

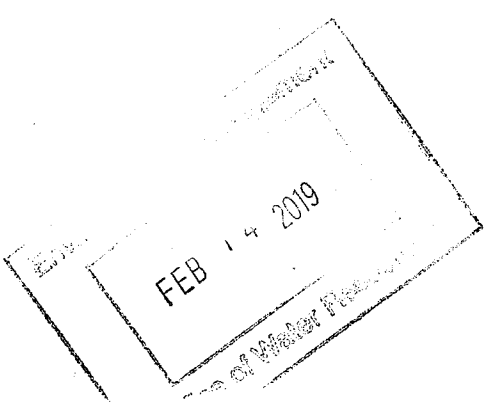
HOUGHTON STREET IMPROVEMENT PROJECT

PROVIDENCE, RHODE ISLAND

ISSUED FOR BID

APPLICANT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

LATEST ISSUED: NOVEMBER 2, 2018

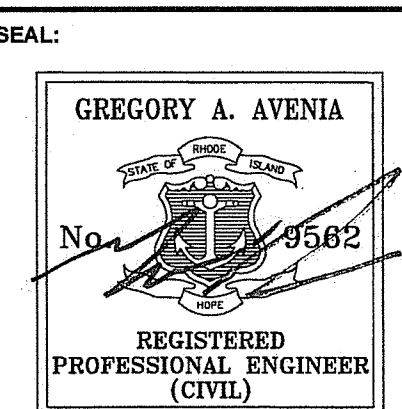
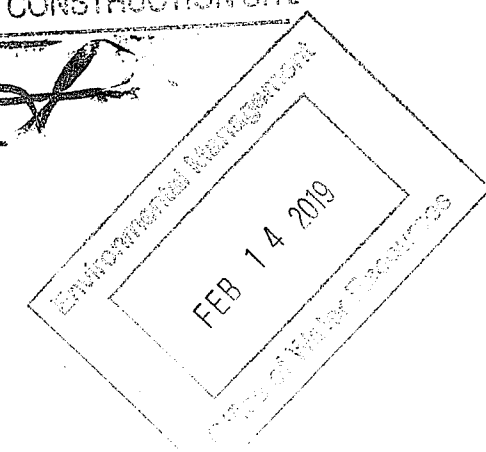


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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 12 2019 FILE # 18-0206
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Avenia



REVISION	DATE	DESCRIPTION

CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY

444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

PROJECT:
HOUGHTON STREET IMPROVEMENTS

HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
COVER

ISSUED FOR:	BID
DATE:	NOVEMBER 2, 2018
SCALE:	N/A
DRAWN BY:	NRM
CHECKED BY:	GAA
PROJECT NO:	3653170226

C-0

SHEET 0 OF 15

UNDERGROUND UTILITIES

1. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY OR STRUCTURE DEPICTED HEREON IS BASED UPON THE BEST AVAILABLE INFORMATION AT THE TIME OF THE FIELD SURVEY (PERFORMED BY CHERENZIA & ASSOCIATES).
2. UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY WOOD ENVIRONMENT AND INFRASTRUCTURE SOLUTIONS, INC. (WOOD). WOOD MAKES NO GUARANTEE AS TO THE ACTUAL EXISTENCE, LOCATION, OR SERVICEABILITY OF ABOVE-GROUND OR UNDERGROUND UTILITIES. ADDITIONAL UTILITIES NOT SHOWN ON THESE PLANS MAY EXIST. CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL CONTACT DIGSAFE 811 AT (888) DIG-SAFE, 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL INVOLVED AGENCIES AND FIELD VERIFY EXACT LOCATIONS OF ALL UTILITIES. IF DISCREPANCIES EXIST THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

LEGEND

	EXIST	PROP	EXIST	PROP
TOP/BOTTOM CURB ELEVATION	21.25 TC	21.25 X	---	---
SPOT GRADE W/LEADER	21.25 TC	21.25 X	---	---
BORING LOCATION	⊕B-1	⊕B-1	---	---
TEST PIT LOCATION	⊕TP-1	⊕TP-1	---	---
MONITORING WELL	⊕MW-1	⊕MW-1	---	---
BENCH MARK	BM	BM	---	---
DRAIN MANHOLE	DMH	DMH	---	---
CATCH BASIN	CB	CB	---	---
DOUBLE CATCH BASIN	DCB	DCB	---	---
GUTTER INLET	GI	GI	---	---
TRENCH DRAIN	TD	TD	---	---
HEADWALL	HW	HW	---	---
FLARED END SECTION	FES	FES	---	---
DRAINAGE LINE	D	D	---	---
OVERFLOW DRAIN	OD	OD	---	---
ROOF DRAIN	RD	RD	---	---
OVERHEAD WIRE	OW	OW	---	---
WATER LINE	W	W	---	---
FIRE PROTECTION LINE	FP	FP	---	---
GAS LINE	G	G	---	---
UNDERGROUND ELECTRIC	UE	UE	---	---
UNDERGROUND TELEPHONE	TE	TE	---	---
FIRE ALARM	FA	FA	---	---
FIRE & POLICE CABLE	FAP	FAP	---	---
CABLE TV	CATV	CATV	---	---
PLUG/STUB	C	C	---	---
GREASE TRAP	GT	GT	---	---
CONTROL STRUCTURE	CS	CS	---	---
SEWER MANHOLE	SMH	SMH	---	---
SEWER LINE	S	S	---	---
WATER GATE	WG	WG	---	---
TAPPING SLEEVE, VALVE, & BOX	TSV	TSV	---	---
RISER	R	R	---	---
PRESSURE REDUCER	PR	PR	---	---
SIAMSE CONNECTION	SC	SC	---	---
FIRE HYDRANT	FHY	FHY	---	---
WATER METER	WM	WM	---	---
POST INDICATOR VALVE	PV	PV	---	---
WELL	W	W	---	---
GAS GATE	GG	GG	---	---
GAS METER	GM	GM	---	---
ELECTRIC MANHOLE	EMH	EMH	---	---
ELECTRIC BOX	EB	EB	---	---
ELECTRIC METER	EM	EM	---	---
LIGHT POLE	LP	LP	---	---
FLOOD LIGHT	FL	FL	---	---
SINGLE LUMINAIRE	SL	SL	---	---
DOUBLE LUMINAIRE	DL	DL	---	---
TRIPLE LUMINAIRE	TL	TL	---	---
QUAD LUMINAIRE	QL	QL	---	---
WALL PACK	WP	WP	---	---
TELEPHONE MANHOLE	TMH	TMH	---	---
TRAFFIC SIGNAL	TS	TS	---	---
SIGNAL BOX	SB	SB	---	---
FIRE ALARM CONTROL PANEL	FACP	FACP	---	---
FIRE ALARM BOX	FAB	FAB	---	---
TRANSFORMER PAD	TP	TP	---	---
MANHOLE	MH	MH	---	---
UTILITY POLE	UP	UP	---	---
GLY POLE	GP	GP	---	---
HAND HOLE	HH	HH	---	---
PULL BOX	PB	PB	---	---
SURVEYED PROPERTY LINE (PL)	---	---	---	---
ASSESSOR'S MAP PROP. LINE	---	---	---	---
RIGHT-OF-WAY/PL EASEMENT	---	---	---	---
BUILDING SETBACK	---	---	---	---
50' PERIMETER WETLAND	---	---	---	---
100' RIVERBANK WETLAND	---	---	---	---
200' RIVERBANK WETLAND	---	---	---	---
ZONING LINE	---	---	---	---
TOWN LINE	---	---	---	---
STATE LINE	---	---	---	---
GRAVEL ROAD	---	---	---	---
EDGE OF PAVEMENT	---	---	---	---
BITUMINOUS CURB	---	---	---	---
CAPE COD BERM	---	---	---	---
PRECAST CONC. CURB	---	---	---	---
VERT. GRAN. CURB	---	---	---	---
SLOPED GRAN. EDGING	---	---	---	---
LIMIT OF CURB TYPE	---	---	---	---
TREE LINE	---	---	---	---
MEADOW GRASS LINE	---	---	---	---
MEADOW SHRUB LINE	---	---	---	---
CRUSHED STONE	---	---	---	---
EROSION CONTROL FABRIC	---	---	---	---
SAWCUT	---	---	---	---
MATCHLINE	---	---	---	---
SOLID WHITE LINE	---	---	---	---
SOLID YELLOW LINE	---	---	---	---
BROKEN WHITE LINE	---	---	---	---
BROKEN YELLOW LINE	---	---	---	---
SOLID WHITE CHANNELIZING LINE	---	---	---	---
SOLID YELLOW CHANNELIZING LINE	---	---	---	---
DOUBLE YELLOW LINE	---	---	---	---
STOP LINE	---	---	---	---
STEEL GUARD RAIL	---	---	---	---
WOOD GUARD RAIL	---	---	---	---
PATH	---	---	---	---
CHAIN LINK FENCE	---	---	---	---
STONE WALL	---	---	---	---
RETAINING WALL	---	---	---	---
HAY BALES	---	---	---	---
SILT FENCE	---	---	---	---
STRAW WATTLE	---	---	---	---
LIMIT OF DISTURBANCE	---	---	---	---
MINOR CONTOUR	---	---	---	---
MAJOR CONTOUR	---	---	---	---
TOP OF SLOPE	---	---	---	---
TOE OF SLOPE	---	---	---	---
BUILDING	---	---	---	---
BUILDING ENTRANCE	---	---	---	---
LOADING DOCK	---	---	---	---
BOLLARD	---	---	---	---
DUMPSTER PAD	---	---	---	---
SIGN	---	---	---	---
DOUBLE SIGN	---	---	---	---
PARKING METER	---	---	---	---
PARKING COUNT	---	---	---	---
COMPACT PARKING STALLS	---	---	---	---
CROSSWALK	---	---	---	---
CEMENT CONC. PAVEMENT	---	---	---	---
RIPRAP STONE	---	---	---	---
TRAIL REINFORCEMENT	---	---	---	---
ADA RAMP	---	---	---	---
ADA PARKING	---	---	---	---
VAN-ACCESSIBLE ADA PARKING	---	---	---	---

ABBREVIATIONS

ABANDON	ABAN	LANDSCAPE AREA	LA
ADJUST	ADJ	MAXIMUM	MAX
AMERICAN SOCIETY FOR TESTING & MATERIALS	ASTM	MINIMUM	MIN
AMERICANS WITH DISABILITIES ACT	ADA	NOT IN CONTRACT	NIC
APPROXIMATE	APPROX	NOT TO SCALE	NTS
ASPHALT COATED CORRUGATED METAL PIPE	ACMP	ON CENTER	OC
BITUMINOUS CURB	BC	ONSITE WASTEWATER TREATMENT SYSTEM	OWTS
BOTTOM OF SLOPE	BOS	PAVED WATER WAY	PWW
BACK OF CURB	BOC	POLYVINYLCHLORIDE PIPE	PVC
CAPE COD BERM	CCV	PRECAST CONCRETE CURB	PCC
CAST IRON PIPE	CIP	PROPOSED	PROP
CHANGE IN TYPE	CT	RADIUS	R
COLUMN	COL	REINFORCED CONCRETE PIPE	RCP
CONDUIT	COND	REMODEL	REMOLD
CORRUGATED ALUMINUM PIPE	CAP	REMOVE	REM
CORRUGATED POLYETHYLENE PIPE	CPP	REMOVE AND DISPOSE	R&D
CATCH BASIN	CB	REMOVE AND RESET	R&R
DUCTILE IRON PIPE	DIP	REMOVE AND STORE	R&S
DRIVEWAY	D/W	RETAIN	RET
DOUBLE GRATE	DG	RIGHT OF WAY	ROW
ELEVATION	ELEV	SLOPED GRANITE EDGING	SGE
EXISTING	EXIST	SIDEWALK	S/W
EDGE OF PAVEMENT	EOP	SQUARE	SQ
FOUNDATION	FDN	STANDARD	STD
FRAME AND COVER	F&C	TAPPING SLEEVE, VALVE AND BOX	TSV&B
FRAME AND GRATE	F&G	TOP OF SLOPE	TOS
FLARED END SECTION	FES	TRANSITION	TRANS
GALVANIZED	Galv	TYPICAL	TYP
GRANITE CURB	GC	TO BE REMOVED	TBR
HIGH DENSITY POLYETHYLENE	HDPE	UTILITY POLE	UP
HYDRANT	HYD	VERTICAL GRANITE CURB	VGC
HIGH POINT	HP	VITRIFIED CLAY PIPE	VCP
IDENTIFICATION	ID	WATER GATE	WG
INVERT ELEVATION	INV		

GENERAL NOTES

- THESE PLANS AND THEIR CORRESPONDING ELECTRONIC DOCUMENTS, INCLUDING CAD FILES FOR THE PROJECT, ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY OTHER PURPOSE THAN THE DEVELOPMENT OF THIS PROJECT WITHOUT THE EXPRESSED, WRITTEN CONSENT OF WOOD, ANY UNAUTHORIZED USE, RE-USE, ALTERATION, OR MODIFICATION OF THIS DATA SHALL BE AT THE USER'S RISK WITH NO LIABILITY ON THE PART OF WOOD.
- UPON AWARD OF THE CONTRACT AND PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND BONDS AND PAYING ALL STATE AND LOCAL FEES RELATING TO THE WORK SHOWN ON THESE DRAWINGS, THE CONSTRUCTION SPECIFICATIONS, AND CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL NOTIFY DIG-SAFE AT LEAST 72 BUSINESS HOURS PRIOR TO INITIATING ANY EXCAVATION WORK.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. WHERE SITE SPECIFICATIONS ARE NOT PROVIDED, THE CONTRACTOR SHALL ADHERE TO CITY OF PROVIDENCE STANDARDS OR THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, AS APPLICABLE. WHERE A DISCREPANCY EXISTS, THE MORE RESTRICTIVE STANDARD SHALL APPLY.
- REFERENCE MADE TO "STATE HIGHWAY STANDARDS," "STATE STANDARD SPECIFICATIONS," "STANDARD SPECIFICATIONS," OR "RIDOT STANDARDS" SHALL MEAN AND BE DEFINED AS THE "RHODE ISLAND DEPARTMENT OF TRANSPORTATION - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION."
- ANY WORK NOT MEETING THE APPROVED STANDARDS SHALL BE REMOVED IMMEDIATELY AND REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SITE SECURITY AND JOB SAFETY AND SHALL CONFORM TO THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING ANY REQUIRED POLICE PROTECTION. ANY REQUIRED TEMPORARY CONSTRUCTION SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
- THE CONTRACTOR SHALL NOT OBSTRUCT PUBLIC ROADWAYS, SIDEWALKS, OR FIRE HYDRANTS WITHOUT FIRST OBTAINING THE NECESSARY PERMITS TO DO SO.
- ACCESSIBLE ROUTES, PARKING SPACES, SIDEWALKS, AND RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FEDERAL "AMERICANS WITH DISABILITIES ACT (ADA)" AND LOCAL AND STATE STANDARDS. WHERE A DISCREPANCY EXISTS, THE MORE RESTRICTIVE STANDARD SHALL APPLY.
- THE LIMITS-OF-WORK (A.K.A. "LIMIT OF DISTURBANCE") SHALL BE AS SHOWN ON THESE PLANS. AREAS DISTURBED BEYOND THESE DEFINED LIMITS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. LANDSCAPE AREAS SHALL BE RESTORED WITH 4 INCHES OF LOAM AND SEED.
- SHOULD THE CONTRACTOR ENCOUNTER SUSPECTED CONTAMINATED SOIL, GROUNDWATER, OR OTHER MATERIAL DURING EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE SUSPECTED AREA AND NOTIFY THE OWNER SO THAT APPROPRIATE ACTIONS AND TESTING CAN TAKE PLACE.
- UNLESS OTHERWISE NOTED ON THE PLANS, ALL UNPAVED/LANDSCAPE AREAS SHALL RECEIVE 4 INCHES OF LOAM AND SEED WITHIN THE LIMITS OF WORK SHOWN ON THESE PLANS. LOAM SHALL BE EVENLY SPREAD, SMOOTHED, AND COMPACTED PRIOR TO SEEDING.
- PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT THEIR PROPOSED INTERFACE WITH PROPOSED PAVEMENTS TO ENSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
- EXISTING CONDITIONS, INCLUDING HORIZONTAL AND VERTICAL DATUMS, ARE FROM SURVEY CONDUCTED BY CHERENZIA & ASSOCIATES, INC. VERTICAL DATUM FOR THE PROJECT IS REFERENCED TO NAVD 1988.
- ALL PROPERTY PINS DISTURBED BY CONSTRUCTION SHALL BE REPLACED BY A LICENSED ENGINEER OR LAND SURVEYOR. THIS WORK SHALL BE SUBSIDIARY TO OTHER ITEMS OF THE CONTRACT.
- FULL DEPTH SAW CUTS SHALL BE USED TO REMOVE A PORTION OF PAVEMENT OR CURB AND GUTTER. ALL SAWCUTS SHALL BE FULL DEPTH AND SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
- CONTRACTOR SHALL MAINTAIN CONSTRUCTION LIMITS WITHIN THE EXTENTS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, FOR APPROVAL, A DETAILED WORK SCHEDULE OUTLINING ESTIMATED TIME PERIODS FOR CONSTRUCTION OF SEGMENTS.
- CONTRACTOR SHALL VERIFY WITH THE OWNER THAT ALL APPLICABLE PERMITS, EASEMENTS, AND ACQUISITIONS ARE COMPLETE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

UTILITIES:

- EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION, SIZE, MATERIAL(S), AND ELEVATION OF ALL EXISTING UTILITIES WITHIN THE LIMIT OF WORK PRIOR TO ORDERING OR INSTALLING THESE MATERIALS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR UTILITY CONFLICTS PRIOR TO CONSTRUCTION.
- WHERE AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, OR WHERE EXISTING CONDITIONS DIFFER FROM THE INFORMATION SHOWN ON THESE PLANS, SUCH THAT THE WORK CAN NOT BE COMPLETED AS INTENDED, THE CONTRACTOR SHALL IMMEDIATELY IDENTIFY AND PROVIDE THE ENGINEER WITH THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY IN CONFLICT. THE CONTRACTOR SHALL NOT CONTINUE WORK IN THIS AREA UNTIL THE APPROPRIATE REMEDIAL ACTION IS AGREED UPON BY THE OWNER AND ENGINEER.
- THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO OVERHEAD AND/OR UNDERGROUND UTILITIES, WHETHER OR NOT SHOWN ON THESE PLANS THROUGHOUT WORK ON THIS PROJECT.
- PROVIDENCE WATER MUST BE CONTACTED 24 HOURS PRIOR TO ANY WORK ON OR IN CLOSE PROXIMITY TO ANY OF THEIR ASSETS.
- PROPOSED SEWER/WATER LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVIDENCE WATER (PWSB) AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM) SEWER/WATER LINE SEPARATION REQUIREMENTS (SEE THIS PAGE).
- SEWER FORCE MAIN SHALL BE TESTED IN ACCORDANCE WITH AWWA C600 AT THE CONTRACTOR'S EXPENSE PRIOR TO FINAL ACCEPTANCE.
- ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH PROVIDENCE WATER SUPPLY BOARD RULES AND REQUIREMENTS.
- CONTRACTOR SHALL INSTALLED SEWER UTILITIES IN ACCORDANCE WITH NARRAGANSETT BAY COMMISSION RULES AND REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING WITH NBC PERMIT SC180246. AT A MINIMUM, THE CONTRACTOR SHALL:
 - CONTACT AND SCHEDULE AN INSPECTION WITH THE NBC ENGINEERING DEPARTMENT 72 HOURS PRIOR TO ANY PHYSICAL CONNECTION WORK (401-461-8848, EXTENSION 388).
 - COMPLETE THE NBC DIRECT CONNECTION INSPECTION FORM UPON COMPLETION OF THE CONNECTION TO THE NBC SEWER CONNECTION.
 - POST THE SEWER CONNECTION PERMIT ON THE CONSTRUCTION SITE THROUGHOUT THE CONSTRUCTION PROCESS.
 - COMPLETE "AS-BUILT" PLANS OF THE SEWER CONNECTION IN ACCORDANCE WITH NBC REQUIREMENTS.

LAYOUT AND MATERIALS NOTES

- THE CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
- SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THE ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
- DIMENSIONS ARE TO/FROM FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED ON THESE PLANS.
- PROPOSED BOUNDS AND ANY OTHER EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BITUMINOUS PATCH FOR ANY TRENCH WORK WITHIN PAVEMENT OR SIDEWALK AREAS IN PUBLIC RIGHTS-OF-WAY UNTIL PERMANENT PATCHING IS INSTALLED.

DEMOLITION

- WITHIN THE LIMIT OF WORK/DISTURBANCE, THE CONTRACTOR SHALL CLEAR AND GRUB ALL EXISTING VEGETATION AND STOCKPILE AND SCREEN TOPSOIL FOR RE-USE IN LANDSCAPE AREAS. THE CONTRACTOR SHALL ALSO REMOVE AND DISPOSE OF ALL EXISTING MANMADE FEATURES, INCLUDING BUT NOT LIMITED TO BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, WALLS, FENCES, UTILITIES (BOTH OVERHEAD AND UNDERGROUND), SIGNS, ETC., EXCEPT AS OTHERWISE NOTED ON THESE PLANS.
- THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
- THE EXTENT OF DEMOLITION DEPICTED ON THESE PLANS IS INTENDED TO AID THE CONTRACTOR IN BIDDING THE PROJECT AND IS NOT NECESSARILY INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE FULL EXTENTS OF THE DEMOLITION WORK PRIOR TO CONTRACT AWARD AND SHALL NOT BE COMPENSATED FOR UNFORESEEN CONDITIONS ONCE THE WORK HAS COMMENCED.
- EXISTING UTILITIES SHALL BE TERMINATED IN CONFORMANCE WITH APPLICABLE FEDERAL, STATE, LOCAL, AND SERVICE PROVIDER REQUIREMENTS.
- UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THESE PLANS, THE ENGINEER HAS NOT PREPARED PLANS FOR THE DISCOVERY, REMOVAL, ABATEMENT, OR DISPOSAL OF ANY HAZARDOUS OR TOXIC MATERIALS FOUND DURING CONSTRUCTION.
- UTILITIES SHALL REMAIN IN SERVICE TO ALL PROPERTIES AND BUILDINGS AT ALL TIMES THROUGHOUT CONSTRUCTION. REQUIRED OUTAGES SHALL BE COORDINATED BY THE CONTRACTOR WITH 72 HOURS NOTICE TO UTILITY PROVIDERS, CUSTOMERS, AND ANY AFFECTED PARTIES.

EROSION CONTROLS/CONSTRUCTION SEQUENCING

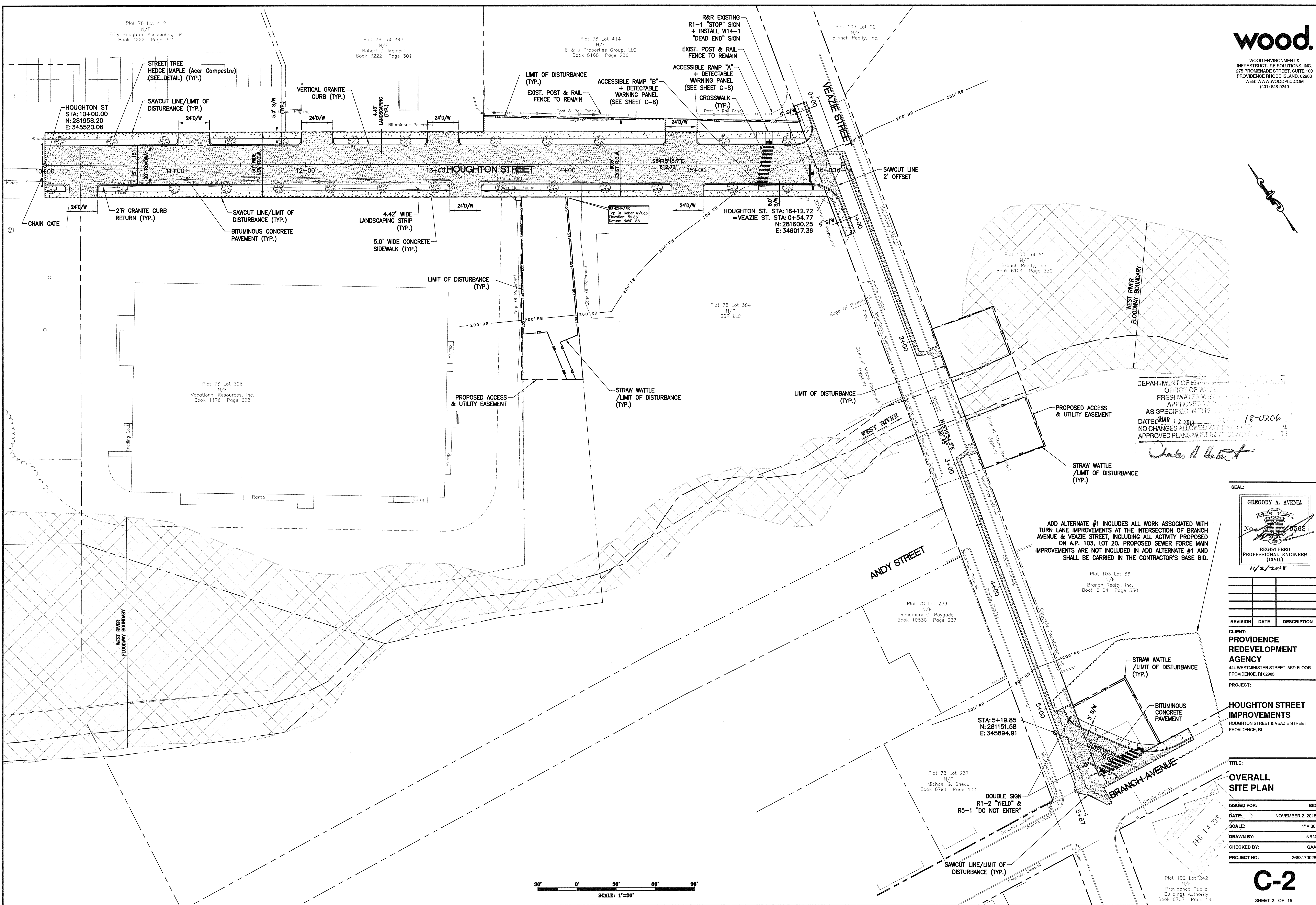
- PRIOR TO THE START OF CONSTRUCTION OF ANY EARTHWORK ACTIVITIES, THE CONTRACTOR SHALL NOTIFY ALL APPLICABLE AGENCIES AND INSTALL THE EROSION CONTROL MEASURES SHOWN ON THESE PLANS IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL PERMITS PERTAINING TO THIS PROJECT.
- THE CONTRACTOR SHALL KEEP A COPY OF THE "SOIL EROSION AND SEDIMENTATION CONTROL PLAN" (SECC) AND THE APPROVED PLAN SET AT THE CONSTRUCTION SITE AT ALL TIMES.
- THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES SHOWN ON THE PLAN SET IN ACCORDANCE WITH THE SECC AND THE MOST RECENT EDITION OF THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK."
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AND/OR UPGRADE THESE MEASURES, AS NECESSARY, THROUGHOUT CONSTRUCTION, TO MEET THE REQUIREMENTS OF ALL RELATED PERMITS FOR THE PROJECT.
- THE CONTRACTOR SHALL PREPARE AND MAINTAIN A RED-LINED COPY OF THE SECC PLAN SHOWING INTENDED AREAS FOR STAGING, STOCKPILING, WASHOUT, SOLID WASTE CONTAINMENT, AND TEMPORARY SEDIMENTATION CONTROL AREAS. ALL SUCH AREAS SHALL BE LOCATED OUTSIDE OF REGULATED WETLAND AREAS OR AREAS INTENDED FOR INFILTRATION PRACTICES.
- EROSION CONTROL DEVICES
 - AT LEAST ONE STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED FOR ACCESS TO THE PROJECT BY CONSTRUCTION VEHICLES. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED BEFORE CONSTRUCTION VEHICLES WILL BE ALLOWED TO ENTER THE CONSTRUCTION SITE. ADDITIONAL ENTRANCES/EXITS SHALL BE INSTALLED, IF MORE THAN ONE ACCESS POINT IS ANTICIPATED BY THE CONTRACTOR. A WASH OUT PAD MAY ALSO BE INSTALLED TO WASH CONSTRUCTION VEHICLES EXITING THE SITE.
 - ROADS ADJACENT TO THE CONSTRUCTION SITE SHALL BE CLEAN AT THE END OF EACH WORK DAY.
 - TEMPORARY SEDIMENT BASINS MAY BE EXCAVATED OR BERMED/HAYBALED AND SHALL BE SIZED IN ACCORDANCE WITH THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" AND THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK." THE DISCHARGE LOCATION FROM THESE BASINS SHALL BE STABILIZED TO PREVENT EROSION.
 - STRAW WATTLE OR SILT SACKS SHALL BE INSTALLED AT ALL DOWN-GRADE CATCH BASINS WITHIN THE LIMIT OF WORK TO CONTROL EROSION AND SEDIMENTATION AND TO PROTECT OFF-SITE AREAS. THESE DEVICES SHALL BE INSTALLED AS SHOWN ON THE E&S CONTROL PLAN PRIOR TO INITIATION OF MAJOR SITE WORK ACTIVITIES AND SHALL BE MAINTAINED/REPAIRED UNTIL FINAL STABILIZATION OF ALL DISTURBED AREAS.
 - STRAW WATTLE SHALL BE INSTALLED AROUND ALL EARTH STOCKPILES. STOCKPILES SHALL BE STABILIZED WITH TEMPORARY SEED ACCORDING TO NOTE 11 BELOW. IF TEMPORARY SEED IS NOT FEASIBLE OR NOT PRACTICAL, STOCKPILES SHALL BE COVERED WITH POLYETHYLENE SHEETING OR SIMILAR PRODUCT AT THE END OF EACH DAY TO MINIMIZE DUST.

- ALL OTHER EROSION CONTROL DEVICES SHOWN ON THESE PLANS SHALL BE IN ACCORDANCE WITH "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" AND THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK."
- THE EROSION CONTROL MEASURES SHOWN ON THESE PLANS ARE INTENDED TO BE THE MINIMUM NECESSARY AT THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AND SUPPLEMENT THESE EROSION CONTROLS, AS NECESSARY THROUGHOUT CONSTRUCTION, TO PREVENT DAMAGE TO WETLANDS AND/OR SURROUNDING PROPERTIES.
- THE CONTRACTOR SHALL PREVENT DUST, DEBRIS, OR SEDIMENTS FROM LEAVING THE SITE DURING CONSTRUCTION AND SHALL BE RESPONSIBLE TO REPAIR, CLEAN UP, OR TAKE OTHER CORRECTIVE ACTION IMMEDIATELY OR NO LATER THAN 24 HOURS AFTER ANY ISSUE ARISES.
- THE CONTRACTOR SHALL CONTROL CONSTRUCTION STORMWATER RUNOFF IN SUCH A MANNER AS TO PREVENT DAMAGE TO DOWN-GRADE PROPERTIES; ANY PROPERTIES SO DAMAGED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND WITHIN 12 HOURS AFTER A RAINFALL EVENT. THE CONTRACTOR SHALL IMMEDIATELY REPAIR DAMAGED DEVICES AND SHALL REMOVE ACCUMULATED SEDIMENTS IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE RIDEPERMIT, WHEN APPLICABLE. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM THE SITE OR PLACED AWAY FROM WETLANDS AND CLOSED DRAINAGE SYSTEMS.
- THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PERFORM EARTHWORK IN PHASES THAT ALLOW FOR STABILIZATION OF THESE AREAS IN A RELATIVELY SHORT TIME PERIOD AND TO DISCOURAGE EROSION AND SEDIMENTATION. ANY EXPOSED SOILS INTENDED TO REMAIN FOR MORE THAN 14 DAYS SHALL BE STABILIZED WITH MULCH, OR TEMPORARY SEED AND WATERED TO ENCOURAGE VEGETATION.
- THE CONTRACTOR SHALL INSTALL PERMANENT SEEDING BETWEEN APRIL 15TH AND JUNE 15TH AND/OR AUGUST 15TH TO OCTOBER 15TH.
- THE CONTRACTOR SHALL APPLY PERMANENT SOIL STABILIZATION MEASURES TO ALL GRADED AREAS WITHIN SEVEN (7) DAYS OF ESTABLISHING FINAL GRADE.
- THE CONTRACTOR SHALL PERFORM A FINAL INSPECTION OF ALL EXISTING CATCH BASINS, DRAINAGE PIPING, AND ASSOCIATED DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS TO ENSURE THAT ALL SEDIMENTS HAVE BEEN REMOVED BEFORE WORK IS DEEMED COMPLETE.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL E&S MEASURES ONLY AFTER FINAL PAVEMENT IS PLACED AND VEGETATION IN LANDSCAPE AREAS IS WELL ESTABLISHED.
- PERMANENT CONTROLS OR SURFACE STABILIZATION SHALL COMMENCE AS SOON AS PRACTICABLE BUT IN NO CASE MORE THAN 14 DAYS AFTER COMPLETION OF FILLING AND GRADING ACTIVITIES. AREAS WHICH WILL NOT BE REWORKED FOR 14 CALENDAR DAYS SHALL BE TEMPORARILY SEEDED AND MULCHED AS SOON AS IT IS KNOWN WITH REASONABLE CERTAINTY THAT WORK WILL BE STOPPED FOR AT LEAST 14 CALENDAR DAYS.
- TEMPORARY EROSION AND SEDIMENT CONTROL BMPs (INCLUDING STRAW WATTLE AND CONSTRUCTION ENTRANCE) SHALL BE REMOVED WITHIN 30 CALENDAR DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED AS DETERMINED BY THE ENGINEER. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL RESULTING FROM REMOVAL OF BMPs OR VEGETATION SHALL BE PERMANENTLY STABILIZED (95% VEGETATION DENSITY).
- THE EROSION CONTROL DEVICES SHOWN ON THE DRAWING REPRESENT THE MINIMUM REQUIRED FOR EROSION CONTROL AND SHALL BE INSTALLED AS REQUIRED. THE CONTRACTOR SHALL ADD TO THESE DEVICES ANY AND ALL MEASURES AS REQUIRED BY THE ENGINEER TO EFFECTIVELY PREVENT EROSION AND MIGRATION OF SEDIMENT FROM THE WORK AREA.

FILTRATION AREAS

- TO ENSURE THE LONG-TERM FUNCTION AND VALUE OF ANY AREA PROPOSED FOR FILTRATION, INCLUDING BUT NOT LIMITED TO THE SAND FILTER, THE CONTRACTOR SHALL EXERCISE THE FOLLOWING BEST MANAGEMENT PRACTICES THROUGHOUT CONSTRUCTION:
- THIS AREA SHALL NOT BE USED FOR TEMPORARY CONSTRUCTION SEDIMENTATION CONTROL, SEDIMENTATION BASINS, OR DEWATERING AREAS UPON START OF SAND FILTER CONSTRUCTION.
 - UPON START OF SAND FILTER CONSTRUCTION, THIS AREA SHALL REMAIN OFF-LINE UNTIL THE ENTIRE CONSTRUCTION AREA CONTRIBUTING TO THESE AREAS HAS BEEN STABILIZED WITH PAVEMENT OR VEGETATION, AS APPLICABLE.
 - STORMWATER RUNOFF DURING CONSTRUCTION SHALL BE DIRECTED AWAY FROM THIS AREA TO THE GREATEST EXTENT PRACTICABLE UPON START OF SAND FILTER CONSTRUCTION. WHERE NOT FEASIBLE, THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROLS UP-GRADE OF THIS AREA TO PREVENT SEDIMENTATION OF THESE AREAS DURING CONSTRUCTION.
 - UPON COMPLETION OF CONSTRUCTION OF THIS AREA, THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES TO PREVENT SILTATION OF THE FILTER MATERIALS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATER AND PROGRAM
APPROVED WITH CONDITIONS



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATER QUALITY DIVISION
APPROVED AS SPECIFIED IN THE PERMITS
DATED MAR 12 2018 FILE 18-0206
NO CHANGES ALLOWED WITHOUT THE APPROVAL OF THE DIVISION
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Walter

SEAL:
GREGORY A. AVENIA
No. 9562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

ADD ALTERNATE #1 INCLUDES ALL WORK ASSOCIATED WITH TURN LANE IMPROVEMENTS AT THE INTERSECTION OF BRANCH AVENUE & VEAZIE STREET, INCLUDING ALL ACTIVITY PROPOSED ON A.P. 103, LOT 20. PROPOSED SEWER FORCE MAIN IMPROVEMENTS ARE NOT INCLUDED IN ADD ALTERNATE #1 AND SHALL BE CARRIED IN THE CONTRACTOR'S BASE BID.

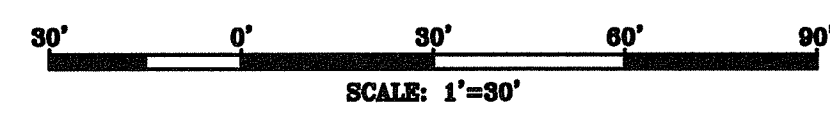
REVISION DATE DESCRIPTION
CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903
PROJECT:

HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
OVERALL SITE PLAN

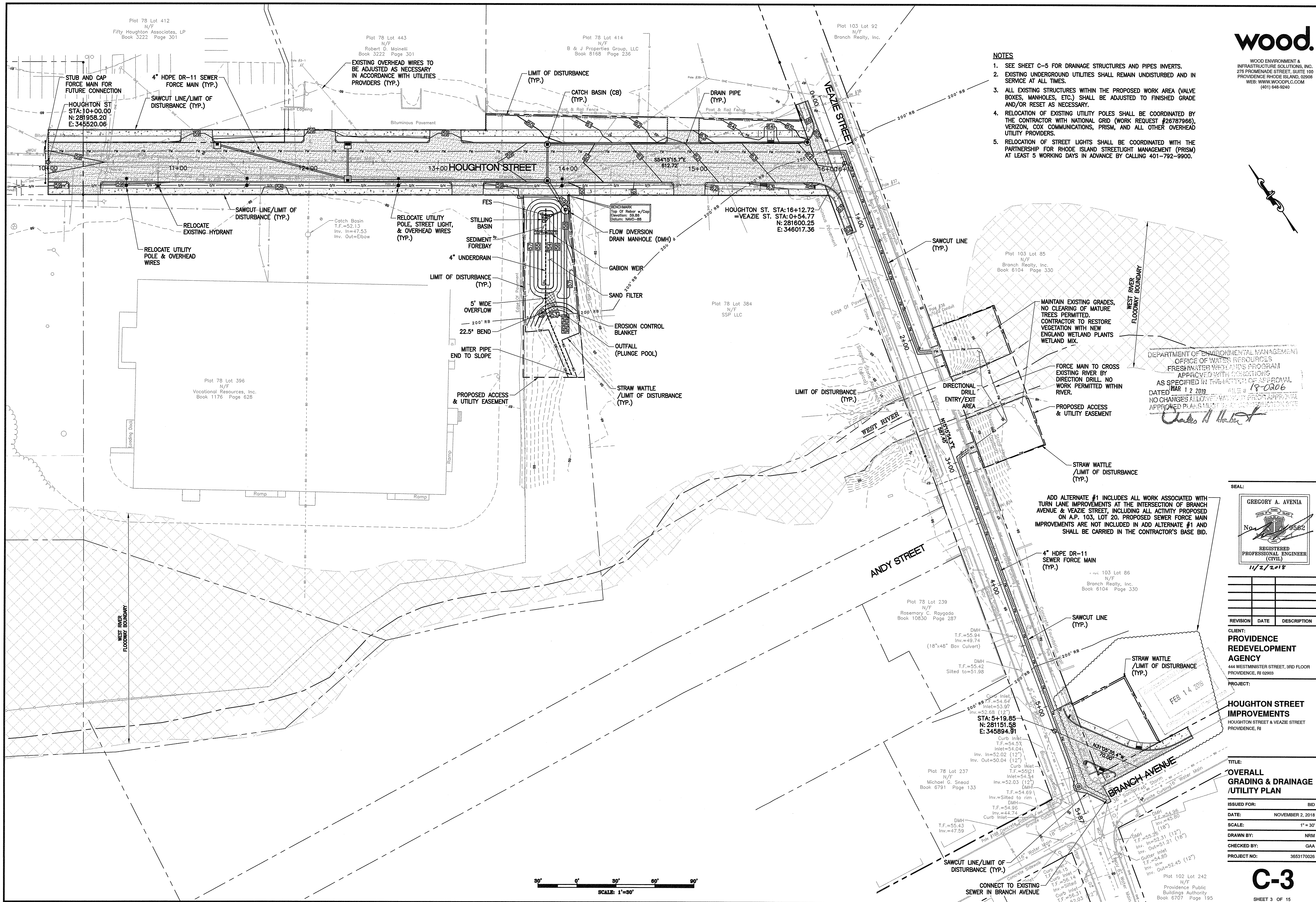
ISSUED FOR: BID
DATE: NOVEMBER 2, 2018
SCALE: 1" = 30'
DRAWN BY: NRM
CHECKED BY: GAA
PROJECT NO: 3653170026

C-2
SHEET 2 OF 15



NOTES

- SEE SHEET C-5 FOR DRAINAGE STRUCTURES AND PIPES INVERTS.
- EXISTING UNDERGROUND UTILITIES SHALL REMAIN UNDISTURBED AND IN SERVICE AT ALL TIMES.
- ALL EXISTING STRUCTURES WITHIN THE PROPOSED WORK AREA (VALVE BOXES, MANHOLES, ETC.) SHALL BE ADJUSTED TO FINISHED GRADE AND/OR RESET AS NECESSARY.
- RELOCATION OF EXISTING UTILITY POLES SHALL BE COORDINATED BY THE CONTRACTOR WITH NATIONAL GRID (WORK REQUEST #26787986), VERIZON, COX COMMUNICATIONS, PRISM, AND ALL OTHER OVERHEAD UTILITY PROVIDERS.
- RELOCATION OF STREET LIGHTS SHALL BE COORDINATED WITH THE PARTNERSHIP FOR RHODE ISLAND STREETLIGHT MANAGEMENT (PRISM) AT LEAST 5 WORKING DAYS IN ADVANCE BY CALLING 401-792-9900.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 12 2019 FILE # 18-0206
NO CHANGES ALLOWED WITHOUT PRE-APPROVAL
APPROVED PLANS MUST BE SUBMITTED TO THE DATE
Charles H. Hester

SEAL:
GREGORY A. AVENIA
No. 05562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

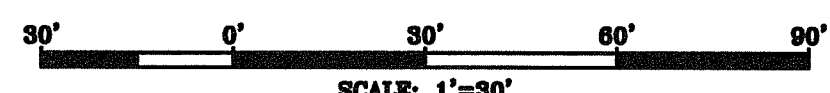
REVISION	DATE	DESCRIPTION

CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

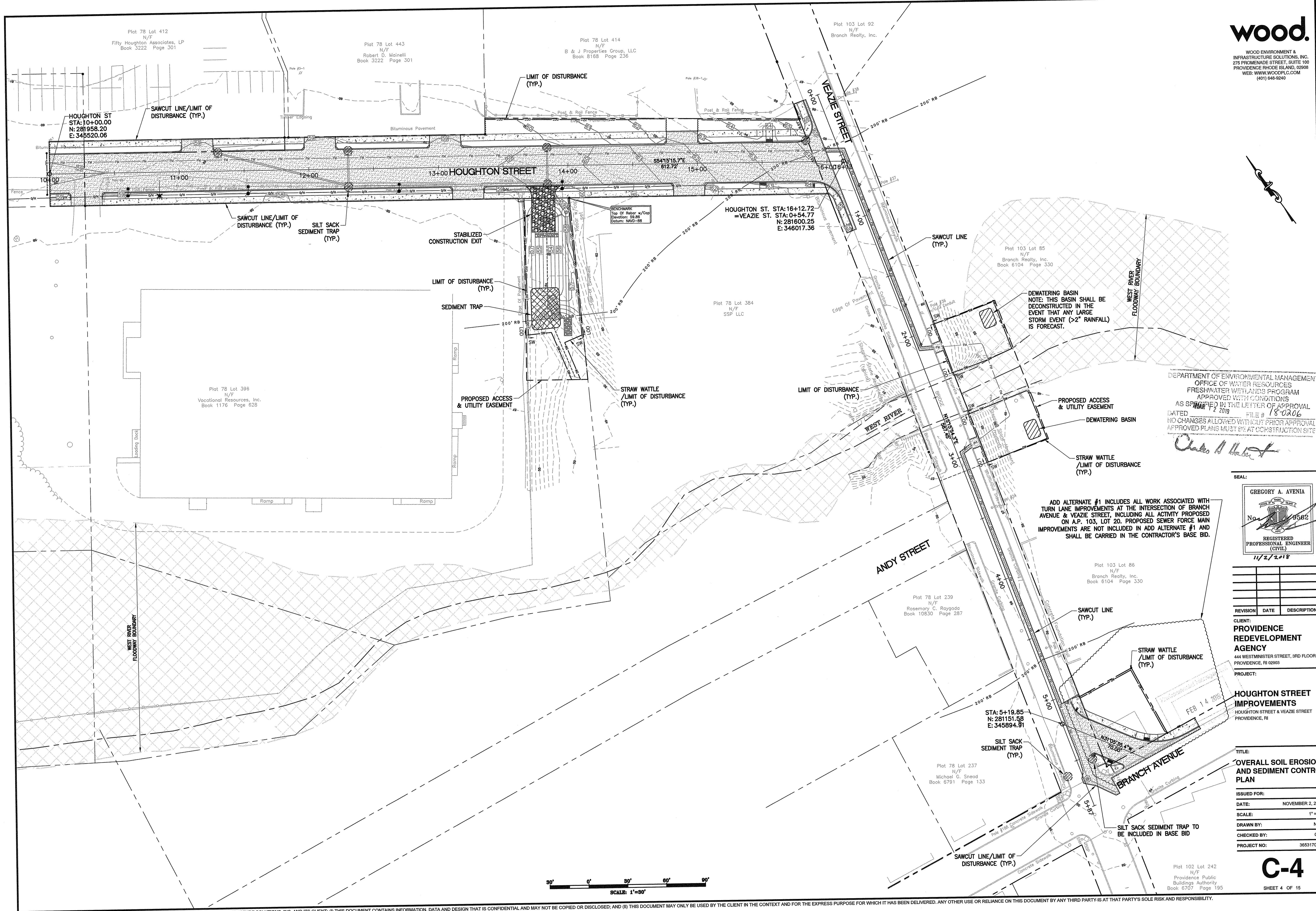
PROJECT:
HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
OVERALL GRADING & DRAINAGE /UTILITY PLAN

ISSUED FOR: BID
DATE: NOVEMBER 2, 2018
SCALE: 1" = 30'
DRAWN BY: NRM
CHECKED BY: GAA
PROJECT NO: 3653170026



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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 02/15/2019 FILE # 18-0206
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Avenia

SEAL:
GREGORY A. AVENIA
No. 3562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

REVISION	DATE	DESCRIPTION

CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

PROJECT:
HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

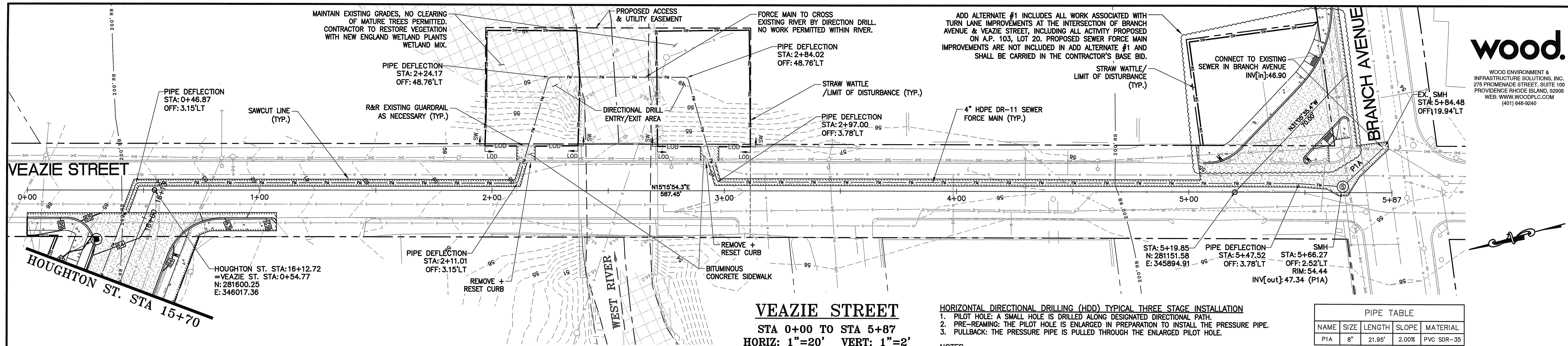
TITLE:
OVERALL SOIL EROSION AND SEDIMENT CONTROL PLAN

ISSUED FOR: BID
DATE: NOVEMBER 2, 2018
SCALE: 1" = 30'
DRAWN BY: NRM
CHECKED BY: GAA
PROJECT NO: 3653170028

C-4
SHEET 4 OF 15

30' 0' 30' 60' 90'
SCALE: 1"=30'

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VEAZIE STREET
STA 0+00 TO STA 5+87
HORIZ: 1"=20' VERT: 1"=2'

HORIZONTAL DIRECTIONAL DRILLING (HDD) TYPICAL THREE STAGE INSTALLATION

1. PILOT HOLE: A SMALL HOLE IS DRILLED ALONG DESIGNATED DIRECTIONAL PATH.
2. PRE-REAMING: THE PILOT HOLE IS ENLARGED IN PREPARATION TO INSTALL THE PRESSURE PIPE.
3. PULLBACK: THE PRESSURE PIPE IS PULLED THROUGH THE ENLARGED PILOT HOLE.

NOTES

- A. BULK LIQUID STORAGE TANKS, FRAC TANKS, OR WATER TIGHT ROLL OFF CONTAINERS SHALL BE USED TO TEMPORARILY CONTAIN AND STORE THE SLURRY AND WASTEWATER FROM DRILLING, WHICH SHALL THEN BE TRANSPORTED TO AN APPROVED FACILITY FOR DISPOSAL.
- B. CONTRACTOR SHALL PROVIDE DETAILED PLAN FOR DIRECTIONAL DRILL PROCESS TO ENGINEER FOR APPROVAL PRIOR TO START OF CONSTRUCTION.

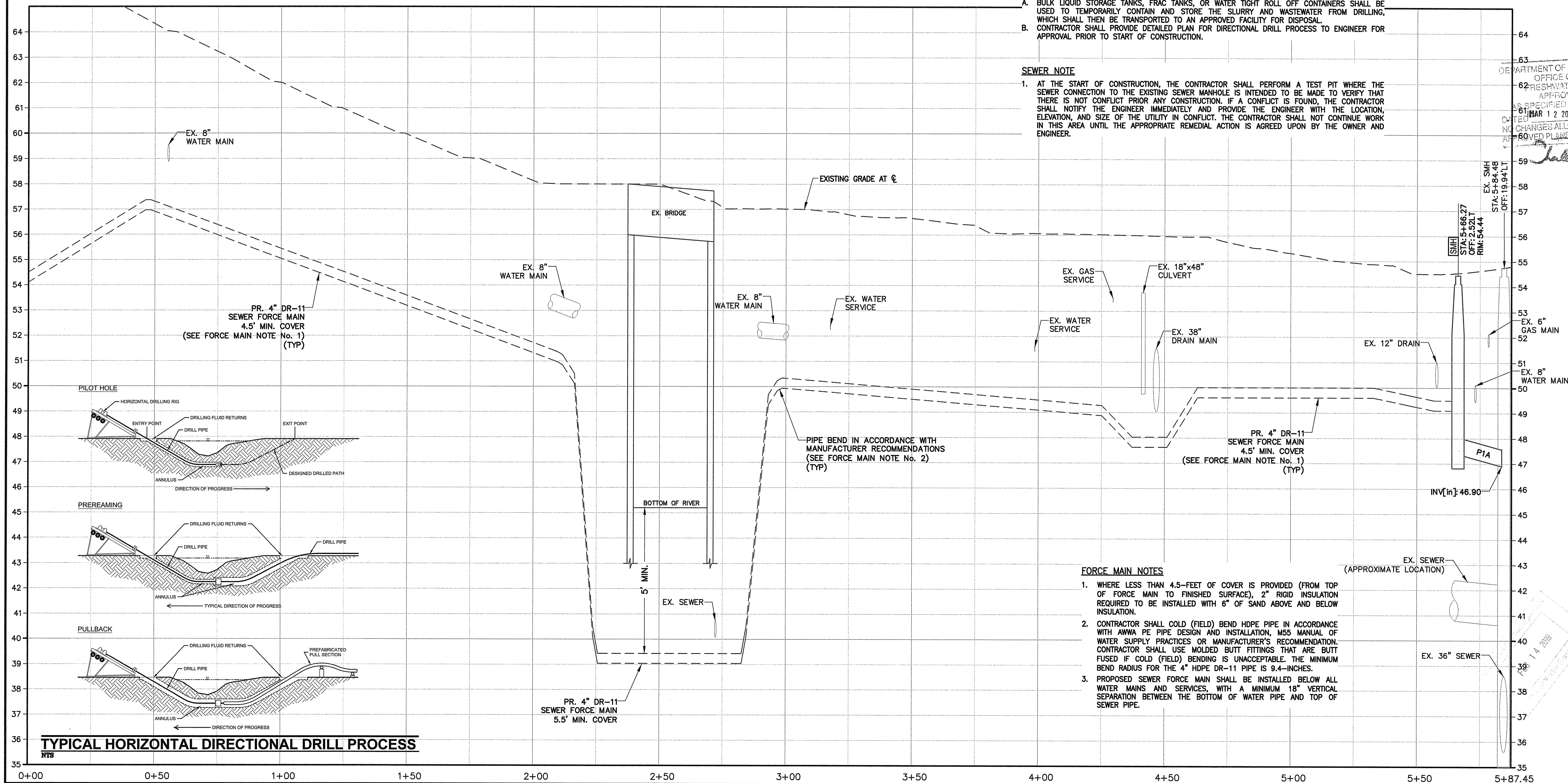
PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
PIA	8"	21.95'	2.00%	PVC SDR-35

SEWER NOTE

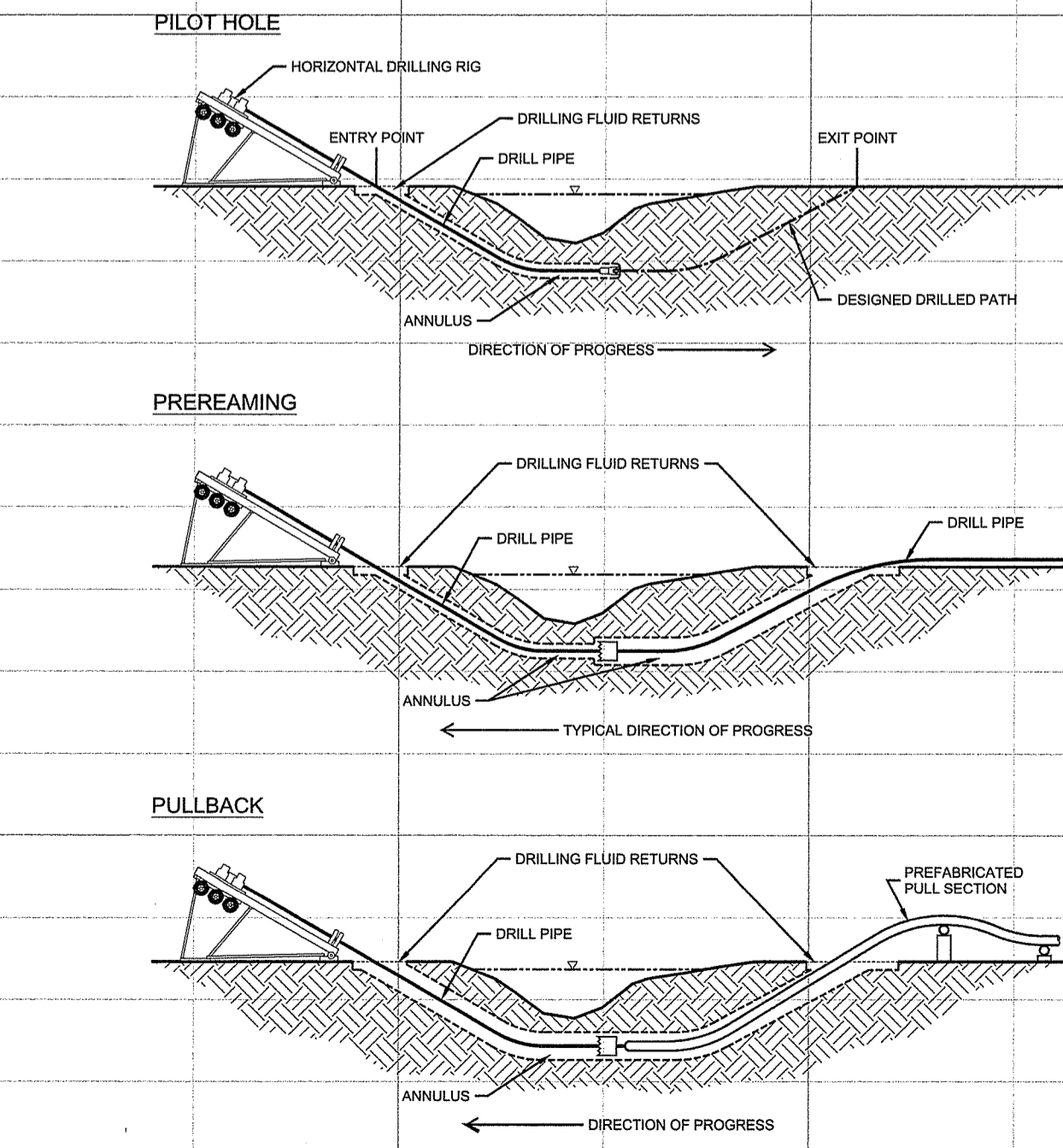
1. AT THE START OF CONSTRUCTION, THE CONTRACTOR SHALL PERFORM A TEST PIT WHERE THE SEWER CONNECTION TO THE EXISTING SEWER MANHOLE IS INTENDED TO BE MADE TO VERIFY THAT THERE IS NOT CONFLICT PRIOR ANY CONSTRUCTION. IF A CONFLICT IS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE THE ENGINEER WITH THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY IN CONFLICT. THE CONTRACTOR SHALL NOT CONTINUE WORK IN THIS AREA UNTIL THE APPROPRIATE REMEDIAL ACTION IS AGREED UPON BY THE OWNER AND ENGINEER.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATE: MAR 12 2019 FILE # 18-0206
CHANGES ALLOWED WITHOUT PRIOR APPROVAL
REVISED PLANS MUST BE IN CONFORMANCE WITH
APPROVED PLANS MUST BE IN CONFORMANCE WITH

Charles A. Hester



TYPICAL HORIZONTAL DIRECTIONAL DRILL PROCESS



FORCE MAIN NOTES

1. WHERE LESS THAN 4.5- FEET OF COVER IS PROVIDED (FROM TOP OF FORCE MAIN TO FINISHED SURFACE), 2" RIGID INSULATION REQUIRED TO BE INSTALLED WITH 6" OF SAND ABOVE AND BELOW INSULATION.
2. CONTRACTOR SHALL COLD (FIELD) BEND HDPE PIPE IN ACCORDANCE WITH AWWA PE PIPE DESIGN AND INSTALLATION, M55 MANUAL OF WATER SUPPLY PRACTICES OR MANUFACTURER'S RECOMMENDATION. CONTRACTOR SHALL USE MOLDED BUTT FITTINGS THAT ARE BUTT FUSED IF COLD (FIELD) BENDING IS UNACCEPTABLE. THE MINIMUM BEND RADIUS FOR THE 4" HDPE DR-11 PIPE IS 9.4-INCHES.
3. PROPOSED SEWER FORCE MAIN SHALL BE INSTALLED BELOW ALL WATER MAINS AND SERVICES, WITH A MINIMUM 18" VERTICAL SEPARATION BETWEEN THE BOTTOM OF WATER PIPE AND TOP OF SEWER PIPE.

SEAL:
GREGORY A. AVENIA
No. 0562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

REVISION	DATE	DESCRIPTION

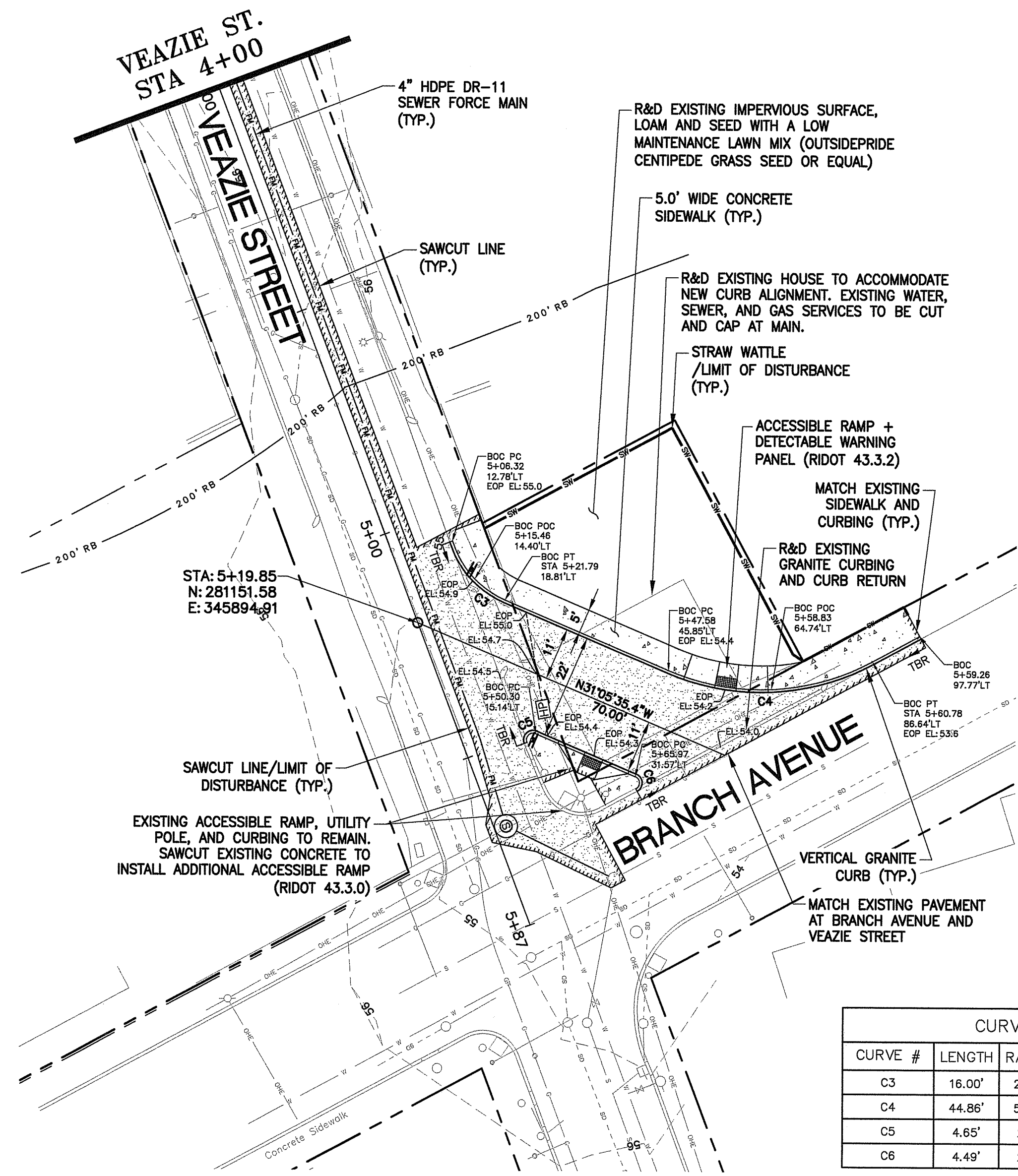
CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

PROJECT:
HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
VEAZIE STREET SANITARY SEWER PLAN AND PROFILE

ISSUED FOR: BID
DATE: NOVEMBER 2, 2018
SCALE: 1" = 20' H / 1" = 2' V
DRAWN BY: NRM
CHECKED BY: GAA
PROJECT NO: 3653170026

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 12 2019 FILE # 18-0206
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED BY [Signature]

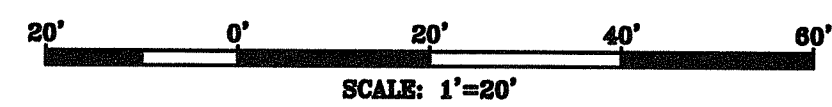
[Signature]

SEAL:
GREGORY A. AVENIA
No. 9562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C3	16.00'	20.00'	45°50'37.5"	8.46'
C4	44.86'	50.00'	51°24'41.4"	24.07'
C5	4.65'	2.00'	133°05'32.3"	4.61'
C6	4.49'	2.00'	128°35'18.6"	4.15'

**INTERSECTION
BRANCH AVENUE AND VEAZIE STREET**

NOTE:
ADD ALTERNATE #1 INCLUDES ALL WORK ASSOCIATED WITH TURN LANE IMPROVEMENTS AT THE INTERSECTION OF BRANCH AVENUE & VEAZIE STREET, INCLUDING ALL ACTIVITY PROPOSED ON A.P. 103, LOT 20. PROPOSED SEWER FORCE MAIN IMPROVEMENTS ARE NOT INCLUDED IN ADD ALTERNATE #1 AND SHALL BE CARRIED IN THE CONTRACTOR'S BASE BID.



REVISION	DATE	DESCRIPTION

CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

PROJECT:
HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
VEAZIE STREET AND BRANCH AVENUE INTERSECTION PLAN

ISSUED FOR: BID

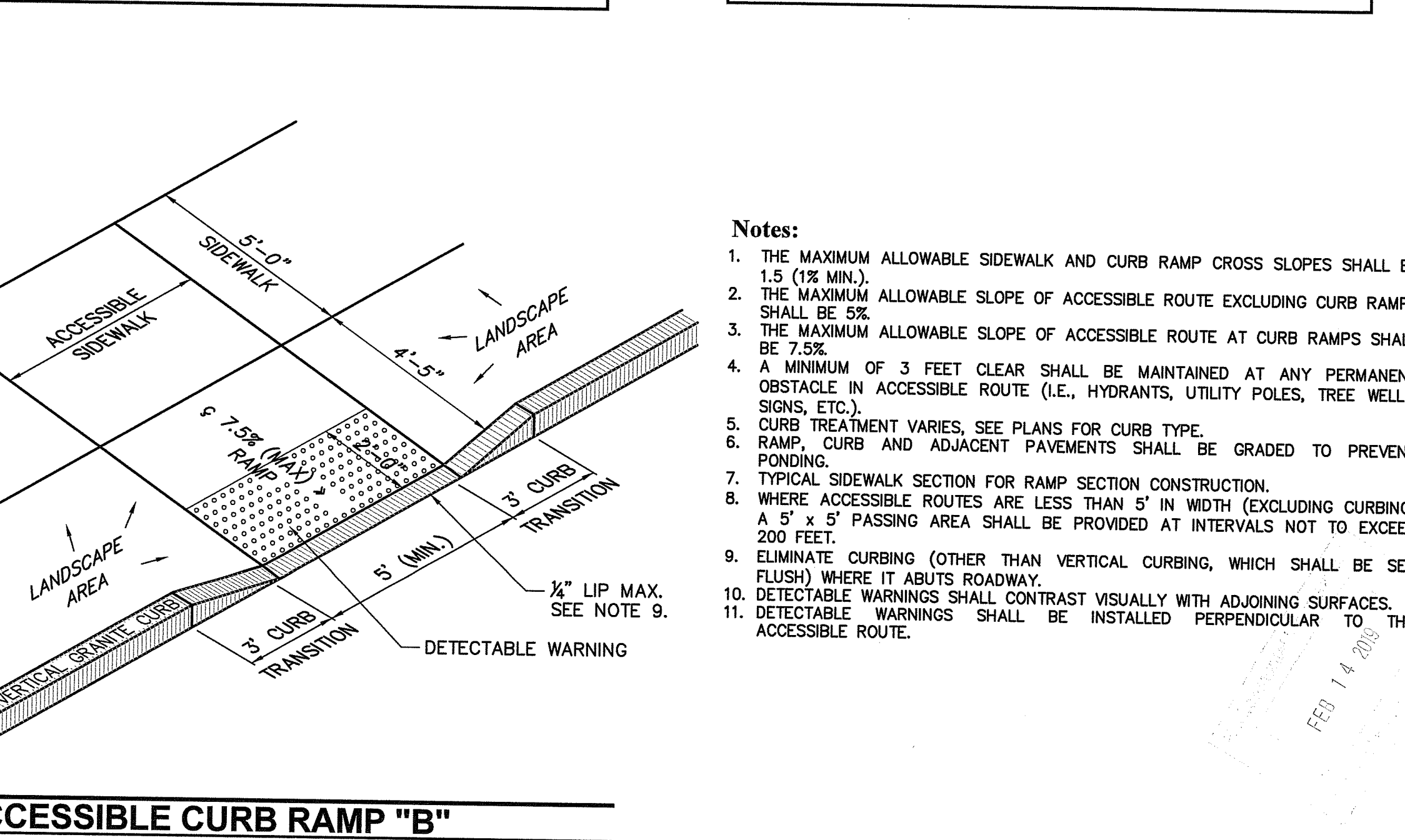
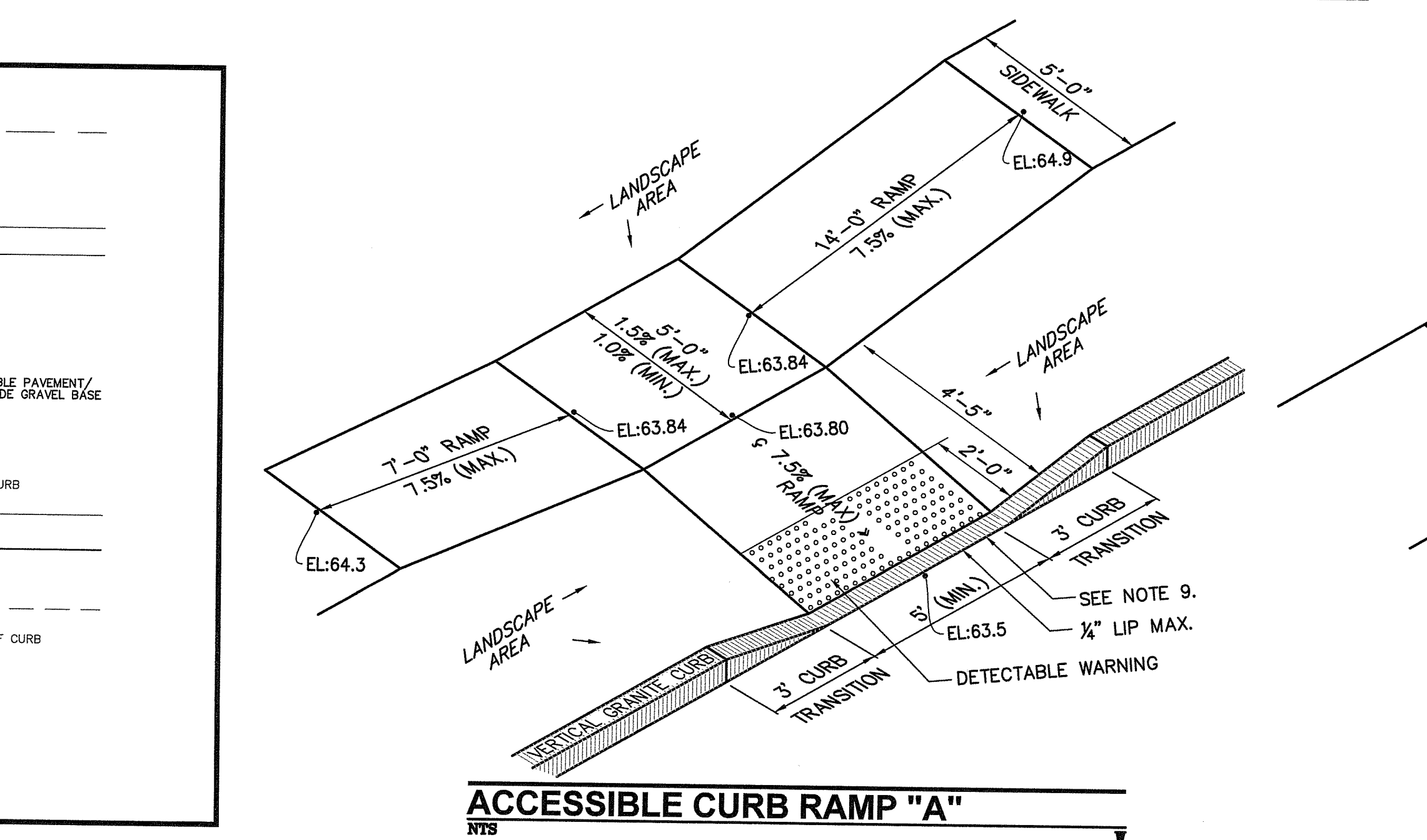
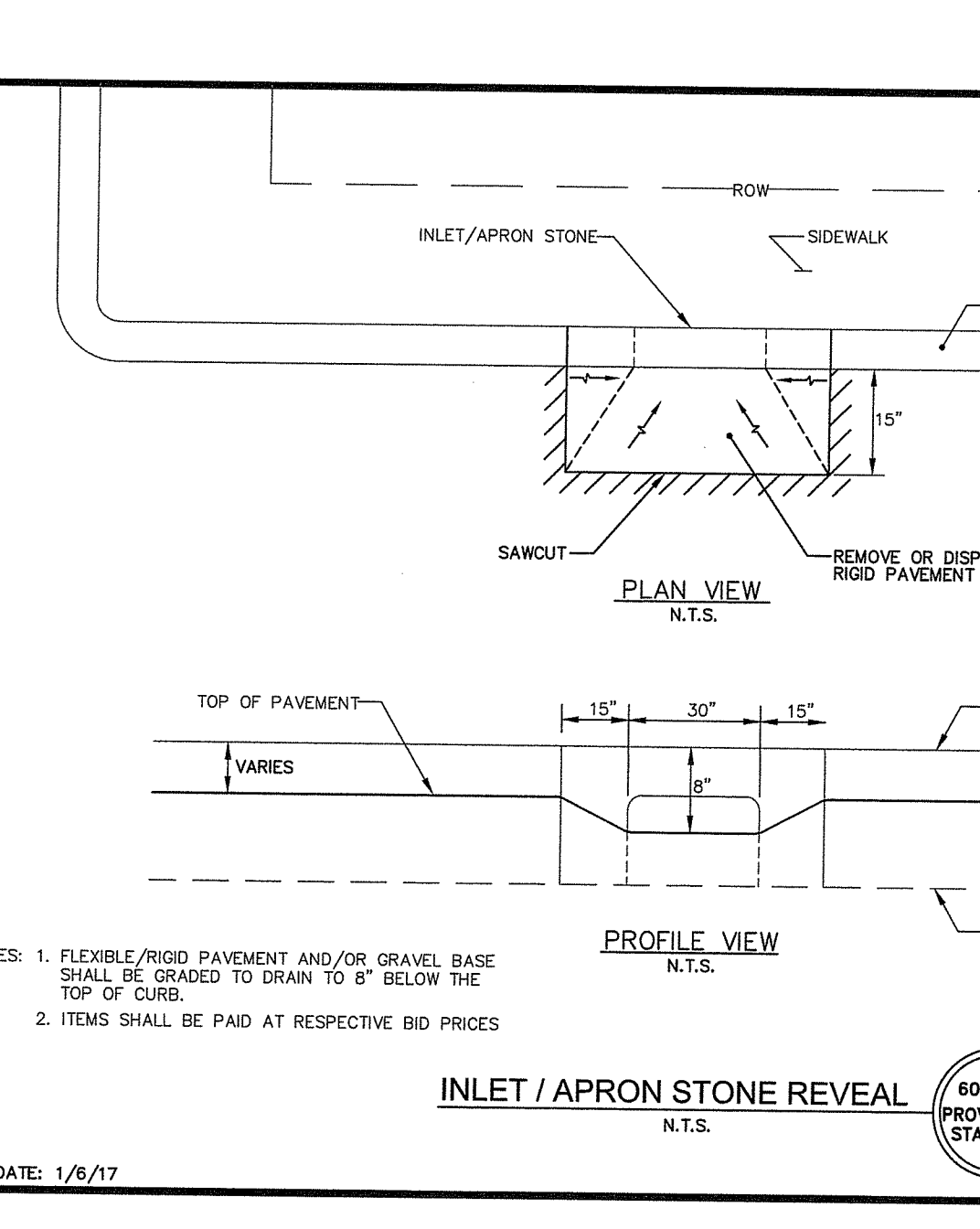
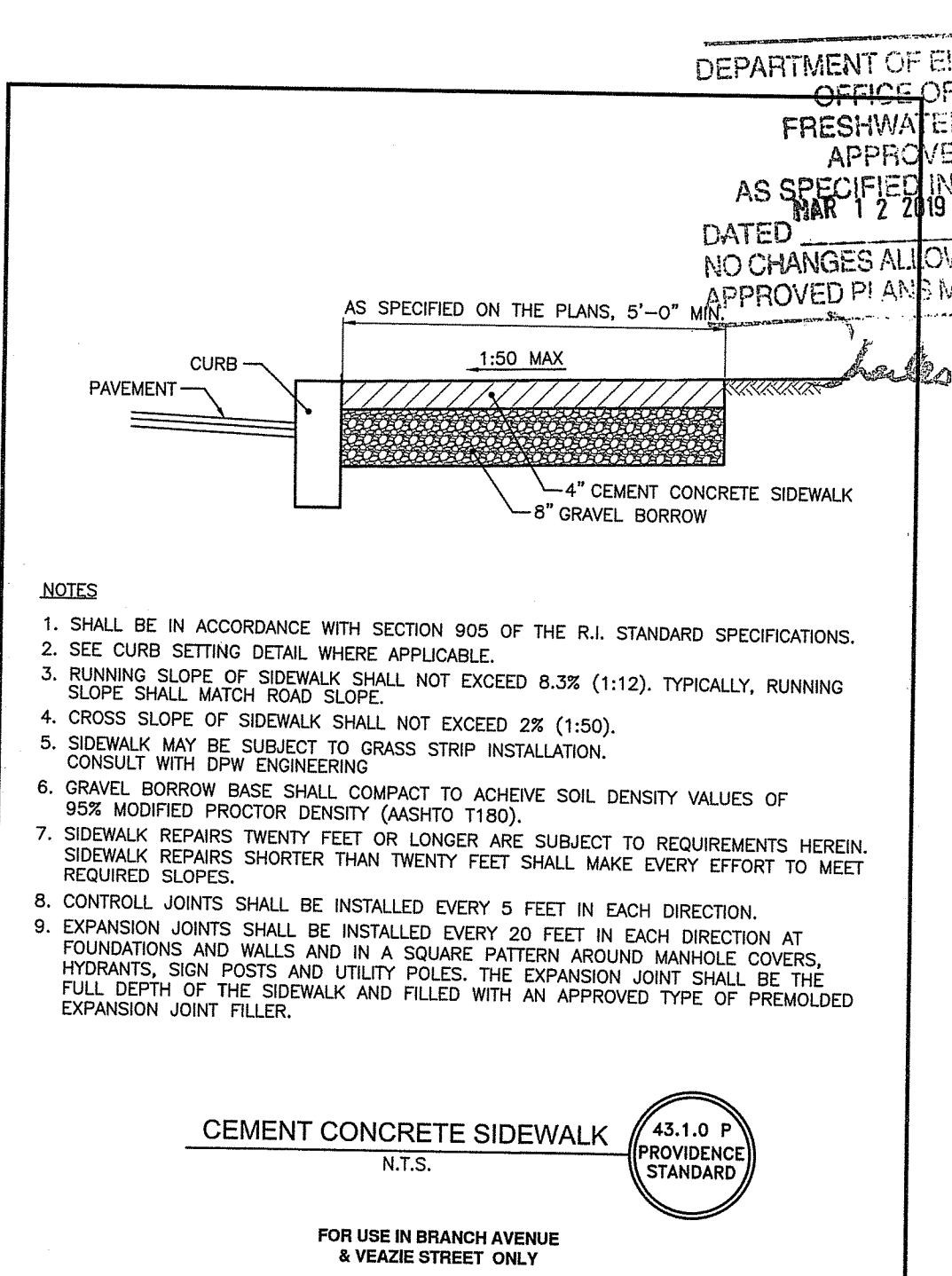
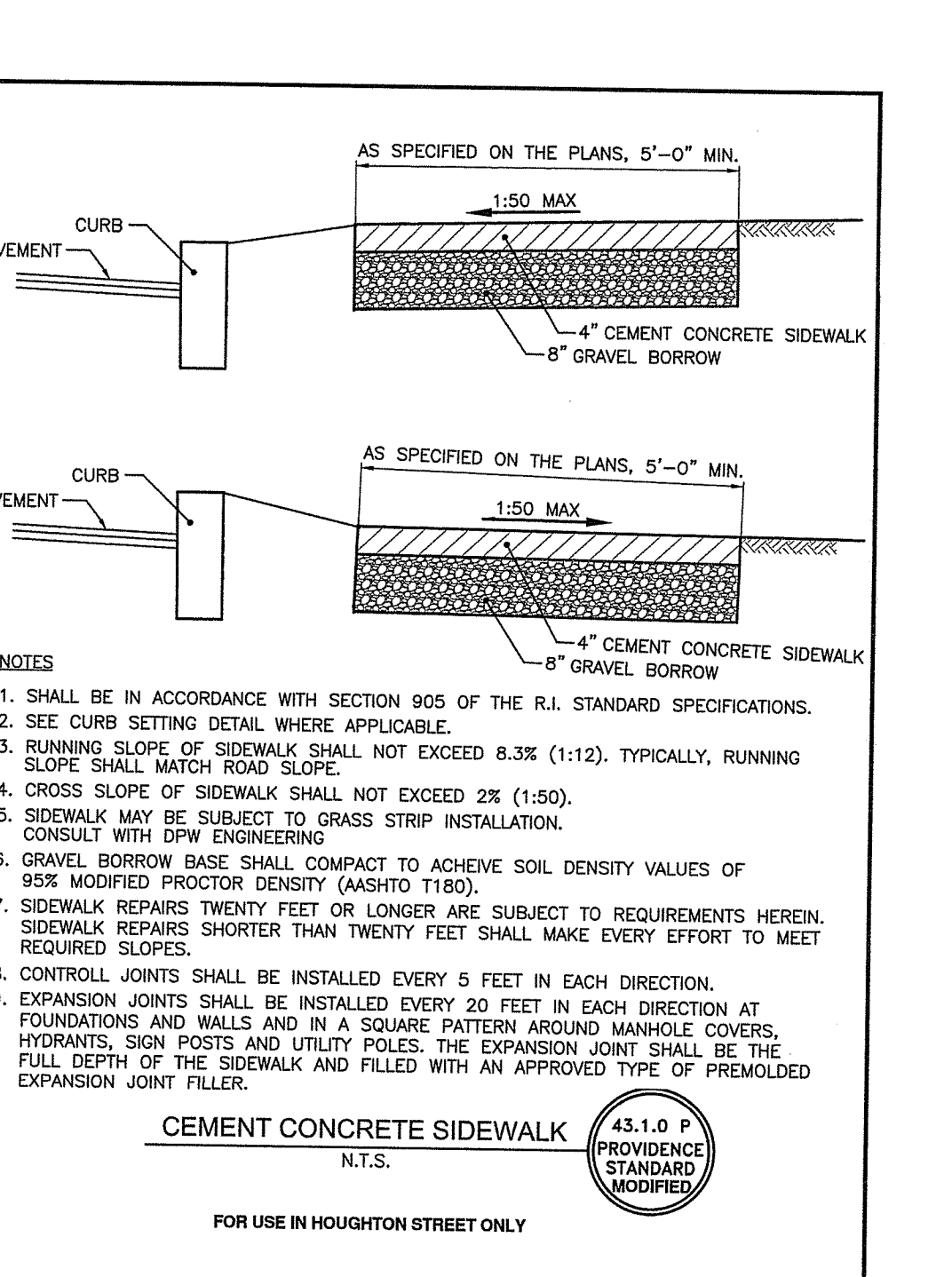
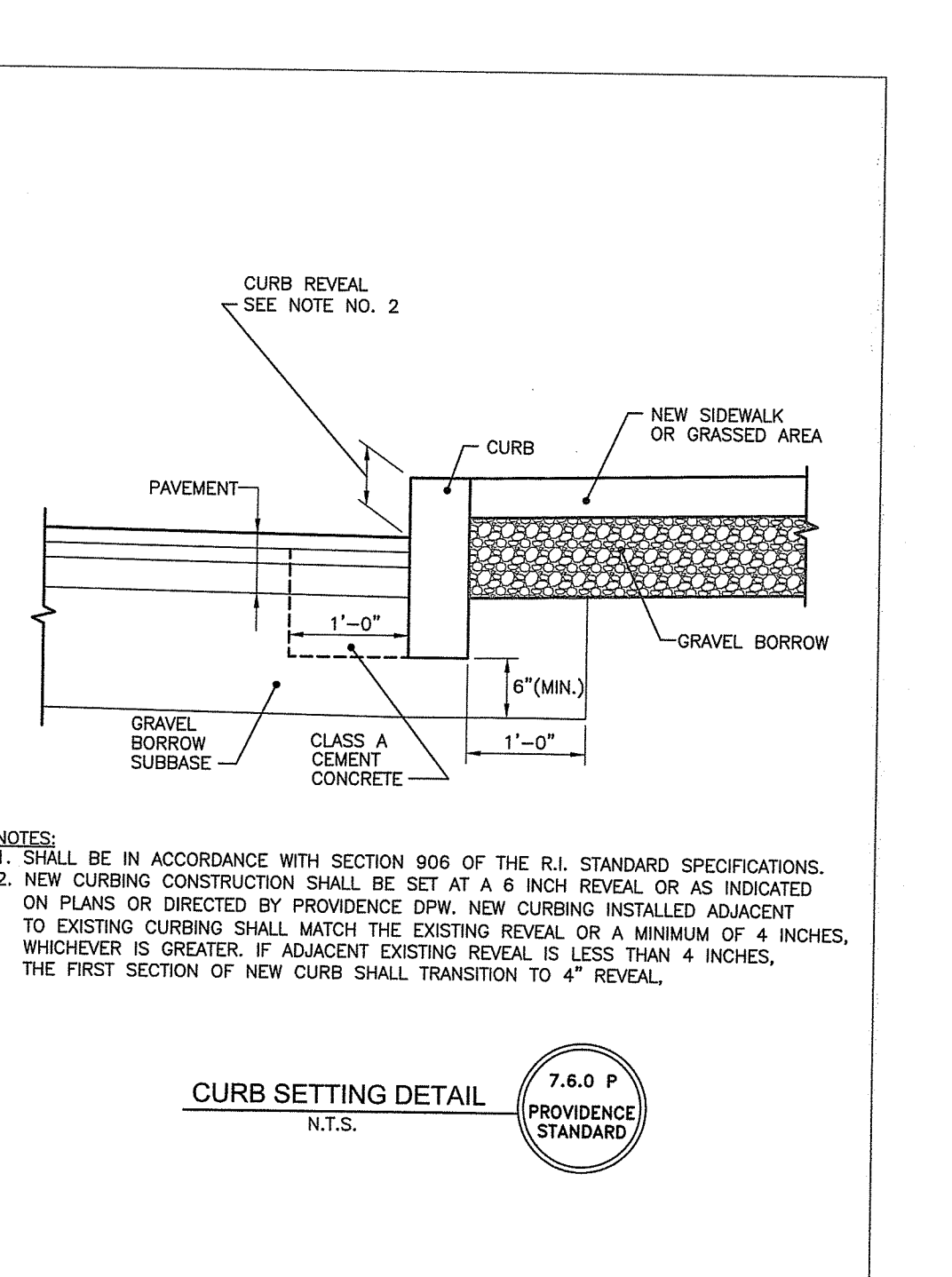
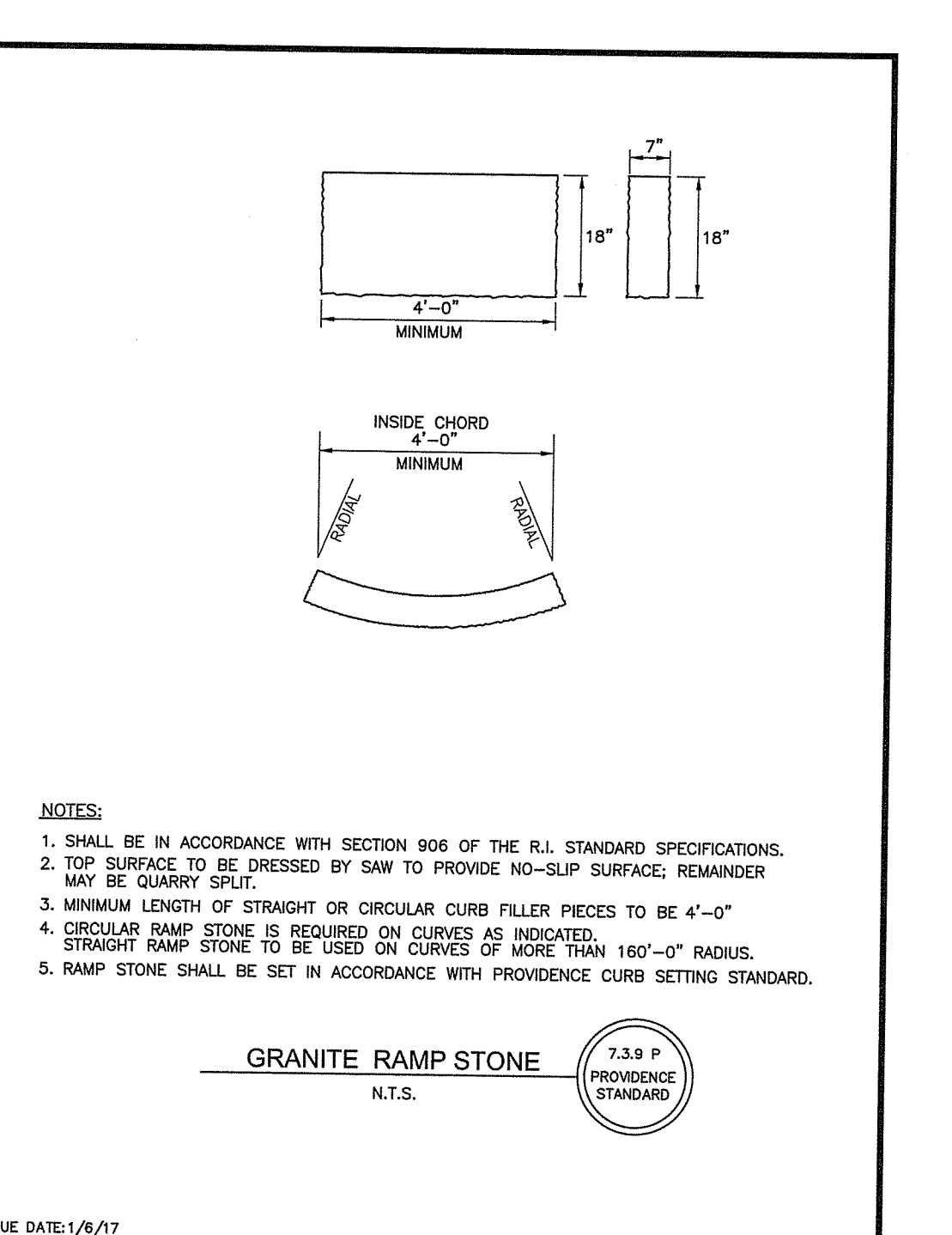
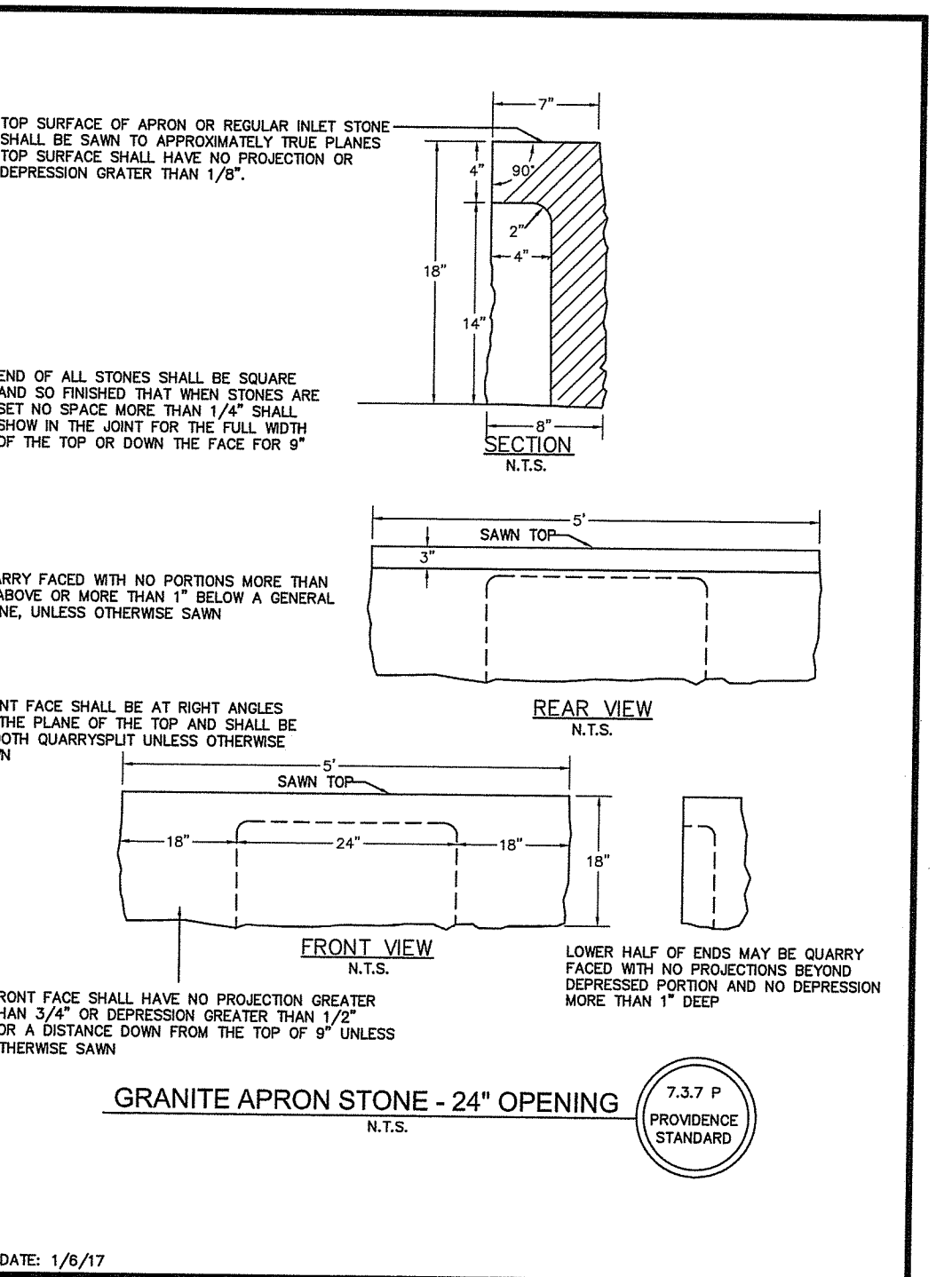
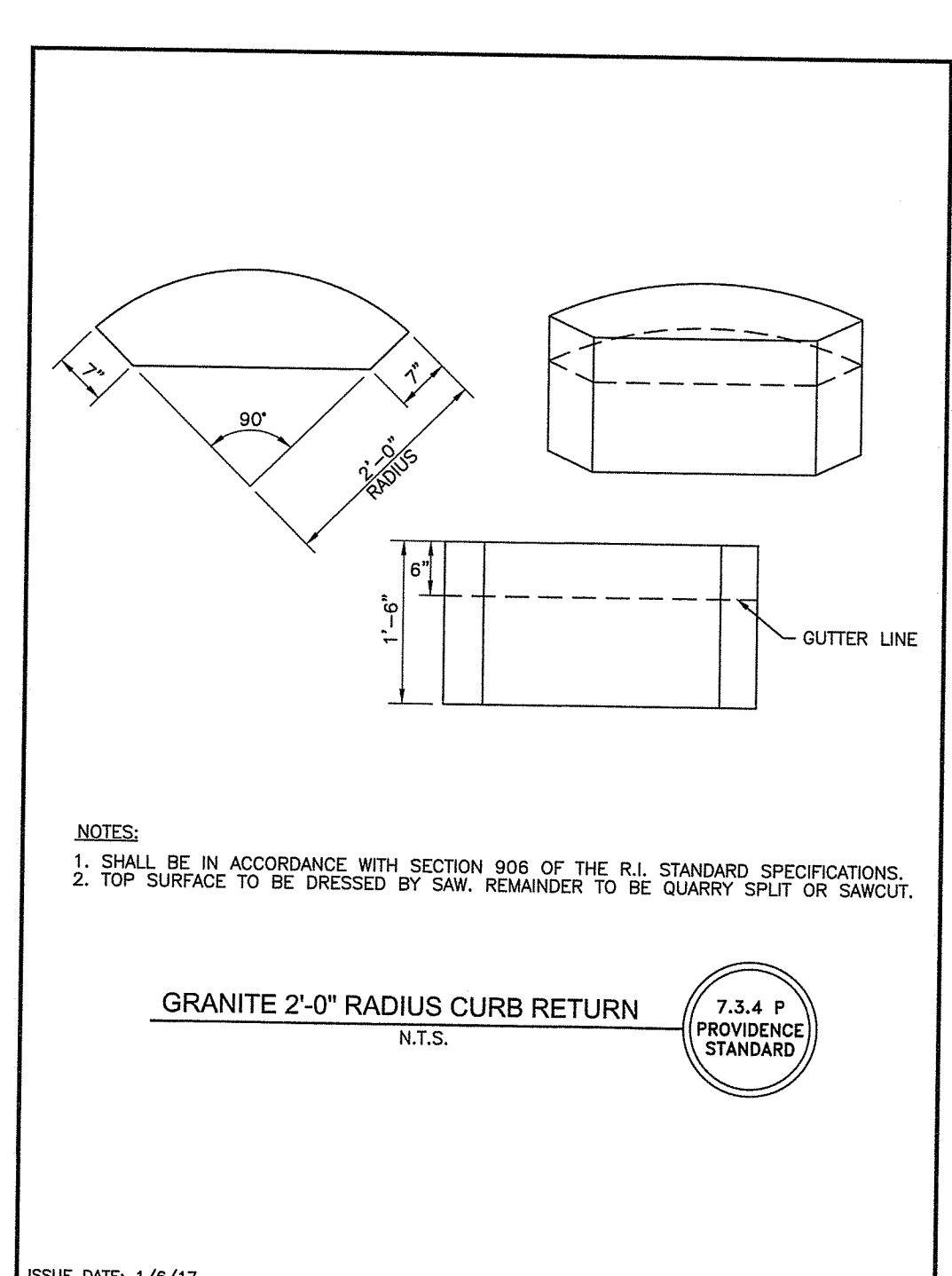
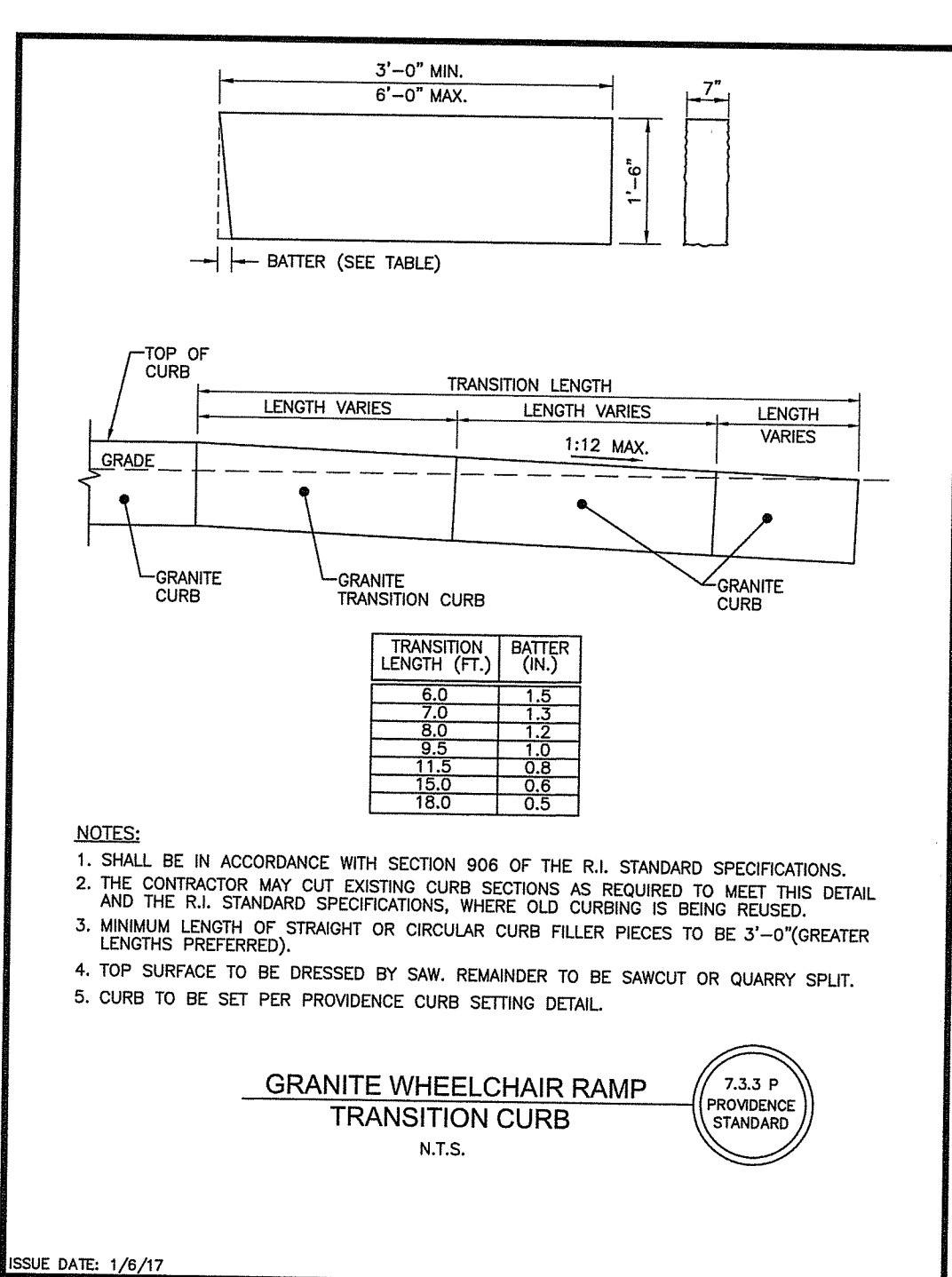
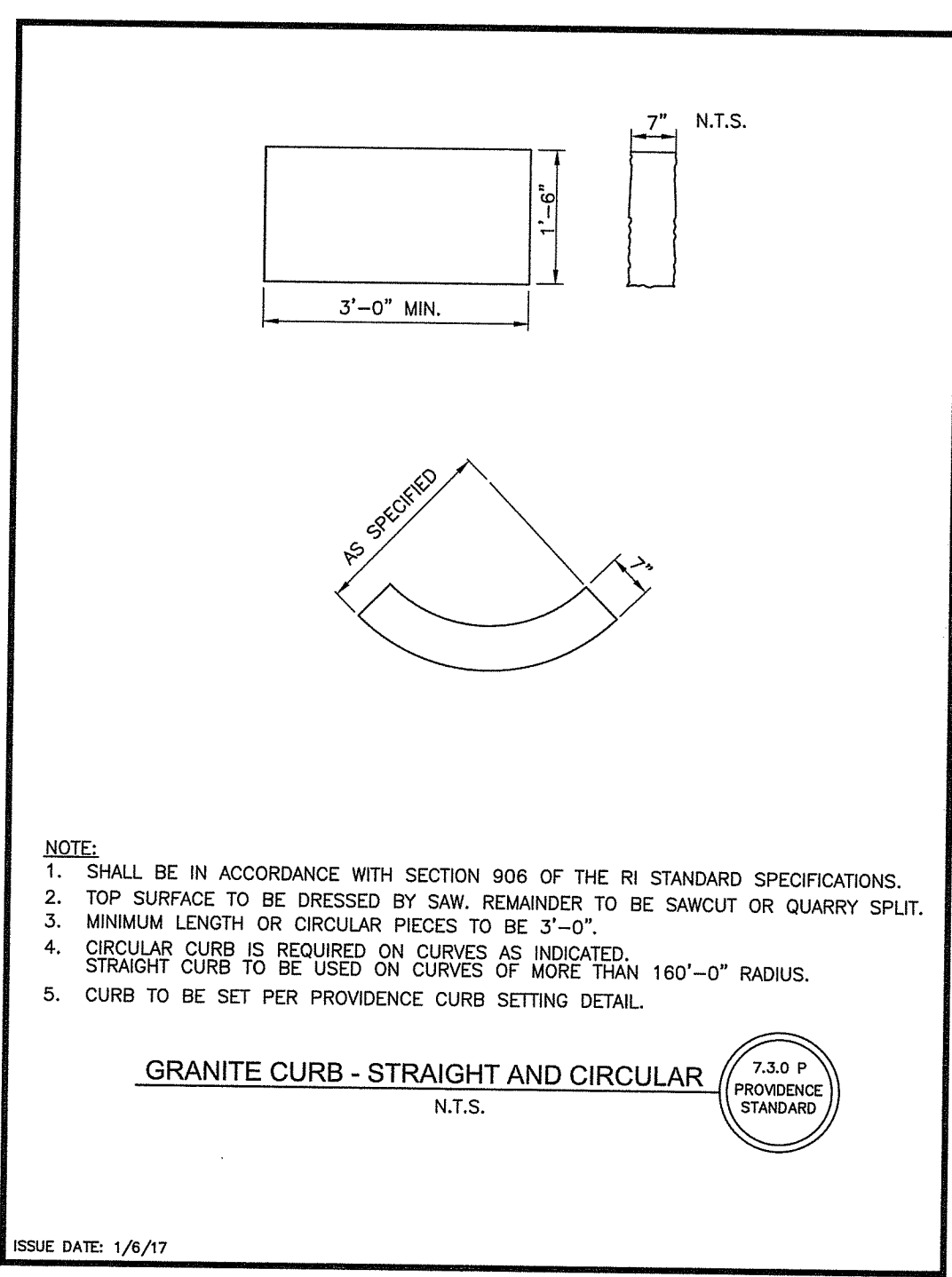
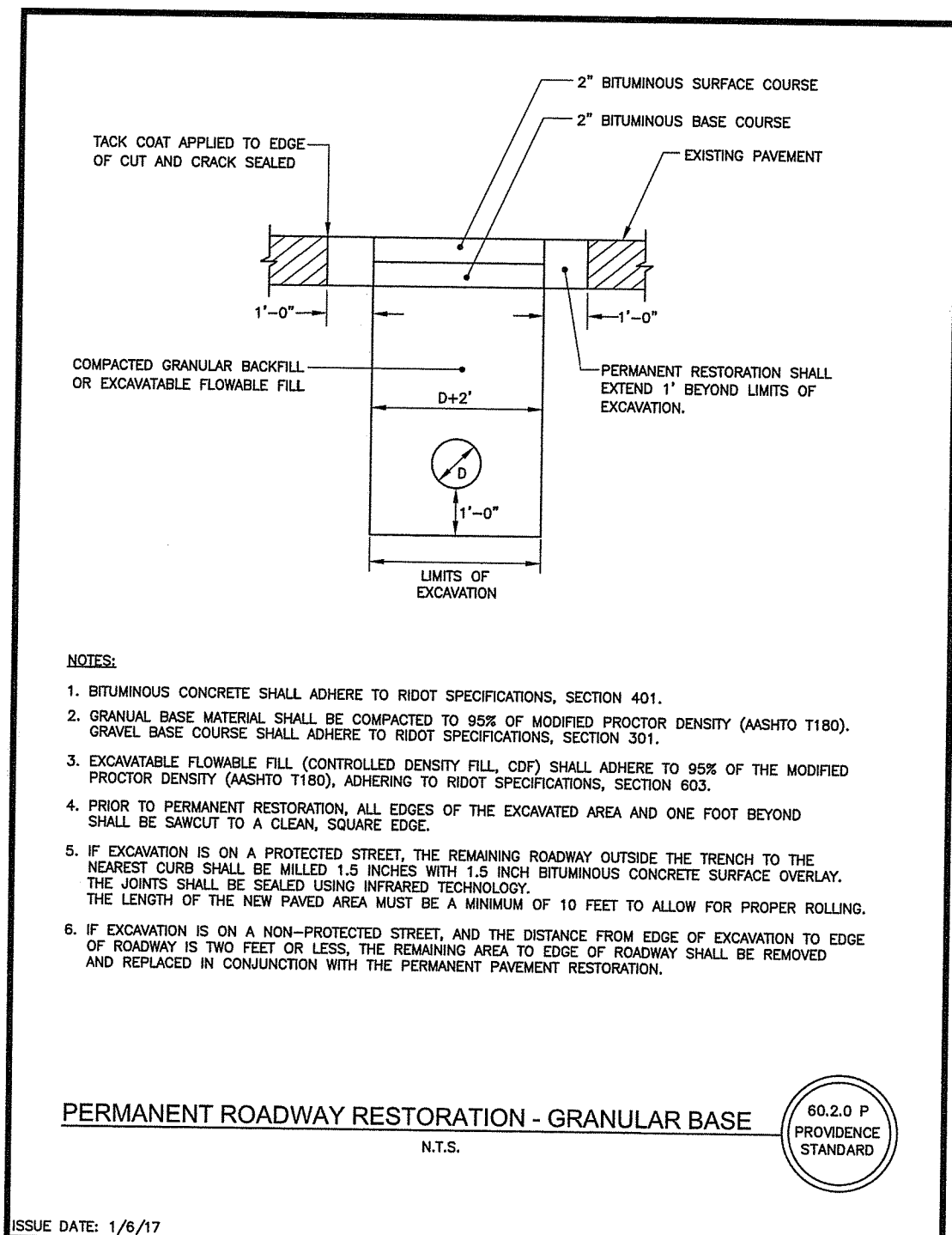
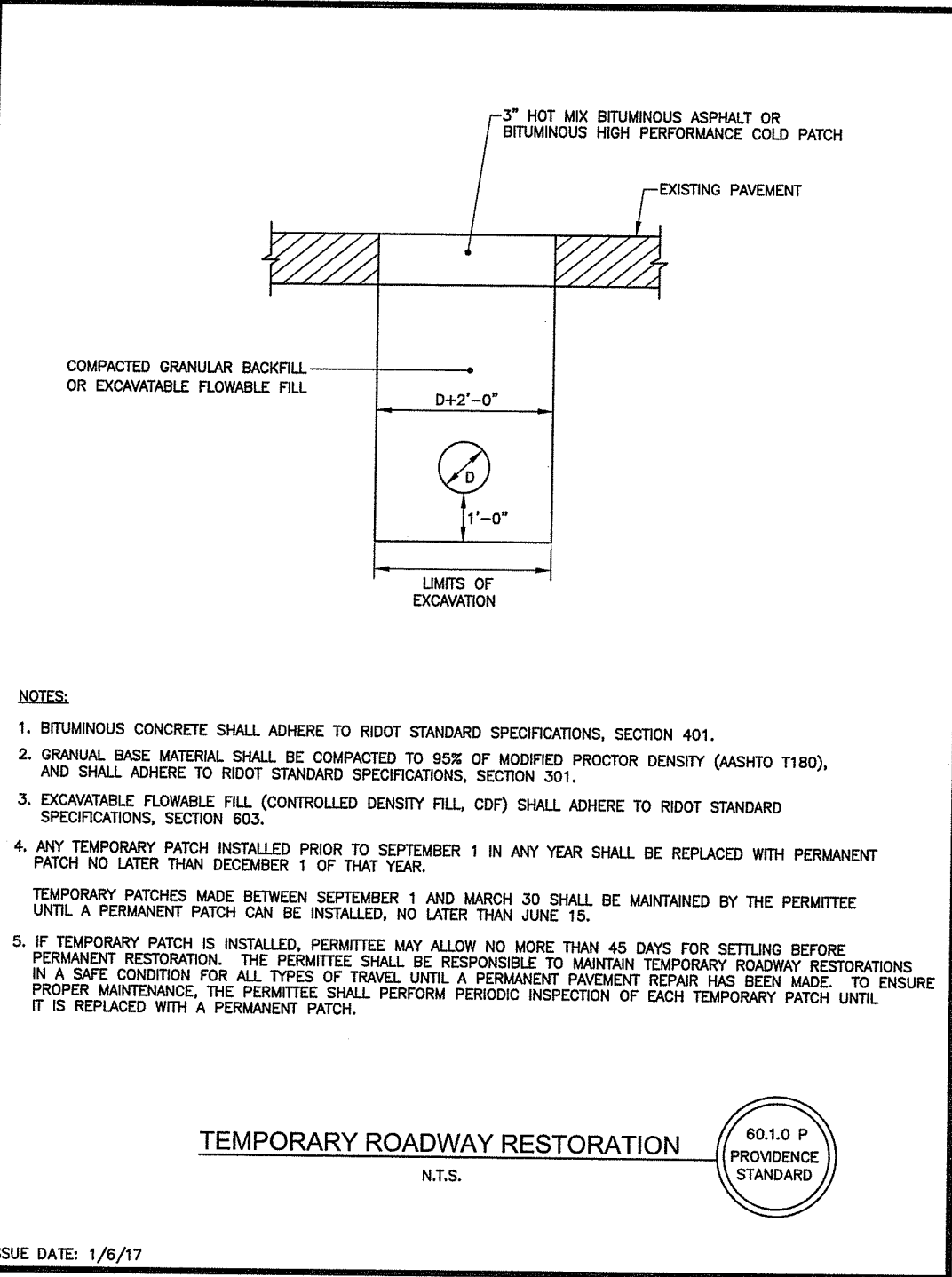
DATE: NOVEMBER 2, 2018

SCALE: 1" = 20'

DRAWN BY: NRM

CHECKED BY: GAA

PROJECT NO: 3653170026



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WEPLANS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLAN MUST BE AT CONSTRUCTION SITE

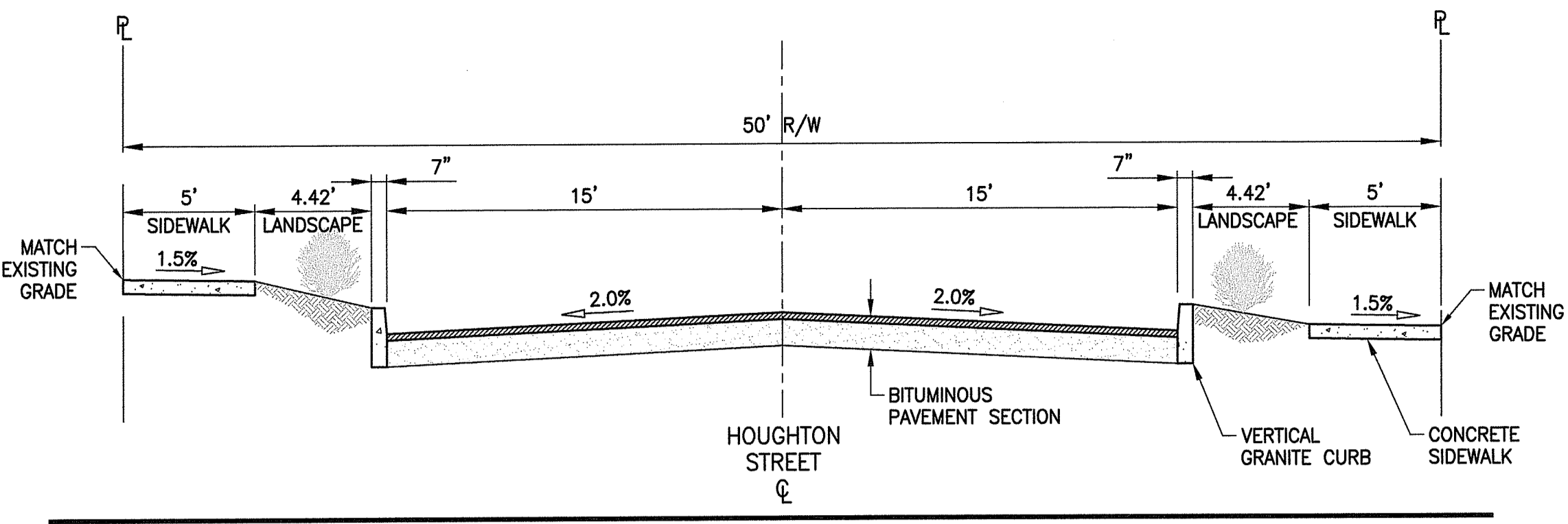
DATED: MAR 12 2018
FILE # 18-0206
James A. Avenia

SEAL:
GREGORY A. AVENIA
No. 18562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

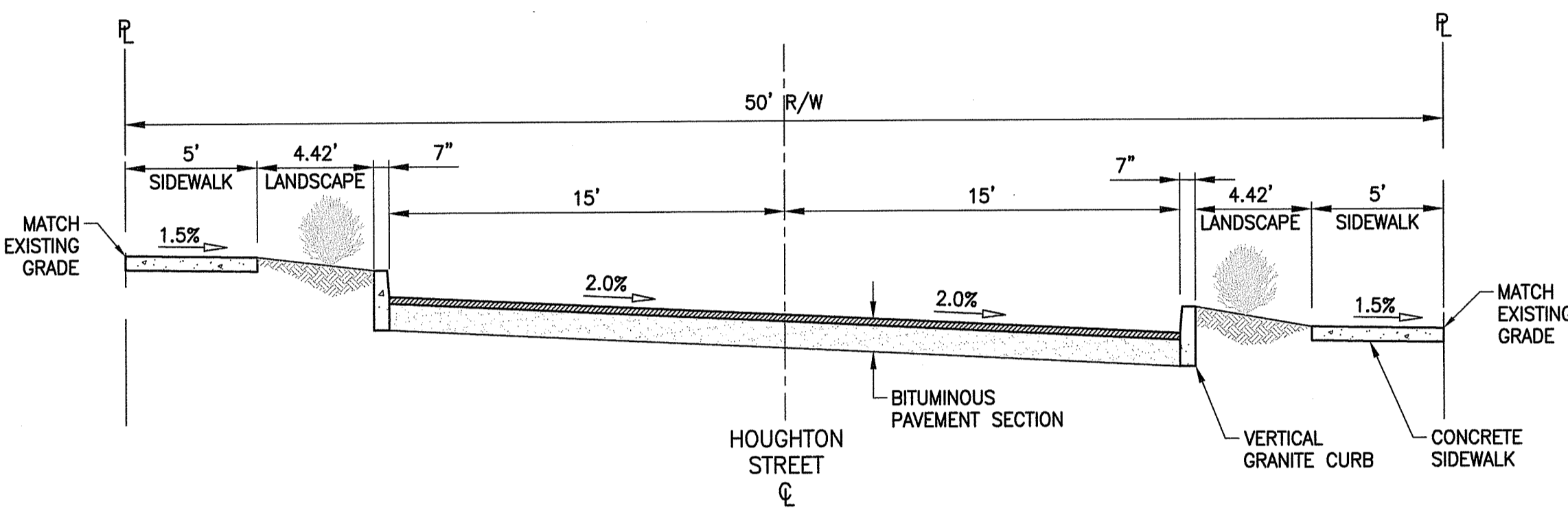
REVISION DATE DESCRIPTION
CLIENT: PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903
PROJECT:

HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

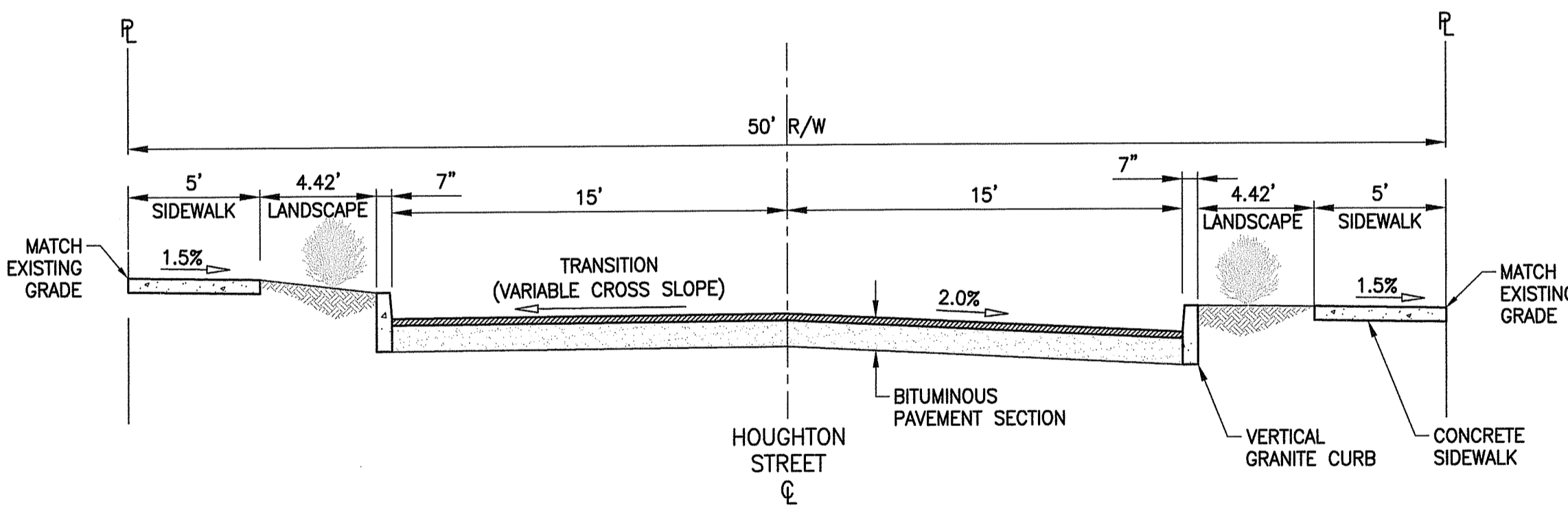
TITLE:
DETAILS 1
ISSUED FOR: BID
DATE: NOVEMBER 2, 2018
SCALE: N.T.S.
DRAWN BY: NRM
CHECKED BY: GAA
PROJECT NO: 3653170026



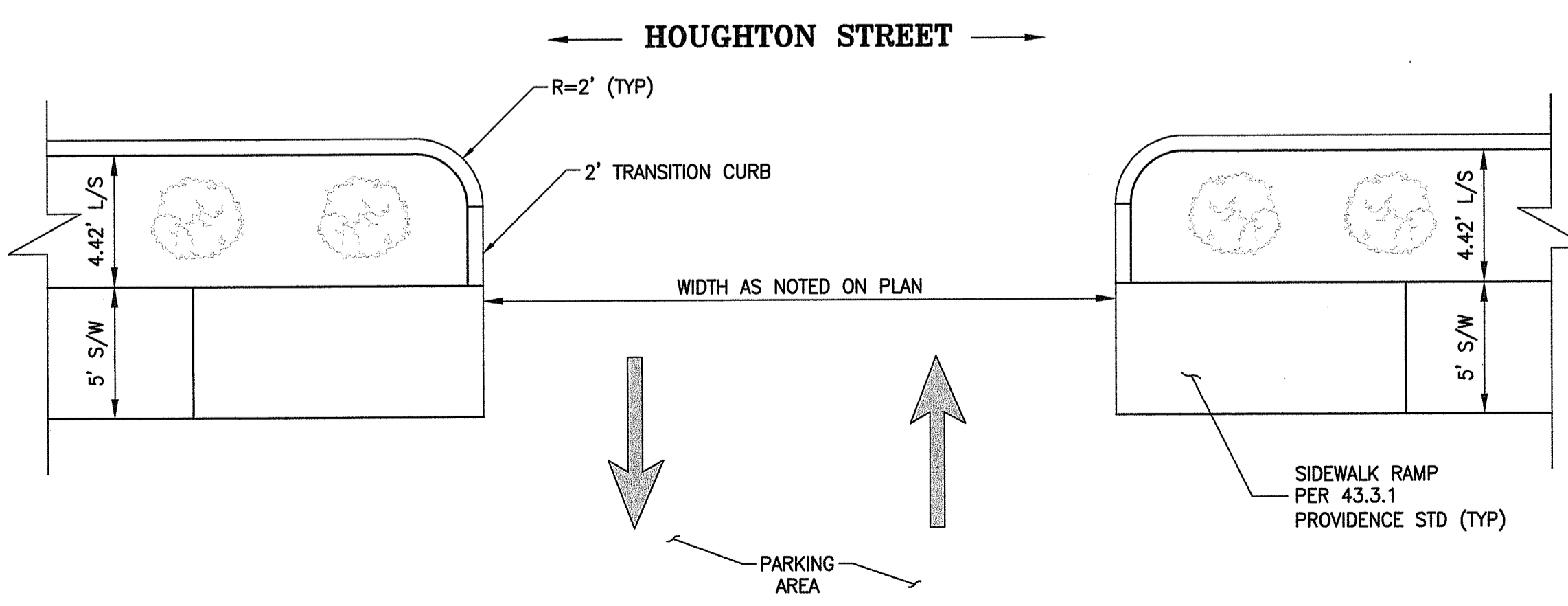
TYPICAL ROADWAY SECTION A
STA 10+00.00 TO STA 13+70.00
(HOUGHTON STREET)



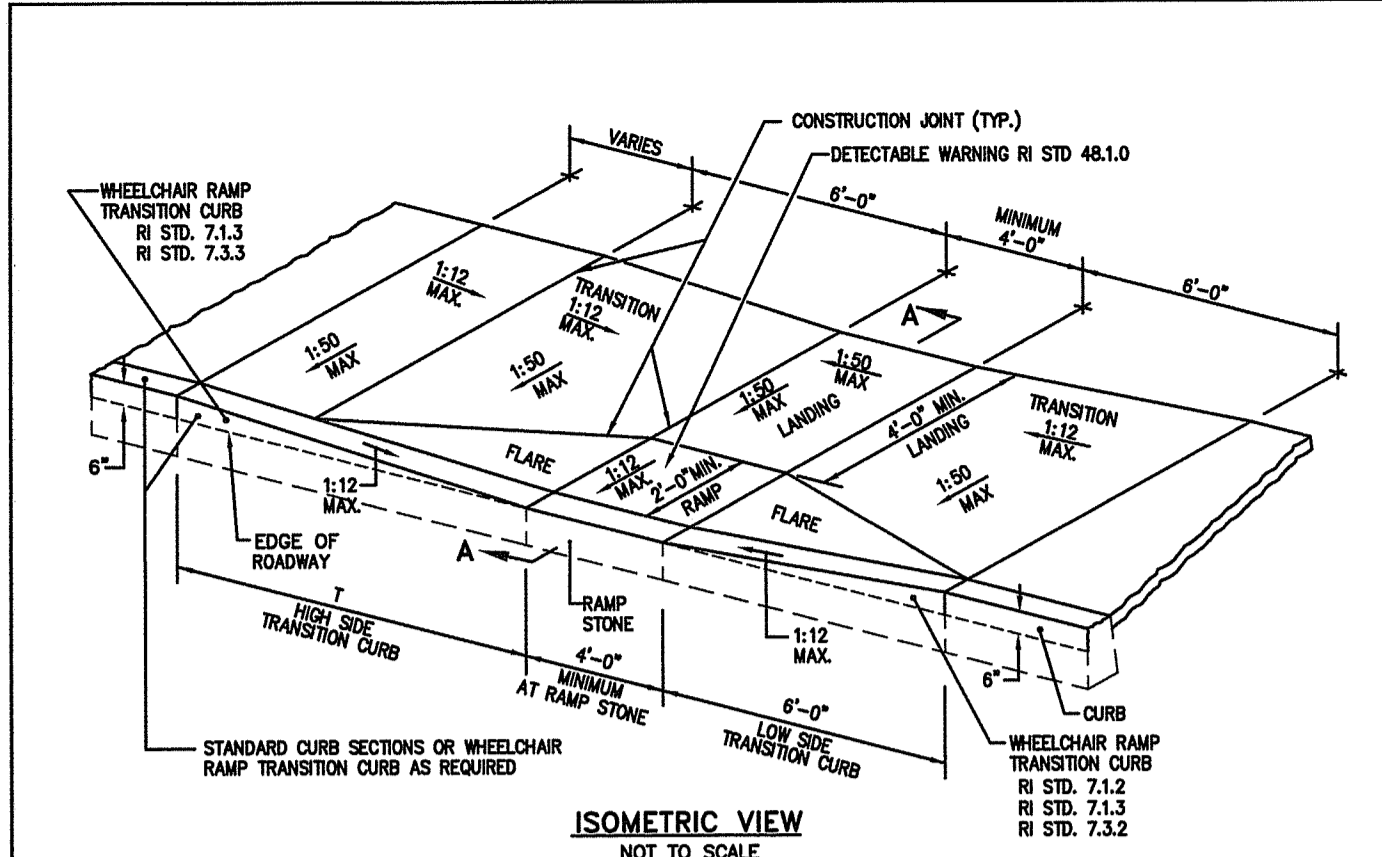
TYPICAL ROADWAY SECTION C
STA 14+50.00 TO STA 15+70.00
(HOUGHTON STREET)



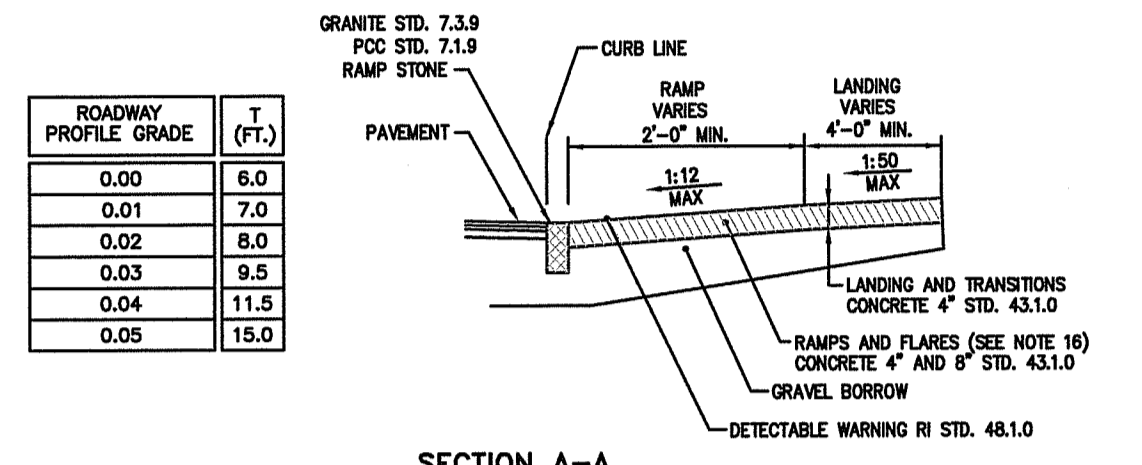
TYPICAL ROADWAY SECTION B
STA 13+70.00 TO STA 14+50.00
(HOUGHTON STREET)



TYPICAL DRIVEWAY DETAIL



ISOMETRIC VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE

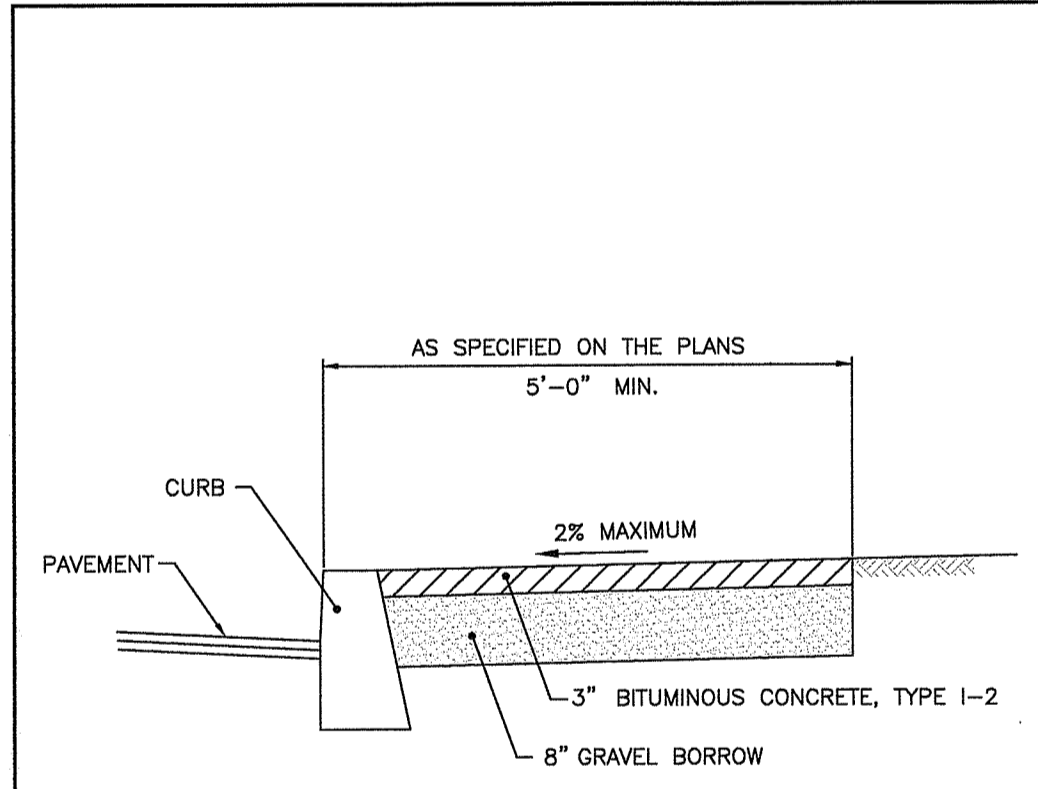
- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
 - WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
 - AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
 - DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMP.
 - LOCATION OF WHEELCHAIR RAMP IS AS SHOWN ON CONTRACT DRAWINGS.
 - IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
 - AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'-0" SHALL BE MAINTAINED.
 - THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
 - WHERE THE ROAD PROFILE EXCEEDS OR THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
 - IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEFORE THE STOP LINE.
 - THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
 - THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
 - MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
 - ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
 - DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATIONS.
 - 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMP ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
WHEELCHAIR RAMP

REVISIONS

NO.	BY	DATE
1	M.P.	Oct 2008
2	M.P.	Jan 2009
3	M.P.	Sep 2012

JUNE 15, 1998
R.I. STANDARD 43.3.0



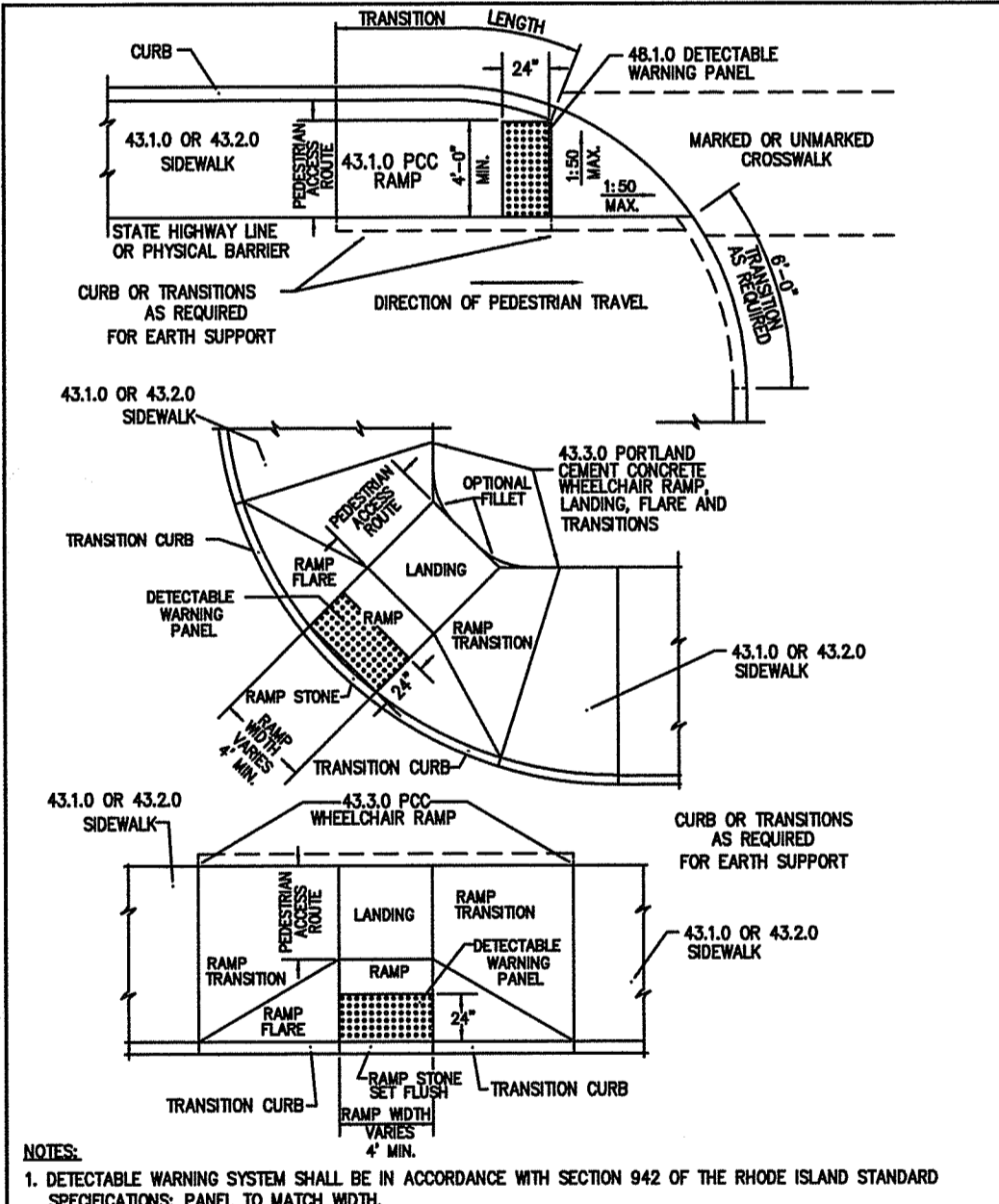
- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
 - FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
BITUMINOUS CONCRETE SIDEWALK

REVISIONS

NO.	BY	DATE
1	M.P.	3/17/09
2	M.P.	06/21/10

JUNE 15, 1998
R.I. STANDARD 43.2.0

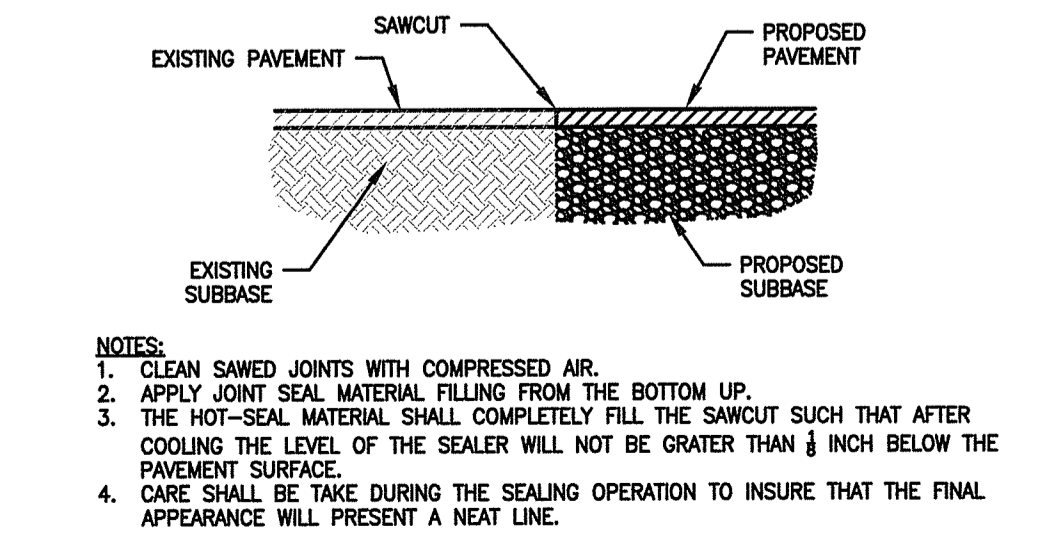


RHODE ISLAND DEPARTMENT OF TRANSPORTATION
DETECTABLE WARNING PANEL PLACEMENT

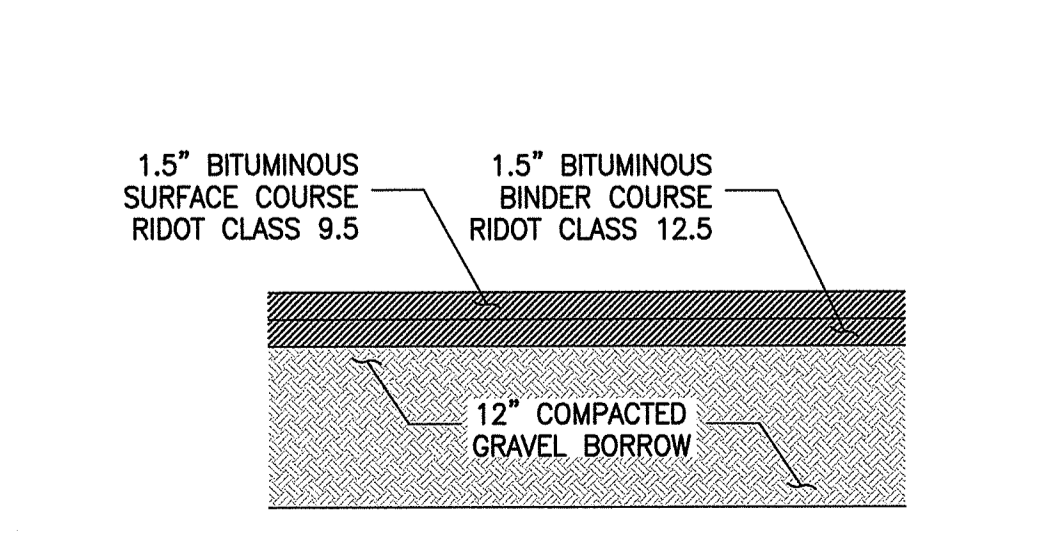
REVISIONS

NO.	BY	DATE
1	M.P.	Mar 2009
2	M.P.	Sep 2012

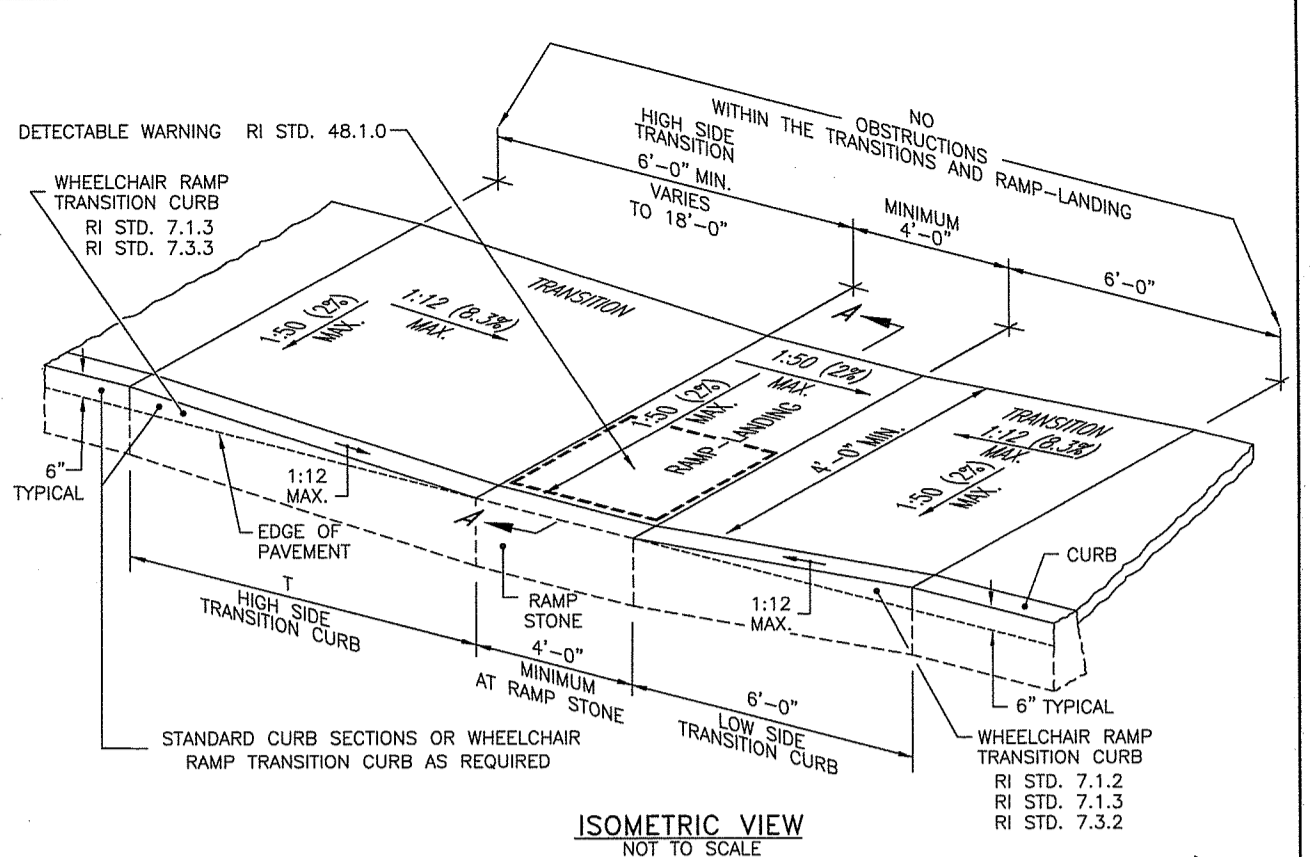
JUNE 15, 1998
R.I. STANDARD 48.1.0



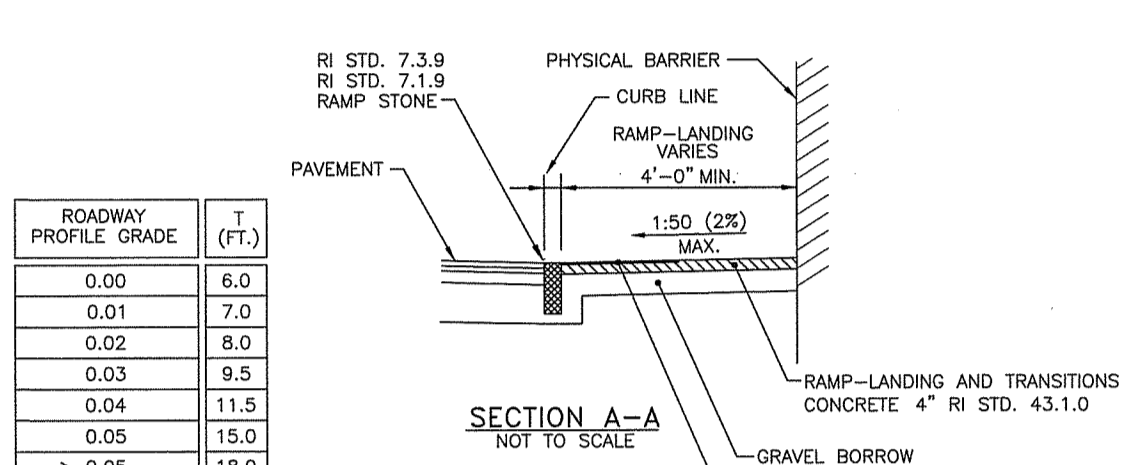
PAVEMENT SAWCUT



BITUMINOUS PAVEMENT SECTION



ISOMETRIC VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE

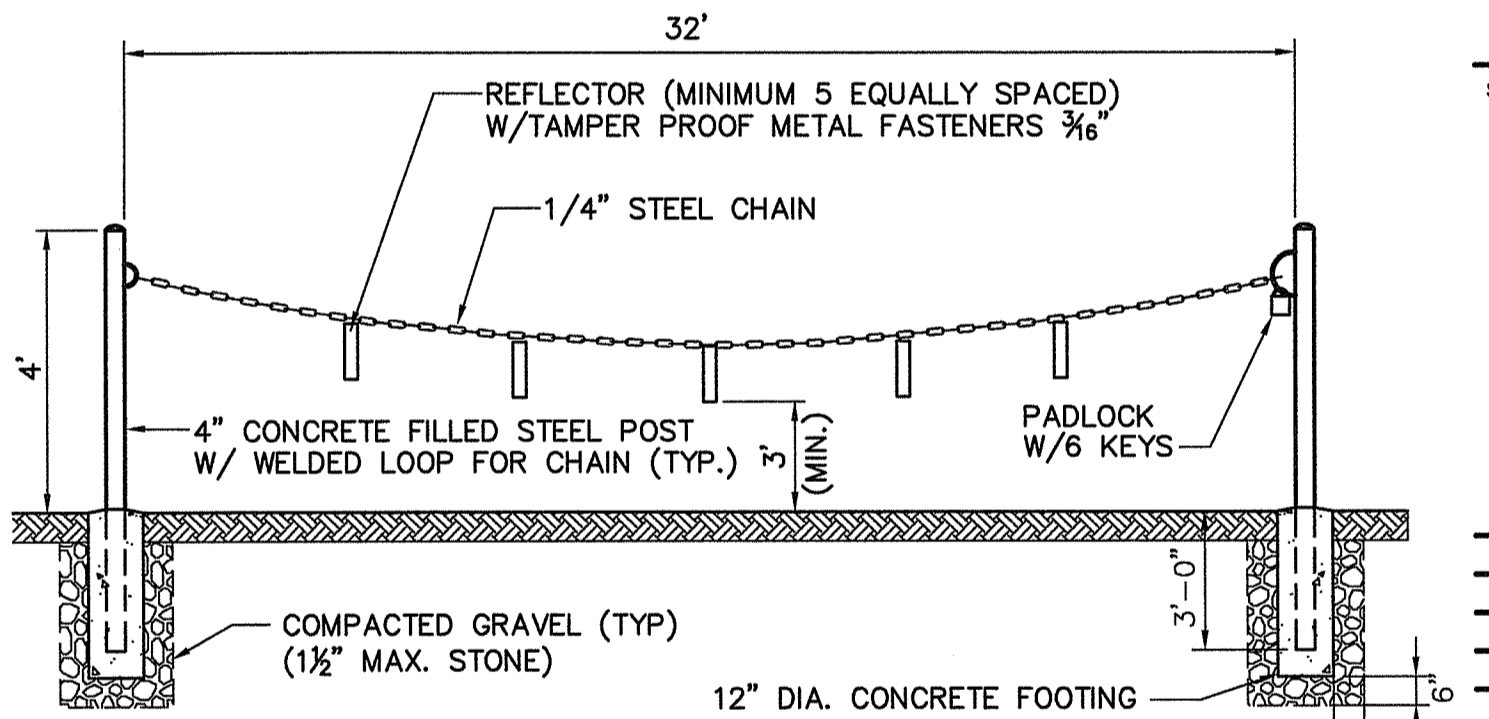
- NOTES:**
- THIS DETAIL MAY BE USED WHEN A PHYSICAL BARRIER IS PRESENT AND THERE IS INSUFFICIENT ROOM TO PROPERLY CONSTRUCT AN ADA ACCESSIBLE RAMP AND LANDING. A TECHNICAL INFESIBILITY FINDING IS REQUIRED.
 - SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
 - THE RAMP-LANDING AND TRANSITIONS SHALL BE FREE OF OBSTRUCTIONS.
 - LOCATION OF THE RAMP-LANDING IS AS SHOWN ON CONTRACT DRAWINGS.
 - AN UNOBSTRUCTED PEDESTRIAN ACCESS ROUTE (PATH OF TRAVEL) WITH A MINIMUM WIDTH OF 4'-0" SHALL BE MAINTAINED.
 - THE ENTRANCE OF THE RAMP-LANDING SHALL BE FLUSH WITH THE PAVEMENT.
 - MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
 - ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
 - DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
RAMP-LANDING FOR NARROW SIDEWALK

REVISIONS

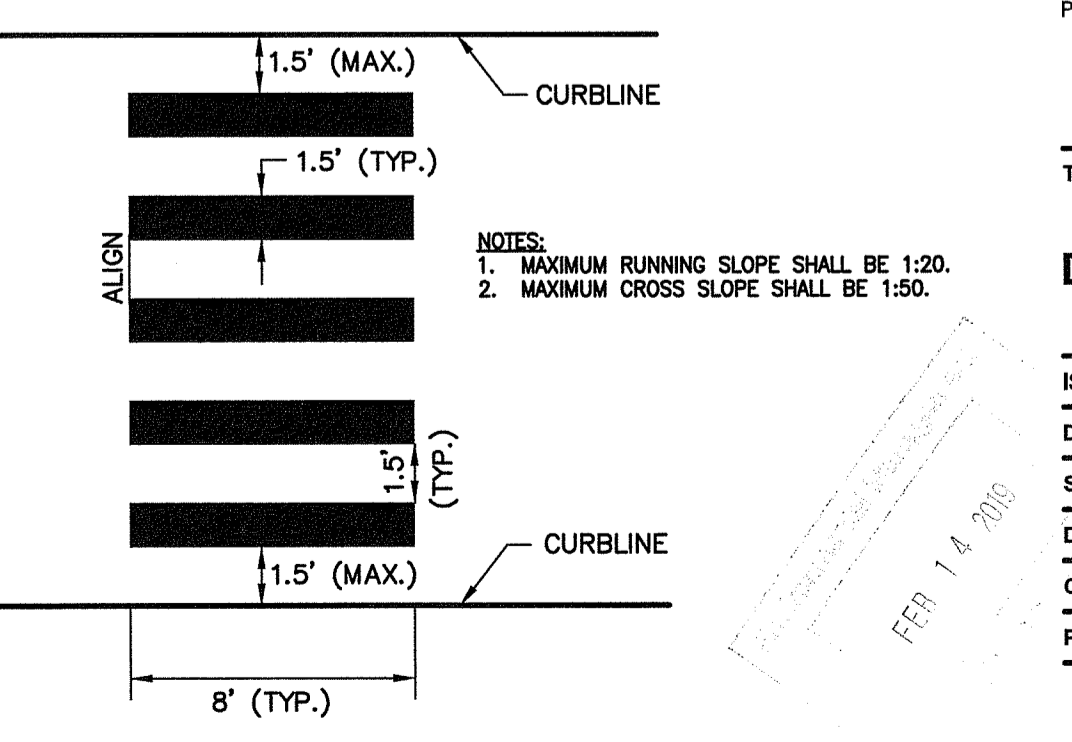
NO.	BY	DATE
1	M.P.	Mar 2015

MARCH 31, 2015
R.I. STANDARD 43.3.2



- Notes:**
- SHOP PRIME & PAINT EXPOSED SURFACES FIELD PAINT EPOXY ENAMEL-YELLOW.
 - PROVIDE "MASTER" PADLOCK WITH 6 WORKING KEYS.
 - 3,000 PSI CONCRETE FOOTING & PIPE FILL

CHAIN GATE



CROSSWALK

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 12 2019 FILE # 18-0206
NO CHANGES ALLOWED WITHOUT PERMITTING AGENCY
APPROVED BY AND SIGNATURE AT CONTRACTOR'S RISK

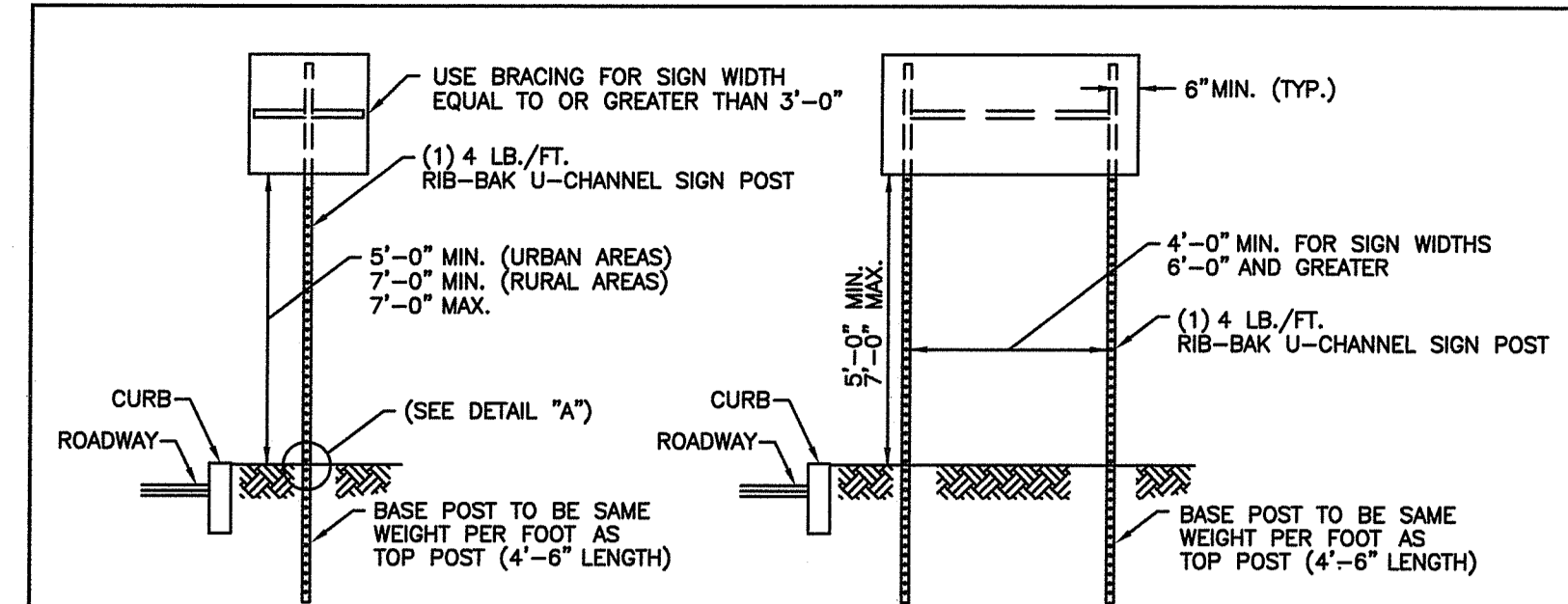
Julius A. Horta

SEAL:
GREGORY A. AVENIA
No. 8562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

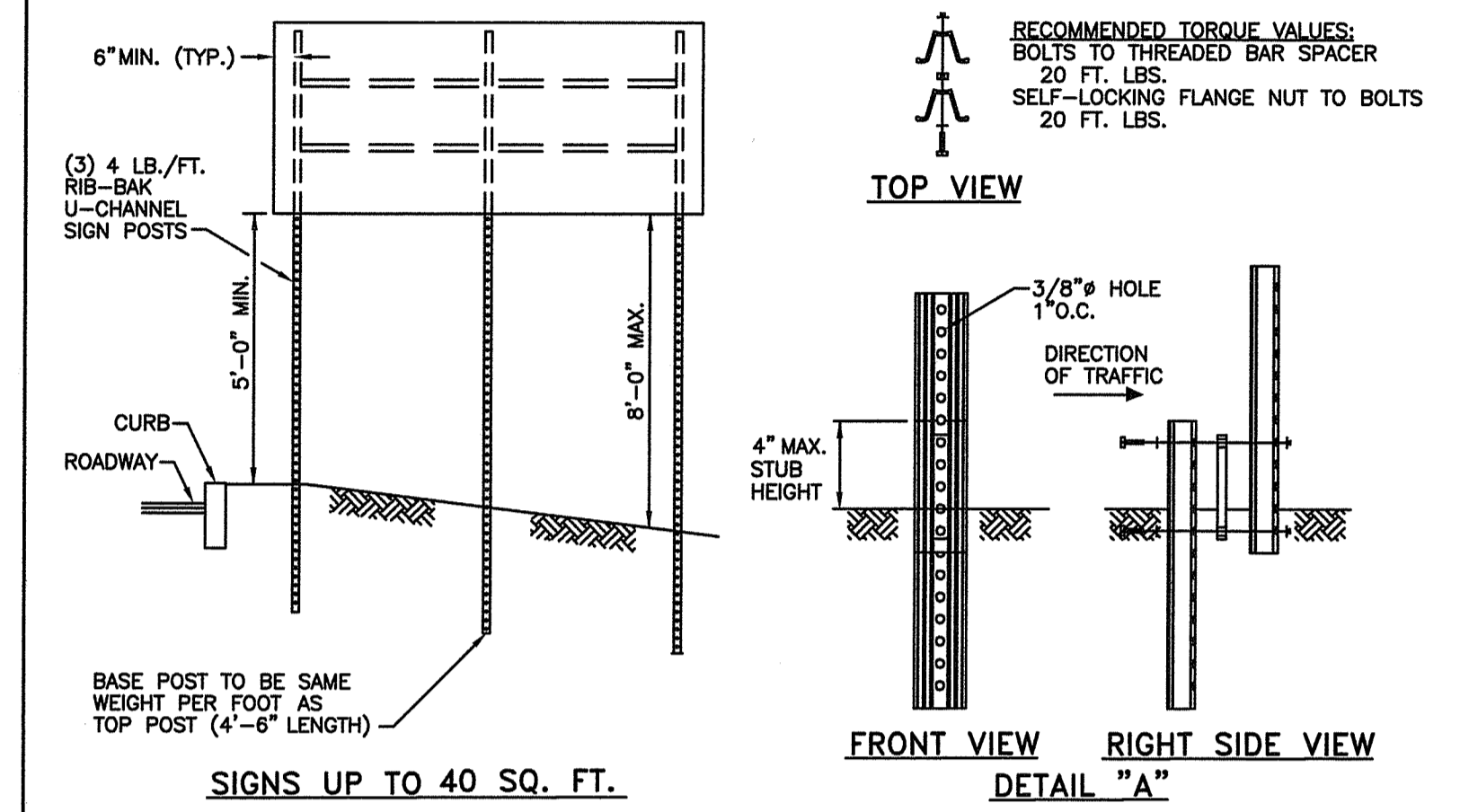
REVISION DATE DESCRIPTION
CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903
PROJECT:

HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
DETAILS 2
ISSUED FOR: BID
DATE: NOVEMBER 2, 2018
SCALE: N.T.S.
DRAWN BY: NRM
CHECKED BY: GAA
PROJECT NO: 3653170028



SIGNS UP TO 12 SQ. FT. SIGNS UP TO 28 SQ. FT.



INSTALLATION PROCEDURE:

- REMOVE A SPADE FULL OF SOIL (APPROXIMATELY 2" DEEP) FROM WHERE THE BASE POST WILL BE LOCATED.
- DRIVE THE BASE POST IN THE CENTER OF THE HOLE JUST CREATED, TO WITHIN 4" OF GRADE LEVEL.
- PLACE ONE BOLT AND FLAT WASHER IN THE TOP HOLE OF THE BASE POST. (IF THE TOP HOLE ON THE BASE POST, OR THE BOTTOM HOLE ON THE TOP POST IS LESS THAN 3/4" FROM END OF THE POST USE THE SECOND AND SIXTH HOLES.) WITH THE THREADED BAR SPACER ALIGNED WITH TOP HOLE ON THE BACK SIDE OF THE BASE POST, SECURELY TIGHTEN THE BOLT TO 20 FT. LBS. OF TORQUE. REPEAT THIS PROCESS FOR THE LOWER BOLT.
- NEST THE TOP POST OVER THE PROTRUDING BOLTS ON THE BASE POST. PLACE A SELF-LOCKING FLANGE NUT ON EACH BOLT AND TIGHTEN SECURELY TO 20 FT. LBS. OF TORQUE.
- REPLACE SOIL REMOVED IN STEP 1.
- IN TRIPLE POST INSTALLATIONS USING 4 LB./FT. POSTS IN WEAK SOIL, A 1'-0" W x 6" H SOIL PLATE IS REQUIRED.

NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
- THE SIVER ANODIZED BAR SPACER IS FOR USE WITH 2, 2.5 AND 2.75 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
- THE GOLD ANODIZED BAR SPACER IS FOR USE WITH 3 AND 4 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
- INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.
- FOR SIGNS GREATER THAN 40 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3

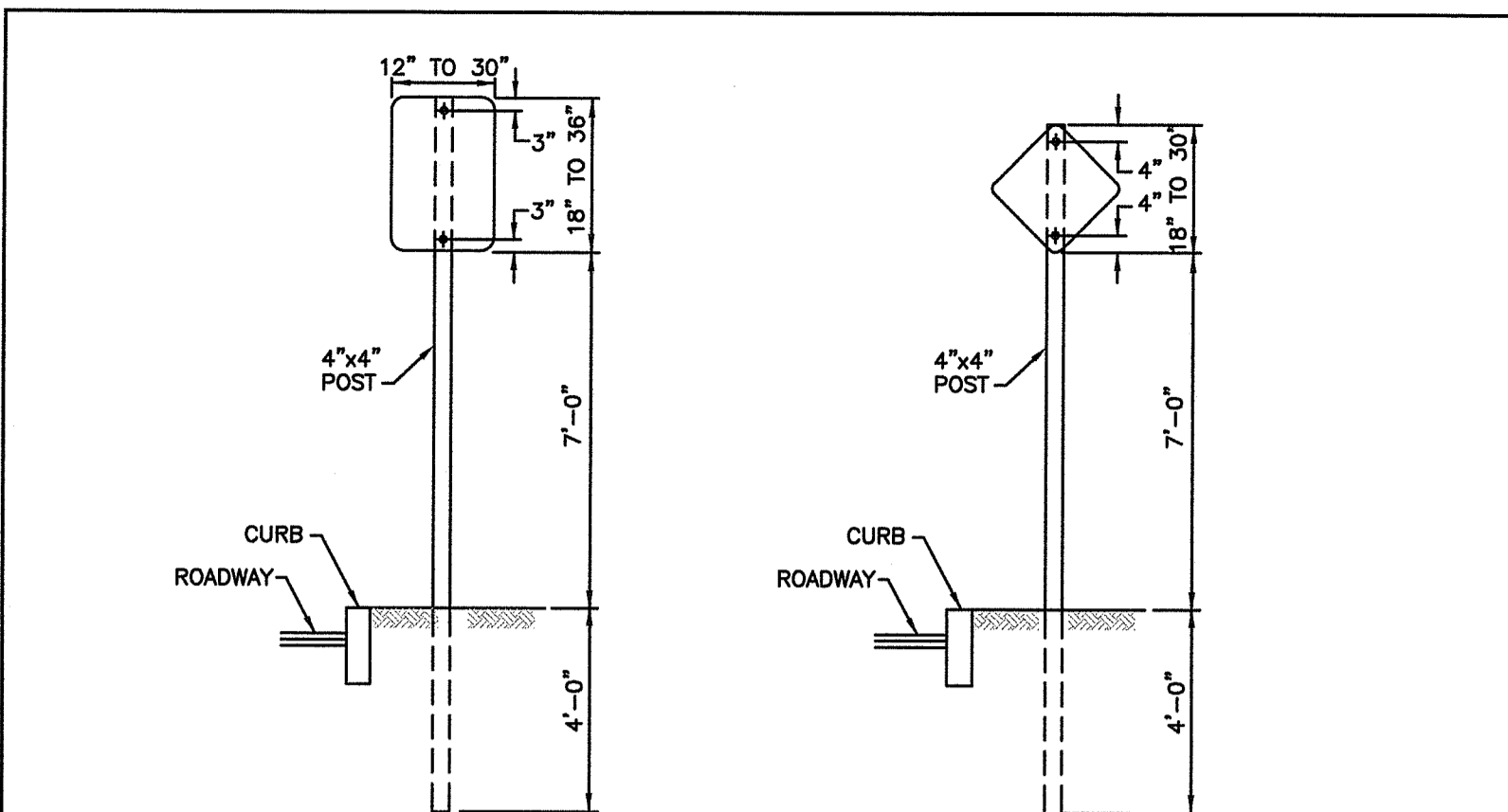
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SIGN POST SELECTION AND INSTALLATION DETAILS
U-CHANNEL POST (SIGNS UP TO 8'-0" Wx4'-0" H)

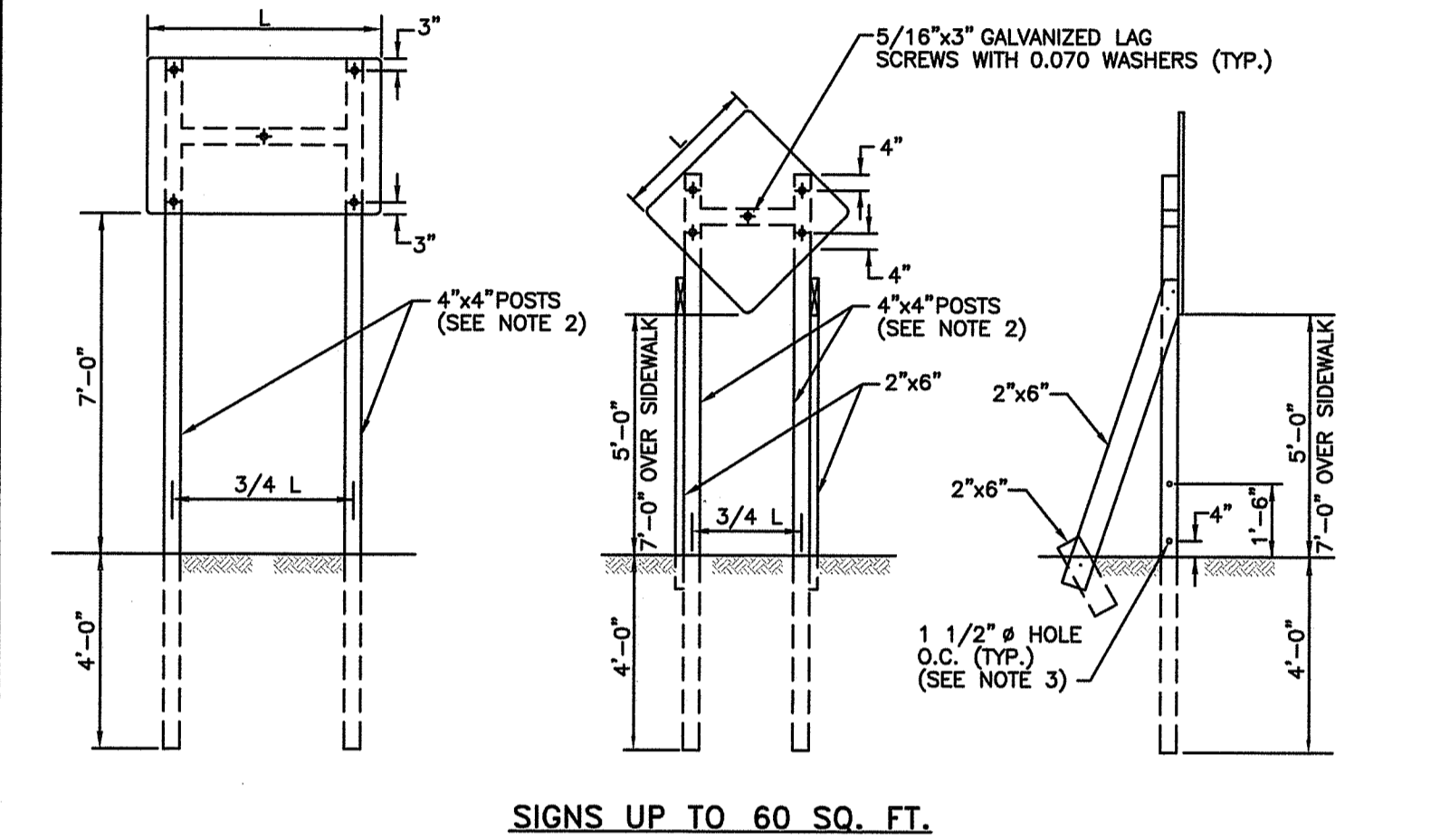
REVISIONS: NO. BY DATE

ISSUE DATE: JUNE 15, 1998

R.I. STANDARD 24.2.0



SIGNS UP TO 10 SQ. FT.



NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
- USE (2) 4"x6" POSTS FOR SIGN AREAS GREATER THAN 20 SQ. FT.
- DRILL 1 1/2" Ø HOLES FOR 4"x6" POSTS ONLY.
- FOR SIGNS 5'-0"x5'-0" AND LARGER USE DIAGONAL BRACING ON EACH VERTICAL POST AND 4 LAG SCREWS
- CONSTRUCTION AND TEMPORARY SIGN PANELS SHALL BE 3/4" THICK EXTERIOR GRADE PLYWOOD OR ALUMINUM.
- ALL SIGN SUPPORTS (INCLUDING TEMPORARY) MUST BE SUCCESSFULLY CRASH TESTED.
- FOR SIGNS GREATER THAN 60 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

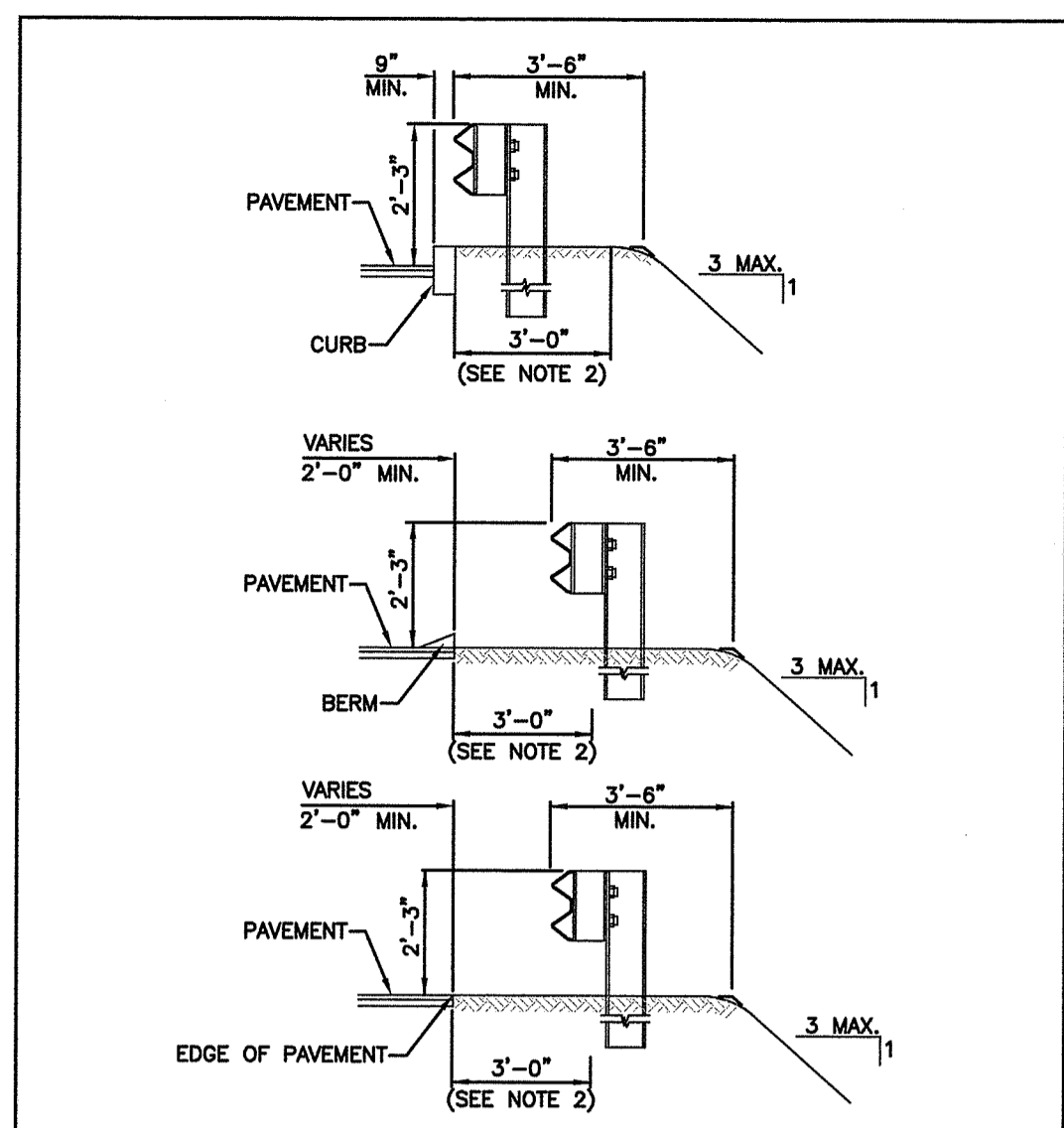
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONSTRUCTION AND TEMPORARY SIGN MOUNTINGS (SIGNS UP TO 60 SQ. FT.)

REVISIONS: NO. BY DATE

ISSUE DATE: JUNE 15, 1998

R.I. STANDARD 24.3.0



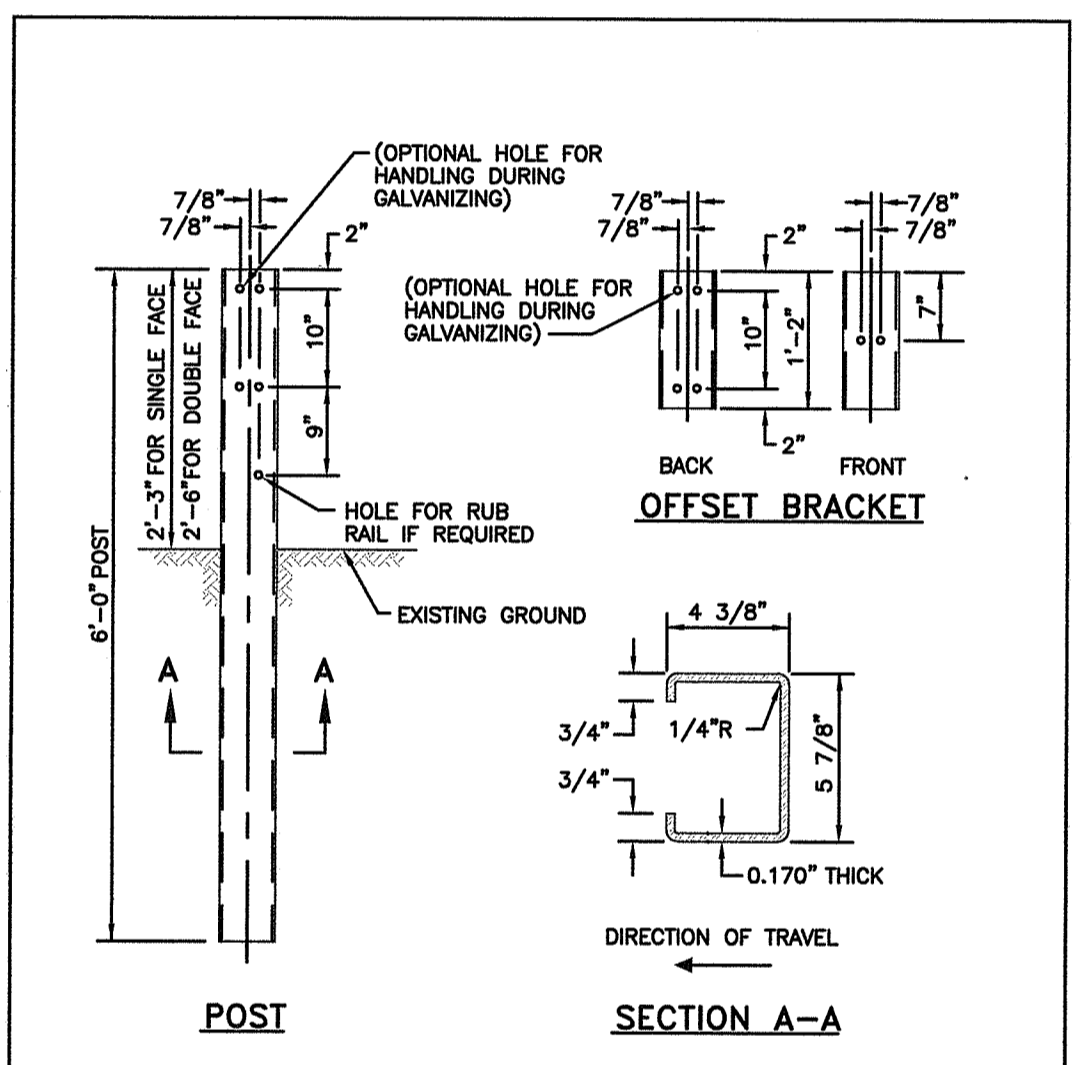
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TYPICAL GUARDRAIL INSTALLATION

REVISIONS: NO. BY DATE

ISSUE DATE: JUNE 15, 1998

R.I. STANDARD 34.1.0



NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
- ALL HOLES TO BE 13/16" Ø.
- ONLY ONE TYPE OF POST SHALL BE USED IN A SINGLE RUN. OPEN SIDE SHALL FACE AWAY FROM DIRECTION OF ONCOMING TRAFFIC.

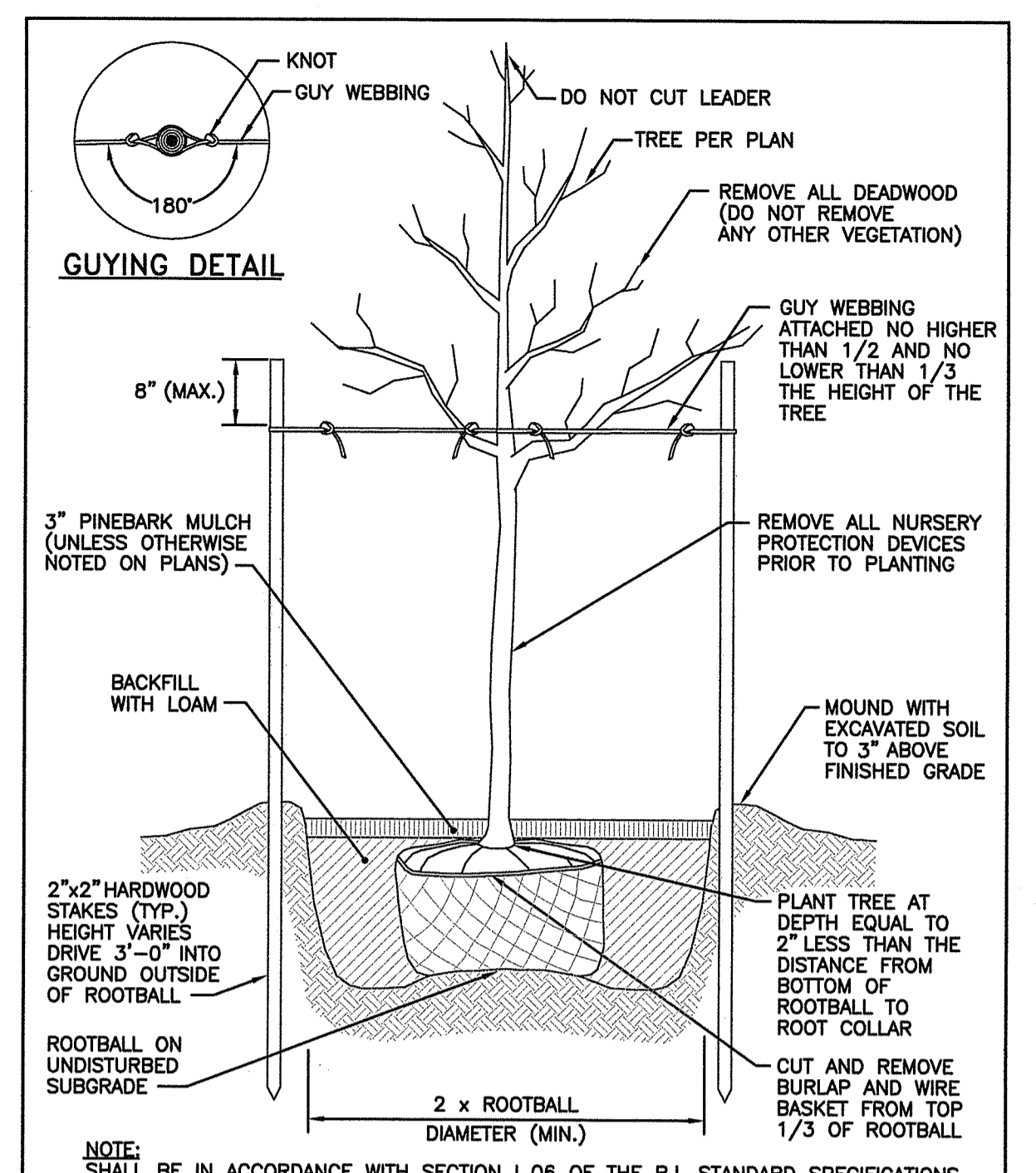
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL POST AND OFFSET BRACKET "C" SECTION

REVISIONS: NO. BY DATE

ISSUE DATE: JUNE 15, 1998

R.I. STANDARD 34.2.4



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

LARGE TREE STAKING AND PLANTING DETAIL (2" CALIPER AND GREATER)

REVISIONS: NO. BY DATE

ISSUE DATE: JUNE 15, 1998

R.I. STANDARD 50.1.0

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 12 2019 FILE # 18-0206
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James A. Harkin

SEAL:

GREGORY A. AVENIA

No. 9582

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

11/2/2018

SIGN NUMBER	*R1-1	*R1-2	R2-1	*R5-1	W14-1
LEGEND	STOP	YIELD	SPEED LIMIT 25	DONOT ENTER	DEAD END
COLOR	BACKGROUND RED COPY WHITE	WHITE RED	WHITE BLACK	RED WHITE	YELLOW BLACK
SIGN DIMENSION	WIDTH 24" 30" 36" 48" HEIGHT 24" 30" 36" 48"	36" 48" 60" 36" 48" 60"	24" 36" 48" 60" 30" 48" 60"	30" 36" 48" 30" 36" 48"	24" 30" 36" 24" 30" 36"

NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
- * DENOTES TYPE III GRADE SHEETING.
- REGULATORY SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.6.0.
- THICKNESS OF ALUMINUM SIGN PLATES:
LESS THAN 10 SQ. FT. - 0.081 IN.
10 SQ. FT. TO 36 SQ. FT. - 0.102 IN.
GREATER THAN 36 SQ. FT. - 0.125 IN.
- FOR ADDITIONAL SIGNS SEE THE MUTCD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REGULATORY SIGNS

REVISIONS: NO. BY DATE

ISSUE DATE: JUNE 15, 1998

R.I. STANDARD 27&28.1.0

REVISION	DATE	DESCRIPTION

CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

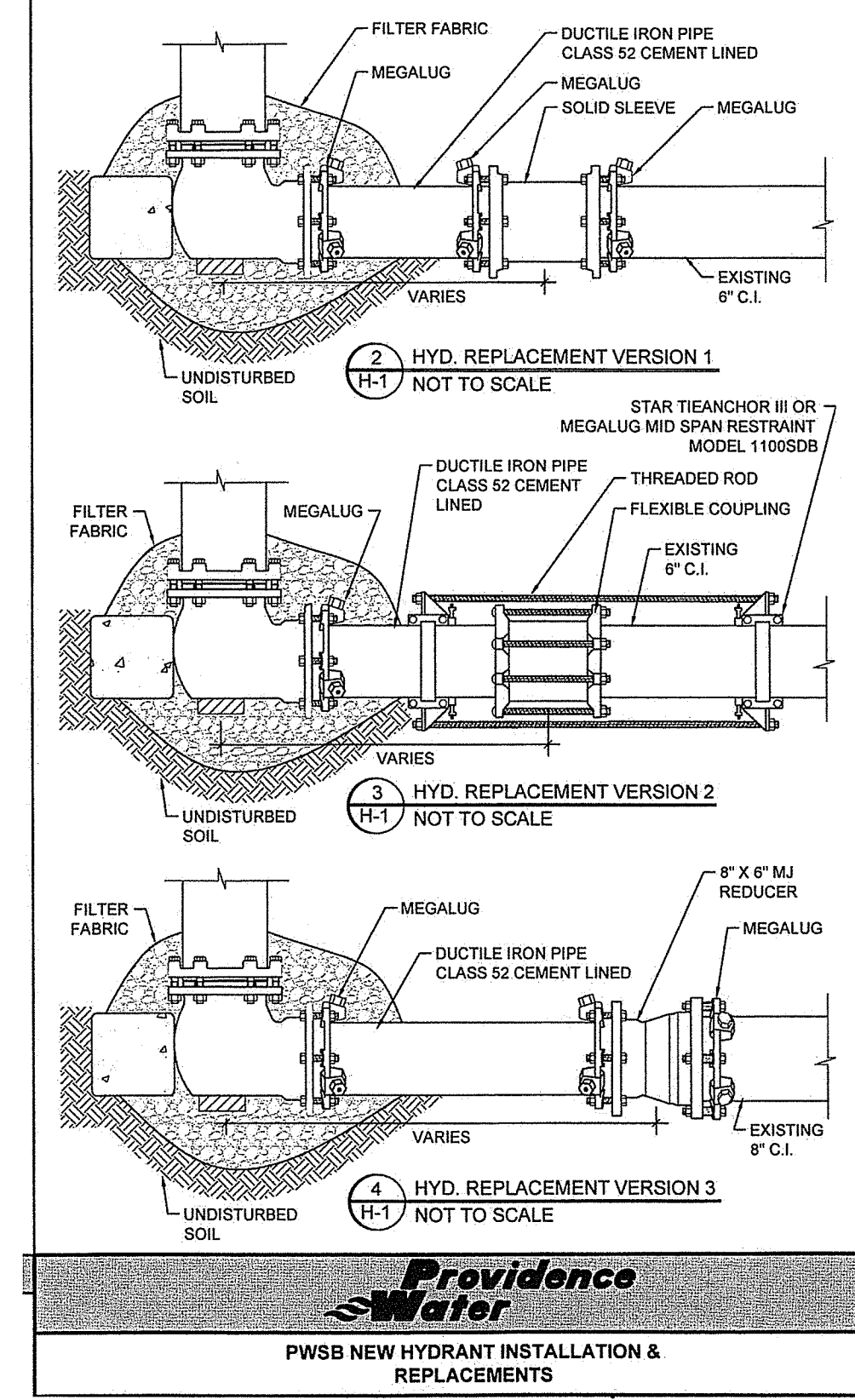
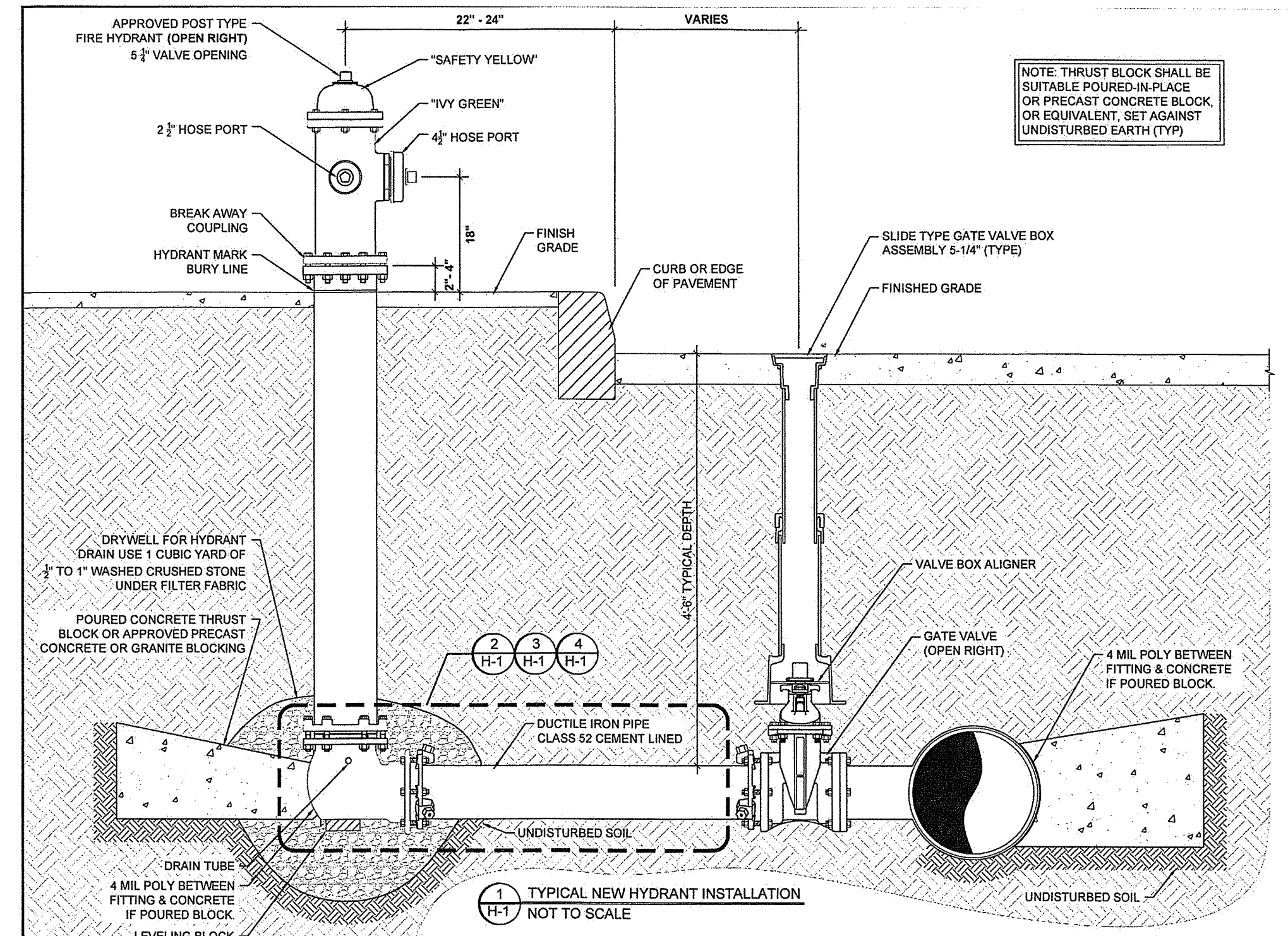
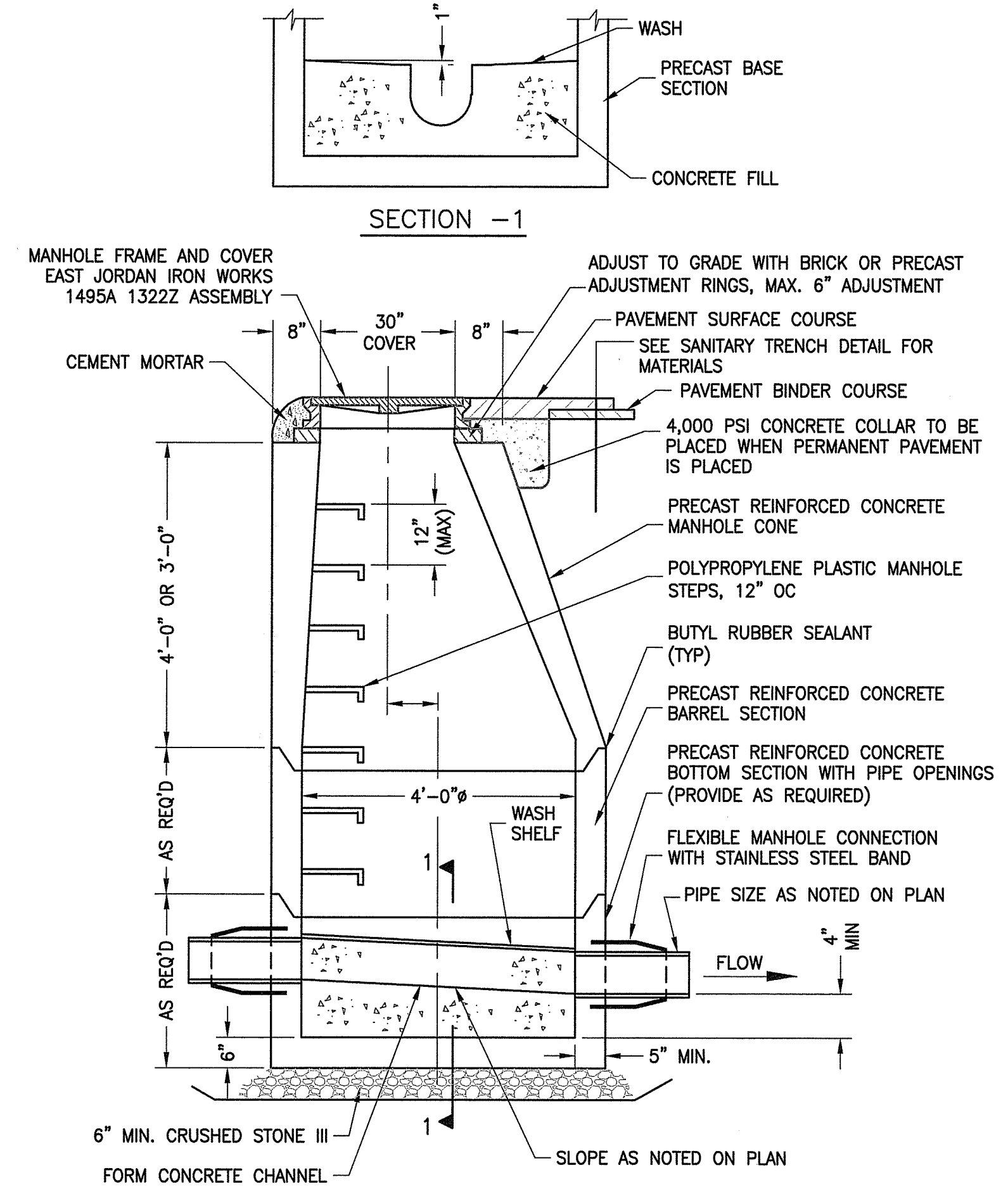
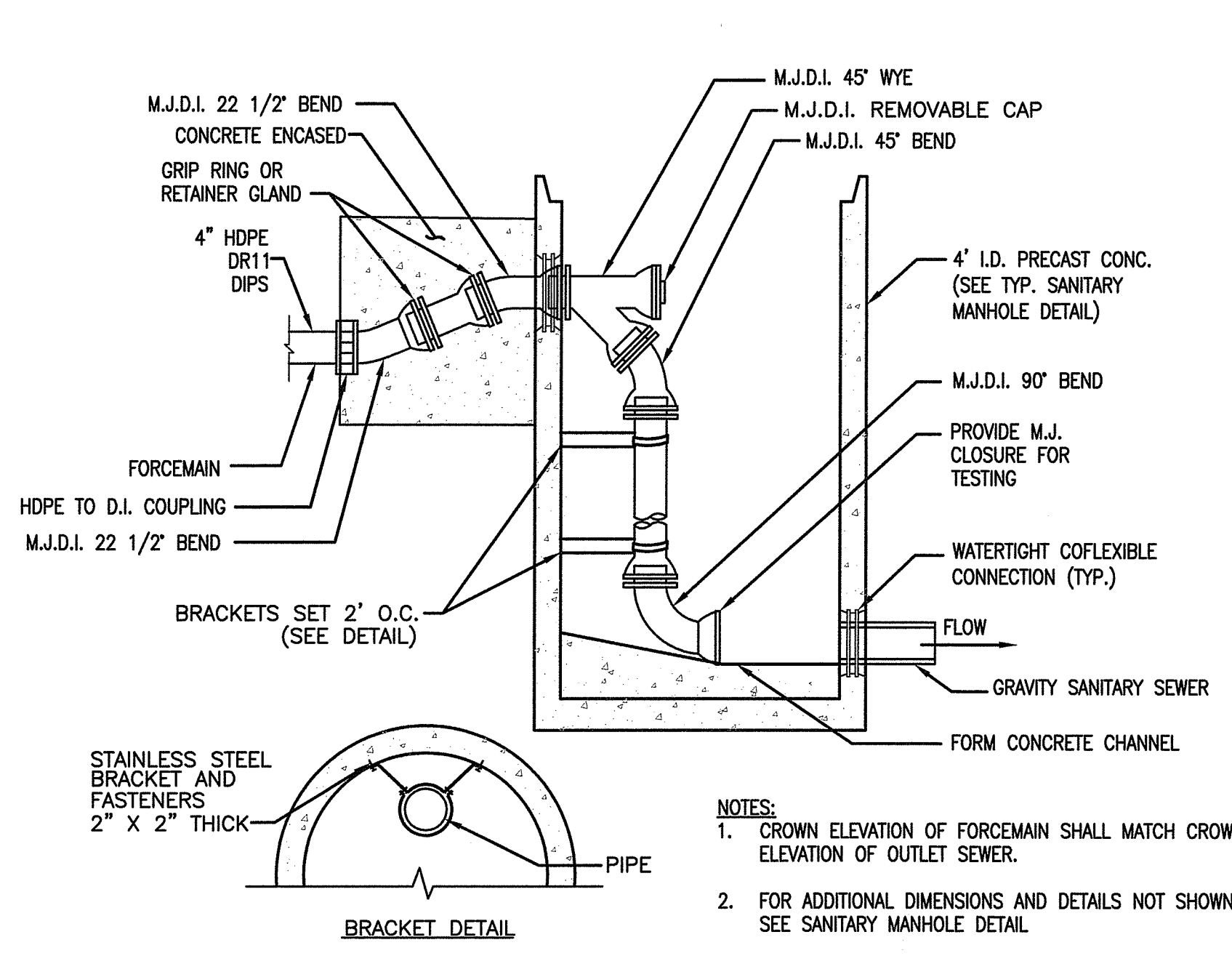
PROJECT:

HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
DETAILS 3

ISSUED FOR:	BID
DATE:	NOVEMBER 2, 2018
SCALE:	N.T.S.
DRAWN BY:	NRM
CHECKED BY:	GAA
PROJECT NO.:	365170026

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 12 2019 FILE # 18-0206
NO CHANGES ALLOWED WITHOUT WRITTEN APPROVAL
APPROVED PLANS MUST BE AT ALL TIMES
Charles A. Harker



GENERAL NOTES

- OTHER UTILITIES ARE NOT SHOWN. CONTRACTOR SHALL NOTIFY "DIG-SAFE" & PWSB PRIOR TO COMMENCING WORK.
- NEW WATER PIPE SHALL BE TESTED AND CHLORINATED IN ACCORDANCE WITH PROVIDENCE WATER STANDARDS AND AS DIRECTED BY PROVIDENCE WATER.
- NEW WATER PIPE SHALL BE CEMENT-LINED DUCTILE IRON PIPE, CLASS 52, CONFORMING TO THE LATEST AWWA STANDARDS.
- PIPE FITTINGS SHALL BE CEMENT-LINED DUCTILE IRON, CLASS 350, WITH MECHANICAL JOINT ENDS.
- UNLESS OTHERWISE NOTED, EARTH COVER OVER PIPE SHALL NOT BE LESS THAN 4'-0".
- GATE VALVES SHALL BE RESILIENT SEAT TYPE WITH MECHANICAL JOINT ENDS AND SHALL OPEN "RIGHT" (CLOCKWISE).
- METALLIZED, DETECTABLE IDENTIFICATION TAPE SHALL BE 2 INCHES WIDE, BLUE IN COLOR, AND IMPRINTED WITH THE WORDS "CAUTION - WATER LINE BURIED BELOW", AND SHALL BE INSTALLED OVER ALL MAINS AND HYDRANT RUN-OUTS AT A DEPTH OF 12 INCHES BELOW FINISHED GRADE.
- UNLESS OTHERWISE NOTED, BREAKAWAY TYPE HYDRANTS, SHALL BE INSTALLED WITH OPERATING NUT POSITIONED 22-24 INCHES BEHIND FACE OF CURB OR EDGE OF PAVEMENT. THE BREAKAWAY FLANGE SHALL BE SET 2 INCHES TO 4 INCHES ABOVE FINISHED GRADE. HYDRANTS SHALL OPEN "RIGHT" (CLOCKWISE).
- PROPERLY SIZED CONCRETE THRUST BLOCKS SHALL BE INSTALLED AT CHANGES OF PIPE DIRECTION (TEES, BENDS, ETC) AND/OR DEAD ENDS IN ACCORDANCE WITH PROVIDENCE WATER STANDARDS. FURTHERMORE, MECHANICAL JOINT THRUST RESTRAINTS SHALL BE PLACED ON EACH SIDE OF FITTINGS AND AT PIPE JOINTS TO SUFFICIENTLY RESTRAIN AN ADEQUATE LENGTH OF PIPE AWAY FROM FITTINGS AT 1-1/2 TIMES THE STATIC PRESSURE, OR NOT LESS THAN 150 PSI.

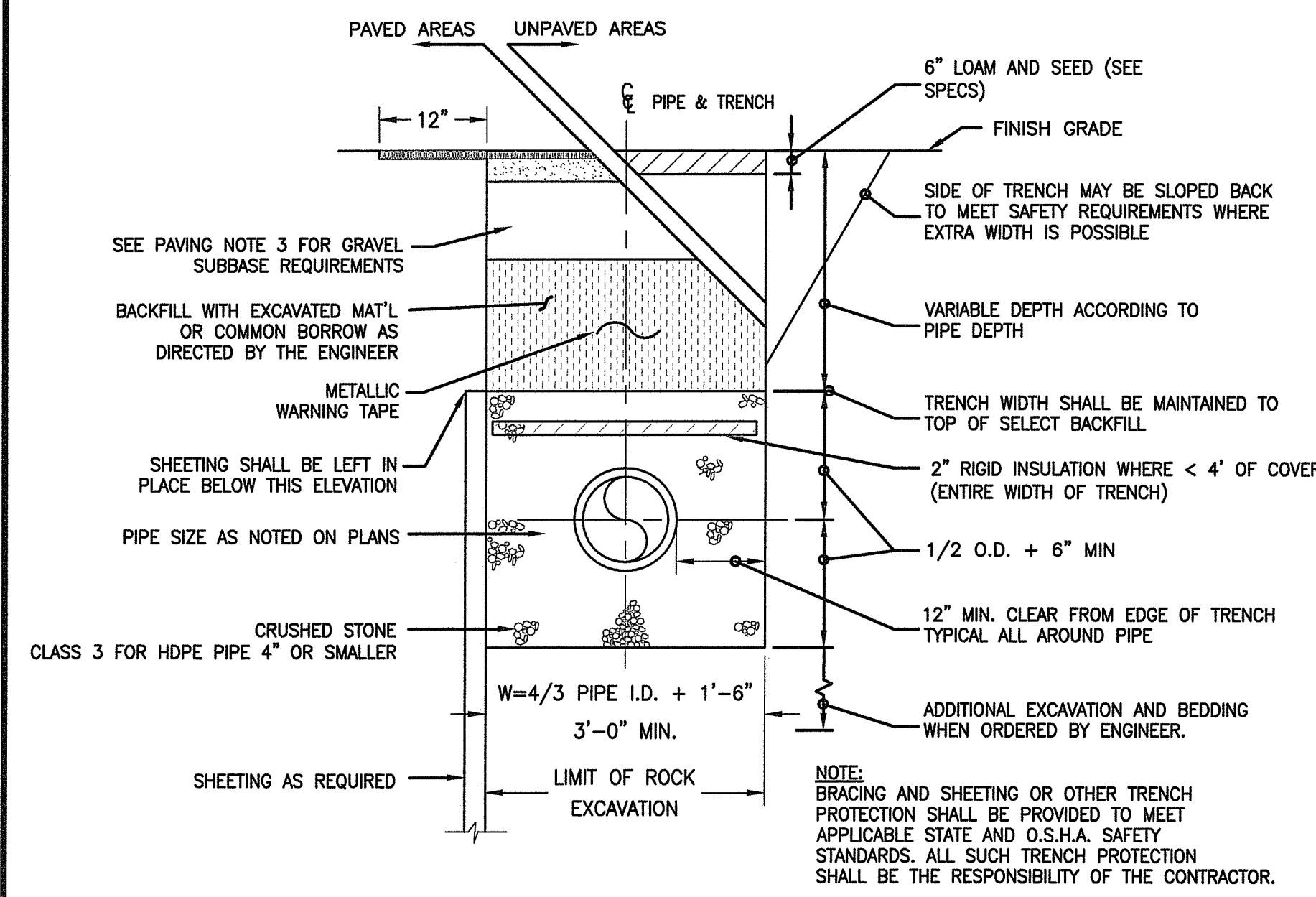


TABLE OF DIMENSIONS

BENDS	B	C	D	E	F	BENDS	B	C	D	E	F
6" 11-1/4"	8"	15"	12"	24"	12"	6" 45"	8"	30"	12"	24"	14"
6" 22-1/2"	"	19"	"	13"	6" 90"	"	30"	"	"	27"	"
8" 11-1/4"	"	20"	"	12"	8" 45"	"	30"	"	"	24"	"
8" 22-1/2"	"	22"	"	17"	8" 90"	"	36"	"	"	36"	"
12" 11-1/4"	"	30"	"	15"	12" 45"	"	40"	"	"	40"	"
12" 22-1/2"	"	35"	"	25"	12" 90"	"	60"	"	"	52"	"

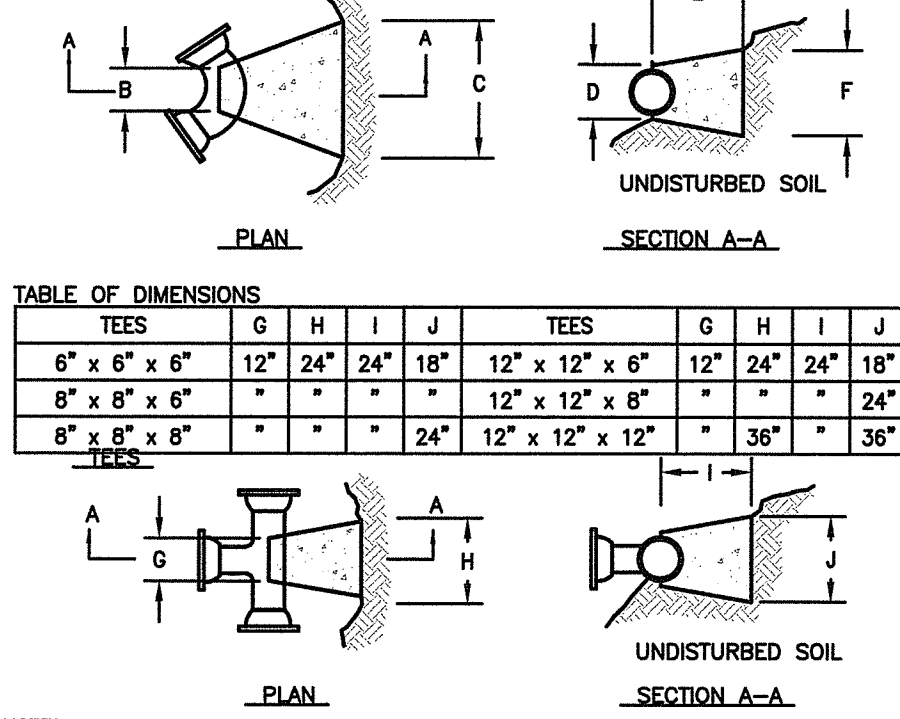
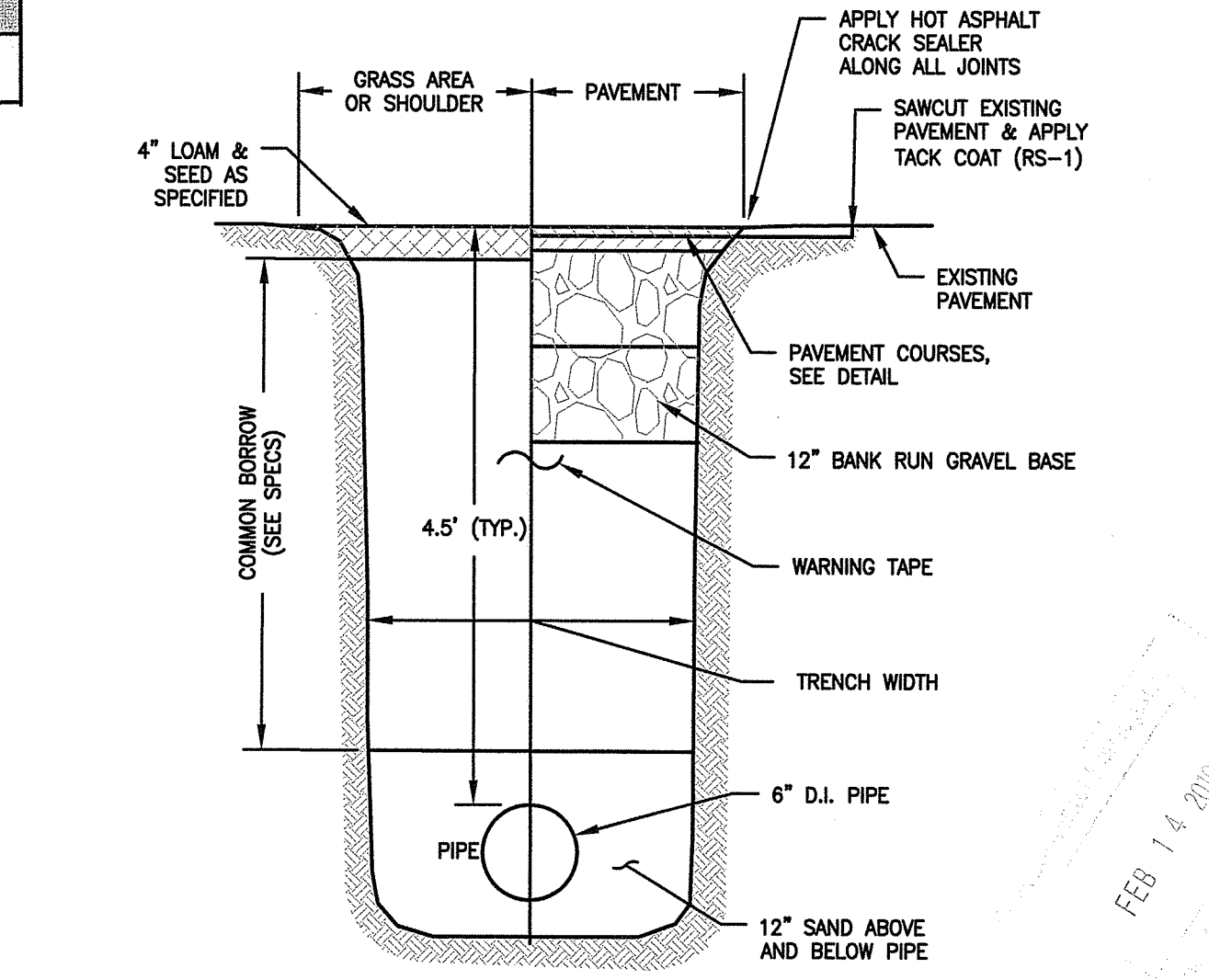
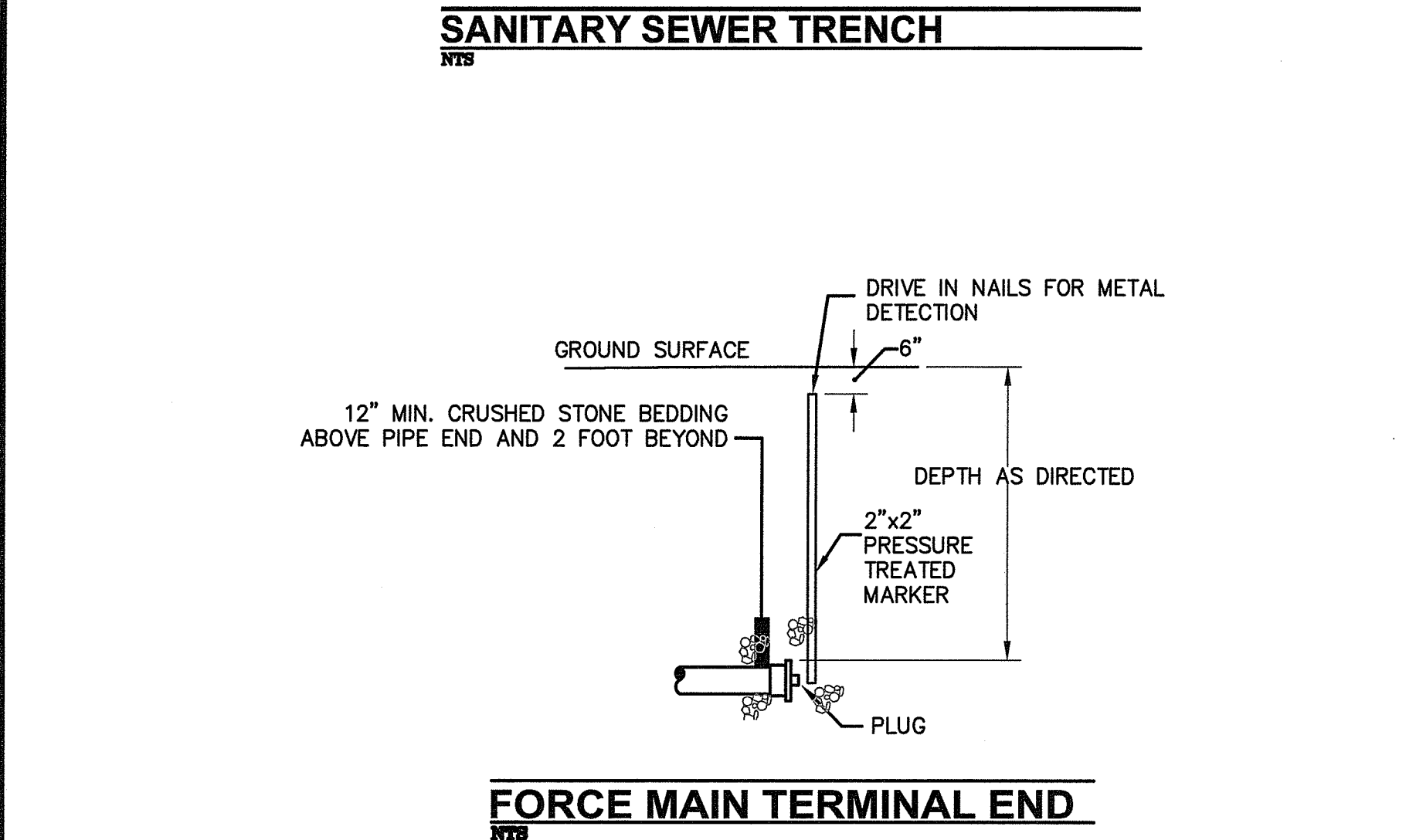


TABLE OF DIMENSIONS

TEES	G	H	I	J	TEES	G	H	I	J
6" x 6" x 6"	12"	24"	24"	18"	12" x 12" x 6"	12"	24"	24"	18"
8" x 6" x 6"	"	"	"	"	12" x 12" x 8"	"	"	"	24"
8" x 6" x 8"	"	"	"	24"	12" x 12" x 12"	"	36"	"	36"



SEAL:
GREGORY A. AVENIA
No. 0562
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
11/2/2018

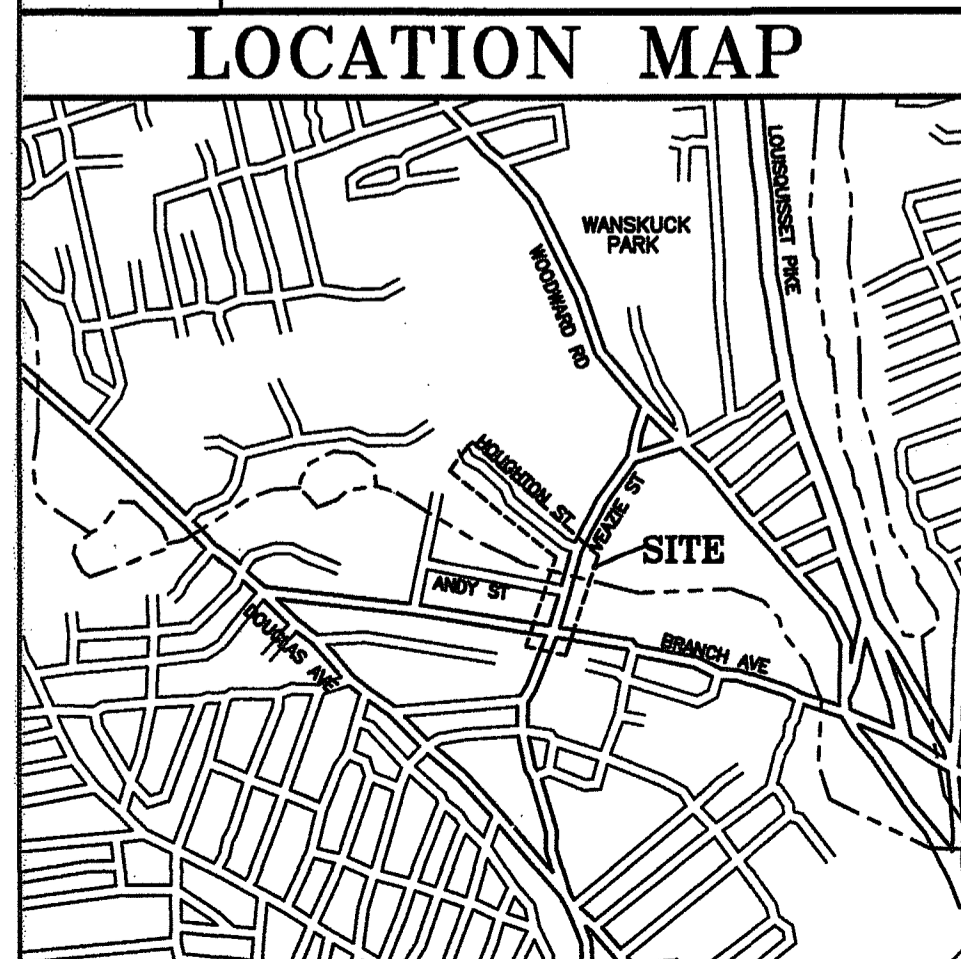
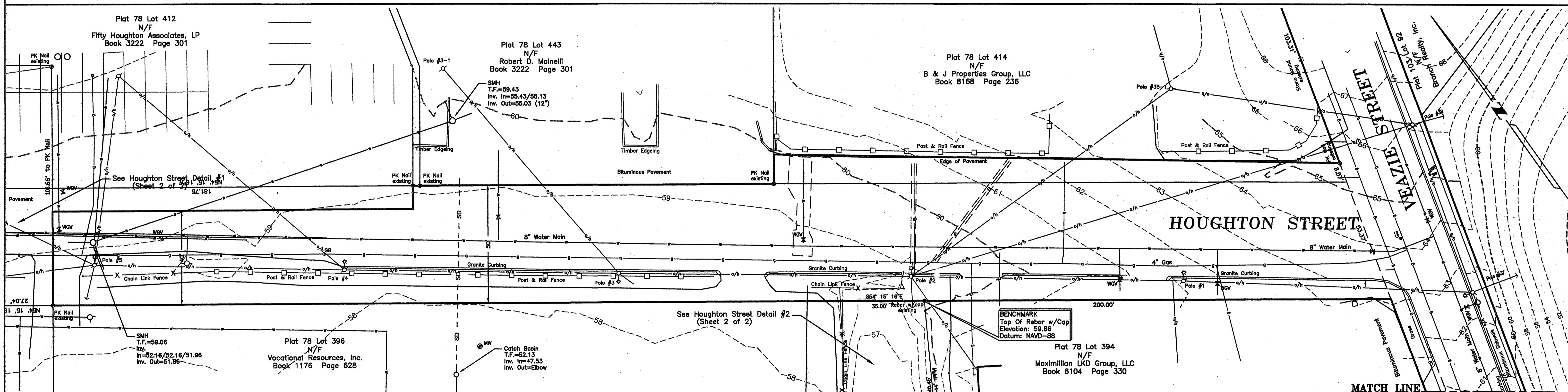
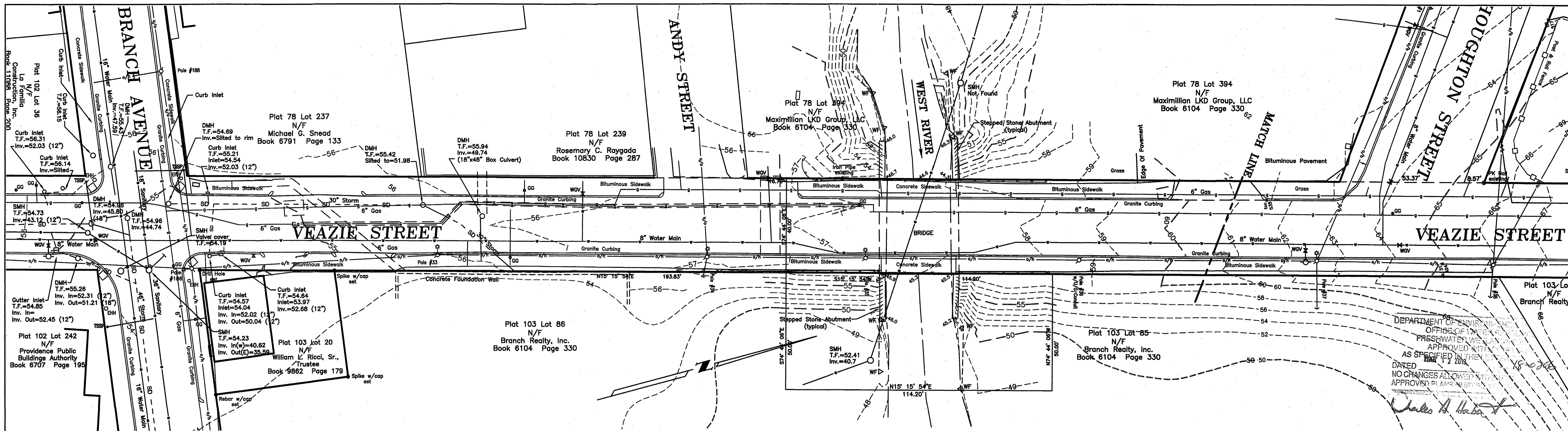
REVISION	DATE	DESCRIPTION

CLIENT:
PROVIDENCE REDEVELOPMENT AGENCY
444 WESTMINSTER STREET, 3RD FLOOR
PROVIDENCE, RI 02903

PROJECT:
HOUGHTON STREET IMPROVEMENTS
HOUGHTON STREET & VEAZIE STREET
PROVIDENCE, RI

TITLE:
DETAILS 5

ISSUED FOR: BID
DATE: NOVEMBER 2, 2018
SCALE: N.T.S.
DRAWN BY: NRM
CHECKED BY: GAA
PROJECT NO: 3653170026



LEGEND

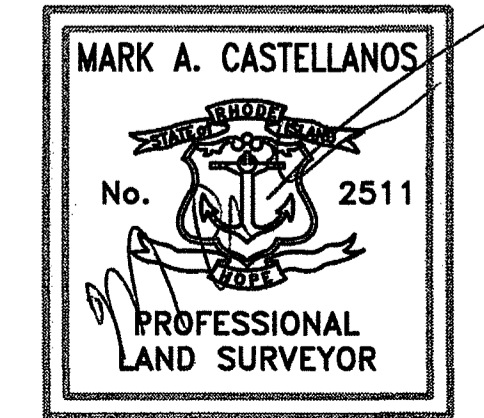
— W —	Water Line
— G —	Underground Gas Lines
— O/H —	Overhead Utilities
— S —	Underground Sanitary Sewer
— SD —	Underground Storm Drain line
— E —	Underground Electricity
— GR —	Guard Rail
— FWE —	Flagged Wetland Edge
— TSSP —	Traffic Signal Support Pole
— BCLC —	Bituminous Concrete Lip Curb
— SMH —	Sanitary Manhole
— DMH —	Drainage Manhole
— CMH —	Communication Manhole
— EHH —	Electricity Hand Hole
— WGV —	Water Gate or Shut-Off
— FH —	Fire Hydrant
— UP —	Utility Pole
— GG —	Gas Gate
— MW —	Monitoring Well
—	Existing Contours
—	Pavement Patch

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS, EFFECTIVE NOVEMBER 11, 2015, AS FOLLOWS:

TYPE OF SURVEY: LIMITED CONTENT BOUNDARY
MEASUREMENT SPECIFICATION: CLASS I
 DATA ACCUMULATION-PLANIMETRICS CLASS III
 TOPOGRAPHY CLASS T-2

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: TO PREPARE A TOPOGRAPHIC BASE MAP OF A PORTION OF HOUGHTON ST, VEAZIE ST AND BRANCH AVENUE.

By: *Mark A. Castellanos*
 PLS Signature
 Mark A. Castellanos PLS #2511
 Printed PLS Name & License No.
 LS.000A133-COA
 COA No.



SEE SHEET 2 OF 2 FOR SURVEY NOTES AND PLAN REFERENCES

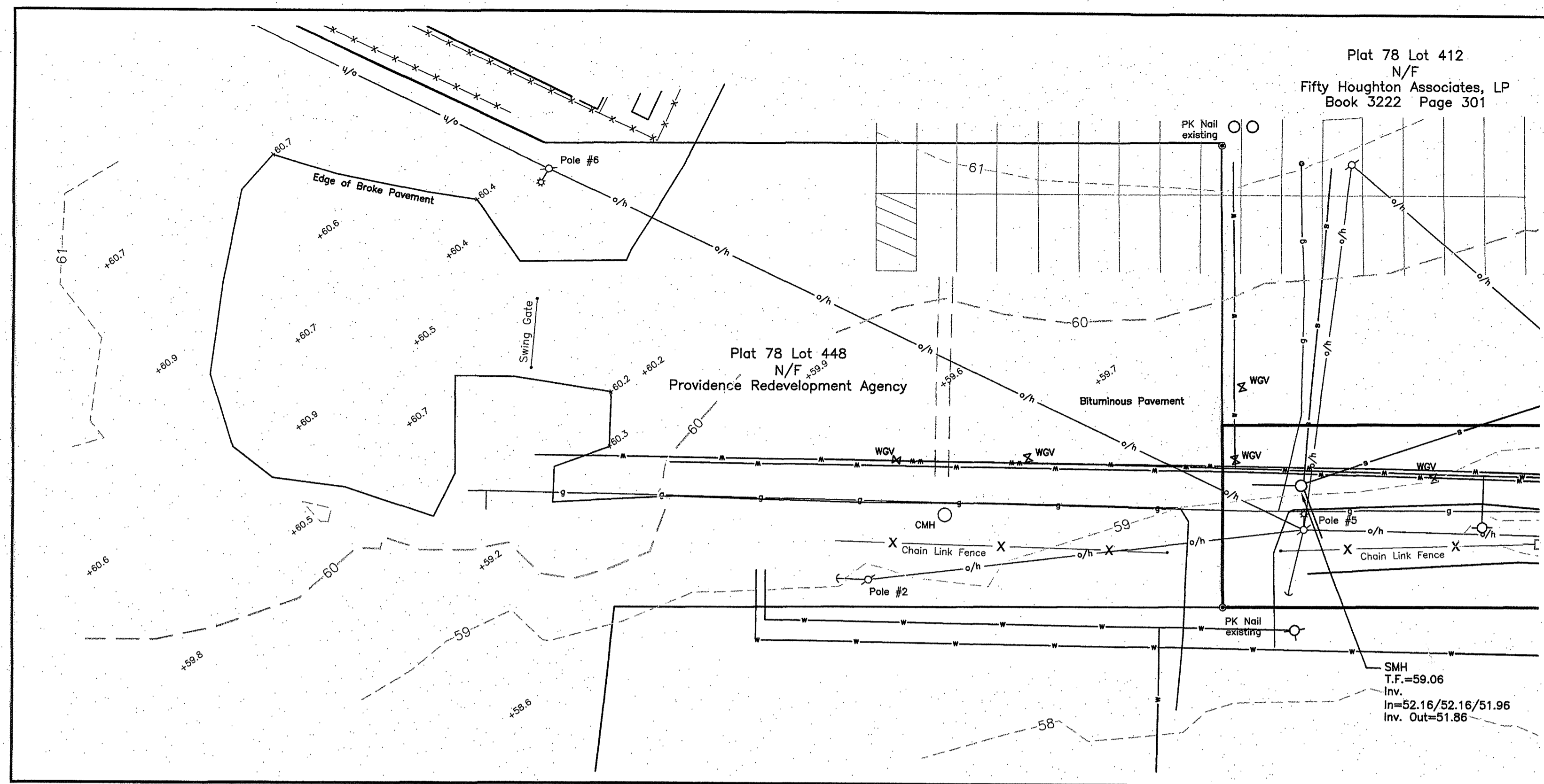
PLAN REVISIONS			
DATE	DESCRIPTION	DWN BY	CHK BY
10-12-18	Update storm and sewer at intersection / Branch	MAC	MAC

CHERENZIA & ASSOCIATES, LTD.
 99 Mechanic St. P.O. Box 513
 Pawtucket, RI 02891
 Tel: 860.629.6500 Fax: 860.599.6090
 Civil Engineers Land Surveyors
 Land Use Planners Environmental Engineers
 www.cherenzia.com

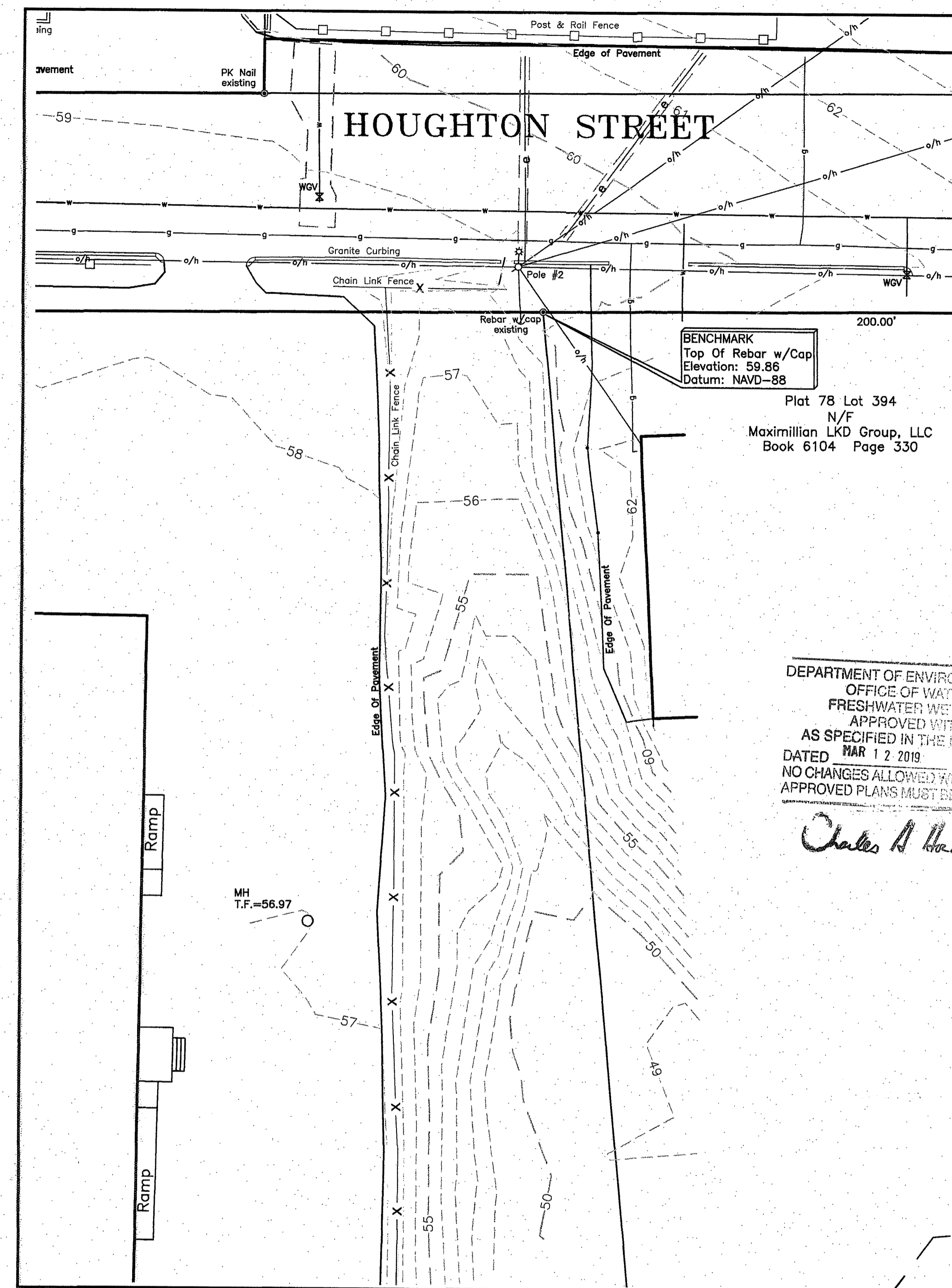
TOPOGRAPHIC SURVEY
 PREPARED FOR
AMEC FOSTER WHEELER
 HOUGHTON & VEAZIE STREETS
 PROVIDENCE, RHODE ISLAND

SCALE: 1" = 20'
 MAY 9, 2018
 SHEET: 1 OF 1

DRAWN BY: TWS
 CHECK BY: MAC
 JOB NO.: 213056-4



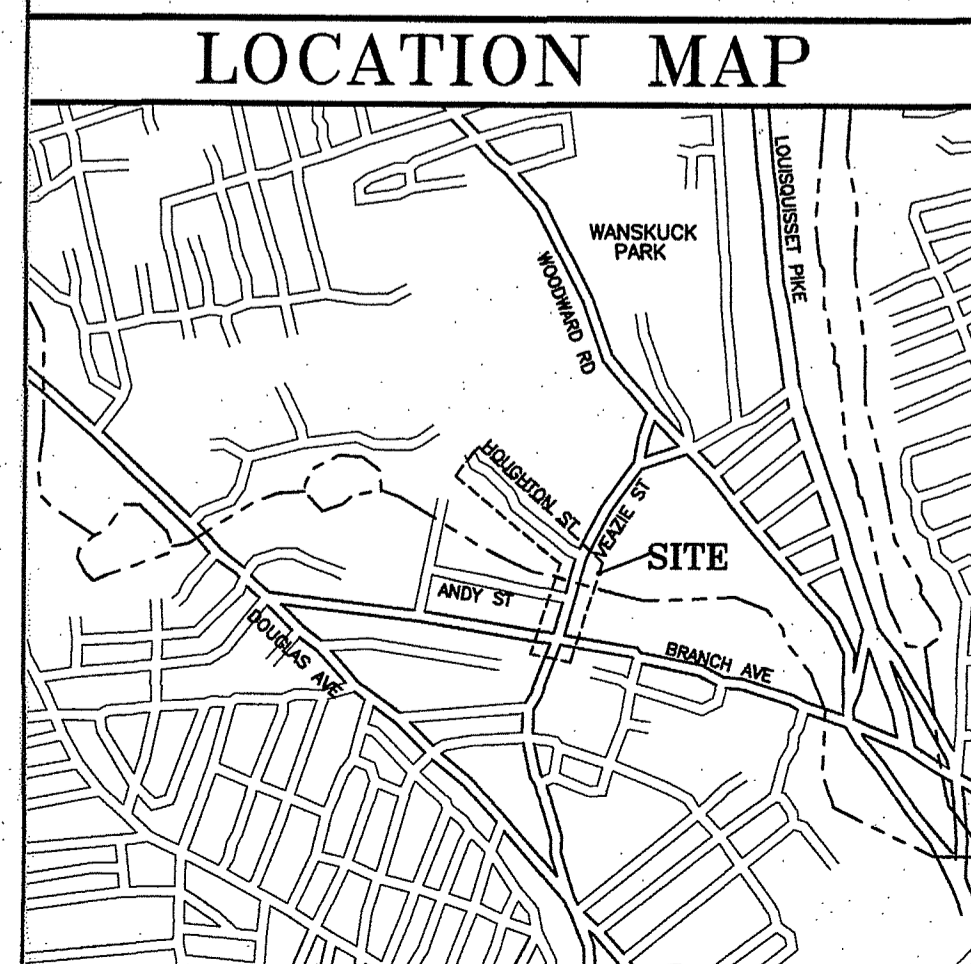
HOUGHTON STREET DETAIL #1



HOUGHTON STREET DETAIL #2

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS DIVISION
 APPROVED WITH COMMENTS
 AS SPECIFIED IN THE LETTERS
 DATED MAR 12 2019
 NO CHANGES ALLOWED WITHOUT
 APPROVED PLANS MUST BE RECONSTRUCTED

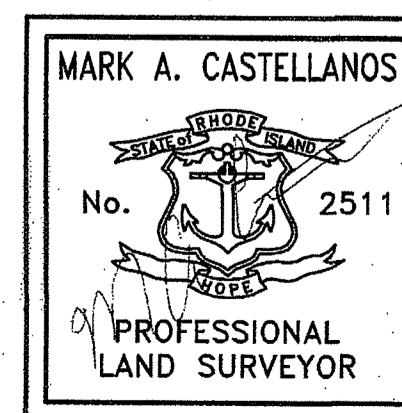
Charles A. Harte



LEGEND

— W —	Water Line
— G —	Underground Gas Lines
— O/H —	Overhead Utilities
— S —	Underground Sanitary Sewer
— SD —	Underground Storm Drain line
— e —	Underground Electricity
— x — x —	Guard Rail
— x — x —	Fence (Chain Link)
— x — x —	Fence (Post & Rail)
— TSSP —	Traffic Signal Support Pole
— BCLC —	Bituminous Concrete Lip Curb
— SMH —	Sanitary Manhole
— DMH —	Drainage Manhole
— CMH —	Communication Manhole
— EHH —	Electricity Hand Hole
— WGV —	Water Gate or Shut-Off
— FH —	Fire Hydrant
— UP —	Utility Pole
— GG —	Gas Gate
— MW —	Monitoring Well
— 20' —	Existing Contours
— 20' —	Pavement Patch

- Survey Notes:**
- Bearings and north arrow orientation are referenced to the Rhode Island State Plane grid, NAD-83.
 - Elevations are referenced to the NAVD-88 vertical datum.
 - Information regarding underground utilities was provided by the respective agencies responsible for sanitary sewer, water service lines, gas lines and storm drainage. In all cases, the information provided was either incomplete, out of date, missing completely or contradictory. This survey represents the best interpretation of what was found by field survey and reconciling with utility information provided.



- Plan References:**
- Plan entitled: "Administrative Subdivision Plan Property of Vocational Resources, Inc. and Providence Redevelopment Agency 70 & 100 Houghton Street Plat 78 Lots 396 & 448 Providence Rhode Island March 6, 2015" prepared by Cherenzia & Associates as job # 213056-2
 - Plan entitled: "Perimeter Survey of Land in Providence Rhode Island For R.S.S. Realty Trust, Inc. Designated as Assessor's Plat 98, Lots 432 and 431, and Assessor's Plat 103, Lots 92, 85, and 86" Drawing No. 950204-03, Dated 3/13/98 prepared by Louis Federici and Associates
 - Plan entitled: "Houghton Plat A Minor Subdivision of Land in Providence, R.I. for Robert Mainelli, Designated as Assessor's Plat 78, Lot 416," prepared by Louis Federici Plan Date 5/26/05 on file in the Providence Land Records.
 - Plan entitled: "Samuel Hedley's Plat No. 2 of Mary J. Wiids Land in North Providence in Lots drawn from a copy of a plat made by Cushing & DeWitt 1868 made and Platted by J. Childs Sept. 2 1865" on file in the Providence Land Records.

PLAN REVISIONS			
DATE	DESCRIPTION	DWN BY	CHK BY

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 Environmental Engineers
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TOPOGRAPHIC SURVEY
 PREPARED FOR
AMEC FOSTER WHEELER
HOUGHTON & VEAZIE STREETS
 PROVIDENCE, RHODE ISLAND
 SCALE: 1" = 20'
 MAY 8, 2018
 DRAWN BY: TWS
 CHECK BY: MAC
 SHEET: 2 OF 2
 JOB NO.: 213056-4