

LOCUS MAP
not to scale

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



TO LIBERTY WAY

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

LEGEND

| | |
|------|--------------------------|
| B | BOLLARD |
| BIT. | BITUMINOUS |
| CLF | 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 |
| RBF | 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 AUGUST 2, 2023.
- 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.

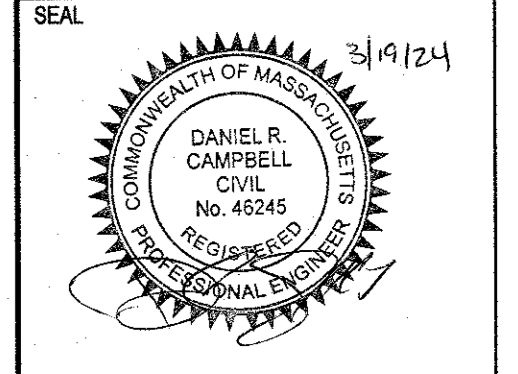
DATUM NOTES

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.

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS, TITLE 250 CMR 6.00.

ROBERT R. LITCHFIELD, PLS #47615 DATE

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 02/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |



DATE: JANUARY 13, 2023
DRAWN: AH/DRG
SCALE: 1"=40'

LIBERTY PARKING EXPANSION

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



EXISTING CONDITIONS

C-1.0

SHEET 2 OF 8

2081.00

ZONING DISTRICT

ZONED: INDUSTRIAL
 USE: 3.10 WAREHOUSE, DISTRIBUTION FACILITY (EXISTING)

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



ZONING REQUIREMENTS

ZONING DISTRICT: INDUSTRIAL

| | REQUIRED | EXISTING | PROPOSED |
|--|----------------------------------|---------------|---------------|
| MIN LOT AREA | 40,000 S.F. | 653,400± S.F. | 653,400± S.F. |
| FRONTAGE | 175' | 946.73' | 946.73' |
| FRONT YARD SETBACK | 40' | 95.9'*** | 95.9'*** |
| SIDE YARD SETBACK | 30' | 149.3' | 149.3' |
| REAR YARD SETBACK | 30' | 259.6' | 259.6' |
| BUILDING COVERAGE | 70% MAX. | 14.6%** | 14.6%** |
| IMPERVIOUS COVERAGE | 80% MAX. | 46.7%*** | 56.9%*** |
| MAX. BUILDING HEIGHT | 3 STORIES* | 1 STORY/24' | 1 STORY/24' |
| PARKING REQUIREMENTS | | | |
| USE: EXISTING WAREHOUSE; ONE SPACE PER 1,000 SF OF GROSS FLOOR AREA. | 95,475 SF / 1,000 SF = 96 SPACES | 98 | (98) EXISTING |

- * BUILDINGS UP TO 60' IN HEIGHT MAY BE PERMITTED BY A SPECIAL PERMIT FROM THE PLANNING BOARD.
- ** BUILDING AREA IS BASED ON FRANKLIN ASSESSORS RECORDS
- *** TAKEN FROM THE RECORD SURVEY IN ADDITION TO AERIAL IMAGERY.

PLAN NOTES:

1. EXISTING CONDITIONS WERE OBTAINED FROM FIELD SURVEY PREPARED BY LEVEL DESIGN GROUP, LLC BETWEEN NOVEMBER 2, 2022 AND AUGUST 2, 2023. SOIL TESTING COMPLETED BY ADAM P. HUNT ON NOVEMBER 16, 2022 AND OCTOBER 4, 2023.
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.

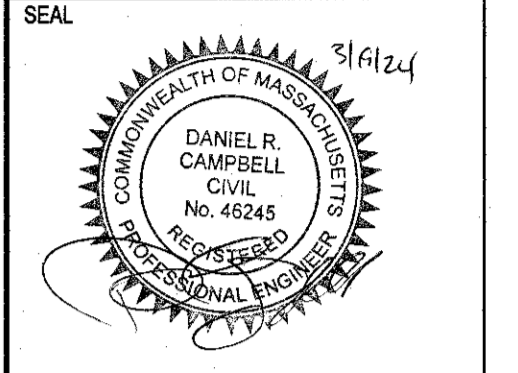
SITE PLAN NOTES:

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.



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

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 02/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |



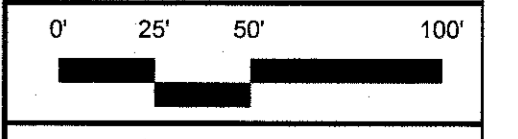
DATE: JANUARY 13, 2023
 DRAWN: AH/DRC
 SCALE: 1" = 50'

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



OVERALL SITE PLAN

C-2.0
 SHEET 3 OF 9



2081.00

ZONING DISTRICT

ZONED: INDUSTRIAL

USE: 3.10 WAREHOUSE, DISTRIBUTION FACILITY (EXISTING)

MINIMUM BUILDING SETBACKS

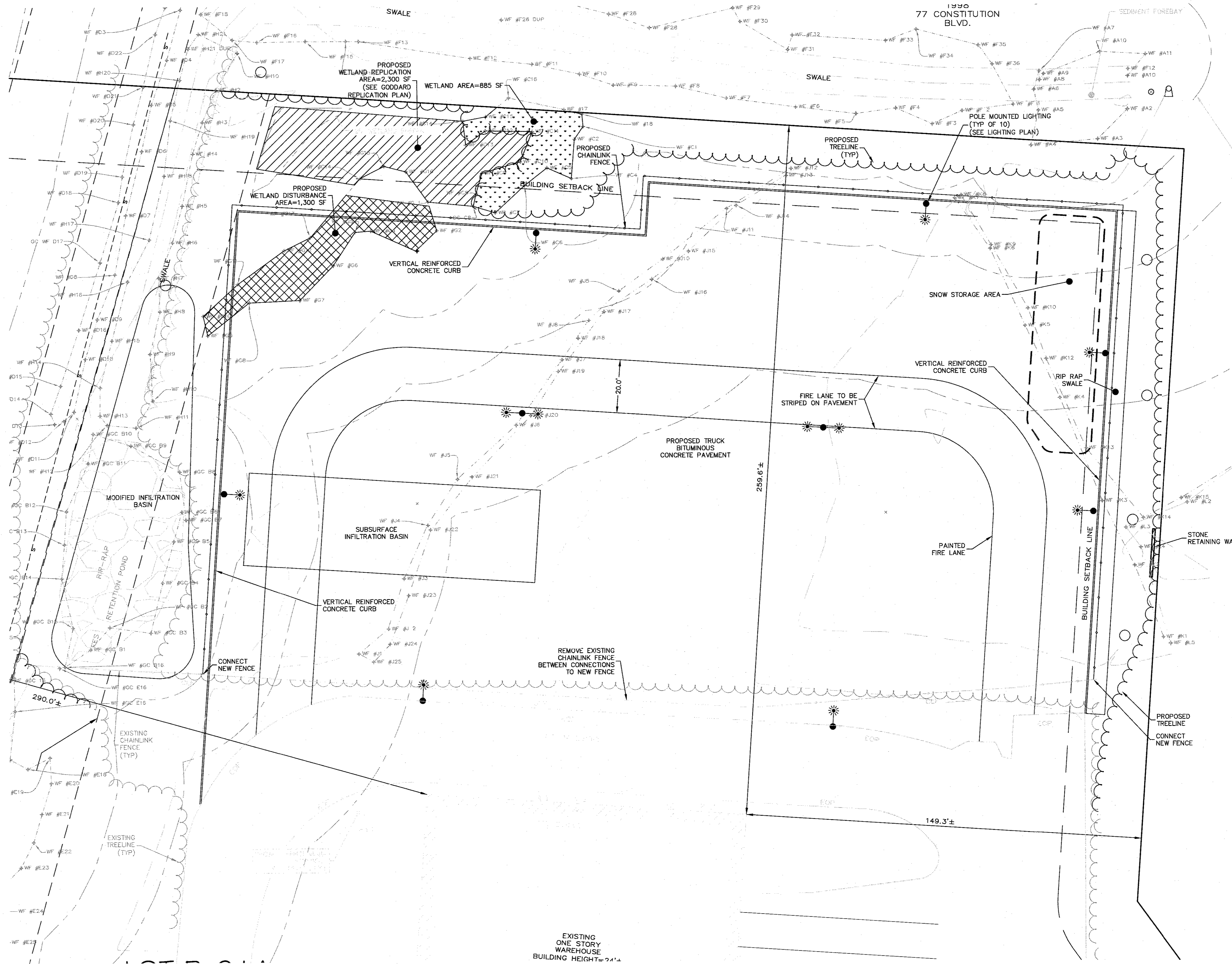
FRONT=40
FEET SIDE=30 FEET
REAR=30 FEET

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



PLAN NOTES:

- EXISTING CONDITIONS WERE OBTAINED FROM FIELD SURVEY PREPARED BY LEVEL DESIGN GROUP, LLC BETWEEN NOVEMBER 2, 2022 AND AUGUST 2, 2023. SOIL TESTING COMPLETED BY ADAM P. HUNT ON NOVEMBER 16, 2022 AND OCTOBER 4, 2023.
- 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.

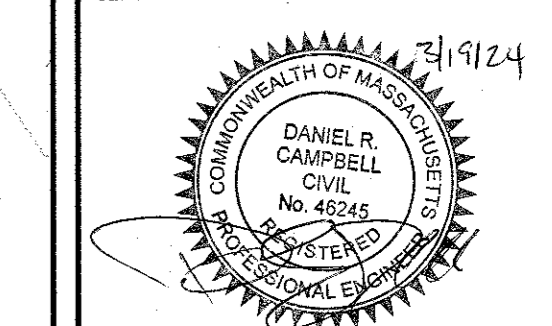
CONSTRUCTION NOTES:

- 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 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 SEEDING.
- 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.

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 02/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |



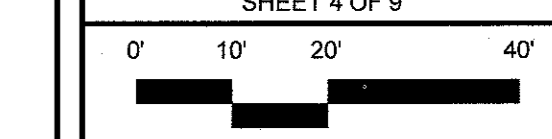
DATE: JANUARY 13, 2023
DRAWN: AH / DRC
SCALE: 1" = 20'

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

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

LAYOUT & MATERIALS

C-3.0
SHEET 4 OF 9



2081.00

ZONING DISTRICT
 ZONED: INDUSTRIAL
 USE: 3.10 WAREHOUSE, DISTRIBUTION FACILITY (EXISTING)

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.

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 02/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |

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

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

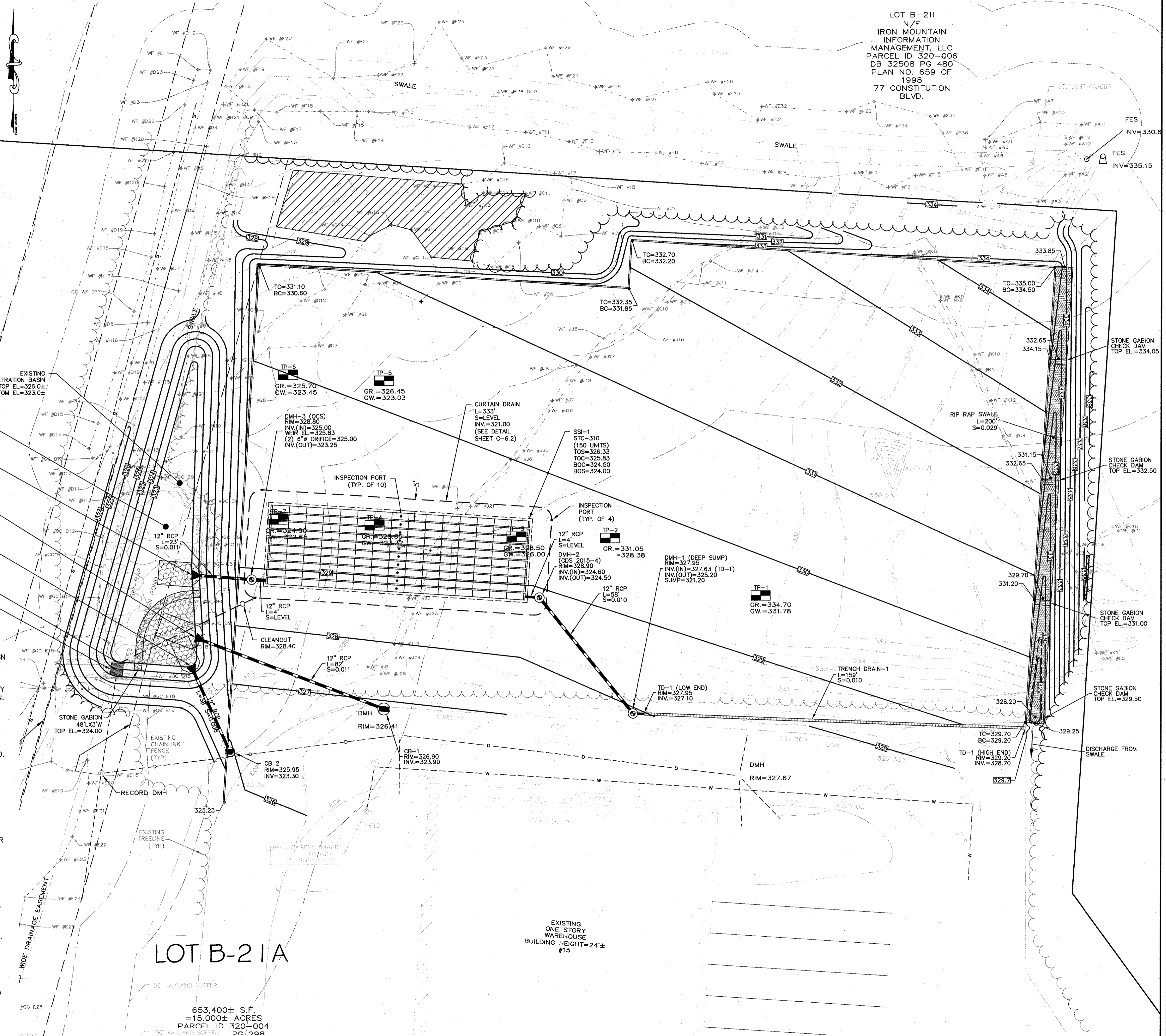
LEVEL
 DESIGN GROUP
 Civil Engineers & Land Surveyors
 249 SOUTH STREET, SUITE 1
 PLAINVILLE, MA 02762
 TEL. (508) 695-2221 FAX. (508) 695-2219

GRADING & DRAINAGE

C-4.0
 SHEET 5 OF 9

0' 10' 20' 40'

2081.00



PLAN NOTES:

- EXISTING CONDITIONS WERE OBTAINED FROM FIELD SURVEY PREPARED BY LEVEL DESIGN GROUP, LLC BETWEEN NOVEMBER 2, 2022 AND AUGUST 2, 2023. SOIL TESTING COMPLETED BY ADAM P. HUNT ON NOVEMBER 16, 2022 AND OCTOBER 4, 2023.
- 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:

- 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 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:

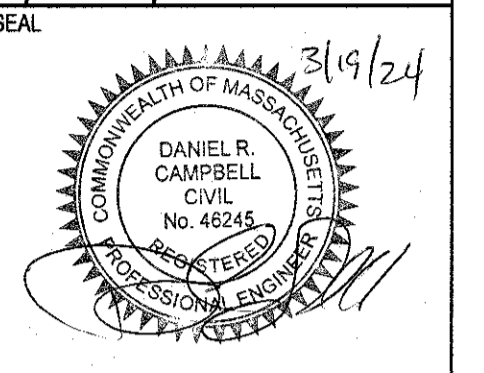
- THIS PLAN SET HAS BEEN ISSUED FOR PERMITTING ONLY. A FULL CONSTRUCTION PLAN SET SHALL BE ISSUED ONCE ALL LOCAL, STATE, AND FEDERAL PERMIT APPROVALS HAVE BEEN GRANTED.

WIDE DRAINAGE EASEMENT

LOT B-21A

653,400± S.F.
 =15,000± ACRES
 PARCEL ID 120-004
 26/00R

EXISTING ONE STORY WAREHOUSE BUILDING HEIGHT=24'± #15



ZONING DISTRICT

ZONED: INDUSTRIAL
USE: 3.10 WAREHOUSE, DISTRIBUTION FACILITY (EXISTING)

MINIMUM BUILDING SETBACKS

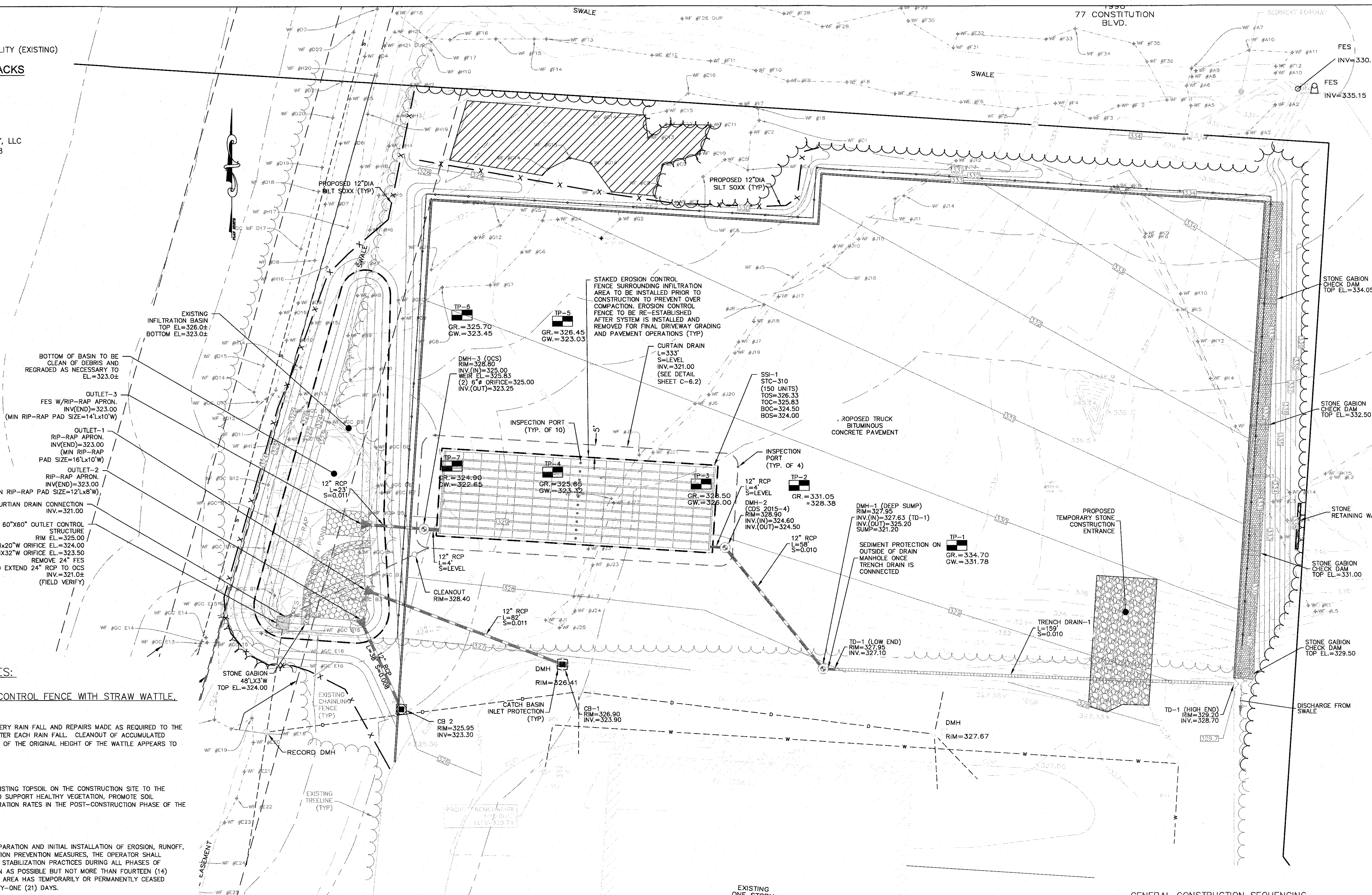
FRONT=40
FEET SIDE=30 FEET
REAR=30 FEET

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



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, PROMOTE 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 CONTROLS 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 AN 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, RUMBLE STRIPS, AND RATTLE PLATES). WHERE SEDIMENT HAS BEEN TRACKED OUT 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.

FOR ANY STOCKPILES OR LAND CLEARING DEBRIS COMPOSED, IN WHOLE OR IN PART, OF SEDIMENT OR SOIL, YOU MUST COMPLY WITH THE FOLLOWING REQUIREMENTS - LOCATE PILES WITHIN THE DESIGNATED LIMITS OF DISTURBANCE OUTSIDE OF THE 100-FOOT BUFFER ZONE, PROTECT FROM CONTACT WITH STORMWATER (INCLUDING RUN-ON) USING A TEMPORARY PERIMETER SEDIMENT BARRIER; WHERE PRACTICABLE, PROVIDE COVER OR APPROPRIATE TEMPORARY VEGETATIVE OR STRUCTURAL STABILIZATION TO AVOID DIRECT CONTACT WITH PRECIPITATION OR TO MINIMIZE SEDIMENT DISCHARGE; NEVER HOSE DOWN OR SWEEP SOIL OR SEDIMENT ACCUMULATED ON PAVEMENT OR OTHER IMPERVIOUS SURFACES INTO ANY STORMWATER CONVEYANCE, STORM DRAIN INLET, OR SURFACE WATER; TO THE MAXIMUM EXTENT PRACTICABLE, CONTAIN AND SECURELY PROTECT FROM WIND.

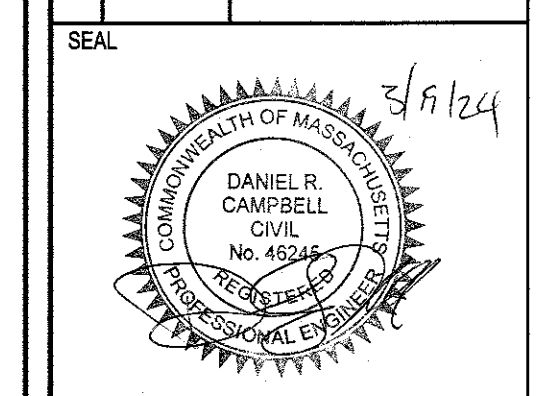
GENERAL CONSTRUCTION SEQUENCING

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 PAVING;
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.

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 02/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |

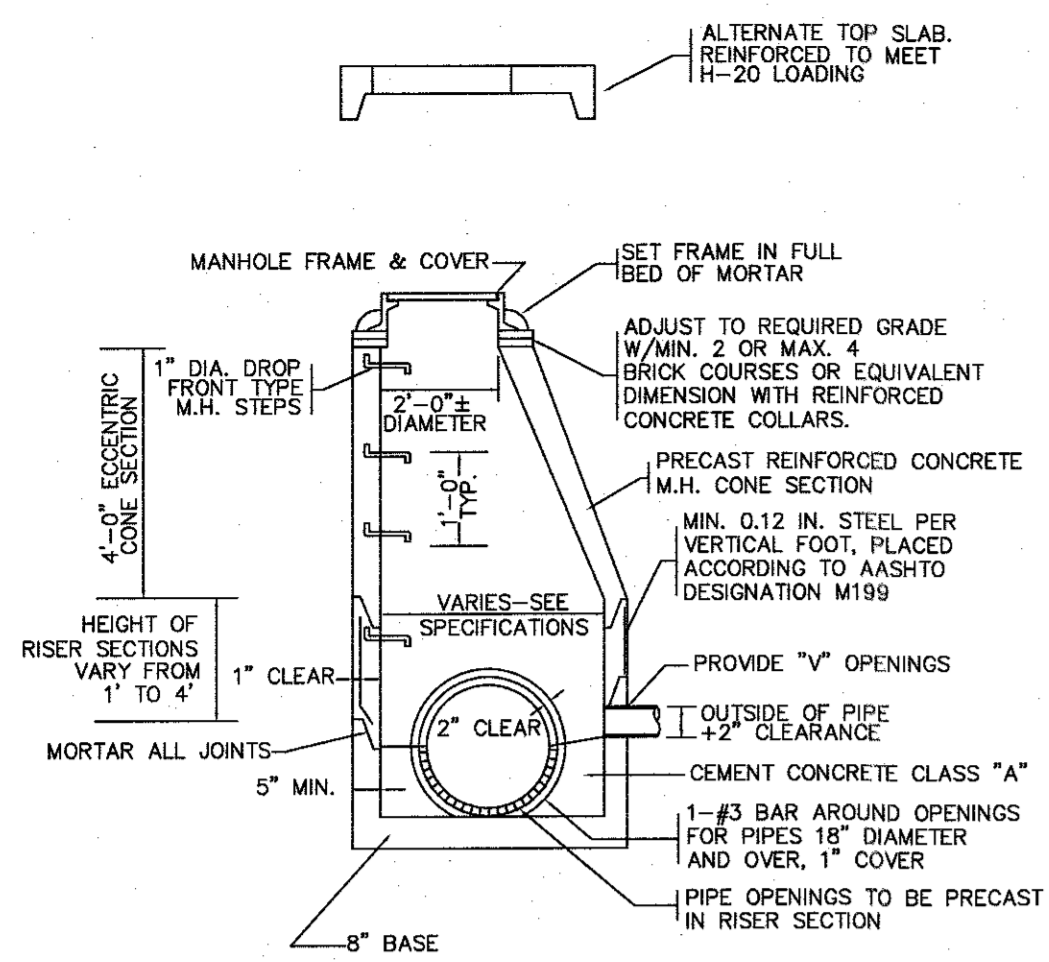


DATE: JANUARY 13, 2023
DRAWN: AH/DRG
SCALE: 1"=20'

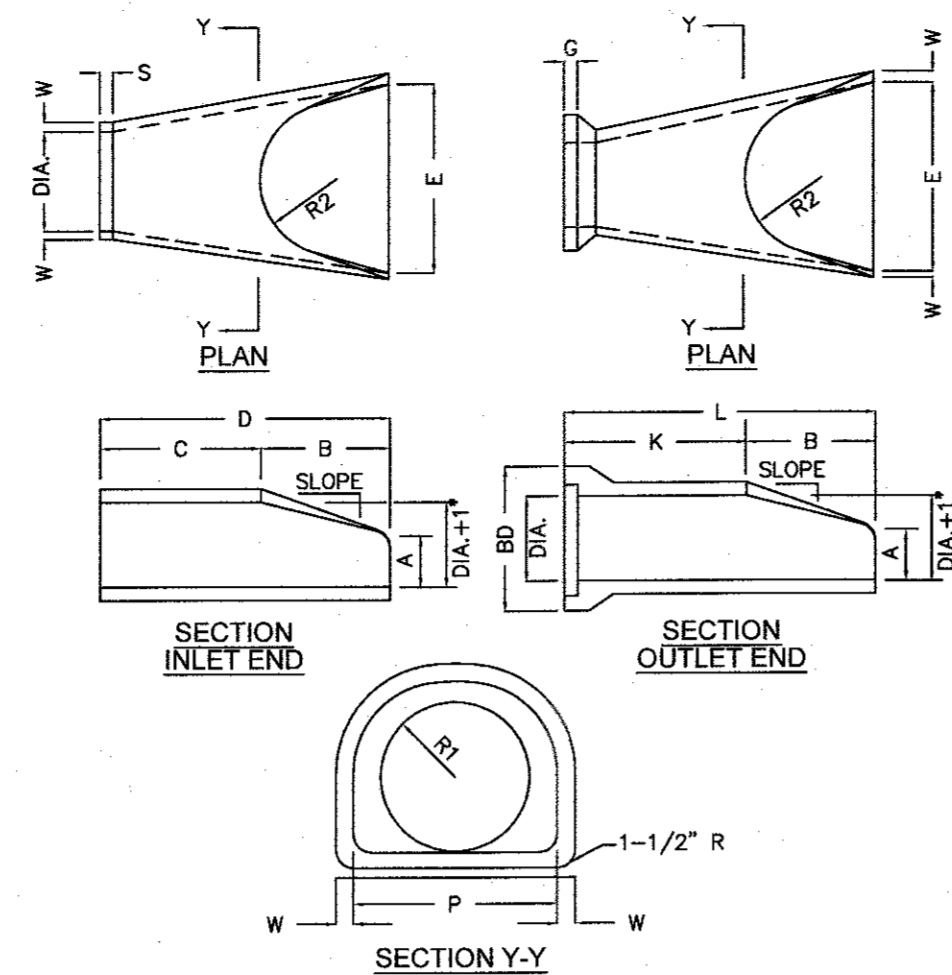
LIBERTY PARKING EXPANSION
MAP SHEET 320, PARCEL 004
15 LIBERTY WAY
FRANKLIN, MASSACHUSETTS



EROSION CONTROL
C-5.0
SHEET 6 OF 9
0 10' 20' 40'
2081.00



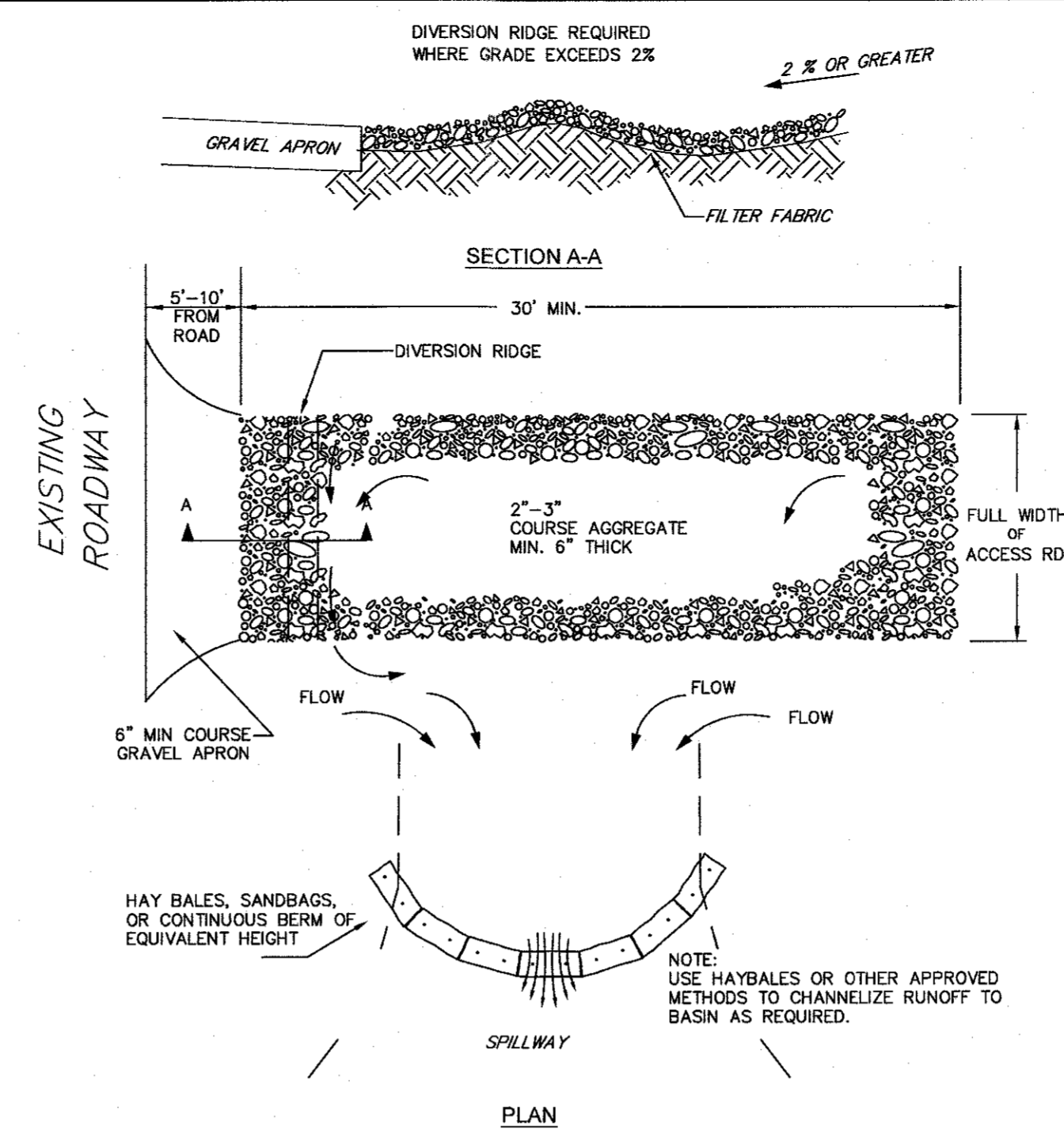
PRECAST CONCRETE DRAIN MANHOLE
NOT TO SCALE



| DIA. | W | A | B | C | D | E | BD |
|------|--------|--------|-----------|-----------|-----------|-------|-----|
| 12" | 2" | 4" | 2'-0" | 4'-0 7/8" | 6'-1 3/8" | 2'-0" | 20" |
| 15" | 2-1/4" | 6" | 2'-3" | 3'-10" | 6'-1 1/2" | 2'-6" | 24" |
| 18" | 2-1/2" | 9" | 2'-3" | 3'-10" | 6'-1" | 3'-0" | 28" |
| 21" | 2-3/4" | 9" | 2'-11" | 3'-2" | 6'-1" | 3'-6" | 32" |
| 24" | 3" | 9-1/2" | 3'-7 1/2" | 3'-2" | 6'-1" | 4'-0" | 36" |

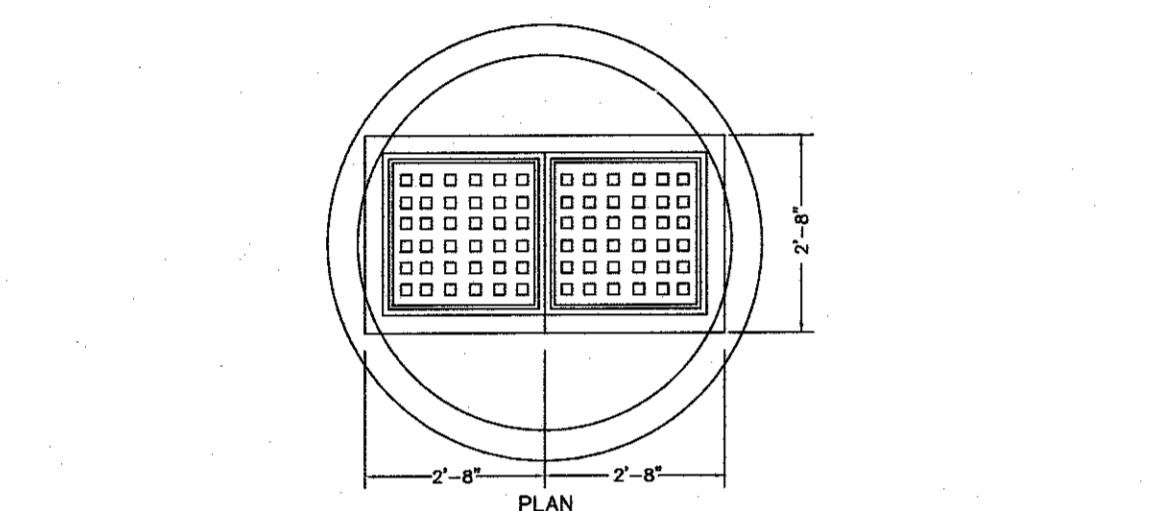
| DIA. | K | L | P | DIA. 1/4" | R1 | R2 | S | G | SLOPE |
|------|-------------|-------------|----------|-----------|-----------|-----|----|--------|-------|
| 12" | 4'-6 1/8" | 6'-6 1/8" | 19 5/16" | 13" | 10 1/8" | 9" | 4" | 2 1/2" | 3:1 |
| 15" | 4'-3 11/16" | 6'-6 11/16" | 24 5/16" | 16" | 12 1/2" | 11" | 4" | 2 1/2" | 3:1 |
| 18" | 4'-3 7/8" | 6'-6 7/8" | 29" | 19" | 15 1/2" | 12" | 4" | 2 3/4" | 3:1 |
| 21" | 3'-8 5/16" | 6'-7 5/16" | 31 5/8" | 22" | 16 1/8" | 13" | 4" | 2 3/4" | 3:1 |
| 24" | 3'-0 1/2" | 6'-8" | 33 3/16" | 25" | 16 13/16" | 14" | 4" | 3" | 3:1 |

REINFORCED CONCRETE PIPE FLARED END
NOT TO SCALE

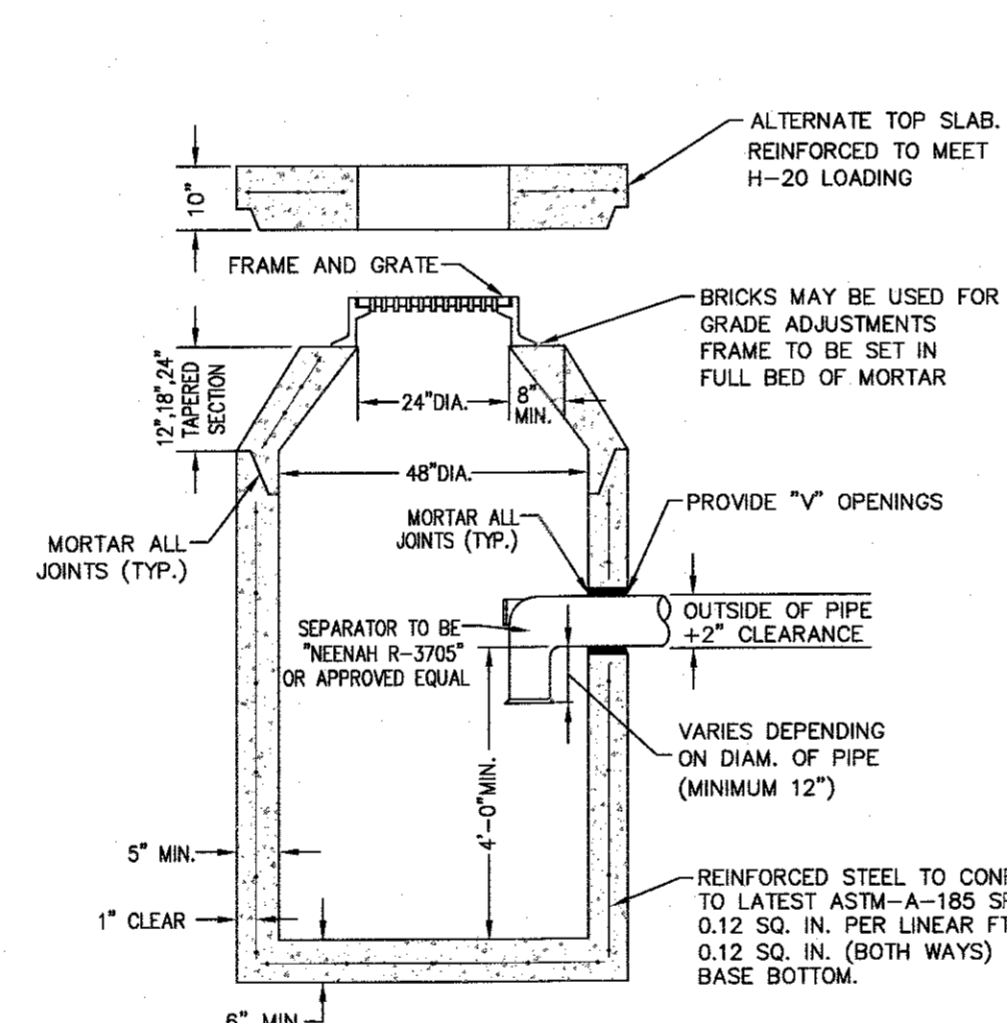


- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITIONS THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC 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.

TEMPORARY CONSTRUCTION ENTRANCE/EXIT DETAIL
NOT TO SCALE

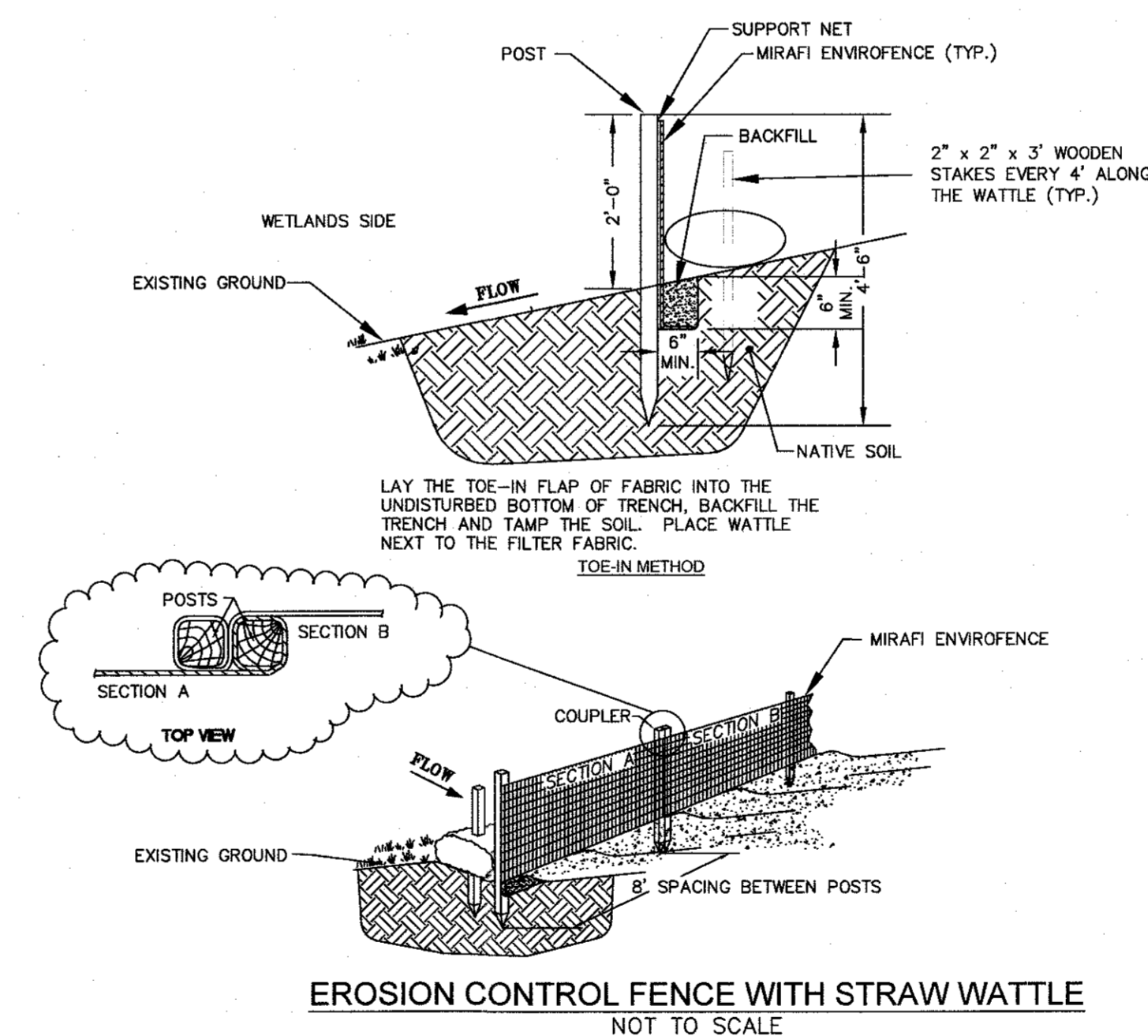


PRECAST CONCRETE DOUBLE CATCH BASIN WITH GAS AND OIL SEPARATOR
NOT TO SCALE

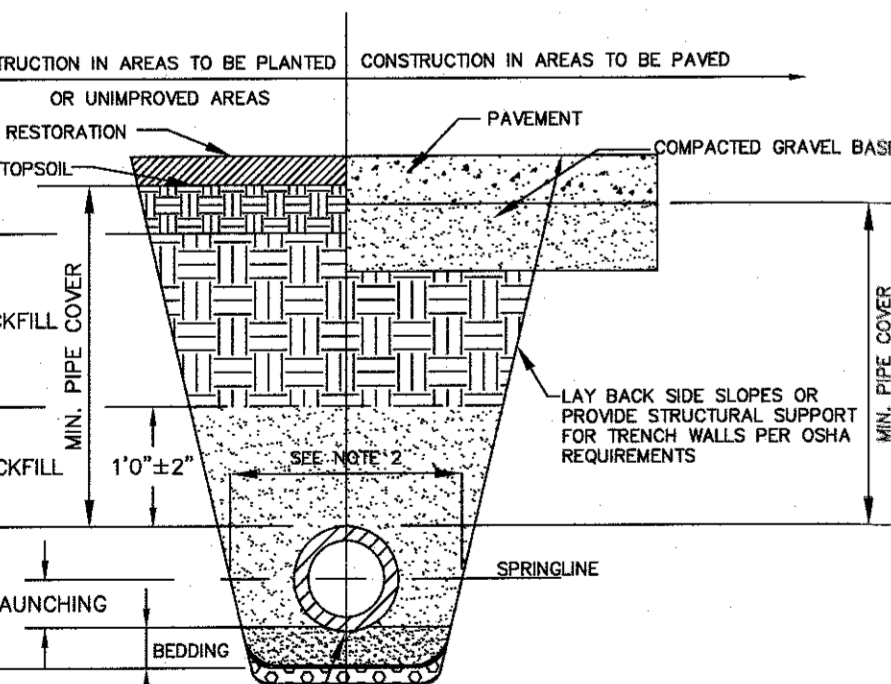


- NOTES:
1. CONCRETE TO BE 4,000 PSI MIN. PER ASTM C-478(6.1).
 2. REINFORCING TO MEET OR EXCEED H-20 LOADING REQUIREMENTS.

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



EROSION CONTROL FENCE WITH STRAW WATTLE
NOT TO SCALE



- SHAPE BEDDING BY HAND TO FIT BOTTOM OF PIPE. INSTALL PIPE ON STABLE BEDDING WITH UNIFORM BEARING UNDER FULL LENGTH OF PIPE BARREL.
- FOUNDATION STABILIZATION WHEN REQUIRED BY ENGINEER OTHERWISE PLACE BEDDING ON UNDISTURBED NATURAL SOIL.
- NOTES:
- [1] PLACE 3/4" MINUS GRADED GRANULAR BACKFILL AT OPTIMUM MOISTURE IN HORIZONTAL 8" 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 UNPAVED 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

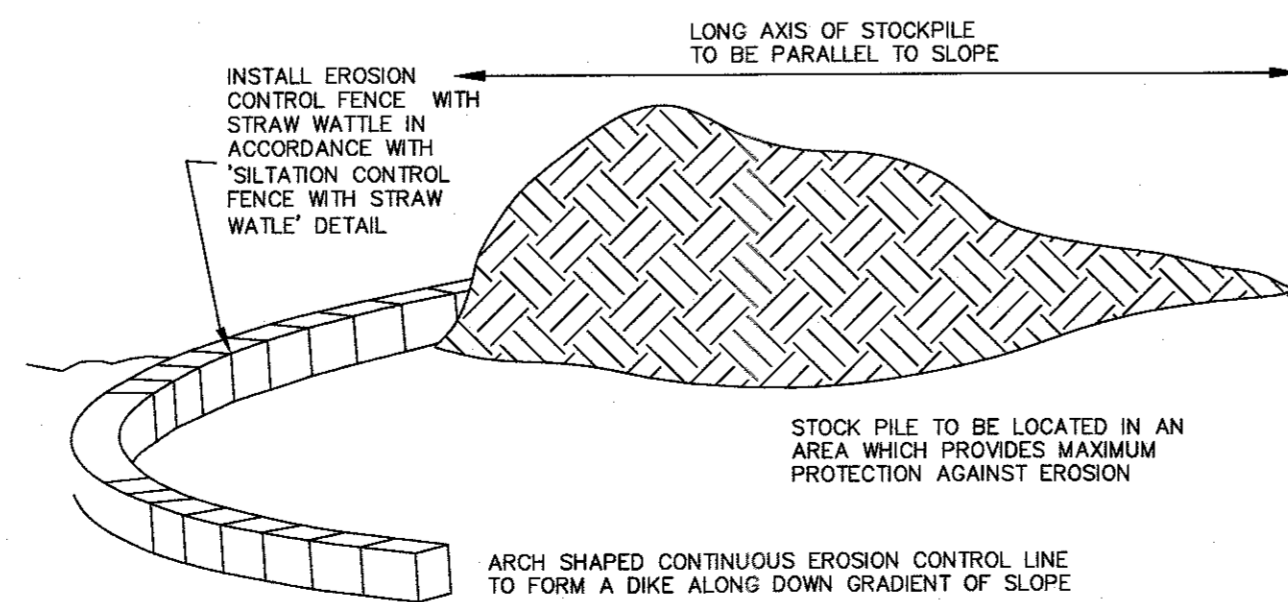
| FOUNDATION, BEDDING AND BACKFILL MATERIALS | HDR, PVC | RC, DI |
|--|----------|--------|
| PIPE MATERIAL | [1] | [1] |
| FOUNDATION STABILIZATION | [6] | [6] |
| BEDDING | [1] | [1] |
| HAUNCHING | [1] | [1] |
| INITIAL BACKFILL | [4] | [4] |
| FINAL BACKFILL | [4] | [4] |
| PIPE COVER | [5] | [5] |

UTILITY TRENCH
NOT TO SCALE

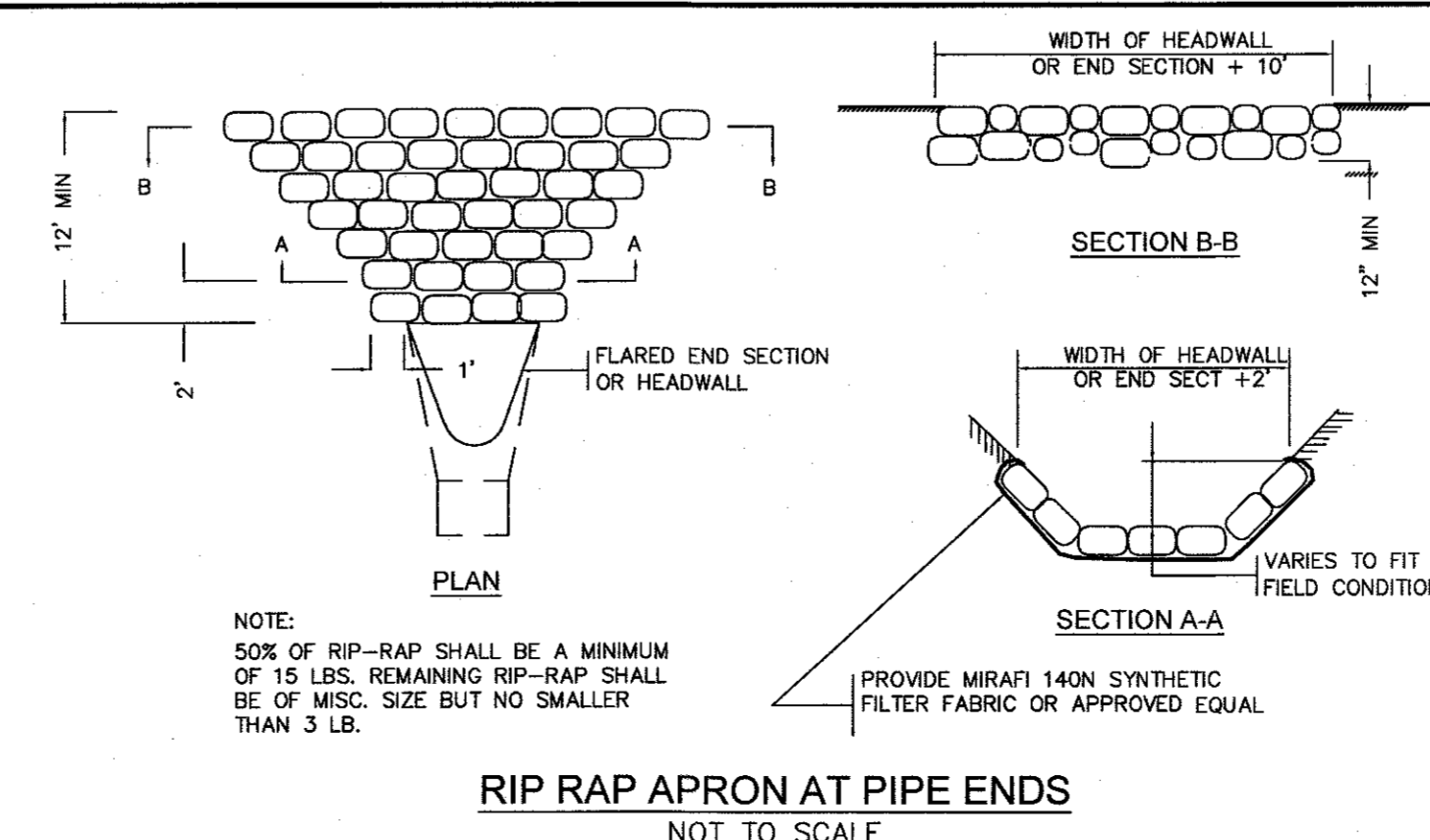
| PIPE ID | WIDTH |
|------------------|------------|
| LESS THAN 21" | O.D. + 12" |
| 21" TO 42" | O.D. + 24" |
| GREATER THAN 42" | O.D. + 30" |

| PIPE MATERIAL | HDR, PVC | RC, DI |
|---------------|----------|--------|
| WATER | 5'-0" | 5'-0" |
| SEWER | 4'-0" | 4'-0" |
| DRAIN | 2'-0" | 1'-6" |

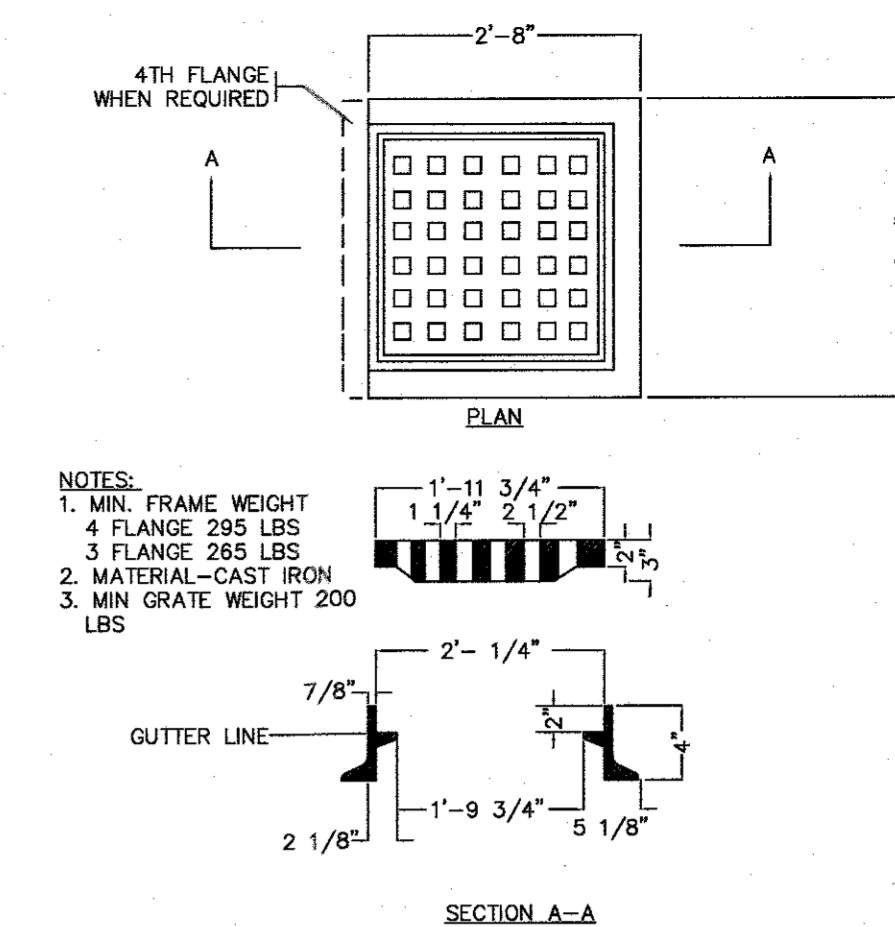
- [6] FOR FOUNDATION STABILIZATION, USE 2" MINUS CRUSHED STONE



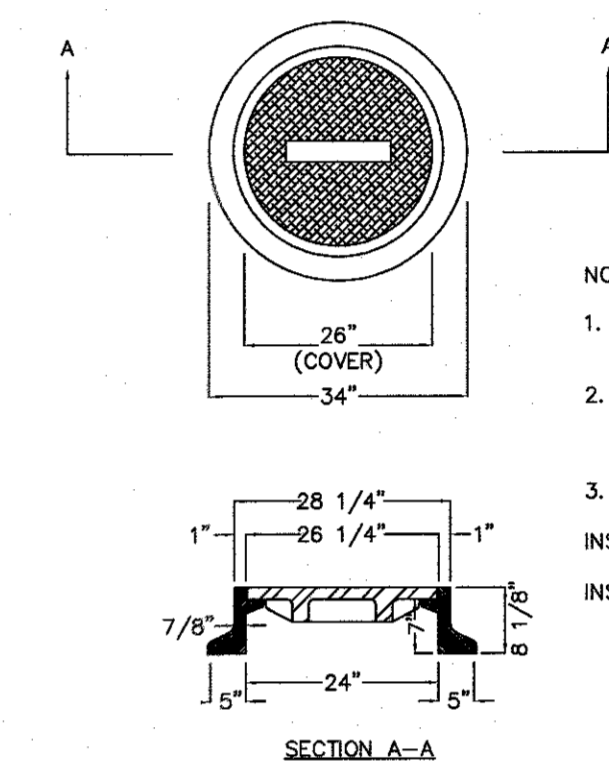
TEMPORARY MATERIAL STOCKPILE
NOT TO SCALE



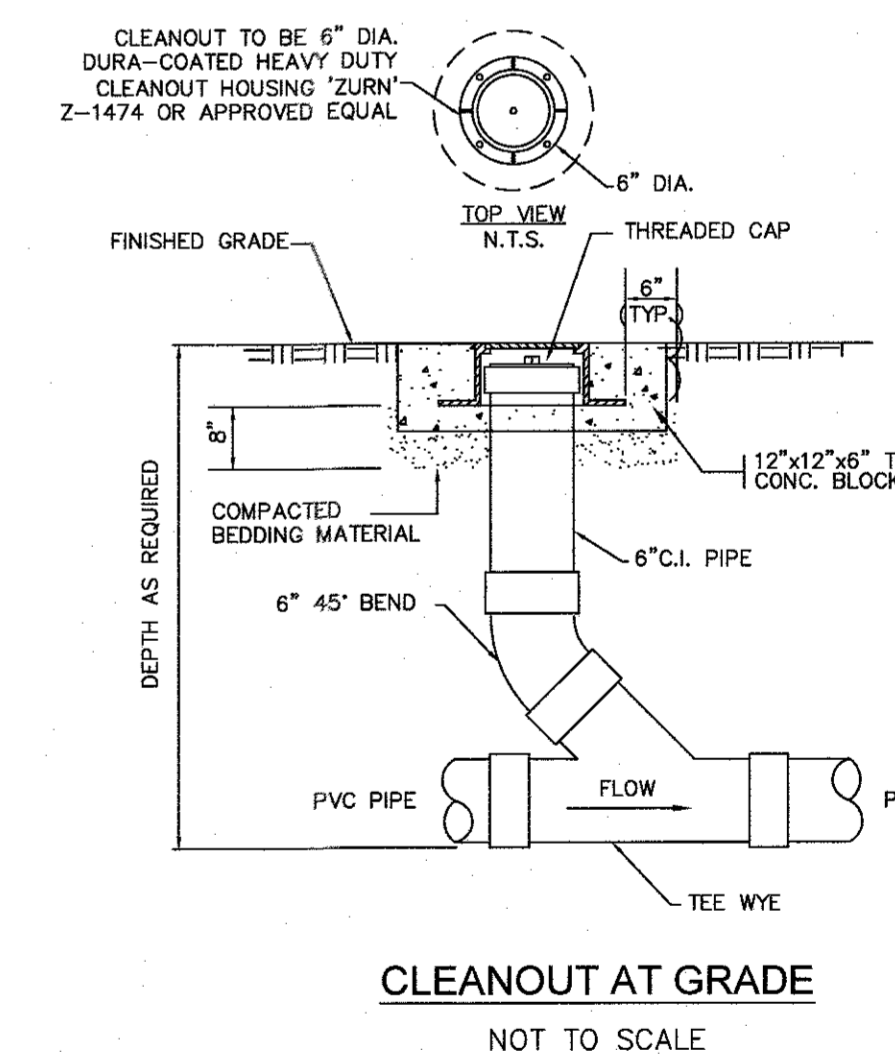
RIP RAP APRON AT PIPE ENDS
NOT TO SCALE



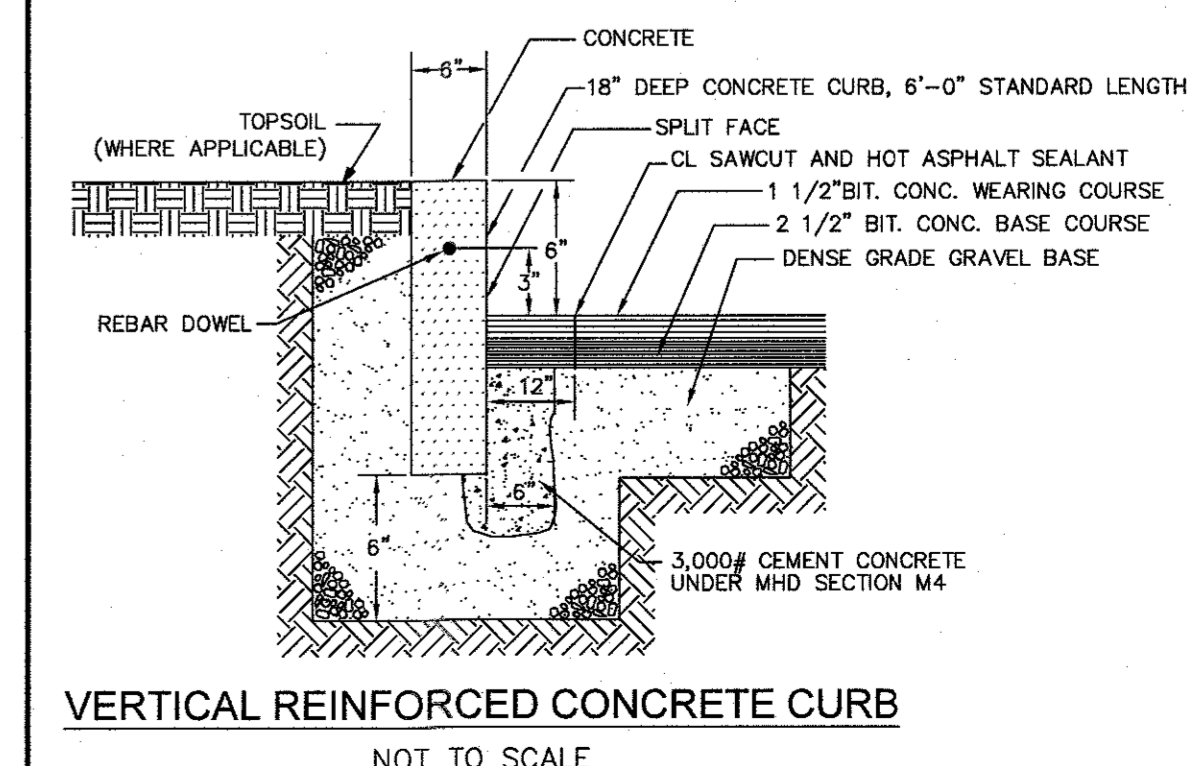
STANDARD CATCH BASIN FRAME & GRATE
NOT TO SCALE



STANDARD MANHOLE FRAME & COVER
NOT TO SCALE

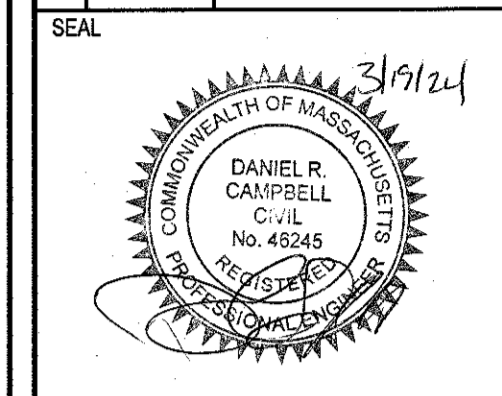


CLEANOUT AT GRADE
NOT TO SCALE



VERTICAL REINFORCED CONCRETE CURB
NOT TO SCALE

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 02/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |



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

LIBERTY PARKING EXPANSION

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

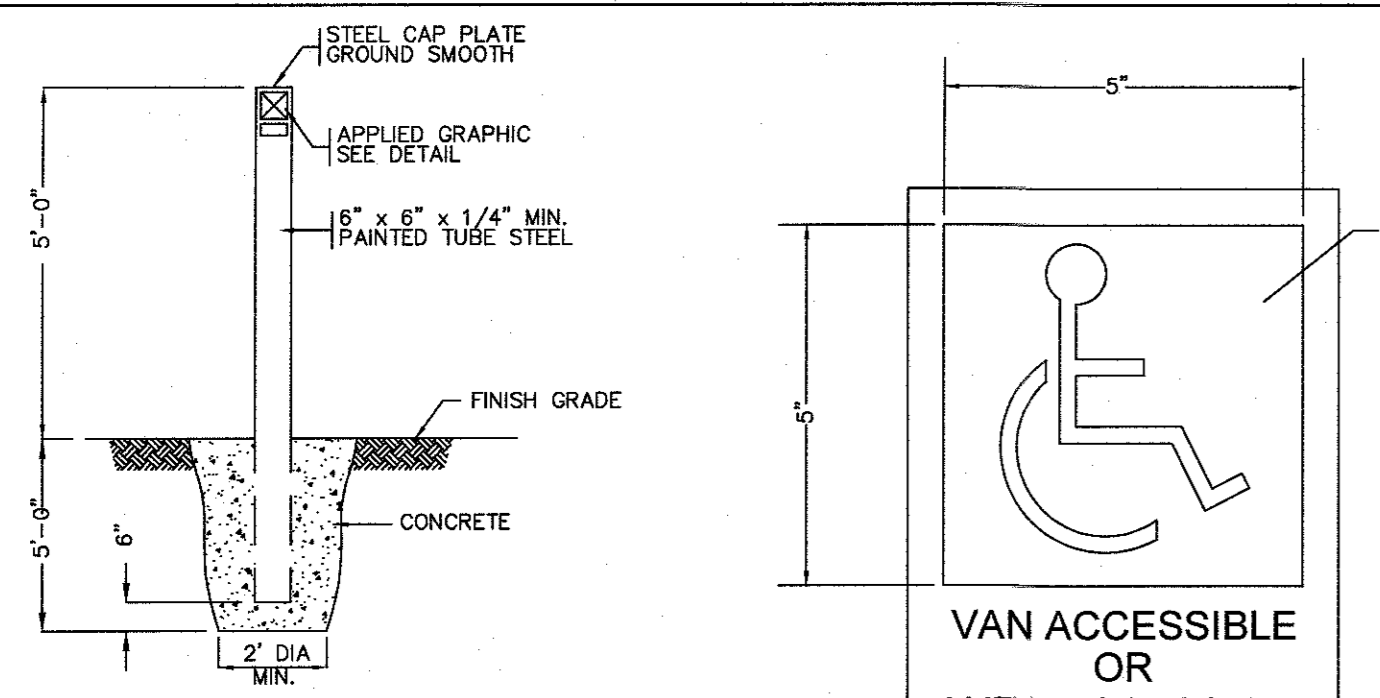


TYPICAL DETAILS

C-6.0

SHEET 7 OF 9

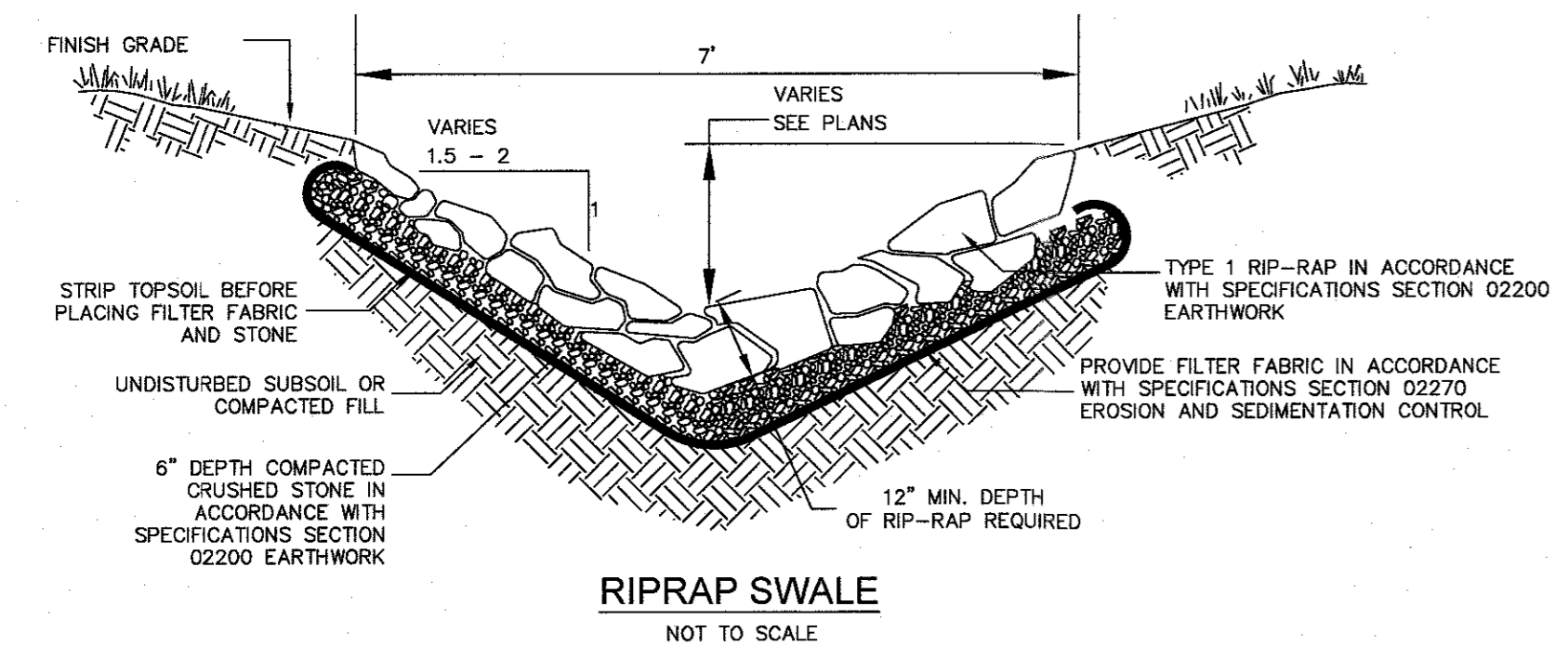
2081.00



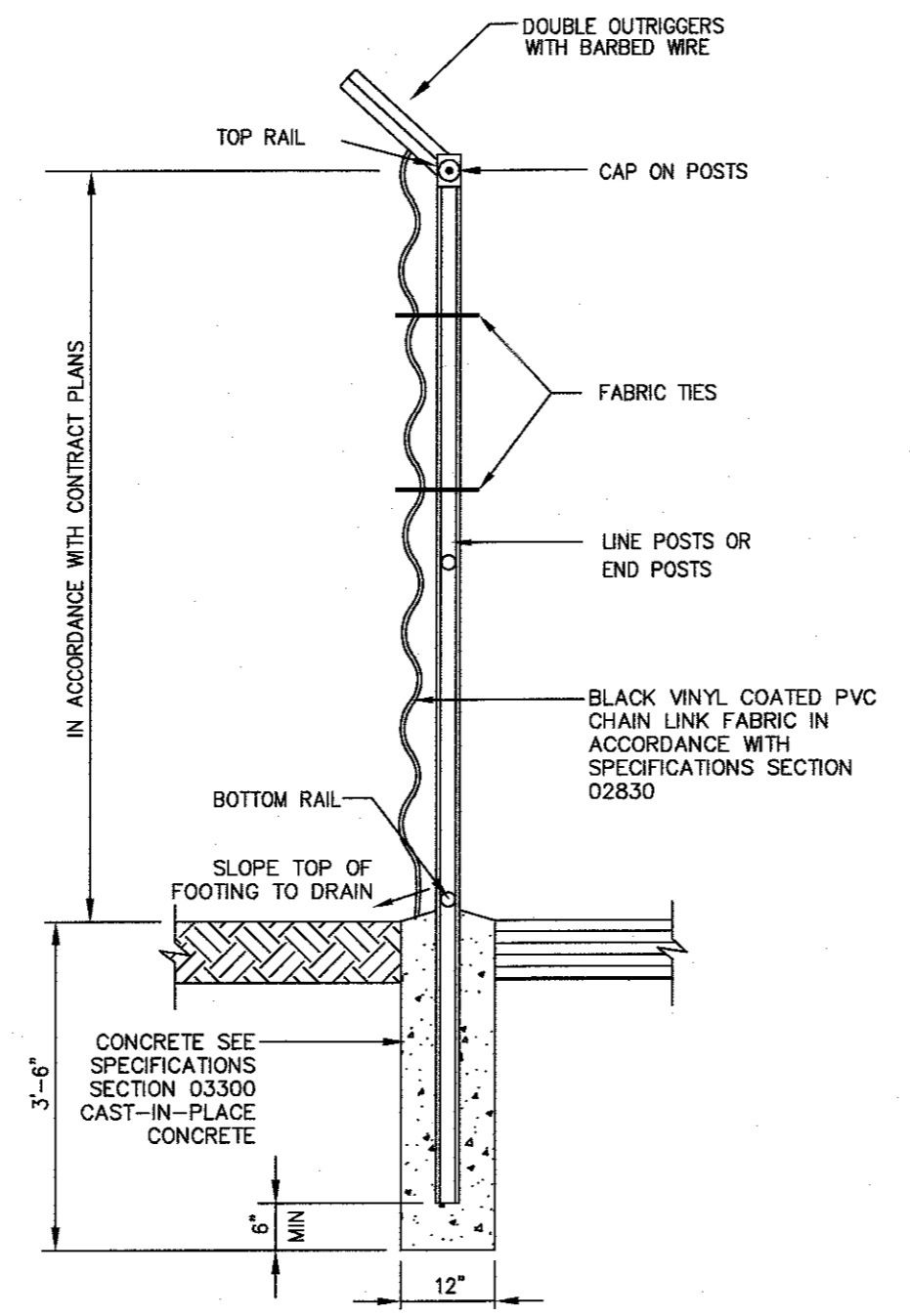
SIGNAGE BOLLARD
NOT TO SCALE

SIGNAGE GRAPHIC
NOT TO SCALE

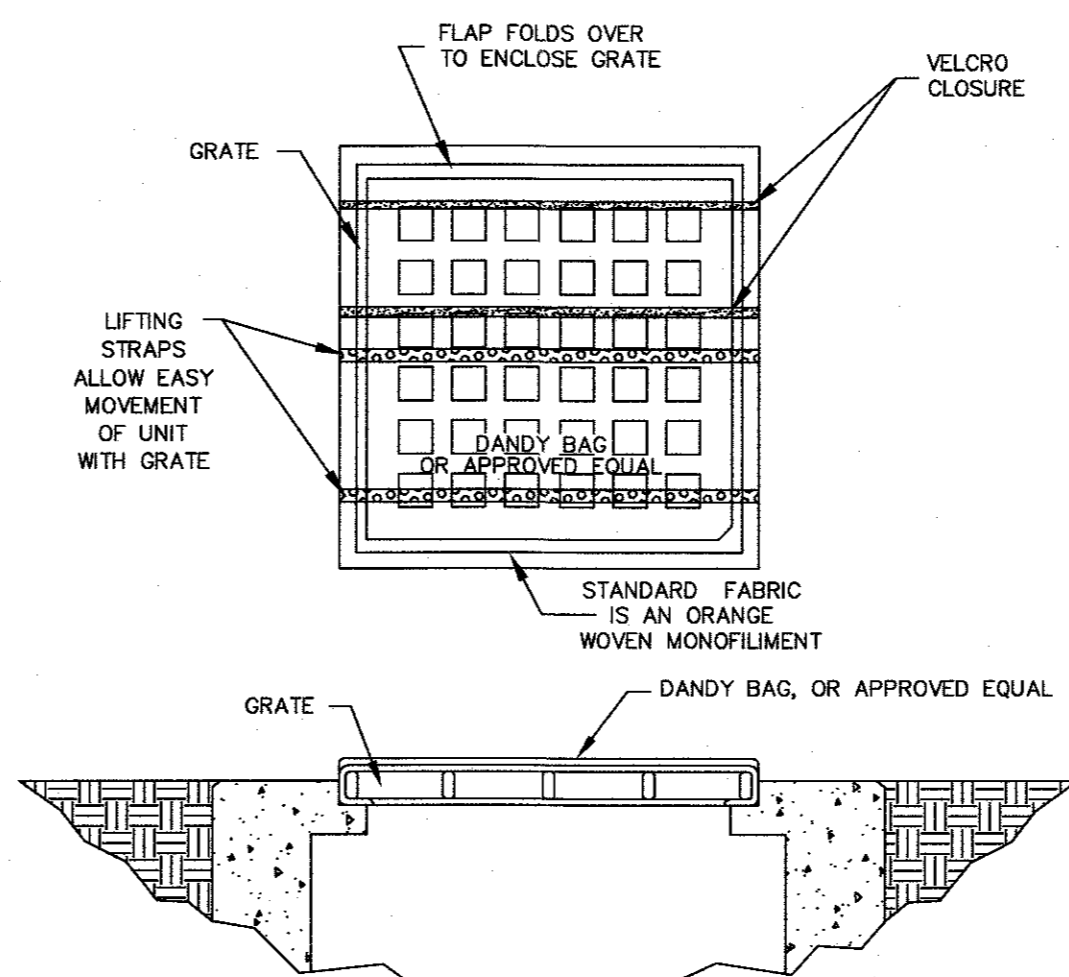
NOTES:
1. ALL CONCRETE TO BE 2500 PSI MIN.
2. SEE PLANS FOR LOCATIONS.
3. WHEN PLACED IN SERIES SIGNS SHALL BE SET AT SAME ELEVATION.



RIPRAP SWALE
NOT TO SCALE

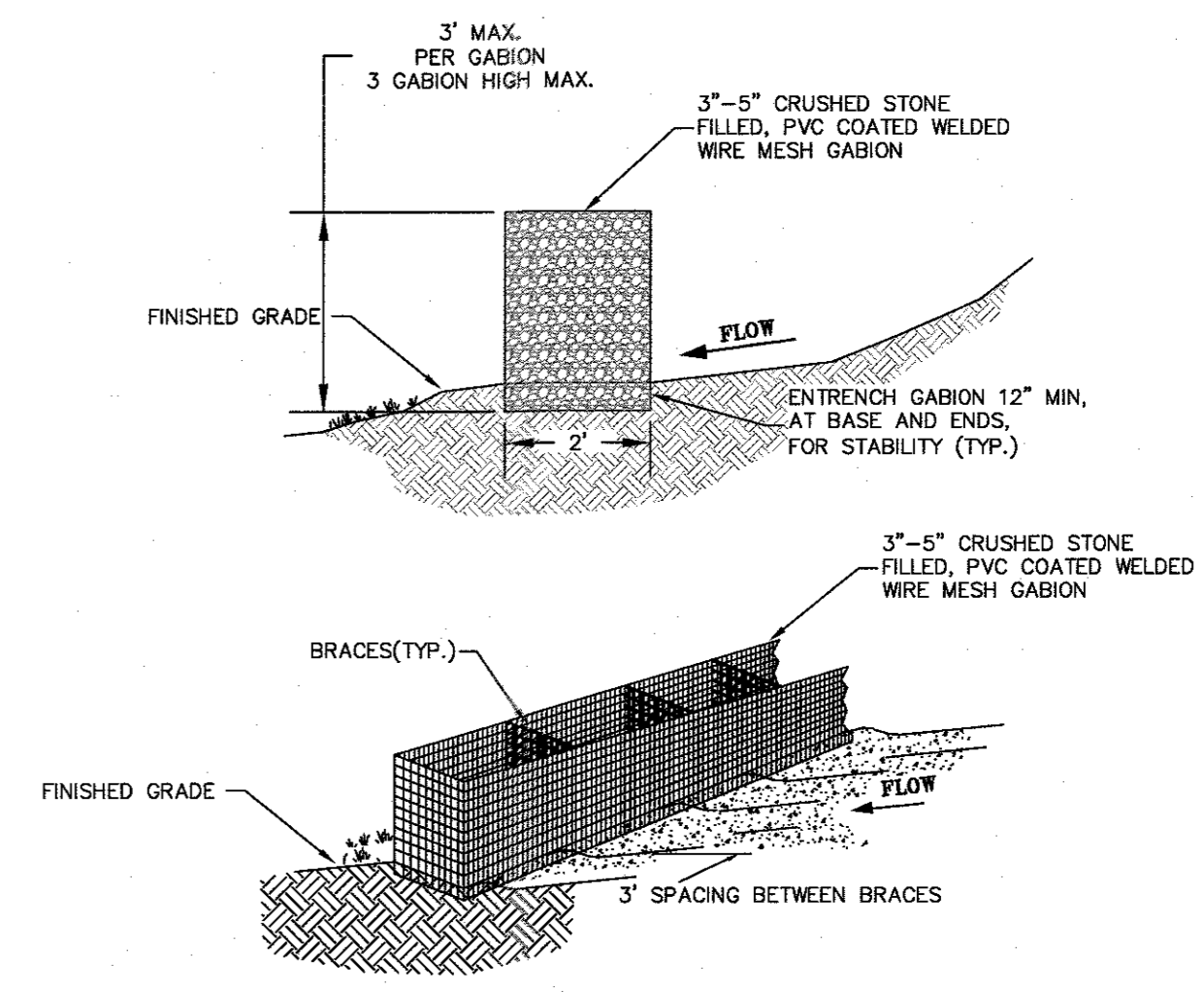


CHAIN LINK FENCE SECTION (TYPICAL)
NOT TO SCALE

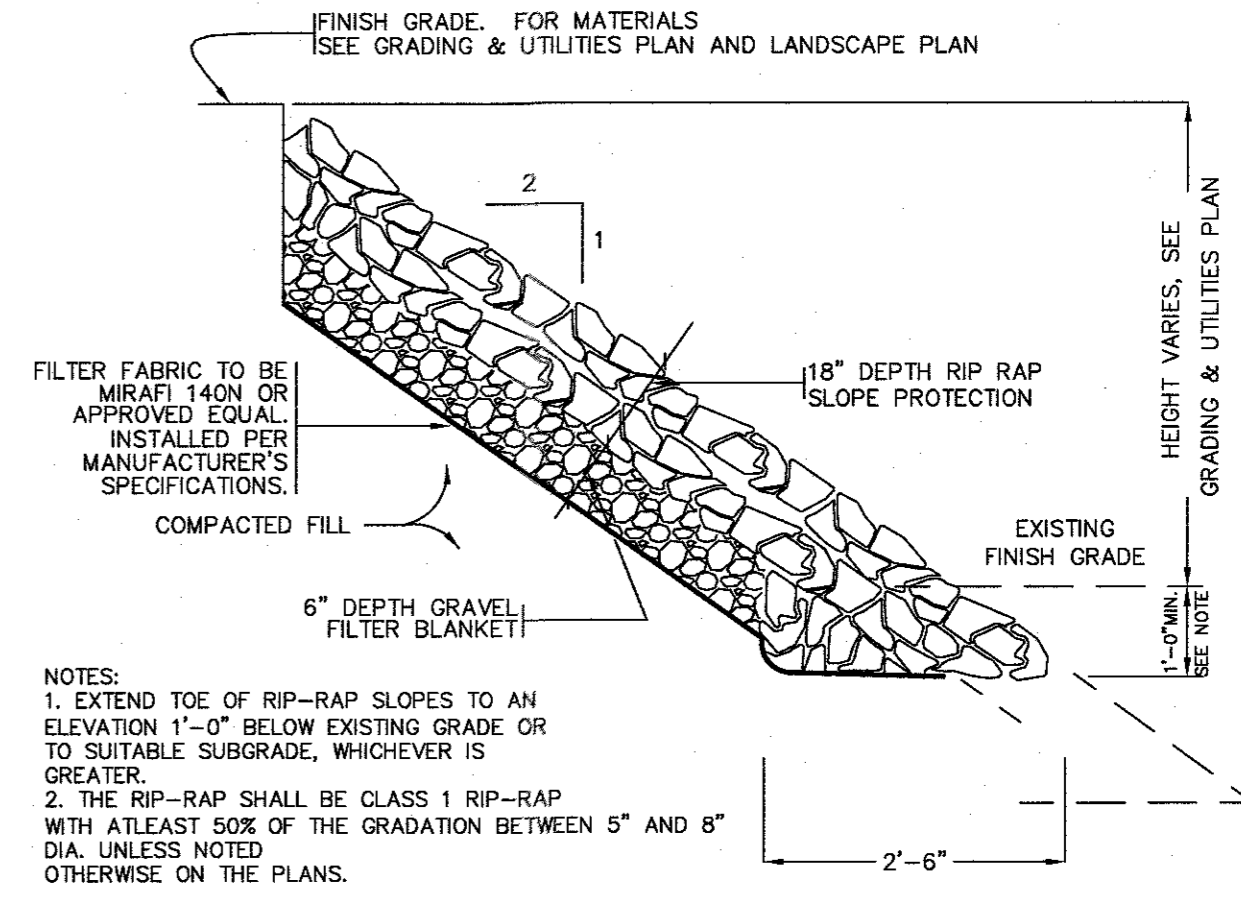


CATCH BASIN INLET PROTECTION
NOT TO SCALE

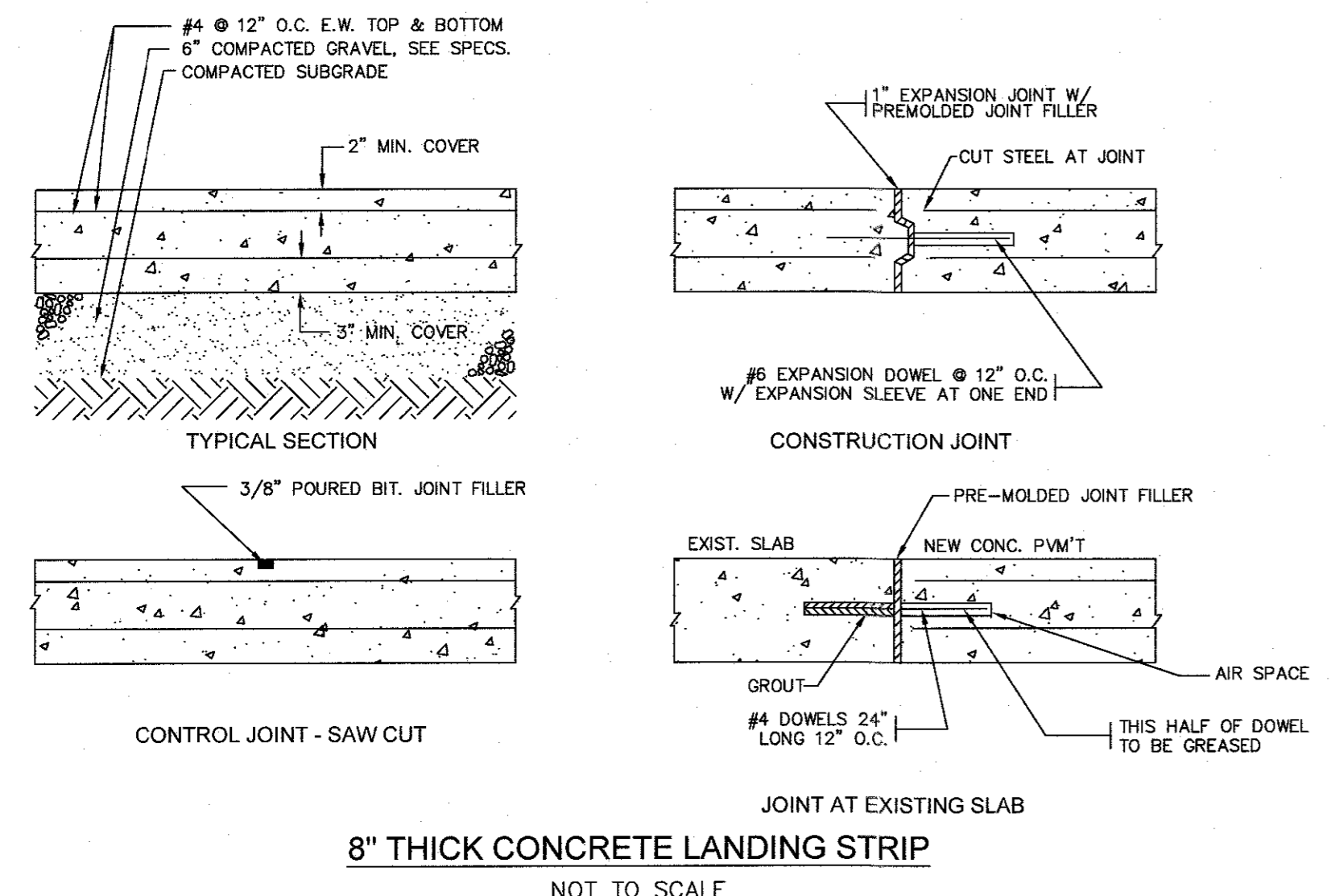
NOTES:
INSTALLATION: THE EMPTY DANDY BAG, OR APPROVED EQUAL, SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN POUCH, ON THE BOTTOM (BELOW-GRADE SIDE) OF THE UNIT. ATTACH ABSORBENT PILLOW TO TETHER LOOP. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE HEIGHT 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.



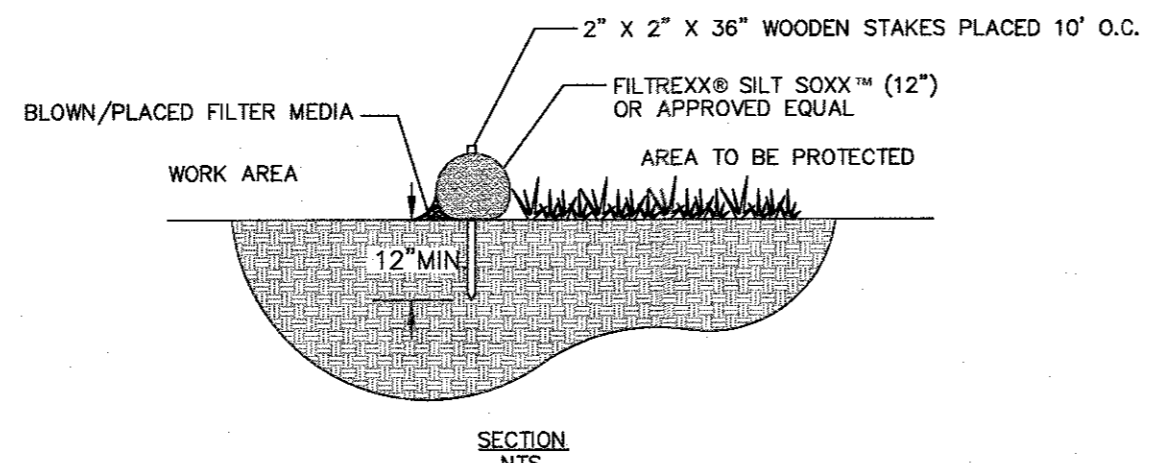
GABION SEDIMENT BAFFLE
NOT TO SCALE



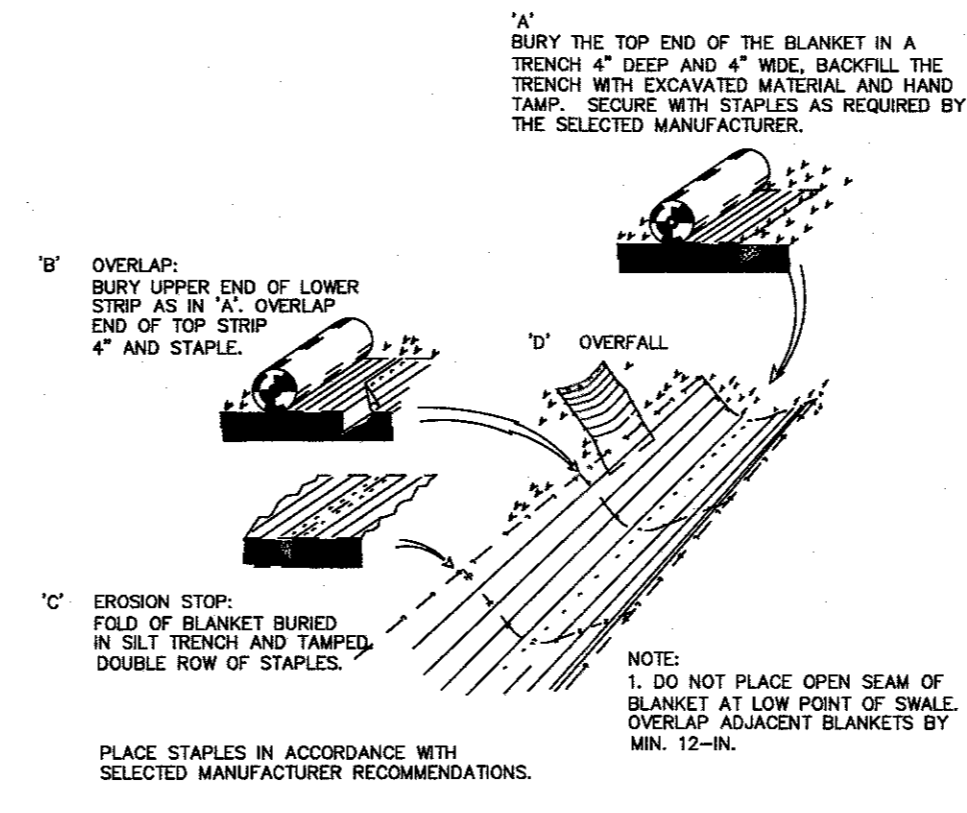
TYPICAL SECTION FOR RIP RAP SLOPE PROTECTION
NOT TO SCALE



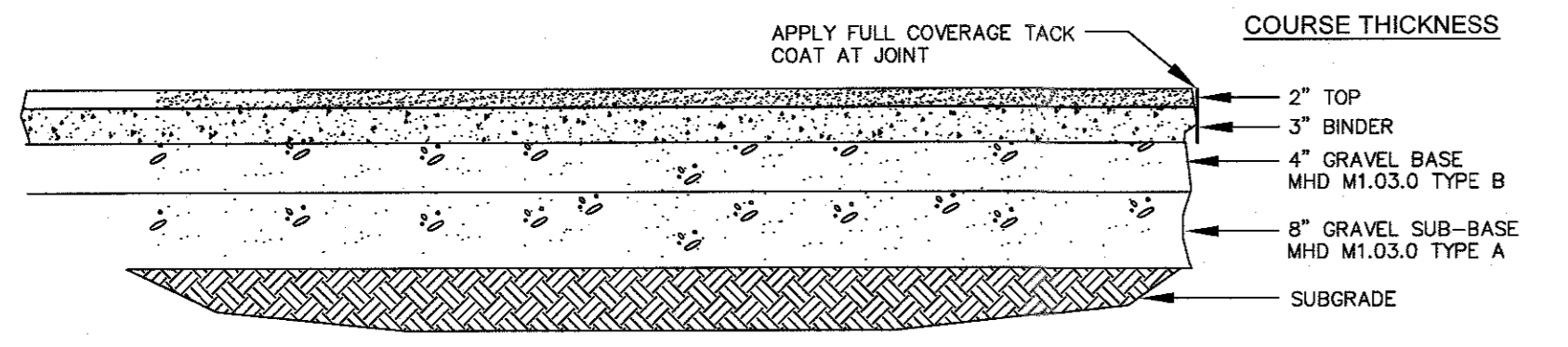
8" THICK CONCRETE LANDING STRIP
NOT TO SCALE



FILTREXX SILT SOXX
NOT TO SCALE



EROSION CONTROL BLANKET
NOT TO SCALE



TRUCK AREAS - BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 02/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |

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

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

TYPICAL DETAILS

C-6.1
SHEET 8 OF 9

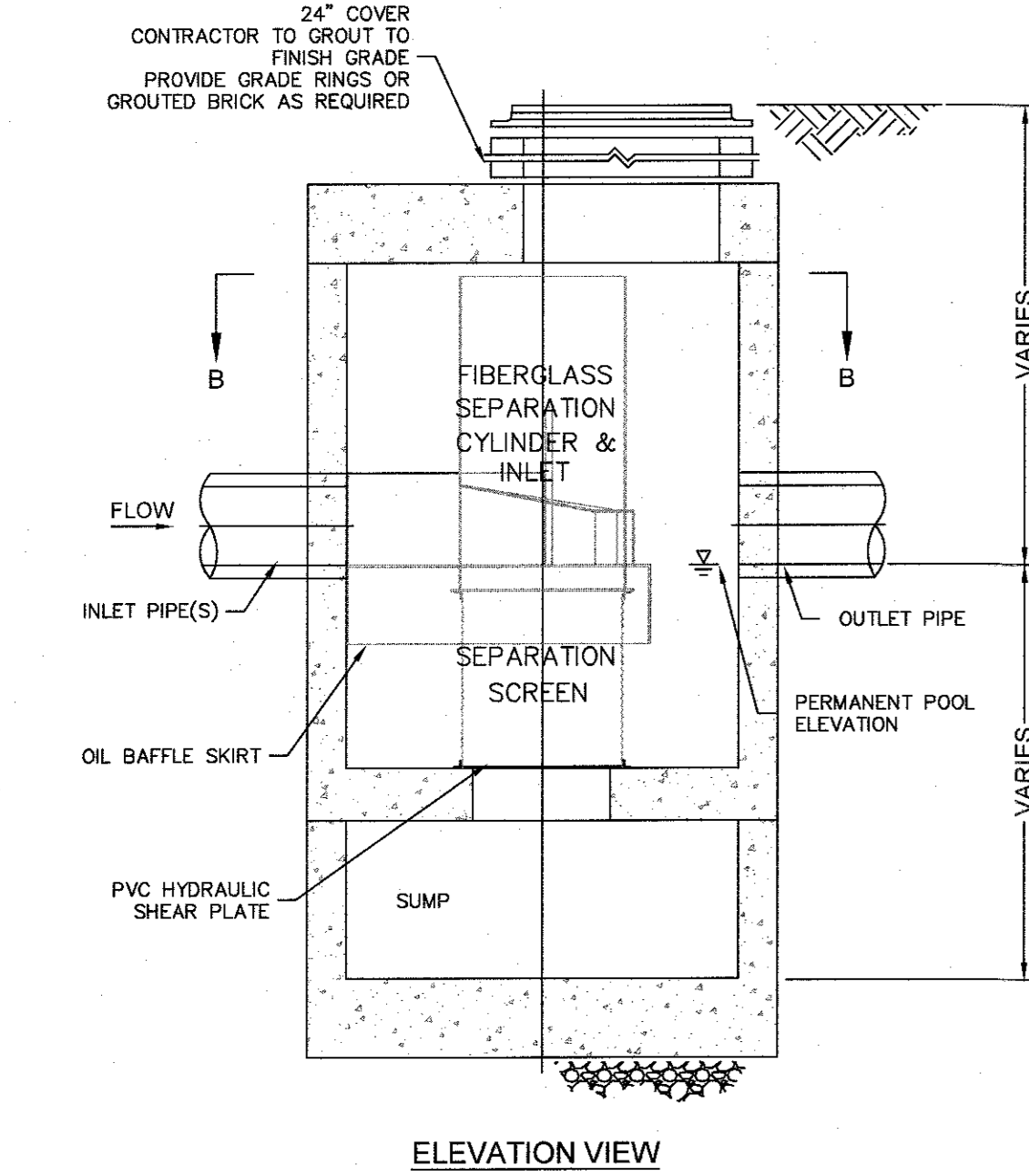
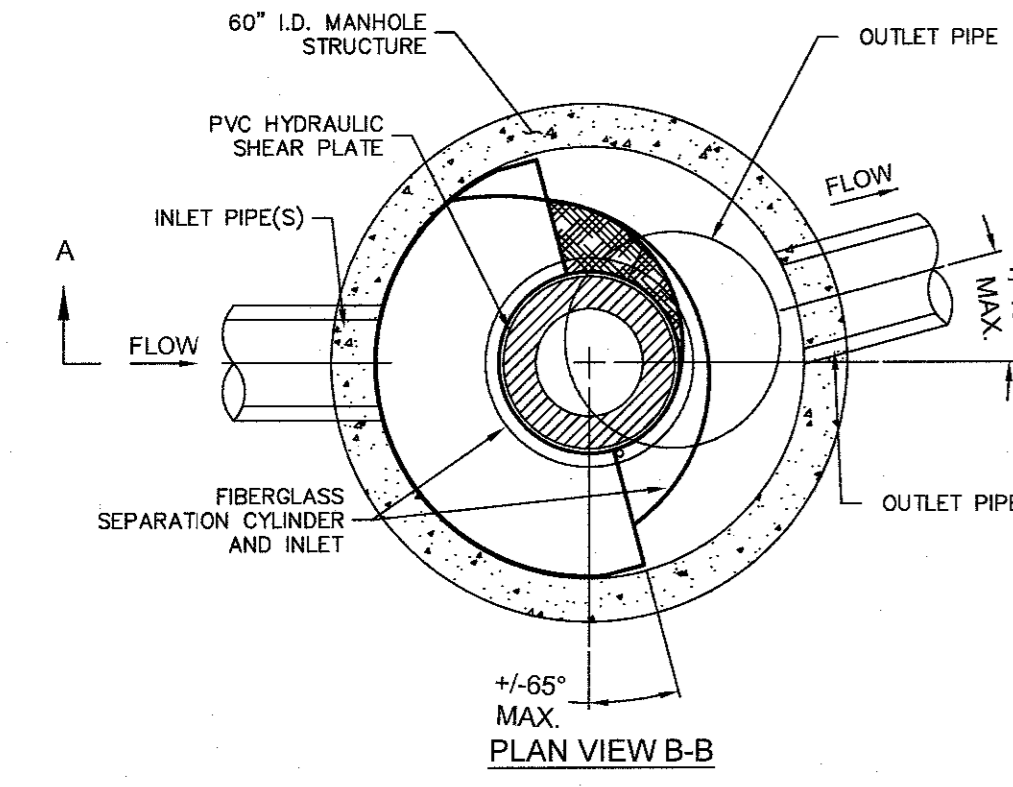
2081.00

GENERAL NOTES

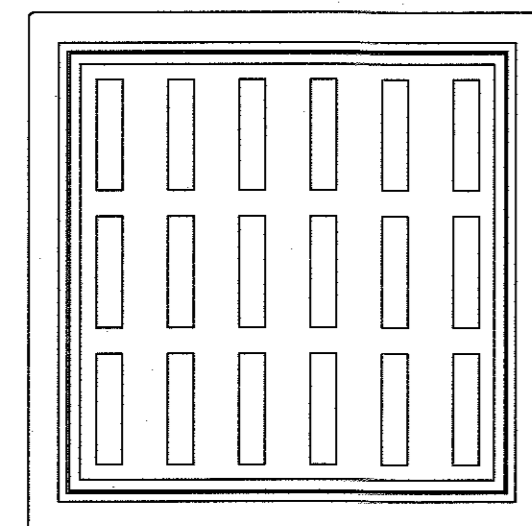
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL REQUEST SHOP DRAWINGS OF EACH INDIVIDUAL CDS STORMWATER TREATMENT UNIT AND SHALL SUBMIT THEM FOR REVIEW AND APPROVAL TO THE DESIGN ENGINEER PRIOR TO UNITS BEING ORDERED OR ENTERING PRODUCTION.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH CONSTRUCTION PRODUCTS REPRESENTATIVE. www.contech-cpi.com
- CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO H20 AND CASTINGS SHALL MEET AASHTO M300 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 SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES

- ANY SUBBASE 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 FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



STORM WATER TREATMENT UNIT



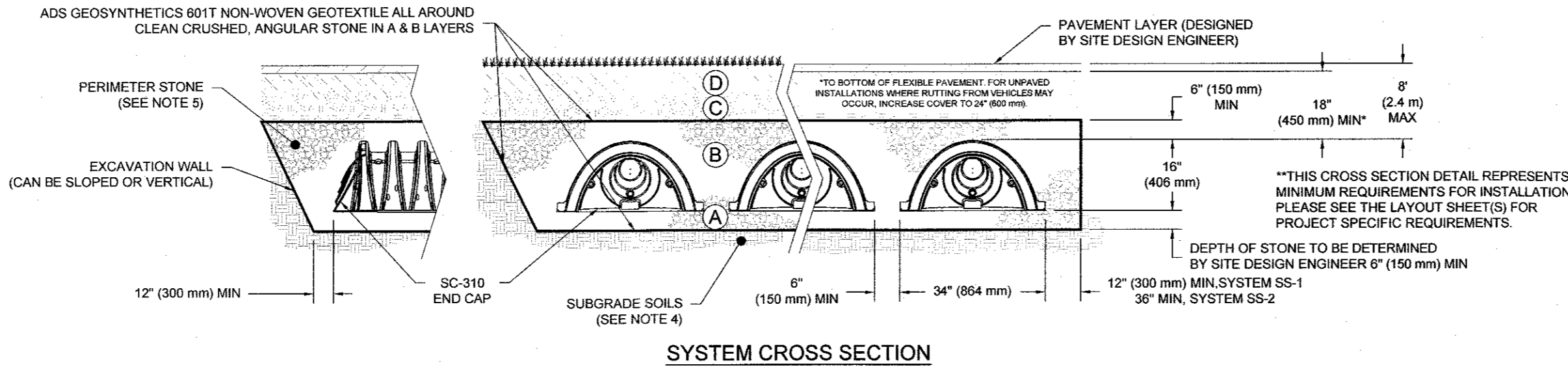
CDS STORMWATER TREATMENT UNITS
NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

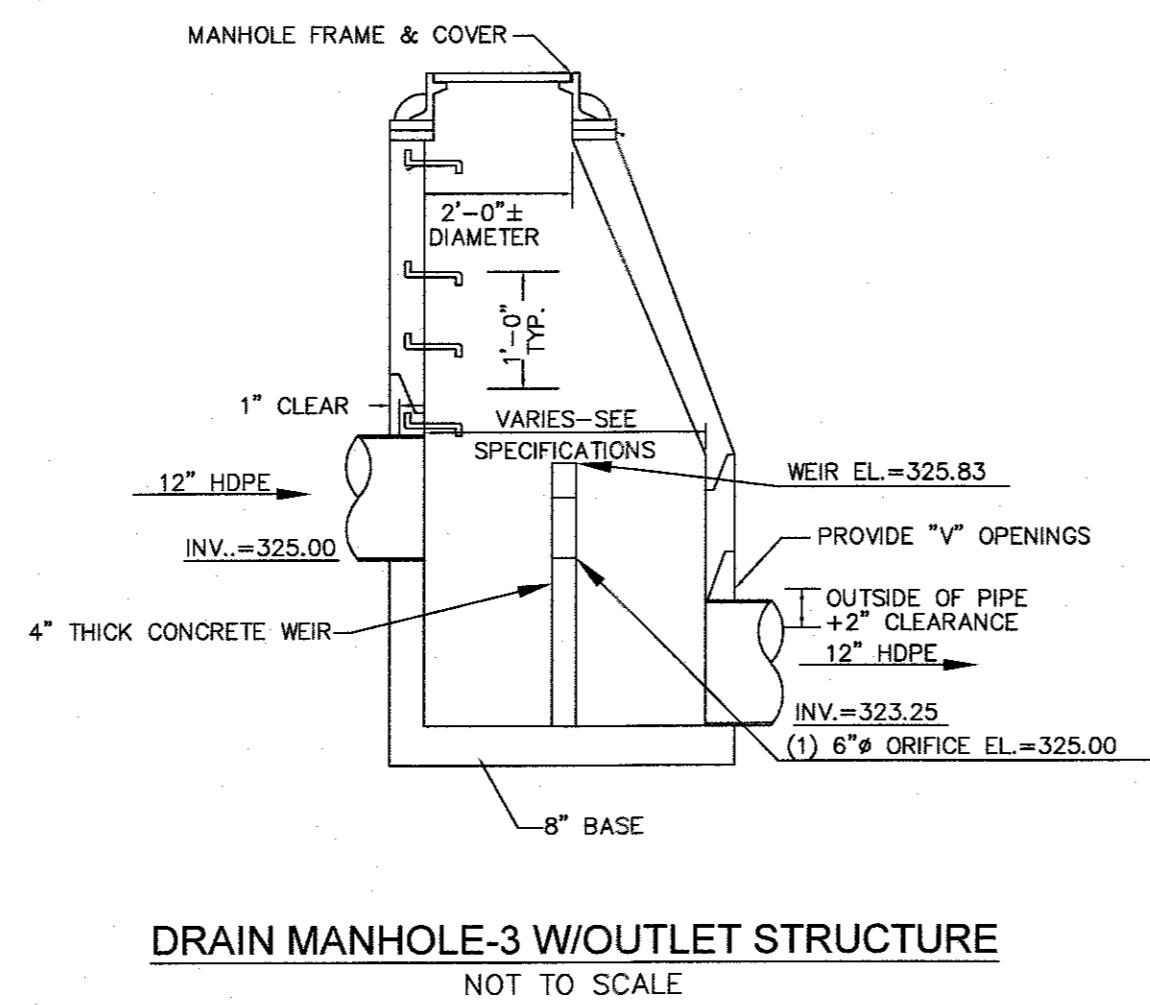
| MATERIAL LOCATION | DESCRIPTION | AASHTO MATERIAL CLASSIFICATIONS | COMPACTION / DENSITY REQUIREMENT |
|-------------------|---|--|--|
| D | FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER. | N/A | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS. |
| C | INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER. | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 5, 57, 68, 7, 78, 8, 88, 9, 10 | BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 98% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 96% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN). |
| B | EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | AASHTO M43* 3, 357, 4, 467, 5, 56, 57 | NO COMPACTION REQUIRED. |
| A | FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | AASHTO M43* 3, 357, 4, 467, 5, 56, 57 | PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3} |

PLEASE NOTE:

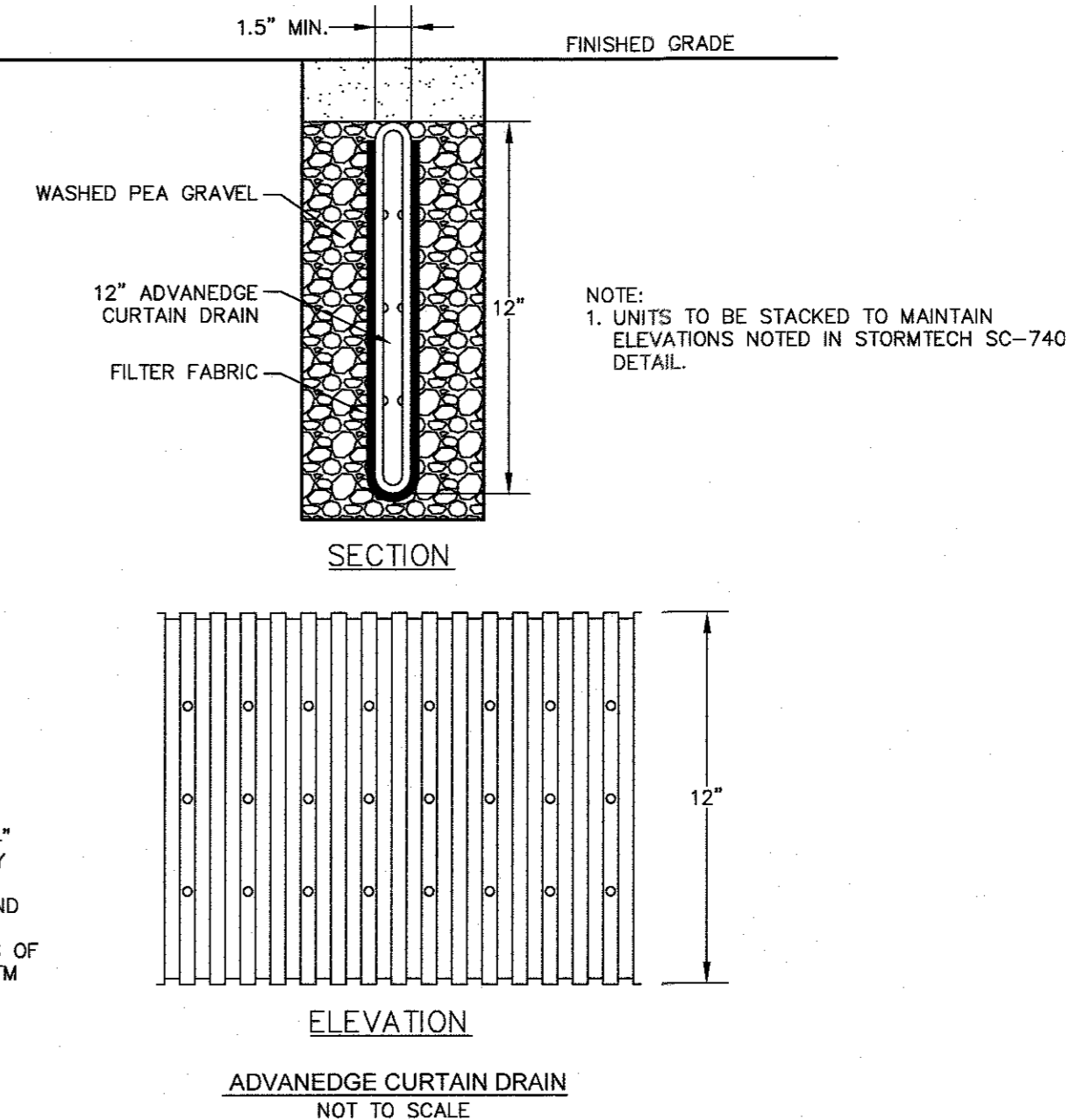
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- 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 MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



STORMTECH SC-310 DETAILS
NOT TO SCALE

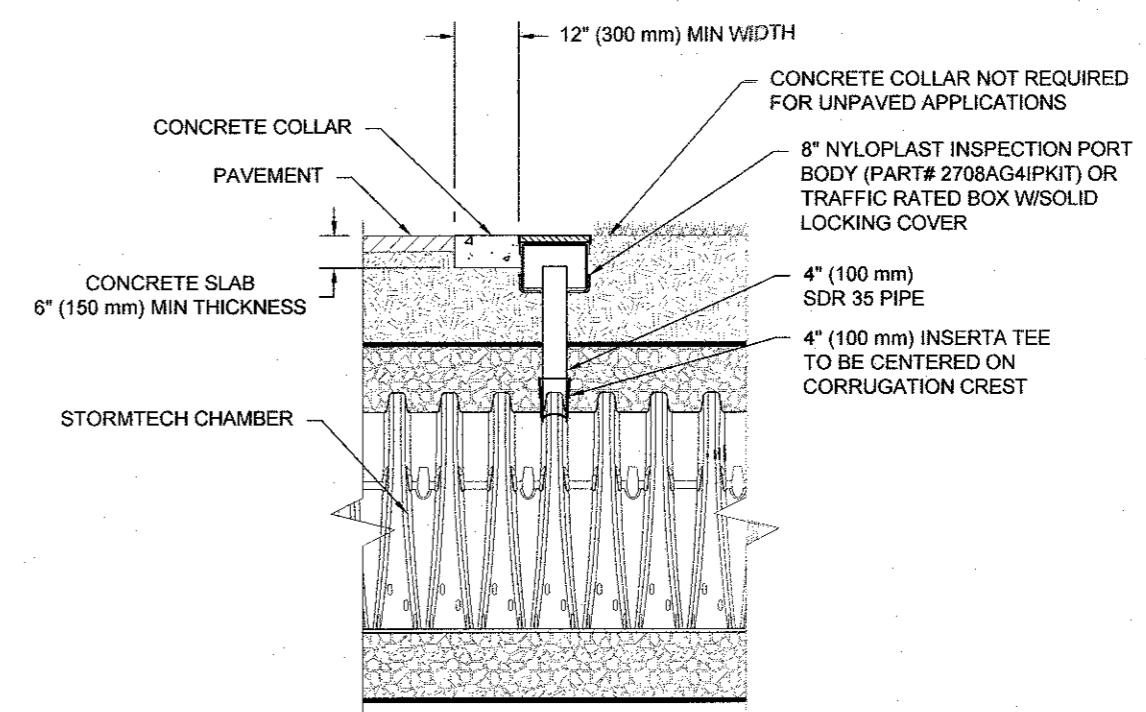
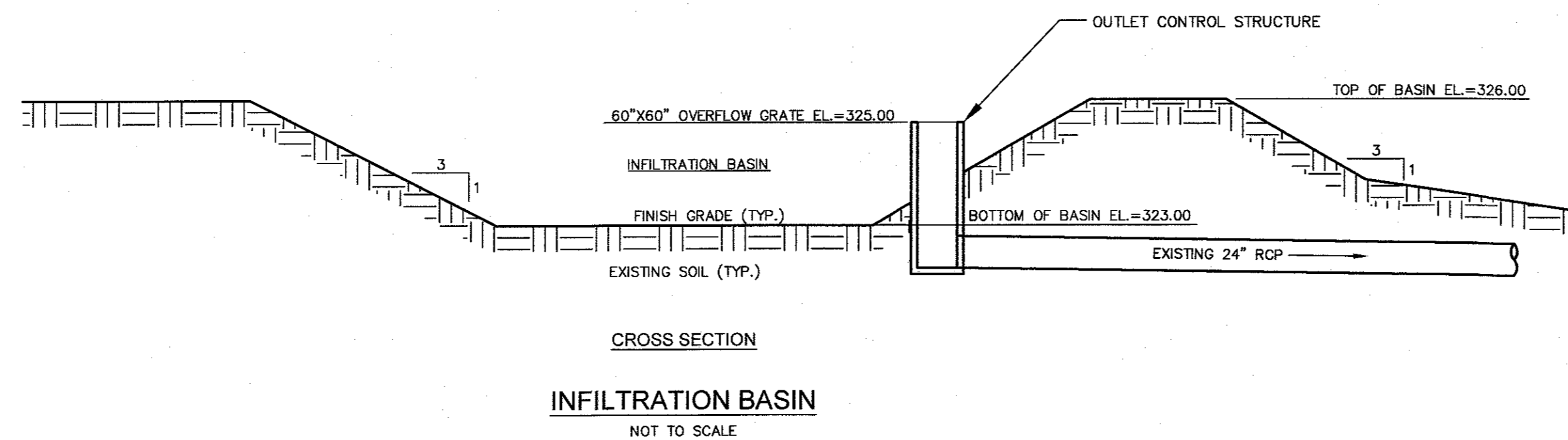


DRAIN MANHOLE-3 W/OUTLET STRUCTURE
NOT TO SCALE



NOTES:

- TRENCH MUST BE NO LESS THAN 4" WIDE
- MINIMUM COVER SHALL BE NO LESS THAN 4"
- ALL PIPE FITTINGS SHALL BE MADE OF POLYETHYLENE WITH A MINIMUM CELL CLASSIFICATION OF 424420C AS DEFINED AND DESCRIBED IN ASTM D3350.
- GEOTEXTILE SHALL MEET THE REQUIREMENTS OF CLASS B GEOCOMPOSITE AS DEFINED IN ASTM D7001.



NOTE: INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2416 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT², AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

| NO | DATE | REVISIONS |
|----|------------|---------------------|
| 1 | 10/17/2023 | RESOURCE AREA FLAGS |
| 2 | 11/22/2023 | REVIEW COMMENTS |
| 3 | 12/01/2024 | REVIEW COMMENTS |
| 4 | 03/19/2024 | REVISE LAYOUT |

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

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

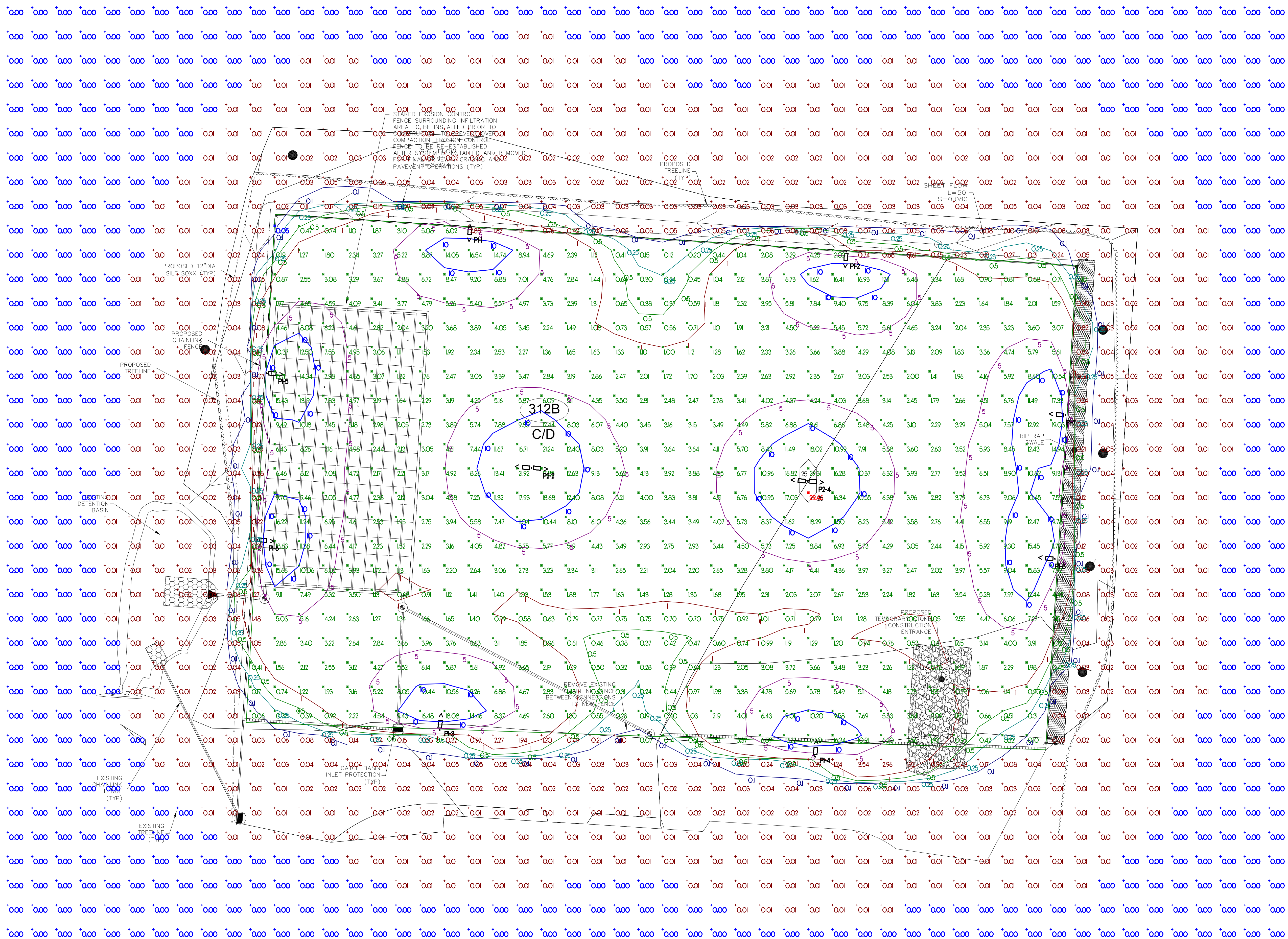
LEVEL
DESIGN GROUP
Civil Engineers & Land Surveyors
249 SOUTH STREET, UNIT 1
PLAINVILLE, MA 02762
TEL. (508) 695-2221 FAX. (508) 695-2219

TYPICAL
DETAILS
C-6.2
SHEET 9 OF 9
2081.00

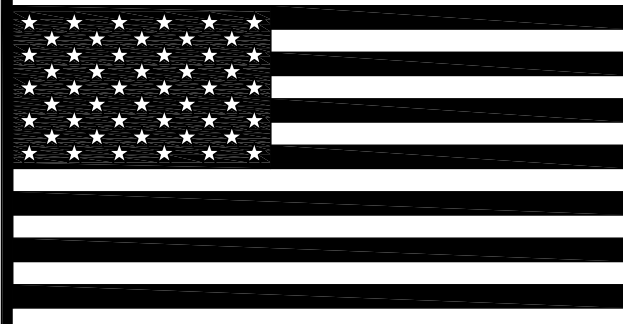
| Statistics | | | | | | |
|-----------------|--------|------|-------|------|---------|---------|
| Description | Symbol | Avg | Max | Mn | Max/Min | Avg/Min |
| TRAILER PARKING | X | 4.69 | 16.29 | 0.05 | 11.58 | 93.61 |

| 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



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: _____
Cat.No: _____
Type: _____
Lamps: _____ Qty: _____
Notes: _____

Ordering guide

example: ECF-L-96L-1A-CW-AR-APR-90-120-DC-PCB-F1-SPI-TS-RPA-HIS-BK

| Qty | Model | LEDs (modules) | Power (W) | Temp. (°C) | Color (lm) | System Watts | Beam Angle | Mounting | Options |
|-------|-------|---------------------|-----------|------------|------------|--------------|------------|--------------------------------------|------------------------|
| ECF-L | 96L | 80 LEDs (8 modules) | 900W | 100°C | 1A | 1200W | 120° | WV-02 Warm White 3000K, Generation 2 | AR* Arm Mount standard |
| | 96L | 88 LEDs (8 modules) | 800W | 100°C | 1A | 1000W | 120° | WV-02 Warm White 3000K, Generation 2 | AR* Arm Mount standard |

| Qty | Model | LEDs (modules) | Power (W) | Temp. (°C) | Color (lm) | System Watts | Beam Angle | Mounting | Options |
|-----|-------------------------------------|--|-----------|------------|------------|--------------|------------|----------|---------|
| DO* | 0-10V | External dimming (for control by others) | | | | | | | |
| DD* | Dual On/Off Control | | | | | | | | |
| FA* | Field Adjustable Voltage Selector | | | | | | | | |
| LI* | Integral wireless module | | | | | | | | |
| BL* | Bluetooth | | | | | | | | |
| DR* | DR driver connected to Zhaga socket | | | | | | | | |

- BL-IMB2* equipped with auto-balanced sensor heating when voltage is 180V (240V).
- Mounts to a 4" round pole with adaptor included for square poles.
- Limited to a maximum of 45 degrees aiming above horizontal.
- Not available with other dimming control options.
- Not available with motion sensor.
- Not available with photocell.
- Must specify motion sensor.
- Not available in 48V or 480V.
- Must specify track voltage.
- TLR02, TLR07 and TLPC receptacle pins 4 & 5 are capped off unless ordered with any of the dimming controls DO*, DD*, FA*, LI*, BL*, DR*, or LI*.
- Not available in 480V. Order photocell separately with TLR02/7.
- Not available with 200V.
- Not available with BF and WB. RPA provided with black finish standard.
- Not available with Type A, SW, BLC, BL-0-90, or BL-0-270.
- Not available with DO, DCC, and FA/ID dimming control options.
- Not available with DO, DCC, FA/ID and LDC dimming control options.
- When ordering BRDR, controller (by other) to be used on.



ECF-L EcoForm large
Area luminaire

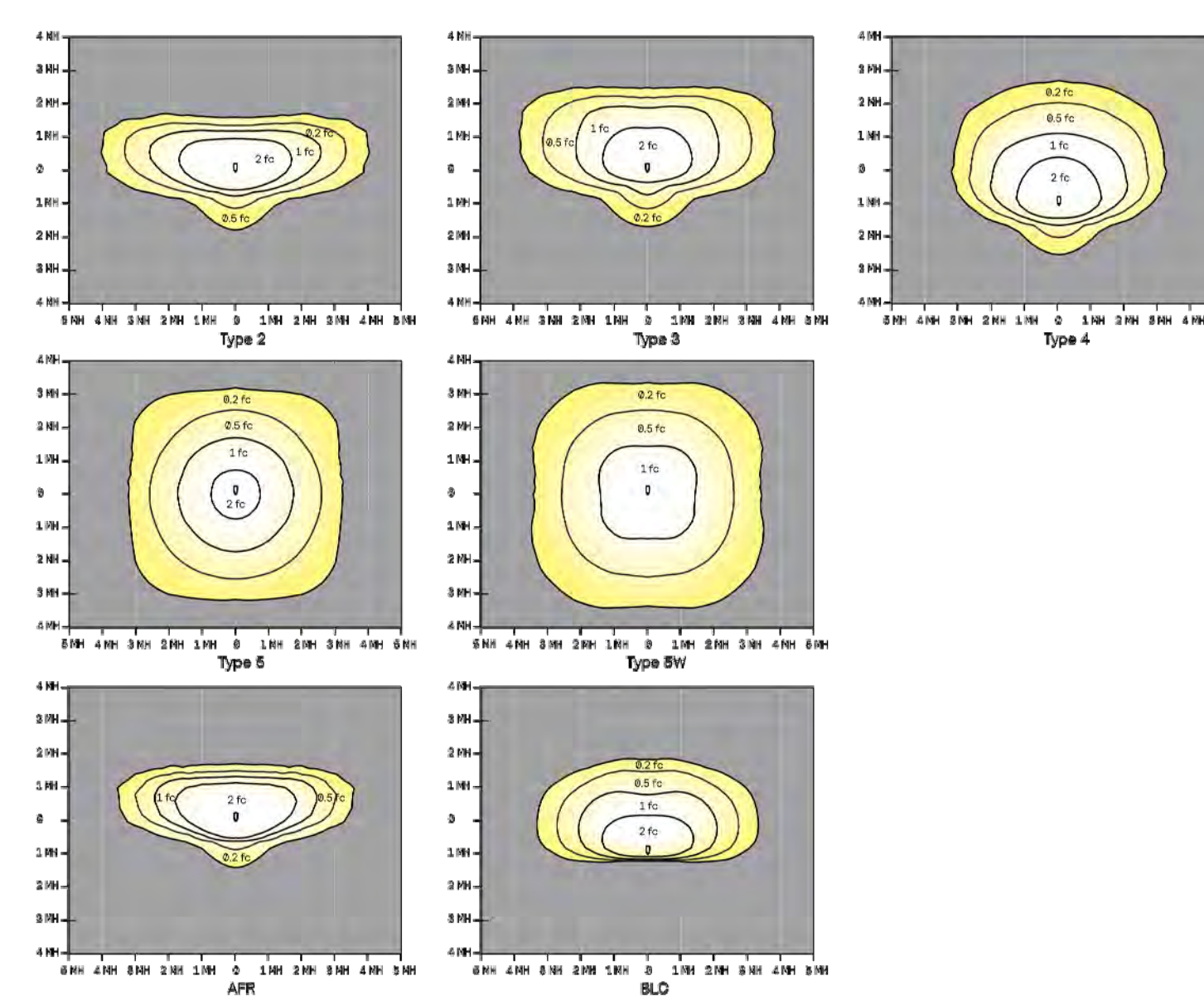
Predicted Lumen Depreciation Data

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 approximately 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 80,000 hrs |
|--------------------------|---------------|----------------------------------|---------------------------|-----------------------------------|
| 25°C | up to 1400 mA | >100,000 hours | >90,000 hours | >86% |

Optical Distributions

Based on configuration ECF-L-96L-1A-NW-92 (285W) mounted at 40ft.

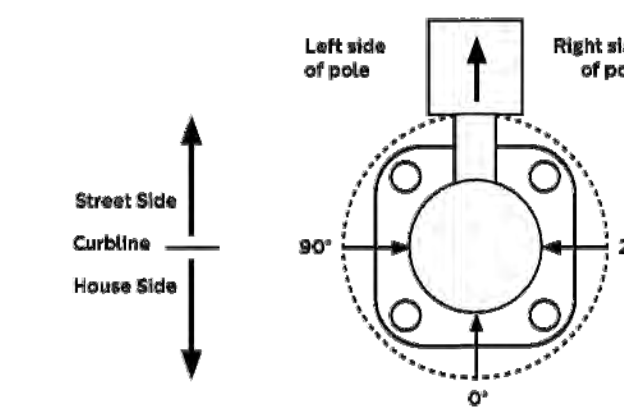


ECF-L EcoForm large
Area luminaire

Optical Orientation Information

Standard Optic Position

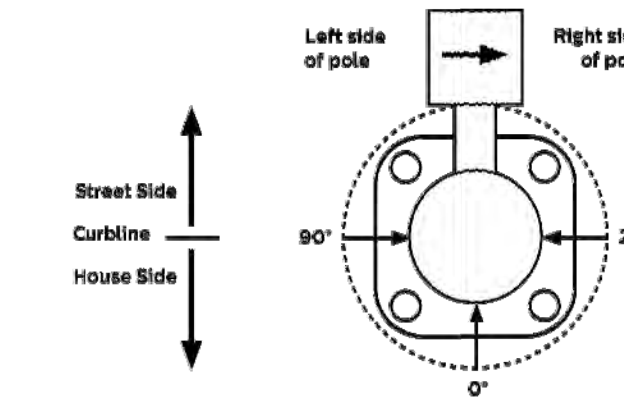
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:



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

Optic Rotated Right (270°) Optic Position

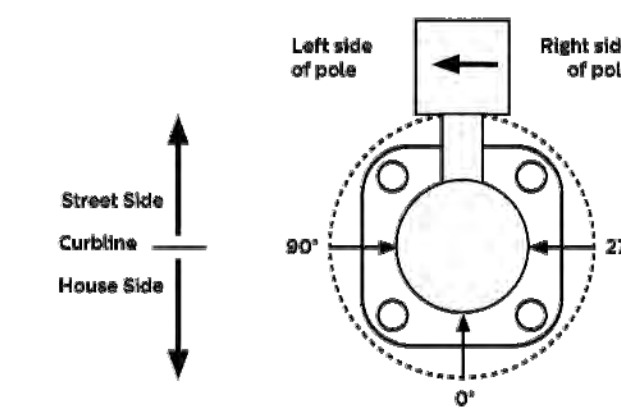
Luminaires ordered with optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below (Type 5 and SW optics are not available with factory set rotatable optics).



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

Optic Rotated Left (90°) Optic Position

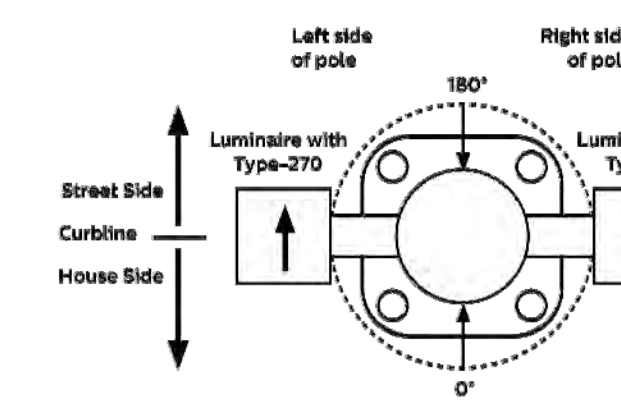
Luminaires ordered with optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below (Type 5 and SW optics are not available with factory set rotatable optics).



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

Twin 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) | Temp. (°C) | Color (lm) | System Watts | Type 2 | | | Type 3 | | | Type 4 | | | Type 5 | | | Type SW | | | |
|----------------------|------------|--------------|------------|------------|--------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|-----|
| | | | | | | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | |
| ECF-L-96L-90-WV-02-x | 80 | 900 | 100 | 1A | 1200 | 228 | 32.78 | 84-02-01 | 126 | 27.84 | 84-02-01 | 126 | 33.34 | 84-02-01 | 126 | 33.16 | 84-02-01 | 126 | 33.44 | 84-02-01 | 126 |

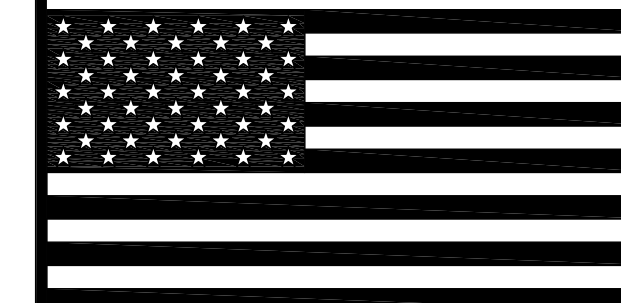
| Ordering Code | Total LEDs | Current (mA) | Temp. (°C) | Color (lm) | System Watts | Type 2 | | | Type 3 | | | Type 4 | | | Type 5 | | | Type SW | | | |
|----------------------|------------|--------------|------------|------------|--------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|-----|
| | | | | | | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | |
| ECF-L-96L-90-WV-02-x | 80 | 900 | 100 | 1A | 1200 | 228 | 32.78 | 84-02-01 | 126 | 27.84 | 84-02-01 | 126 | 33.34 | 84-02-01 | 126 | 33.16 | 84-02-01 | 126 | 33.44 | 84-02-01 | 126 |

4000K LED Wattage and Lumen Values

| Ordering Code | Total LEDs | Current (mA) | Temp. (°C) | Color (lm) | System Watts | Type 2 | | | Type 3 | | | Type 4 | | | Type 5 | | | Type SW | | | |
|----------------------|------------|--------------|------------|------------|--------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|-----|
| | | | | | | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | |
| ECF-L-96L-90-WV-02-x | 80 | 900 | 100 | 1A | 1200 | 228 | 32.78 | 84-02-01 | 126 | 27.84 | 84-02-01 | 126 | 33.34 | 84-02-01 | 126 | 33.16 | 84-02-01 | 126 | 33.44 | 84-02-01 | 126 |

| Ordering Code | Total LEDs | Current (mA) | Temp. (°C) | Color (lm) | System Watts | Type 2 | | | Type 3 | | | Type 4 | | | Type 5 | | | Type SW | | | |
|----------------------|------------|--------------|------------|------------|--------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|--------------|------------------|----------------|-----|
| | | | | | | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | Lumen Output | BUG Rating (LPW) | Efficacy (LPW) | |
| ECF-L-96L-90-WV-02-x | 80 | 900 | 100 | 1A | 1200 | 228 | 32.78 | 84-02-01 | 126 | 27.84 | 84-02-01 | 126 | 33.34 | 84-02-01 | 126 | 33.16 | 84-02-01 | 126 | 33.44 | 84-02-01 | 126 |

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. R_h (R_h) reemittance 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

