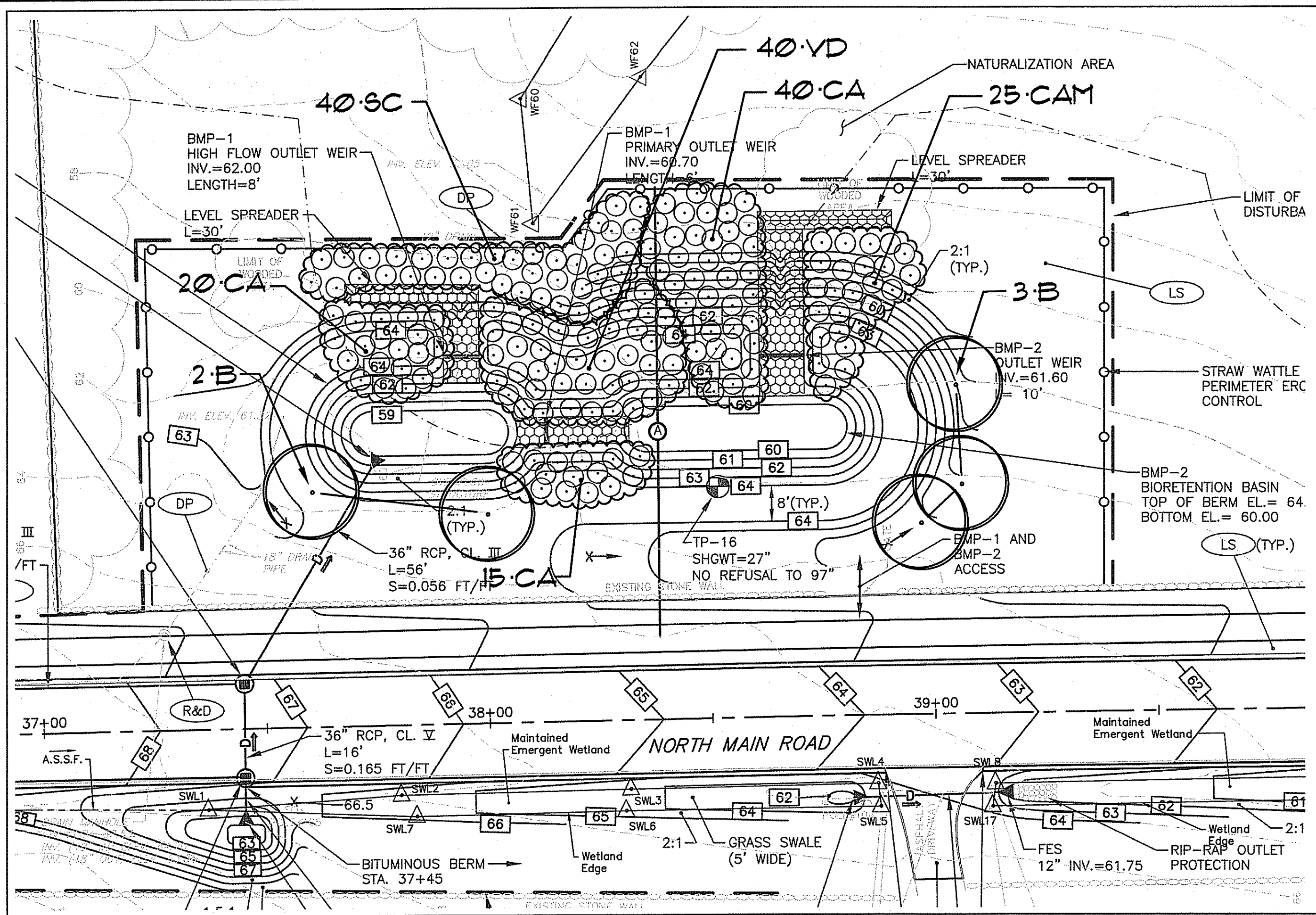
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SOIL EROSION and SEDIMENT CONTROL PLAN

DATE: AUGUST 2017  
SCALE: AS NOTED  
DWG. NAME: 2145-12-SOIL.dwg

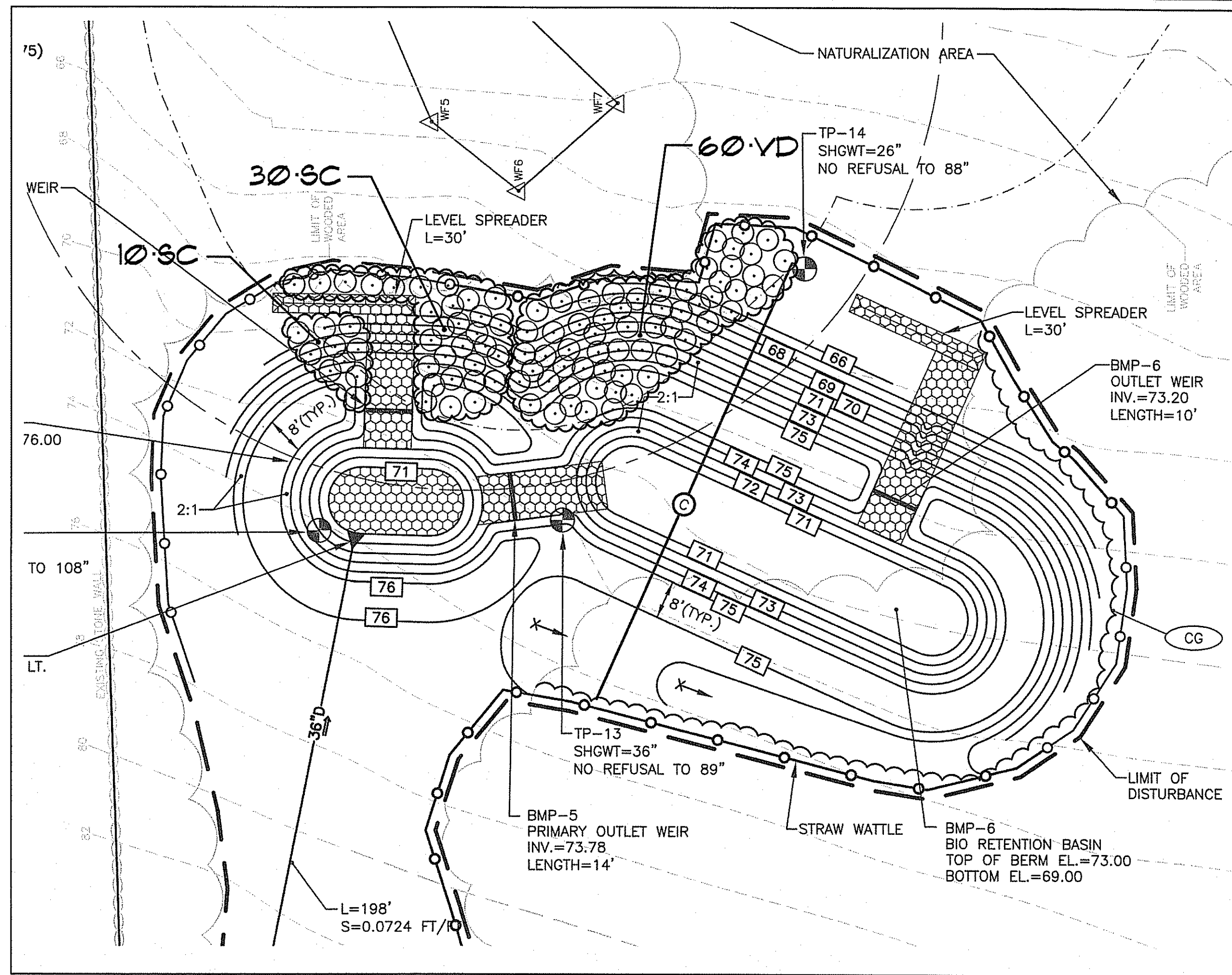
**REVISIONS**

NUMBER	REMARKS	DATE
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2	RIDEM COMMENTS	01/19/18

**DRAWING NUMBER**  
**C10**  
SHEET: 11 OF: 18



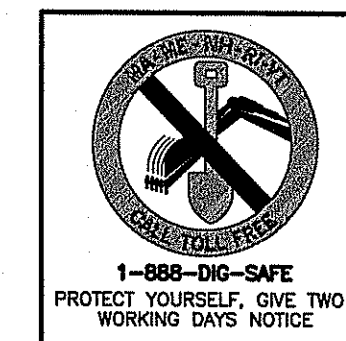
LANDSCAPE PLAN - BMP 1 & 2



LANDSCAPE PLAN - BMP 5 & 6

No.	Revision:	Date:
1	ADD SWALE FLAGS	11-20-2011
2	BMP 3 & 4 REVISION	01-19-2012

REFERENCES:  
 "PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH" DRAWINGS C-7, C-8 & C-9 BY CROSSMAN ENGINEERING DATED THROUGH REVISION OF 01-19-2012.

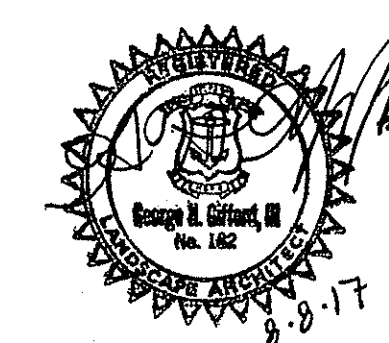


# NORTH ROAD DRAINAGE IMPROVEMENTS

JAMESTOWN, RI

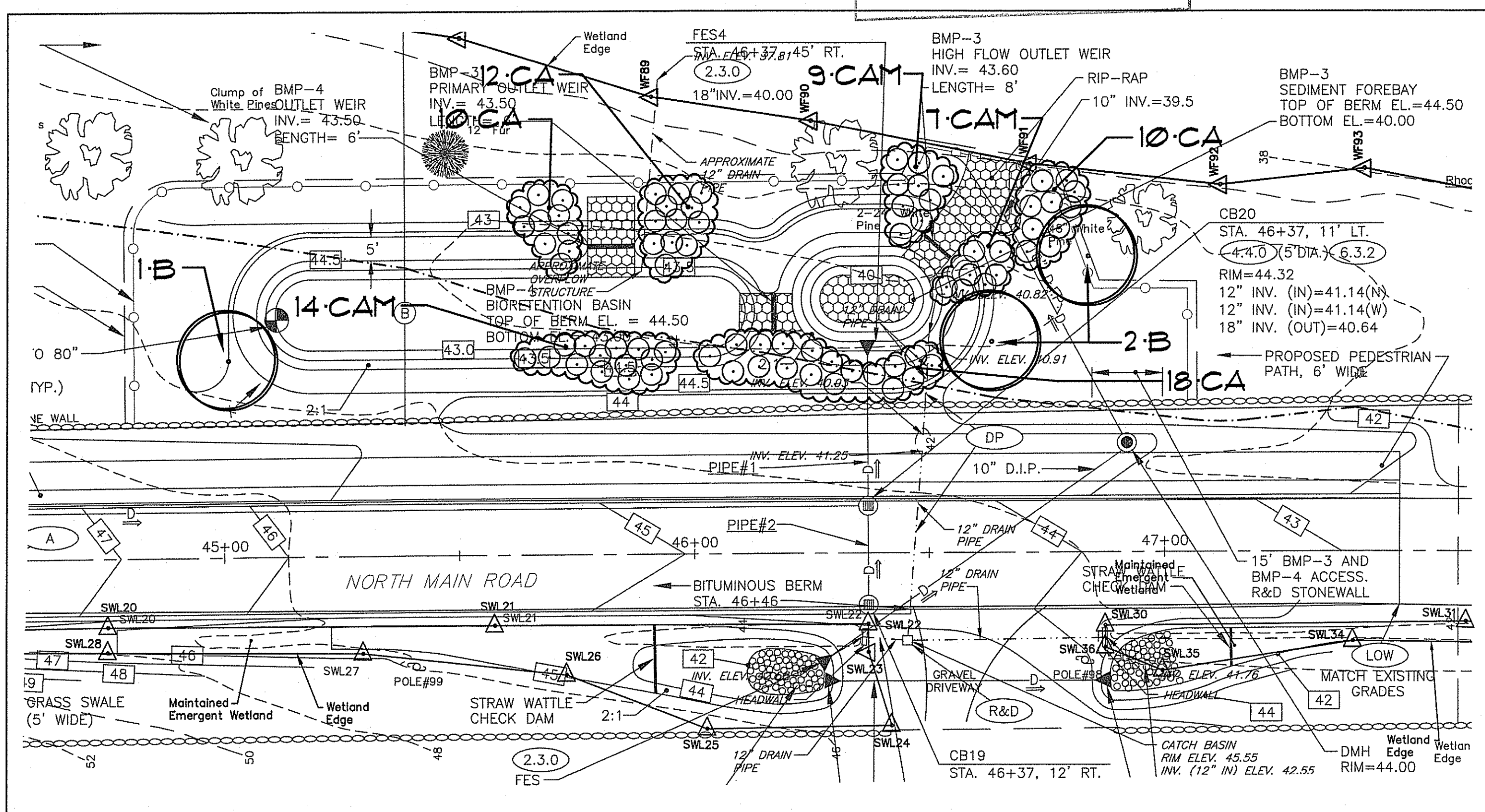
OWNER / APPLICANT:  
 Town of Jamestown  
 Department of Public Works  
 93 Narragansett Avenue  
 Jamestown, RI 02835

THE GIFFORD DESIGN GROUP, Inc.  
 LANDSCAPE ARCHITECTURE ENVIRONMENTAL PLANNING  
 4096 MENDON ROAD, CUMBERLAND, RHODE ISLAND 02864  
 PHONE (401) 671-6336 FAX (401) 671-6466



Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

SCALE: 1" = 20'

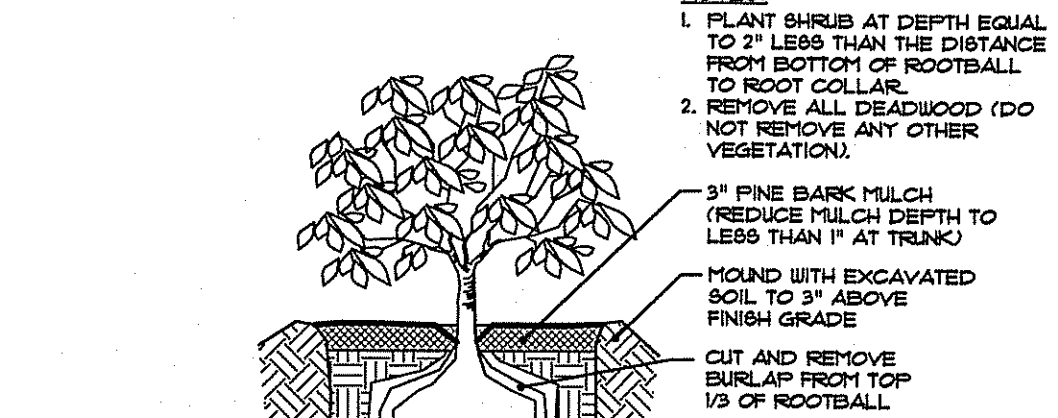
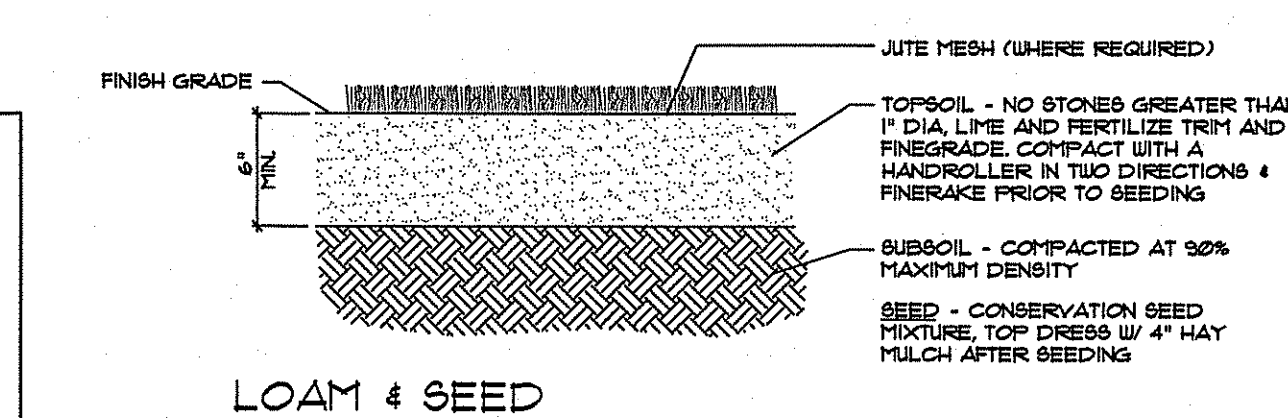


LANDSCAPE PLAN - BMP 3 & 4

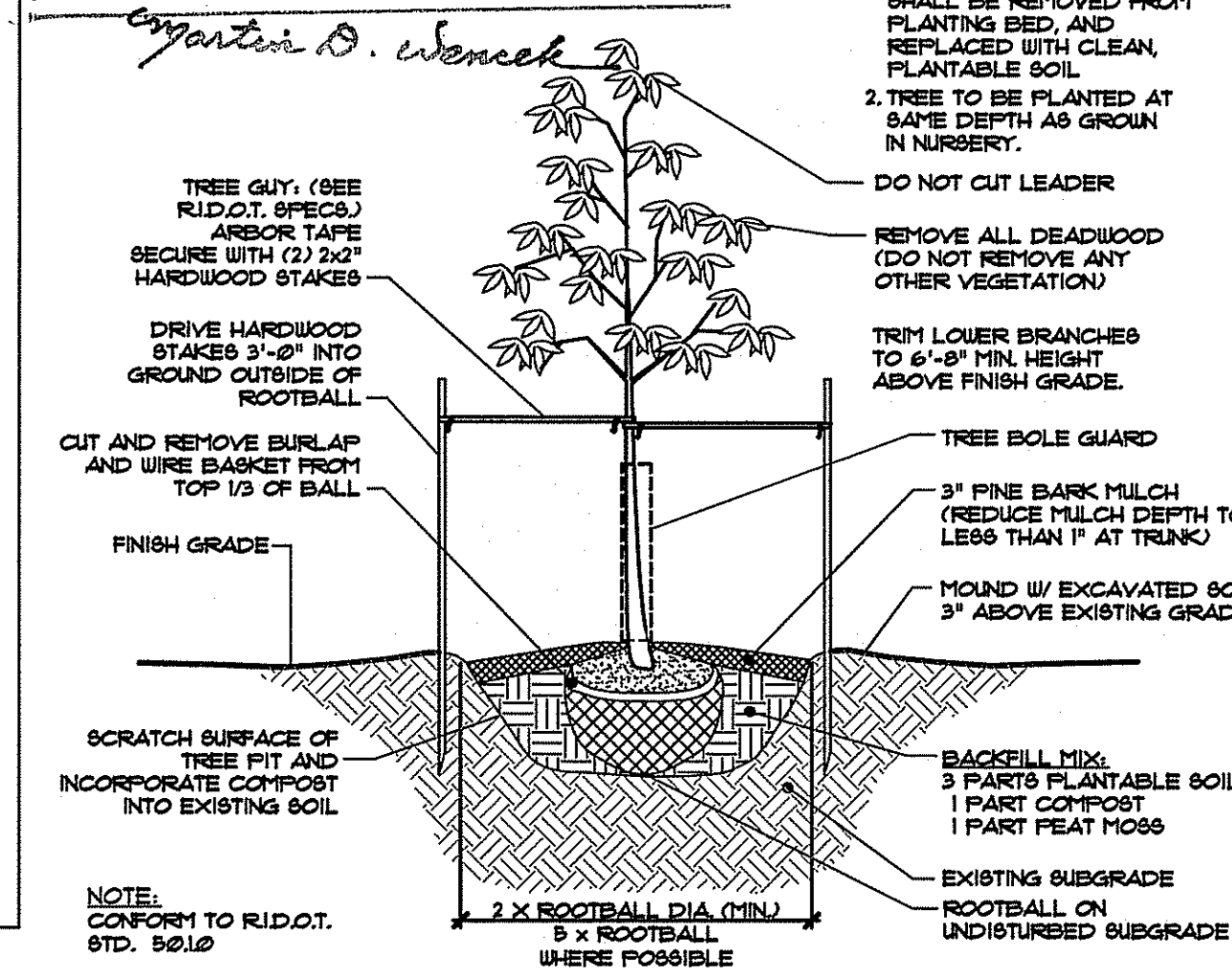
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SCALE: 1" = 20'

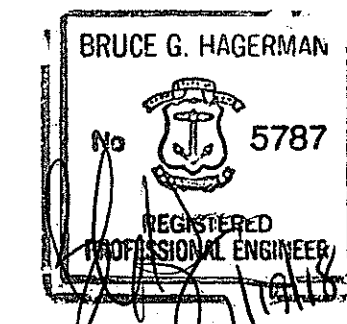
SCALE: 1" = 20'



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
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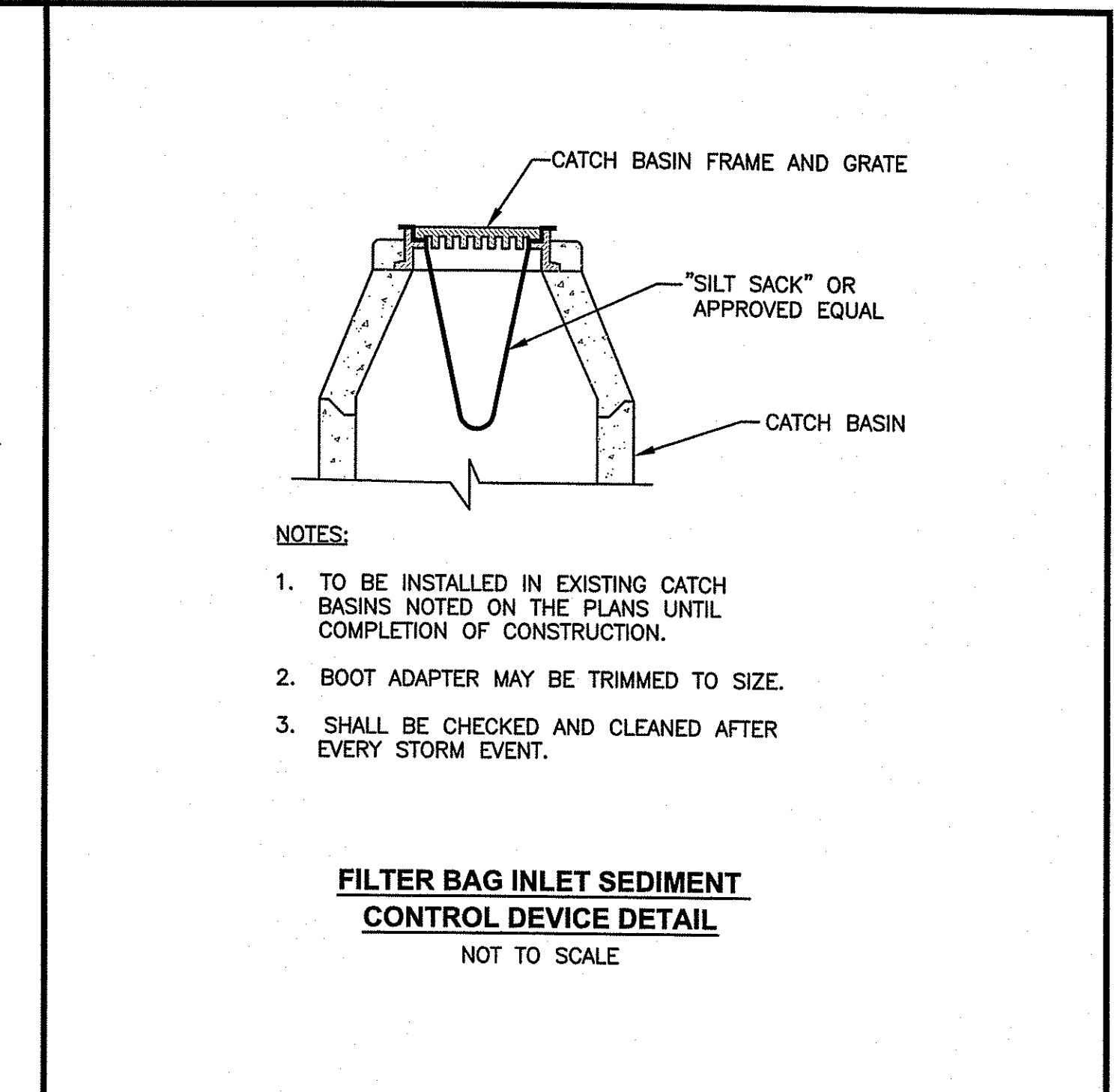
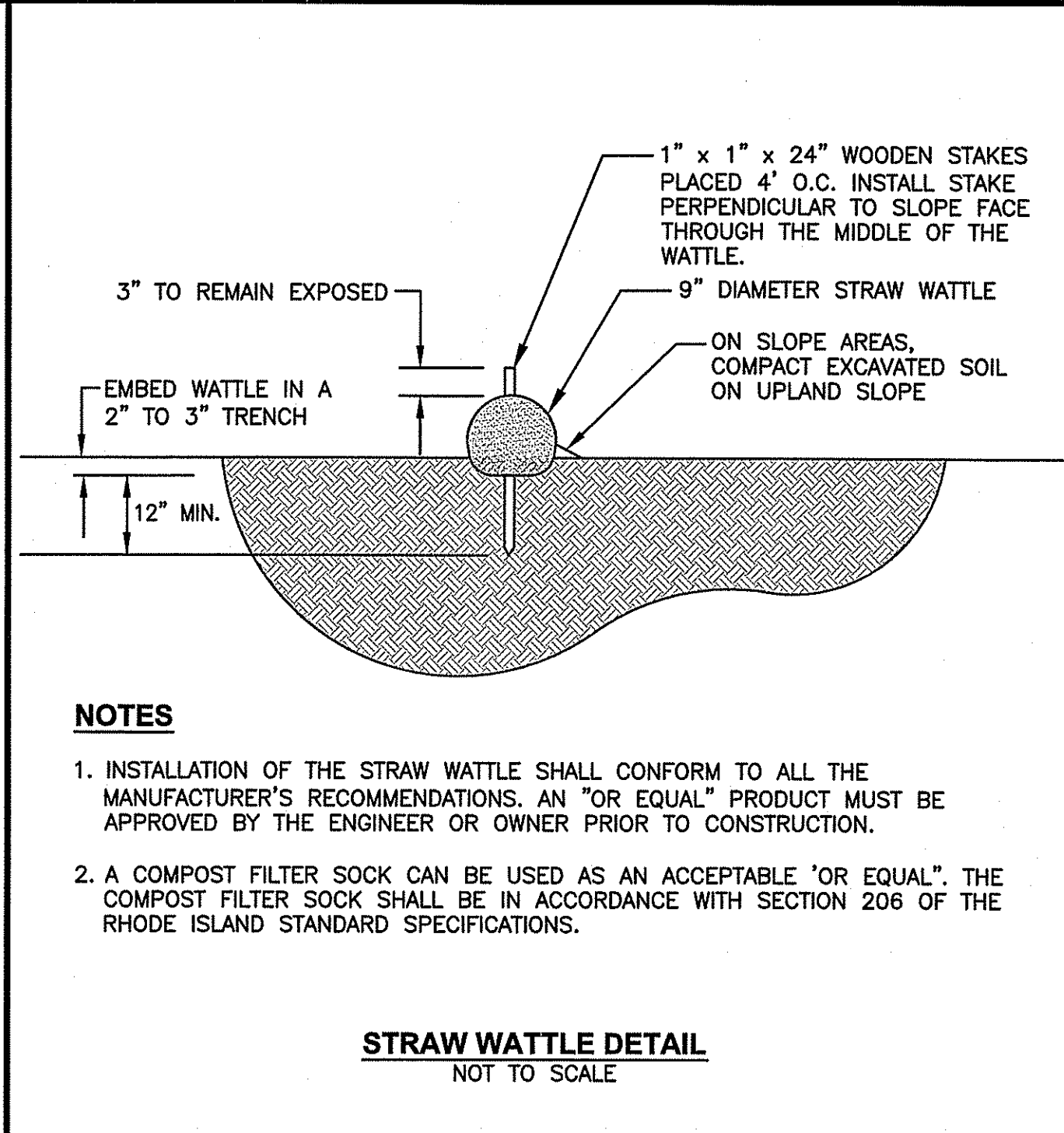
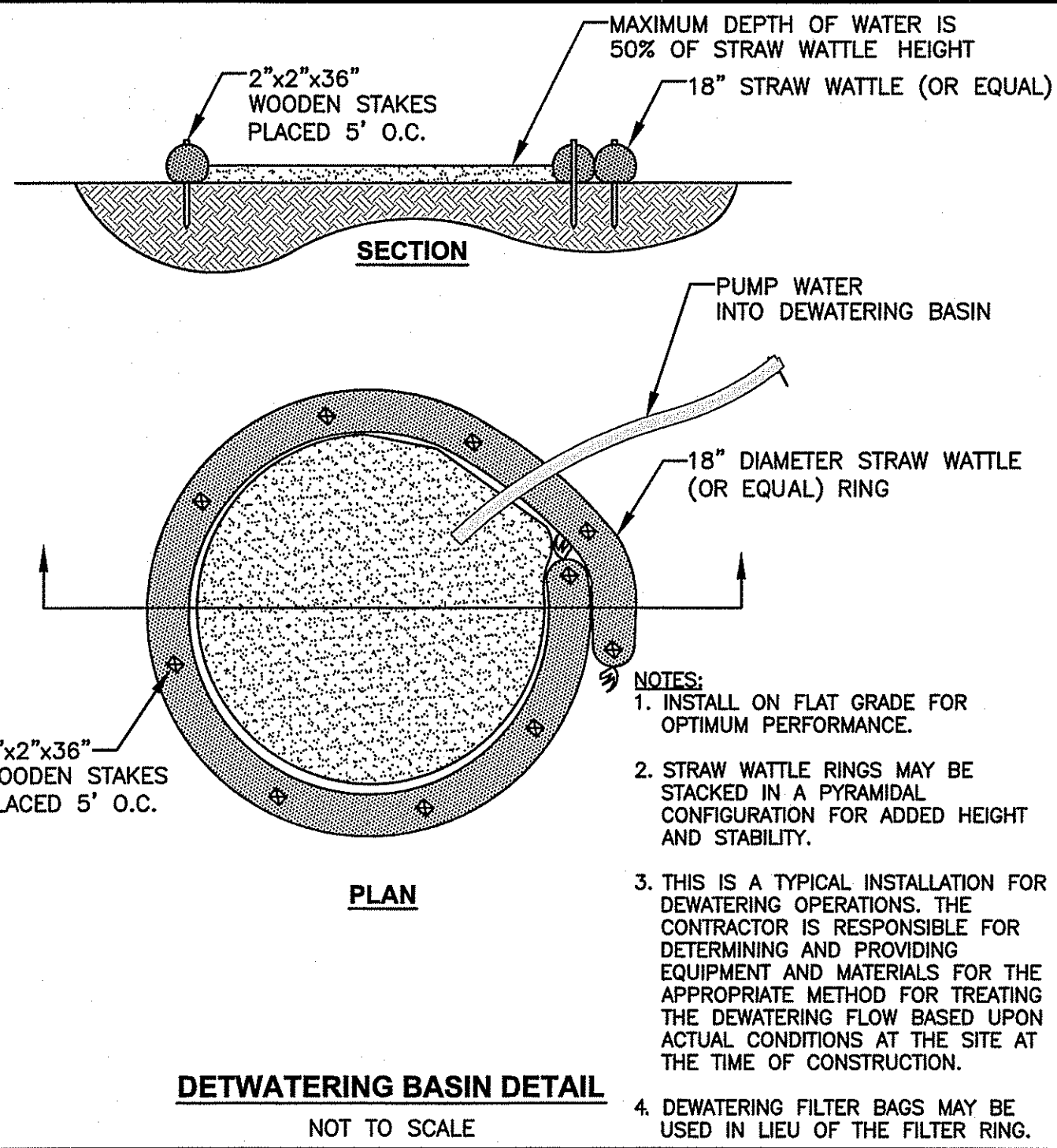
Key	Botanical Name/ Common Name	Size	Qty	Comment
B	BETULA NIGRA River Birch	6'-1'	8	3-Stem Clump B & B
CA	CLETHRA ALNIFOLIA Sweet Pepperbush	18"-24"	125	Container
CAM	CORNUS AMOMUM Silky Dogwood	18"-24"	55	Container
SC	SAMBUCUS CANADENSIS Common Elderberry	18"-24"	80	Container
VD	VIBURNUM DENTATUM Northern Arrowwood	18"-24"	120	Container



# LANDSCAPE PLAN

PROJECT NO. 231.820 DRAWING 12 OF 18  
 DATE: AUGUST 2017 DRAWING NO:  
 SCALE: AS SHOWN  
 DRAWN BY: CB  
 CHECKED BY: GHG

L-1



**Crossman Engineering**

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BRUCE G. HAGERMAN  
No. 5787  
PROFESSIONAL ENGINEER  
STATE OF RHODE ISLAND

KEY PLAN

**PROJECT TITLE:**  
PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

PREPARED FOR:

**TOWN OF JAMESTOWN**  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JAN 26 2018 FILE # 17-0192  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Walter D. Wenzel*

**DRAWING TITLE:**  
MISCELLANEOUS DETAILS  
PLAN NO. 1

DATE: AUGUST 2017 SCALE: AS NOTED

DWG. NAME: 2145-13-DET\_1.dwg

**REVISIONS**

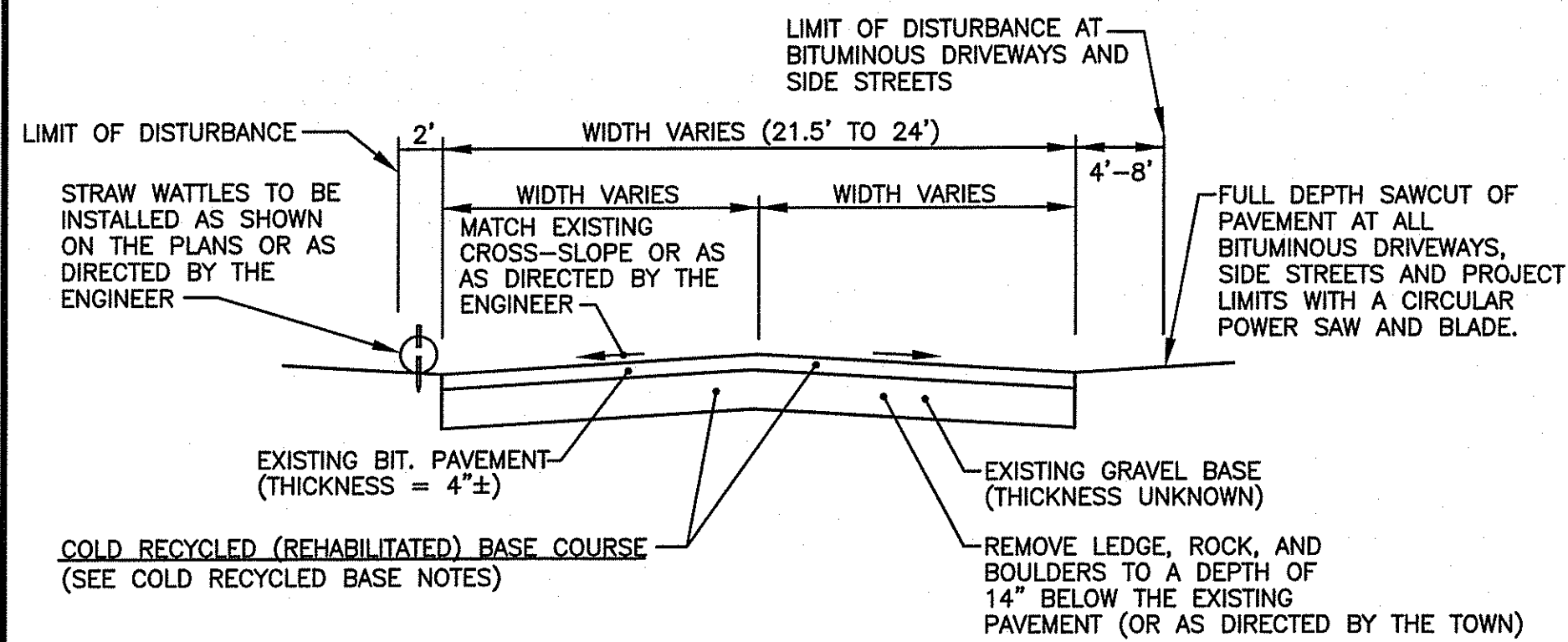
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

**DRAWING NUMBER**  
**C11**  
SHEET: 13 OF 18

**SOIL EVALUATION DATA**

TEST PITS PERFORMED BY BRUCE HAGERMAN (RI PE 5787), CROSSMAN ENGINEERING, ON JANUARY 30, 2017.

TEST HOLE #	APPROXIMATE SURFACE EL.	SOIL DESCRIPTION	DEPTH TO IMPERVIOUS/LIMITING LAYER	GW SEEPAGE	DEPTH TO SEASONAL HIGH WATER TABLE	SEASONAL HIGH WATER TABLE ELEVATION
TEST HOLE #1	0"	VERY DARK GRAY SILT LOAM-FRIBLE	12"	0"	>60"	>60"
TEST HOLE #2	0"	VERY DARK GRAY SILT LOAM-FRIBLE	6"	30"	16"	116.7±
TEST HOLE #3	0"	VERY DARK BROWN SANDY LOAM-FRIBLE	12"	9"	9"	115.7±
TEST HOLE #4	0"	VERY DARK BROWN SANDY LOAM-FRIBLE	12"	12"	12"	113±
TEST HOLE #4A	0"	VERY DARK GRAY SANDY LOAM/SILT LOAM-FRIBLE	10"	54"	24"	113.5±
TEST HOLE #5	0"	VERY DARK GRAY LOAMY SAND-FRIBLE	10"	60"	22"	114.1±
TEST HOLE #5A	0"	VERY DARK GRAY LOAMY SAND-FRIBLE	6"	36"	36"	113±
TEST HOLE #6	0"	VERY DARK GRAY LOAMY SAND/SILT LOAM-FRIBLE	10"	NONE	10"	115.1±
TEST HOLE #7	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	8"	NONE	8"	114.3±
TEST HOLE #8	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	10"	NONE	24"	108±
TEST HOLE #9	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	14"	NONE	38"	96.9±
TEST HOLE #10	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	13"	79"	24"	90±
TEST HOLE #11	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	14"	NONE	28"	85.4±
TEST HOLE #12	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	9"	NONE	23"	72.1±
TEST HOLE #13	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	10"	NONE	36"	69±
TEST HOLE #14	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	13"	67"	20"	62.9±
TEST HOLE #15	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	12"	NONE	36"	57.8±
TEST HOLE #16	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	14"	NONE	96"	57.8±
TEST HOLE #17	0"	VERY DARK GRAY FINE SANDY LOAM-FRIBLE	6"	44"	16"	42.2±

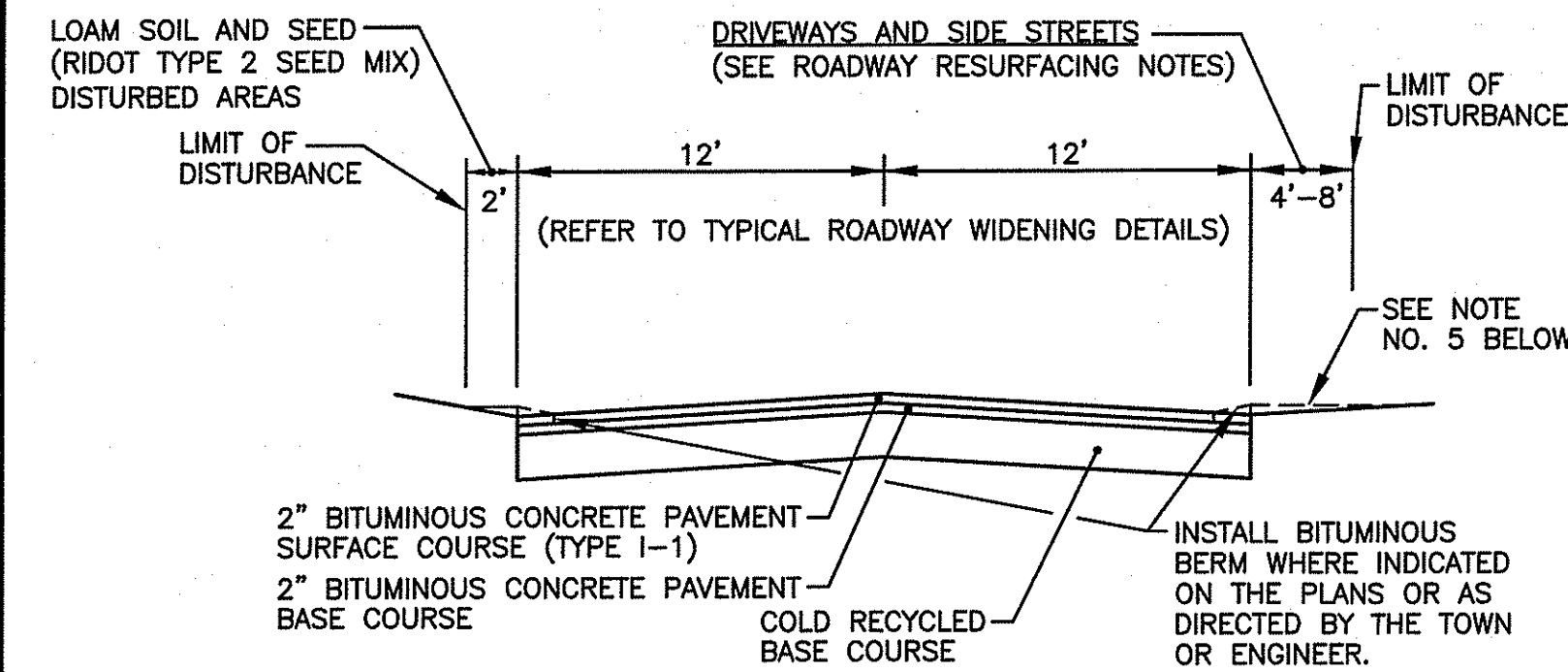


**COLD RECYCLED BASE COURSE NOTES AND DETAILS**

NOT TO SCALE

**COLD RECYCLED BASE NOTES:**

- EXISTING PAVEMENT STRUCTURE TO BE MILLED AND MIXED WITH THE EXISTING GRAVEL BASE TO A DEPTH OF 8" OR AS DIRECTED BY THE ENGINEER.
- THE NEW RECYCLED BASE COURSE SHALL CONFORM TO THE GRADATION IN SECTION 02406 OF THE SPECIFICATIONS.
- THE NEW RECYCLED BASE COURSE SHALL BE RESHAPED, ROLLED, COMPACTED, AND GRADED TO MATCH THE PRE-CONSTRUCTION CROSS SECTION OR AS DIRECTED BY THE ENGINEER. CALCIUM CHLORIDE SHALL BE APPLIED PER SECTION 02406 OF THE SPECIFICATIONS. THE COMPACTION SHALL BE A UNIFORM DENSITY OF NOT LESS THAN 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T155, METHOD D.
- ALL LEDGE REMOVED IN THE PROJECT SHALL BE REPLACED WITH GRAVEL BORROW SUBBASE OR EXCESS RECYCLED BASE MATERIAL AS APPROVED BY THE ENGINEER.
- ALL UNSUITABLE MATERIAL ENCOUNTERED IN THE EXISTING GRAVEL BASE SHALL BE REMOVED AND THE VOID REPLACED WITH GRAVEL BORROW SUBBASE OR EXCESS RECYCLED BASE MATERIAL AS APPROVED BY THE ENGINEER.
- RECYCLED BASE MATERIAL TO BE REMOVED AND GRADED AS NECESSARY SO THAT THE LEVEL OF THE NEW PAVEMENT MATCHES THE PRE-CONSTRUCTION LEVEL ADJACENT TO EXISTING DRIVEWAYS, SIDEWALKS, STEPS, SIDE STREETS AND AT THE PROJECT LIMITS.
- ALL FRAMES AND GRATES AND FRAMES AND COVERS WITHIN THE PROJECT LIMITS/LIMITS OF DISTURBANCE ARE TO REMAIN IN PLACE DURING MILLING. THE CONTRACTOR MUST AVOID THESE STRUCTURES AND REMOVE THE SURROUNDING PAVEMENT BY OTHER METHODS.
- ALL CONCRETE DRIVEWAYS, BRICK DRIVEWAYS AND CONCRETE BLOCK DRIVEWAYS ARE TO REMAIN. THE RECYCLING OPERATION MUST AVOID CONTACT WITH ALL CONCRETE AND BRICK DRIVEWAYS. THE NEW BASE COURSE AND PAVEMENT LEVELS MUST BE ADJUSTED TO MATCH FINISH GRADES WITH ALL CONCRETE AND BRICK DRIVEWAYS.
- THE CONTRACTOR SHALL BE AWARE THAT EXISTING DRY STONE WALLS EXIST WITHIN ONE (1) FOOT OF THE EDGE OF PAVEMENT WITHIN THE PROJECT LIMITS. CARE SHALL BE UTILIZED DURING THE CONSTRUCTION OPERATIONS TO PREVENT ANY DAMAGE TO THE WALLS. ANY WALLS DAMAGED SHALL BE REPAIRED BY THE CONTRACTOR PER THE DETAIL AT NO ADDITIONAL COST TO THE OWNER.
- ANY MAILEDGES THAT OVERHANG THE EDGE OF PAVEMENT AND WILL BE DAMAGED DURING THE RECYCLING PROCESS SHALL BE REMOVED AND RESET.
- IF NEW GRAVEL BASE MATERIAL IS NECESSARY, IT SHALL MEET THE R.I.D.O.T. SPECIFICATIONS FOR GRAVEL BORROW SUBBASE.
- ALL SURPLUS COLD RECYCLED BASE MATERIAL SHALL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAULING THE MATERIAL TO A LOCATION IN THE TOWN OF BURLINGAME AS DETERMINED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
- AT THE END OF EACH DAY OF WORK THE RECLAIMED BASE MATERIAL SHALL BE GRADED WITH A MOTORIZED GRADER AND COMPACTED WITH A ROLLER IN ORDER TO MAINTAIN THE ROAD PASSABLE AND SAFE FOR EXISTING TRAFFIC.
- PRIOR TO RECYCLING THE PAVEMENT, THE CONTRACTOR SHALL DEPRESS ALL WATER GATE VALVE BOXES.
- ALL EXISTING GRANITE AND CONCRETE CURBING ON HILL ROAD, SNAKE HILL ROAD, LEDGEWOOD LANE INTERSECTION, CENTRAL ROAD INTERSECTION IS TO REMAIN. THE RECYCLING OPERATIONS MUST AVOID CONTACT WITH CURBING. ANY DAMAGE TO CURBING OR ADJACENT CONCRETE SIDEWALK MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE NEW BASE COURSE AND PAVEMENT LEVELS MUST BE ADJUSTED TO MAINTAIN A 6" REVEAL AT THE CURB FACE AND MATCH FINISH GRADES AT ALL DRIVEWAY LOCATIONS.
- ALL FRAMES AND COVERS (SEWER AND DRAINAGE) FRAMES AND GRATES, WATER GATE BOXES THROUGHOUT THE PROJECT LIMITS ARE TO BE ADJUSTED TO GRADE PRIOR TO FINAL PAVING.

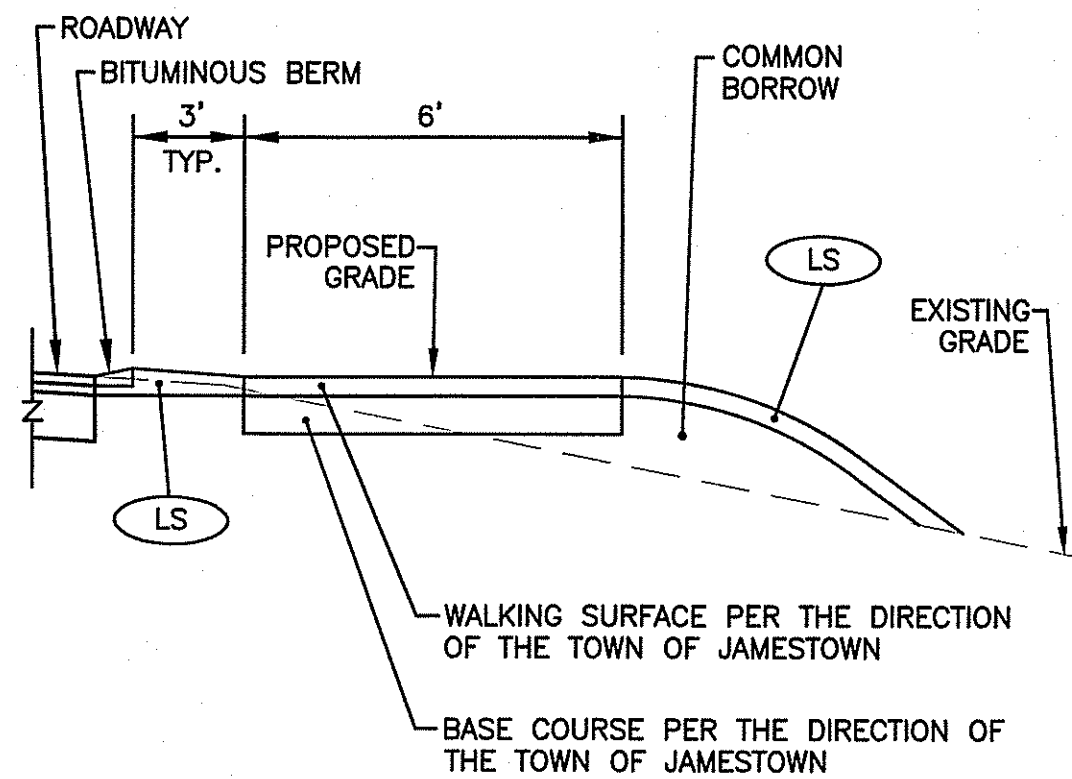


**ROADWAY RESURFACING NOTES:**

- ALL GRAVEL AND CRUSHED STONE DRIVEWAYS SHALL BE PAVED WITH BITUMINOUS PAVEMENT PER THE ABOVE LIMITS.
- EXTEND NEW PAVEMENT AND COLD RECYCLED BASE TO MATCH AT ALL BITUMINOUS DRIVEWAYS AND SIDE STREETS.
- FULL DEPTH SAWCUT AND MATCH PAVEMENT AT ALL BITUMINOUS DRIVEWAYS, SIDE STREETS AND AT THE PROJECT LIMITS. FULL DEPTH SAWCUT SHALL BE MADE WITH A CIRCULAR POWER SAW AND BLADE.
- APPLY AN ASPHALT EMULSION TACK COAT IN BETWEEN PAVEMENT COURSES AND AT ALL BITUMINOUS EDGES.
- INSTALL BITUMINOUS BERM AT ALL BITUMINOUS DRIVEWAYS WHERE AN EXISTING HUMP IS PRESENT OR AS DIRECTED BY THE ENGINEER TO DIVERT RUNOFF AWAY FROM PRIVATE PROPERTY. REFER TO DETAIL ON MISCELLANEOUS DETAILS PLAN NO. 1. THERE ARE APPROXIMATELY FOUR (4) DRIVEWAYS THAT WILL REQUIRE THE PLACEMENT OF THE BITUMINOUS DRIVEWAY BERM AT THE EDGE OF ROAD. THE BITUMINOUS CONCRETE BERM AND DRIVEWAY AREA SHALL BE HAND ROLLED.
- ALL PAVING OPERATIONS SHALL HAVE A HIGHWAY LAP, WITH THE ENDS STAGGERED AT LEAST TEN (10) FEET APART.
- WHERE NO NEW BITUMINOUS BERM IS PROPOSED GRADE GRASSED SHOULDERS TO DRAIN.
- ALL BITUMINOUS PAVEMENT MIXTURES SHALL BE FROM THE R.I.D.O.T. APPROVED LIST.
- ALL BITUMINOUS PAVEMENT MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY R.I.D.O.T.

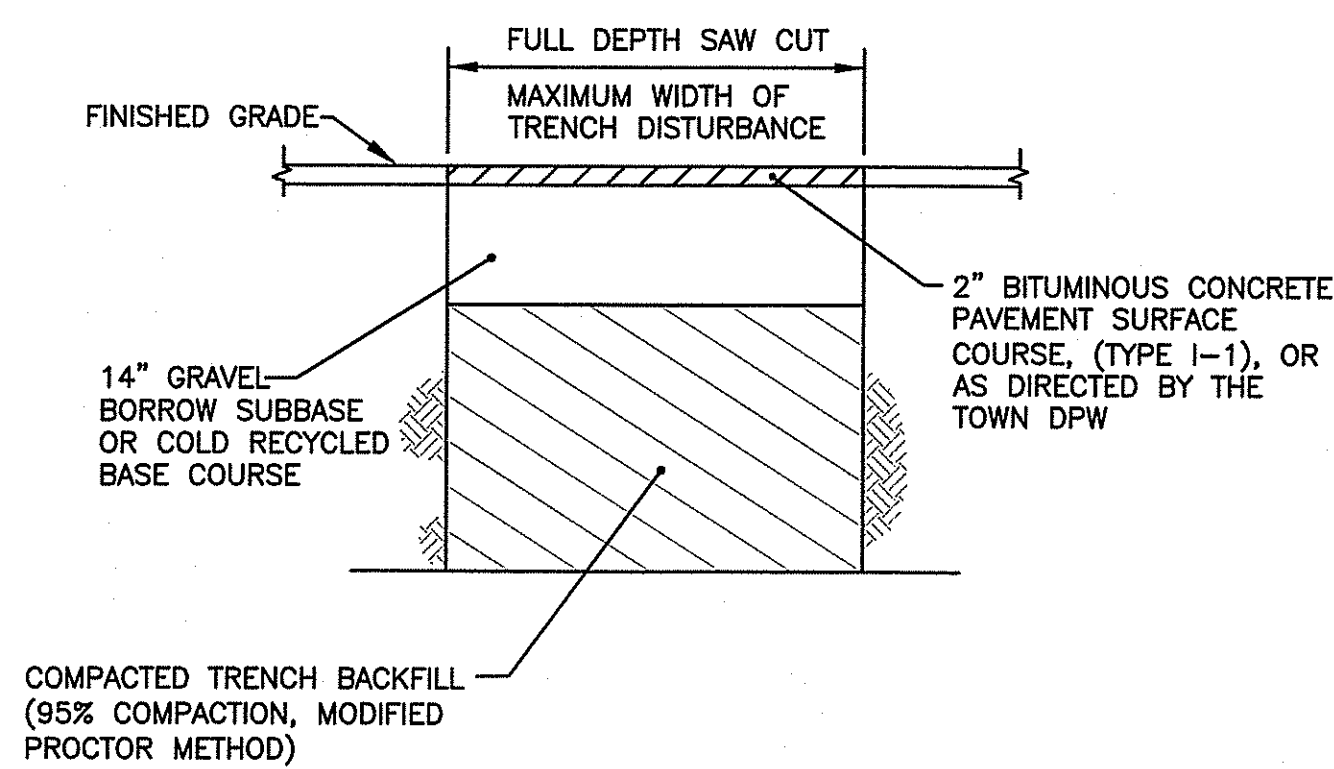
**ROADWAY RESURFACING**

NOT TO SCALE



**PEDESTRIAN WALKWAY DETAIL - WESTERLY SIDE**

NOT TO SCALE

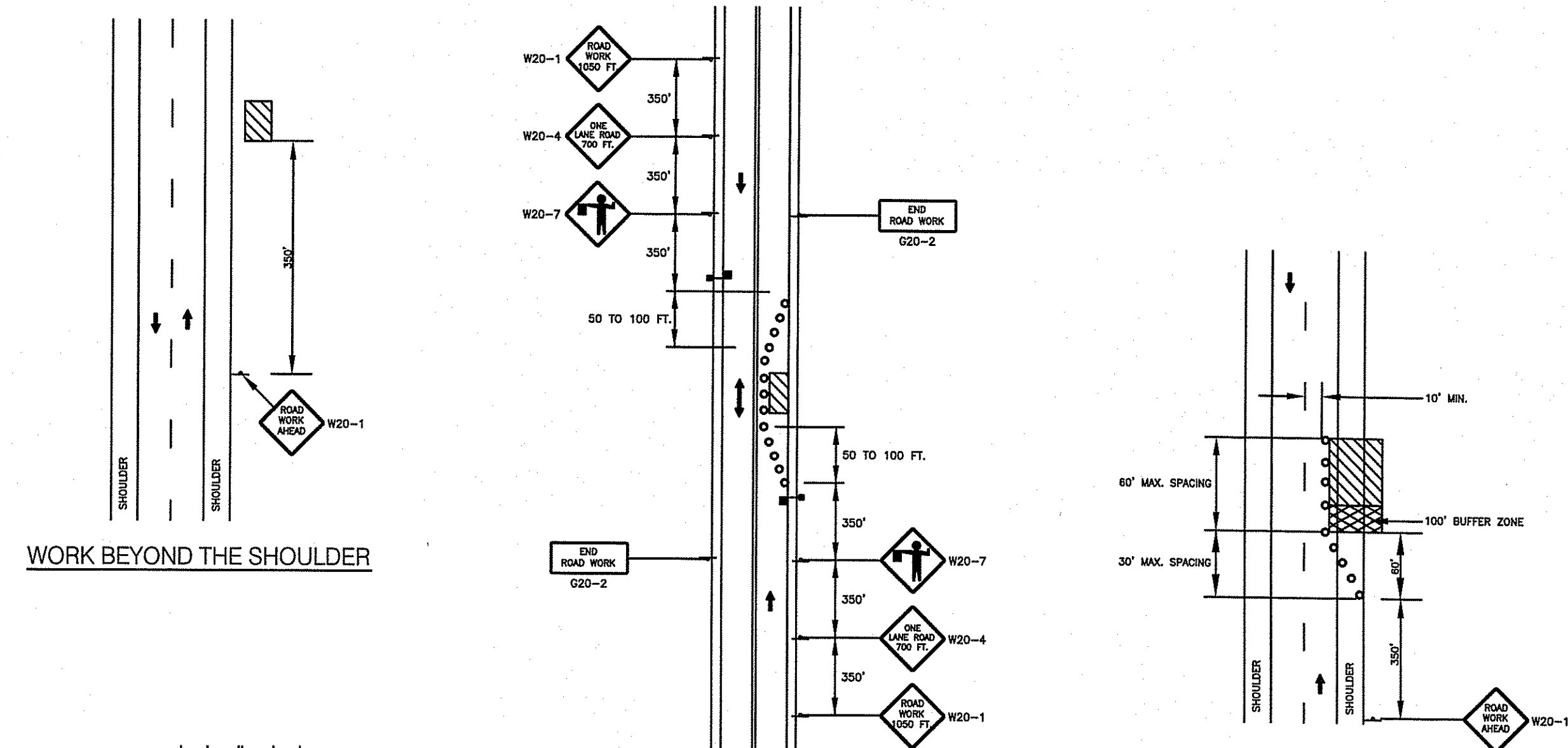


**NOTE:**

IF THE CONTRACTOR ELECTS TO PERFORM THE DRAINAGE WORK PRIOR TO RECLAMATION, THEN A 2" TEMPORARY BITUMINOUS PAVEMENT PATCH SHALL BE INSTALLED OVER THE TRENCH WIDTH IMMEDIATELY FOLLOWING PIPE INSTALLATION.

**TEMPORARY PAVEMENT REPAIR DETAIL**

NOT TO SCALE

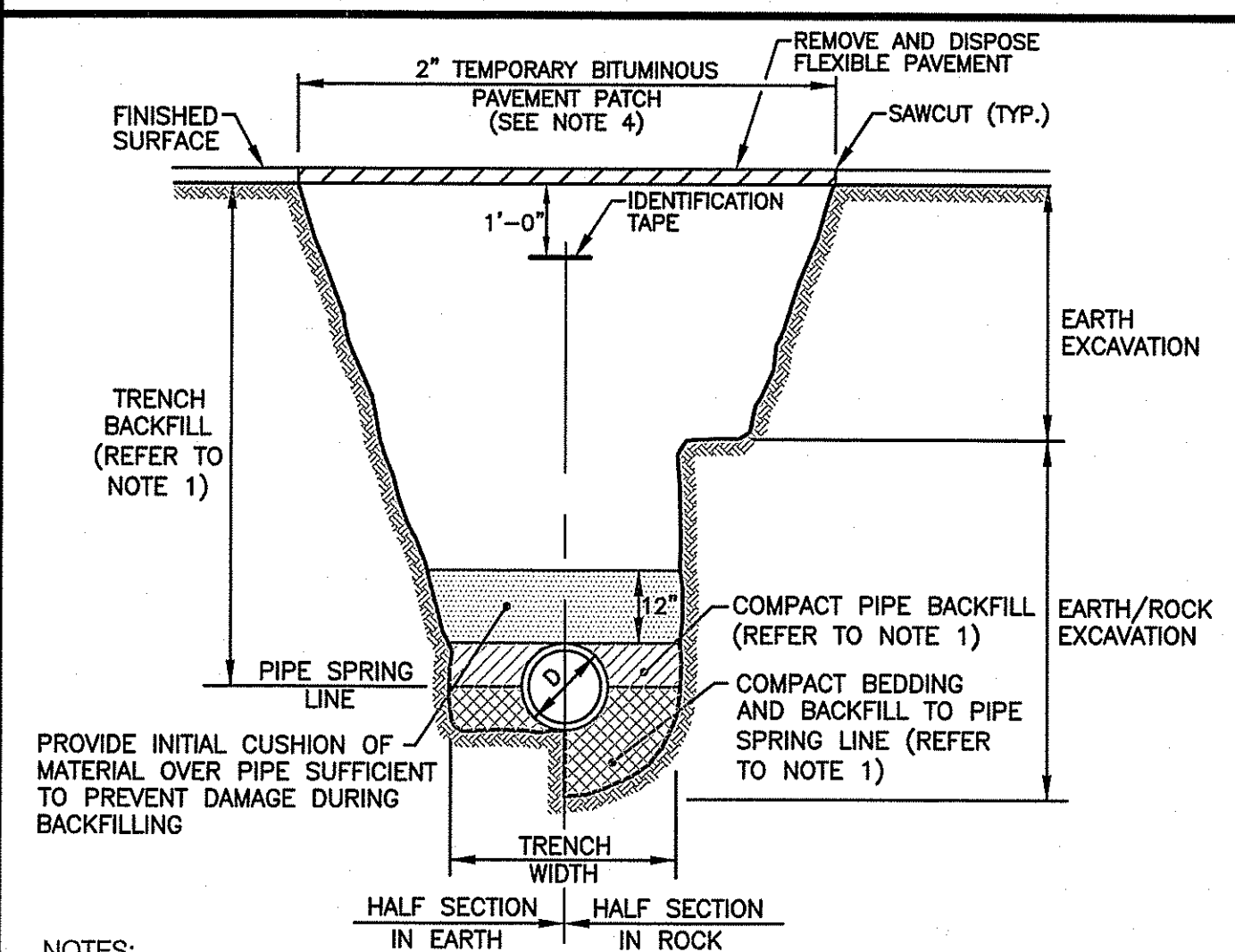


**NOTES:**

- ANY ROADWAY WORK ADJACENT TO AN INTERSECTION REQUIRES THAT A UNIFORMED TRAFFIC PERSON CONTROL TRAFFIC AT THE INTERSECTION.
- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR CONDITIONS NOT ADDRESSED ON THESE PLANS.
- ALL TEMPORARY SIGNS TO BE 36"x36" EXCEPT AS NOTED. ALL SIGNS SHALL BE INSTALLED DAILY PRIOR TO ANY WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL, INCLUDING SCHEDULING AND OBTAINING POLICE OFFICERS OR RIDOT LICENSED FLAGPERSONS DURING CONSTRUCTION.

**TRAFFIC CONTROL DETAILS**

NOT TO SCALE

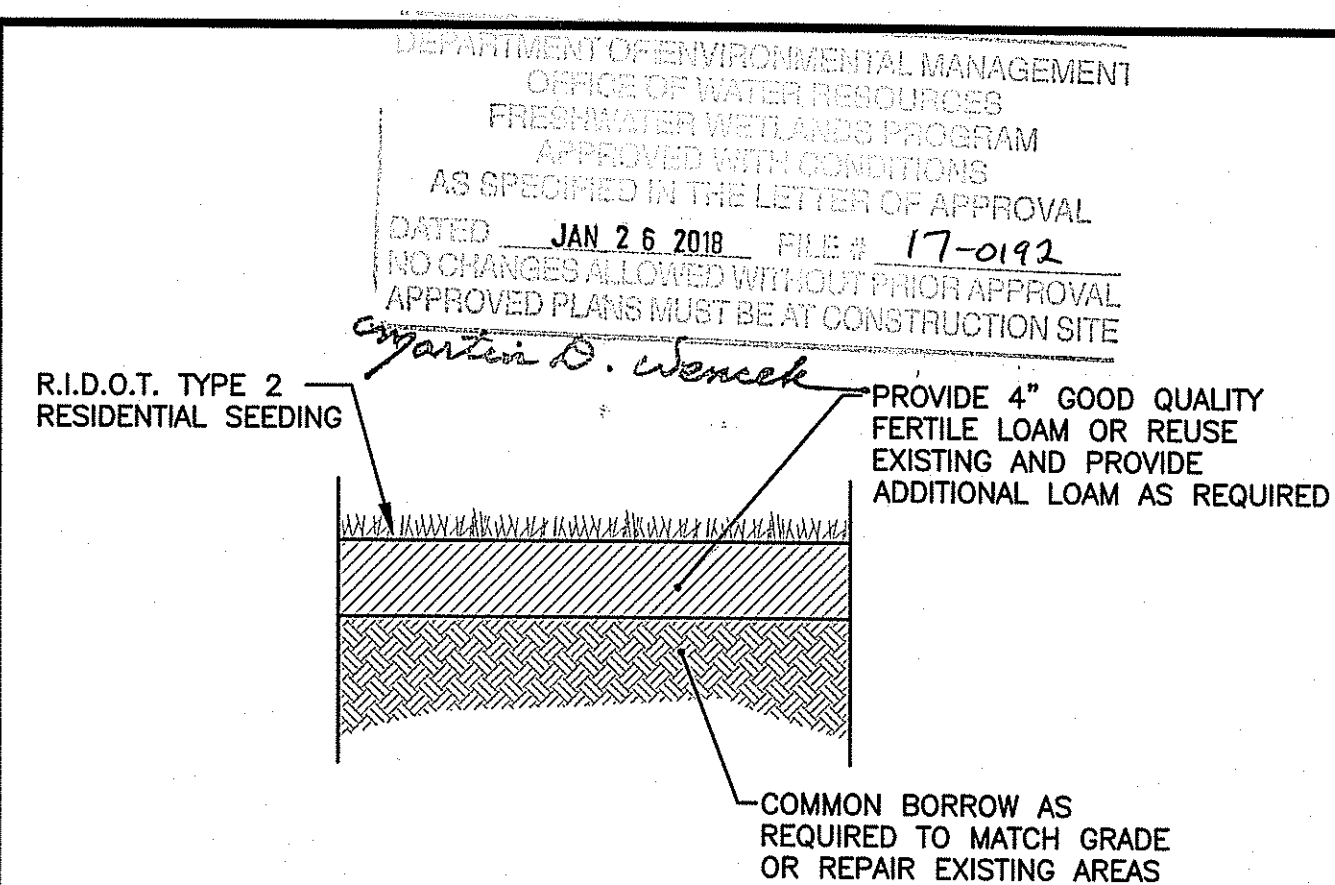


**NOTES:**

- PIPE BEDDING AND BACKFILL TO SPRING LINE SHALL CONSIST OF CRUSHED STONE-3/4" MINUS. PIPE BACKFILL SHALL CONSIST OF CRUSHED STONE (WRAPPED IN FILTER FABRIC) OR GRAVEL (3" MINUS, WITH SIEVE ANALYSIS APPROVED BY ENGINEER), OR OTHER APPROVED MATERIAL. TRENCH BACKFILL SHALL CONSIST OF SUITABLE EXCAVATED MATERIAL OR OTHER APPROVED MATERIAL. ALL BEDDING/BACKFILL TO BE COMPACTED TO 95% DRY DENSITY, MODIFIED PROCTOR METHOD.
- ALL TRENCH EXCAVATION AND ANY SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND OSHA REGULATIONS.
- MINIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 12". MAXIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 24".
- IF THE CONTRACTOR ELECTS TO PERFORM THE DRAINAGE WORK PRIOR TO RECLAMATION, THEN A 2" TEMPORARY BITUMINOUS PAVEMENT PATCH SHALL BE INSTALLED OVER TRENCH WITH IMMEDIATELY FOLLOWING PIPE INSTALLATION.

**TRENCH DETAIL**

NOT TO SCALE



**NOTES:**

- THE CONTRACTOR WILL BE RESPONSIBLE FOR WATERING DURING THE COURSE OF THE GROWING SEASON FOR A PERIOD OF ONE (1) YEAR.
- THE CONTRACTOR SHALL HAND ROLL ALL LOAM AREAS PRIOR TO SEEDING. THE FINAL COMPACTED DEPTH SHALL BE 4 INCHES. ANY AREAS THAT ARE SUBJECT TO EROSION TENDACIES SHALL RECEIVE AN EROSION CONTROL TREATMENT.
- THE ACCEPTABLE SEEDING DATES ARE FROM APRIL 1 TO MAY 31 AND AUGUST 15 TO OCTOBER 15.
- THE SEEDING RATE FOR R.I.D.O.T. TYPE 2 RESIDENTIAL SEED SHALL BE 150 POUNDS PER ACRE.

**LOAM - SEED DETAIL**

NOT TO SCALE



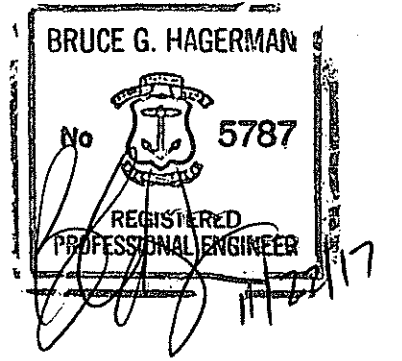
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**KEY PLAN**

**PROJECT TITLE:**

**PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH**

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

**PREPARED FOR:**



**TOWN OF JAMESTOWN**  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

**DRAWING TITLE:**

**MISCELLANEOUS DETAILS PLAN NO. 2**

DATE: AUGUST 2017 SCALE: AS NOTED

DWG. NAME: 2145-13-DET\_2.dwg

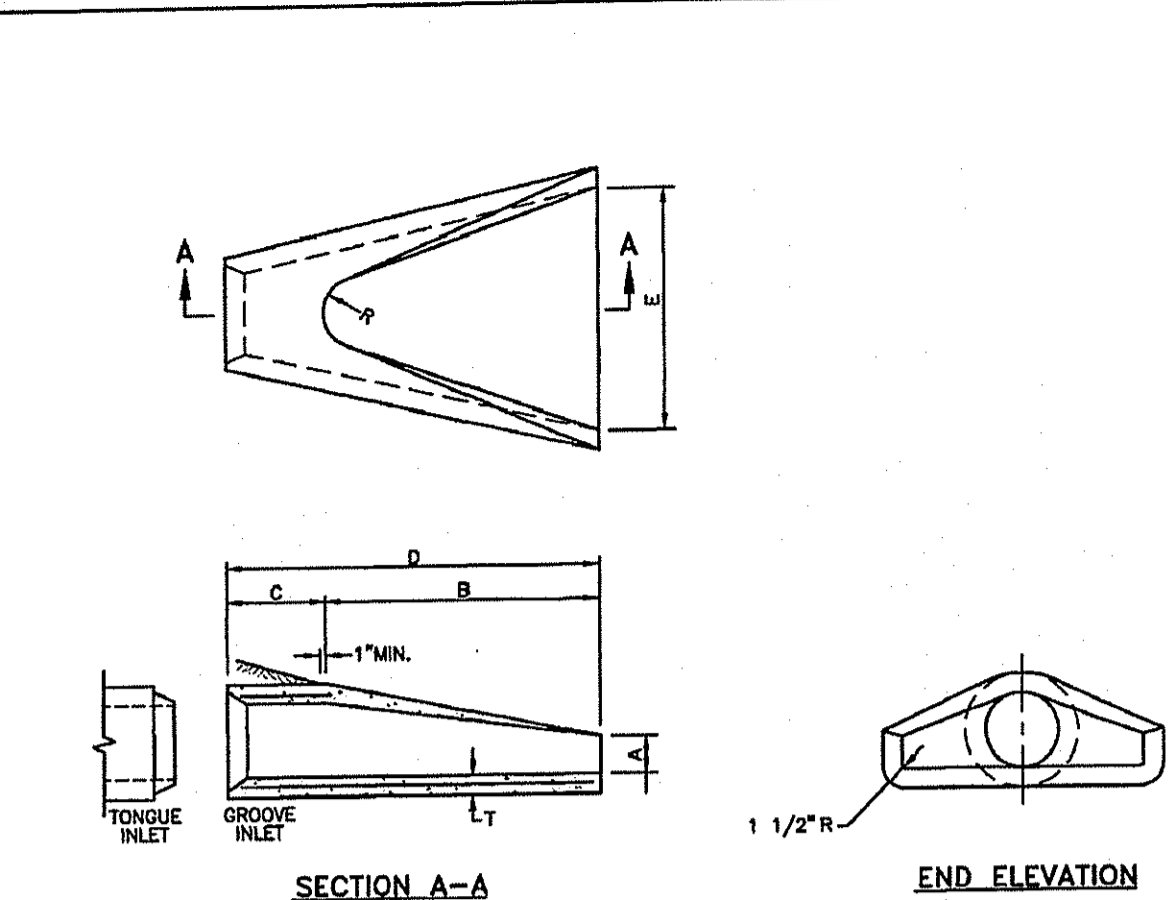
**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

**DRAWING NUMBER**

**C12**

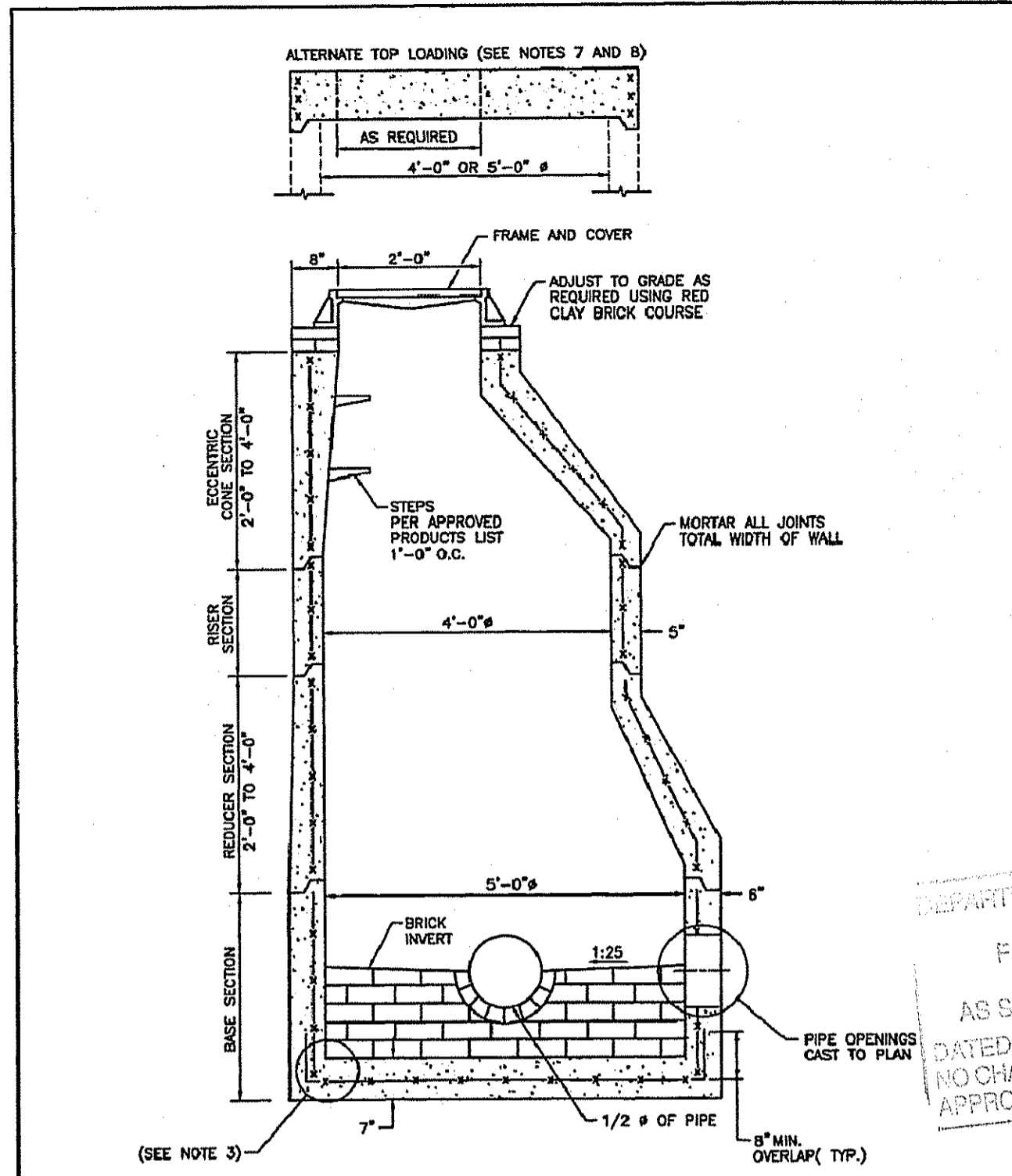
SHEET: 14 OF: 18



DIMENSIONS								REINFORCEMENT
DIA.	A	B	C	D	E	R	T	MIN. AREA OF EACH WAY (SQ. IN./FT.)
1'-0"	4"	2'-0"	4'-0"	7/8"	6'-0"	7/8"	2'-0"	0.048
1'-3"	8"	2'-3"	3'-10"	6'-1"	2'-6"	11"	2 1/4"	0.054
1'-6"	8"	2'-3"	3'-10"	6'-1"	3'-0"	12"	2 1/2"	0.060
2'-0"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	1'-2"	3"	0.072
2'-6"	1'-0"	4'-6"	12'-3/4"	8'-1 3/4"	3'-0"	1'-3"	3 1/2"	0.084
3'-0"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	1'-8"	4"	0.096
3'-6"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	1'-10"	4 1/2"	0.108
4'-0"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	1'-10"	5"	0.120
4'-6"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	2'-0"	5 1/2"	0.132
5'-0"	2'-6"	5'-0"	3'-3"	8'-3"	8'-0"	2'-0"	6"	0.144

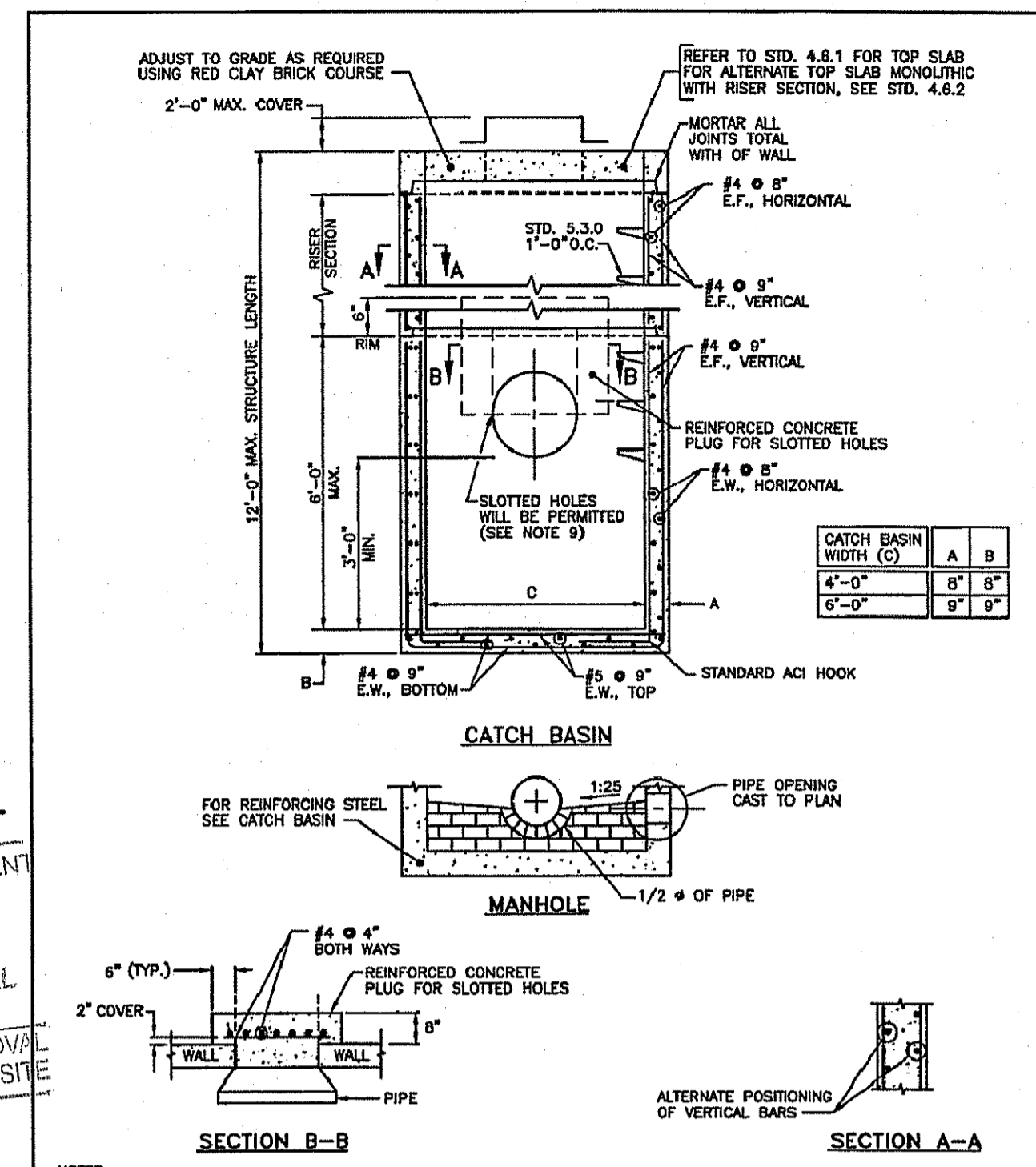
NOTE: SHALL BE IN ACCORDANCE WITH SECTION 701 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**PRECAST CONCRETE FLARED END SECTION**  
 JUN 15, 1998  
 R.I. STANDARD 2.3.0



NOTE: 1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.  
 2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. (BOTH WAYS).  
 3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).  
 4. ONE POUR MONOLITHIC BASE SECTION.  
 5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.  
 6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.  
 7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.0).  
 8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.  
 9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**PRECAST 5'-0" ROUND MANHOLE**  
 JUN 15, 1998  
 R.I. STANDARD 4.2.1



NOTE: 1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.  
 2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.  
 3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.  
 4. TOP SLAB, RISER AND BASE SECTIONS HAVE BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB, RISER AND BASE SECTIONS ARE DESIGNED FOR AXLE LOAD OF NO GREATER THAN 20 TONS.  
 5. THERE IS TO BE 2" MINIMUM COVER ON ALL REBAR.  
 6. ALL REBAR ARE TO HAVE MINIMUM 2" CLEARANCE FROM OPENING.  
 7. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.  
 8. THE SPACE LENGTHS ON REBARS ARE TO BE A MINIMUM OF 1'-2".  
 9. WHERE THE CLEARANCE FROM THE TOP OF THE RIM IS "B" OR LESS, REBAR SHALL BE USED IN CONJUNCTION WITH SLOTTED HOLES. NO SLOTTED HOLE WILL BE PERMITTED WHERE THE CLEARANCE IS GREATER THAN "B". IN CASES WHERE SLOTTED HOLES ARE NOT USED AND THE WALL OPENING COMES WITHIN 1'-3" OF THE RIM, AN ADDITIONAL #6 BAR SHALL BE USED ABOVE THE OPENING THE WIDTH "C" OF THE WALL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN**  
 JUN 15, 1998  
 R.I. STANDARD 4.3.0

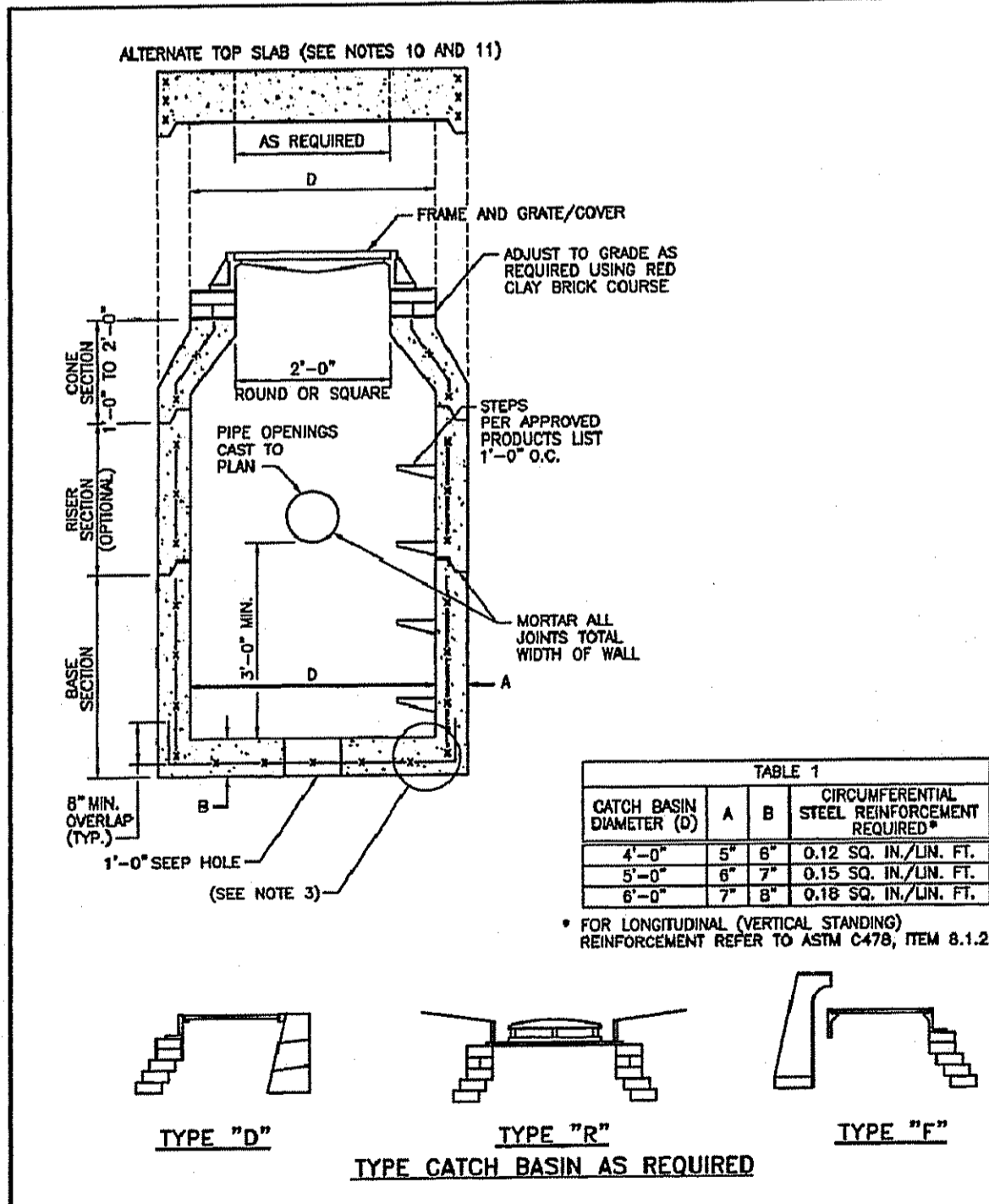
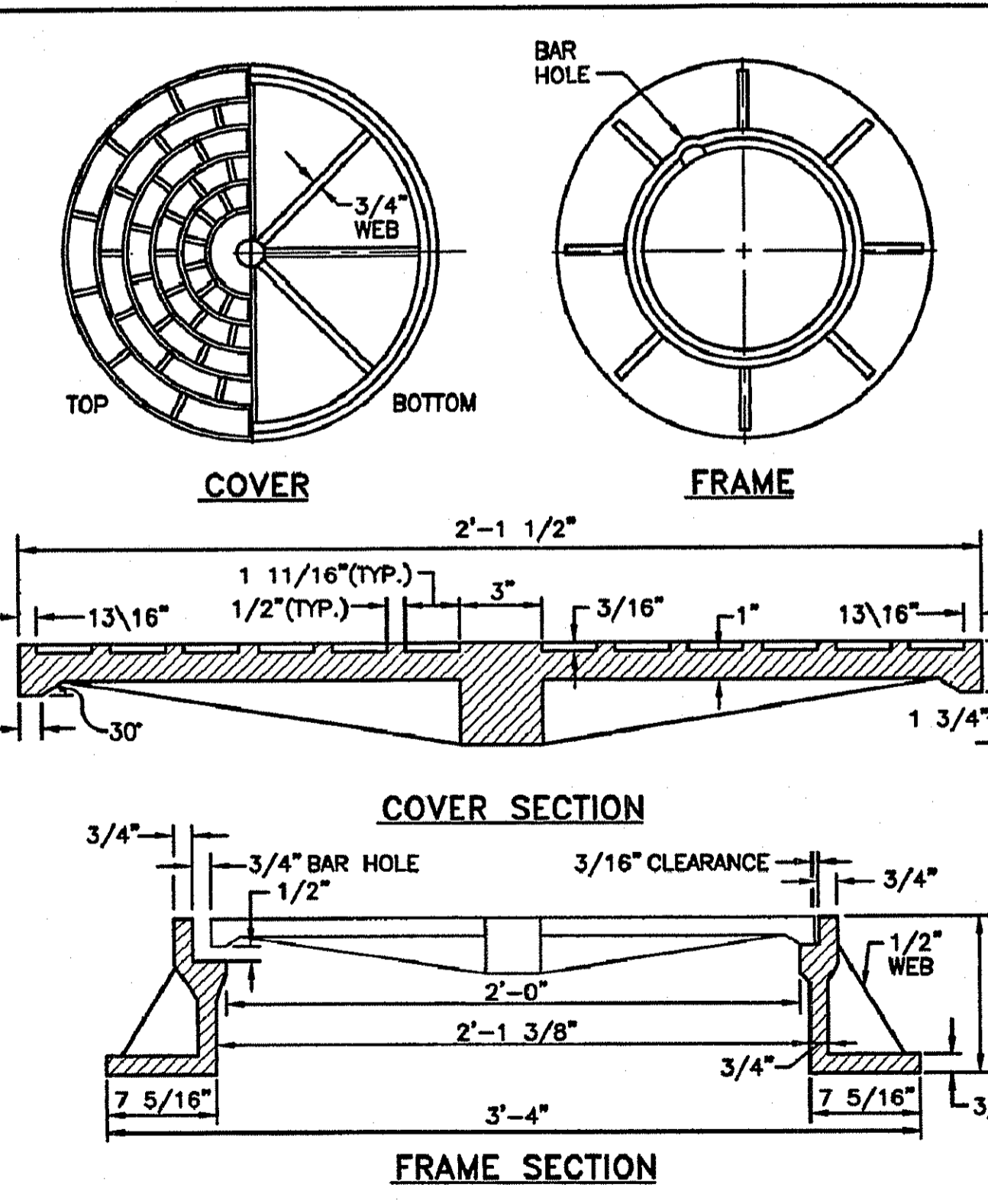


TABLE 1			CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*
CATCH BASIN DIAMETER (D)	A	B	REINFORCEMENT REQUIRED*
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.

\* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2

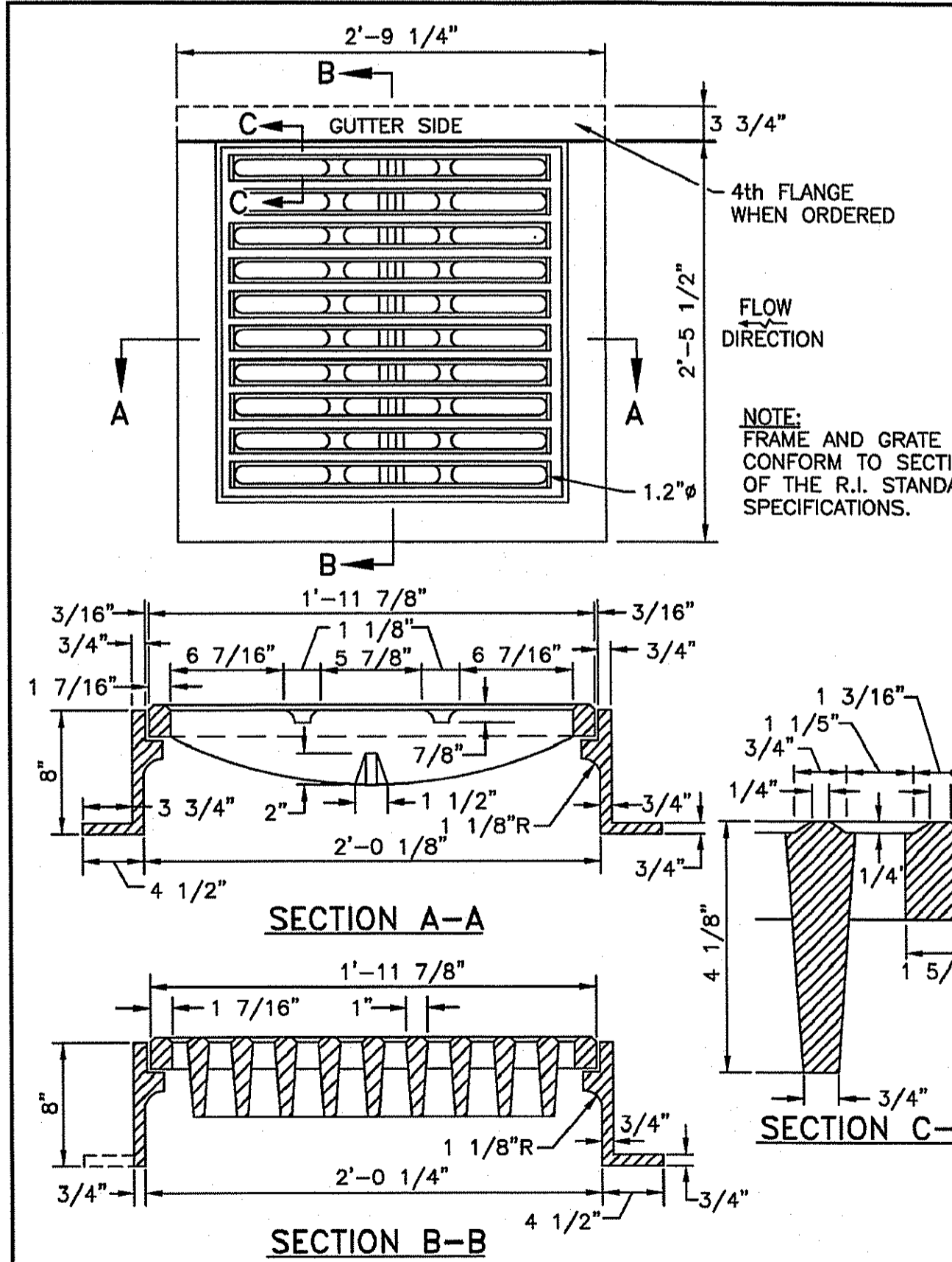
NOTE: 1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.  
 2. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.  
 3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).  
 4. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.  
 5. ONE POUR MONOLITHIC BASE SECTION.  
 6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.  
 7. CORSEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.  
 8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.  
 9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.  
 10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).  
 11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.  
 12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN**  
 JUN 15, 1998  
 R.I. STANDARD 4.4.0



NOTE: 1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.  
 2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**HEAVY-DUTY ROUND FRAME AND COVER**  
 JUN 15, 1998  
 R.I. STANDARD 6.2.1



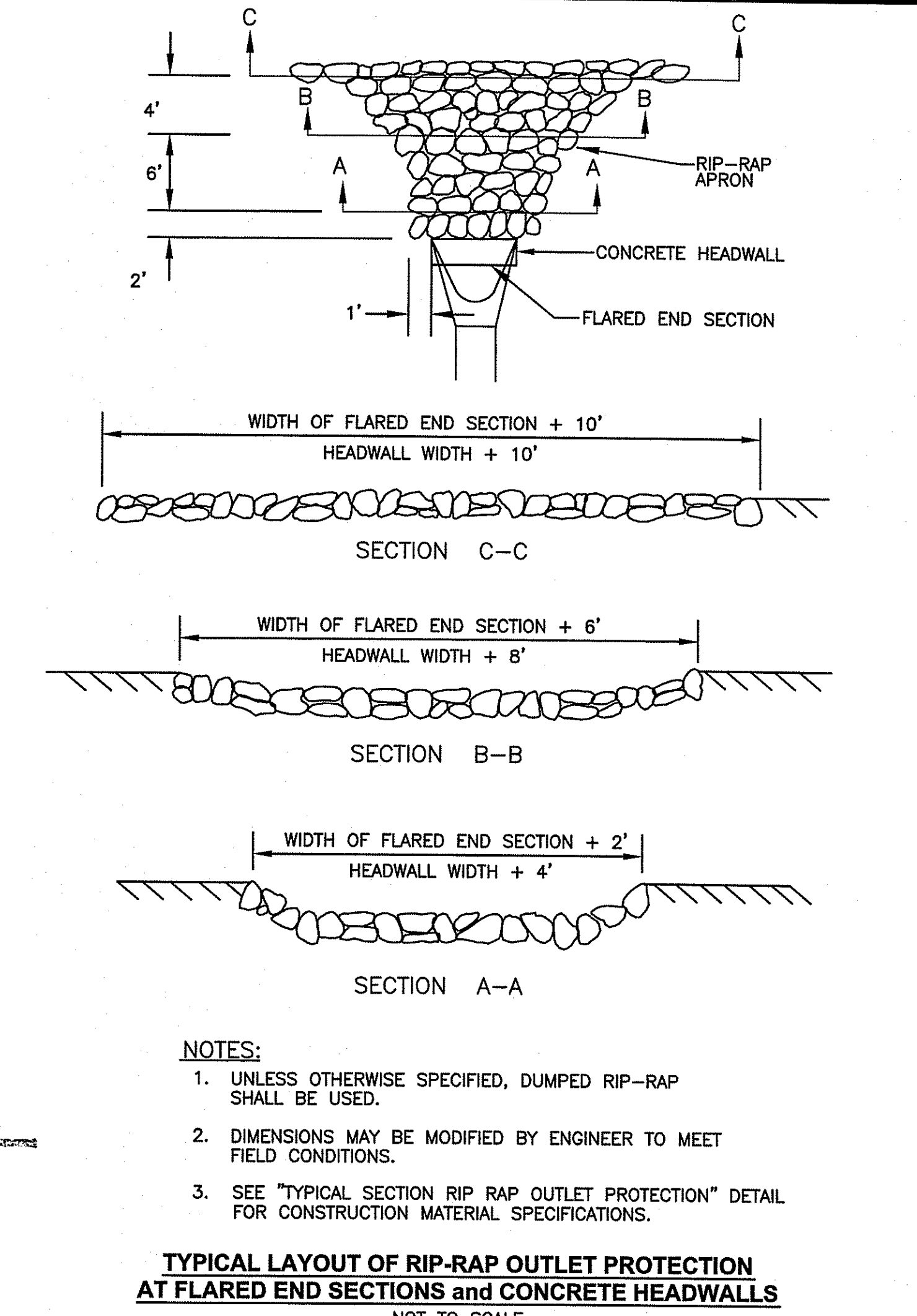
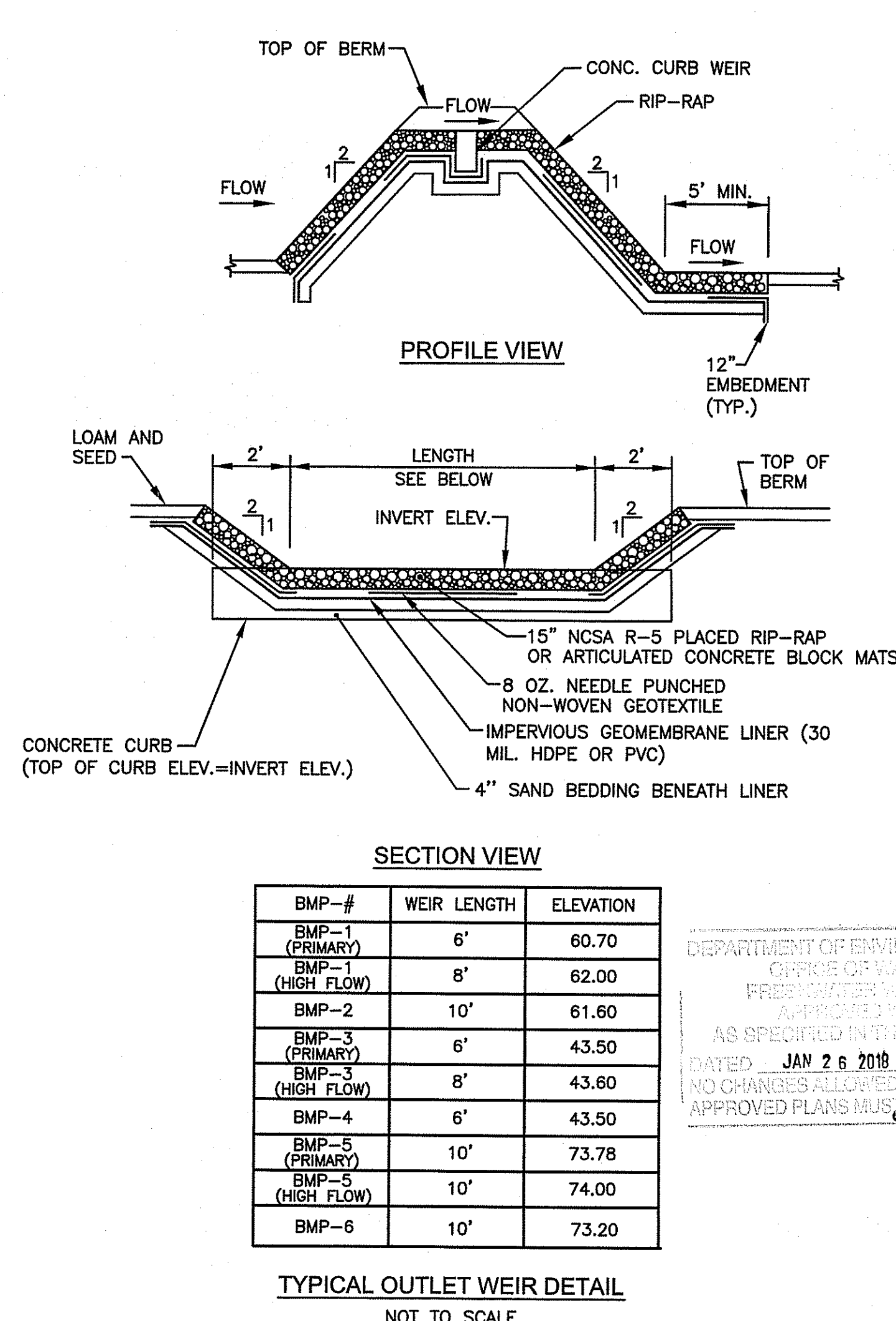
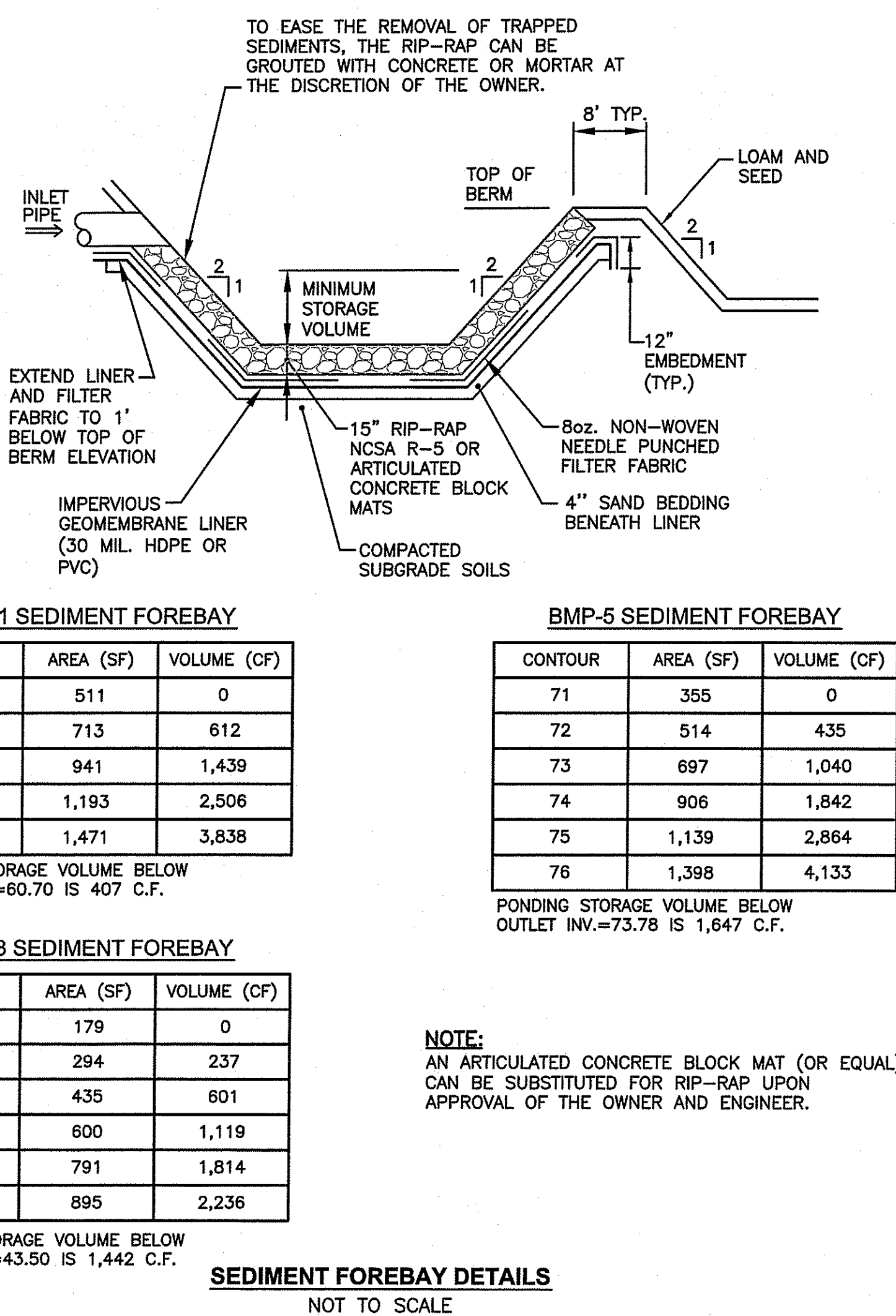
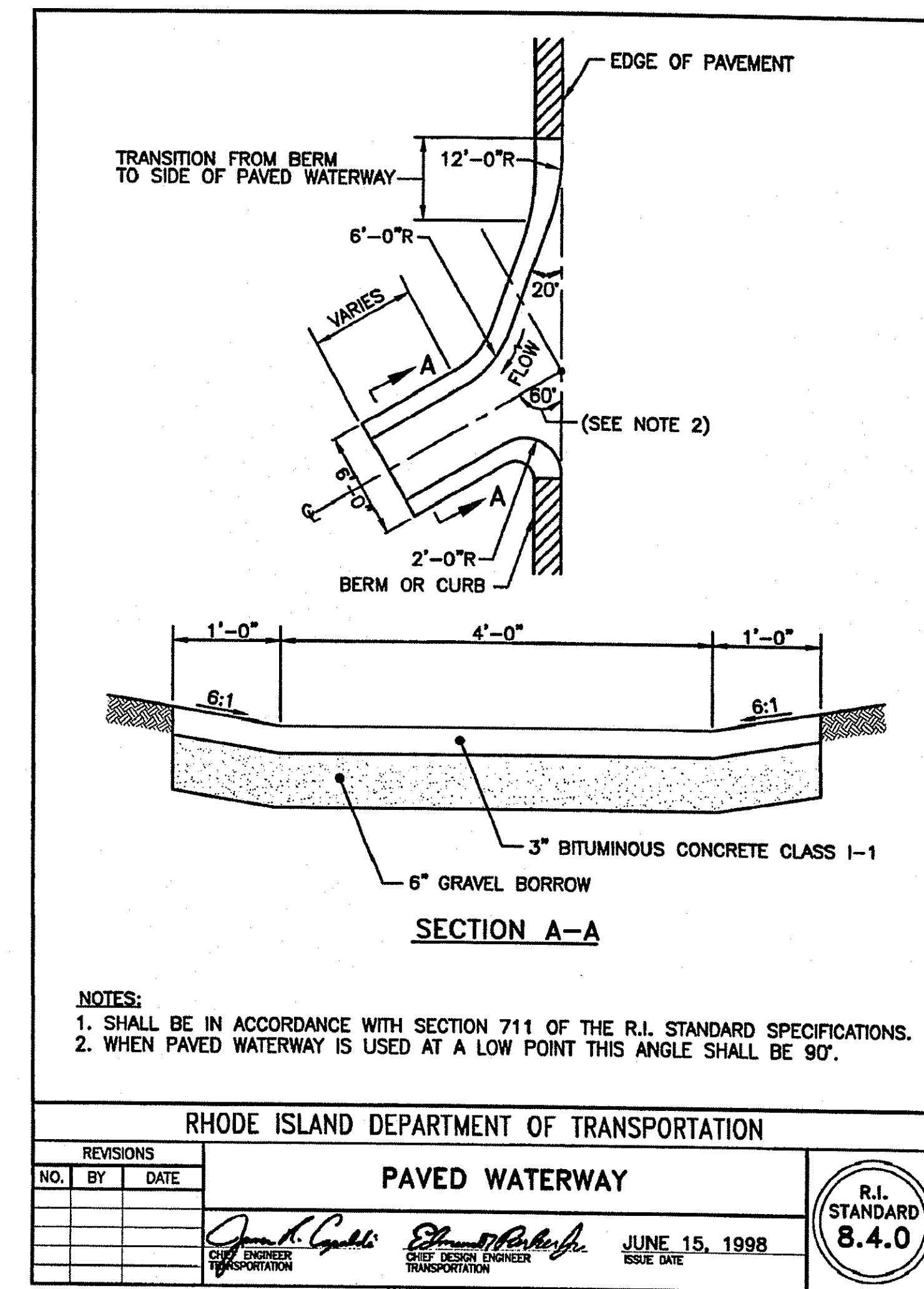
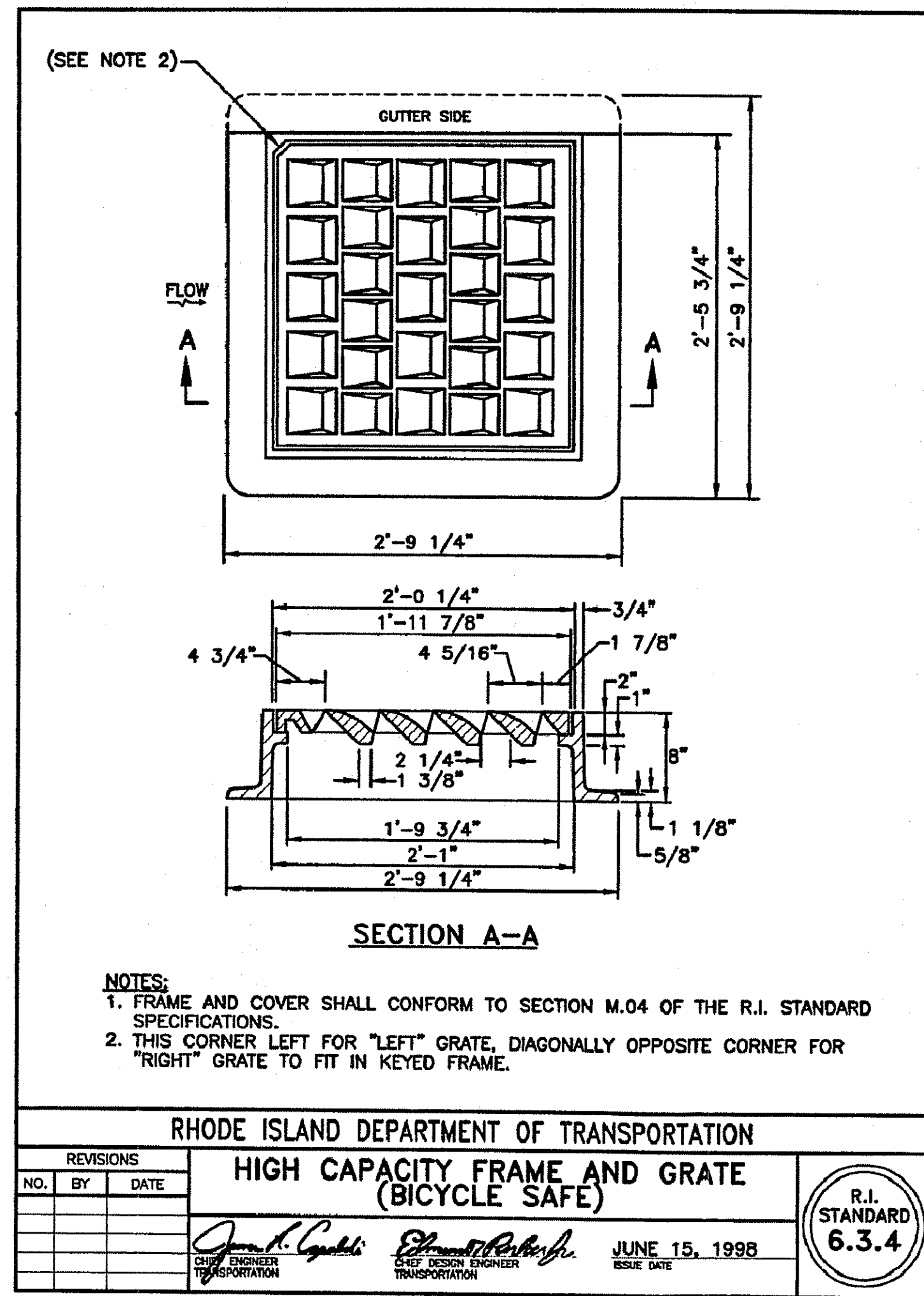
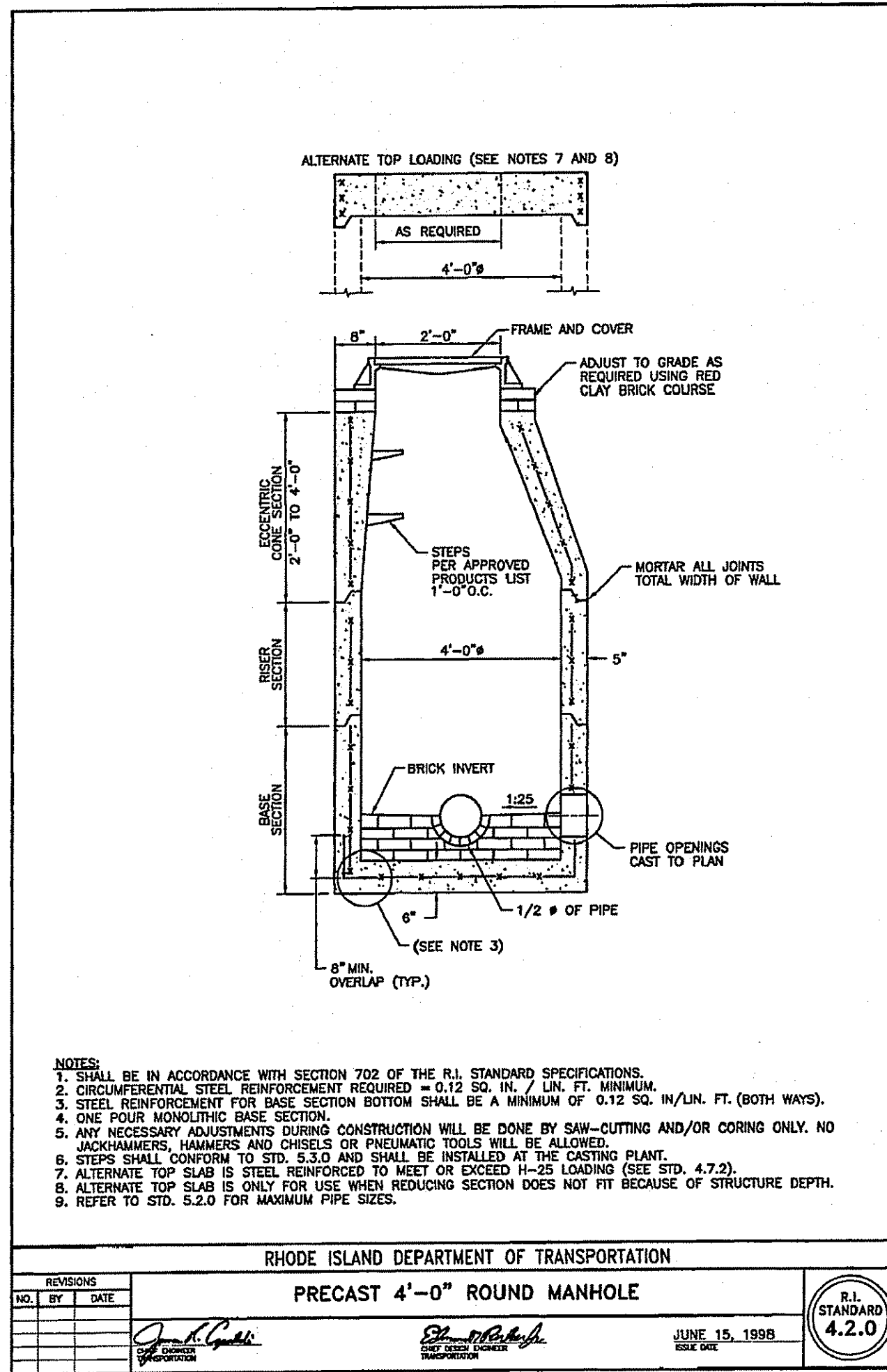
RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**SQUARE FRAME AND GRATE (BICYCLE SAFE)**  
 JUN 15, 1998  
 R.I. STANDARD 6.3.2

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BRUCE G. HAGERMAN  
 No. 5787  
 REGISTERED PROFESSIONAL ENGINEER

KEY PLAN  
 PROJECT TITLE:  
**PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH**  
 LAUREL LANE TO SEVERANCE LANE  
 JAMESTOWN, RHODE ISLAND  
 PREPARED FOR:  
**TOWN OF JAMESTOWN**  
 DEPARTMENT OF PUBLIC WORKS  
 93 NARRAGANSETT AVENUE  
 JAMESTOWN, RHODE ISLAND  
 DRAWING TITLE:  
**MISCELLANEOUS DETAILS PLAN NO. 3**  
 DATE: AUGUST 2017 SCALE: AS NOTED  
 DWG. NAME: 2145-15-DET\_3.dwg  
 REVISIONS:  
 1. RIDEM COMMENTS 11/16/17  
 DRAWING NUMBER: **C13**  
 SHEET: 15 OF 18



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• Permitting  
• Landscape Architecture

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BRUCE G. HAGERMAN  
No. 5787  
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE:  
**PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH**

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

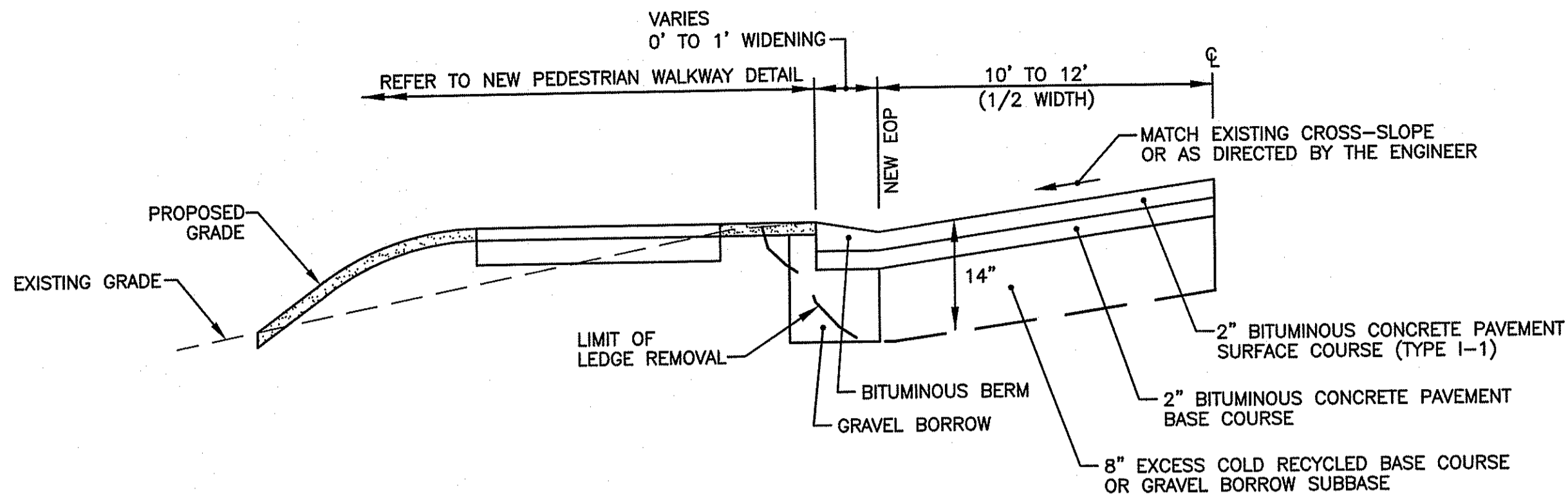
PREPARED FOR:  
**TOWN OF JAMESTOWN**  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

DRAWING TITLE:  
**MISCELLANEOUS DETAILS PLAN NO. 4**

DATE: AUGUST 2017  
SCALE: AS NOTED  
DWG. NAME: 2145-16-DET\_4.dwg

REVISIONS	NUMBER	REMARKS	DATE
1	1	RIDEM COMMENTS	11/16/17

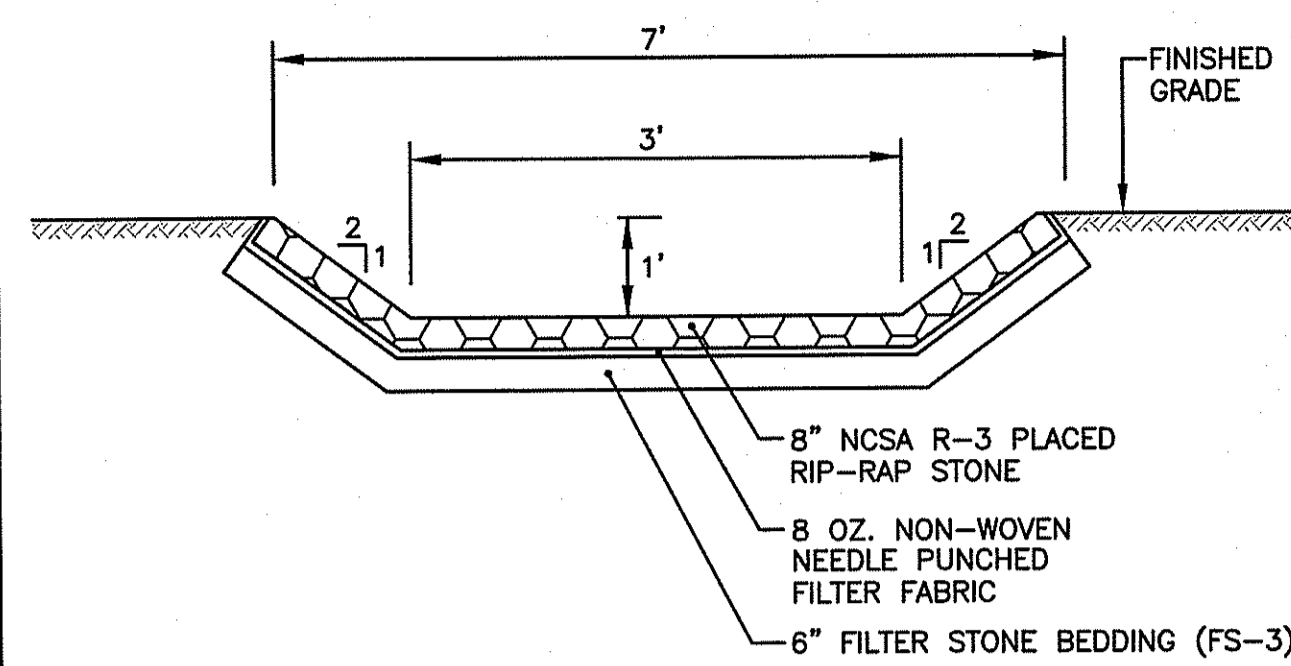
DRAWING NUMBER  
**C14**  
SHEET: 16 OF 18



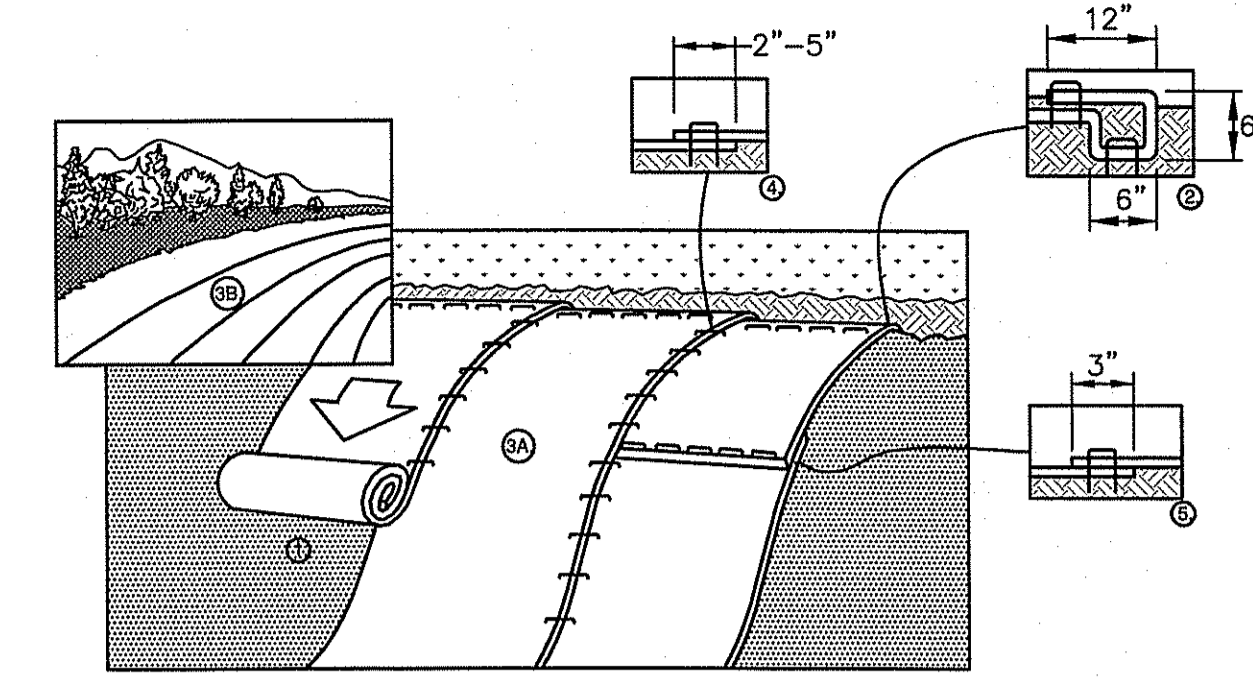
**ROADWAY WIDENING NOTES:**

- ROADWAY WIDENING SHALL OCCUR FROM APPROXIMATELY STA. 10+00 TO STA. 47+50 LT AS SHOWN ON THE PLANS.
- REMOVE LEDGE, ROCK AND BOULDERS TO A DEPTH OF 14" BELOW PROPOSED PAVEMENT.

**NORTH ROAD TYPICAL ROADWAY WIDENING DETAIL FOR WESTERLY SIDE**  
NOT TO SCALE



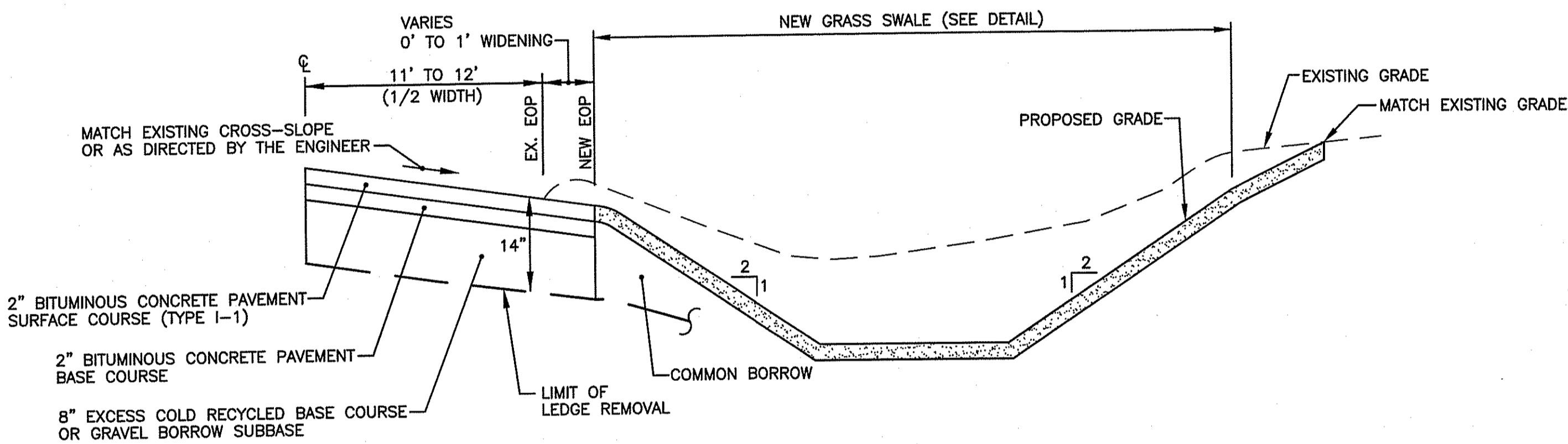
**RIP-RAP SWALE DETAIL**  
NOT TO SCALE



**NOTES:**

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
  - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
  - ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
  - THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
  - CONSECUTIVE RECP'S SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.
  - ALL REQUIRED EROSION CONTROL BLANKET (MAT) OVERLAPS AND ANCHORS SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE.
- NOTE:** \*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

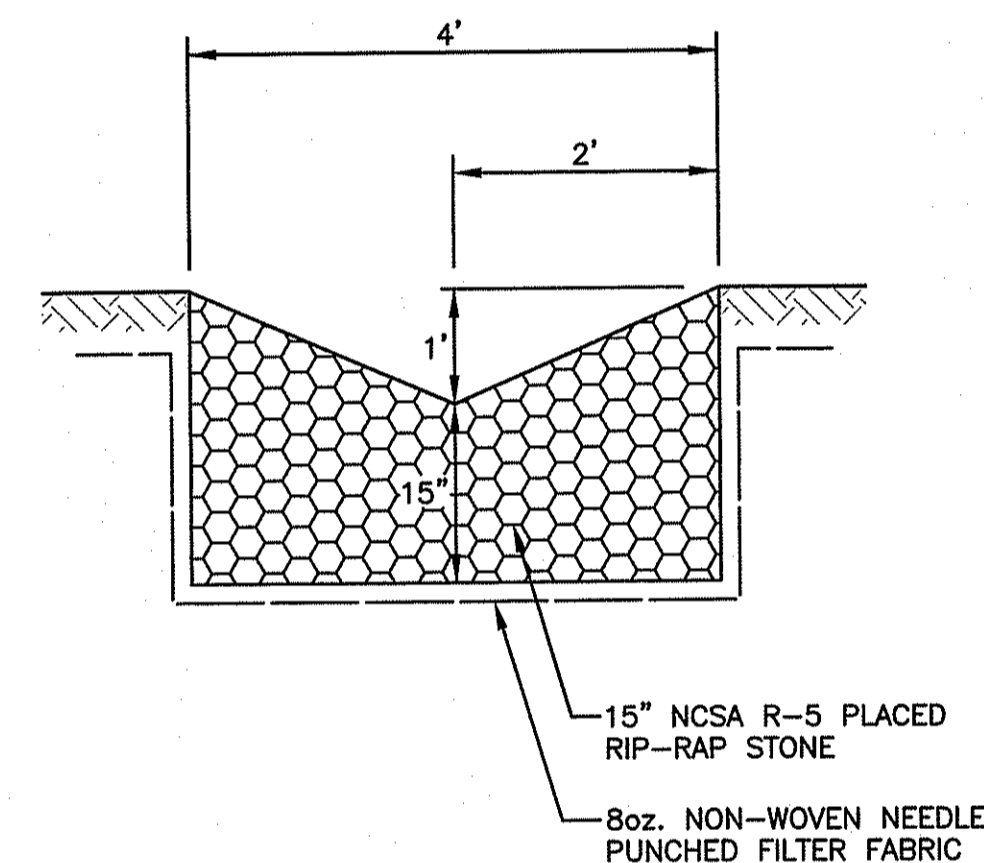
**EROSION CONTROL BLANKET (MAT) PERMANENT AND TEMPORARY INSTALLATION DETAIL**  
NOT TO SCALE



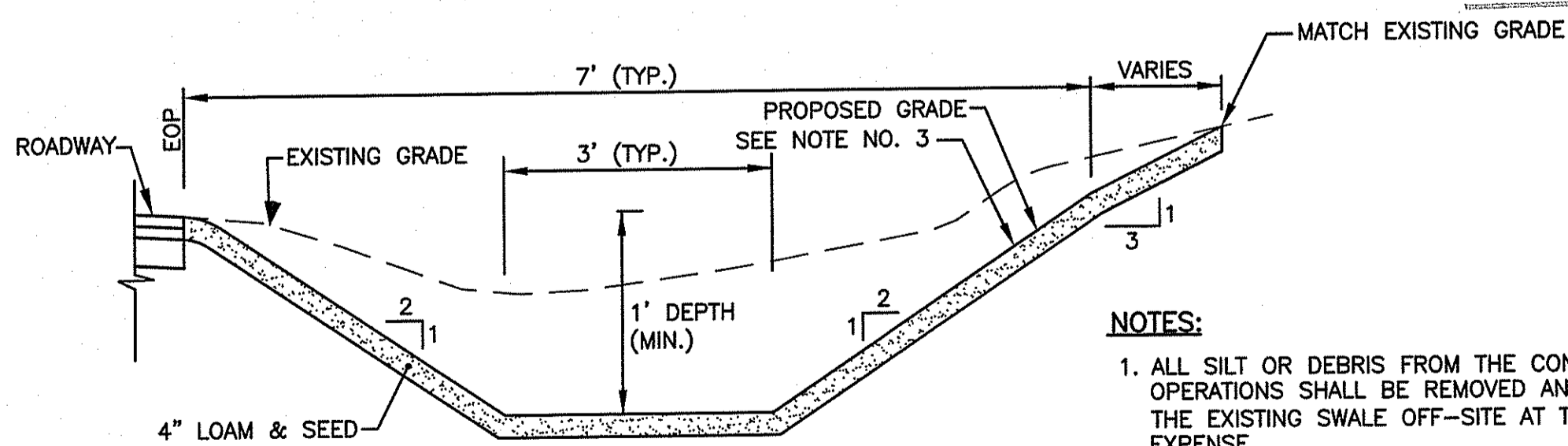
**ROADWAY WIDENING NOTES:**

- ROADWAY WIDENING SHALL OCCUR FROM APPROXIMATELY STA. 10+00 TO STA. 47+50 RT AS SHOWN ON THE PLANS.
- REMOVE LEDGE, ROCK AND BOULDERS TO A DEPTH OF 14" BELOW PROPOSED PAVEMENT.

**NORTH ROAD TYPICAL ROADWAY WIDENING DETAIL FOR EASTERLY SIDE**  
NOT TO SCALE



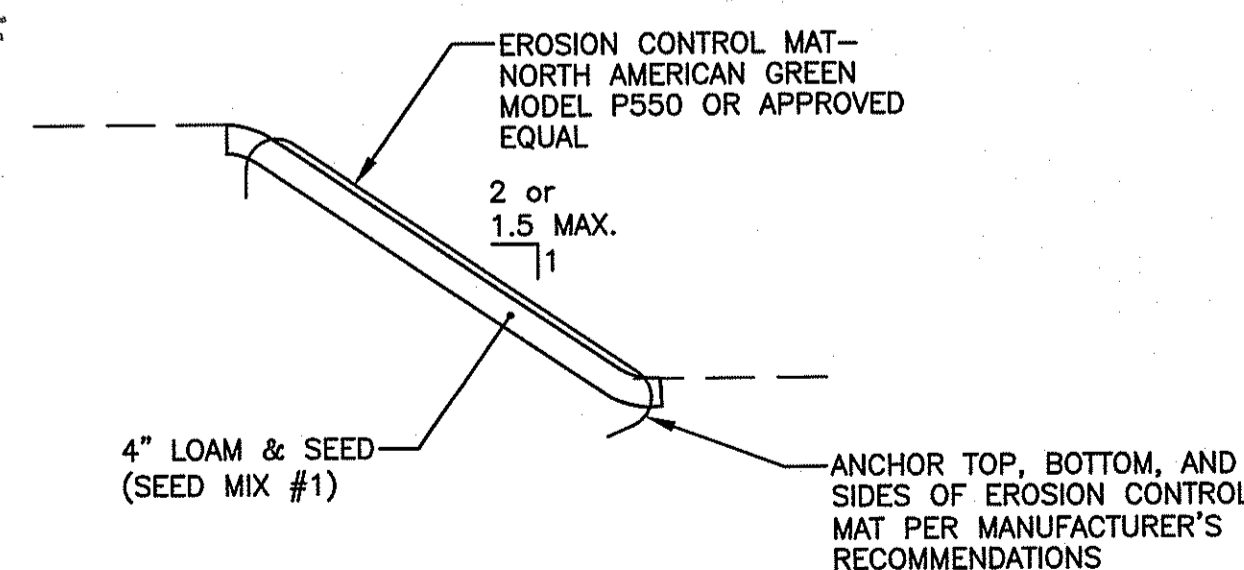
**LEVEL SPREADER DETAIL**  
NOT TO SCALE



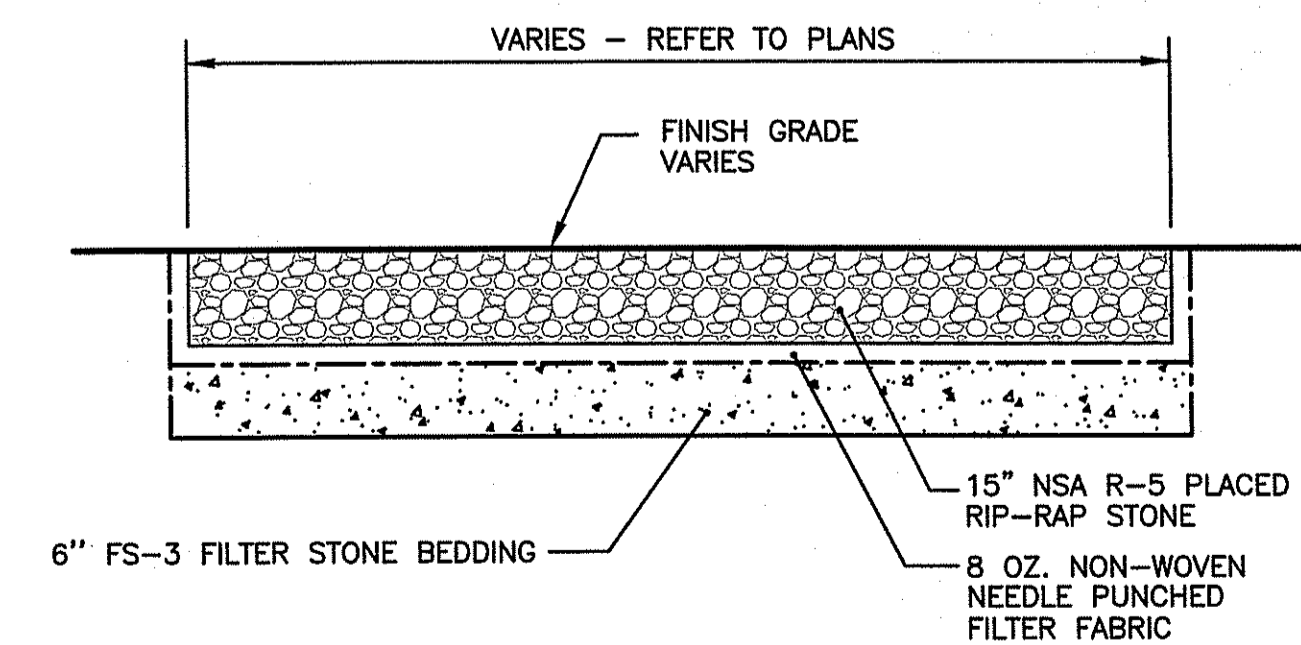
**NOTES:**

- ALL SILT OR DEBRIS FROM THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AND DISPOSED FROM THE EXISTING SWALE OFF-SITE AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL HAND ROLL LOAM MATERIAL AFTER INSTALLATION AND PRIOR TO SEEDING.
- INSTALL EROSION CONTROL FABRIC OVER ALL AREAS OF THE NEWLY SEEDED GRASS SWALE.

**GRASS SWALE TYPICAL SECTION**  
NOT TO SCALE



**1.5:1 GRASS SLOPE TYPICAL SECTION**  
NOT TO SCALE



**TYPICAL SECTION RIP-RAP OUTLET PROTECTION**  
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED JAN 26 2016 FILE # 17-0192  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

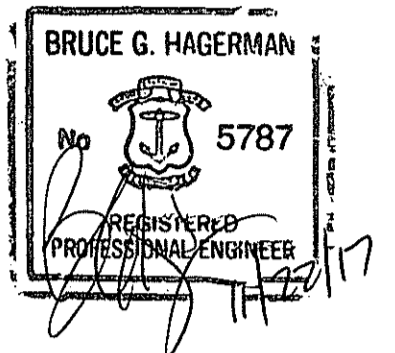
*Matthew D. Wenzel*

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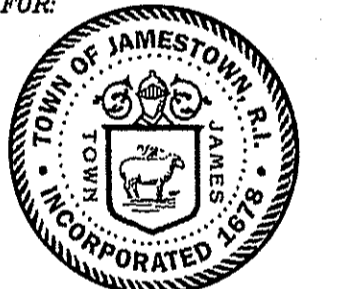


**KEY PLAN**

**PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH**

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

**PREPARED FOR:**



**TOWN OF JAMESTOWN**  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

**MISCELLANEOUS DETAILS PLAN NO. 5**

**DATE:** AUGUST 2017  
**SCALE:** AS NOTED

**DWG. NAME:** 2142-16-DET\_5.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17

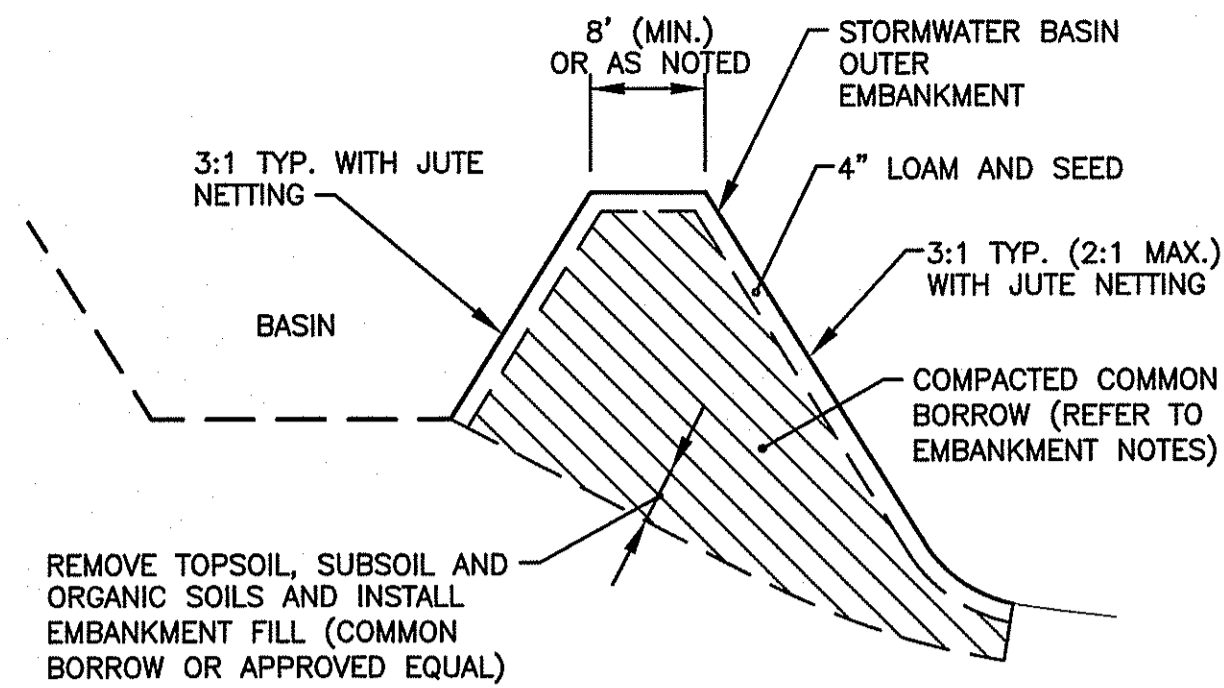
**DRAWING NUMBER**

**C15**

SHEET: 17 OF 18

**STORMWATER BASIN EMBANKMENT NOTES:**

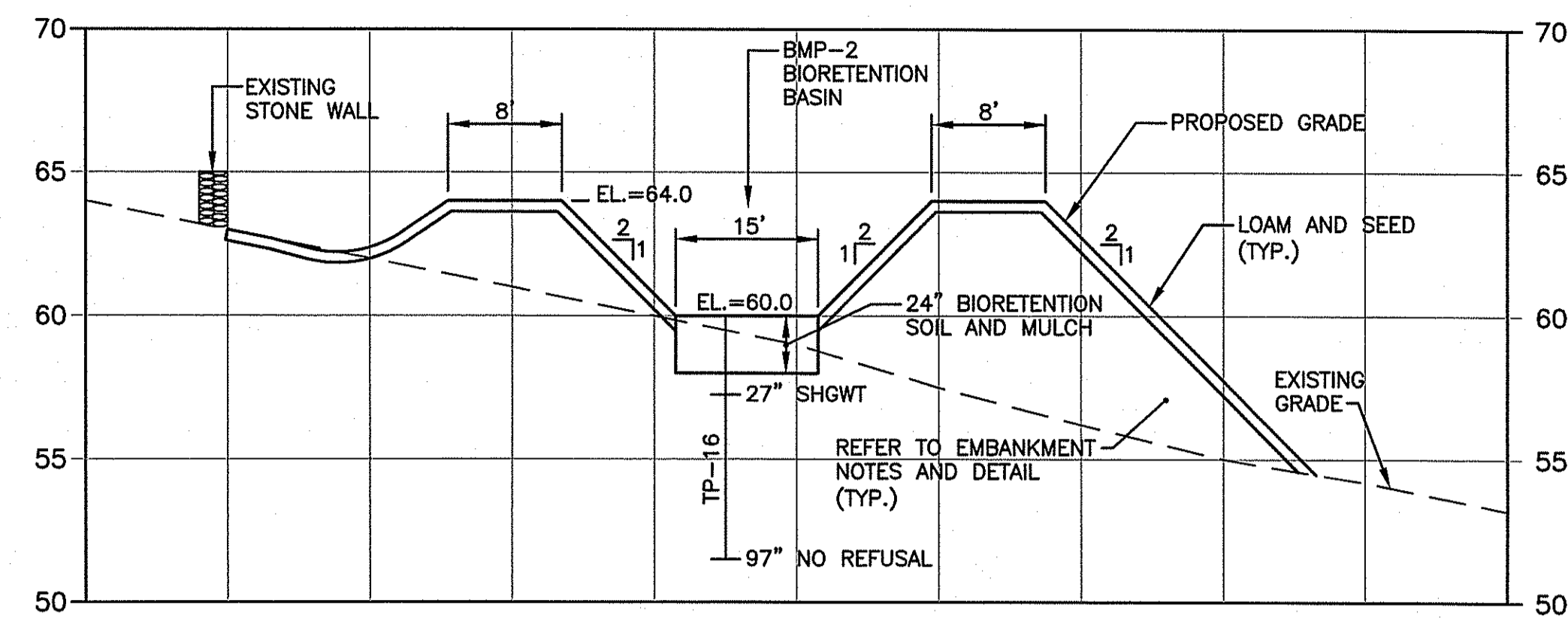
1. THE BIORETENTION BASIN EMBANKMENTS ARE TO BE CONSTRUCTED WITH APPROVED COMMON BORROW. NO SOIL/ROCK GRATER THAN 3" SHALL BE UTILIZED. COMMON BORROW SHALL MEET OR EXCEED AN IN-PLACE DENSITY OF 100 LB./CF. ALL MATERIAL SHALL BE PLACED IN 8 TO 12 INCH LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. FILL MATERIAL WILL NOT CONTAIN FROZEN MATERIALS OR BE PLACED ON FROZEN SURFACES. COMMON BORROW SHALL MEET R.I.D.O.T. STANDARD SPECIFICATIONS.
2. UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, THE EMBANKMENT AREAS ARE TO BE EXCAVATED. IF ANY ORGANIC OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR REVIEW OF EXCAVATION AREA. THE DEPTH OF EXCAVATION WILL BE DETERMINED BY THE ENGINEER BASED UPON THE LOCAL CONDITIONS. NO FILL MATERIAL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION HAS BEEN COMPLETED. ALL WATER SHALL BE REMOVED FROM THE FOUNDATION PRIOR TO PLACING THE EMBANKMENT.
3. THE FILL MATERIAL MUST BE SPREAD IN UNIFORM LAYERS AND FALL WITHIN THE SPECIFIED OPTIMUM WATER CONTENT RANGE IN ORDER TO ACHIEVE THE REQUIRED COMPACTION. EACH LAYER IS TO BE COMPACTED PRIOR TO LAYING AN ADDITIONAL LAYER. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER HIS SELECTED METHOD OF COMPACTION, COMPACTION EQUIPMENT AND THE SEQUENCE OF OPERATIONS NECESSARY TO OBTAIN THE REQUIRED DENSITY. THE WATER CONTENT AT COMPACTION SHALL BE IN THE RANGE BETWEEN ONE PERCENTAGE POINT BELOW AND TWO PERCENTAGE POINTS ABOVE STANDARD AASHTO OPTIMUM WATER CONTENT. THE MATERIAL SHALL BE PROCESSED TO A UNIFORM WATER CONTENT BY ADDING WATER TO THE MATERIAL IN ADVANCE OF THE FILL PLACEMENT.
4. BACKFILL MATERIAL AROUND STRUCTURES AND PIPE IS TO BE PLACED TO PREVENT THE MOVEMENT OF WATER. THE OPTIMUM WATER CONTENT MUST BE MAINTAINED IN THE SAME RANGE AS IN THE EMBANKMENT. THE BACKFILL MUST BE PLACED IN LAYERS LESS THAN 4 INCHES IN THICKNESS AND DISTRIBUTED UNIFORMLY AROUND THE STRUCTURE/PIPE. ALL COMPACTION WILL BE TO 95% MAXIMUM DENSITY AND REQUIRE HAND TAMPERS OR SMALL POWER EQUIPMENT.
5. EMBANKMENT DAMAGE COMMONLY RESULTS FROM IMPROPER CONSTRUCTION OF CONDUIT AND STRUCTURAL BACKFILL WITHIN THE EMBANKMENT BECAUSE SEEPAGE WILL OCCUR WITH IMPROPER BACKFILL AND COMPACTION. THEREFORE, STRUCTURES AND PIPES ARE TO BE CONSTRUCTED AS THE EMBANKMENT CONSTRUCTION RISES TO THE RESPECTIVE PIPE OR STRUCTURE. THIS WILL PREVENT THE DISTURBANCE OF CONSTRUCTED EMBANKMENT MATERIAL. PIPES FROM THE OUTLET STRUCTURE TO THE OFFFALL SHALL HAVE AN ANTI-SEEP COLLAR.



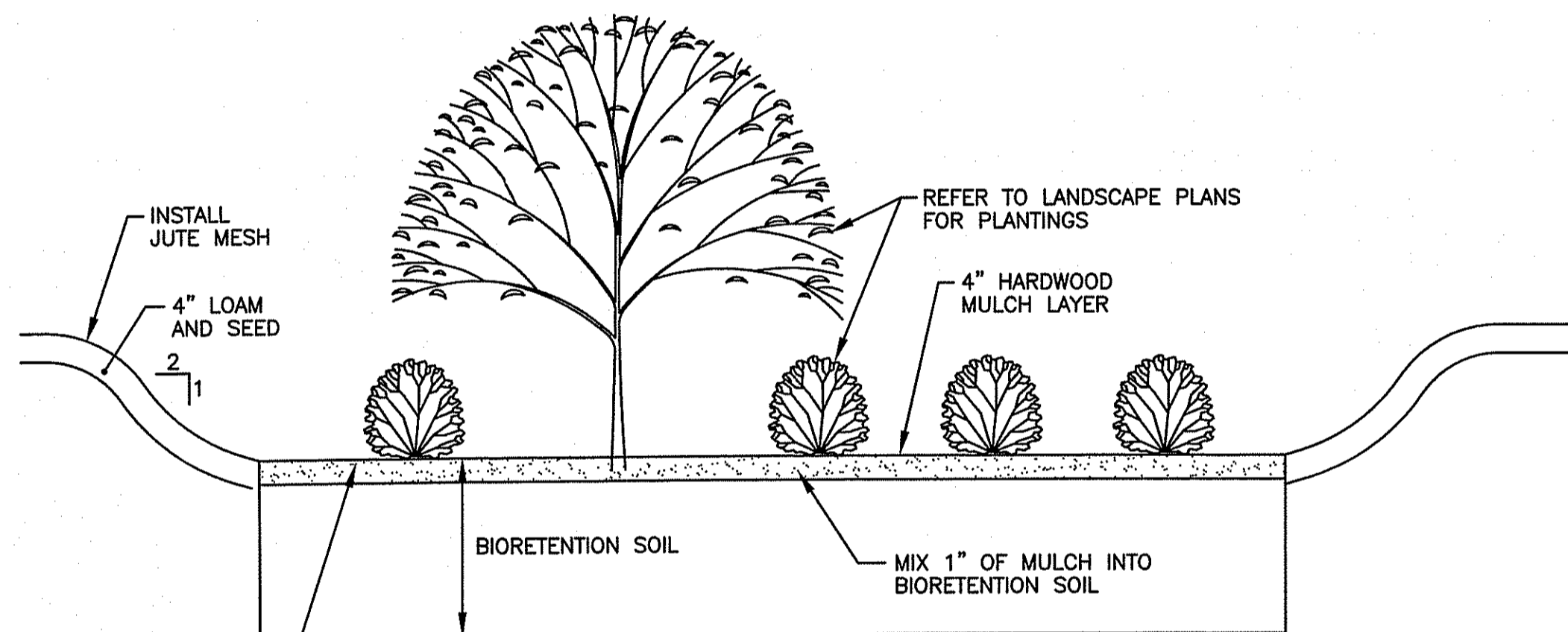
**NOTES:**

1. USE ANTI-SEEP COLLAR AROUND ALL OUTLET PIPES.

**EMBANKMENT CONSTRUCTION DETAIL - SCHEMATIC**  
NOT TO SCALE

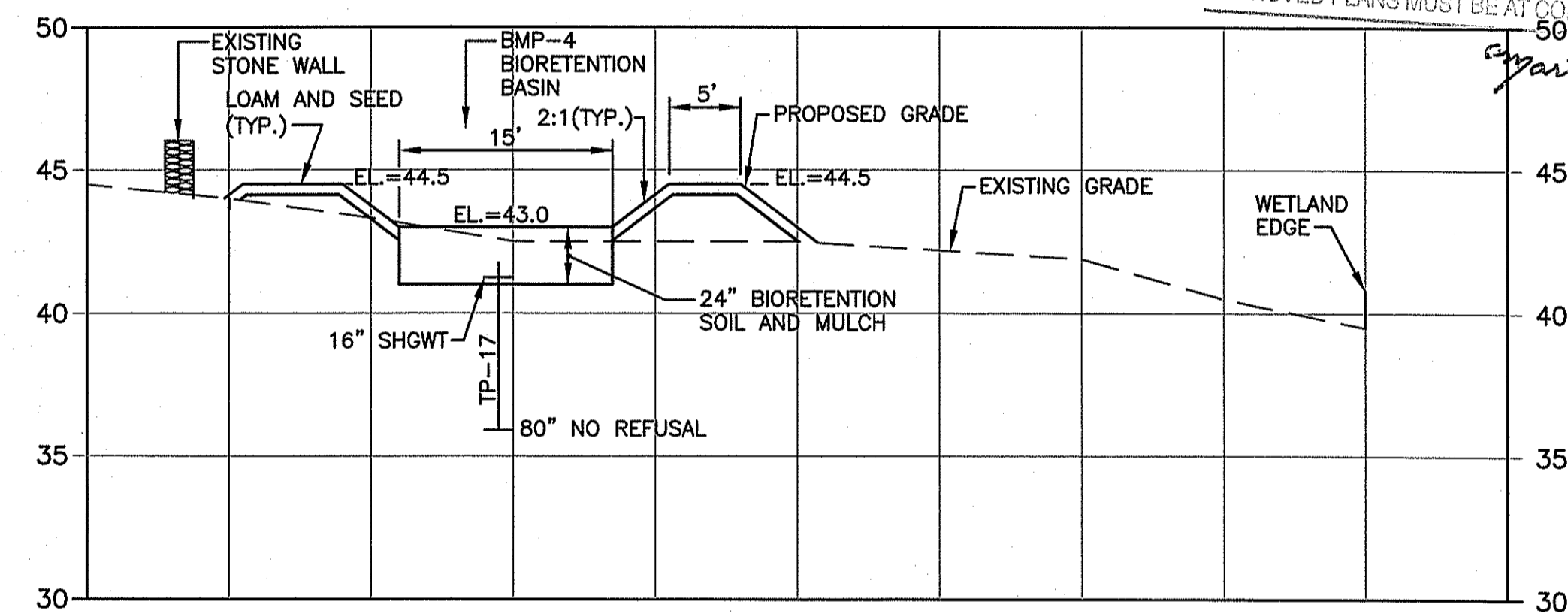


**CROSS SECTION-A**  
SCALE: HORIZ. 1"=10'  
VERT. 1"=5'

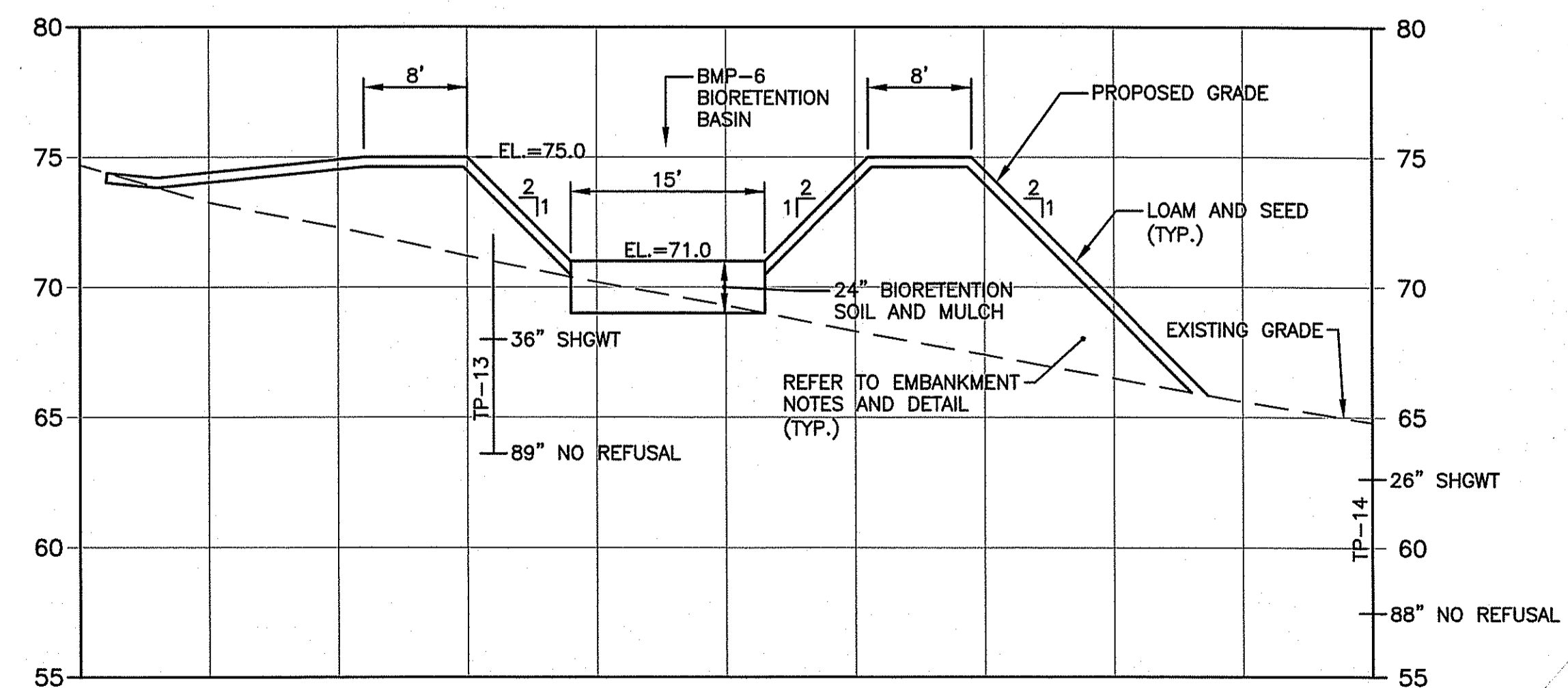


TOP ELEVATION OF BIORETENTION SOIL  
BMP-2=60.0  
BMP-4=42.5  
BMP-6=71.0

**TYPICAL SECTION**  
NOT TO SCALE



**CROSS SECTION-B**  
SCALE: HORIZ. 1"=10'  
VERT. 1"=5'



**CROSS SECTION-C**  
SCALE: HORIZ. 1"=10'  
VERT. 1"=5'

**BIORETENTION SOIL MIXTURE:**

SAND: 85-88%  
SOIL FINES: 8 TO 12% (NO MORE THAN 2% CLAY)  
ORGANIC MATTER: 3 TO 5%  
ADD 20% (BY VOLUME) OF WELL AGED (3 MONTHS), WELL AERATED LEAF COMPOST TO THE MIXTURE.

**NOTES:**

1. BIORETENTION SOIL AND HARDWOOD MULCH SHALL MEET THE SPECIFICATIONS IN THE R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, DEC. 2010, APPENDIX-F, SECTION F.5.2.

**BMP-2 BIORETENTION BASIN SUMMARY**

CONTOUR	AREA (SF)	VOLUME (CF)
60.0	479.0	0
61.0	714.0	597.0
62.0	975.0	1,441.0
63.0	1,260.0	2,559.0
64.0	1,571.0	3,974.0

**BMP-6 BIORETENTION BASIN SUMMARY**

CONTOUR	AREA (SF)	VOLUME (CF)
71.0	1,222.0	0
72.0	1,607.0	1,415.0
73.0	2,019.0	3,228.0
74.0	2,465.0	5,470.0
75.0	2,940.0	8,172.0

**BMP-4 BIORETENTION BASIN SUMMARY**

CONTOUR	AREA (SF)	VOLUME (CF)
43.0	1,452.0	0
43.5	1,899.0	838.0
44.5	2,371.0	2,973.0

**BMP-2, 4 & 6 BIORETENTION BASIN DETAILS**  
NOT TO SCALE

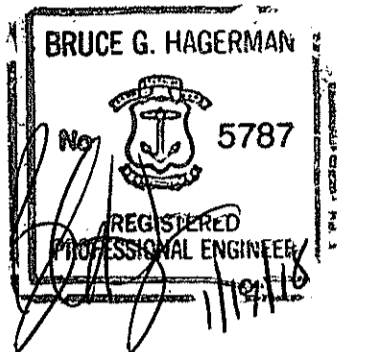


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**KEY PLAN**

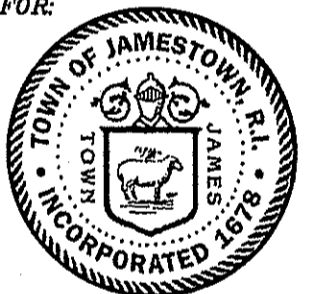
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
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DATED: JAN-26-2018 FILE # 17-0192  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Justin D. Wenczek*

**PHASE 2 NORTH ROAD DRAINAGE IMPROVEMENTS AND PEDESTRIAN PATH**

LAUREL LANE TO SEVERANCE LANE  
JAMESTOWN, RHODE ISLAND

**PREPARED FOR:**



**TOWN OF JAMESTOWN**  
DEPARTMENT OF PUBLIC WORKS  
93 NARRAGANSETT AVENUE  
JAMESTOWN, RHODE ISLAND

**MISCELLANEOUS DETAILS PLAN NO. 6**

DATE: AUGUST 2017 SCALE: AS NOTED

DWG. NAME: 2142-18-DET\_6.dwg

**REVISIONS**

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	11/16/17
2	RIDEM COMMENTS	01/19/18

**DRAWING NUMBER**

**C16**

SHEET: 18 OF 18