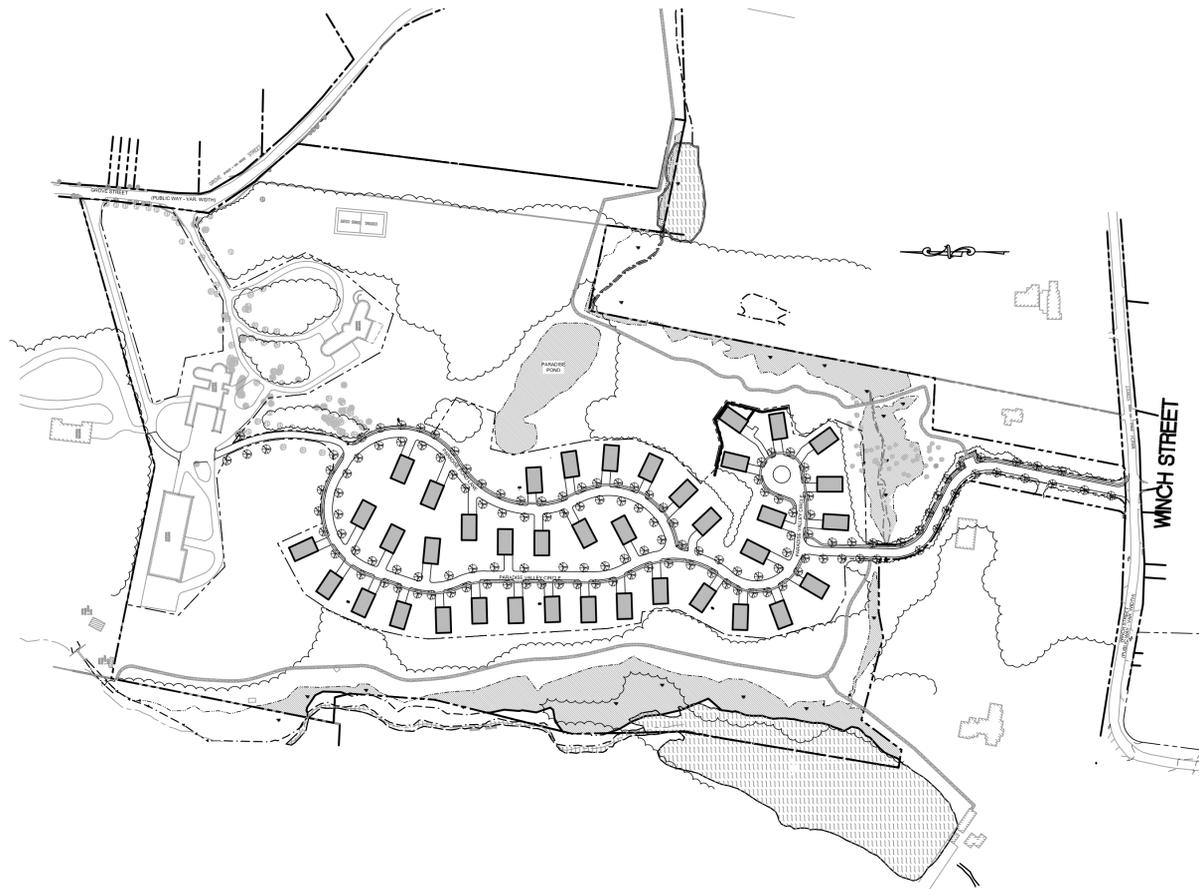
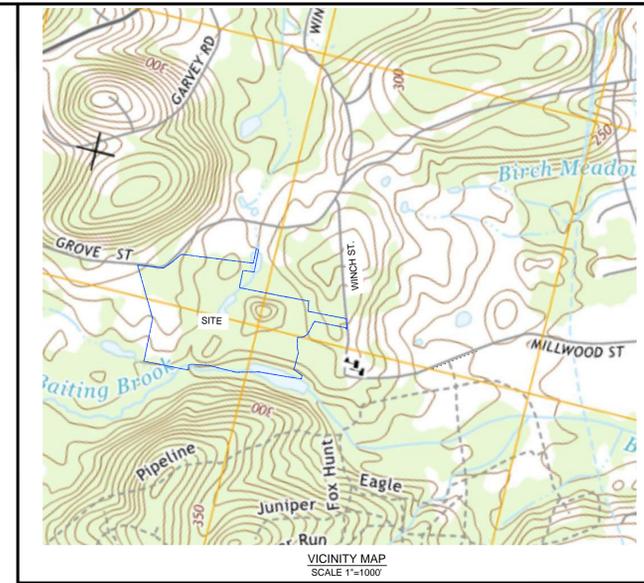


Paradise Valley Club

Grove Street

in

Framingham, Massachusetts



SHEET INDEX

SHEET NO.	DESCRIPTION
T-100	TITLE SHEET
C-100 thru C-103	EXISTING CONDITIONS PLANS
C-200 thru C-203	SITE LAYOUT PLANS
C-300 thru C-303	GRADING, DRAINAGE & EROSION CONTROL PLANS
C-400 thru C-403	SITE UTILITIES PLANS
C-404 thru C-407	SEWER EXTENSION PLAN AND PROFILE
C-500	EROSION CONTROL NOTES & DETAILS
C-501	SITE DETAILS
C-502	SITE DETAILS
C-503	SITE DETAILS

APPROVED BY THE
FRAMINGHAM PLANNING BOARD

PREPARED FOR
Benchmark Engineering, Corp
120 Quarry Drive
Milford, Massachusetts 01757

Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757



OCG

Oak Consulting Group
P.O. Box 1123
Newburyport, MA 01950
Ph. 978.312.3120

TITLE SHEET

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

Design by:	SPM	Checked by:	PFA
Drawn by:	SPM	Approved by:	PFA
Project:	13005	Date:	December 8, 2015

Sheet:
T-100

EXISTING CONDITIONS NOTES:

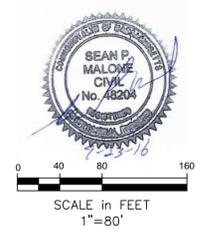
1. VERTICAL DATUM REFERS TO NGVD 1929.
2. THE WETLAND BOUNDARIES SHOWN HEREON ARE BASED WETLANDS FLAGS SURVEY LOCATED BY GUERRIERE & HANLON AND PROVIDED TO OCG IN THE SUMMER OF 2016.
3. EXISTING CONDITIONS AND TOPOGRAPHIC INFORMATION SHOWN HEREON WAS PROVIDED BY BENCHMARK ENGINEERING.

OWNER REFERENCE

STREET ADDRESS: 1060 GROVE STREET
 OWNER OF RECORD: MCLAUGHLIN, F MOORE IV & FAFARD, M WINCH MILLWOOD REALTY TRUST II
 ASSESSORS REFERENCE: PARCEL: 034-54-8981 035-55-0466
 034-54-8157 034-55-7148
 045-63-2498 045-63-2149
 035-64-5851 044-53-8238
 ZONING: R-4; OPEN SPACE PRESERVATION DEVELOPMENT
 AREA: 49.45± ACRES

Site:
PARADISE VALLEY CLUB
 1060 GROVE STREET
 FRAMINGHAM, MASSACHUSETTS
 Prepared for:
BENCHMARK ENGINEERING CORP.
 120 QUARRY DRIVE
 MILFORD, MASSACHUSETTS 01757

- LEGEND**
- PROPERTY LINE
 - ▲- BORDERING VEGETATED WETLAND
 - RIVER FRONT TOP OF BANK
 - 30' NO DISTURB ZONE
 - 125' BUFFER
 - 200' RIVER FRONT AREA
 - 100-YR FLOODPLAIN
 - EXISTING CONTOUR
 - EDGE OF PAVEMENT
 - STONE WALL
 - SIGN
 - TREE LINE
 - DRAIN
 - SEWER
 - WATER
 - OVERHEAD WIRE
 - CATCH BASIN
 - DRAIN MANHOLE
 - SEWER MANHOLE
 - FIRE HYDRANT
 - GATE VALVE
 - UTILITY POLE
 - EXISTING TREE
 - TEST PIT
 - ▨ SLOPES > 15%



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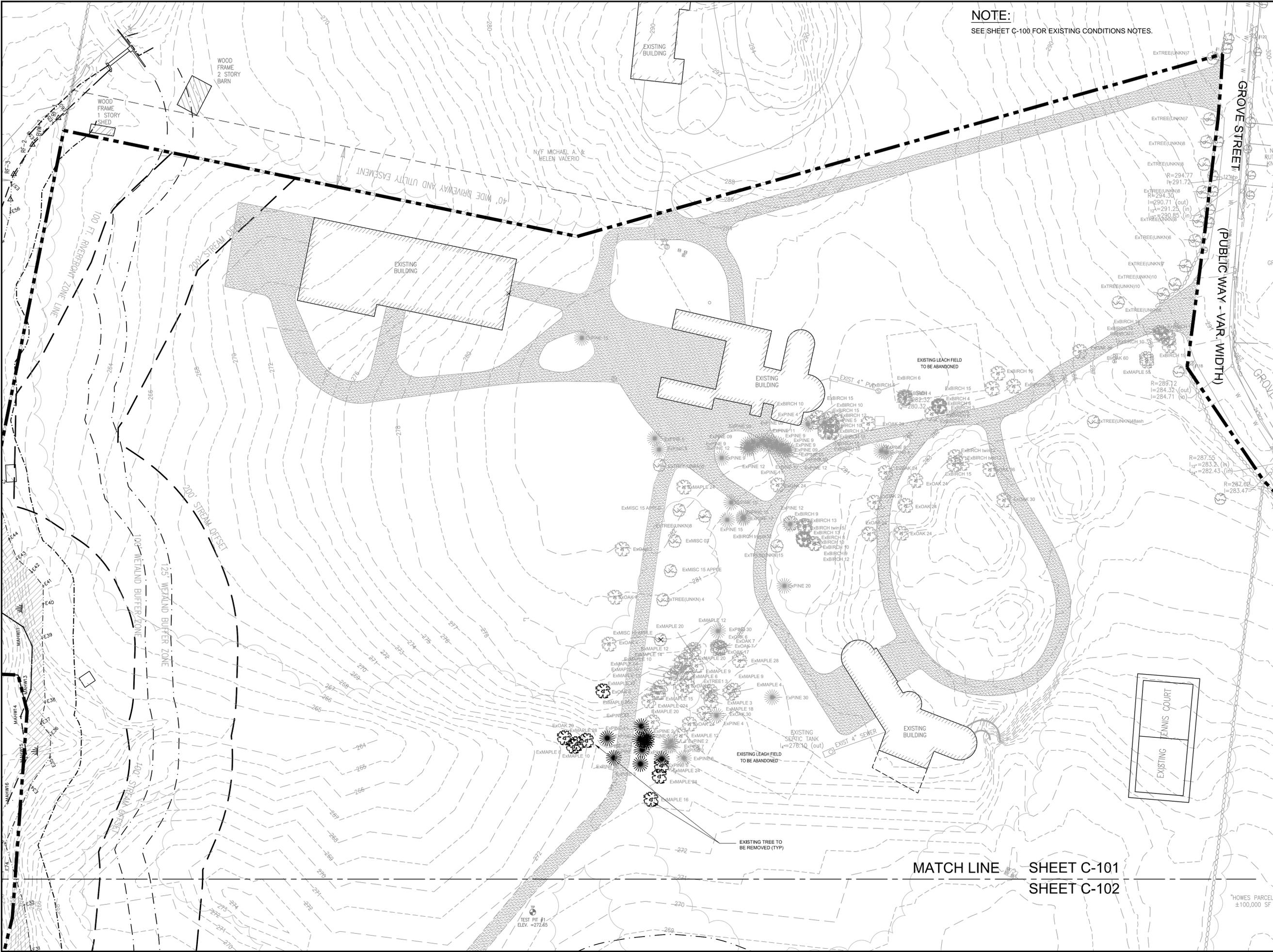
OVERALL EXISTING CONDITIONS PLAN

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

Design by: SPM Checked by: PFA
 Drawn by: SPM Approved by: PFA
 Project: 13005 Date: December 8, 2015

Sheet: **C-100**





NOTE:
SEE SHEET C-100 FOR EXISTING CONDITIONS NOTES.

Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

- PROPERTY LINE
- BORDERING VEGETATED WETLAND
- RIVER FRONT TOP OF BANK
- 125' BUFFER
- 200' RIVER FRONT AREA
- 30' NO DISTURB ZONE
- 100' --- EXISTING CONTOUR
- EP --- EDGE OF PAVEMENT
- STONE WALL
- SIGN
- TREE LINE
- DRAIN
- SEWER
- W --- WATER
- OHW --- OVERHEAD WIRE
- CATCH BASIN
- ⊙ DRAIN MANHOLE
- ⊙ SEWER MANHOLE
- ⊙ FIRE HYDRANT
- ⊙ GATE VALVE
- ⊙ UTILITY POLE
- ⊙ EXISTING TREE
- ⊙ TEST PIT #2
ELEV. =270.00

BEAN P. MALONE
CIVIL
No. 45204

0 20 40 80
SCALE in FEET
1"=40'

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Oak Consulting Group
P.O. Box 1123
Newburyport, MA 01950
Ph. 978.312.3120

EXISTING CONDITIONS PLAN

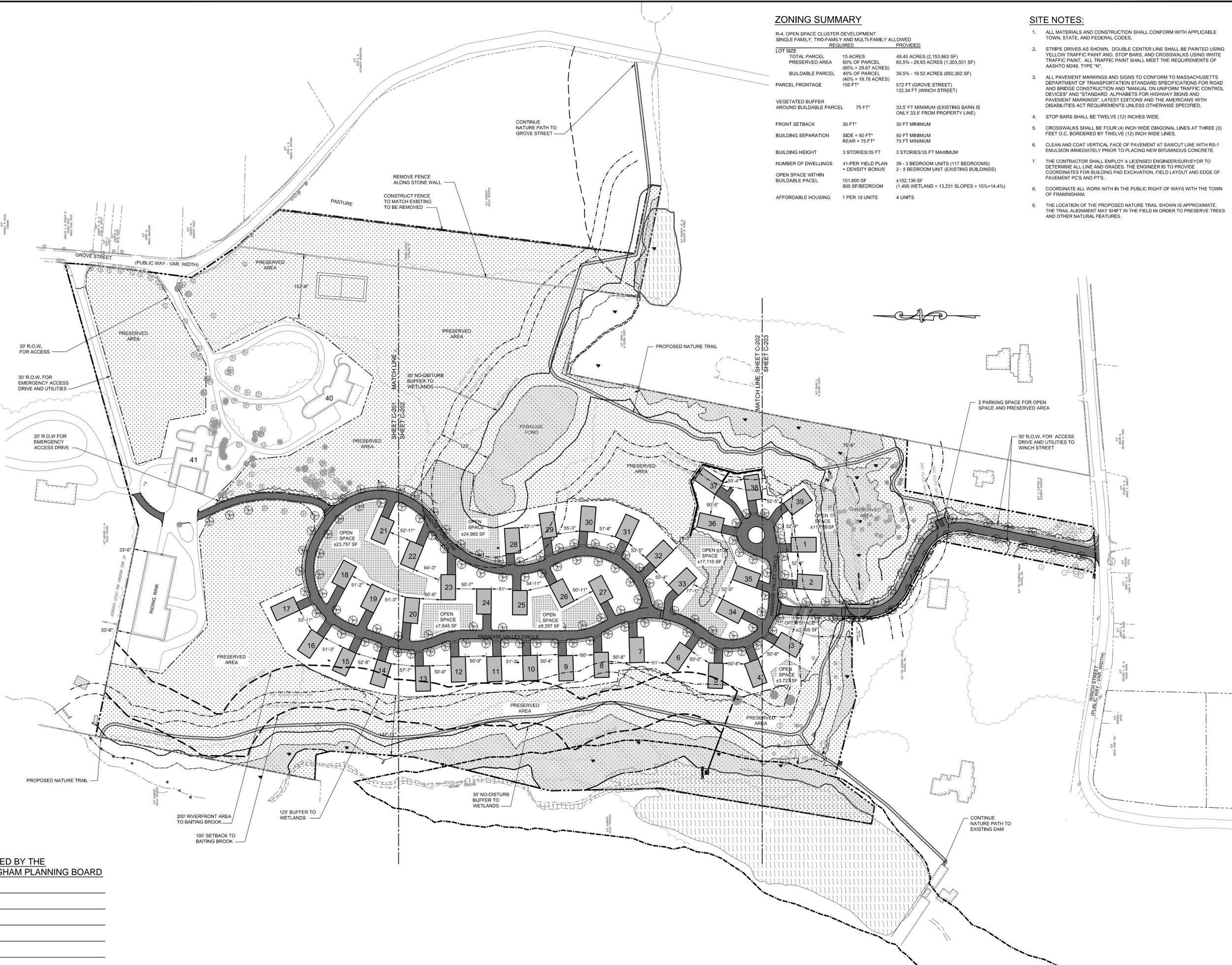
No.	Revision/Issue	Date
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Design by:	SPM	Checked by:	PFA
Drawn by:	SPM	Approved by:	PFA
Project:	13005	Date:	December 8, 2015

Sheet: **C-101**

MATCH LINE SHEET C-101
SHEET C-102

"HOWES PARCEL"
±100,000 SF



ZONING SUMMARY

R-4, OPEN SPACE CLUSTER DEVELOPMENT
SINGLE FAMILY, TWO-FAMILY AND MULTI-FAMILY ALLOWED

LOT SIZE	REQUIRED	PROVIDED
TOTAL PARCEL	15 ACRES	49.45 ACRES (2,153,863 SF)
PRESERVED AREA	60% OF PARCEL (9.0 ACRES)	60.5% - 29.93 ACRES (1,303,501 SF)
BUILDABLE PARCEL	40% OF PARCEL (6.0 ACRES)	39.5% - 19.52 ACRES (850,362 SF)
PARCEL FRONTAGE	150 FT*	572 FT (GROVE STREET) 132.34 FT (WINCH STREET)
VEGETATED BUFFER AROUND BUILDABLE PARCEL	75 FT*	33.5' FT MINIMUM (EXISTING BARN IS ONLY 33.5' FROM PROPERTY LINE)
FRONT SETBACK	30 FT*	30 FT MINIMUM
BUILDING SEPARATION	SIDE = 50 FT* REAR = 75 FT*	50 FT MINIMUM 75 FT MINIMUM
BUILDING HEIGHT	3 STORIES/35 FT	3 STORIES/35 FT MAXIMUM
NUMBER OF DWELLINGS	41-PER YIELD PLAN + DENSITY BONUS	39 - 3 BEDROOM UNITS (117 BEDROOMS) 2 - 5 BEDROOM UNIT (EXISTING BUILDINGS)
OPEN SPACE WITHIN BUILDABLE PACEL	101,600 SF	±102,136 SF (1,495 WETLAND + 13,231 SLOPES > 15%=14.4%)
AFFORDABLE HOUSING	1 PER 10 UNITS	4 UNITS

SITE NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE TOWN, STATE, AND FEDERAL CODES.
- STRIP DRIVES AS SHOWN, DOUBLE CENTER LINE SHALL BE PAINTED USING YELLOW TRAFFIC PAINT AND, STOP BARS, AND CROSSWALKS USING WHITE TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248, TYPE "N".
- ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS". LATEST EDITIONS AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS UNLESS OTHERWISE SPECIFIED.
- STOP BARS SHALL BE TWELVE (12) INCHES WIDE.
- CROSSWALKS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT THREE (3) FEET O.C. BORDERED BY TWELVE (12) INCH WIDE LINES.
- CLEAN AND COAT VERTICAL FACE OF PAVEMENT AT SAWCUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
- THE CONTRACTOR SHALL EMPLOY A LICENSED ENGINEER/SURVEYOR TO DETERMINE ALL LINE AND GRADES. THE ENGINEER IS TO PROVIDE COORDINATES FOR BUILDING PAD EXCAVATION, FIELD LAYOUT AND EDGE OF PAVEMENT PCS AND PTS.
- COORDINATE ALL WORK WITH IN THE PUBLIC RIGHT OF WAYS WITH THE TOWN OF FRAMINGHAM.
- THE LOCATION OF THE PROPOSED NATURE TRAIL SHOWN IS APPROXIMATE. THE TRAIL ALIGNMENT MAY SHIFT IN THE FIELD IN ORDER TO PRESERVE TREES AND OTHER NATURAL FEATURES.

Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

	PROPERTY LINE
	BORDERING VEGETATED WETLAND
	RIVER FRONT TOP OF BANK
	30' NO DISTURB ZONE
	125' BUFFER
	200' RIVER FRONT AREA
	EDGE OF PAVEMENT
	STONE WALL
	SIGN
	PROPOSED CURB
	PROPOSED SIGN
	PROPOSED RETAINING WALL
	PROPOSED SIDEWALK
	PROPOSED ROAD
	PROPOSED TRAIL
	PROPOSED STREET LIGHT
	PROPOSED STREET TREE
	PRESERVED AREA

SCALE in FEET
1"=80'

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Ph. 978.312.3120

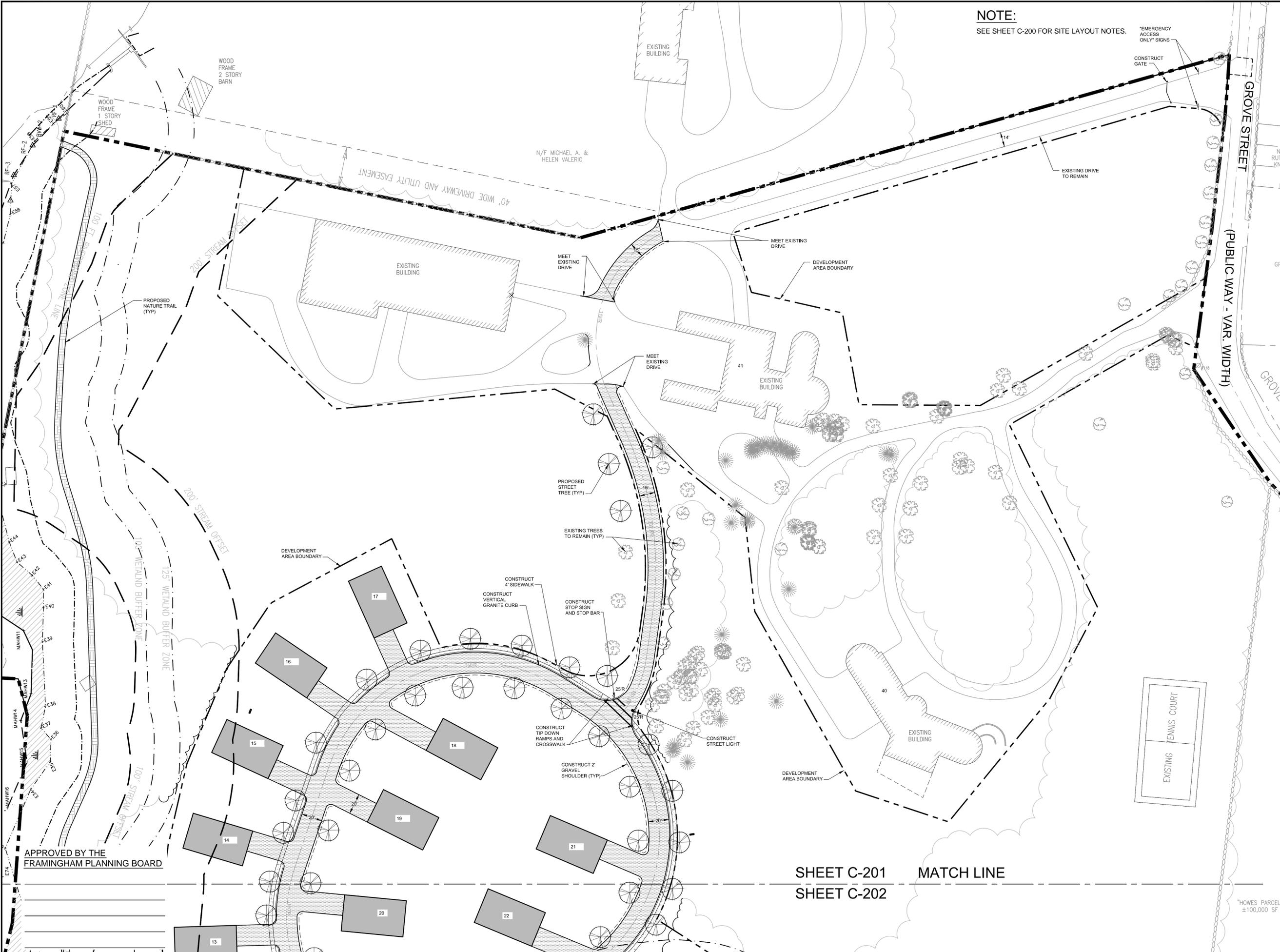
OVERALL SITE LAYOUT PLAN

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

Design by:	SPM	Checked by:	PFA
Drawn by:	SPM	Approved by:	PFA
Project:	13005	Date:	December 8, 2015

APPROVED BY THE
FRAMINGHAM PLANNING BOARD

Sheet: **C-200**



NOTE:
SEE SHEET C-200 FOR SITE LAYOUT NOTES.

Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

- PROPERTY LINE
- - - - - BORDERING VEGETATED WETLAND
- - - - - RIVER FRONT TOP OF BANK
- - - - - 125' BUFFER
- - - - - 200' RIVER FRONT AREA
- EP — EDGE OF PAVEMENT
- STONE WALL
- SIGN
- TREE LINE
- PROPOSED CURB
- PROPOSED SIGN
- PROPOSED RETAINING WALL
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED STREET LIGHT
- PROPOSED STREET TREE

SCALE in FEET
1"=40'

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Ph. 978.312.3120

SITE LAYOUT PLAN

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

Design by: SPM	Checked by: PFA
Drawn by: SPM	Approved by: PFA
Project: 13005	Date: December 8, 2015

Sheet:
C-201

APPROVED BY THE
FRAMINGHAM PLANNING BOARD

SHEET C-201
SHEET C-202

*HOWES PARCEL
±100,000 SF

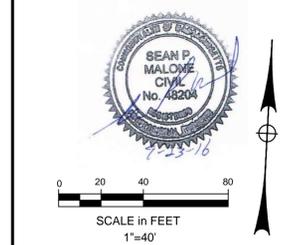
NOTE:
SEE SHEET C-200 FOR SITE LAYOUT NOTES.

Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
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120 QUARRY DRIVE
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LEGEND

- PROPERTY LINE
- BORDERING VEGETATED WETLAND
- RIVER FRONT TOP OF BANK
- 125' BUFFER
- 200' RIVER FRONT AREA
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- SIGN
- TREE LINE
- PROPOSED CURB
- PROPOSED SIGN
- PROPOSED RETAINING WALL
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED STREET LIGHT
- PROPOSED STREET TREE



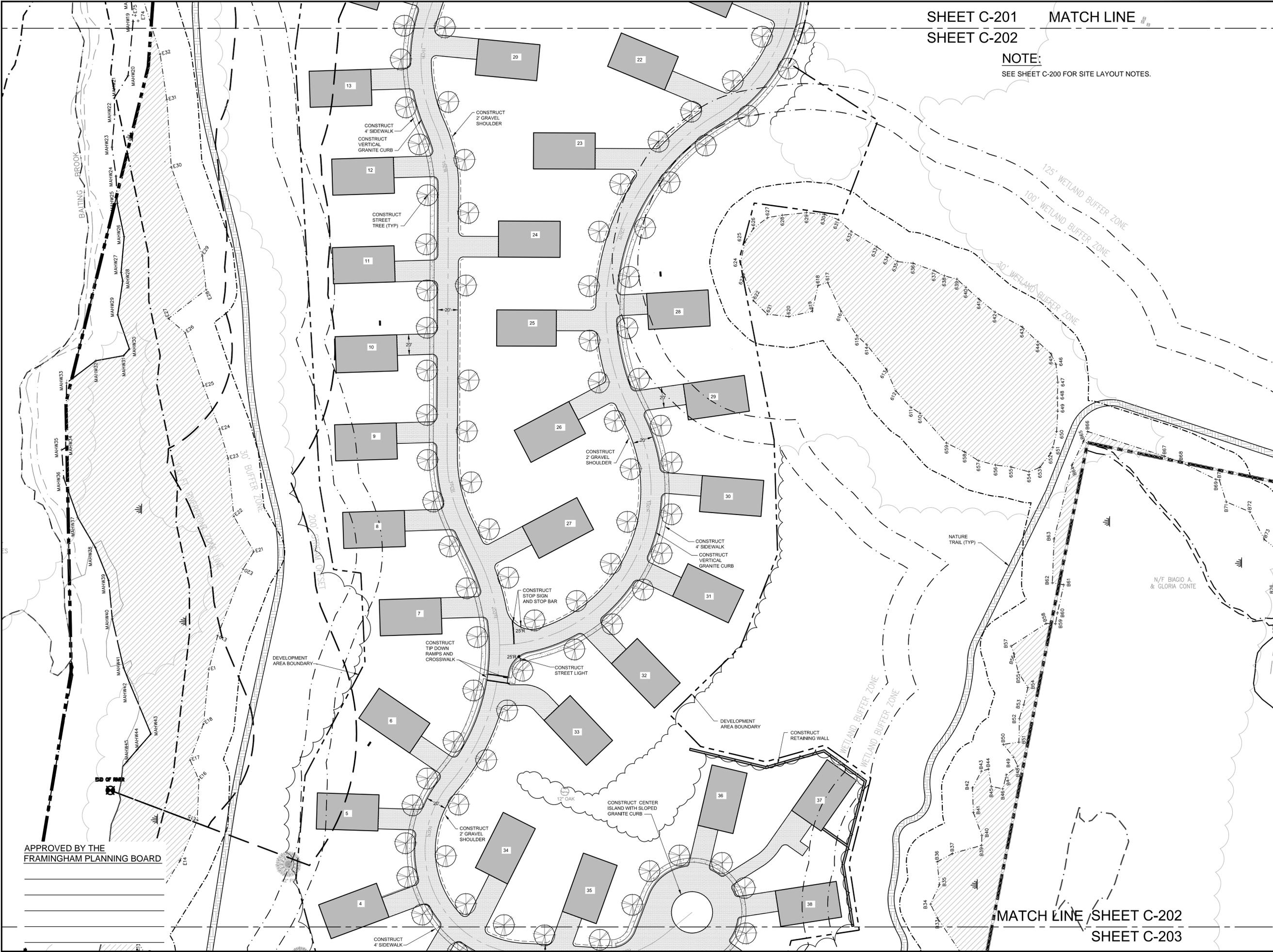
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SITE LAYOUT PLAN

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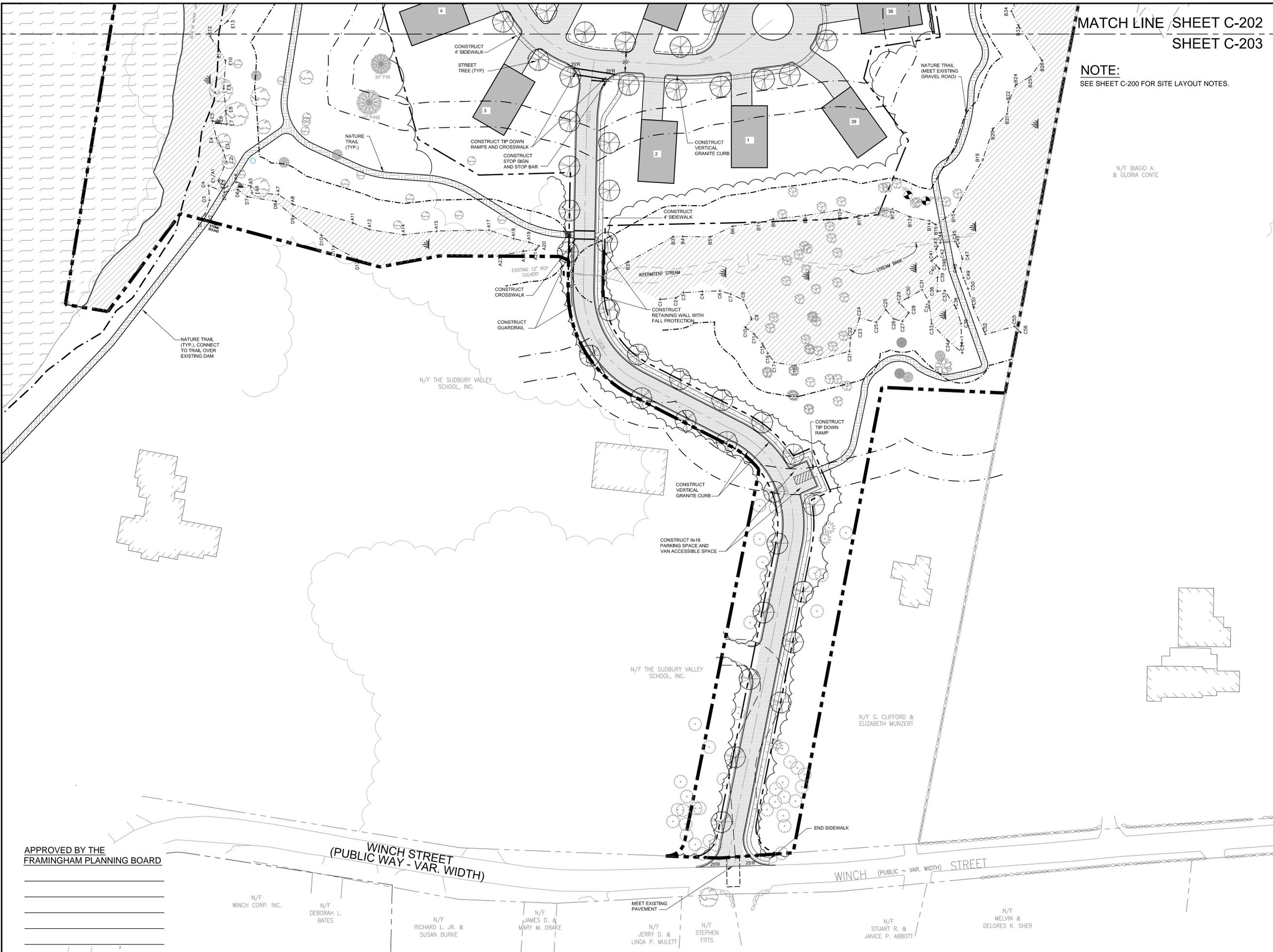
Design by:	SPM	Checked by:	PFA
Drawn by:	SPM	Approved by:	PFA
Project:	13005	Date:	December 8, 2015

Sheet: **C-202**



APPROVED BY THE
FRAMINGHAM PLANNING BOARD

MATCH LINE SHEET C-202
SHEET C-203



MATCH LINE SHEET C-202
SHEET C-203

NOTE:
SEE SHEET C-200 FOR SITE LAYOUT NOTES.

Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

- PROPERTY LINE
- - - - - BORDERING VEGETATED WETLAND
- - - - - RIVER FRONT TOP OF BANK
- - - - - 125' BUFFER
- - - - - 200' RIVER FRONT AREA
- EP — EDGE OF PAVEMENT
- ○ ○ ○ ○ STONE WALL
- ○ ○ ○ ○ SIGN
- TREE LINE
- PROPOSED CURB
- PROPOSED SIGN
- PROPOSED RETAINING WALL
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED STREET LIGHT
- ○ ○ ○ ○ PROPOSED STREET TREE



SCALE in FEET
1"=40'

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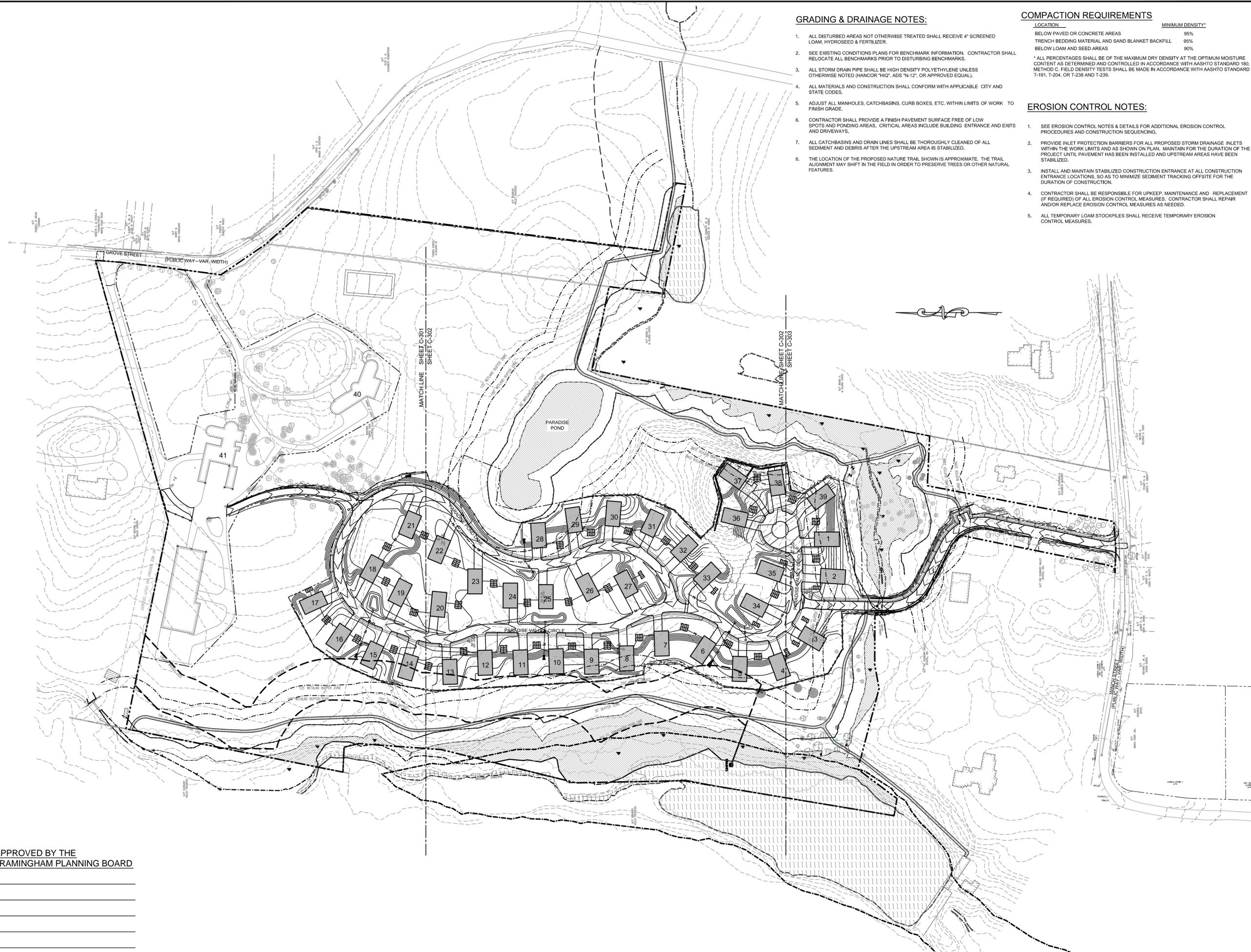
SITE LAYOUT PLAN

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

Design by: SPM	Checked by: PFA
Drawn by: SPM	Approved by: PFA
Project: 13005	Date: December 8, 2015

Sheet: **C-203**

APPROVED BY THE
FRAMINGHAM PLANNING BOARD



GRADING & DRAINAGE NOTES:

1. ALL DISTURBED AREAS NOT OTHERWISE TREATED SHALL RECEIVE 4" SCREENED LOAM, HYDROSEED & FERTILIZER.
2. SEE EXISTING CONDITIONS PLANS FOR BENCHMARK INFORMATION. CONTRACTOR SHALL RELOCATE ALL BENCHMARKS PRIOR TO DISTURBING BENCHMARKS.
3. ALL STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE UNLESS OTHERWISE NOTED (HANCOR "HIQ", ADS "N-12", OR APPROVED EQUAL).
4. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY AND STATE CODES.
5. ADJUST ALL MANHOLES, CATCHBASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
6. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND EXITS AND DRIVEWAYS.
7. ALL CATCHBASINS AND DRAIN LINES SHALL BE THOROUGHLY CLEANED OF ALL SEDIMENT AND DEBRIS AFTER THE UPSTREAM AREA IS STABILIZED.
8. THE LOCATION OF THE PROPOSED NATURE TRAIL SHOWN IS APPROXIMATE. THE TRAIL ALIGNMENT MAY SHIFT IN THE FIELD IN ORDER TO PRESERVE TREES OR OTHER NATURAL FEATURES.

COMPACTION REQUIREMENTS

LOCATION	MINIMUM DENSITY*
BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

* ALL PERCENTAGES SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH AASHTO STANDARD 180, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH AASHTO STANDARD T-191, T-204, OR T-238 AND T-239.

EROSION CONTROL NOTES:

1. SEE EROSION CONTROL NOTES & DETAILS FOR ADDITIONAL EROSION CONTROL PROCEDURES AND CONSTRUCTION SEQUENCING.
2. PROVIDE INLET PROTECTION BARRIERS FOR ALL PROPOSED STORM DRAINAGE INLETS WITHIN THE WORK LIMITS AND AS SHOWN ON PLAN. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED AND UPSTREAM AREAS HAVE BEEN STABILIZED.
3. INSTALL AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCE AT ALL CONSTRUCTION ENTRANCE LOCATIONS, SO AS TO MINIMIZE SEDIMENT TRACKING OFFSITE FOR THE DURATION OF CONSTRUCTION.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR UPKEEP, MAINTENANCE AND REPLACEMENT (IF REQUIRED) OF ALL EROSION CONTROL MEASURES. CONTRACTOR SHALL REPAIR AND/OR REPLACE EROSION CONTROL MEASURES AS NEEDED.
5. ALL TEMPORARY LOAM STOCKPILES SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES.

Site:
PARADISE VALLEY CLUB
 1060 GROVE STREET
 FRAMINGHAM, MASSACHUSETTS
 Prepared for:
BENCHMARK ENGINEERING CORP.
 120 QUARRY DRIVE
 MILFORD, MASSACHUSETTS 01757

LEGEND

---	PROPERTY LINE
---▲---	BORDERING VEGETATED WETLAND
---	RIVER FRONT TOP OF BANK
---	125' BUFFER
---	200' RIVER FRONT AREA
---	30' NO DISTURB ZONE
---	INDEX CONTOUR
---	EDGE OF PAVEMENT
○	STONE WALL
---	DRAIN
○	CATCH BASIN
○	DRAIN MANHOLE
○	TEST PIT
---	PROPOSED CONTOUR
---	PROPOSED DRAIN
---	PROPOSED CATCH BASIN
○	PROPOSED DRAIN MANHOLE
---	SEDIMENTATION BARRIER
---	PROPOSED RETAINING WALL
---	PROPOSED TRAIL



0 40 80 160
 SCALE in FEET
 1" = 80'

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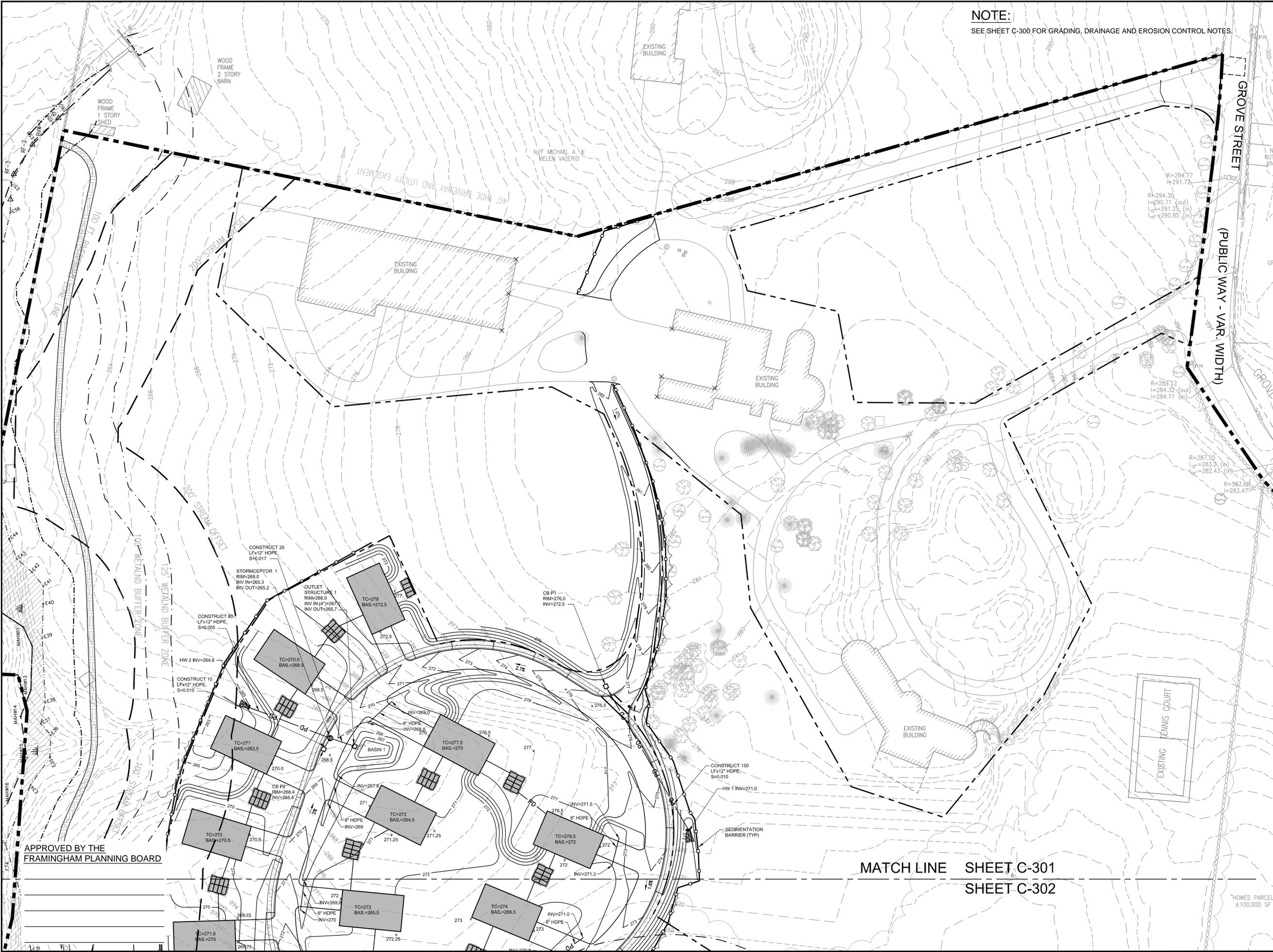
**OVERALL GRADING,
 DRAINAGE & EROSION
 CONTROL PLAN**

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

Design by: SPM	Checked by: PFA
Drawn by: SPM	Approved by: PFA
Project: 13005	Date: December 8, 2015

Sheet: **C-300**

APPROVED BY THE
 FRAMINGHAM PLANNING BOARD



NOTE:
SEE SHEET C-300 FOR GRADING, DRAINAGE AND EROSION CONTROL NOTES.

Site:
PARADISE VALLEY CLUB

1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

- — — — — PROPERTY LINE
- — — — — BORDERING VEGETATED WETLAND
- — — — — RIVER FRONT TOP OF BANK
- — — — — 125' BUFFER
- — — — — 200' RIVER FRONT AREA
- — — — — 30' NO DISTURB ZONE
- — — — — 100' INDEX CONTOUR
- — — — — EDGE OF PAVEMENT
- — — — — STONE WALL
- — — — — DRAIN
- — — — — CATCH BASIN
- — — — — DRAIN MANHOLE
- — — — — TEST PIT #2 ELEV. =270.00
- — — — — TEST PIT
- — — — — 276 PROPOSED CONTOUR
- — — — — X43.5 SPOT ELEVATION
- — — — — PD PROPOSED DRAIN
- — — — — PROPOSED CATCH BASIN
- — — — — PROPOSED DRAIN MANHOLE
- — — — — SEDIMENTATION BARRIER
- — — — — PROPOSED RETAINING WALL
- — — — — PROPOSED TRAIL

SCALE in FEET
1" = 40'

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GRADING, DRAINAGE & EROSION CONTROL PLAN

No.	Revision/Issue	Date
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1	REVISED SEWER	6/27/16

Design by:	SPM	Checked by:	PFA
Drawn by:	SPM	Approved by:	PFA
Project:	13005	Date:	December 8, 2015

Sheet: **C-301**

APPROVED BY THE
FRAMINGHAM PLANNING BOARD

MATCH LINE SHEET C-301
SHEET C-302

"HOWES PARCEL"
±100,000 SF

NOTE:
SEE SHEET C-300 FOR GRADING, DRAINAGE AND
EROSION CONTROL NOTES.

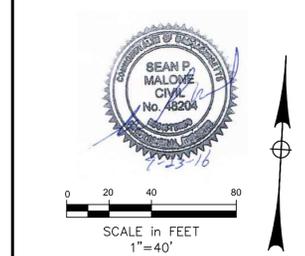
Site:
PARADISE VALLEY CLUB

1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
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120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

	PROPERTY LINE
	BORDERING VEGETATED WETLAND
	RIVER FRONT TOP OF BANK
	125' BUFFER
	200' RIVER FRONT AREA
	30' NO DISTURB ZONE
	100' INDEX CONTOUR
	EDGE OF PAVEMENT
	STONE WALL
	DRAIN
	CATCH BASIN
	DRAIN MANHOLE
	TEST PIT #2 ELEV. = 270.00
	PROPOSED CONTOUR
	SPOT ELEVATION
	PROPOSED DRAIN
	PROPOSED CATCH BASIN
	PROPOSED DRAIN MANHOLE
	SEDIMENTATION BARRIER
	PROPOSED RETAINING WALL
	PROPOSED TRAIL



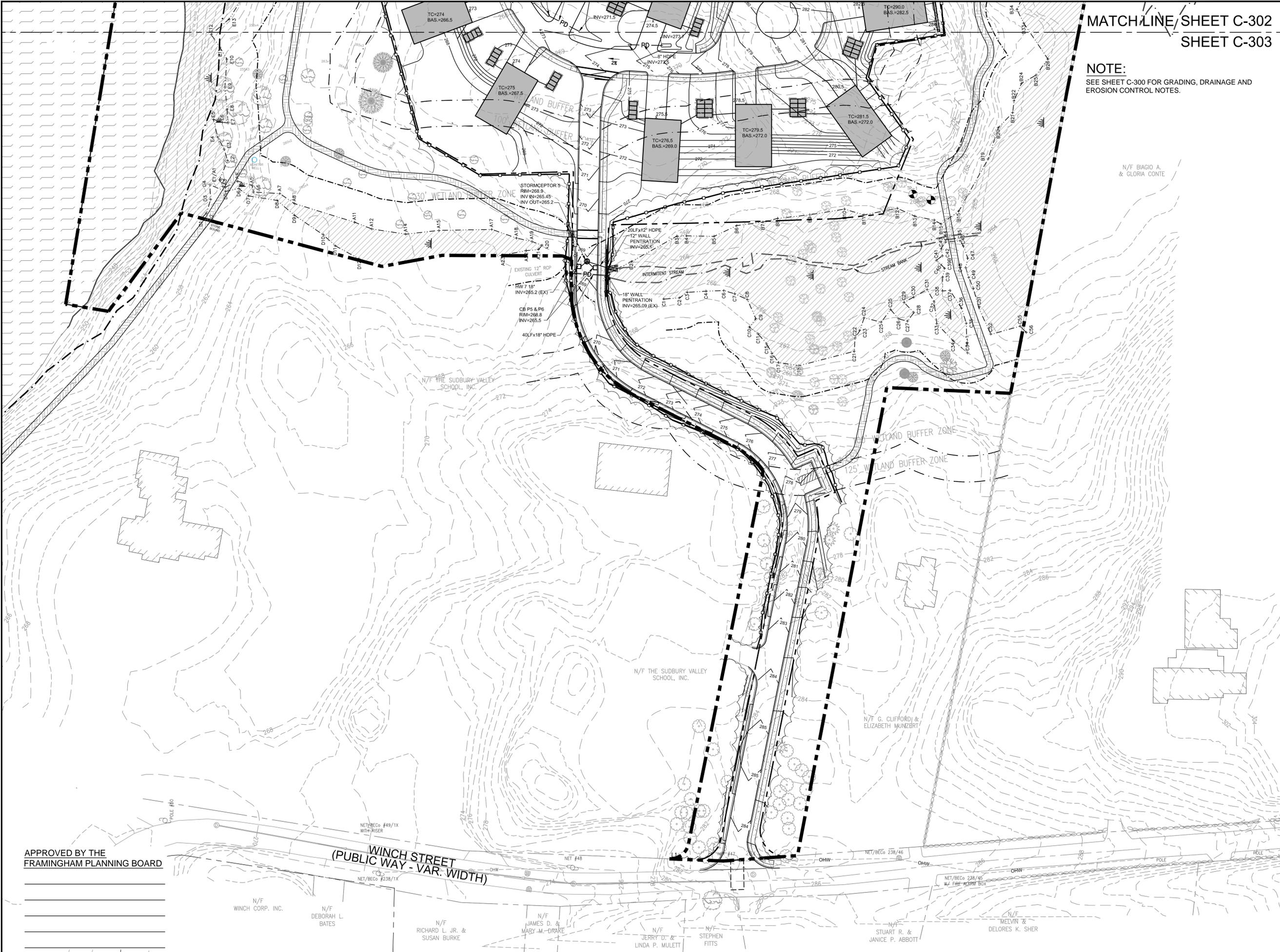
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**GRADING, DRAINAGE &
EROSION CONTROL
PLAN**

No.	Revision/Issue	Date
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1	REVISED SEWER	6/27/16

Design by:	SPM	Checked by:	PFA
Drawn by:	SPM	Approved by:	PFA
Project:	13005	Date:	December 8, 2015

Sheet: **C-303**



APPROVED BY THE
FRAMINGHAM PLANNING BOARD

WINCH STREET
(PUBLIC WAY - VAR. WIDTH)

N/F WINCH CORP. INC.

N/F DEBORAH L. BATES

N/F RICHARD L. JR. & SUSAN BURKE

N/F JAMES D. & MARY M. DRAKE

N/F JERRY D. & LINDA P. MULETT

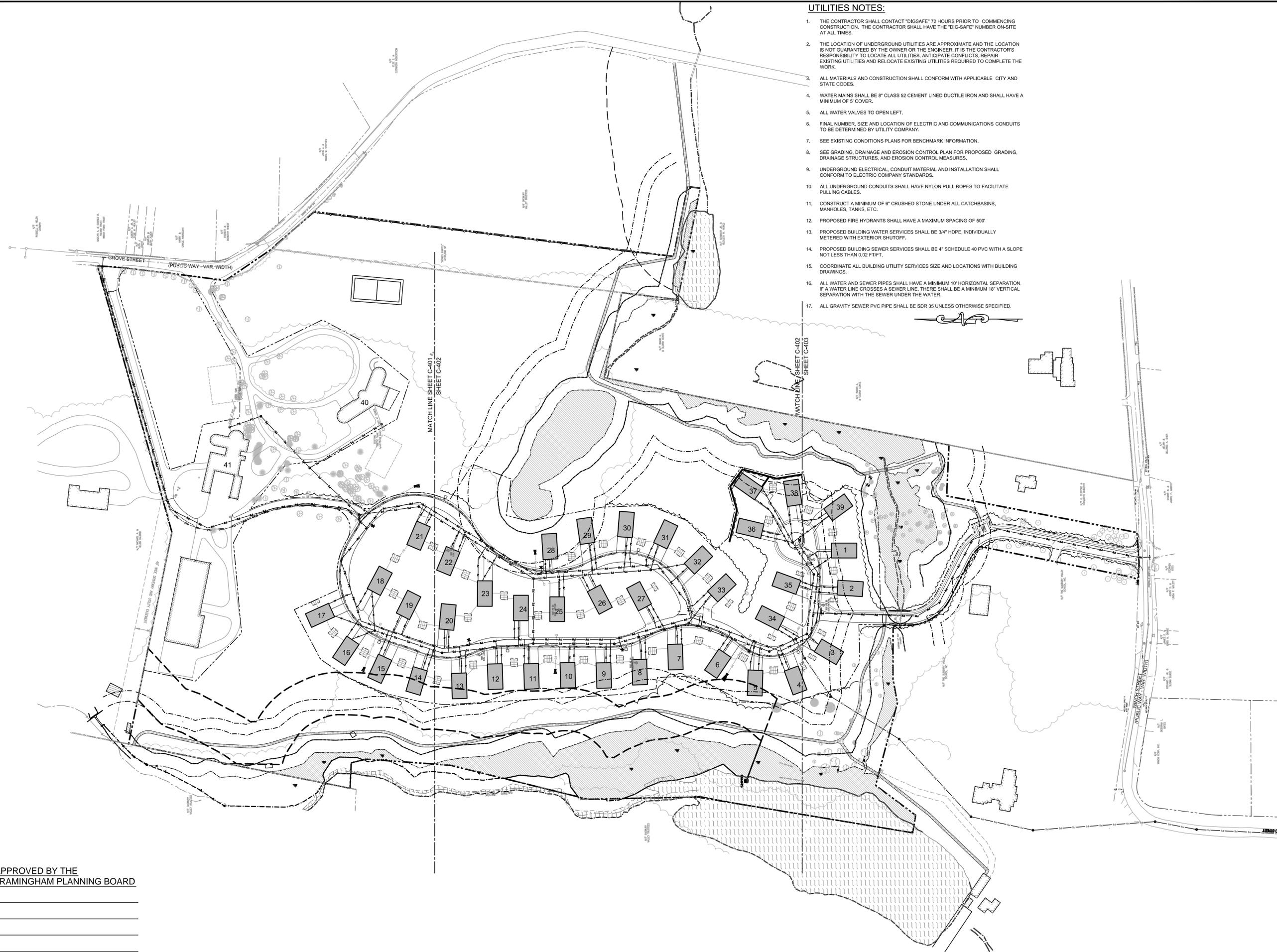
N/F STEPHEN FITTS

N/F STUART R. & JANICE P. ABBOTT

N/F MELVIN & DELORES K. SHER

UTILITIES NOTES:

1. THE CONTRACTOR SHALL CONTACT "DIGSAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON-SITE AT ALL TIMES.
2. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY AND STATE CODES.
4. WATER MAINS SHALL BE 8" CLASS 52 CEMENT LINED DUCTILE IRON AND SHALL HAVE A MINIMUM OF 6" COVER.
5. ALL WATER VALVES TO OPEN LEFT.
6. FINAL NUMBER, SIZE AND LOCATION OF ELECTRIC AND COMMUNICATIONS CONDUITS TO BE DETERMINED BY UTILITY COMPANY.
7. SEE EXISTING CONDITIONS PLANS FOR BENCHMARK INFORMATION.
8. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PROPOSED GRADING, DRAINAGE STRUCTURES, AND EROSION CONTROL MEASURES.
9. UNDERGROUND ELECTRICAL CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO ELECTRIC COMPANY STANDARDS.
10. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
11. CONSTRUCT A MINIMUM OF 6" CRUSHED STONE UNDER ALL CATCHBASINS, MANHOLES, TANKS, ETC.
12. PROPOSED FIRE HYDRANTS SHALL HAVE A MAXIMUM SPACING OF 500'
13. PROPOSED BUILDING WATER SERVICES SHALL BE 3/4" HDPE, INDIVIDUALLY METERED WITH EXTERIOR SHUTOFF.
14. PROPOSED BUILDING SEWER SERVICES SHALL BE 4" SCHEDULE 40 PVC WITH A SLOPE NOT LESS THAN 0.02 FT/FT.
15. COORDINATE ALL BUILDING UTILITY SERVICES SIZE AND LOCATIONS WITH BUILDING DRAWINGS.
16. ALL WATER AND SEWER PIPES SHALL HAVE A MINIMUM 10' HORIZONTAL SEPARATION. IF A WATER LINE CROSSES A SEWER LINE, THERE SHALL BE A MINIMUM 18" VERTICAL SEPARATION WITH THE SEWER UNDER THE WATER.
17. ALL GRAVITY SEWER PVC PIPE SHALL BE SDR 35 UNLESS OTHERWISE SPECIFIED.

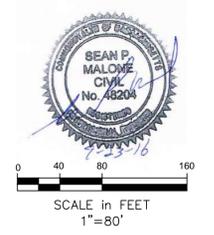


Site:
PARADISE VALLEY CLUB
 1060 GROVE STREET
 FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
 120 QUARRY DRIVE
 MILFORD, MASSACHUSETTS 01757

LEGEND

---	PROPERTY LINE
---	BORDERING VEGETATED WETLAND
---	EDGE OF PAVEMENT
---	DRAIN
---	SEWER
---	OVERHEAD WIRE
○	CATCH BASIN
○	DRAIN MANHOLE
○	SEWER MANHOLE
⊕	FIRE HYDRANT
⊕	GATE VALVE
○	UTILITY POLE
---	PROPOSED DRAIN
---	PROPOSED SEWER
---	PROPOSED WATER
---	PROPOSED UNDERGROUND ELECTRIC & COMMUNICATIONS
○	PROPOSED CATCH BASIN
○	PROPOSED DRAIN MANHOLE
○	PROPOSED SEWER MANHOLE
⊕	PROPOSED FIRE HYDRANT
⊕	PROPOSED GATE VALVE



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SITE UTILITIES PLAN

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

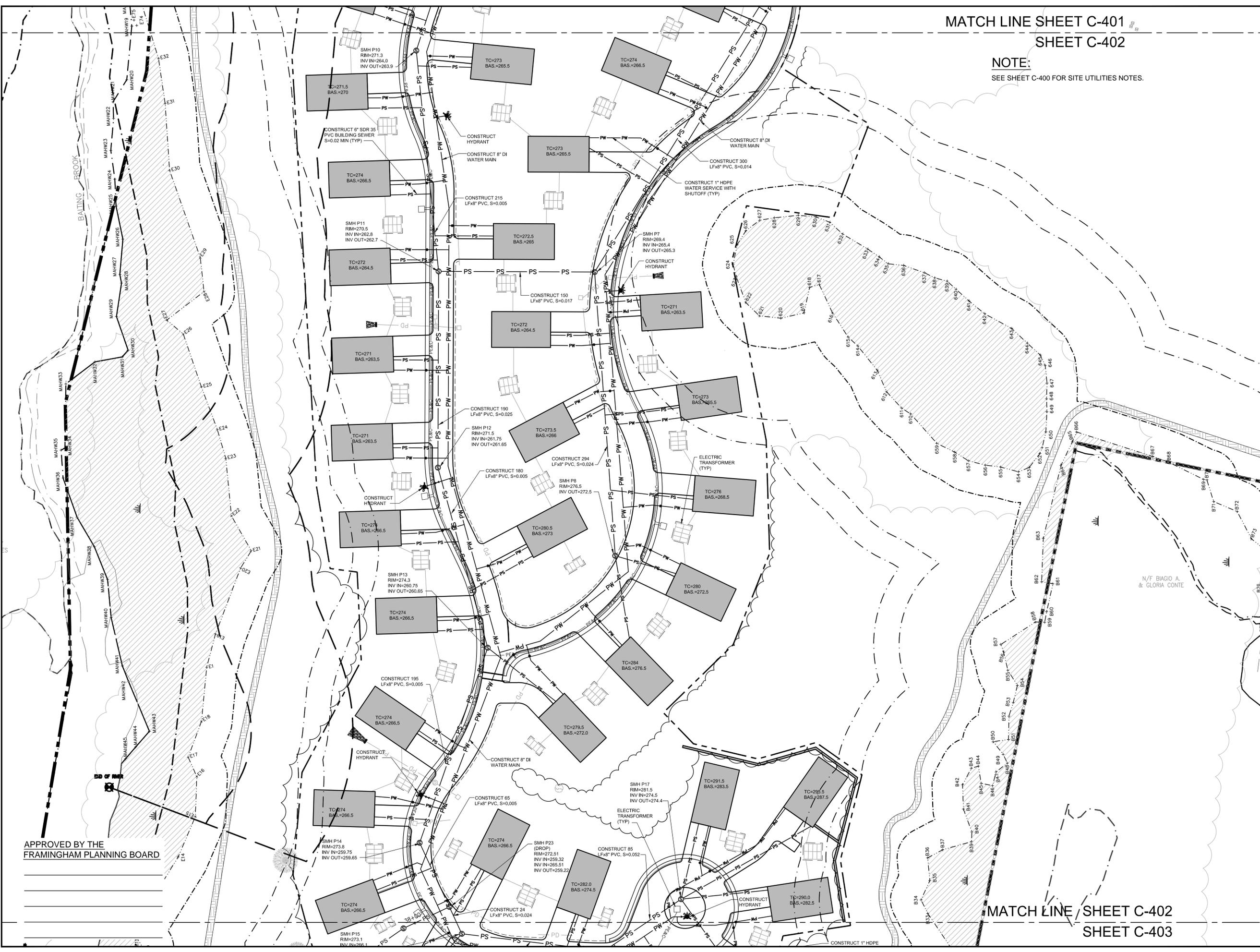
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Project: 13005	Date: December 8, 2015

Sheet: **C-400**

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MATCH LINE SHEET C-401
SHEET C-402

NOTE:
SEE SHEET C-400 FOR SITE UTILITIES NOTES.



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Site:
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FRAMINGHAM, MASSACHUSETTS

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LEGEND

- PROPERTY LINE
- BORDERING VEGETATED WETLAND
- EP EDGE OF PAVEMENT
- DRAIN
- SEWER
- WATER
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- PROPOSED SEWER MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE

SEAN P. MALONE
CIVIL
No. 45204

SCALE in FEET
1"=40'

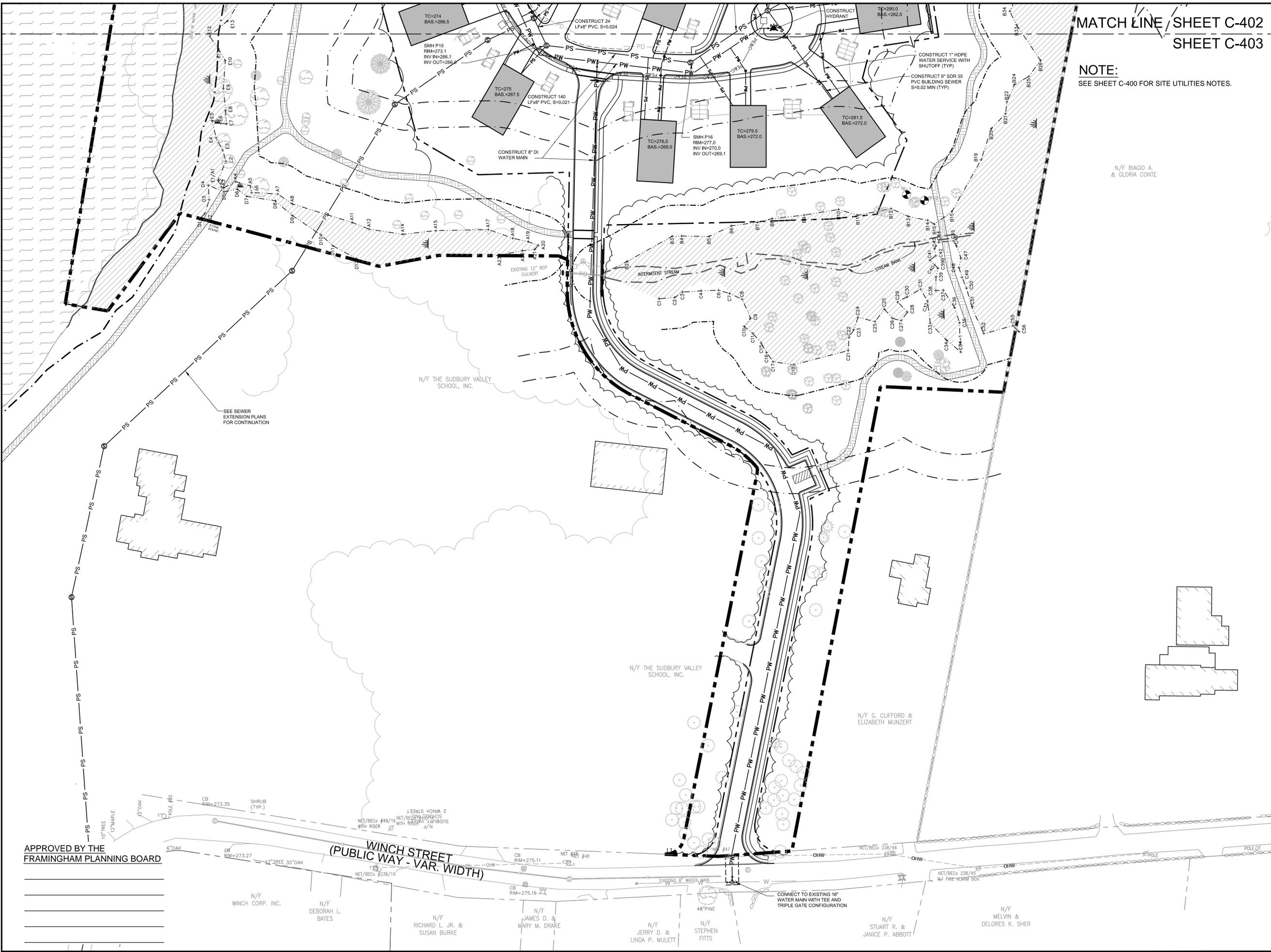
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SITE UTILITIES PLAN

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Project: 13005
Date: December 8, 2015
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MATCH LINE SHEET C-402
SHEET C-403



MATCH LINE SHEET C-402
SHEET C-403

NOTE:
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Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
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120 QUARRY DRIVE
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LEGEND

- ▲— PROPERTY LINE
- - - - - BORDERING VEGETATED WETLAND
- EP ——— EDGE OF PAVEMENT
- DRAIN
- SEWER
- W ——— WATER
- - - - - OVERHEAD WIRE
- CATCH BASIN
- ⊕ DRAIN MANHOLE
- ⊕ SEWER MANHOLE
- ⊕ FIRE HYDRANT
- ⊕ GATE VALVE
- ⊕ UTILITY POLE
- PD ——— PROPOSED DRAIN
- PS ——— PROPOSED SEWER
- PW ——— PROPOSED WATER
- PEAC ——— PROPOSED UNDERGROUND ELECTRIC & COMMUNICATIONS
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- ⊕ PROPOSED FIRE HYDRANT
- ⊕ PROPOSED GATE VALVE

SCALE in FEET
1" = 40'

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SITE UTILITIES PLAN

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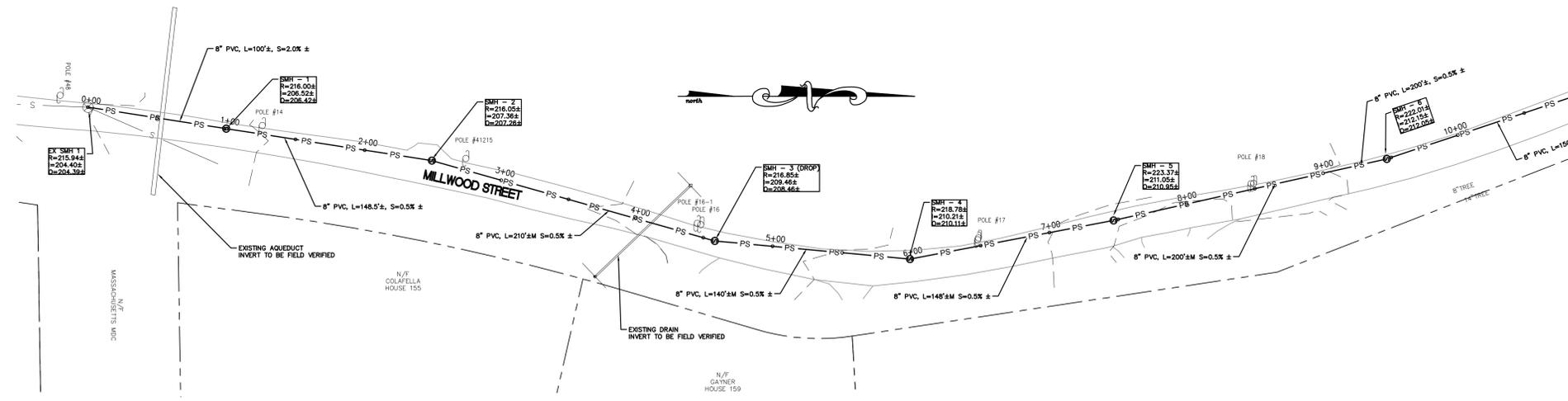
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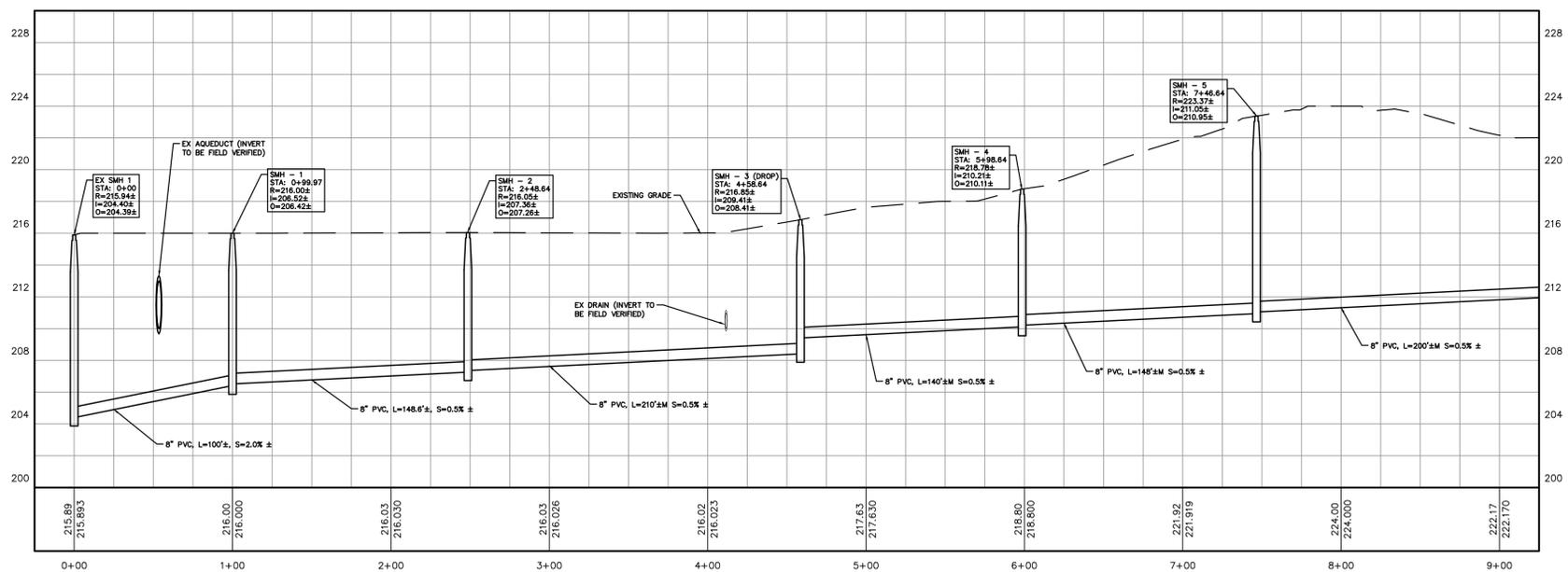
WINCH STREET
(PUBLIC WAY - VAR. WIDTH)

N/F WINCH CORP. INC. N/F DEBORAH L. BATES N/F RICHARD L. JR. & SUSAN BURKE N/F JAMES D. & MARY M. DRAKE N/F JERRY D. & LINDA P. MULETT N/F STEPHEN FITTS N/F STUART R. & JANICE P. ABBOTT N/F MELVIN & DELORES K. SHER

NOTE:
SEE SHEETS C-400 THROUGH 403 FOR SITE UTILITIES INFORMATION.



PLAN



PARADISE VALLEY CLUB SEWER EXTENSION PROFILE

SCALE: 1"=40'H AND 1"=10' V

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Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

- PROPERTY LINE
- - - - - BORDERING VEGETATED WETLAND
- EP --- EDGE OF PAVEMENT
- DRAIN
- SEWER
- W --- WATER
- - - - - OHW --- OVERHEAD WIRE
- CATCH BASIN
- ⊙ DRAIN MANHOLE
- ⊙ SEWER MANHOLE
- ⊙ FIRE HYDRANT
- ⊙ GATE VALVE
- ⊙ UTILITY POLE
- PD --- PROPOSED DRAIN
- PS --- PROPOSED SEWER
- PW --- PROPOSED WATER
- PE&C --- PROPOSED UNDERGROUND ELECTRIC & COMMUNICATIONS
- PROPOSED CATCH BASIN
- ⊙ PROPOSED DRAIN MANHOLE
- ⊙ PROPOSED SEWER MANHOLE
- ⊙ PROPOSED FIRE HYDRANT
- ⊙ PROPOSED GATE VALVE

0 20 40 80
SCALE in FEET
1" = 40'

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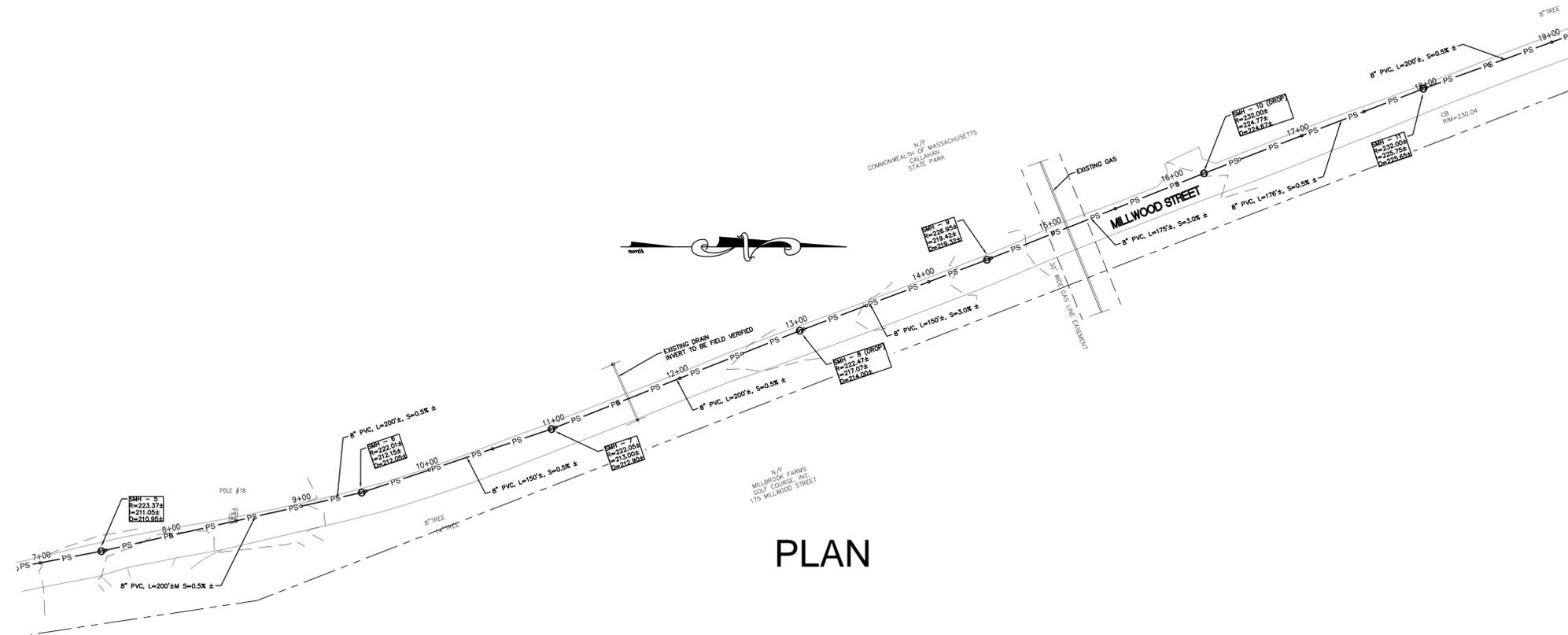
SEWER EXTENSION PLAN AND PROFILE

No.	Revision/Issue	Date
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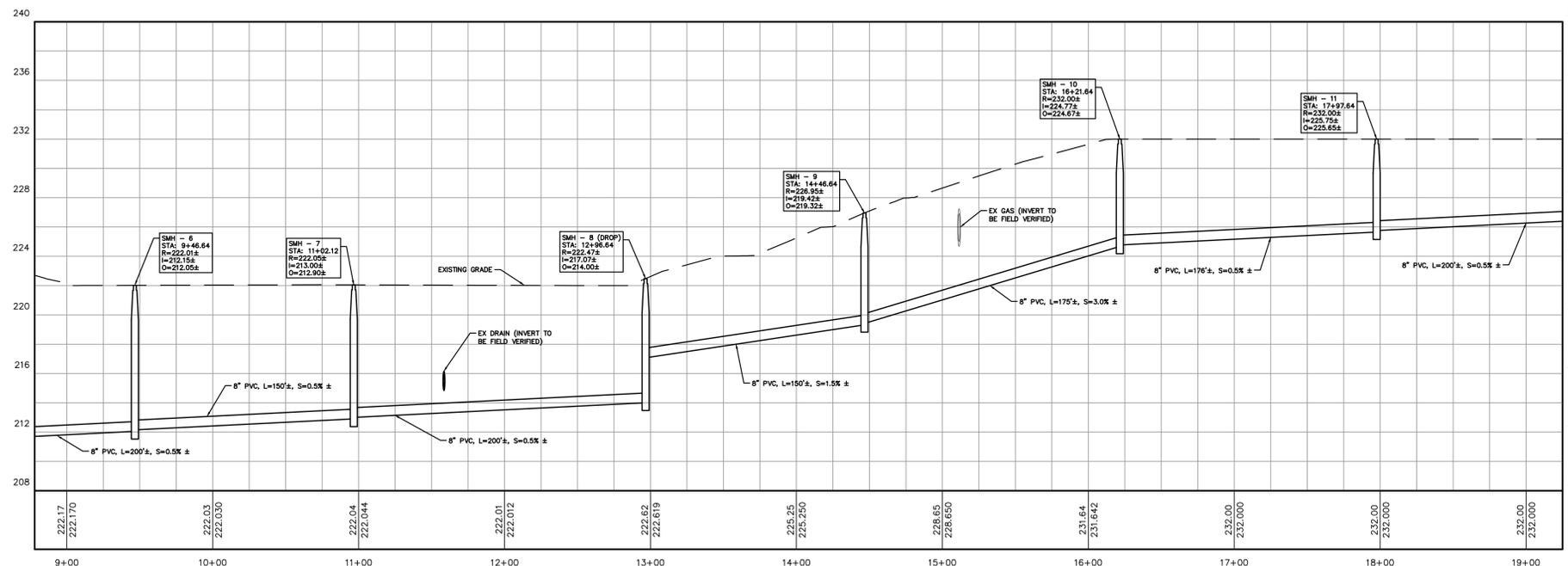
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Sheet:
C-404

NOTE:
SEE SHEETS C-400 THROUGH 403 FOR SITE UTILITIES INFORMATION.



PLAN



PARADISE VALLEY CLUB SEWER EXTENSION PROFILE

SCALE: 1"=40'H AND 1"=10' V

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Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

- PROPERTY LINE
- BORDERING VEGETATED WETLAND
- EP EDGE OF PAVEMENT
- DRAIN
- SEWER
- W WATER
- OHW OVERHEAD WIRE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
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0 20 40 80
SCALE in FEET
1"=40'

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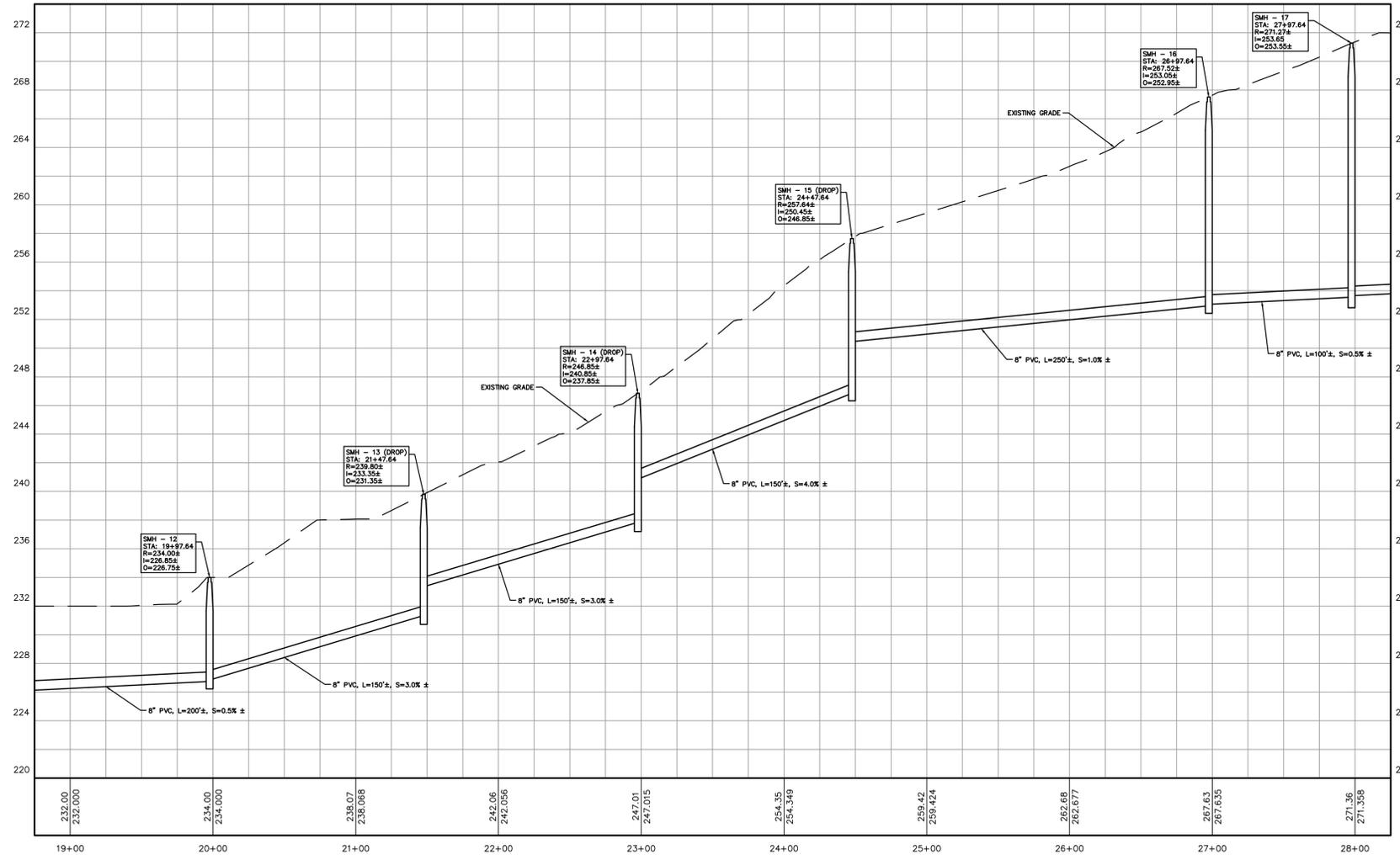
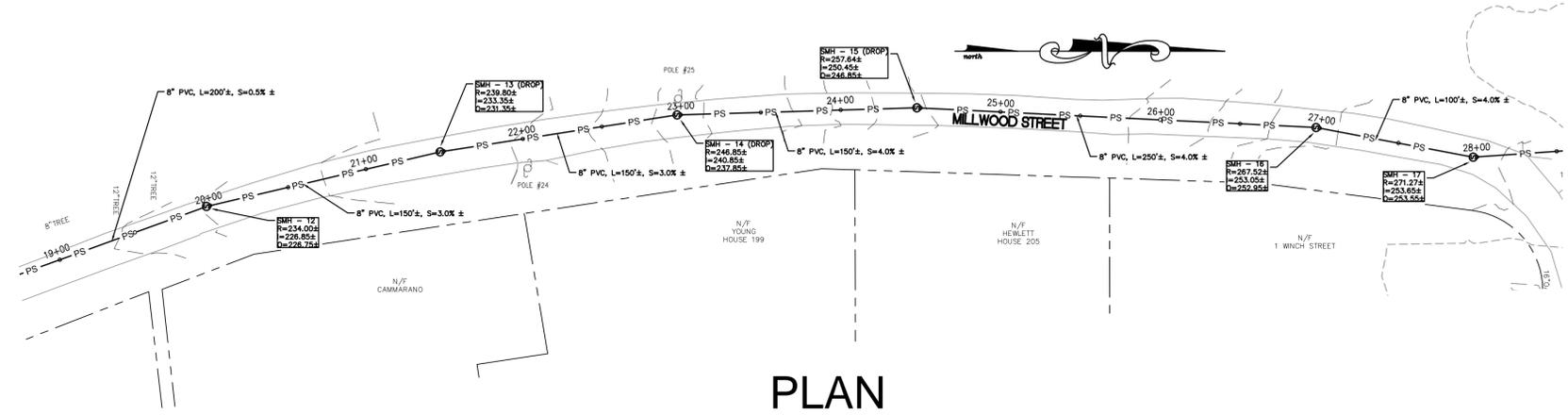
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C-405

NOTE:
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PARADISE VALLEY CLUB SEWER EXTENSION PROFILE
SCALE: 1"=40'H AND 1"=10' V

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Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
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120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

LEGEND

- PROPERTY LINE
- BORDERING VEGETATED WETLAND
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- DRAIN
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SCALE in FEET
1"=40'

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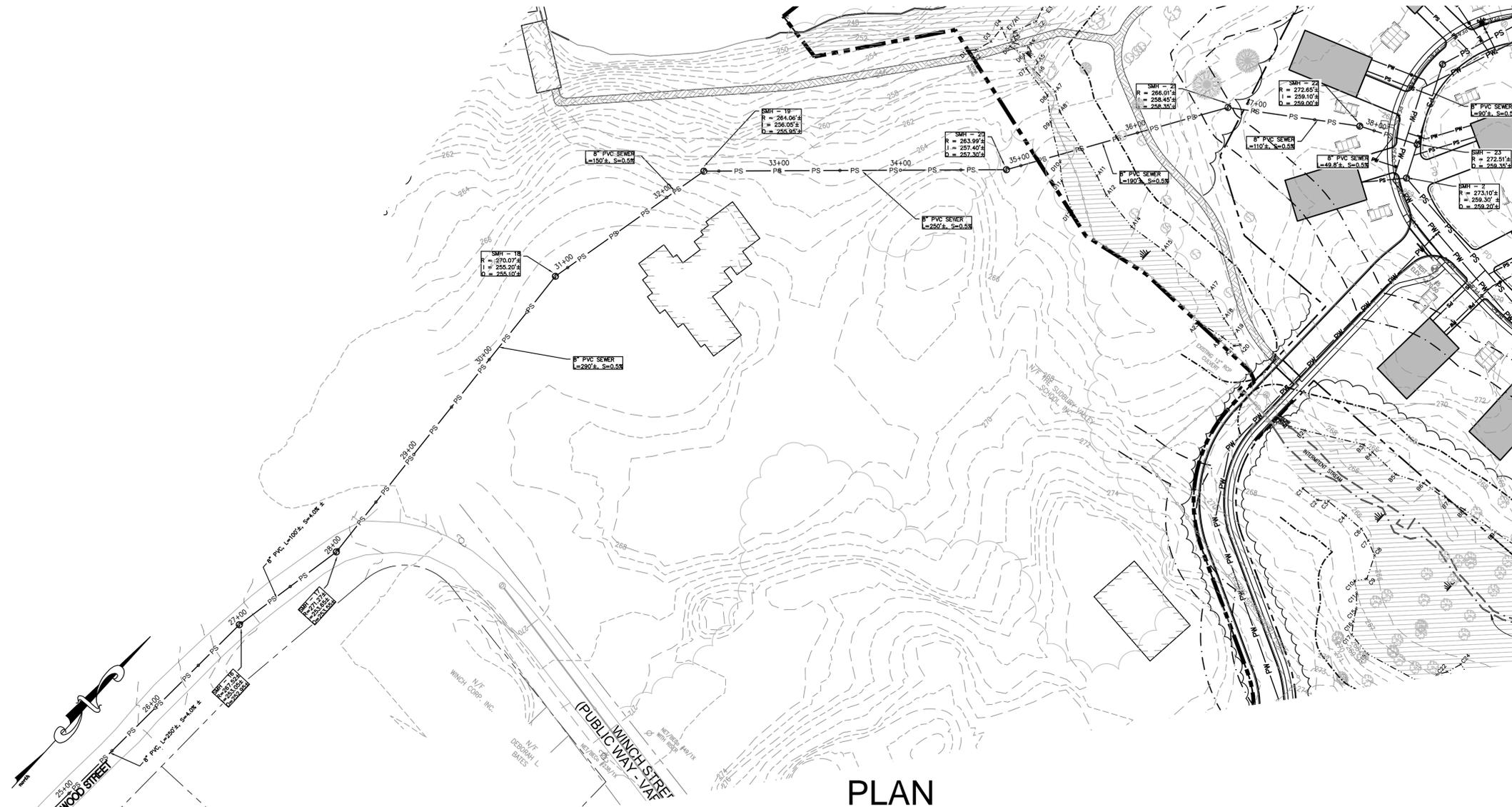
SEWER EXTENSION PLAN AND PROFILE

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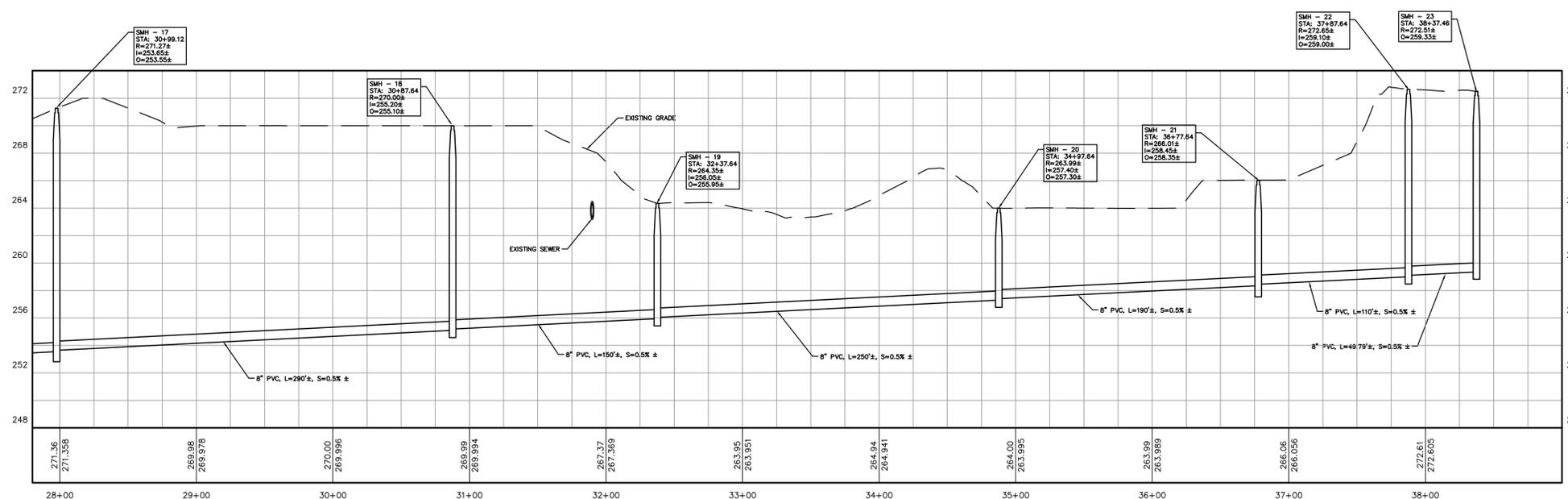
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Project: 13005	Date: December 8, 2015

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C-406

NOTE:
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PLAN



PARADISE VALLEY CLUB SEWER EXTENSION PROFILE

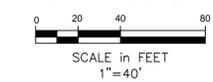
SCALE: 1"=40'H AND 1"=10' V

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Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757

- LEGEND**
- PROPERTY LINE
 - - - - - BORDERING VEGETATED WETLAND
 - EP ----- EDGE OF PAVEMENT
 - DRAIN
 - SEWER
 - W ----- WATER
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EXTENSION SEWER PLAN AND PROFILE

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Project: 13005	Date: December 8, 2015

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PROJECT NAME AND LOCATION

PARADISE VALLEY CLUB
FRAMINGHAM, MASSACHUSETTS

DESCRIPTION

THE PROJECT CONSISTS OF DEVELOPING AN EXISTING RESIDENTIAL PROPERTY AND HORSE FARM TO A OPEN SPACE PRESERVATION DEVELOPMENT.

SOIL CHARACTERISTICS

THE EXISTING SITE IS PRESENTLY PREDOMINANTLY PASTURE WITH SOME NATIVE VEGETATION. THE UNDERLYING SOILS VARY.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 14 ACRES.

SEQUENCE OF MAJOR ACTIVITIES

- 1. INSTALL EROSION CONTROLS. CLEAR AND GRUB SITE.
2. CLEARING AND GRUBBING. STRIP AND STOCKPILE TOPSOILS.
3. ROUGH GRADE SITE. CONSTRUCT STORMWATER SYSTEM PROTECT INFILTRATION AREAS FROM SEDIMENTATION.
4. CONSTRUCT MAIN ROADWAYS AND UTILITIES.
5. CONSTRUCT BUILDINGS AND DRIVES WITH BUILDING UTILITIES.
6. CONSTRUCT LANDSCAPING.
7. REMOVE EROSION CONTROLS.

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES

STABILIZATION: AN AREA SHALL BE CONSIDERED STABILIZED ONCE ONE OF THE FOLLOWING HAS OCCURRED:

- A. A MINIMUM OF 85% VEGETATIVE GROWTH HAS BEEN ESTABLISHED
B. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED
C. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES AND DISTURBED AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR MORE THAN THIRTY (30) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 60 DAYS OF INITIAL DISTURBANCE. ALL CUT AND FILL SLOPES AND ROADWAYS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING GRADE. STABILIZATION MEASURES TO BE USED INCLUDE:

- A. TEMPORARY SEEDING.
B. MULCHING.
C. STONE RIP RAP.
D. JUTE MATTING.

DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH HAY BALE BARRIERS AND/OR SILT FENCES. ALL STORM DRAIN INLETS SHALL BE PROVIDED WITH BARRIER FILTERS. ALL CATCH BASINS WILL BE COVERED WITH A GEOTEXTILE FABRIC PRIOR TO THE BASE PAVEMENT COURSE BEING PLACED.

OFF SITE VEHICLE TRACKING

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL EGRESSES TO THE SITE AND MAINTAINED FOR THE DURATION OF CONSTRUCTION.

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES THE AND SILT FENCES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING OR GRADING OF THE SITE. STRUCTURAL CONTROLS SHALL BE INSTALLED CONCURRENTLY WITH THE APPLICABLE ACTIVITY. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN THIRTY (30) DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN FOURTEEN (14) DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, SILT FENCES AND HAY BALE BARRIERS AND ANY EARTHDIKES WILL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

GENERAL

INSPECTION

- 1. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER.
2. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
3. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.

MAINTENANCE

- 1. STABILIZATION OF ALL SWALES, DITCHES AND PONDS IS REQUIRED PRIOR TO DIRECTING FLOW TO THEM.
2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
3. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE OR HAY BALE BARRIERS WHEN IT HAS REACHED ONE THIRD THE HEIGHT OF THE FENCE OR BALE.
4. ALL DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
5. TEMPORARY SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND UNHEALTHY GROWTH.

FILTERS

DISTURBED CONTRIBUTING AREA SHOULD NOT EXCEED 0.25 ACRES PER 100 LINEAR FEET OF FILTER BARRIER.

1. STRAWHAY BALES

A. SHEET FLOW APPLICATIONS

- 1. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
2. ALL BALES SHALL BE EITHER WIRE-BOUND OR STRIP-TIED. BALES SHALL BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES TO PREVENT DETRIORATION OF THE BINDINGS.
3. THE BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR (4) INCHES. AFTER THE BALES ARE STAKED AND CHINKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHALL BE BUILT UP TO FOUR (4) INCHES AGAINST THE UPHILL SIDE OF THE BARRIER. IDEALLY, BALES SHOULD BE PLACED TEN (10) FEET AWAY FROM THE TOE OF SLOPE.
4. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES OR REBARS DRIVEN THROUGH THE BALE. THE FIRST SIAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES OR REBARS SHALL BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES.
5. THE GAPS BETWEEN BALES SHALL BE CHINKED (FILLED) BY WEDGING) WITH STRAWHAY TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES.

2. SILT FENCE

SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

Table with 3 columns: PHYSICAL PROPERTY, TEST, REQUIREMENTS. Rows include Filtering Efficiency, Tensile Strength, and Flow Rate.

SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX (6) MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES F TO 120 DEGREES F.
B. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED THIRTY-SIX (36) INCHES.
C. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPICED TOGETHER ONLY AT SUPPORT POST, WITH A MINIMUM SIX (6) INCH OVERLAP, AND SECURELY SEALED.

- D. POSTS SHALL BE SPACED A MAXIMUM OF TEN (10) FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 16 INCHES).
E. A TRENCH SHALL BE EXCAVATED APPROXIMATELY SIX (6) INCHES WIDE AND SIX (6) INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
F. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST ONE (1) INCH LONG, THE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND NO MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACES.
G. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND EIGHT (8) INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING...
H. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ITEM (G) APPLYING.
I. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
J. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAS BEEN PERMANENTLY STABILIZED.

- 3. SEQUENCE OF INSTALLATION
SEDMIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
4. MAINTENANCE
A. STRAWHAY BALE BARRIER AND SILT FENCE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THEY SHALL BE REPAIRED IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.
B. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
C. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD (1/3) THE HEIGHT OF THE BARRIER.
D. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

IN ORDER FOR MULCH TO BE EFFECTIVE, IT MUST BE IN PLACE PRIOR TO MAJOR STORM EVENTS. THERE ARE TWO (2) TYPES OF STANDARDS WHICH SHALL BE USED TO ASSURE THIS.

- A. APPLY MULCH PRIOR TO ANY STORM EVENT. THIS IS APPLICABLE WHEN WORKING WITHIN 100 FEET OF WETLANDS. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS, USUALLY BY CONTACTING THE NATIONAL WEATHER SERVICE IN CONCORD, TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
B. REQUIRED MULCHING WITHIN A SPECIFIED TIME PERIOD. THE TIME PERIOD CAN RANGE FROM 14 TO 21 DAYS OF INACTIVITY ON A AREA, AND THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. SOIL JUDGMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES, ETC.) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION.
2. GUIDELINES FOR WINTER MULCH APPLICATION.

WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER WINTER (PAST THE GROWING SEASON) IT SHALL BE AT A RATE OF 6,000 POUNDS OF HAY OR STRAW PER ACRE. A TACKIFIER MAY BE ADDED TO THE MULCH.

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED.

FOR PERMANENT MEASURES AND PLANTINGS FROM EARLY SPRING TO SEPTEMBER 30:

AFTER ROUGH GRADING OF THE SUBGRADE HAS BEEN COMPLETED AND APPROVED, THE SUB GRADE SURFACE SHALL BE SCARIFIED TO A DEPTH OF FOUR INCHES. THEN FURNISH AND INSTALL A LAYER OF LOAM PROVIDING A ROLLED FOUR INCH THICKNESS. ANY DEPRESSIONS WHICH MAY OCCUR DURING ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM, REGRADED AND REROLLED UNTIL THE SURFACE IS TRUE TO THE FINISHED LINES AND GRADES. ALL LOAM NECESSARY TO COMPLETE THE WORK UNDER THIS SECTION SHALL BE SUPPLIED BY THE SITE SUBCONTRACTOR.

ALL LARGE STIFF CLOUDS, LUMPS, BRUSH, ROOTS, DEBRIS, GLASS, STUMPS, LITTER AND OTHER FOREIGN MATERIAL AS WELL AS STONES OVER ONE INCH IN DIAMETER SHALL BE REMOVED FROM THE LOAM AND DISPOSED OF OFF SITE, AND THE LOAM SHALL BE RAKED SMOOTH AND EVEN.

THE LOAM SHALL BE PREPARED TO RECEIVE SEED BY REMOVING STONES, FOREIGN OBJECTS AND GRADINGS TO ELIMINATE WATER POCKETS AND IRREGULARITIES PRIOR TO PLACING SEED. FINISH GRADING SHALL RESULT IN STRAIGHT UNIFORM GRADES AND SMOOTH, EVEN SURFACES WITHOUT IRREGULARITIES TO LOW POINTS.

SHAPE THE AREAS TO THE LINES AND GRADES REQUIRED. THE SITE SUBCONTRACTOR'S ATTENTION IS DIRECTED TO THE SCHEDULING OF LOAMING AND SEEDING OF GRADED AREAS TO PERMIT SUFFICIENT TIME FOR THE STABILIZATION OF THESE AREAS. IT SHALL BE THE SITE SUBCONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE AREAS DURING THE CONSTRUCTION PERIOD AND REGRADE, LOAM AND RESEED ANY DAMAGED AREAS.

ALL AREAS DISTURBED BY CONSTRUCTION WITHIN THE PROPERTY LINES AND NOT COVERED BY STRUCTURES, PAVEMENT, OR MULCH SHALL BE LOAMED AND SEEDED. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 2 TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5.

IF REQUIRED, FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 50 POUNDS PER ACRE OF 10-20-20 FERTILIZER. USE OF FERTILIZER SHOULD BE AVOIDED IN INFILTRATION AREAS.

SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4 1/2 POUNDS AND 5 1/2 POUNDS PER INCH OF WIDTH.

SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH.

HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AT A RATE OF 1.5 TO 2 TONS PER ACRE. MULCH THAT BLOWS OR WASHES AWAY SHALL BE REPLACED IMMEDIATELY AND ANCHORED USING APPROPRIATE TECHNIQUES FROM THE EROSION AND SEDIMENT CONTROL HANDBOOK.

THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.

THE SITE SUBCONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED, INCLUDING CUTTING, AS SPECIFIED HEREIN AFTER UNDER MAINTENANCE AND PROTECTION.

UNLESS OTHERWISE APPROVED, SEEDING SHALL BE DONE DURING THE APPROXIMATE PERIODS OF EARLY SPRING TO SEPTEMBER 30, WHEN SOIL CONDITIONS AND WEATHER ARE SUITABLE FOR SUCH WORK.

Table with 3 columns: GENERAL COVER, CREeping RED FESCUE, KENTUCKY BLUE GRASS. Rows include POUNDS PER ACRE, GERMINATION, PURITY, and SLOPE SEED.

IN NO CASE SHALL THE WEED CONTENT EXCEED 1 PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS.

FOR TEMPORARY PLANTINGS AFTER SEPTEMBER TO EARLY SPRING AND FOR TEMPORARY PROTECTION OF DISTURBED AREAS:

- O FOLLOW UP ABOVE SLOPE, LOAM DEPTH AND GRADING REQUIREMENTS.
O FERTILIZER SHALL BE SPREAD AND WORKED INTO THE SURFACE AT A RATE OF 300 POUNDS PER ACRE.
O MULCHING AND SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES: WINTER RYE (FALL SEEDING) 2.5 LBS/1,000 S.F., OATS (SPRING SEEDING) 2 LBS/1,000 S.F., MULCH 1.5 TONS/ACRE

STABILIZED CONSTRUCTION ENTRANCE

1. SPECIFICATIONS

- A. AGGREGATE SIZE: USE TWO (2) INCHES STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
B. AGGREGATE THICKNESS: NOT LESS THAN SIX (6) INCHES.
C. WIDTH: TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS.
D. LENGTH: AS REQUIRED, BUT NOT LESS THAN FIFTY (50) FEET.
E. GEOTEXTILE: TO BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.

2. MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

WASTE DISPOSAL

A. WASTE MATERIALS

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.

B. HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.

C. SANITARY WASTE

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

ADDITIONAL NOTES FOR WINTER CONSTRUCTION

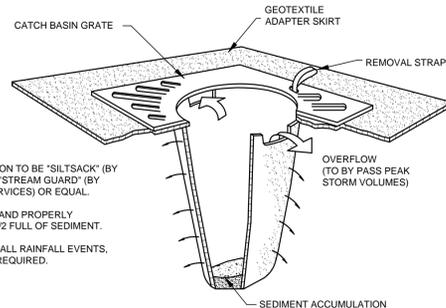
A) ALL PROPOSED POST-DEVELOPMENT LANDSCAPED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1 AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND.

B) ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

C) AFTER NOVEMBER 15TH, ALL TRAVEL SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOWFALL AFTER EACH STORM EVENT.

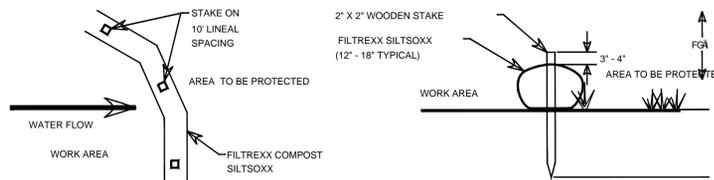
DUST CONTROL

A. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL METHODS SHALL INCLUDE, BUT NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ADJUTING AREAS.



INLET PROTECTION BARRIER

NOT TO SCALE

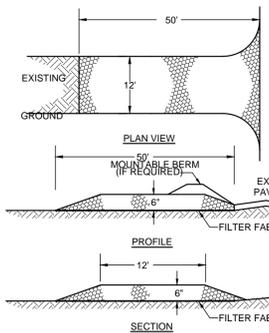


NOTES:

- 1. ALL MATERIAL TO MEET FILTERXX SPECIFICATIONS
2. SILT/XXX COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. SILT/XXX SHALL BE INSTALLED PERPENDICULAR TO THE SLOPE AND PER MANUFACTURER'S RECOMMENDATIONS
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

SEDIMENTATION BARRIER

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

- STONE SIZE - SEE GRADATION TABLE
LENGTH - 50 FOOT MINIMUM.
THICKNESS - SIX (6) INCHES (MINIMUM).
WIDTH - 12' MINIMUM
FILTER FABRIC - MIRAFI 600X OR APPROVED EQUAL.

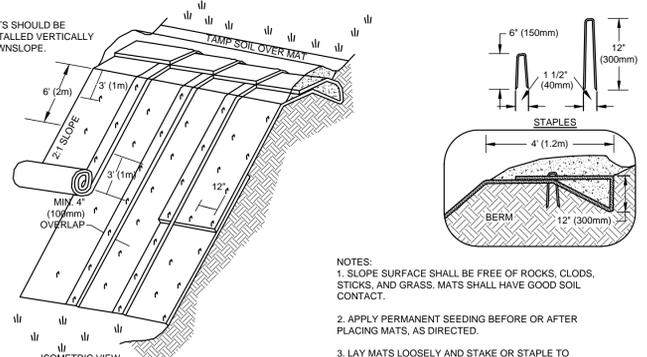
INSTALLATION - THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. A ROAD STABILIZATION FILTER CLOTH CAN BE PLACED ON THE SUBGRADE PRIOR TO THE GRAVEL PLACEMENT TO PREVENT PUMPING. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS.

MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

Table with 2 columns: SIEVE SIZE, % PASSING BY WEIGHT. Rows include 2 inches, 1 1/2 inches, 3/4 inch, 3/8 inch.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:

- 1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS, AND GRASS. MATS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE OR AFTER PLACING MATS, AS DIRECTED.
3. LAY MATS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

EROSION CONTROL MATTING

NOT TO SCALE

Site:

PARADISE VALLEY CLUB

1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:

BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757



OCG

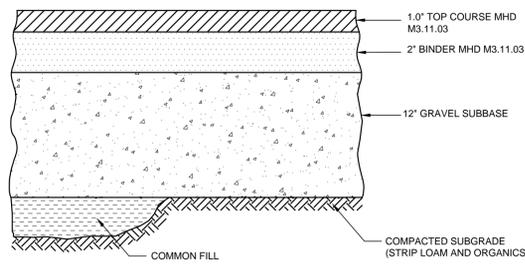
Oak Consulting Group
P.O. Box 1123
Newburyport, MA 01950
Ph. 978.312.3120

EROSION CONTROL NOTES & DETAILS

Table with 3 columns: No., Revision/Issue, Date. Rows include General Revisions and Revised Sewer.

Table with 2 columns: Design by, Checked by; Drawn by, Approved by; Project, Date.

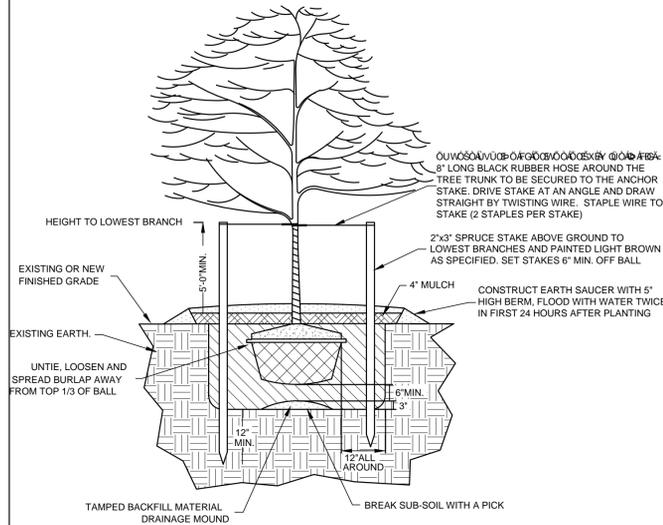
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NOTE:
 1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
 2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.

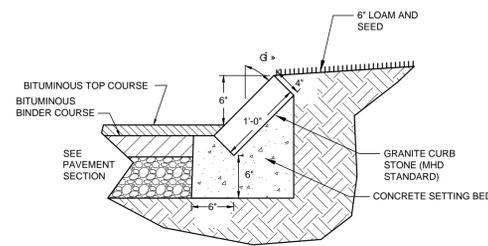
TYPICAL PAVEMENT SECTION

NOT TO SCALE



TYPICAL PLANTING DETAIL

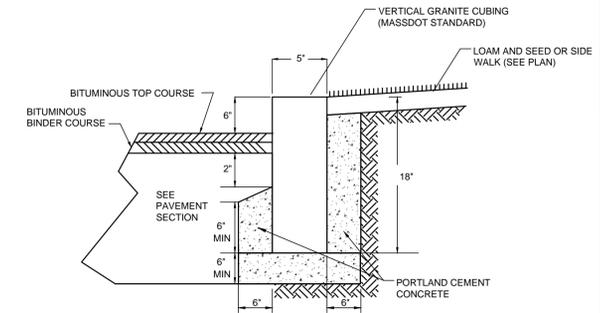
NOT TO SCALE



NOTES:
 1. CONCRETE TO BE 4,000 PSI.
 2. MORTAR ALL GAPS BETWEEN CURB STONES

SLOPED GRANITE CURB

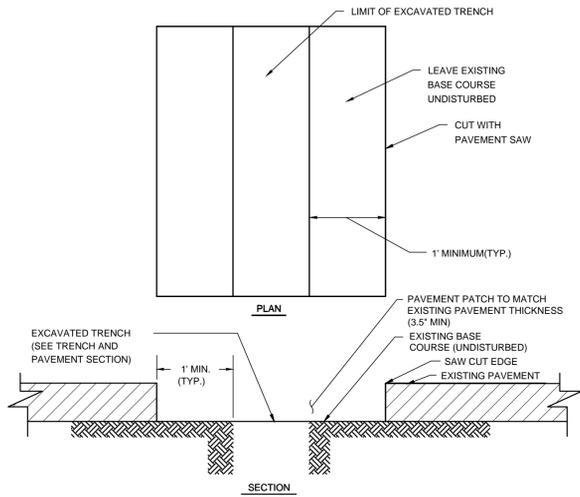
NOT TO SCALE



NOTES:
 1. CONCRETE TO BE 4,000 PSI.
 2. ALL RADI 5\"/>

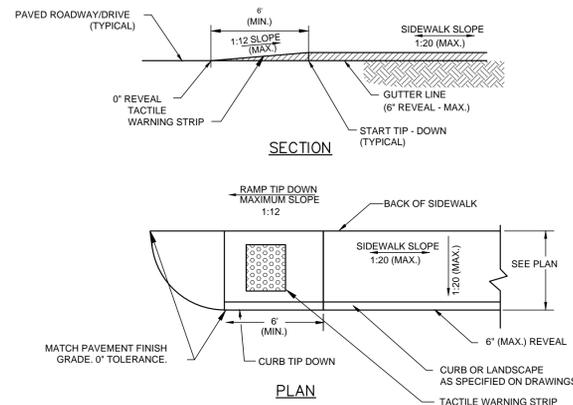
GRANITE CURB

NOT TO SCALE



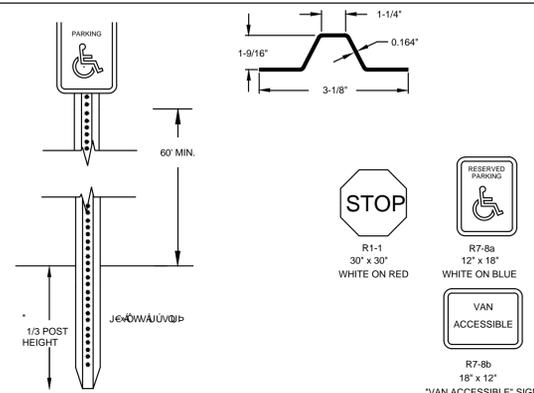
TRENCH PATCH

NOT TO SCALE



SIDEWALK TIP DOWN RAMP

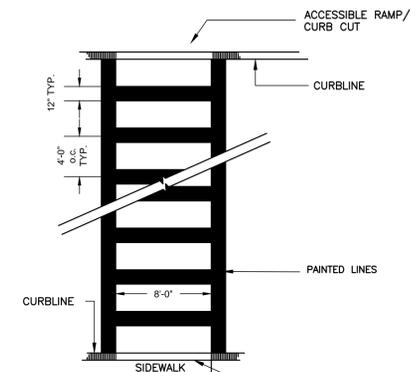
NOT TO SCALE



NOTE:
 ALL SIGNS TO BE INSTALLED AS INDICATED
 LENGTH: AS REQUIRED
 WEIGHT PER LINEAR FOOT: 250 LBS (MIN)
 HOLES: 3/8\"/>

SIGN POST AND LEGEND

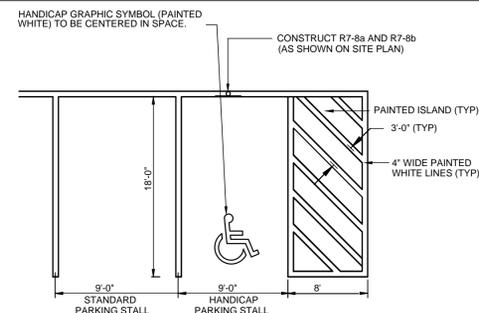
NOT TO SCALE



NOTES:
 1.) THIS DETAIL IS A GENERAL CROSSWALK DETAIL. CONTRACTOR SHALL MATCH CROSSWALKS TO THE TOWN OF FRAMINGHAM STANDARD WITH SAME COLORS, LINE WIDTHS AND SIZES.
 2.) ALL PAINT USED SHALL BE TRAFFIC PAINT.

CROSSWALK DETAIL

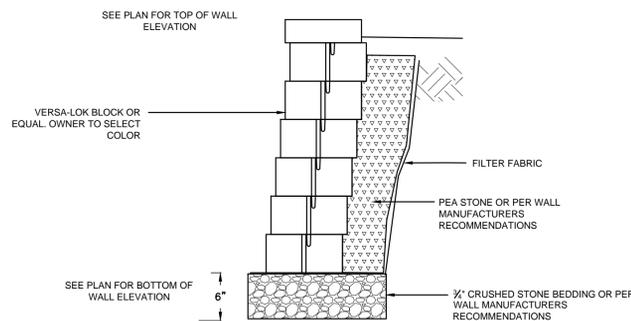
NOT TO SCALE



NOTE:
 1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE N. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
 2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT.

PARKING STALL STRIPING

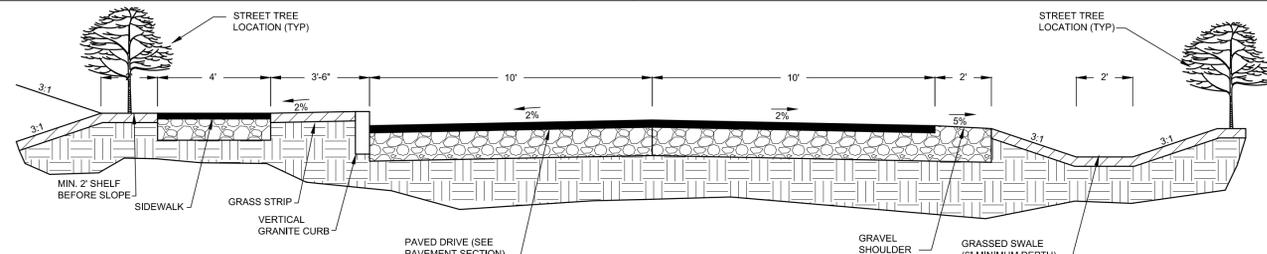
NOT TO SCALE



NOTES:
 1. THE INTENT IS TO USE A MANUFACTURED PROPRIETARY WALL SYSTEM. THE CONTRACTOR SHALL SUPPLY A WALL DESIGN BY THE MANUFACTURER AND STAMPED BY A MASSACHUSETTS PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.

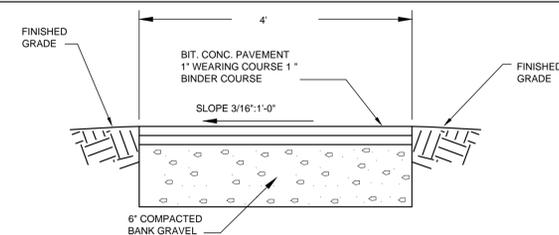
INTERLOCKING SMALL BLOCK WALL

NOT TO SCALE



TYPICAL STREET SECTION

NOT TO SCALE



TYPICAL SIDEWALK SECTION

NOT TO SCALE

Site:
PARADISE VALLEY CLUB
 1060 GROVE STREET
 FRAMINGHAM, MASSACHUSETTS
 Prepared for:
BENCHMARK ENGINEERING CORP.
 120 QUARRY DRIVE
 MILFORD, MASSACHUSETTS 01757



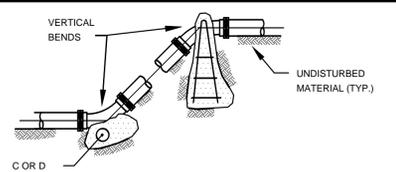
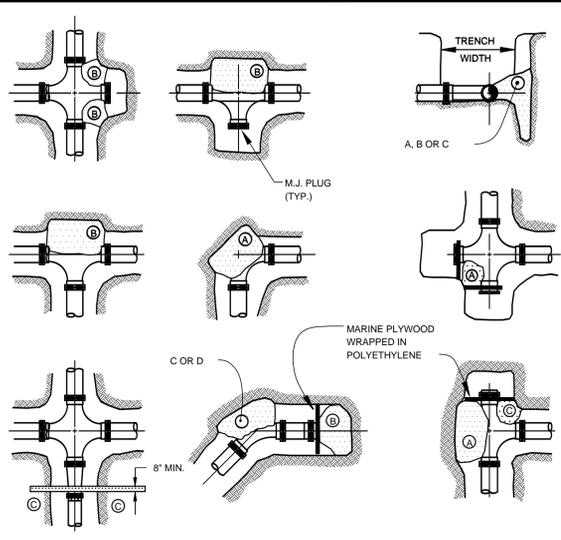
OCG
 Oak Consulting Group
 P.O. Box 1123
 Newburyport, MA 01950
 Ph. 978.312.3120

SITE DETAILS PLAN

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISION SEWER	6/27/16

Design by:	SPM	Checked by:	PFA
Drawn by:	SPM	Approved by:	PFA
Project:	13005	Date:	December 8, 2015

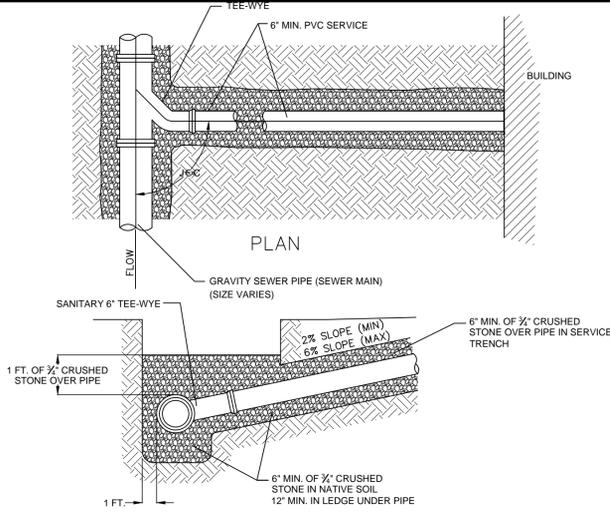
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C-501



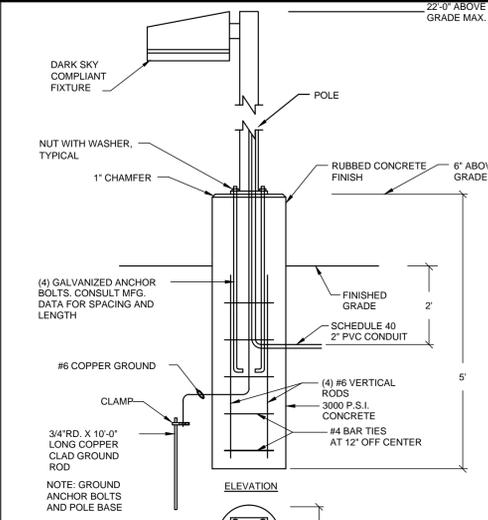
REACTION TYPE	PIPE SIZE				
	4"	6"	8"	10"	12"
CONCRETE	0.89	2.19	3.82	11.14	17.24
STEEL	0.65	1.55	2.78	8.38	12.00
ALUMINUM	0.48	1.19	2.12	6.02	9.32
PLASTIC	0.25	0.60	1.06	3.08	4.74
GLASS	0.13	0.30	0.54	1.54	2.38

- NOTES:
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
 - ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 - PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
 - WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLANDS MUST BE USED, GRIP RING, MEGA-LUG OR STAR GRIP

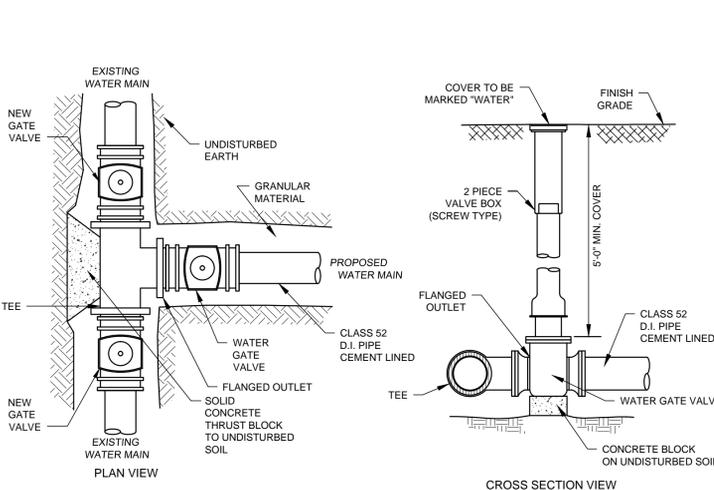
THRUST BLOCKS
NOT TO SCALE



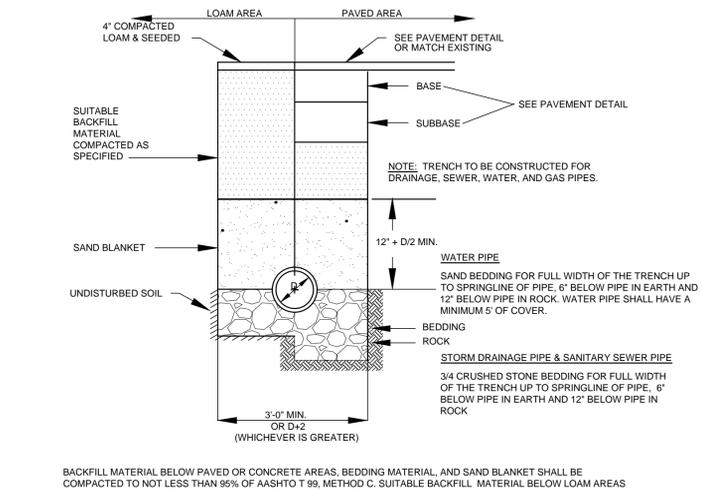
SEWER CONNECTION
NOT TO SCALE



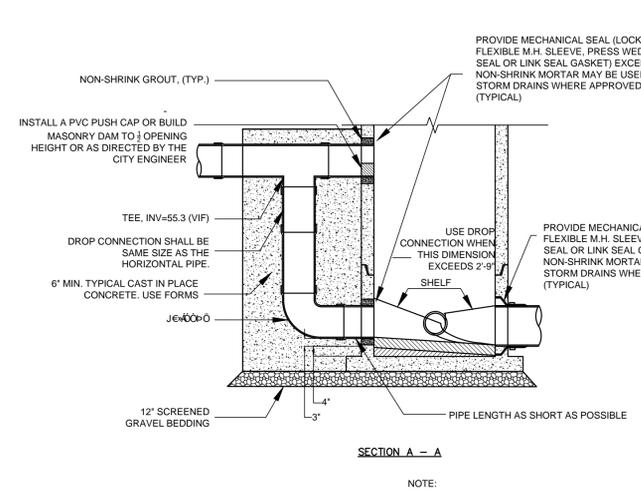
TYPICAL SITE LIGHT
NOT TO SCALE



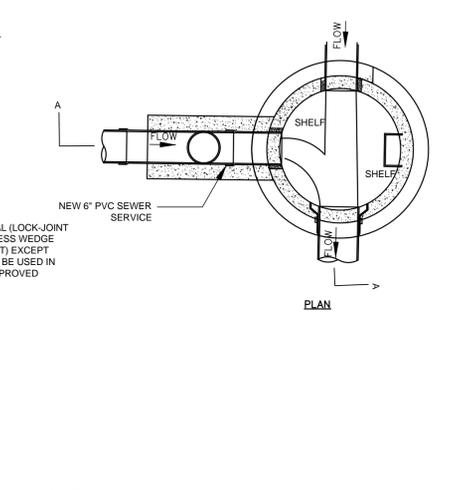
CONNECT TO EXISTING WATER MAIN
NOT TO SCALE



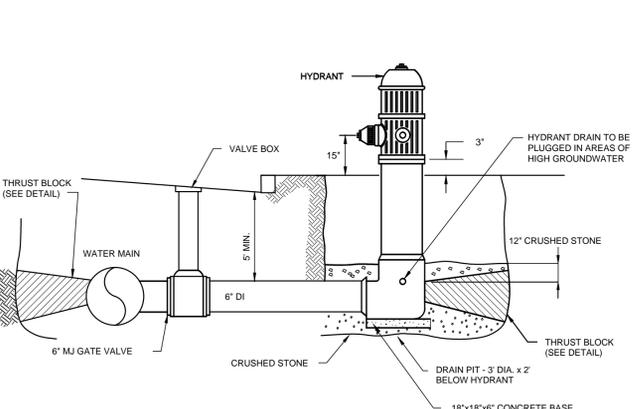
UTILITY TRENCH
NOT TO SCALE



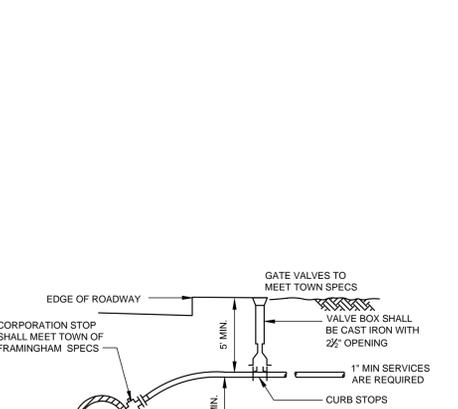
DROP INLET SEWER CONNECTION
NOT TO SCALE



TYPICAL SEWER MANHOLE
NOT TO SCALE



FIRE HYDRANT
NOT TO SCALE



WATER SERVICE CONNECTION
NOT TO SCALE

APPROVED BY THE
FRAMINGHAM PLANNING BOARD

Site:
PARADISE VALLEY CLUB
1060 GROVE STREET
FRAMINGHAM, MASSACHUSETTS

Prepared for:
BENCHMARK ENGINEERING CORP.
120 QUARRY DRIVE
MILFORD, MASSACHUSETTS 01757



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SITE DETAILS PLAN

No.	Revision/Issue	Date
2	GENERAL REVISIONS	9/23/16
1	REVISED SEWER	6/27/16

Design by: SPM
Checked by: PFA
Drawn by: SPM
Approved by: PFA
Project: 13005
Date: December 8, 2015

Sheet:
C-502

