

PROJECT INFORMATION

SITE ADDRESS - 23 CENTRAL STREET, BYFIELD, MA || ASSESSOR MAP R-20-0-28

OWNER - R&E REALTY TRUST, 2 FRUIT STREET, BYFIELD MA 01922
TRUSTEES RONALD O. PEARSON & EDNA L. PEARSON

APPLICANT - A.L. PRIME ENERGY CONSULTANT, INC., 18 LARK AVE, SAUGUS MA
- ANTHONY GUBA, ENGR - 512-745-6400
- NASSER ABU-EID, VP - 617-212-3551

EMERGENCY - 911 || DIGSAFE - 811
BYFIELD INSPECTIONAL SVCS AND BLDG COMMISSIONER - 978-465-0862
BYFIELD FIRE DEPT (BUSINESS) - 978-462-2282
BYFIELD POLICE (BUSINESS) - 978-462-4440
BYFIELD PUBLIC WORKS - 978-465-0112

ELECTRIC UTILITY - NATIONAL GRID - 800-233-5325
GAS UTILITY - NATIONAL GRID - 800-233-5325
WATER UTILITY - BYFIELD WATER DISTRICT - 978-462-3023
SEWER UTILITY - ON SITE SEPTIC SYSTEM, BD OF HEALTH - 978-465-0862 x316

PROJECT GENERAL SCOPE OF WORK

THIS PROJECT IS INTENDED TO REPLACE THE EXISTING NON-CONFORMING RESIDENTIAL USE WITH AN ALLOWED BUSINESS USE - NEW CONVENIENCE STORE AND GAS STATION. THE WORK WILL INCLUDE:

- DEMOLISH ALL EXISTING IMPROVEMENTS AT THE PROPERTY
- INSTALL NEW STORMWATER STRUCTURES INCLUDING SUBSURFACE INFILTRATION
- CONSTRUCT NEW ~4,000 SF CONVENIENCE STORE INCLUDING COFFEE DRIVE-THRU (WITH LIMITED INSIDE SEATING).
- INSTALL ALL NEW UTILITIES
- CONSTRUCT NEW STEEL CANOPY OVER FUELING AREAS
- INSTALL UG MOTOR FUEL STORAGE TANKS AND ASSOCIATED UG PIPING TO INCLUDE DIESEL, FUEL DISPENSERS, ISLANDS, AND DRY CHEMICAL FIRE SUPPRESSION SYSTEM AT FUELING AREA
- INSTALL ALL NEW CURBING, PAVING, ACCESS DRIVEWAYS AND SITE LANDSCAPE
- THE BUSINESS IS PROPOSED TO OPERATE 24 HRS

CODES SUMMARY

- CODES:
- MA STATE BUILDING CODE 780, 9TH EDITION BASED ON MODIFIED VERSION OF 2015 INTERNATIONAL CODES AS PUBLISHED BY INTL CODE COUNCIL (ICC):
 - IBC - INTL BUILDING CODE
 - IECC - INTL ENERGY CONSERVATION CODE
 - IMC - INTL MECHANICAL CODE
 - IFC - PORTIONS OF INTL FIRE CODE
 - MA STATE FIRE CODE 527 CMR 1.00, 2015 EDITION
 - MA ELECTRICAL CODE 527 CMR 12.00, 2017 EDITION
 - MA UNIFORM STATE PLUMBING CODE 248 CMR 10, 2017 EDITION
 - ARCHITECTURAL ACCESS BOARD REGULATIONS CMR 521 CMR
 - EPA GEN CONST PERMIT - SITE IS LESS THAN ONE ACRE AND CONST PHASE RUNOFF WILL BE RETAINED ON SITE. HOWEVER, GC TO VERIFY NPDES PERMIT NOT REQ'D PRIOR TO CONST

OCCUPANCY - USE GROUP M MERCANTILE - CONVENIENCE STORE AND GAS STATION
TOTAL GROSS FOOT AREA - ~4,000 GFA CONVENIENCE STORE
CONSTRUCTION TYPE - IIIB - NON COMBUSTIBLE EXT WALLS, STEEL ROOF FRAMING/DECK
HEIGHT - ~20'-2" (SINGLE STORY)

- EGRESS:
- MAX EGRESS TRAVEL DISTANCE - 75 FEET - SINGLE STORY
 - PROVIDED EGRESS WIDTH - 72" - ONE EACH EGRESS AT FRONT CENTER
 - OCCUPANCY CALC - 69 = 60 MERCANTILE + 4 KITCHEN + 5 STORAGE
 - OCCUPANCY EXCEEDING 49 REQUIRES SECONDARY EGRESS

FIRE PROTECTION: UNPROTECTED CONSTRUCTION. PROVISIONS MADE FOR SMOKE DETECTORS, EMERGENCY LIGHTING AND SIGNAGE, HORN AND STROBE ANNUNCIATORS

- PLUMBING:
- COMPLY WITH STATE PLUMBING AND FUEL GAS CODES
 - MIN OF ONE RESTROOM FOR MEN AND ONE RESTROOM FOR WOMEN
 - COMPLY WITH BOARD OF HEALTH REQUIREMENTS FOR RETAIL AND FOOD SERVICE
 - ON-SITE SEPTIC SYSTEM PER APPROVED DESIGN
 - EXTERNAL GREASE TRAP TO BE INSTALLED

- ENERGY: CLIMATE ZONE 5
- WALLS - CMU WITH FURRED INTERIOR DRYWALL - R 13.3ci
 - FLAT ROOF - R 30 ci
 - SLAB ON GRADE - R-15 FOR 36" BELOW
 - WINDOWS AND STOREFRONT
 - SOUTHWEST FACING
 - <30% WALL AREA
 - NO OPERABLE FENESTRATION
 - U 0.38 FIXED, 0.77 ENTRANCE DOOR

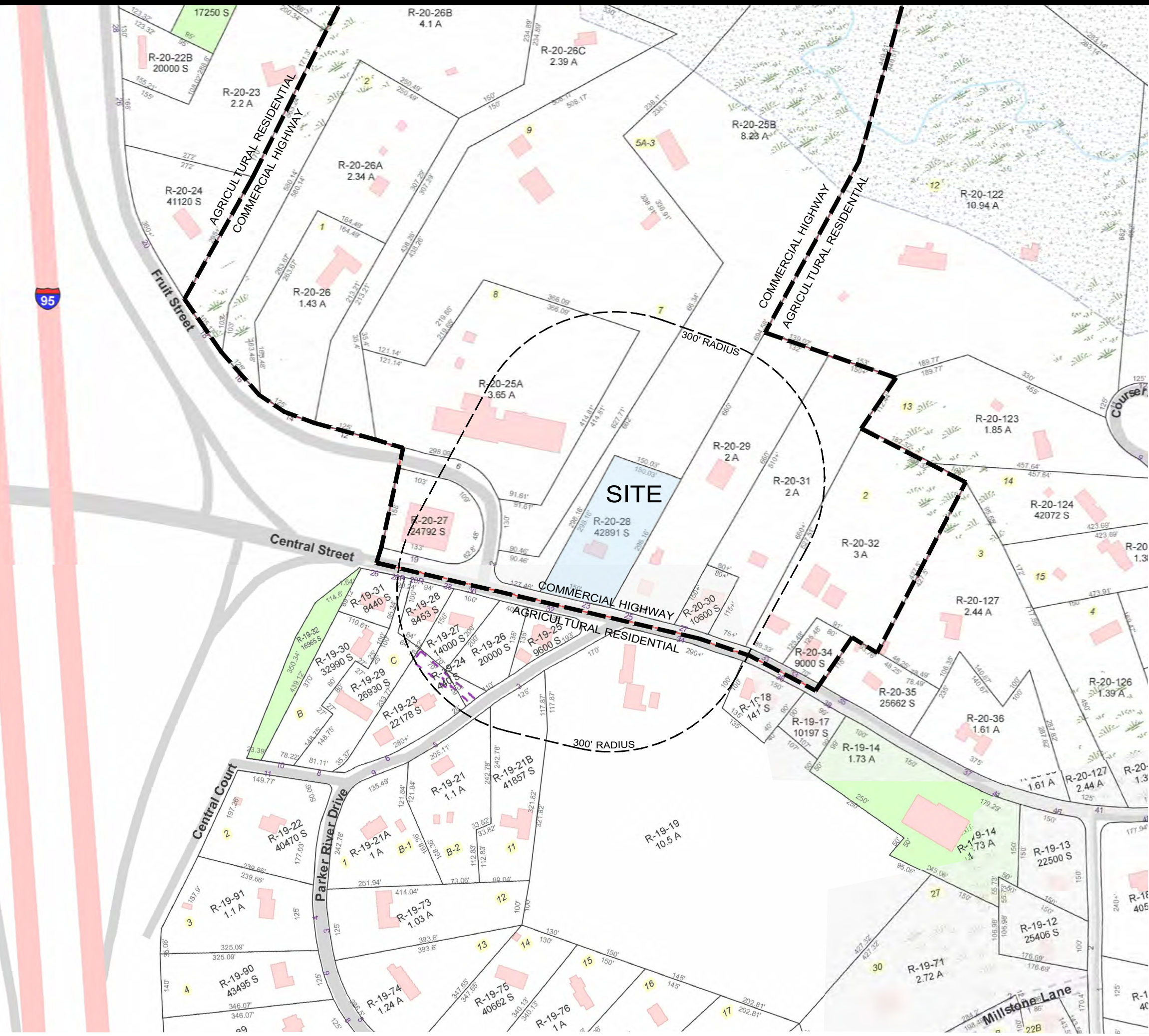
- DESIGN LOADS:
- GROUND SNOW LOAD - 50 PSF
 - ROOF TOP MECH LOAD - POINT LOAD SPECIFIED ON STRUCTURAL SHEET
 - ROOF UPLIFT - 40PSF
 - PRESUMPTIVE SOIL BEARING - 2,500 PSF
 - DESIGN WIND LOAD - (I) 114MPH, (II) 125MPG, (III) 136MPG
 - SEISMIC S1- 0.077



A.L. PRIME ENERGY
CONSULTANT, INC.
18 LARK AVENUE
SAUGUS MA 01906
(781) 246-0201

NEW GAS STATION, C-STORE, DRIVE-THRU
A.L. PRIME #TBD
23 CENTRAL STREET
BYFIELD, MASS

APPLICANT CONTACT: ANTHONY GUBA, P.E. -- MOBILE 512-745-6400



VICINITY MAP

REFERENCE - TOWN OF NEWBURY ASSESSOR MAPS

APPROX SCALE

DRAWING INDEX

THIS SET ISSUED FOR SPR & SP 10/7/20 2nd HRG, W/ REVISIONS PER CMTS

| | | ORIG DATE | LAST REV | REV DATE |
|--------|--|-------------|----------|-----------|
| C-0 | COVER | 29 APR 2020 | 2 | 23 SEP 20 |
| 1 of 2 | EXSTG CONDITIONS SHT 1 OF 2 (ELS, LLC) | 12 DEC 2019 | 4 | 20 AUG 20 |
| 2 of 2 | EXSTG CONDITIONS SHT 2 OF 2 (ELS, LLC) | 12 DEC 2019 | 4 | 20 AUG 20 |
| 1 | EASEMENT PLAN SHT 1 (ELS, LLC) | 22 SEP 2020 | NONE | N/A |
| C-1.0 | PROPOSED SITE IMPROVEMENTS | 29 APR 2020 | 2 | 23 SEP 20 |
| C-2 | GRADING | 29 APR 2020 | 1 | 23 SEP 20 |
| C-3 | UTILITIES | 29 APR 2020 | 1 | 23 SEP 20 |
| ER-1 | EROSION CONTROL | 29 APR 2020 | 1 | 23 SEP 20 |
| SW-1 | STORMWATER AREAS | 29 APR 2020 | 1 | 23 SEP 20 |
| L-1 | LANDSCAPE | 29 APR 2020 | 2 | 21 SEP 20 |
| 6493 | LIGHTING (RED LEONARD ASSOC) | 04 DEC 2019 | 1 | 1 SEP 20 |
| TR-1 | EMGCY, TANKER, & DRIVE-THRU VEHICLE PATH | 29 APR 2020 | 1 | 23 SEP 20 |
| TK-1 | TANK AND PIPING LAYOUT | 29 APR 2020 | 1 | 23 SEP 20 |
| TK-2 | TANK AND PIPING DETAILS | 29 APR 2020 | NONE | N/A |
| FSP-1 | SELF SERVICE FIRE SUPPRESSION | 29 APR 2020 | 1 | 23 SEP 20 |
| FSP-2 | SELF SERVICE FIRE SUPPRESSION | 29 APR 2020 | 1 | 23 SEP 20 |
| SD-1 | SITE DETAILS | 29 APR 2020 | 1 | 23 SEP 20 |
| SD-2 | SITE DETAILS | 29 APR 2020 | 1 | 23 SEP 20 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| A1.0 | FLOOR PLAN | 29 APR 2020 | 1 | 23 SEP 20 |
| A2.1 | BUILDING ELEVATIONS | 29 APR 2020 | 1 | 23 SEP 20 |
| A2.2 | BUILDING ELEVATIONS | 29 APR 2020 | 1 | 23 SEP 20 |
| A2.3 | CANOPY ELEVATIONS | 29 APR 2020 | 1 | 23 SEP 20 |
| | | | | |
| | | | | |
| SG-1 | SIGN AND GRAPHICS | 29 APR 2020 | 1 | 23 SEP 20 |



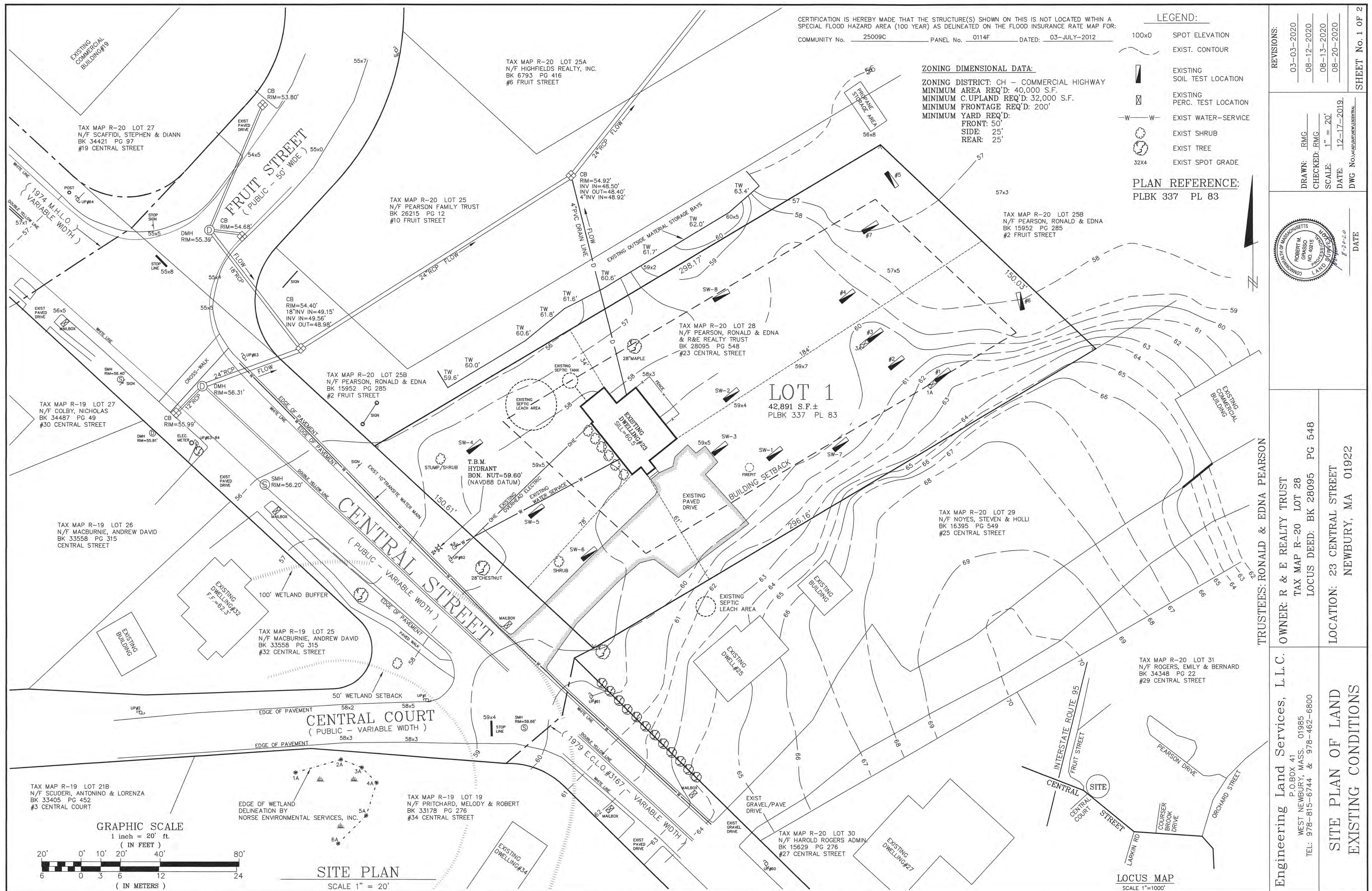
A.L. PRIME ENERGY
CONSULTANT, INC.
18 LARK AVENUE
SAUGUS MA 01906
(781)246-0201

BYFIELD, MA
23 CENTRAL STREET

PROJECT
COVER SHEET

DWG FILE
SCALE
TBD-019-01 BYFIELD
AS NOTED

SHEET
C-0



| | | | |
|---|---|---|------------------|
| Engineering Land Services, L.L.C. P.O. BOX 41 WEST NEWBURY, MASS. 01985 TEL: 978-815-6744 & 978-462-6800 | OWNER: R & E REALTY TRUST TAX MAP R-20 LOT 28 LOCUS DEED: BK 28095 PG 548 | | REVISIONS: |
| | | | 03-03-2020 |
| | | | 08-12-2020 |
| | | | 08-13-2020 |
| | | | 08-20-2020 |
| SITE PLAN OF LAND EXISTING CONDITIONS | LOCATION: 23 CENTRAL STREET NEWBURY, MA 01922 | DRAWN: RMG CHECKED: RMG SCALE: 1" = 20' DATE: 12-17-2019 | |
| | | DWG No. A40400001 NEWBURY CENTRAL | SHEET No. 1 OF 2 |

CERTIFICATION IS HEREBY MADE THAT THE STRUCTURE(S) SHOWN ON THIS IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA (100 YEAR) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR:

COMMUNITY No. 25009C PANEL No. 0114F DATED: 03-JULY-2012

ZONING DIMENSIONAL DATA:

ZONING DISTRICT: CH - COMMERCIAL HIGHWAY
MINIMUM AREA REQ'D: 40,000 S.F.
MINIMUM C.UPLAND REQ'D: 32,000 S.F.
MINIMUM FRONTAGE REQ'D: 200'
MINIMUM YARD REQ'D:
FRONT: 50'
SIDE: 25'
REAR: 25'

LEGEND:

FND - FOUND
S.F. - SQUARE FEET
D.H. - DRILL HOLE
I.P. - IRON PIPE
I.R. - IRON ROD
U - UTILITY POLE

FOR REGISTRY USE ONLY:

LOT 54-3

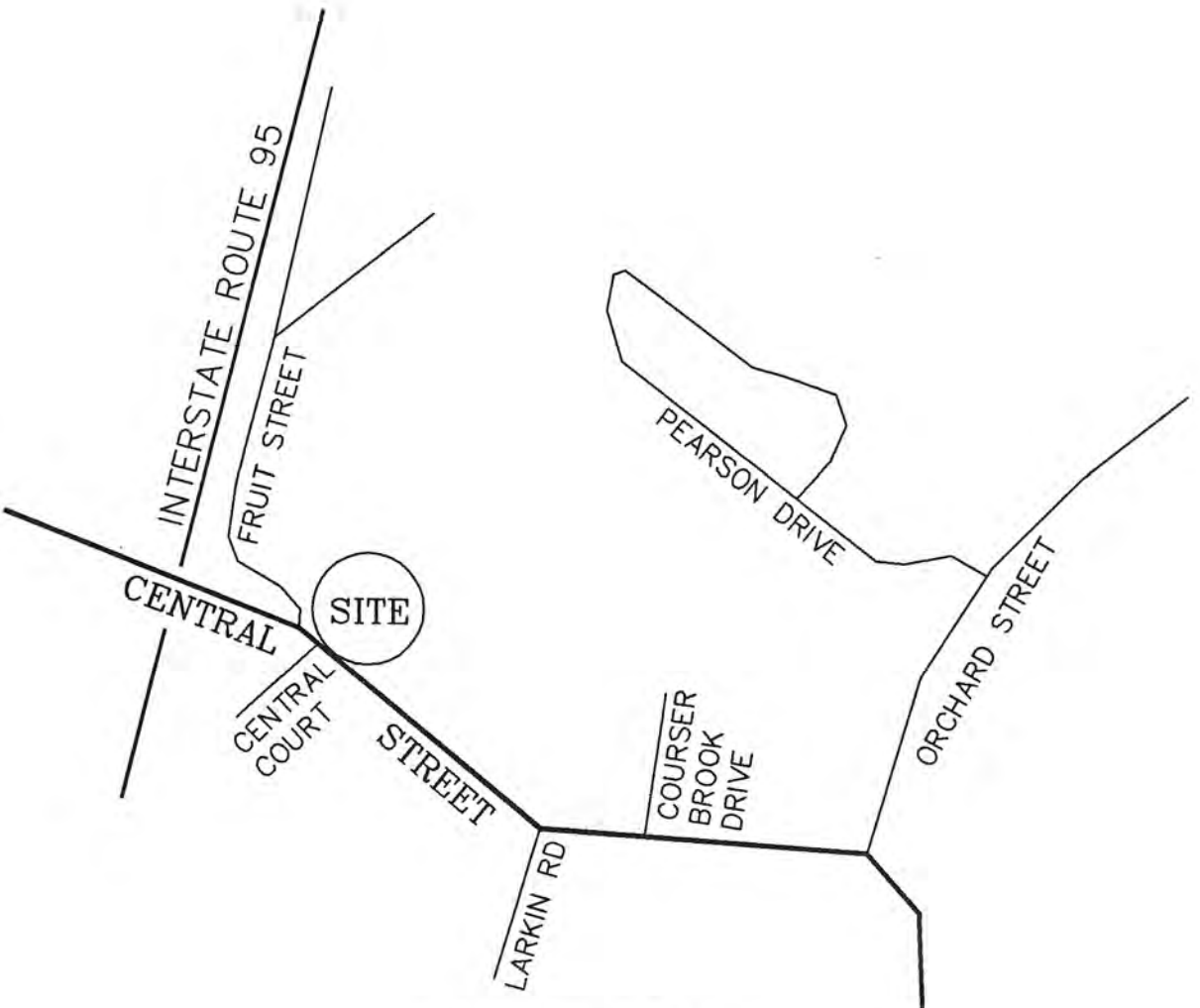
8.2 ACRES±
PLBK 337 PL 83
TAX MAP R-20 LOT 25B
N/F PEARSON, RONALD & EDNA
BK 15952 PG 285
#2 FRUIT STREET

PROPOSED DRAINAGE & GRADING EASEMENT 6,226 S.F.± FOR THE BENEFIT TO LOT 1

LOT 1

42,891 S.F.±
PLBK 337 PL 83
TAX MAP R-20 LOT 28
N/F PEARSON, RONALD & EDNA
& R&E REALTY TRUST
BK 28095 PG 548
#23 CENTRAL STREET

TAX MAP R-20 LOT 29
N/F NOYES, STEVEN & HOLLI
BK 16395 PG 549
#25 CENTRAL STREET

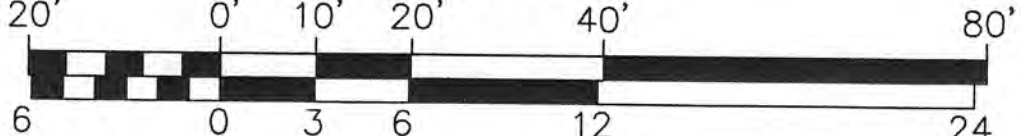


LOCUS MAP
NOT TO SCALE

GRAPHIC SCALE

1 inch = 20' ft.

(IN FEET)



(IN METERS)

PLAN REFERENCE:

PLBK 337 PL 83

ASSESSOR'S DATA:

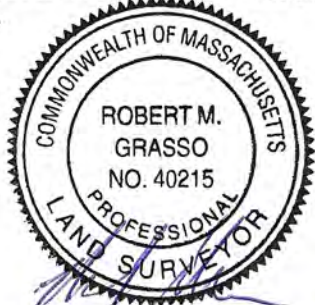
MAP No. R-20
LOT No. 28 & 25B

CERTIFICATIONS:

I HEREBY CERTIFY THAT THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIP, AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR THE DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.
(Ch. 380 OF THE ACTS OF 1966)

I FURTHER CERTIFY THAT ALL SURVEYING CONFORMS TO THE TECHNICAL STANDARDS OF THE AMERICAN CONGRESS ON SURVEYING AND MAPPING.

THE CERTIFICATION SHOWN HEREON IS INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND IS NOT A CERTIFICATION AS TO THE TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PARCELS ARE SHOWN ACCORDING TO CURRENT ASSESSOR'S MAPS.



ROBERT M. GRASSO, P.L.S.#40215 DATE

LOCUS DEEDS:

R&E REALTY TRUST
RONALD & EDNA PEARSON
BK 28095 PG 548
23 CENTRAL STREET - LOT 1
TAX MAP R-20 LOT 28

RONALD & EDNA PEARSON
BK 15952 PG 285
2 FRUIT STREET - LOT 54-3
TAX MAP R-20 LOT 25B

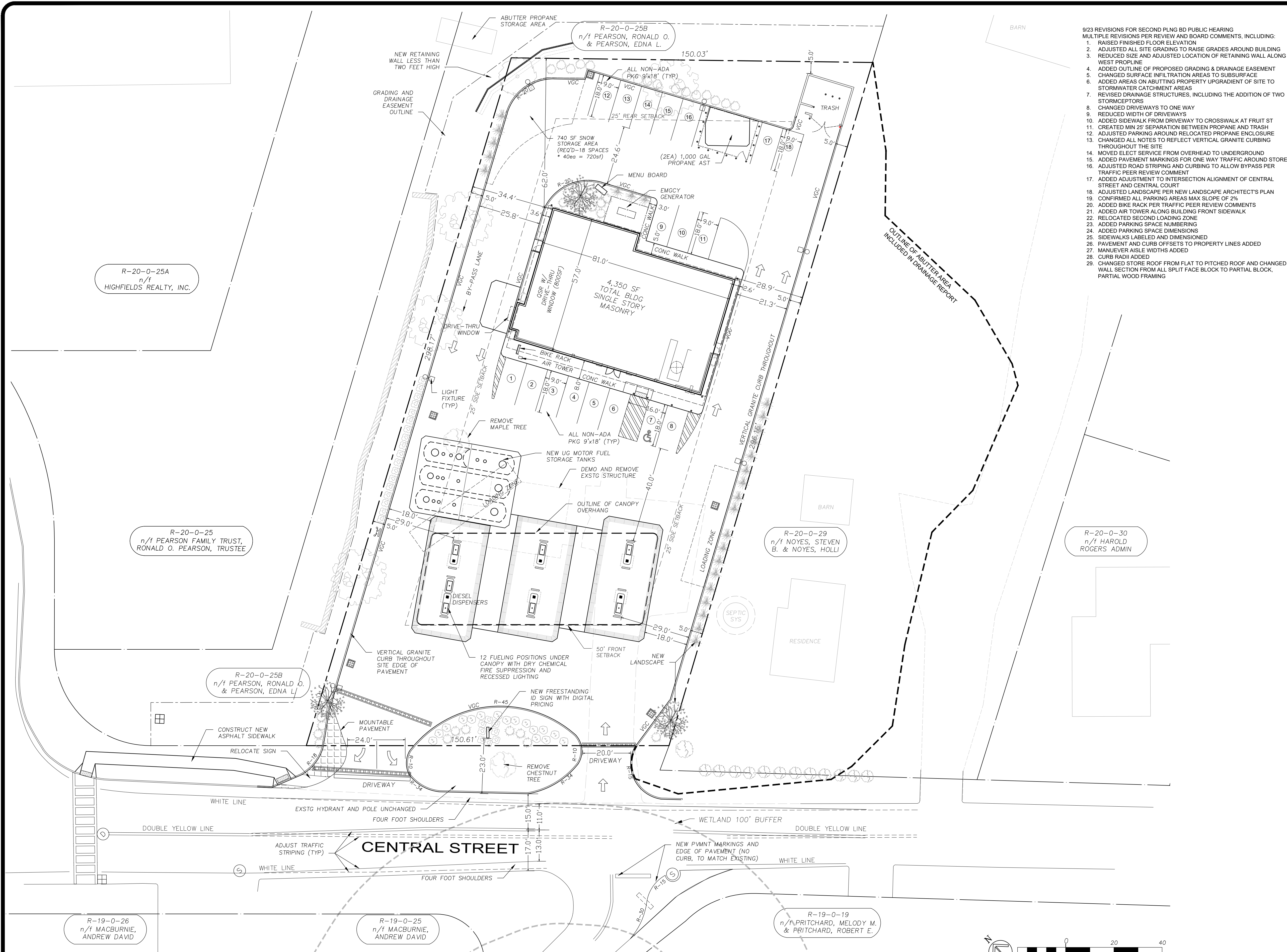
EASEMENT PLAN OF LAND

LOCATED IN
NEWBURY, MASSACHUSETTS

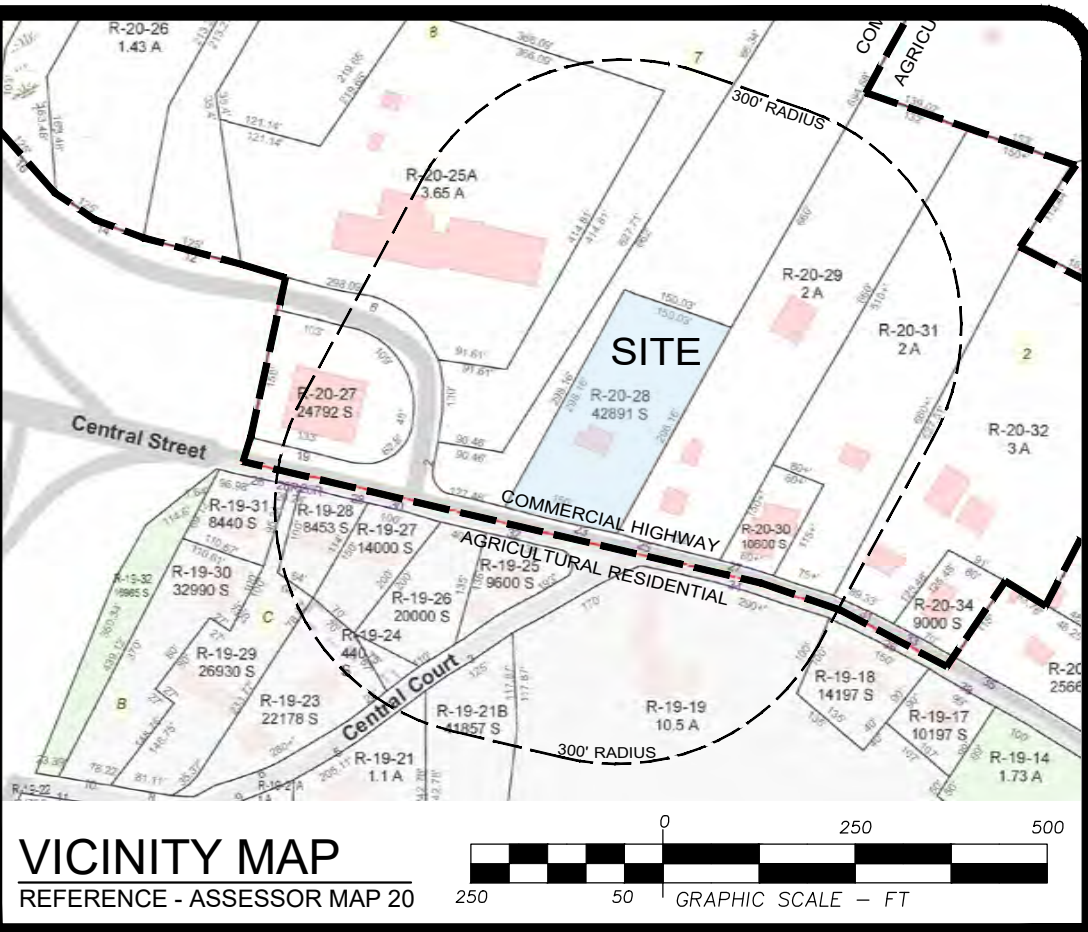
OWNER:
RONALD & EDNA PEARSON
2 FRUIT STREET
NEWBURY, MA 01922

2 FRUIT ST/23 CENTRAL ST
NEWBURY, MA
DRAINAGE/GRADING EASEMENT

| | | | |
|---------------------------------------|--------------------|---------------|-------------|
| DRAWN: BJF | DESIGNED: RMG | SCALE: 1"=20' | SHEET No. 1 |
| CHECKED: RMG | DATE: 22-SEPT-2020 | | |
| Engineering Land Services, LLC | | | REVISION : |
| P.O.BOX 41 | | | BY |
| WEST NEWBURY, MA 01985 | | | |
| TEL: 978-815-6744 & FAX: 978-462-6800 | | | |
| EMAIL: MASSPLSRG@AOL.COM | | | |



- 9/23 REVISIONS FOR SECOND PLNG BD PUBLIC HEARING
MULTIPLE REVISIONS PER REVIEW AND BOARD COMMENTS, INCLUDING:
1. RAISED FINISHED FLOOR ELEVATION
 2. ADJUSTED ALL SITE GRADING TO RAISE GRADES AROUND BUILDING
 3. REDUCED SIZE AND ADJUSTED LOCATION OF RETAINING WALL ALONG WEST PROLINE
 4. ADDED OUTLINE OF PROPOSED GRADING & DRAINAGE EASEMENT
 5. CHANGED SURFACE INFILTRATION AREAS TO SUBSURFACE
 6. ADDED AREAS ON ABUTTING PROPERTY UPGRADIENT OF SITE TO STORMWATER CATCHMENT AREAS
 7. REVISED DRAINAGE STRUCTURES, INCLUDING THE ADDITION OF TWO STORMCEPTORS
 8. CHANGED DRIVEWAYS TO ONE WAY
 9. REDUCED WIDTH OF DRIVEWAYS
 10. ADDED SIDEWALK FROM DRIVEWAY TO CROSSWALK AT FRUIT ST
 11. CREATED MIN 25' SEPARATION BETWEEN PROPANE AND TRASH
 12. ADJUSTED PARKING AROUND RELOCATED PROPANE ENCLOSURE
 13. CHANGED ALL NOTES TO REFLECT VERTICAL GRANITE CURBING THROUGHOUT THE SITE
 14. MOVED ELECT SERVICE FROM OVERHEAD TO UNDERGROUND
 15. ADDED PAVEMENT MARKINGS FOR ONE WAY TRAFFIC AROUND STORE
 16. ADJUSTED ROAD STRIPING AND CURBING TO ALLOW BYPASS PER TRAFFIC PEER REVIEW COMMENT
 17. ADDED ADJUSTMENT TO INTERSECTION ALIGNMENT OF CENTRAL STREET AND CENTRAL COURT
 18. ADJUSTED LANDSCAPE PER NEW LANDSCAPE ARCHITECT'S PLAN
 19. CONFIRMED ALL PARKING AREAS MAX SLOPE OF 2%
 20. ADDED BIKE RACK PER TRAFFIC PEER REVIEW COMMENTS
 21. ADDED AIR TOWER ALONG BUILDING FRONT SIDEWALK
 22. RELOCATED SECOND LOADING ZONE
 23. ADDED PARKING SPACE NUMBERING
 24. ADDED PARKING SPACE DIMENSIONS
 25. SIDEWALKS LABELED AND DIMENSIONED
 26. PAVEMENT AND CURB OFFSETS TO PROPERTY LINES ADDED
 27. MANUEVER AISLE WIDTHS ADDED
 28. CURB RADII ADDED
 29. CHANGED STORE ROOF FROM FLAT TO PITCHED ROOF AND CHANGED WALL SECTION FROM ALL SPLIT FACE BLOCK TO PARTIAL BLOCK, PARTIAL WOOD FRAMING



ZONING INFO - PARCEL R20-0-28 - BK28095/PG548 - 23 CENTRAL ST
ZONE: CH - COMMERCIAL HIGHWAY

| | REQUIRED | EXISTING | PROPOSED | RELIEF REQD |
|---|-------------|------------|-----------|-------------|
| MIN. LOT AREA | 40,000 SF | 42,891 SF± | NO CHANGE | NONE |
| MIN. LOT FRONTAGE | 200 FT | 150 FT | NO CHANGE | NONE |
| FRONT YARD SETBACK | 50 FT | 78 FT± | 50 FT | NONE |
| SIDE YARD SETBACK | 25 FT | 34 FT± | 25 FT | NONE |
| REAR YARD SETBACK | 25 FT | 184 FT± | 59 FT± | NONE |
| MAX BLDG AREA (SF) | N/A | 1,138 SF | 4,350 SF | NONE |
| MAX BLDG HEIGHT | 35 FT (max) | 25 FT± | 20 FT± | NONE |
| MAX LOT COVERAGE (%) | 50 % (max) | 2.7% | 18.5 % | NONE |
| PARKING SPACES (MIN 9.0x18') -RETAIL - 3ea / 1,000 * 3,000 GFA = 9 -FOOD - 0.3ea / 12 SEATS = 4 | 13 | 4 | 18 | NONE |

REFERENCE:
TOWN OF NEWBURY MA eCODE360 CH 97 ZONING ADOPTED OCT 8, 1959
W/ AMENDMENTS THRU APRIL 23, 2019

- GENERAL NOTES**
1. THE GENERAL PURPOSE OF THIS WORK IS TO REMOVE THE EXISTING RESIDENTIAL USE AND IMPROVEMENTS AND CONSTRUCT A NEW GAS STATION AND CONVENIENCE STORE WITH DRIVE-THRU
 2. THE PROSPECTIVE PROPERTY OWNER WILL OBTAIN ANY APPLICABLE BOARD AND STATE APPROVALS AND GENERAL BUILDING PERMIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR PERMITS FROM THE LOCAL FIRE MARSHAL'S OFFICE AND TRADE OR BUILDING PERMITS FROM THE LOCAL BLDG DEPT AND ALL ASSOCIATED TESTING AND INSPECTION REQUIREMENTS.
 3. THE CONTRACTOR SHALL CONTACT DIG-SAFE PRIOR TO ANY CONSTRUCTION EXCAVATION (811 IN MA)
 4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY:
 - 4.1. PROPERTY BOUNDARIES, EASEMENTS, AND RIGHT OF WAYS.
 - 4.2. EXSTG STRUCTURES, BUILDINGS, AND DRIVEWAYS
 - 4.3. LOCATIONS, SIZES, DEPTHS OF EXSTG UG UTILITIES, PIPING, STRUCTURES, TANKS, ETC.
 - 4.4. ALL EXSTG AND PROPOSED CRITICAL ELEVATIONS
 5. WHERE CONFLICTS ARISE BETWEEN THE FIELD CONDITIONS & PROPOSED CONSTRUCTION, OR IF THERE IS A CONFLICT BETWEEN ANY REGS OR MUNICIPAL REQINTS AND PROPOSED PLANS, CONTRACTOR SHALL NOTIFY OWNER'S REP PRIOR TO CONTINUANCE OF THE WORK.
 6. PROPOSED WORK INCLUDES:
 - 6.1. PREP SITE PER ANY CONDITIONS OF SITE APPROVALS FROM ZONING, PLANNING, CONSERVATION COMMISSION, OR ANY OTHER APPLICABLE BODY
 - 6.2. RAZE AND REMOVE ALL EXISTING IMPROVEMENTS
 - 6.3. REPLACE UG UTILITIES AND INSTALL ANY STORMWATER MANAGEMENT STRUCTURES
 - 6.4. INSTALL NEW UNDERGROUND STORAGE TANKS
 - 6.5. CONSTRUCT NEW STORE, GAS STATION ISLANDS & CANOPIES
 - 6.6. INSTALL PAVEMENT & CURBING INCLUDING DRIVEWAYS. MATCH GRADE ALONG ALL PROP LINES
 - 6.7. INSTALL SIGNAGE IAW SIGNAGE APPROVALS
 - 6.8. INSTALL LANDSCAPING AND FENCING PER APPROVED SITE PLAN AS WELL AS SCREENED TRASH ENCLOSURE

23 SEP 2020

19 MAY 2020

29 APR 2020

2

1

0

AG

AG

AG

MULTIPLE REVISIONS PER PEER REVIEW AND HRG CMTS

ADDED ABUTTER SEPTIC SYS LOCATION

ORIGINAL DRAWING DATE

REV BY

DATE

4Prime Energy
A.L. PRIME ENERGY CONSULTANT, INC.
18 LARK AVENUE
SAUGUS MA 01906
(781)246-0201

PROJECT ADDRESS

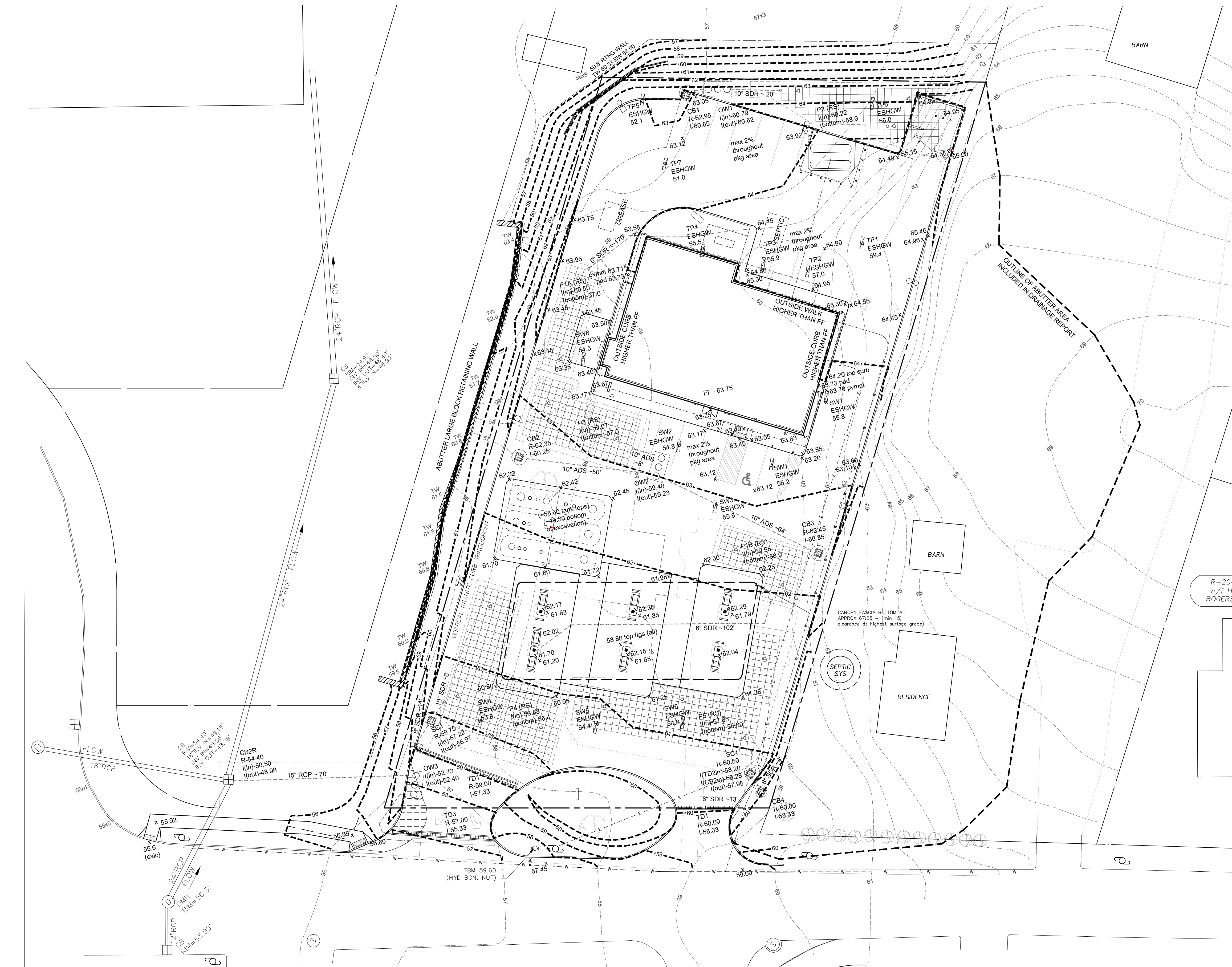
BYFIELD, MA
23 CENTRAL STREET

SITE LAYOUT

TBD-019-01 BYFIELD

AS NOTED

C-1.0

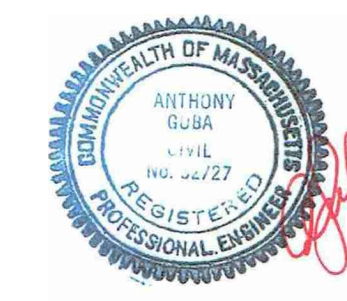


LAYOUT OF PROPOSED SITE GRADING

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT DIG-SAFE PRIOR TO ANY CONSTRUCTION EXCAVATION (811 IN MA)
2. SITE GRADES VARY LESS THAN SEVEN FEET ACROSS ENTIRE PROPERTY. CONTOURS SHOWN AT ONE FOOT INTERVAL
3. OWNER WILL HAVE SURVEYOR CONFIRM LOCAL TEMP BM AT HYDRANT ALONG FRONTAGE PRIOR TO START OF CONSTRUCTION AND CONTRACTOR WILL MAINTAIN AND PROTECT THE BM THROUGHOUT THE PROJECT
4. BY TOWN REGULATION, ALL PARKING AREAS TO HAVE A MAXIMUM 2% SLOPE IN ALL DIRECTIONS
5. WHERE CONFLICTS ARISE BETWEEN THE FIELD CONDITIONS VERIFIED AND PROPOSED CONSTRUCTION, OR IF THERE IS A CONFLICT BETWEEN ANY REGULATIONS OR MUNICIPAL REQUIREMENTS AND THE PROPOSED PLANS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO CONTINUANCE OF THE WORK.

| DATE | REV | DESCRIPTION |
|------------|-----|--|
| 09-23-2020 | 1 | AG ADDED ABUTTER CONTOURS, RAISED FF AND REAR PWINT GRADES 2'-3" |
| 04-29-2020 | 0 | AG ORIGINAL DRAWING DATE |

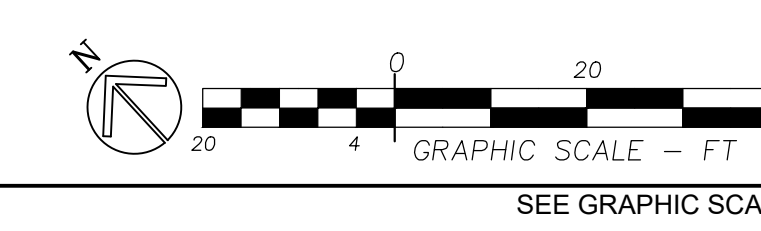


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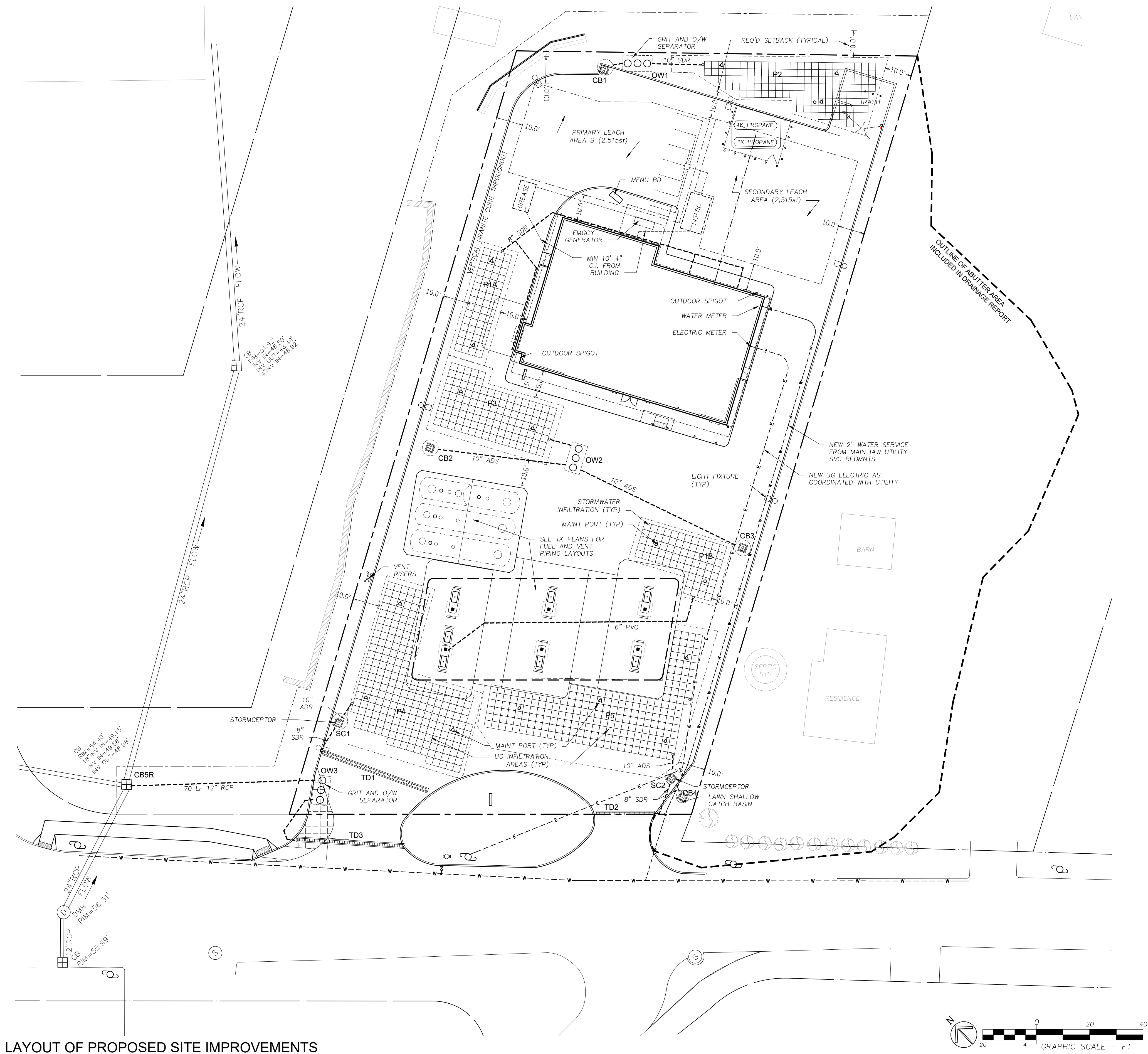
PROJECT ADDRESS
BYFIELD, MA
23 CENTRAL STREET

GRADING

| | |
|--------------------------------|---------------------|
| DRAWN BY TBD-019-01 BYFIELD | SHEET C-2 |
| SCALE AS NOTED | |



SEE GRAPHIC SCALE





LAYOUT OF PROPOSED SITE IMPROVEMENTS

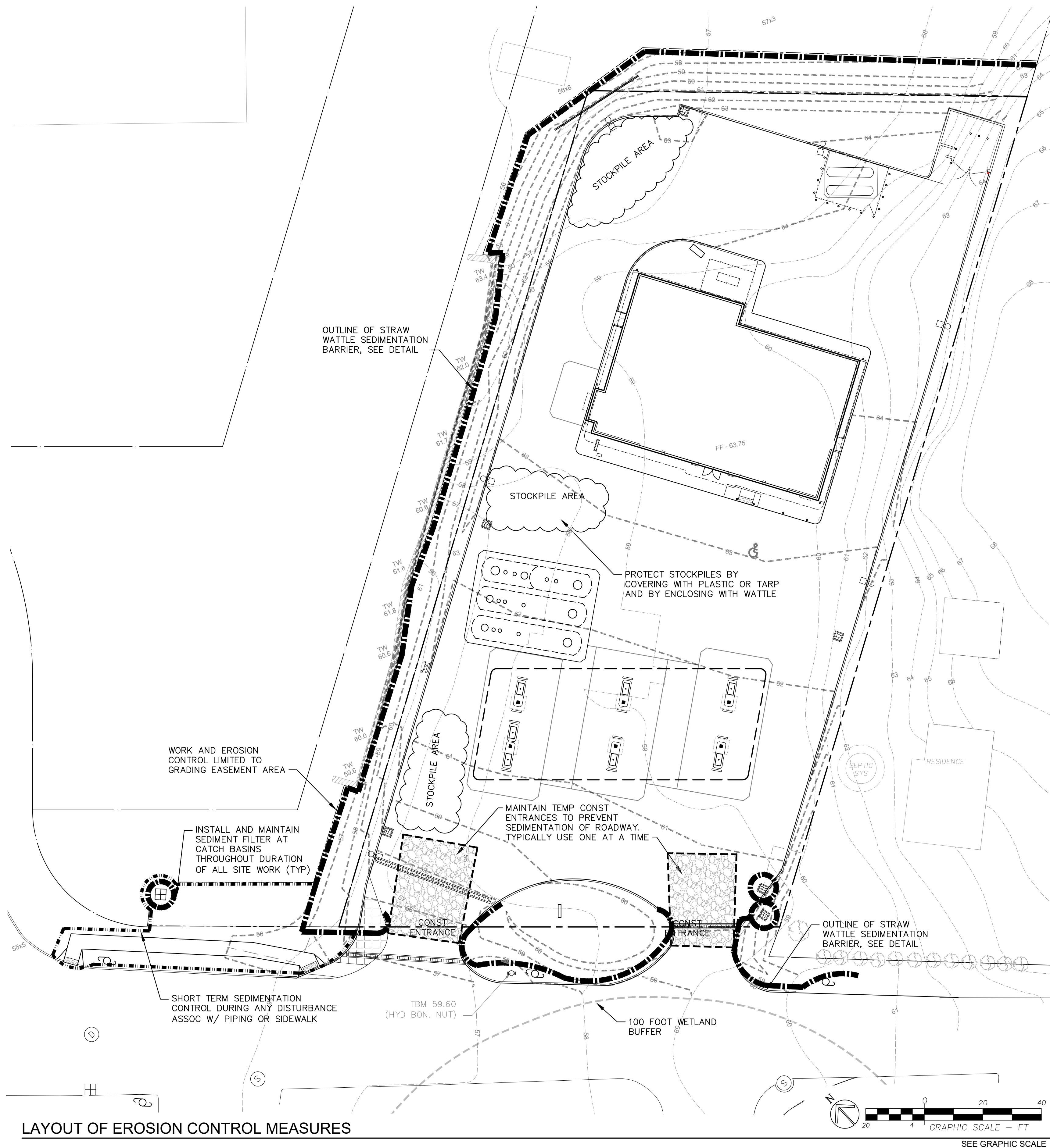
GENERAL NOTES

1. SITE WILL BE SERVED BY ON SITE SEPTIC. PERC TESTING AND PRELIMINARY DESIGN HAS BEEN COMPLETED TO CONFIRM THAT THE SITE LAYOUT WILL PROVIDE NECESSARY AREA, GRADING AND DEPTH FOR THE FINAL SEPTIC DESIGN. A DETAILED SEPTIC PLAN WILL BE PREPARED FOR MUNICIPAL APPROVAL FOLLOWING APPROVAL OF THE SITE PLAN, SPECIAL PERMIT, AND OTHER REQUIRED PERMITTING.
2. A NEW 2" WATER SERVICE IS PROPOSED. THE CLOSURE OF THE EXISTING SERVICE AND TIE FOR THE NEW SERVICE WILL BE COMPLETED IN ACCORDANCE WITH UTILITY PROVIDER REQUIREMENTS.
3. A NEW OVERHEAD ELECTRIC SERVICE WILL BE ROUTED ALONG THE EAST PROPERTY LINE TO THE NEW BUILDING.
4. AN EMERGENCY GENERATOR IS PROPOSED TO BE INSTALLED.
5. PROPANE TANKS WILL BE INSTALLED FOR BUILDING HEATING, GENERATOR, AND KITCHEN APPLIANCES AS NECESSARY.
6. THE CONTRACTOR SHALL CONTACT DIG-SAFE PRIOR TO ANY CONSTRUCTION EXCAVATION (811 IN MA).
7. WHERE CONFLICTS ARISE BETWEEN THE FIELD CONDITIONS VERIFIED AND PROPOSED CONSTRUCTION, OR IF THERE IS A CONFLICT BETWEEN ANY REGULATIONS OR MUNICIPAL REQUIREMENTS AND THE PROPOSED PLANS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO CONTINUANCE OF THE WORK.
8. PROPOSED WORK INCLUDES THE INSTALLATION OF NEW SUBSURFACE STORMWATER INFILTRATION SYSTEMS FOR THE BUILDING AND CANOPY ROOF DRAINS AS WELL AS THE MAJORITY OF THE NEW PAVEMENT AREA.
9. IT IS INTENDED TO LEAVE UNCHANGED THE EXISTING FIRE HYDRANT AT APPROXIMATELY THE MIDDLE OF THE PROPERTY FRONTAGE.
10. A.L. PRIME OR ITS INSTALLATION CONTRACTOR WILL OBTAIN UTILITY APPROVALS AND PAY WATER CONNECTION FEES AS APPLICABLE PRIOR TO ANY WATER UTILITY WORK.
11. SEE THE TANK AND PIPING PLANS FOR LAYOUT OF MOTOR FUEL AND VENT PIPING.

ANTICIPATED WATER AND SEWER RQMNTS

1. ANTICIPATED WATER AND SEWER FLOWS OF 1,500 GALLONS PER DAY BASED ON MA TITLE V AND SIMILAR STATION EXPERIENCE:
 - 1.1. RESTAURANT - (MIN) 1000 GPD
 - 1.2. RETAIL STORE - (MIN) 200 GPD
 - 1.3. MOTOR FUEL - (MIN) 300 GPD

| | | | | | | | |
|---|--|------|--|--|--|-------|--|
| 23 SEP 2020 1 AG CHANGED ELECT TO UG. MOVED PROPANE. REV PER CMTS | | DATE | | 29 APR 2020 0 AG ORIGINAL DRAWING DATE | | DATE | |
| REV | | BY | | DESCRIPTION | | | |
|  | | | |  | | | |
| PROJECT ADDRESS | | | | A.L. PRIME ENERGY CONSULTANT, INC. 18 LARK AVENUE SAUGUS MA 01906 (781)246-0201 | | | |
| BYFIELD, MA 23 CENTRAL STREET | | | | | | | |
| UTILITIES | | | | | | | |
| DWG TITLE | | | | TBD-019-01 BYFIELD | | SHEET | |
| SCALE | | | | AS NOTED | | C-3 | |



LAYOUT OF EROSION CONTROL MEASURES

EROSION CONTROL AND SOIL STABILIZATION

SEE DETAIL SHEETS FOR ADDITIONAL DETAILS

TEMPORARY STABILIZATION

- ALL DISTURBED SLOPES SHALL BE STABILIZED WITH TEMPORARY TREATMENT SUCH AS EROSION CONTROL BLANKETS OR HYDRO SEEDED AND PROTECTED WITHIN ONE WEEK OR BEFORE ANY EXPECTED STORM EVENT.
- EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED DAILY
- TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS
- DESIGN SEED MIX SHALL BE COMPRISED OF THE FOLLOWING SEED RATE MIXTURE
 - PER ACRE: 20 LBS TALL FESCUE, 20 LBS CREEPING RED FESCUE, 8 LBS BIRDSFOOT TREFOIL
 - PER 1,000 SF: 0.45 LBS TALL FESCUE, 0.45 LBS CREEPING RED FESCUE, 0.20 LBS BIRDSFOOT TREFOIL
- TEMPORARY TREATMENTS SHALL CONSIST OF HAY, STRAW, FIBER MULCH, OR PROTECTIVE COVER SUCH AS BURLAP, JUTE, FIBERGLASS NETTING OR BLANKETS. HAY OR STRAW SHOULD BE APPLIED AT MAXIMUM OF 3 TONS PER ACRE.
- ALL TEMPORARY PROTECTION INCLUDING SILT FENCE, HAY BALES OR STRAW WATTLES SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR GROUND COVER IS ESTABLISHED.
- ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS AND SHALL HAVE MAX SIDE SLOPE LESS THAN 2:1.
- CONTRACTOR TO TAKE WHATEVER MEASURES APPROPRIATE DURING EACH PHASE OF WORK TO DIVERT RUNOFF AROUND DISTURBED AREAS AND TO LIMIT THE AMOUNT OF RUNOFF FLOWING INTO OR THROUGH DISTURBED AREAS.

CONSTRUCTION SEQUENCE

- ESTIMATED TIME OF CONSTRUCTION FOR THIS PROJECT IS FIVE MONTHS.
- TEMPORARY CONTROL MEASURES AND ANY REQUIRED MA DEP SIGNAGE TO BE INSTALLED PRIOR TO ANY SITE WORK OR DEMO OF EXISTING IMPROVEMENTS.
- INSTALL PERIMETER FENCING, SILT CONTROLS, CONSTRUCTION ENTRANCES AND ESTABLISH STOCKPILE AREAS PRIOR TO SITE WORK EXCAVATION.
- THROUGHOUT THE COURSE OF THE WORK, MAINTAIN EROSION AND SEDIMENTATION CONTROL STRUCTURES AS NECESSARY TO KEEP ALL OPERATING AS INTENDED.
- DRAINAGE SHALL BE PREVENTED FROM ENTERING SUBSURFACE INFILTRATION SYSTEM BEFORE THE SYSTEM IS COMPLETED AND BACKFILLED.
- TEMPORARY HAY BALES, STRAW WATTLES, OR SILT FENCES MAY BE REMOVED AFTER FINAL SOIL STABILIZATION AND BASE PAVEMENT HAS BEEN INSTALLED AND ISSUANCE OF ANY REQUIRED APPROVAL FROM MUNICIPAL AUTHORITY.
- CATCH BASIN INLET PROTECTION MUST REMAIN UNTIL BASE PAVEMENT IS INSTALLED AND ALL STOCKPILES ARE REMOVED AND NO LONGER NECESSARY.
- AT THE CONCLUSION OF CONSTRUCTION AND AFTER ALL FINAL STABILIZATION IS ACHIEVED, CLEAN ALL DRAINAGE STRUCTURES OF ALL DIRT, DEBRIS, OR ANY LOOSE MATERIALS.

SEDIMENTATION CONTROL AND CONSTRUCTION OPN AND MAINT PLAN

- CARE SHALL BE TAKEN TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING ROADWAYS OR ANY DRAINAGE STRUCTURE.
- PROTECT ALL INLETS, STOCKPILES AND UN-ESTABLISHED SOIL AREAS DURING STORMS AND PERIODS OF RAINFALL.
- INSPECT ALL SEDIMENTATION CONTROL DEVICES PROMPTLY AFTER EACH RAINFALL AND REPAIR OR CLEAN OUT SEDIMENTATION AS NECESSARY.
- INSTALL ADDITIONAL CONTROL MEASURES AS NECESSARY AS CONDITIONS WARRANT.
- AT THE END OF EACH WORK DAY, COVER ALL STOCKPILES AND INSURE ALL SEDIMENTATION CONTROL DEVICES ARE IN PLACE. STOCKPILE SIDE SLOPES SHALL NOT BE GREATER THAN 2:1.
- SEDIMENT SHALL BE REMOVED FROM SILT WATTLE BARRIER ONCE THE VOLUME REACHES 1/2 HEIGHT OF THE WATTLE.
- CONSTRUCT AND MAINTAIN A TEMPORARY CONSTRUCTION ENTRANCE PRIOR TO EXISTING PAVED AREAS ARE DISTURBED AND CONSTRUCTION VEHICLES START TRACKING SEDIMENTATION INTO THE ROADWAY. CONSTRUCTION ENTRANCE(S) WILL BE MONITORED AND CLEANED OF SEDIMENT AS NEEDED ON A DAILY BASIS. SWEEP THE CONSTRUCTION SITE AND ENTRANCES AS NECESSARY TO PREVENT TRACKING OF SEDIMENTATION INTO THE ROADWAY.
- TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE DISTURBED, STOCKPILED IN APPROVED AREAS AND STABILIZED WITH TEMP VEGETATIVE COVER IF TO BE LEFT STOCKPILED FOR MORE THAN 30 CALENDAR DAYS.
- MAINTAIN PROPER DUST CONTROL THROUGHOUT THE PROJECT.
- INSTALL A CONTINUOUS LINE OF SEDIMENTATION CONTROL ALONG THE PERIMETER OF ALL CONSTRUCTION ACTIVITY PER THE EROSION CONTROL SITE PLAN.
- PROTECT THE INLET OF ALL CATCH BASINS SUBJECT TO POSSIBLE RUNOFF FROM THE SITE WITH SEDIMENT FILTER AND INSPECT THE FILTER AFTER ALL RAINFALLS AND ANY RUNOFF THAT REACHES THE CATCH BASIN.
- INSURE PROPER HANDLING OF CONCRETE WASH OR OTHER CONSTRUCTION ACTIVITY TO PREVENT ANY SUCH WASH FROM REACHING THE CATCH BASIN OR ROADWAY.

POST CONSTRUCTION

- UPON COMPLETION OF CONSTRUCTION, STORM WATER CONTROLS ARE TO BE MAINTAINED IN ACCORDANCE WITH FOLLOWING PERMANENT PROCEDURES:
 - CATCH BASINS SHALL BE INSPECTED AT LEAST ANNUALLY AND CLEANED AS NECESSARY
 - MAINTAIN A WRITTEN EMERGENCY RESPONSE PROCEDURE AND TRAIN ALL SITE EMPLOYEES HOW TO RESPOND IN CASE OF ANY SPILL
 - PAVED AREAS SHOULD BE SWEEPED AT LEAST ANNUALLY IN SPRING TO REMOVE SEDIMENT ACCUMULATED THROUGH THE WINTER
- LANDSCAPE AREAS ARE TO BE MAINTAINED AND ANY BARE SOIL IN GRASSSED AREAS SHALL BE RE-SEEDED.
- SEE WRITTEN OPERATION AND MAINTENANCE PLAN SUBMITTED AS PART OF SITE PLAN APPLICATION.

| | | | | | |
|---|--------|-----------|--|--------------------------|------|
| 09-23-2020 04-29-2020 | 1 0 | AG JAG | ADDED EASEMENT LINE, ADJ SEDIMENTATION LINE ORIGINAL DRAWING DATE | REV BY DESCRIPTION | DATE |
| <div><div></div><div>4Prime Energy A.L. PRIME ENERGY CONSULTANT, INC. 18 LARK AVENUE SAUGUS MA 01906 (781)246-0201</div></div> | | | | | |
| PROJECT ADDRESS BYFIELD, MA 23 CENTRAL STREET | | | | | |
| EROSION CONTROL | | | | | |
| DWG FILE TBD-019-01 BYFIELD | | | | SHEET ER-1 | |
| SCALE AS NOTED | | | | | |



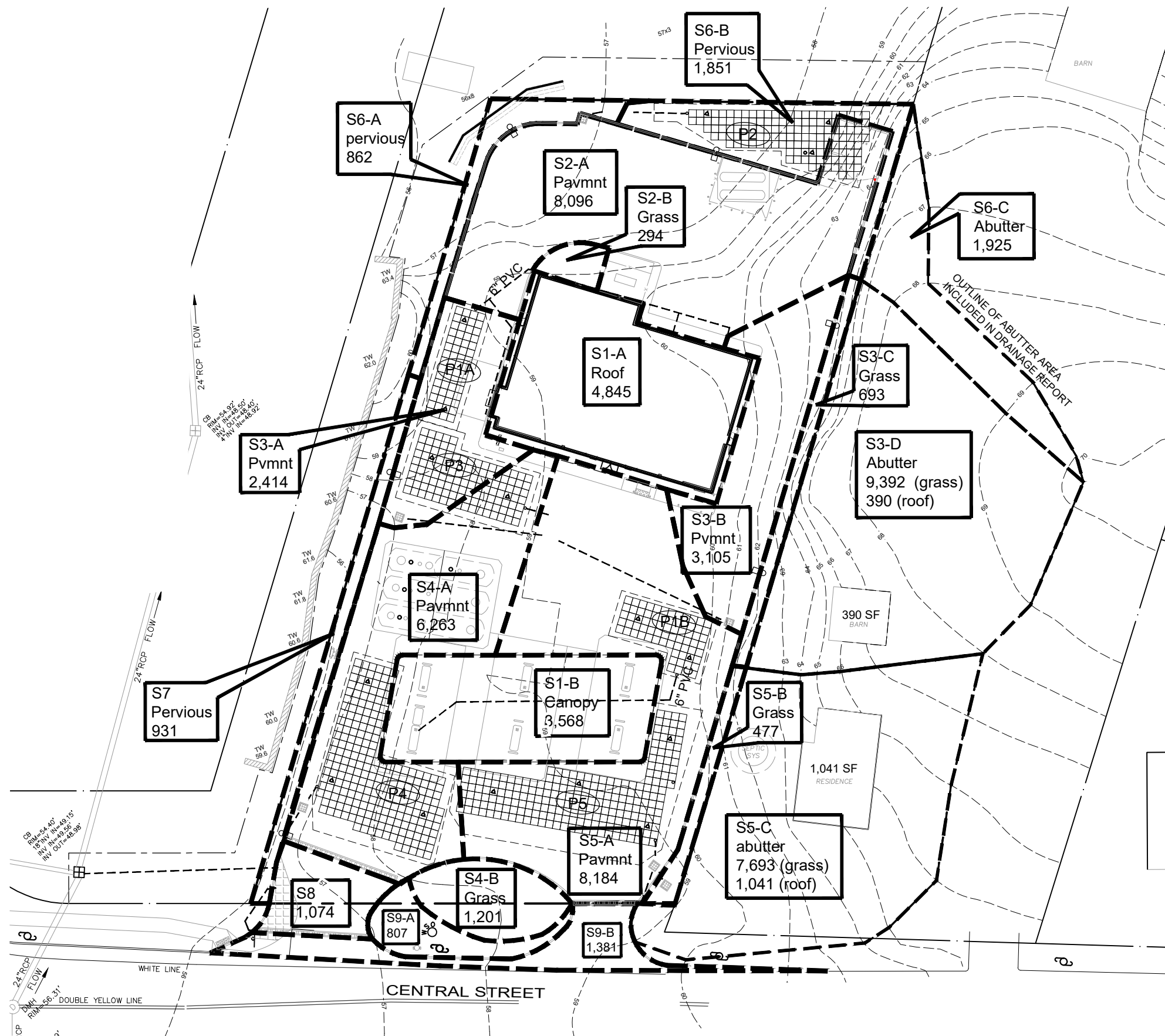
EXISTING LAYOUT



PROPOSED LAYOUT



PRE DEV RUNOFF AREAS



POST DEV RUNOFF AREAS

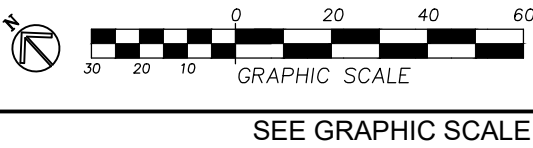
GENERAL NOTES

1. THE GENERAL PURPOSE OF THIS WORK IS TO REMOVE THE EXISTING RESIDENTIAL USE AND IMPROVEMENTS AND CONSTRUCT A NEW GAS STATION AND CONVENIENCE STORE WITH DRIVE-THRU
2. STORMWATER IMPACTS OF THE PROPOSED DEVELOPMENT HAVE BEEN MODELED IN HYDROCAD AND RUNOFF MITIGATION HAS BEEN DESIGNED AS INFLUENCED BY THAT MODELING TO REDUCE POST DEVELOPMENT RUNOFF BELOW PRE-DEVELOPMENT RATES AND VOLUMES. PLEASE REFER TO THE STORMWATER MANAGEMENT PLAN.
3. THE LAYOUTS ON THIS SHEET ARE INCLUDED IN THE STORMWATER MANAGEMENT PLAN AND USED IN THE HYDROCAD MODEL

Runoff Comparison of Rates and Volumes from Pre to Post Conditions

| | Total Runoff to St | | Total Runoff to Offsite | |
|----------------------|--------------------|--------|-------------------------|--------|
| | Rate | Volume | Rate | Volume |
| 2yr Pre Dev | 0.16 | 0.011 | 0.66 | 0.045 |
| 2yr Post Dev | 0.15 | 0.007 | 0.33 | 0.018 |
| Change | -0.01 | -0.004 | -0.33 | -0.027 |
| % change Pre to Post | -6% | -36% | -50% | -60% |
| 10yr Pre Dev | 0.77 | 0.038 | 2.97 | 0.146 |
| 10yr Post Dev | 0.28 | 0.013 | 0.74 | 0.037 |
| Change | -0.49 | -0.025 | -2.23 | -0.109 |
| % change Pre to Post | -64% | -66% | -75% | -75% |
| 100yr Pre Dev | 2.88 | 0.134 | 10.91 | 0.508 |
| 100yr Post Dev | 0.59 | 0.03 | 1.89 | 0.094 |
| Change | -2.29 | -0.104 | -9.02 | -0.414 |
| % change Pre to Post | -80% | -78% | -83% | -81% |

PRE AND POST DEVELOPMENT STORMWATER RUNOFF AREAS AND FLOW DIRECTIONS



SEE GRAPHIC SCALE

23 SEP 20201 AG ADDED ABUTTER AREAS THAT AFFECT SITE RUNOFF

29 APR 20200 AG ORIGINAL DRAWING DATE

DATE

REV BY DESCRIPTION

ANTHONY
DIBONA
No. 06427
PROFESSIONAL ENGINEER
MASSACHUSETTS

4Prime Energy

A.L. PRIME ENERGY
CONSULTANT, INC.
18 LARK AVENUE
SAUGUS MA 01906
(781)246-0201

PROJECT ADDRESS

BYFIELD, MA
23 CENTRAL STREET

SWOTER

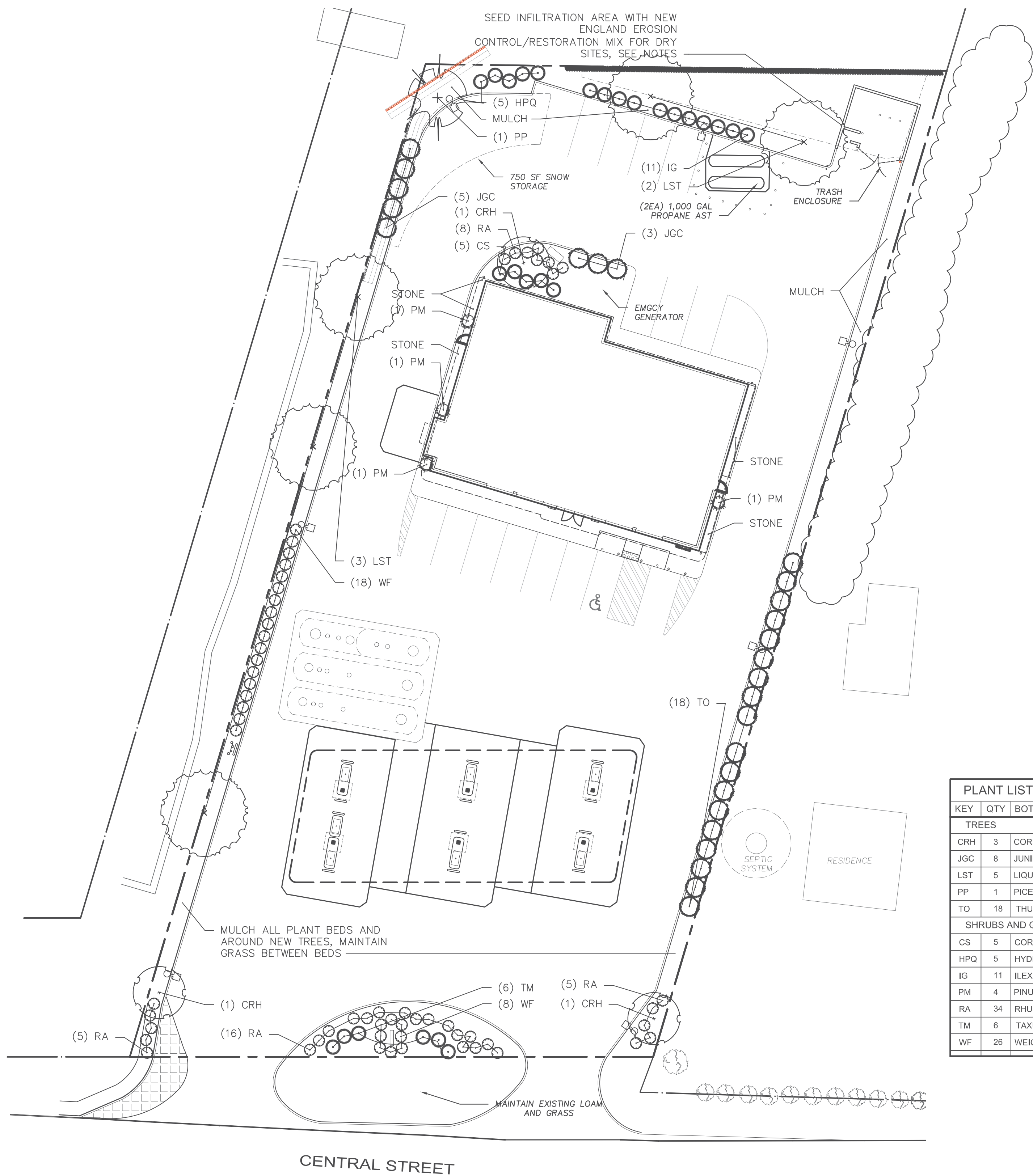
TBD-019-01 BYFIELD

SHEET

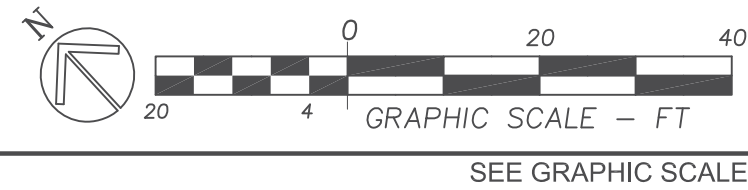
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SCALE

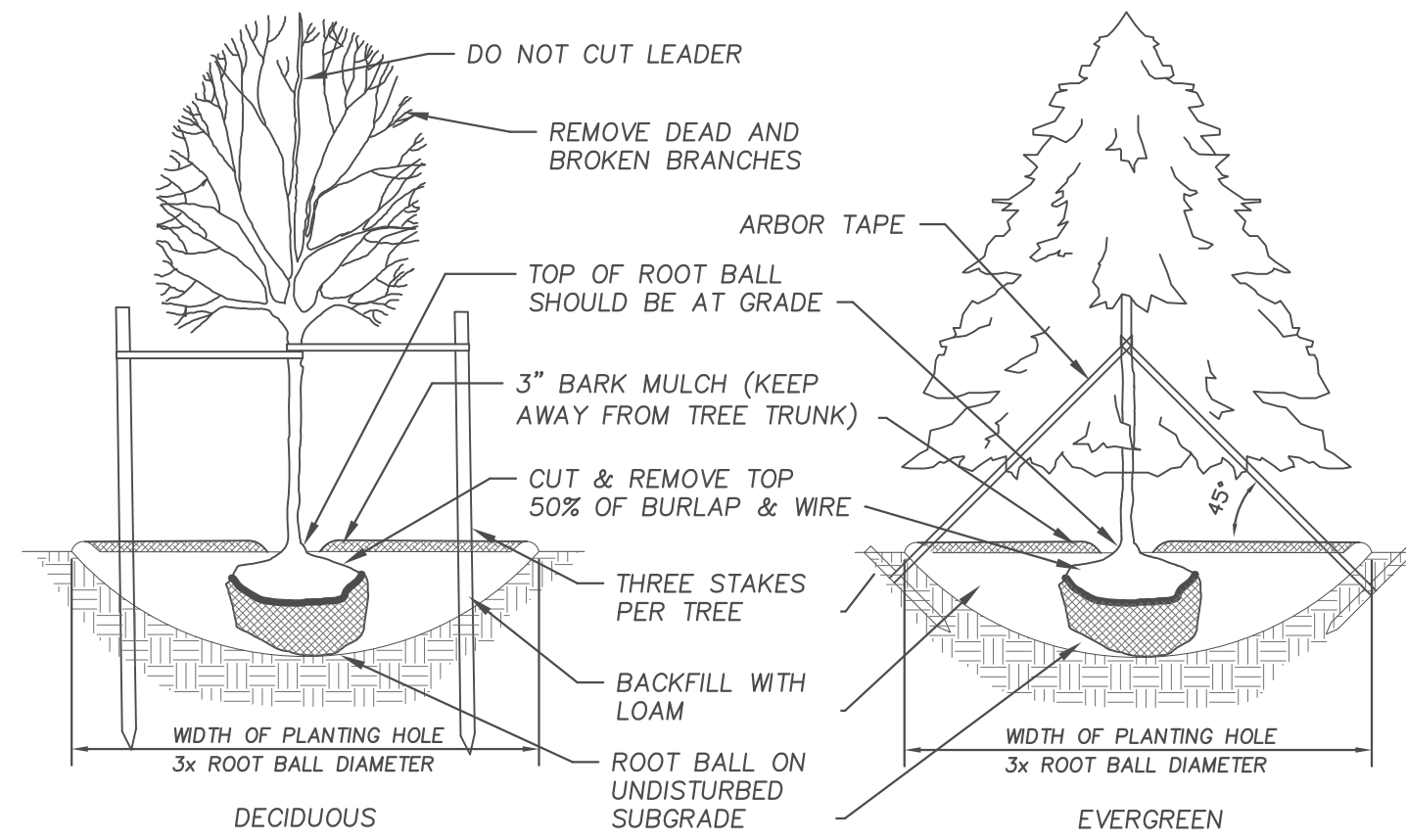
AS NOTED



LAYOUT OF PROPOSED SITE IMPROVEMENTS

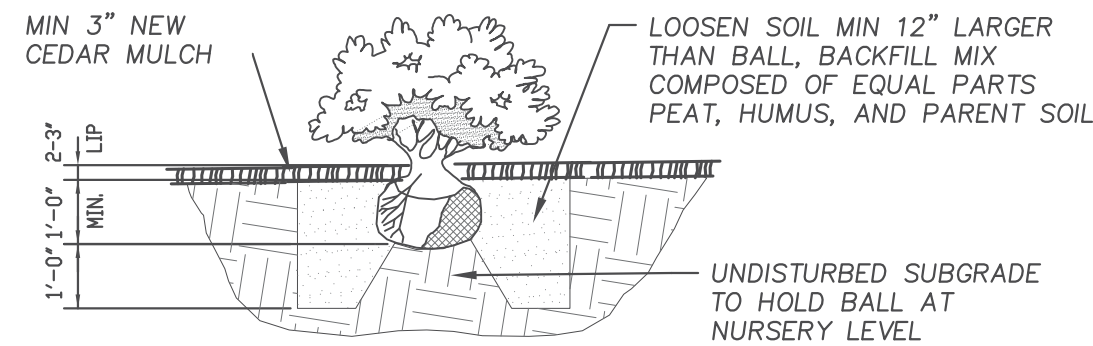


SEE GRAPHIC SCALE



TREE PLANTING

SEE GRAPHIC SCALE



SHRUB PLANTING

SEE GRAPHIC SCALE

| PLANT LIST | | | | | |
|------------------------|-----|------------------------------------|-----------------------|-----------|----------|
| KEY | QTY | BOTANICAL NAME | COMMON NAME | SIZE | COMMENTS |
| TREES | | | | | |
| CRH | 3 | CORNUS X 'RUTBAN' | RUTGERS HYBRD DOGWOOD | 2" CAL. | |
| JGC | 8 | JUNIPERUS CHINENSIS 'HETZII COLUM' | JUNIPER | 5-6' HT. | |
| LST | 5 | LIQUIDAMBAR SYRACIFLUA | SWEETGUM | 2.5" CAL. | |
| PP | 1 | PICEA PUNGENS 'GLAUCA' | BLUE SPRUCE | 6-8' HT. | |
| TO | 18 | THUJA OCCIDENTALIS 'EMERALD GR' | ARBORVITAE | 6-8' HT. | |
| SHRUBS AND GROUNDCOVER | | | | | |
| CS | 5 | CORNUS SERICEA 'ISANTI' | RED-TWIG DOGWOOD | 5 GAL | |
| HPQ | 5 | HYDRANGEA PAN. 'QUICKFIRE' | PANICLE HYDRANGEA | 5 GAL | |
| IG | 11 | ILEX GABRA 'COMPACTA' | INKBERRY | 5 GAL | |
| PM | 4 | PINUS MUGO 'COMPACTA' | DWARF MUGO PINE | 3 GAL | |
| RA | 34 | RHUS AROMATICA 'GRO-LOW' | GRO-LOW SUMAC | 3 GAL | |
| TM | 6 | TAXUS X MEDIA 'DENSIFORMIS' | SPREADING YEW | 5 GAL | |
| WF | 26 | WEIGELA FLORIDA 'MINUET' | WEIGELA | 3 GAL | |

GENERAL NOTES

1. THE LOCATION OF UG UTILITIES MUST BE VERIFIED IN THE FIELD PRIOR TO ANY EXCAVATION. VERIFY EXISTING AND PROPOSED UTILITY LOCATIONS IN THE FIELD AND VERIFY WITH PROJECT MANAGER PRIOR TO ANY EXCAVATION.
2. ALL WORK TO BE DONE IN ACCORDANCE WITH ALL CONDITIONS OF APPROVAL AND ANY SITE PLAN REQUIREMENTS OF THE TOWN OF NEWBURY.
3. VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON LAYOUT PLAN GOVERN OVER THE PLANT LIST IN THE CASE OF ANY DISCREPANCY.
4. ANY PLANT SUBSTITUTION MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE.
5. SEED INFILTRATION AREA WITH NEW ENGLAND EROSION CONTROL/RESTORATION SEED MIX FOR DRY SITES AT A RATE OF 1 LB/1250 SF (NEW ENGLAND WETLAND PLANTS, INC.). INFILTRATION AREAS TO BE SEEDED AND STABILIZED AS SOON AS PRACTICAL AFTER GRADING OF THE AREA.
9. ALL TREES TO BE STAKED WITH THREE HARDWOOD STAKES, SEE PLANTING DETAILS.
10. ALL NEW LANDSCAPE AREAS WITHIN 3 FEET OF NEW PLANTINGS TO HAVE MIN 12 INCHES TOPSOIL NOT INCLUDING THAT SOIL WITH THE TREE OR SHRUB PIT FOR FULL DEPTH OF ROOT BALL.
11. ALL MULCH AREAS TO BE A MIN OF 3 INCHES DEPTH OF SHREDDED HARDWOOD BARK.
12. AREAS AGAINST THE BUILDING WILL BE "MULCHED" WITH NON-FLAMMABLE LANDSCAPE STONE, COLOR AND TYPE TO BE APPROVED BY THE OWNER REPRESENTATIVE PRIOR TO PLACEMENT.
13. DURING PLANTING, APPLY SOIL ADDITIVES AND SLOW RELEASE FERTILIZER AND WATER THOROUGHLY AT COMPLETION.

| | | |
|------------------------------|-----|--------------|
| FOR REVIEW | KT | 21 SEPT 2020 |
| FOR REVIEW | KT | 17 AUG 2020 |
| ORIGINAL DRAWING DATE | KT | 12 AUG 2020 |
| DATE | REV | BY |
| DESCRIPTION | | |
| PROJECT ADDRESS | | |
| BYFIELD, MA 23 CENTRAL ST | | |
| LANDSCAPE | | |
| DWS FILE | | |
| SHEET | | |
| SCALE | | |
| AS NOTED | | |
| L-1 | | |

KD Turner Design
landscape architecture
27 High St.
Newburyport, MA 01950
ph) 781.632.6004






4Prime Energy
A.L. PRIME ENERGY CONSULTANT, INC.
18 LARK AVENUE
SAUGUS MA 01906
(781)246-0201

| LUMINAIRE LOCATION SUMMARY | | |
|----------------------------|-------|----------|
| LUM NO. | LABEL | MTG. HT. |
| 1 | C3 | 15 |
| 2 | C3 | 15 |
| 3 | C3 | 15 |
| 4 | C3 | 15 |
| 5 | C3 | 15 |
| 6 | C3 | 15 |
| 7 | C3 | 15 |
| 8 | C3 | 15 |
| 9 | C3 | 15 |
| 10 | C3 | 15 |
| 11 | C3 | 15 |
| 12 | C3 | 15 |
| 13 | C3 | 15 |
| 14 | C3 | 15 |
| 15 | C3 | 15 |
| 16 | C3 | 15 |
| 17 | C3 | 15 |
| 18 | C3 | 15 |
| 19 | C3 | 15 |
| 20 | C3 | 15 |
| 21 | C3 | 15 |
| 22 | C3 | 15 |
| 23 | C3 | 15 |
| 24 | C3 | 15 |
| 25 | C3 | 15 |
| 26 | C3 | 15 |
| 27 | C3 | 15 |
| 28 | C3 | 15 |
| 29 | C3 | 15 |
| 30 | C3 | 15 |
| 31 | L3 | 10 |
| 32 | L3 | 10 |
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| 41 | L4 | 10 |
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| 49 | L4 | 10 |
| 50 | L4 | 10 |
| 51 | L4 | 10 |
| 52 | L4 | 10 |

| LUMINAIRE LOCATION SUMMARY | | |
|----------------------------|-------|----------|
| LUM NO. | LABEL | MTG. HT. |
| 53 | L4 | 10 |
| 54 | L4 | 10 |
| 55 | L4 | 10 |
| 56 | L4 | 10 |
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| 93 | L4 | 10 |
| 94 | L4 | 10 |
| 95 | L4 | 10 |
| 96 | L4 | 10 |
| 97 | L4 | 10 |
| 98 | L4 | 10 |
| 99 | Q3 | 17 |
| 100 | Q3 | 17 |
| 101 | Q4 | 17 |
| 102 | Q4 | 17 |
| 103 | Q4 | 17 |
| 104 | Q4 | 17 |
| 105 | Q4 | 17 |

NOTE:
AREA LIGHTS ON NEW15 FT. POLES MOUNTED ON 2 FT. CONCRETE BASES

| FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES | | | | | |
|--|-------|------|-----|---------|---------|
| LABEL | AVG | MAX | MIN | AVG/MIN | MAX/MIN |
| CANOPY | 50.71 | 81 | 21 | 2.41 | 3.86 |
| PAVED | 3.59 | 13.6 | 0.8 | 4.49 | 17.00 |
| UNDEFINED | 0.49 | 17.5 | 0.0 | N.A. | N.A. |

| LUMINAIRE SCHEDULE | | | | | | | | | | |
|---|-----|-------|--------------|--------|-------|------------|-----------------|-------------|--------------|--------------------------------------|
| SYMBOL | QTY | LABEL | ARRANGEMENT | LUMENS | LLF | BUG RATING | WATTS/LUMINAIRE | TOTAL WATTS | MANUFACTURER | DESCRIPTION |
|  | 30 | C3 | SINGLE | 8924 | 1.030 | B3-U0-G1 | 92 | 2760 | CREE, INC. | CAN-304-SL-XX-04-E-UL-XX-700-57K |
|  | 8 | L3 | 3FT LINEAR | 148 | 1.000 | B0-U1-G0 | 2.9 | 139.2 | MAXLITE INC. | LB3650 |
|  | 60 | L4 | 4FT LIGHTBAR | 148 | 1.000 | B0-U1-G0 | 2.9 | 1392 | MAXLITE INC. | LB4850 |
|  | 2 | Q3 | SINGLE | 5551 | 1.030 | B1-U0-G1 | 53 | 106 | Cree Inc | OSQ-A-NM-3ME-Z-57K-UL-XX + OSQ-BLSMF |
|  | 5 | Q4 | SINGLE | 5402 | 1.030 | B1-U0-G1 | 53 | 265 | Cree Inc | OSQ-A-NM-4ME-Z-57K-UL-XX + OSQ-BLSMF |

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SCALE:
1" = 20'

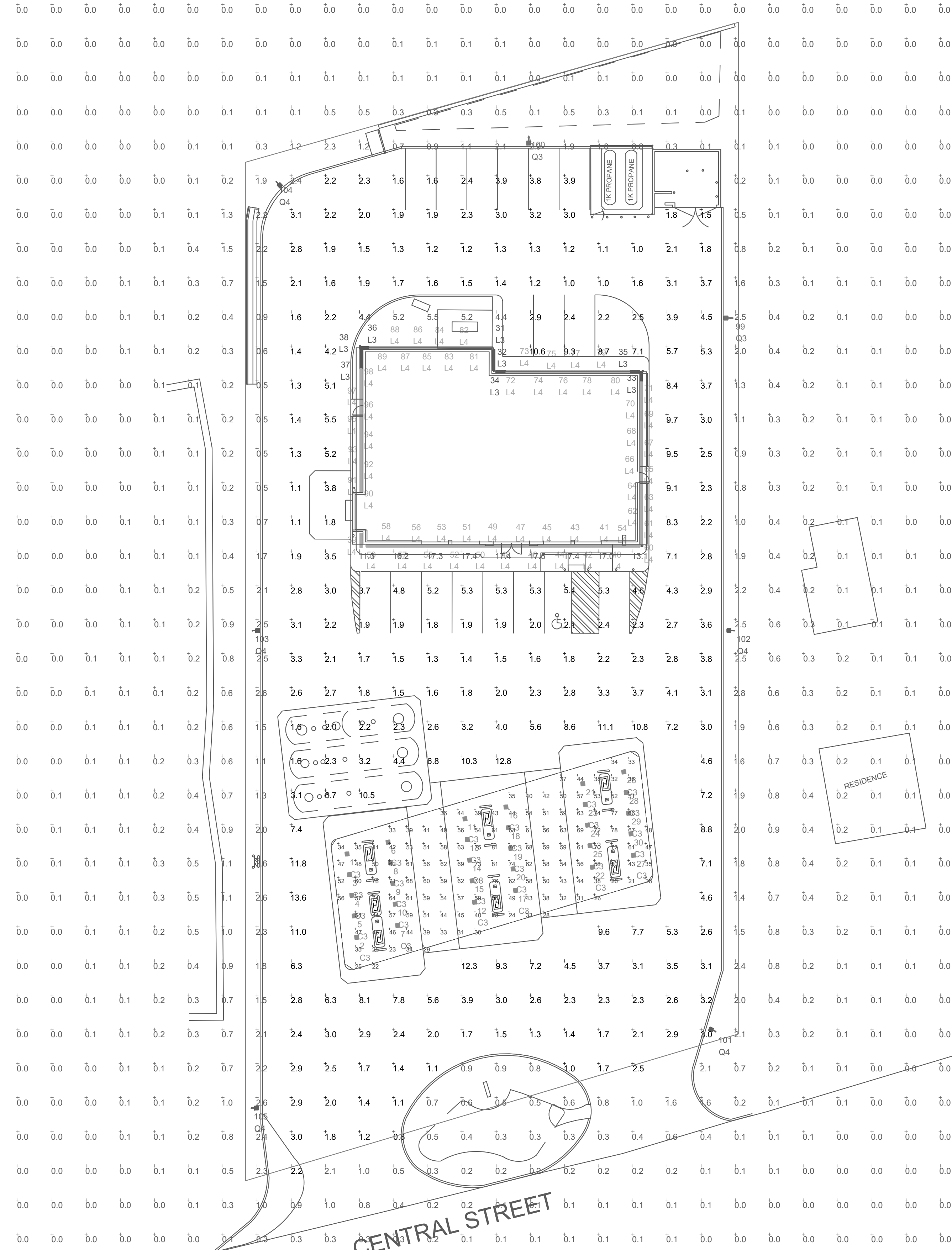
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LMP

DWG SIZE:
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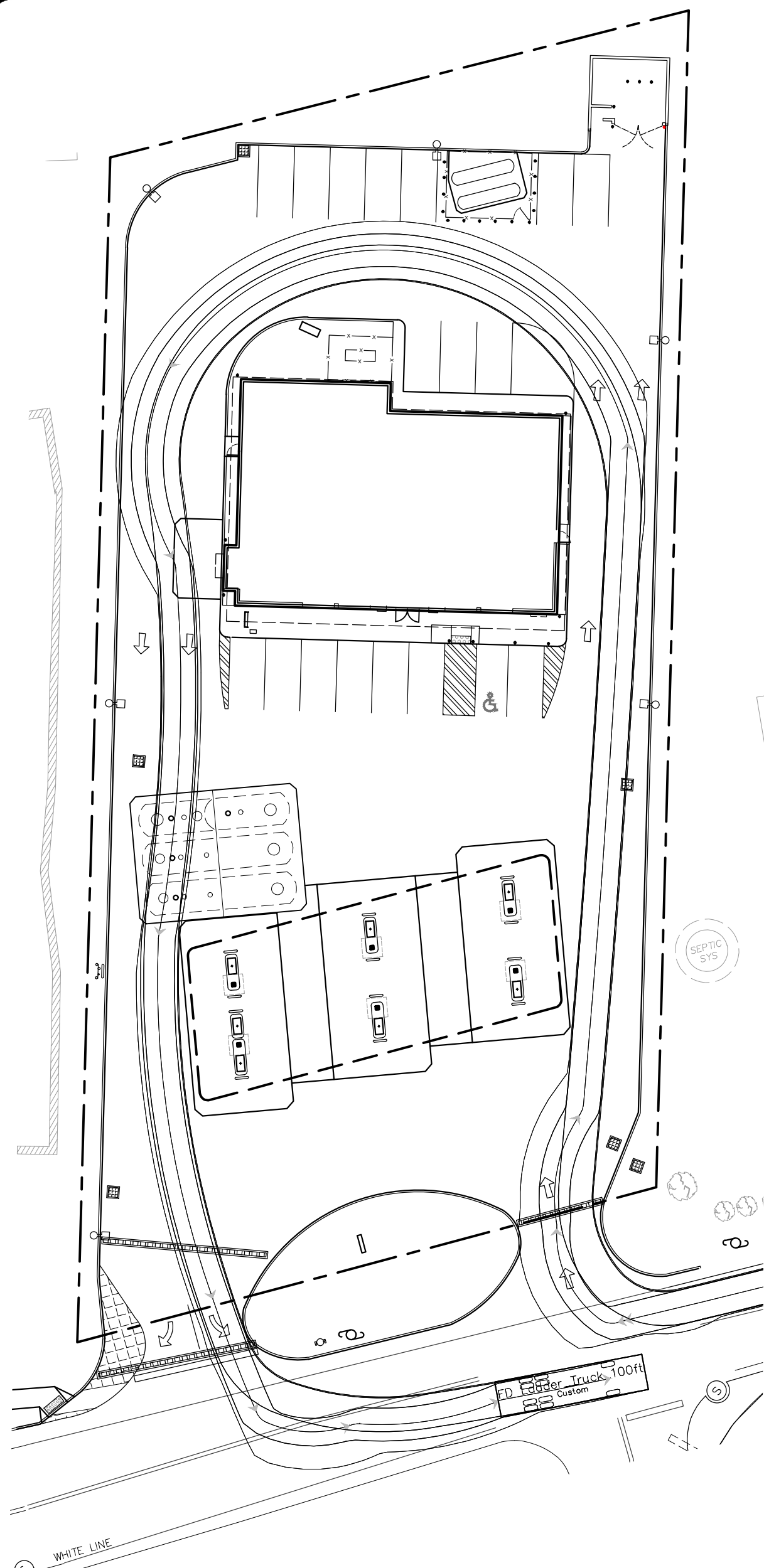
DATE:
12/04/19

PROJECT NAME:
AL PRIME
BYFIELD, MA
DRAWING NUMBER:
RL-6493-S1-R1

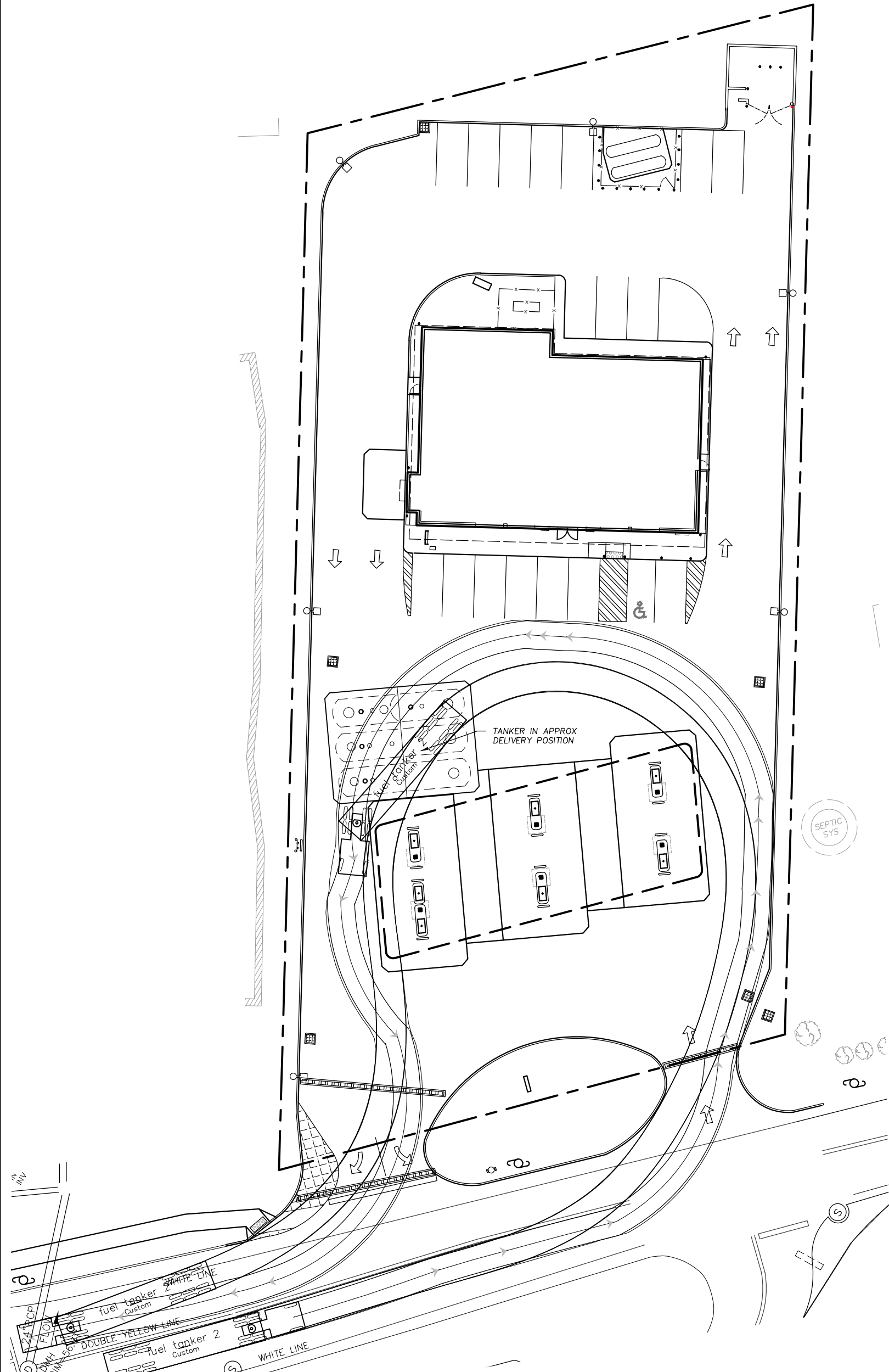
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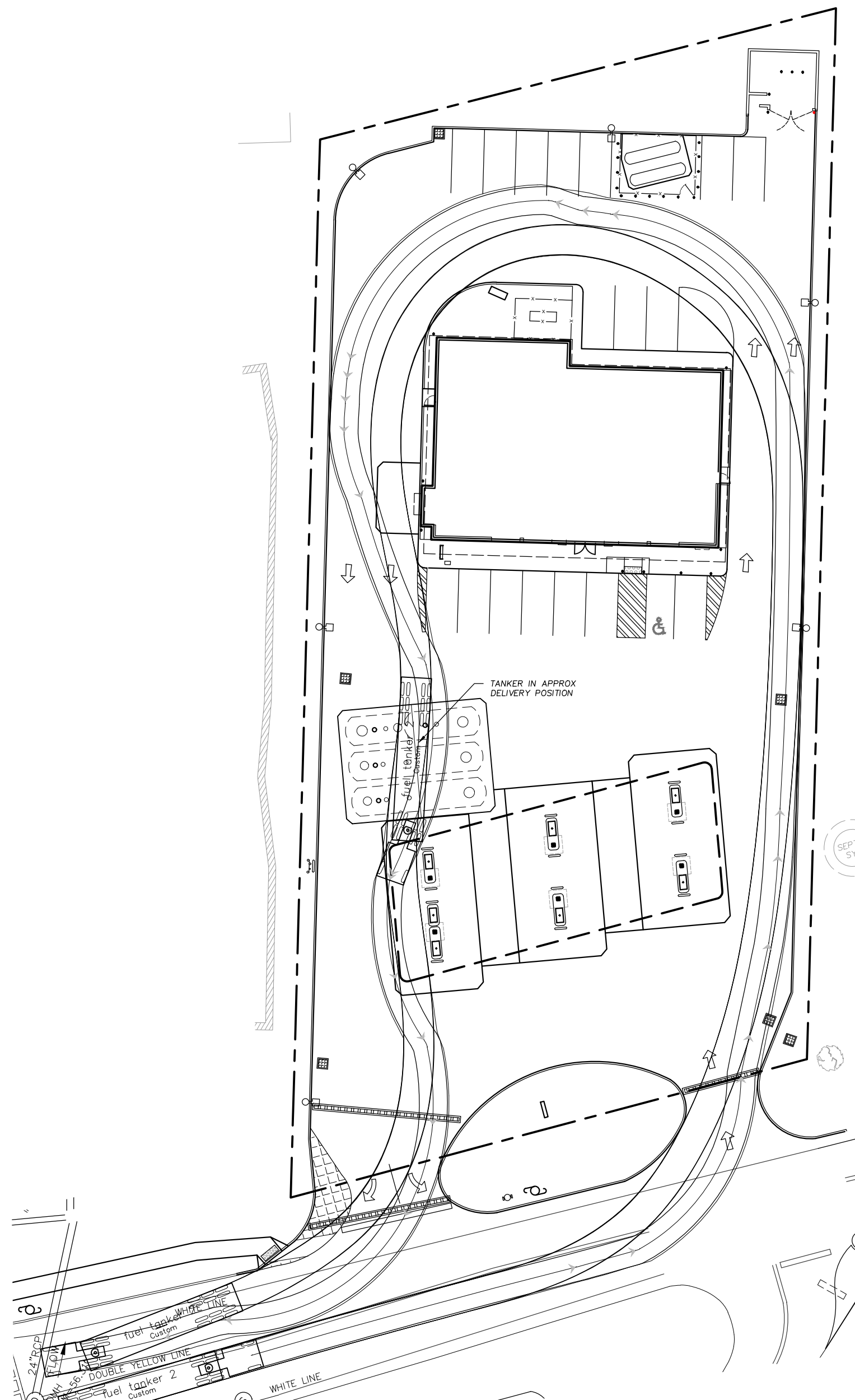
| REV. | BY | DATE | DESCRIPTION |
|------|-----|------------|--|
| R1 | LMP | 09/01/2020 | REVISED PER UPDATED SITE PLAN AND COMMENTS |
| | | | |
| | | | |
| | | | |



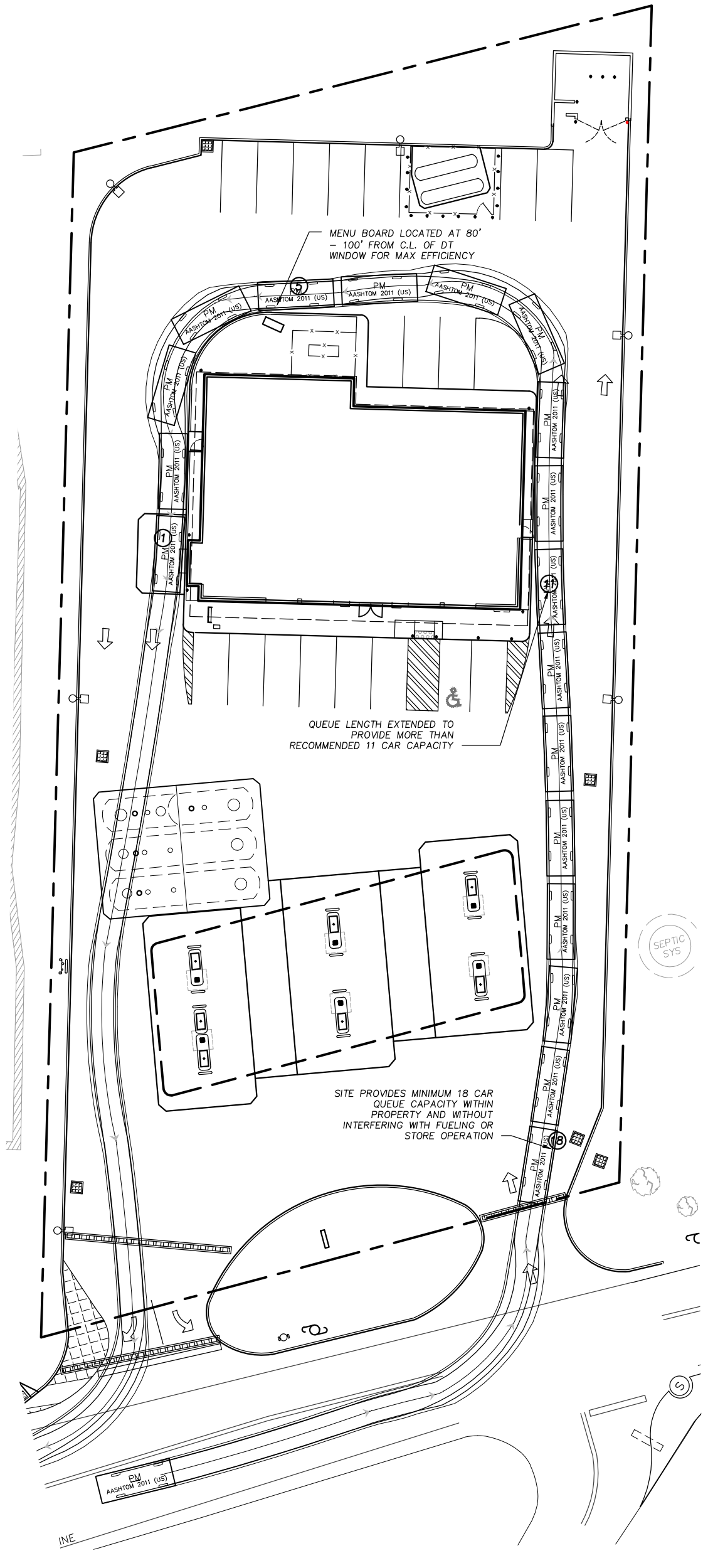
EMGCY VEHICLE LADDER TRUCK



DELIVERY TANKER

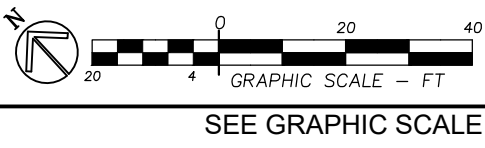


DELIVERY TANKER ALTERNATE



DRIVE-THRU QUEUE

AUTOTURN SWEEP PATH ANALYSIS



| | | | |
|---|--|--|--|
| <p>23 SEP 2020 1 AG REV SITE AND DRIVEWAYS AND ADJUSTED PATHS</p> | | | <p>4Prime Energy</p> <p>A.L. PRIME ENERGY CONSULTANT, INC. 18 LARK AVENUE SAUGUS MA 01906 (781)246-0201</p> |
| <p>29 APR 2020 0 AG ORIGINAL DRAWING DATE</p> | | | |
| <p>DATE: 23 SEP 2020 BY: AG</p> | | <p>PROJECT ADDRESS: BYFIELD, MA 23 CENTRAL STREET</p> | |
| <p>SCALE: AS NOTED</p> | | <p>VEHICLE PATHS</p> | |
| <p>TWO FILED: TBD-019-01 BYFIELD</p> | | <p>SHEET: TR-1.0</p> | |



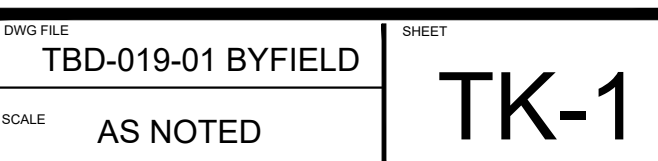
1. ALL BACKFILL MATERIAL SHALL MEET TANK AND/OR PIPE MFG'S INSTALLATION SPECS. IF NO SPECS ARE AVAILABLE, USE FOLLOWING GRAVEL: STANDARD BED AND/OR PAV. SHOULD BE A NATURALLY ROUNDED AGGREGATE, CLEAN AND FREE-FLOWING, WITH PARTICLE SIZES NOT LESS THAN 3/4" NOR MORE THAN 1 1/2" IN DIAM AND CONTAINING NO MORE THAN 5% FINES PASSING NO. 200 SIEVE. THIS MATERIAL SHALL BE WASHED AND CRUSHED TO MEET THE FOLLOWING:

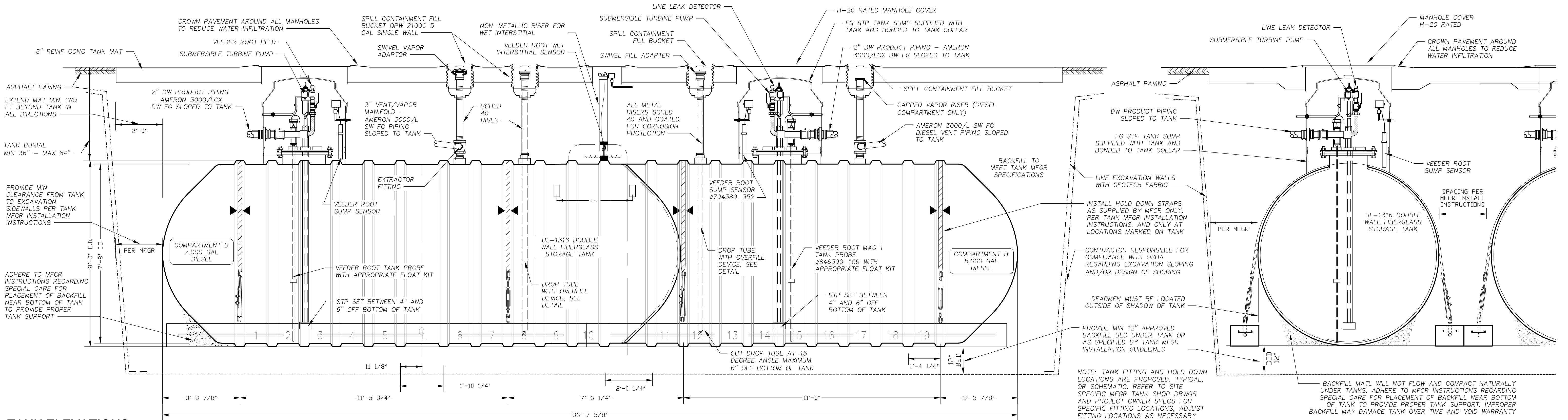
STONE OR GRAVEL CRUSHINGS: CRUSHINGS WITH ANGULAR PARTICLE SIZE NOT LESS THAN 3/4" OR MORE THAN 1 1/2" IN DIAM WASHED AND FREE FLOWING AND CONTAINING NO MORE THAN 5% (VOL) FINES PASSING THROUGH A #8 SIEVE IS ACCEPTABLE AS ALL MATERIAL THIS MATERIAL MUST MEET ASTM C33 (CLASS 9) REQUIREMENTS LIMITS ON FINES CONTENT FOR SOUNDNESS AND QUALITY.

CAUTION: IN FREEZING CONDITIONS, BACKFILL MUST BE DRY AND FREE OF ICE. DO NOT USE OTHER BACKFILL MATERIALS. DO NOT ALLOW BACKFILL TO BE EXPOSED TO INTERMITTENT OR PROLONGED FROST EXCAVATED SOIL AT THE SITE.

2. DRY GRAVEL DENSITY MUST BE MIN OF 95 LBS PER CUBIC FOOT.

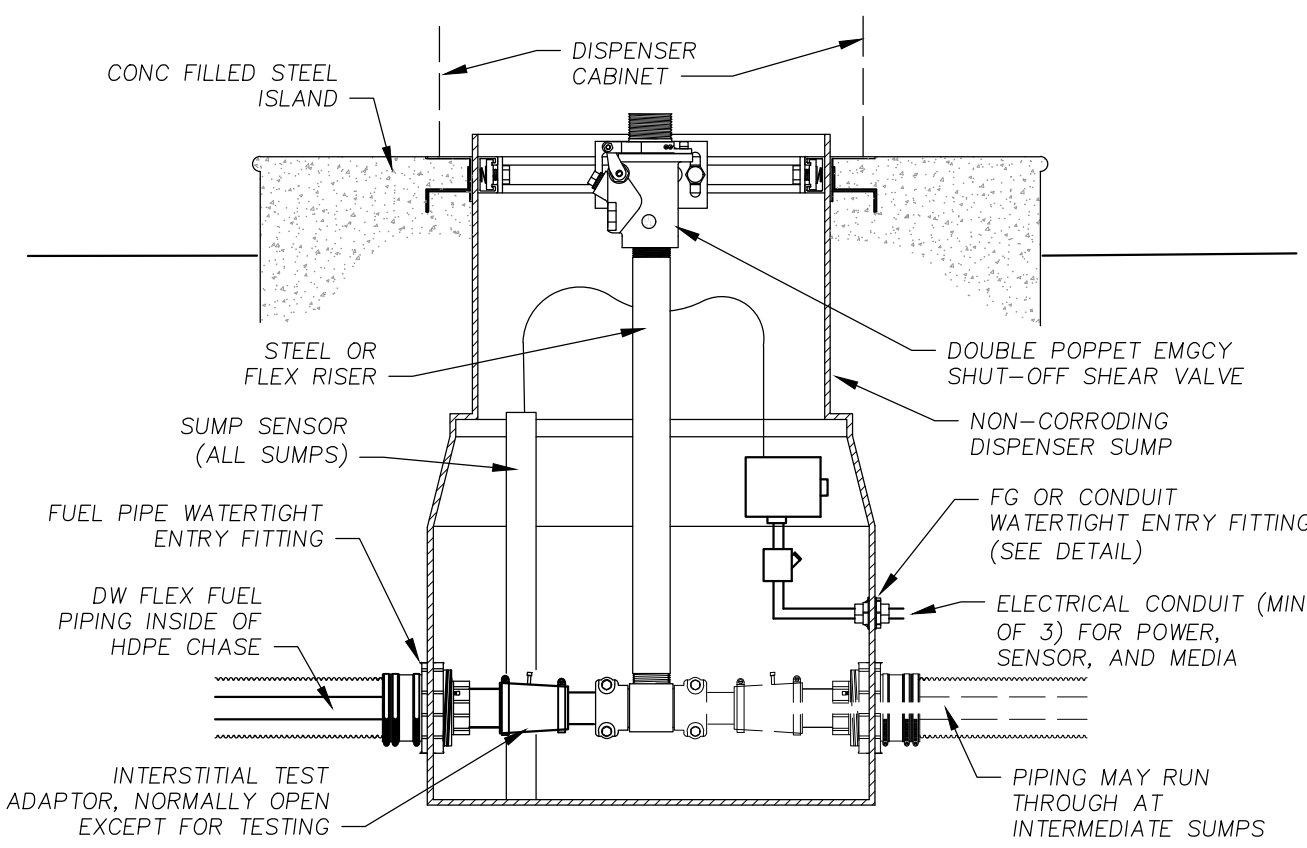
| DATE | REV | DESCRIPTION |
|----------|-----|---|
| SEP 2020 | 1 | AG MINOR REVISIONS PER CHANGES ON OTHER SHITS |
| APR 2020 | 0 | AG ORIGINAL DRAWING DATE |





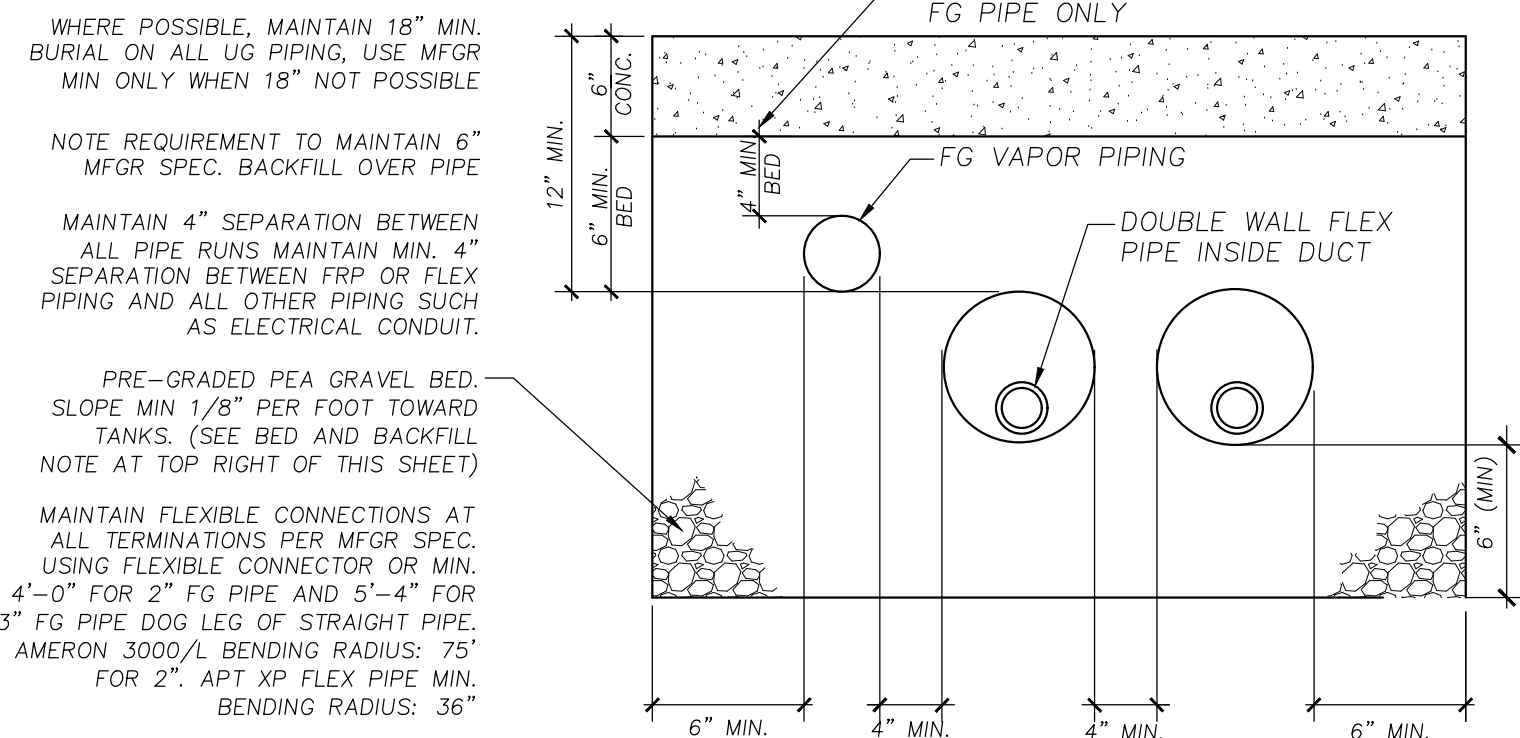
TANK ELEVATIONS

NOT TO SCALE



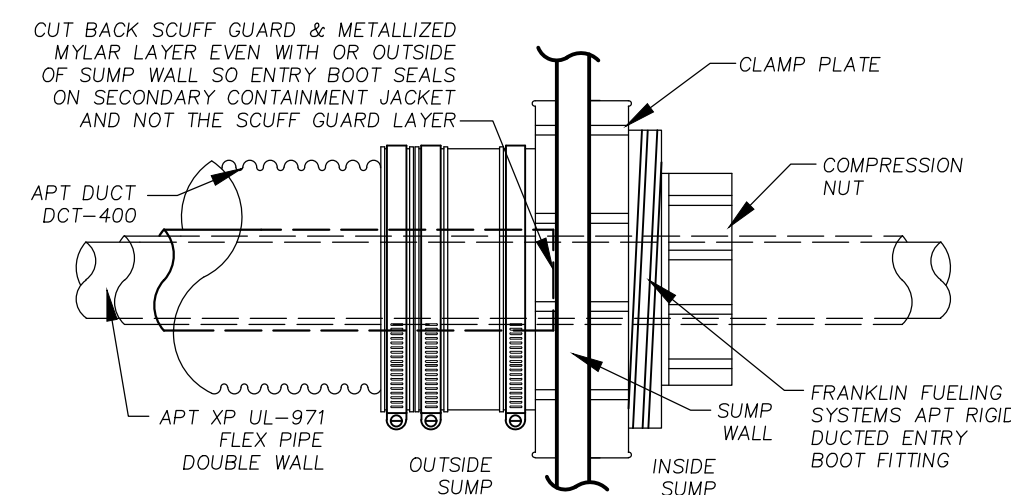
DISPENSER SUMP

NOT TO SCALE



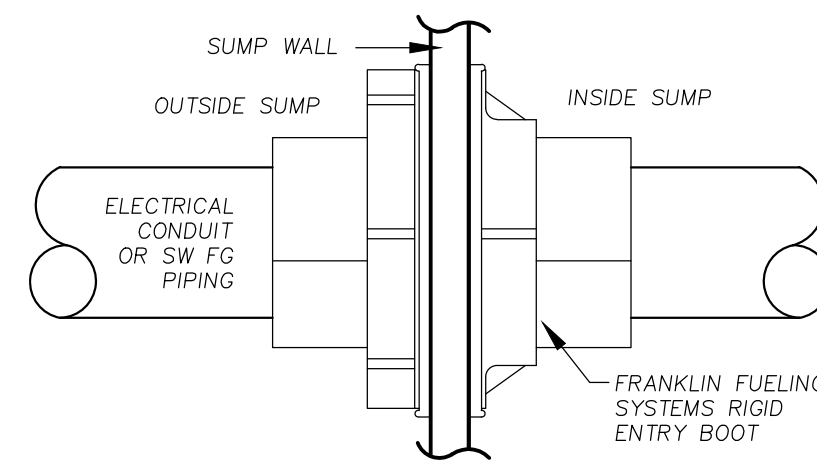
FUEL PIPING TRENCH

NOT TO SCALE



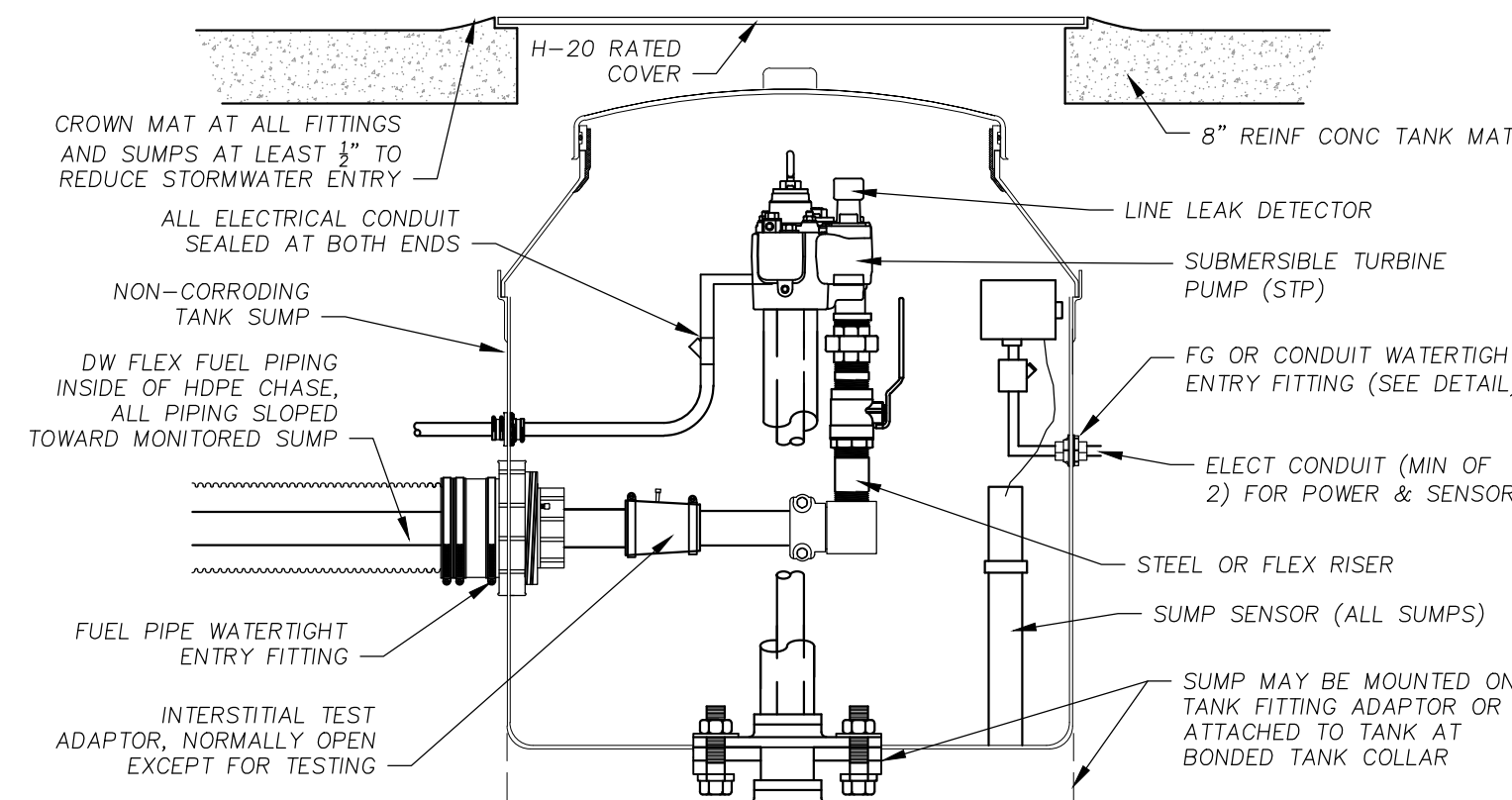
FUEL PIPING ENTRY

NOT TO SCALE



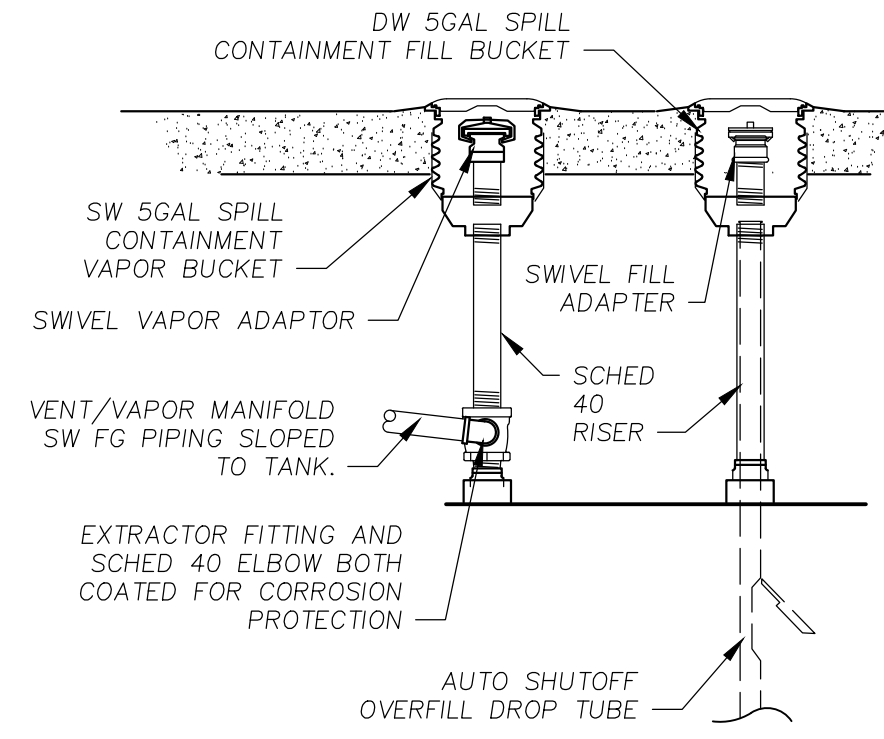
SW PIPE OR CONDUIT ENTRY

NOT TO SCALE



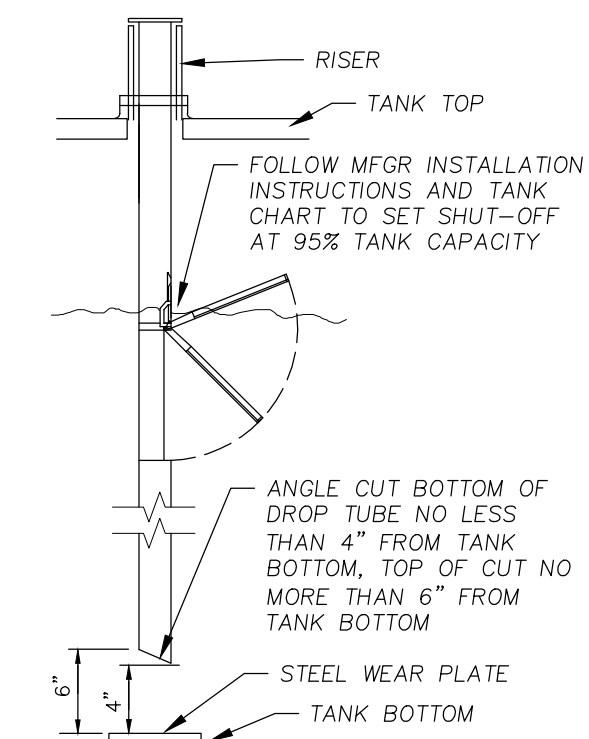
TANK SUMP

NOT TO SCALE



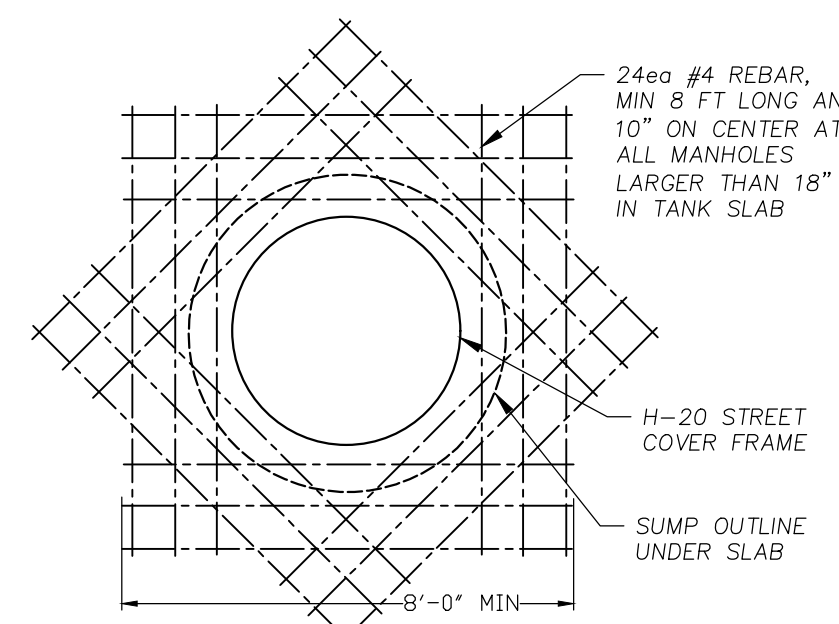
TANK FILL & VAPOR FITTINGS

NOT TO SCALE



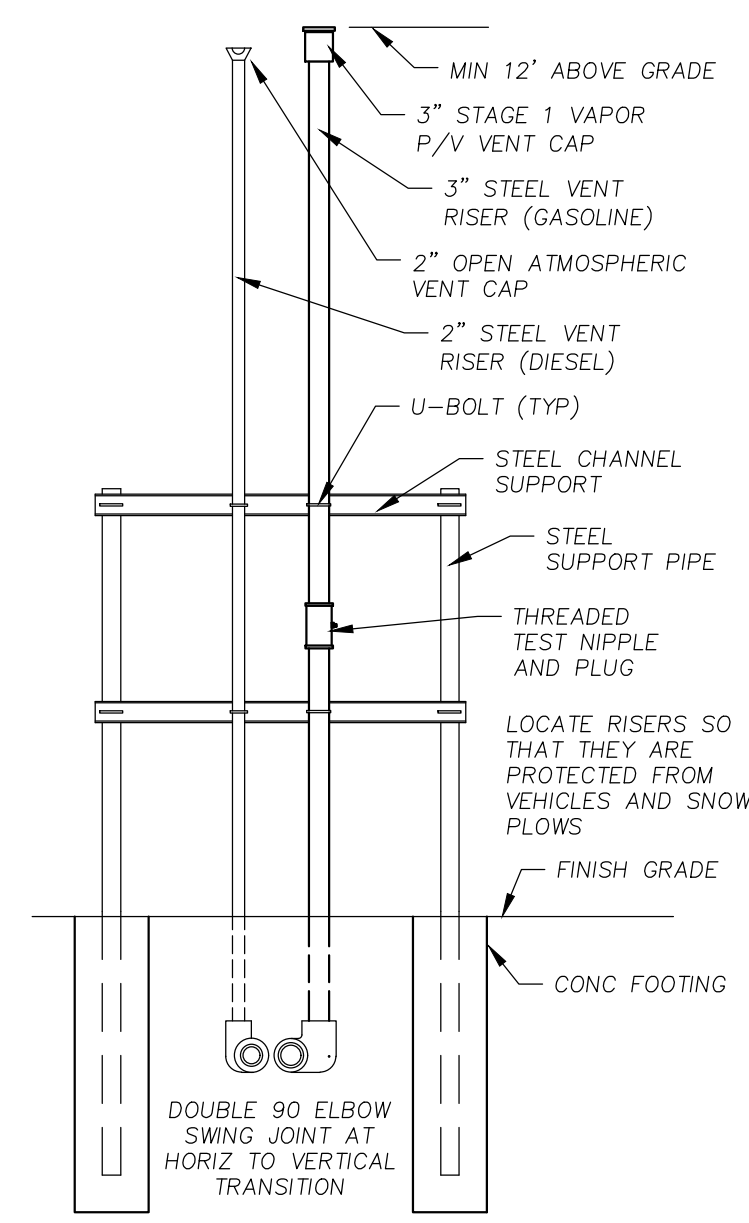
OVERFILL DEVICE

NOT TO SCALE



MAT REINF AT SUMP

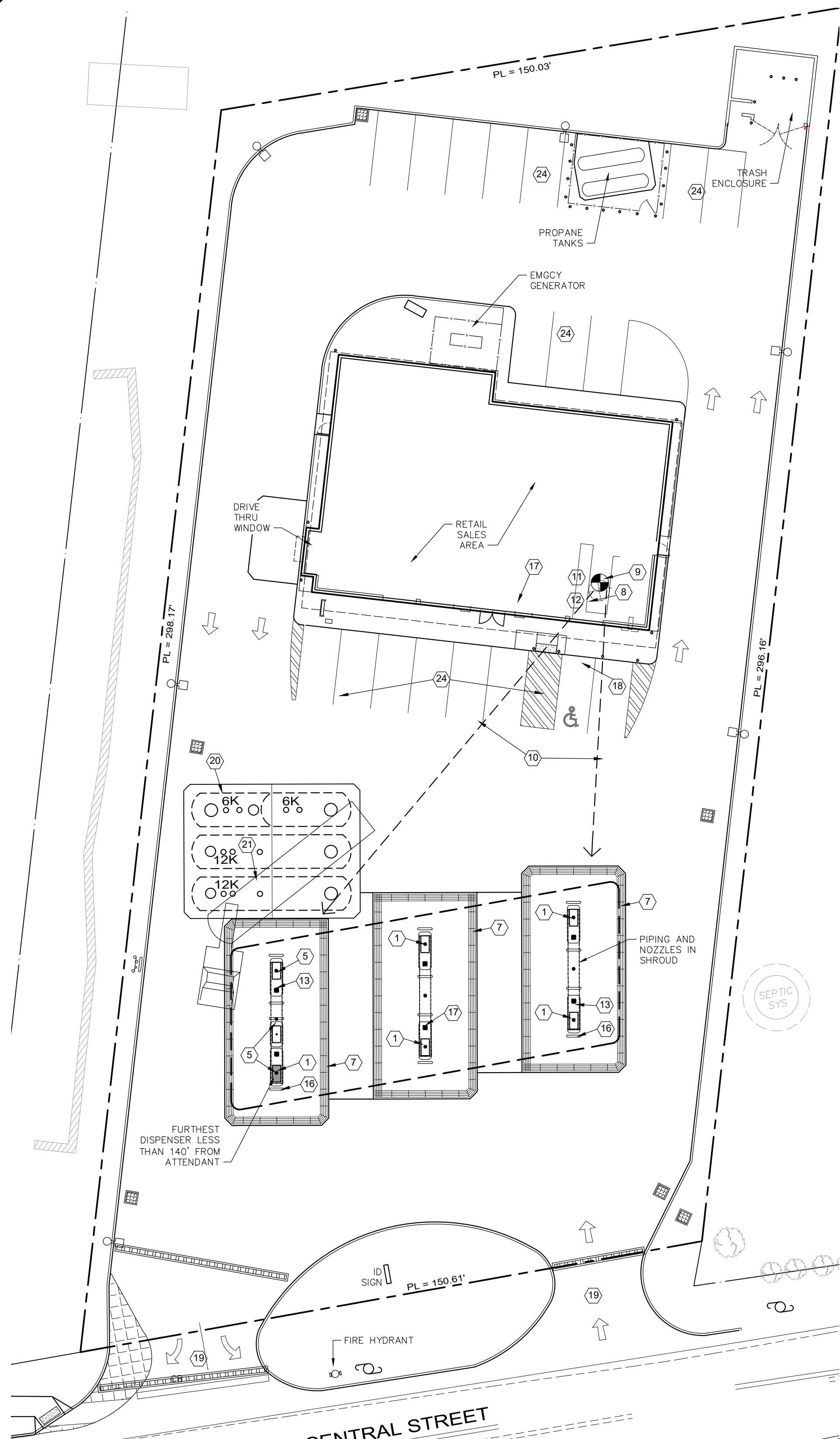
NOT TO SCALE



VENT RISERS

NOT TO SCALE

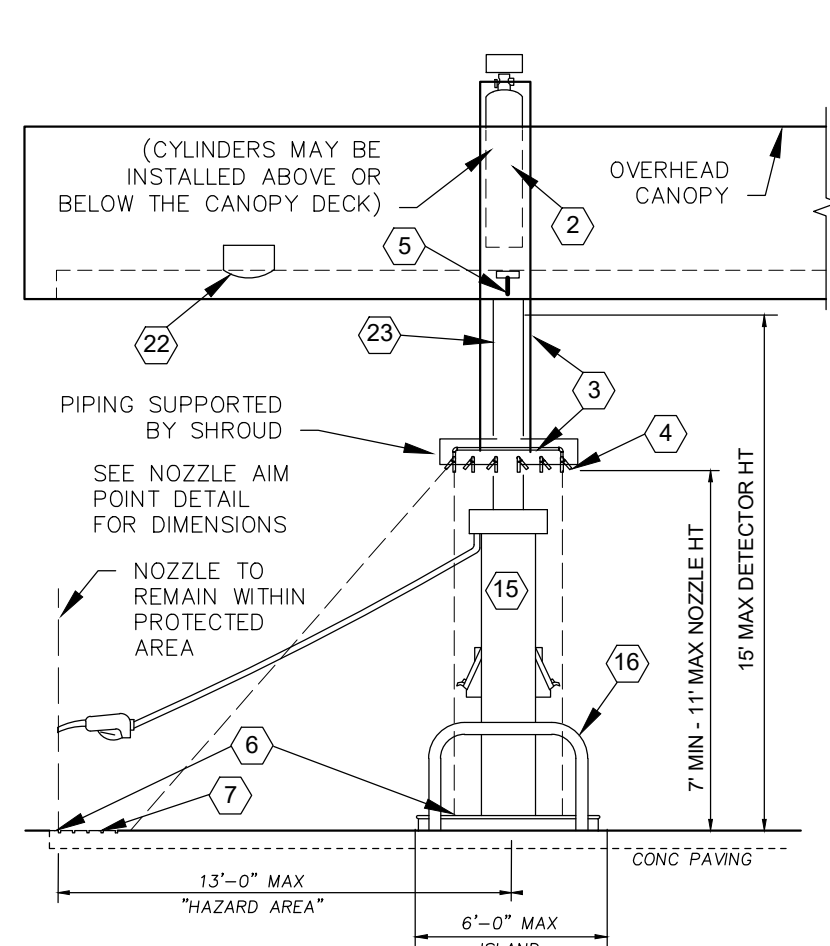
| | |
|--|---|
| | |
| 4Prime Energy A.L. PRIME ENERGY CONSULTANT, INC. 18 LARK AVENUE SAUGUS MA 01908 (781)246-0201 | |
| PROJECT ADDRESS BYFIELD, MA 23 CENTRAL STREET | |
| TANK & PIPING DETAILS | |
| DWG FILE TBD-019-01 BYFIELD | SHEET TK-2 |
| SCALE AS NOTED | |
| 23 SEP 2020 DATE | REISSUE WITH 9/23 SET - NO CHANGES AG ORIGINAL DRAWING DATE 0 AG REV BY 1 0 DESCRIPTION |



- NOTE:
- DISPENSING AREA TO BE AS LEVEL AS POSSIBLE
 - 7 DISPENSERS & 12 FUELING POSITIONS
 - ALL DISPENSERS CONTAIN CREDIT CARD READERS

SITE LAYOUT

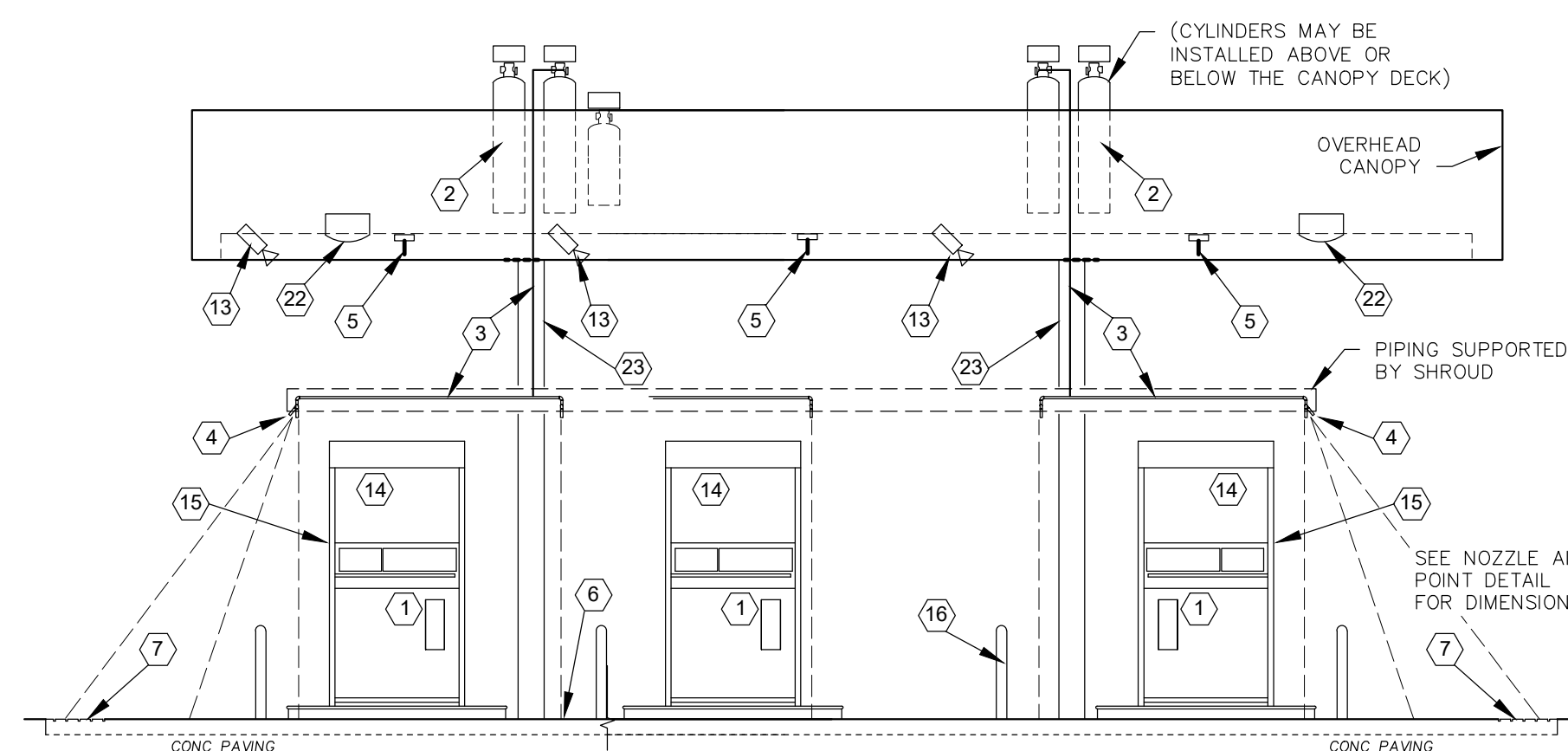
REFERENCE:
THIS PLAN IS NOT A SURVEY NOR INTENDED TO PROVIDE ANY SITE INFO OTHER THAN GENERAL ARRANGEMENT APPROXIMATION FOR THE SOLE PURPOSE OF FIRE SUPPRESSION SYSTEM RELATED WORK. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE OR AS A SITE LAYOUT REFERENCE FOR ANY OTHER WORK. ALL SITE IMPROVEMENTS ARE SHOWN PER THE BEST AVAIL INFO AND MUST BE VERIFIED IN THE FIELD, PARTICULARLY ANY EXCAVATION OR WORK THAT MAY AFFECT BURIED UTILITIES. PROPERTY LINES AND OTHER SITE INFO SHOWN ON THIS DRAWING TAKEN FROM SITE PLAN OF LAND EXISTING CONDITIONS BY ENGINEERING LAND SERVICES, LLC, WEST NEWBURY MA, 12/17/19, SCALE 1"=20'



ISLAND END ELEVATION

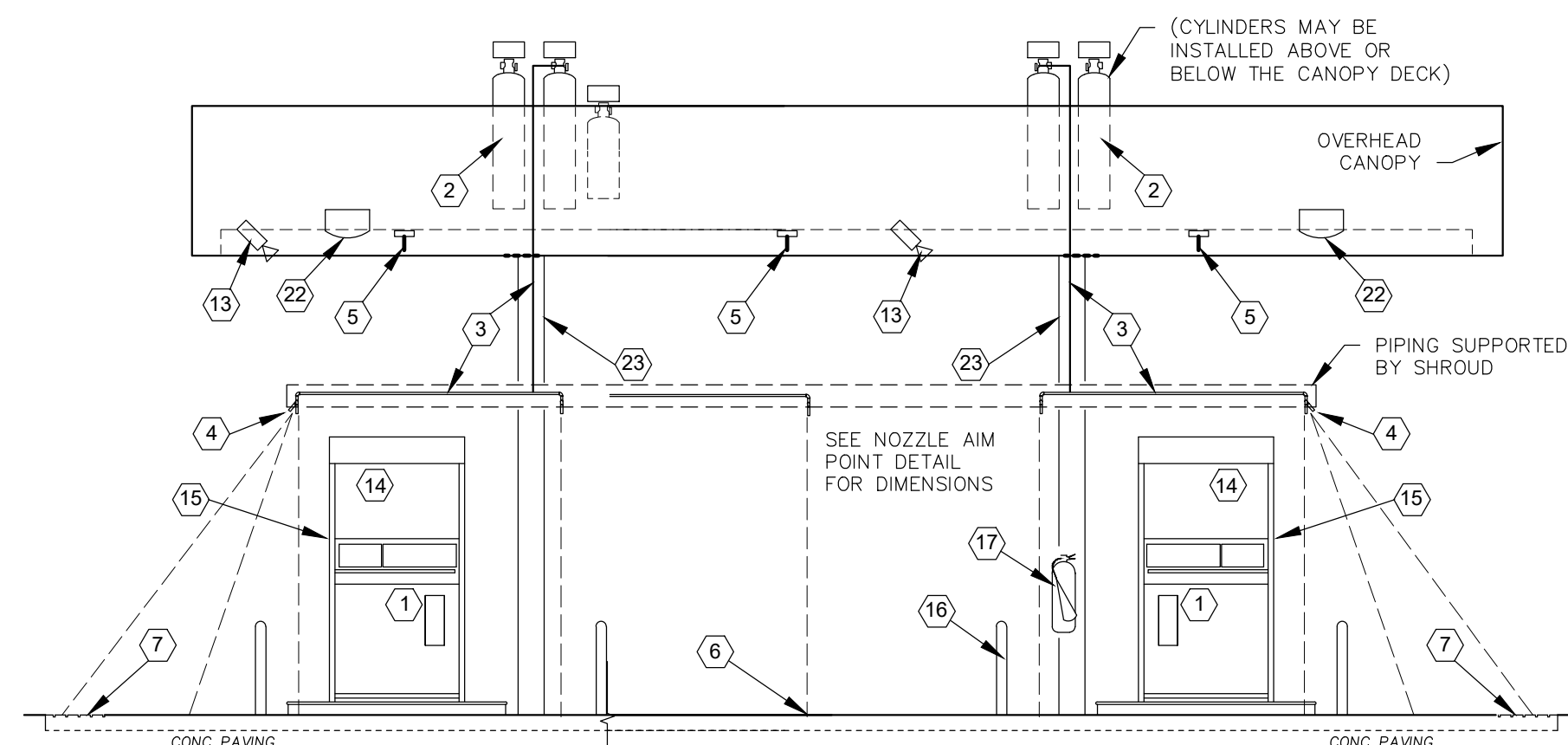
NOT TO SCALE

- LEGEND
- (1) MOTOR FUEL DISPENSER - UL APPROVED
 - (2) DRY CHEMICAL CYLINDER
 - (3) OH FSS PIPING - SCHED 40 (DIST & SUPPLY)
 - (4) UL LISTED SYSTEM NOZZLE
 - (5) 225 (MAX) DEGREE AUTO THERMOSTAT
 - (6) NOZZLE AIMING POINT
 - (7) PLB - POSITIVE LIMITING BARRIER GROOVES
 - (8) CONTROL CONSOLE EQUIPMENT
 - (9) SELF-SERVICE ATTENDANT LOCATION
 - (10) ATTENDANT SIGHT LINES
 - (11) DISPENSER EMGCY SHUTDOWN SWITCH
 - (12) MANUAL SYSTEM RELEASE SWITCH
 - (13) CCTV CAMERA (AT EA DISPENSER)
 - (14) INTERCOM SPEAKER (AT EA DISPENSER)
 - (15) MA FIRE MARSHAL APPROVED SIGNAGE
 - (16) SAFETY BUMPER OR BOLLARD
 - (17) HAND OPERATED 40BC HI FLOW EXTINGUISHER
 - (18) GLASS DOOR OR WINDOW FOR SIGHT LINE
 - (19) DRIVEWAY
 - (20) UG MOTOR FUEL STORAGE TANK
 - (21) FUEL TRANSPORT AT DROP POSITION
 - (22) LIGHTING WITHIN FUELING AREA
 - (23) COLUMN OR LIGHT POLE
 - (24) PARKING SPACES



ISLAND SIDE ELEVATION - WEST ISLAND

NOT TO SCALE



ISLAND SIDE ELEVATION - MIDDLE AND EAST ISLANDS

NOT TO SCALE

BYFIELD FIRE DEPT REQUIREMENT
A MONITORED BUILDING FIRE ALARM PANEL WILL BE INSTALLED AND THIS FIRE SUPPRESSION SYSTEM WILL BE ADDED TO THE PANEL AS A SEPARATE ZONE

GENERAL NOTES

- REFER TO THE MOST CURRENT MASS DEPT OF FIRE SVCS DIV OF FIRE SAFETY "GUIDELINES FOR SELF-SERVICE MOTOR FUEL FACILITY GUIDELINES", 527 CMR 1.00 FIRE REGULATIONS, NFPA 17, AND THE SYSTEM MFGOR UL LISTING AND SYSTEM MANUALS.
- ALL MASSACHUSETTS SELF-SERVICE DISPENSING AREAS OPEN TO THE PUBLIC SHALL BE EQUIPPED WITH A LISTED UL-1254 COMPLIANT PRE-ENGINEERED DRY CHEMICAL EXTINGUISHING SYSTEM INCLUDING END OF ISLAND PROTECTION AND DESIGNED AND INSTALLED TO PROTECT THE ENTIRE SPILL AND HAZARD AREA.
- STATE REQUIRED PLAN STATEMENTS:
 - THE SELF-SERVE EXTINGUISHING SYSTEM SHALL BE INSTALLED FROM AND IN ACCORDANCE WITH APPROVED/STAMPED PLANS FROM THE STATE FIRE MARSHAL.
 - ALL EXTINGUISHING SYSTEMS, DISPENSING SYSTEMS, AND CONTROL EQUIPMENT SHALL BE UNDERWRITERS LABORATORY (UL) LISTED.
 - CREDIT CARD READING DEVICES ARE PROPOSED AT THIS LOCATION AND ARE SUBJECT TO 527 CMR 1.00 SECTION 42.7.4.5 (1)(K):
 - EA SALE SHALL BE INDIVIDUALLY AUTHORIZED BY THE SELF-SERVICE ATTENDANT.
 - THE AUTOMATIC CREDIT CARD READING DEVICE SHALL NOT BE USED AS PHYSICAL AUTHORIZATION FOR THE DISPENSING OF MOTOR FUEL.
 - THE AUTOMATIC CREDIT CARD READING DEVICES ARE INCLUDED ON PLANS SUBMITTED TO AND APPROVED BY THE STATE FIRE MARSHAL (SEE NOTES AND LEGEND).
 - FAILURE TO CONSTRUCT, INSTALL, OR MAINTAIN ANY EQUIPMENT, DEVICES, SYSTEM, OR PROCEDURE INDICATED ON THE APPROVED PLANS SHALL BE CAUSE FOR THE REVOCATION OF THIS APPROVAL.
 - PLANS APPROVED BY THE MARSHAL ARE ON THE CONDITION THAT THEY COMPLY IN ALL RESPECTS TO 527 CMR 1.00. ANY OMISSIONS OR ERRORS ON THE PLANS DO NOT RELIEVE THE APPLICANT OR INSTALLER FROM COMPLYING WITH ALL APPLICABLE REQUIREMENTS OF 527 CMR 1.00.
 - STATE FIRE MARSHAL APPROVAL OF PLANS TO CONSTRUCT/RENOVATE A SELF-SERVICE FACILITY BECOMES NULL AND VOID ONE YEAR FROM THE DATE OF THE APPROVAL (IF CONSTRUCTION HAS NOT STARTED).
- ALL FIRE SUPPRESSION SYSTEMS SHALL BE INSTALLED AND MAINTAINED BY COMPANIES AND PERSONS HOLDING REQUIRED CERTIFICATES OF COMPETENCY AND REGISTRATION ISSUED BY THE MA STATE FIRE MARSHAL.
- THE INSTALLATION OF THIS FIRE EXTINGUISHING SYSTEM MUST BE IN ACCORDANCE WITH THE PREVAILING MASSACHUSETTS CODE REQUIREMENTS AND THE PROVISIONS OF NFPA 17 (SEE 527 CMR 1.00 CH 2 FOR CURRENT EDITION).
- THE CONTRACTOR SHALL VISIT THE SITE AND BE RESPONSIBLE FOR FIELD CONFIRMATION OF ALL ITEMS ON THE PLAN AND SHALL NOTIFY THE DESIGNER IN WRITING OF ANY DISCREPANCY BEFORE PROCEEDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE ENTIRE SYSTEM AND SHALL COMPLY WITH THE REGULATIONS SET FORTH BY THE PREVAILING MASSACHUSETTS CODE AND THE EQUIPMENT MANUFACTURER SPECIFICATIONS.
- THE CONTROLLING MECHANISM CONSOLE SHALL INCLUDE A DISCONNECT SWITCH WHICH WILL INSTANTLY CUT OFF ALL PUMPING POWER TO ALL MOTOR FUEL PUMPS AT THE SERVICE STATION. THE CONTROLLING MECHANISM CONSOLE, SWITCHES AND RELATED EQUIPMENT SHALL BE A DESIGN AND TYPE APPROVED BY THE FIRE MARSHAL AND SHALL BE UNDERWRITERS LABORATORIES (U.L.) LISTED EQUIPMENT, LISTED FOR USE WITH THE DISPENSING DEVICES.
- CLOSED CIRCUIT TV (CCTV) COVERAGE IS REQUIRED ON ALL FUELING POSITIONS. CCTV MONITORS SHALL DISPLAY ALL CAMERA ANGLES SIMULTANEOUSLY ON THE SCREEN WITH A MIN FRAME OF 5" BY 6.5" PER CAMERA. CCTV SHALL DISPLAY IMAGES IN COLOR.
- AN INTERCOM SYSTEM IS REQD BETWEEN THE CONTROL CONSOLE AND DISPENSING ISLANDS. THE CONTROL CONSOLE WILL BE LOCATED IN DIRECT LINE OF SIGHT AND WITHIN 200 FEET OF THE MOST REMOTE DISPENSER. DISTANCES GREATER THAN 200 FT MAY BE APPROVED AT SOLE DISCRETION OF THE STATE FIRE MARSHAL.
- ANY ISLAND USED AS FULL SERVICE WILL HAVE A SWITCH WHICH WILL ACTIVATE THE OVERHEAD FIRE EXTINGUISHING SYSTEM AND DEACTIVATE POWER TO THE SELF-SERVICE ISLAND DISPENSING PUMPS AND THE SELF-SERVICE ISLANDS.
- WARNING SIGNS SHALL BE CONSPICUOUSLY POSTED ON BOTH ENDS OF THE DISPENSER AND SHALL INCORPORATE STATE REQD LANGUAGE (SEE DETAIL 1).
- THE CONCRETE PAD SURROUNDING THE DISPENSING ISLAND SHALL BE INSTALLED AS LEVEL AS POSSIBLE. THE POSITIVE LIMITING BARRIER (GROOVES) SHALL BE INSTALLED IN THIS PAD WITH OUTER GROOVE LOCATED NO FURTHER THAN THE PROTECTED HAZARD AREA DEFINED BY THE FIRE SUPPRESSION SYSTEM DESIGN.
- A MEANS TO INSTANTLY DISCONNECT THE POWER TO ALL DISPENSERS AND ACTIVATE THE SUPPRESSION SYSTEM SHALL BE CONSPICUOUSLY MARKED AND LOCATED AT THE CONTROL CONSOLE.
- 225" (MAX) ELECTRIC THERMOSTAT DETECTORS SHALL BE INSTALLED ON 15 FOOT (MAX) CENTERS IN A SINGLE LINE OVER THE CENTER OF THE ISLAND FOR ISLANDS UP TO 6 FT WIDE. FOR WIDER ISLANDS 2 ROWS OF DETECTORS SHALL BE LOCATED 1 FT FROM EA CURB. IF A CANOPY IS PROVIDED DETECTORS SHALL BE LOCATED ON THE UNDERSIDE (15 FT MAX HEIGHT) OF THE CANOPY. IF THERE IS NO CANOPY, THE DETECTOR(S) SHALL BE MOUNTED TO THE UNDERSIDE OF AN 18"x18"x2" HEAT COLLECTOR, WHICH SHALL BE LOCATED NO HIGHER THAN THE NOZZLES.
- UNRELATED BUSINESS: VENDING AREAS, CONVENIENCE FOOD MART, AUTOMOTIVE REPAIR GARAGE, AND SIMILAR BUSINESS SHALL BE OPERATED BY OTHERS.
- THE CONTROLLING MECHANISM CONSOLE MUST BE IN CONSTANT ATTENDANCE BY THE ATTENDANT WHILE MOTOR FUEL IS BEING DISPENSED AND A MEANS MUST BE PROVIDED FOR THE ATTENDANT TO OBSERVE THE FILLING OPERATION AT EA VEHICLE DURING THE TIME THAT ANY OF THE PUMPS HAVE BEEN ACTIVATED TO DISPENSE MOTOR FUEL.
- THE LICENSED INSTALLING CONTRACTOR SHALL INSURE THAT THE LIMITS OF THE FIRE SUPPRESSION SYS ARE NOT EXCEEDED. THE INSTALLING CONTRACTOR SHALL TEST FIRE THE ENTIRE SYSTEM, INCLUDING ALL CONTROLS AND SHALL CERTIFY TO THE OWNER IN WRITING OF THE SYSTEM'S SATISFACTORY OPERATIONAL PERFORMANCE AND COMPLIANCE WITH U.L. APPROVAL.
- AT LEAST SEMIANNUALLY, ALL DISCHARGE NOZZLES, PIPING DRY CHEMICAL CONTAINERS, HEAT COLLECTORS, ETC. SHALL BE INSPECTED BY APPROVED AND CERTIFIED COMPANIES WITH VALID MASSACHUSETTS ISSUED CERTIFICATE OF REGISTRATION. REPORTS OF SUCH INSPECTIONS SHALL BE SUBMITTED TO THE HEAD OF THE FIRE DEPARTMENT IN ACCORDANCE WITH NFPA STANDARDS (NFPA-17).
- FAILURE TO MAINTAIN AN EXISTING FACILITY IAW GUIDELINES UNDER WHICH APPROVED MAY REQUIRE THE FACILITY BE UPGRADED TO THEN CURRENT GUIDELINES.
- A COMPLETE RESUBMITTAL IN ACCORDANCE WITH THEN CURRENT SELF-SERVICE GUIDELINES IS REQUIRED IN THE FOLLOWING CASES:
 - REPLACEMENT OF THE FIRE SUPPRESSION SYSTEM
 - CHANGE IN METHOD OF DISPENSING (I.E.- CHANGING FROM SINGLE PRODUCT TO MULTI-PRODUCT DISPENSERS)
 - REPLACEMENT OR RECONSTRUCTION OF THE DISPENSING ISLAND
 - MATERIAL CHANGE IN ENVIRONMENTAL CONDITIONS OR HAZARD AREA (I.E.- CHANGE THAT IMPACTS ATTENDANT ABILITY TO OBSERVE THE FUELING OPERATION)

NARRATIVE:

THE PURPOSE OF THIS WORK IS TO INSTALL A DRY CHEMICAL FIRE SUPPRESSION SYSTEM MEETING UL-1254 AT THIS NEW-TO-INDUSTRY SELF-SERVICE RETAIL MOTOR FUEL STATION. IN ADDITION TO THE FUELING ISLANDS, THE ATTENDANT MAY MONITOR A CONVENIENCE STORE WITH APPROX 1,600 SF OF RETAIL AREA. PROPOSED TO BE OPERATED BY OTHERS THAN THE MOTOR FUEL SELF-SERVICE ATTENDANT IS A COFFEE MENU DRIVE-THRU FOOD OPERATION.

PLBs (POSITIVE LIMITING BARRIERS) WILL BE INSTALLED AS WELL AS CAMERAS AT EACH DISPENSER AND SIGNAGE TO MEET STATE FIRE MARSHAL GUIDELINE REQUIREMENTS. ALL EQUIPMENT WILL BE INSTALLED PER THE PRE-ENGINEERED DESIGN MANUAL FROM THE SYSTEM MANUFACTURER.

THE SYSTEM WILL PROVIDE BOTH AUTOMATIC AND MANUAL ACTIVATION SWITCHES. THERE WILL BE HI TEMP SENSORS INSTALLED IN THE FUEL DISPENSING AREAS. SYSTEM OPERATION IS PER THE PRE-ENGINEERED DESIGN BY THE MANUFACTURER, PYRO-CHEM. REFER TO MANUFACTURER DESIGN MANUAL FOR TECHNICAL SPECIFICATIONS AND GENERAL SYSTEM SEQUENCE.

NEW TO INDUSTRY SELF SERVICE FACILITY

SYSTEM INFORMATION

ATTENDANT 1 SYSTEM MFGRD BY PYRO CHEM, INC.
MODEL ATD-35/75 -- MEETS UL-1254

SYSTEM INSTALLER - TO BE DETERMINED

INSTALLER MA CERT OF COMPETENCY NUMBER - _____
INSTALLER MA CERT OF REGISTRATION NUMBER - _____

PROTECTED AREA - (3 EA) SYSTEMS EACH PROTECTING 24' x 48.5'
NUMBER OF 75# CYLINDERS - 3ea x 4 per sys = TOTAL OF 12ea 75# CYLINDERS
NUMBER OF 35# CYLINDERS - 3ea x 1 per sys = TOTAL OF 3ea 35# CYLINDERS
NUMBER OF FIRE SUPP NOZZLES - 8ea x 12(75#) + 4ea x 3(35#) = 108ea TOTAL NOZZLES
NUMBER OF HI TEMP HEAT DETECTORS - 3ea x 3 per sys = 9ea TOTAL HEAT DETECTORS

THIS BOX RESERVED FOR LOCAL FIRE DEPARTMENT OFFICE USE

I, _____, CHIEF OF THE DEPARTMENT OR HIS DESIGNEE, HAVE REVIEWED THE ATTACHED INFORMATION AND HAVE ACKNOWLEDGEMENT THEREOF:

CITY/TOWN _____ DATE _____

THIS BOX RESERVED FOR LOCAL FIRE DEPARTMENT OFFICE USE

THIS BOX RESERVED FOR STATE FIRE MARSHAL OFFICE USE ONLY

THIS BOX RESERVED FOR STATE FIRE MARSHAL OFFICE USE ONLY

THIS COPY:

| DATE | BY | DESCRIPTION |
|-------------|------|---|
| 23 SEP 2020 | 1 AG | ADDED NOTE PER FD COMMENTS FOR MONITORED FIRE ALARM |
| 20 APR 2020 | 0 AG | ORIGINAL DRAWING DATE |

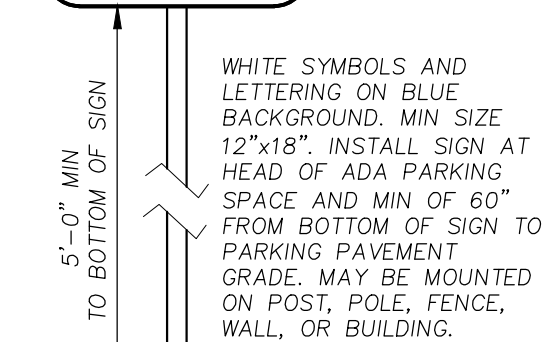
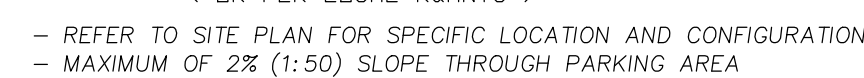
PROJECT ADDRESS
BYFIELD, MA
23 CENTRAL STREET

**SELF SERVICE
FIRE SUPPRESSION**

DRAWING
TBD-019-01 BYFIELD

SHEET
FSP-1

SCALE
AS NOTED

[illegible]

26"

8"

19"

PLAN VIEW OF
FIXTURE

LED FULL CUTOFF
FIXTURE DIRECT
ARM MOUNT

4" SQ STEEL POST,
PREFINISHED WHITE

18'-0" FIXT MTG HT

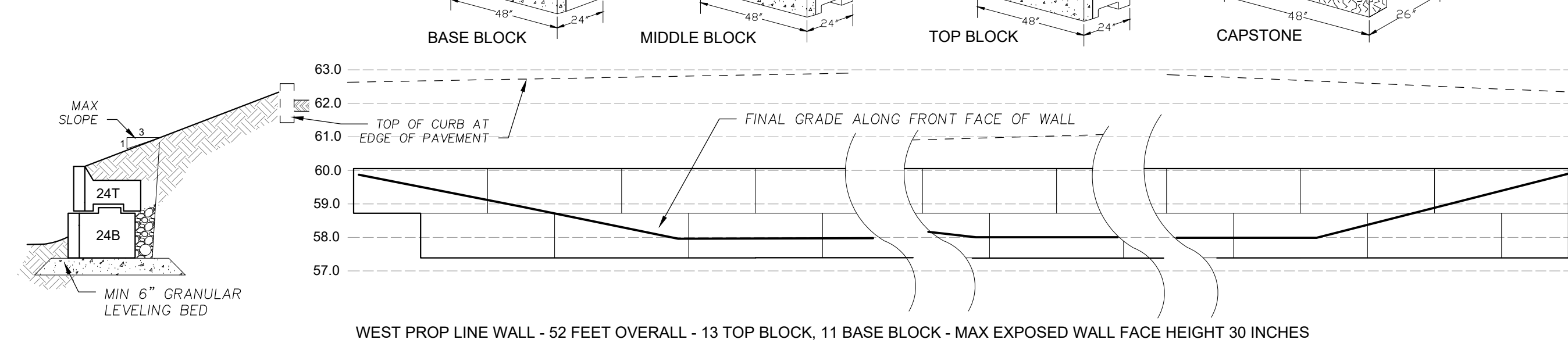
ALUM BOLT COVER

CONC BASE PRECAST
OR POURED IN FIELD,
SIZE PER MFRG SPEC,
APPROX 24" EXPOSED

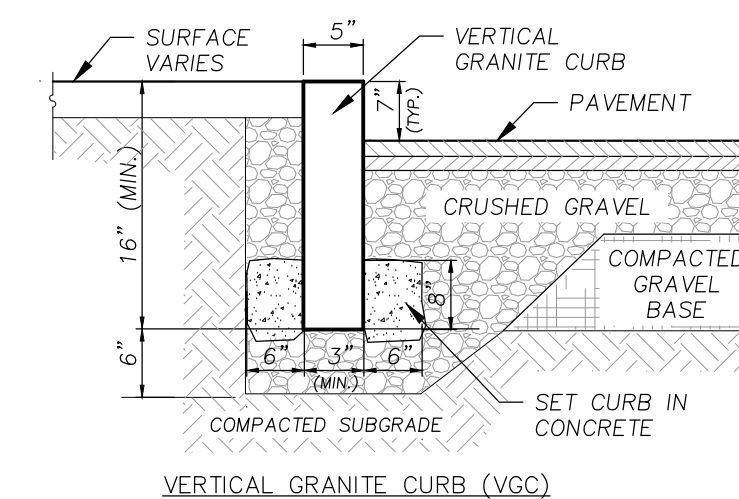
ALL EXTERIOR
LIGHTING TO BE LED
FULL CUTOFF
(SHIELDED) FIXTURES

SHEA CONCRETE PRODUCTS
RECON RETAINING WALL SYSTEM

THIS DETAIL IS PROPOSED,
REFER TO SHEA SHOP DWGS FOR
CONSTRUCTION



NOT TO SCALE



BLDG EXTERIOR WALL

EXPANSION JT

MIN 4" WIRE REINF CONC WITH JOOT FINISH, MIN 5' WIDE FROM BUILDING WALL AND MAX 1:20 RUNNING SLOPE AND 1:50 CROSS SLOPE

MAX 7.5" STEP

SLOPE TO DRAIN

DRIVEWAY GRADE

HAUNCH EDGE OF WALK

MIN 6" COMPACTED GRAVEL BASE

CLEANOUT BOX (NEENAH R-6400 OR EQUIV) WATER TIGHT COVER MARKED DRAIN

FINISH GRADE

CONC RIM

CLEANOUT PLUG

The diagram illustrates the installation of a cleanout box into a sewer line. A horizontal sewer pipe is shown at the bottom, with a cleanout plug inserted into its side. This plug connects to a vertical pipe that leads up to a cleanout box. The cleanout box is positioned such that its top is at the finish grade, while its base is embedded in a concrete rim. The cleanout box has a water-tight cover marked with a drain symbol. Labels with leader lines identify the cleanout box, finish grade, concrete rim, and cleanout plug.

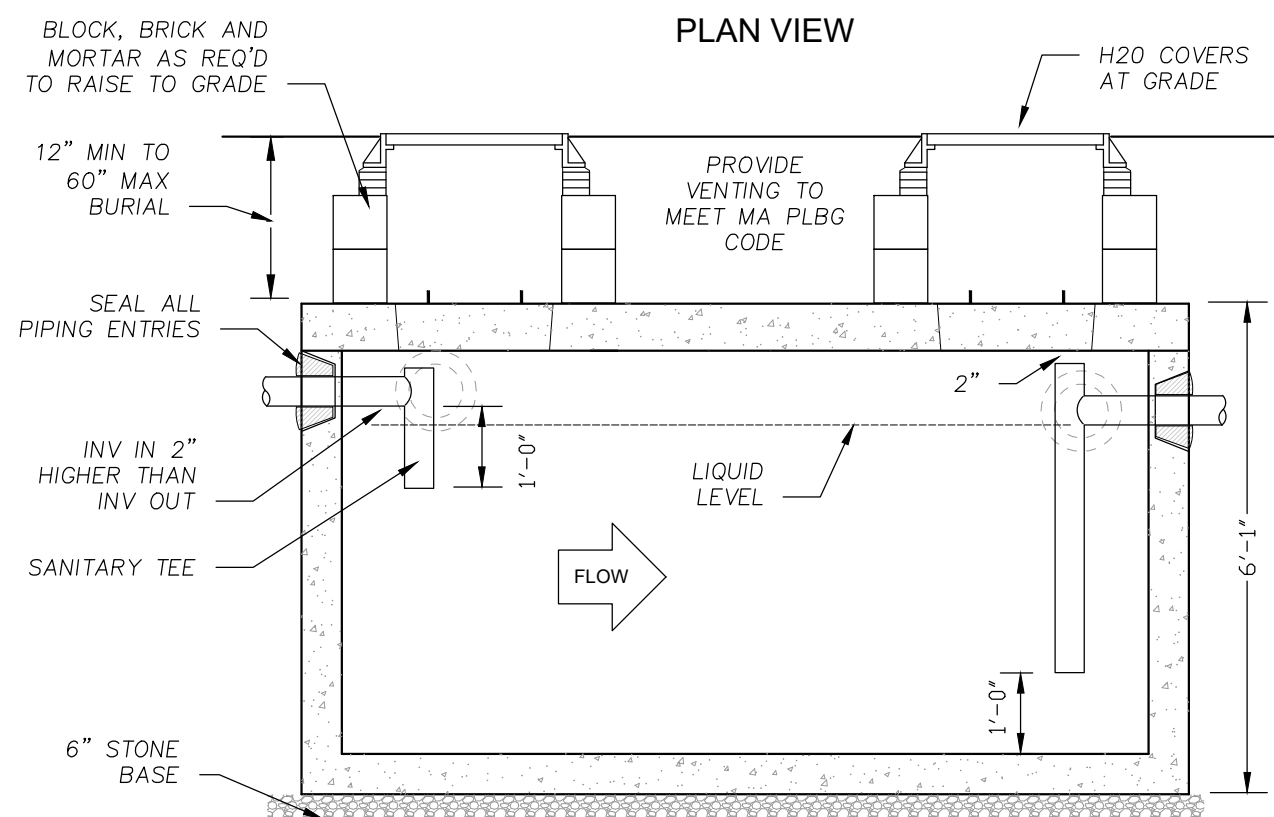
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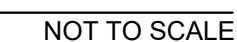
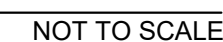
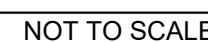
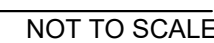
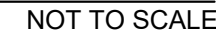
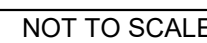
The diagrams illustrate four types of concrete joints:

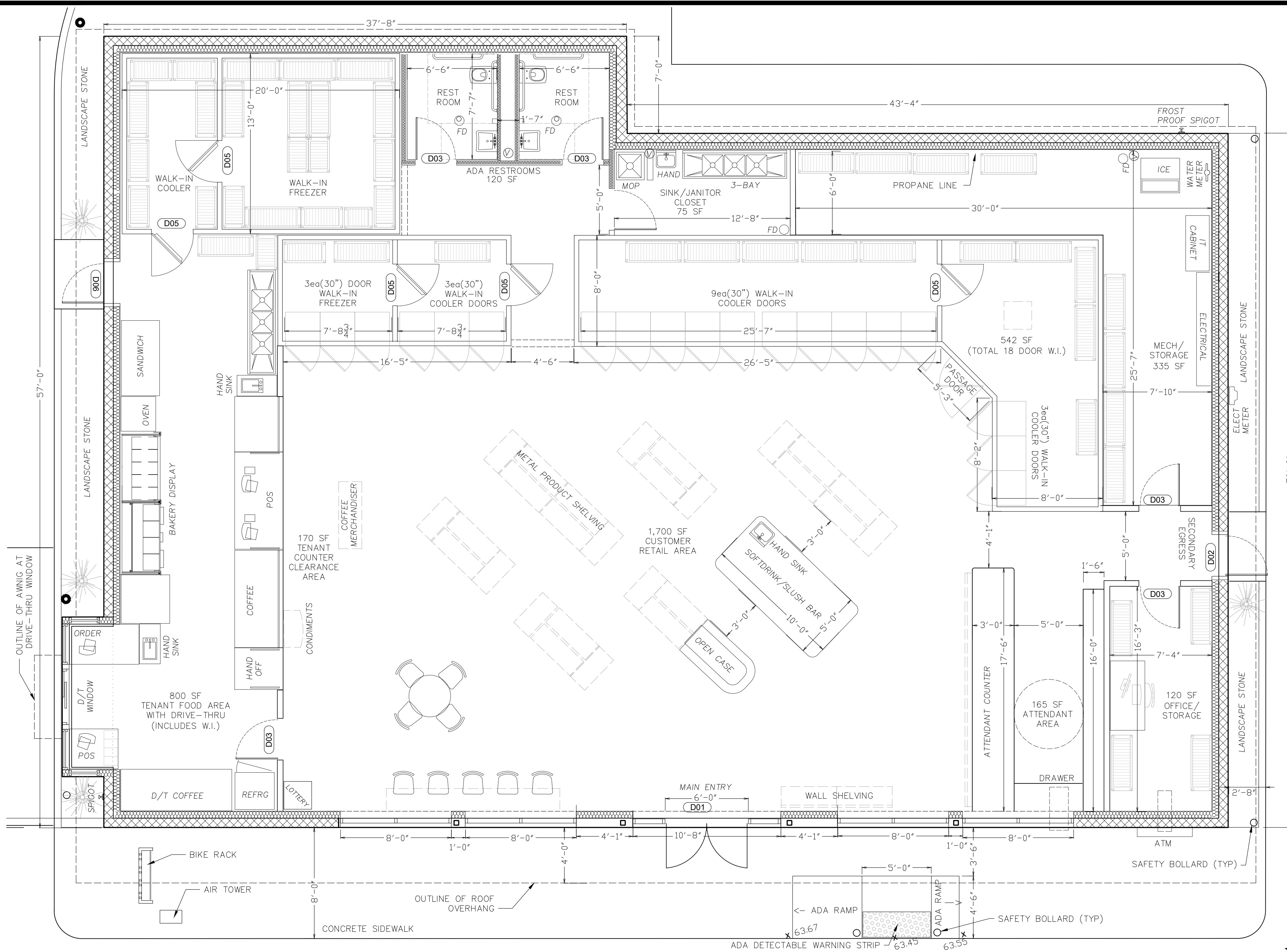
- EXPANSION JOINT:** Shows a cross-section of a concrete slab with reinforcement bars (CONC REINF) and a joint filled with SIKOFLEX. A dimension line indicates a width of 1" to 1 1/2" and a depth of 4" to 6" at the filling.
- ISOLATION JOINT:** Shows a cross-section of a concrete slab with reinforcement bars and a joint filled with SIKOFLEX. The joint is labeled as being for a WALL, ISLAND, POLE, ETC.
- CONST JOINT:** Shows a cross-section of a concrete slab with reinforcement bars and a joint filled with SIKOFLEX. The joint is labeled as being for NEW CONC MAY SHRINK & OPEN AT JT.
- CONTROL JOINT:** Shows a cross-section of a concrete slab with reinforcement bars and a joint filled with SIKOFLEX. The joint is labeled as being for ANTICIPATED CRACK AT CONTROL JT.

Technical drawing of a rectangular unit. The overall dimensions are 11'-0" wide and 6'-0" high. The unit features two circular knockouts, each labeled "24\" D/AM CLEANOUT". The left knockout is also labeled "INLET KNOCKOUT (TYP)". The unit is shown with four mounting feet, one at each corner.

BLOCK, BRICK AND PLAN VIEW

[illegible]

SD-2



FLOOR PLAN

GENERAL NOTES


1. ALL EXTERIOR DIMENSIONS TO EXTERIOR FACE OF FOUNDATION OR CMU
2. ALL INTERIOR DIMENSIONS TO FACE OF FINISH EXCEPT WHERE NOTED AS OTHERWISE.
3. ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED.
4. PROVIDE SOLID WOOD BLOCKING BEHIND ALL WALL MOUNT FIXTURES.
5. REFER TO DOOR AND FINISH SCHEDULE
6. PROVIDE TILE BACKER BOARD BEHIND ALL TILED WALL SURFACES.
7. TRADE CONTRACTORS SHALL SUBMIT SHOP DRAWINGS AND/OR EQUIPMENT CUT SHEETS AND SPECS PRIOR TO PROCEEDING WITH PURCHASE OF MATERIALS OR FABRICATION.
8. MECHANISE SHELVING NOT ATTACHED AND MOVABLE, LAYOUT WILL VARY FROM TIME TO TIME.
9. ALL FINISHES SUBJECT TO APPROVAL AND REQUIREMENTS OF THE HEALTH DEPARTMENT
10. TENANT AREA LAYOUT CONCEPTUAL AND SUBJECT TO CHANGE PER TENANT SPECIFICATIONS.
11. TENANT AREA TO BE FINISHED BY AND PER TENANT SPECIFICATION AND COLORS.

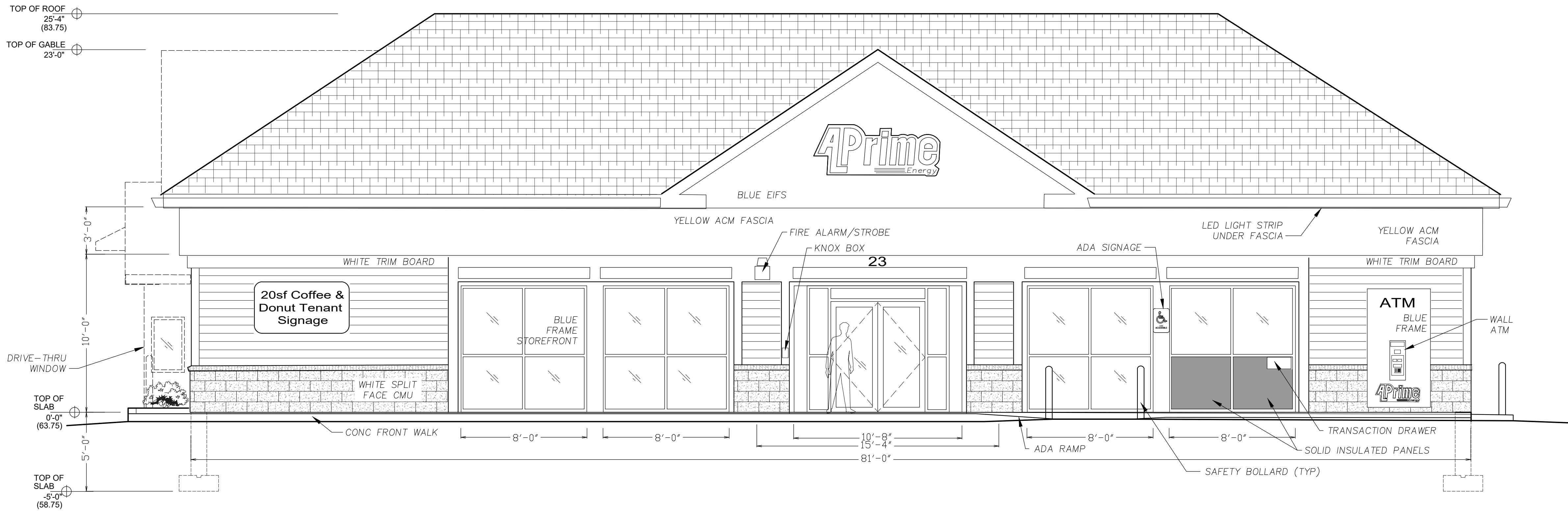
PLAN REVISIONS 23 SEPT 2020

1. CHANGED LOCATIONS OF WATER AND ELECTRIC METERS
2. OVERHANG CHANGED FROM FLAT ROOF FASCIA STYLE
3. ADJUSTED ADA SIDEWALK RAMP
4. ADDED BIKE RACK AND AIR TOWER ON SIDEWALK

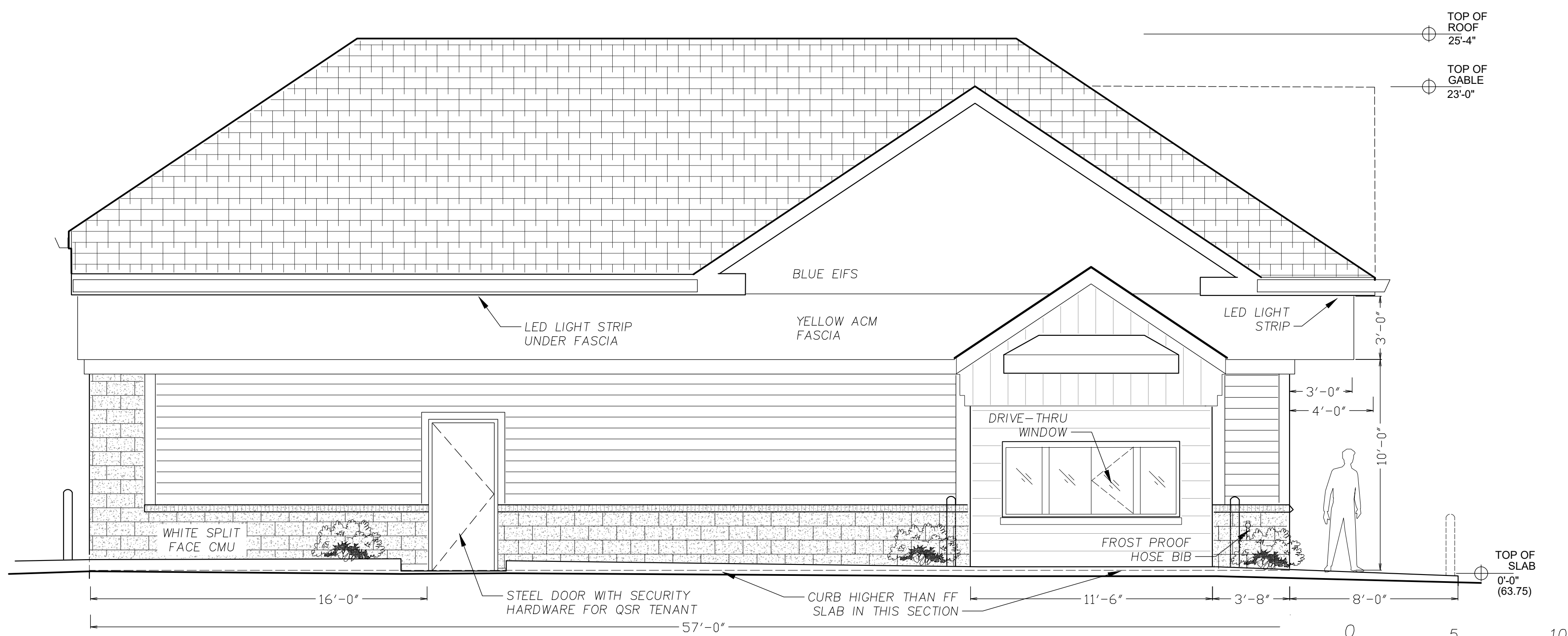
| FINISH SCHEDULE | | | | | |
|--------------------|----------------------|--------------|---------------------|-------------------------|----------------------------------|
| ROOM | FLOOR | BASE | WALL | CEILING | NOTE |
| MAIN SALES AREA | CERAMIC TILE | CERAMIC TILE | PAINTED GYPSUM | EXPOSED STEEL FRAMING | SLAT DISPLAY WALL BEHIND COUNTER |
| RESTROOMS | CERAMIC TILE | CERAMIC TILE | CERAMIC TILE | 2x2 SUSPENDED CEILING | |
| OFFICE | CERAMIC TILE | CERAMIC TILE | PAINTED GYPSUM | 2x2 SUSPENDED CEILING | |
| MECHANICAL/STORAGE | CERAMIC TILE | VINYL COVE | PAINTED GYPSUM | EXPOSED STEEL FRAMING | |
| WALK-IN COOLER | CERAMIC TILE | VINYL COVE | MFGR INSULATED WALL | MFGR INSULATED PANEL | |
| WALK-IN FREEZER | MFGR INSULATED FLOOR | VINYL COVE | MFGR INSULATED WALL | MFGR INSULATED PANEL | |
| FOOD PREP AREA | CERAMIC TILE | TENANT SPEC | TENANT SPEC | TENANT SPEC - SUSPENDED | |

| DOOR SCHEDULE | | | | | | | |
|---------------|-----|-------|--------|--------------------|----------------|---------|--|
| MARK | QTY | SIZE | | DOOR MATERIAL | FRAME MATERIAL | CLOSER? | NOTES |
| | | WIDTH | HEIGHT | | | | |
| D01 | 1 | 6'-0" | 7'-0" | ALUM/GLASS | ALUMINUM | Y | DBL DOOR, NO CENTER MULLION, EXTERIOR FRAME FINISHED BLUE |
| D02 | 1 | 3'-0" | 7'-0" | HOLLOW METAL | STEEL | Y | EMERGENCY ALARM EXIT ONLY, BLANK HARDWARE ON EXTERIOR |
| D03 | 5 | 3'-0" | 6'-8" | SOLID WOOD | STEEL | Y | INTERIOR DOOR, WITH LOCKSET AND ADA HARDWARE |
| D04 | 0 | 3'-0" | 6'-8" | SOLID WOOD | WOOD | N | POCKET DOOR |
| D05 | 5 | 3'-0" | 6'-6" | INSULATED ALUMINUM | ALUMINUM/STEEL | Y | AS PROVIDED BY COOLER MANUFACTURER, INCLUDE VACUUM RELEASE |
| D06 | 1 | 3'-0" | 7'-0" | HOLLOW METAL | STEEL | Y | TENANT STOCK AND EXIT ONLY, BLANK HARDWARE ON EXTERIOR |

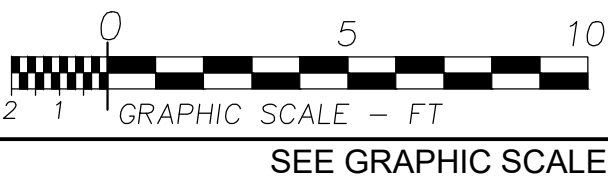
| | | | | | |
|---|---|-----------------|---|---|--|
| MINOR REVISIONS PER ROOF STYLE CHANGE AND UTILITY REROUTE | | PROJECT ADDRESS | |  | |
| 23 SEP 2020 | 1 | AG | 0 | | |
| 20 APR 2020 | 0 | AG | 0 | BYFIELD, MA 23 CENTRAL STREET | |
| DATE | | | | FLOOR PLAN | |
| SCALE | | | | AS NOTED | |
| PROJECT FILE | | | | SHEET | |
| TBD-019-01 BYFIELD | | | | A1.0 | |



SOUTH ELEVATION (FRONT)




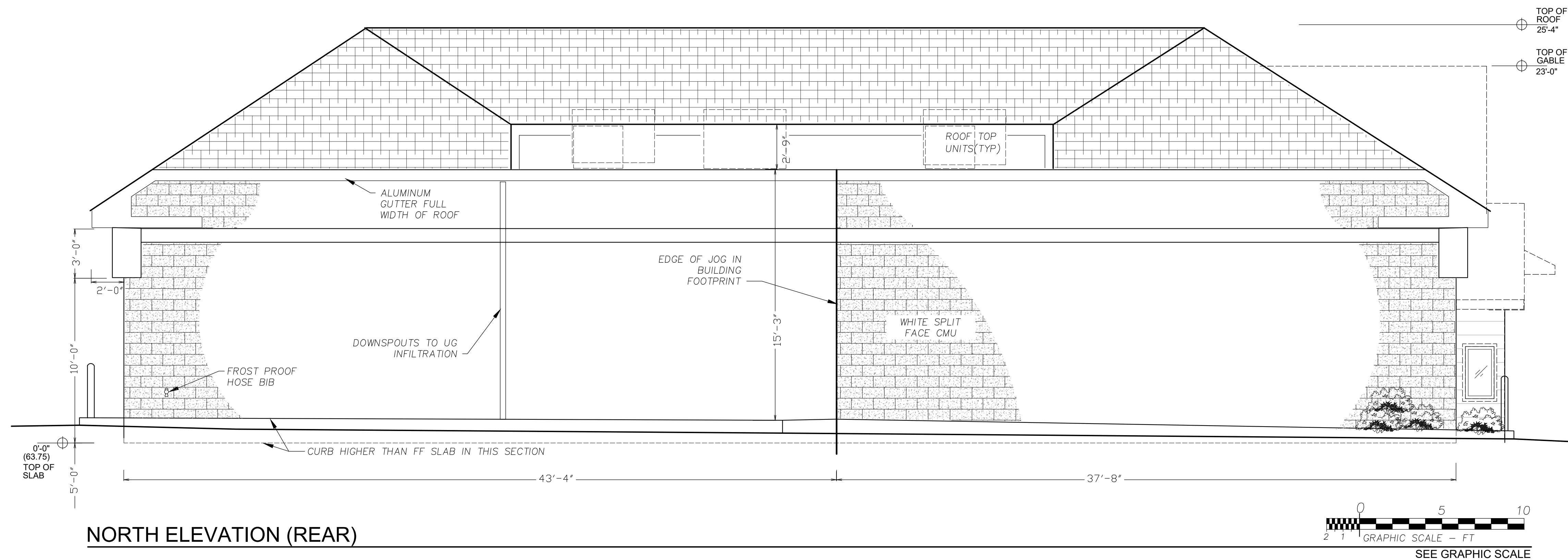
WEST ELEVATION (DRIVE-THRU SIDE)



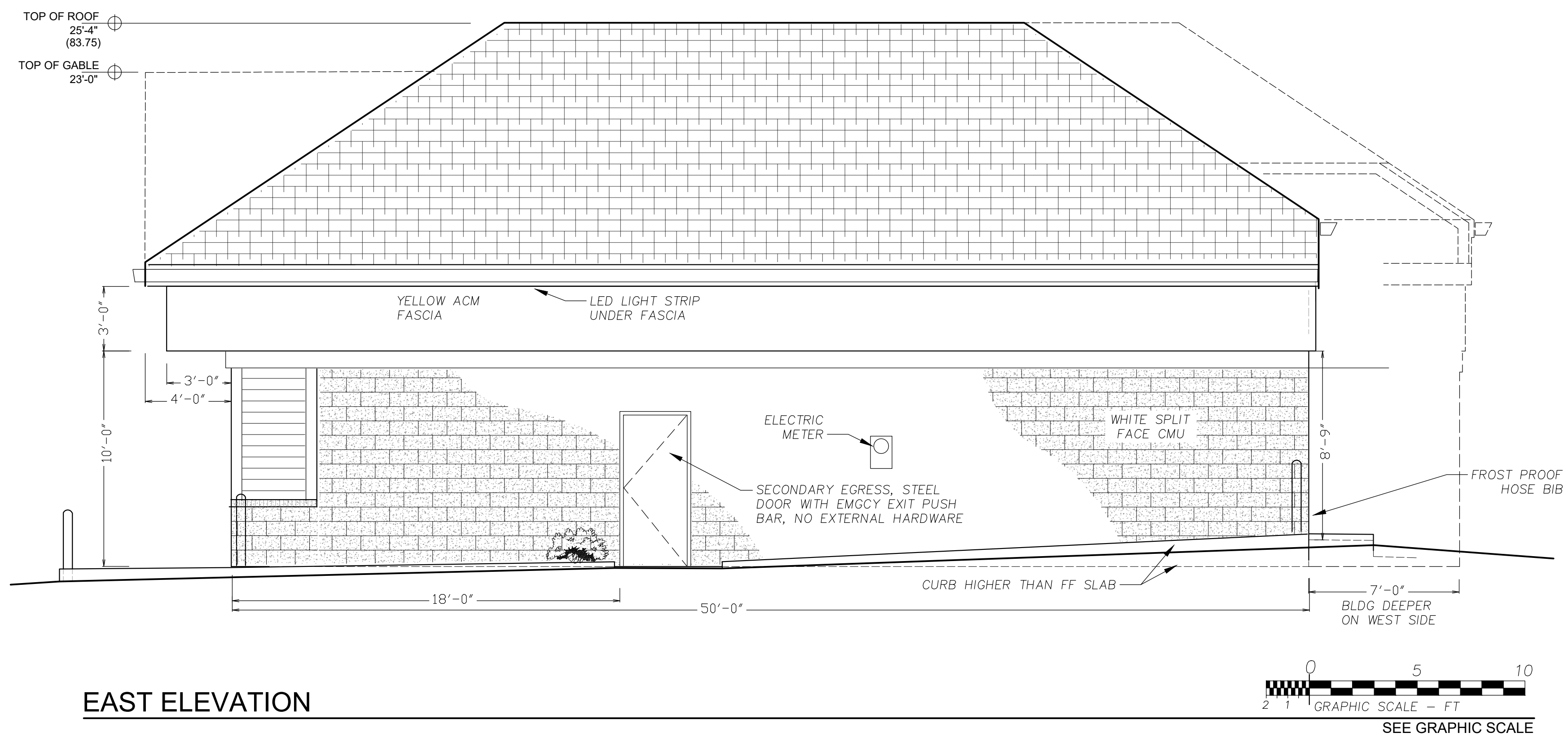
GENERAL NOTES

1. PROPOSED BUILDING IS A SINGLE STORY SLAB ON GRADE MASONRY AND WOOD FRAME BUILDING.
2. SIGNAGE SHOWN ON THIS SHEET AND SG-1 SIGN AND GRAPHICS SHEET ARE PROPOSED, IT IS INTENDED TO PERMIT SIGNAGE SEPARATELY AS ALLOWED BY RIGHT. PETITIONER IS NOT SEEKING VARIANCE OR WAIVER FOR SIGNAGE AS PART OF SITE PLAN OR SPECIAL PERMIT APPROVAL.
3. ALL DIMENSIONS TO FACE OF FINISH EXCEPT WHERE NOTED AS OTHERWISE.
4. CONFIRM MOUNTING HEIGHT OF TRANSACTION DRAWER AND ATM FOR PROPER ADA ACCESSIBILITY.
5. LOCATION OF KNOX BOX AND EXTERNAL FIRE ALARM/STROBE SUBJECT TO FINAL LOCATION APPROVAL BY FIRE DEPARTMENT.
6. TRADE CONTRACTORS INCLUDING STOREFRONT FABRICATOR SHALL SUBMIT SHOP DRAWINGS AND/OR EQUIPMENT CUT SHEETS AND SPECS PRIOR TO PROCEEDING WITH PURCHASE OF MATERIALS OR FABRICATION.
7. ALUMINUM STOREFRONT - PRE-FINISHED BLUE ALUMINUM FRAMES (SEE A.L. PRIME SPECIFICATION) WITH ONE INCH INSULATED GLASS, TEMPERED AS REQ'D BY CODE. BOTTOM PANELS AT COUNTER TO BE OPAQUE OR SOLID INSULATED PANEL.
8. SIZE, SHAPE, AND FINISH OF DRIVE-THRU BUILDING BUMP-OUT TO BE ADJUSTED PER TENANT CORPORATE IMAGE AND COLORS.
9. TENANT DRIVE-THRU WINDOW AWNING STYLE, HEIGHT, SIZE AND COLOR ARE CONCEPTUAL ONLY AND TO BE ADJUSTED PER TENANT SPECIFICATIONS


| | | | | | | | |
|--------------------------------------|--|--|--|--|--|--|--|
| CHANGED ROOF LINE PER BOARD COMMENTS | | | |  | | | |
| ORIGINAL DRAWING DATE | | | | 4Prime Energy A.L. PRIME ENERGY CONSULTANT, INC. 18 LARK AVENUE SAUGUS MA 01906 (781)246-0201 | | | |
| PROJECT ADDRESS | | | | BYFIELD, MA 23 CENTRAL STREET | | | |
| DATE | | | | EXTERIOR ELEVATIONS | | | |
| TBD-019-01 BYFIELD | | | | A-2.1 | | | |
| AS NOTED | | | | | | | |

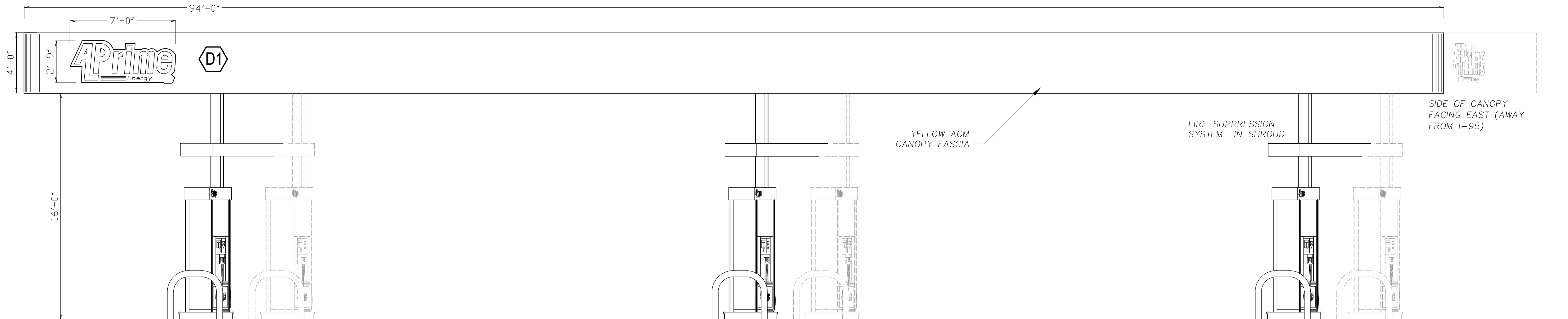


NORTH ELEVATION (REAR)

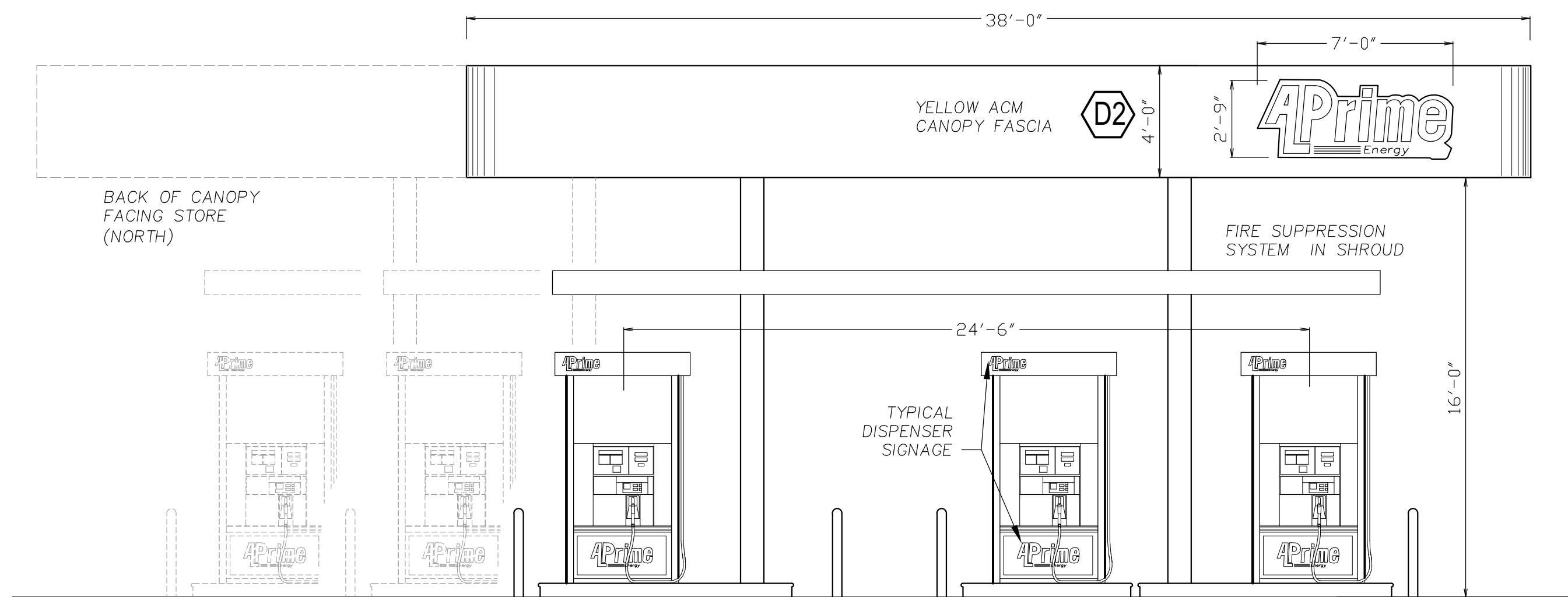


EAST ELEVATION

| | | | | | |
|----------------------------|--------|----------|---|--|-----------------------|
| | | | |  | |
| | | | | 4Prime Energy A.L. PRIME ENERGY CONSULTANT, INC. 18 LARK AVENUE SAUGUS MA 01906 (781)246-0201 | |
| | | | | PROJECT ADDRESS BYFIELD, MA 23 CENTRAL STREET | |
| | | | | EXTERIOR ELEVATIONS (2) | |
| 23 SEP 2020 23 APR 2020 | 1 0 | AG AG | REVISED ROOF LINES ORIGINAL DRAWING DATE | DWG FILE TBD-019-01 BYFIELD | SHEET A-2.2 |
| | | | | SCALE AS NOTED | |



CANOPY SOUTH ELEVATION (FACING CENTRAL)



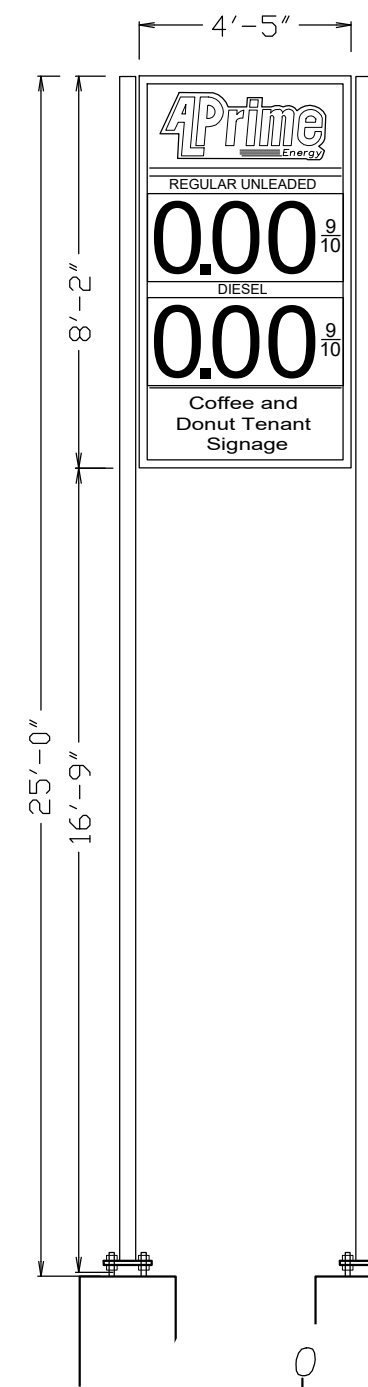
CANOPY WEST ELEVATION (FACING I-95)



GENERAL NOTES

1. DO NOT REFER TO THIS PLAN FOR CONSTRUCTION LAYOUT OR PURPOSES. THIS PLAN IS ONLY FOR BOARD REVIEW AND APPROVAL AND DOES NOT CONTAIN ADEQUATE INFORMATION FOR CONSTRUCTION.
2. REFER TO CANOPY MANUFACTURER STAMPED STRUCTURAL DRAWINGS, INCLUDING FOOTING DETAILS FOR ALL COLUMN AND FOOTING LAYOUT.
3. REFER TO TK-1 TANK AND PIPING PLAN FOR ISLAND AND DISPENSER SUMP LAYOUT.
4. REFER TO LOCAL AND STATE FIRE APPROVED FIRE SUPPRESSION PLAN FOR SHROUD AND FIRE SUPPRESSION SYSTEM PIPING LAYOUT
5. REFER TO BUILDING DEPARTMENT APPROVED SIGN PLAN FOR LAYOUT OF ANY APPROVED SIGNAGE. SIGNAGE SHOWN IS PROPOSED AND WILL BE APPROVED SEPARATELY AS ALLOWED BY RIGHT.
6. REFER TO LIGHTING PLAN AND OWNER SPECIFICATIONS REGARDING NUMBER AND LOCATION OF LIGHTING FIXTURES TO BE INSTALLED INTO CANOPY DECK.

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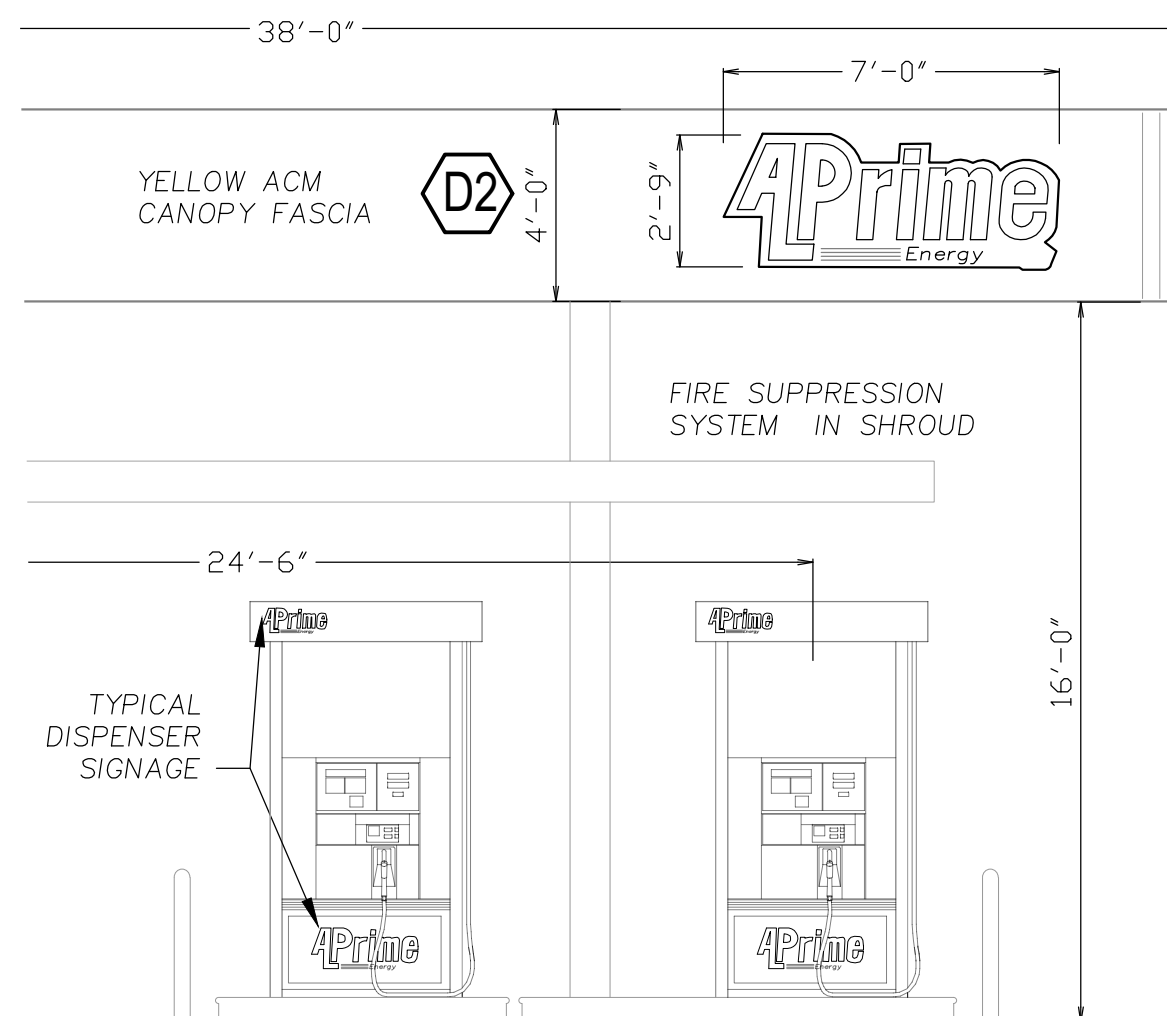
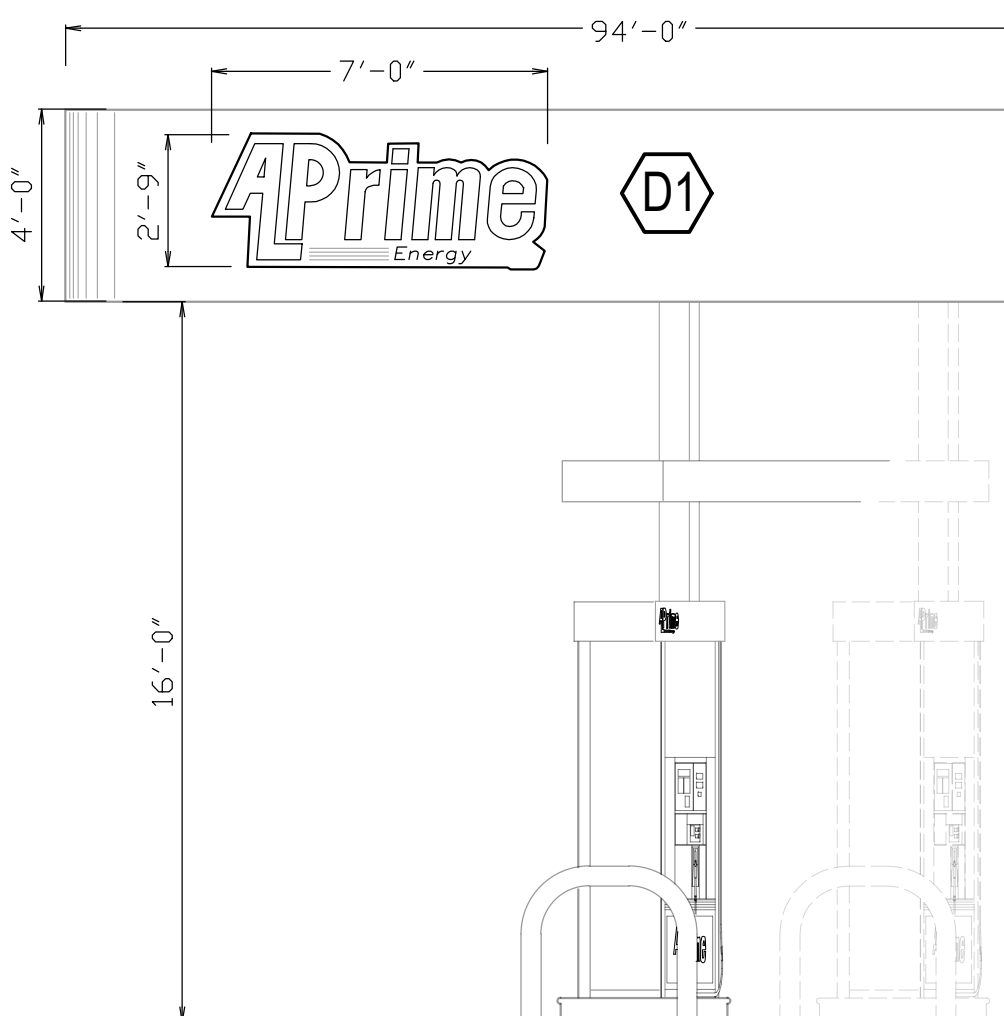
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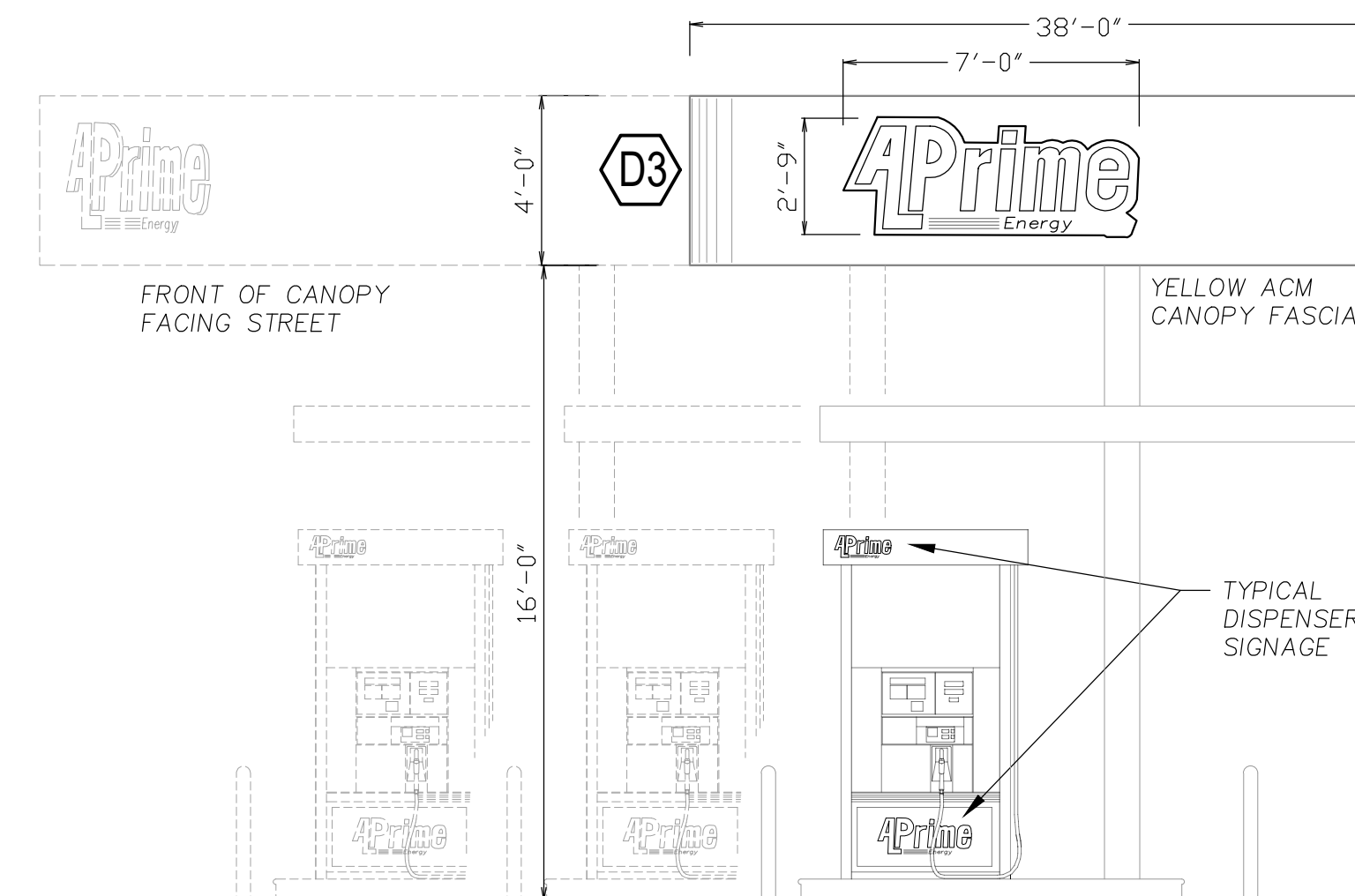
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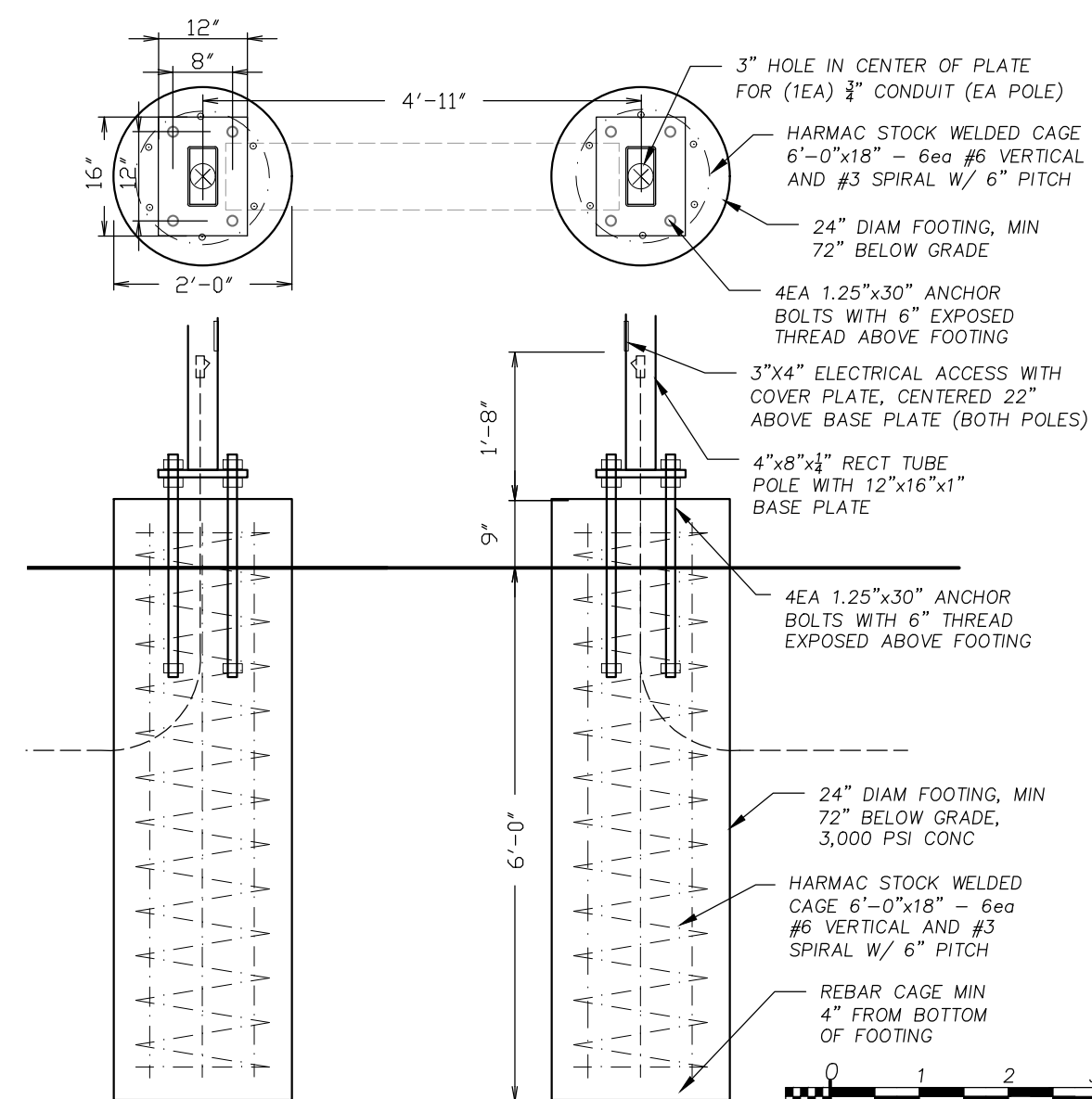


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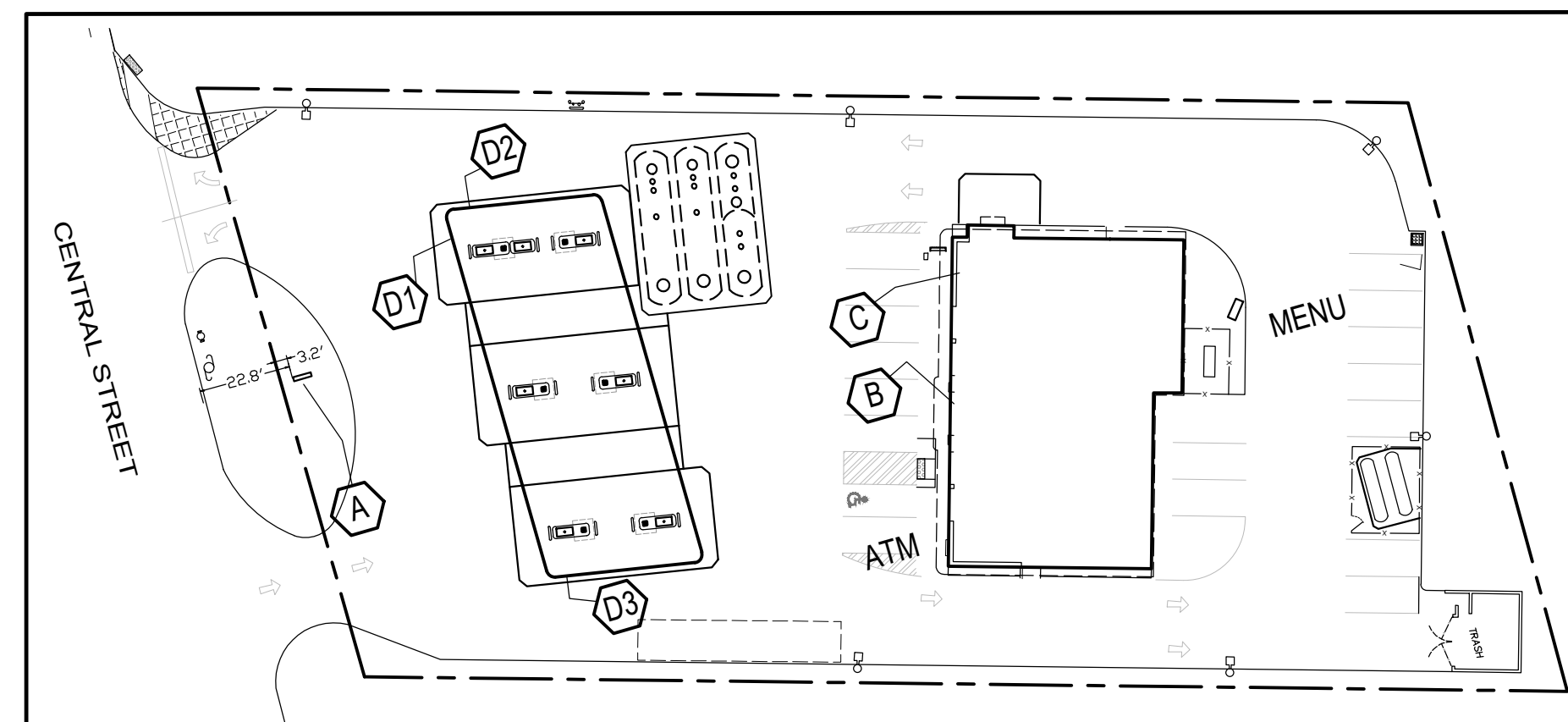
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SIGN LOCATION PLAN



PROPOSED SIGNAGE

| KEY | TYPE | SIZE | AREA (sf) | DIST TO BOTTOM | DIST TO TOP | INTERNALLY ILLUMINATED | CMTS |
|-----|---------------|----------------|-----------|----------------|-------------|------------------------|---------------------|
| A | FREESTANDING | 4'-5" x 8'-2" | 36.00 | 16'-9" | 25'-0" | Y | LED PRICES |
| B | WALL (BLDG) | 8'-1" x 3'-3" | 20.33 | 15'-0" | 18'-3" | Y | IRREGULAR OUTLINE |
| C | WALL (BLDG) | | 20.00 | 11'-0" | 14'-6" | Y | SIZE & GRAPHICS TBD |
| D1 | WALL (CANOPY) | 7'-0" x 2'-9" | 15.45 | 16'-9" | 19'-6" | Y | IRREGULAR OUTLINE |
| D2 | WALL (CANOPY) | 6'-10" x 2'-7" | 15.45 | 16'-9" | 19'-6" | Y | IRREGULAR OUTLINE |
| D3 | WALL (CANOPY) | 6'-10" x 2'-7" | 15.45 | 16'-9" | 19'-6" | Y | IRREGULAR OUTLINE |

TOTAL PROPOSED FREESTANDING SIGNAGE: 36.00 SF
TOTAL PROPOSED BUILDING WALL SIGNAGE: 40.33 SF
TOTAL BUILDING FRONT LENGTH: 81 LF (Allowed Signage Calc - 1 SF / 2 LF * (81 LF) = 40.5 SF)
TOTAL PROPOSED CANOPY WALL SIGNAGE: 46.35 SF
TOTAL CANOPY FRONT LENGTH: 94 LF (Allowed Signage Calc - 1 SF / 2 LF * (94 LF) = 47.0 SF)

IT IS INTENDED AND BELIEVED THAT PROPOSED SIGNAGE IS AS ALLOWED BY RIGHT AND MAY BE REVISED OR RECONFIGURED AFTER SITE PLAN APPROVAL PROVIDED CHANGES ALSO MEET ZONING BYLAW AND ARE ALLOWED BY RIGHT. IN THE FUTURE, SHOULD ANY NON-CONFORMING SIGNAGE BE DESIRED, APPROVAL WILL BE OBTAINED SEPARATELY VIA APPLICABLE ZBA PROCEDURE.

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|-----------------|----------------------------------|-------|
| PROJECT ADDRESS | BYFIELD, MA 23 CENTRAL STREET | |
| DATE | 23 SEP 2020 | SCALE |
| REV | 1 | AG |
| DESCRIPTION | TBD-019-01 BYFIELD | |
| DATE | 23 APR 2020 | SCALE |
| DESCRIPTION | AS NOTED | |
| PROJECT ADDRESS | | SG-1 |

A.L. PRIME ENERGY CONSULTANT, INC.
18 LARK AVENUE
SAUGUS MA 01906
(781)246-0201