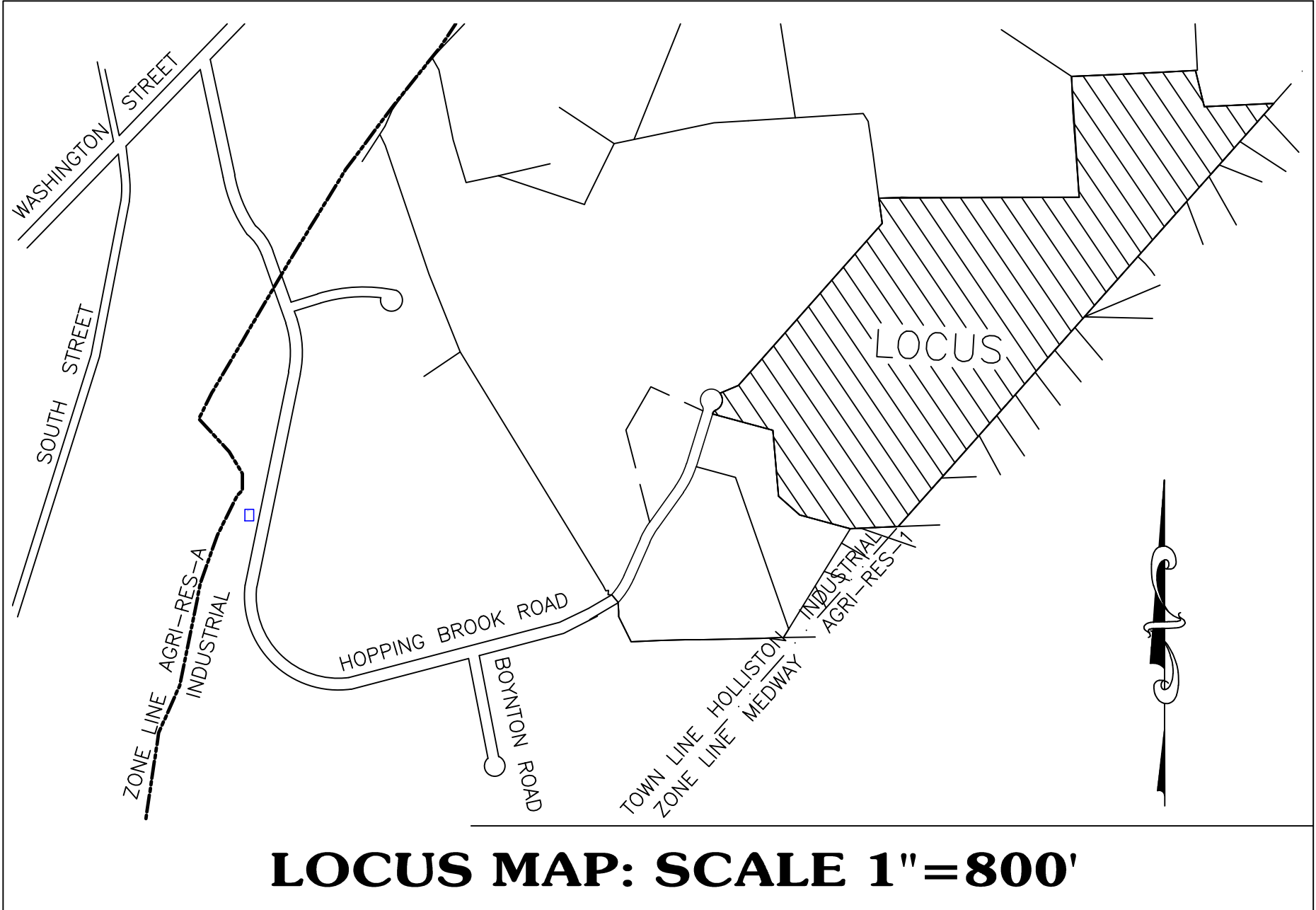


555 HOPPING BROOK ROAD  
A MODIFICATION OF THE DEFINITIVE SITE PLAN  
IN  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)



SHEET LIST	
SHEET	TITLE
1	COVER
2	LAYOUT & MATERIALS (80 SCALE)
3	1LAYOUT & MATERIALS (NW 40 SCALE)
4	LAYOUT & MATERIALS (SW 40 SCALE)
5	LAYOUT & MATERIALS (NE 40 SCALE)
6	LAYOUT & MATERIALS (SE 40 SCALE)
7	UTILITIES (80 SCALE)
8	GRADING & DRAINAGE (80 SCALE)
9	GRADING & UTILITIES (NW 40 SCALE)
10	GRADING & UTILITIES (SW 40 SCALE)
11	GRADING & UTILITIES (NE 40 SCALE)
12	GRADING & UTILITIES (SE 40 SCALE)
13	GRADING & UTILITIES (OFFSITE BASIN - ONSITE BASIN)
14	PROFILE (DCB-1 to DMH-4--555 SOUTH SIDE)
15	PROFILE (555 SOUTH SIDE)
16	PROFILE (555 WEST SIDE--DCB
17	PROFILE (RF-1 TO RF-4--RF-10 TO RF-14)
18	PROFILE (555 WEST SIDE)
19	PROFILE (555 WEST SIDE--DCB-6 TO DMH-23)
20	PROFILE (DCB-9 TO OUTLET-4)
21	PROFILE (CB-22 TO DMH-34--RF-17 TO OUTLET-5)
22	PROFILE (DCB-16 TO OUTLET-6)
23	PROFILE (CB-25 TO DMH-41--RF-19 TO OUTLET-7)
24	PROFILE (DCB-19 to DMH-43)
25	STORMWATER SYSTEM DATA
26	LANDSCAPE PLAN
27	LIGHTING
28	CONSTRUCTION DETAILS
29	STORMWATER DETAILS
30	STORMWATER DETAILS
31	STORMWATER DETAILS
31A	STORMWATER DETAILS
32	LANDSCAPE & LIGHTING DETAILS
33	STORMWATER POLLUTION PREVENTION PLAN
34	EXISTING CONDITIONS PLAN
35	ELEVATION PLAN (9-24-19)
36	FLOOR PLAN (9-25-19)

LEGEND

BIT CONC	BITUMINOUS CONCRETE
CB	CATCHBASIN
CB/PLUG	CONCRETE BOUND/PLUG
CC	CONCRETE CURB
CCB	CAPE COD BERM
CO	CLEAN OUT
CONC	CONCRETE
CONC	CONCRETE
CS	CURB STOP
CW	CROSSWALK
D	DRAINLINE
DCB	DOUBLE CATCH BASIN
DI	DUCTILE IRON
DMH	DRAIN MANHOLE
ELEC	ELECTRIC
EMH	ELECTRIC MANHOLE
FD	FOUNDATION DRAIN
FE	FLARED END
GAS	GAS LINE
GG	GAS GATE
GV	GATE VALVE
HC	HANDICAPPED RAMP
HCC	HAUNCHED CONCRETE CURB
HYD	HYDRANT
ID	INTERCEPTOR DRAIN
INV	INVERT
LP	LIGHT POLE
MH	MANHOLE
PV	POST INDICATOR VALVE
PPVC	PERFORATED POLY-VINYL-CHLORIDE
PVC	POLY-VINYL-CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
S	SEWER LINE
S	SIGN
SB	SPEED BUMP
SB/DH	STONE BOUND/DRILLHOLE
SGC	SLOPED GRANITE CURB
SMH	SEWER MANHOLE
SWBL	SINGLE WHITE BROKEN LINE
WSL	SINGLE WHITE SOLID LINE
TD	TRENCH DRAIN
TELE	TELEPHONE LINE
TMH	TELEPHONE MANHOLE
TRANS	TRANSFORMER
TS	TRANSITION STONE
UD	UNDERDRAIN
VGC	VERTICAL GRANITE CURB
W	WATER LINE
WG	WATER GATE
⊕	BORING
⊕S	TEST PIT
EOB	WETLAND FLAG
T24	EROSION CONTROL BARRIER
⊠ (TBS)	24" TREE
	STONE BOUND/DRILL HOLE TO BE SET

ZONING

ZONING DISTRICT: IND	REQUIRED	PROPOSED
MIN. FRONTAGE:	100 FT.	150.0 FT.
MIN. AREA:	20,000 S.F.	3,458,910±S.F.
MAX. LOT COVERAGE:	40%	800,420 S.F. - 23.1%
MAX. HEIGHT:	40 FT. 3 ST.	<40 FT.
LOT DEPTH:	150 FT.	>150 FT.
F.A.R.	0.5	0.23
SETBACKS:		
FRONT:	30 FT.	415.2 FT.
SIDE:	20 FT.	LT-200.2 FT. RT-355.5 FT.
REAR:	30 FT.	1593.6 FT.
PARKING:	1 SP/13 EMP.	403 SPACES (14 HC)

"I ATTEST THAT THE PLANNING BOARD VOTED \_\_\_\_ TO \_\_\_\_ TO APPROVE THIS  
SPECIAL PERMIT/SITE PLAN ON \_\_\_\_ (DATE)  
\_\_\_\_ (SIGNATURE OF PLANNING BOARD MEMBER)"

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OWNER/APPLICANT:

CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 BARR HARBOR DRIVE  
CONSHOHOCKEN, PA 19249

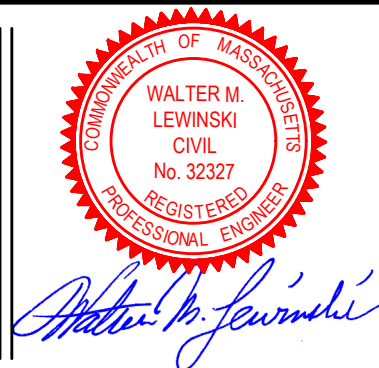
ENGINEER:

ENGINEERING DESIGN CONSULTANTS,  
INC.  
32 TURNPIKE ROAD  
SOUTHBOROUGH, MASSACHUSETTS

NOVEMBER 16, 2019

REVISED: FEBRUARY 5, 2020  
MARCH 2, 2020  
FEBRUARY 5, 2021  
APRIL 13, 2021  
MAY 11, 2021

REV	DATE	DESCRIPTION
5	5/11/21	PEER REVIEW COMMENTS
4	3/17/21	PEER REVIEW COMMENTS
3	2/5/21	ISSUED FOR REVIEW
2	3/2/20	PEER REVIEW COMMENTS
1	2/5/20	PEER REVIEW COMMENTS
0	11/16/19	ISSUED FOR REVIEW
DESIGNED BY:	WML	
CHECKED BY:	PSS	
APPROVED BY:	PSS	



TITLE: COVER  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
APPLICANT: CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
Conshohocken, PA 19248

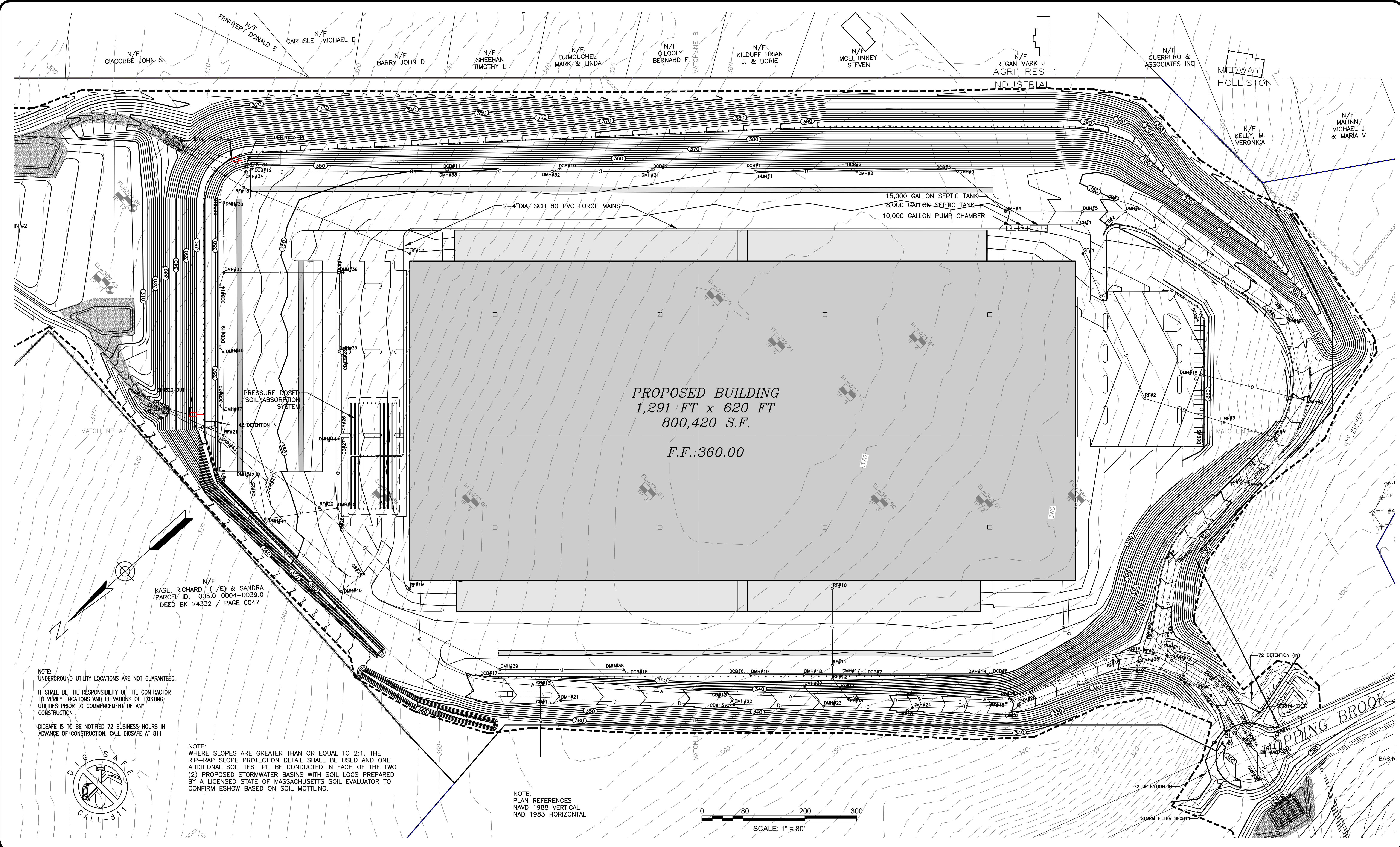
PROJECT: 555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS 01746  
(MIDDLESEX COUNTY)

PREPARED BY: Engineering Design Consultants, Inc.  
Turnpike Road  
Southborough, Massachusetts  
ph: (508)480-0225 fax: (800)832-5781

FILE NO: 3724 COVER SHEET  
COVER  
DATE: NOVEMBER 16, 2019  
DEFINITIVE PLAN NO.: 1 of 37  
1



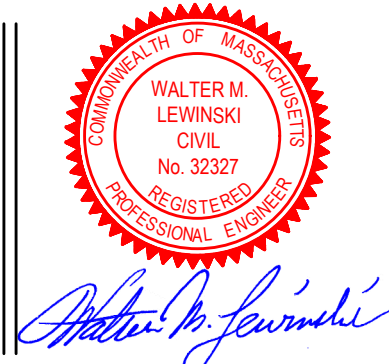
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PREPARED BY:  
**EDC** Engineering Design Consultants, Inc.  
32 Turnpike Road  
Southborough, Massachusetts  
ph: (508) 480-0225 fax: (508) 832-5781

PROJECT:  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)

TITLE:  
**GRADING & UTILITIES**  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS

OWNER/APPLICANT:  
CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
Conshohocken, PA 19248

FILE NO.: 3724 GRADING DRAINAGE - BOSCAGE  
G&U (6)

DATE: NOVEMBER 16, 2019

DEFINITIVE PLAN NO.: 8 of 37

8



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DRWN BY:	WML	
CHKD BY:	PSB	
APPROV BY:	PSB	



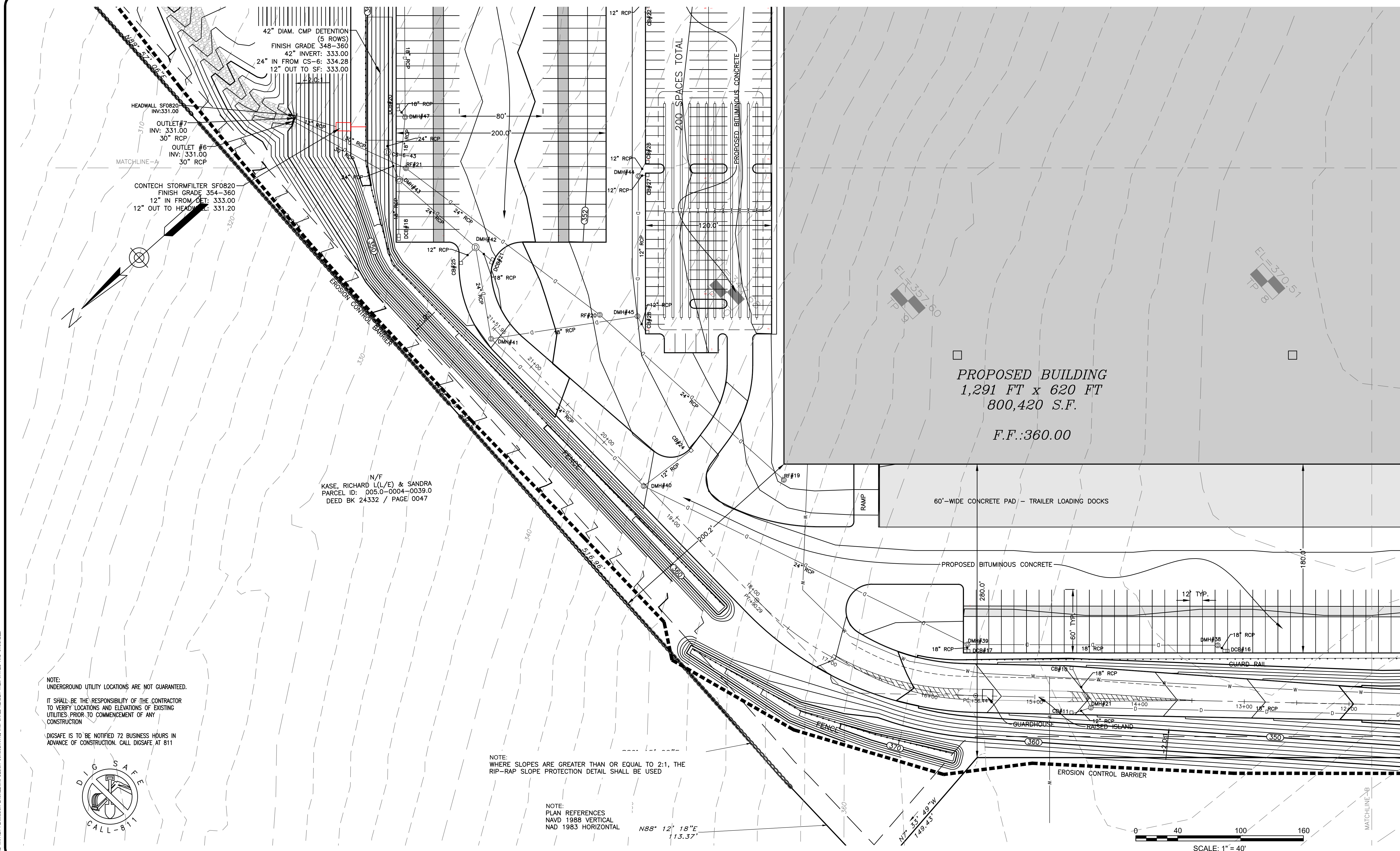
PREPARED BY:  
**Engineering Design Consultants, Inc.**  
32 Turnpike Road  
Southborough, Massachusetts  
ph: (508) 480-0225 fax: (800) 832-5781

PROJECT:  
**555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)**

TITLE:  
**GRADING & UTILITIES  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS**

OWNER/APPLICANT:  
**CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
Conshohocken, PA 19248**

FILE NO: 3724 GRADING DRAINAGE  
G&D (3)  
DATE: NOVEMBER 16, 2019  
DEFINITIVE PLAN NO.:  
**9 of 37**  
**9**





NOTE:  
UNDERGROUND UTILITY LOCATIONS ARE NOT GUARANTEED.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR  
TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING  
UTILITIES PRIOR TO COMMENCEMENT OF ANY  
CONSTRUCTION

DIGSAFE IS TO BE NOTIFIED 72 BUSINESS HOURS IN  
ADVANCE OF CONSTRUCTION. CALL DIGSAFE AT 811



PROPOSED BUILDING  
1,291 FT x 620 FT  
800,420 S.F.

F.F.:360.00

NATURAL GAS  
GENERATOR

60'-WIDE CONCRETE PAD TRAILER LOADING DOCKS

80 DOCKS TOTAL

PROPOSED BITUMINOUS CONCRETE  
80 SPACES TOTAL

DCB#6

DMH#19

18" RCP

18" RCP

DMH#18

24" RCP

RF#11

18" RCP

DMH#17

18" RCP

DMH#16

18" RCP

DMH#15

12" RCP

DMH#14

12" RCP

DMH#13

12" RCP

DMH#12

12" RCP

DMH#11

12" RCP

DMH#10

12" RCP

DMH#9

12" RCP

DMH#8

12" RCP

DMH#7

12" RCP

DMH#6

12" RCP

DMH#5

12" RCP

DMH#4

12" RCP

DMH#3

12" RCP

DMH#2

12" RCP

DMH#1

12" RCP

DMH#0

12" RCP

DMH#-1

12" RCP

DMH#-2

12" RCP

CB#12

DMH#22

12" RCP

DMH#21

12" RCP

DMH#20

12" RCP

DMH#19

12" RCP

DMH#18

12" RCP

DMH#17

12" RCP

DMH#16

12" RCP

DMH#15

12" RCP

DMH#14

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DMH#13

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DMH#12

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DMH#11

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DMH#10

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DMH#5

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DMH#4

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DMH#3

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DMH#2

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DMH#1

12" RCP

DMH#0

12" RCP

DMH#-1

12" RCP

CB#11

DMH#21

12" RCP

DMH#20

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DMH#19

12" RCP

DMH#18

12" RCP

DMH#17

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DMH#16

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DMH#1

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DMH#0

12" RCP

DMH#-1

12" RCP

DMH#-2

12" RCP

CB#10

DMH#20

12" RCP

DMH#19

12" RCP

DMH#18

12" RCP

DMH#17

12" RCP

DMH#16

12" RCP

DMH#15

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DMH#-1

12" RCP

DMH#-2

12" RCP

DMH#-3

12" RCP

CB#9

DMH#19

12" RCP

DMH#18

12" RCP

DMH#17

12" RCP

DMH#16

12" RCP

DMH#15

12" RCP

DMH#14

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DMH#13

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DMH#12

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DMH#11

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DMH#9

12" RCP

DMH#8

12" RCP

DMH#7

12" RCP

DMH#6

12" RCP

DMH#5

12" RCP

DMH#4

12" RCP

DMH#3

12" RCP

DMH#2

12" RCP

DMH#1

12" RCP

DMH#0

12" RCP

DMH#-1

12" RCP

72" DIAM. CMP DETENTION  
(234 LF IN 3 ROWS)  
FINISH GRADE 300-302  
72" INVERT: 290.73  
24" IN FROM CDS: 294.45  
12" OUT TO SF: 290.73

CONTECH STORMFILTER SF0814  
FINISH GRADE 299-300  
12" IN FROM DET: 290.73  
12" OUT TO DMH#14: 287.68

LANDMARK SIGN

EROSION CONTROL BARRIER

PROPOSED SIDEWALK

PROPOSED BITUMINOUS CONCRETE

PROPOSED SIDEWALK

PROPOSED SIDEWALK

PROPOSED SIDEWALK

PROPOSED SIDEWALK

PROPOSED SIDEWALK

PROPOSED SIDEWALK

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THIRD PARTY COSTS.

REVISED BY	DATE	DESCRIPTION
WML	5/11/21	PEER REVIEW COMMENTS
PSB	4/13/21	PEER REVIEW COMMENTS
PSB	2/5/21	ISSUED FOR REVIEW
PSB	3/2/20	PEER REVIEW COMMENTS
PSB	1/6/19	PEER REVIEW COMMENTS
PSB	11/16/19	ISSUED FOR REVIEW



PREPARED BY:



**Engineering Design Consultants, Inc.**  
32 Turnpike Road  
Southborough, Massachusetts  
ph:(508) 480-0225 fax:(800)832-5781

PROJECT:

**555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)**

TITLE:

**GRADING & UTILITIES  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS**

OWNER/APPLICANT:

**CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
Conshohocken, PA 19248**

FILE NO: 3724 GRADING DRAINAGE

G&U(1)

DATE: NOVEMBER 16, 2019

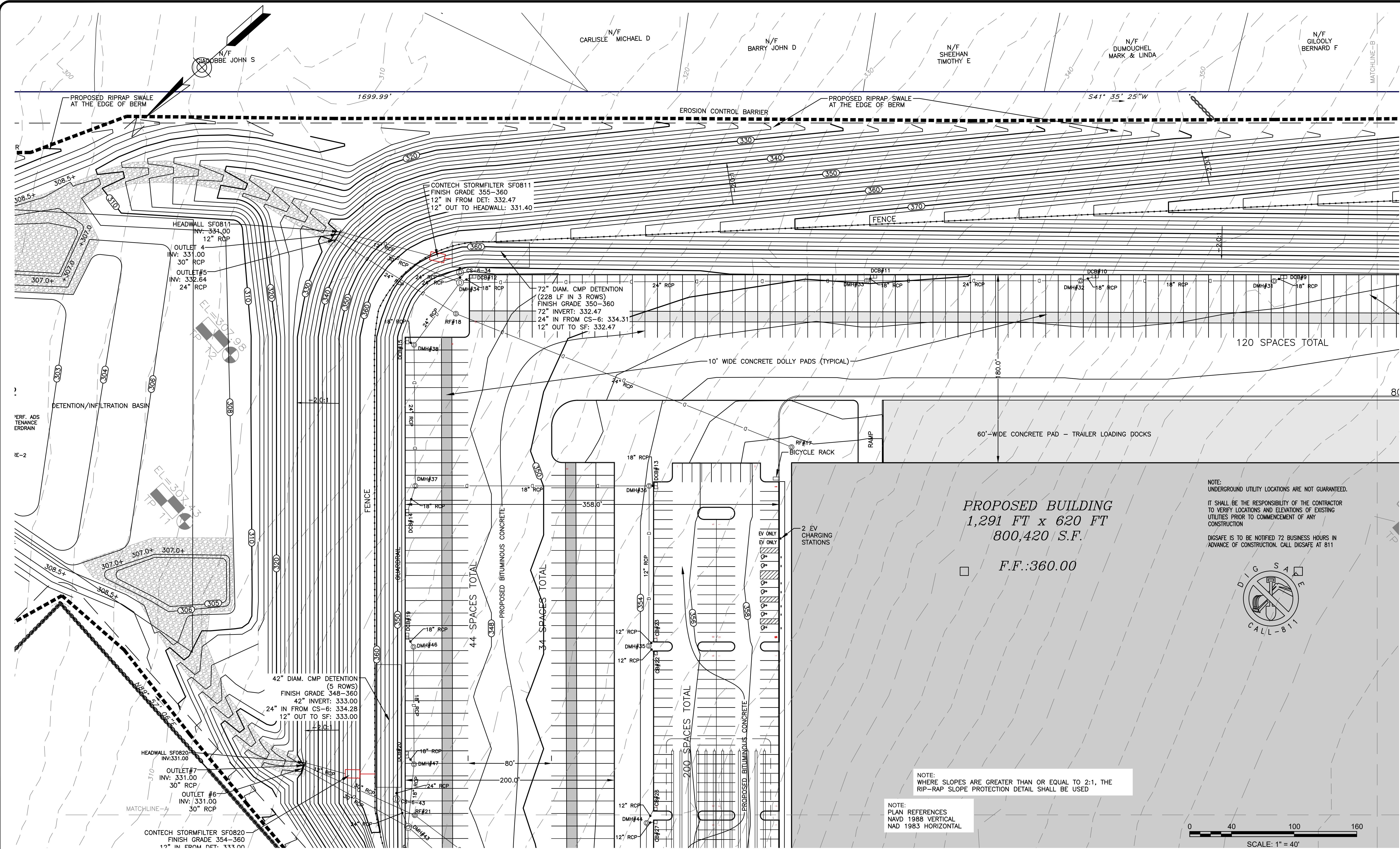
DEFINITE PLAN NO.:

10 of 37

10



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0		ISSUED FOR REVIEW	

DRAWN BY:	WML
CHECKED BY:	PSB
APPROVED BY:	PSB



PREPARED BY:  
**Engineering Design Consultants, Inc.**  
32 Turnpike Road  
Southborough, Massachusetts  
ph:(508) 480-0225 fax:(800)832-5781

PROJECT:  
**555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)**

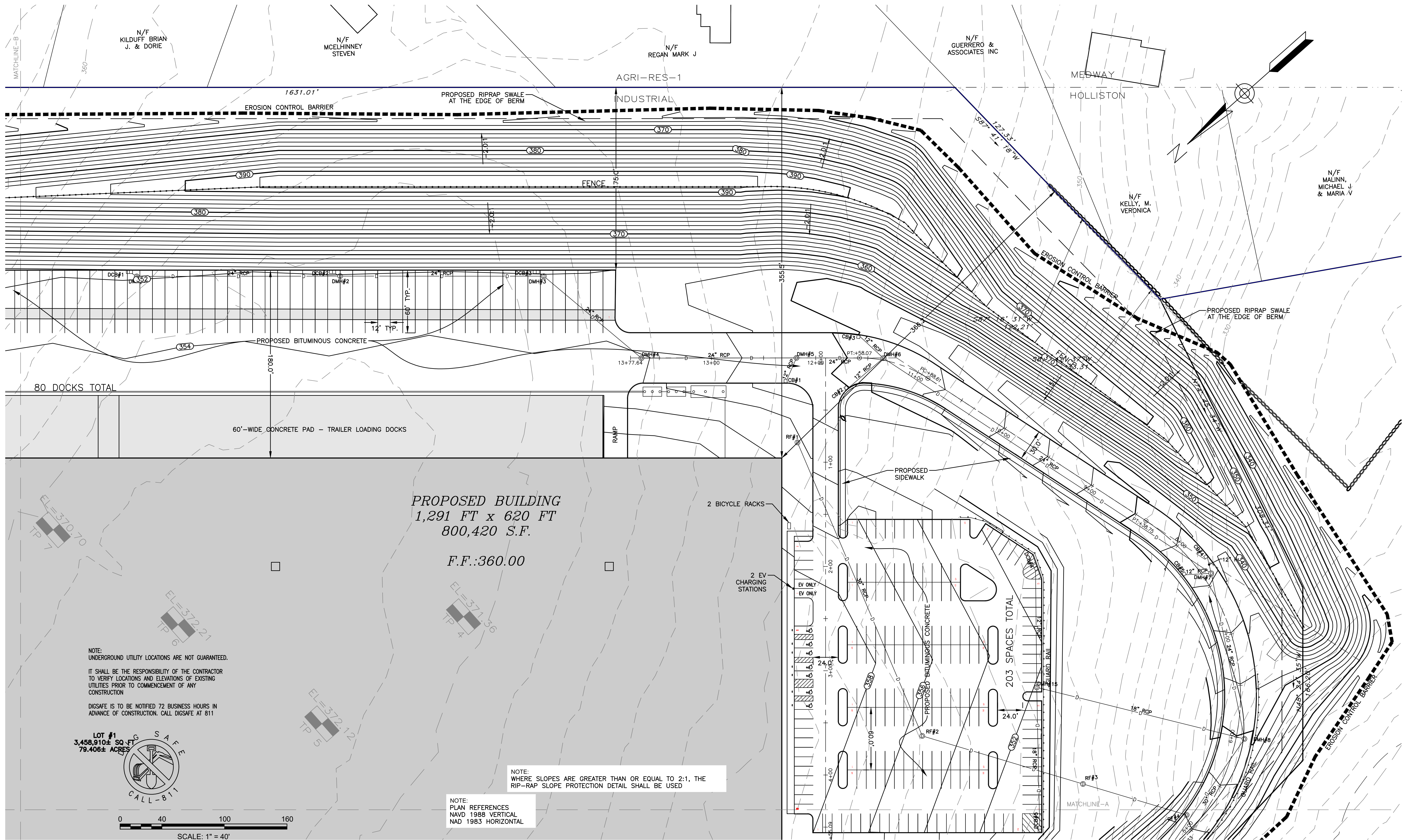
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555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS**

OWNER/APPLICANT:  
**CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
Conshohocken, PA 19248**

FILE NO: 3724 GRADING DRAINAGE  
G&D (4)  
DATE: NOVEMBER 16, 2019  
DEFINITIVE PLAN NO.:  
**11 of 37**  
**11**



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DRWN BY: VML	CHKD BY: PSB	APPROV BY: PSB
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PREPARED BY:  
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Southborough, Massachusetts  
ph:(508) 480-0225 fax:(800)832-5781

PROJECT:  
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(MIDDLESEX COUNTY)**

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HOLLISTON, MASSACHUSETTS**

OWNER/APPLICANT:  
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200 Barr Harbor Drive  
Conshohocken, PA 19248**

FILE NO: 3724 GRADING DRAINAGE  
G&D (2)  
DATE: NOVEMBER 16, 2019  
DEFINITIVE PLAN NO.:  
**12 of 37  
12**





		REVIEWS	
		5	5/11/21
		4	4/13/21
		3	2/5/21
DRWN BY:	WML	2	3/2/20
CHECKD BY:	PSB	1	2/5/20
APPROV BY:	PSB	0	11/6/19
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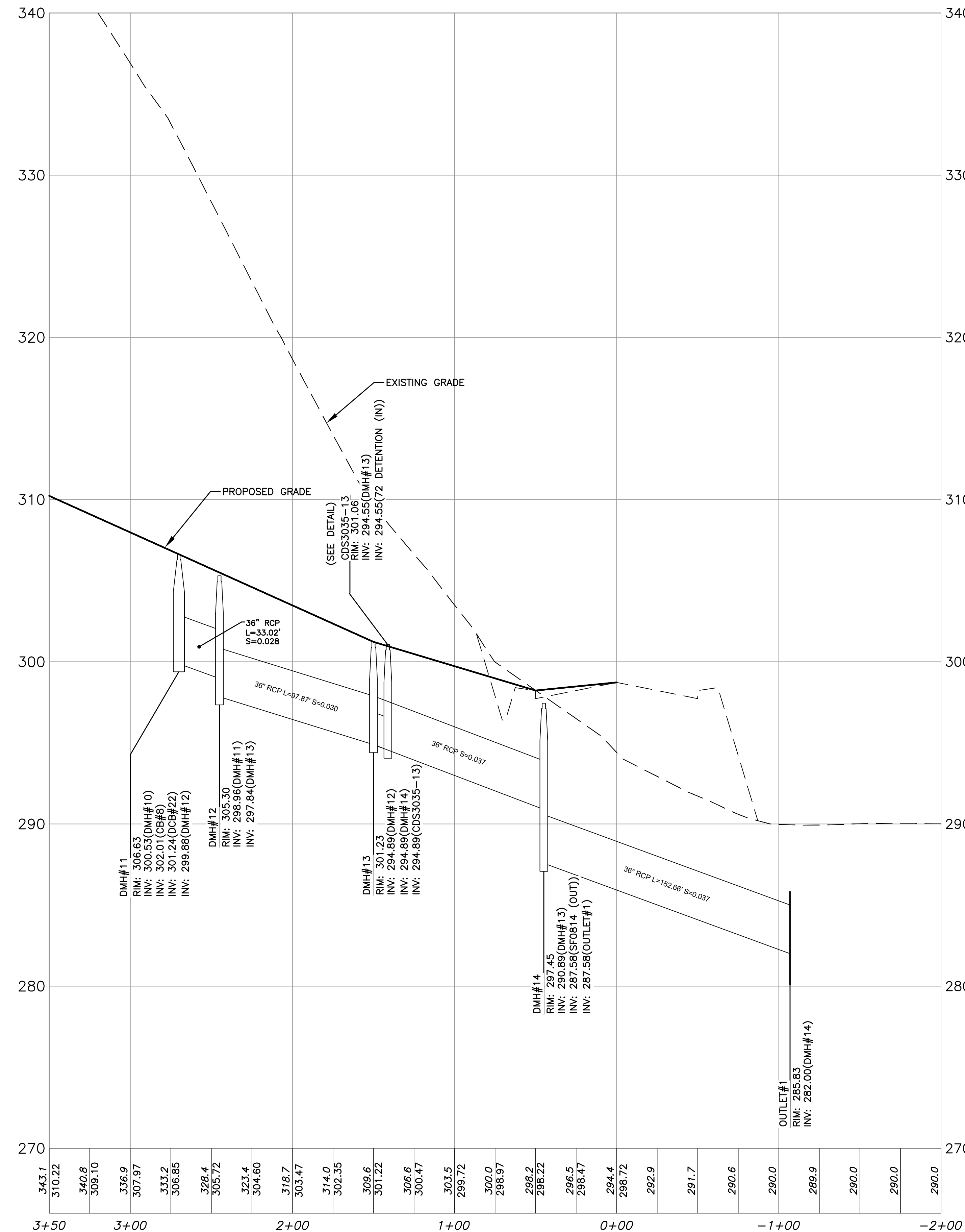
**PROJECT:**

**555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)**

FILE NO.: 3724 GRADING DRAINAGE  
G&D (5)  
DATE: NOVEMBER 16, 2019  
DEFINITIVE PLAN NO.:  
13 of 37  
13

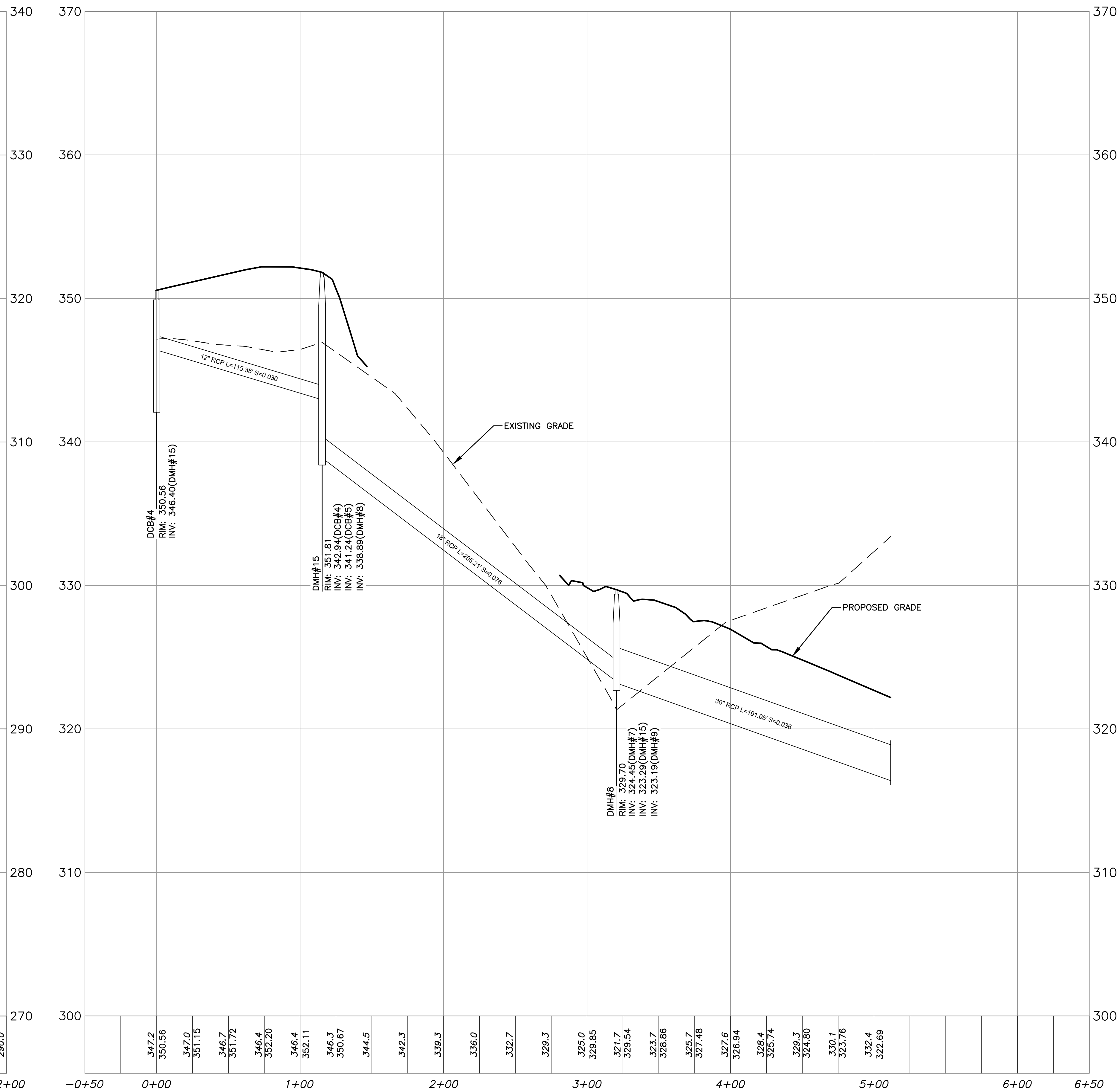


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555 WEST DR  
Horizontal Scale: 1" = 40'  
Vertical Scale: 1" = 4'

NOTE:  
PLAN REFERENCES  
NAVD 1988 VERTICAL  
NAD 1983 HORIZONTAL



DCB#4 TO DMH#8  
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1	5/5/20	PEER REVIEW COMMENTS	
0	11/16/19	ISSUED FOR REVIEW	
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APPROVED BY: PSB			



PREPARED BY:  
**Engineering Design Consultants, Inc.**  
32 Turnpike Road  
Southborough, Massachusetts  
ph:(508) 480-0225 fax:(800)832-5781

PROJECT:  
**555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)**

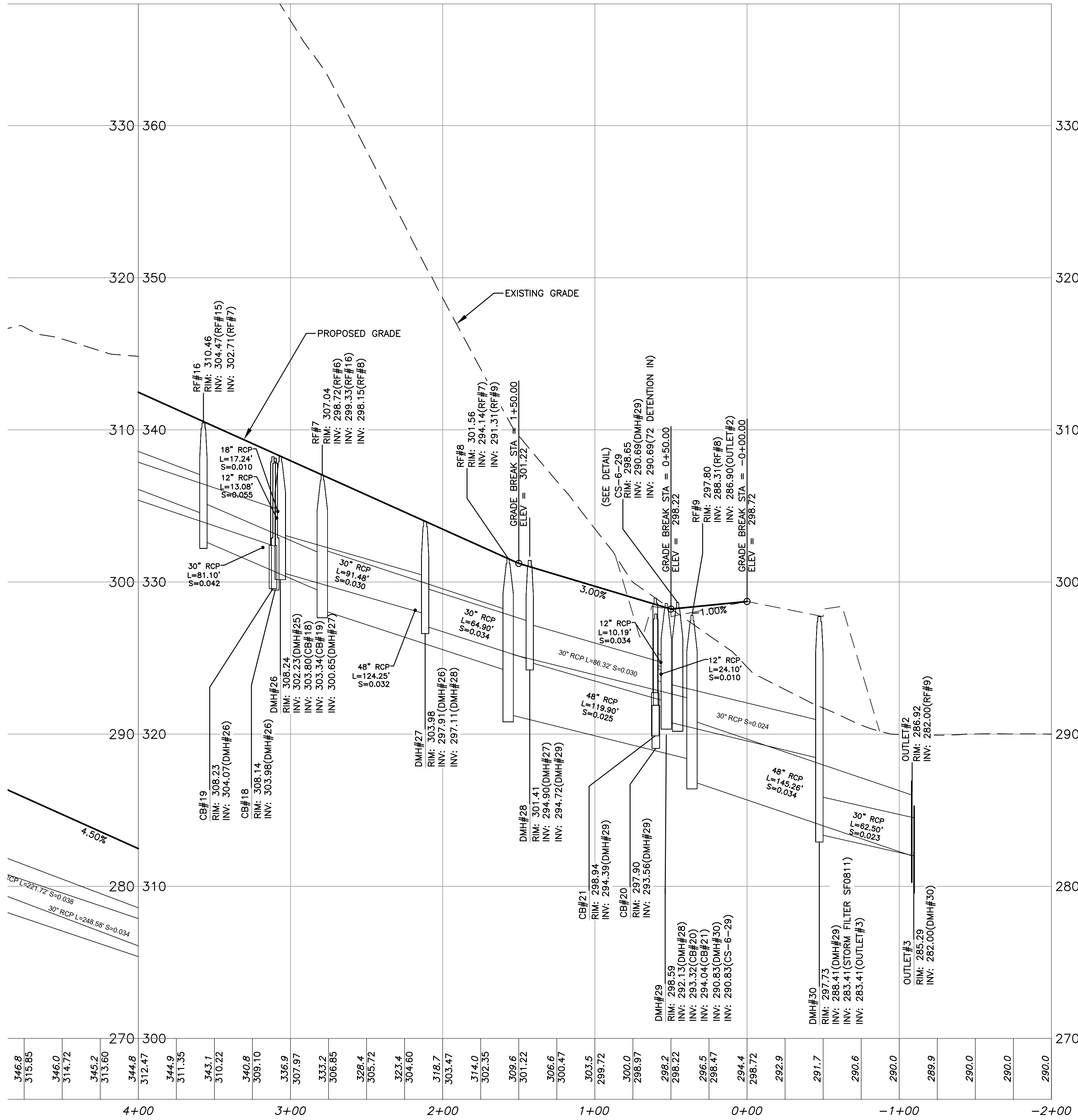
TITLE:  
**PROFILES  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS**

OWNER/APPLICANT:  
**CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
Conshohocken, PA 19248**

FILE NO: 3724 GRADING DRAINAGE  
PROF(3)  
DATE: NOVEMBER 16, 2019  
DEFINITE PLAN NO.:  
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**16**

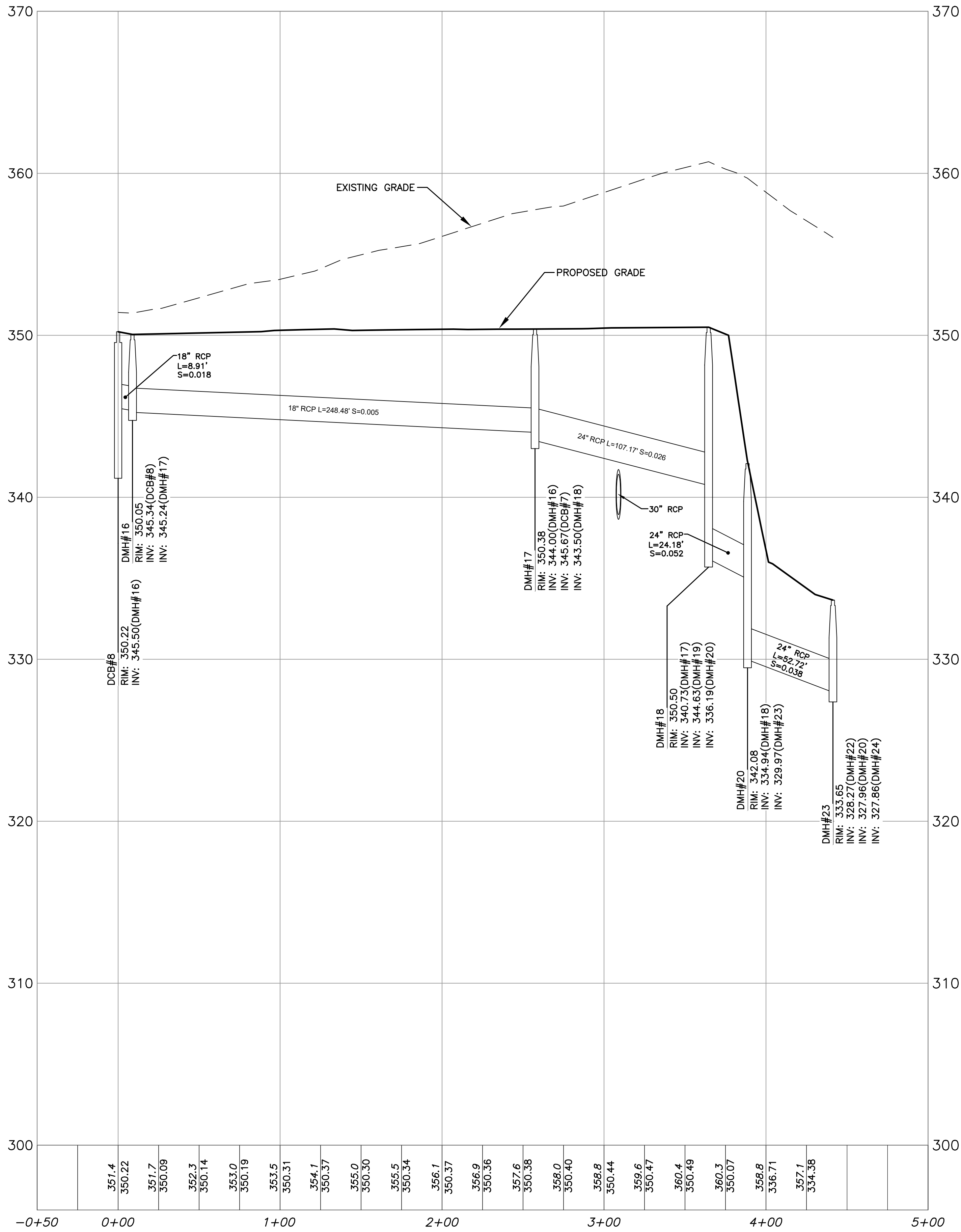


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555 WEST DR  
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Vertical Scale: 1" = 4'

NOTE:  
PLAN REFERENCES  
NAVD 1988 VERTICAL  
NAD 1983 HORIZONTAL



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PREPARED BY:



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PROJECT:

555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)

TITLE:

OWNER/APPLICANT:

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555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
Conshohocken, PA 19248

FILE NO: 3724 GRADING DRAINAGE

PROF(6)

DATE: NOVEMBER 16, 2019

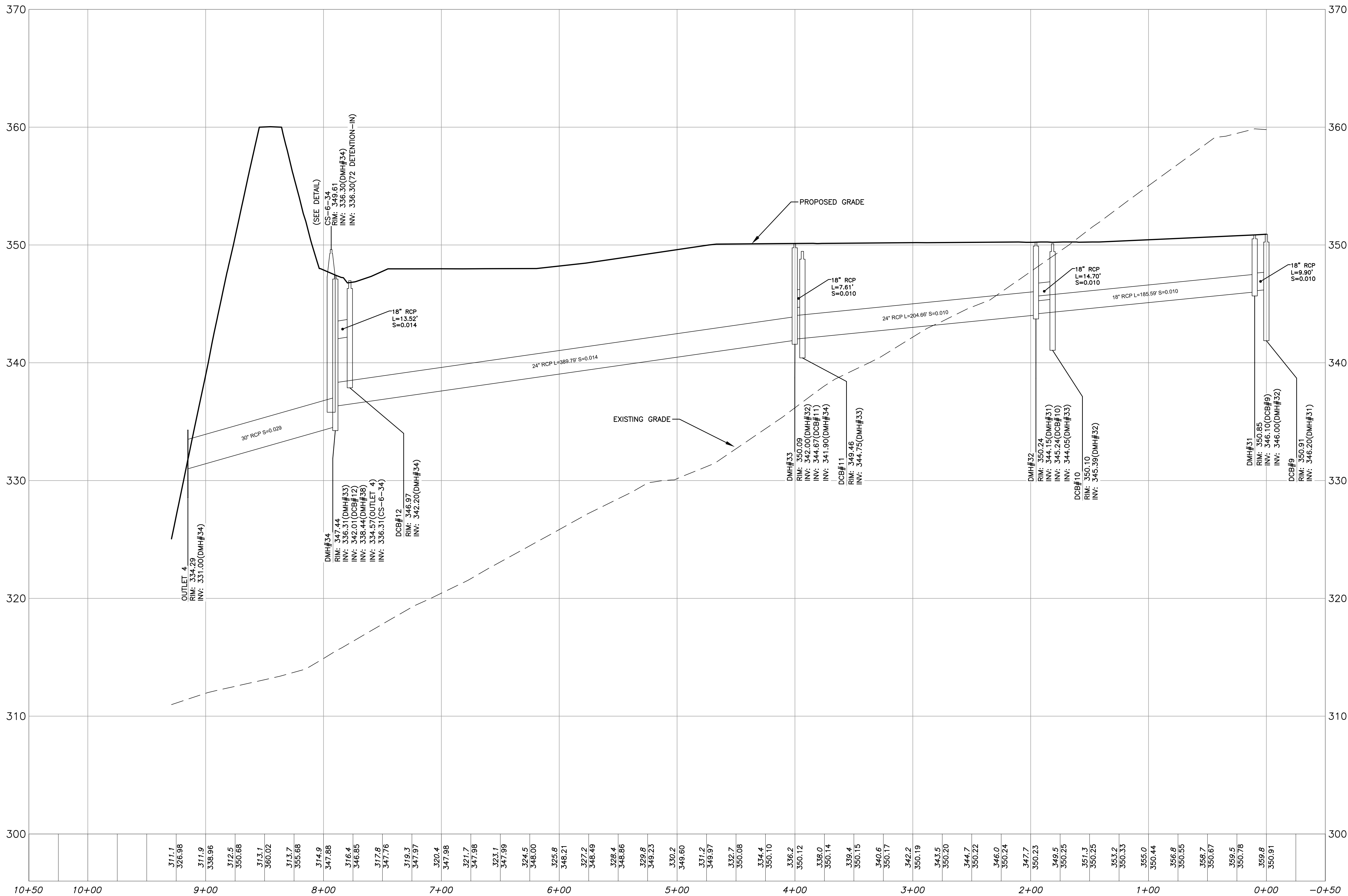
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PROJECT:

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HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)

TITLE:

OWNER/APPLICANT:

PROFILES  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
CRG INTEGRATED REAL ESTATE SOLUTIONS  
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FILE NO: 3724 GRADING DRAINAGE

PROF(7)

DATE: NOVEMBER 16, 2019

DEFINITIVE PLAN NO.:

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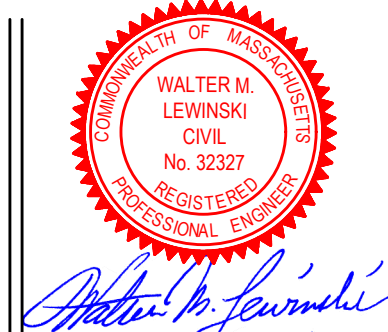


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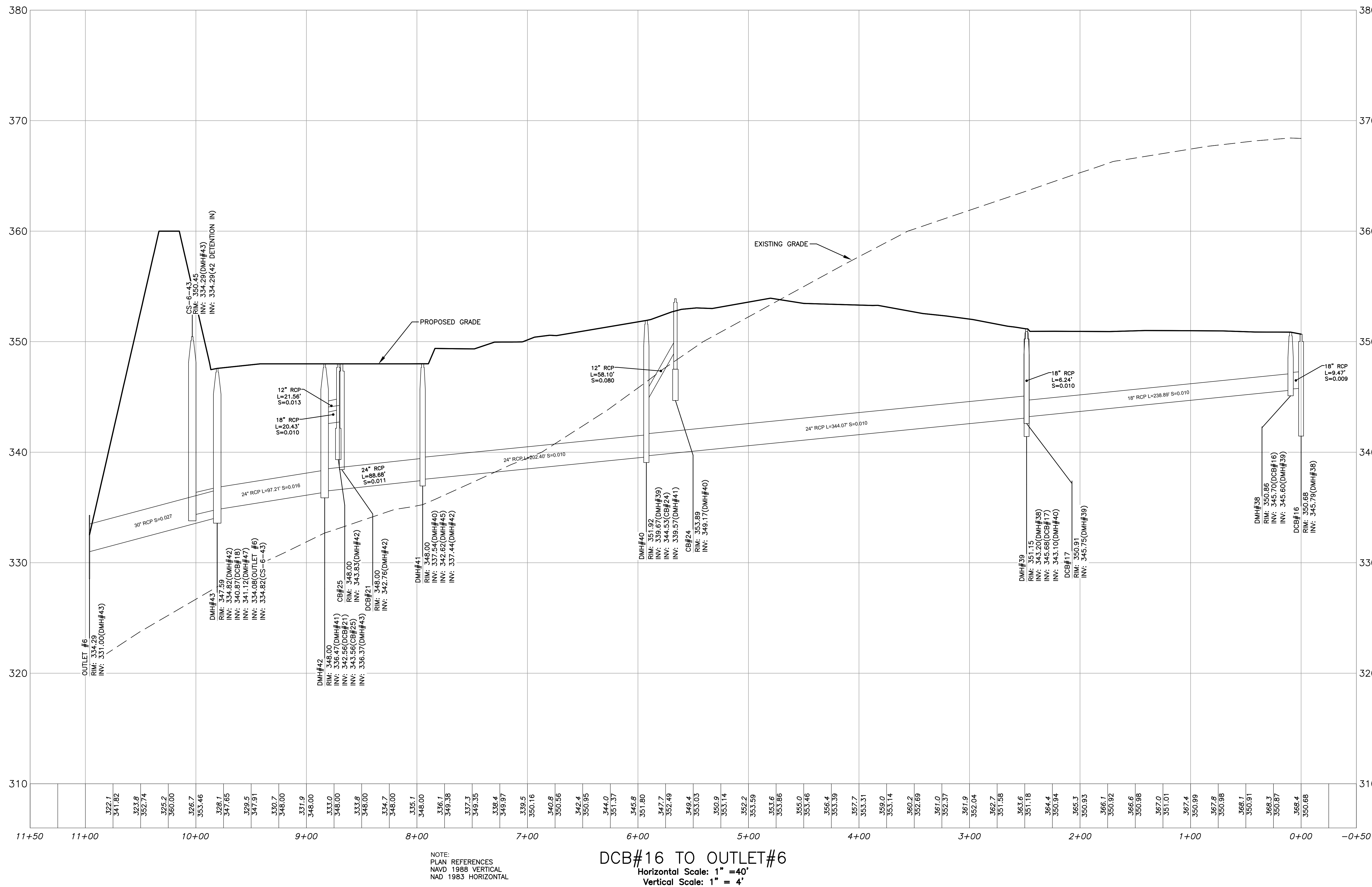
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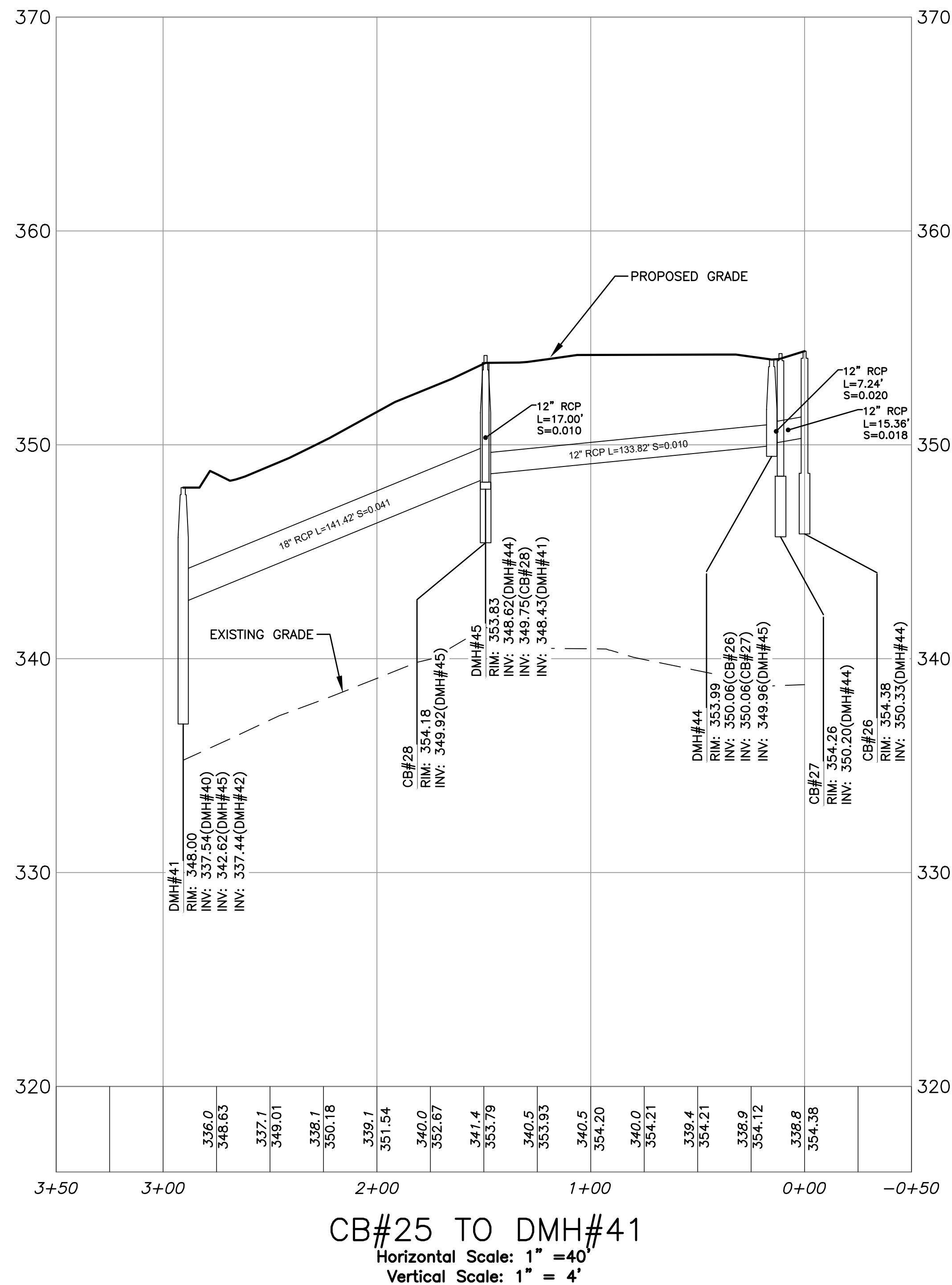


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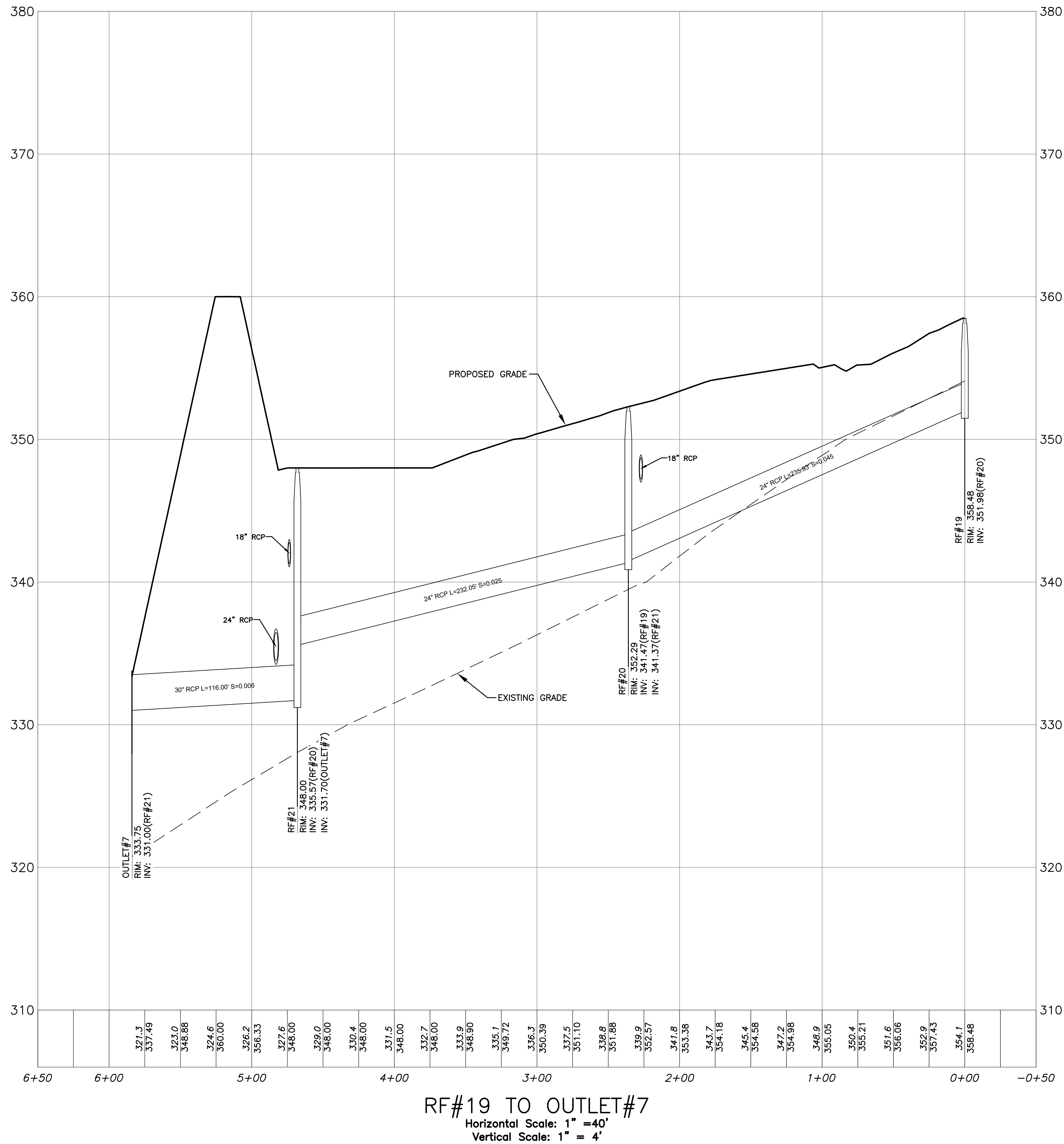
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HOLLISTON, MASSACHUSETTS  
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555 HOPPING BROOK ROAD  
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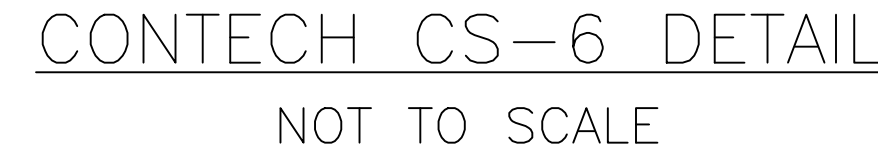
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DATE: NOVEMBER 16, 2019  
DEFINITIVE PLAN NO.:  
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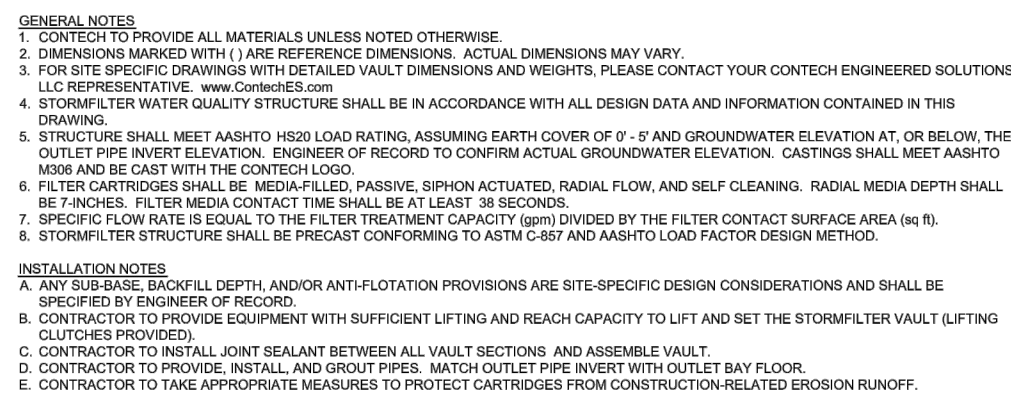
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NAD 1983 HORIZONTAL





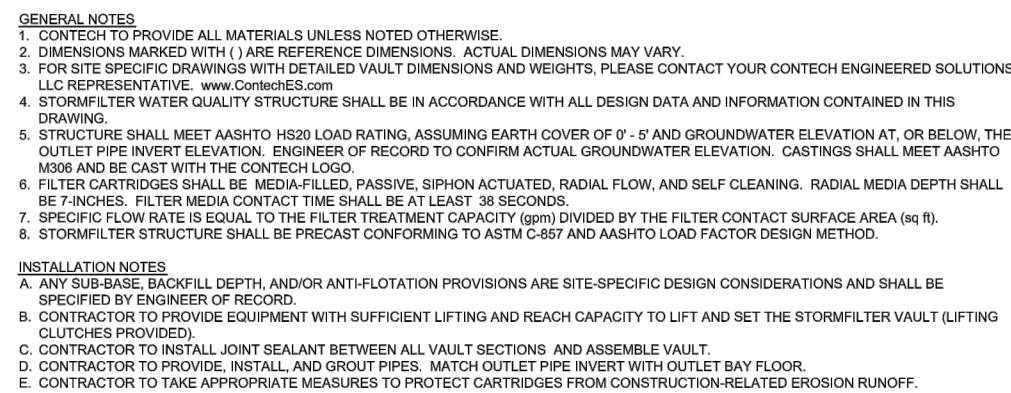






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2	3/2/20
1	2/5/20
0	11/16/19



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PROJECT

555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)

|| TITLE:

OWNER/APPLICANT

HOLLISTON, MASSACHUSETTS

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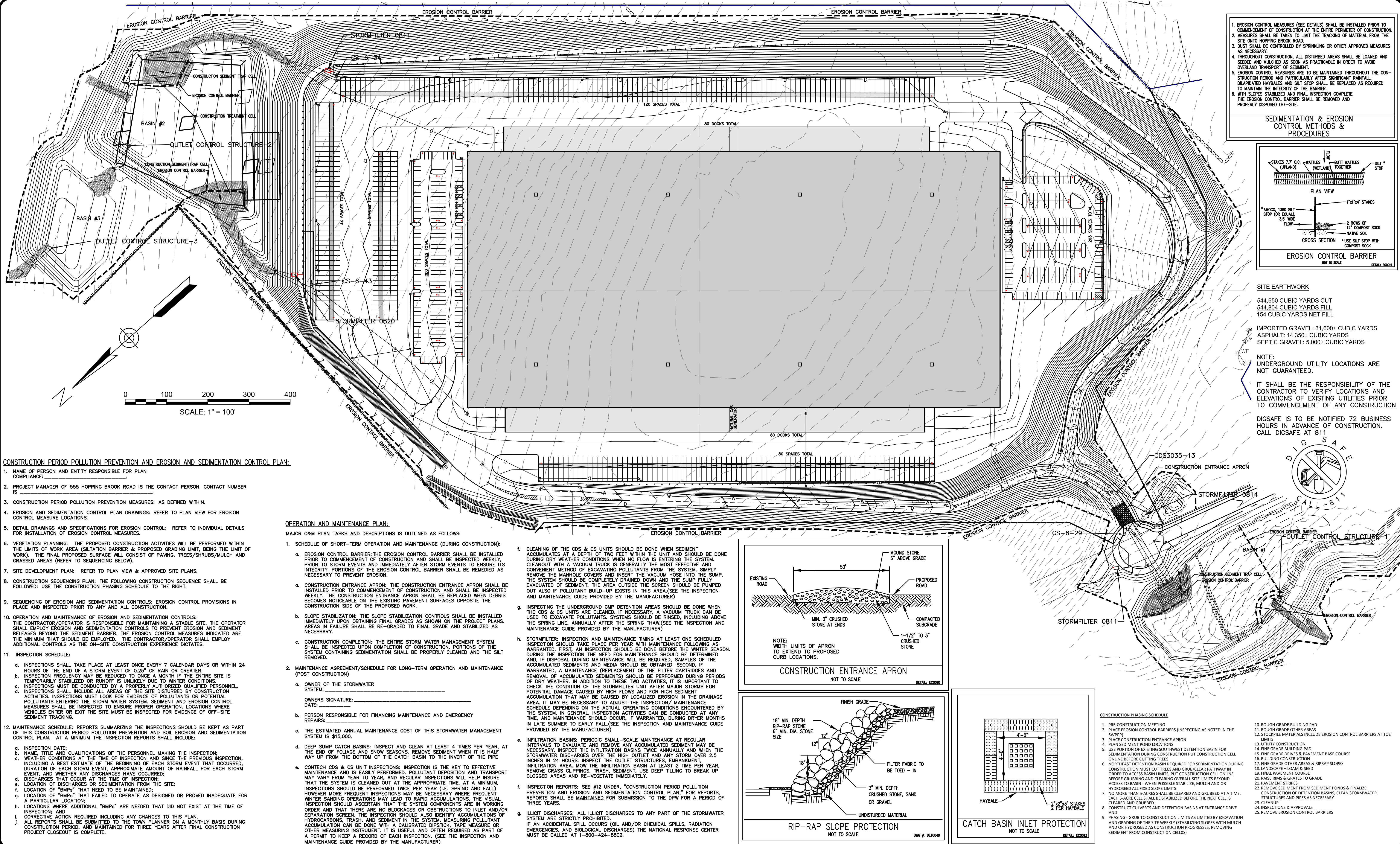
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200 Barr Harbor Drive  
Conshohocken, PA 19248

FILE NO.: 3724 DRAINAGE CONTECH  
DETAILS  
CONTECH DETAILS (2)

DATE: NOVEMBER 16, 2019

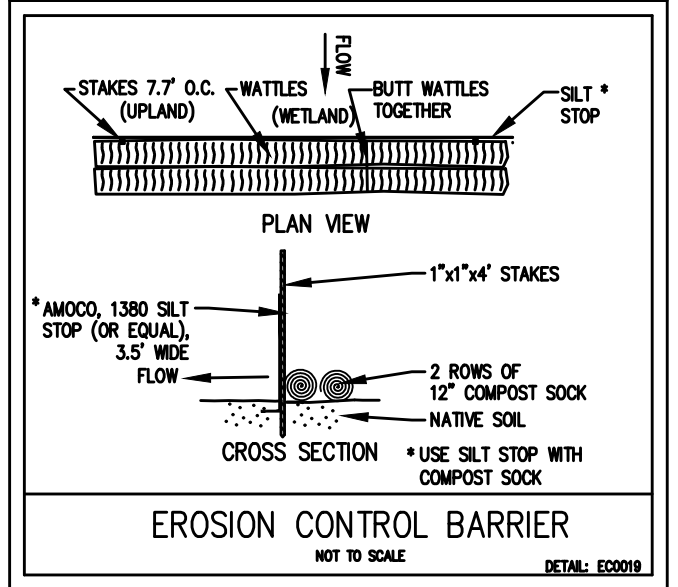
DEFINITIVE PLAN NO.:  
31A<sup>OF</sup> 37  
31A





1. EROSION CONTROL MEASURES (SEE DETAILS) SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION AT THE ENTIRE PERIMETER OF CONSTRUCTION.  
2. MEASURES SHALL BE TAKEN TO LIMIT THE TRACKING OF MATERIAL FROM THE SITE ONTO HOPPING BROOK ROAD.  
3. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED MEASURES AS NECESSARY.  
4. THROUGHOUT CONSTRUCTION, ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED AND MULCHED AS SOON AS PRACTICABLE IN ORDER TO AVOID OVERLAND TRANSPORT OF SEDIMENT.  
5. EROSION CONTROL MEASURES ARE TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND PARTICULARLY AFTER SIGNIFICANT RAINFALL. DAMAGED HAYBALES AND SILT STOP SHALL BE REPLACED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE BARRIER.  
6. WITH SLOPES STABILIZED AND FINAL INSPECTION COMPLETE, THE EROSION CONTROL BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OFF-SITE.

**SEDIMENTATION & EROSION CONTROL METHODS & PROCEDURES**



**SITE EARTHWORK**

544,650 CUBIC YARDS CUT  
544,804 CUBIC YARDS FILL  
154 CUBIC YARDS NET FILL

IMPORTED GRAVEL: 31,600± CUBIC YARDS  
ASPHALT: 14,350± CUBIC YARDS  
SEPTIC GRAVEL: 5,000± CUBIC YARDS

**NOTE:**  
UNDERGROUND UTILITY LOCATIONS ARE NOT GUARANTEED.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

DIGSAFE IS TO BE NOTIFIED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION. CALL DIGSAFE AT 811

**CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENTATION CONTROL PLAN:**

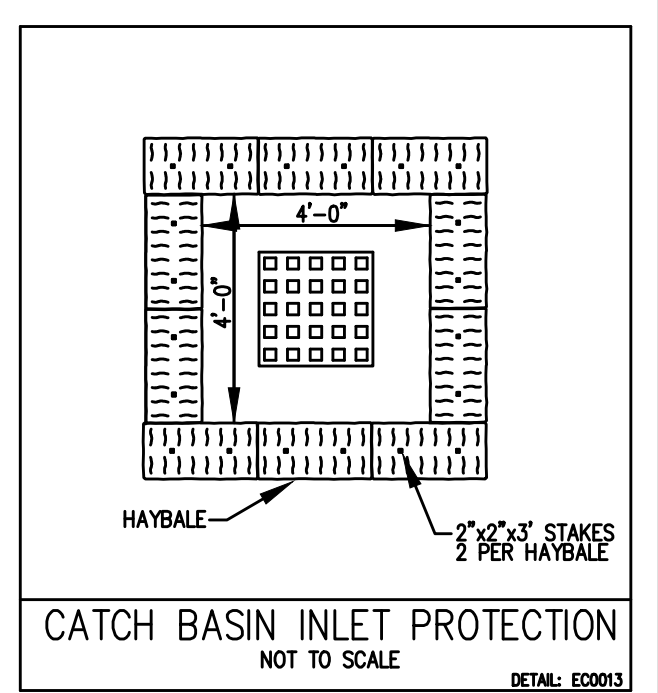
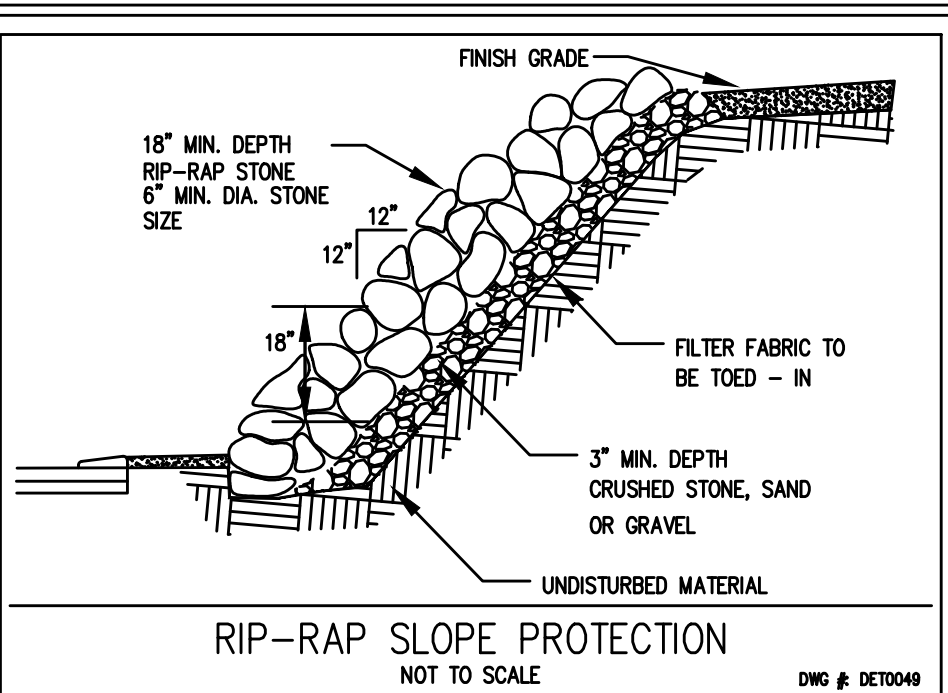
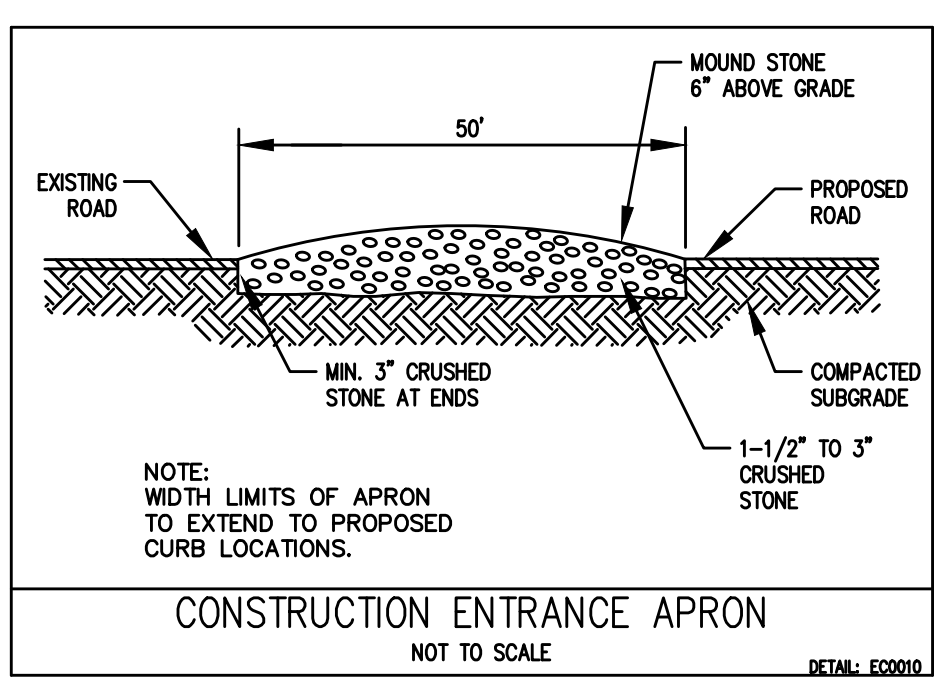
- NAME OF PERSON AND ENTITY RESPONSIBLE FOR PLAN COMPLIANCE: \_\_\_\_\_
- PROJECT MANAGER OF 555 HOPPING BROOK ROAD IS THE CONTACT PERSON. CONTACT NUMBER IS: \_\_\_\_\_
- CONSTRUCTION PERIOD POLLUTION PREVENTION MEASURES: AS DEFINED WITHIN.
- EROSION AND SEDIMENTATION CONTROL PLAN DRAWINGS: REFER TO PLAN VIEW FOR EROSION CONTROL MEASURE LOCATIONS.
- DETAIL DRAWINGS AND SPECIFICATIONS FOR EROSION CONTROL: REFER TO INDIVIDUAL DETAILS FOR INSTALLATION OF EROSION CONTROL MEASURES.
- VEGETATION PLANNING: THE PROPOSED CONSTRUCTION ACTIVITIES WILL BE PERFORMED WITHIN THE LIMITS OF WORK AREA (SILTATION BARRIER & PROPOSED GRADING LIMIT, BEING THE LIMIT OF WORK). THE FINAL PROPOSED SURFACE WILL CONSIST OF PAVING, TREES/SHRUBS/MULCH AND GRASSED AREAS (REFER TO SEQUENCING BELOW).
- SITE DEVELOPMENT PLAN: REFER TO PLAN VIEW & APPROVED SITE PLANS.
- CONSTRUCTION SEQUENCING PLAN: THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED: USE THE CONSTRUCTION PHASING SCHEDULE TO THE RIGHT.
- SEQUENCING OF EROSION AND SEDIMENTATION CONTROLS: EROSION CONTROL PROVISIONS IN PLACE AND INSPECTED PRIOR TO ANY AND ALL CONSTRUCTION.
- OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS: THE CONTRACTOR/OPERATOR IS RESPONSIBLE FOR MAINTAINING A STABLE SITE. THE OPERATOR SHALL EMPLOY EROSION AND SEDIMENTATION CONTROLS TO PREVENT EROSION AND SEDIMENT RELEASES BEYOND THE SEDIMENT BARRIER. THE EROSION CONTROL MEASURES INDICATED ARE THE MINIMUM THAT SHOULD BE EMPLOYED. THE CONTRACTOR/OPERATOR SHALL EMPLOY ADDITIONAL CONTROLS AS THE ON-SITE CONSTRUCTION EXPERIENCE DICTATES.
- INSPECTION SCHEDULE:
  - INSPECTIONS SHALL TAKE PLACE AT LEAST ONCE EVERY 7 CALENDAR DAYS OR WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.25" OF RAIN OR GREATER.
  - INSPECTION FREQUENCY MAY BE REDUCED TO ONCE A MONTH IF THE ENTIRE SITE IS TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS.
  - INSPECTIONS MUST BE CONDUCTED BY A PROPERLY AUTHORIZED QUALIFIED PERSONNEL.
  - INSPECTIONS SHALL INCLUDE ALL AREAS OF THE SITE DISTURBED BY CONSTRUCTION ACTIVITIES. INSPECTIONS MUST LOOK FOR EVIDENCE OF POLLUTANTS OR POTENTIAL POLLUTANTS ENTERING THE STORM WATER SYSTEM. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED TO ENSURE PROPER OPERATION. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
- MAINTENANCE SCHEDULE: REPORTS SUMMARIZING THE INSPECTIONS SHOULD BE KEPT AS PART OF THIS CONSTRUCTION PERIOD POLLUTION PREVENTION AND SEDIMENTATION CONTROL PLAN. AT A MINIMUM THE INSPECTION REPORTS SHALL INCLUDE:
  - INSPECTION DATE;
  - NAME, TITLE AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION;
  - WEATHER CONDITIONS AT THE TIME OF INSPECTION AND SINCE THE PREVIOUS INSPECTION, INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT THAT OCCURRED, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT, AND WHETHER ANY DISCHARGES HAVE OCCURRED;
  - DISCHARGES THAT OCCURRED AT THE TIME OF INSPECTION;
  - LOCATION OF DISCHARGES OR SEDIMENTATION FROM THE SITE;
  - LOCATION OF "BMPs" THAT NEED TO BE MAINTAINED;
  - LOCATION OF "BMPs" THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;
  - LOCATIONS WHERE ADDITIONAL "BMPs" ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND
  - CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO THIS PLAN.ALL REPORTS SHALL BE SUBMITTED TO THE TOWN PLANNER ON A MONTHLY BASIS DURING CONSTRUCTION PERIOD, AND MAINTAINED FOR THREE YEARS AFTER FINAL CONSTRUCTION PROJECT CLOSEOUT IS COMPLETE.

**OPERATION AND MAINTENANCE PLAN:**

MAJOR O&M PLAN TASKS AND DESCRIPTIONS IS OUTLINED AS FOLLOWS:

- SCHEDULE OF SHORT-TERM OPERATION AND MAINTENANCE (DURING CONSTRUCTION):
  - EROSION CONTROL BARRIER: THE EROSION CONTROL BARRIER SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE INSPECTED WEEKLY. PRIOR TO STORM EVENTS AND IMMEDIATELY AFTER STORM EVENTS TO ENSURE ITS INTEGRITY. PORTIONS OF THE EROSION CONTROL BARRIER SHALL BE REMEDIATED AS NECESSARY TO PREVENT EROSION.
  - CONSTRUCTION ENTRANCE APRON: THE CONSTRUCTION ENTRANCE APRON SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE INSPECTED WEEKLY. THE CONSTRUCTION ENTRANCE APRON SHALL BE REPLACED WHEN DEBRIS BECOMES NOTICEABLE ON THE EXISTING PAVEMENT SURFACES OPPOSITE THE CONSTRUCTION SIDE OF THE PROPOSED WORK.
  - SLOPE STABILIZATION: THE SLOPE STABILIZATION CONTROLS SHALL BE INSTALLED IMMEDIATELY UPON OBTAINING FINAL GRADES AS SHOWN ON THE PROJECT PLANS. AREAS IN FAILURE SHALL BE RE-GRADED TO FINAL GRADE AND STABILIZED AS NECESSARY.
  - CONSTRUCTION COMPLETION: THE ENTIRE STORM WATER MANAGEMENT SYSTEM SHALL BE INSPECTED UPON COMPLETION OF CONSTRUCTION. PORTIONS OF THE SYSTEM CONTAINING SEDIMENTATION SHALL BE PROPERLY CLEANED AND THE SILT REMOVED.
- MAINTENANCE AGREEMENT/SCHEDULE FOR LONG-TERM OPERATION AND MAINTENANCE (POST CONSTRUCTION)
  - OWNER OF THE STORMWATER SYSTEM: \_\_\_\_\_
  - PERSON RESPONSIBLE FOR FINANCING MAINTENANCE AND EMERGENCY REPAIRS: \_\_\_\_\_
  - THE ESTIMATED ANNUAL MAINTENANCE COST OF THIS STORMWATER MANAGEMENT SYSTEM IS \$15,000.
  - DEEP SUMP CATCH BASINS: INSPECT AND CLEAN AT LEAST 4 TIMES PER YEAR, AT THE END OF FOLIAGE AND SNOW SEASONS. REMOVE SEDIMENT WHEN IT IS HALF WAY UP FROM THE BOTTOM OF THE CATCH BASIN TO THE INVERT OF THE PIPE.
  - CONTECH CDS & CS UNIT INSPECTIONS: INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE AND IS EASILY PERFORMED. POLLUTANT DEPOSITION AND TRANSPORT MAY VARY FROM YEAR TO YEAR, AND REGULAR INSPECTIONS WILL HELP INSURE THAT THE SYSTEM IS CLEANED OUT AT THE APPROPRIATE TIME. AT A MINIMUM, INSPECTIONS SHOULD BE PERFORMED TWICE PER YEAR (I.E. SPRING AND FALL) HOWEVER MORE FREQUENT INSPECTIONS MAY BE NECESSARY WHERE FREQUENT WINTER SANDING OPERATIONS MAY LEAD TO RAPID ACCUMULATIONS. THE VISUAL INSPECTION SHOULD ASCERTAIN THAT THE SYSTEM COMPONENTS ARE IN WORKING ORDER AND THAT THERE ARE NO BLOCKAGES OR OBSTRUCTIONS TO INLET AND/OR SEPARATION SCREEN. THE INSPECTION SHOULD ALSO IDENTIFY ACCUMULATIONS OF HYDROCARBONS, TRASH, AND SEDIMENT IN THE SYSTEM. MEASURING POLLUTANT ACCUMULATION CAN BE DONE WITH A CALIBRATED DIPSTICK, TAPE MEASURE OR OTHER MEASURING INSTRUMENT. IT IS USEFUL, AND OFTEN REQUIRED AS PART OF A PERMIT TO KEEP A RECORD OF EACH INSPECTION. (SEE THE INSPECTION AND MAINTENANCE GUIDE PROVIDED BY THE MANUFACTURER)

- CLEANING OF THE CDS & CS UNITS SHOULD BE DONE WHEN SEDIMENT ACCUMULATES AT A DEPTH OF TWO FEET WITHIN THE UNIT AND SHOULD BE DONE DURING DRY WEATHER CONDITIONS WHEN NO FLOW IS ENTERING THE SYSTEM. CLEANOUT WITH A VACUUM TRUCK IS GENERALLY THE MOST EFFECTIVE AND CONVENIENT METHOD OF EXCAVATING POLLUTANTS FROM THE SYSTEM. SIMPLY REMOVE THE MANHOLE COVERS AND INSERT THE VACUUM HOSE INTO THE SUMP. THE SYSTEM SHOULD BE COMPLETELY DRAINED DOWN AND THE SUMP FULLY EVACUATED OF SEDIMENT. THE AREA OUTSIDE THE SCREEN SHOULD BE PUMPED OUT ALSO IF POLLUTANT BUILD-UP EXISTS IN THIS AREA (SEE THE INSPECTION AND MAINTENANCE GUIDE PROVIDED BY THE MANUFACTURER)
- INSPECTING THE UNDERGROUND CMP DETENTION AREAS SHOULD BE DONE WHEN THE CDS & CS UNITS ARE CLEANED. IF NECESSARY, A VACUUM TRUCK CAN BE USED TO EXCAVATE POLLUTANTS. SYSTEMS SHOULD BE RINSED, INCLUDING ABOVE THE SPRING LINE, ANNUALLY AFTER THE SPRING THAW (SEE THE INSPECTION AND MAINTENANCE GUIDE PROVIDED BY THE MANUFACTURER)
- STORMFILTER: INSPECTION AND MAINTENANCE TIMING AT LEAST ONE SCHEDULED INSPECTION SHOULD TAKE PLACE PER YEAR WITH MAINTENANCE FOLLOWING AS WARRANTED. FIRST, AN INSPECTION SHOULD BE DONE BEFORE THE WINTER SEASON. DURING THE INSPECTION THE NEED FOR MAINTENANCE SHOULD BE DETERMINED AND, IF DISPOSAL DURING MAINTENANCE WILL BE REQUIRED, SAMPLES OF THE ACCUMULATED SEDIMENTS AND MEDIA SHOULD BE OBTAINED. SECOND, IF WARRANTED, A MAINTENANCE (REPLACEMENT OF THE FILTER CARTRIDGES AND REMOVAL OF ACCUMULATED SEDIMENTS) SHOULD BE PERFORMED DURING PERIODS OF DRY WEATHER. IN ADDITION TO THESE TWO ACTIVITIES, IT IS IMPORTANT TO CHECK THE CONDITION OF THE STORMFILTER UNIT AFTER MAJOR STORMS FOR POTENTIAL DAMAGE CAUSED BY HIGH FLOWS AND FOR HIGH SEDIMENT ACCUMULATION THAT MAY BE CAUSED BY LOCALIZED EROSION IN THE DRAINAGE AREA. IT MAY BE NECESSARY TO ADJUST THE INSPECTION/ MAINTENANCE SCHEDULE DEPENDING ON THE ACTUAL OPERATING CONDITIONS ENCOUNTERED BY THE SYSTEM. IN GENERAL, INSPECTION ACTIVITIES CAN BE CONDUCTED AT ANY TIME, AND MAINTENANCE SHOULD OCCUR, IF WARRANTED, DURING DRYER MONTHS IN LATE SUMMER TO EARLY FALL (SEE THE INSPECTION AND MAINTENANCE GUIDE PROVIDED BY THE MANUFACTURER)
- INFILTRATION BASINS: PERIODIC SMALL-SCALE MAINTENANCE AT REGULAR INTERVALS TO EVALUATE AND REMOVE ANY ACCUMULATED SEDIMENT MAY BE NECESSARY. INSPECT THE INFILTRATION BASINS TWICE ANNUALLY AND WHEN THE STORMWATER DISCHARGES OVER THE HIGH OUTLET AND ANY STORM OVER 2.5 INCHES IN 24 HOURS. INSPECT THE OUTLET STRUCTURES, EMBANKMENT, INFILTRATION AREA. MOW THE INFILTRATION BASIN AT LEAST 2 TIME PER YEAR. REMOVE GRASS CLIPPINGS, TRASH, SEDIMENT. USE DEEP TILLING TO BREAK UP CLOGGED AREAS AND RE-VEGETATE IMMEDIATELY.
- INSPECTION REPORTS: SEE #12 UNDER "CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENTATION CONTROL PLAN." FOR REPORTS, REPORTS SHALL BE MAINTAINED FOR SUBMISSION TO THE DPW FOR A PERIOD OF THREE YEARS.
- ILLICIT DISCHARGES: ALL ILLICIT DISCHARGES TO ANY PART OF THE STORMWATER SYSTEM ARE STRICTLY PROHIBITED. IF AN ACCIDENTAL SPILL OCCURS (OIL AND/OR CHEMICAL SPILLS, RADIATION EMERGENCIES, AND BIOLOGICAL DISCHARGES) THE NATIONAL RESPONSE CENTER MUST BE CALLED AT 1-800-424-8802.



- CONSTRUCTION PHASING SCHEDULE**
- PRE-CONSTRUCTION MEETING
  - PLACE EROSION CONTROL BARRIERS (INSPECTING AS NOTED IN THE SWPPP)
  - PLACE CONSTRUCTION ENTRANCE APRON
  - PLAN SEDIMENT POND LOCATIONS
  - UTILITY CONSTRUCTION
  - USE PORTION OF EXISTING SOUTHWEST DETENTION BASIN FOR SEDIMENTATION DURING CONSTRUCTION PUT CONSTRUCTION CELL ONLINE BEFORE CUTTING TREES
  - NORTHEAST DETENTION BASIN REQUIRED FOR SEDIMENTATION DURING CONSTRUCTION MUST CUT TREES AND GRUB/GEAR PATHWAY IN ORDER TO ACCESS BASIN LIMITS. PUT CONSTRUCTION CELL ONLINE BEFORE GRUBBING AND CLEARING OVERALL SITE LIMITS BEYOND ACCESS TO BASIN - WHEN POSSIBLE STABILIZE, MULCH AND OR HYDROSEED ALL FIXED SLOPE LIMITS
  - NO MORE THAN 5-ACRES SHALL BE CLEARED AND GRUBBED AT A TIME. EACH 5-ACRE CELL SHALL BE STABILIZED BEFORE THE NEXT CELL IS CLEARED AND GRUBBED.
  - CONSTRUCT CULVERTS AND DETENTION BASINS AT ENTRANCE DRIVE AND
  - PRE-GRUB: GRUB TO CONSTRUCTION LIMITS AS LIMITED BY EXCAVATION AND GRADING OF THE SITE WEEKLY (STABILIZING SLOPES WITH MULCH AND OR HYDROSEED AS CONSTRUCTION PROGRESSES, REMOVING SEDIMENT FROM CONSTRUCTION CELLS)
  - ROUGH GRADE BUILDING PAD
  - ROUGH GRADE OTHER AREAS
  - STOCKPILE MATERIALS INCLUDE EROSION CONTROL BARRIERS AT TOE LIMITS
  - UTILITY CONSTRUCTION
  - FINE GRADE BUILDING PAD
  - FINE GRADE DRIVES & PAVEMENT BASE COURSE
  - BUILDING CONSTRUCTION
  - FINE GRADE OTHER AREAS & RIPRAP SLOPES
  - LANDSCAPE - LOAM & SEED
  - FINAL PAVEMENT COURSE
  - BASE RIMS & GRATES TO GRADE
  - PAVEMENT STRIPES
  - REMOVE SEDIMENT FROM SEDIMENT PONDS & FINALIZE CONSTRUCTION OF DETENTION BASINS. CLEAN STORMWATER STRUCTURES AND PIPES AS NECESSARY
  - CLEANUP
  - INSPECTIONS & APPROVALS
  - REMOVE EROSION CONTROL BARRIERS

ENGINEERING DESIGN CONSULTANTS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTORS EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

ENGINEERING DESIGN CONSULTANTS, INC.'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COSTS.

REVISED	DATE	DESCRIPTION
5	5/11/21	PEER REVIEW COMMENTS
4	4/13/21	PEER REVIEW COMMENTS
3	2/5/21	ISSUED FOR REVIEW
2	3/2/20	PEER REVIEW COMMENTS
1	2/2/20	PEER REVIEW COMMENTS
0	11/16/19	ISSUED FOR REVIEW
REV 1	DATE	DESCRIPTION



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PROJECT: **555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS  
(MIDDLESEX COUNTY)**

TITLE: **STORMWATER POLLUTION PREVENTION PLAN  
555 HOPPING BROOK ROAD  
HOLLISTON, MASSACHUSETTS**

OWNER/APPLICANT: **CRG INTEGRATED REAL ESTATE SOLUTIONS  
200 Barr Harbor Drive  
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FILE NO: 3724 SWPPP  
SWPPP  
DATE: NOVEMBER 16, 2019  
DEFINITE PLAN NO: 33 of 37  
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