

LIBERTY PARKING EXPANSION

OLIVER STREET CAPITAL

15 LIBERTY WAY
FRANKLIN, MASSACHUSETTS

DATE: JANUARY 13, 2023

NO.	DATE	REVISIONS

APPLICANT:
 OLIVER STREET CAPITAL
 125 HIGH STREET, SUITE 220
 BOSTON, MA 02110

CIVIL ENGINEER:

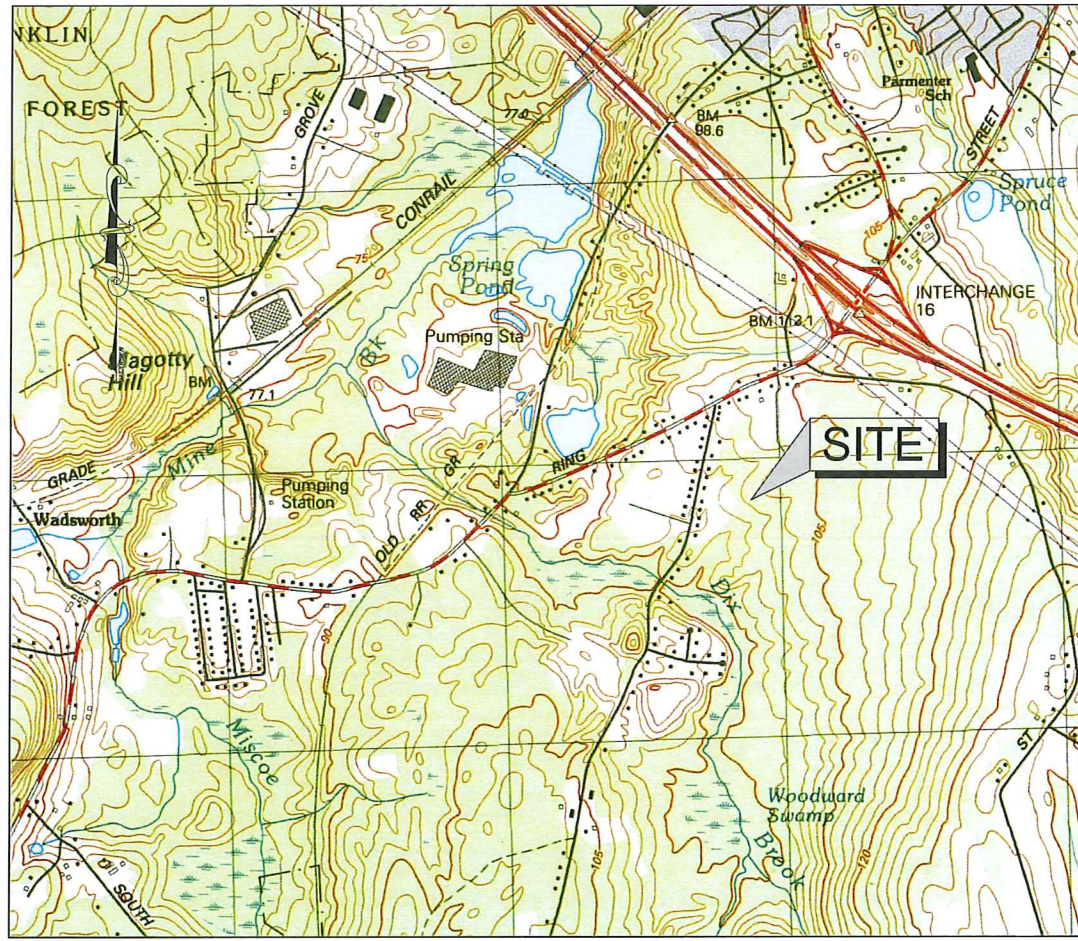
 LEVEL
 DESIGN GROUP
Civil Engineers & Land Surveyors
CIVIL ENGINEERING / LAND SURVEYING
249 SOUTH STREET
UNIT 1
PLAINVILLE, MA 02762
TEL: (858) 455-2211 FAX: (508) 455-2219

PROPERTY ADDRESS:
 15 LIBERTY WAY
 FRANKLIN, MASSACHUSETTS

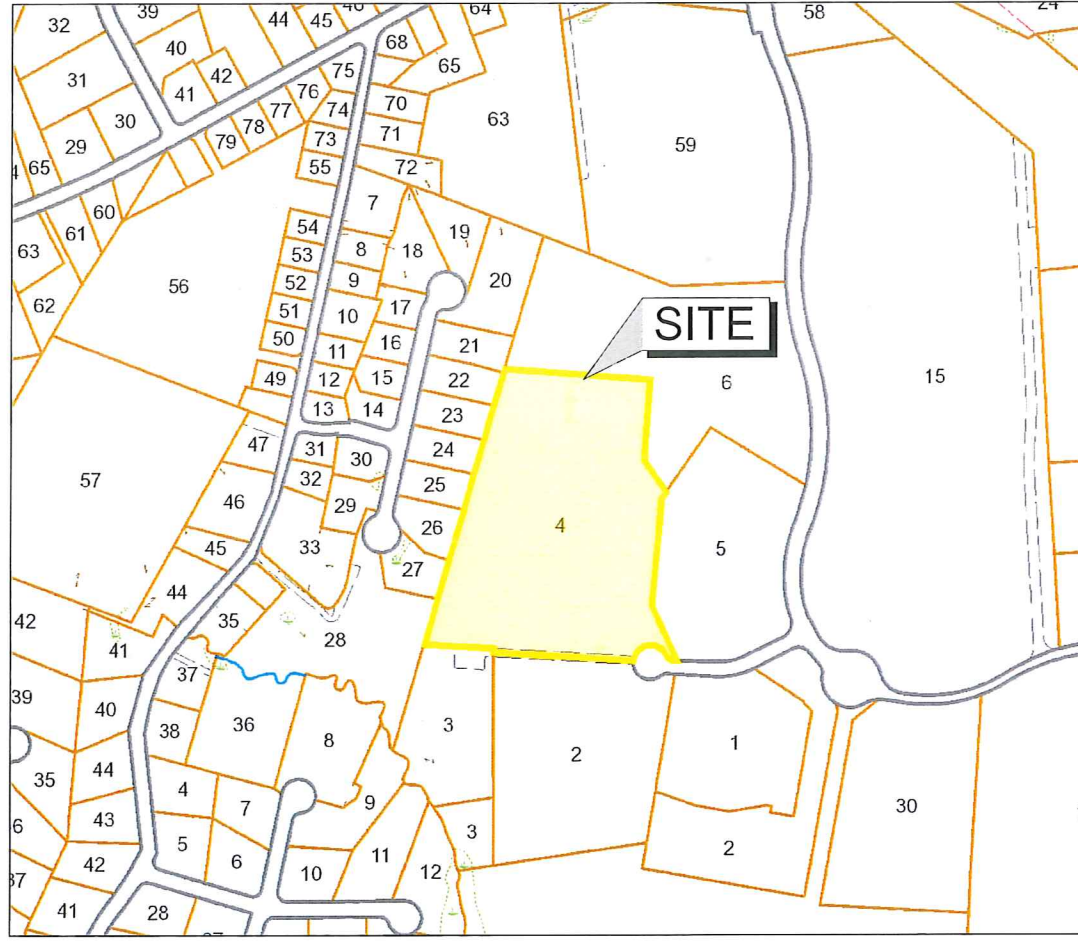
ASSESSORS MAP/PARCEL:
 MAP 320 , PARCEL 004

ZONING DISTRICT:
 INDUSTRIAL

- DRAWING LIST:**
- C-0.0 COVER
 - C-1.0 EXISTING CONDITIONS
 - C-2.0 LAYOUT & MATERIALS
 - C-3.0 GRADING & DRAINAGE
 - C-4.0 EROSION CONTROL PLAN
 - C-5.0 TYPICAL DETAILS
 - C-5.1 TYPICAL DETAILS
 - C-5.2 TYPICAL DETAILS



USGS MAP
 SCALE: 1"= 1,000'±



ASSESSORS MAP
 SCALE: 1"= 300'±

RECEIVED
 2023 FEB -9 P 3:47
 TOWN OF FRANKLIN
 TOWN CLERK



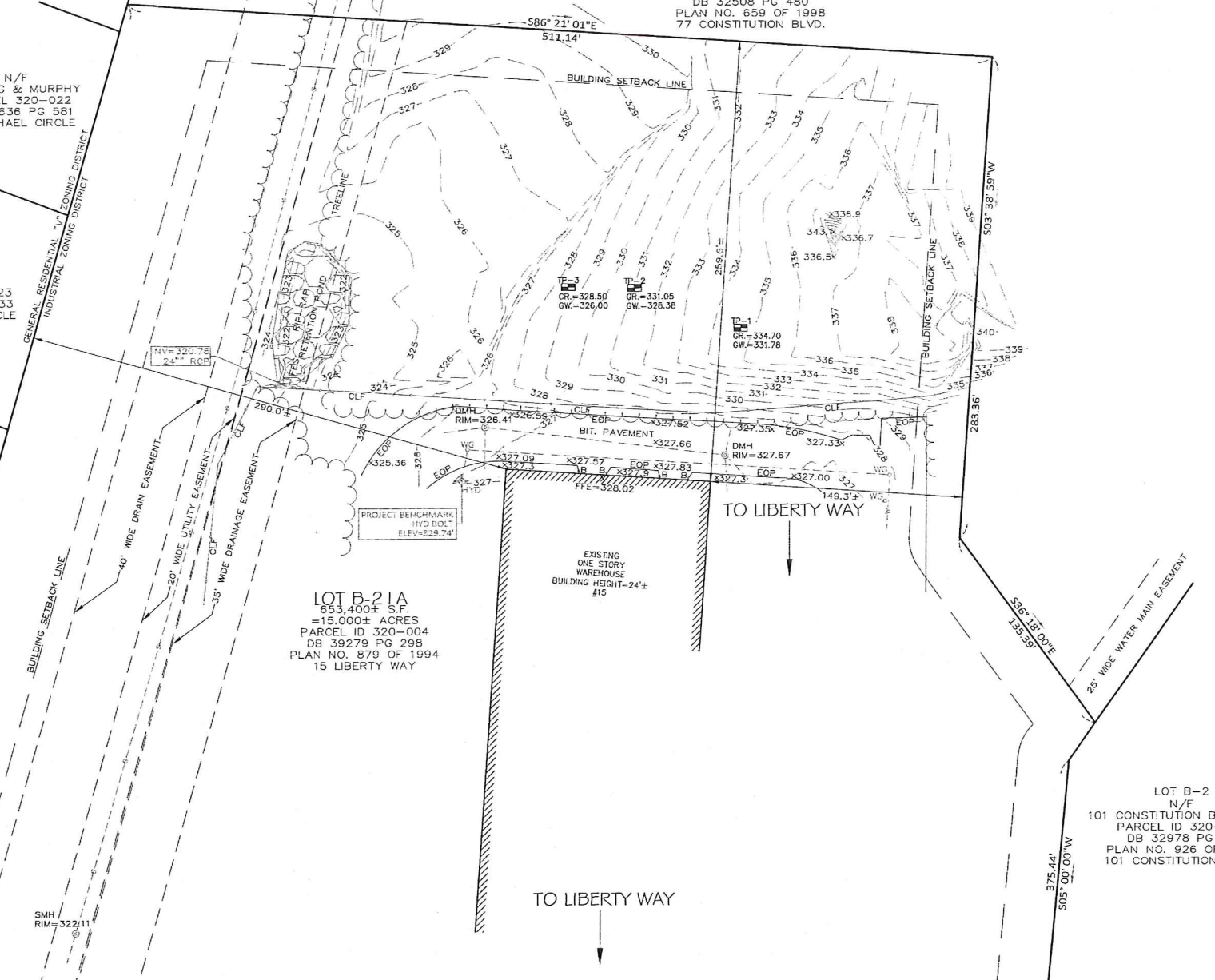
PLAN NO. 879 OF 1994

N/F COOKE
PARCEL 320-021
DB 11508 PG 376
4 RACHAEL CIRCLE

N/F HARDING & MURPHY
PARCEL 320-022
DB 10636 PG 581
6 RACHAEL CIRCLE

N/F SMITH
PARCEL 320-023
DB 10681 PG 633
8 RACHAEL CIRCLE

N/F PISANI
PARCEL 320-024
DB 15863 PG 178
10 RACHAEL CIRCLE

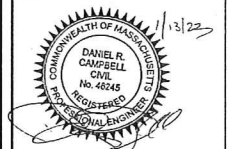


LOT B-21A
653,400± S.F.
=15,000± ACRES
PARCEL ID 320-004
DB 39279 PG 298
PLAN NO. 879 OF 1994
15 LIBERTY WAY

LOT B-211
N/F
IRON MOUNTAIN INFORMATION MANAGEMENT, LLC
PARCEL ID 320-006
DB 32508 PG 480
PLAN NO. 659 OF 1998
77 CONSTITUTION BLVD.

LOT B-2
N/F
101 CONSTITUTION BLVD., LLC
PARCEL ID 320-005
DB 32978 PG 87
PLAN NO. 926 OF 1986
101 CONSTITUTION BLVD.

NO	DATE	REVISIONS



DATE: JANUARY 13, 2022
DRAWN: AH/DRG
SCALE: 1" = 40'

LEGEND

- | | | | |
|--------|--------------------------|--|--|
| B | BOLLARD | | |
| BIT. | BITUMINOUS | | |
| C.L.F. | CHAIN LINK FENCE | | |
| -D- | UNDERGROUND DRAIN LINE | | |
| DB | DEED BOOK | | |
| DMH | DRAIN MANHOLE | | |
| ELEV | ELEVATION | | |
| EOP | EDGE OF PAVEMENT | | |
| FES | FLARED END SECTION | | |
| FFE | FINISHED FLOOR ELEVATION | | |
| HYD | FIRE HYDRANT | | |
| INV | INVERT | | |
| N/F | NOW OR FORMERLY | | |
| REF | REBAR FOUND | | |
| -S- | UNDERGROUND SEWER LINE | | |
| SMH | SEWER MANHOLE | | |
| PG | PAGE | | |
| RCP | REINFORCED CONCRETE PIPE | | |
| -W- | UNDERGROUND WATER LINE | | |
| WG | WATER GATE | | |

ZONING DISTRICT

INDUSTRIAL

MINIMUM BUILDING SETBACKS

FRONT=40 FEET
SIDE=30 FEET*
REAR=30 FEET*

* INCREASE BY THE COMMON BUILDING HEIGHT OF THE STRUCTURE WHEN ABUTTING A RESIDENTIAL USE.

DEED REFERENCES

ATLANTIC OLIVER 15 LIBERTY WAY, LLC
DEED BOOK 39279 PAGE 278

PLAN REFERENCES

PLAN NO. 879 OF 1994
PLAN NO. 878 OF 1994
PLAN NO. 47 OF 1995

NOTES

- THIS SURVEY AND PLAN ARE BASED UPON AN ACTUAL ON THE GROUND INSTRUMENT SURVEY PERFORMED BETWEEN NOVEMBER 2, 2022 AND NOVEMBER 16, 2022.
- LEGAL STATUS OF THE STREETS AND/OR WAYS SHOWN HEREON, WHETHER THEY ARE PUBLIC OR PRIVATE, WERE NOT MADE PART OF THIS SURVEY.
- ALL FLOWERING PLANTS, SHRUBS, OR TREES MAY NOT BE SHOWN WITHIN LANDSCAPING AREAS. IT IS MEANT FOR ILLUSTRATIVE PURPOSES ONLY AND NOT MEANT AS A COMPLETE INVENTORY OF ALL VEGETATION THAT MAY EXIST. SIZES REFLECT APPROXIMATE TRUNK DIAMETER AT BREAST HEIGHT OR APPROXIMATE DIAMETER OF SHRUB WIDTH.
- THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY, AND ARE NOT WARRANTED TO BE CORRECT. UNDERGROUND UTILITIES ARE SHOWN BASED ON EITHER RECORD DATA PROVIDED BY THE OPERATING AUTHORITIES, VISUAL INSPECTION OF AVAILABLE ABOVEGROUND STRUCTURES, PHYSICAL SURFACE MARKINGS, FOUND, OR DATA PROVIDED BY OTHERS. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED FOR SERVICE, SIZE, INVERT ELEVATION, LOCATIONS, ETC. PRIOR TO NEW CONNECTIONS TO OR RELOCATION OF SAME. CONTRACTOR MUST NOTIFY DIG-SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION. NOTIFY THIS FIRM IN WRITING OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
- THE SUBJECT PROPERTY DOES NOT FALL IN A SPECIAL FLOOD HAZARD ZONE AS THE SUBJECT PROPERTY IS PLOTTED BY SCALE ONTO THE FLOOD INSURANCE RATE MAP FOUND AS,
COUNTY NORFOLK
COMMUNITY TOWN OF FRANKLIN
PANEL 250240 0317E
EFFECTIVE DATE JULY 17, 2012
ZONE "X"
- THE SUBJECT PROPERTY DOES NOT FALL IN THE TOWN OF FRANKLIN'S WATER RESOURCE PROTECTION DISTRICT.

DATUM NOTES

HORIZONTAL DATUM:
MASSACHUSETTS STATE PLANE - MAINLAND ZONE NAD83 (2011) EPOCH 2010.00 - US FEET
VERTICAL DATUM:
NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12B) - US FEET

ON-THE-GROUND OBSERVATIONS WERE PERFORMED USING A LEICA TS13 (3") ROBOTIC TOTAL STATION AND WITH A SOKKIA GCX3 GPS RECEIVER USING THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION (MCCORS) RTK NETWORK.

LIBERTY PARKING EXPANSION

MAP SHEET 320, PARCEL 004
15 LIBERTY WAY
FRANKLIN, MASSACHUSETTS



249 SOUTH STREET, UNIT 1
PLAINVILLE, MA 02762
TEL (508) 695-2221 FAX (508) 695-2219

EXISTING CONDITIONS

C-1.0



2081.00

SHEET 2 OF 8

ZONING DISTRICT

ZONED: INDUSTRIAL

MINIMUM BUILDING SETBACKS

FRONT=40 FEET
 SIDE=30 FEET
 REAR=30 FEET

DEED REFERENCES

ATLANTIC OLIVER 15 LIBERTY WAY, LLC
 DEED BOOK 39279 PAGE 278

PLAN REFERENCES

PLAN NO. 879 OF 1994
 PLAN NO. 878 OF 1994
 PLAN NO. 47 OF 1995

LOT B-211
 N/F
 IRON MOUNTAIN
 INFORMATION
 MANAGEMENT, LLC
 PARCEL ID 320-006
 DB 32508 PG 480
 PLAN NO. 659 OF
 1998
 77 CONSTITUTION
 BLVD.

PLAN NOTES:

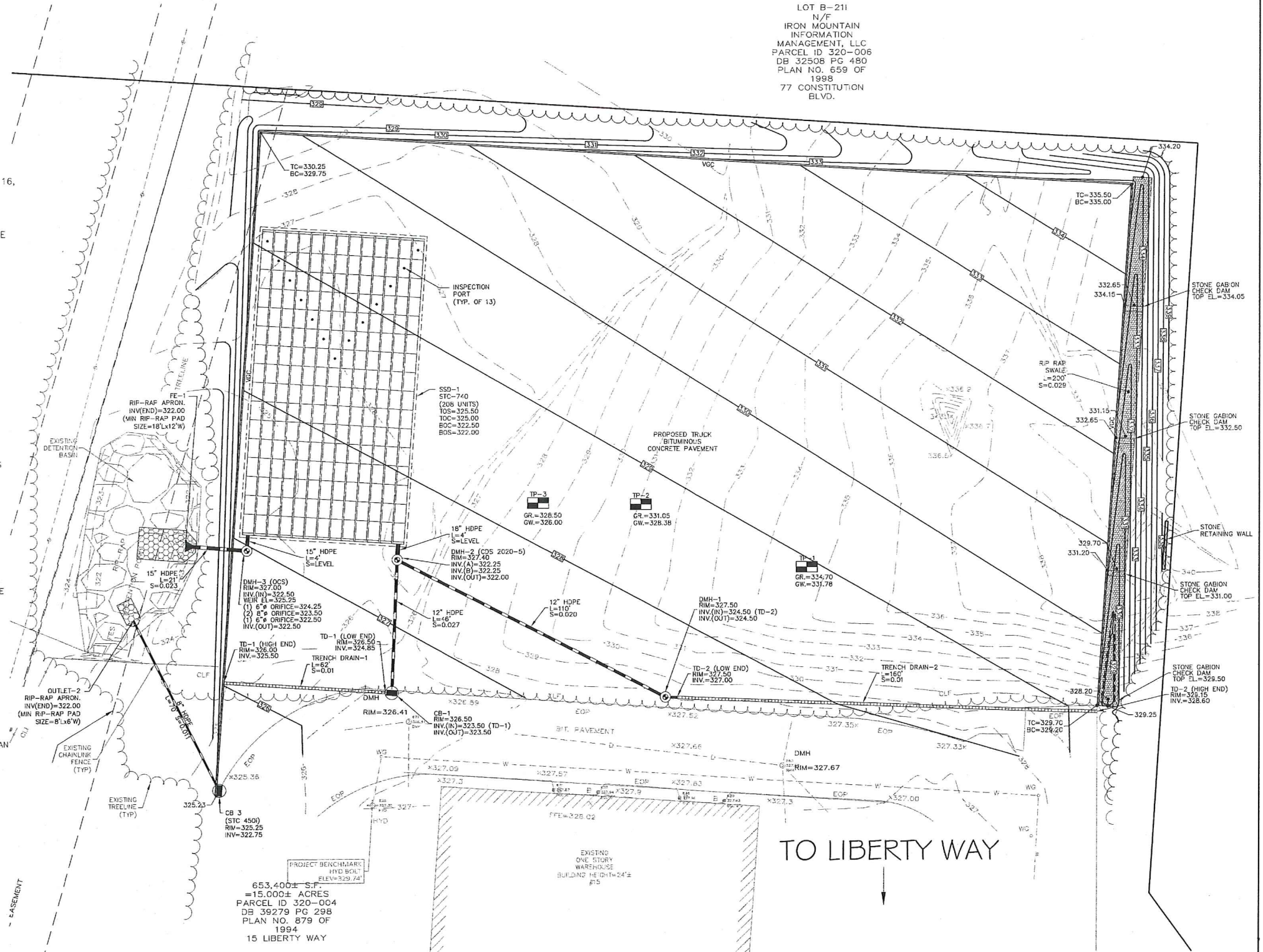
1. EXISTING CONDITIONS WERE OBTAINED FROM FIELD SURVEY PREPARED BY LEVEL DESIGN GROUP, LLC BETWEEN NOVEMBER 2, 2022 AND NOVEMBER 16, 2022. SOIL TESTING COMPLETED BY ADAM P. HUNT ON NOVEMBER 16, 2022.
2. THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. NOTIFY "DIG-SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY SITE DEMOLITION OR EXCAVATION.
3. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IN THE DESIGN PLANS PRIOR TO THE START OF CONSTRUCTION.
4. ALL DISTURBED AREAS NOT RECEIVING IMPROVEMENTS SHALL BE LOAMED AND SEEDED.
5. THE SITE IS NOT LOCATED WITHIN A ZONE II WATER RESOURCE DISTRICT.
6. THE SITE IS NOT LOCATED WITHIN A FLOOD PLAIN DISTRICT.

CONSTRUCTION NOTES:

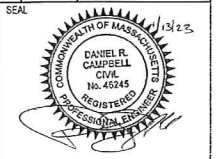
1. THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. NOTIFY "DIG-SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY SITE DEMOLITION OR EXCAVATION.
2. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IN THE DESIGN PLANS PRIOR TO THE START OF CONSTRUCTION.
3. ALL EXISTING PAVEMENT SHALL BE SAWCUT PRIOR TO REMOVAL.
4. ALL EXISTING PAVEMENT, CURB, WALKS, UTILITIES, LIGHT POLES, TREES, SHRUBS, ETC., SHALL BE REMOVED FROM THE AREAS TO BE DEVELOPED. ALL SUCH ITEMS NOT WITHIN THE WORK AREA SHALL BE PROTECTED AND UNDISTURBED.
5. ALL DISTURBED AREAS NOT RECEIVING IMPROVEMENTS SHALL BE LOAMED AND SEEDED.
6. ALL CONSTRUCTION AND CONSTRUCTION ACTIVITIES SHALL CONFORM TO STATE AND LOCAL REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE TOWN OF FRANKLIN, THE COMMONWEALTH OF MASSACHUSETTS AND ANY OTHER AGENCIES HAVING JURISDICTION.
7. MATERIAL TO BE EXPORTED FROM THE SITE WILL BE LIMITED TO TOPSOIL IN AREAS TO BE PAVED AND ANY DELETERIOUS MATERIAL ENCOUNTERED DURING EXCAVATION. MATERIAL TO BE EXPORTED WILL BE LIMITED TO GRAVEL BASE AND SEPTIC AGGREGATE.

SITE PLAN NOTES:

1. THIS PLAN SET HAS BEEN ISSUED FOR PERMITTING ONLY. A FULL CONSTRUCTION PLAN SET SHALL BE ISSUED ONCE ALL LOCAL, STATE, AND FEDERAL PERMIT APPROVALS HAVE BEEN GRANTED.



NO	DATE	REVISIONS



DATE: JANUARY 13, 2023
 DRAWN: AH/DRC
 SCALE: 1" = 20'

LIBERTY PARKING EXPANSION

MAP SHEET 320, PARCEL 004
 15 LIBERTY WAY
 FRANKLIN, MASSACHUSETTS

LEVEL DESIGN GROUP
 Civil Engineers & Land Surveyors
 249 SOUTH STREET UNIT 1
 PLAINVILLE, MA 02762
 TEL. (508) 695-2221 FAX. (508) 695-2219

GRADING & DRAINAGE

C-3.0

SHEET 4 OF 8

2081.00

ZONING DISTRICT
ZONED: INDUSTRIAL

MINIMUM BUILDING SETBACKS
FRONT=40 FEET
SIDE=30 FEET
REAR=30 FEET

DEED REFERENCES
ATLANTIC OWNER 15 LIBERTY WAY, LLC
DEED BOOK 39279 PAGE 278

PLAN REFERENCES
PLAN NO. 878 OF 1994
PLAN NO. 878 OF 1994
PLAN NO. 47 OF 1995

EROSION CONTROL PLAN NOTES:
SILTATION CONTROL USING EROSION CONTROL FENCE WITH STRAW WATTLE, OR APPROVED EQUAL
SILT SOXX IS TO BE VISUALLY INSPECTED AFTER EVERY RAIN FALL AND REPAIRS MADE AS REQUIRED TO THE SILTATION CONTROL FENCE AND STRAW WATTLE AFTER EACH RAIN FALL. CLEANOUT OF ACCUMULATED SEDIMENT BEHIND THE WATTLE IS NECESSARY IF 1/2 OF THE ORIGINAL HEIGHT OF THE WATTLE APPEARS TO HAVE BEEN INUNDATED WITH SEDIMENT.

PRESERVE TOPSOIL
SITE OWNERS AND OPERATORS MUST PRESERVE EXISTING TOPSOIL ON THE CONSTRUCTION SITE TO THE MAXIMUM EXTENT FEASIBLE AND AS NECESSARY TO SUPPORT HEALTHY VEGETATION, PROVIDE SOIL STABILIZATION, AND INCREASE STORMWATER INFILTRATION RATES IN THE POST-CONSTRUCTION PHASE OF THE PROJECT.

STABILIZATION OF SOILS
UPON COMPLETION AND ACCEPTANCE OF SITE PREPARATION AND INITIAL INSTALLATION OF EROSION, RUNOFF, AND SEDIMENT CONTROL AND TEMPORARY POLLUTION PREVENTION MEASURES, THE OPERATOR SHALL INITIATE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION PRACTICES DURING ALL PHASES OF CONSTRUCTION ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF REMOVAL.

ONLY AREAS THAT CAN BE REASONABLY EXPECTED TO HAVE ACTIVE CONSTRUCTION WORK BEING PERFORMED WITHIN 14 DAYS OF DISTURBANCE WILL BE CLEARED/GRUBBED AT ANY ONE TIME. IT IS NOT ACCEPTABLE TO GRUB AND STRIP TOP SOIL THE ENTIRE CONSTRUCTION SITE IF PORTIONS WILL NOT BE ACTIVE WITHIN THE 14-DAY TIME FRAME. PROPER PHASING OF CLEARING AND GRUBBING ACTIVITIES SHALL INCLUDE TEMPORARY STABILIZATION TECHNIQUES FOR AREAS CLEARED AND GRUBBED THAT WILL NOT BE ACTIVE WITHIN THE 14-DAY TIME FRAME.

ONLY AREAS THAT CAN BE REASONABLY EXPECTED TO HAVE ACTIVE CONSTRUCTION WORK BEING PERFORMED WITHIN 14 DAYS OF DISTURBANCE WILL BE CLEARED/GRUBBED AT ANY ONE TIME. IT IS NOT ACCEPTABLE TO GRUB AND STRIP TOP SOIL THE ENTIRE CONSTRUCTION SITE IF PORTIONS WILL NOT BE ACTIVE WITHIN THE 14-DAY TIME FRAME. PROPER PHASING OF CLEARING AND GRUBBING ACTIVITIES SHALL INCLUDE TEMPORARY STABILIZATION TECHNIQUES FOR AREAS CLEARED AND GRUBBED THAT WILL NOT BE ACTIVE WITHIN THE 14-DAY TIME FRAME.

STEEP SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHALL INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS IN AREAS OF STEEP SLOPES AS SOON AS POSSIBLE BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS. ONCE A STEEP SLOPE AREA HAS BEEN TEMPORARILY AND/OR FINAL SEEDED IT SHALL BE PROTECTED WITH 4" HIGH ORANGE CONSTRUCTION TO PREVENT FURTHER DISTURBANCE OF THE AREA.

THE TEMPORARY SEEDING DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT
ANNUAL RYE GRASS	40
PERENNIAL RYE GRASS	60

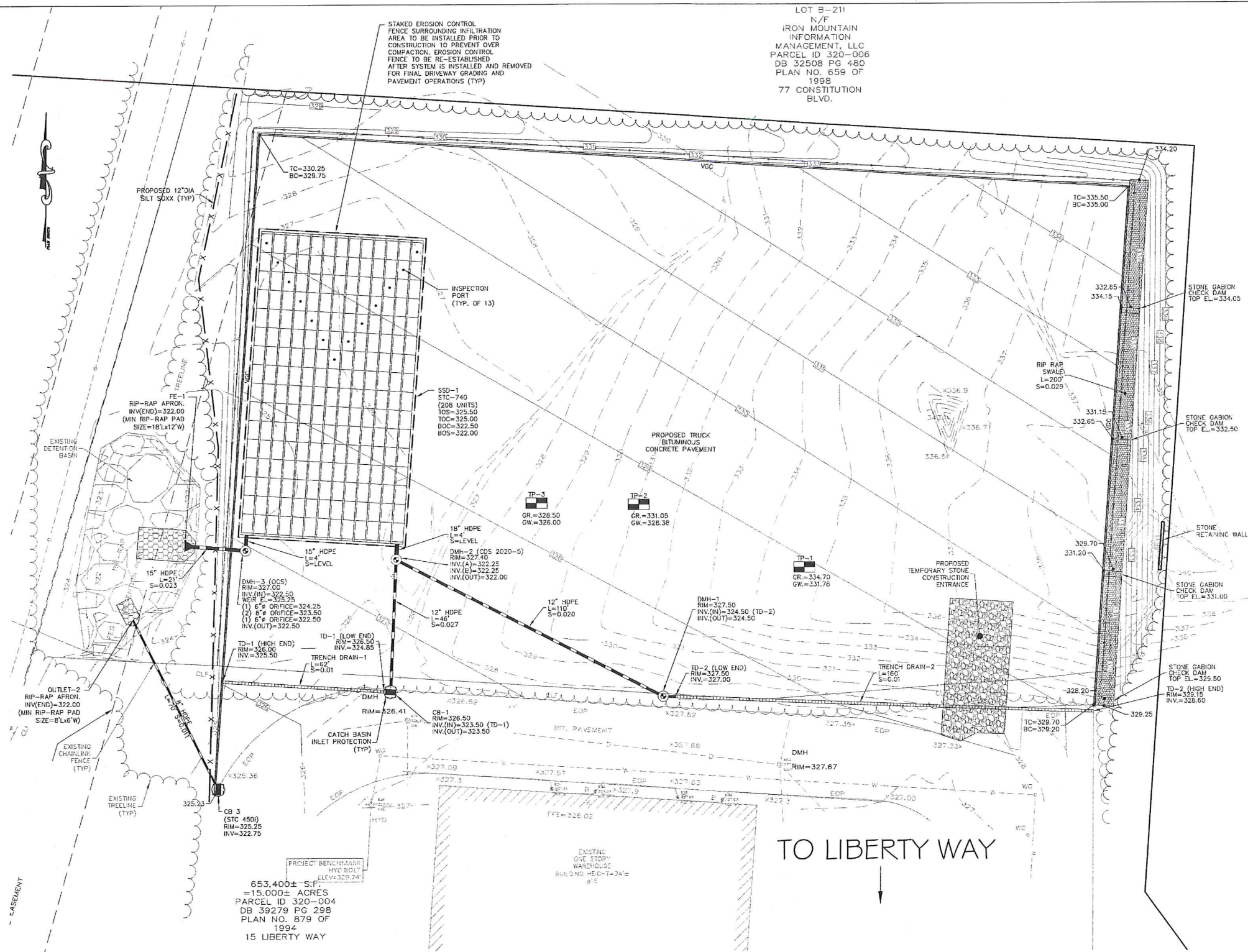
STORMWATER INLET PROTECTION
INLET PROTECTION - WILL BE UTILIZED TO PREVENT SOIL AND DEBRIS FROM ENTERING STORM DRAIN INLETS. THESE MEASURES ARE USUALLY TEMPORARY AND ARE IMPLEMENTED BEFORE A SITE IS DISTURBED. ALL STORMWATER INLETS &/OR CATCH BASINS THAT ARE OPERATIONAL DURING CONSTRUCTION AND HAVE THE POTENTIAL TO RECEIVE SEDIMENT-LADEN STORMWATER FLOW FROM THE CONSTRUCTION SITE MUST BE PROTECTED USING CONTROL MEASURES OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN. EROSION CONTROL FENCE WITH STRAW WATTLES ARE TO BE PLACED AT TO OPENING OF ALL ROUGH GRADED SEDIMENT FOREBAYS UNTIL THE FOREBAY AND BASIN HAS BEEN STABILIZED AND BROUGHT ON-LINE.

MAINTENANCE - THE OPERATOR MUST CLEAN, OR REMOVE AND REPLACE THE INLET PROTECTION MEASURES AS SEDIMENT ACCUMULATES, THE FILTER BECOMES CLOGGED, AND/OR AS PERFORMANCE IS COMPROMISED. ACCUMULATED SEDIMENT ADJACENT TO THE INLET PROTECTION MEASURES SHOULD BE REMOVED BY THE END OF THE SAME WORK DAY IN WHICH IT IS FOUND OR BY THE END OF THE FOLLOWING WORK DAY IF REMOVAL BY THE SAME WORK DAY IS NOT FEASIBLE.

INFILTRATION BASINS - ALL AREAS CONTAINING INFILTRATION BASINS (ABOVE OR BELOW GROUND) SHALL BE PROTECTED THROUGHOUT CONSTRUCTION. THESE AREAS ARE NOT TO BE USED FOR MATERIAL STOCKPILES OR FOR PARKING EQUIPMENT. SURFACE BASINS ARE TO BE ROUGH GRADED AND PROTECTED UNTIL STABILIZED AND BROUGHT ON-LINE FOR STORMWATER MANAGEMENT OF THE STABILIZED SITE.

CONSTRUCTION ENTRANCES
CONSTRUCTION ENTRANCES SHALL BE ESTABLISHED PRIOR TO REMOVAL OF EXISTING DRIVEWAY PAVEMENT TO BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF SEDIMENT TRACKING OFF THE PROJECT. ANY CONSTRUCTION SITE ACCESS POINT MUST EMPLOY THE CONTROL MEASURES ON THE APPROVED SITE PLANS AND IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN. CONSTRUCTION ENTRANCES SHALL BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY CONSTRUCTION VEHICLES. ALL CONSTRUCTION ACCESS ROADS SHALL BE CONSTRUCTED PRIOR TO ANY ROADWAY ACCEPTING CONSTRUCTION TRAFFIC.

THE SITE OWNER AND OPERATOR MUST WILL RESTRICT VEHICLE USE TO PROPERLY DESIGNATED EXIT POINTS, USE PROPERLY DESIGNED AND CONSTRUCTED CONSTRUCTION ENTRANCES AT ALL POINTS THAT EXIT ONTO PAVED ROADS SO THAT SEDIMENT REMOVAL OCCURS PRIOR TO VEHICLE EXIT. WHEN AND WHERE NECESSARY, USE ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXIT (I.E. WHEEL WASHING RACKS, RUBBLE STRIPS, AND WATTLE PLATES). WHERE SEDIMENT HAS BEEN TRACKED OFF FROM THE CONSTRUCTION SITE ONTO THE SURFACE OF OFFSET STREETS, OTHER PAVED AREAS, AND SIDEWALKS, THE DEPOSITED SEDIMENT MUST BE REMOVED BY THE END OF THE SAME WORK DAY IN WHICH THE TRACK OUT OCCURS. TRACK-OUT MUST BE REMOVED BY SWEEPING, SHOVELING, OR VACUUMING THESE SURFACES, OR BY USING OTHER SIMILARLY EFFECTIVE MEANS OF SEDIMENT REMOVAL.



STOCKPILE CONTAINMENT
SHALL BE USED ON-SITE TO MINIMIZE OR ELIMINATE THE DISCHARGE OF SOIL, TOPSOIL, BASE MATERIAL OR RUBBLE, FROM ENTERING DRAINAGE SYSTEMS OR SURFACE WATERS. ALL STOCKPILES MUST BE LOCATED WITHIN THE LIMIT OF DISTURBANCE, PROTECTED FROM RUN-ON WITH THE USE OF TEMPORARY SEDIMENT BARRIERS AND PROVIDED WITH COVER OR STABILIZATION TO AVOID CONTACT WITH PRECIPITATION AND WIND WHERE AND WHEN PRACTICAL. STOCK PILE MANAGEMENT CONSISTS OF PROCEDURES AND PRACTICES DESIGNED TO MINIMIZE OR ELIMINATE THE DISCHARGE OF STOCKPILED MATERIAL (SOIL, TOPSOIL, BASE MATERIAL, RUBBLE) FROM ENTERING DRAINAGE SYSTEMS OR SURFACE WATERS.

GENERAL CONSTRUCTION SEQUENCING
1. INSTALL EROSION AND SEDIMENT CONTROLS;
2. CLEAR, GRUB AND ROUGH GRADE AREAS SHOWN TO BE REGRADED;
3. DEMO EXISTING FEATURES IN WORK AREA NOT SHOWN TO BE SAVED AND CUT AND CAP UTILITIES AS NEEDED;
4. INSTALL STORMWATER MANAGEMENT SYSTEM AND SITE UTILITIES;
5. INSTALL BINDER COAT PAWNG;
6. INSTALL LANDSCAPING;
7. FINE GRADE SITE AND LOAM AND SEED ALL DISTURBED AREAS;
8. INSTALL TOP COAT PAVEMENT;
9. PROJECT CLOSE OUT.

PLAN NOTES:
1. EXISTING CONDITIONS WERE OBTAINED FROM FIELD SURVEY PREPARED BY LEVEL DESIGN GROUP, LLC BETWEEN NOVEMBER 2, 2022 AND NOVEMBER 16, 2022. THERE ARE NO RESOURCE AREAS, IN ACCORDANCE WITH 310 CMR 10.00 WITHIN 100' OF PROPOSED SYSTEM.
2. THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. NOTIFY "DIG-SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY SITE DEMOLITION OR EXCAVATION.
3. SEE STORMWATER POLLUTION PREVENTION PLAN PREPARED FOR CONSTRUCTION ACTIVITIES AT 15 LIBERTY WAY FRANKLIN, MA 02038, FOR ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES AND PROCEDURES.

653,400 ± S.F. = 15,000 ± ACRES
PARCEL ID 320-004
DB 39279 PG 29B
PLAN NO. 879 OF 1994
15 LIBERTY WAY

TO LIBERTY WAY

LOT E-211
N/F
IRON MOUNTAIN
INFORMATION
MANAGEMENT, LLC
PARCEL ID 320-006
DB 32508 PG 480
PLAN NO. 659 OF 1998
77 CONSTITUTION
BLVD.

LIBERTY PARKING EXPANSION
MAP SHEET 320, PARCEL 004
15 LIBERTY WAY
FRANKLIN, MASSACHUSETTS

DATE: JANUARY 13, 2023
DRAWN: AH/DRC
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LEVEL
DESIGN GROUP
Civil Engineers & Land Surveyors

249 SOUTH STREET, UNIT 1
PLAINVILLE, MA 02762
TEL: (508) 695-2221 FAX: (508) 695-2219

EROSION CONTROL

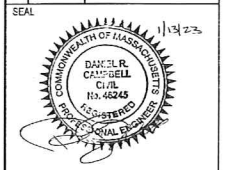
C-4.0

SHEET 5 OF 8

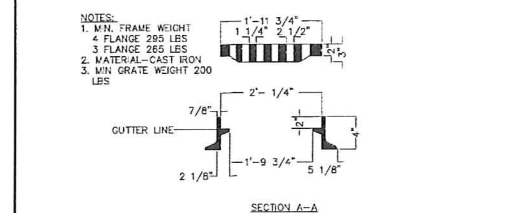
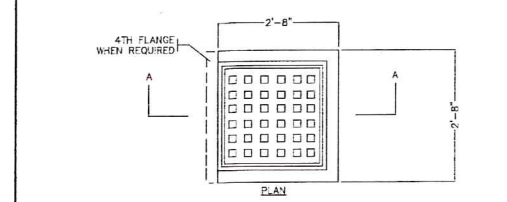
0' 10' 20' 40'

2081.00

NO	DATE	REVISIONS

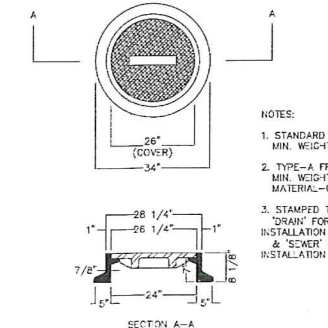


DATE: JANUARY 13, 2023
 DRAWN: AH/DRG
 SCALE: AS NOTED



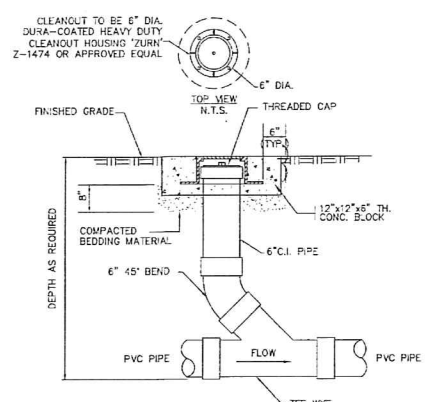
STANDARD CATCH BASIN FRAME & GRATE
NOT TO SCALE

- 1. M.H. FRAME HEIGHT 4"
- 2. FLANGE 265 LBS
- 3. MATERIAL - CAST IRON
- 4. MIN. GRATE WEIGHT 200 LBS

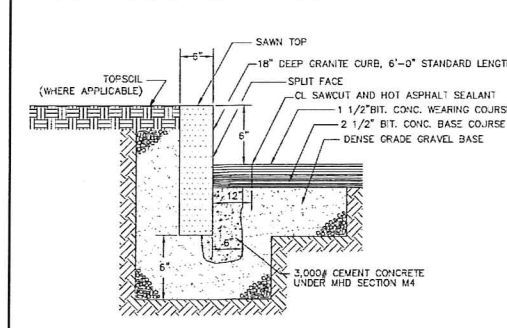


- NOTES:
1. STANDARD COVER MIN. WEIGHT 200 LBS.
 2. TYPE-A FRAME MIN. WEIGHT 265 LBS. MATERIAL - CAST IRON
 3. STAMPED TO READ "DRAIN" FOR DRAIN MANHOLE INSTALLATION & "SEWER" FOR SEWER MANHOLE INSTALLATION

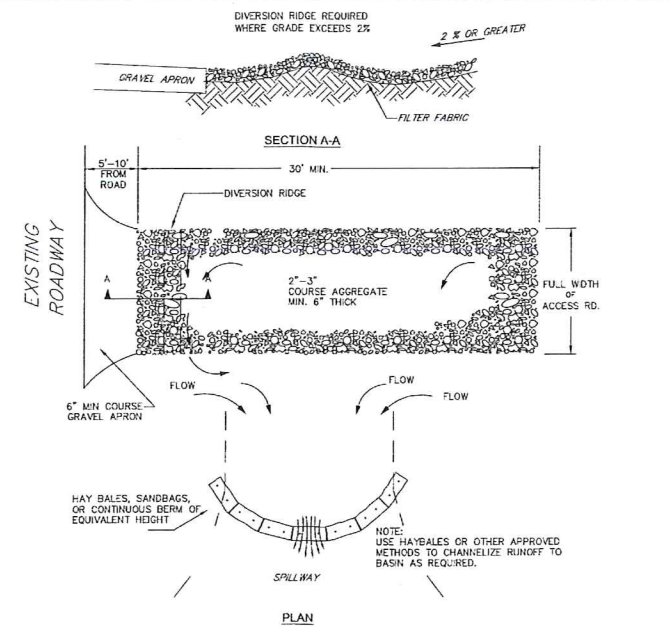
STANDARD MANHOLE FRAME & COVER
NOT TO SCALE



CLEANOUT AT GRADE
NOT TO SCALE

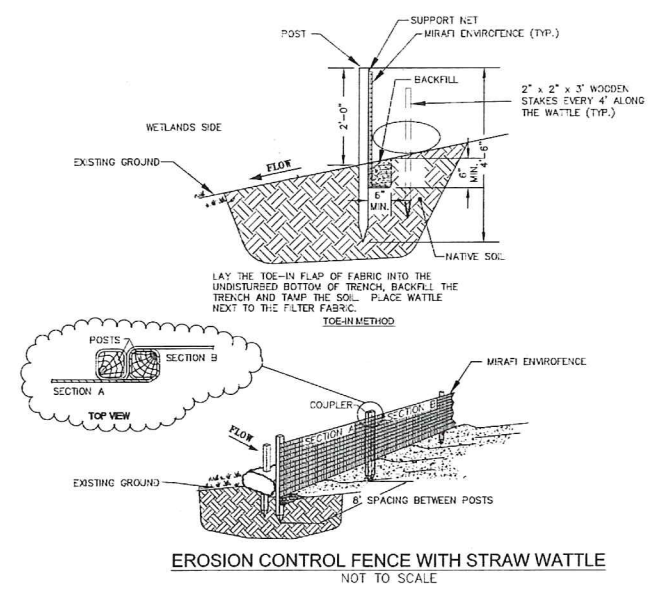


VERTICAL GRANITE CURB
NOT TO SCALE

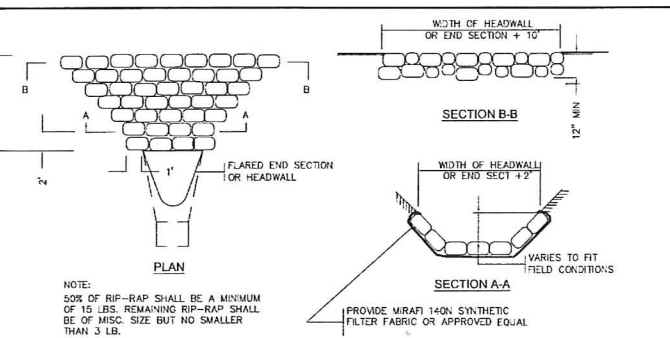


TEMPORARY CONSTRUCTION ENTRANCE/EXIT DETAIL
NOT TO SCALE

- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITIONS THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ON TO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS TO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

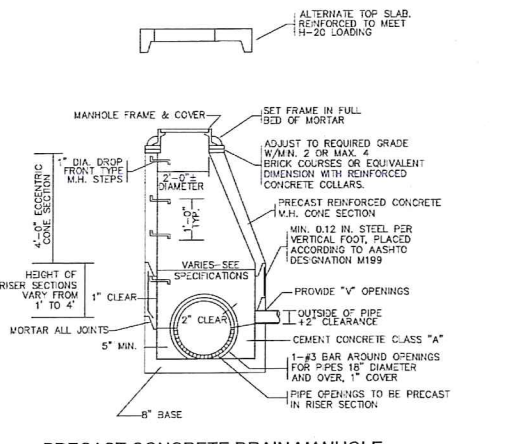


EROSION CONTROL FENCE WITH STRAW WATTLE
NOT TO SCALE

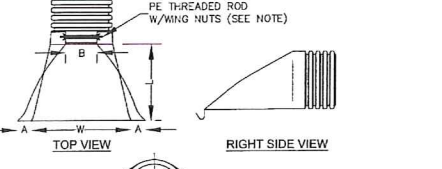


RIP RAP APRON AT PIPE ENDS
NOT TO SCALE

- NOTE: 50% OF RIP-RAP SHALL BE A MINIMUM OF 10 LB. REMAINING RIP-RAP SHALL BE OF MISC. SIZE BUT NO SMALLER THAN 3 LB.



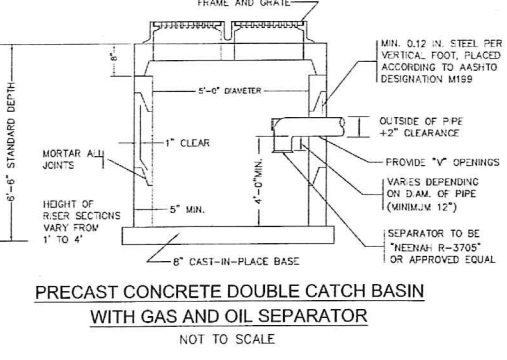
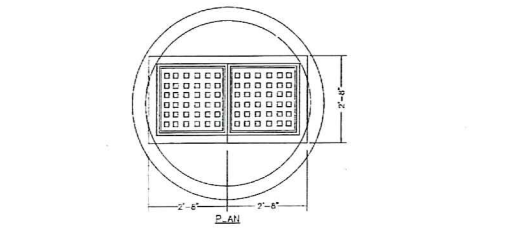
PRECAST CONCRETE DRAIN MANHOLE
NOT TO SCALE



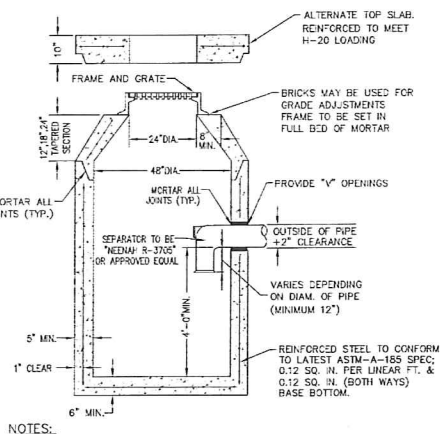
PIPE SIZE	A	B (MAX)	H	L	W
12"	6.5"	10"	6.5"	25"	29"
15"	6.5"	10"	6.5"	25"	29"
18"	7.5"	15"	6.5"	32"	35"
24"	7.5"	18"	6.5"	35"	45"
30"	10.5"	N/A	7.0"	53"	68"
36"	10.5"	N/A	7.0"	53"	68"

NOTE: PE THREADED ROD W/ WING NUTS PROVIDED FOR END SECTIONS 12"-24", 30" & 36" END SECTIONS TO BE WELDED TO PIPE PER MANUFACTURER'S RECOMMENDATIONS.

HDPE FLARED END SECTION
NOT TO SCALE

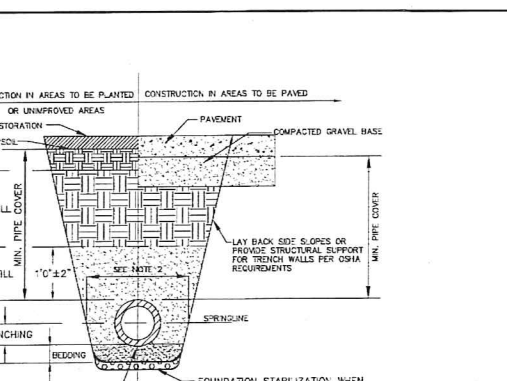


PRECAST CONCRETE DOUBLE CATCH BASIN WITH GAS AND OIL SEPARATOR
NOT TO SCALE



- NOTES:
1. CONCRETE TO BE 4,000 PSI MIN. PER ASTM C-478(6.1).
 2. REINFORCING TO MEET OR EXCEED H-20 LOADING REQUIREMENTS.

PRECAST CONCRETE CATCH BASIN WITH GAS AND OIL SEPARATOR
NOT TO SCALE



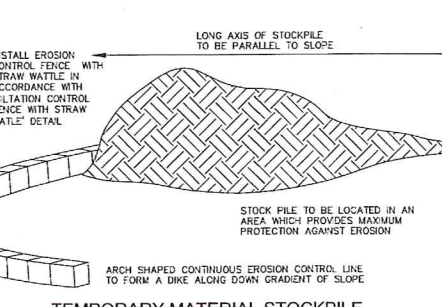
UTILITY TRENCH
NOT TO SCALE

FOUNDATION BEDDING AND BACKFILL MATERIALS

FOUNDATION	DEPTH	HT.	HT.	HT.
FOUNDATION	HT.	HT.	HT.	HT.
FOUNDATION	HT.	HT.	HT.	HT.
FOUNDATION	HT.	HT.	HT.	HT.
FOUNDATION	HT.	HT.	HT.	HT.
FOUNDATION	HT.	HT.	HT.	HT.
FOUNDATION	HT.	HT.	HT.	HT.

UTILITY TRENCH
NOT TO SCALE

- NOTES:
1. PLACE 3/4" MINUS GRADED GRANULAR BACKFILL AT OPTIMUM MOISTURE IN HORIZONTAL "B" DEEP LOOSE LAYERS, COMPACT TO 95% PER ASTM D-1557
 2. MINIMUM WIDTH OF TRENCH MEASURED AT SPRINGLINE OF PIPE, INCLUDING ANY NECESSARY SHEATHING
 3. INSTALL PIPE IN CENTER OF TRENCH.
 4. IN PLANTED OR UNIMPROVED AREAS, USE ON-SITE EXCAVATED MATERIAL FOR FINAL BACKFILL. COMPACT TO 95% PER ASTM D-1557. IN PAVED AREAS, OBTAIN ENGINEER APPROVAL OF ON-SITE EXCAVATED MATERIALS FOR USE AS FINAL BACKFILL
 5. MINIMUM COVER OVER TOP OF PIPE



TEMPORARY MATERIAL STOCKPILE
NOT TO SCALE

INSTALL EROSION CONTROL FENCE WITH STRAW WATTLE IN ACCORDANCE WITH "SLASH CONTROL FENCE WITH STRAW WATTLE" DETAIL

LONG AXIS OF STOCKPILE TO BE PARALLEL TO SLOPE

STOCKPILE TO BE LOCATED IN AN AREA WHICH PROVIDES MAXIMUM PROTECTION AGAINST EROSION

ARCH SHAPED CONTINUOUS EROSION CONTROL LINE TO FORM A DIKE ALONG DOWN GRADIENT OF SLOPE

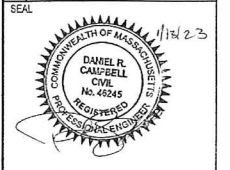
LIBERTY PARKING EXPANSION
 MAP SHEET 320, PARCEL 004
 15 LIBERTY WAY
 FRANKLIN, MASSACHUSETTS

LEVEL DESIGN GROUP
 Civil Engineers & Land Surveyors
 249 SOUTH STREET, UNIT 1
 PLAINVILLE, MA 02762
 TEL: (508) 655-2221 FAX: (508) 655-2219

TYPICAL DETAILS
C-5.0
 SHEET 6 OF 8

2081.00

NO.	DATE	REVISIONS

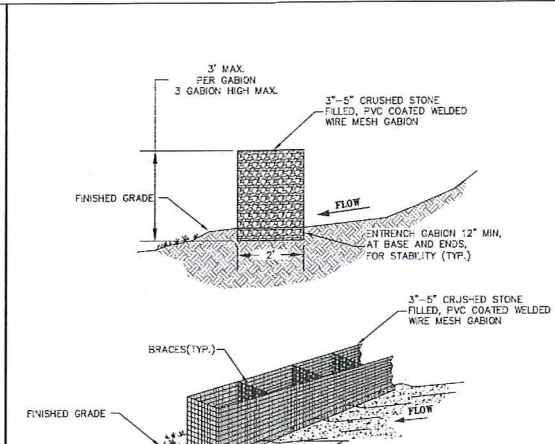


DATE: JANUARY 13, 2023
DRAWN: AH/DRC
SCALE: AS NOTED

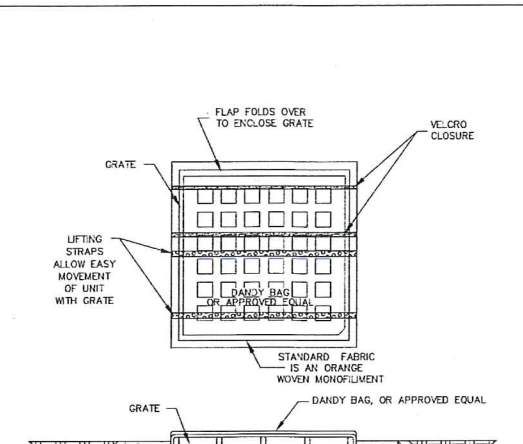
LIBERTY PARKING EXPANSION
MAP SHEET 320, PARCEL 004
15 LIBERTY WAY
FRANKLIN, MASSACHUSETTS

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249 SOUTH STREET, UNIT 1
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TEL: (508) 695-2221 FAX: (508) 695-2219

TYPICAL DETAILS
C-5.1
SHEET 7 OF 8
2081.00

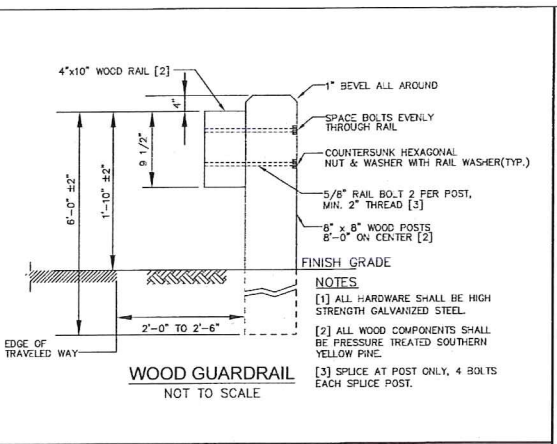


GABION SEDIMENT BAFFLE
NOT TO SCALE

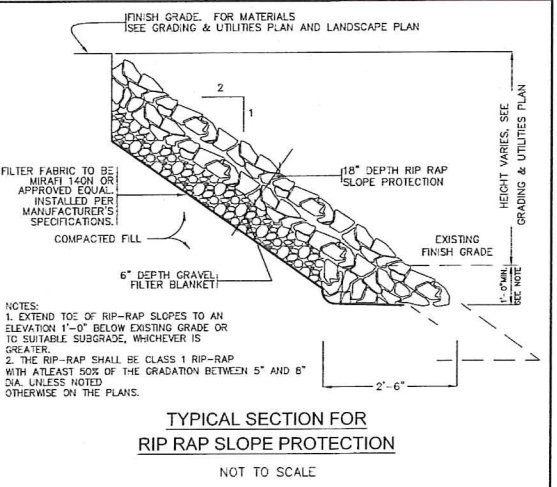


CATCH BASIN INLET PROTECTION
NOT TO SCALE

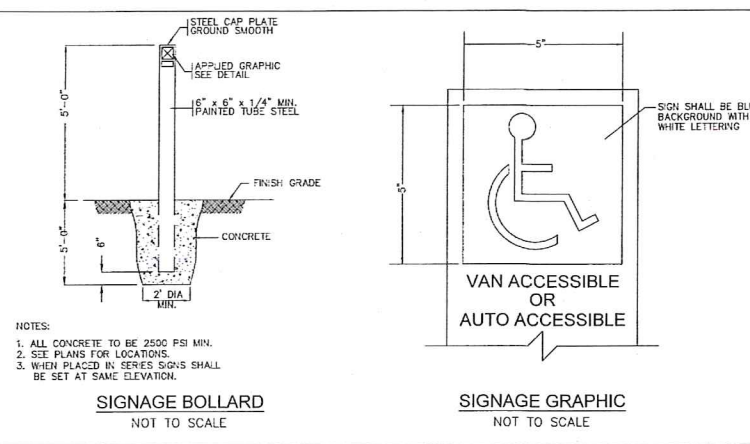
NOTES:
INSTALLATION: THE EMPTY DANDY BAG, OR APPROVED EQUAL, SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN POUCH, ON THE BOTTOM (BELOW-GRADE SIDE) OF THE UNIT. ATTACH ABSORBENT PILLOW TO TETHER LOOP. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME.
MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT. REMOVE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE DANDY BAG AS NEEDED. IF USING OPTIONAL OIL ABSORBENTS, REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.



WOOD GUARDRAIL
NOT TO SCALE

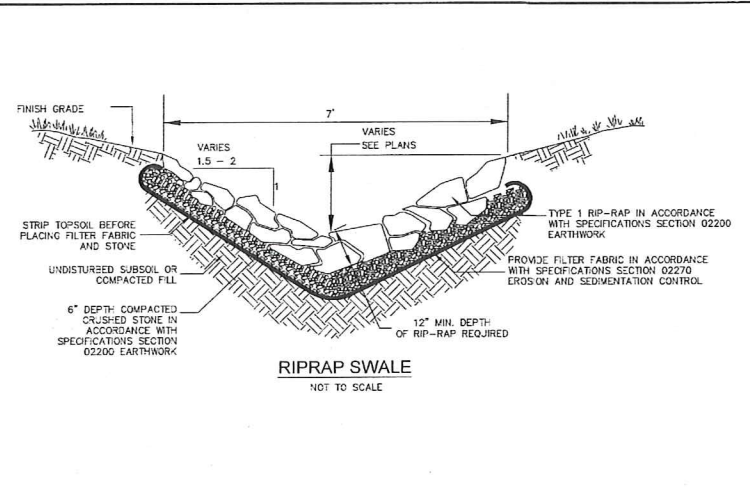


TYPICAL SECTION FOR RIP RAP SLOPE PROTECTION
NOT TO SCALE

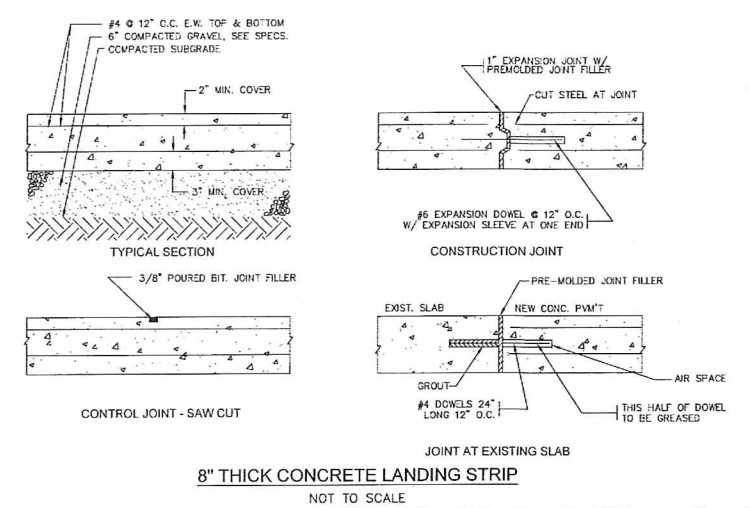


SIGNAGE BOLLARD
NOT TO SCALE

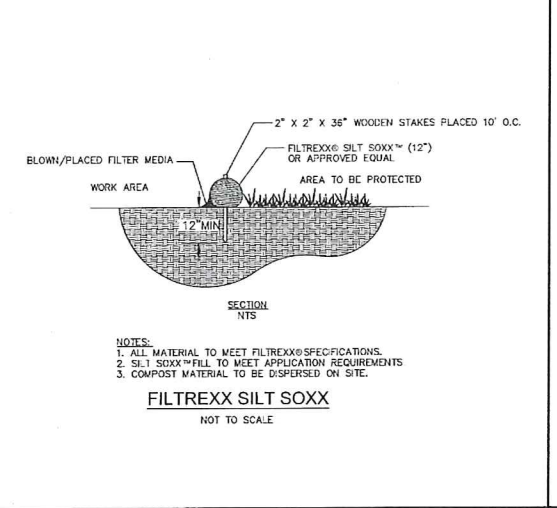
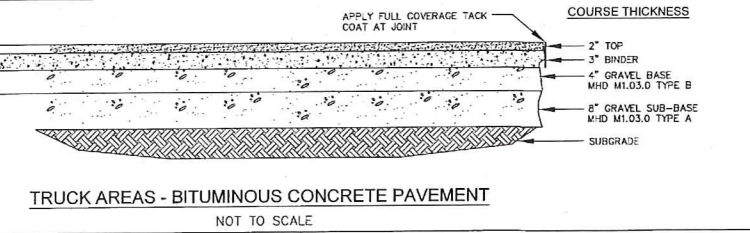
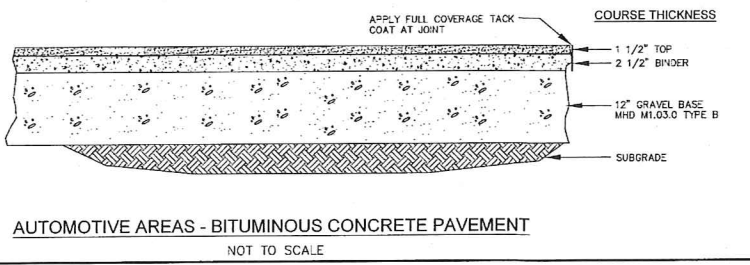
SIGNAGE GRAPHIC
NOT TO SCALE



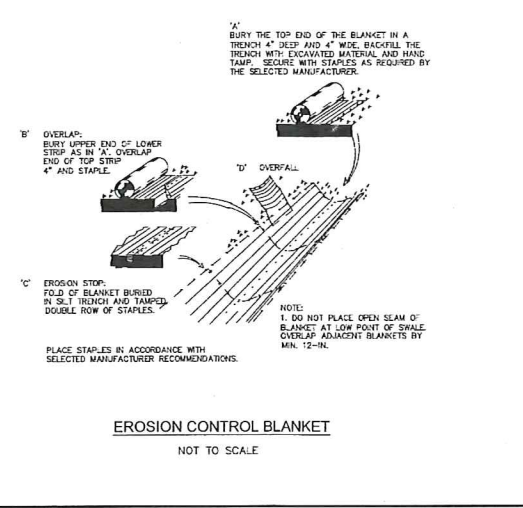
RIPRAP SWALE
NOT TO SCALE



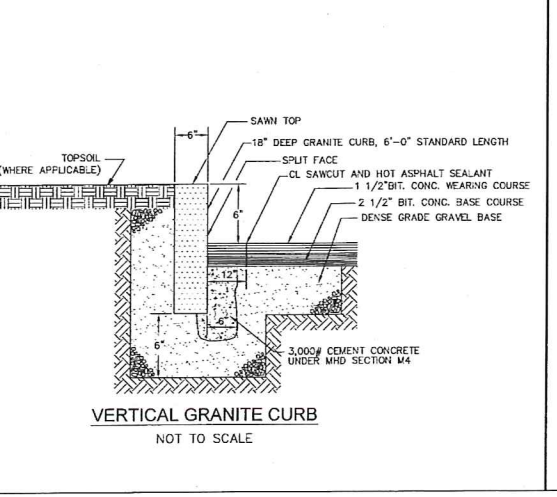
8" THICK CONCRETE LANDING STRIP
NOT TO SCALE



FILTREXX SILT SOXX
NOT TO SCALE



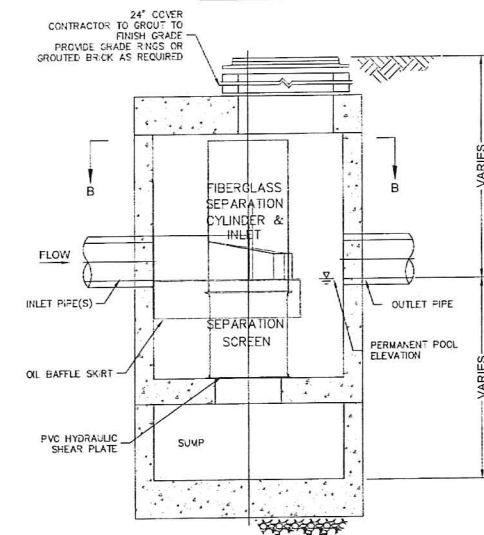
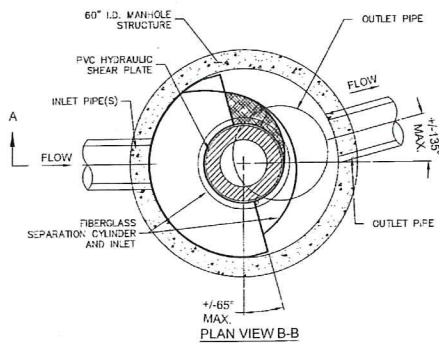
EROSION CONTROL BLANKET
NOT TO SCALE



VERTICAL GRANITE CURB
NOT TO SCALE

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE
 - CONTRACTOR SHALL REQUEST SHOP DRAWINGS OF EACH INDIVIDUAL CDS STORMWATER TREATMENT UNIT AND SHALL SUBMIT THEM FOR REVIEW AND APPROVAL TO THE DESIGN ENGINEER PRIOR TO UNITS BEING ORDERED OR EXTENSIVE PRODUCTION.
 - DIMENSIONS MARKED WITH (1) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
 - FOR FABRICATION DRAWINGS WITH DETAIL STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH CONSTRUCTION PRODUCTS REPRESENTATIVE. www.contech-storm.com
 - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
 - STRUCTURE SHALL MEET AASHTO M30 AND CASTINGS SHALL MEET AASHTO M205 LOAD RATING ASSUMING GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
 - PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHEET AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
- INSTALLATION NOTES**
- ANY SUB-BASE BACKFILL DEPTH AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
 - CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
 - CONTRACTOR TO PROVIDE, INSTALL AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
 - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT. HOLDING WATER TO FLOODLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

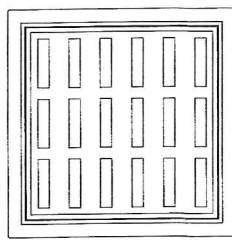


ELEVATION VIEW

STORM WATER TREATMENT UNIT



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



FRAME AND GRATE
(24\"/>

CDS STORMWATER TREATMENT UNITS
NOT TO SCALE

NOTE:

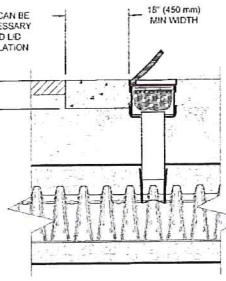
1. STORMTECH SYSTEM DETAILS DEPICTED HEREIN ARE INTENDED FOR PERMITTING REVIEW ONLY. CONTRACTOR SHALL REQUEST FORMAL SHOP DRAWINGS FOR THE PROPOSED SYSTEM PRIOR TO CONSTRUCTION WHICH ARE TO BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER.

PAVEMENT AND SUBBASE DESIGN
(BY ENGINEER) MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF REQUIREMENTS FOR LAYERS 'C' & 'D')
ONCE LAYER 'C' IS PLACED ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIALS REQUIREMENTS OF LAYERS 'C' OR 'D' AT THE DESIGN ENGINEER'S DISCRETION.



STORMTECH ACCEPTABLE FILL

N.T.S.



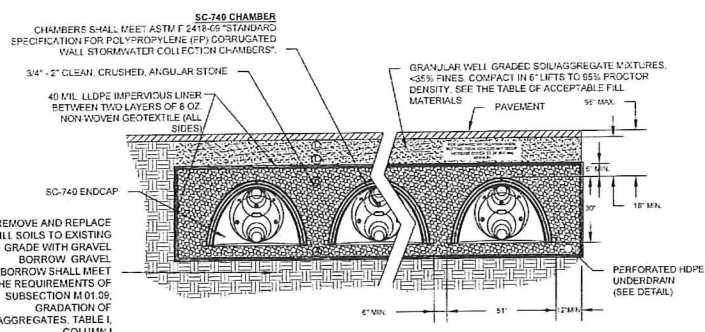
STORMTECH CLEANOUT

NOT TO SCALE

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
① FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBBASE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
② FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('E' LAYER) TO 24\"/>			

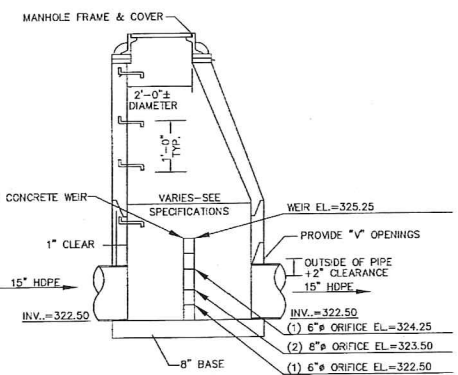
PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: 'CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE.'
- AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9 [229 mm] (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.



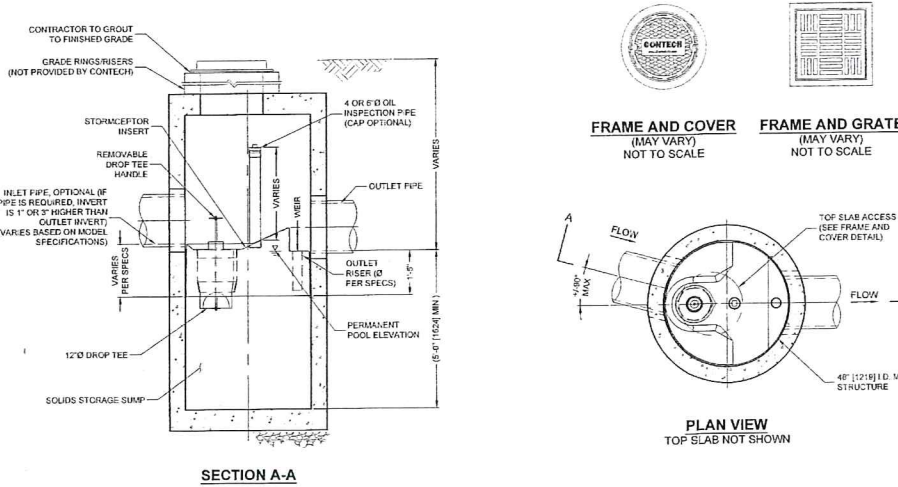
STORMTECH SC-740 SYSTEM LAYOUT

NOT TO SCALE



DRAIN MANHOLE-3 W/OUTLET STRUCTURE

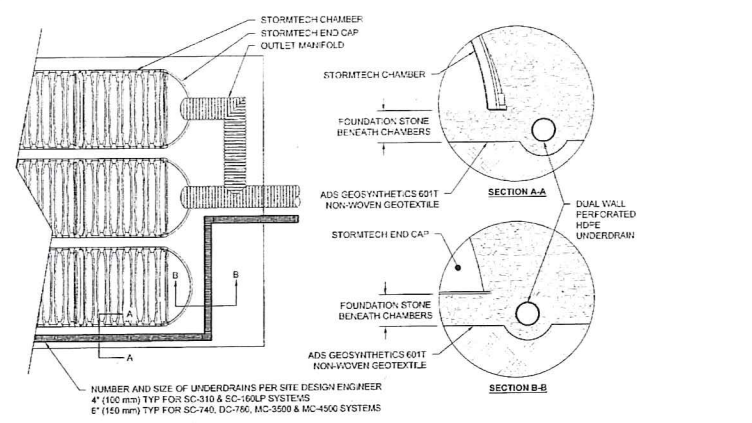
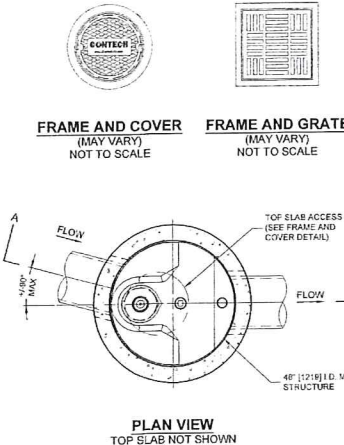
NOT TO SCALE



SECTION A-A

STORMCEPTOR TREATMENT UNITS

NOT TO SCALE

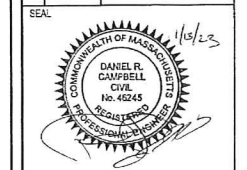


UNDERDRAIN

NOT TO SCALE

LIBERTY PARKING EXPANSION
 MAP SHEET 320, PARCEL 004
 15 LIBERTY WAY
 FRANKLIN, MASSACHUSETTS

NO.	DATE	REVISIONS



DATE: JANUARY 13, 2023
 DRAWN: AH/DRG
 SCALE: AS NOTED

LEVEL
 DESIGN GROUP
 Civil Engineers & Land Surveyors

249 SOUTH STREET, UNIT 1
 PLAINVILLE, MA 02762
 TEL. (508) 655-2221 FAX. (508) 695-2219

TYPICAL DETAILS

C-5.2

SHEET 8 OF 8

2081.00

Plant Schedule					Mar. 2, 2023
Sym.	Botanical Name	Common Name	Qty.	Size, Comments	
Trees					
AG	Amelanchier 'Autumn Brilliance'	Autumn Brilliance Serviceberry	10	8-10' B+B, m/s	
BN	Betula nigra 'Heritage'	Heritage River Birch	3	12-14' B+B, m/s	
Shrubs					
Ca	Clethra alnifolia	Summersweet	8	#10	
Ci	Cornus alba 'Ivory Halo'	Red-twig Dogwood	10	2-3' B+B	
Rs	Amelanchier alnifolia 'Regent'	Regent Serviceberry	12	#7	
Tm	Taxus canadensis	Densiformis Yew	8	18-24"	
Vd	Viburnum dentatum	Arrowwood Viburnum	14	2-3' B+B	

General Planting Notes

- All plants shall be the highest quality, heavy nursery-grown stock and sized according to Massachusetts Nurseryman's Association Standards. No substitutions will be permitted without the prior approval of the Landscape Architect.
- Topsoil for plant beds and pits shall be good quality sandy loam devoid of roots, clods, stones, rubbish, glass, brick, or asphalt. Soil should be between pH 6 and 7, and have good fertility and organic content.
- Plant beds shall have a minimum soil depth of 10" unless otherwise specified and be mulched with 2-3" of finely shredded pine bark mulch. Groundcover area should have a 1 1/2" - 2" mulch depth.
- All plant material shall be guaranteed for one full year from the completion of the installation.
- All seeded and sodded areas shall have 6" of screened loam, spread and finely graded according to the plans. All areas indicated of the drawings and disturbed areas not otherwise indicated, shall receive 6" of loam previously stripped and stockpiled with the addition of 3" loam borrow tilled together and finely graded over all areas to receive seed. Loam borrow shall consist of friable soil typical of locally cultivated soils containing a minimum of 2% decayed organic matter, no clods, sticks and debris, and have a pH of 6 to 7. Test soil for acidity, fertility and texture by a reputable soils testing lab. Amend soil with lime and fertilizers accordingly. Rake until surface is smooth, friable, and uniform in texture to the elevations indicated on the drawings. Seed evenly at a rate of 5 lbs. per 1000 square feet or according to the manufacturers instructions. Lay sod with hand-tight joints. Irrigate immediately and as necessary to provide one inch of water per week while the seed germinates and sod takes root until the grass is thoroughly established.

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PLAN NOTES:

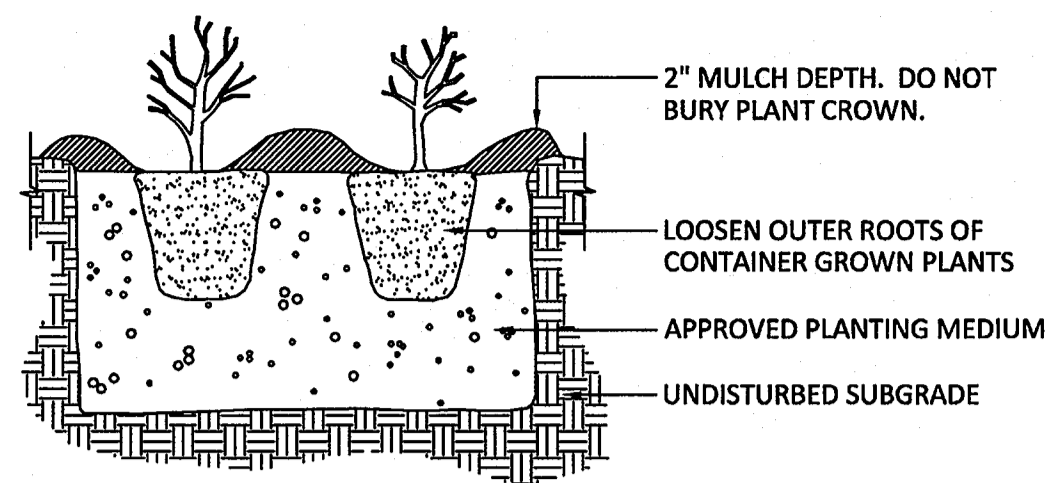
- EXISTING CONDITIONS WERE OBTAINED FROM FIELD SURVEY PREPARED BY LEVEL DESIGN GROUP, LLC BETWEEN NOVEMBER 2, 2022 AND NOVEMBER 16, 2022. SOIL TESTING COMPLETED BY ADAM P. HUNT ON NOVEMBER 16, 2022.
- THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. NOTIFY "DIG-SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY SITE DEMOLITION OR EXCAVATION.
- CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IN THE DESIGN PLANS PRIOR TO THE START OF CONSTRUCTION.
- ALL DISTURBED AREAS NOT RECEIVING IMPROVEMENTS SHALL BE LOAMED AND SEEDED.
- THE SITE IS NOT LOCATED WITHIN A ZONE II WATER RESOURCE DISTRICT.
- THE SITE IS NOT LOCATED WITHIN A FLOOD PLAIN DISTRICT.

CONSTRUCTION NOTES:

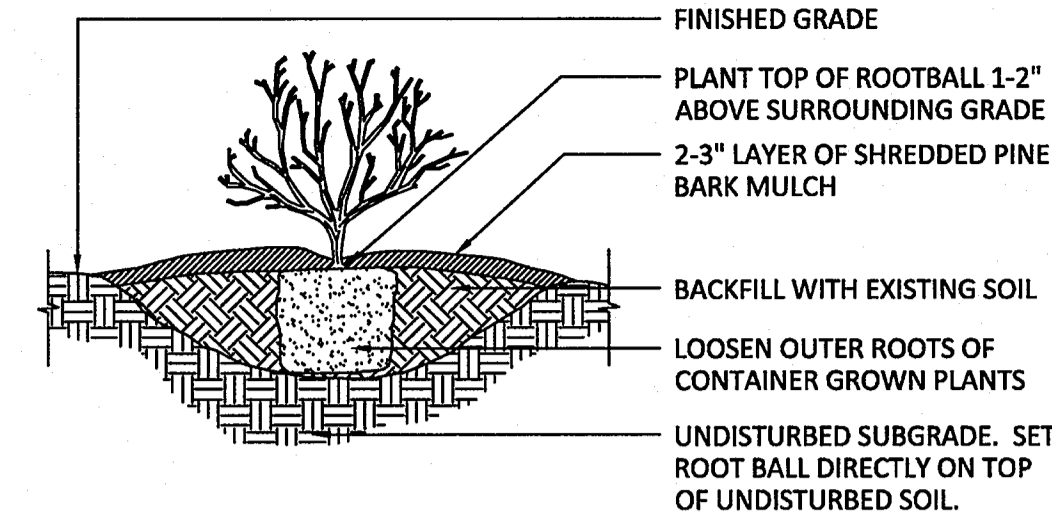
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- CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IN THE DESIGN PLANS PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING PAVEMENT SHALL BE SAWCUT PRIOR TO REMOVAL.
- ALL EXISTING PAVEMENT, CURB, WALKS, UTILITIES, LIGHT POLES, TREES, SHRUBS, ETC., SHALL BE REMOVED FROM THE AREAS TO BE DEVELOPED. ALL SUCH ITEMS NOT WITHIN THE WORK AREA SHALL BE PROTECTED AND UNDISTURBED.
- ALL DISTURBED AREAS NOT RECEIVING IMPROVEMENTS SHALL BE LOAMED AND SEEDED.
- ALL CONSTRUCTION AND CONSTRUCTION ACTIVITIES SHALL CONFORM TO STATE AND LOCAL REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE TOWN OF FRANKLIN, THE COMMONWEALTH OF MASSACHUSETTS AND ANY OTHER AGENCIES HAVING JURISDICTION.
- MATERIAL TO BE EXPORTED FROM THE SITE WILL BE LIMITED TO TOPSOIL IN AREAS TO BE PAVED AND ANY DELETERIOUS MATERIAL ENCOUNTERED DURING EXCAVATION. MATERIAL TO BE EXPORTED WILL BE LIMITED TO GRAVEL BASE AND SEPTIC AGGREGATE.

SITE PLAN NOTES:

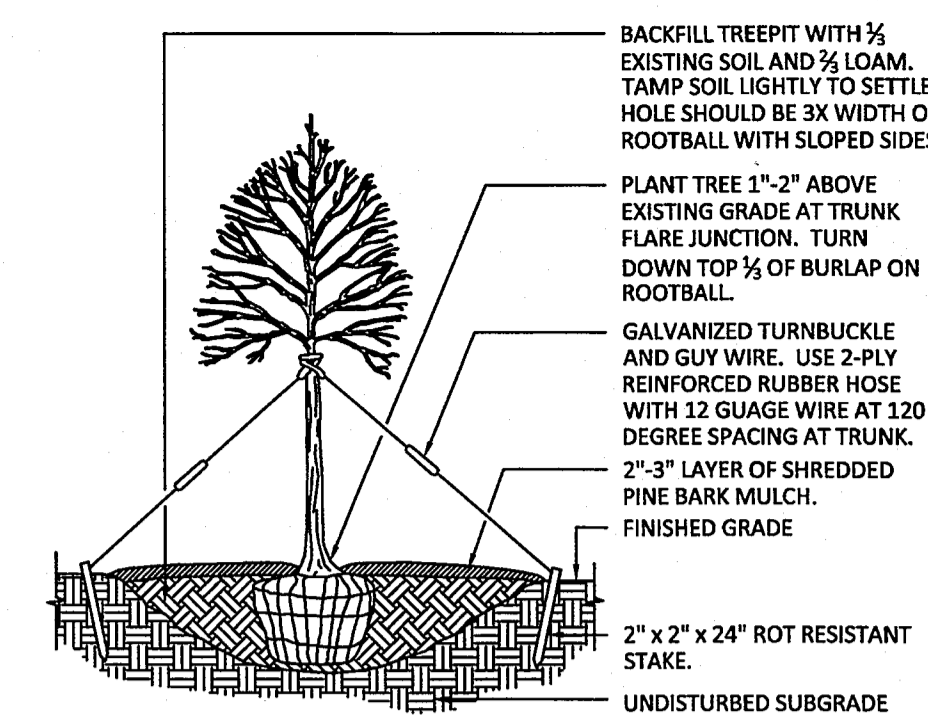
- THIS PLAN SET HAS BEEN ISSUED FOR PERMITTING ONLY. A FULL CONSTRUCTION PLAN SET SHALL BE ISSUED ONCE ALL LOCAL, STATE, AND FEDERAL PERMIT APPROVALS HAVE BEEN GRANTED.



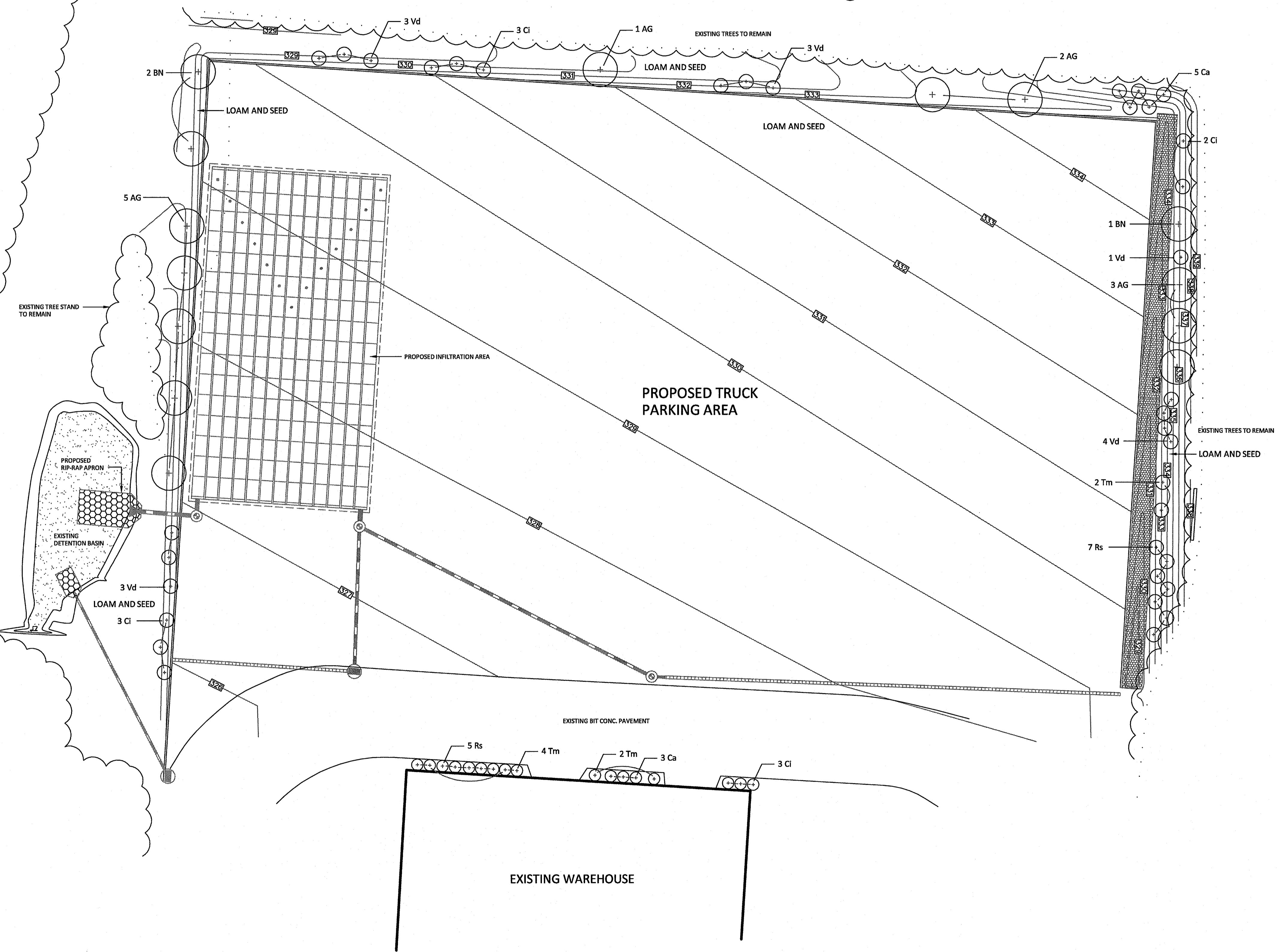
PERENNIAL/GROUNDCOVER PLANTING
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE



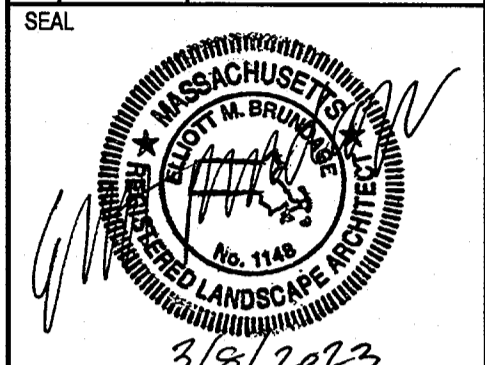
TREE PLANTING DETAIL
NOT TO SCALE



IRRIGATION NOTES

- The Landscape Contractor shall provide a drip irrigation system for all planted islands.
- The Landscape Contractor shall submit an irrigation plan with zone boxes, valve boxes, clock, and backflow preventer locations to the Owner.
- Once the irrigation system has been installed, the Landscape Contractor shall provide an as-built plan to the Owner with all irrigation equipment shown on the plan, including sub-surface sleeves, conduit and valve boxes.

NO.	DATE	REVISIONS



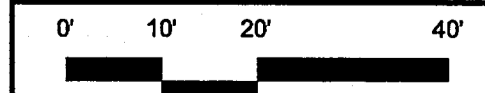
DATE: MARCH 8, 2023
DRAWN: EB
SCALE: 1" = 20'

LIBERTY PARKING EXPANSION
MAP SHEET 320, PARCEL 004
15 LIBERTY WAY
FRANKLIN, MASSACHUSETTS

ELLIOTT BRUNDAGE
LANDSCAPE ARCHITECTURE
978 470 4970
190 High Plain Road Andover MA
elliottbrundage.com

LANDSCAPE PLAN

L-1.0
SHEET 1 OF 1



2081.00



Gardco EcoForm Gen-2 combines economy with performance in an LED area luminaire. Capable of delivering up to 52,600 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings. Includes Service Tag, our innovative way to provide assistance throughout the life of the product.

Project: _____
Location: _____
Gd.No: _____
Type: _____
Lamps: Qty: _____
Notes: _____

Ordering guide

example: ECF-L-96L-1A-DW-AR-APR-90-120-DD-PCB-F1-SP1-T8-RPA-HIS-BK

Part	Description	Part	Description	Part	Description	Part	Description
ECF-L	EcoForm luminaire	90L	90 LEDs (6 modules)	1A	1200mA	WW-02	Warm White 3000K, 70CRI Generation 2
		1A	1200mA	WW-02	Warm White 3000K, 70CRI Generation 2	AR	Arm Mount (standard)
		1A	1200mA	WW-02	Warm White 3000K, 70CRI Generation 2	AR	Arm Mount (standard)

Option	Description	Option	Description	Option	Description
DO SM	0-10V External dimming (for controls by others)	MRB SM	Integral with 40 pins	PCB SM	Photocontrol Button
DDA SM	Dual On/Off Control	MRP SM	Integral with 47 pins	TLR20 SM	Twist Lock Receptacle 5 Pin
FAWBA SM	Field Adjustable Wattage Selector	TLR20 SM	Twist Lock Receptacle 5 Pin	TLR20 SM	Twist Lock Receptacle 5 Pin
LIQ SM	Integral wireless module	TLR20 SM	Twist Lock Receptacle 5 Pin	TLR20 SM	Twist Lock Receptacle 5 Pin
BL SM	Bluetooth	TLR20 SM	Twist Lock Receptacle 5 Pin	TLR20 SM	Twist Lock Receptacle 5 Pin
DRIVER SM	8 pin driver connected to Zhaga socket	TLR20 SM	Twist Lock Receptacle 5 Pin	TLR20 SM	Twist Lock Receptacle 5 Pin

1. BL-MRBS/7 equipped with auto-balanced sensor housing when voltage is 120V (240V/200V).
2. Mounts to a 4" round pole with adapter included for square poles.
3. Limited to a maximum of 45 degrees aiming above horizontal.
4. Not available with other dimming control options.
5. Not available with motion sensor.
6. Not available with photocell sensor.
7. Must specify motion sensor.
8. Not available with 8 pin or 40 pin.
9. Must specify input voltage.
10. TLR20, TLR27 and TLPC receptacle pins 4 & 5 are capped off unless ordered with any of the dimming controls DO or FAWB or LLC.
11. Not available in 480V. Order photocell separately with TLR20/7.
12. Not available with 500V.
13. Not available with BF and WB. RPA provided with black finish standard.
14. Not available with Type 4, 5, 6, BLC, BLD-90, or BLD-270.
15. Not available with DD, DCC, and FAWB dimming control options.
16. Not available with DD, DCC, FAWB and LLC dimming control options.
17. When ordering BRDR, controller (by other) to be used on.



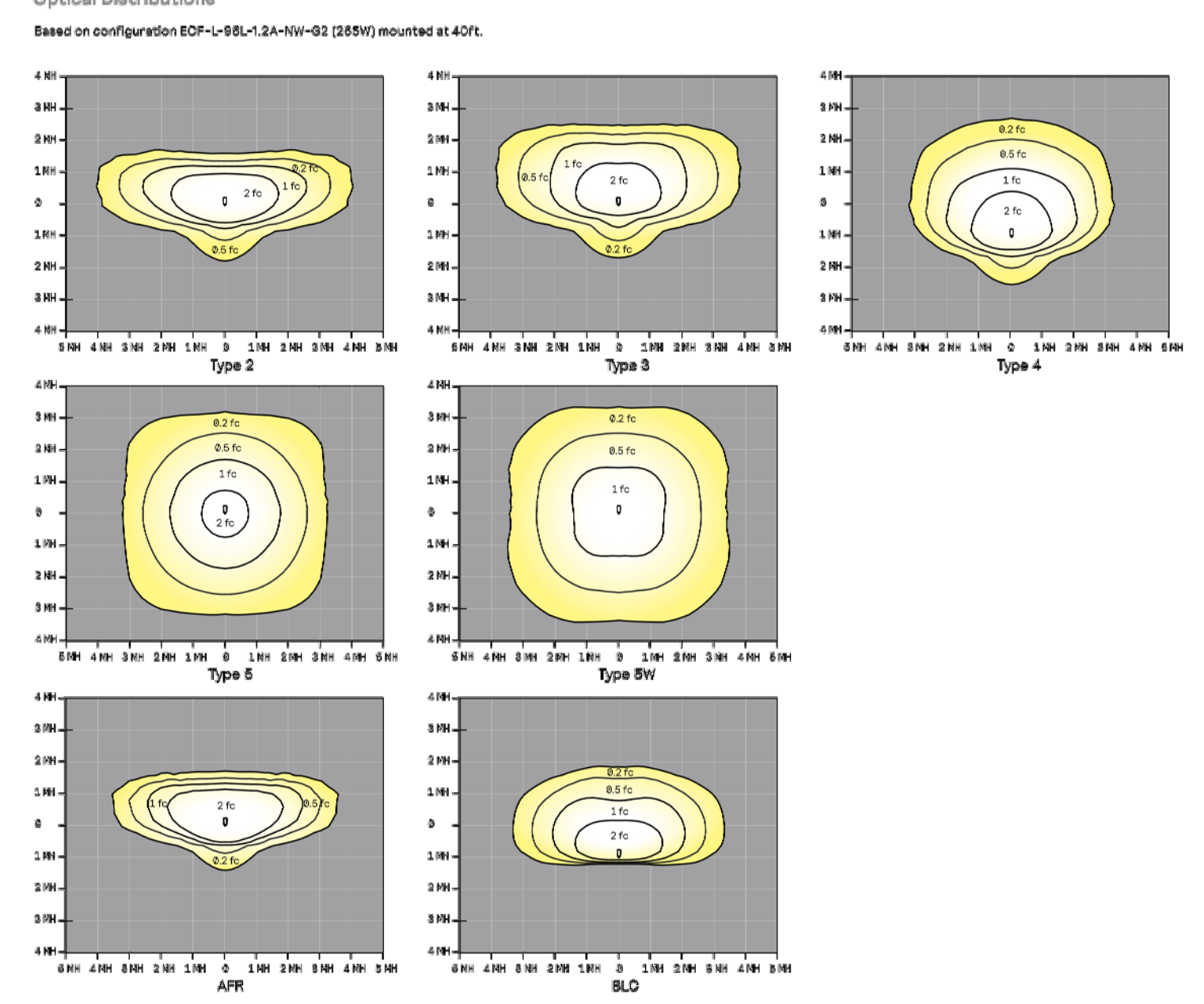
ECF-L EcoForm large
Area luminaire

Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L₇₀ is the predicted time when LED performance is deprecates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L₇₀ hours limited to 8 times actual LED test hours

Ambient Temperature -°C	Driver mA	Calculated L ₇₀ Hours	L ₇₀ per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1400 mA	>100,000 hours	>90,000 hours	>96%

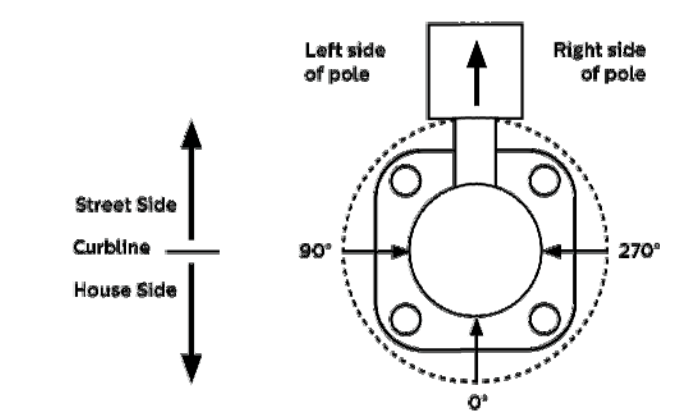
Optical Distributions



ECF-L EcoForm large
Area luminaire

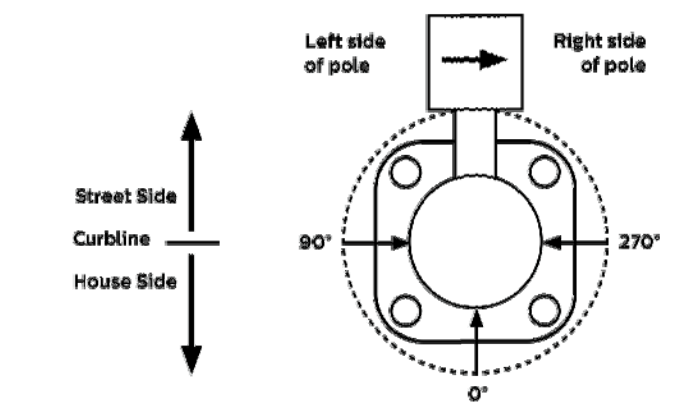
Optical Orientation Information

Standard Optic Position
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:



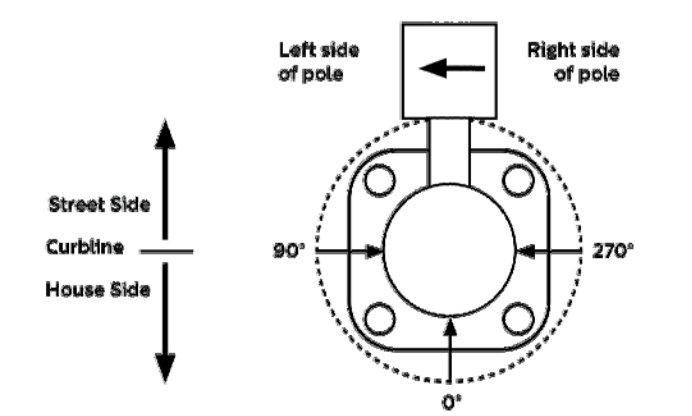
Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Right (270°) Optic Position
Luminaires ordered with optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below (Type 5 and SW optics are not available with factory set rotatable optics):



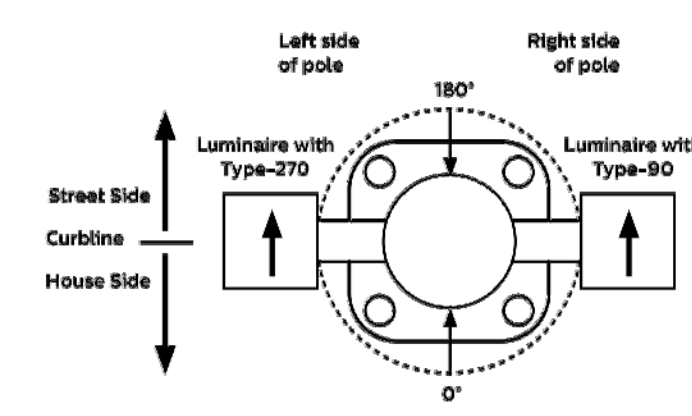
Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Left (90°) Optic Position
Luminaires ordered with optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below (Type 5 and SW optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

Two Luminaire Assemblies with Type-90/Type-270 Rotated Optics
Twin luminaire assemblies installed with rotated optical systems are an excellent way to direct light toward the interior of the site (Street Side) without additional equipment. It is important, however, that care be exercised to insure that luminaires are installed in the proper location.



Note: The hand hole location will depend on the drilling configuration ordered for the pole.

ECF-L EcoForm large
Area luminaire

3000K LED Wattage and Lumen Values

Ordering Code	Total LEDs	Current (mA)	LED Temp. (°C)	Color System	Type 2			Type 3			Type 4			Type 5			Type SW		
					Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)
ECF-L-90L-90-WW-02-x	80	800	3000	228	32,736	84-02-03	127	27,824	84-02-04	124	25,344	84-02-05	122	23,888	84-02-06	120	22,560	84-02-07	118

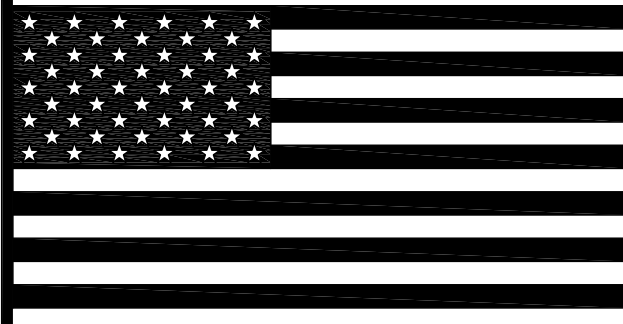
4000K LED Wattage and Lumen Values

Ordering Code	Total LEDs	Current (mA)	LED Temp. (°C)	Color System	Type 2			Type 3			Type 4			Type 5			Type SW		
					Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)
ECF-L-90L-90-WW-02-x	80	800	3000	228	32,736	84-02-03	127	27,824	84-02-04	124	25,344	84-02-05	122	23,888	84-02-06	120	22,560	84-02-07	118

4000K LED Wattage and Lumen Values

Ordering Code	Total LEDs	Current (mA)	LED Temp. (°C)	Color System	Type 2			Type 3			Type 4			Type 5			Type SW		
					Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)	Lumen Output	BIG Rating (LPW)	Efficiency (LPW)
ECF-L-90L-90-WW-02-x	80	800	3000	228	32,736	84-02-03	127	27,824	84-02-04	124	25,344	84-02-05	122	23,888	84-02-06	120	22,560	84-02-07	118

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. RPA highly recommended to confirm performance with photometric layout. NOTE: Some data may be based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.



REVISIONS:

REV.	DATE	DESCRIPTION

CLIENT:
LEVEL DESIGN GROUP
249 SOUTH ST., UNIT 1
PLAINVILLE, MA 02762

PROJECT:
LIBERTY PARKING EXPANSION
15 LIBERTY WAY
FRANKLIN, MA

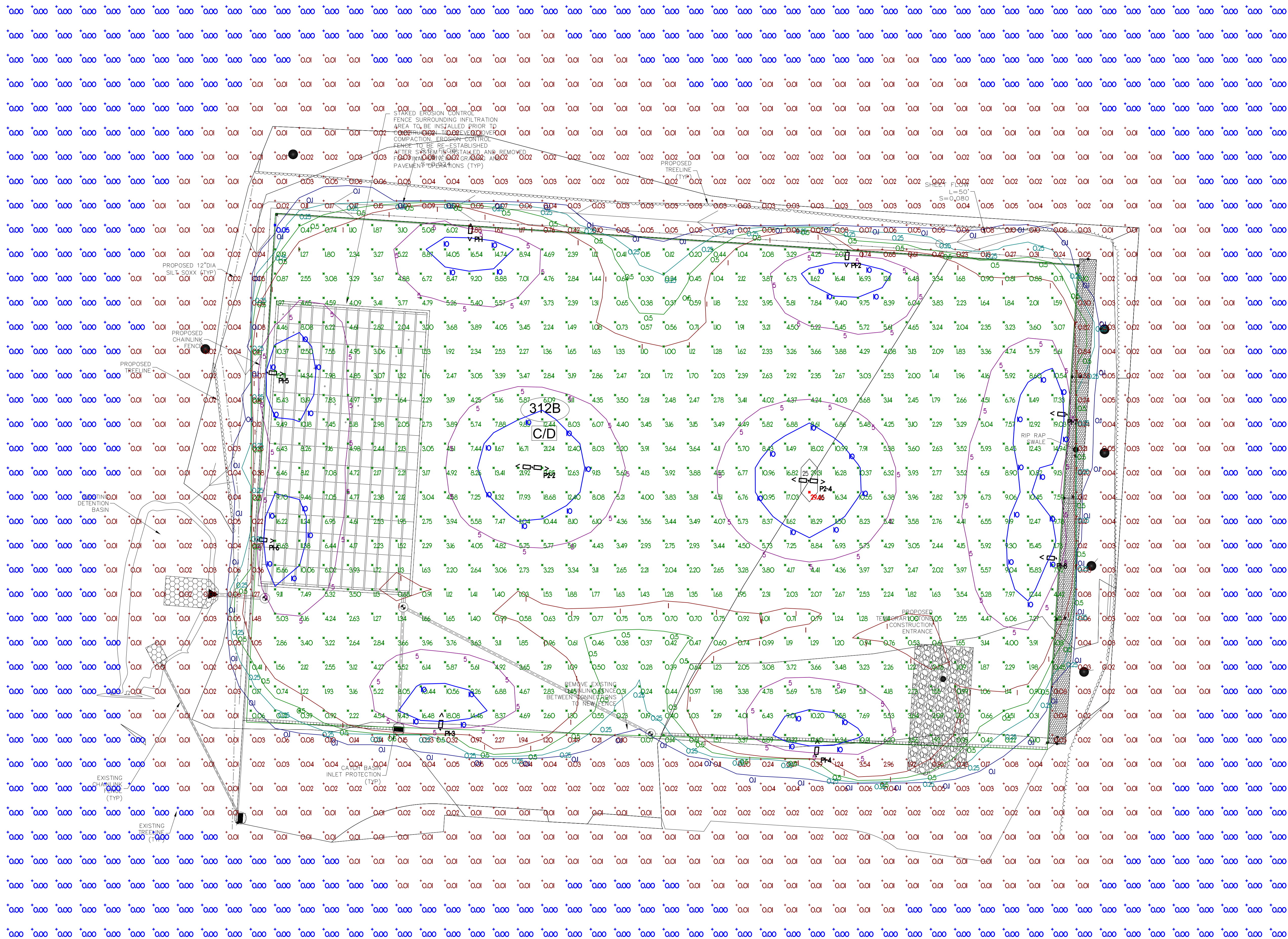
DRAWING TITLE:
PHOTOMETRY LIGHTING SPEC'S

DRAWN: CDO
CHECKED: VAD Jr.
SCALE: NOT TO SCALE
DATE: 3/13/23

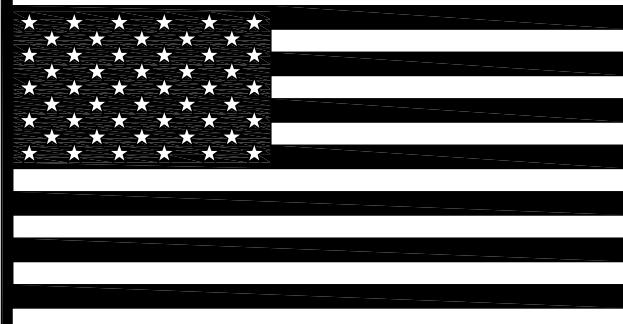
Statistics						
Description	Symbol	Avg	Max	Mn	Max/Min	Avg/Min
TRAILER PARKING	X	4.69	16.29	0.05	11.5892	93.61

Schedule							
Symbol	Label	QTY	Manufacturer	Catalog	Description	Number	Lot
△	P1	8	PHILIPS GARDCO	ECF-L-80L-1A-NW-G2-BLC	EcoForm Area LED ECF - Large, 80 4000K CCT, TYPE BLC OPTIC.	LED's	24081
□	P2	2	SIGNIFY GARDCO	ECF-L-80L-1A-NW-G2-4	EcoForm Area LED ECF - Large, 80 4000K CCT, TYPE 4 OPTIC, No Shield	LED's	33656

ALL FIXTURES ARE SHOWN AT 18'-0" ABOVE FINISHED GRADE



est. 1972
VINCENT A. D'ORIO, INC.
CONSULTING ENGINEERS
89 Access Rd. Suite 18
Norwood, MA 02062
(781)255-9754 | vadjr@vadeng.com
www.vadeng.com



REVISIONS:	
REV.	DATE: DESCRIPTION:

CLIENT:
LEVEL DESIGN GROUP
249 SOUTH ST., UNIT 1
PLAINVILLE, MA 02762

PROJECT:
LIBERTY PARKING EXPANSION
15 LIBERTY WAY
FRANKLIN, MA

DRAWING TITLE:
PHOTOMETRIC SITE LIGHTING

DRAWN: CDO
CHECKED: VAD Jr
SCALE: 1" = 20'-0"
DATE: 3/13/23

PH1.1