# PROPOSED SITE DEVELOPMENT D.F. PRAY

# SITE DRAWINGS

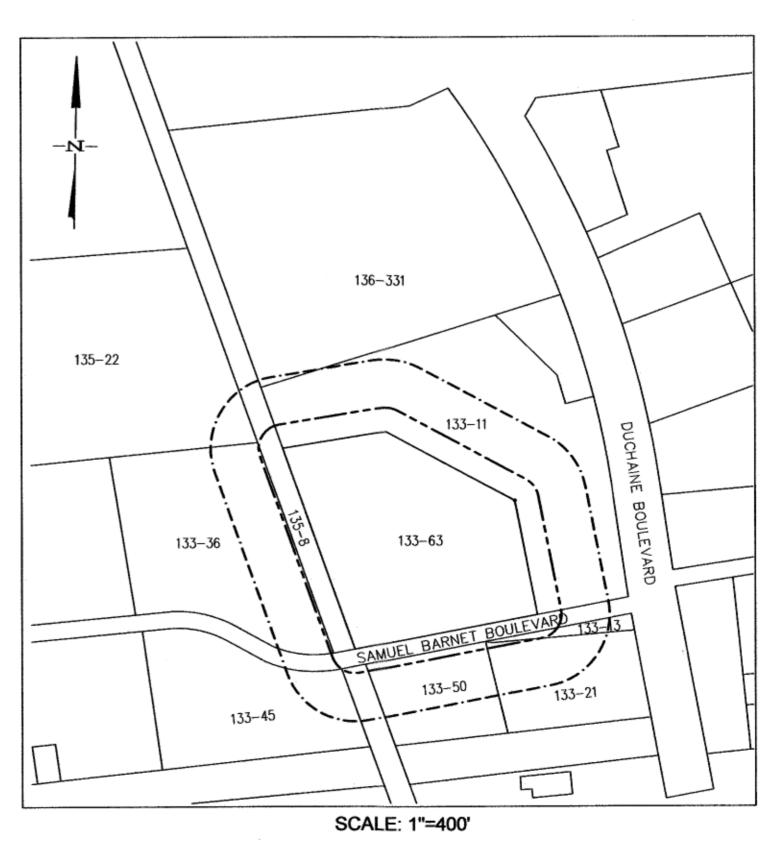
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# SAMUEL BARNET BOULEVARD NEW BEDFORD, MASSACHUSETTS

SCALE: 1"=600'

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PROJECT LOCATION:

ASSESSORS MAP 133 LOT 63 NEW BEDFORD, MASSACHUSETTS

	-
LOT NO.	OWNER OF RECORD
133-11	GREATER NEW BEDFORD INDUSTRIAL FOUNDATION
133-13	GREATER NEW BEDFORD INDUSTRIAL FOUNDATION
133-21	MILHENCH LLC
133-36	83 SEIP BARNETT OWNER LLC
133-45	CP BOURG INC.

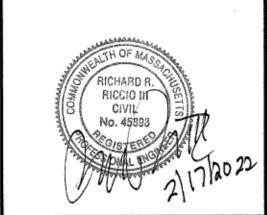
GREATER NEW BEDFORD INDUSTRIAL FOUNDATION
PENN CENTRAL CO., CONSOLIDATED RAIL CORP.

GREATER NEW BEDFORD INDUSTRIAL FOUNDATION

ACUSHNET COMPANY C/O SUE BRENNER

PROPOSED SITE DEVELOPMENT

MAP 133 LOT 63 SAMUEL BARNET BOULEVARD NEW BEDFORD, MA



MGINEERING
CO., INC.
CONSULTING ENGINEERS

11D INDUSTRIAL DRIVE P.O. BOX 1178 MATTAPOISETT, MA 02739 TEL: (508) 758-2749 FAX: (508) 758-2849

Project No.

**ENGINEER:** 

FIELD ENGINEERING CO., INC. 11D INDUSTRIAL DRIVE P.O. BOX 1178 MATTAPOISETT, MA 02739 APPLICANT/OWNER:

D.F. PRAY 25 ANTHONY STREET SEEKONK, MA 02771

#### GENERAL CONSTRUCTION NOTES

1. THE MATERIALS AND CONSTRUCTION OF ALL THE PROPOSED WATER, SEWER AND STORM DRAINAGE UTILITIES SHALL CONFORM TO THE LOCAL D.P.W. STANDARDS AND SPECIFICATIONS AS WELL AS ALL APPLICABLE MASSDOT STANDARDS AND SPECIFICATIONS, LATEST EDITION. THE MATERIALS AND CONSTRUCTION OF ALL ELECTRIC, TELEPHONE & CATV UTILITIES SHALL CONFORM TO THE SPECIFICATIONS OF EACH RESPECTIVE PUBLIC UTILITY PROVIDER.

2. ALL CONSTRUCTION MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHALL RECEIVE THE WRITTEN APPROVAL OF THE LOCAL D.P.W., AND THE PROJECT ENGINEER PRIOR TO FABRICATION AND INSERTAL ATION.

3. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATION AND THE BEST AVAILABLE RECORD INFORMATION AND ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF ALL EXISTING LINES.

4. THE CONTRACTOR SHALL CONTACT "DIG SAFE" AT "811", 72 HOURS PRIOR TO ANY EXCAVATION AND/OR SUBSURFACE TESTING TO INFORM THE UTILITY COMPANIES OF ANY EXCAVATION.

5. WHENEVER EXISTING STRUCTURES ARE ENCOUNTERED, THE CONTRACTOR SHALL REPAIR ANY DAMAGED STRUCTURES OR REPLACE ANY REMOVED STRUCTURES, AND MAKE ANY IMPROVEMENTS ABOVE OR BELOW GRADE TO A CONDITION BETTER THAN OR EQUAL TO PRE-EXISTING CONDITIONS.

ALL EXCAVATED MATERIAL DESIGNATED FOR REUSE SHALL BE STOCKPILED ON SITE NO HIGHER THAN 8 FEET AND SHALL BE ENCLOSED BY TEMPORARY SILT FENCES TO PREVENT TRAVEL OF SEDIMENT TO ADJACENT PROPERTIES OR DRAINAGE WAYS. STOCKPILES SHALL NOT BE ALLOWED WITHIN THE 100' WETLAND BUFFER ZONE.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL WASTE MATERIAL AT AN APPROVED LOCATION. BURIAL OF WASTE MATERIAL ON SITE WILL NOT PERMITTED.

8. EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND MAINTAINED IN GOOD CONDITION UNTIL SURFACE RESTORATION IS COMPLETE AND ALL AREAS DISTURBED BY THE CONTRACTORS OPERATIONS ARE STABILIZED. 9. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES FROM ON SITE CONSTRUCTION ACTIVITIES AND REMOVE ANY SEDIMENT OR DEBRIS DEPOSITED THEREON IMMEDIATELY.

10. DRAINAGE GENERATED AS A RESULT OF TRENCH DEWATERING SHALL BE DISCHARGED TO EXISTING DRAINAGE COURSES WITH PROPER EROSION CONTROL AND DEWATERING MEASURES MEASURES SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. DIRECT DISCHARGE ONTO PAVEMENT, WETLANDS OR PRIVATE PROPERTY SHALL NOT BE ALLOWED WITHOUT CONSENT OF THE PROJECT ENGINEER AND THE OWNER.

11. THE OWNER AND THE PROJECT ENGINEER SHALL APPROVE ALL FIELD CHANGES IN THE WORK PRIOR TO IMPLEMENTATION. NO FIELD CHANGES SHALL BE MADE IN ANY SPECIFIED SITE WORK OR ANY MATERIALS FOR WHICH SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED WITHOUT PRIOR CONSULTATION OF THE OWNER AND THE PROJECT ENGINEER. ANY CHANGES SO MADE WITHOUT THE CONSENT OF THE OWNER AND THE PROJECT ENGINEER SHALL, IF DEEMED UNACCEPTABLE BY EITHER PARTY, BE PROMPTLY REMOVED FROM THE WORK AT NO EXPENSE TO THE OWNER OF THE PROJECT.

12. ANY WORK OR MATERIALS NOT MEETING THE APPROVED STANDARDS AND SPECIFICATIONS OF THE LOCAL DEPT. OF PUBLIC WORKS SHALL BE IMMEDIATELY REMOVED AND REPLACED AT THE FULL RESPONSIBILITY AND COST/EXPENSE TO THE CONTRACTOR.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SITE PREPARATION, THE COORDINATION AND INSTALLATION OF ALL UTILITY CONNECTIONS, AND RELATED WORK INCLUDING BUT NOT LIMITED TO ALL NECESSARY SHORING, BRACING AND TRENCH DEWATERING FOR THE COMPLETE INSTALLATION OF THE PROJECT FACILITIES DURING CONSTRUCTION.

14. ALL OPEN EXCAVATIONS SHALL BE ADEQUATELY SAFEGUARDED IN STRICT ACCORDANCE WITH OSHA GUIDELINES AND TO THE SATISFACTION OF THE LOCAL POLICE DEPARTMENT. PROVISIONS FOR TEMPORARY BARRICADES, CAUTION SIGNS, LIGHTS AND OTHER MEANS TO PREVENT ACCIDENTS AND DAMAGE TO PROPERTY ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE SUITABLE AND SAFE BRIDGES AND OTHER CROSSINGS FOR ACCOMMODATING TRAVEL BY PEDESTRIANS AND WORKMEN. NO EXCAVATIONS SHALL REMAIN OPEN OVERNIGHT.

15. REFER TO CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL UTILITY REQUIREMENTS AND SPECIFICATIONS 16. THESE PLANS HAVE BEEN PREPARED SPECIFICALLY AS SUPPLEMENTAL INFORMATION TO ACCOMPANY APPLICABLE PERMIT APPLICATIONS AND ARE NOT INTENDED FOR ACTUAL CONSTRUCTION WITHOUT THE EXPRESSED WRITTEN

17. IN THE EVENT OF AN INCONSISTENCY BETWEEN THESE SPECIFICATIONS AND THE LOCAL D.P.W. SPECIFICATIONS SHALL GOVERN. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE SPECIFICATIONS FROM THE LOCAL DEPARTMENT OF PUBLIC WORKS.

18. ANY MINOR MODIFICATIONS (AS DETERMINED BY THE CITY ENGINEER) TO THE INFORMATION SHOWN ON THE APPROVED SITE PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER AS A MINOR PLAN REVISION FOR APPROVAL PRIOR TO THE WORK BEING PERFORMED.

19. ALL HANDICAP PARKING, RAMPS, AND ACCESS SHALL CONFORM TO ADA & MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) REQUIREMENTS.

20. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL SHALL CONFROM TO THE CITY OF NEW BEDFORD CONSERVATION COMMISSION REQUIREMENTS AS STATED IN THE ORDER OF

CONDITIONS (REFER TO SITE GRADING AND LAYOUT PLAN FOR EROSION CONTROL LOCATIONS) 21. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO MUTCO REQUIREMENTS.

22. THE CONTRACTOR SHALL A STREET DISTURBANCE AND OBSTRUCTION PERMIT PRIOR TO ANY WORK BEING PERFORMED

23. ALL WATER AND SEWER MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CITY OF NEW BEDFORD

24. ALL WATER AND SEWER CONSTRUCTION SHALL BE INSPECTED BY THE CITY OF NEW BEDFORD PRIOR TO BEING BACKFILLED.

25. THE CITY SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE REQUIRED INSPECTIONS

LEGEND	EXISTING	PROPOSED
INTERMEDIATE CONTOUR	-12-	42
INDEX CONTOUR	40	
SPOT ELEVATION	×123.4	x 123.4
SEWER MANHOLE		-
DRAIN MANHOLE		
ROOF DRAIN		
CATCH BASIN FLARED END		
RIP-RAP		
UNDERGROUND WATER		
WATER FIRE SERVICE		FS-
WATER DOMESTIC SERVICE		DS
WATER DOMESTIC SERVICE	A som	
HYDRANT		
WATER GATE		
<u> </u>		Ι
TEE		, <u>T</u>
TAPPING SLEEVE & GATE VALVE		A
GAS GATE		
UNDERGROUND GASLINE		C
UNDERGROUND ELECTRIC, CABLE & TELEPHONE		— — E/T/C—
LIGHT POLE	*	
UTILITY POLE	-O-UP	
GUY WIRE OVERHEAD WIRE		
HANDICAP RAMP		=
CONCRETE	00%	CONC
BITUMINOUS CONCRETE	BIT COVO	BIT CON
TREE	€B7	
TREE LINE	السلامين	
BUILDING		202.492.042.000.00
CONCRETE CURB		
BIT CONC BERM	BGF	
POST & RAIL FENCE	<del></del>	
CHAIN LINK FENCE	_xx_	
SIGN	75 075	
SOIL TEST PIT	<b>₽</b> 3	
BORDERING VEGETATED	- die 477	

WETLAND PROTECTION ZONE ----

#### EROSION & SEDIMENTATION CONTROL PROGRAM

- 1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE EXECUTED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS AND THE NPDES STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
- 2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL IF THE DISTURBANCE IS WITHIN 100 FEET OF A WETLAND RESOURCE AREA. THE DISTURBED AREAS SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY FORECASTED STORM EVENT.
- SEDIMENT BARRIERS (SILT FENCE, HAY BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE UPGRADIENT CONTRIBUTING DRAINAGE AREA. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8.0% AFTER OCTOBER 1ST.
- 4. INSTALL SILT FENCE AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF, SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
- 5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL, SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT AND WHEN THE DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
- 6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2 TO 1) UNLESS NOTED
- 7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH OR DORMANT SEEDING TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED
- 8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO
- 9. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:

A) THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL BE PLACED TO A DEPTH OF FOUR (4) INCHES ON ALL LOAM AND SEED AREAS OR AS SPECIFIED ON THE DRAWINGS. B) APPLY FERTILIZER AT A RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF. APPLY GROUND LIMESTONE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE OR 138 LB PER

C) THE DESIGN MIX FOR SEEDING SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE. THE SEED MIX SHALL BE INOCULATED WITHIN TWENTY-FOUR (24) HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM

LOAM AND SEED AREAS - MASSDOT SPEC M6.03.0

THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.

RED FESCUE KENTUCKY 3 DOMESTIC RYE RED TOP ADINO CLOVER

10. HAY OR STRAW MULCH SHALL BE LOOSELY SPREAD TO A UNIFORM DEPTH AT THE RATE OF 4.5 TONS PER ACRE EXCEPT OVER CERTAIN SELECTED SEEDED AREAS WHERE 2 TONS PER ACRE SHALL BE USED AS DIRECTED BY THE ENGINEER AND/OR THE PLANNING BOARD. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A suitable binder such as curasol or RMB plus will be used on hay mulch for wind control.

11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED TO THE SATISFACTION OF THE PROJECT ENGINEER AND/OR THE CONSERVATION COMMISSION.

12. ADJACENT PROPERTIES WILL BE PROTECTED WITH HAY BALES AND/OR SILT FENCING INSTALLED AS SHOWN ON THE DRAWINGS. ADDITIONAL HAY BALES OR SAND BAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE

13. TEMPORARY HAY BALE EROSION CHECKS OR FILTER FABRIC GRATE INSERTS SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURE INLETS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION AND SATISFACTORY STABILIZATION OF DISTURBED AREAS, THE CONTRACTOR SHALL CLEAN ALL CATCH BASIN SUMPS AND DRAIN INVERTS.

14. THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER. 15. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH JUNE 15TH AND AUGUST 15TH THROUGH

16. STOCKPILES OF TOP SOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 1:1.

RATE (1.000 S.F.) 200 POUNDS MULCH LOCATION
MILD SLOPES LESS THAN 3:1 MULCH STRAW OR HAY 200-275 POUNDS SHREDDED OR CHOPPED CORNSTALKS HIGH WIND VELOCITY AREAS ANCHORED STRAW OR HAY (1) JUTE MESH OR EXCELSIOR MAT JUTE MESH OR EXCELSIOR MAT 200 POUNDS AS REQUIRED AS REQUIRED MODERATE TO HIGH VWLOCITY AREAS STEEP SLOPES GREATER THAN 3:1

(1) A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON HAY MULCH FOR WIND CONTROL. MULCH ANCHORING

MULCH ANCHORING MAY BE ACCOMPLISHED WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (PER

MANUFACTURERS SPECIFICATIONS); WOOD CELLULOSE FIBER (750 LBS/ACRE); OR CHEMICAL TACK (PER

#### EROSION CONTROL NOTES DURING CONSTRUCTION

MANUFACTURERS SPECIFICATIONS).

- 1. CONSTRUCTION ACTIVITY EXECUTED DURING THE WINTER CONSTRUCTION PERIOD BETWEEN NOVEMBER 1 THROUGH APRIL 15 SHALL BE SUBJECT TO THE FOLLOWING ADDITIONAL REQUIREMENTS.
- 2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- 3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
- 4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO AREA IN EXCESS OF ONE ACRE IS WITHOUT EROSION
- 5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
- 6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE PERMITTED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED.

IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200 TO 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE APONE MANNER.

UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF HAY BALE/SAND BAG CHECK DAMS.

7. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER.

MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3%, FOR SLOPES EXPOSED TO DIRECT WINDS, AND FOR ALL OTHER SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.

8. ALL EROSION MITIGATION SHALL BE IN PLACE PRIOR TO ANY SOIL DISTURBANCE ACTIVITIES ON THE SITE.

#### DUST CONTROL NOTES DURING CONSTRUCTION

1. DUST SHALL BE CONTROLLED BY THE CONTRACTOR AS NEEDED, OR AS DIRECTED BY THE TOWN OR OWNER BY USING ONE OF THE FOLLOWING TWO METHODS:

A) WATER THE CONTRACTOR SHALL SPRAY WATER OVER EXPOSED SOIL SURFACES UNTIL MOISTENED AS NEEDED TO CONTROL DUST. B) <u>CALCIUM CHLORIDE</u> CALCIUM CHLORIDE SHOULD BE EITHER LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP THE SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT

DAMAGE. CONTRACTOR SHALL NOT USE CALCIUM CHLORIDE ON STEEPER SLOPES (GREATER THAN 3:1) OR IN AREAS THAT WILL DRAIN DIRECTLY TOWARDS THE WETLANDS.

2. SPECIAL CONSIDERATION FOR DUST CONTROL SHALL BE GIVEN AT ALL SITE ACCESS DRIVEWAYS TO MINIMIZE THE AMOUNT OF DUST IN THE STREETS.

3. ALTERNATIVE METHODS FOR DUST CONTROL SUCH AS THE USE OF MULCH OR SPRAY ON ADHESIVES SHALL BE REVIEWED WITH THE PROJECT ENGINEER PRIOR TO THEIR IMPLEMENTATION

#### STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE PLAN

#### NAME AND CURRENT ADDRESS OF THE APPLICANT/OWNER

#### SEEKONK, MASSACHUSETTS 02771

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES UNTIL SUCH TIME AS THE STORMWATER MANAGEMENT SYSTEM IS ACCEPTED BY THE OWNER. THEREAFTER THE OWNER SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF THE STORMWATER FACILITIES IN ACCORDANCE WITH THIS OPERATION AND MAINTENANCE PLAN AS WELL AS THE CONTINUING CONDITIONS OF THE CERTIFICATE OF COMPLIANCE ON THE PROPERTY.

ALL STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) INCLUDING SHOULD BE INSPECTED AFTER EVERY MAJOR RAINFALL EVENT EXCEEDING 1.0—INCH FOR THE FIRST 6 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND CONSTRUCTION.

3. THEREAFTER, REGULAR BMP INSPECTIONS SHOULD BE CONDUCTED ACCORDING TO THE FOLLOWING SCHEDULE:

INSPECTIONS PER YEAR DEEP SUMP CATCH BASINS EXTENDED DETENTION/INFILTRATION BASIN PER MANUFACTURER'S SPECIFICATIONS WATER QUALITY INLET

4. THE OWNER SHALL MAINTAIN AND SUBMIT TO THE CONSERVATION COMMISSION UPON REQUEST A BMP INSPECTION REPORT FOLLOWING EACH SITE INSPECTION AS RECOMMENDED ABOVE. THE BMP INSPECTION REPORT SHALL IDENTIFY THE DATE OF INSPECTION, THE NAME AND CONTACT NUMBER OF THE RESPONSIBLE PARTY, SPECIFIC STRUCTURES INSPECTED, SPECIFIC MAINTENANCE REQUIRED AND OBSERVATIONS AT A MINIMUM, INSPECTION REPORTS SHOULD ADDRESS THE FOLLOWING CONDITIONS WHERE APPLICABLE:

. EMBANKMENT SUBSIDENCE 3. CRACKING OF CONTAINMENT BERM 4. INLET/OUTLET CONDITIONS
5. SEDIMENT ACCUMULATIONS
6. SLOPE STABILITY

MORE FREQUENTLY IF ACCUMULATED DEPTH OF SEDIMENT EXCEEDS SIX INCHES AT THE PROPOSED STONE CHECK DAMS. ACCUMULATED SILT AND SEDIMENT SHOULD BE REMOVED AT LEAST ONCE A YEAR FOR DEEP SUMP CATCH BASINS OR MORE FREQUENTLY IF ACCUMULATED DEPTH OF SEDIMENT EXCEEDS SIX INCHES

ALL REMOVED SEDIMENTS ARE TO BE PROPERLY DISPOSED OF AT A LOCATION TO BE APPROVED BY THE BOARD OF HEALTH. TRANSPORTATION AND DISPOSAL OF SEDIMENTS SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

7. THE DRIVEWAY AND PARKING AREAS SHALL BE SWEPT AT LEAST TWICE PER YEAR.

8. THE EXTENDED DETENTION/INFILTRATION BASINS, SEDIMENT FOREBAYS AND ALL LANDSCAPED AREAS SHOULD BE INSPECTED FOR TRASH ON A MONTHLY BASIS. ANY ACCUMULATED TRASH, LITTER AND DISCARDED MATERIALS

9. SNOW WILL BE STOCKPILED WITHIN AND AROUND AREAS WHICH DRAIN INTO THE STORMWATER MANAGEMENT SYSTEM WHEREVER PRACTICABLE. CATCH BASIN GRATES WILL BE CLEANED OF SNOW AND ICE AFTER ALL SNOWFALL EVENTS. DISCHARGE OF SNOW DIRECTLY INTO THE SEDIMENT FOREBAYS, DETENTION BASINS, OR WET

10. NO DISPOSAL OF MATERIALS WILL BE PERMITTED WITHIN THE ANY OF THE STORMWATER MANAGEMENT SYSTEM BMP'S. THIS PROHIBITION APPLIES TO TRASH, FILL MATERIAL, CONSTRUCTION DEBRIS, GRASS CLIPPINGS, COLLECTED LEAVES, AND CUT BRANCHES.

11. THE EMBANKMENTS, SIDE SLOPES, AND BOTTOM AREAS OF THE SEDIMENT FOREBAYS AND EXTENDED DETENTION/INFILTRATION BASIN AREAS SHALL BE MOWED AT LEAST TWICE ANNUALLY TO FACILITATE MAINTENANCE

12. AN OPERATION AND MAINTENANCE INSPECTION FORM SHALL BE DEVELOPED AND COPIES OF THE COMPLETED FORMS SHALL BE COMPILED BY THE OWNER. THESE FORMS SHALL BE AVAILABLE FOR REVIEW BY THE

13. THE OWNER SHALL CONTRACT WITH A MAINTENANCE COMPANY ON AN ANNUAL BASIS THAT WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM. THE CONTACT INFORMATION FOR THIS COMPANY SHALL BE PROVIDED TO THE CONSERVATION COMMISSION FOR THEIR FILES.

14. THE STORM WATER BMP'S WILL BE INSPECTED ANNUALLY DURING REGULARLY SCHEDULED MID—SUMMER LANDSCAPING AND WEEDING OPERATIONS FOR INVASIVE OR UNWANTED PLANTS. IF INVASIVE SPECIES ARE FOUND, THEY WILL BE PHYSICALLY UPROOTED AND REMOVED FROM THE AREA.

#### INVASIVE SPECIES CONTROL PLAN (ISCP)

1. THE OWNER WILL MONITOR THE EXTENDED DETENTION/INFILTRATION BASINS, WET BASIN AND SEDIMENT FOREBAYS PURSUANT TO THE RECOMMENDATIONS OUTLINED IN THE USACE DOCUMENT TITLED 'NEW ENGLAND DISTRICT COMPENSATORY MITIGATION GUIDANCE DOCUMENT, PAGES 24-26 SECTION 4.F. INVASIVE SPECIES.. DUE TO THE PROXIMITY OF THE BMP'S TO THE EXISTING BORDERING VEGETATED WETLAND, THE APPLICANT HAS CHOSEN A MECHANICAL CONTROL METHOD OF REMOVAL INVASIVE SPECIES WILL BE REMOVED BY HAND (PULLING, MOWING OR EXCAVATING ON-SITE). NO CHEMICAL CONTROL WILL BE UTILIZED.

2. SPECIAL ATTENTION WILL BE GIVEN TO ASSURE THAT NONE OF THE FOLLOWING INVASIVE SPECIES POPULATE THE STORM WATER BMP'S: COMMON REED (PHRAGMITES AUSTRALIS), PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), SMOOTH AND COMMON BUCKTHORN (FRANGULA ALNUS, RHAMNUS CARTHARTICA), RUSSIAN AND AUTUMN OLIVES (ELAEAGNUS ANGUSTIFOLIA AND E. UMBELLATA), MULTIFLORA ROSE (ROSA MULTIFLORA), REED CANARY-GRASS (PHALARIS ARUNDINACEA), AND JAPANESE KNOTWEED (FALLOPIA JAPONICA).

SOIL OBSERVATION LOG

DATE: 10/19/15

SOIL EVALUATOR: JON C. CONNELL

ORGANIC/LEAF LITTER ELEV. 83.1±

10 YR 2/2 ELEV. 82.8±

2.5 Y 6/2 ELEV. 82.4±

10 YR 5/6 ELEV. 81.6±

MED.-COARSE, GRAVELLY 2.5 Y 5/4 ELEV. 77.5±

GROUNDWATER - 30" (MOTTLE DEPTH @ ELEV. 81.0±)

TEST PIT #1

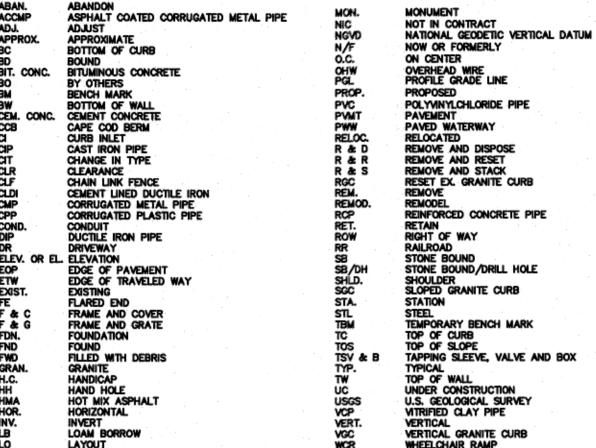
OBSERVED DEPTH TO WEEPING - N/E

ESTIMATED DEPTH TO SEASONAL HIGH

TOP ELEVATION: 83.5±

# NOT IN CONTRACT

GENERAL ABBREVIATIONS



#### SOIL OBSERVATION LOG DATE: 11/13/15

SOIL EVALUATOR: RICHARD R. RICCIO III, P.E.

TOP ELEVATION: 82.4± ORGANIC/LEAF LITTER 0/A SANDY LOAM 10 YR 3/2 ELEV. 81.9± 10 YR 4/3 ELEV. 80.4± LOAMY SAND-FIRM

OBSERVED DEPTH TO WEEPING - 30" (DAMPNESS) ESTIMATED DEPTH TO SEASONAL HIGH GROUNDWATER - 28" (MOTTLE DEPTH @ ELEV. 80.1±)

24"-30"+ 2.5 Y 5/3 ELEV. 79.9±

#### SOIL OBSERVATION LOG

SOIL EVALUATOR: RICHARD R. RICCIO III, P.E.

#### TEST PIT #WR-2

TOP ELEVATION: 82.1±

OBSERVED DEPTH TO WEEPING - 24" (DAMPNESS) ESTIMATED DEPTH TO SEASONAL HIGH

## DATE: 11/13/15

ORGANIC/LEAF LITTER SANDY LOAM 10 YR 3/2 ELEV. 81.6± SANDY LOAM 10 YR 4/3 ELEV. 80.11 MED.-COARSE, GRAVELLY 2.5 Y 5/3 ELEV. 79.6±

GROUNDWATER - 24" (MOTTLE DEPTH @ ELEV. 80.1±)

#### SOIL OBSERVATION LOG DATE: 10/19/15

## SOIL EVALUATOR: JON C. CONNELL

#### TEST PIT 43 TOP ELEVATION: 82.3±

0*-4*	0	ORGANIC/LEAF LITTER ELEV. 82.0±
4"-7"	A	SANDY LOAM 10 YR 2/2 ELEV. 81.7±
7"-18"	В	SANDY LOAM 10 YR 5/6 ELEV. 80.8±
18*-28*	C1	LOAMY SAND GRAVELLY, FIRM 2.5 Y 5/5 ELEV. 80.0±
	c <sub>2</sub>	
28"-80"		LOAMY SAND MED.—COARSE, GRAVELLY 2.5 Y 5/4 ELEV. 75.6±

OBSERVED DEPTH TO WEEPING - 78' ESTIMATED DEPTH TO SEASONAL HIGH GROUNDWATER - 40" (MOTTLE DEPTH @ ELEV. 79.0±)

#### SOIL OBSERVATION LOG DATE: 10/19/15 SOIL EVALUATOR: JON C. CONNELL

## TEST PIT #4

TOP ELEVATION: 82.3±

<u>-2</u>	0	ORGANIC/LEAF LITTER ELEV. 82.1±
<u>-4</u>	A	SANDY LOAM 10 YR 2/2 ELEV. 82.0±
"-18"	В	SANDY LOAM 10 YR 5/6 ELEV. 80.8±
8"-34"	C <sub>1</sub>	LOAMY SAND FIRM 2.5 Y 5/5 ELEV. 79.5±
	c <sub>2</sub>	LOAMY SAND

ESTIMATED DEPTH TO SEASONAL HIGH GROUNDWATER - 37" (MOTTLE DEPTH @ ELEV. 79.2±)

34"-83" | MED. 2.5 Y 5/4 ELEV. 75.4±

#### SOIL OBSERVATION LOG DATE: 10/19/15 SOIL EVALUATOR: JON C. CONNELL

TEST PIT #5

#### TOP ELEVATION: 82.6±

SOIL OBSERVATION LOG

DATE: 10/19/15

SOIL EVALUATOR: JON C. CONNELL

SANDY LOAM 10 YR 2/2 ELEV. 82.7±

2.5 Y 6/2 ELEV. 82.5±

10 YR 5/6 ELEV. 81.7±

MED.-COARSE, GRAVELLY 2.5 Y 5/4 ELEV. 76.7±

GROUNDWATER - 33" (MOTTLE DEPTH @ ELEV. 80.6±)

OBSERVED DEPTH TO WEEPING - N/E

ESTIMATED DEPTH TO SEASONAL HIGH

TEST PIT #2

TOP ELEVATION: 83.4±

0"-2"	0	ELEV. 82.4±
2*-4*	A	SANDY LOAM 10 YR 2/2 ELEV. 82.3±
4"-24"	8	SANDY LOAM 10 YR 5/6 ELEV. 80.6±
24"-32"	C <sub>1</sub>	LOAMY SAND GRAVELLY, FIRM 2.5 Y 5/5 ELEV. 79.9±
	c <sub>2</sub>	
32*-86*		LOAMY SAND MEDCOARSE, GRAVELLY 2.5 Y 5/4 ELEV. 75.4±

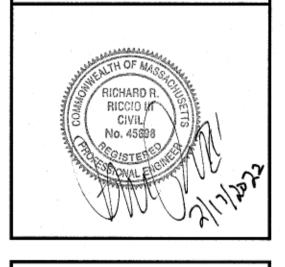
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OBSERVED DEPTH TO WEEPING - 62" ESTIMATED DEPTH TO SEASONAL HIGH GROUNDWATER - 42" (MOTTLE DEPTH @ ELEV. 79.1±)

#### **E**IELD -NGINEERING CO., INC. CONSULTING ENGINEERS

11D INDUSTRIAL DRIVE P.O. BOX 1178 MATTAPOISETT, MA 02739 TEL: (508) 758-2749 FAX: (508) 758-2849

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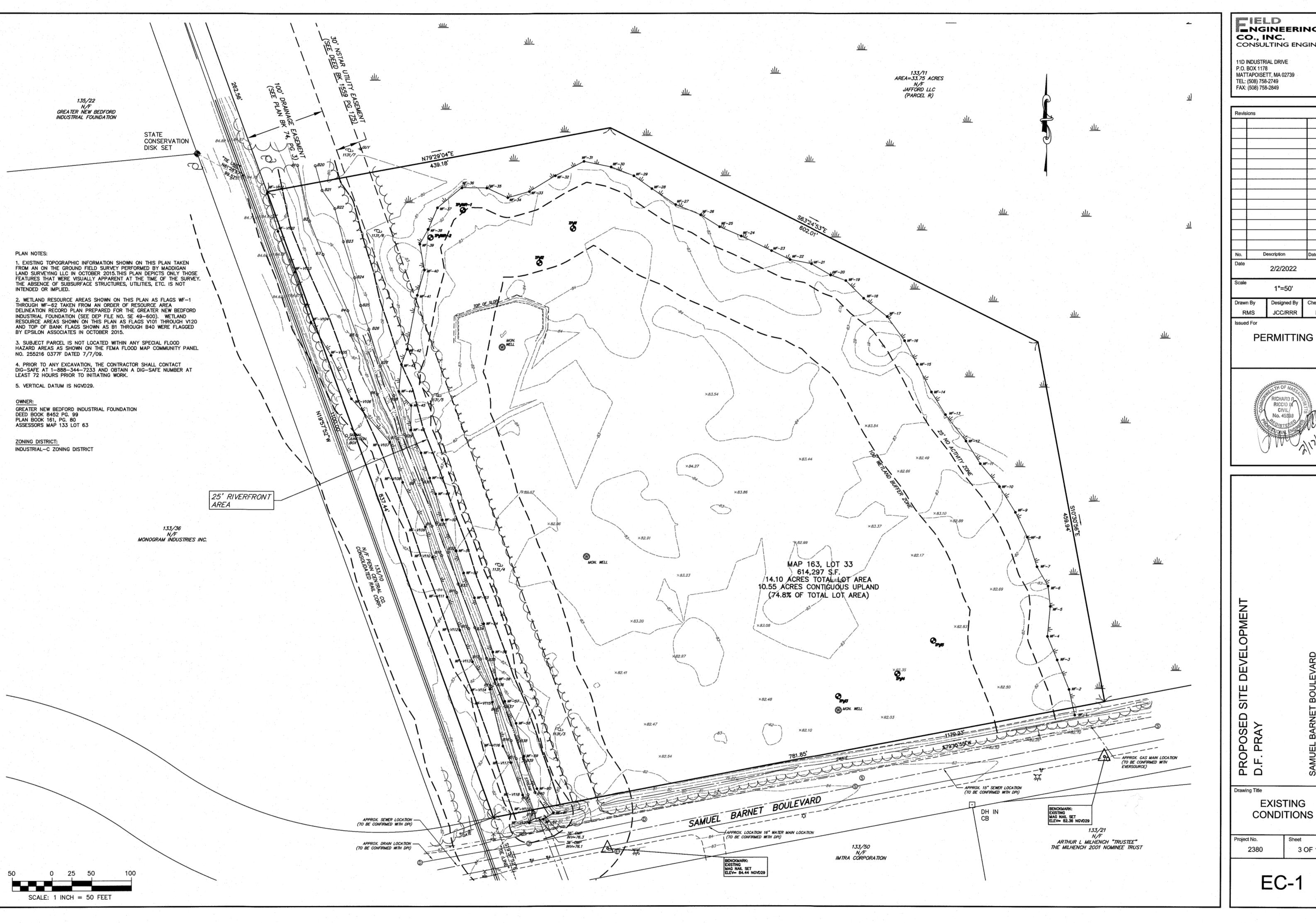
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Drawing Title NOTES &

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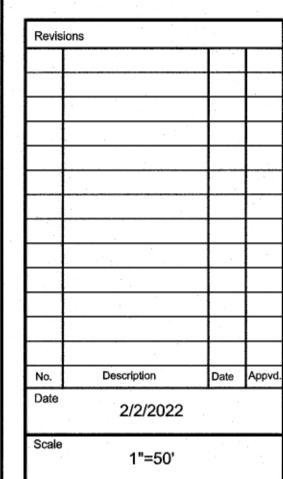
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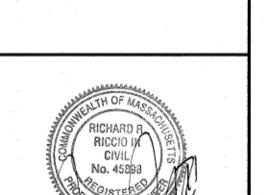
2 OF 12



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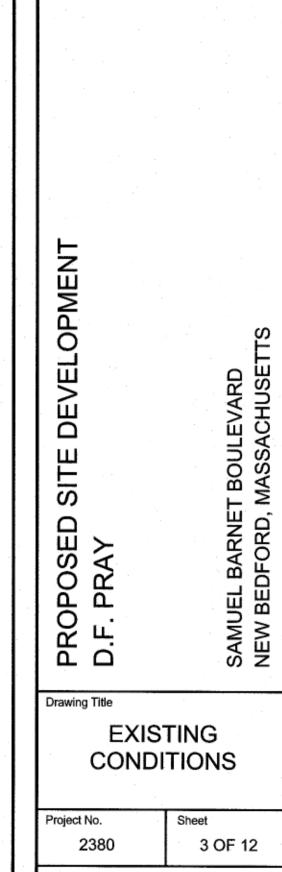




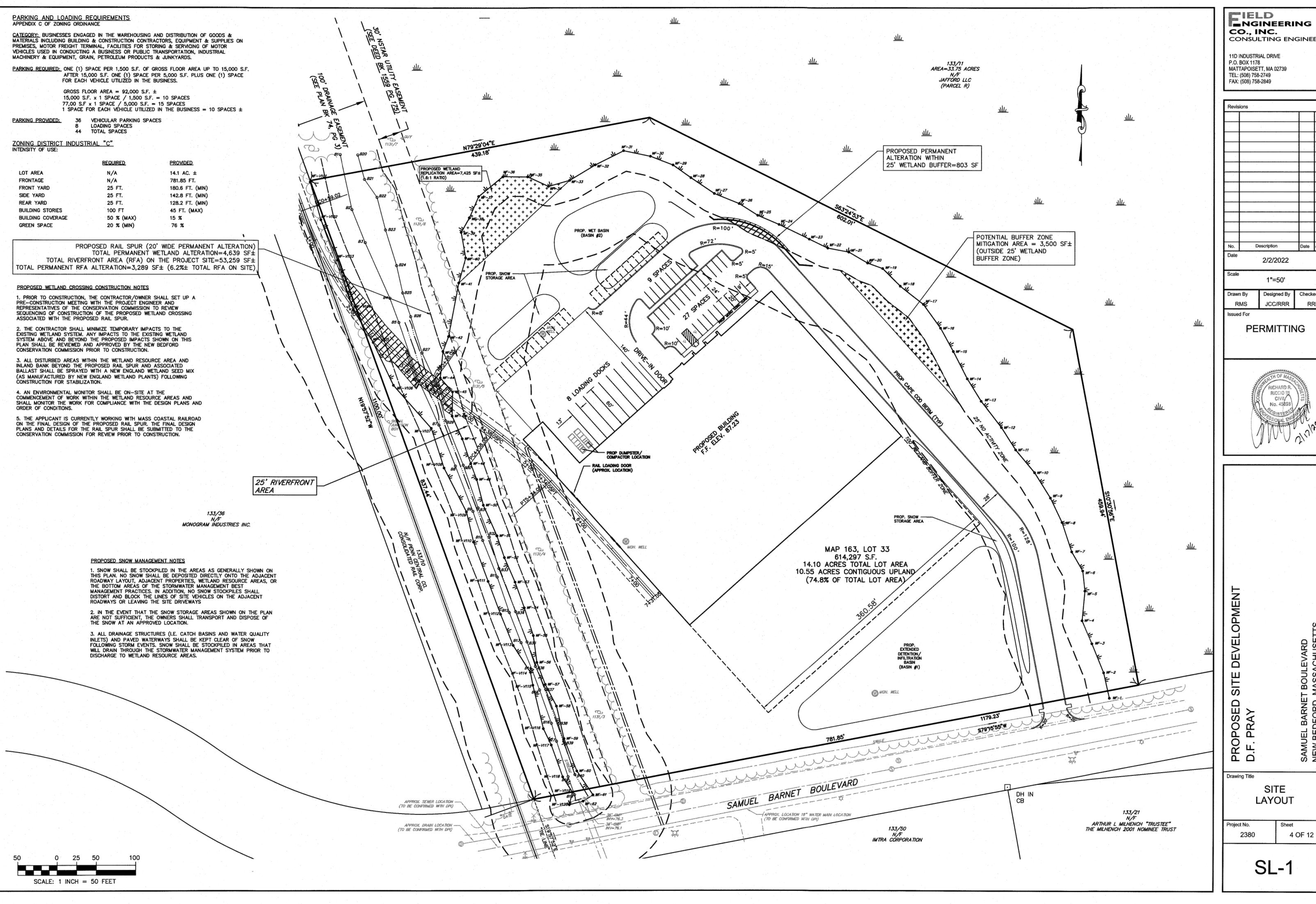
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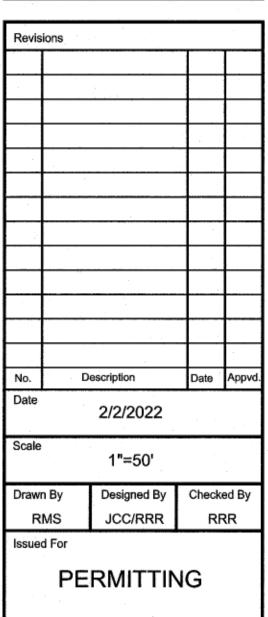
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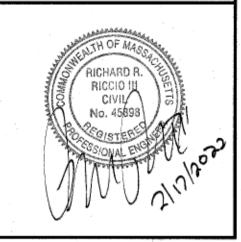


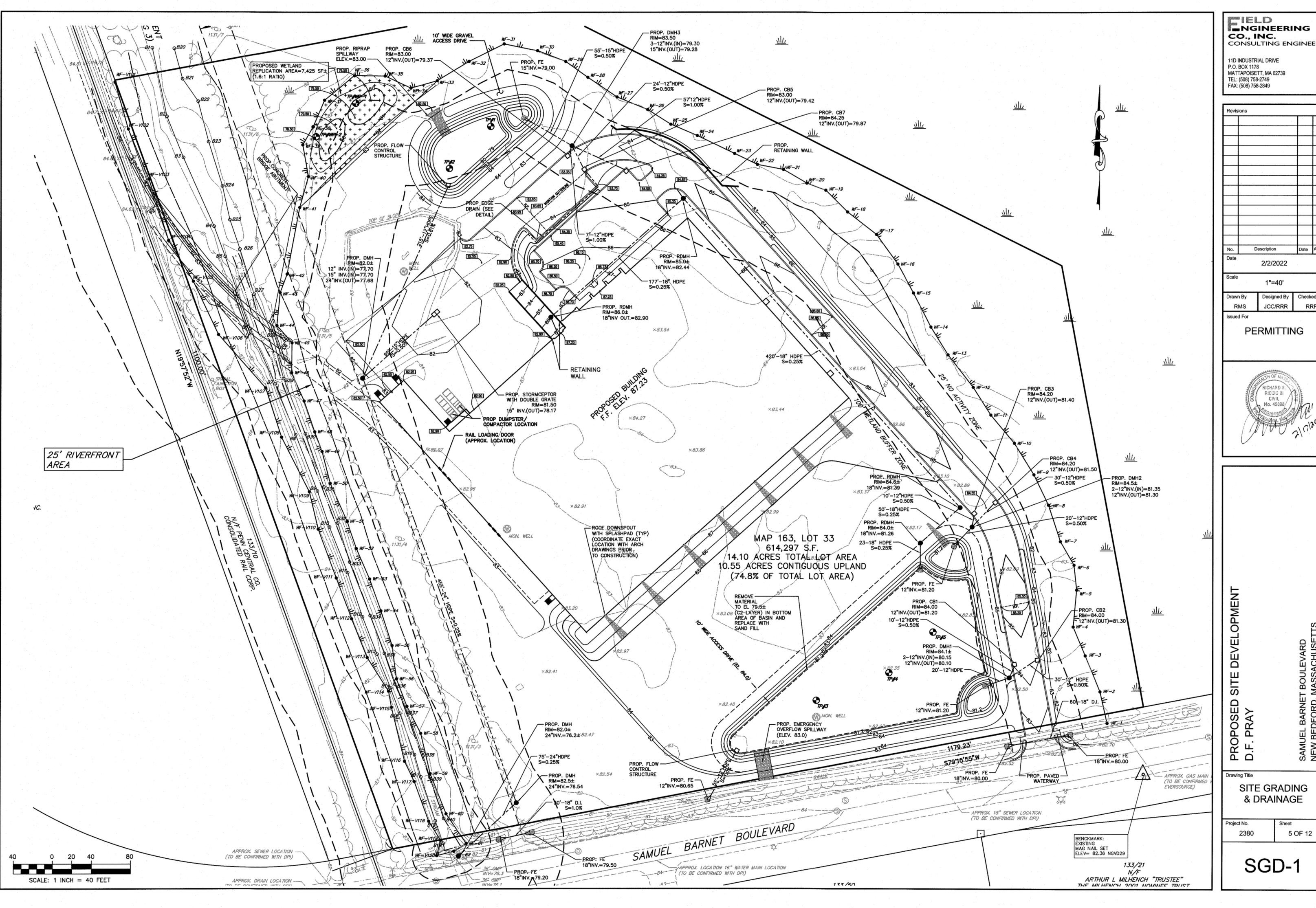
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- NGINEERING CONSULTING ENGINEERS

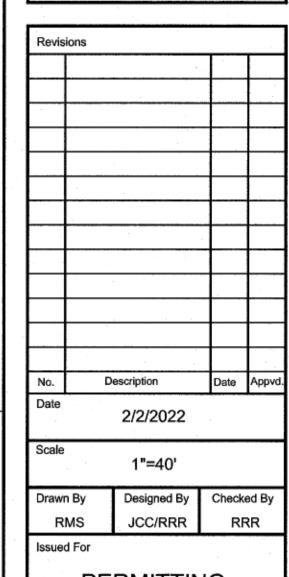






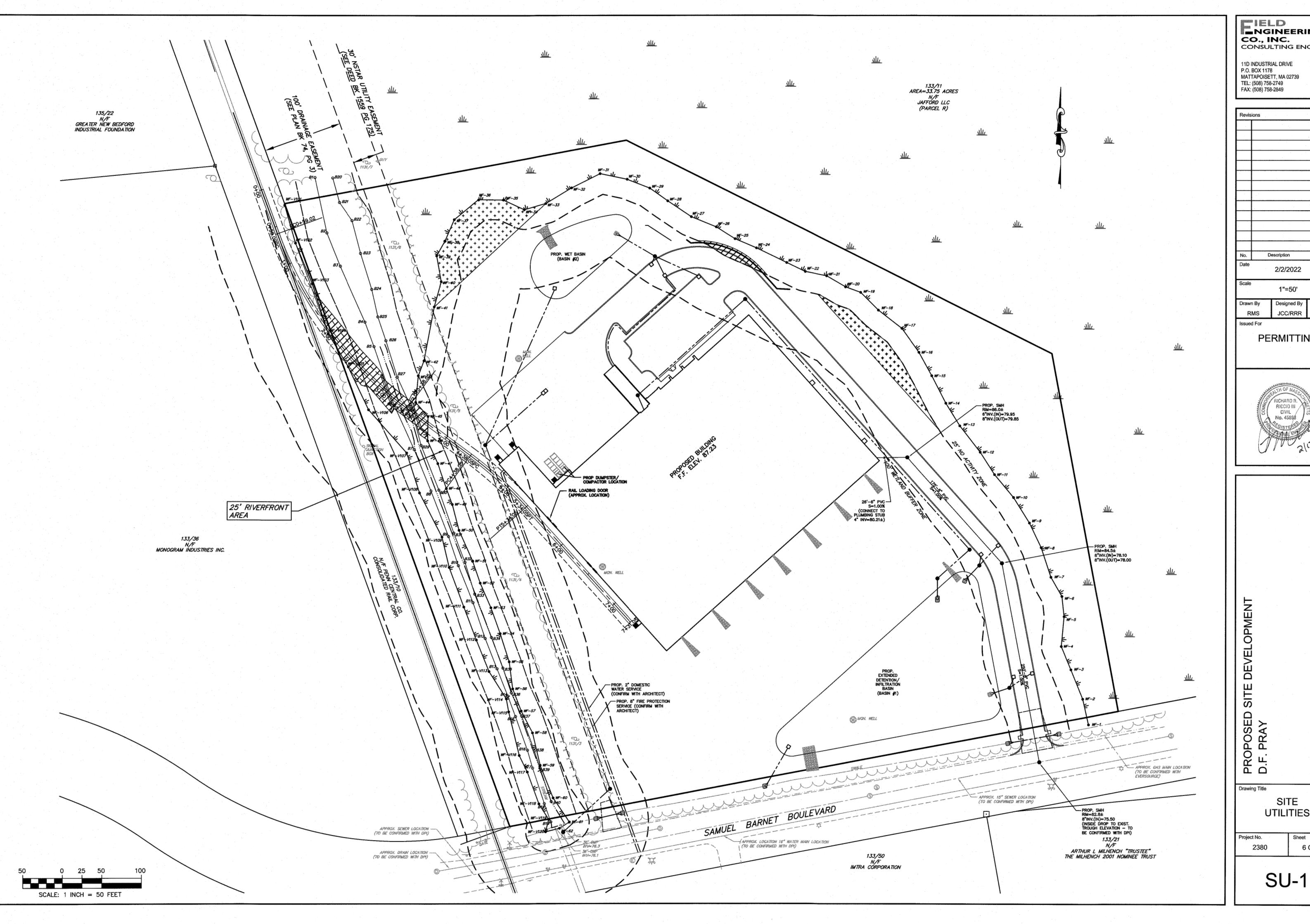
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MATTAPOISETT, MA 02739









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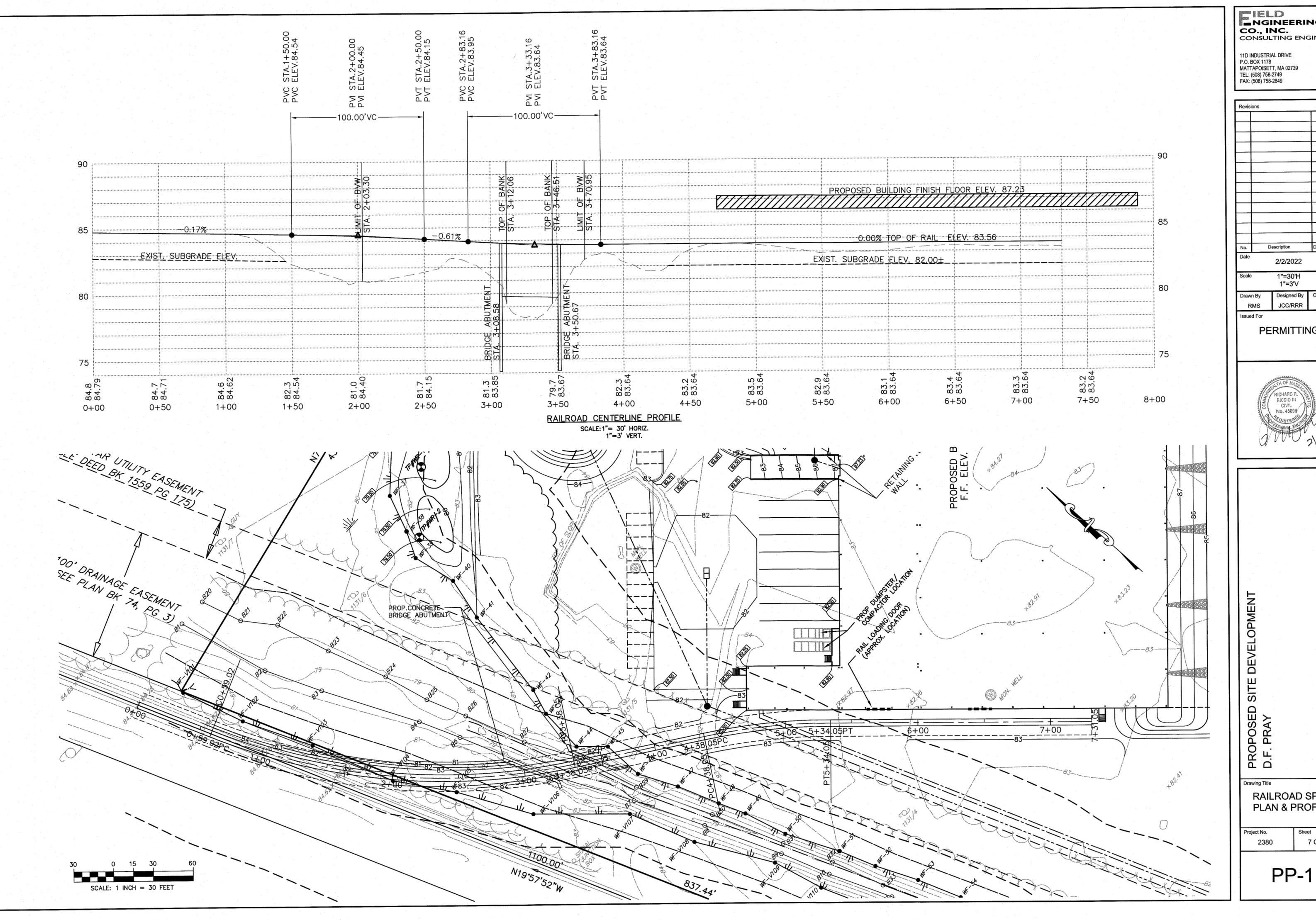
CO., INC.

CONSULTING ENGINEERS

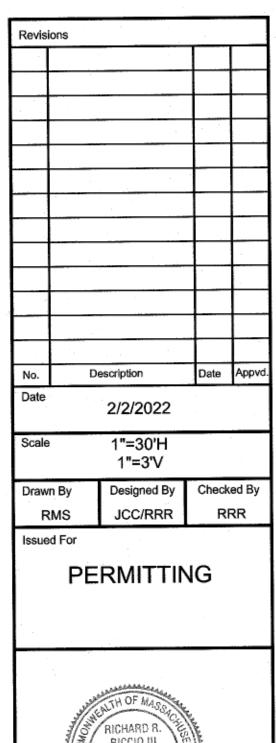


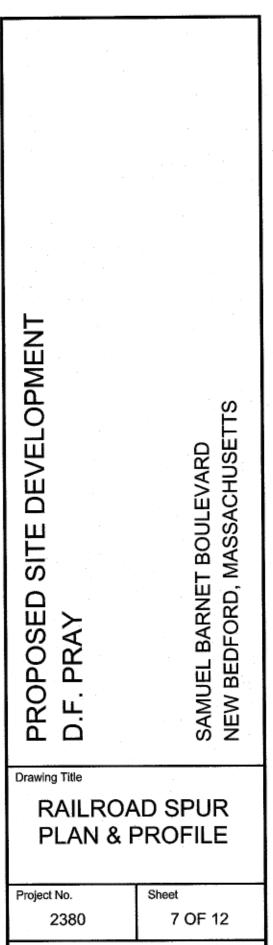


	PROPOSED SITE DEVELOPMENT D.F. PRAY	SAMUEL BARNET BOULEVARD NEW BEDFORD, MASSACHUSETTS
	· ·	ITE ITIES
	Project No. 2380	Sheet 6 OF 12



FIELD NGINEERING CO., INC.
CONSULTING ENGINEERS





#### **PLANTING NOTES**

- 1. PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED; INCLUDING ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS, AND
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT, LAYOUT TO BE APPROVED BY OWNERS REPRESENTATIVE AND THE CONSERVATION COMMISSION PRIOR TO
- 3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES.
- 4. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL TO THE
- 5. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION, PROVISIONS SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE FOR TREES AND SHRUBS. REPLACEMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED
- 6. INSOFAR AS IT IS PRACTICABLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD WILL BE
- 7. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH ANSI 260 (REV. 1980) "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- 8. ALL PLANTS SHALL BE PLANTED IN TRANSPORTED TOP SOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACK FILLING PROGRESSES. PLANTING MIX TO BE AS SHOWN ON PLANTING DETAILS. RAISE AND REPLANT ANY PLANT WHICH SETTLES MORE THAN 2" AFTER PLANTING AND
- FERTILIZER FOR WOODY PLANTS SHALL BE SLOW RELEASE, PELLITIZED AND SUITABLE FOR RELEASE UNDER SATURATED SOIL CONDITIONS. FERTILIZER

SHALL BE OSMOCOTE 18-5-11, 12-14 MONTH RELEASE OR EQUAL.

- 10. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED
- FROM THE BOTTOM OF THE BALL ONLY. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED PRACTICE. PLANTS SHALL NOT BE
- PER MANUFACTURER'S INSTRUCTIONS. 12. NO PLANT. EXCEPT GROUND COVERS, SHALL BE PLANTED LESS THAN TWO FEET FROM EXISTING STRUCTURES AND SIDEWALKS.

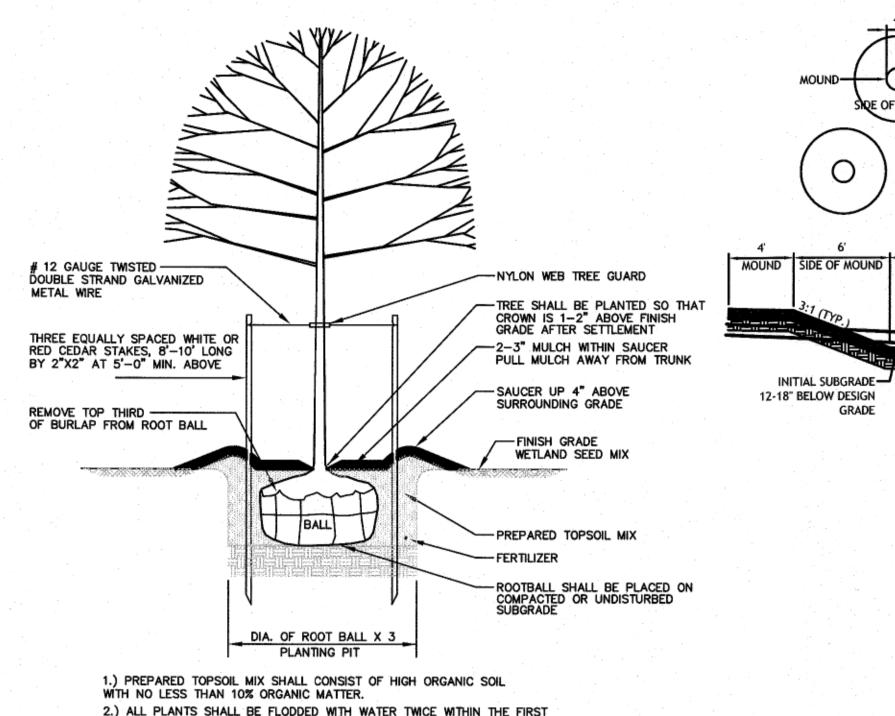
INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION. ALL

PLANT MATERIAL SHALL BE SPRAYED WITH "WILT-PRUF" OR EQUAL AS

- 13. SET ALL PLANTS PLUMB AND STRAIGHT. LOCATE PLANT IN THE CENTER OF
- 14. ALL DEADWOOD, SUCKERS, AND BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED. CONTAINER GROWN PLANTS SHALL NOT BE THINNED.
- 15. TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING. TREES SHALL BE STAKED AS SHOWN ON THE DETAIL. THE LANDSCAPE CONTRACTOR SHALL REMOVE STAKING AND GUYING AT THE END OF THE ONE YEAR MAINTENANCE AND GUARANTEE PERIOD.
- 16. NEW PLANTING AREAS SHALL BE ADEQUATELY IRRIGATED OR WATERED TO ESTABLISH THE PROPOSED PLANTS AND SEED AREAS.
- 17. PRIOR TO THE ACCEPTANCE BY THE OWNER, THE PROPOSED LANDSCAPE AS SHOWN ON THE APPROVED PLAN MUST BE INSTALLED, INSPECTED AND APPROVED BY THE CONSERVATION COMMISSION AND THE OWNERS REPRESENTATIVE. ANY PLANTING INSTALLED IN CONFLICT WITH THESE REQUIREMENTS MUST RECEIVE THE WRITTEN APPROVAL OF THE ENGINEER AND THE CONSERVATION COMMISSION PRIOR TO PLANTING. FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL REQUIRE THE REMOVAL OF THE PLANTING IN QUESTION. THIS REQUIREMENT DOES NOT APPLY TO SEEDING OR SODDING OR PLANTINGS SPECIFICALLY FOR SOIL STABILIZATION.
- 18. REPLICATION AREAS SHALL BE TREATED WITH TWELVE (12") INCHES OF HIGH ORGANIC TOPSOIL WITH EXISTING TOPSOIL PLANTED WITH NEW ENGLAND WETMIX SEED MIX, APPLIED AT A RATE OF 1.0 LBS. PER 2,500 EQUAL. THE WETLAND SEEDS IN THE SPECIFIED MIX CAN BE SOWN BY HAND, WITH A HAND-HELD SPREADER, OR HYDRO-SEEDED. LIGHTLY RAKE TO INSURE GOOD SEED-TO-SOIL CONTACT. SEEDING CAN TAKE PLACE ON FROZEN SOIL, AS THE FREEZING AND THAWING WEATHER OF LATE FALL AND LATE WINTER WILL WORK THE SEED INTO THE SOIL. IF SPRING CONDITIONS ARE DRIER THAN USUAL WATERING MAY BE REQUIRED. IF SOWING DURING THE SUMMER MONTHS SUPPLEMENTAL WATERING WILL LIKELY BE REQUIRED UNTIL GERMINATION. A LIGHT MULCH OF CLEAN, WEED FREE STRAW IS RECOMMENDED.
- 19. THE CONSERVATION COMMISSION AGENT SHALL INSPECT AND APPROVE THE SUBGRADE EXCAVATION OF THE CONSTRUCTED WETLAND AREA PRIOR TO BACKFILLING WITH THE ORGANIC TOPSOIL FILL.
- 20. THE CONSERVATION COMMISSION AGENT SHALL INSPECT AND APPROVE THE ORGANIC TOPSOIL FILL PRIOR TO PLACEMENT WITHIN THE CONSTRUCTED WETLAND.
- 21. ANY PORTION OF THE REPLICATION WORK NOT MEETING THE APPROVED STANDARDS OR REQUIREMENTS OF THE CONSERVATION COMMISSION SHALL BE PROMPTLY REMOVED FROM THE WORK AT NO COST/EXPENSE TO THE
- 22. HIGH ORGANIC SOIL SHALL BE FREE OF REFUSE, BRUSH. THE MATERIAL TO BE FURNISHED SHALL CONSIST OF A SOIL FREE OF REFUSE, BRUSH, STUMPS, ROOTS, ROCK, COBBLES, STONES, NOXIOUS WEEDS, LITTER, AND OTHER MATERIALS WHICH ARE LARGER THAN 4-INCHES IN THE GREATEST DIMENSION AND WHICH WILL PREVENT THE FORMATION OF SUITABLE SEED BED. ORGANIC MATTER SHALL CONSTITUTE NOT LESS THAN 10-PERCENT NOR MORE THAN 25-PERCENT OF THE HIGH ORGANIC SOIL AS DETERMINED BY LOSS-ON-IGNITION OF OVEN DRIED SAMPLES THAT HAVE BEEN DRAWN BY THE OWNER REPRESENTATIVE, UNLESS OTHERWISE SPECIFIED OR

#### WETLAND REPLICATION AREA GENERAL NOTES

- 1. APPROXIMATELY 7,425 SQUARE FEET OF WETLAND REPLICATION IS PROPOSED ON THESE DRAWINGS TO MITIGATE APPROXIMATELY 4,640 SQUARE FEET OF WETLAND ALTERATION ASSOCIATED WITH THE CONSTRUCTION OF THE PROPOSED RAIL SPUR.
- 2. THE BYW REPLICATION AREA HAS BEEN DESIGNED IN ACCORDANCE WITH 310 CMR 10.55(4)(B) AND THE MASSDEP "MASSACHUSETTS INLAND WETLAND REPLICATION GUIDELINES.
- 3. A QUALIFIED WETLAND SCIENTIST WILL SUPERVISE ALL WORK AND WILL INSPECT AND APPROVE ALL IMPORTED PLANTED MATERIALS. WITHIN 30 DAYS FOLLOWING CONSTRUCTION OF THE WETLAND REPLICATION AREA, THE WETLAND SCIENTIST WILL CERTIFY THAT THE AREA HAS BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE FINAL ORDER OF CONDITIONS. THIS CERTIFICATION WILL BE ACCOMPANIED BY AN "AS-BUILT" PLAN PREPARED BY A REGISTERED PROFESSIONAL LAND SURVEYOR SHOWING THE LIMITS AND FINAL GRADING OF THE REPLICATION AREA.
- 4. THE WETLAND REPLICATION AREA SHALL BE MONITORED ON AN ONGOING BASIS FOR A PERIOD OF TWO COMPLETE GROWING SEASONS BY A QUALIFIED WETLAND SCIENTIST. WRITTEN REPORTS SHALL BE SUBMITTED TWICE PER YEAR TO THE NEW BEDFORD CONSERVATION COMMISSION IN JUNE AND OCTOBER.
- 5. AS REQUIRED BY THE WETLANDS PROTECTION ACT REGULATIONS, AT LEAST 75% OF THE SURFACE OF THE REPLICATION AREA SHOULD BE ESTABLISHED WITH NATIVE PLANT SPECIES WITHIN TWO GROWING SEASONS.



PIT SIDE OF MOUND MOUND

WETLAND SOIL (12")

PIT & MOUND

MICROTOPOGRAPHY

**DETAIL** 

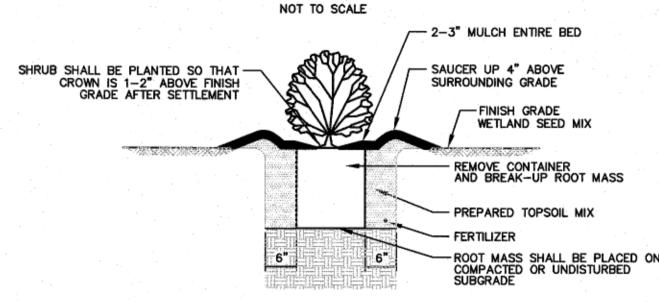
NOT TO SCALE

INITIAL SUBGRADE

12-18" BELOW DESIGN

INISHED GRADE

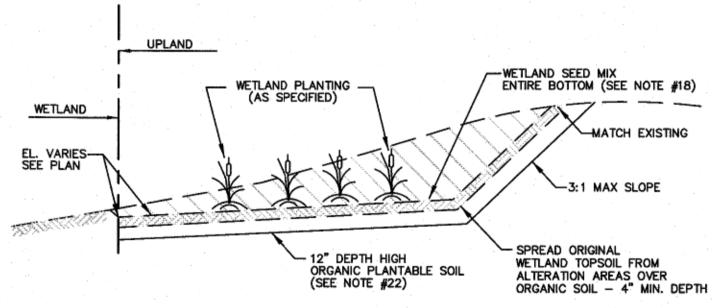
2.) ALL PLANTS SHALL BE FLODDED WITH WATER TWICE WITHIN THE FIRST TWENTY-FOUR HOUR PERIOD AFTER PLANTING. TREE PLANTING DETAIL



1.) PREPARED TOPSOIL MIX SHALL CONSIST OF HIGH ORGANIC SOIL WITH NO LESS THAN 10% ORGANIC MATTER. 2.) ALL PLANTS SHALL BE FLODDED WITH WATER TWICE WITHIN THE FIRST

### SHRUB PLANTING DETAIL

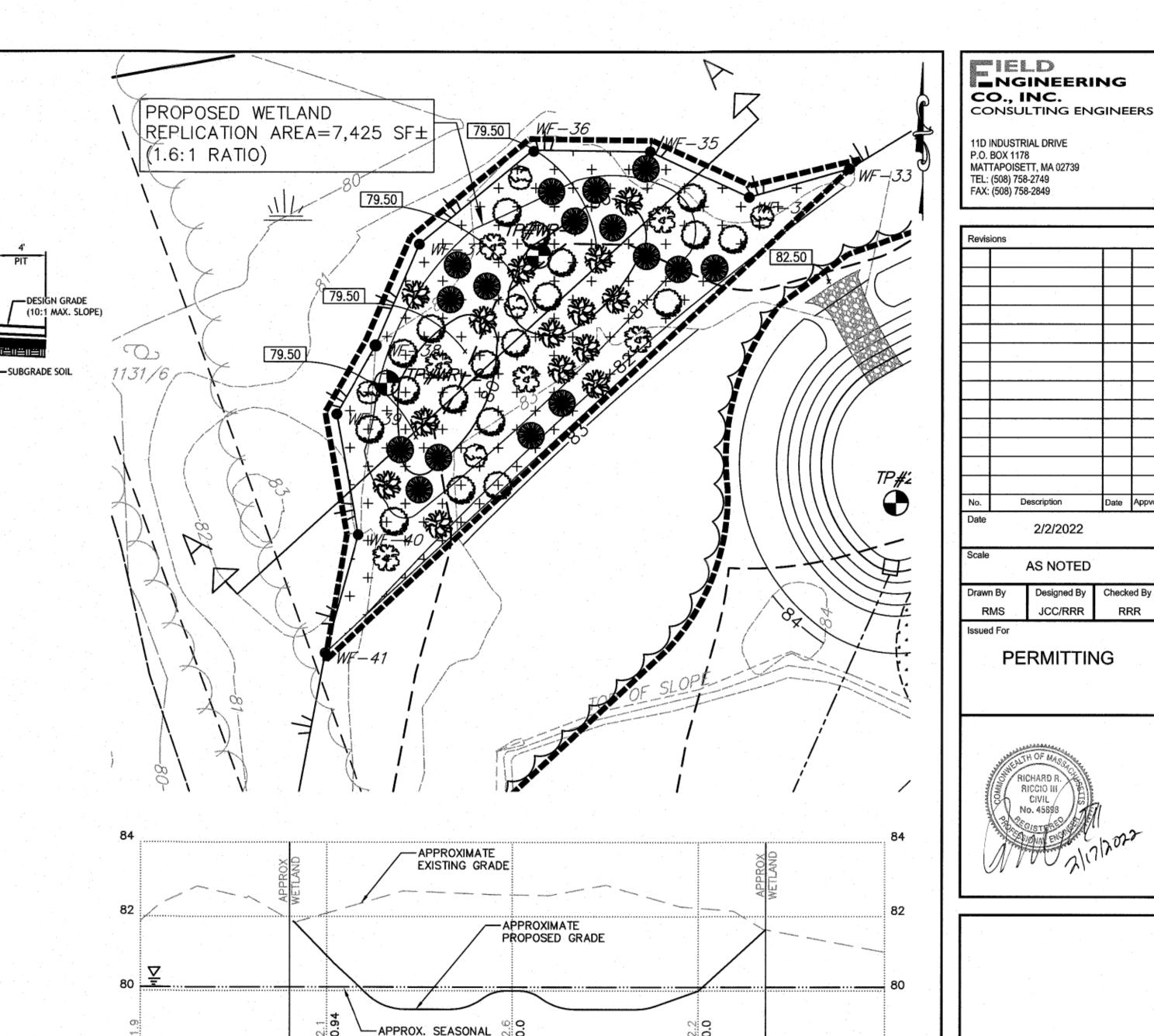
NOT TO SCALE



#### TYPICAL X-SECTION OF WETLAND REPLICATION AREA NOT TO SCALE

#### WETLAND REPLICATION AREA CONSTRUCTION NOTES

- 1. THE REPLICATION AREA SHALL BE GRUBBED AND INITIALLY EXCAVATED TO A DEPTH APPROXIMATELY 12-INCHES BELOW THE FINAL DESIGN GRADE ELEVATIONS DEPICTED ON THESE DRAWINGS TO ALLOW FOR PLACEMENT OF WETLAND TOPSOIL AND CONSTRUCTION OF MICRO-TOPOGRAPHY. FOLLOWING INITIAL EXCAVATION, THE WETLAND SCIENTIST SHALL INSPECTION THE AREA TO CONFIRM THAT PROPER HYDROLOGY WILL BE ESTABLISHED WITH THE ADJACENT WETLANDS, FOLLOWING APPROVAL FROM THE WETLAND SCIENTIST, MICRO-TOPOGRAPHY ("PITS AND MOUNDS") SHALL THEN BE ESTABLISHED WITHIN THE SUB-GRADE USING CONTINUOUS ROUGH GRADING. THE MICRO-TOPOGRAPHY WORK SHALL OCCUR UNDER THE DIRECT SUPERVISION OF THE WETLAND SCIENTIST. ROUGHLY 50 PERCENT OF THE SURFACE AREA OF THE REPLICATION SITE SHALL BE MOUNDS AND 50 PERCENT SHALL BE PITS. ROCKS AND BOULDERS UNCOVERED DURING THE EXCAVATION MAY BE LEFT IN PLACE UPON APPROVAL FROM THE WETLAND SCIENTIST PROVIDED THAT THEY DO NOT SIGNIFICANTLY DECREASE THE PLANTABLE AREA OF THE MITIGATION AREA. THESE ROCKS AND BOULDERS, SHALL BE PLACED IN SUCH A WAY AS TO PROVIDE CREVICES AND CAVITIES SUITABLE FOR USE BY WILDLIFE.
- 2. AFTER THE PROPOSED SUBGRADES AND MICROTOPOGRAPHY HAS BEEN VERIFIED BY PROJECT SURVEYORS AND THE WETLAND SCIENTIST, APPROXIMATELY 12 INCHES OF AN EVENLY MIXED ORGANIC/MINERAL SOIL SHALL BE PLACED WITHIN THE REPLICATION AREA BRINGING GRADES TO THE FINAL DESIRED ELEVATIONS. IF FEASIBLE, THE APPLICANT WILL TRANSLOCATE SUITABLE HYDRIC SOILS FROM THE BVW IMPACT SITE TO THE REPLICATION SITE. SOIL AMENDMENTS FROM OFF-SITE SOURCES WILL BE NEEDED. ACCORDINGLY, APPROXIMATELY 12 INCHES OF AN EVENLY MIXED ORGANIC/MINERAL SOIL ("WETLAND SOIL") SHALL BE IMPORTED TO THE SITE FROM AN OFF-SITE SOURCE AND PLACED WITHIN THE REPLICATION AREA BRINGING GRADES TO THE FINAL DESIRED ELEVATIONS. SOIL CONSISTENCY SHALL BE LOOSE TO FRIABLE AND TEXTURE SHOULD BE LOAM TO SANDY LOAM. THE ORGANIC MATERIAL USED FOR MIXING SHALL BE WELL OR PARTIALLY DECOMPOSED. CLEAN LEAF COMPOST IS THE PREFERRED SOIL AMENDMENT TO ACHIEVE THESE STANDARDS THOUGH OTHER MATERIALS MAY BE USED IF APPROVED BY THE WETLAND SCIENTIST. A MINIMUM ORGANIC CARBON CONTENT OF 12% (21 PERCENT ORGANIC MATTER) ON A DRY WEIGHT BASIS FOR SOILS SHALL BE USED IN THE WETLAND REPLICATION AREA.
- 3. WETLAND TOP SOIL SHALL BE DEPOSITED IN THE REPLICATION AREA IN A MANNER THAT MINIMIZES TRAVEL AND SUBSEQUENT COMPACTION OF THE PIT AND MOUND SUBGRADE. SHOULD SOILS BE COMPACTED, THEY SHALL BE LOOSENED BY A METHOD
- 4. FALLEN LOGS, BRANCHES, AND OTHER NATURAL DEBRIS EXISTING WITHIN THE PROPOSED BVW IMPACT AREA, OR OTHER UPLAND AREAS PROPOSED TO BE DISTURBED, SHALL BE RELOCATED TO THE REPLICATION AREA TO PROVIDE BENEFICIAL HABITAT FEATURES FOR WILDLIFE. THIS MATERIAL SHALL BE DISTRIBUTED TO COVER ROUGHLY 10 PERCENT OF THE REPLICATION AREA'S SUBSTRATE SURFACE. THIS MATERIAL SHALL BE OF VARYING STAGES OF DECAY AND SHALL BE RANDOMLY PLACED TO PROVIDE HABITAT FEATURES, AS DIRECTED BY THE WETLAND SCIENTIST. THESE MATERIALS SHALL NOT INCLUDE SPECIES IDENTIFIED ON THE U.S. ARMY CORPS OF ENGINEERS INVASIVE SPECIES LIST. FRESHLY CUT LOGS SHALL NOT BE THE PRIMARY SOURCE FOR THIS FEATURE, BUT MAY BE USED IF APPROVED BY THE SUPERVISING WETLAND SCIENTIST. FALLEN LOGS SHALL BE VARYING SIZES AND IN VARYING DEGREES OF DECOMPOSITION.



HIGH GROUNDWATER

1+00

1"=2' VERT.

SECTION A-A

SCALE: 1"=20' HORIZ.

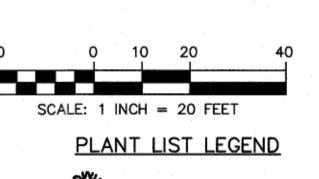
 $EL = 80.1 \pm$ 

0+50

#### PROPOSED PLANT LIST - WETLAND REPLICATION AREA

0+00

QU.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS
			New England Wetmix — 1.0 I	b/2,500 s.f.		
	-	Carex Iurida	Lurid Sedge			SEED MIX
_	-	Carex scoparia	Blunt Broom Sedge	-	<del>-</del>	SEED MIX
_	-	Verbena hastata	Blue Vervain	_		SEED MIX
1-	-	Carex lupulina	Hop Sedge	_	-,	SEED MIX
<u> </u>		Scirpus atrovirens	Green Bulrush		_	SEED MIX
_	_	Panicum rigidulum	Redtop Panic Grass	_	-	SEED MIX
_	_	Deschampa cespitosa	Tufted Hairgrass	-	- : - : - : - : - : - : - : - : - : - :	SEED MIX
_	-	Bidens aristosa	Tickseed Sunflower/Bur Marigold		/	SEED MIX
_	-	Eleocharis palustris	Creeping Spike Rush	_		SEED MIX
_	_	Juncus effusus	Soft Rush		-	SEED MIX
_	1 <del>-</del>	Carex crinita	Fringed Sedge	_	: -	SEED MIX
	-,	Mimulus ringens	Square Stemmed Monkey Flower	-		SEED MIX
<del>-</del> .	-	Aster puniceus	Swamp Aster	_	-	SEED MIX
, a a <u> </u>	_	Eupatorium perfoliatum	Boneset		_	SEED MIX
	, <del>,</del> -	Glyceria canadensis	Rattlesnake Grass	_		SEED MIX
·		Asclepias incarnata	Swamp Milkweed	<del>-</del>	·	SEED MIX
_	- 7	Helenium autumnale	Common Sneezeweed			SEED MIX
	<u> </u>	Penthorum sedoides	Ditch Stonecrop	_		SEED MIX
5	QB	Quercus bicolor	Swamp White Oak	2-2.5" Cal.	AS SHOWN	B&B
6	AR	Acer rubrum	Red Maple	2-2.5" Cal.	AS SHOWN	B&B
14	VC	Vaccinium corymbosum	Highbush Blueberry	18"-24"	10-12' O.C.	CONTAINER
19	CA	Clethra anifolia	Sweet Pepperbush	18"-24"	10-12' O.C.	CONTAINER
16	IV	llex verticillata	Common Winterberry	18"-24"	10-12' O.C.	CONTAINER



2+00

1 + 50

HIGHBUSH BLUEBERRY

SWEET PEPPERBUSH COMMON WINTERBERRY

SWAMP WHITE OAK

NEW ENGLAND WETMIX

Ω Drawing Title WETLAND REPLICATION Project No. Sheet 8 OF 12

REP-1

CIELD

11D INDUSTRIAL DRIVE

Description

RMS

Issued For

2/2/2022

AS NOTED

Designed By

JCC/RRR

PERMITTING

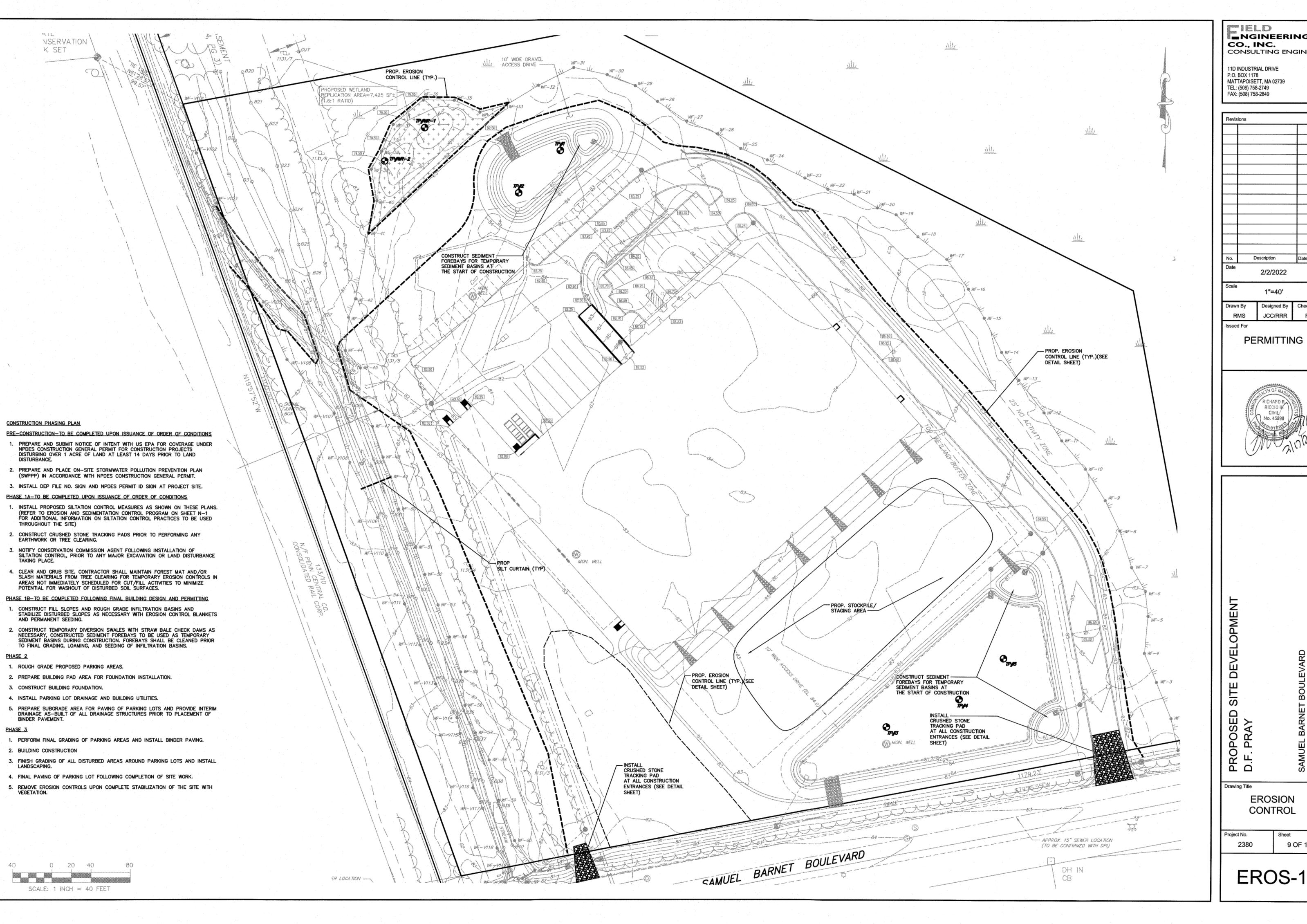
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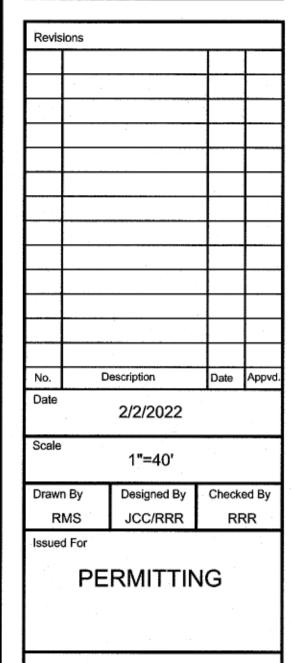
P.O. BOX 1178

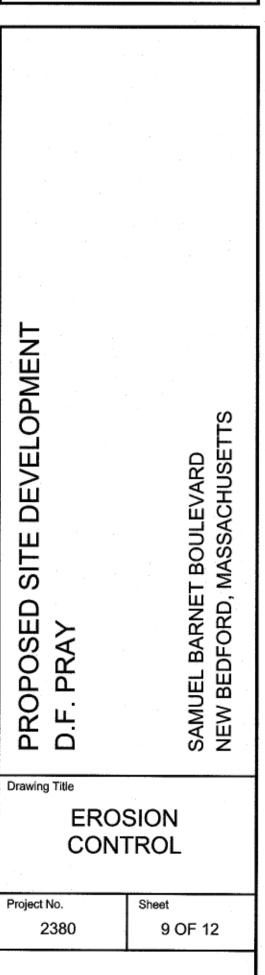
**M**OINEERING

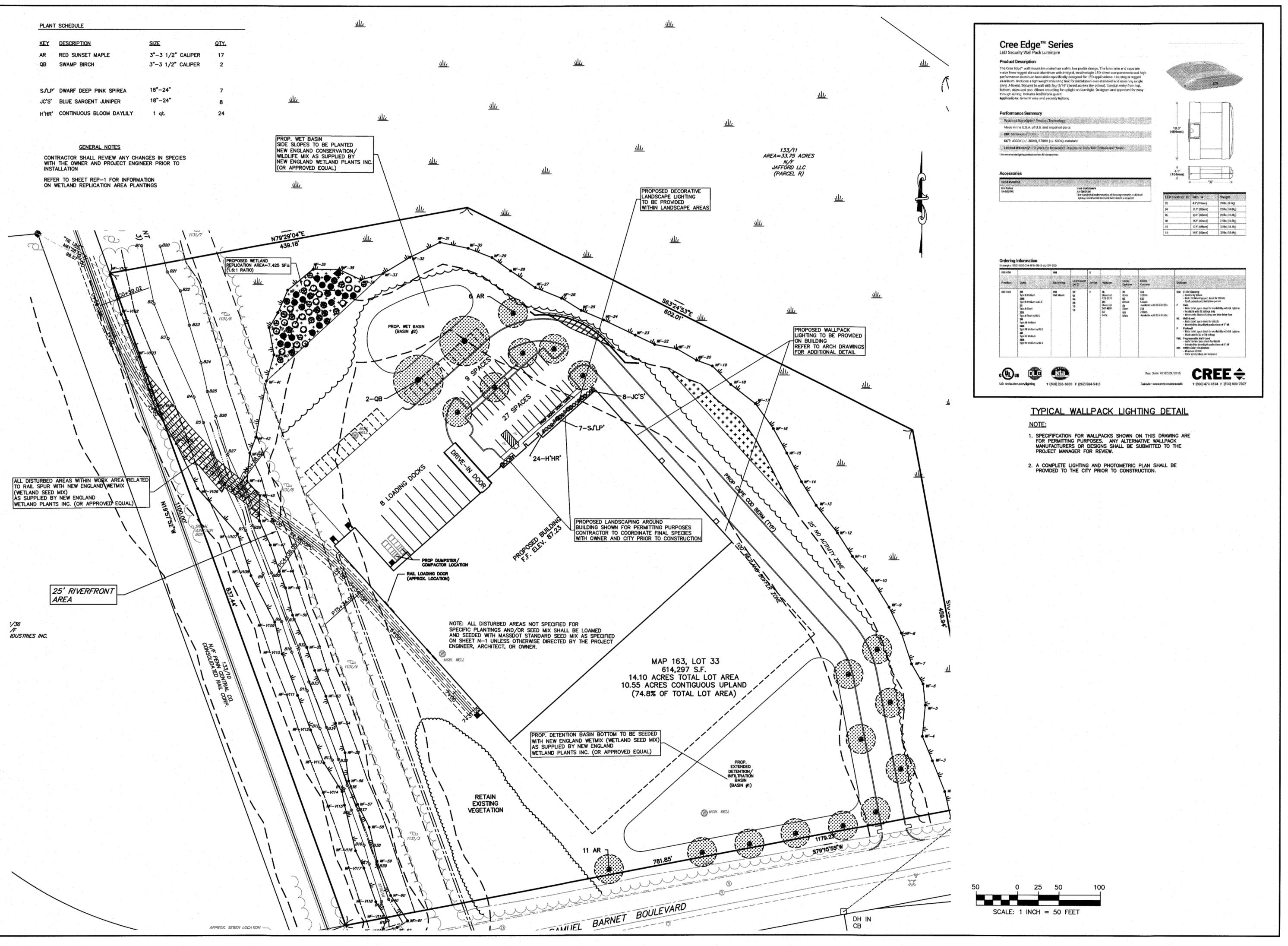


TIELD. NGINEERING CO., INC. CONSULTING ENGINEERS

11D INDUSTRIAL DRIVE P.O. BOX 1178 MATTAPOISETT, MA 02739 TEL: (508) 758-2749 FAX: (508) 758-2849

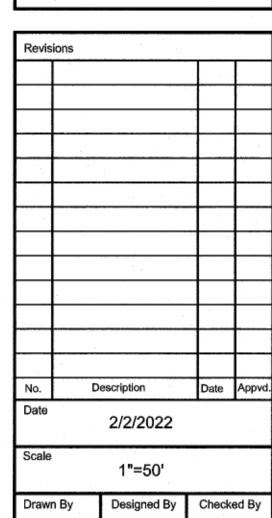






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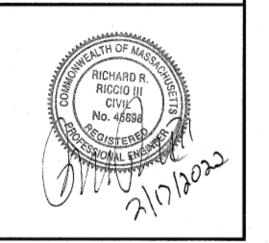


JCC/RRR

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Issued For



PROPOSED SITE DEVELOPMENT

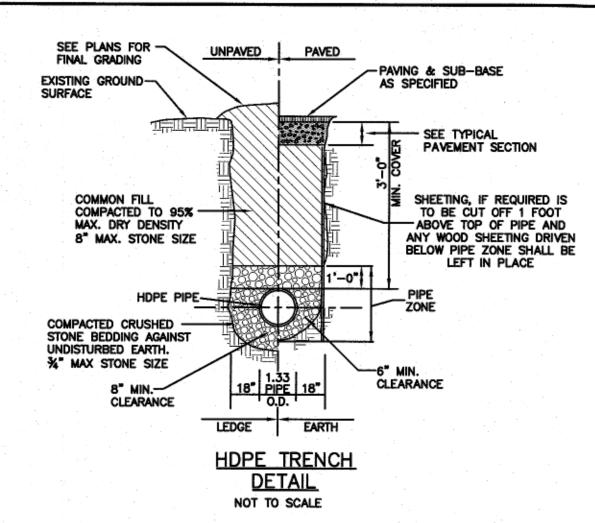
D.F. PRAY

D.F. P

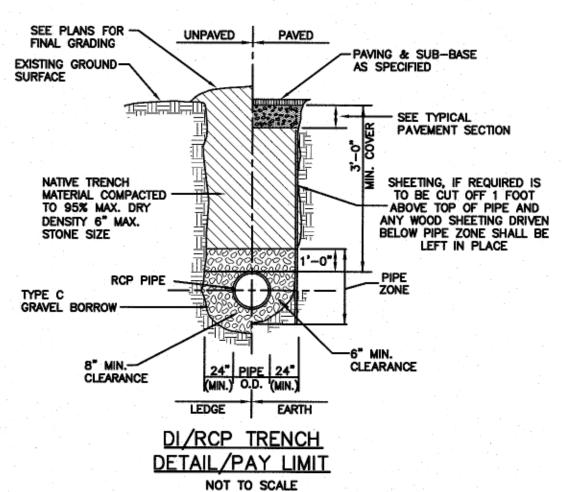
& LANDSCAPING

2380 Sheet 10 OF 12

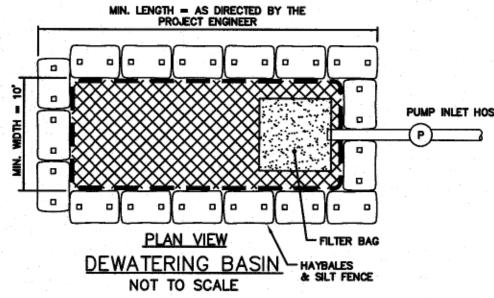
LAND-1



1. TYPE C GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION M1.03.0 2. CRUSHED STONE SHALL CONFORM TO MASSDOT SPECIFICATION M12.01.4



- 1. TYPE C GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION
- 2. TRENCH WIDTH SHALL BE AS REQUIRED TO PROVIDE ADEQUATE SHORING DURING CONSTRUCTION IN ACCORDANCE WITH ALL APPLICABLE TRENCHING AND SHORING REGULATIONS.



DEWATERING SPECIFICATIONS

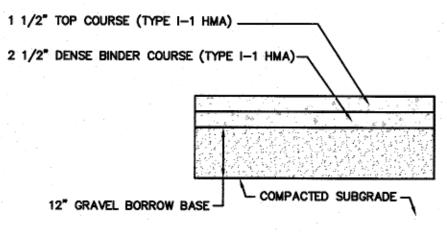
1. DEWATERING BASINS SHALL BE CONSTRUCTED BEFORE ANY DEWATERING OPERATION COMMENCE. DISCHARGE FROM THE DEWATERING BASINS SHALL BE DIRECTED TO THE NEAREST WETLAND DISCHARGE AREA DOWNSTREAM OF THE PROPOSED WORK AREA. 2. HAY BALES/SILT DEWATERING BASINS SHALL BE CONSTRUCTED BEFORE DEWATERING

3. ALL SEDIMENT SHALL BE REMOVED AND FINISHED GRADES RESTORED UPON COMPLETION OF DEWATERING OPERATIONS.

4. THE LOCATION OF ANY DEWATERING BASIN SHALL BE REVIEWED WITH THE PROJECT ENGINEER AND CONSERVATION COMMISSION AGENT PRIOR TO THEIR IMPLEMENTATION.

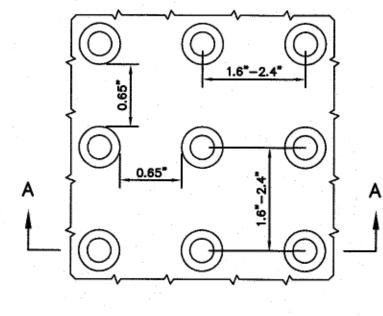
#### STREAM CROSSING DEWATERING NOTES:

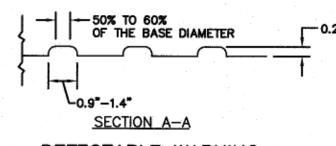
- IT IS ANTICIPATED THAT TEMPORARY DEWATERING OF THE EXCAVATIONS FOR THE PROPOSED BRIDGE ABUTMENTS WILL BE REQUIRED. ALL DEWATERING OPERATIONS SHALL BE REVIEWED AND APPROVED BY THE CONSERVATION COMMISSION PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL PLACE TEMPORARY DAMS UPSTREAM OF THE PROPOSED STREAM CROSSING FOR TEMPORARY BYPASS OF THE STREAM FLOW FROM THE WORK AREA. THE CONTRACTOR SHALL REVIEW TEMPORARY BYPASS MEASURES WITH THE PROJECT ENGINEER AND CONSERVATION COMMISSION PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL PLACE A SILT CURTAIN IN THE STREAM DOWNSTREAM FROM THE PROPOSED WORK AREA TO MINIMIZE THE POTENTIAL FOR MIGRATION OF SILT FROM THE WORK AREA DOWNSTREAM.



 GRAVEL BORROW BASE SHALL CONFORM TO MASSDOT STANDARD SPECIFICATIONS FOR GRAVEL BORROW SEC. M.1.03.0 TYPE B COMPACTED TO 95% MAX. DRY DENSITY IN 6" MAX. LIFTS. BITUMINOUS PAVEMENT SHALL CONFORM TO MASSDOT STANDARD SPECIFICATIONS FOR CLASS 1 TYPE I-1 BITUMINOUS CONCRETE PAVEMENT SEC. 460.2. SUBMIT JOB-MIX FORMULA TO THE OWNERS REPRESENTATIVE FOR APPROVAL.

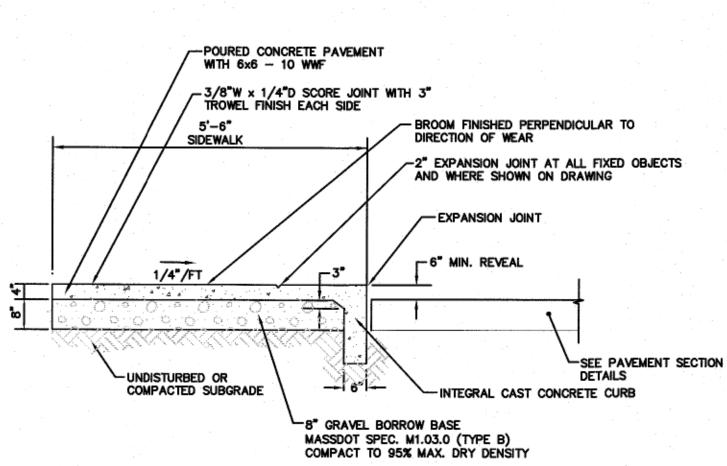
TYPICAL PAVEMENT SECTION NOT TO SCALE





DETECTABLE WARNING PANEL DETAIL NOT TO SCALE

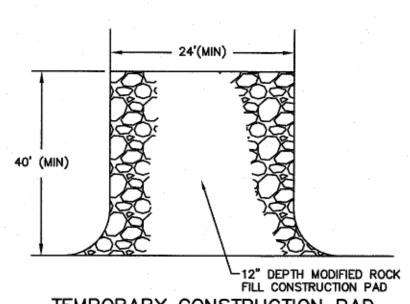
1. PANELS SHALL BE 2448IDPAVI AS MANUFACTURED BY ADA SOLUTIONS, INC. 2. PANELS SHALL BE YELLOW IN COLOR UNLESS OTHERWISE SPECIFIED.



#### CEMENT CONCRETE SIDEWALK SECTION

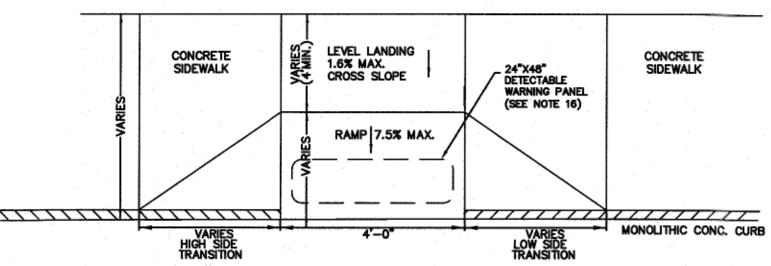
(NOT TO SCALE)

- SCORE JOINT SPACING: MIN. 4'-0" MAX. 6'-0", UNLESS OTHERWISE SHOWN ON PLAN.
- 2. EQUAL SPACING BETWEEN EXPANSION JOINTS, 32'-0" MAX., UNLESS OTHERWISE SHOWN ON PLAN.
- 3. CEMENT CONCRETE SHALL CONFORM TO MASSDOT SPEC M4.02.00 AND SHALL HAVE 4,000 P.S.I. COMPRESSIVE STRENGTH @ 28 DAYS
- WITH A CEMENT CONTENT OF 660#/C.Y.; MAX. AGGREGATE SIZE 3/8"



TEMPORARY CONSTRUCTION PAD NOT TO SCALE

NOTE: TEMPORARY CONSTRUCTION PADS TO BE PLACED AT ALL CONSTRUCTION ENTRANCES TO MINIMIZE TRACKING ONTO THE ROADWAY SURFACE.

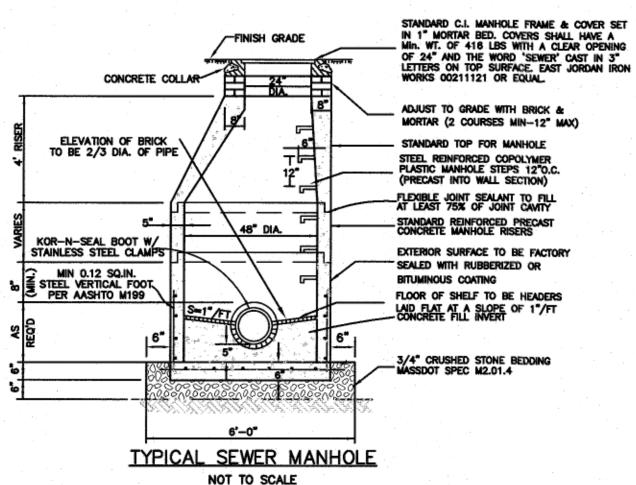


SIDEWALK LESS THAN 5'-0' HANDICAP RAMP DETAIL NOT TO SCALE

- THE SIDEWALK CROSS SLOPE MUST NOT EXCEED 1.6% FOR CEMENT CONCRETE. (REFER TO STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 36" SHALL BE MAINTAINED.

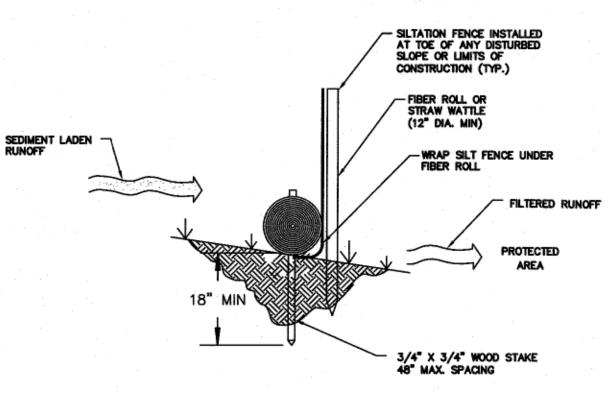
- 6. FIXED OBJECTS--UTILITY POLES, HYDRANTS ETC.--MUST NOT ENCROACH ON WHEELCHAIR RAMPS
- AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
- 8. CATCH BASINS WHICH ARE TO BE LOCATED IN THE VICINITY OF A WHEELCHAIR RAMP SHOULD LOCATED UP-GRADE WHENEVER POSSIBLE.
- 9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH PARKING AREA. TESTING SURFACE — WHEN TESTING A STRAIGHT EDGE PLACED PARALLEL TO THE LINE OF SLOPE, THERE SHALL BE NO DEVIATION FROM A TRUE SURFACE IN EXCESS OF THE 1.6% MAX. SLOPE.
- 11. WHEN IT IS TECHNOLOGICALLY UNFEASIBLE TO CONSTRUCT WHEELCHAIR RAMPS IN COMPLIANCE WITH THE ARCHITECTURAL ACCESS BOARD'S REGULATIONS, A VARIANCE WILL NEED TO BE SUBMITTED THE DEPARTMENT'S HANDICAPPED ACCESSIBILITY SECTION SHOULD BE CONTACTED UNDER THESE CIRCUMSTANCES.

- 14. THE ENTIRE WHEELCHAIR RAMP SHALL BE CONSTRUCTED OF CEMENT CONCRETE.
- 16. DETECTABLE WARNING PANELS SHALL BE CAST—IN—PLACE COMPOSITE PAVER UNIT MODEL NO. 2448IDPAV2 AS MANUFACTURED BY ADA SOLUTIONS, INC. OR APPROVED EQUAL. UNIT SHALL BE FEDERAL YELLOW IN COLOR UNLESS OTHERWISE SPECIFIED BY THE OWNER.



1. MANHOLE DESIGN TO CONFORM TO "PRECAST CONCRETE MANHOLE SECTIONS-ASTM C478 LATEST REVISION. FILL OUTSIDE FACE OF ALL MANHOLE JOINTS W/NON SHRINK MORTAR.
 USE FLAT TOP SLAB WHEN HEIGHT OF CONE SECTION IS LESS THAN 3'-0". 4. PROVIDE PIPE JOINTS NO MORE THAN 3'-0" FROM OUTSIDE FACE OF MANHOLE.

5. PLUG LIFT HOLES SOLID W/ MASTIC.
6. PROVIDE FLEXIBLE SLEEVE & STAINLESS STEEL STRAP AT ALL PIPE TO MANHOLE JOINTS.
7. COAT OUTSIDE SURFACE WITH BITUMINOUS WATERPROOFING.



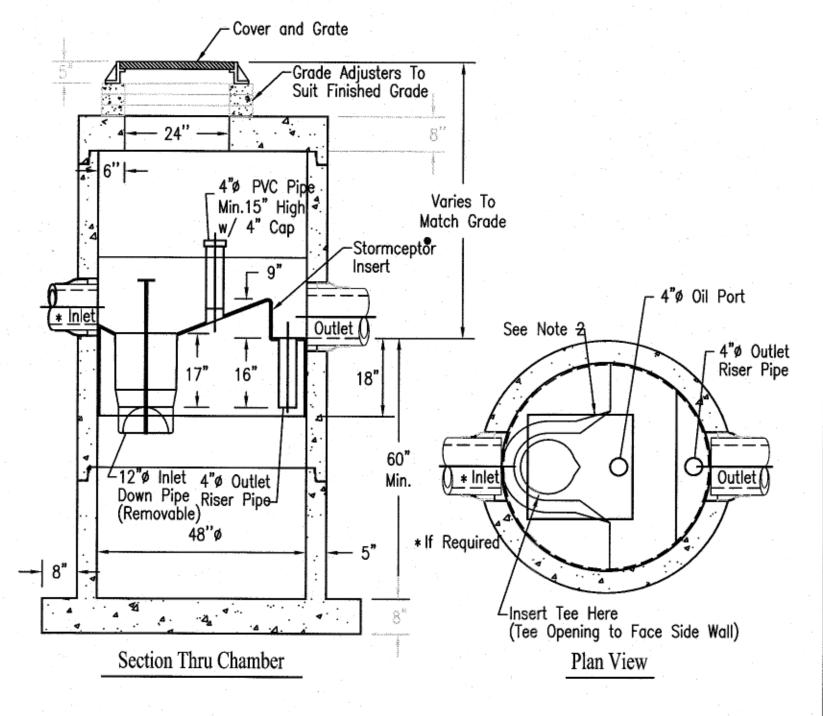
- FIBER ROLL AND SILT FENCE EROSION CONTROLS SHALL BE INSTALLED DOWN SLOPE OF ALL PROPOSED AND EXISTING DISTURBED AREAS, OR AS SHOWN ON THE PLANS.
- EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL VEGETATIVE COVER HAS BEEN FIRMLY ESTABLISHED.

NOT TO SCALE

3. EROSION CONTROL MEASURES SHALL FOLLOW THE PERFORMANCE STANDARDS OF THE USDA SOIL CONSERVATION SERVICE, AND ANY APPLICABLE STATE/LOCAL CONSERVATION AUTHORITY. SILTATION BARRIER DETAIL

Concrete Pipe Divisio

STC 450i Precast Concrete Stormceptor (450 U.S. Gallon Capacity)



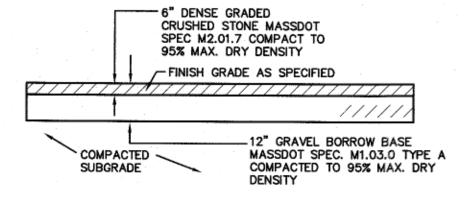
- 1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
- The Cover Should be Positioned Over The Inlet Drop Pipe and The Oil Port.
- 3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.

4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 027 REFER TO POST DETAIL FOR FENCE POST MOUNTING ADHERE TO TOP UNIT CONCRETE ADHESIVE REINFORCEMENT CONT. ALONG LENGTH OF WALL RETAINED BACKFILL 3/4"-1 1/2" WASHED STONE 12" THICK MIN. versa—lok standard -MODULAR CONCRETE APPROXIMATE EXCAVATION LINE (PER OSHA) COMPACTED 95% OF MAXIMUM STANDARD PROCTOR OUTLET • END OF WALL OR • 40' CENTERS MAX. SLOPE TO DRAIN (1/8"/FT.) -impervious fill COMPACTED SAND BORROW LEVELING PAD 6" THICK MIN.

> VERSA-LOK - REINFORCED RETAINING WALL MODULAR CONCRETE UNIT (OR EQUAL)

WALL SECTION FOR PERMITTING PURPOSE ONLY. SHOP DRAWINGS
PREPARED BY A REGISTERED PROFESSIONAL ENGINEER SHALL BE
SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW AND APPROVE
PRIOR TO CONSTRUCTION

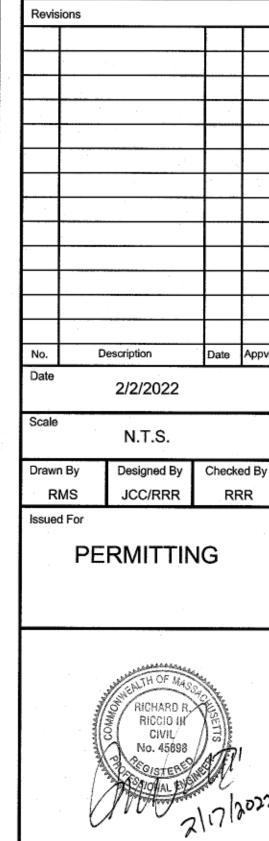


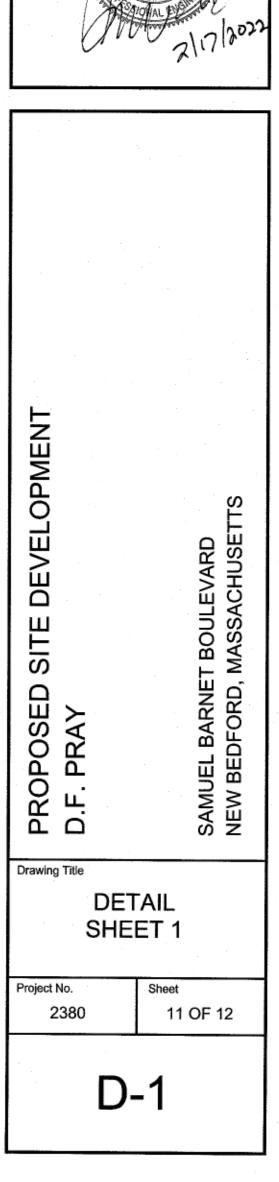
GRAVEL ACCESS ROAD SECTION NOT TO SCALE

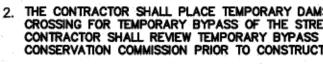
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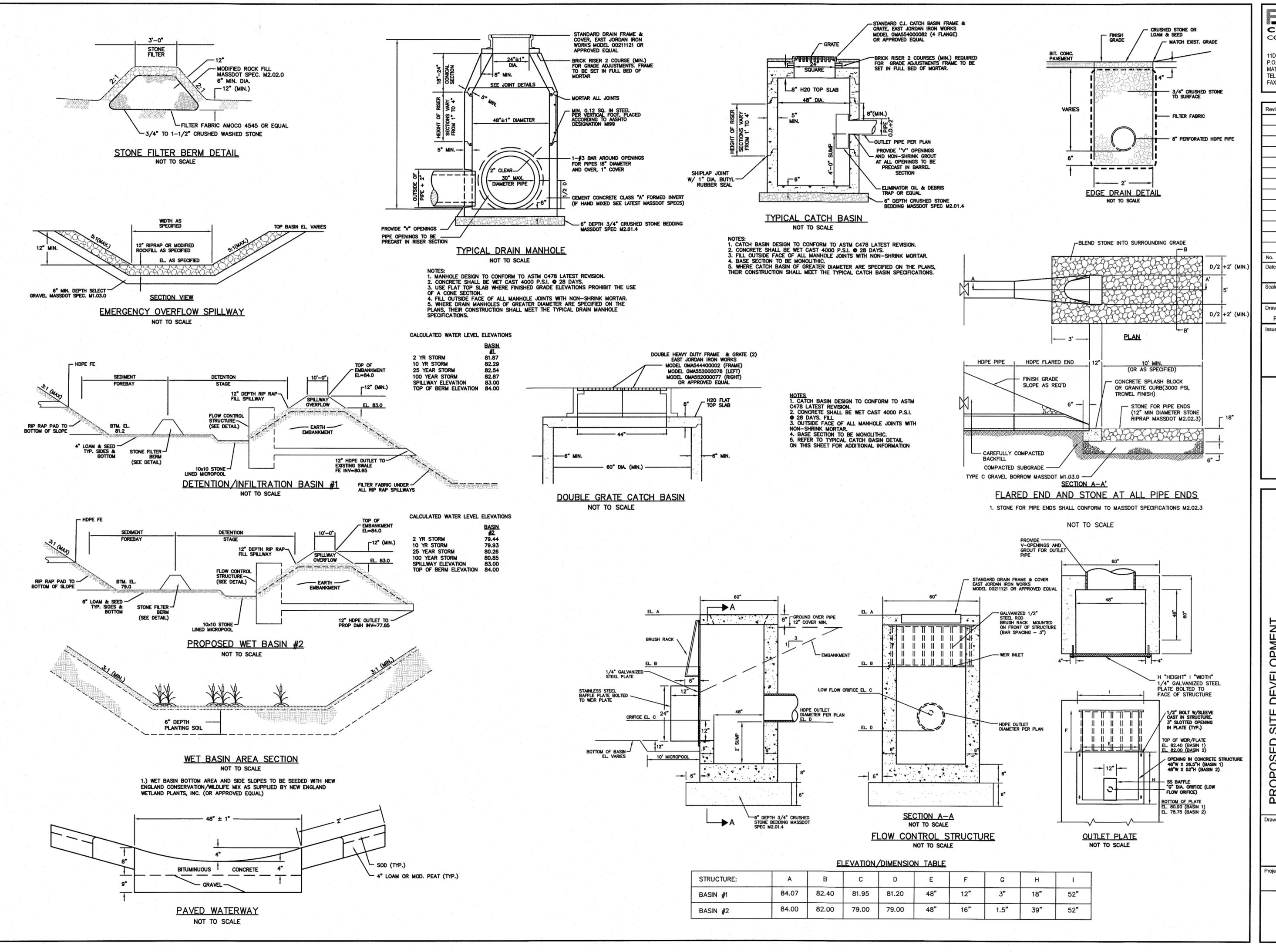
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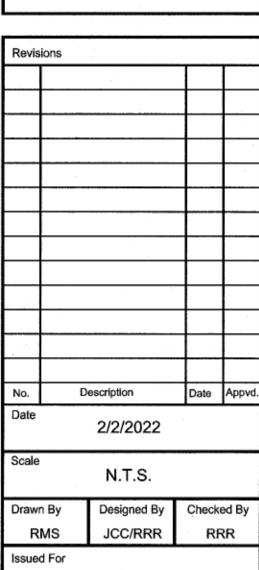




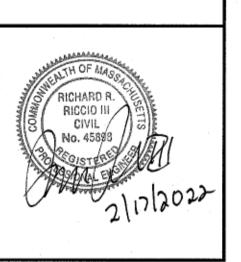


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PERMITTING



PROPOSED SITE DEVELOPMENT
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D.F. PRAY
SAMUEL BARNET BOULEVARD
NEW BEDFORD, MASSACHUSETTS