Article 17. Concord-Carlisle Regional School District Landfill Remediation

ARTICLE 17. Ms. Boynton moves that: the Town will vote to approve $1,200,000, or any other sum, of debt authorized by the Concord-Carlisle Regional School Committee for landfill remediation; provided, however, that this approval shall be contingent upon passage of a Proposition 2 1/2, debt exclusion referendum under General Laws Chapter 59, §21C(k); to exempt the Town's allocable share of the amounts required for the payment of interest and principal on said borrowing; or take any other action relative thereto.

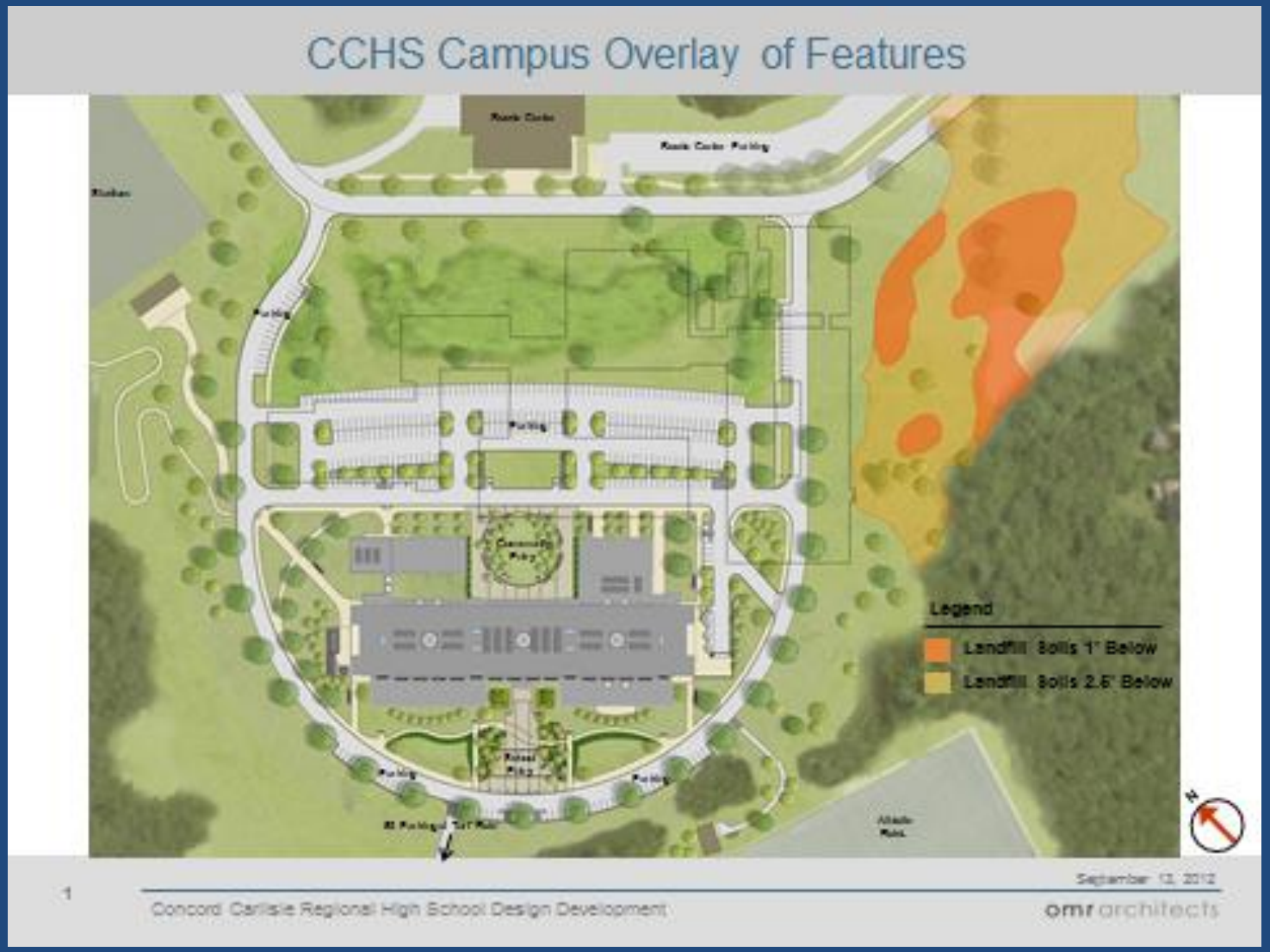
Article 17. Concord-Carlisle Regional School District Landfill Remediation

Article 17:

- addresses the required landfill remediation at CCHS know at DEP as, "Concord-Carlisle High School Eastern Parking Lot"
- provides for Concord's share of the remediation cost *(FY18 73.51%)*

- Cost to be assessed annually over a 10 year period
- Estimated annual tax impact – approximately $16.33 to median tax bill

Article 17. Concord-Carlisle Regional School District Landfill Remediation



Article 17. Concord-Carlisle Regional School District Landfill Remediation

History

- May 2011 – June 2013 - Environmental issues identified
- November 2013 - Submitted Phase II and Phase III plans to DEP.
- Spring 2016 – Article failed at Concord TM, passed at Carlisle TM
- September 2016 - CCRSC hired Weston & Sampson to study expanded options for capping the Landfill at CCHS
- November 2016 - CCRSC held Public Forum on landfill options and Weston & Sampson's recommendation.
- December 2016 - SC adopted Weston & Sampson's Flexible Cap Design suitable for several possible future uses

Future

CCHS Campus Advisory Committee will recommend future uses

Article 17. Concord-Carlisle Regional School District Landfill Remediation

Overview of the Weston & Sampson Feasibility Study

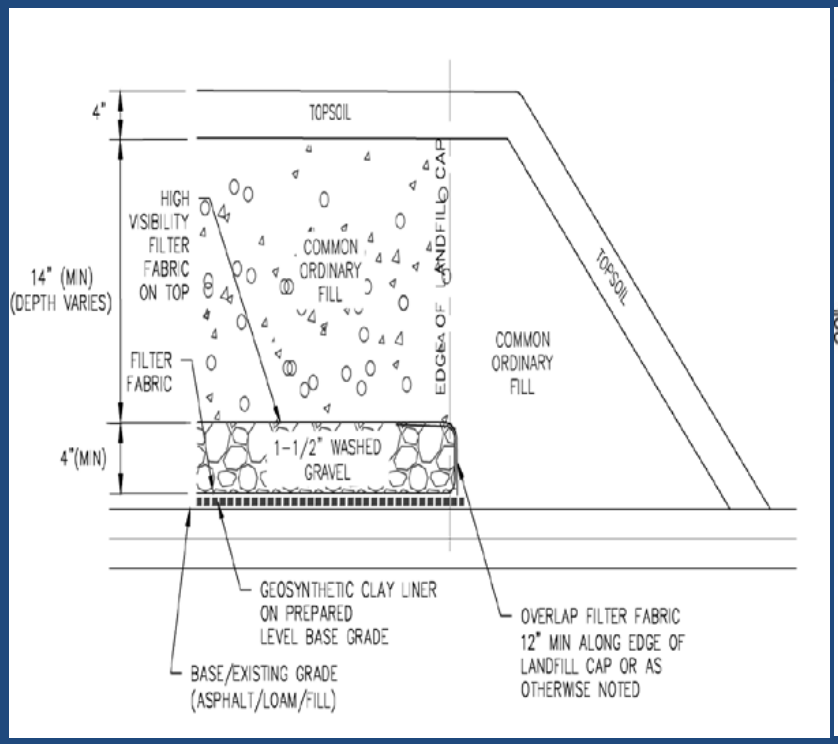
- Emphasized increasing the possible uses of the site after remediation
- Developed preliminary cost estimates for alternatives
- Provided recommendations/improvements to the baseline cap design to allow for future cost effective construction

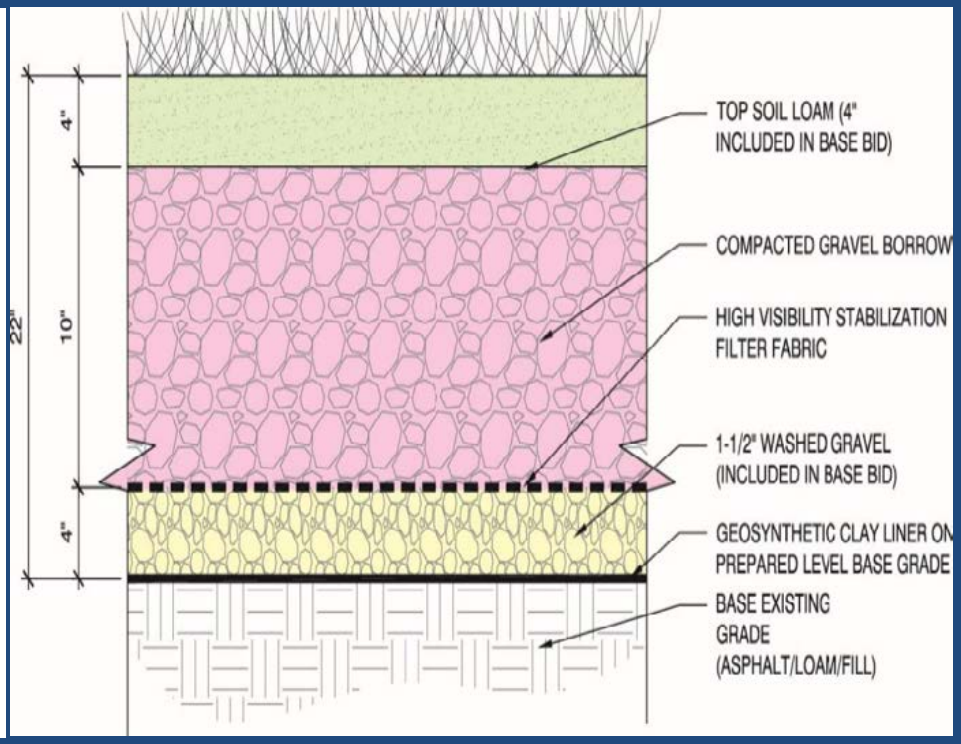
Article 17. Concord-Carlisle Regional School District Landfill Remediation

Overview of the Weston & Sampson Recommendation

- Utilize a Flexible Cap Design (FCD) to maximize flexibility for future uses.
  - Using FCD slightly increases initial costs (approx. $70K) but saves more money on future options.
  - Savings are related to minimizing future soil-handling and escalation costs
- The Flexible Cap Design is the best choice for offering high quality base for any future alternative construction.

Article 17. Concord-Carlisle Regional School District Landfill Remediation





Previous Request **Flexible Cap Design**

Current request provides an improved fill material that would be useable in many future use scenarios without removal costs of previously specified "common" fill

Article 17. Concord-Carlisle Regional School District Landfill Remediation

Other Project Elements:

- Construction of a retaining wall around existing skate park
- Construction of a paved pathway and ramped access to skate park
- Construction of a drainage trench

CCHS Campus Advisory Committee will recommend future use of the remediated area

Article 17. Concord-Carlisle Regional School District Landfill Remediation

- The installation of an Engineered Barrier with Flexible Cap Design option:
  - satisfies the requirements for environmental closure of this site by capping subsurface soil contamination
  - complies with the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000.
- Article 17 cost of $1.2 M is based on construction bids of $825,900, estimated project management fees of $75,000 and contingency and soft cost allowances up to $299,100.

Article 17. Concord-Carlisle Regional School District Landfill Remediation

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Article 17. Concord-Carlisle Regional School District Landfill Remediation

- **Remediation Method Selected:** $ 1.2 M
  - Installation of a flexible cap engineered barrier.
  - Reduces the risk of cost growth in remediating the site.
  - Prepares for future uses of the site for passive recreation (AUL), and possible playing field, track, or other projects.
- **Other Options Considered:**
  - Soil excavation and off-site disposal of 110,000 cubic yards of soil with an estimated 10% containing hazardous waste. $15 M
  - Excavation, Ex-situ soil treatment & solidification/stabilization processes $ 9 M
  - In-situ soil treatment and solid/stabilization $ 5 M

Article 17. Concord-Carlisle Regional School District Landfill Remediation

Remediation Actions:

The construction of a cap over an approximate 3.5-acre area consisting of the installation of the following:

- Geosynthetic Clay Liner with Flexible Membrane Liner Filter Fabric
- Gravel/Peastone Subbase
- Plastic Defining Marker or High Visibility Mirafil Filter Fabric
- Compacted “gravel borrow” fill instead of “common” fill
- Topsoil and seed

Other Actions:

- Construction of a retaining wall around existing skate park
- Construction of a paved pathway and ramped access to skate park
- Construction of a drainage trench

Article 17. Concord-Carlisle Regional School District Landfill Remediation

IMAGE SOURCE: MAGIS 2008 ORTHOPHOTO

FIGURE 2

PROPOSED CAP BOUNDARY
CONCORD CARLISLE HIGH SCHOOL
CONCORD, MA

June 2015

DATA PROJECTION: NAD 1983 MASSACHUSETTS STATE PLANE MAINLAND (METERS)

0 110 220 330 Feet

IMAGE SOURCE: MAGIS 2008 ORTHOPHOTO

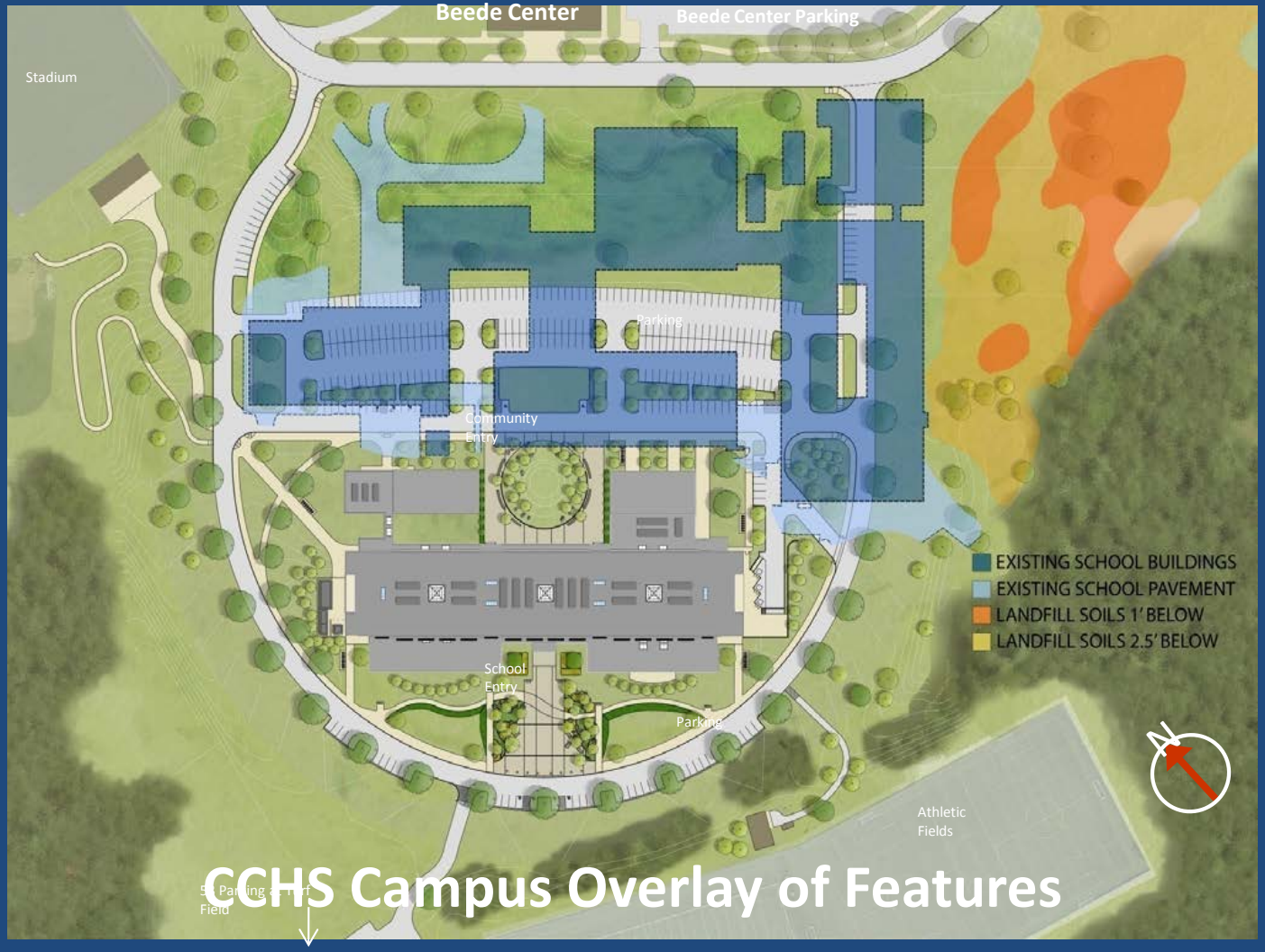
FIGURE 2

PROPOSED CAP BOUNDARY
CONCORD CARLISLE HIGH SCHOOL
CONCORD, MA

June 2015

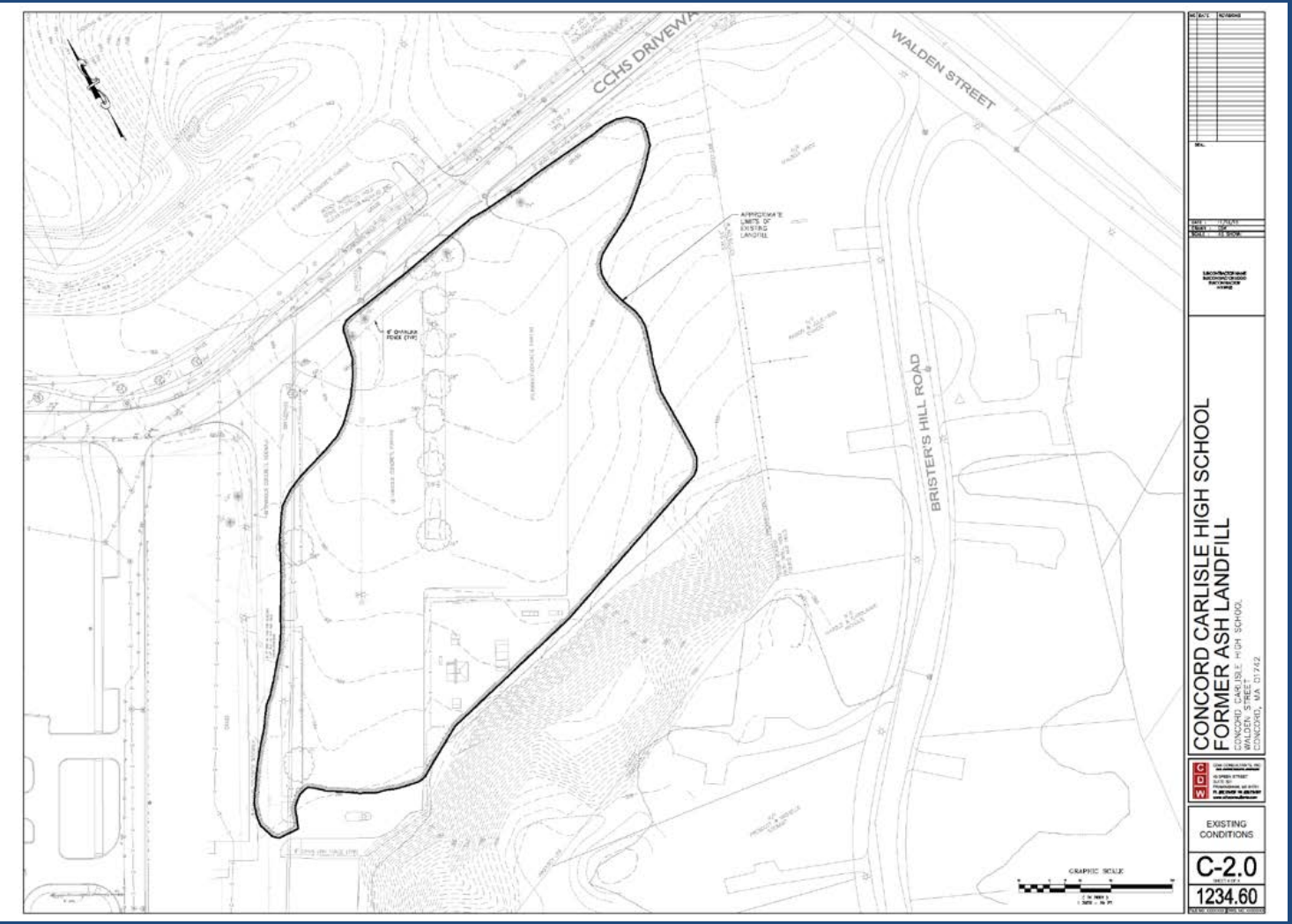
0 110 220 330

Article 17. Concord-Carlisle Regional School District Landfill Remediation

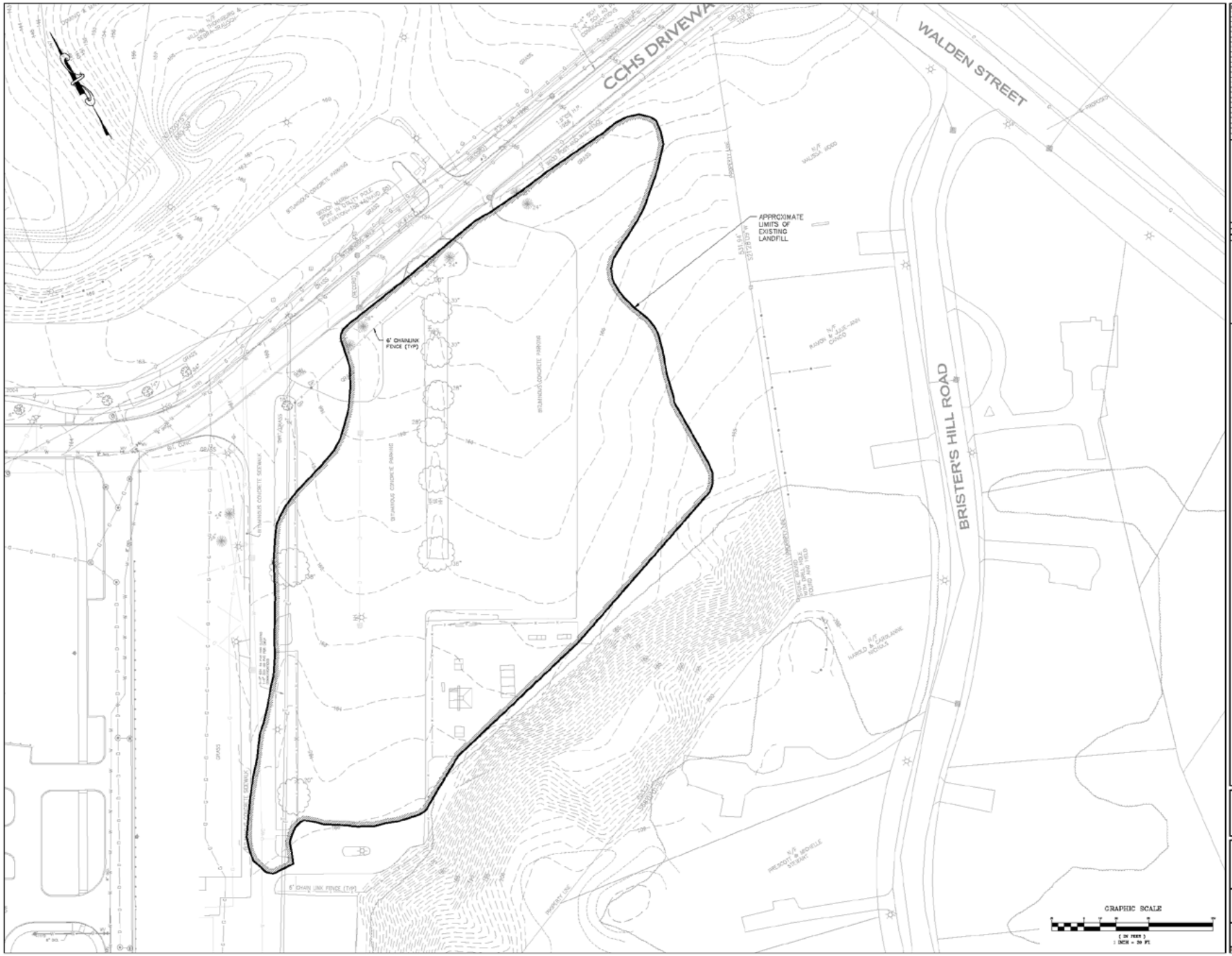


CCHS Campus Overlay of Features

Article 17. Concord-Carlisle Regional School District Landfill Remediation



CCHS Campus Overlay of Features



NO	DATE	REVISIONS

SEAL

DATE : 11/22/13
DRAWN : DEW
SCALE : AS SHOWN

SUBCONTRACTOR NAME
SUBCONTRACTOR LOGO
SUBCONTRACTOR ADDRESS

CONCORD CARLISLE HIGH SCHOOL FORMER ASH LANDFILL

CONCORD CARLISLE HIGH SCHOOL
WALDEN STREET
CONCORD, MA 01742

CDW CONSULTANTS, INC.
40 SPEEN STREET
SUITE 301
FRAMINGHAM, MA 01701

EXISTING CONDITIONS

C-2.0

SHEET 3 OF X

1234.60

FILE NO. XXXXXXX EWG NO. XXXXXXX