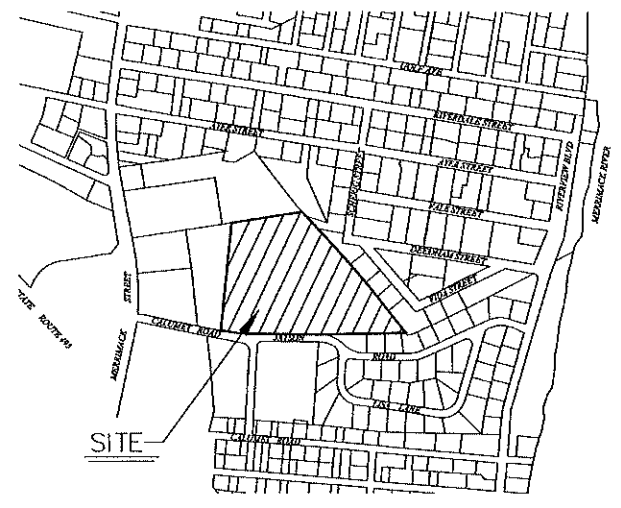


**METHUEN COMMUNITY DEVELOPMENT BOARD**

DATE OF APPLICATION: \_\_\_\_\_  
 DATE OF HEARING: \_\_\_\_\_  
 DATE OF APPROVAL: \_\_\_\_\_  
 DATE OF ENDORSEMENT: \_\_\_\_\_

- LEGEND:**
- - - - - EXISTING CONTOUR
  - - - - - EDGE OF WETLANDS
  - - - - - EDGE OF PAVEMENT
  - - - - - EDGE OF GRAVEL
  - EXISTING DRAIN
  - - - - - SLOPED GRANITE EDGING
  - - - - - BITUMINOUS CONCRETE BERM
  - - - - - ZONING DISTRICT LINE
  - - - - - EXISTING WATER
  - EXISTING UTILITY POLE/GUY
  - EXISTING GATE VALVE
  - EXISTING HYDRANT
  - ⊕ 3 SOIL TEST PIT #3



**SITE LOCUS**

**NOTES:**

- 1.) THE SITE IS SHOWN ON CITY OF METHUEN ASSESSOR MAP L13, PARCEL 1113-109W-20A, 143 14 CALUMET ROAD. THE PARCEL IS WITHIN THE HIGHWAY-BUSINESS (BH) ZONING DISTRICT.
- 2.) RECORD OWNER IS:  
14 CALUMET ROAD, LLC  
30 GLENN STREET  
LAWRENCE, MA 01843
- 3.) APPLICANT IS:  
OCEAN STORAGE, LLC  
15 NORTH STREET  
MANCHESTER, NH 03104
- 4.) EXISTING CONDITIONS WERE OBTAINED FROM AN INSTRUMENT FIELD SURVEY CONDUCTED BY ANDOVER CONSULTANTS, INC.
- 5.) THE WETLAND BOUNDARIES WERE FLAGGED IN OCTOBER 2016 BY NORSE ENVIRONMENTAL SERVICES, INC. THE "A" SERIES BOUNDARY WAS ADJUSTED IN APRIL 2018 BY NORSE ENVIRONMENTAL SERVICES DURING A SITE WALK OF THE BOUNDARY WITH CONSERVATION OFFICER JOSEPH GIARUSSO.
- 6.) ABUTTING STRUCTURES DEPICTED WERE SCALED FROM THE CITY OF METHUEN GIS MAP.

- REFERENCE PLANS:**  
 PLANS ON FILE AT THE ESSEX COUNTY REGISTRY OF DEEDS, NORTHERN DISTRICT.
- 1). PLAN 6584
  - 2). PLAN 15268
  - 3). PLAN 18066
- DEED REFERENCE:**  
 BOOK 14790 PAGE 82

Revision No.	Revision Description	Date
7	GENERAL REVISIONS PER REDESIGNED SITE	JUNE 10, 2020
6	NONE THIS SHEET	FEB. 7, 2019
5	STREET STRIPING NOTE, CAST IRON SEWER PER CDB CONDITIONS	NOV. 27, 2018
4	RESPONSE TO CITY ENGINEER AND CONCERNAL COMMENTS	AUG. 22, 2018
3	REVISED WETLAND BOUNDARY	JUNE 15, 2018
2	NONE THIS SHEET	MAR. 6, 2018
1	RESPONSE TO PEER REVIEW AND CITY COMMENTS	FEB. 27, 2018

**EXISTING CONDITIONS PLAN**  
**14 CALUMET ROAD**  
**METHUEN, MASS.**

PREPARED FOR: OCEAN STORAGE, LLC  
 DATE: JANUARY 10, 2018 REV: JUNE 10, 2020  
 SCALE: 1" = 40'

**andover consultants inc.**  
 1 East River Place  
 Methuen, Mass. 01844

**Peter D. Goodwin**  
 Reg. Prof. Land Surveyor  
 No. 48133

0 10 20 40 120 160 Ft.  
 0 10 20 40 Meter

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF APPLICATION: \_\_\_\_\_  
 DATE OF HEARING: \_\_\_\_\_  
 DATE OF APPROVAL: \_\_\_\_\_  
 DATE OF ENDORSEMENT: \_\_\_\_\_

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGE OF WETLAND
- EXISTING WATER
- PROPOSED WATER
- EXISTING DRAINAGE
- PROPOSED DRAINAGE
- PROPOSED SPOT GRADE
- SOIL TEST PIT
- EXISTING GAS
- PROPOSED GAS
- PROPOSED CHAIN LINK FENCE
- PROPOSED HAYBALES/SILT FENCE
- ZONING DISTRICT LINE
- BITUMINOUS CONCRETE BERM
- PROPOSED LIGHT POLE
- EXISTING LIGHT POLE
- SLOPED GRANITE EDGING
- VERTICAL GRANITE CURB
- EXISTING UTILITY POLE W/GUY
- PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL
- EXISTING SEWER
- PROPOSED SEWER
- PROPOSED SEWAGE FORCELINE
- PROPOSED HYDRANT
- PROPOSED GATE VALVE
- PROPOSED SIGN
- PROPOSED LIMIT OF CLEARING
- PROPOSED LIGHT POLE

Zoning Summary Chart-Lot 1

Zoning District(S):	BH (Highway Business)	
Zoning Regulation Requirements	Required	Provided
MINIMUM LOT AREA	10,000 SF	270,094 SF
FRONTAGE	100 FEET	240.00 FEET
FRONT YARD SETBACK	25 FEET	92.2 FEET
SIDE YARD SETBACK	30 FEET (3)	73.7 FEET
REAR YARD SETBACK	30 FEET (3)	143.6 FEET
MINIMUM LOT WIDTH	100 FEET	308 FEET
MAXIMUM LOT COVERAGE	35%	33%
BUILDING COVERAGE		15.3%

(3) WHERE ABUTTING A RESIDENTIAL OR MULTIFAMILY DISTRICT SEE SECTION VI-6(12): A SCREENING OR BUFFER STRIP SHALL BE 30 FEET IN ADDITION TO MINIMUM YARD SETBACK (60 FEET THIS LOT).

NOTES:

- RADIUS (R) = 2' UNLESS NOTED OTHERWISE.
- DIMENSIONS ARE TO FACE OF CURB OR BUILDING.
- LOT COVERAGE INCLUDES 13,223 S.F. OF EXISTING PAVEMENT.
- BUILDING FOOTPRINT = 41,340 S.F., TOTAL STORAGE BUILDING AREA = 124,020 S.F. PARKING PROVIDED.
- 11 SPACES, (10 STANDARD & 1 ACCESSIBLE)
- PARKING SPACE = 9' X 18'
- ACCESSIBLE SPACE = 9' X 18' WITH 9' ANGLE (VAN ACCESSIBLE)
- ADDITIONAL PARKING FOR STORAGE IS TEMPORARY AT FRONT OF EACH USER STORAGE SPACE.

Revision No.	Revision Description	Date
7	GENERAL REVISIONS PER REDESIGNED SITE	JUNE 10, 2020
6	HONE THIS SHEET	FEB. 7, 2019
5	STREET STOPPING NOTE, CAST IRON SEMI PER COB CONDITIONS	NOV. 27, 2018
4	RESPONSE TO CITY ENGINEER AND CONCERN COMMENTS	AUG. 22, 2018
3	SITE REDESIGN PER REVISED WETLAND BOUNDARY	JUNE 15, 2018
2	REVISE PARKING AREA	MAR. 6, 2018
1	RESPONSE TO PEER REVIEW AND CITY COMMENTS	FEB. 27, 2018

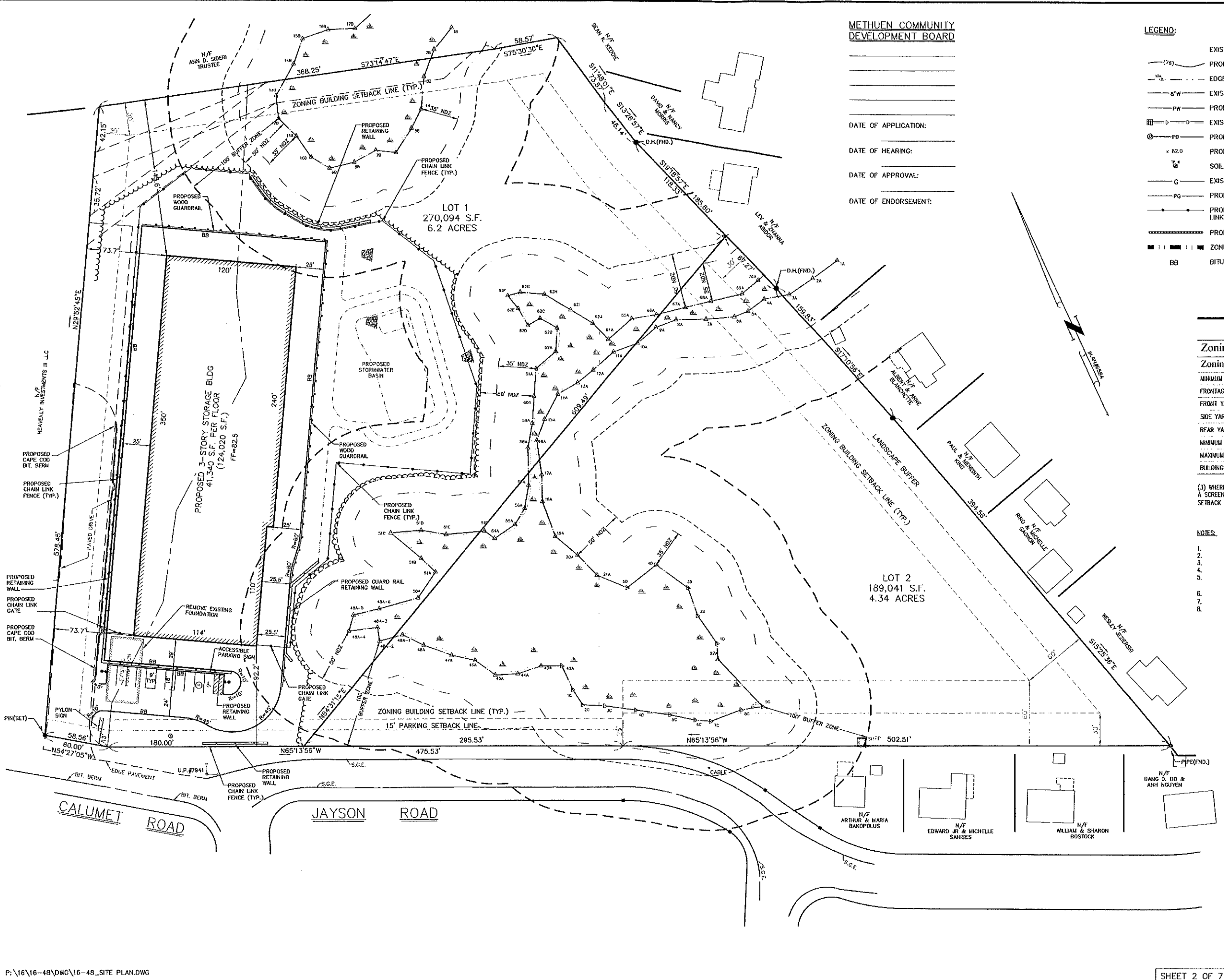
SITE LAYOUT PLAN  
 14 CALUMET ROAD  
 METHUEN, MASS.

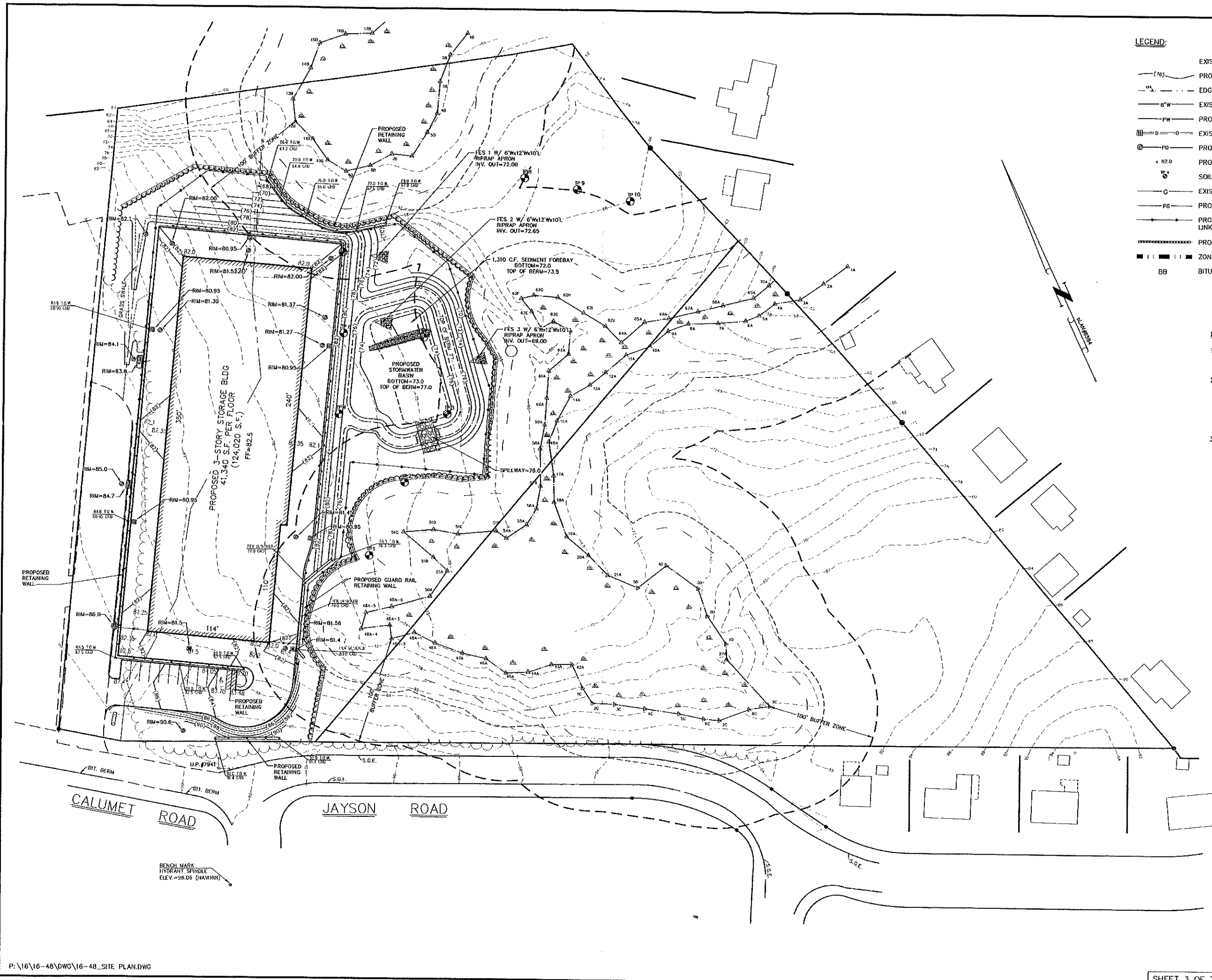
PREPARED FOR: OCEAN STORAGE, LLC  
 DATE: JANUARY 10, 2018 REV: JUNE 10, 2020  
 SCALE: 1" = 40'

andover consultants inc.  
 1 East River Place  
 Methuen, Mass. 01844

REG. PROF. ENGINEER  
 JAMES S. FAIRWEATHER II  
 CIVIL  
 No. 34716  
 REGISTERED PROFESSIONAL ENGINEER

0 40 80 120 160 Ft.  
 0 10 20 40 Meter





**LEGEND:**

- |            |                            |        |   |
|------------|----------------------------|--------|---|
| (76) ———   | EXISTING CONTOUR           | ⊙      | PROPOSED LIGHT POLE                       |
| ---(76)--- | PROPOSED CONTOUR           | ⊙      | EXISTING LIGHT POLE                       |
| - - - - -  | EDGE OF WETLAND            | S.G.C. | SLOPED GRANITE EDGING                     |
| —W—        | EXISTING WATER             | V.C.C. | EXISTING GRANITE CURB                     |
| —PW—       | PROPOSED WATER             | ↔      | EXISTING UTILITY POLE W/GUY               |
| —D—        | EXISTING DRAINAGE          | —UT&E— | PROPOSED UNDERGROUND ELECTRIC & TELEPHONE |
| ⊙—D—       | PROPOSED DRAINAGE          | —G—    | EXISTING GUARDRAIL                        |
| x R2.0     | PROPOSED SPOT GRADE        | —S—    | EXISTING GUARDRAIL                        |
| ⊙          | SOIL TEST PIT              | —S—    | EXISTING SEWER                            |
| —G—        | EXISTING GAS               | ⊙—PS—  | PROPOSED SEWER                            |
| —PG—       | PROPOSED GAS               | ⊙—PFL— | PROPOSED SEWAGE FORCELINE                 |
| —          | PROPOSED CHAIN LINK FENCE  | ↕      | PROPOSED HYDRANT                          |
| —          | PROPOSED HAYBALES/SILFENCE | ⊕      | PROPOSED GATE VALVE                       |
| —          | ZONING DISTRICT LINE       | —      | PROPOSED SIGN                             |
| BB         | BITUMINOUS CONCRETE BERM   | ⊕      | PROPOSED LIMIT OF CLEARING                |
|            |                            | ⊕      | PROPOSED LIGHT POLE                       |

**NOTES:**

- 1.) THE LIMITS OF WORK SHALL BE STAKED OUT AND THE EROSION CONTROL BARRIERS INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SITE CLEARING.
- 2.) THE PROPOSED PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND WILL REQUIRE AN NPDES CONSTRUCTION PERMIT. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL FILE A NOTICE OF INTENT WITH THE EPA IN ACCORDANCE WITH THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) REGULATIONS. 14 CALUMET ROAD, LLC HAS OBTAINED COVERAGE EFFECTIVE 12-29-18, NPDES ID MAR100IRK. REFER TO THE SWPPP FOR ADDITIONAL INFORMATION REGULATING THE WORK.
- 3.) REFER TO THE ORDER OF CONDITIONS, DEP FILE NO. 219-1204, MCD NO. 18-003, RECORDED AT THE NORTHERN ESSEX REGISTRY OF DEEDS IN BOOK 15700, PAGE 58 ISSUED ON 9-20-18 BY THE METHUEN CONSERVATION COMMISSION FOR ADDITIONAL REQUIREMENTS (CONDITIONS) REGULATING THE WORK.

Revision No.	Revision Description	Date
7	GENERAL REVISIONS PER REDESIGNED SITE	JUNE 10, 2020
6	REVISE BUILDING GRABES, ACCESS DRIVES IN OR NEAR AIA FOR DEEDING	FEB. 7, 2019
5	STREET STRIPPING NOTE, CAST IRON SEWER PER CDB CONDITIONS	NOV. 27, 2018
4	RESPONSE TO CITY ENGINEER AND CONDOMA COMMENTS	AUG. 22, 2018
3	SITE REDESIGN PER REVISED WETLAND BOUNDARY	JUNE 15, 2018
2	REVISE PARKING AREA	MAR. 6, 2018
1	RESPONSE TO PEER REVIEW AND CITY COMMENTS	FEB. 27, 2018

**SITE GRADING PLAN**  
**14 CALUMET ROAD**  
**METHUEN, MASS.**

PREPARED FOR: OCEAN STORAGE, LLC  
 DATE: JANUARY 10, 2017 REV: JUNE 10, 2020  
 SCALE: 1" = 40'

**andover consultants inc.**  
 1 East River Place  
 Methuen, Mass. 01844  
 REG. PROF. ENGINEER  
 J.S.F.

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF APPLICATION: \_\_\_\_\_

DATE OF HEARING: \_\_\_\_\_

DATE OF APPROVAL: \_\_\_\_\_

DATE OF ENDORSEMENT: \_\_\_\_\_

LEGEND:

(76) ---	EXISTING CONTOUR	□	PROPOSED LIGHT POLE
---	PROPOSED CONTOUR	○	EXISTING LIGHT POLE
---	EDGE OF WETLAND	S.C.C.	SLOPED GRANITE EDGING
8"W	EXISTING WATER	VGC	VERTICAL GRANITE CURB
PW	PROPOSED WATER	+	EXISTING UTILITY POLE W/GUY
---	EXISTING DRAINAGE	UT&E	PROPOSED UNDERGROUND ELECTRIC & TELEPHONE
PD	PROPOSED DRAINAGE	---	EXISTING GUARDRAIL
x 82.0	PROPOSED SPOT GRADE	---	EXISTING GUARDRAIL
⊗	SOIL TEST PIT	S	EXISTING SEWER
---	EXISTING GAS	PS	PROPOSED SEWER
---	PROPOSED GAS	PFL	PROPOSED SEWAGE FORCELINE
---	PROPOSED CHAIN LINK FENCE	▼	PROPOSED HYDRANT
---	PROPOSED HAYBALES/SILT FENCE	⊗	PROPOSED GATE VALVE
---	ZONING DISTRICT LINE	---	PROPOSED SIGN
BB	BITUMINOUS CONCRETE BERM	---	PROPOSED LIMIT OF CLEARING
		○	PROPOSED LIGHT POLE

Structure Name	Structure Details
CB 4	RIM = 81.50 SUMP = 73.40 Pipe-15 INV OUT = 77.40
CB 5	RIM = 81.40 SUMP = 72.97 Pipe-25 INV OUT = 76.97
CB 6	RIM = 80.95 SUMP = 72.51 Pipe-45 INV OUT = 76.51
CB 7	RIM = 80.95 SUMP = 71.31 Pipe - 85 INV OUT = 75.31
CB 8	RIM = 80.95 SUMP = 72.80 Pipe-85 INV OUT = 76.80
CB 9	RIM = 80.95 SUMP = 71.94 Pipe-95 INV OUT = 75.94
CB 10	RIM = 80.95 SUMP = 72.80 Pipe-125 INV OUT = 76.80
DNH 4	RIM = 81.58 SUMP = 76.20 Pipe-25 INV IN = 76.95 Pipe-15 INV IN = 76.95 Pipe-35 INV OUT = 76.70
DNH 5	RIM = 81.45 SUMP = 75.60 Pipe-35 INV IN = 76.20 Pipe-45 INV IN = 76.45 Pipe-55 INV OUT = 76.10
DNH 6	RIM = 81.27 SUMP = 74.28 Pipe-55 INV IN = 75.03 Pipe - 65 INV IN = 75.28 Pipe-75 INV OUT = 74.78
DNH 7	RIM = 81.30 SUMP = 75.30 Pipe-85 INV IN = 75.91 Pipe-95 INV IN = 75.91 Pipe-105 INV OUT = 75.80
DNH 8	RIM = 82.00 SUMP = 74.73 Pipe-105 INV IN = 75.33 Pipe-115 INV OUT = 75.23
DNH 9	RIM = 81.52 SUMP = 74.05 Pipe-125 INV IN = 76.74 Pipe-115 INV IN = 74.80 Pipe-135 INV OUT = 74.55
DNH 10	RIM = 82.00 SUMP = 73.42 Pipe-135 INV IN = 74.02 Pipe-145 INV OUT = 73.92
DNH 11	RIM = 81.37 SUMP = 72.30 Pipe-145 INV IN = 73.65 Pipe-75 INV IN = 74.66 Pipe-155 INV OUT = 72.80
FES 2	Pipe-155 INV IN = 72.65

Structure Name	Structure Details
CB 1	RIM = 86.00 SUMP = 77.50 Pipe - 1 INV OUT = 81.50
CB 2	RIM = 84.70 SUMP = 76.05 Pipe - 5 INV OUT = 80.05
CB 3	RIM = 83.80 SUMP = 74.20 Pipe - 6 INV OUT = 78.20
DNH 1	RIM = 85.00 SUMP = 79.20 Pipe - 1 INV IN = 79.95 Pipe - 5 INV IN = 79.95 Pipe - 2 INV OUT = 79.70
DNH 2	RIM = 84.10 SUMP = 76.60 Pipe - 6 INV IN = 78.10 Pipe - 2 INV IN = 77.85 Pipe - 3 INV OUT = 77.10
DNH 3	RIM = 82.10 SUMP = 74.55 Pipe - 3 INV IN = 75.40 Pipe - 4 INV OUT = 75.05
FES 1	Pipe - 4 INV IN = 72.00

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB 1	DNH 1	15	HDPE	132	1.17%	81.50	79.95
CB 2	DNH 1	15	HDPE	2	4.00%	80.05	79.95
CB 3	DNH 2	15	HDPE	2	4.00%	78.20	78.10
DNH 1	DNH 2	18	HDPE	114	1.63%	79.70	77.85
DNH 2	DNH 3	24	HDPE	115	1.48%	77.10	75.40
DNH 3	FES 1	24	HDPE	214	1.42%	75.05	72.00

SITE DIVERSION DRAIN

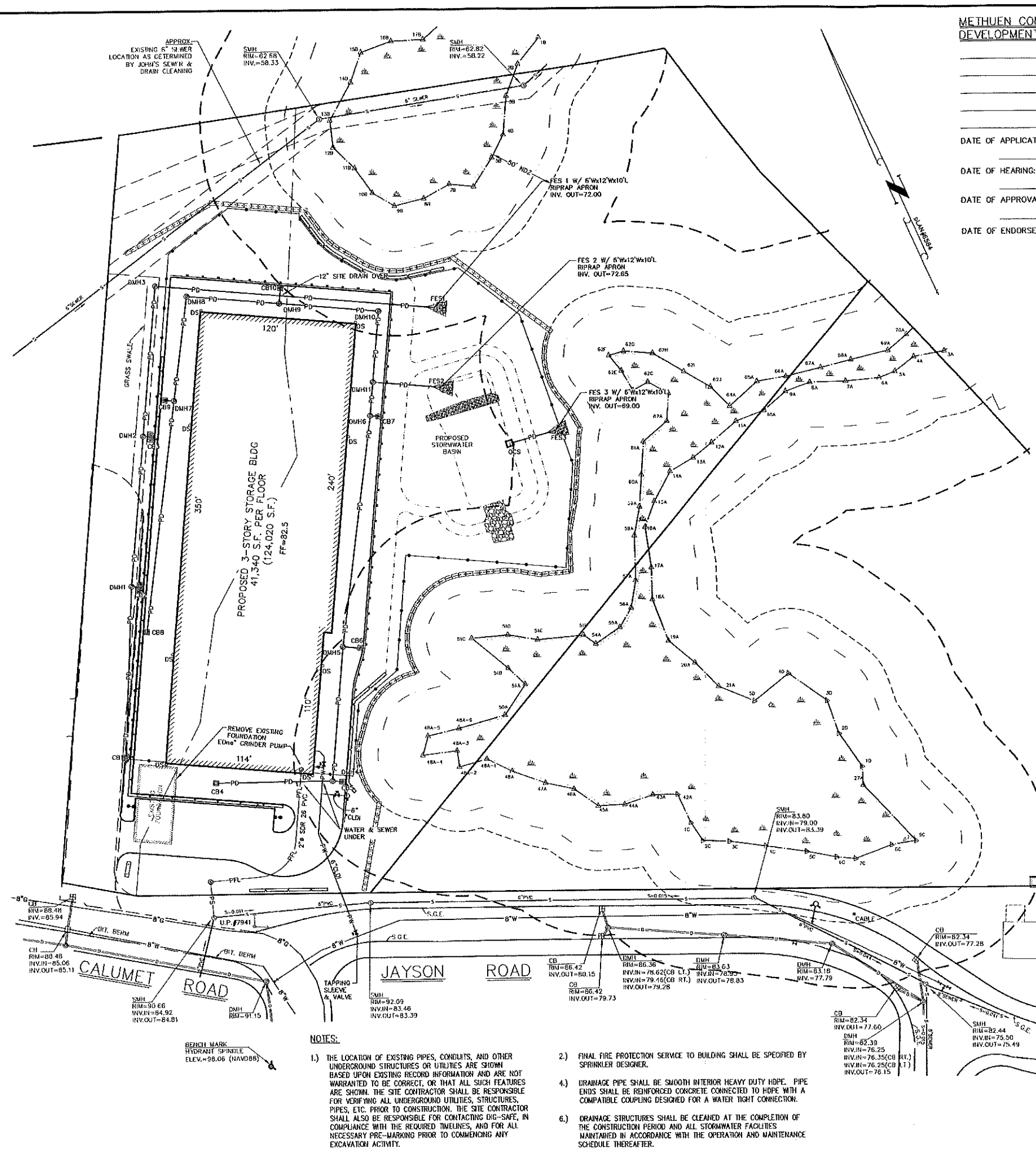
Revision No.	Revision Description	Date
7	GENERAL REVISIONS PER REDESIGNED SITE	JUNE 10, 2020
6	REVISE BUILDING GRADIES, ACCESS DRIVES IN OR NEAR AIR FOR BIDDING	FEB. 7, 2019
5	STREET STRIPING NOTE, CAST IRON SEWER PER COB CONDITIONS	NOV. 27, 2018
4	RESPONSE TO CITY ENGINEER AND CONCERN COMMENTS	AUG. 27, 2018
3	SITE REDESIGN PER REVISED WETLAND BOUNDARY	JUNE 15, 2018
2	REVISE PARKING AREA	MAR. 6, 2018
1	RESPONSE TO PEER REVIEW AND CITY COMMENTS	FEB. 27, 2018

Revision No. Revision Description Date

SITE UTILITY PLAN  
14 CALUMET ROAD  
METHUEN, MASS.

PREPARED FOR: OCEAN STORAGE, LLC  
DATE: JANUARY 10, 2017 REV: JUNE 10, 2020  
SCALE: 1" = 40'

andover consultants inc.  
1 East River Place  
Methuen, Mass. 01844  
REG. PROF. ENGINEER  
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0 10 20 40 Meter



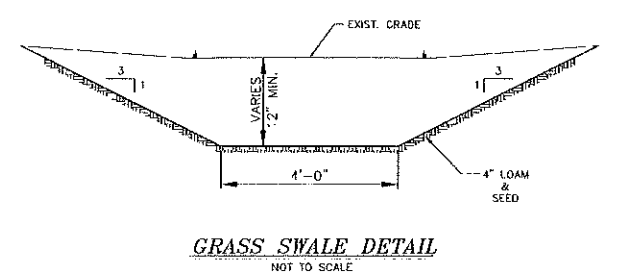
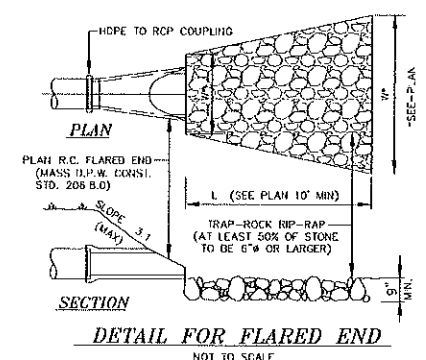
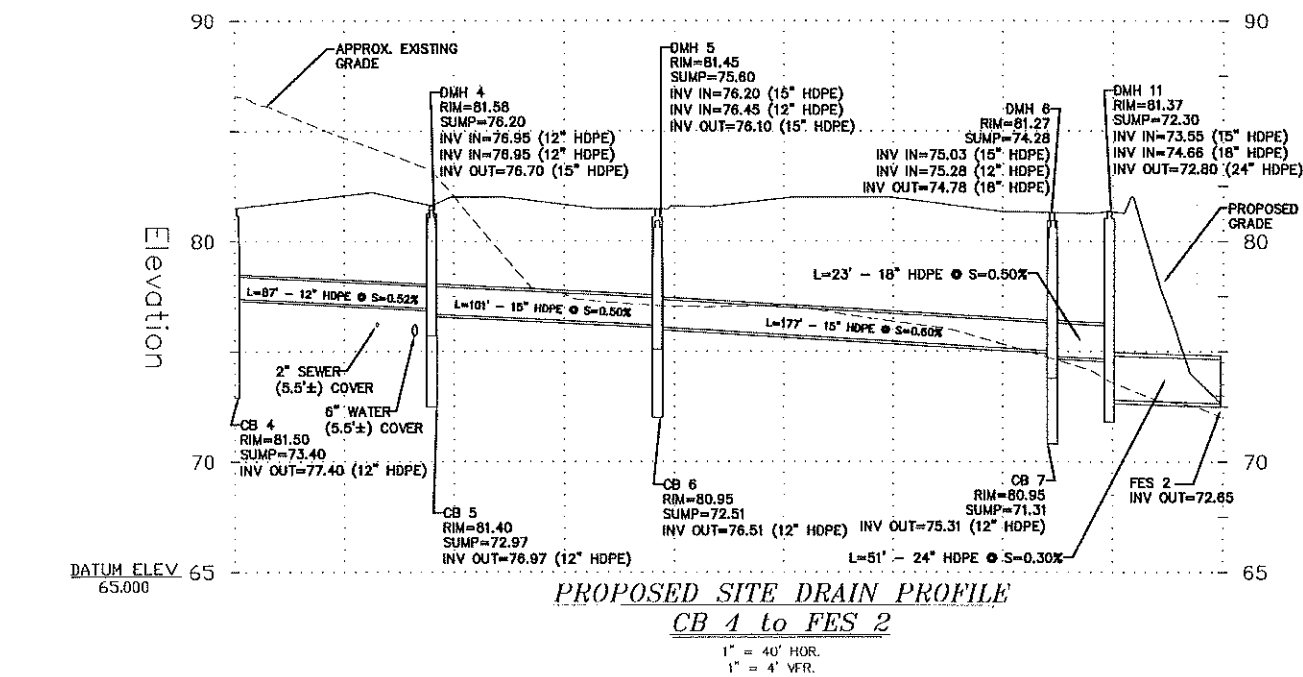
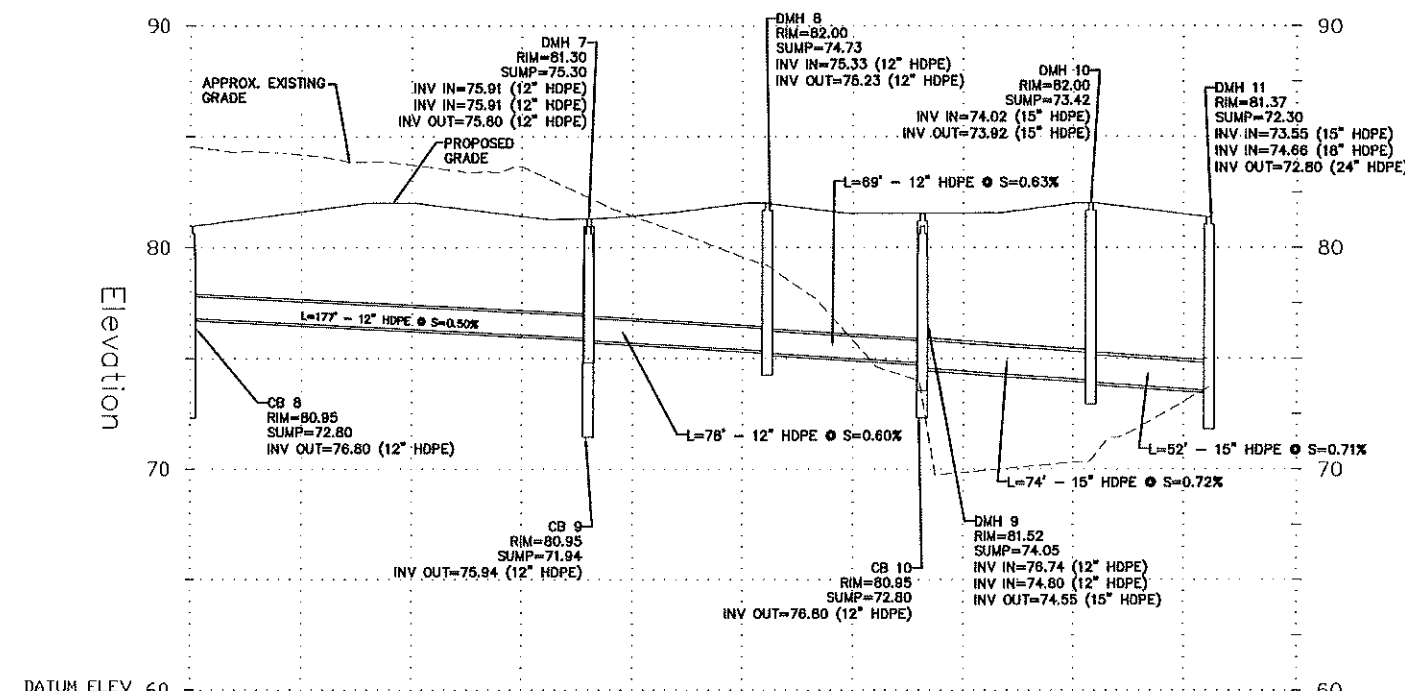
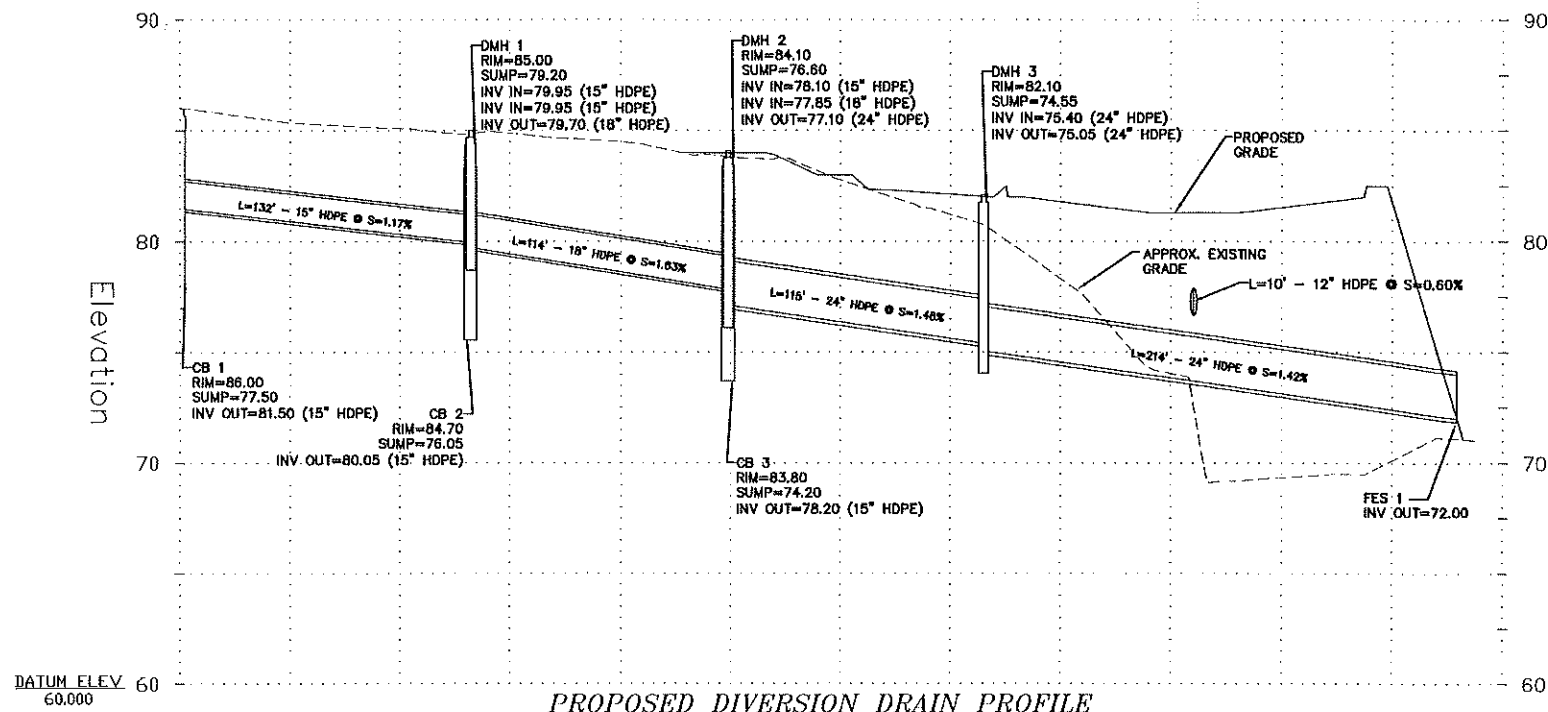
NOTES:

- THE LOCATION OF EXISTING PIPES, CONDUITS, AND OTHER UNDERGROUND STRUCTURES OR UTILITIES ARE SHOWN BASED UPON EXISTING RECORD INFORMATION AND ARE NOT WARRANTED TO BE CORRECT, OR THAT ALL SUCH FEATURES ARE SHOWN. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UNDERGROUND UTILITIES, STRUCTURES, PIPES, ETC. PRIOR TO CONSTRUCTION. THE SITE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CONTACTING DIG-SAFE, IN COMPLIANCE WITH THE REQUIRED TIMELINES, AND FOR ALL NECESSARY PRE-MARKING PRIOR TO COMMENCING ANY EXCAVATION ACTIVITY.
- FINAL FIRE PROTECTION SERVICE TO BUILDING SHALL BE SPECIFIED BY SPRINKLER DESIGNER.
- DRAINAGE PIPE SHALL BE SMOOTH INTERIOR HEAVY DUTY HDPE. PIPE ENDS SHALL BE REINFORCED CONCRETE CONNECTED TO HDPE WITH A COMPATIBLE COUPLING DESIGNED FOR A WATER TIGHT CONNECTION.
- DRAINAGE STRUCTURES SHALL BE CLEANED AT THE COMPLETION OF THE CONSTRUCTION PERIOD AND ALL STORMWATER FACILITIES MAINTAINED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE SCHEDULE THEREAFTER.

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB 4	DNH 4	12	HDPE	87	0.52%	77.40	76.95
CB 5	DNH 4	12	HDPE	4	0.50%	76.97	76.95
CB 6	DNH 5	12	HDPE	11	0.53%	76.51	76.45
CB 7	DNH 6	12	HDPE	4	0.69%	75.31	75.28
CB 8	DNH 7	12	HDPE	177	0.50%	76.80	75.91
CB 9	DNH 7	12	HDPE	4	0.70%	75.94	75.91
CB 10	DNH 9	12	HDPE	10	0.60%	76.80	76.74
DNH 4	DNH 5	15	HDPE	101	0.50%	76.70	76.20
DNH 5	DNH 6	15	HDPE	177	0.60%	76.10	75.03
DNH 6	DNH 11	18	HDPE	23	0.50%	74.78	74.68
DNH 7	DNH 8	12	HDPE	78	0.60%	75.80	75.33
DNH 8	DNH 9	12	HDPE	69	0.63%	75.23	74.80
DNH 9	DNH 10	15	HDPE	74	0.72%	74.55	74.02
DNH 10	DNH 11	15	HDPE	52	0.71%	73.92	73.55
DNH 11	FES 2	24	HDPE	51	0.30%	72.80	72.65

SITE DRAINS



METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF APPLICATION: \_\_\_\_\_  
DATE OF HEARING: \_\_\_\_\_  
DATE OF APPROVAL: \_\_\_\_\_  
DATE OF ENDORSEMENT: \_\_\_\_\_

Revision No.	Revision Description	Date
7	GENERAL REVISIONS PER REDESIGNED SITE	JUNE 10, 2020
6	REVISE BUILDING GRADES, ACCESS DRIVES IN OR NEAR AIA FOR BOORIO	FEB. 7, 2019
5	STREET STRIPING NOTE, CAST IRON SEWER PER CDR CONDITIONS	NOV. 27, 2018
4	RESPONSE TO CITY ENGINEER AND GEORADIAL COMMENTS	AUG. 22, 2018
3	SITE REDESIGN PER REVISED METLAND BOUNDARY	JAN. 15, 2018
2	REVISE PARKING AREA	MAR. 6, 2018
1	RESPONSE TO PEER REVIEW AND CITY COMMENTS	FEB. 27, 2018

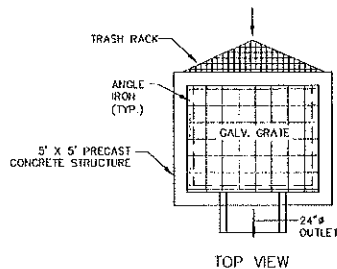
**SITE DETAILS**  
14 CALUMET ROAD  
METHUEN, MASS.

PREPARED FOR: OCEAN STORAGE, LLC  
DATE: JANUARY 10, 2017 REV: JUNE 10, 2020  
SCALE: 1" = 40'

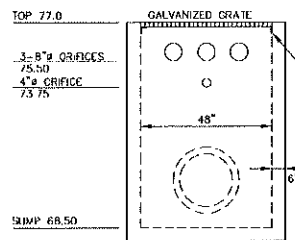
**andover consultants inc.**  
1 East River Place  
Methuen, Mass. 01844  
REG. PROF. ENGINEER

**James S. Fairweather II**  
Civil  
No. 30716  
Professional Seal

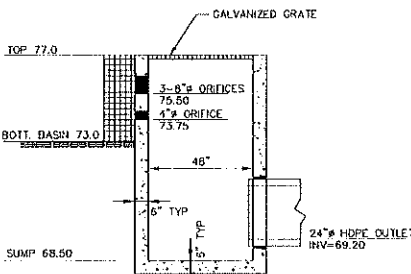
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0 10 20 40 Meter



TOP VIEW



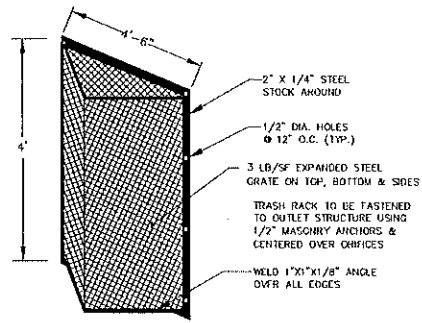
FRONT VIEW



SECTION

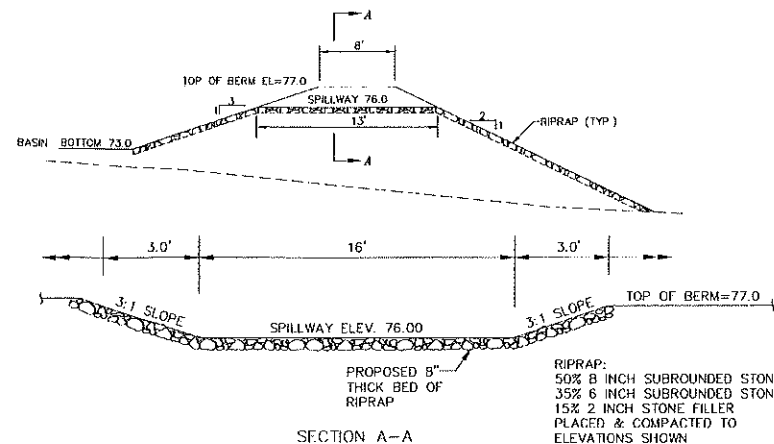
**OUTLET CONTROL STRUCTURE**

NOT TO SCALE



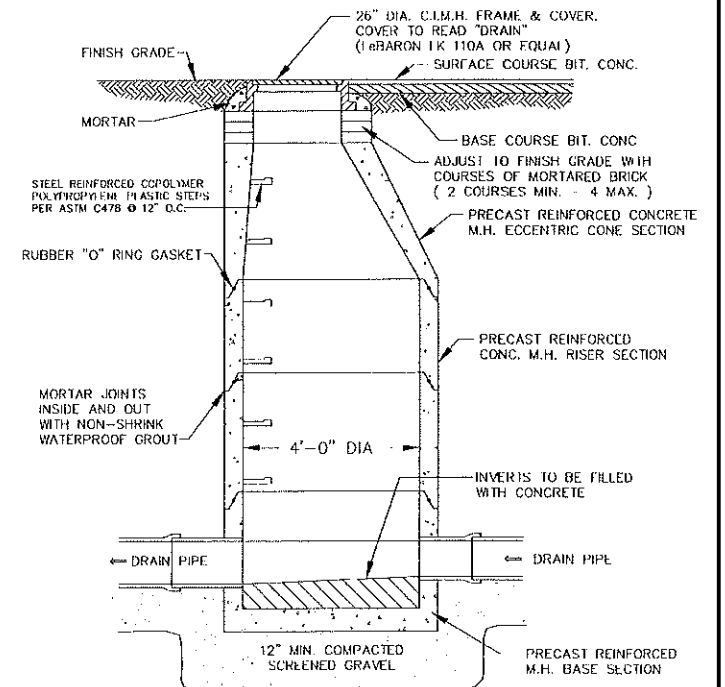
**OUTLET STRUCTURE TRASH RACK**

NOT TO SCALE



**SECTION A-A  
BASIN SPILLWAY**

NOT TO SCALE

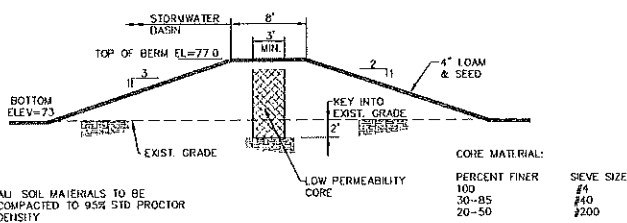


NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 24 DAYS.
2. DESIGNED FOR 11 20' LOADING, MIN 12" COVER.
3. END & SIDE LIMITS DO NOT HAVE FLOW-THRU OPENINGS.
5. PROVIDE OPENINGS FOR INLET AND OUTLET PIPES, SEE PLAN.
6. PROVIDE 24" Ø OPENING FOR INSPECTION, SEE PLAN FOR LOCATIONS.
7. PROVIDE RISER WITH DRAIN MANHOLE FRAME AND COVER TO GRADE FOR SYSTEM INSPECTION. SEE TYPICAL DRAIN MANHOLE DETAIL FOR FRAME AND COVER SPECIFICATIONS.

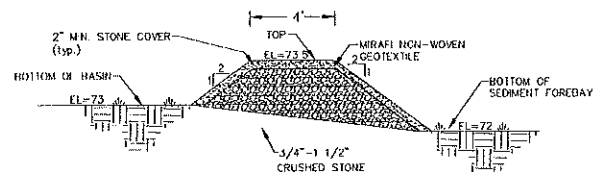
**TYPICAL DRAIN MANHOLE DETAIL**

NOT TO SCALE



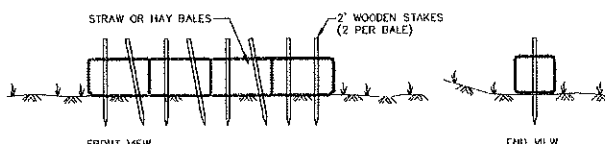
**STORMWATER BASIN BERM SECTION**

NOT TO SCALE



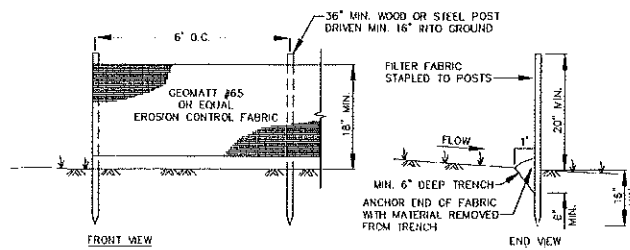
**SEDIMENT FOREBAY BERM**

NOT TO SCALE



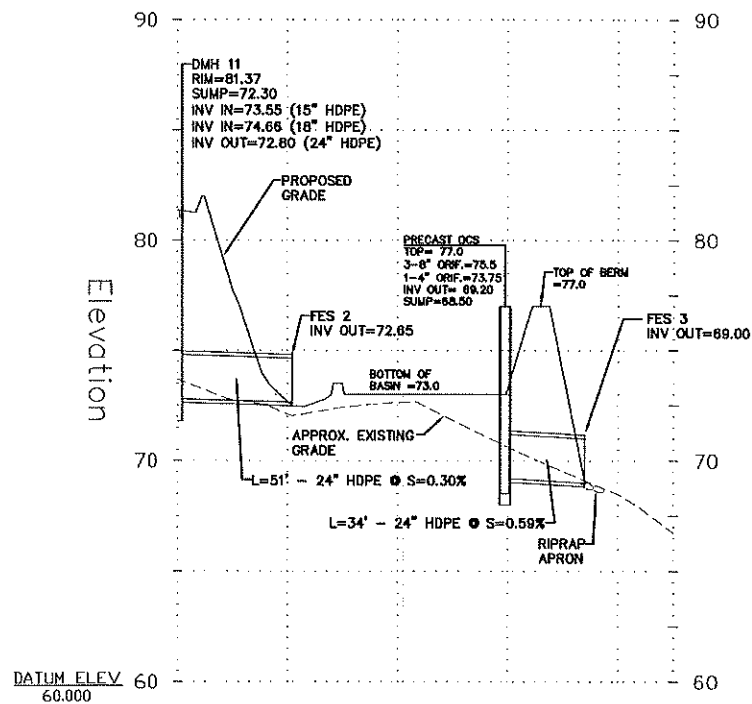
**HAY BALE SILTATION BARRIER DETAIL**

NOT TO SCALE



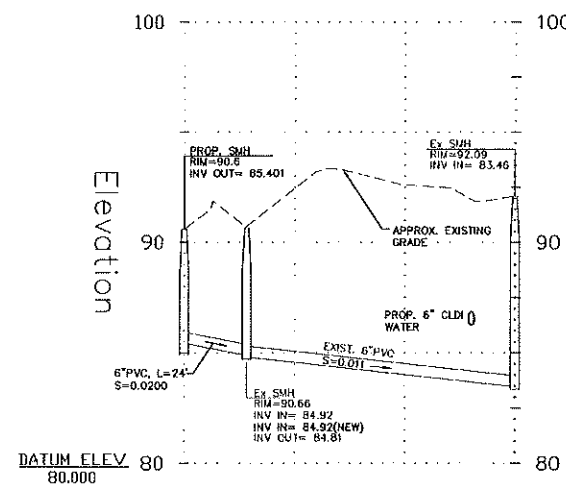
**FABRIC SILTATION FENCE DETAIL**

(NOT TO SCALE)



**PROFILE-THRU STORMWATER BASIN**

1" = 40' HOR.  
1" = 4' VER.



**PROPOSED SEWER PROFILE**

1" = 40' HOR.  
1" = 4' VER.

**METHUEN COMMUNITY DEVELOPMENT BOARD**

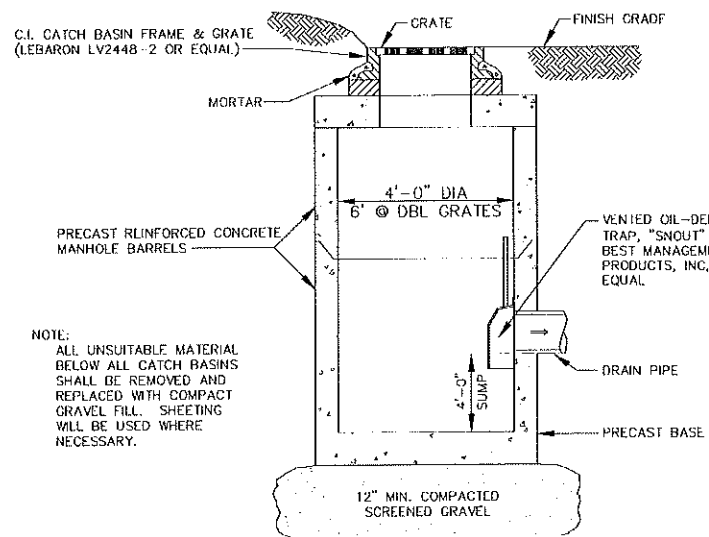
DATE OF APPLICATION: \_\_\_\_\_  
DATE OF HEARING: \_\_\_\_\_  
DATE OF APPROVAL: \_\_\_\_\_  
DATE OF ENDORSEMENT: \_\_\_\_\_

Revision No.	Revision Description	Date
7	GENERAL REVISIONS PER REDESIGNED SITE	JUNE 10, 2020
6	NONE THIS SHEET	FEB. 7, 2019
5	STREET STIRLING NOTE, CAST FROM SEWER PER CDB CONDITIONS	NOV. 27, 2018
4	RESPONSE TO CITY ENGINEER AND CONCERNAL COMMENTS	AUG. 22, 2018
3	SITE REDESIGN PER REVISED WERLAND BOUNDARY	JUNE 15, 2018
2	REVISE PARKING AREA	MAR. 6, 2018
1	RESPONSE TO PEER REVIEW AND CITY COMMENTS	FEB. 27, 2018

**SITE DETAILS  
14 CALUMET ROAD  
METHUEN, MASS.**

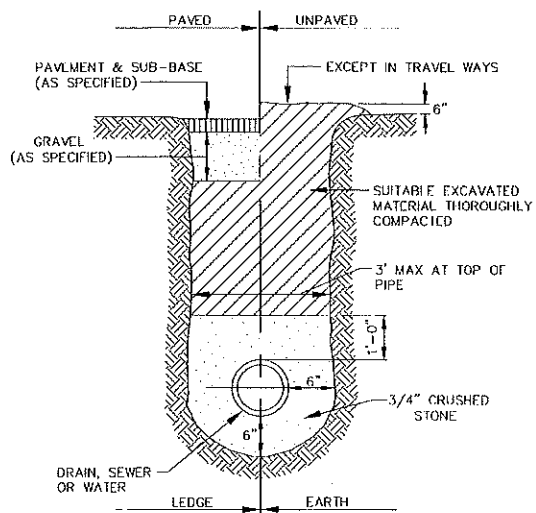
PREPARED FOR: OCEAN STORAGE, LLC  
DATE: JANUARY 10, 2017 REV: JUNE 10, 2020  
SCALE: 1" = 40'

**andover consultants inc.**  
1 East River Place  
Methuen, Mass. 01844  
REG. PROF. ENGINEER  
0 40 80 120 160 Ft.  
0 10 20 40 Meter



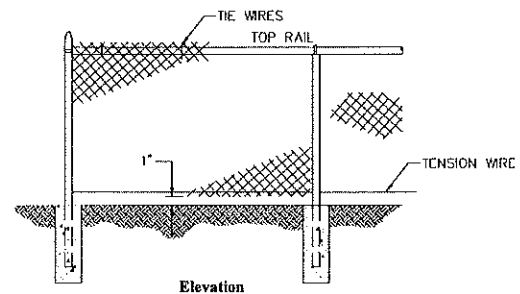
**TYPICAL CATCH BASIN FOR DOUBLE RIM**

NOT TO SCALE

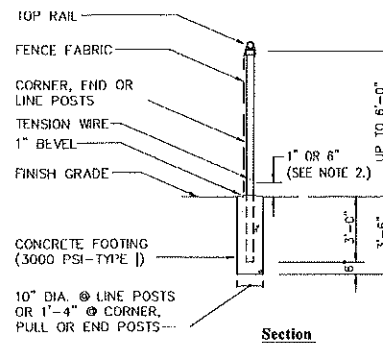


**PIPE TRENCH TYPICAL SECTION**

NOT TO SCALE



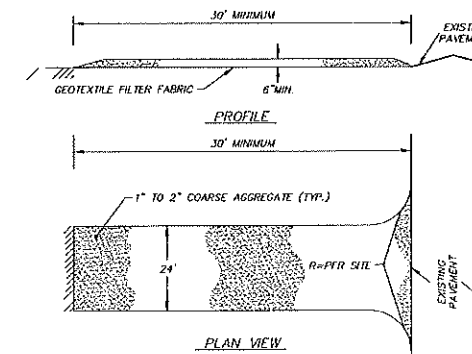
**Elevation**



**Section**

**CHAIN LINK FENCE (UP TO 6')**

NOT TO SCALE

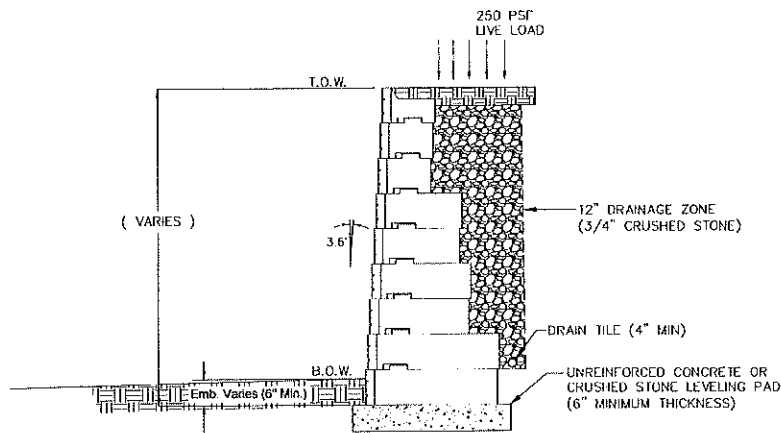


**CONSTRUCTION SPECIFICATIONS:**

1. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN A FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
2. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
3. ALL SURFACE WATER THAT IS FLOWING TO OR DEVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM SUBSTITUTED FOR THE PIPE.

**STABILIZED CONSTRUCTION ENTRANCE DETAIL**

NOT TO SCALE

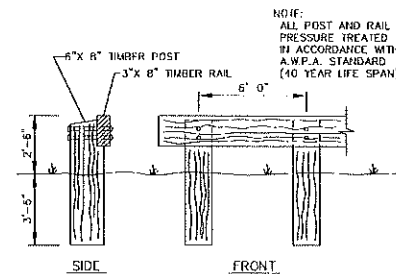


NOTE: SHOWN FOR GENERAL INFORMATION ONLY. FINAL WALL CONFIGURATION AND TYPE TO BE DETERMINED BY THE WALL SUPPLIER ENGINEER LICENSED TO PRACTICE ENGINEERING IN MASSACHUSETTS.

WALL TO BE DESIGNED FOR H20 PARKING LOAD WHERE NEXT TO PAVEMENT, FOR HYDROSTATIC PRESSURE AT STORMWATER BASIN, AND FOR ANY OTHER NECESSARY REQUIREMENTS.

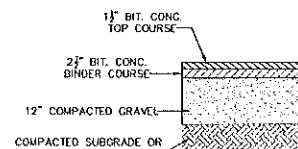
**TYPICAL SEGMENTAL BLOCK WALL SECTION**

(NOT TO SCALE)



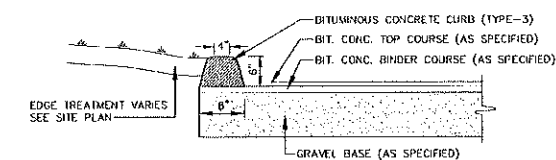
**TIMBER GUARDRAIL**

NOT TO SCALE



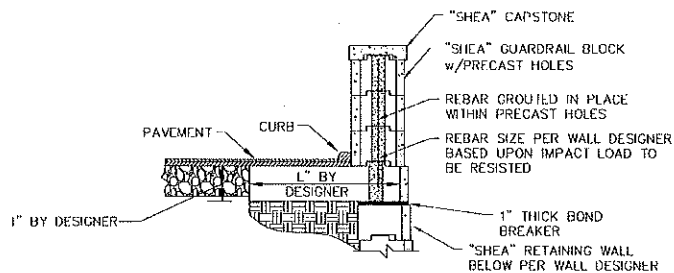
**PAVEMENT SECTION**

NOT TO SCALE



**BITUMINOUS CONCRETE CURB DETAIL**

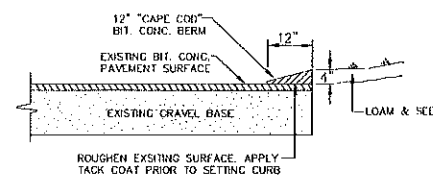
(SEE MASS D.P.W. CONST. STD. 106.2.0) NOT TO SCALE



NOTE: WITH PROPER REINFORCING AND MOMENT SLAB BLOCK DEPTHS, "SHEA" GUARDRAIL BLOCK CAN BE USED TO CREATE A TRAFFIC BARRIER CAPABLE OF RESISTING LOADS AS HIGH AS AASHTO'S TL-1 (13,500 LBS). THIS DETAIL IS INTENDED TO REPRESENT THE GENERAL CONFIGURATION OF THE BLOCK AND THE LOCATION OF THE REBAR REINFORCEMENT. FINAL DESIGN AND LAYOUT OF THE TRAFFIC BARRIER AND RETAINING WALL UNDER IS TO BE DESIGNED BY AN ENGINEER LICENSED TO PRACTICE IN MASSACHUSETTS.

**GUARDRAIL BLOCK INTEGRAL TRAFFIC BARRIER WALL DETAIL**

(NOT TO SCALE)



**BITUMINOUS CONCRETE BERM DETAIL**

NOT TO SCALE

**METHUEN COMMUNITY DEVELOPMENT BOARD**

DATE OF APPLICATION: \_\_\_\_\_  
DATE OF HEARING: \_\_\_\_\_  
DATE OF APPROVAL: \_\_\_\_\_  
DATE OF ENDORSEMENT: \_\_\_\_\_

Revision No.	Revision Description	Date
7	GENERAL REVISIONS PER REDESIGNED SITE	JUNE 10, 2020
6	REMOVE THIS SHEET	FEB. 7, 2019
5	STREET STOPPING MARK, CAST IRON SEMI PER COB CONDITIONS	NOV. 27, 2018
4	RESPONSE TO CITY ENGINEER AND CONCERN COMMENTS	AUG. 22, 2018
3	SITE REDSIGN PER REVISED WETLAND BOUNDARY	JUNE 15, 2018
2	REVISE PARKING AREA	MAR. 6, 2018
1	RESPONSE TO PEER REVIEW AND CITY COMMENTS	FEB. 27, 2018

**SITE DETAILS**  
**14 CALUMET ROAD**  
**METHUEN, MASS.**

PREPARED FOR: OCEAN STORAGE, LLC  
DATE: JANUARY 10, 2017 REV: JUNE 10, 2020  
SCALE: 1" = 40'

**andover consultants inc.**  
1 East River Place  
Methuen, Mass. 01844  
REG. PROF. ENGINEER  
JAMES S. FARWELLER II  
CIVIL  
No. 34719

0 10 20 40 80 120 160 Ft.  
0 10 20 40 Meter