

# THE NEW **W. EDWARD BALMER SCHOOL**

## WHITINSVILLE, MASSACHUSETTS



## SCHOOL BUILDING COMMITTEE MEETING

## AUGUST 6, 2019



Massachusetts School Building Authority  
*Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities*



# AGENDA

- **CD Progress Report**
- **Minutes Action Items**
  - **LEED Update**
  - **EV Charging Stations Update**
- **Building Design Updates**
  - **Exit Stair Structural Change**
  - **Rooftop Mechanical - Acoustical Update**
- **Site Plan Updates:**
  - **Concession Building Update**
  - **East Abutter Tree Removal Request**



# DESIGNER PROGRESS REPORT

7/18	Responded to Structural Peer Review comments
7/18	TGE / FBI conducted LEED Construction Phase kickoff meeting
7/19	Responded to Board of Health permit questions
7/30	ERP#2 Issued – Concrete and Steel (Elev/ Damp) bid package
7/31	90% CD Pricing Documents issued

## Ongoing:

- Construction Document Detailing and Production, Specifications coordination and editing, Consultant Drawing and Spec Coordination, QA/QC redlining
- PM coordination with internal team, CM, Consultants, OPM, Owner
- On-site Construction Administration services: weekly meetings, field reports, submittals, requests for information/interpretation (RFI's), payment application review

## Next Deadlines:

- **8/20/19 90% CD Estimate Due**
- **8/23/19 90% CD Estimate Reconciliation at SMMA**





# LEED SCORECARD UPDATE

Yes	Maybe	No		
43	18	49	Project Totals (Certification Estimates)	110

**Certified:** 40-49 points, **Silver:** 50-59 points, **Gold:** 60-79 points, **Platinum:** 80+ points

- Close to minimum credit level for “Certified” level
- Not a lot of points to lose
- Want to enter into credit review with at least four points buffer in the “yes” column
- Some limited movement on “maybe” points since last time



# LEED SCORECARD UPDATE

			Yes	Maybe	No		
D/C	0	0	1				
D			1	IPc1	Integrative Process		1
			Yes	Maybe	No		
	0	1	14				
D			N	LTc1	LEED for Neighborhood Development Location		15
D			1	LTc2	Sensitive Land Protection		1
D			2	LTc3	<u>High Priority Site</u>		2
D			5	LTc4	<u>Surrounding Density and Diverse Uses</u>		5
D			4	LTc5	Access to Quality Transit		4
D			1	LTc6	Bicycle Facilities		1
D			1	LTc7	Reduced Parking Footprint		1
D		1		LTc8	Green Vehicles	← This is the EV Station credit	1



# LEED SCORECARD UPDATE

		Yes	Maybe	No		
		3	5	4	Sustainable Sites	12
C	Y				SSpr1 Construction Activity Pollution Prevention	Required
D	Y				SSpr2 Environmental Site Assessment	Required
D	1				SSc1 Site Assessment	1
D		2			SSc2 Site Development - Protect or Restore Habitat	2
D		1			SSc3 Open Space	1
D				3	SSc4 Rainwater Management	3
D		2			SSc5 Heat Island Reduction	2
D	1				SSc6 Light Pollution Reduction	1
D				1	SSc7 Site Master Plan	1
D	1				SSc8 Joint Use of Facilities	1

Looking at moving one point to yes with additional vegetation in Bioretention Basins



# LEED SCORECARD UPDATE

		Yes	Maybe	No		
		6	0	6	<b>Water Efficiency</b>	<b>12</b>
D	Y				WEpr1 <b>Outdoor Water Use Reduction</b>	Required
D	Y				WEpr2 <b>Indoor Water Use Reduction</b>	Required
D	Y				WEpr3 <b>Building-level Water Metering</b>	Required
D	2				WEc1 <b><u>Outdoor Water Use Reduction</u></b>	2
D	3			4	WEc2 <b>Indoor Water Use Reduction</b>	7
D				2	WEc3 <b>Cooling Tower Water Use</b>	2
D	1				WEc4 <b>Water Metering</b>	1



# LEED SCORECARD UPDATE

		Yes	Maybe	No			
		18	4	9		Energy & Atmosphere	31
C	Y				EApr1	Fundamental Commissioning and Verification	Required
D	Y				EApr2	Minimum Energy Performance	Required
D	Y				EApr3	Building-level Energy Metering	Required
D	Y				EApr4	Fundamental Refrigerant Management	Required
D	5			1	EAc1	Enhanced Commissioning	6
D	13			3	EAc2	<u>Optimize Energy Performance</u>	16
D				1	EAc3	Advanced Energy Metering	1
C				2	EA4	Demand Response	2
D		1		2	EAc5	<u>Renewable Energy Production (1%/5%/10%)</u>	3
D		1			EAc6	Enhanced Refrigerant Management	1
C		2			EAc7	Green Power and Carbon Offsets (50%/100%)	2

Looking strong for a yes, but pending final installation of kitchen equipment





# LEED SCORECARD UPDATE

**Need to confirm two recyclables with hauler T. Berkowitz:  
Batteries, Mercury-containing lamps, E-waste**

Yes    Maybe    No					
	<b>4</b>	<b>1</b>	<b>8</b>	<b>Materials &amp; Resources</b>	<b>13</b>
D	Y			MRpr1 <b>Storage &amp; Collection of <u>Recyclables</u></b>	Required
C	Y			MRpr2 <b>Construction and Demolition Waste Management Planning</b>	Required
C			<b>5</b>	MRc1 <b><u>Building Life-cycle Impact Reduction</u></b>	5
C	<b>1</b>		<b>1</b>	MRc2 <b>Building Product Disclosure and Optimization-Environmental Product</b>	2
C		<b>1</b>	<b>1</b>	MRc3 <b>Building Product Disclosure and Optimization-Sourcing of Raw Matls.</b>	2
C	<b>1</b>		<b>1</b>	MRc4 <b>Building Product Disclosure and Optimization-Material Ingredients</b>	2
C	<b>2</b>			MRc5 <b>Construction and Demolition Waste Management</b>	2

**Fontaine has had good success with getting this to yes**



# LEED SCORECARD UPDATE

		Yes	Maybe	No		
		6	4	6		
		<b>Indoor Environmental Quality</b>				<b>16</b>
D	Y				EQpr1	<b>Minimum IAQ Performance</b> Required
D	Y				EQpr2	<b>Environmental Tobacco Smoke (ETS) Control</b> Required
D	Y				EQpr3	<b>Minimum Acoustical Performance</b> Required
D	2				EQc1	<b>Enhanced IAQ Strategies</b> 2
C	1	2			EQc2	<b>Low-Emitting Materials (3/5/6)</b> 3
C	1				EQc3	<b>Construction IAQ Management Plan</b> 1
C		2			EQc4	<b>IAQ Assessment</b> 2
D				1	EQc5	<b>Thermal Comfort</b> 1
D	1			1	EQc6	<b>Interior Lighting</b> 2
D				3	EQc7	<b>Daylight</b> 3
D	1				EQc8	<b>Quality Views</b> 1
D				1	EQc9	<b>Acoustic Performance</b> 1

**Moved 1 from “No” - Fontaine will be doing testing option; has had good success**



# LEED SCORECARD UPDATE

	Yes	Maybe	No			
	4	2	0		<b>Innovation</b>	6
D	1			INc1.1	<b>Innovation: Low-Mercury Lighting</b>	1
D	1			INc1.2	<b>Innovation: O+M Starter Kit</b> ← <b>Green Cleaning, IPM</b>	1
D		1		INc1.3	<b>Innovation: MSBA HVAC LCCA</b>	1
C		1		INc1.4	<b>Innovation: Pending</b>	1
C	1			INc1.5	<b>Pilot Credit: Integrative Analysis of Building Materials</b>	1
C	1			INc2	<b>LEED Accredited Professional</b>	1

	Yes	Maybe	No			
	2	1	1		<b>Regional Priority Credits - earn up to 4 points</b>	4
D	1			RPc1	<b>Regional Priority: WEc1 (@2pts)</b>	1
D	1			RPc2	<b>Regional Priority: EAc2 (@8pts)</b>	1
C		1		RPc3	<b>Regional Priority</b>	1
D			1	RPc4	<b>Regional Priority</b>	1

	Yes	Maybe	No		
	43	18	49	<b>Project Totals (Certification Estimates)</b>	110

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# MAIN ENTRANCE



# LTc8 – EV CHARGER LOCATION PLAN



# LEED – EV CHARGING STATION COMPARISON SUMMARY

- Option 1 – Build infrastructure for 6 + install 6 stations - **\$29,300\* PUBLIC**
- Option 1 – Build infrastructure for 6 + install 6 stations - **\$36,112\* PRIVATE**  
MEETS LEED REQUIREMENTS TO GET THE CREDIT
- Option 2 – Build infrastructure for 16 + install 6 stations – meets LEED but only get incentives for installed units – NOT ESTIMATED
- Option 3 – Build infrastructure for 16 + install 16 stations - **\$65,300\* PUBLIC**
- Option 3 – Build infrastructure for 16 + install 16 stations - **\$82,474\* PRIVATE**
- Infrastructure only – 16 stations, NO incentives – **TO BE ESTIMATED IN 90% CDS;**  
**PREVIOUS R.O.M. \$60K\***

**\* ESTIMATES ONLY, FOR ORDER OF MAGNITUDE BUDGETING – FINAL COST TBD**





# EXIT STAIR STRUCTURAL CHANGE

- Due to unforeseen difficulty in detailing the steel stair structure, design team elected to revert to reinforced concrete block masonry (CMU) stair towers
- Checked comparative constructability with Fontaine, who endorsed change to CMU
- Cost-neutral or slight reduction – eliminated a lot of spray fireproofing
- Changes will be issued as addendum to ERP#2 to steel bidders



# EXIT STAIR STRUCTURAL CHANGE

**60% CD Plan**

**90% CD Plan**

**EXIT STAIR STRUCTURAL CHANGE**

- ADD COLUMN & GRID
- DELETE LANDING BEAM
- DELETE BEAMS
- REMOVE TWO COLUMNS, BEAMS AT EACH FLOOR, AND GRID
- REVISE CURTAINWALL TO PUNCHED STOREFRONT WINDOWS WITH METAL SIDING BETWEEN?
- DELETE ALL FIREPROOFING IN HATCHED AREA

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# MECHANICAL ROOFTOP UNIT ACOUSTICAL UPDATE



- Acoustical measurements came back showing relatively quiet existing neighborhood acoustical conditions
- Cannot exceed neighborhood condition by more than 10 dB
- Mechanical units as specified require extensive sound treatment, and absorptive acoustical screens all around, 1-2 feet taller than units
- Significant cost impact – range of \$400 – 525K
- Looking at other options as follows...

# MECHANICAL RTU ACOUSTICAL UPDATE

## COMPARING COST OPTIONS:

1. Conventional mech units and BRD sound treatment, plus the solid absorptive acoustical roof screens on structural steel support structure:  
ADD \$400 – \$525K

## VERSUS

2. Conventional mech units, plus BRD curb-supported solid acoustical roof screens with integral support and BRD sound treatment, with NO structural steel support structure – cost pending

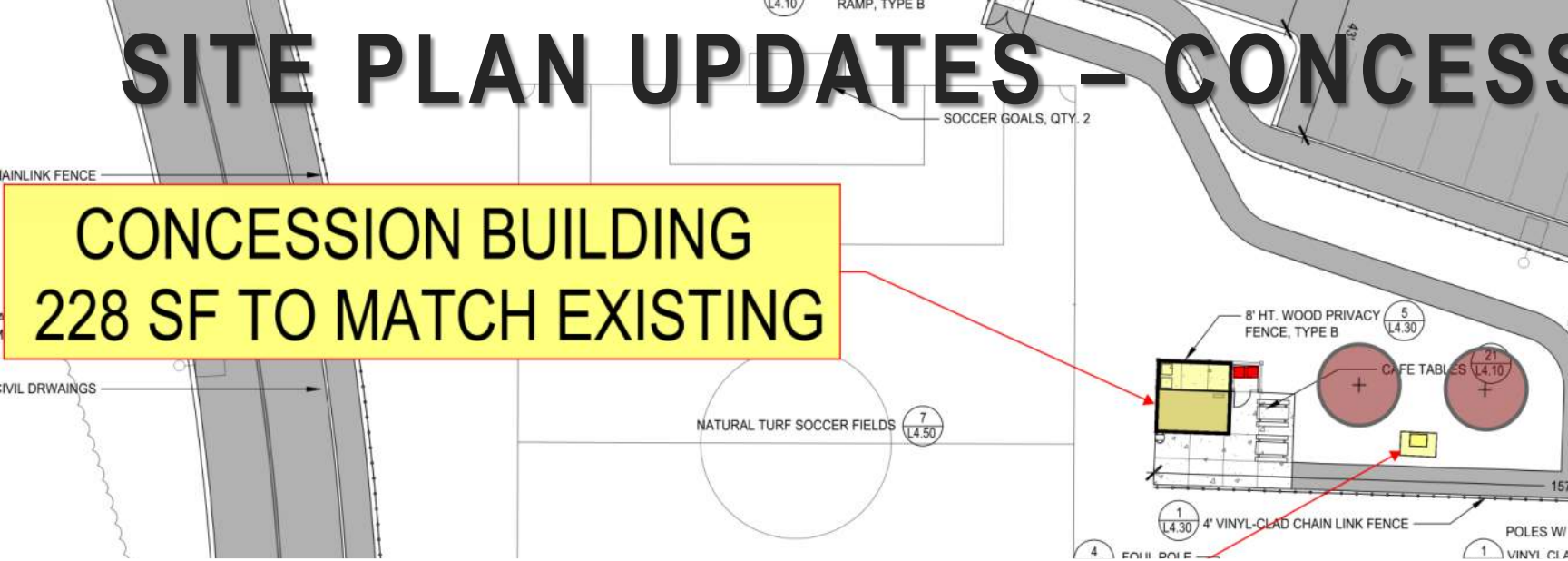
## VERSUS

3. AAON proprietary mech units (+ ~15%), plus corrugated sheet metal roof screens on structural steel support structure – cost pending





# SITE PLAN UPDATES – CONCESSION BUILDING



“Sierra”

Pricing from Eastern Shed Co, N. Andover, MA

- 14' x 16' size, 224 SF, 2 oversize windows, 60" x 72" double door, small window; attach to concrete slab by others using Tapcon fasteners thru double PT sill plate.
- “Sierra” single pitch roof – no extended overhang:
  - \$6,600 vinyl siding
  - \$6,120 pine wood siding, PTD
- “Quaker” gable roof with extended overhang:
  - \$8,136 vinyl siding
  - \$7,372 wood siding, PTD
- Both options include offsetting no floor credit and architectural shingle upgrade (\$1/sf) and \$100 delivery charge



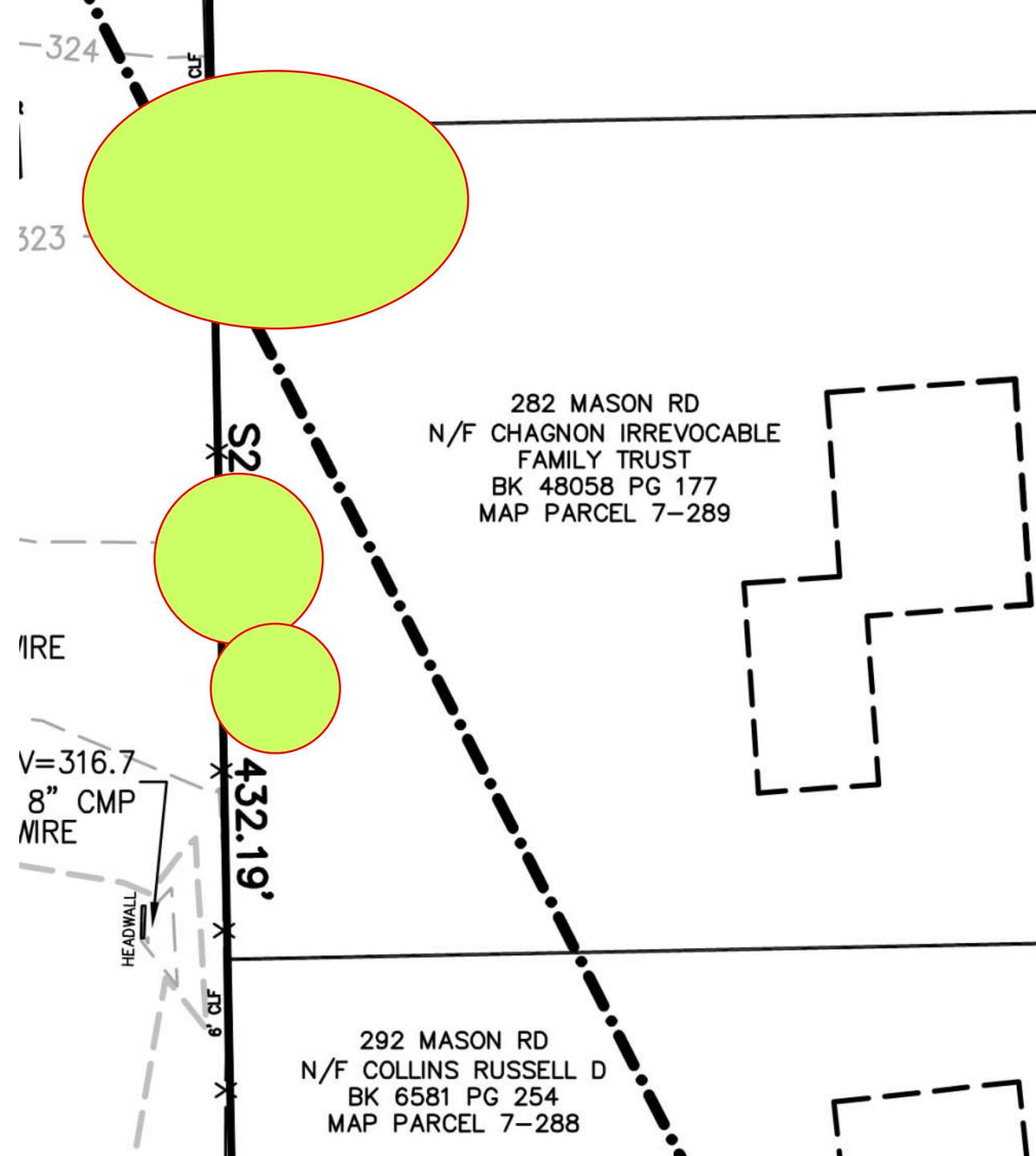
“Quaker”



# EAST PROPERTY LINE UPDATES:

## 282 MASON RD.

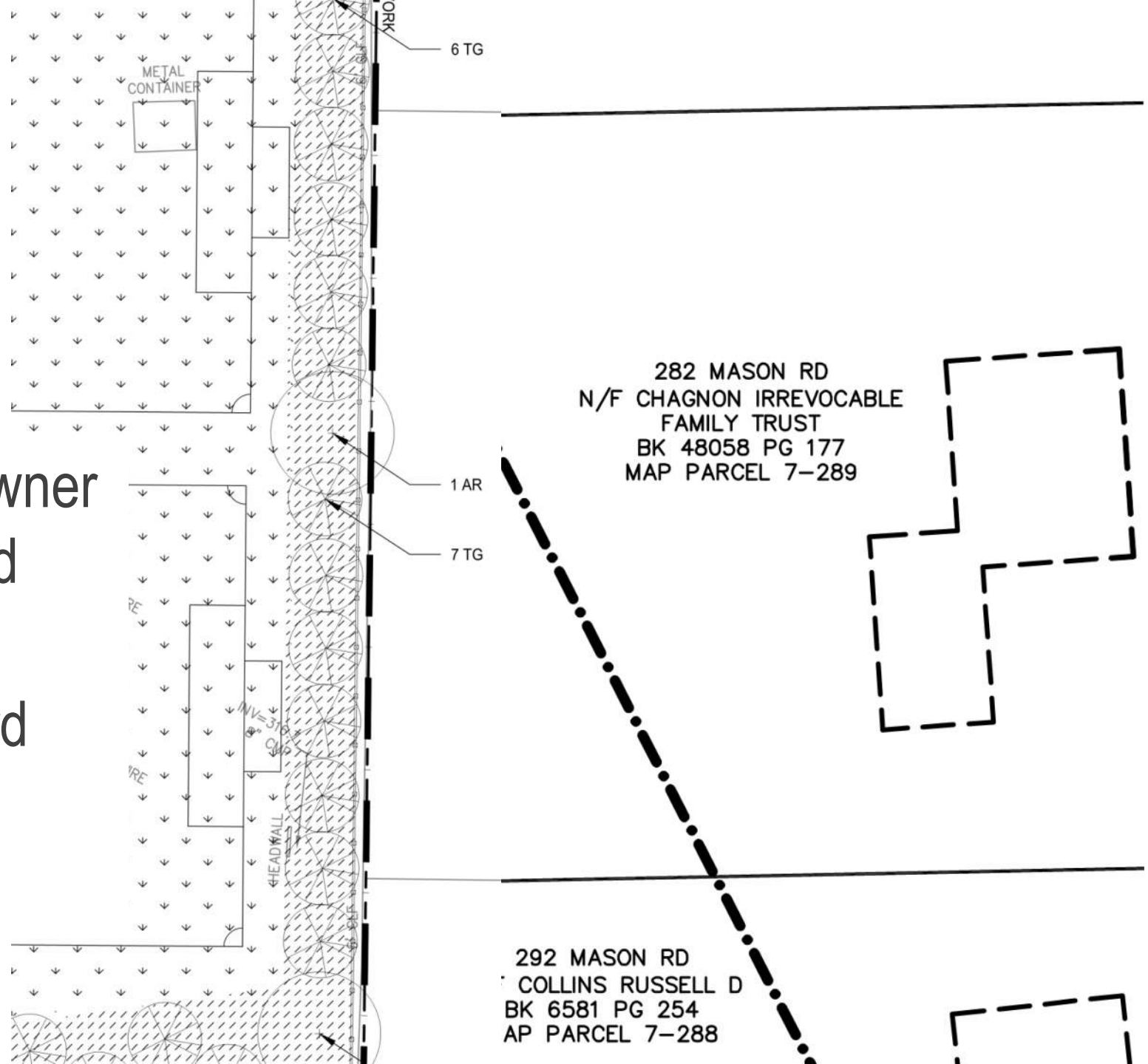
- 3 trees near property line: Owner wants Town to take down and remove
- One of them is leaning well over school side, trunk close to line
- Other two are near line



# EAST PROPERTY LINE UPDATES:

## 282 MASON RD.

- 3 trees near property line: Owner wants Town to take down and remove
- One of them is leaning toward school side, close to line
- Other two are near line





# SITE PLAN UPDATES: CONSTRUCTION ACTIVITY





# **SITE PLAN UPDATES: CONSTRUCTION ACTIVITY**





# **SITE PLAN UPDATES: CONSTRUCTION ACTIVITY**





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***Thank You!***