



## Facilities Department

1875 W. LOWELL AVENUE | TRACY, CA  
P: 209.830.3200 | F: 209.830.3204



## ADDENDUM NO. 1

Date: December 23, 2022  
Issued by: Tracy Joint Unified School District  
Project: **Project #2022/23-001 Merrill F. West High Tennis Court Repairs**

This addenda shall supersede the original Information, attachments, and specifications regarding this project where it adds to, deletes from, clarifies or otherwise modifies them. All other conditions and any previous addenda shall remain unchanged.

---

## BID QUESTIONS ANSWERED:

### Bid Walk Questions:

1. What supplier carries the specified asphalt fiber in specification 32 12 16.26?
  - a. Forti-Fi Fiber is available from any supplier upon request per the manufacturer listed below. Manufacturer has stated "We will supply anybody in need of fiber. Takes two weeks to deliver". Granite has a fiber feeder in Ukiah and gets their fiber from Forti Fi. Teichert uses the ACE fiber by default, but is able to order and use the Forti Fi Fiber as well. Manufacturer contact is below to anyone who would like to reach out:

MIKE HASS  
Pacific Geosource - Project Manager  
10778 SW Manhasset Dr.  
Tualatin, OR 97062  
Cell 503.214.0376  
Office 877.454.8096  
PACIFICGEOSOURCE.COM  
mhass@pacificgeosource.com

2. Will alternatives be accepted for the specified fiber?  
*Official Response: Yes, alternatives reasonably found to be "equal" will be accepted via. substitution request. See answer to pre-bid question 5 below as well for additional information on this issue.*

3. Is there an engineer's estimate?

*Official Response: Yes, the engineers estimate for this project is \$2,270,000.00 for the base bid and \$464,000 for the add alternate, not including any required contingencies per the contract.*

Pre-Bid Questions (Via email):

1. I wanted to ask if the asphalt they spec'd for this is the pyrite free mix? With out that you will have rust looking spots show up on the courts as the pyrite rises and bonds to the paint and causes major discoloration.

*Official Response: We have not typically specified that on the asphalt paving for tennis courts in this area and have not experienced the discoloration indicated, however, if it is a concern of a surfacing installer as a means to deliver a successful project, yes, the asphalt mix should be pyrite free and we have amended specification section 32 12 00 – Section 2.01.F to state this as part of this addendum for all bidders to appropriately bid.*

2. Can you confirm if this project has a PLA agreement?

*Official Response: No PLA agreement required.*

3. Can you confirm if this project is a Buy American project?

*Official Response: Yes, it is listed in the bidding documents, Section 00 45 46.09.*

4. Would chain link fence be an approved replacement for the poultry cages, details 10 & 11 on plan sheet C3.2?

*Official Response: This would be acceptable as long as the fenced enclosures are provided with a ceiling. A substitution request may be submitted to use chain link fencing as opposed to the pre-manufactured cages, however, contractor sill need to provide proposed shop drawings of the intended construction.*

5. I am having difficulty finding an asphalt supplier that uses the Forti Fi fiber in their HMA products Teichert Aggregates has a mix with ACE Fiber and state it is a superior product. Is this a product that can be substituted?

*Recent testing performed by NCAT and MnROAD showed a significant difference (~20%) in cracking tolerance performance (Ideal-CT) in a study of the ACE fiber compared to the Forta-Fi Fiber. This was a study performed on actual production mixes, not lab mixes. At this time, the ACE fiber is not considered an acceptable alternative and is not viewed as a superior product for this reason. Documentation from those studies is provided for reference as part of this document.*

## **PLAN CHANGES**

- C2.1 – Replace with included sheet AD1-C2.1 in its entirety.

Summary of changes:

- Keynote 8 revised to clarify that new fencing is to be installed.

- C2.3 – Replace with included sheet AD1-C2.3 in its entirety.

Summary of changes:

- Keynote 8 revised to clarify that new fencing is to be installed.

- C4.1 – Replace with included sheet AD1-C4.1 in its entirety.

Summary of changes:

- Detail 3 revised to clarify that new fencing is to be installed.
- New detail 7/C4.1 provided for new 12' fencing. Note that existing mesh may be salvages and re-installed per the detail.

## **PROJECT MANUAL / SPECIFICATION CHANGES**

Specification 00 11 16 – “Notice to Bidders”, Line 6:

REVISE “**December 28, 2022**” to read “**January 4th, 2023**”

Specification 32 12 00 – Part 2, Section 2.01.F

Add to end of section F, “All aggregates used in tennis court paving shall be pyrite free”.

## **OTHER DOCUMENTATION PROVIDED:**

None

## **ATTACHMENTS**

Plan Sheet AD1-C2.1

Plan Sheet AD1-C2.3

Plan Sheet AD1-C4.1

NCAT and MnROAD – Powerpoint and Ideal-CT documentation

**END OF ADDENDUM NO. 1**



**5.408.1.1 Construction waste management.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3, or meet a local construction and demolition waste management ordinance, whichever is more stringent.

**5.408.1.1 Construction waste management plan.** Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that:

1. Contractor shall identify the construction and demolition waste materials to be diverted from project, to comply with 65% criteria listed above, by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Contractor shall determine if construction and demolition waste materials will be sorted on-site (source-separated) or bulk moved (single stream). Either method is the responsibility of the contractor.
3. Contractor shall identify diversion facilities where construction and demolition waste materials collected will be taken. Transport to such facilities is contractor's responsibility.
4. Contractor shall record and provide record of the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, and not by both.

**5.408.1.2 Waste management company.** Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

Contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company. Contractor shall make any and all arrangements with waste management company for pickup of materials.

**Exceptions to Sections 5.408.1.1 and 5.408.1.2:**

1. Excavated soil and land clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Construction materials meeting local ordinance or calculated in consideration of local recycling facilities and markets.

**5.408.1.3 Waste stream reduction alternative.** The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65 percent minimum requirement as approved by the enforcing agency.

**5.408.1.4 Waste Diversion Docs. Required:**  
(Ref CalGreen 5.408.1.4)

Contractor shall prepare and provide documentation to the enforcing agency which demonstrates compliance with CalGreen Section 5.408.1.1 through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

**Notes:**

1. Sample forms found in "A Guide to the California Green Building Standards Code (Noresidential)" located at <http://www.cdsc.ca.gov/home/CALGreen.aspx> may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CALRecycle).

**CAL-GREEN - Excavated Soil & Land Clearing:**

**5.408.3 Excavated soil and land clearing debris.** 100 percent of trees, stumps, rocks and associated vegetation and soils shall be primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

**Exception:** Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

**Notes:**

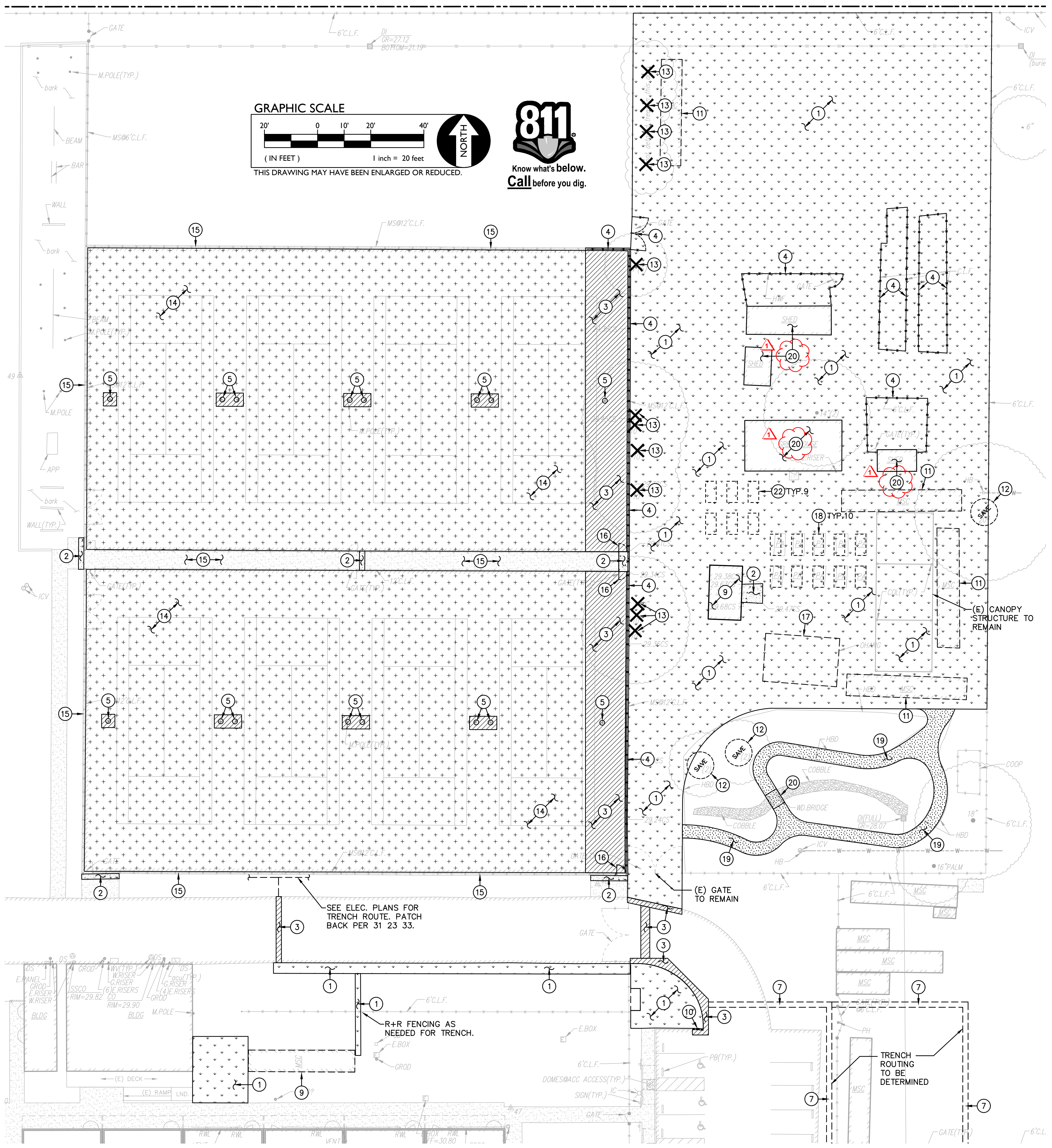
1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.  
([www.cdff.ca.gov/extension/county\\_contacts.html](http://www.cdff.ca.gov/extension/county_contacts.html))
2. For a map of known pest hotspots/disease quarantine zones, consult with the California Department of Food and Agriculture. ([www.cdffa.ca.gov](http://www.cdffa.ca.gov))

**Utility Verification Note:**



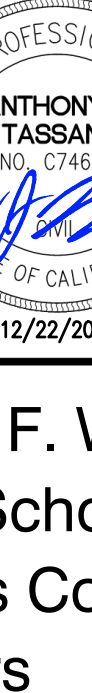



PRIOR TO THE START OF CONSTRUCTION, VERIFY AND POTHOLE ALL UTILITY POINTS OF CONNECTION FOR LOCATION, DEPTH, AND SIZE. IF CONFLICT IS FOUND, CONTACT THE ENGINEER IMMEDIATELY FOR DIRECTION.

**DEMOLITION GENERAL NOTES**

1. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THE GEOCHEMICAL INVESTIGATION REPORT OR ARE ENCOUNTERED DURING GRADING OPERATIONS, THE GEOCHEMICAL ENGINEER AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTIONS.
2. NO BURNING OR BLASTING SHALL BE PERMITTED.
3. ADDITIONAL DEMOLITION INFORMATION MAY BE SHOWN ON THE GRADING, DRAINAGE, AND UTILITY PLANS, AND THOSE PLANS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT.
4. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OFFSITE AT A SUITABLE, LEGAL, DUMP SITE OR OTHER FACILITY.
5. ALL DISPOSED OF MATERIALS SHALL BE RECYCLED IF POSSIBLE.
6. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN IN THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS, AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER UTILITIES OR UTILITIES WHICH MAY BE RECOVERED BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY THE DISTRICT TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK IN ORDER TO VERIFY TO THE GREATEST EXTENT POSSIBLE THE EXISTING UTILITY LINES, CONFLICTS AND PROPOSED UTILITY CONNECTION POINTS.
7. THE SCHOOL DISTRICT SHALL HAVE SALVAGE RIGHTS TO ANY DEMOLISHED ITEMS SHOWN HEREON. THE CONTRACTOR SHALL GIVE THE DISTRICT NOTICE 7 DAYS PRIOR TO THE START OF DEMOLITION. THE DISTRICT SHALL MOVE ANY RETAINED ITEMS OUT OF THE CONTRACTORS WORK AREA, UNLESS ANOTHER ARRANGEMENT IS MADE WITH THE CONTRACTOR. ANY REMAINING ITEMS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ANY ITEMS NOT SHOWN FOR REMOVAL SHALL REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION TO A REASONABLE EXTENT.
8. EXISTING UTILITY STRUCTURES IN AREAS OF NEW PAVING SHALL BE REMOVED AND REINSTEALLED AT NEW GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ITEMS OUTSIDE THE LIMITS OF DEMOLITION SHALL REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
10. CONTRACTOR SHALL COMPLY WITH CHAPTER 33 OF THE 2014 CFC, "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" AT ALL TIMES DURING CONSTRUCTION.
11. CONTRACTOR SHALL HIRE A UTILITY LOCATING COMPANY AND SHALL SCAN THE ENTIRE AREA WITHIN THE LIMITS OF NEW WORK. ALL UTILITY LOCATIONS SHALL BE MARKED AND PROTECTED DURING THE CONSTRUCTION PHASE. ANY DAMAGE TO ANY EXISTING UTILITY OR ANY LOCATED UTILITY DAMAGED WITHIN THE LIMITS OF WORK WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.
12. ALL DEMOLITION SHALL BE APPROPRIATELY SUPPORTED AND REINFORCED DURING REMOVAL TO PREVENT INJURY FROM FALLING, PROJECTILE, OR OTHERWISE MOVING DEBRIS OR OTHER DELETERIOUS MATERIAL. ON-SITE SAFETY WITHIN THE LIMITS OF WORK IS THE CONTRACTORS SOLE RESPONSIBILITY.

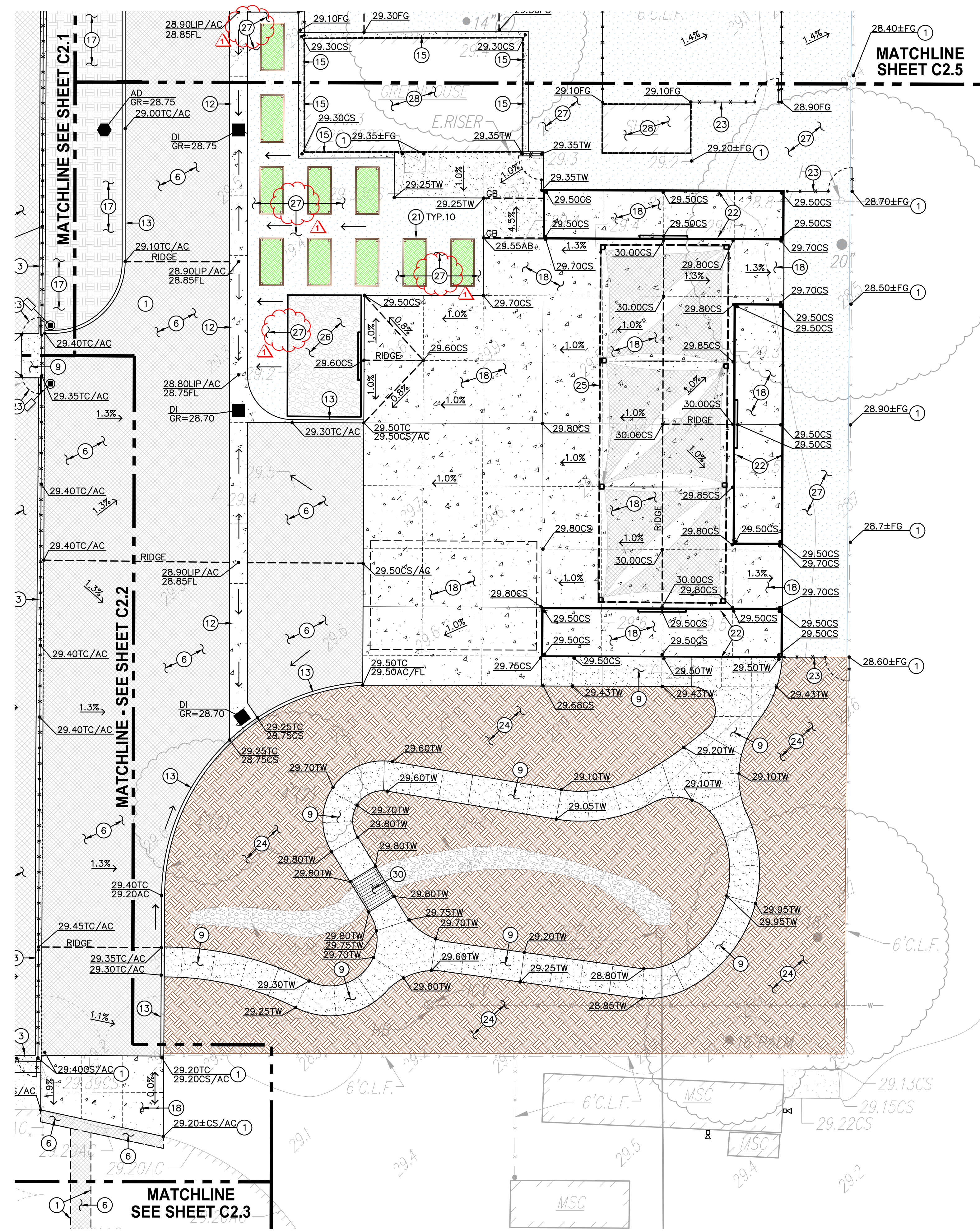
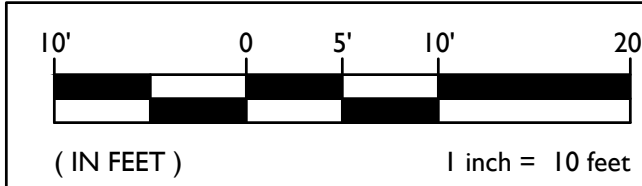


AND/OR LEGEND	#	DEMOLITION NOTES
	1.	REMOVE ALL PLANTS, SHRUBS, EXISTING VEGETATION, AND GRAVEL. REFER TO EARTHWORK SPECIFICATIONS FOR ADDITIONAL SITE CLEARING REQUIREMENTS. SEE GENERAL IRRIGATION NOTE, THIS SHEET.
	2.	REMOVE EXISTING CONCRETE PAVING AND BASE AGGREGATES (IF EXIST). WHERE SAWCUTS ARE NECESSARY, THEY SHALL BE A NEAT STRAIGHT LINE. CUTS SHALL BE MADE AT NEAREST EXISTING JOINT TO LOCATION SHOWN.
	3.	SAWCUT AND REMOVE EXISTING ASPHALT PAVING AND BASE AGGREGATE TO PROVIDE FOR NEW CONSTRUCTION. SAWCUTS SHALL BE NEAT AND STRAIGHT. MAINTAIN CLEAN STRAIGHT CUT EDGE UNTIL NEW PAVING PLACED, OR NEW CUTS WILL BE REQUIRED.
	4.	REMOVE EXISTING FENCING TO INCLUDE POST FOOTINGS AND CONCRETE APRON. BACKFILL VOIDS PER EARTHWORK SPECIFICATIONS, OR WITH CLASS II AB COMPACTED IN 6" LIFTS, EACH COMPACTED TO 95% SEE GRADING PLAN.
	5.	REMOVE EXISTING TENNIS NET GAME POSTS AND CONCRETE BASE. BACKFILL VOID PER EARTHWORK SPECIFICATIONS, OR WITH CLASS II AB COMPACTED IN 6" LIFTS, EACH COMPACTED TO 95%.
	6.	RE-SET EXISTING REFRIGERATION UNIT ON NEW PAD AND LEVEL, AND THEN RE-SET ON NEW PAD. SEE GRADING AND CONSTRUCTION PLAN.
	7.	NEW ELECTRICAL TRENCHING, SEE ELECTRICAL PLANS. PATCH AND REPAIR TRENCHING IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS AND SECTION 31 23 33.
	8.	REMOVE EXISTING FENCING TO INCLUDE POST FOOTINGS. BACKFILL VOID PER EARTHWORK SPECIFICATIONS, OR WITH CLASS II AB COMPACTED IN 6" LIFTS, EACH COMPACTED TO 95%.
	9.	RELOCATE EXISTING SHED, SEE GRADING PLAN.
	10.	REMOVE EXISTING CONCRETE CURB, MOWBAND OR GUTTER AS SHOWN.
	11.	TEMPORARILY RELOCATE MOVE EXISTING STORAGE CONTAINER UNIT TO NEW CONSTRUCT NEW PAD, AND THEN SET ON NEW PAD. SEE GRADING AND CONSTRUCTION PLAN.
	12.	EXISTING TREE TO REMAIN AND BE PROTECTED FROM DAMAGE. PROVIDE PROTECTIVE FENCING IF NEEDED. TREES WITHIN 20 FEET OF EQUIPMENT TRAFFIC SHALL BE PROTECTED WITH TEMPORARY 2x4'S STRAPPED VERTICALLY ON TRUNK OF TREE FOR VEHICULAR IMPACT PROTECTION. 2x4'S SHALL BE PLACED WITH NO GREATER THAN A 6" GAP BUT ONLY NEED BE SPACED ON THE HALF CIRCUMFERENCE FACING EQUIPMENT TRAFFIC.
	13.	REMOVE EXISTING TREE AND ROOTS. IF SMALL ROOTS OR ROOT FRAGMENTS REMAIN (>1" IN DIA.), CONTRACTOR TO REMOVE BY HAND IF NECESSARY. BACKFILL VOID PER GRADING SPECIFICATIONS. IT IS HIGHLY RECOMMENDED WET AND DRY UTILITIES BE READY TO SHUTOFF SHOULD A ROOT DAMAGE A LINE DURING TREE REMOVAL. ROOTS 1/4" IN DIAMETER AND LARGER MUST BE REMOVED FROM EXCAVATED SOIL PLANNED FOR USE AS ENGINEERED FILL.
	14.	GRIND EXISTING ASPHALT PAVING 1.5" DEEP TO ALLOW FOR ASPHALT OVERLAY.
	15.	POWER STEAM/WASH TOPS OF EXISTING CONCRETE APRONS AND SIDEWALK CLEAN OF ALL DIRT, DEBRIS AND LOOSE MATERIAL. SACK AND PATCH ALL CHIPS AND GOUGES IN SURFACE.
	16.	REMOVE AND SALVAGE GATE SEE CONSTRUCTION PLAN FOR RE-INSTALLATION.
	17.	TEMPORARILY RELOCATE SHADE STRUCTURE AND PLACE BACK WHEN NEW CONSTRUCTION IS COMPLETE.
	18.	RELOCATE PLANTER BOXES AS SHOWN.
	19.	REMOVE EXISTING DG PATHWAY AND HEADERS.
	20.	EXISTING BUILDING TO REMAIN, PROTECT FROM DAMAGE.
	21.	REMOVE EXISTING DG PATHWAY AND HEADERS.
	22.	RELOCATE PLANTING TABLES TO NEW LOCATION SHOWN, SEE GRADING PLAN.

DSA															
<div>ENGINEER:</div> <div style="text-align: center;"> <b>WARREN CONSULTING ENGINEERS, INC.</b> 1117 WINDFIELD WAY, SUITE 110 EL DORADO HILLS, CA 95762   (916) 985-1870</div>															
<div>ENGINEER:</div>															
<div>OWNER:</div> <div style="text-align: center;"> <b>TRACY</b> UNIFIED SCHOOL DISTRICT Tracy Unified School District 1875 W. Lowell Avenue Tracy, CA 95376 Phone: (209) 830-3200</div>															
															
<div>Merrill F. West High School Tennis Court Repairs</div> <div>1775 Lowell Ave. Tracy, CA 95376</div>															
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th colspan="2" style="text-align: center; padding: 5px;">REVISIONS</th></tr></thead><tbody><tr><td style="width: 10%; padding: 5px;">NO.</td><td style="padding: 5px;">DESCRIPTION</td></tr><tr><td style="padding: 5px;"> 1</td><td style="padding: 5px;">Addendum No.1</td></tr><tr><td style="height: 20px;"></td><td></td></tr><tr><td style="height: 20px;"></td><td></td></tr><tr><td style="height: 20px;"></td><td></td></tr><tr><td style="height: 20px;"></td><td></td></tr></tbody></table>		REVISIONS		NO.	DESCRIPTION	 1	Addendum No.1								
REVISIONS															
NO.	DESCRIPTION														
 1	Addendum No.1														
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%; padding: 5px;">DRAWN: <div style="text-align: right;">SMN</div></td><td style="width: 50%; padding: 5px;">SCALE: <div style="text-align: right;">AS NOTED</div></td></tr><tr><td style="padding: 5px;">CHECKED: <div style="text-align: right;">AT</div></td><td style="padding: 5px;">PROJECT NO. <div style="text-align: right;">22-056</div></td></tr><tr><td style="padding: 5px;">DESIGNED: <div style="text-align: right;">SMN/AT</div></td><td style="padding: 5px;">DATE: <div style="text-align: right;">11-11-2022</div></td></tr></table>		DRAWN: <div style="text-align: right;">SMN</div>	SCALE: <div style="text-align: right;">AS NOTED</div>	CHECKED: <div style="text-align: right;">AT</div>	PROJECT NO. <div style="text-align: right;">22-056</div>	DESIGNED: <div style="text-align: right;">SMN/AT</div>	DATE: <div style="text-align: right;">11-11-2022</div>								
DRAWN: <div style="text-align: right;">SMN</div>	SCALE: <div style="text-align: right;">AS NOTED</div>														
CHECKED: <div style="text-align: right;">AT</div>	PROJECT NO. <div style="text-align: right;">22-056</div>														
DESIGNED: <div style="text-align: right;">SMN/AT</div>	DATE: <div style="text-align: right;">11-11-2022</div>														
<div>ISSUANCE:</div> <div style="text-align: center; font-size: 24px; font-weight: bold; margin-top: 20px;">BID SET</div>															
<div>SHEET TITLE:</div> <div style="text-align: center; font-size: 24px; font-weight: bold; margin-top: 20px;">DEMOLITION PLAN</div>															
<div>SHEET NO.</div> <div style="text-align: center; font-size: 36px; font-weight: bold; margin-top: 20px;">AD1 C1.1</div>															



## GRAPHIC SCALE



## GRADING NOTES

- MATCH EXISTING GRADE/ELEVATION. WHEN MATCHING NEW SLABS TO EXISTING, DOWEL SLABS PER THE DETAIL PROVIDED AT 24" O.C.
- CONSTRUCT CONCRETE BARRIER CURB PER THE DETAIL PROVIDED.
- CONSTRUCT 12" WIDE CONCRETE APRON AT FENCING PER THE DETAIL PROVIDED.
- PLACE TWO LIFT TENNIS COURT PAVING, 1.5" THICK SURFACE COURSE WITH 3/8" TYPE "A" PG 64-28 POLYMER MODIFIED AC, OVER 2.5" THICK BASE COURSE OF 3/4" TYPE "A" PG 64-28 POLYMER MODIFIED AC WITH FORTI-FI (OR APPROVED EQUAL) AC REINFORCEMENT, OVER 24" CLASS II AB ON GEOGRID, TENSAR TX140 (OR APPROVED EQUAL) ON PREPARED SUBGRADE. SUBGRADE PREPARED IN ACCORDANCE WITH SPECIFICATIONS SECTION 31 00 00. ASPHALT SHALL BE PER SECTION 32 12 00. SEE STRIPING AND SURFACING PLAN FOR TENNIS COURT SURFACING.
- PRESSURE WASH SURFACE OF EXISTING CONCRETE APRON CLEAN OF DIRT, DEBRIS AND EXISTING SURFACING.
- PLACE 3" TYPE A ASPHALT PAVING (1/2" MAX) OVER 24" CLASS II AB ON GEOGRID, TENSAR TX140 (OR APPROVED EQUAL) ON PREPARED SUBGRADE. SUBGRADE PREPARED IN ACCORDANCE WITH SPECIFICATIONS SECTION 31 00 00. ASPHALT SHALL BE PER SECTION 32 12 00.
- SEE SURFACING, STRIPING AND EQUIPMENT PLAN FOR GAME EQUIPMENT.
- GRIND EXISTING ASPHALT PAVING 1.5" MIN. THICK. APPLY TACK COAT AND 1.5" ASPHALT OVERLAY WITH 3/8" TYPE "A" PG 64-28 POLYMER MODIFIED AC. ASPHALT SHALL BE PER SECTION 32 12 00. SEE STRIPING AND SURFACING PLAN FOR TENNIS COURT SURFACING.
- PLACE 5" CONCRETE PAVING OVER 4" CLASS II AB ON SCARIFIED AND RE-COMPACTED SUBGRADE. PLACE CONCRETE PAVING PER THE TYPICAL DETAILS PROVIDED. REFER TO SPECIFICATIONS SECTION 31 00 00 FOR SUBGRADE PREPARATION, SECTION 32 16 00 FOR CONCRETE PAVING.
- PLACE 6" CLASS II AB PAD ON SCARIFIED AND COMPACTED SUBGRADE PER SECTION 31 00 00.
- CONSTRUCT CONCRETE CURB PER THE DETAIL PROVIDED.
- CONSTRUCT 36" WIDE CONCRETE VALLEY GUTTER PER THE DETAIL PROVIDED.
- CONSTRUCT CONCRETE FLUSH CURB PER THE DETAIL PROVIDED.
- CONSTRUCT ELECTRICAL EQUIPMENT PAD, SEE ELECTRICAL PLANS.
- CONSTRUCT 12" WIDE CONCRETE APRON AT EDGE OF EXISTING BUILDING, SHED OR GREENHOUSE AS SHOWN.
- ROLL TOP OF CURB DOWN TO FLUSH OVER 12 INCHES DISTANCE.
- PATCH BACK AND REPAIR EXISTING SURFACING, PLANTING, GRAVEL OR OTHER SURFACING. PLACE 4" LAYER NEW WALK-ON MULCH.
- PLACE 6" CONCRETE PAVING OVER 8" CLASS II AB ON SCARIFIED AND RE-COMPACTED SUBGRADE. PLACE CONCRETE PAVING PER THE TYPICAL DETAILS PROVIDED. REFER TO SPECIFICATIONS SECTION 31 00 00 FOR SUBGRADE PREPARATION, SECTION 32 16 00 FOR CONCRETE PAVING.
- NOT USED.
- CONSTRUCT CONCRETE CURB GUTTER WITH VARIABLE HEIGHT CURB REVEAL PER THE GRADES PROVIDED.
- PROVIDE AND INSTALL PRE-MANUFACTURED AND PRE-FINISHED 4'X8' WOOD PLANTER BOXES PER THE DETAIL PROVIDED.
- SET METAL STORAGE CONTAINER ON PAVING AS INDICATED.
- SEE FENCING PLAN FOR NEW FENCING.
- EXISTING GARDEN PLANTING TO BE MAINTAINED TO THE GREATEST EXTENT POSSIBLE. REPAIR ANY DAMAGE AND PLACE MULCH ALONG EDGES OF NEW WALK TO MATCH EXISTING.
- EXISTING SHADE STRUCTURE TO REMAIN. PROTECT FROM DAMAGE.
- EXISTING RELOCATED WOOD STORAGE SHED SET ON 6" THICK CLASS II AB PAD COMPACTED TO 95% OVER 12" DEEP SCARIFIED AND RE-COMPACTED SUBGRADE PER 31 00 00.
- PLACE 6" LAYER COMPACTED DECOMPOSED GRANITE SURFACING OVER 12" DEEP SCARIFIED AND RE-COMPACTED SUBGRADE PER SPECIFICATIONS SECTIONS 31 00 00 AND 32 15 40.  
**NOTE: THIS LAYER IS INTENDED AS A BASE SURFACING. FINAL ANIMAL ENCLOSURE SURFACING (I.E. MULCH, RUBBER MATS, ETC.) TO BE PROVIDED BY AGG. PROGRAM.**
- EXISTING SHED/GREENHOUSE OR OTHER STRUCTURE TO REMAIN. PROTECT FROM DAMAGE.
- CONSTRUCT AGG YARD MATERIAL STORAGE AREA PER THE DETAIL PROVIDED.
- PROVIDE AND INSTALL 6' LONG 5' WIDE LANDSCAPE BRIDGE PER THE DETAIL PROVIDED.

DSA

ENGINEER:



ENGINEER:

OWNER:



Merrill F. West  
High School  
Tennis Court  
Repairs

1775 Lowell Ave.  
Tracy, CA 95376

## REVISIONS

NO.	DESCRIPTION
1	Addendum No.1

DRAWN:	SCALE:
SMN	AS NOTED
CHECKED:	PROJECT NO.
AT	22-056
DESIGNED:	DATE:
SMN/AT	11-11-2022

ISSUANCE:

## BID SET

SHEET TITLE:

GRADING AND  
CONSTRUCTION  
PLAN

SHEET NO.

AD1 C2.4



An aerial photograph showing a multi-lane highway under construction or recently completed, winding through a dense forest. The road surface is light-colored, contrasting with the green and brown foliage. A semi-transparent white box is overlaid on the left side of the image, containing text.

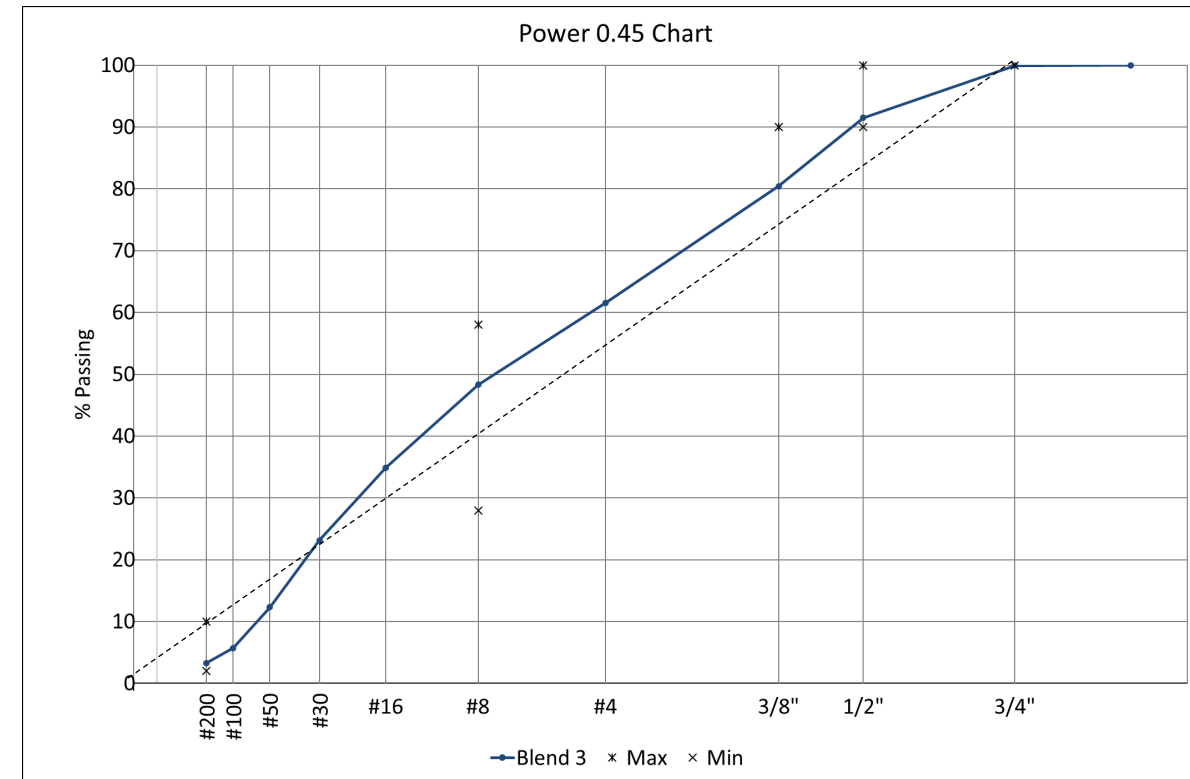
# **Northern AG (RCC) Construction Experience & Research Plan**

*Fall 2022 Sponsor Meeting  
September 20, 2022  
Nathan Moore, P.E.*



# RCC Mix Designs - Blend

- Blend from Martin Marietta
- Blend Properties
  - Air voids = 3.5%
  - VMA = 15.8%
  - AC% = 5.7%



# RCC Mix Designs - Tests

- Tests Selected for BMD design
  - IDEAL-CT
  - HWTT
  - DCT (no pass/fail criteria)
- More tests to be run on plant-mixed samples
- Short-term aging 4 hours vs. two hours



# RCC Mix Designs – Test Criteria

- IDEAL-CT
  - Consulted with Texas A&M researchers, MnDOT, and internal NCAT staff
  - Agreed on 100 @ 4 hour STOA @ 135°C
- HWTT
  - Potential for rutting
  - Originally chose 46°C, changed to 43°C because it put the control mix at 12.5 mm of rutting at approx. 10K passes



# Construction QA Results

	JMF/ Target	Control 58H-34	Control XX-34	Dry Rubber	Dry plastic	Wet Rubber	Fibers Forta	Fibers Ace	Wet Plastic
Cell	JMF	39	38	37	36	35	34	33	32
P <sub>b</sub> (%)	5.7	5.6	5.7	5.5	5.8	5.6	5.8	5.6	5.5
P <sub>2.36</sub>	48	49	47	48	51	53	48	48	49
P <sub>0.075</sub>	3.3	3.5	3.3	3.3	3.3	3.6	3.3	3.2	3.2
V <sub>a</sub> (%)	3.5	1.9%	1.7%	6.0%	1.7%	1.8%	1.9%	2.1%	2.4%
In-Place Density	N/A	94.9	95.9	94.6	94.5	95.2	95.1	95.1	94.5

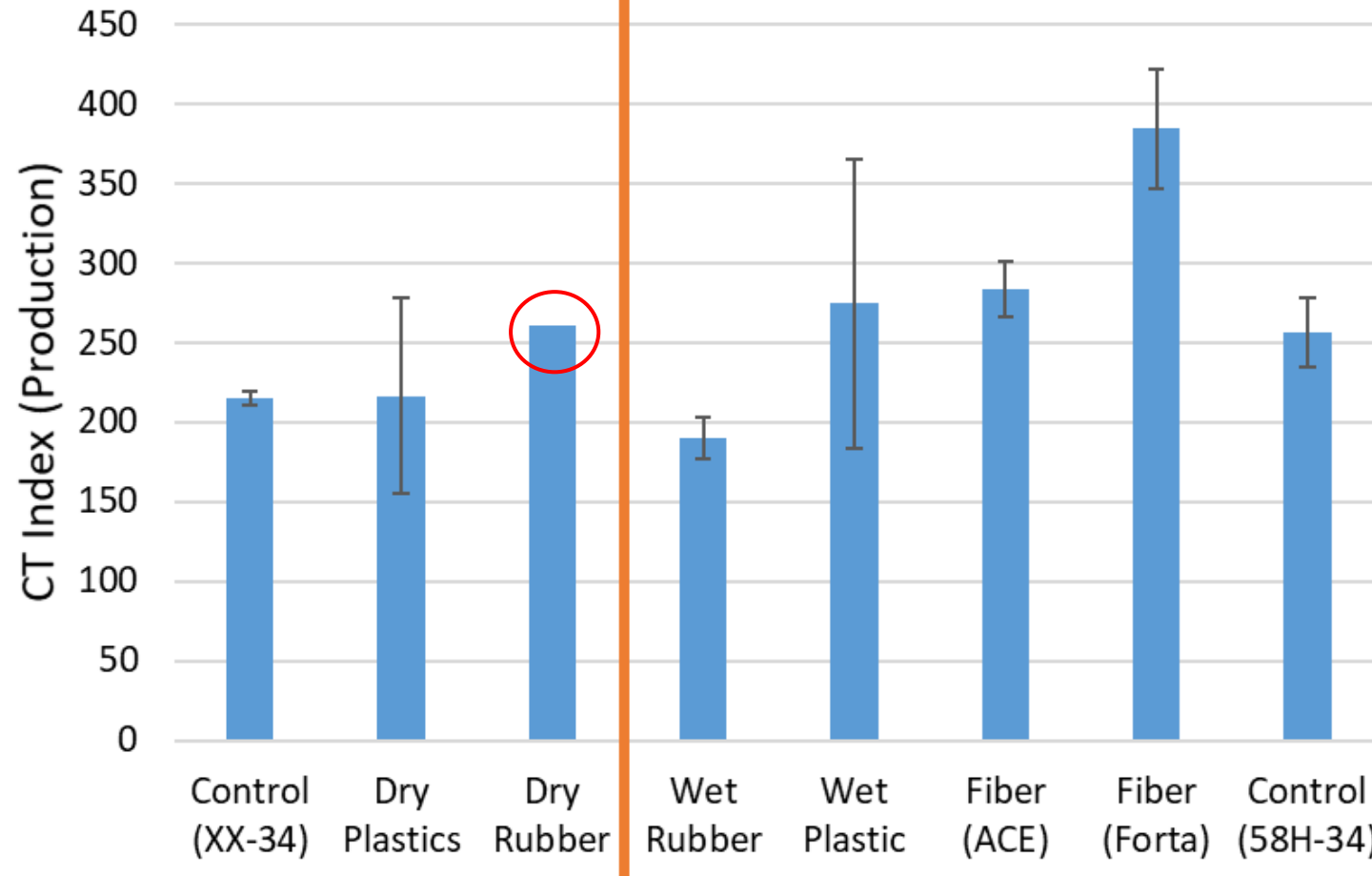


# Additive Group Production BMD

- Main focus during construction was on gradation and AC%
- Rapid rutting test (HT-IDT) performed on site for future reference
- Design pucks and extra BMD samples taken back to NCAT lab and tested

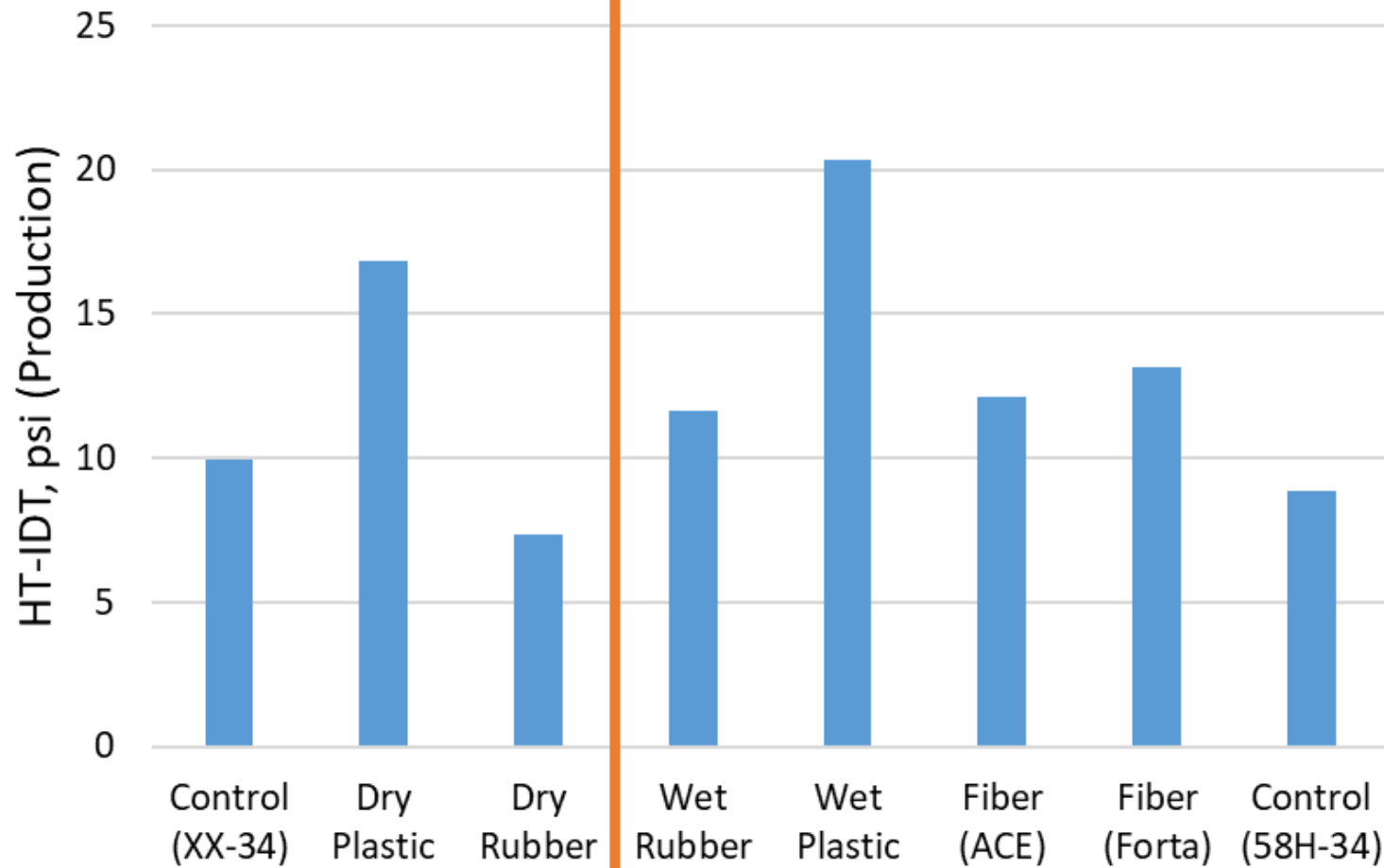


# RCC Production BMD Results – IDEAL-CT

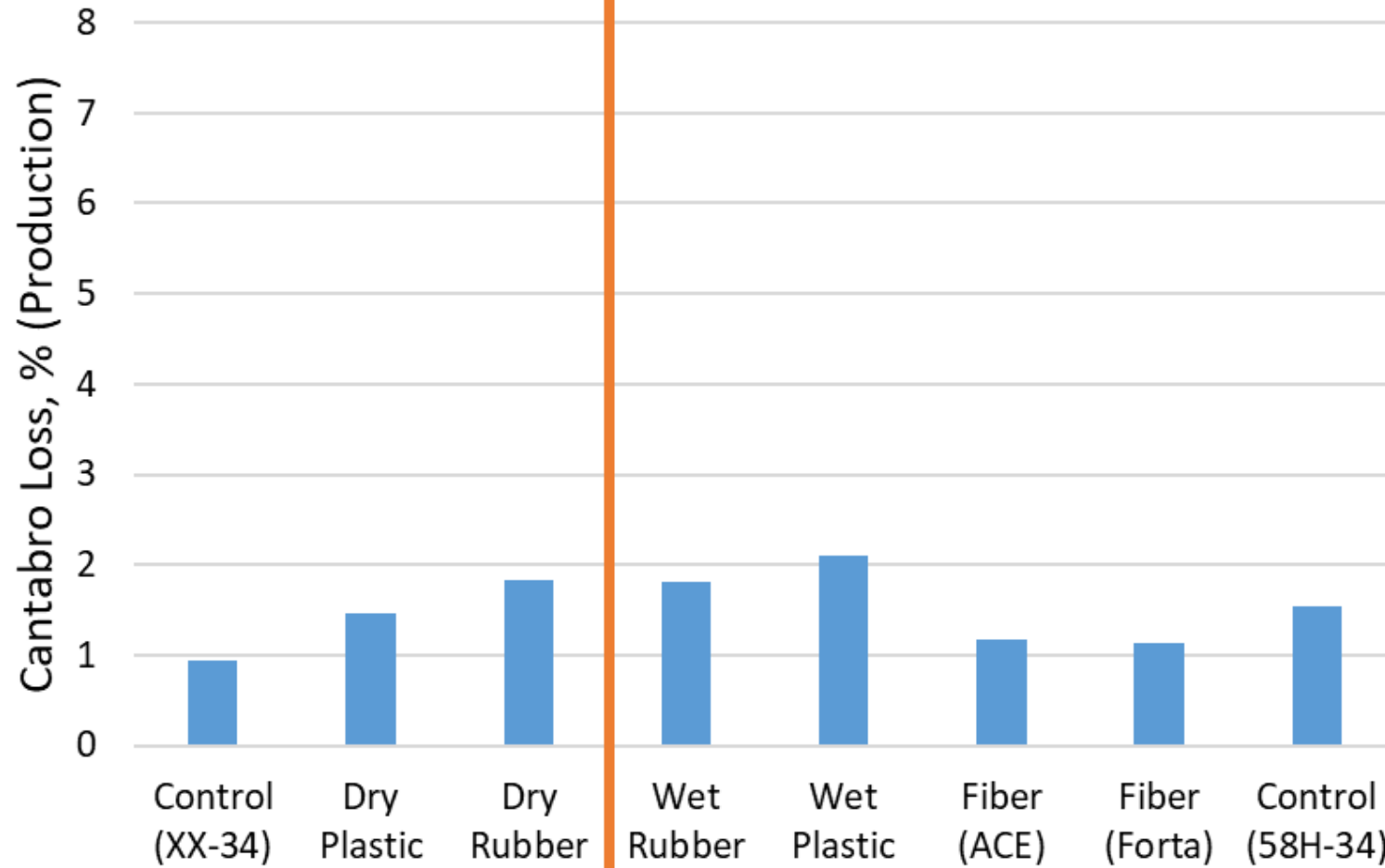




# RCC Production BMD Results – HT-IDT



# RCC Production BMD Results – Cantabro





# Summary of RCC Results

- Consistency in the test sections
- Great diversity in lab results
- Opportunity to validate/modify BMD targets
- Opportunity to validate or develop new models to address state-of-the-art additives

# Acknowledgements

- MnDOT and MnROAD
  - Trucking Facility
- Martin Marietta
  - Don Petty, Todd Tveit, Brad Paul
- NCAT Mobile Lab Team
  - Mark Brewer & Robert Scroggins
- NCAT Lab
  - Adam Taylor
  - Tina Taylor
  - NCAT co-op students



# Questions?





## TECHNOLOGY DEPLOYED IN MATC

# INDIRECT TENSILE ASPHALT CRACKING TEST (IDEAL-CT)

*Determine the cracking potential of your asphalt mixtures*

## HOW IT WORKS

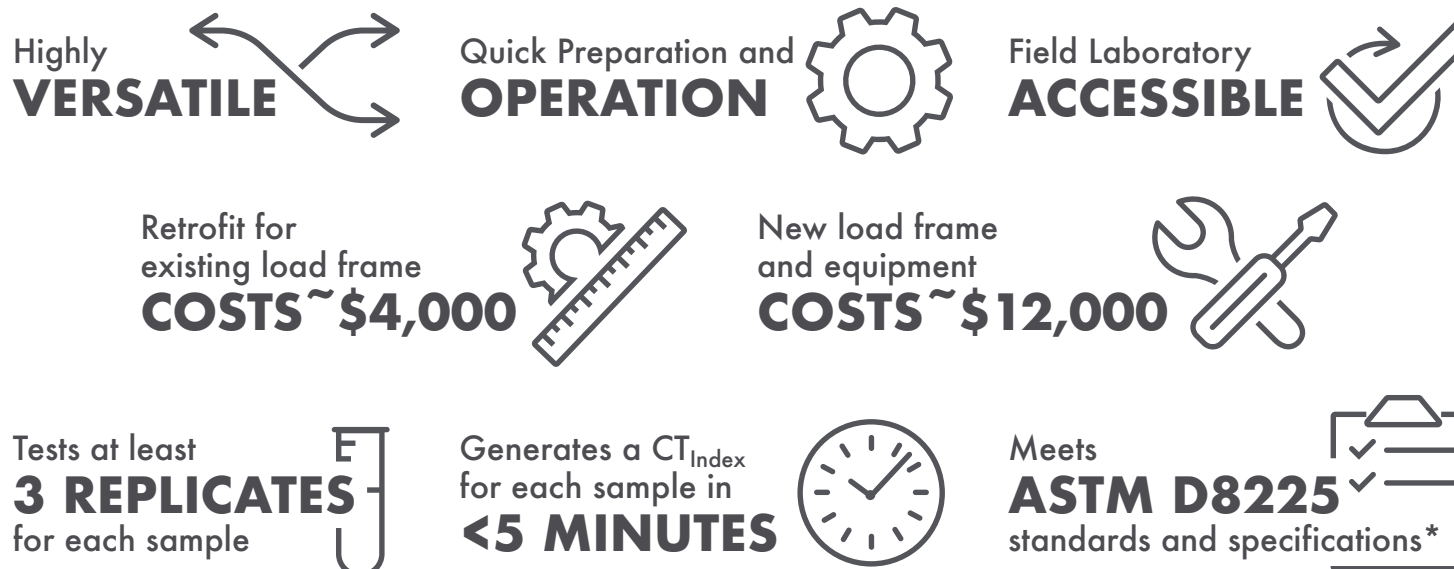
The IDEAL-CT is an indirect tension test that determines the cracking potential of asphalt mixtures with a fracture mechanics-based parameter: Cracking Tolerance Index ( $CT_{Index}$ ). Asphalt mixture specimens are conditioned and fabricated to 150 mm in diameter and 62 mm in height, with  $7.0 \pm 0.5$  percent air voids, no notching/cutting necessary. The test is run at room temperature with a monotonic loading rate of 50 mm/minute of cross-headed displacement.

**The larger the  $CT_{Index}$  value,  
the better the cracking resistance.**



Image Source: FHWA  
Load Frame performing Ideal-CT

## IDEAL-CT FEATURES



Current Performance Testing Program Evaluations of IDEAL-CT in: Texas, Oklahoma, Virginia, Kentucky, Minnesota, Maine, Vermont, National Center for Asphalt Technology (NCAT).

**LEARN MORE AT [HTTPS://WWW.FHWA.DOT.GOV/PAVEMENT/ASPHALT/TRAILER/TESTING.CFM](https://www.fhwa.dot.gov/pavement/asphalt/trailer/testing.cfm)**

\* These standards and specifications are not FHWA requirements.