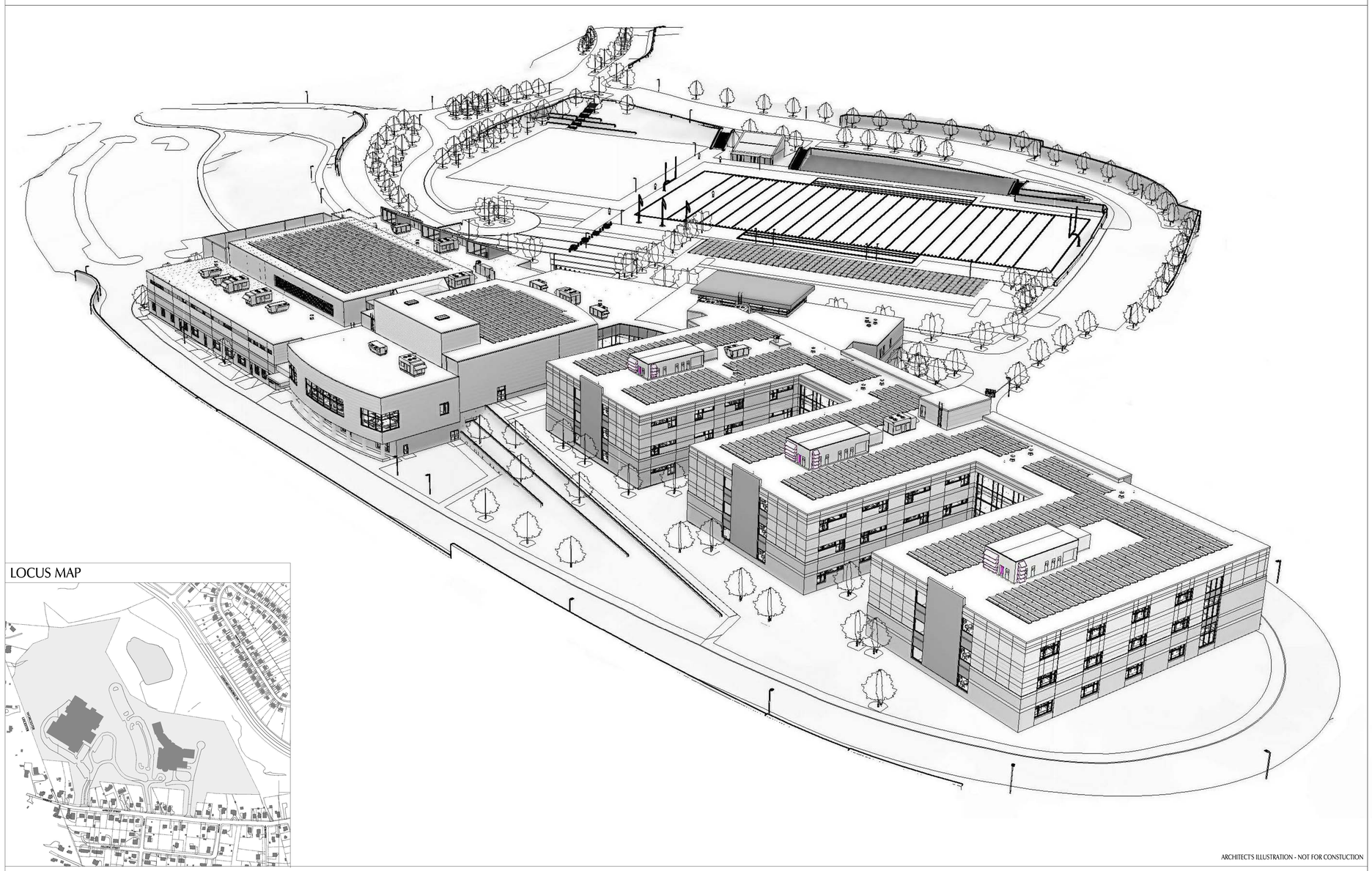
South High Community School

170 Apricot Street, Worcester, MA 01603

FINAL BID PACKAGE



ARCHITECT'S ILLUSTRATION - NOT FOR CONSTUCTION

LOCUS MAP

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DRAWING LIST COVER 1

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MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

Worcester Public Schools

South High Community School

170 Apricot Street, Worcester, MA 01603

Date:

January 31, 2019

Set No:

VOLUME I OF IV

EXISTING CONDITIONS LEGEND AND NOTES

LEGEND

- CATCH BASIN
- CABLE TELEVISION MANHOLE
- DRAIN MANHOLE
- ELECTRIC MANHOLE
- MISCELLANEOUS MANHOLE
- SEWER MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- GSO — GAS SHUT-OFF
- WSO — WATER SHUT-OFF
- GG — GAS GATE
- WG — WATER GATE
- ICV — IRRIGATION CONTROL VALVE
- CLEANOUT — CLEANOUT
- BWW — BOSTON WATER WORKS
- FIRE HYDRANT
- DS — DOWN SPOUT
- UP — UTILITY POLE
- UP W/ UE — UTILITY POLE WITH CONDUIT LINE TO GROUND
- LIGHT POLE
- LB — LIGHT BOLLARD
- LL — LANDSCAPE LIGHT
- HH — HAND HOLE
- TC — TRASH CAN
- FACP — FIRE ALARM CALL BOX
- MP — METAL POST
- CP — CONCRETE POST
- PM — PARKING METER
- S — SIGN POST
- TMA — TRAFFIC MAST ARM
- TRSG — TRAFFIC SIGNAL
- PED — PEDESTRIAN SIGNAL
- 12" — DECIDUOUS TREE WITH TRUNK DIAMETER
- 12" — CONIFEROUS TREE WITH TRUNK DIAMETER
- HANDICAP PARKING
- 60.14x3 — SPOT ELEVATION
- CLF — CHAIN LINK FENCE
- BB — BITUMINOUS CONCRETE BERM
- SGC — SLOPED GRANITE CURB
- VGC — VERTICAL GRANITE CURB
- VCC — VERTICAL CONCRETE CURB
- WCR — WHEELCHAIR RAMP
- LST — LANDSCAPE TIMBER
- R= — RIM ELEVATION EQUALS
- I= — INVERT ELEVATION EQUALS
- TH= — TOP OF HOOD ELEVATION EQUALS
- NPV — NO PIPES VISIBLE
- TOW= — TOP OF WATER
- TCB — TRAFFIC CONTROL BOX
- ULD — UNDERGROUND LOOP DETECTOR
- DWP — DETECTABLE WARNING PANEL
- 60.14x3TW — TOP OF WALL ELEVATION
- CATV — UNDERGROUND CABLE TELEVISION LINE
- D — UNDERGROUND DRAIN LINE
- E — UNDERGROUND ELECTRIC LINE
- G — UNDERGROUND GAS LINE
- S — UNDERGROUND SEWER LINE
- T — UNDERGROUND TELEPHONE LINE
- W — UNDERGROUND WATER LINE
- OHW — OVERHEAD WIRES
- MONITORING WELL
- BENCH MARK

GENERAL NOTES

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2. THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING CONDITIONS AS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY WHICH OCCURRED MAY AND AUGUST 2017. ADDITIONAL FIELD SURVEY LOCATIONS WERE OBTAINED IN FEBRUARY 2018 NEAR THE SULLIVAN MIDDLE SCHOOL AND LOWER FIELD.
3. THE HORIZONTAL DATUM SHOWN HEREON REFERENCES THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, NAD83(2011) EPOCH 2010.0. ESTABLISHED USING RTK-GPS.
4. THE VERTICAL DATUM SHOWN HEREON REFERENCES NAVD88, GEOID 12B. SUBTRACT 0.15' TO WORCESTER CITY BASE.
5. PLEASE NOTE THIS PLAN REPRESENTS A COMPILATION OF CONTOUR DATA OBTAINED FROM ON THE GROUND FIELD SURVEYS AND DATA OBTAINED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) LIDAR DATA (CONTOUR DATA). THIS DATA SET IS FROM THE MAINE AND MA 2015 QL1 AND QL2 LIDAR WITH AN ESTIMATED VERTICAL ACCURACY OF SIX-TENTHS OF A FOOT.
6. THE INFORMATION CONTAINED ON THE DISK OR ELECTRONIC DRAWING FILE ACCOMPANYING THIS PLAN MUST BE COMPARED TO THE SEALED AND SIGNED HARD COPY OF THE PLAN TO ENSURE THE ACCURACY OF ALL INFORMATION AND TO ENSURE NO CHANGES, ALTERATIONS, OR MODIFICATIONS HAVE BEEN MADE. RELIANCE SHALL NOT BE MADE ON A DOCUMENT TRANSMITTED BY COMPUTER OR OTHER ELECTRONIC MEANS UNLESS FIRST COMPARED TO THE ORIGINAL SEALED DOCUMENT ISSUED AT THE TIME OF THE SURVEY. DUE TO THE CRITICAL NATURE OF SURVEYING, DATA ACQUISITION, AND AUTOCAD PLAN DEVELOPMENT, IF CRITICAL DIMENSIONAL INFORMATION IS NEEDED AND IS NOT SPECIFICALLY SHOWN ON THE ELECTRONIC DRAWING FILE, PLEASE CONTACT NITSCH ENGINEERING.
7. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH AND MAY NOT DISCLOSE ANY MATTERS THAT MAY BE REVEALED BY ONE.
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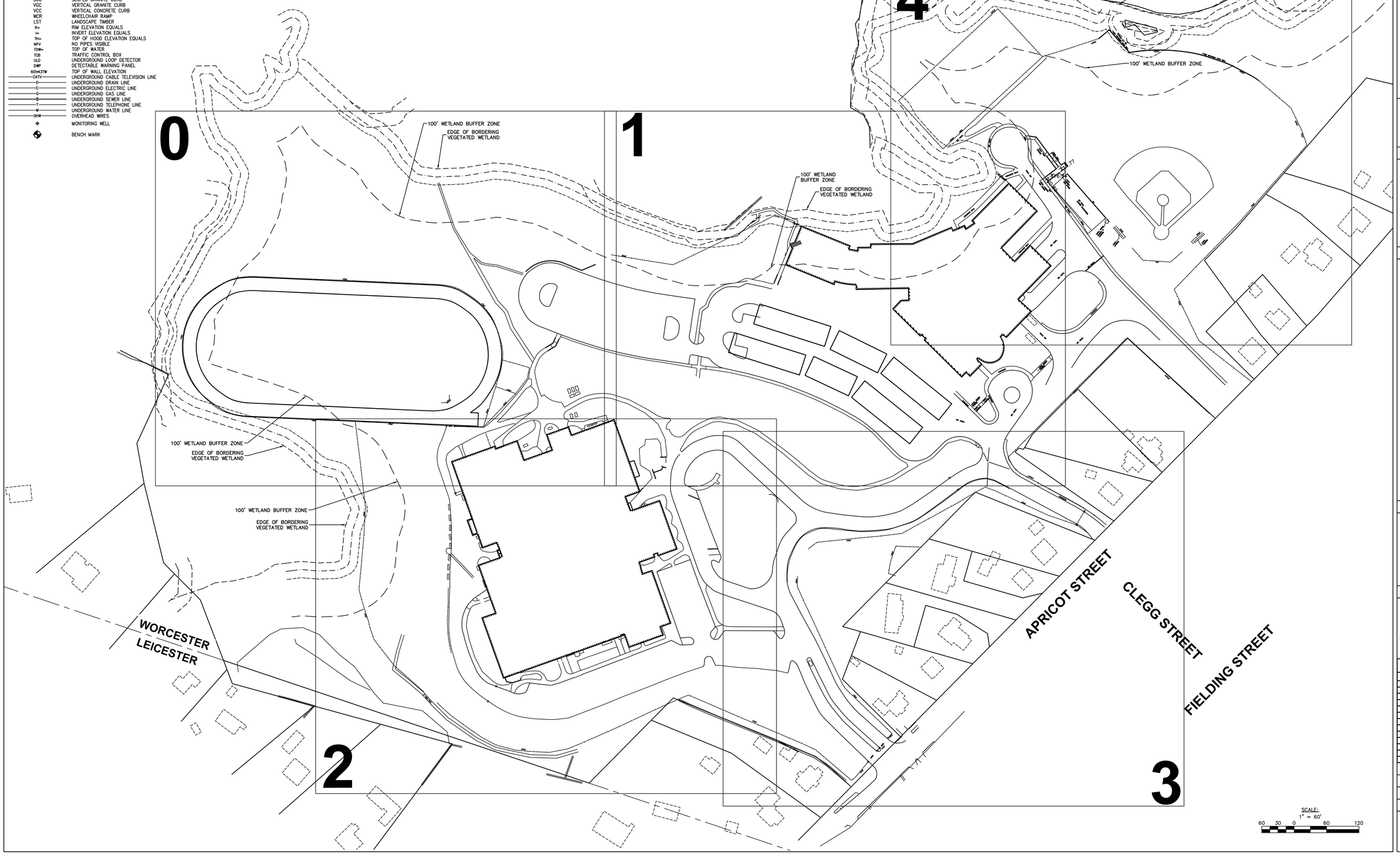
UTILITY INFORMATION STATEMENT

1. THE SUB-SURFACE UTILITY INFORMATION SHOWN HEREON IS COMPILED BASED ON FIELD SURVEY INFORMATION, RECORD INFORMATION AS SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES, AND PLAN INFORMATION SUPPLIED BY THE CLIENT, IF ANY; THEREFORE WE CANNOT GUARANTEE THE ACCURACY OF SAID COMPILED SUB-SURFACE INFORMATION TO ANY CERTAIN DEGREE OF STATED TOLERANCE. ONLY PHYSICALLY LOCATED SUB-SURFACE UTILITY FEATURES FALL WITHIN NORMAL STANDARD OF CARE ACCURACIES.
2. THE LOCATIONS OF UNDERGROUND PIPES, CONDUITS, AND STRUCTURES HAVE BEEN DETERMINED FROM SAID INFORMATION, AND ARE APPROXIMATE ONLY. COMPILED LOCATIONS OF ANY UNDERGROUND STRUCTURES, NOT VISIBLY OBSERVED AND LOCATED, CAN VARY FROM THEIR ACTUAL LOCATIONS.
3. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED.
4. THE STATUS OF UTILITIES, WHETHER ACTIVE, ABANDONED, OR REMOVED, IS AN UNKNOWN CONDITION AS FAR AS OUR COMPILATION OF THIS INFORMATION.
5. IT IS INCUMBENT UPON INDIVIDUALS USING THIS INFORMATION TO UNDERSTAND THAT COMPILING UTILITY INFORMATION IS NOT EXACT, AND IS SUBJECT TO CHANGE BASED UPON VARYING PLAN INFORMATION RECEIVED AND ACTUAL LOCATIONS.
6. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS, THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER MATTERS.
7. THE PROPER UTILITY ENGINEERING/COMPANY SHOULD BE CONSULTED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHOULD BE VERIFIED IN THE FIELD (V.I.F.) BEFORE PLANNING FUTURE CONNECTIONS. CONTACT THE DIG SAFE CALL CENTER AT 1-888-344-7233, SEVENTY-TWO HOURS PRIOR TO EXCAVATION, BLASTING, GRADING, AND/OR PAVING.
8. AS OF THE DATE OF THIS PLAN RECORD INFORMATION HAS NOT BEEN RECEIVED BY NITSCH ENGINEERING FOR THE FOLLOWING UTILITIES:



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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

EXISTING CONDITIONS PLAN

Key Plan

REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677ex

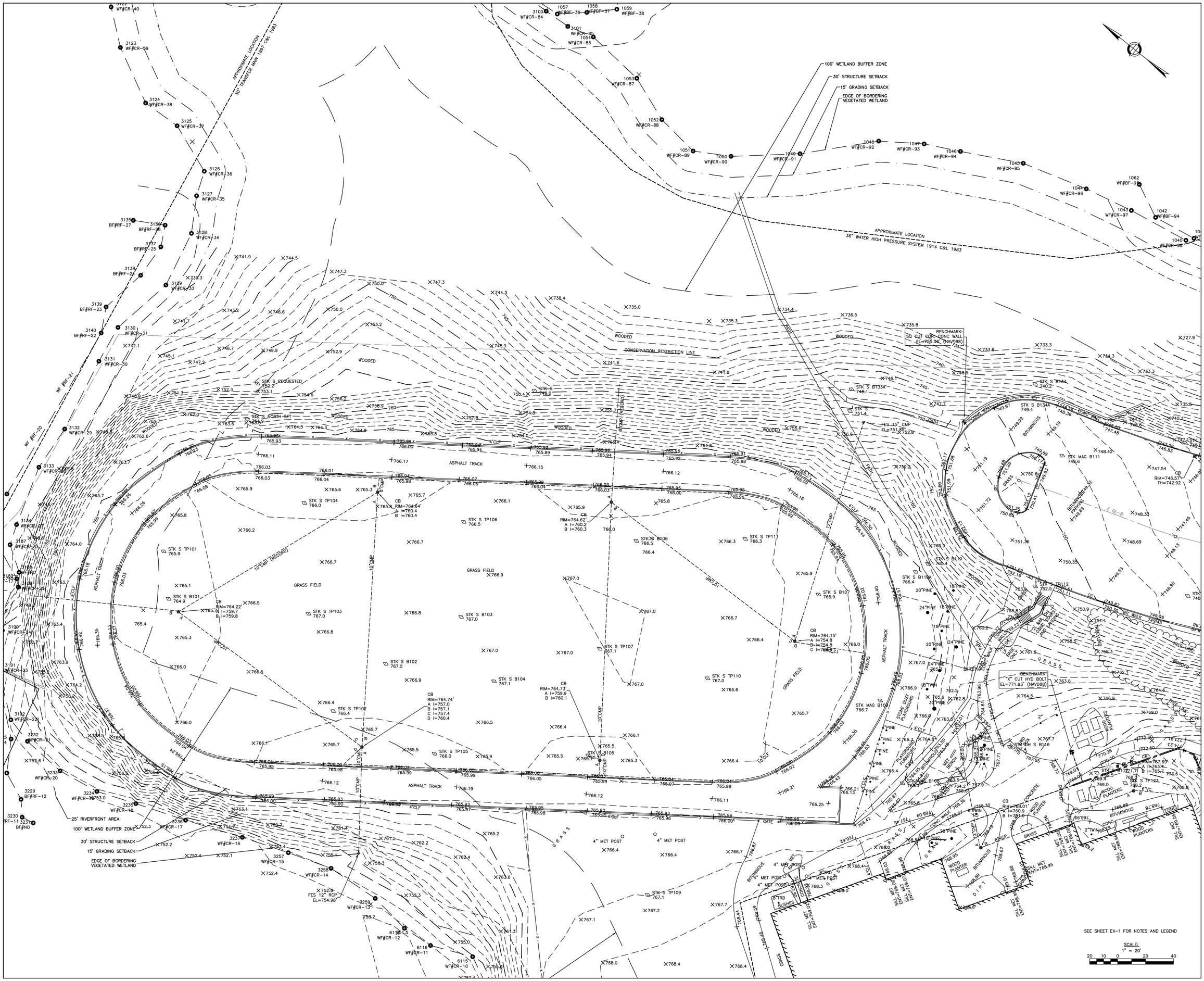
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=60'

DATE: January 31, 2019

EX1.0

Nitsch Project #11677



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FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

EXISTING CONDITIONS PLAN

Key Plan

REVISIONS

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1	SEBP #1-Addendum #1	3/01/18
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7	ESBP #3-Addendum #5	12/27/18

FILE: 11677ex

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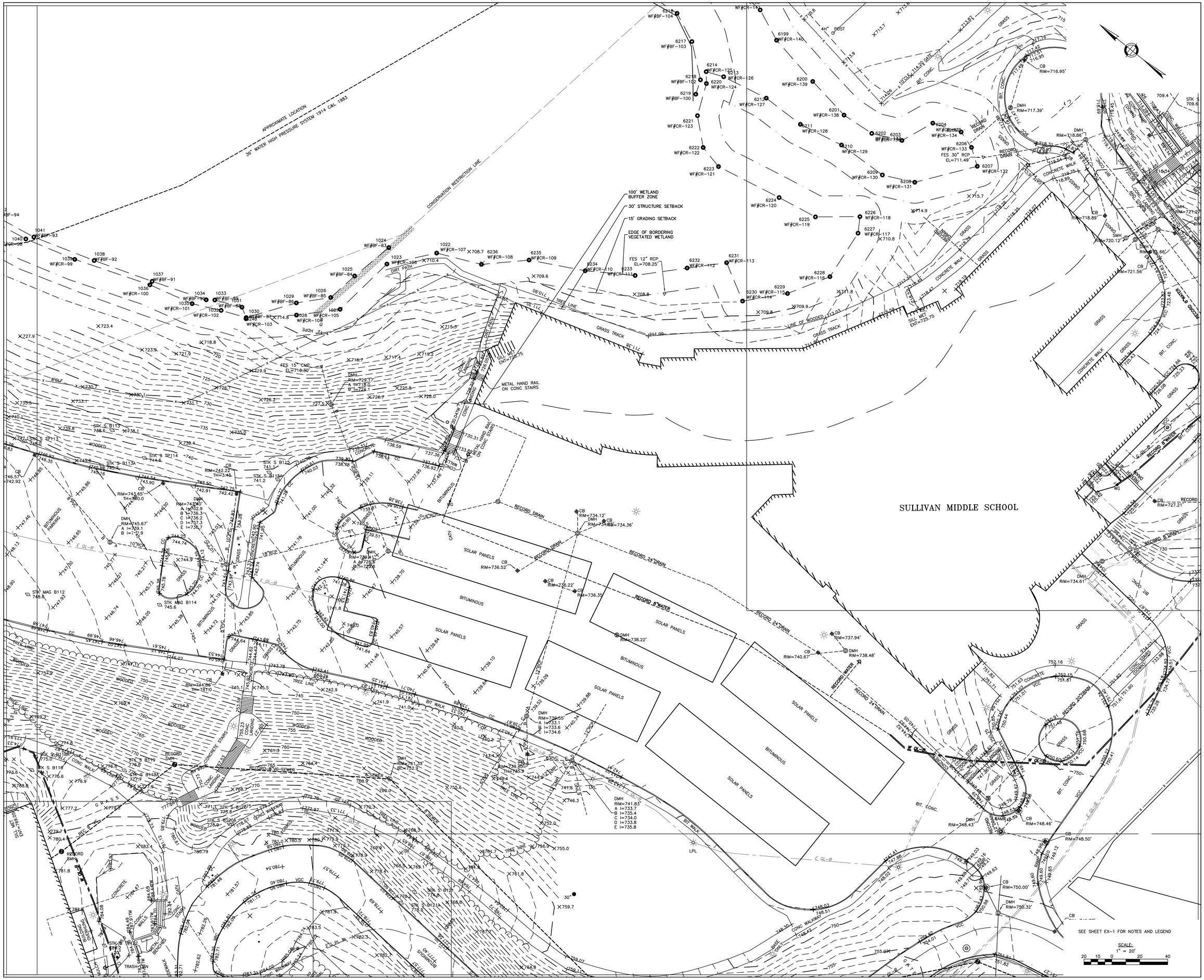
DATE: January 31, 2019

EX2.0

Nitsch Project #11677



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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

EXISTING CONDITIONS PLAN

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FILE: 11677cex

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DATE: January 31, 2019

EX2.1

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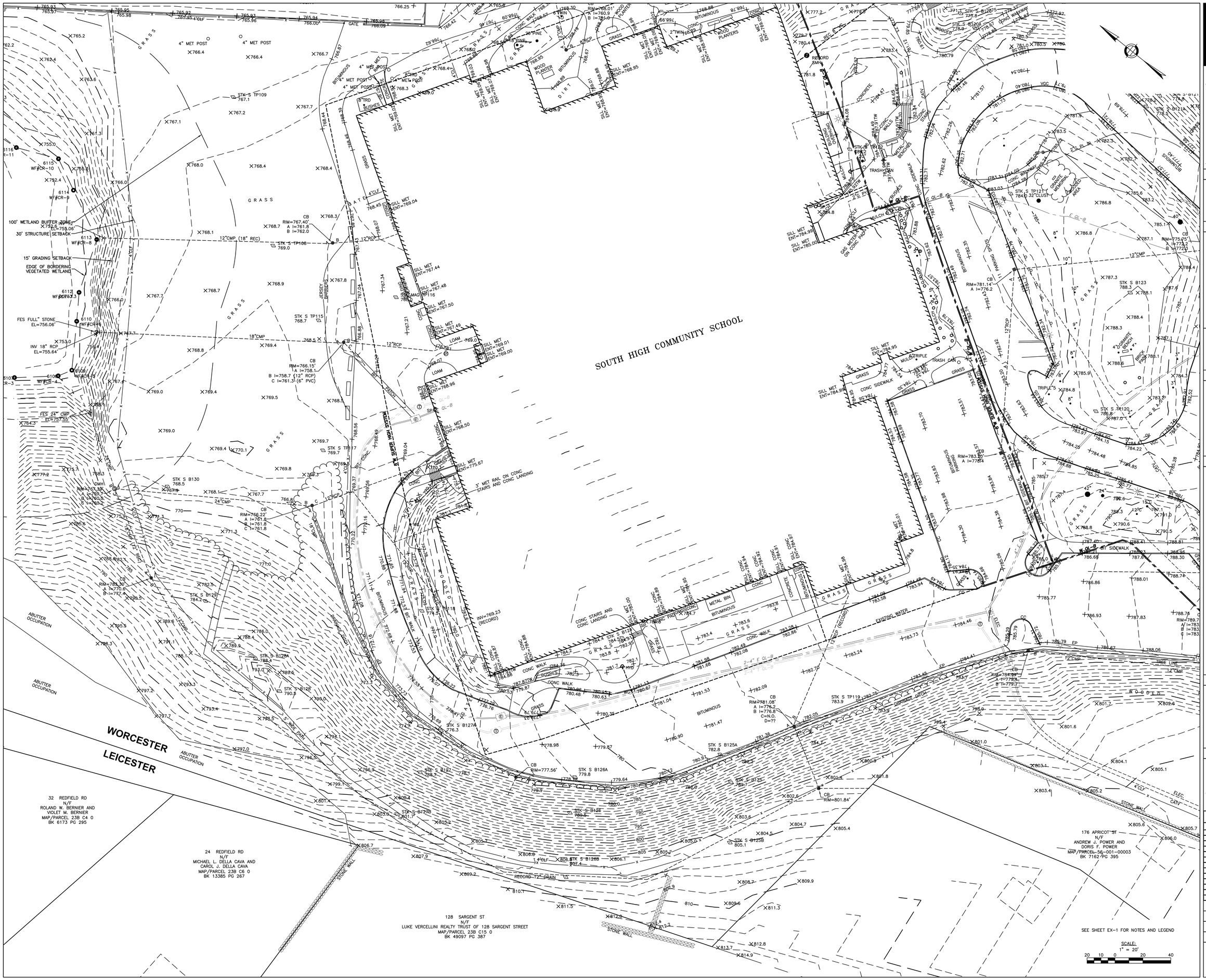

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FILE: 11677cex

DWN. BY: ER | JOB NO: #1611

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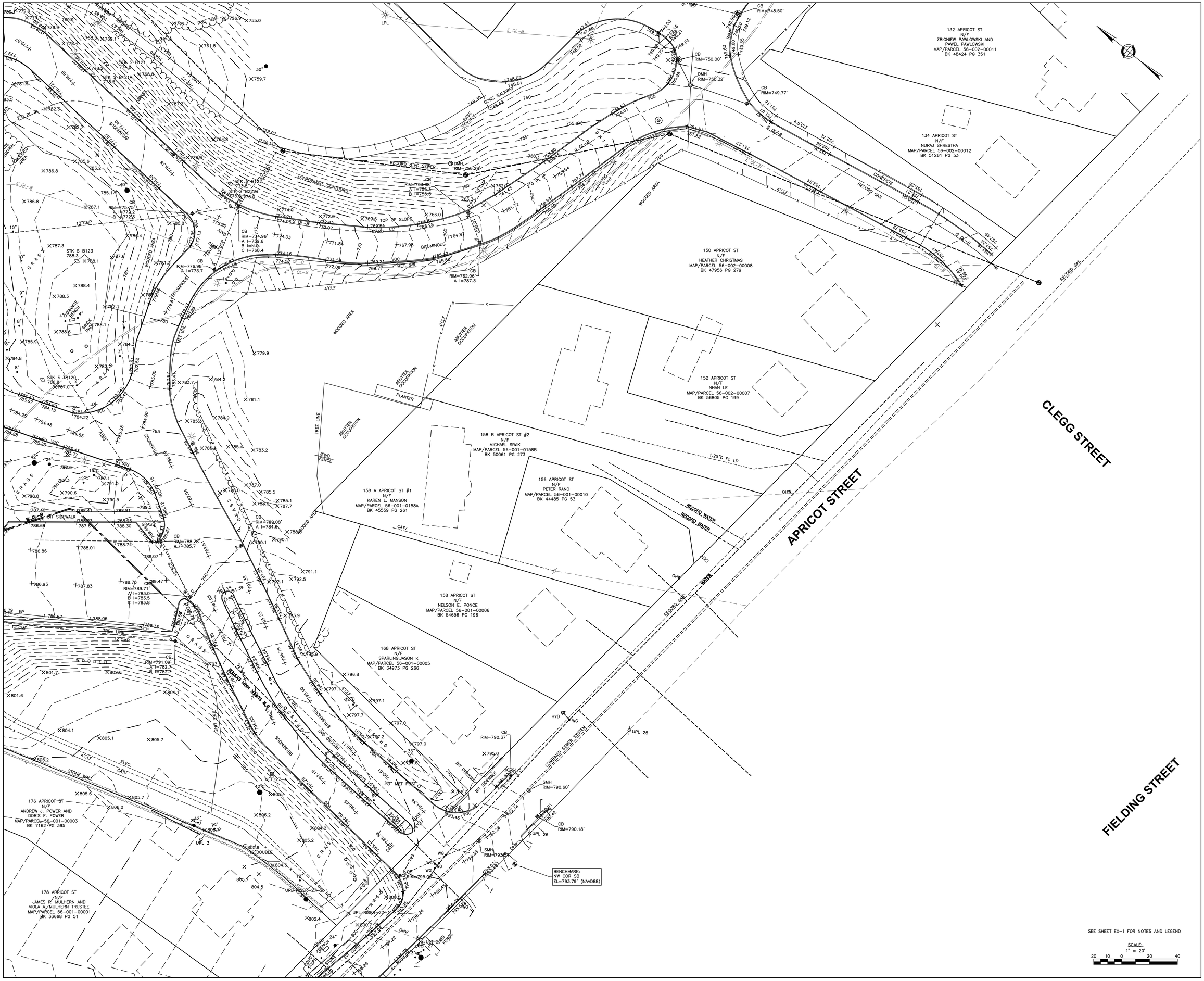
DATE: January 31, 2019

EX2.2

Nitsch Project #11677



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FILE: 11677ex

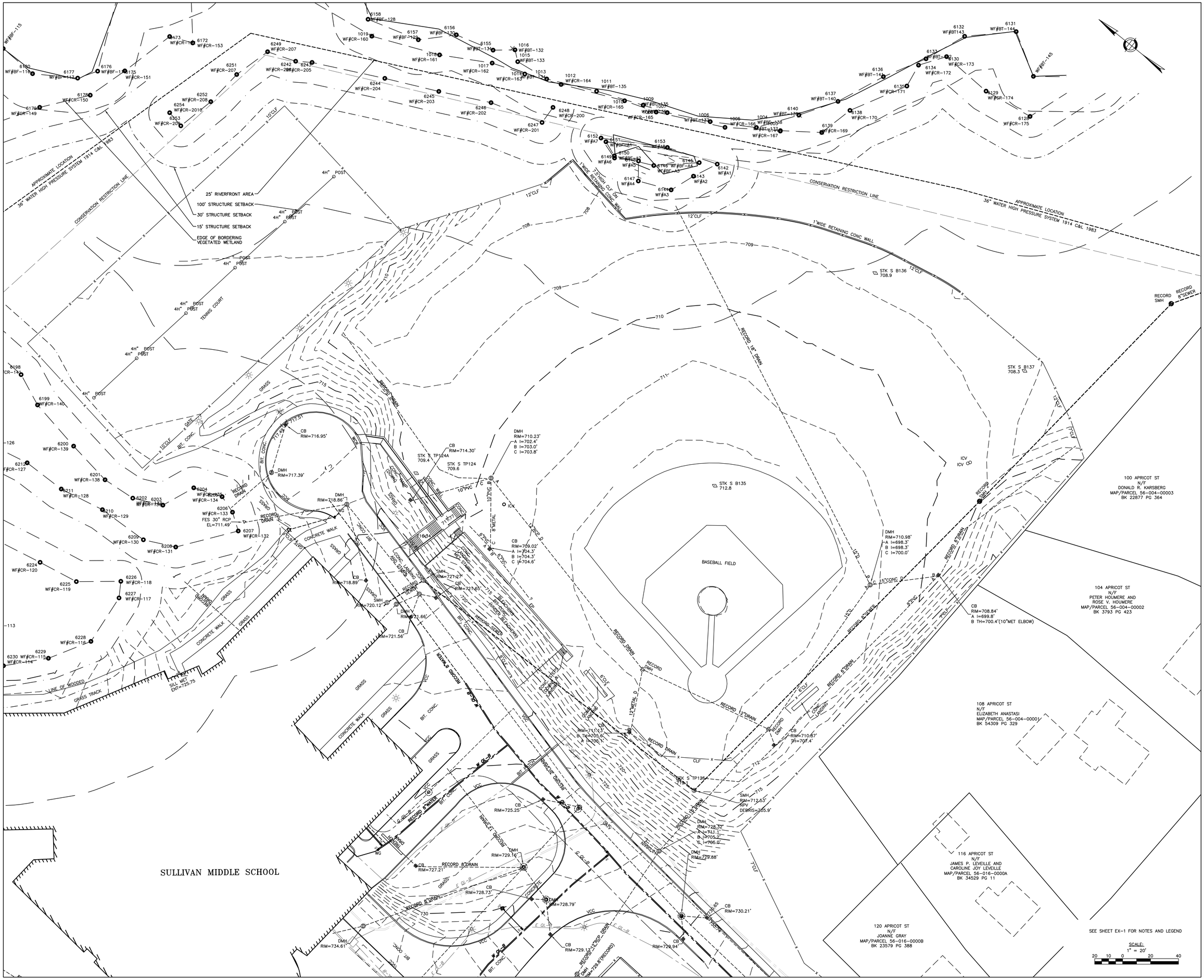
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

EX2.3

Nitsch Project #11677



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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

EXISTING CONDITIONS PLAN

Key Plan

REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cex

DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

EX2.4

Nitsch Project #11677

GENERAL NOTES:

1. TOPOGRAPHIC DATA, PROPERTY LINE INFORMATION, AND EXISTING SITE FEATURES WERE OBTAINED FROM A PLAN ENTITLED "EXISTING CONDITIONS PLAN", PREPARED BY NITSCH ENGINEERING, DATED MARCH 29 2018.
2. FLOODPLAIN INFORMATION WAS OBTAINED FROM THE FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY MAP NO. 25027C0801E. THE SITE IS NOT WITHIN A FLOOD HAZARD ZONE.
3. THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82, SECTION 40, AS AMENDED, WHICH STATES THAT NO ONE MAY EXCAVATE IN THE COMMONWEALTH OF MASSACHUSETTS EXCEPT IN AN EMERGENCY WITHOUT 72 HOURS NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, TO NATURAL GAS PIPELINE COMPANIES, AND MUNICIPAL UTILITY DEPARTMENTS THAT SUPPLY GAS, ELECTRICITY, TELEPHONE, OR CABLE TELEVISION SERVICE IN OR TO THE CITY OR TOWN WHERE THE EXCAVATION IS TO BE MADE. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE.
4. THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, ALSO REFERRED TO AS JACKIE'S LAW, AS DETAILED IN SECTION 520 CMR 14.00 OF THE CODE OF MASSACHUSETTS REGULATIONS.
5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS AND SAFETY CODES IN THE CONSTRUCTION OF ALL IMPROVEMENTS.
6. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE AND AND ALL UTILITIES MAY NOT BE SHOWN. PRESENCE AND LOCATIONS OF ALL UTILITIES WITHIN THE LIMIT OF WORK MUST BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND CONTACTING THE CONTROLLING AUTHORITIES AND/OR UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THEIR LINES. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND NITSCH ENGINEERING. ANY DAMAGE RESULTING FROM THE FAILURE OF THE CONTRACTOR TO MAKE THESE DETERMINATIONS AND CONTACTS SHALL BE BORNE BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL, THROUGHOUT CONSTRUCTION, TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, GRADING, SIDEWALKS AND SITE DETAILS OUTSIDE OF THE LIMIT OF WORK AS DEFINED ON THE DRAWINGS AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE ANY SUCH OR OTHER DAMAGE SO CAUSED.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.
9. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND CONSTRUCTION DOCUMENTS TO DEVELOP A THOROUGH UNDERSTANDING OF THE PROJECT, INCLUDING ANY SPECIAL CONDITIONS AND CONSTRAINTS.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PROJECT SITE AND TO VERIFY ALL CONDITIONS IN THE FIELD AND REPORT DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER OR OWNER'S REPRESENTATION IMMEDIATELY.
11. THE CONTRACTOR SHALL CONDUCT ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS.
12. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE ESTABLISHMENT AND USE OF ALL VERTICAL AND HORIZONTAL CONSTRUCTION CONTROLS.
13. ELEVATIONS REFER TO NAVD88.
14. THE CONTRACTOR SHALL COMPLY WITH THE ORDER OF CONDITIONS DATED MAY 18, 2018 AND ISSUED BY THE CITY OF WORCESTER CONSERVATION COMMISSION (DEP #349-1194).
15. FOR SOIL INFORMATION REFER TO GEOTECHNICAL REPORT.

UTILITY NOTES:

1. ALL UTILITY CONNECTIONS ARE SUBJECT TO THE APPROVAL OF, AND GRANTING OF PERMITS BY, THE LOCAL MUNICIPALITY. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS RELATED TO UTILITY WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ALL PERMISSIONS FOR, AND FOR CONDUCTING ALL PREPARATIONS RELATED TO, WORK AFFECTING ANY UTILITIES WITHIN THE JURISDICTION OF ANY NON-MUNICIPAL UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, AND/OR GAS. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE AGENCIES, DEPARTMENTS, AND UTILITY COMPANIES, IN WRITING, AT LEAST 7 DAYS (OR PER UTILITY COMPANY REQUIREMENT) AND NOT MORE THAN 30 DAYS PRIOR TO ANY CONSTRUCTION.
3. THE CONTRACTOR SHALL MAINTAIN UTILITIES SERVICING BUILDINGS AND FACILITIES WITHIN OR OUTSIDE THE PROJECT LIMIT UNLESS THE INTERRUPTION OF SERVICE IS COORDINATED WITH THE OWNER.
4. ALL WATER, SEWER, AND DRAIN WORK SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE LOCAL MUNICIPALITY.
5. GAS, TELECOMMUNICATIONS AND ELECTRIC SERVICES ARE TO BE DESIGNED BY EACH UTILITY COMPANY IN COORDINATION WITH THE MECHANICAL, ELECTRIC, AND PLUMBING CONSULTANTS.
6. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES OF NEW UTILITIES WITH GAS, TELECOMMUNICATION AND ELECTRICAL SERVICES.
7. INSTALL WATER LINES WITH A MINIMUM OF FIVE FEET OF COVER AND A MAXIMUM OF EIGHT FEET COVER AS MEASURED FROM THE TOP OF THE PIPE TO THE FINAL DESIGN GRADES.
8. MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION (WATER OVER SEWER) BETWEEN SEWER AND WATER LINES. WHEREVER THERE IS LESS THAN 10 FEET OF HORIZONTAL SEPARATION AND 18 INCHES OF VERTICAL SEPARATION BETWEEN A PROPOSED OR EXISTING SEWER LINE TO REMAIN AND A PROPOSED OR EXISTING WATER LINE TO REMAIN BOTH WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10-FEET ON EITHER SIDE OF THE CROSSING. ONE (1) FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER THE SEWER AT THE CROSSING.
9. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED AND/OR REMOVED & DISPOSED.
10. THE CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING, AND SURFACE RESTORATION FOR GAS UTILITY SYSTEMS.
11. ALL ON SITE UTILITIES SHALL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
12. ALL EXISTING AND PROPOSED MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
13. ALL GRATES IN WALKWAYS SHALL BE ADA COMPLIANT.

DEMOLITION NOTES:

1. SITE PREPARATION AND DEMOLITION SHALL INCLUDE THOSE AREAS WITHIN THE LIMIT OF WORK LINE AS SHOWN ON THE CONTRACT DOCUMENTS.
2. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
3. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING DEMOLITION.
4. THE CONTRACTOR SHALL COORDINATE SITE DEMOLITION EFFORTS WITH ALL TRADES THAT MAY BE AFFECTED BY THE WORK.
5. ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL AND FOOTINGS OR FOUNDATIONS AS REQUIRED TO FACILITATE CONSTRUCTION, AND LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR.
6. UTILITY PIPES DESIGNATED TO BE ABANDONED IN PLACE SHALL BE PLUGGED AT THEIR ENDS WITH WATERTIGHT BRICK MASONRY OR CEMENT MORTAR WITH A MINIMUM THICKNESS OF 8 INCHES.
7. UTILITY PIPES DESIGNATED TO BE REMOVED SHALL CONSIST OF THE COMPLETE REMOVAL AND DISPOSAL OF THE ENTIRE LENGTH OF PIPE AND BACKFILL AND 95% COMPACTION OF THE VOID WITH ORDINARY BORROW. WHEN THE VOID IS WITHIN THE FOOTPRINT OF THE NEW BUILDING, GRAVEL BORROW SHALL BE USED TO BACKFILL THE VOID.
8. UTILITY STRUCTURES DESIGNATED TO BE ABANDONED IN PLACE SHALL HAVE THEIR CAST IRON CASTINGS REMOVED AND DISPOSED, INLET AND OUTLET PIPES PLUGGED, THE BOTTOM OF THE STRUCTURES SHALL BE BROKEN, THE VOID OF THE STRUCTURES SHALL BE BACKFILLED AND COMPACTED TO 95% WITH SAND BORROW OR FLOWABLE FILL, AND THE TOP OF THE STRUCTURE SHALL BE REMOVED SO THAT IT IS AT LEAST 36 INCHES BELOW FINISH GRADE.
9. UTILITY STRUCTURES DESIGNATED TO BE REMOVED SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF CAST IRON CASTINGS, PLUGGING OF INLET AND OUTLET PIPES, REMOVAL OF THE STRUCTURE, AND BACKFILL AND 95% COMPACTION OF THE VOID WITH ORDINARY BORROW. WHEN THE VOID IS WITHIN THE FOOTPRINT OF THE NEW BUILDING, GRAVEL BORROW SHALL BE USED TO BACKFILL THE VOID.
10. ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFF SITE.
11. AT ALL LOCATIONS WHERE EXISTING CURBING, CONCRETE PAVEMENT OR BITUMINOUS CONCRETE ROADWAY ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE.
12. EXTEND DESIGNATED LIMIT OF WORK WITHIN THE PROPERTY LIMITS AND AS APPROVED BY OWNER AS NECESSARY TO ACCOMPLISH ROUGH GRADING, EROSION CONTROL, TREE PROTECTION, AND SITE WORK AS REQUIRED BY THESE DRAWINGS AND SPECIFICATIONS.
13. THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL RUBBISH AND DEBRIS FOUND THEREON. STORAGE OF SUCH MATERIALS ON THE PROJECT SITE WILL NOT BE PERMITTED. THE CONTRACTOR SHALL LEAVE THE SITE IN SAFE, CLEAN, AND LEVEL CONDITION UPON COMPLETION OF THE SITE DEMOLITION WORK.
14. REMOVE AND DISPOSE OF ALL EXISTING SITE LIGHTS, BENCHES, TRASH RECEPTACLES, TRAFFIC SIGNS, AND OTHER SITE IMPROVEMENTS WITHIN THE LIMIT OF WORK LINE UNLESS OTHERWISE NOTED.
15. REMOVE AND STOCKPILE FOR REUSE ALL EXISTING GRANITE CURB UNLESS OTHERWISE NOTED.
16. ALL EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED AND MAINTAINED THROUGHOUT THE TIME OF CONSTRUCTION, AS SPECIFIED AND DIRECTED BY THE LANDSCAPE ARCHITECT.
17. BEFORE ANY TREES OR SHRUBS ARE REMOVED, THE CONTRACTOR SHALL ARRANGE A CONFERENCE ON THE SITE WITH THE OWNER OR OWNER'S REPRESENTATIVE AND CONSERVATION COMMISSION AGENT TO IDENTIFY TREES AND SHRUBS THAT ARE TO BE REMOVED, AS WELL AS THOSE WHICH ARE TO BE PROTECTED. DO NOT COMMENCE CLEARING OPERATIONS WITHOUT A CLEAR UNDERSTANDING OF EXISTING CONDITIONS TO BE PRESERVED.
18. THE CONTRACTOR SHALL REMOVE FROM THE AREA OF CONSTRUCTION PAVEMENT, CONCRETE, CURBING, POLES AND FOUNDATIONS, ISLANDS, TREE BERMS AND OTHER FEATURES WITHIN THE LIMITS OF CONSTRUCTION AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION WHETHER SPECIFIED ON THE DRAWINGS OR NOT.
19. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TREES, SHRUBS, AND PLANTINGS NECESSARY TO COMPLETE THE PROPOSED WORK.

EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" PREPARED BY DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF RESOURCE PROTECTION, AND THE CURRENT NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES.
2. MEANS OF EROSION AND SEDIMENT PROTECTION AS NOTED ON THE DRAWINGS INDICATE MINIMUM RECOMMENDED PROVISIONS. THE CONTRACTOR IS RESPONSIBLE FOR FINAL SELECTION AND PLACEMENT OF EROSION AND SEDIMENTATION CONTROLS BASED ON ACTUAL SITE CONDITIONS AND CONSTRUCTION CONDITIONS. ADDITIONAL MEANS OF PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR CONTINUED OR UNFORESEEN EROSION PROBLEMS, OR AS DIRECTED BY CONTROLLING MUNICIPAL AUTHORITIES, AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. AN EROSION CONTROL BARRIER SHALL BE INSTALLED ALONG THE EDGE OF PROPOSED DEVELOPMENT AS INDICATED IN THE PLAN PRIOR TO COMMENCEMENT OF DEMOLITION OR CONSTRUCTION OPERATIONS.
4. SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF AND DURING ALL PHASES OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO AND IMMEDIATELY AFTER ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
5. AFTER ANY SIGNIFICANT RAINFALL (GREATER THAN 0.25 INCHES OF RAINFALL WITHIN 24 HOURS), SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOR INTEGRITY. ANY DAMAGE SHALL BE CORRECTED IMMEDIATELY.
6. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES SHALL BE PROVIDED TO ENSURE THAT THE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT LEAVING THE LIMIT OF WORK. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT FROM ENTERING ANY STORM DRAINAGE SYSTEM AND FROM BEING CONVEYED TO ANY WETLAND RESOURCE AREA, PUBLIC WAYS, ABUTTING PROPERTY, OR OUTSIDE OF THE PROJECT LIMITS.
8. THE CONTRACTOR SHALL PROTECT ALL DRAINAGE SWALES AND GROUND SURFACES WITHIN THE LIMIT OF WORK FROM EROSIVE CONDITIONS. STRAW BALE, CRUSHED STONE OR EQUIVALENT CHECK DAMS ARE TO BE PROVIDED AT A MAXIMUM OF TWO HUNDRED (200) FOOT SPACING, OR LESS AS SITE-SPECIFIC CONDITIONS WARRANT, WITHIN ALL DRAINAGE SWALES AND DITCHES AND AT UPSTREAM SIDES OF ALL DRAINAGE INLETS.
9. ALL STOCK PILES SHALL BE PROTECTED AND LOCATED A MINIMUM OF 100' FROM EXISTING WETLAND RESOURCE AREAS & WITHIN THE LIMIT OF WORK.
10. ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.
11. ALL SEDIMENT RETAINED BY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
12. TEMPORARY DIVERSION DITCHES, PERMANENT DITCHES, CHANNELS, EMBANKMENTS , AND ANY DENUDED SURFACE THAT WILL BE EXPOSED FOR A PERIOD OF 14 CALENDAR DAYS OR MORE SHALL BE CONSIDERED CRITICAL VEGETATION AREAS. THESE AREAS SHALL BE STABILIZED/PROTECTED WITH APPROPRIATE EROSION CONTROL MATTING OR OTHER EROSION CONTROL METHODS.
13. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS AS DIRECTED BY THE PERMITTING AUTHORITY OR OWNER.
14. THE CONTRACTOR SHALL USE TEMPORARY SEEDING, MULCHING OR OTHER APPROVED STABILIZATION MEASURES TO PROTECT EXPOSED AREAS DURING PROLONGED CONSTRUCTION OR OTHER LAND DISTURBANCE. STOCKPILES THAT WILL BE EXPOSED FOR LONGER THAN 14 DAYS SHALL BE STABILIZED.
15. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL EROSION AND SEDIMENT CONTROLS AT THE COMPLETION OF SITE CONSTRUCTION, BUT ONLY WHEN DIRECTED BY THE CITY OF WORCESTER CONSERVATION AGENT. STABILIZE OR SEED BARE AREAS LEFT AFTER EROSION CONTROL REMOVAL.

EARTH MOVING AND GRADING NOTES:

1. ALL TOPSOIL ENCOUNTERED WITHIN THE WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND STOCKPILED FOR REUSE. EXCESS TOPSOIL NOT DESIGNATED FOR REUSE SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED BY THE OWNER. TOPSOIL PILES SHALL REMAIN SEGREGATED FROM EXCAVATED SUBSURFACE SOIL MATERIALS. EXISTING SITE SOILS CONTAIN NATURALLY-OCCURRING ARSENIC. THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS PER THE SPECIFICATIONS AND REGULATIONS REGARDING REUSE AND/OR OFFSITE DISPOSAL OF EXISTING SITE SOILS.
2. GRADES WITHIN HANDICAP PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 1.5% IN ANY DIRECTION.
3. CROSS SLOPES OF ALL PEDESTRIAN WALKS SHALL NOT EXCEED 1.5%.
4. RUNNING SLOPE OF ALL PEDESTRIAN WALKS SHALL NOT EXCEED 4.5%, UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL EXERCISE CAUTION IN ALL EXCAVATION ACTIVITY DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES.
6. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM OF 1% UNLESS OTHERWISE NOTED.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM FACE OF BUILDINGS AT ALL LOCATIONS.
8. PITCH EVENLY BETWEEN CONTOUR LINES AND BETWEEN SPOT GRADES. SPOT GRADE ELEVATIONS TAKE PRECEDENCE OVER CONTOUR LINES.
9. ALL PROPOSED TOP OF CURB ELEVATIONS ARE SIX INCHES (6") ABOVE BOTTOM OF CURB ELEVATIONS UNLESS OTHERWISE NOTED. ALL PROPOSED TOP OF CAPE COD BERM ELEVATIONS ARE FOUR INCHES (4") ABOVE BOTTOM OF CURB ELEVATION UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL BLEND NEW GRADING SMOOTHLY INTO EXISTING GRADING AT LIMITS OF GRADING.
11. WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING PAVING WITH SMOOTH TRANSITION BETWEEN EXISTING AND NEW SURFACES.
12. THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
13. PITCH TOPS OF ALL WALLS AT ONE-EIGHTH INCH (1/8") PER FOOT FROM BACK OF WALL TO FACE OF WALL. EXISTING SITE SOILS CONTAIN NATURALLY-OCCURRING ARSENIC. THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS PER THE SPECIFICATIONS AND REGULATIONS REGARDING REUSE AND/OR OFFSITE DISPOSAL OF EXISTING SITE SOILS.
14. SURPLUS MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE. REFER TO EARTHWORK SPECIFICATIONS.
15. ANY AREAS OUTSIDE OF THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR TO THE PRE-CONSTRUCTION CONDITION/GRADE AT NO COST TO THE OWNER.
16. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO COMMONWEALTH/OWNER.
17. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER.

PROPOSED LEGEND

- LIMIT OF WORK
- VEHICULAR GUARDRAIL
- EROSION CONTROL BARRIER
- x — x CONSTRUCTION FENCE
- W DOMESTIC WATER PIPE
- FP FIRE PROTECTION PIPE
- S SANITARY SEWER PIPE
- D STORM DRAIN PIPE
- G GAS PIPE
- E ELECTRIC DUCTBANK
- T/C TELECOM DUCTBANK
- INLET PROTECTION
- ELEVATION CONTOURS
- MATCH LINE
- CO CLEANOUT
- AD AREA DRAIN
- DMH DRAIN MANHOLE
- WQS WATER QUALITY STRUCTURE
- CB CATCH BASIN
- SMH SEWER MANHOLE
- WV WATER VALVE
- HYD FIRE HYDRANT
- PEDESTRIAN LIGHT
- STREET LIGHT

ABBREVIATIONS

AB	ACCESS BASIN
AD	AREA DRAIN
BC	BOTTOM OF CURB ELEVATION
CB	CATCH BASIN
CCB	CAPE COD BERM
CI	CAST IRON
CJ	CONTROL JOINT
CL	CENTER LINE
CO	CLEANOUT
COP	CENTER OF PIPE
CP	CARRIER PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
DCB	DOUBLE CATCH BASIN
DI	DUCTILE IRON PIPE CEMENT LINED
DMH	DRAIN MANHOLE
EHH	ELECTRIC HANDHOLE
EJ	EXPANSION JOINT
EMH	ELECTRIC MANHOLE
FD	FOUNDATION DRAIN
FFE	FINISHED FLOOR ELEVATION
HP	HIGH POINT
HYD	FIRE HYDRANT
INV	INVERT ELEVATION
LF	LINEAR FEET
LOW	LIMIT OF WORK
LP	LOW POINT
LW	LAB WASTE
M&P	MAINTAIN AND PROTECT
NIC	NOT IN CONTRACT
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
PD	PERIMETER DRAIN
PERF	PERFORATED
PVC	POLYVINYL CHLORIDE PIPE
R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
RD	ROOF DRAIN
RIM	RIM ELEVATION
SMH	SEWER MANHOLE
SS	SEWER SERVICE
TC	TOP OF CURB ELEVATION
THH	TELECOM HANDHOLE
TMH	TELECOM MANHOLE
TOP	TOP OF PIPE
TOD	TOP OF DUCT BANK
TYP	TYPICAL
UD	UNDERDRAIN
USD	UNDERSLAB DRAIN
VGC	VERTICAL GRANITE CURB
WQI	WATER QUALITY INLET
WQS	WATER QUALITY STRUCTURE
WV	WATER VALVE

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Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

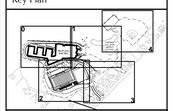
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL NOTES, LEGEND AND ABBREVIATIONS

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
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DATE: January 31, 2019

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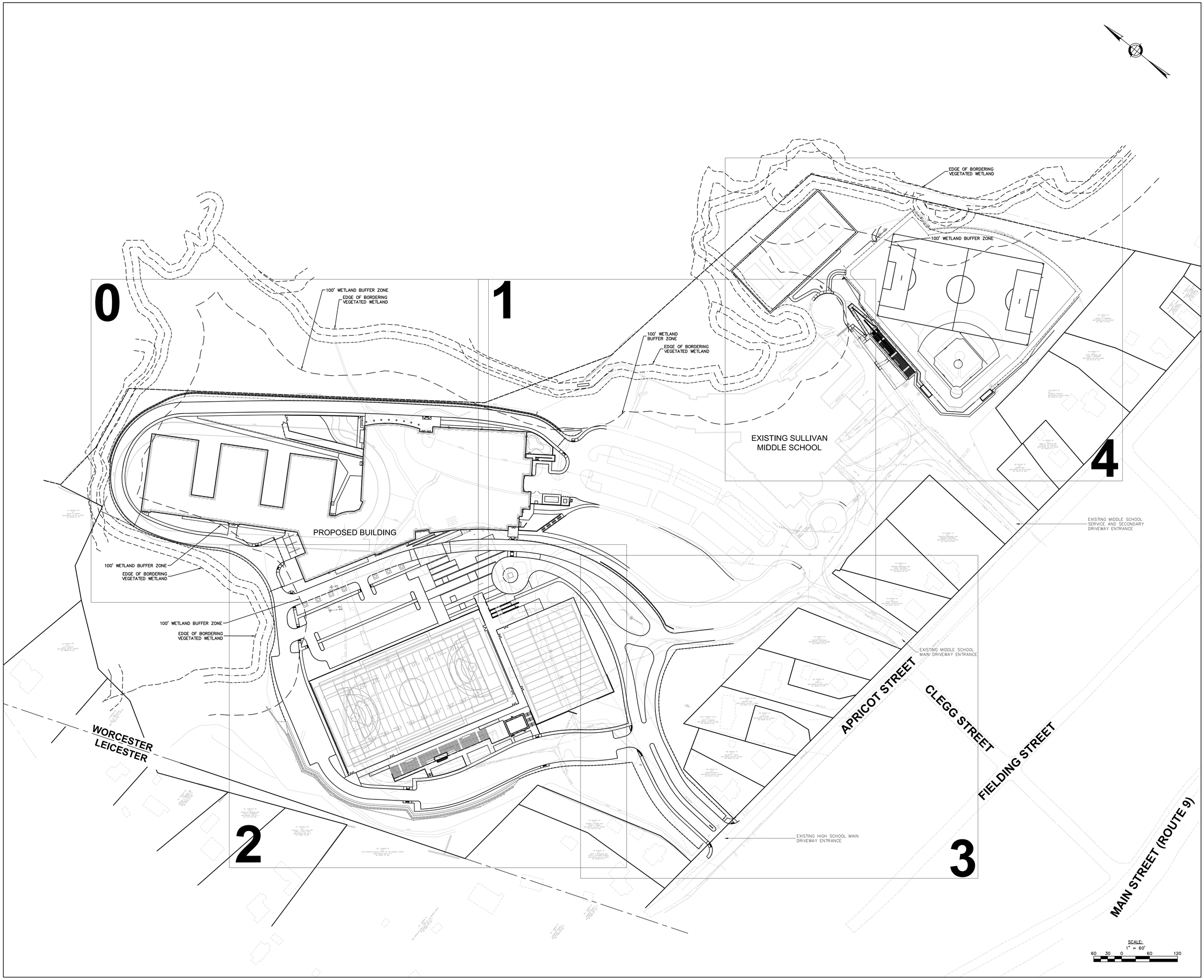

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FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

OVERALL SITE PLAN

Key Plan

REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
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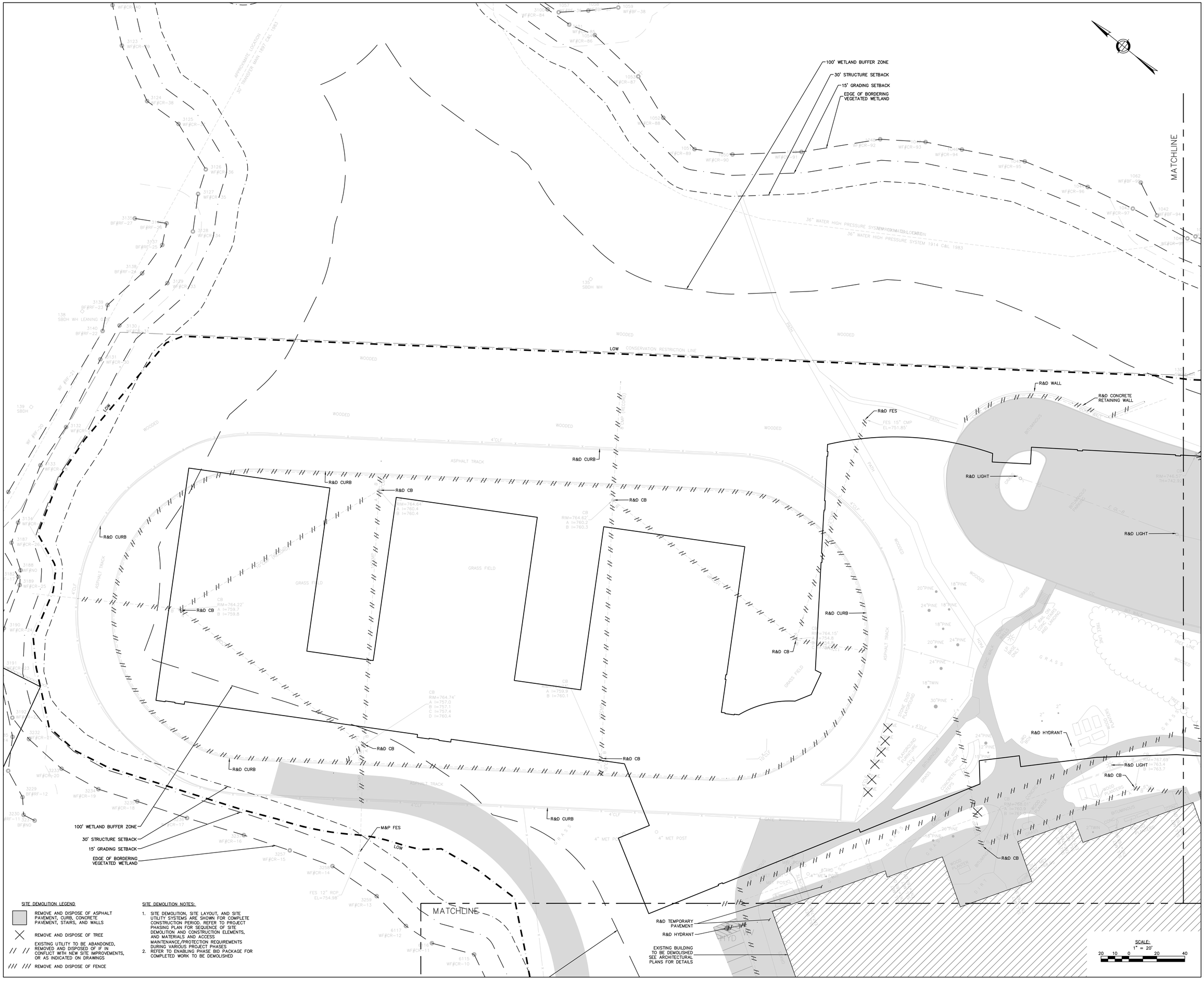
C2.0

Nitsch Project #11677



SITE DEMOLITION LEGEND

- REMOVE AND DISPOSE OF ASPHALT PAVEMENT, CURB, CONCRETE PAVEMENT, STAIRS, AND WALLS
- REMOVE AND DISPOSE OF TREE
- EXISTING UTILITY TO BE ABANDONED, REMOVED AND DISPOSED OF IF IN CONFLICT WITH NEW SITE IMPROVEMENTS, OR AS INDICATED ON DRAWINGS
- REMOVE AND DISPOSE OF FENCE

SITE DEMOLITION NOTES:

1. SITE DEMOLITION, SITE LAYOUT, AND SITE UTILITY SYSTEMS ARE SHOWN FOR COMPLETE CONSTRUCTION PERIOD. REFER TO PROJECT PHASING PLAN FOR SEQUENCE OF SITE DEMOLITION AND CONSTRUCTION ELEMENTS, AND MATERIALS AND ACCESS MAINTENANCE/PROTECTION REQUIREMENTS DURING VARIOUS PROJECT PHASES.
2. REFER TO ENABLING PHASE BID PACKAGE FOR COMPLETED WORK TO BE DEMOLISHED

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
108 GROVE STREET, SUITE 300
WORCESTER, MASSACHUSETTS 01605

MEMBER OF
THE AMERICAN INSTITUTE OF ARCHITECTS

CONSULTANT

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

SITE DEMOLITION PLAN

Key Plan

REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
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5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cdm

DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

C3.0

Nitsch Project #11677

SITE DEMOLITION LEGEND

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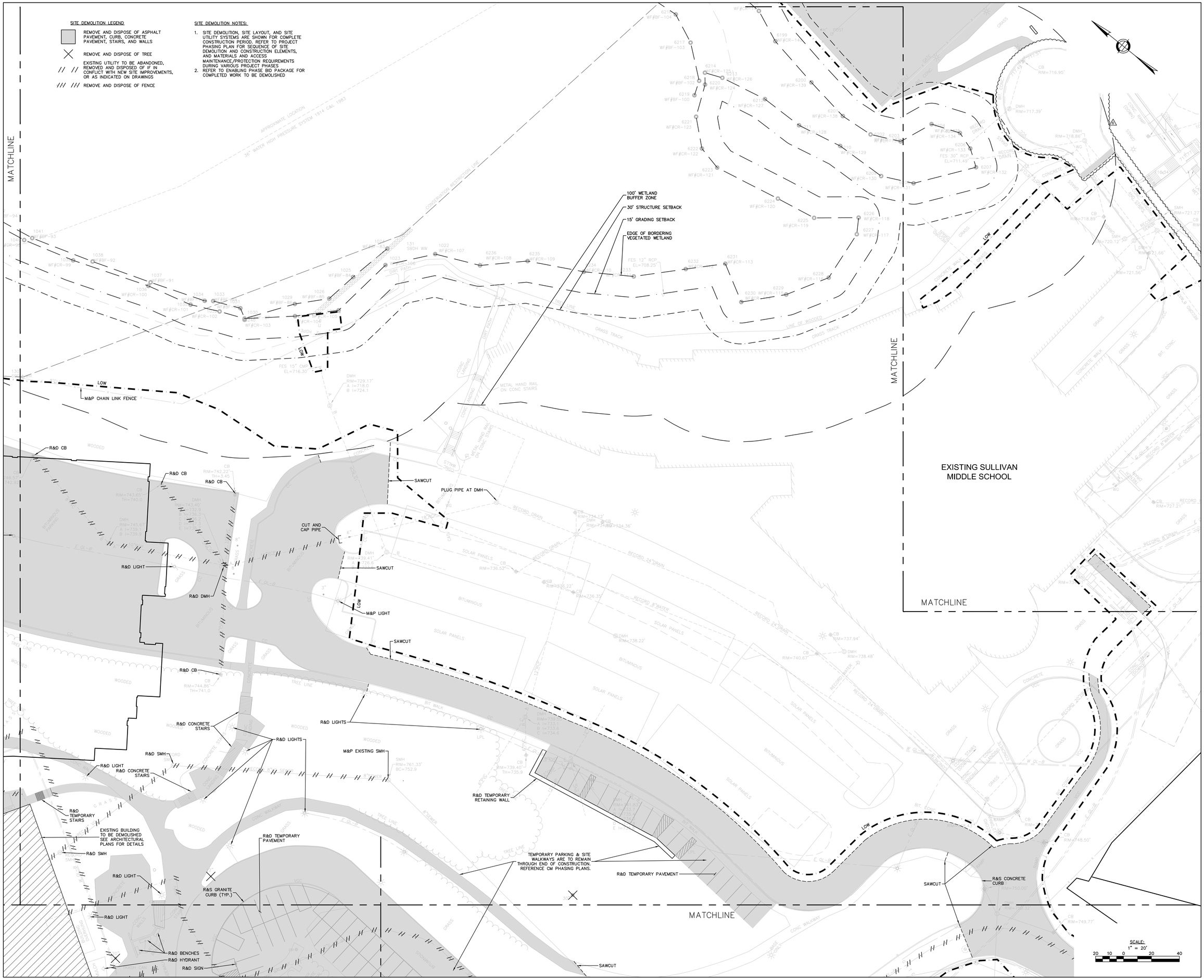

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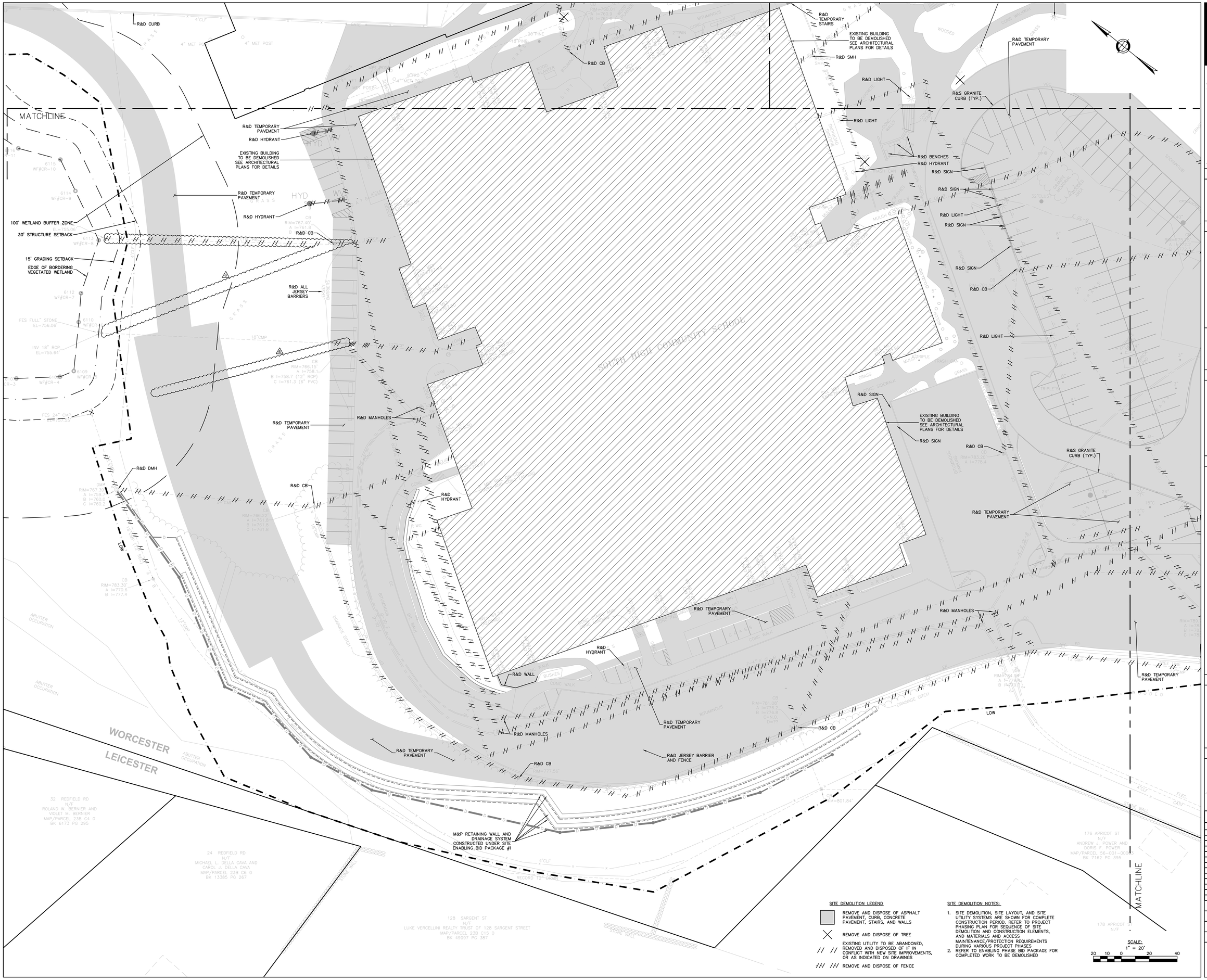
CKD. BY: JFG | SCALE: 1"=20'

DATE: January 31, 2019

C3.1

Nitsch Project #11677



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FILE: 11677cdm

DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

C3.2

Nitsch Project #11677

SITE DEMOLITION LEGEND

REMOVE AND DISPOSE OF ASPHALT PAVEMENT, CURB, CONCRETE PAVEMENT, STAIRS, AND WALLS

REMOVE AND DISPOSE OF TREE

EXISTING UTILITY TO BE ABANDONED, REMOVED AND DISPOSED OF IF IN CONFLICT WITH NEW SITE IMPROVEMENTS, OR AS INDICATED ON DRAWINGS

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SCALE:
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20 10 0 20 40

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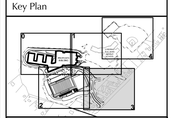

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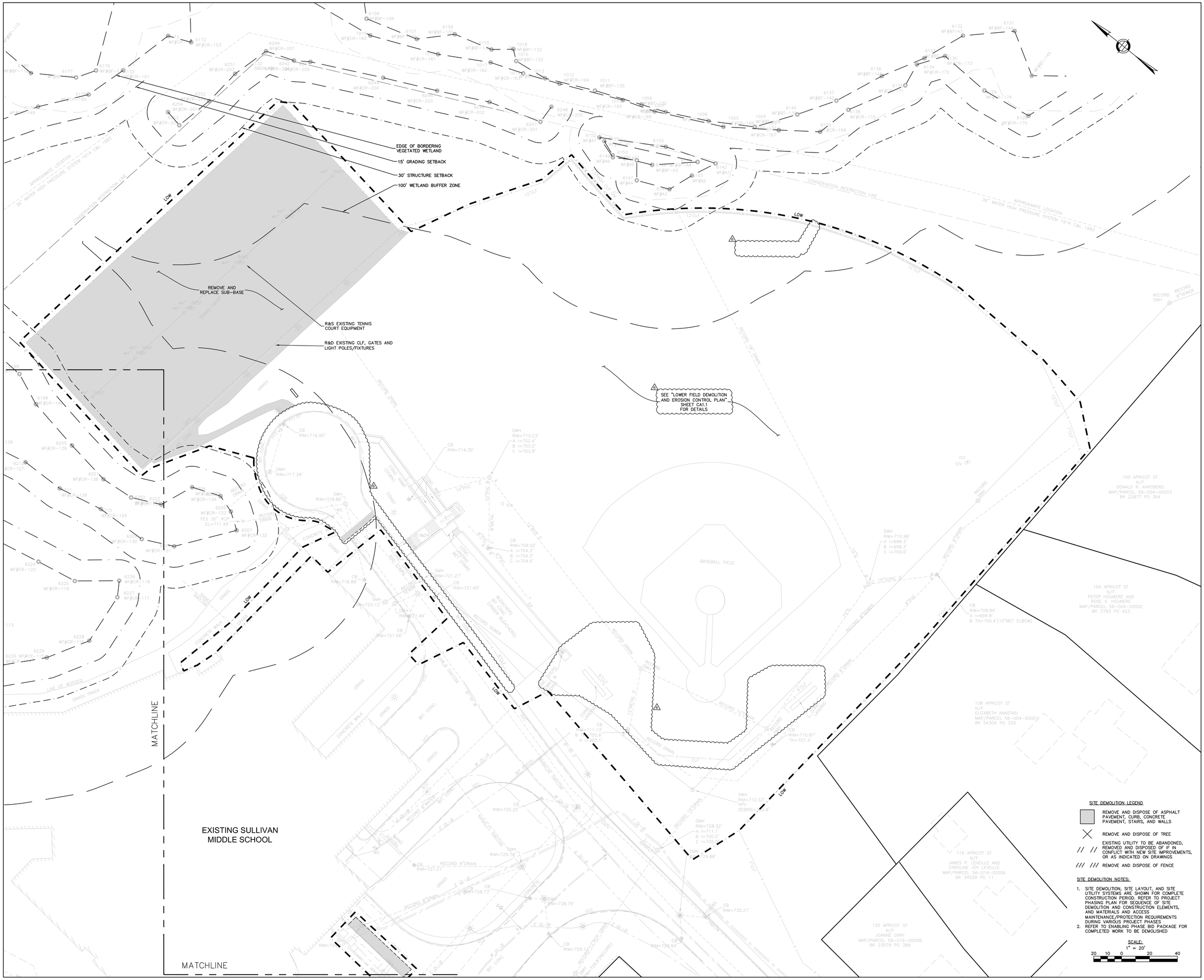
FILE: 11677cdm

DWN. BY:	ER	JOB NO:	#1611
CKD. BY:	JEG	SCALE:	1"=20

DATE: January 31, 2019

C3.3

Nitsch Project #11677



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SITE DEMOLITION PLAN

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FILE: 11677cdm

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CKD. BY: JEG | SCALE: 1"=20

DATE: January 31, 2019

C3.4

Nitsch Project #11677

100' WETLAND BUFFER ZONE
30' STRUCTURE SETBACK
15' GRADING SETBACK
EDGE OF BORDERING VEGETATED WETLAND

PERIMETER EROSION CONTROL BARRIER INSTALLED UNDER ENABLING PHASE. CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION. REFERENCE CM PHASING PLAN

CONSTRUCTION FENCE INSTALLED UNDER ENABLING PHASE. CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION. REMOVE FROM THE PROJECT SITE AT THE END OF THE CONSTRUCTION PERIOD. REFERENCE CM PHASING PLAN

MATCHLINE

PROTECT RECHARGE SYSTEM FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

PROVIDE ORANGE SNOW FENCE AROUND RAIN GARDENS AT COMMENCEMENT OF LANDSCAPE WORK

PROTECT RECHARGE SYSTEM FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

PROVIDE ORANGE SNOW FENCE AROUND RAIN GARDENS AT COMMENCEMENT OF LANDSCAPE WORK

PROTECT RECHARGE SYSTEM FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

PROVIDE ORANGE SNOW FENCE AROUND RAIN GARDENS AT COMMENCEMENT OF LANDSCAPE WORK

INLET PROTECTION (TYP.)

PROTECT RECHARGE SYSTEM FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

PROPOSED BUILDING

TEMPORARY EARTH RETENTION SYSTEM INSTALLED INSTALLED UNDER ENABLING PHASE

PROTECT RECHARGE SYSTEM FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

PROTECT RECHARGE SYSTEM FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

PROPOSED BUILDING

PROTECT BIORETENTION BASINS FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

PROTECT RECHARGE SYSTEM FROM COMPACTION AND SEDIMENTATION DURING CONSTRUCTION

100' WETLAND BUFFER ZONE
30' STRUCTURE SETBACK
15' GRADING SETBACK
EDGE OF BORDERING VEGETATED WETLAND

PERIMETER EROSION CONTROL BARRIER INSTALLED UNDER ENABLING PHASE. CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION.

CONSTRUCTION FENCE INSTALLED UNDER ENABLING PHASE. CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION. REMOVE FROM THE PROJECT SITE AT THE END OF THE CONSTRUCTION PERIOD.

DRAINAGE OUTFALL CONSTRUCTION INSPECTION POINT

MATCHLINE

PERIMETER EROSION CONTROL BARRIER CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION.

SCALE:
1" = 20'
20 10 0 20 40

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170 Apricot Street, Worcester, MA 01603

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7	ESBP #1-Addendum #5	12/7/18

FILE: 11677cec

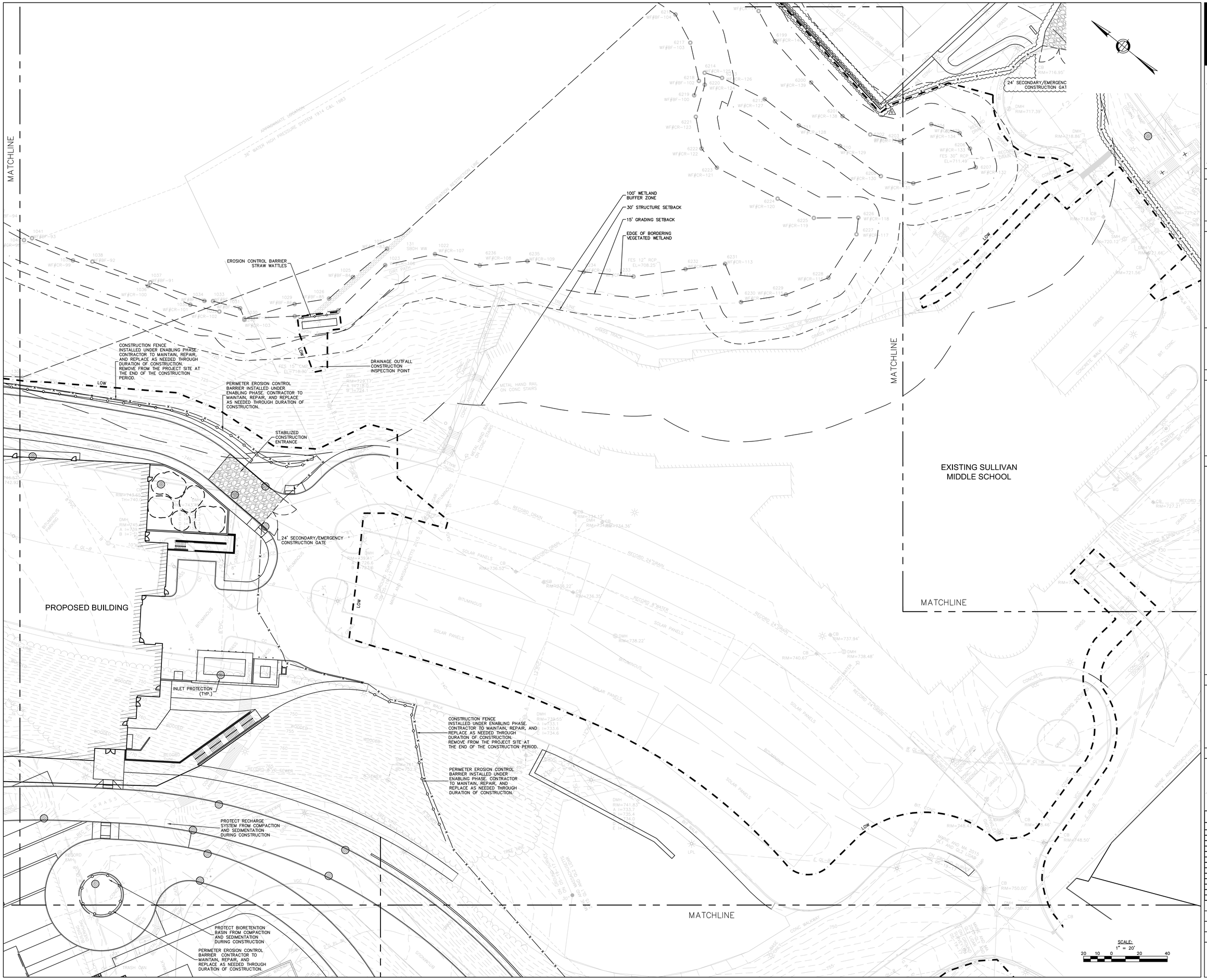
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"= 20'

DATE: January 31, 2019

C4.0

Nitsch Project #11677



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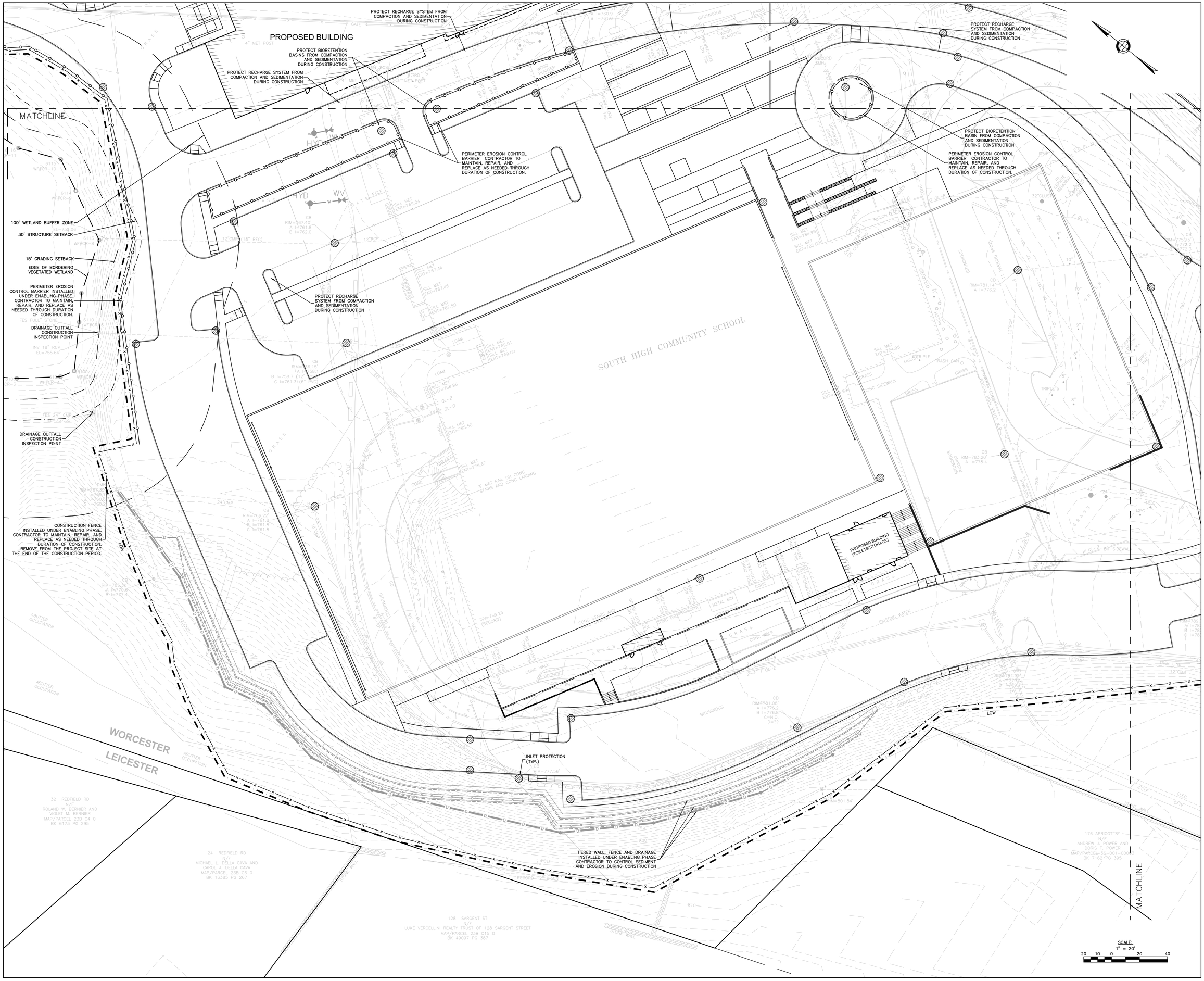

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FILE: 11677cec

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CKD. BY: JEG | SCALE: 1"=20'

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C4.2

Nitsch Project #11677

MATCHLINE

CONSTRUCTION FENCE INSTALLED UNDER ENABLING PHASE. CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION. REMOVE FROM THE PROJECT SITE AT THE END OF THE CONSTRUCTION PERIOD.

INLET PROTECTION (TYP.)

CONSTRUCTION FENCE CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION. REMOVE FROM THE PROJECT SITE AT THE END OF THE CONSTRUCTION PERIOD.

PERIMETER EROSION CONTROL BARRIER INSTALLED UNDER ENABLING PHASE. CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION.

STABILIZED CONSTRUCTION ENTRANCE

24' CONSTRUCTION GATE INSTALLED UNDER ENABLING PHASE. CONTRACTOR TO MAINTAIN, REPAIR, AND REPLACE AS NEEDED THROUGH DURATION OF CONSTRUCTION.

132 APRICOT ST
N/F
ZBIGNIEW PAWLOWSKI AND PAWEL PAWLOWSKI
MAP/PARCEL 56-002-00011
BK 48424 PG 351

134 APRICOT ST
N/F
NURAJ SHRESTHA
MAP/PARCEL 56-002-00012
BK 51261 PG 53

150 APRICOT ST
N/F
HEATHER CHRISTMAS
MAP/PARCEL 56-002-00008
BK 47956 PG 279

152 APRICOT ST
N/F
NHAN LE
MAP/PARCEL 56-002-00007
BK 56805 PG 199

158 B APRICOT ST #2
N/F
MICHAEL SIWIK
MAP/PARCEL 56-001-0158B
BK 50061 PG 273

158 A APRICOT ST #1
N/F
KAREN L. MANSON
MAP/PARCEL 56-001-0158A
BK 45559 PG 261

156 APRICOT ST
N/F
PETER RANO
MAP/PARCEL 56-001-00010
BK 44485 PG 53

158 APRICOT ST
N/F
NELSON E. PONCE
MAP/PARCEL 56-001-00006
BK 54656 PG 196

168 APRICOT ST
N/F
SPARLING,JASON K
MAP/PARCEL 56-001-00005
BK 34973 PG 266

176 APRICOT ST
N/F
ANDREW J. POWER AND DORIS F. POWER
MAP/PARCEL 56-001-000
BK 7162/PG 395

178 APRICOT ST
N/F
JAMES R. MULHERN AND VIOLA A./MULHERN TRUSTEE
MAP/PARCEL 56-001-00001
BK 33668 PG

APRICOT STREET

CLEGG STREET

FIELDING STREET

MATCHLINE

SCALE:
1" = 20'
20 10 0 20 40

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DATE: January 31, 2019

C4.3

Nitsch Project #11677

EDGE OF BORDERING VEGETATED WETLAND

15' GRADING SETBACK

30' STRUCTURE SETBACK

100' WETLAND BUFFER ZONE

CONSTRUCTION FENCE FINAL LOCATION TO BE DETERMINED BY CONTRACTOR

PERIMETER EROSION CONTROL BARRIER

CONSTRUCTION FENCE FINAL LOCATION TO BE DETERMINED BY CONTRACTOR

PERIMETER EROSION CONTROL BARRIER

SEE "LOWER FIELD DEMOLITION AND EROSION CONTROL PLAN" SHEET CA1.1 FOR DETAILS

24' SECONDARY/EMERGENCY CONSTRUCTION GATE

PERIMETER EROSION CONTROL BARRIER

CONSTRUCTION FENCE FINAL LOCATION TO BE DETERMINED BY CONTRACTOR

INLET PROTECTION (TYP.)

EXISTING SULLIVAN MIDDLE SCHOOL

MATCHLINE

MATCHLINE

100 APRICOT ST
N/F
DONALD R. KARSBERG
MAP/PARCEL 56-004-00003
BK 22877 PG 364

104 APRICOT ST
N/F
PETER HOUMERE AND
ROSE V. HOUMERE
MAP/PARCEL 56-004-00002
BK 3793 PG 423

108 APRICOT ST
N/F
ELIZABETH ANASTASI
MAP/PARCEL 56-004-00001
BK 54309 PG 329

116 APRICOT ST
N/F
JAMES P. LEVEILLE AND
CAROLINE JOY LEVEILLE
MAP/PARCEL 56-016-0000A
BK 34529 PG 11

120 APRICOT ST
N/F
JOANNE GRAY
MAP/PARCEL 56-016-0000B
BK 23579 PG 388

SCALE:
1" = 20'

20 10 0 20 40

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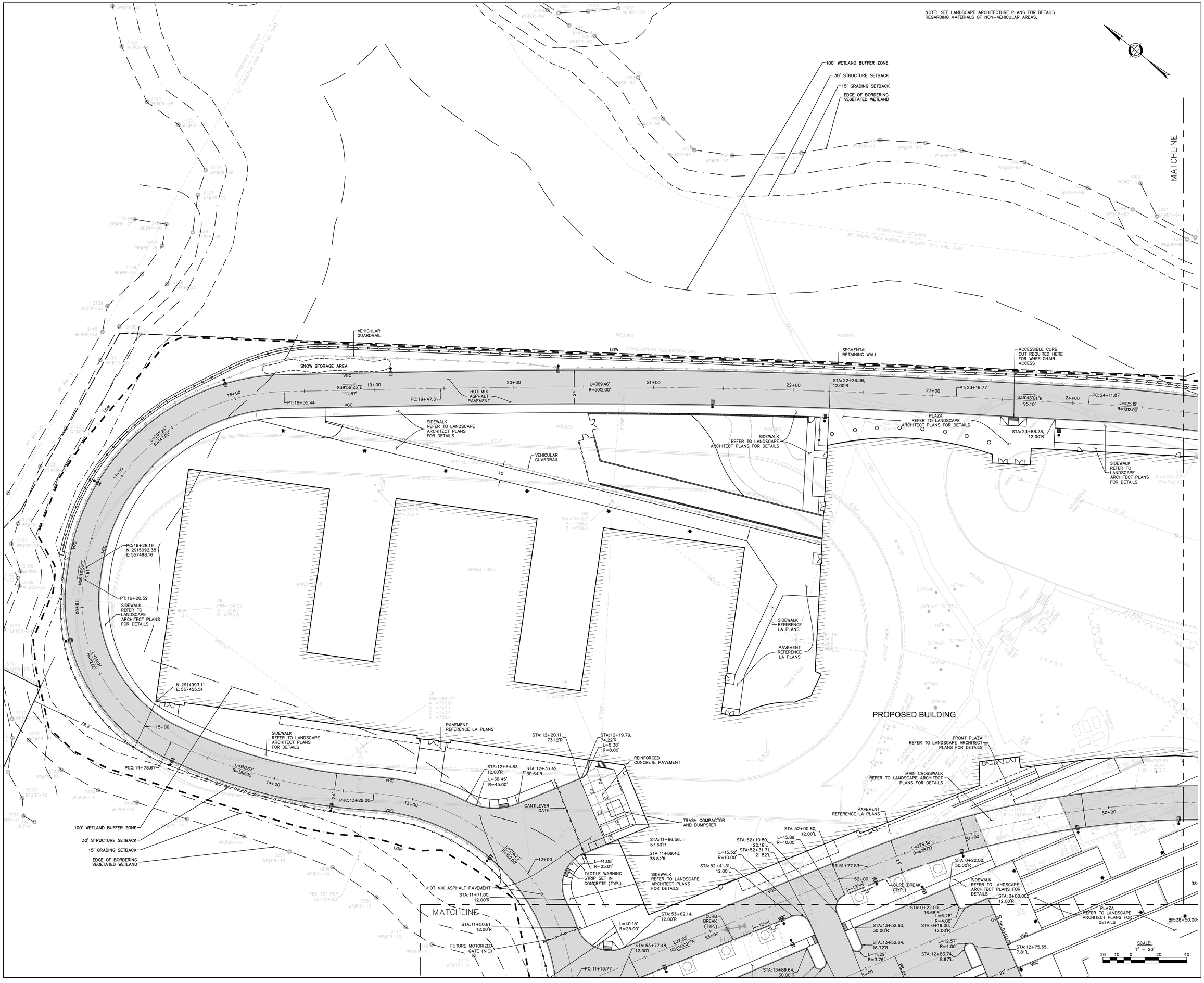
C4.4

Nitsch Project #11677

NOTE: SEE LANDSCAPE ARCHITECTURE PLANS FOR DETAILS REGARDING MATERIALS OF NON-VEHICULAR AREAS.



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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

ROADWAY LAYOUT AND MATERIALS PLAN

Key Plan

REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
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6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cdo

DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

C5.0

Nitsch Project #11677

NOTE: SEE LANDSCAPE ARCHITECTURE PLANS FOR DETAILS REGARDING MATERIALS OF NON-VEHICULAR AREAS.

MATCHLINE

100' WETLAND BUFFER ZONE
30' STRUCTURE SETBACK
15' GRADING SETBACK
EDGE OF BORDERING VEGETATED WETLAND

RESTORE TRAIL/PATH WITH COMPACTED GRAVEL BORROW PROVIDE 6" MINIMUM COVER OVER EXISTING CULVERTS

SEGMENTAL RETAINING WALL

BOULDER RETAINING WALL UTILIZE ONSITE BOULDERS TO CONSTRUCT WALL

FUTURE MOTORIZED GATE (NIC)
PT: 1+57.35
STA: 1+58.48, 15.65'L

STA: 1+67.46, 16.49'L
L=50.81'
R=50.04'
STA: 2+02.25, 17.11'L
EP: 2+05.15
N: 2914313.46
E: 558204.90
L=37.40'
R=25.00'
PC: 1+71.09
PT: 1+62.57
PC: 1+53.62
EP: 26+86.32
PC: 1+59.59
PT: 1+48.87
PCC: 1+30.45
PRC: 1+21.27
PC: 1+12.03
STA: 0+95.28, 15.11'L
PT: 0+96.30
L=25.23'
R=20.00'
PCC: 0+86.58
PCC: 0+58.66
PCC: 0+37.40
STA: 0+37.85, 15.20'L
PC: 0+17.39
BP: 0+00.00
N: 2914244.34
E: 558090.59
L=19.75'
R=59.80'
L=8.23'
R=19.53'
STA: 0+22.97, 13.47'L

MEET AND MATCH EXISTING PAVEMENT

PC: 25+71.57
PT: 25+37.02
S28°37'53"E 34.55'
S15°32'40"W 65.44'
L=59.73'
R=112.00'
PT: 26+31.29
STA: 26+65.58, 12.01'L
STA: 26+83.43, 12.00'R
STA: 0+57.59, 41.78'R
STA: 0+84.59, 41.78'R
STA: 0+84.59, 20.11'R
STA: 0+89.23, 15.11'R
STA: 0+92.59, 15.11'R
L=30.68'
R=25.00'
STA: 0+57.59, 27.03'R
STA: 0+92.56, 14.86'L
L=25.23'
R=20.00'
STA: 0+35.23, 22.05'R
L=7.50'
R=5.02'
L=5.19'
R=5.02'
STA: 0+52.24, 22.05'R
STA: 0+01.48, 26.05'L
STA: 0+06.58, 26.05'L

PLAY SURFACE
REFER TO LANDSCAPE ARCHITECT PLANS FOR DETAILS

WALKWAY AND RAMP
REFER TO LANDSCAPE ARCHITECT PLANS FOR DETAILS

TACTILE WARNING STRIP SET IN CONCRETE (TYP.)

SIDEWALK REFER TO LANDSCAPE ARCHITECT PLANS FOR DETAILS

PROPOSED BUILDING

EP: 1+09.43

HOT MIX ASPHALT PAVEMENT

6" BOLLARD (TYP.)

SIDEWALK
REFER TO LANDSCAPE ARCHITECT PLANS FOR DETAILS

EXISTING SULLIVAN MIDDLE SCHOOL

MATCHLINE

MEET AND MATCH EXISTING PAVEMENT
REMOVE AND RESET CURB

REMOVE AND RESET CURB

NEW TRANSFORMER AND BLAST WALL

REMOVE AND RESET CURB

PC: 48+99.15
N35°43'01"W 26.64'
PT: 48+72.52
L=338.13'
R=388.00'
HOT MIX ASPHALT PAVEMENT
PCC: 37+55.89
STA: 37+42.49, 11.00'L
EP: 39+56.14
PC: 38+14.05
N35°43'01"W 12.30'
PT: 38+01.75
L=34.09'
R=28.00'
L=45.86'
R=353.00'
EP: 38+48.14
PT: 39+26.08
N57°14'24"E 30.07'
L=39.85'
R=25.00'
HOT MIX ASPHALT PAVEMENT
STA: 39+22.44, 11.00'R
L=59.55'
R=88.00'
BP: 38+50.00

SIDEWALK
REFER TO LANDSCAPE ARCHITECT PLANS FOR DETAILS

SNOW STORAGE AREA

VEHICULAR GUARDRAIL

MATCHLINE

MEET AND MATCH EXISTING PAVEMENT

REINSTALL EXISTING CURB

HOT MIX ASPHALT PAVEMENT

SCALE:
1" = 20'
20 10 0 20 40

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C5.1

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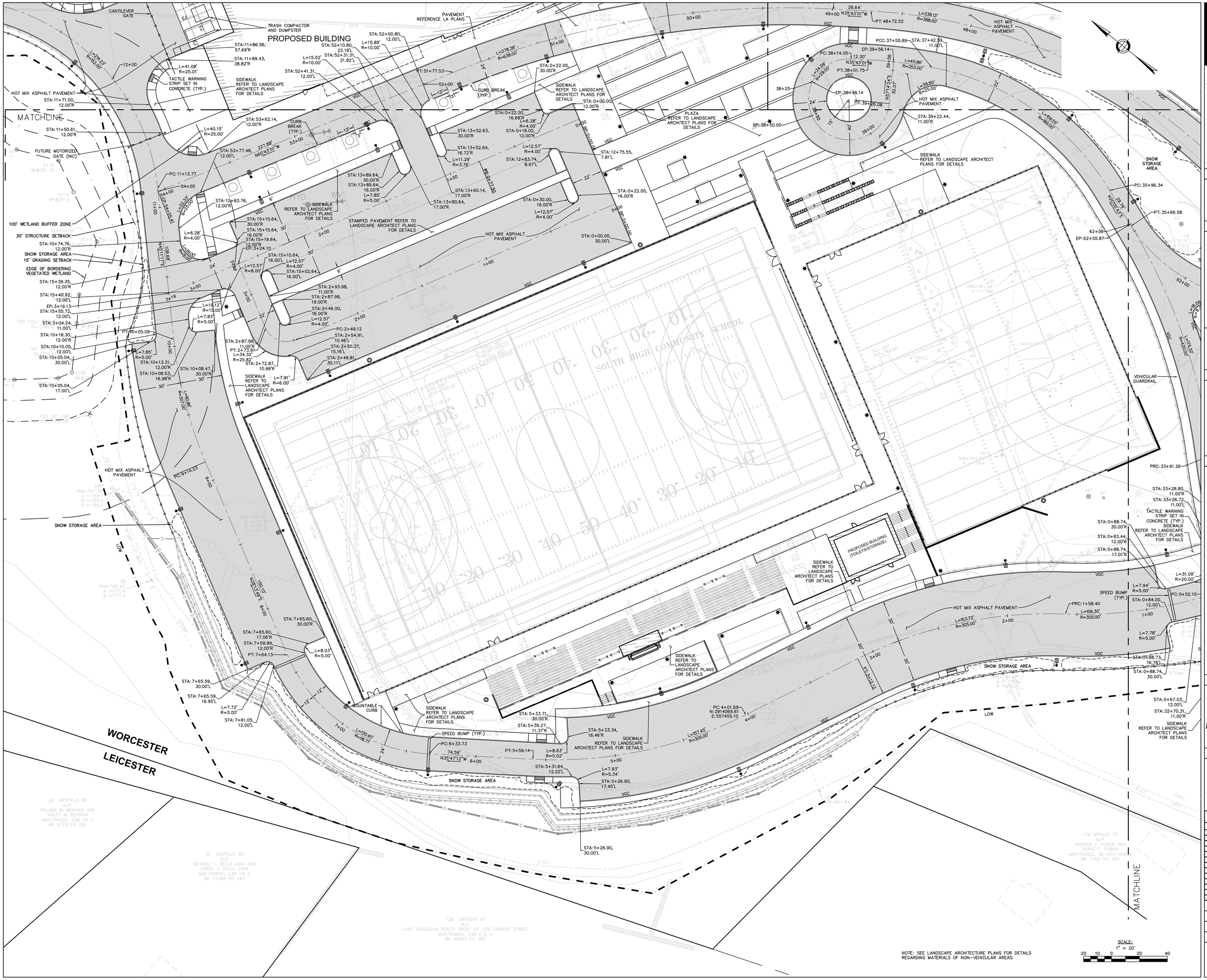

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C5.2

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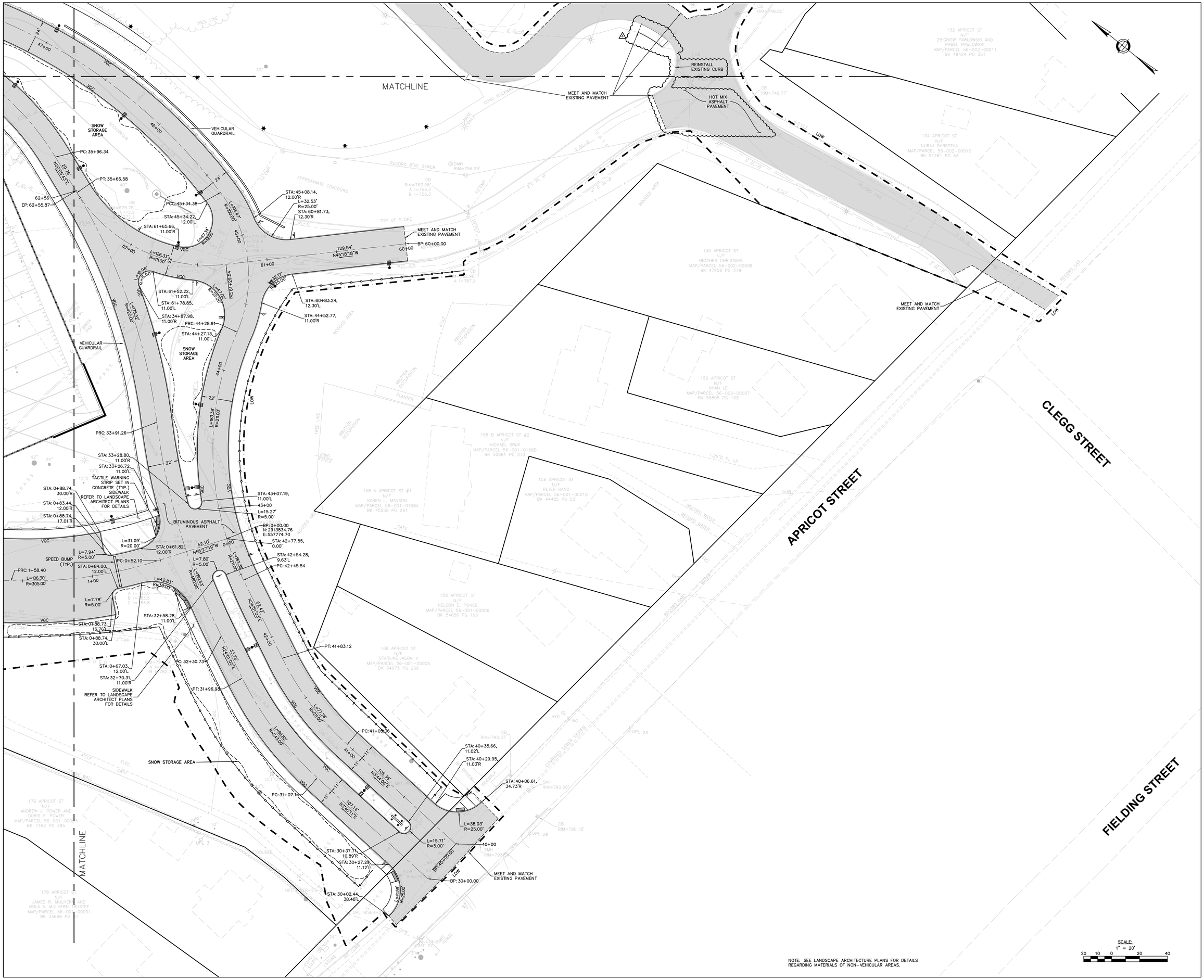

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SCALE: 1" = 20'

20 10 0 20 40

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C5.3

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EDGE OF BORDERING VEGETATED WETLAND

15' GRADING SETBACK

30' STRUCTURE SETBACK

100' WETLAND BUFFER ZONE

HOT MIX ASPHALT PAVEMENT

SIDEWALK REFERENCE LA PLANS

REMOVE AND RESET CURB

SEE "LOWER FIELD MATERIALS PLAN" SHEET CA2.1 AND "LOWER FIELD LAYOUT PLAN" SHEET CA2.2 FOR DETAILS

MEET AND MATCH EXISTING PAVEMENT REMOVE AND RESET CURB

MEET AND MATCH EXISTING PAVEMENT

REMOVE AND RESET CURB

NEW TRANSFORMER AND BLAST WALL

EXISTING SULLIVAN MIDDLE SCHOOL

MATCHLINE

MATCHLINE

100 APRICOT ST
N/F
DONALD R. KARSBERG
MAP/PARCEL 56-004-00003
BK 22877 PG 364

104 APRICOT ST
N/F
PETER HOUMERE AND
ROSE V. HOUMERE
MAP/PARCEL 56-004-00002
BK 3793 PG 423

108 APRICOT ST
N/F
ELIZABETH ANASTASI
MAP/PARCEL 56-004-00001
BK 54309 PG 329

116 APRICOT ST
N/F
JAMES P. LEVEILLE AND
CAROLINE JOY LEVEILLE
MAP/PARCEL 56-016-0000A
BK 34529 PG 11

120 APRICOT ST
N/F
JOANNE GRAY
MAP/PARCEL 56-016-0000B
BK 23579 PG 388

SCALE:
1" = 20'

20 10 0 20 40

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C5.4

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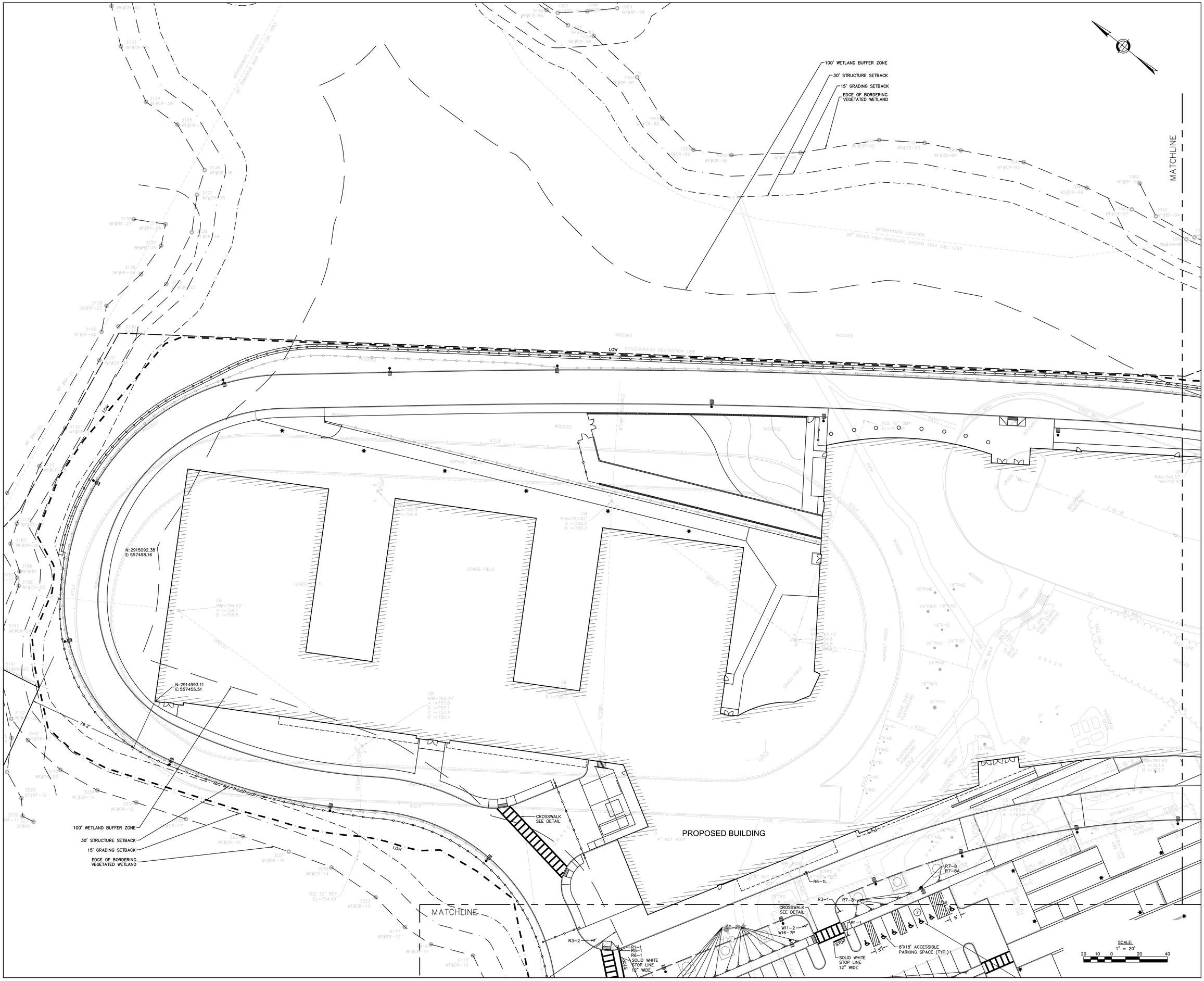

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ROADWAY SIGNAGE & STRIPING PLAN

Key Plan

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C6.0

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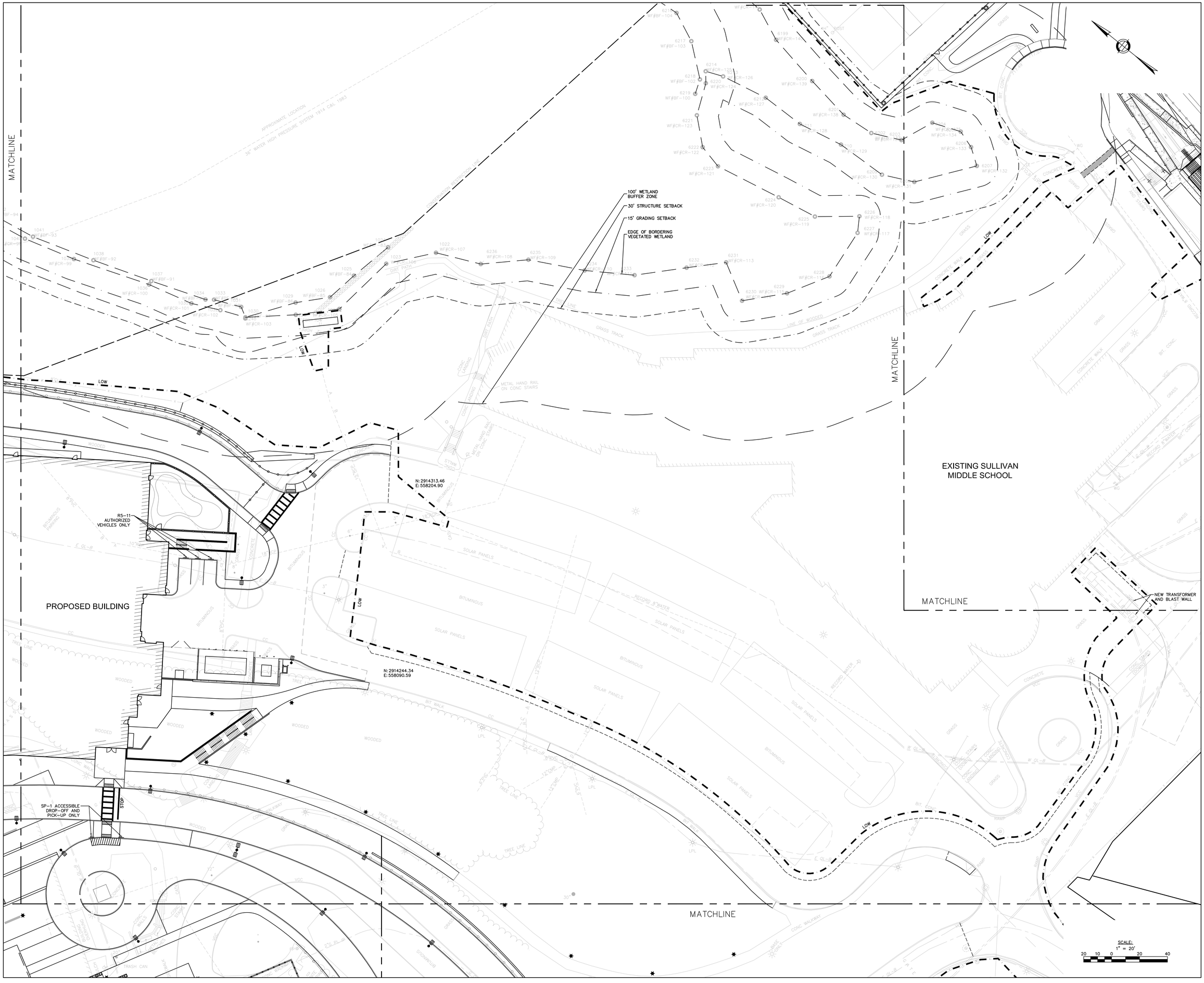

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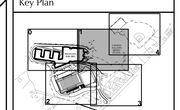

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FILE: 11677.dwg

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C6.1

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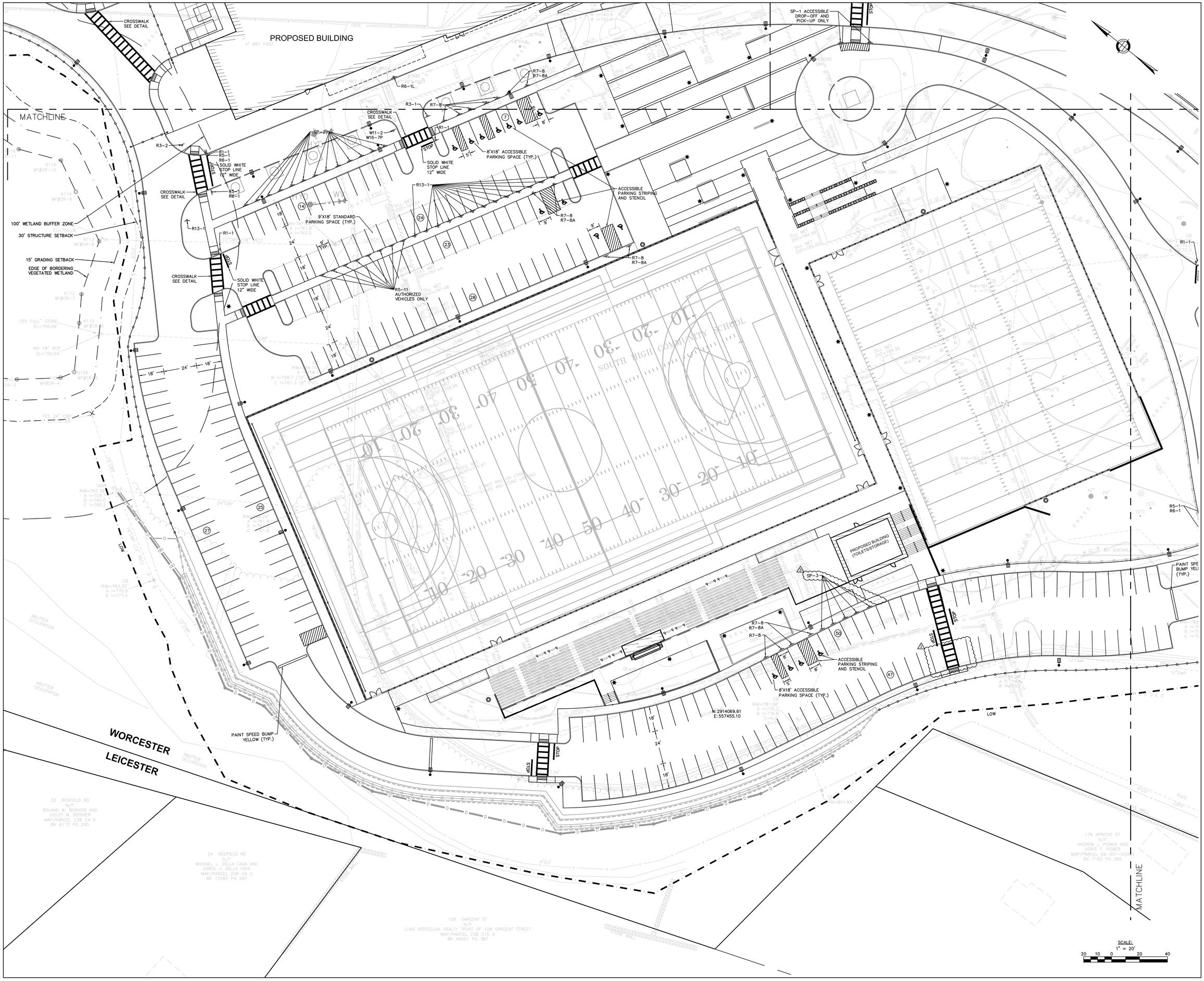

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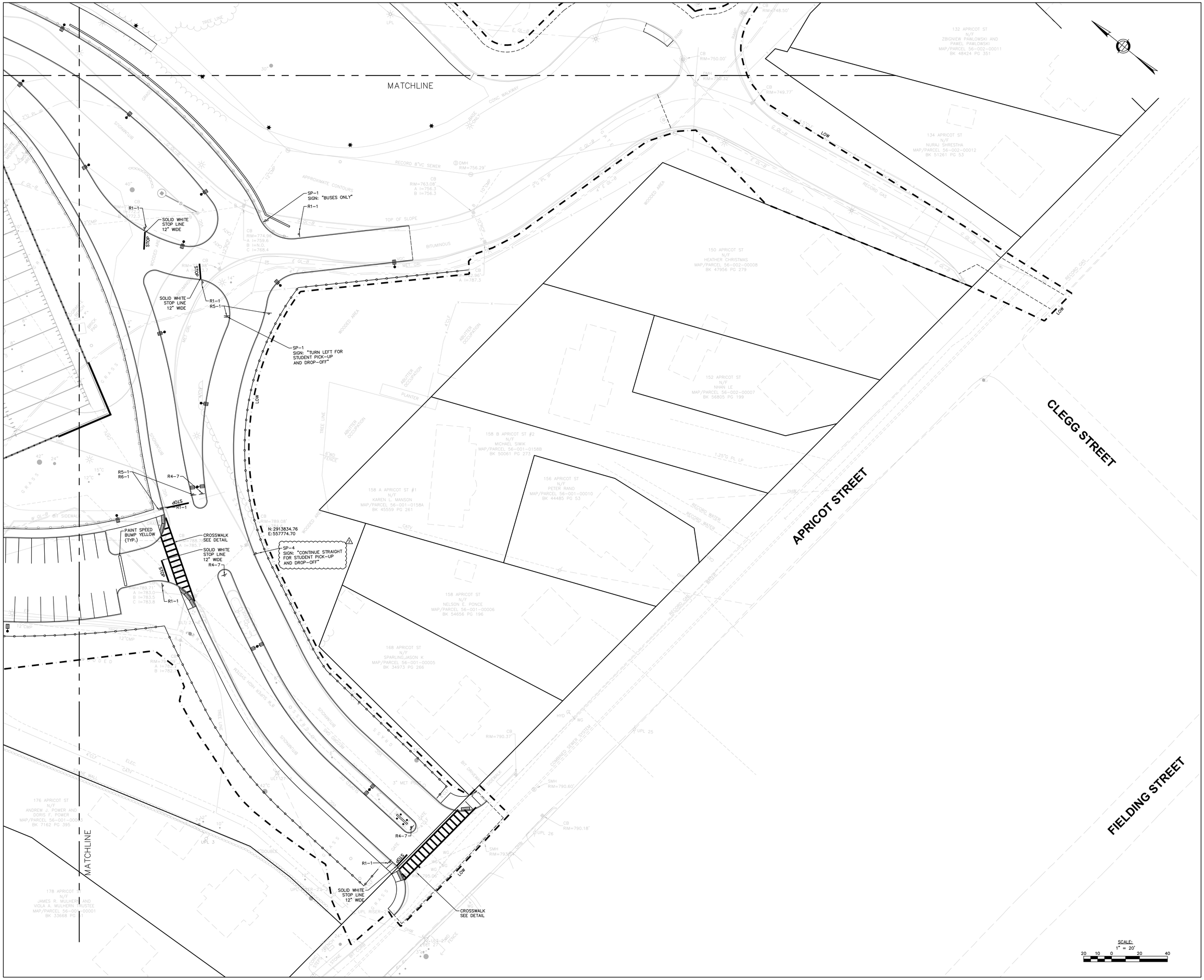

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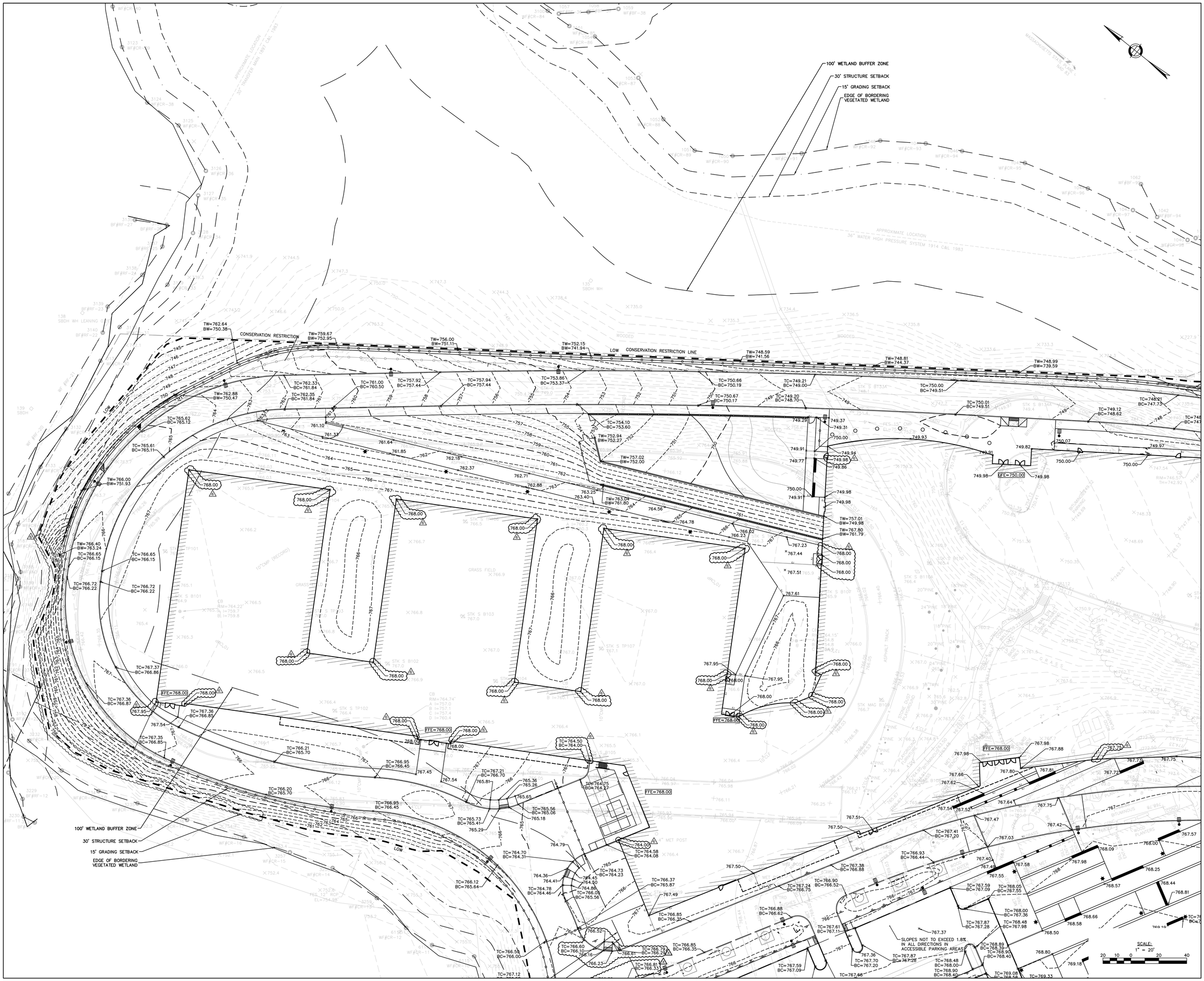

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SITE GRADING PLAN

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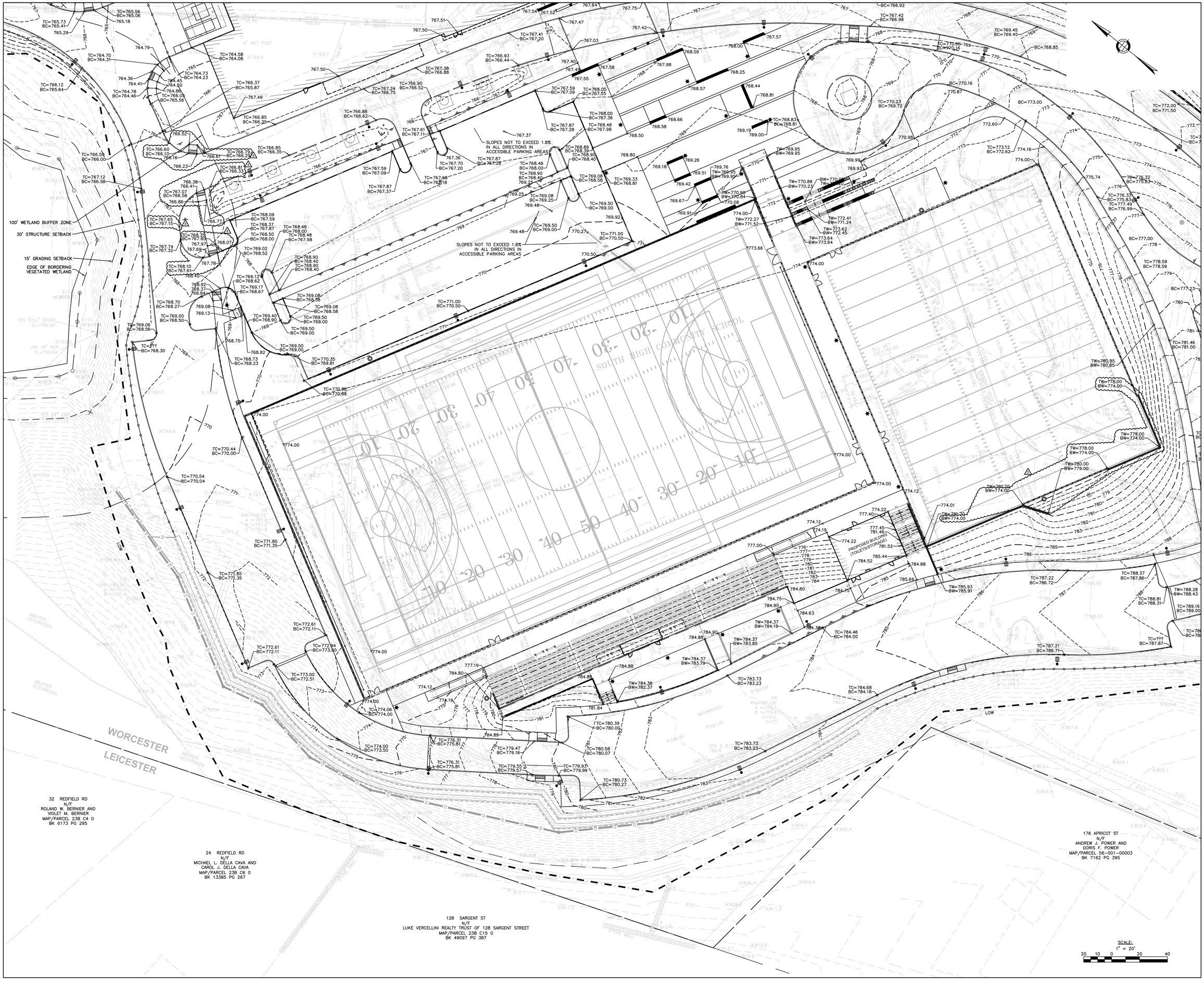

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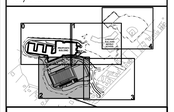

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PROJECT

FINAL BID PACKAGE

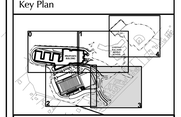
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

SITE GRADING PLAN

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
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6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677clo

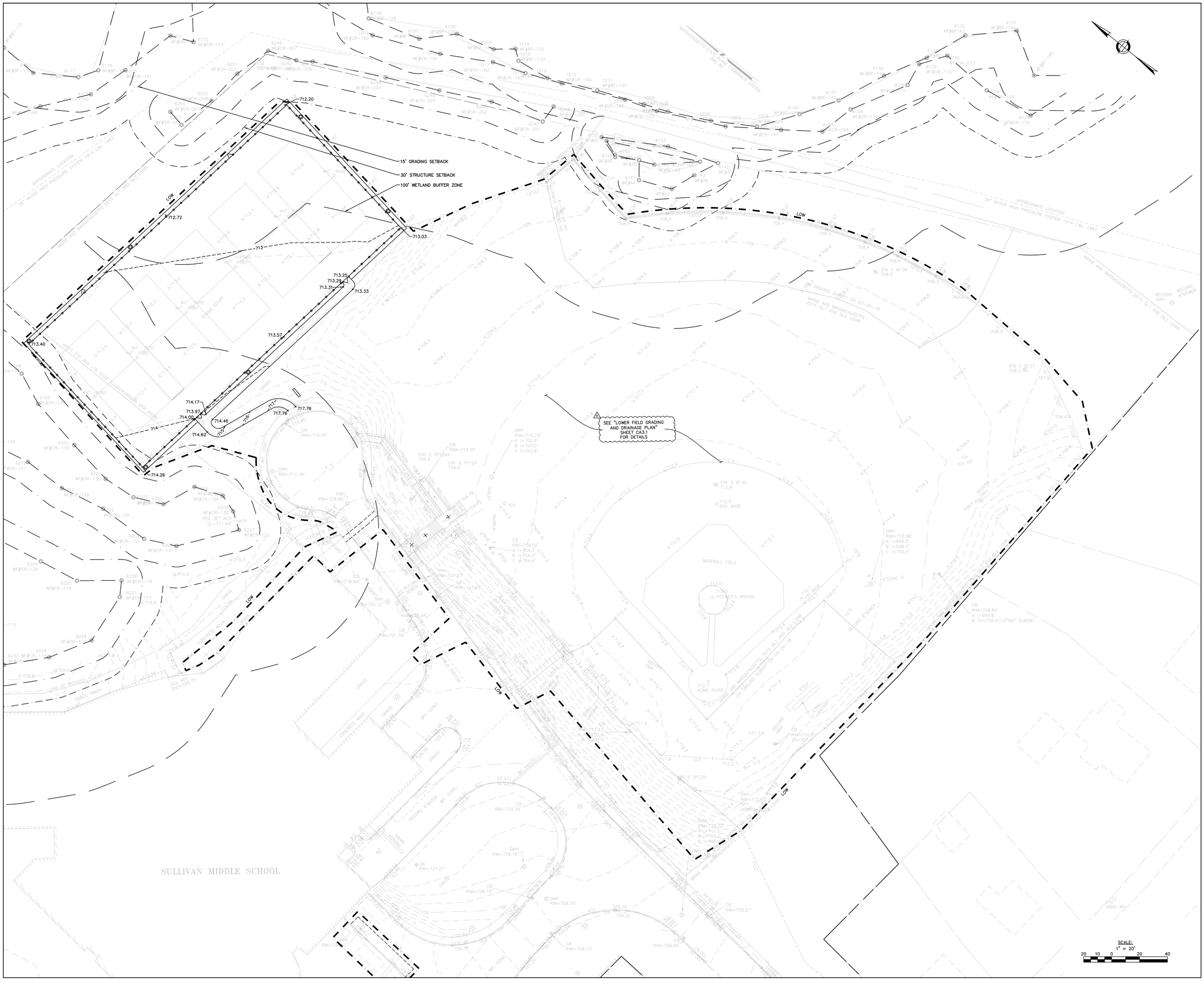
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

C7.3

Nitsch Project #11677



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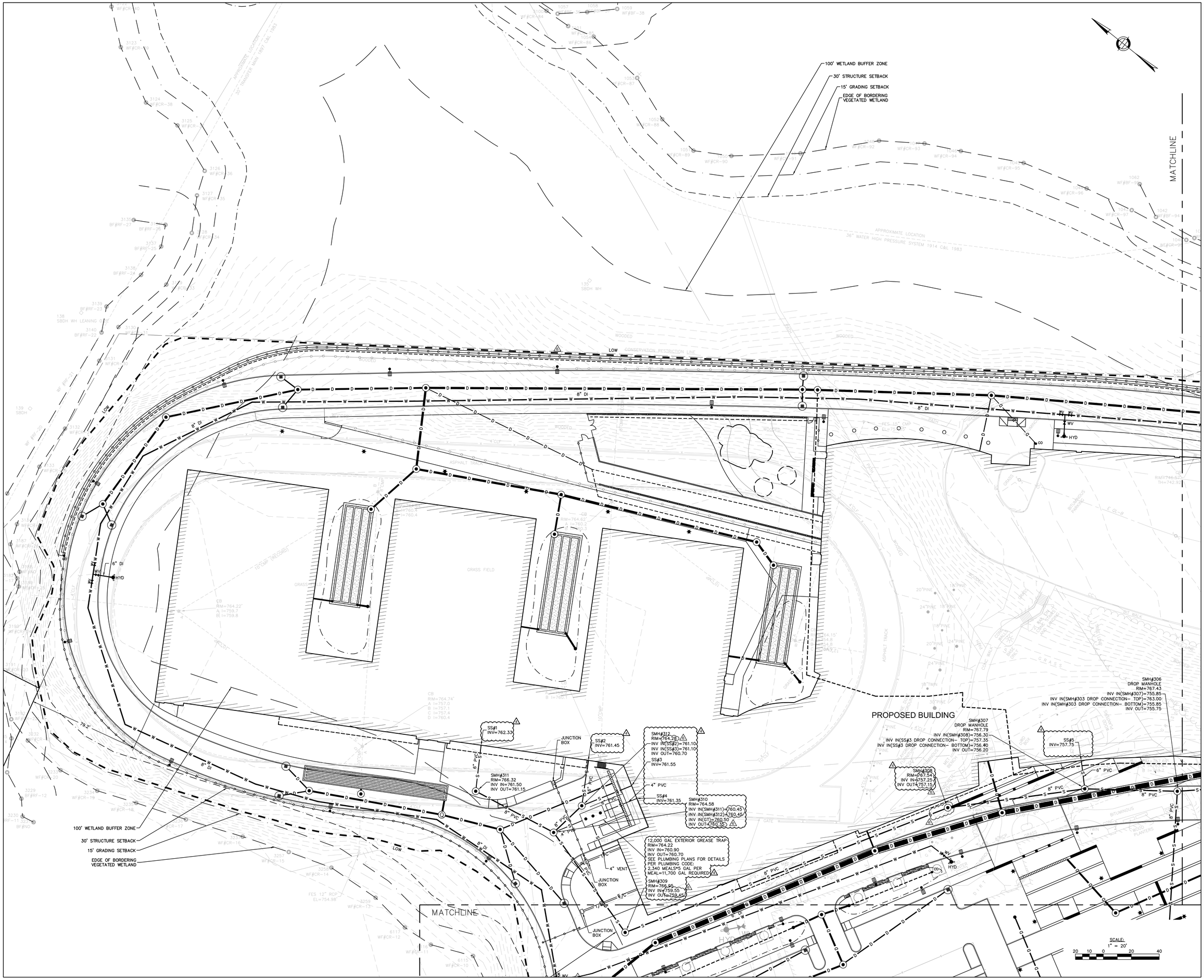

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SITE UTILITY PLAN

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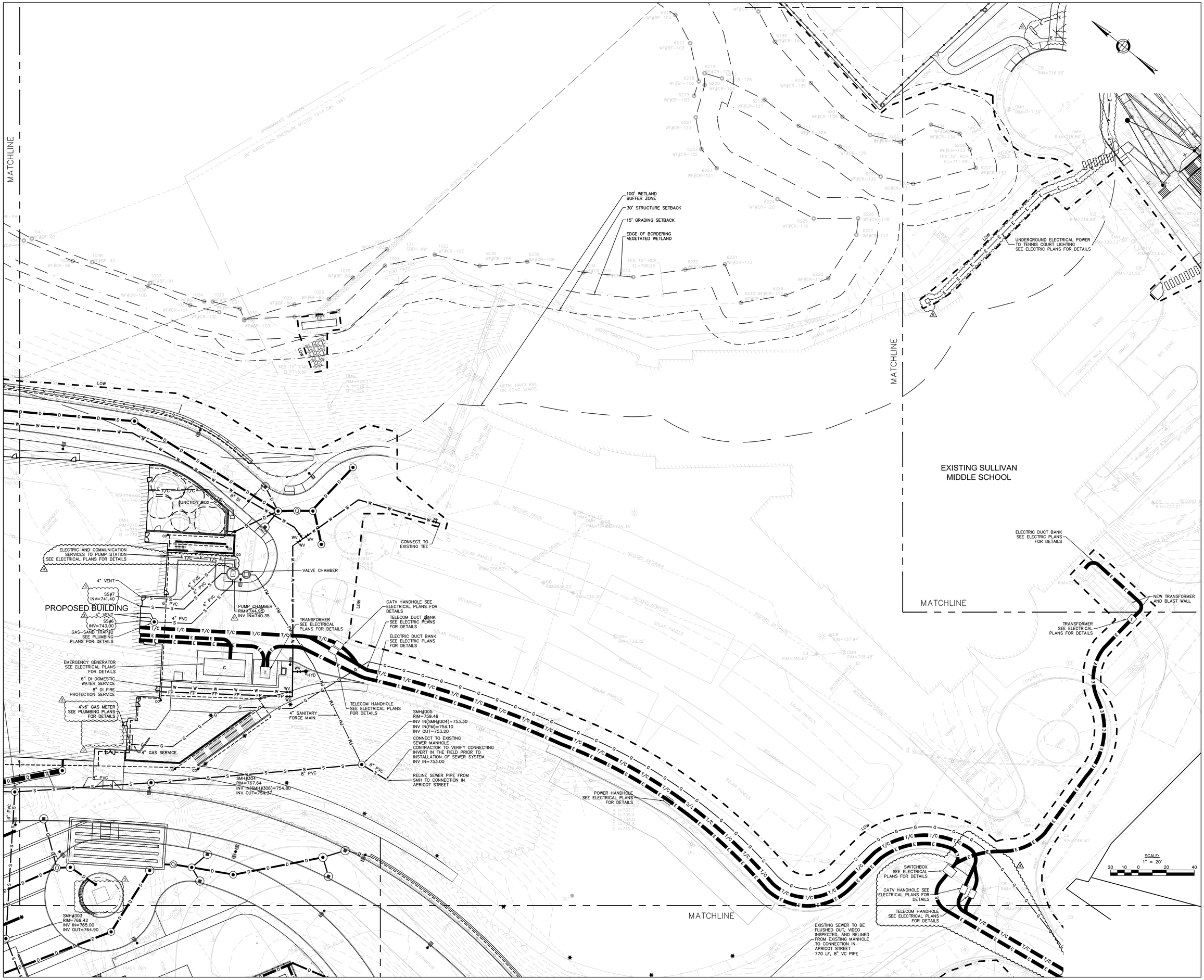
C8.0

Nitsch Project #11677



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C8.1

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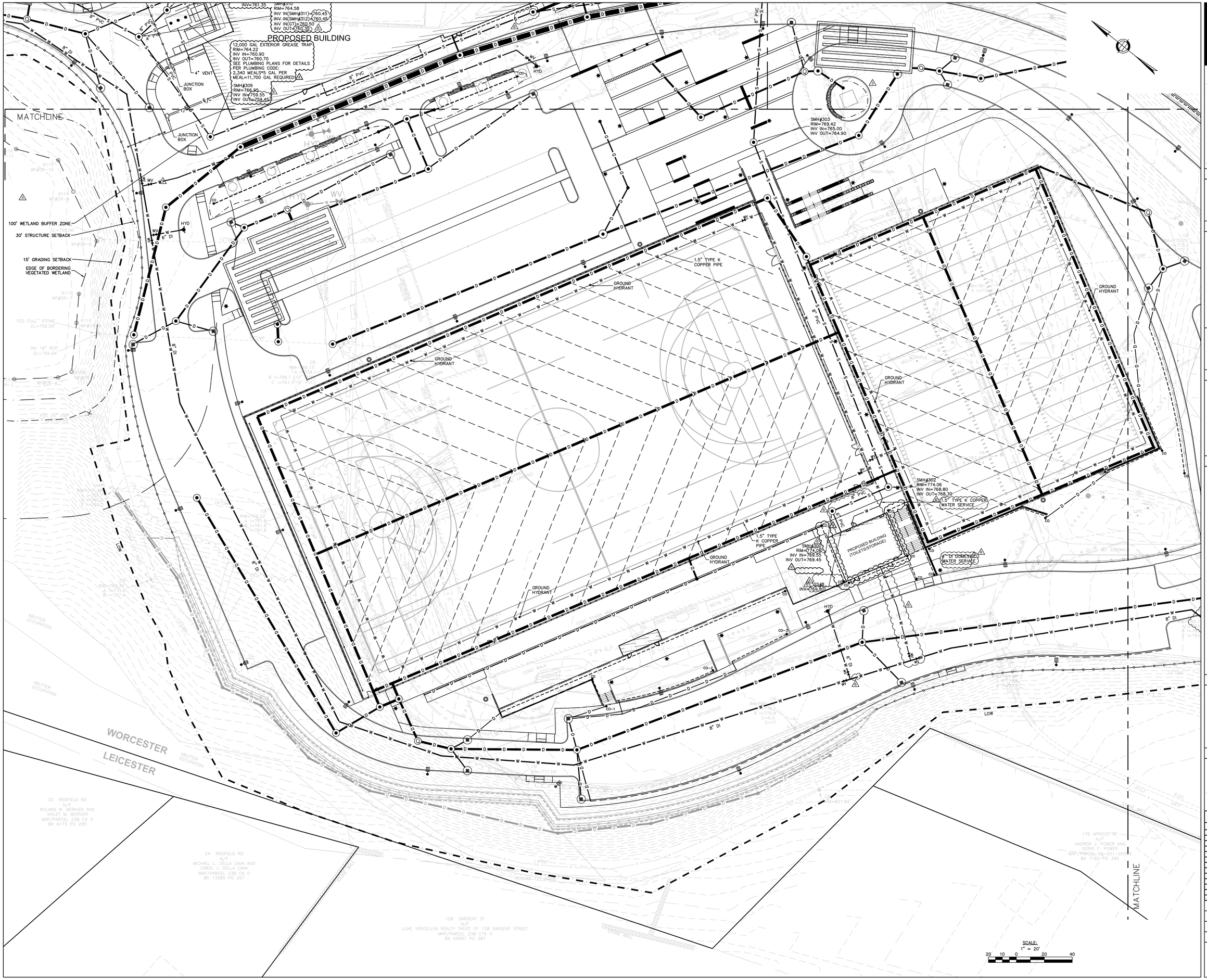

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DWN. BY: ER | JOB NO: #1611

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DATE: January 31, 2019

C8.2

Nitsch Project #11677

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FINAL BID PACKAGE

South High Community School

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FILE: 11677cst

DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

C8.3

Nitsch Project #11677

EDGE OF BORDERING VEGETATED WETLAND

15' GRADING SETBACK

30' STRUCTURE SETBACK

100' WETLAND BUFFER ZONE

SEE "ELECTRICAL SPORT LIGHTING PLAN" SHEET E0.3B FOR DETAILS

ELECTRIC HANDHOLE SEE ELECTRICAL PLANS FOR DETAILS

UNDERGROUND ELECTRICAL POWER TO SCORE BOARD LIGHTING SEE ELECTRIC PLANS FOR DETAILS

SEE "ELECTRICAL LOWER FIELD POWER PLAN" SHEET E0.3D FOR DETAILS

UNDERGROUND ELECTRICAL POWER TO TENNIS COURT LIGHTING SEE ELECTRIC PLANS FOR DETAILS

MATCHLINE

EXISTING SULLIVAN MIDDLE SCHOOL

ELECTRIC DUCT BANK SEE ELECTRIC PLANS FOR DETAILS

NEW TRANSFORMER AND BLAST WALL

MATCHLINE

SCALE:
1" = 20'
20 10 0 20 40

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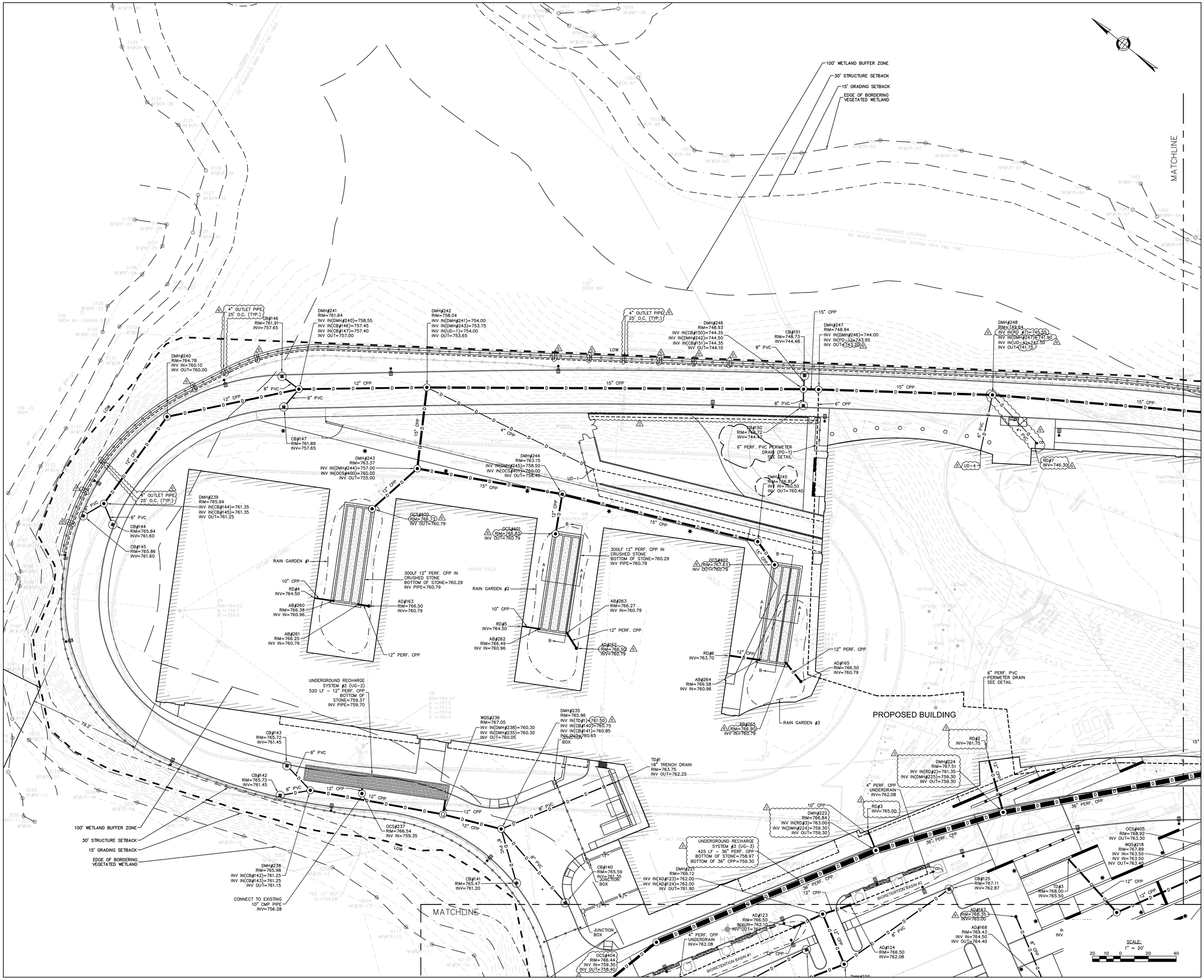
DWN. BY:	ER	JOB NO:	#1611
CKD. BY:	JEG	SCALE:	1"=20'

DATE: January 31, 2019

C8.4

Nitsch Project #11677



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South High Community School

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SITE DRAINAGE PLAN

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FILE: 11677cut

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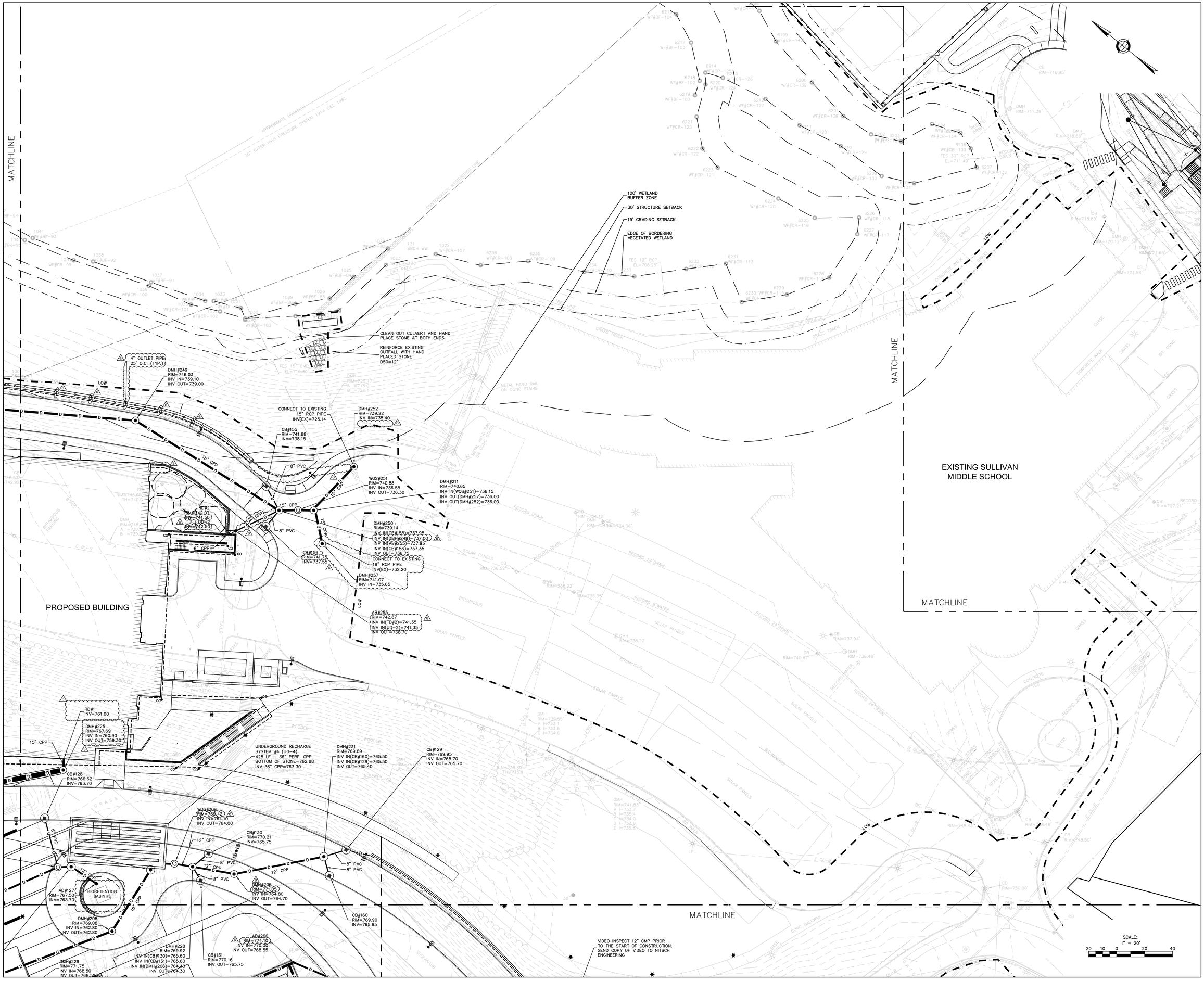
Nitsch Project #11677



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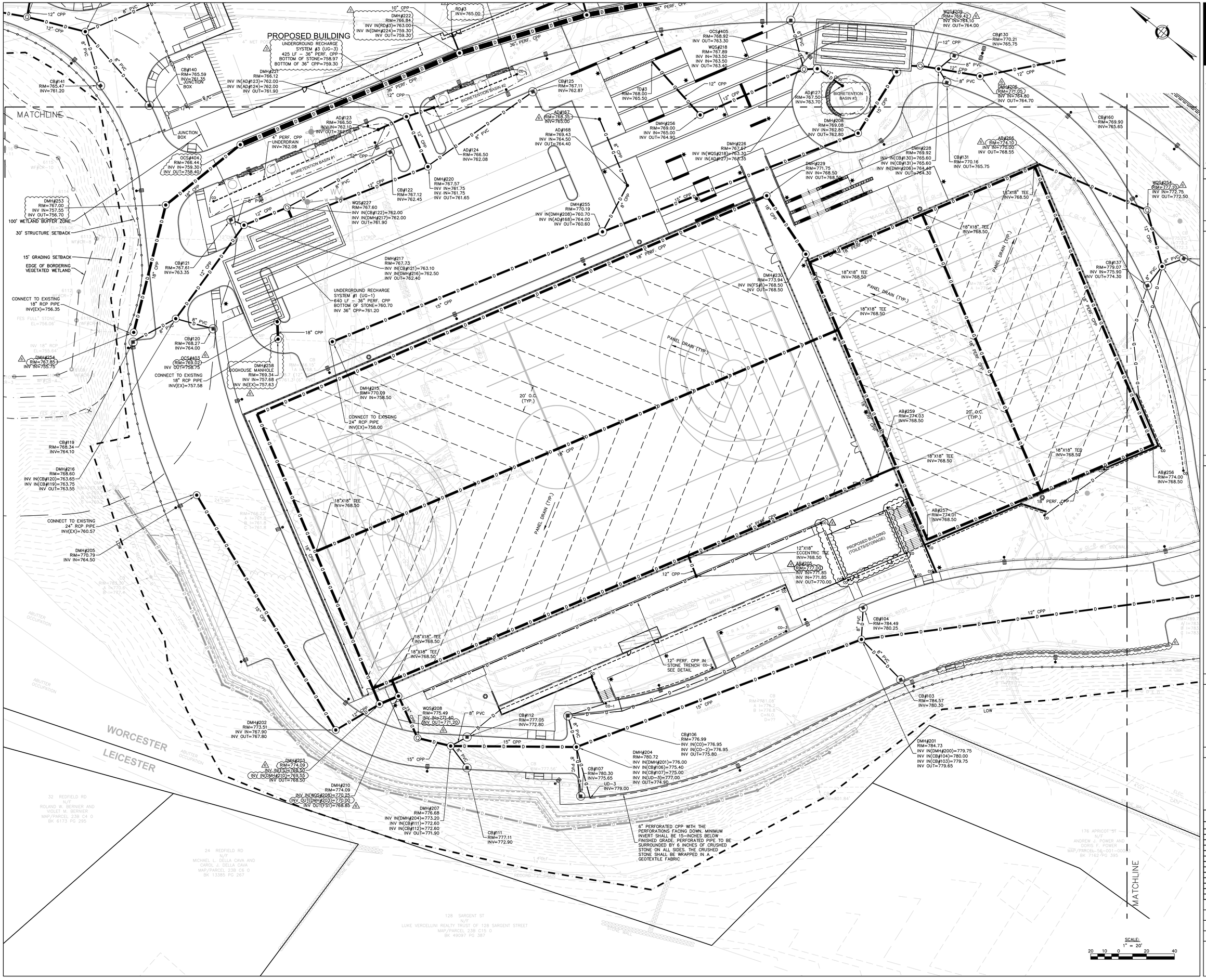

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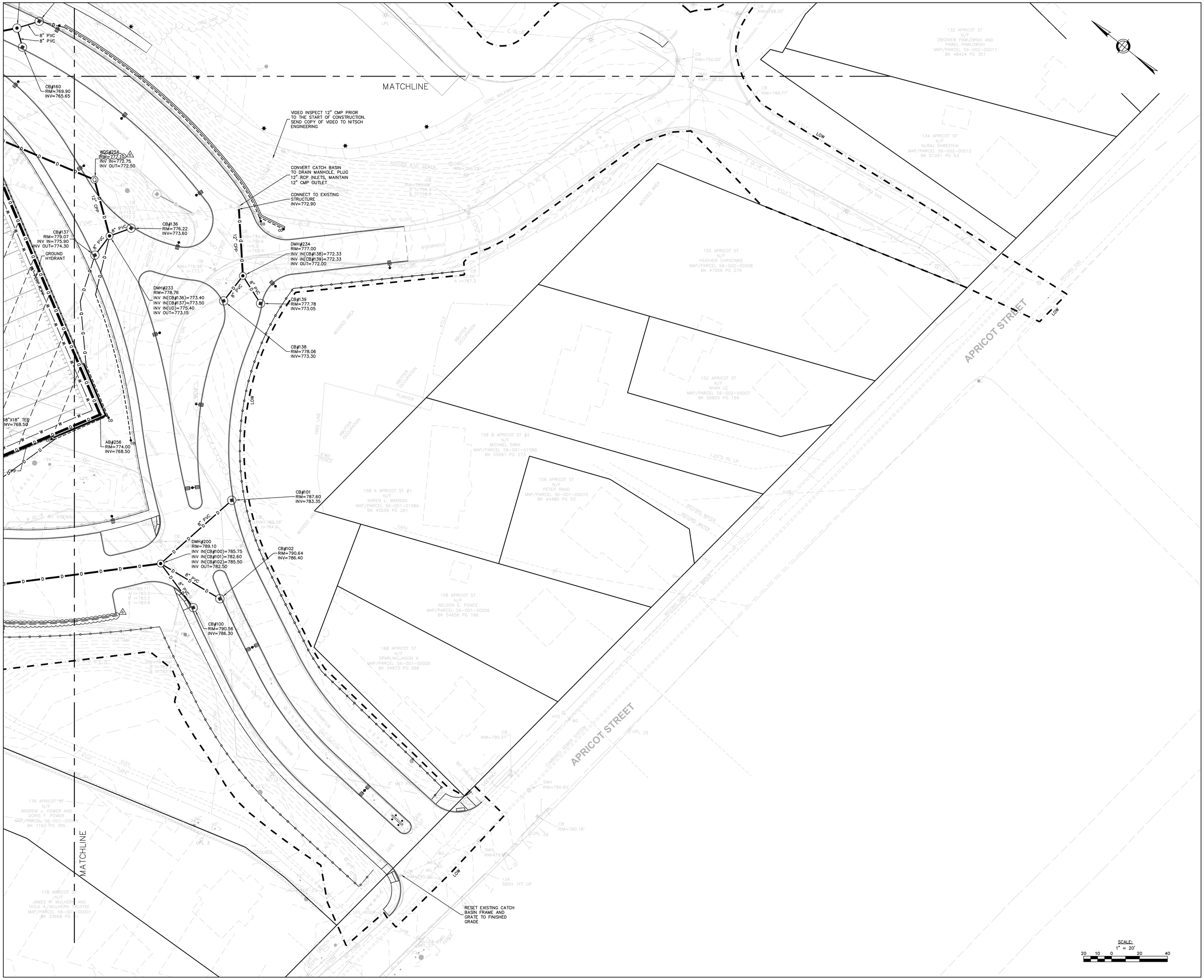

SCALE: 1" = 20'

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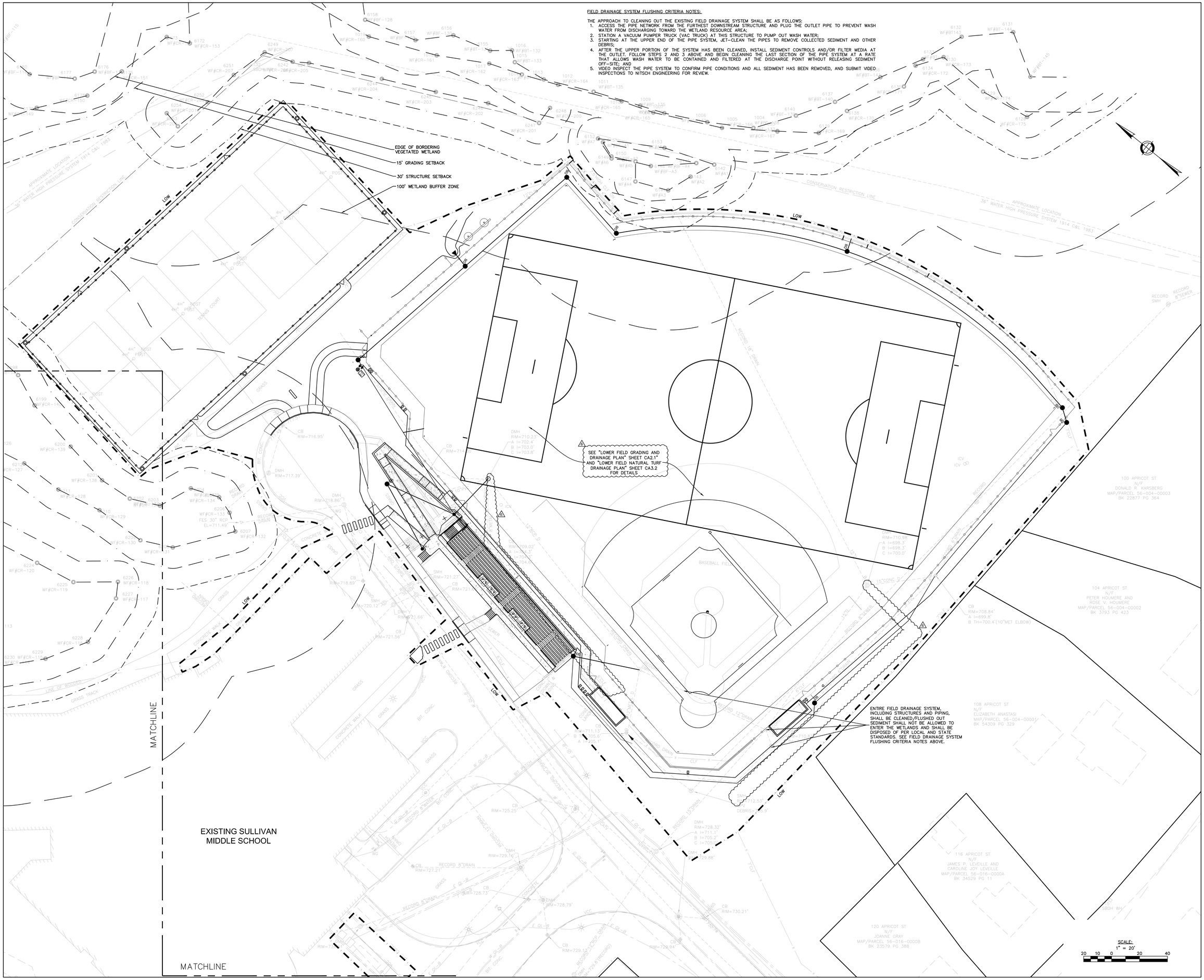
C9.3

Nitsch Project #11677

FIELD DRAINAGE SYSTEM FLUSHING CRITERIA NOTES:

THE APPROACH TO CLEANING OUT THE EXISTING FIELD DRAINAGE SYSTEM SHALL BE AS FOLLOWS:

1. ACCESS THE PIPE NETWORK FROM THE FURTHEST DOWNSTREAM STRUCTURE AND PLUG THE OUTLET PIPE TO PREVENT WASH WATER FROM DISCHARGING TOWARD THE WETLAND RESOURCE AREA;
2. STATION A VACUUM PUMPER TRUCK (VAC TRUCK) AT THIS STRUCTURE TO PUMP OUT WASH WATER;
3. STARTING AT THE UPPER END OF THE PIPE SYSTEM, JET-CLEAN THE PIPES TO REMOVE COLLECTED SEDIMENT AND OTHER DEBRIS;
4. AFTER THE UPPER PORTION OF THE SYSTEM HAS BEEN CLEANED, INSTALL SEDIMENT CONTROLS AND/OR FILTER MEDIA AT THE OUTLET. FOLLOW STEPS 2 AND 3 ABOVE AND BEGIN CLEANING THE LAST SECTION OF THE PIPE SYSTEM AT A RATE THAT ALLOWS WASH WATER TO BE CONTAINED AND FILTERED AT THE DISCHARGE POINT WITHOUT RELEASING SEDIMENT OFF-SITE; AND
5. VIDEO INSPECT THE PIPE SYSTEM TO CONFIRM PIPE CONDITIONS AND ALL SEDIMENT HAS BEEN REMOVED, AND SUBMIT VIDEO INSPECTIONS TO NITSCH ENGINEERING FOR REVIEW.



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C9.4

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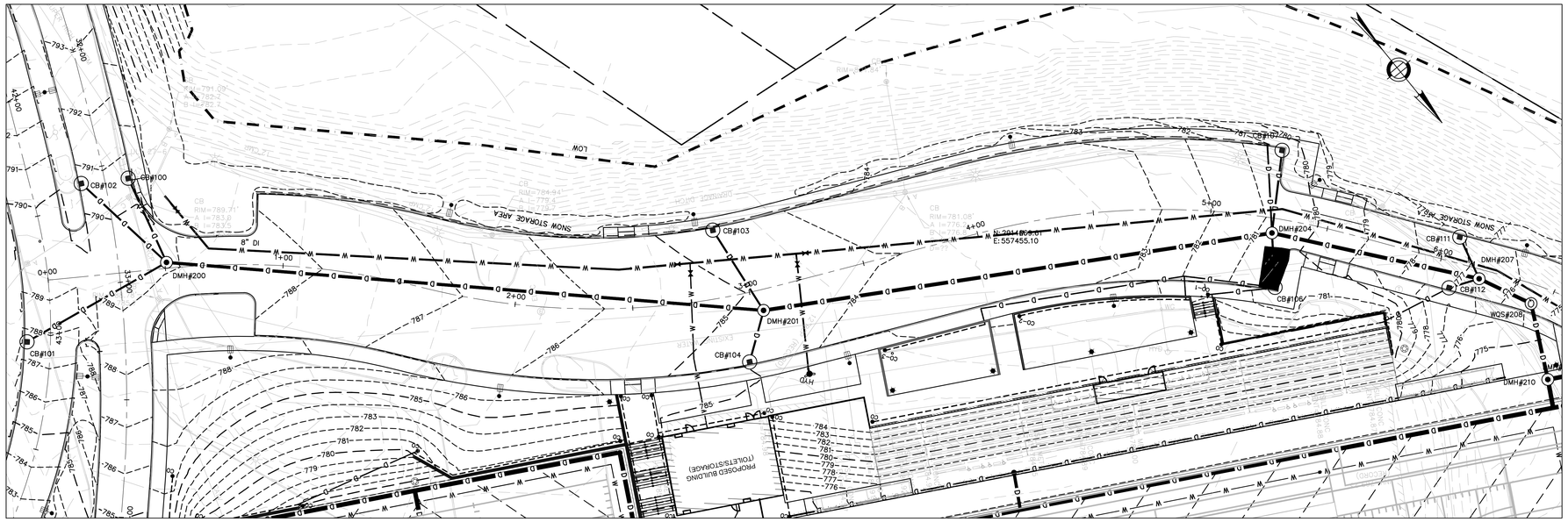
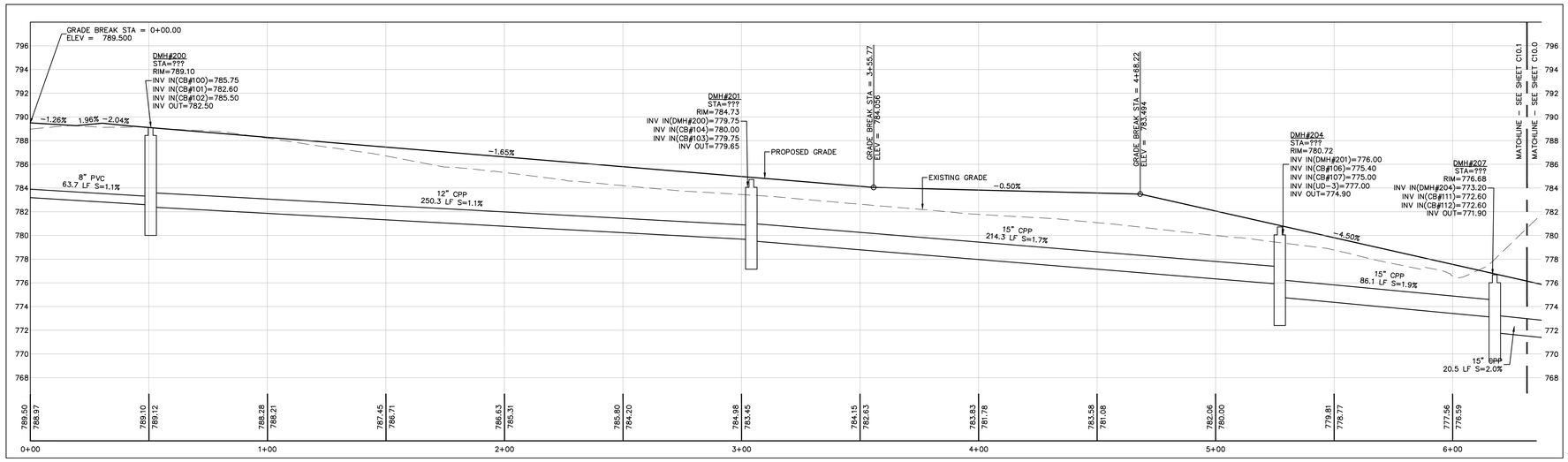


DRIVEWAY ALIGNMENT A - STA: 0+00 TO 6+30

SCALE: 1"=20'



DRIVEWAY ALIGNMENT A - STA: 0+00 TO 6+30

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4"

SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 4'

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ROADWAY PLAN AND PROFILE

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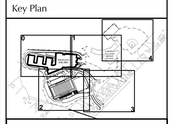

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5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cpr

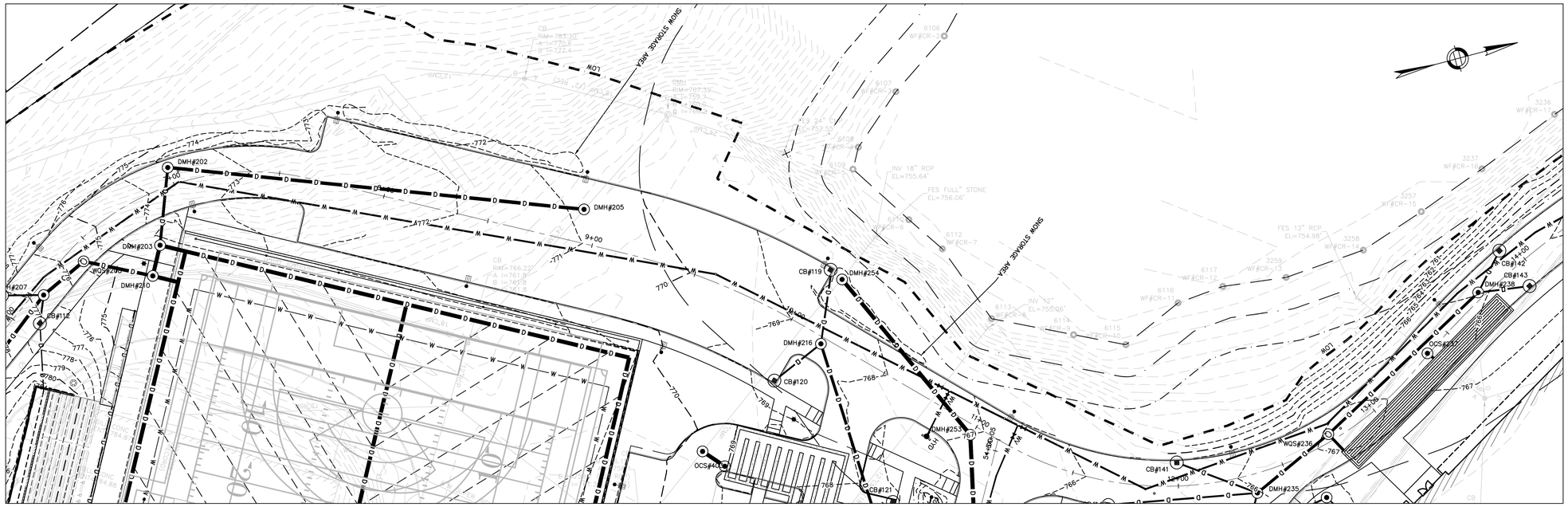
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

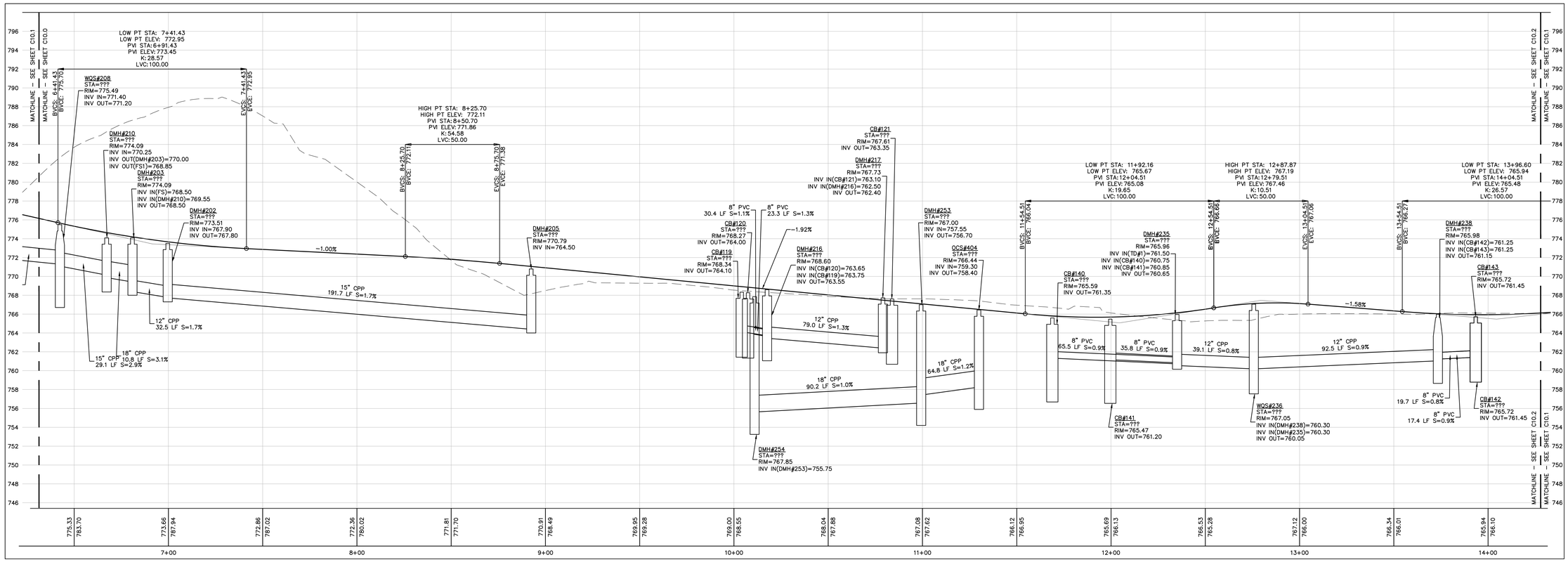
C10.0

Nitsch Project #11677



DRIVEWAY ALIGNMENT A - STA: 6+30 TO 14+00

SCALE: 1"=20'



DRIVEWAY ALIGNMENT A - STA: 6+30 TO 14+00

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 4'

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

ROADWAY PLAN AND PROFILE

Key Plan

REVISIONS

No.	Description	Date
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FILE: 11677cpr

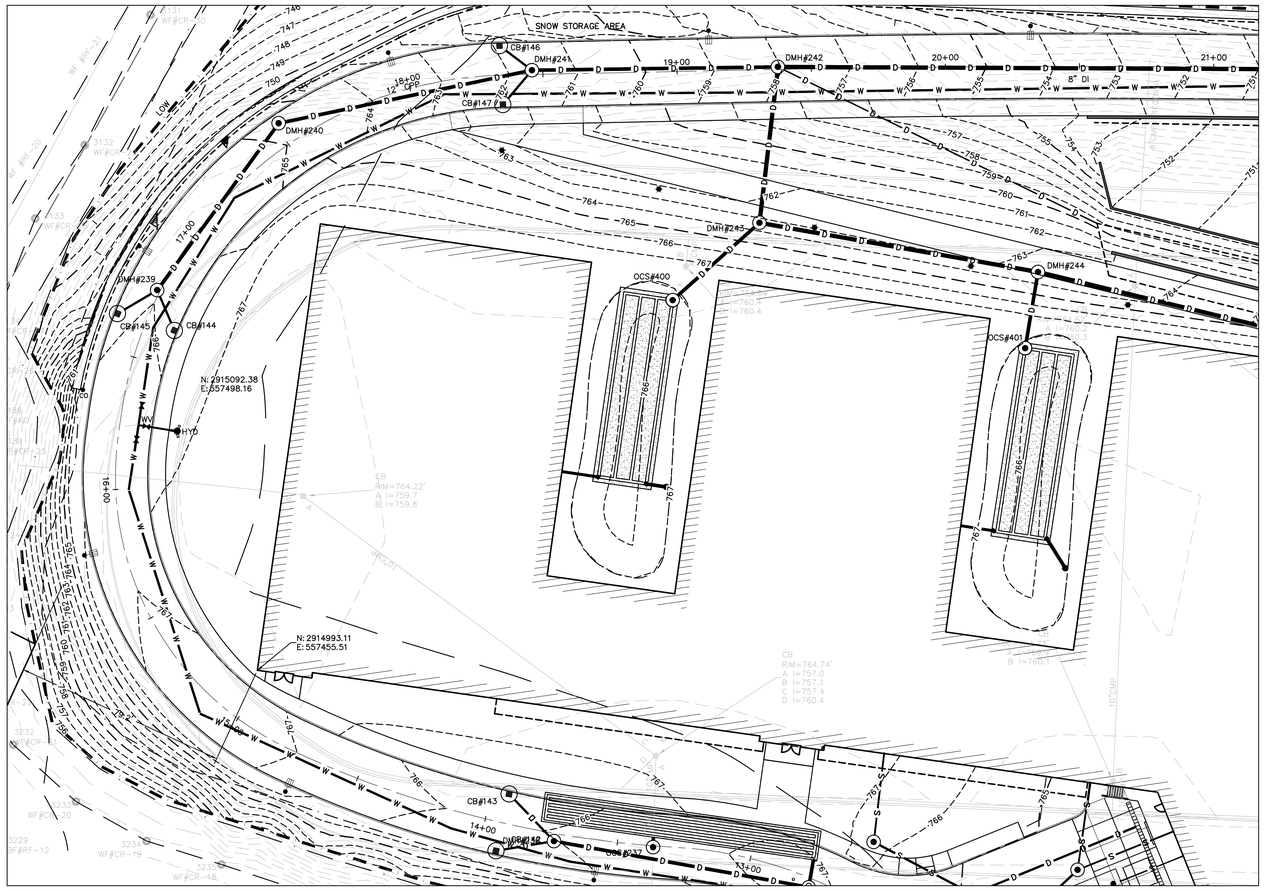
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

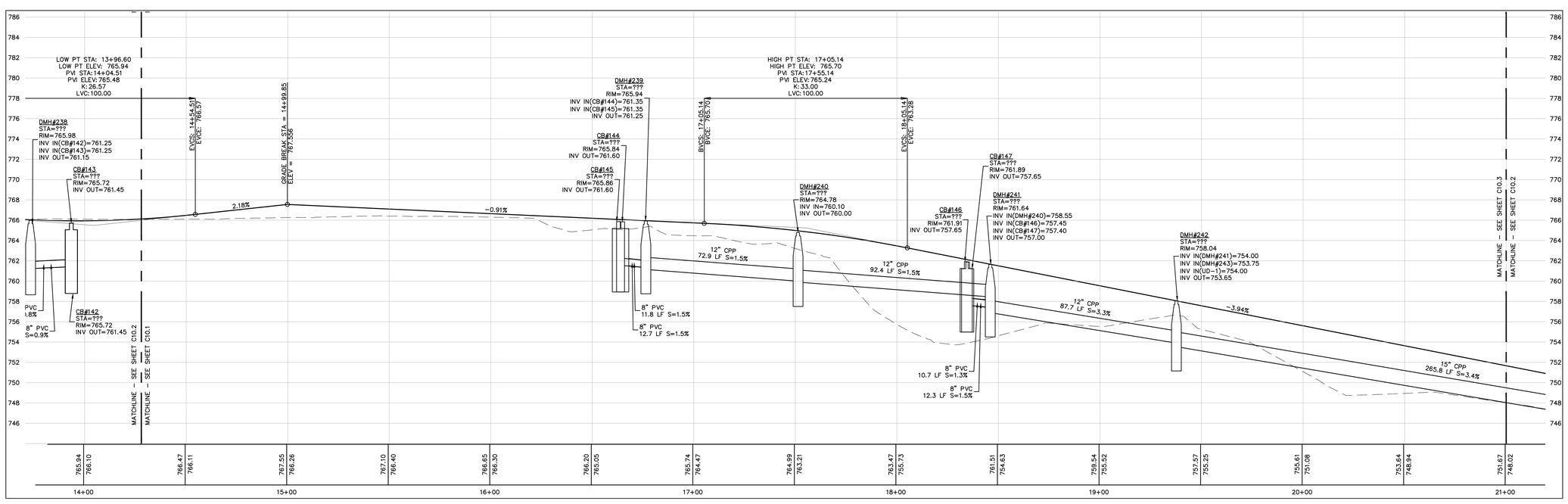
C10.1

Nitsch Project #11677



DRIVEWAY ALIGNMENT A - STA: 14+00 TO 21+00

SCALE: 1"=20'



DRIVEWAY ALIGNMENT A - STA: 14+00 TO 21+00

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

SCALE:
HORIZONTAL: 1" = 20'
20 10 0 20 40
VERTICAL: 1" = 4'
4 2 0 4 8

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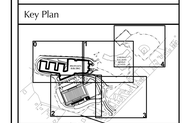

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7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cpr

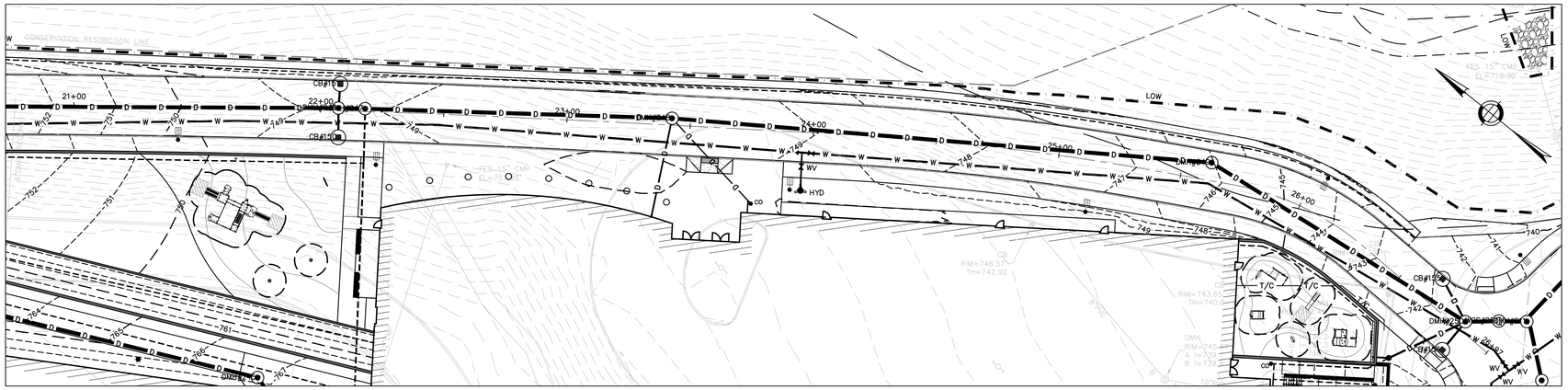
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

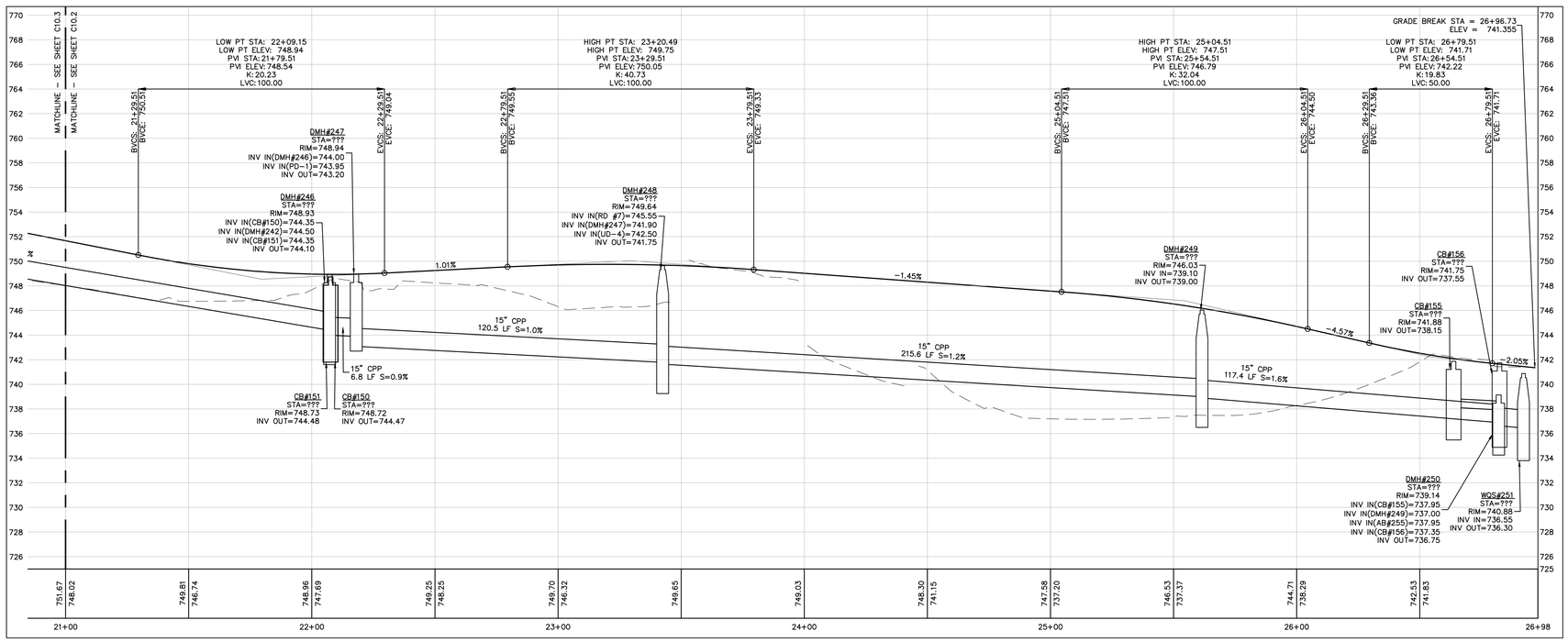
C10.2

Nitsch Project #11677



DRIVEWAY ALIGNMENT A - STA: 21+00 TO 26+98

SCALE: 1"=20'



DRIVEWAY ALIGNMENT A - STA: 21+00 TO 26+98

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

SCALE:
HORIZONTAL: 1" = 20'
20 10 0 20 40
4 2 0 4 8
VERTICAL: 1" = 4'

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South High Community School

170 Apricot Street, Worcester, MA 01603

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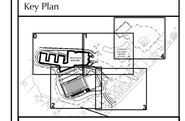
Key Plan



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FILE: 11677cpr

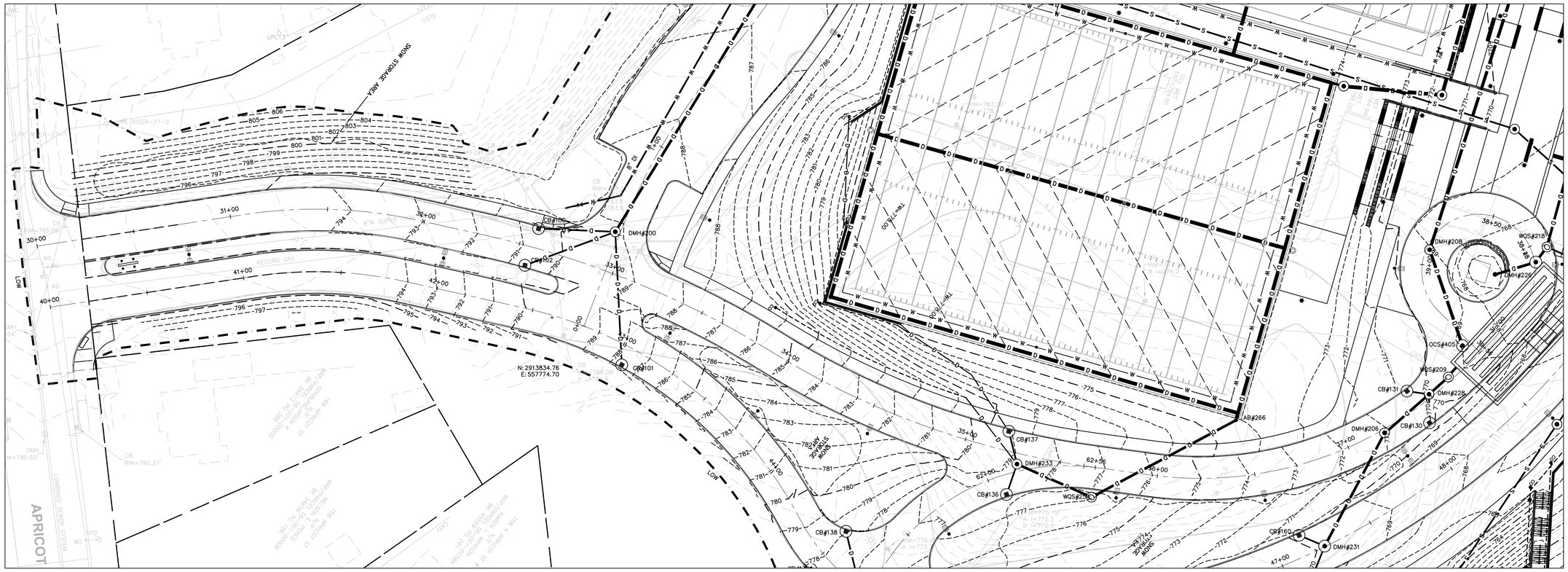
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

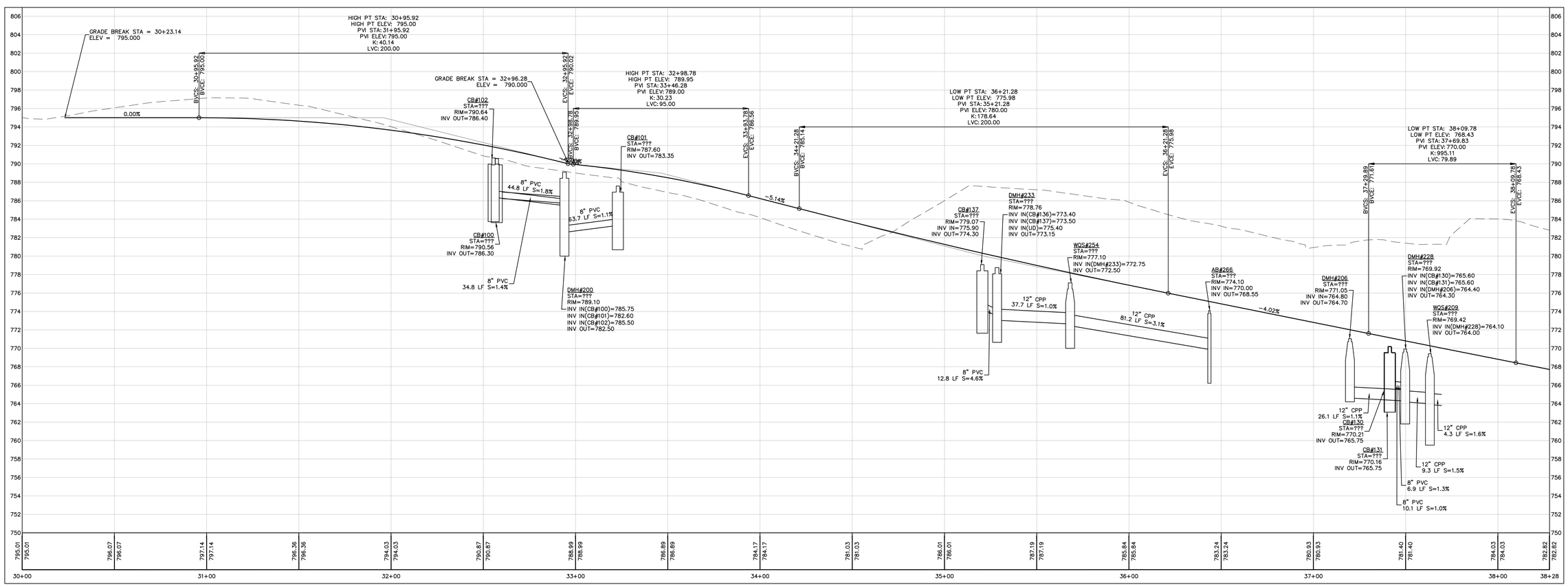
C10.3

Nitsch Project #11677



DRIVEWAY ALIGNMENT B - STA: 30+00 TO 38+28

SCALE: 1"=20'



DRIVEWAY ALIGNMENT B - STA: 32+00 TO 38+28

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4"

SCALE:
HORIZONTAL: 1" = 20'
20 10 0 20 40
4 2 0 4 8
VERTICAL: 1" = 4'

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South High Community School

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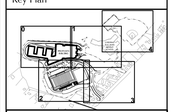

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FILE: 11677cpr

DWN. BY:	ER	JOB NO:	#1611
CKD. BY:	JEG	SCALE:	1"=20'

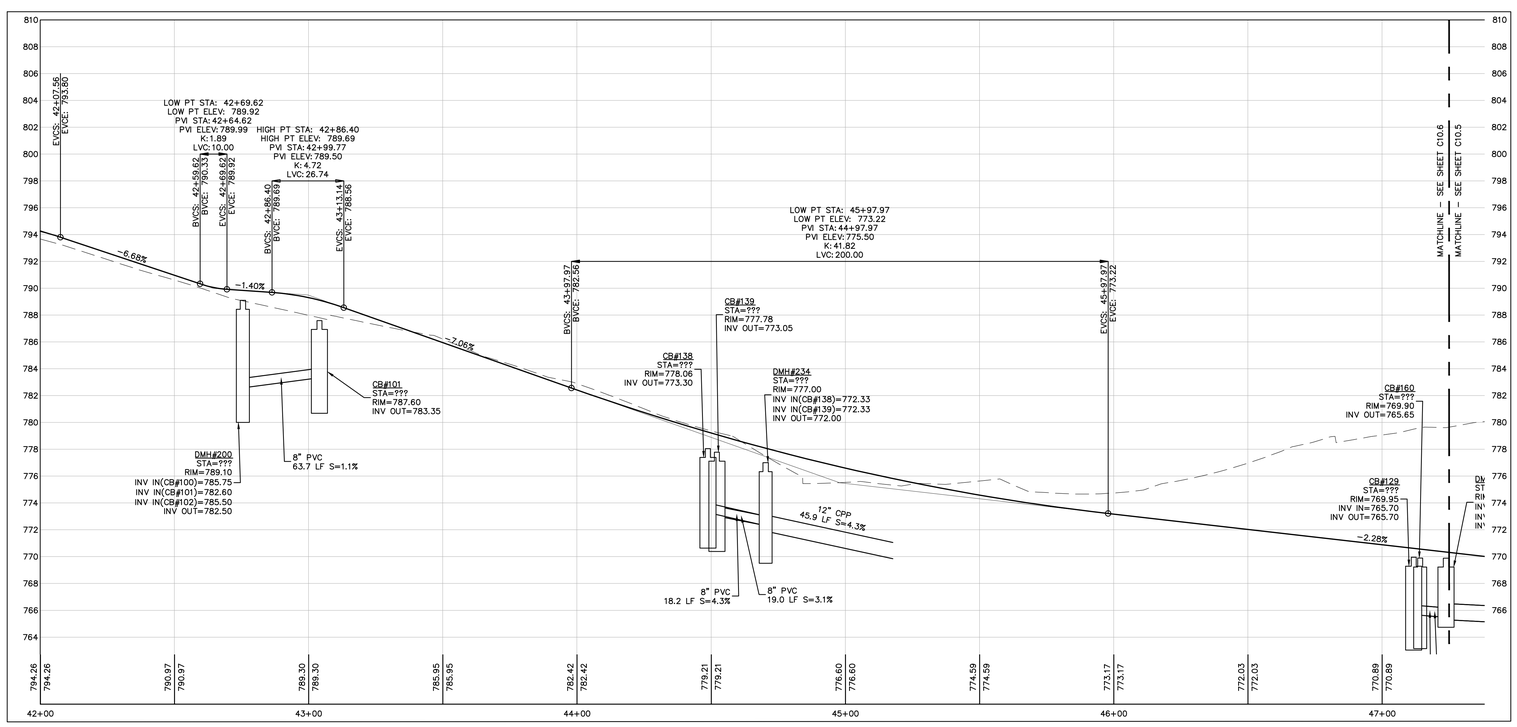
DATE: January 31, 2019

C10.4

Nitsch Project #11677

DRIVEWAY ALIGNMENT C - STA: 42+00 TO 47+25

SCALE: 1"=20'



DRIVEWAY ALIGNMENT C - STA: 42+00 TO 47+25

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4"

SCALE:
HORIZONTAL: 1" = 20'
20 10 0 20 40
4 2 0 4 8
VERTICAL: 1" = 4'

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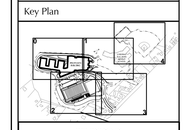

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FILE: 11677cpr

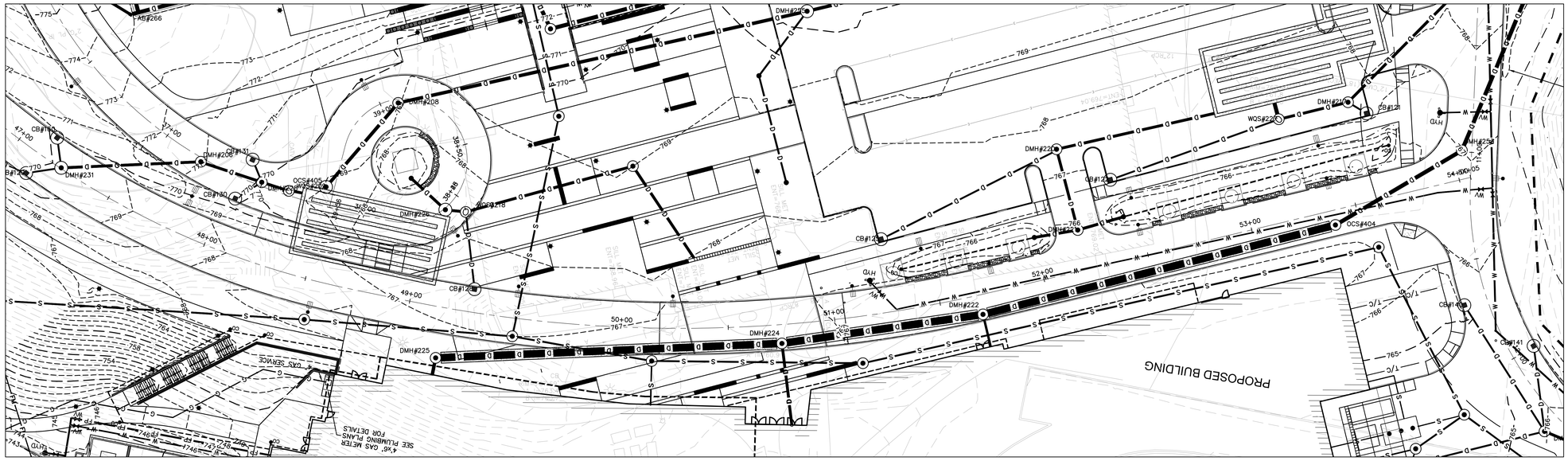
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

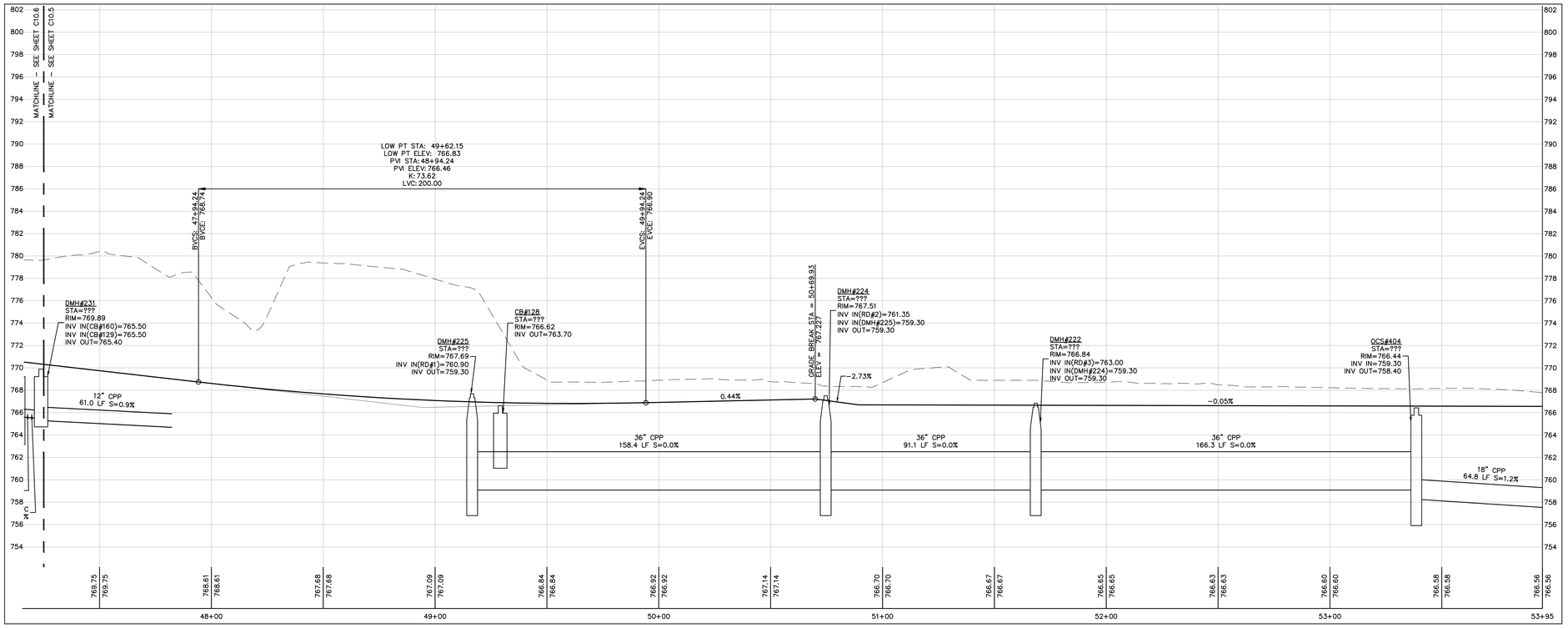
C10.5

Nitsch Project #11677



DRIVEWAY ALIGNMENT C - STA: 47+25 TO 53+95

SCALE: 1"=20'



DRIVEWAY ALIGNMENT C - STA: 47+25 TO 53+95

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 4'

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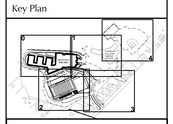

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FILE: 11677cpr

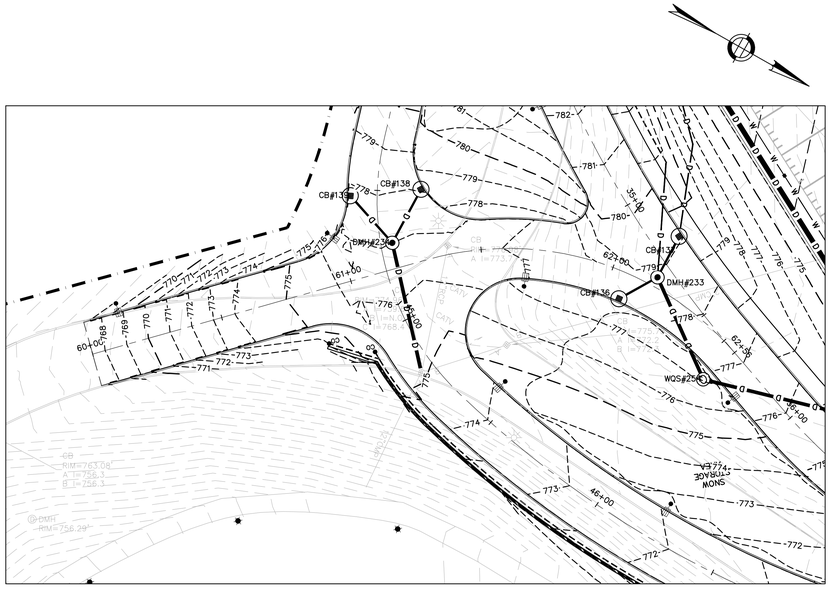
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

DATE: January 31, 2019

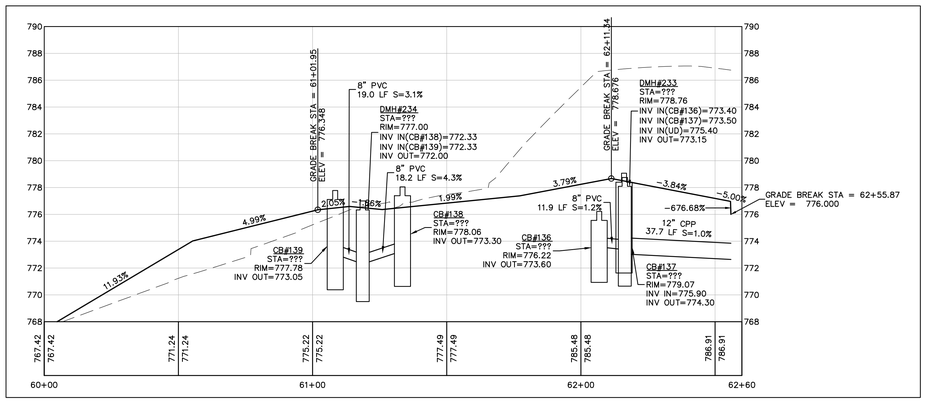
C10.6

Nitsch Project #11677



DRIVEWAY ALIGNMENT D - STA: 60+00 TO 62+60

SCALE: 1"=20'



DRIVEWAY ALIGNMENT D - STA: 60+00 TO 62+60

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

SCALE:
HORIZONTAL: 1" = 20'
20 10 0 20 40
4 2 0 4 8
VERTICAL: 1" = 4'

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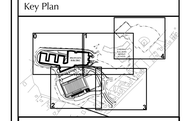

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FILE: 11677cpr

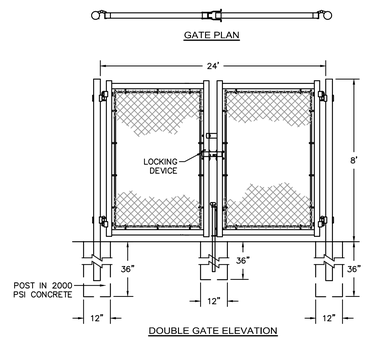
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: 1"=20'

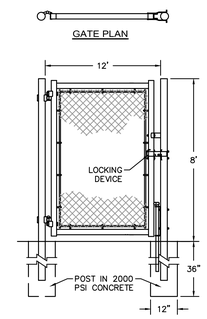
DATE: January 31, 2019

C10.7

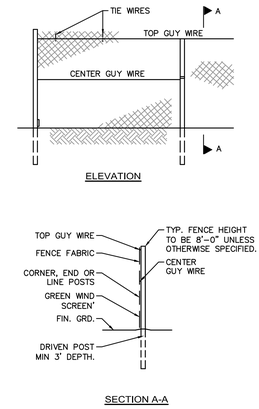
Nitsch Project #11677



24' WIDE DOUBLE GATE
NOT TO SCALE



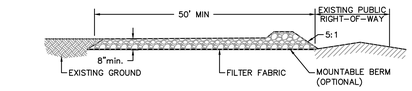
12' WIDE EMERGENCY GATE
NOT TO SCALE



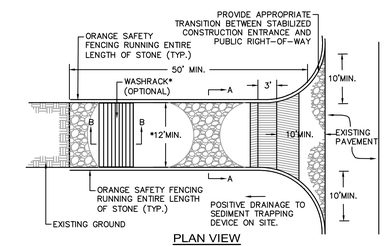
CONSTRUCTION FENCE AND GATE NOTES

1. FABRIC SHALL BE 0.148" WIRE, WOVEN INTO APPROXIMATELY 2" DIAMOND MESH.
2. THE FENCE FABRIC SHALL BE ZINC COATED STEEL OR ALUMINUM COATED STEEL.
3. FENCE POSTS SHALL RECEIVE THE SAME COATING AND TREATMENT AS THE FENCE FABRIC (DESCRIBED ABOVE).
4. THE CONTRACTOR SHALL ADD A GREEN WIND SCREEN
5. LINE POSTS SHALL BE 2½" O.D. END OR CORNER POSTS SHALL BE 3" O.D.
6. THE CONTRACTOR IS RESPONSIBLE FOR SURFACE RESTORATION ONCE THE FENCE IS REMOVED.
7. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE TEMPORARY CONSTRUCTION FENCE AT THE CONCLUSION OF THE PROJECT.

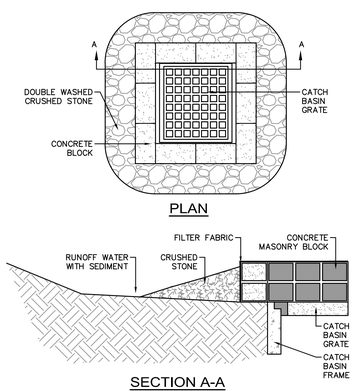
CHAIN LINK CONSTRUCTION FENCE
NOT TO SCALE



SIDE ELEVATION

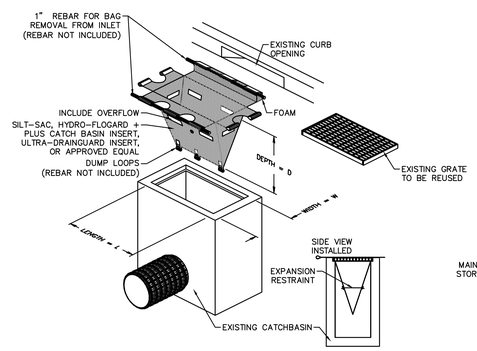


PLAN VIEW



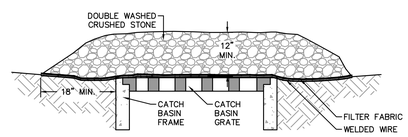
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND STRUCTURE.

INLET PROTECTION ③ CATCH BASIN W/ BLOCK AND GRAVEL
NOT TO SCALE



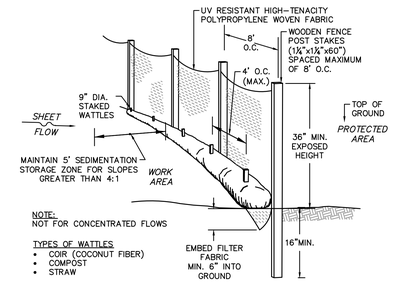
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS SHEET, OVERLAND OR CONCENTRATED FLOWS (NOT GREATER THAN 1 CFS). THE METHOD CAN DRAIN FLAT AREA TO STEEP SLOPES. INLET CAPACITY WILL BE DECREASED WITH THIS METHOD AND THE CONTRACTOR SHALL EXPECT PONDING DURING HIGH FLOW EVENTS.

INLET PROTECTION ② CATCH BASIN W/ SILTATION SACK
NOT TO SCALE



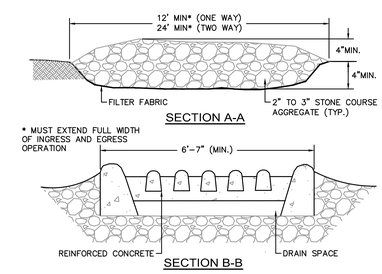
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS. THIS METHOD NOT ACCEPTABLE IN ACTIVE TRAFFIC AREAS.

INLET PROTECTION ① CATCH BASIN W/ GRAVEL
NOT TO SCALE



NOTE:
NOT FOR CONCENTRATED FLOWS

TYPES OF WATTLES
- COIR (COCONUT FIBER)
- COMPOST
- STRAW



CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

LENGTH – GREATER THAN OR EQUAL TO 50 FEET

WIDTH – TWELVE FOOT MINIMUM (ONE WAY), TWENTY FOUR FOOT MINIMUM (TWO WAY), BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

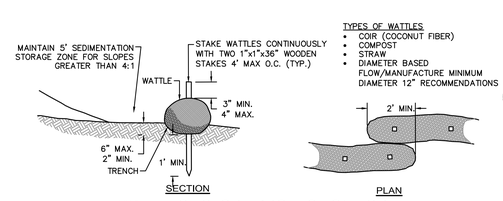
SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHALL BE PERMITTED.

THICKNESS – 8"

MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR 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.

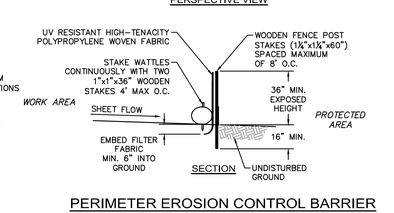
PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

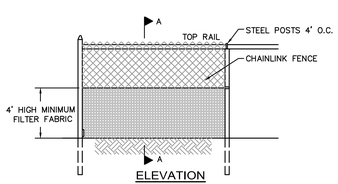


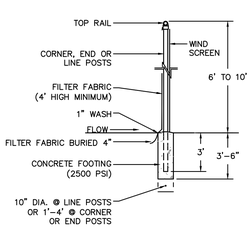
TYPES OF WATTLES
- COIR (COCONUT FIBER)
- COMPOST
- STRAW
- DIAMETER BASED FLOW/MANUFACTURE MINIMUM DIAMETER 12" RECOMMENDATIONS

WATTLES - SLOPE PROTECTION FOR SLOPES LESS THAN 10:1
NOT TO SCALE



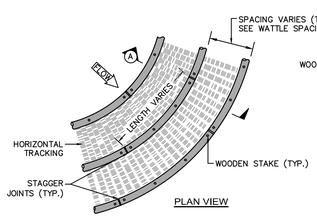
PERIMETER EROSION CONTROL BARRIER SILT FENCE DETAIL WITH WATTLES
NOT TO SCALE

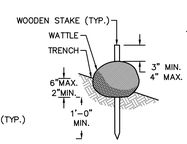


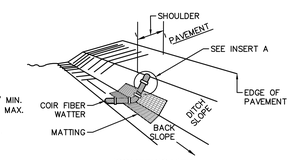


1. CHAINLINK FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES.
2. FILTER FABRIC SHALL BE FASTENED SECURELY TO CHAINLINK FENCE WITH TIES SPACED HORIZONTALLY 24" AS THE TOP AND MIDSECTION.
3. WHEN TWO SECTIONS OF FILTER FABIRC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6"
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL SHALL BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 50% OF THE HEIGHT OF THE FILTER FABRIC.
5. MAINTENANCE OF SILT FENCE SHALL BE RECORDED TO IN THE SWPPP

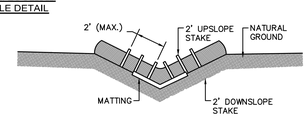
EROSION CONTROL BARRIER SUPER SILT FENCE
NOT TO SCALE

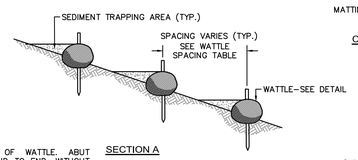






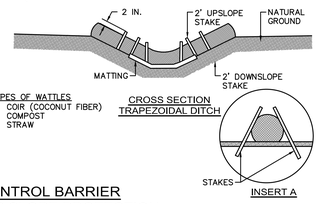
WATTLE SPACING TABLE	
SLOPE	MAX. SPACING
1:1	10'-0"
2:1	20'-0"
3:1	30'-0"
4:1	40'-0"





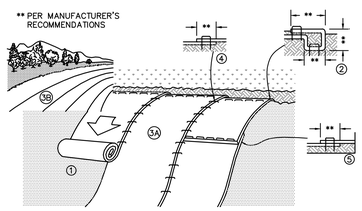
WATTLE SLOPE PROTECTION NOTES:

1. SECURELY KNOT EACH END OF WATTLE. ABUT ADJACENT WATTLES TIGHTLY, END TO END, WITHOUT OVERLAPPING THE ENDS.
2. PILOT HOLES MAY BE DRIVEN THROUGH THE WATTLES AND INTO THE SOIL WHEN SOIL CONDITIONS REQUIRE
3. WATTLES SHALL BE INSPECTED REGULARLY, AND IMMEDIATELY AFTER A RAINFALL PRODUCES RUNOFF, TO ENSURE THEY REMAIN THOROUGHLY ENTRENCHED AND IN CONTACT WITH THE SOIL.
4. ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.



TYPES OF WATTLES
- COIR (COCONUT FIBER)
- COMPOST
- STRAW

EROSION CONTROL BARRIER WATTLES - STEEP SLOPE PROTECTION
NOT TO SCALE

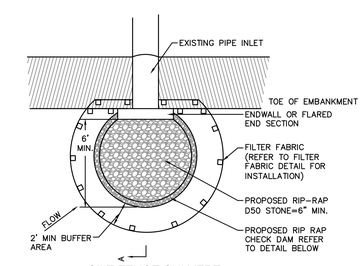


SLOPE INSTALLATION

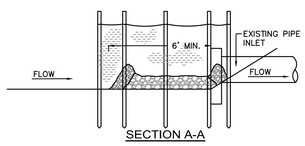
NOTES:

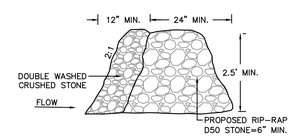
1. PREPARE SOIL BEFORE INSTALLING EROSION CONTROL BLANKETS (ECB's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB's IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING PORTION OF ECB's BACK OVER SEED AND COMPACTED SOIL. SECURE ECB's OVER COMPACTED SOIL WITH A ROW OF STAKES/STAPLES SPACED ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATIONS ACROSS THE WIDTH OF THE ECB's.
3. ROLL THE ECB's DOWN (A) OR HORIZONTALLY (B) ACROSS THE SLOPE. ECB's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAKES/STAPLES IN APPROPRIATE LOCATIONS AS SHOWN ON THE STAKE/STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL ECB's MUST BE STAKED/STAPLED WITH OVERLAP DEPENDING ON ECB's TYPE. SEE THE MANUFACTURER'S RECOMMENDATIONS.
5. CONSECUTIVE ECB's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN OVERLAP (SEE THE MANUFACTURER'S RECOMMENDATIONS). STAKE/STAPLE THROUGH OVERLAPPED AREA, ACROSS ENTIRE ECB's WIDTH PER MANUFACTURER'S RECOMMENDATIONS.
6. IN LOOSE SOIL CONDITIONS, THE USE OF STAKE OR STAPLE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB's.
7. THE CONTRACTOR SHALL FOLLOW ALL INSTALLATION INSTRUCTIONS AS RECOMMENDED BY THE MANUFACTURER.

TEMPORARY EROSION CONTROL BLANKET FOR STEEP SLOPES DETAIL
NOT TO SCALE



SILT FENCE CULVERT INLET PROTECTION





RIP-RAP CHECK DAM

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
108 GROVE STREET, SUITE 300
WORCESTER, MASSACHUSETTS 01605

MEMBER OF
THE AMERICAN INSTITUTE OF ARCHITECTS

CONSULTANT

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

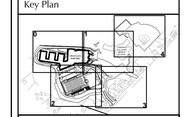
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL DETAILS

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cdt

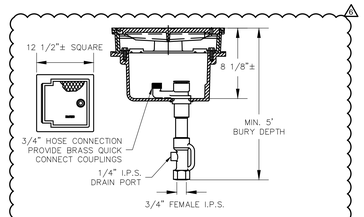
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: As Noted

DATE: January 31, 2019

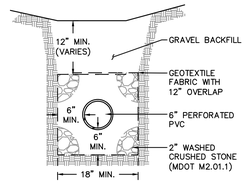
C11.0

Nitsch Project #11677



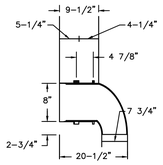
NON-FREEZE GROUND HYDRANT DETAIL

NOT TO SCALE



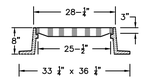
UNDERDRAIN DETAIL

NOT TO SCALE



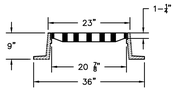
WORCESTER 8" GREEN TRAP DETAIL

NOT TO SCALE



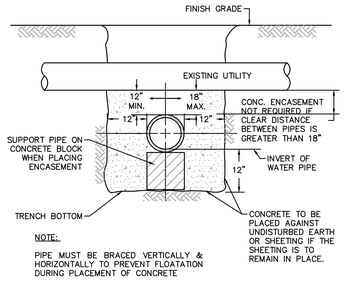
WORCESTER STANDARD CATCH BASIN FRAME & GRATE DETAIL

NOT TO SCALE



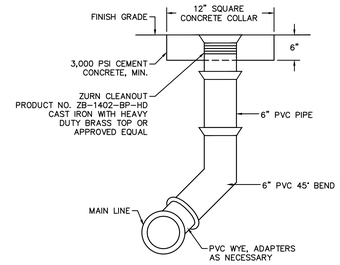
WORCESTER STANDARD MANHOLE FRAME & COVER DETAIL

NOT TO SCALE



CONCRETE ENCASEMENT DETAIL AT UTILITY CROSSINGS

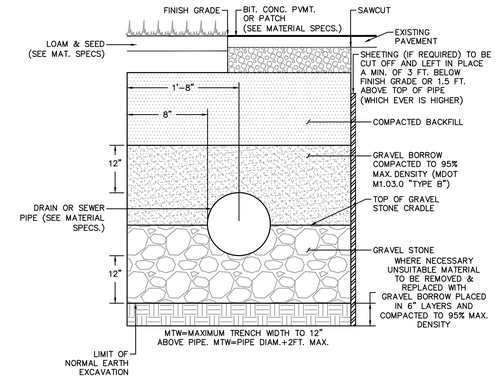
NOT TO SCALE



TYPICAL CLEANOUT DETAIL

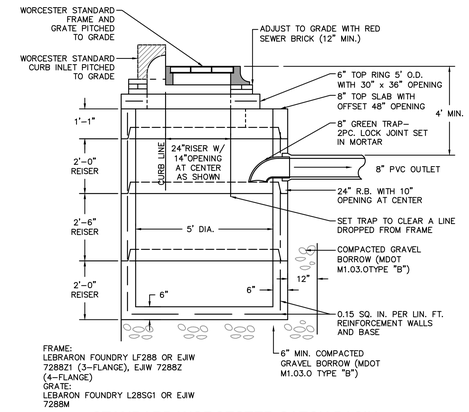
NOT TO SCALE

NOTE TO DESIGNER:
FOR ASPHALT PVMT - SET TOP OF CONCRETE COLLAR TO BINDER COURSE



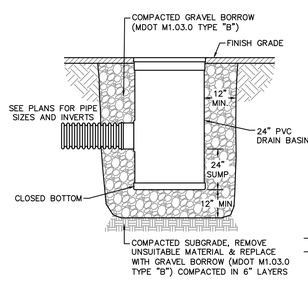
STANDARD TRENCH DETAIL FOR UTILITY PIPE

NOT TO SCALE

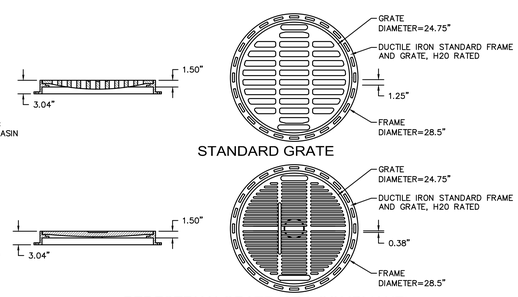


STANDARD WORCESTER CATCH BASIN

NOT TO SCALE



SECTION VIEW



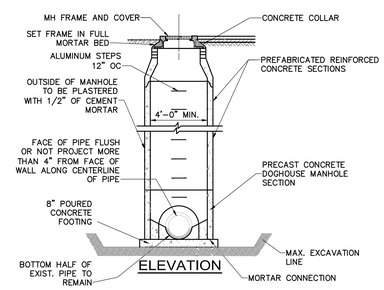
PEDESTRIAN GRATE (ADA COMPLIANT)

NOTES:
1. FRAME AND GRATE SHALL BE DUCTILE IRON CONFORMING TO ASTM A536 GRADE 70-50-05.
2. 24" AREA DRAINS SHALL BE NYLOPLAST MODEL 2824 AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC., OR APPROVED EQUAL.
3. AREA DRAINS SHALL BE CUSTOM MANUFACTURED ACCORDING TO THE PLANS AND DETAIL.
4. CASTINGS SHALL BE FURNISHED WITH A BLACK PAINT.
5. SEE PLANS FOR LAYOUT AND ELEVATIONS OF DRAIN PIPES TO AREA DRAINS.

24" AREA DRAIN DETAIL

NOT TO SCALE

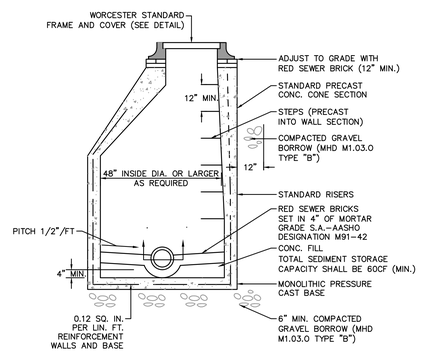
CLEANOUT



NOTES:
1. PREFABRICATED REINFORCED CONCRETE UNITS SHALL BE USED.
2. THEY SHALL BE DESIGNED TO WITHSTAND AASHTO HS-20-44 LOADING.
3. SHOP DRAWINGS WILL BE REQUIRED TO BE SUBMITTED FOR APPROVAL. THE SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN MASSACHUSETTS.

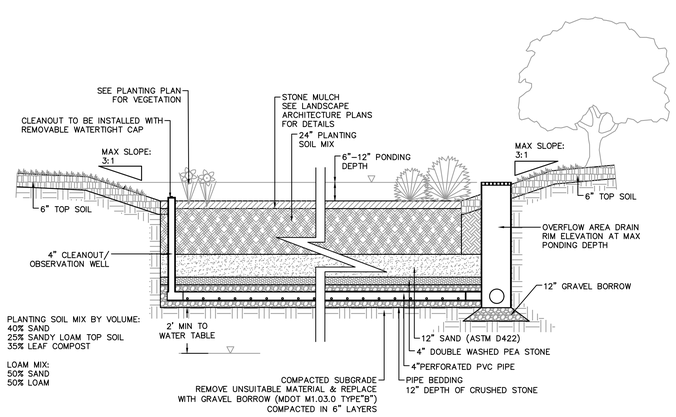
DOGHOUSE MANHOLE DETAIL

NOT TO SCALE



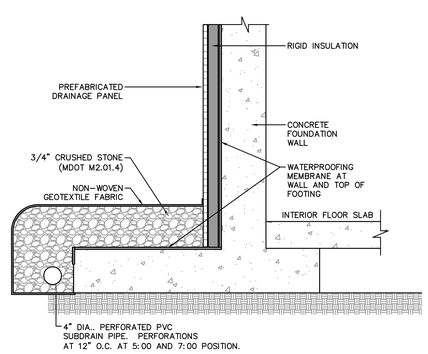
STANDARD WORCESTER MANHOLE

NOT TO SCALE



BIORETENTION BASIN

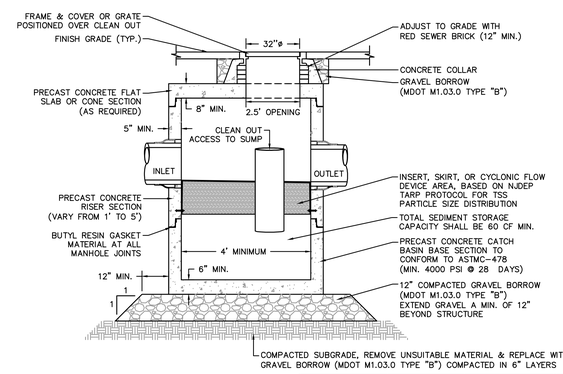
NOT TO SCALE



SEE ARCHITECTURAL DRAWINGS FOR TYPE AND EXTENT OF RIGID INSULATION, WATERPROOFING MEMBRANE, AND WALL DRAIN PANEL.

PERIMETER FOUNDATION SUBDRAIN DETAIL

NOT TO SCALE



NOTE:
1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL CLEANOUT PIPE.
3. STRUCTURE DESIGNED FOR H20 LOADING

STRUCTURE NAME	MINIMUM WQF	PEAK FLOW RATE*	MINIMUM SEDIMENT STORAGE CAPACITY
WQS#208	1.26 CFS	4.94 CFS	120 CF
WQS#218	0.40 CFS	0.66 CFS	120 CF
WQS#236	0.47 CFS	2.57 CFS	60 CF
WQS#251	1.46 CFS	11.70 CFS	120 CF
WQS#254	0.53 CFS	0.68 CFS	120 CF
WQS#209	0.60 CFS	1.73 CFS	60 CF
WQS#227	0.95 CFS	2.74 CFS	60 CF

* PEAK FLOW RATE BASED ON RATIONAL ANALYSIS FOR A 25-YEAR STORM EVENT. STRUCTURE SHALL BE ABLE TO PASS PEAK FLOW RATE WITHOUT CAUSING A BACKWATER CONDITION.

WATER QUALITY STRUCTURE DETAIL

NOT TO SCALE

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
108 GROVE STREET, SUITE 300
WORCESTER, MASSACHUSETTS 01605

MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

CONSULTANT

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

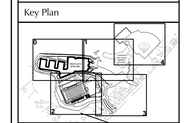
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL DETAILS

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cdt

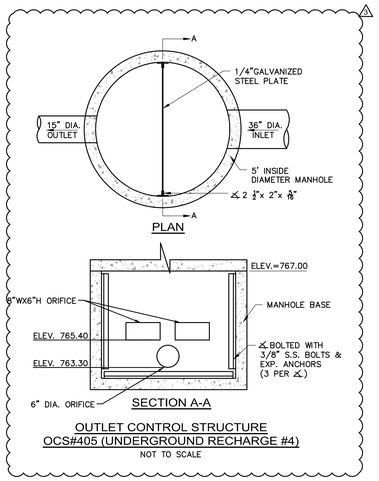
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: As Noted

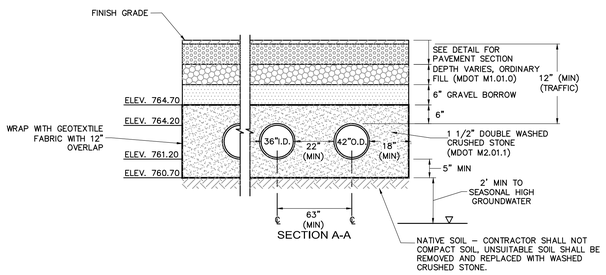
DATE: January 31, 2019

C11.1

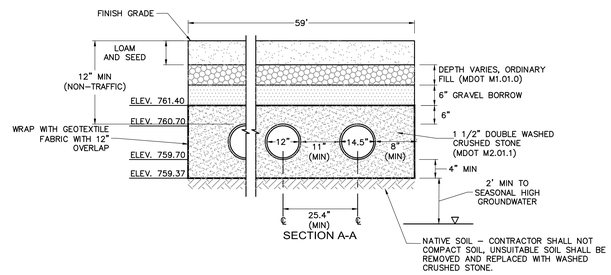
Nitsch Project #11677



OUTLET CONTROL STRUCTURE
OCS#405 (UNDERGROUND RECHARGE #4)
NOT TO SCALE



UNDERGROUND RECHARGE SYSTEM #1 (UG-1) 36"
PERFORATED PIPE IN CRUSHED STONE DETAIL
NOT TO SCALE



UNDERGROUND RECHARGE SYSTEM #2 (UG-2)
12" PERFORATED PIPE IN CRUSHED STONE DETAIL
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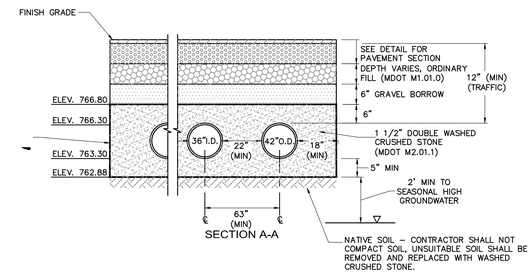

UNDERGROUND RECHARGE SYSTEM #4 (UG-4) 36"
PERFORATED PIPE IN CRUSHED STONE DETAIL
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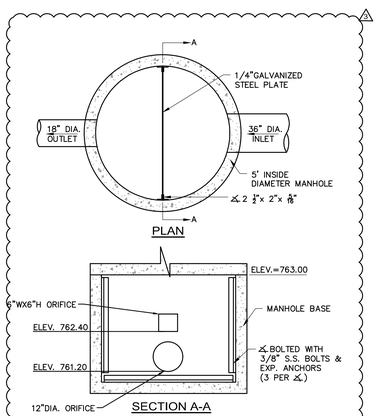
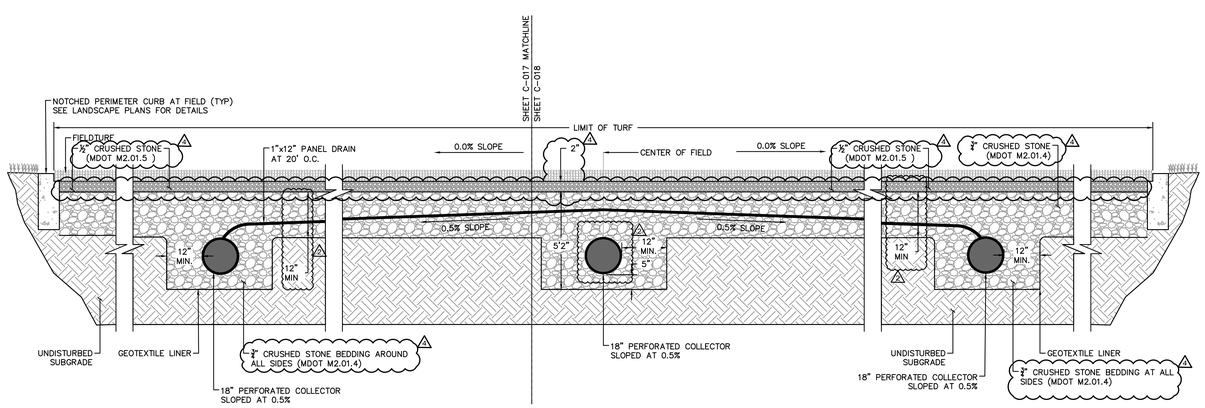
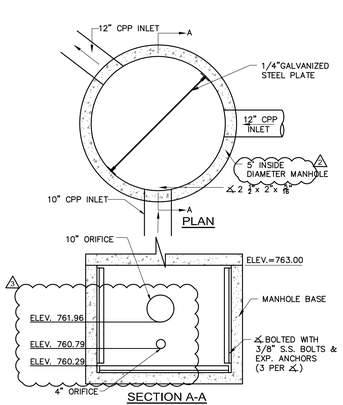


OUTLET CONTROL STRUCTURE
OCS#404 (UNDERGROUND RECHARGE #3)
NOT TO SCALE



SYNTHETIC TURF FIELD SYSTEM DETAIL
NOT TO SCALE

15-INCH ACCESS BASIN DETAIL
REMOVED



OUTLET CONTROL STRUCTURE
OCS#400 (RAIN GARDEN #1)
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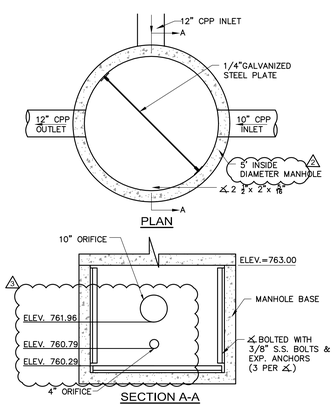
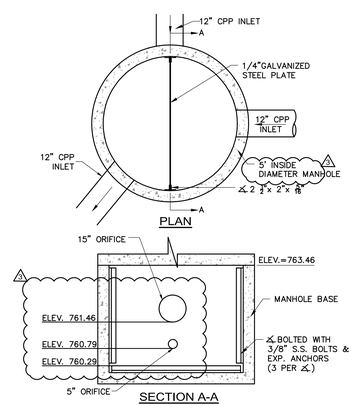
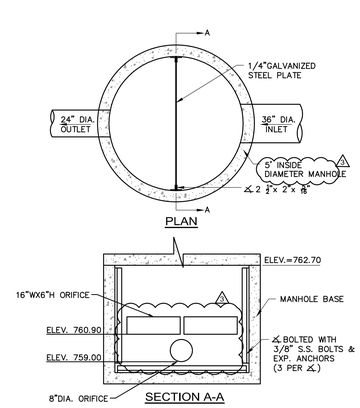


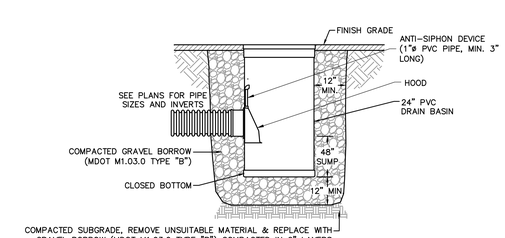
OUTLET CONTROL STRUCTURE
OCS#401 (RAIN GARDEN #2)
NOT TO SCALE



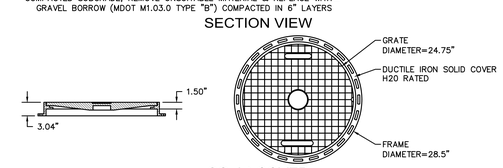
OUTLET CONTROL STRUCTURE
OCS#402 (RAIN GARDEN #3)
NOT TO SCALE



OUTLET CONTROL STRUCTURE
OCS#403 (UNDERGROUND RECHARGE #1)
NOT TO SCALE



SECTION VIEW



SOLID COVER

NOTES:
1. FRAME AND COVER SHALL BE DUCTILE IRON CONFORMING TO ASTM A536 GRADE 70–50–05.
2. 24" ACCESS BASINS SHALL BE NYLOPLAST MODEL 2824 AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC., OR APPROVED EQUAL.
3. ACCESS BASINS SHALL BE CUSTOM MANUFACTURED ACCORDING TO THE PLANS AND DETAIL.
4. CASTINGS SHALL BE FURNISHED WITH A BLACK PAINT.
5. SEE PLANS FOR LAYOUT AND ELEVATIONS OF DRAIN PIPES TO ACCESS BASINS.

24" ACCESS BASIN DETAIL
NOT TO SCALE

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
108 GROVE STREET, SUITE 300
WORCESTER, MASSACHUSETTS 01605
MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

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FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

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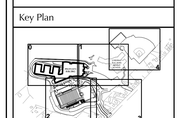
CIVIL DETAILS

Key Plan



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FILE: 11677cdt

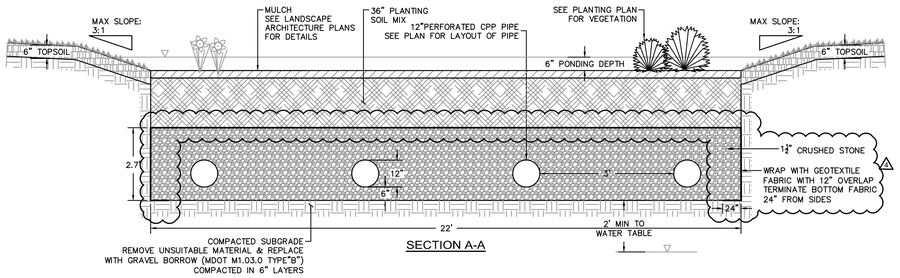
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: As Noted

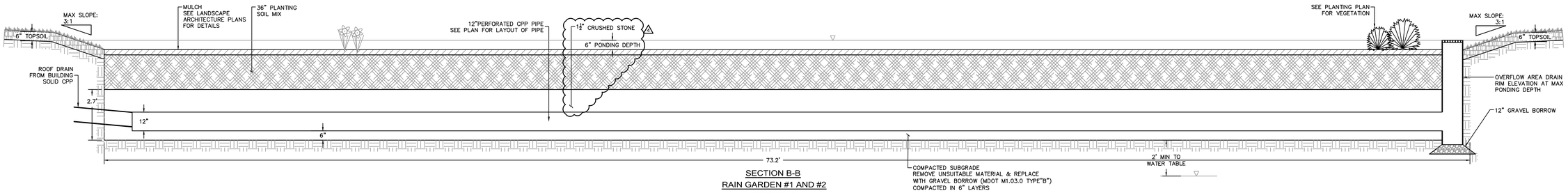
DATE: January 31, 2019

C11.2

Nitsch Project #11677

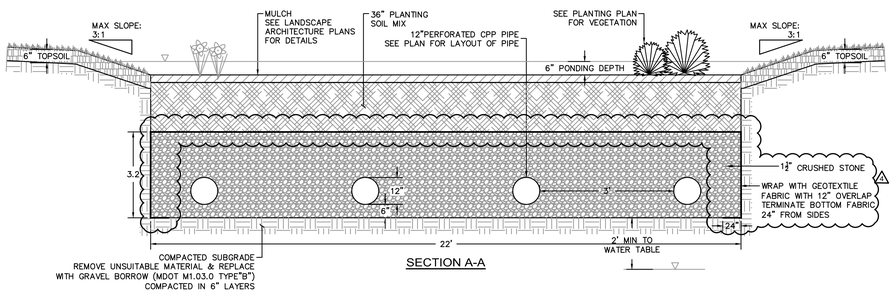


SECTION A-A

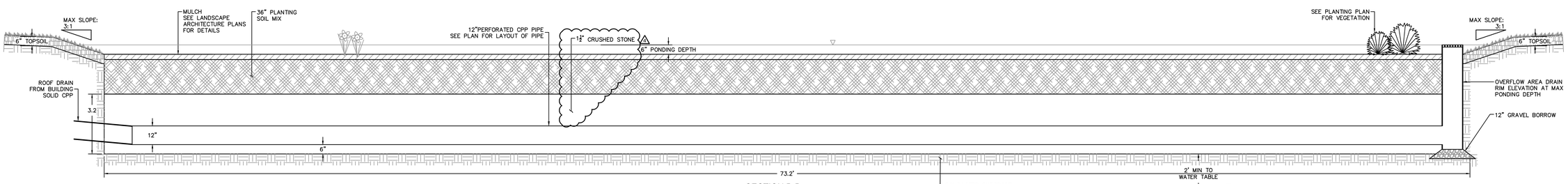


SECTION B-B
RAIN GARDEN #1 AND #2

NOT TO SCALE



SECTION A-A



SECTION B-B
RAIN GARDEN #3

NOT TO SCALE

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
108 GROVE STREET, SUITE 300
WORCESTER, MASSACHUSETTS 01605

MEMBER OF
THE AMERICAN INSTITUTE OF ARCHITECTS

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL DETAILS

Key Plan

REVISIONS

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FILE: 11677cdt

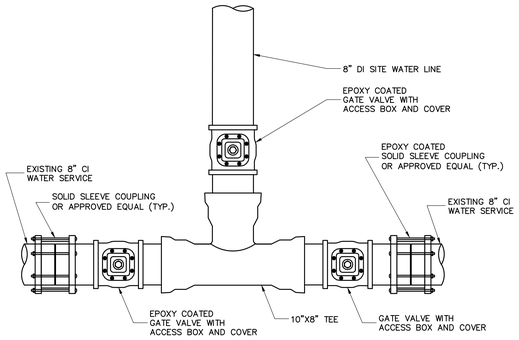
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: As Noted

DATE: January 31, 2019

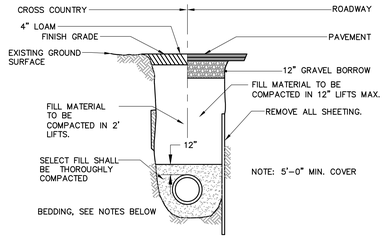
C11.3

Nitsch Project #11677



CONNECTION TO EXISTING WATER SERVICE DETAIL

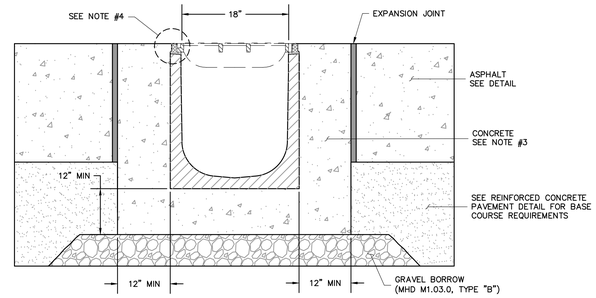
NOT TO SCALE



NOTES:
1. CITY OF WORCESTER MAY REQUIRE FLOWABLE FILL AT ITS DISCRETION.
2. FOR LOCATIONS WHERE LEDGE IS NOT ENCOUNTERED IN TRENCH, PIPE CAN LAY ON UNDISTURBED EARTH, OR ON SAND BEDDING CONSISTENT WITH AWWA GUIDELINES.
3. FOR LOCATIONS WHERE LEDGE IS ENCOUNTERED, SAND BEDDING SHALL BE MINIMUM OF 12" THICK UNDER PIPE.
4. FILL MATERIAL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.

WATER TRENCH DETAIL

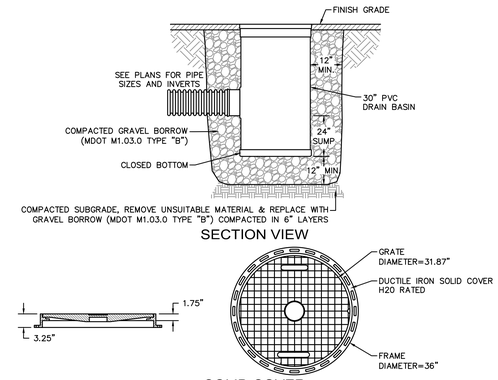
NOT TO SCALE



NOTES:
1. TRENCH DRAIN SHALL BE A POLYMER CONCRETE CHANNEL SYSTEM WITH A DUCTILE IRON RAIL AND GRATE.
2. TRENCH DRAIN SYSTEM AND GRATES SHALL BE H-20 LOADING.
3. CONCRETE CRADLE FOR TRENCH DRAIN SHALL BE MINIMUM 4,000 PSI. CONCRETE SHALL BE VIBRATED TO ELIMINATE AIR POCKETS.
4. THE FINISHED LEVEL OF THE SURROUNDING CONCRETE SHALL BE FLUSH WITH THE TOP OF THE CHANNEL EDGE.
5. TRENCH DRAIN SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. ALL TRENCH DRAINS SHALL BE PROVIDED WITH AN INLINE CATCH BASIN AT THE LOW POINT OF THE SYSTEM. WIDTH OF INLINE CATCH BASIN TO MATCH WIDTH OF TRENCH DRAIN.

18" TRENCH DRAIN DETAIL

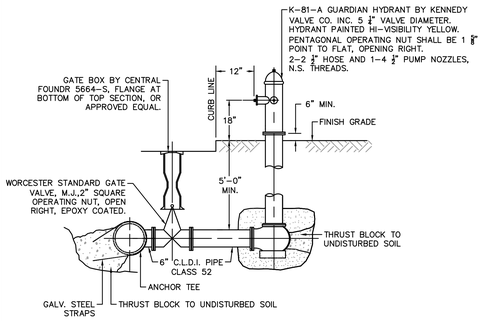
NOT TO SCALE



NOTES:
1. FRAME AND COVER SHALL BE DUCTILE IRON CONFORMING TO ASTM A536 GRADE 70-50-05.
2. 30" ACCESS BASINS SHALL BE NYLOPLAST MODEL 3099CGC AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC., OR APPROVED EQUAL.
3. ACCESS BASINS SHALL BE CUSTOM MANUFACTURED ACCORDING TO THE PLANS AND DETAIL.
4. CASTINGS SHALL BE FURNISHED WITH A BLACK PAINT.
5. SEE PLANS FOR LAYOUT AND ELEVATIONS OF DRAIN PIPES TO ACCESS BASINS.

30" ACCESS BASIN DETAIL (AB#256, AB#257, & AB#266)

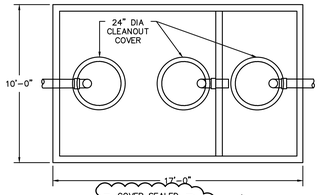
NOT TO SCALE

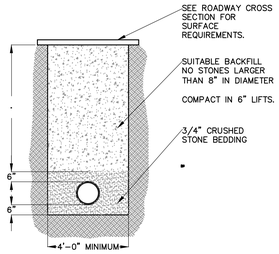


NOTE: HYDRANT SET ON FLAT STONE OR CONCRETE PAD. PLACE ½ CUBIC YARD OR PEAS STONE AROUND HYDRANT DRAIN AND COVER STONES WITH 8 MIL POLYETHYLENE.

FIRE HYDRANT DETAIL

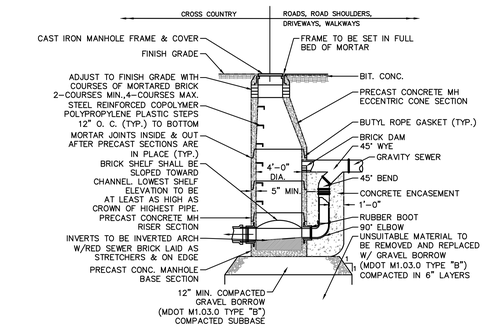
NOT TO SCALE





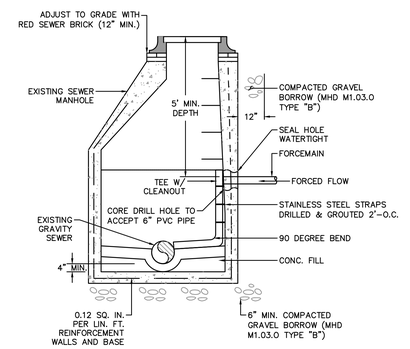
STANDARD TRENCH DETAIL FOR SEWER MAIN

NOT TO SCALE



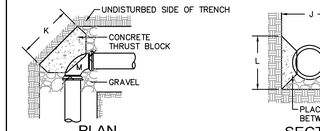
DROP SEWER MANHOLE DETAIL

NOT TO SCALE

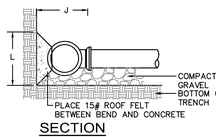


FORCE MAIN DISCHARGE DETAIL CROSS SECTION

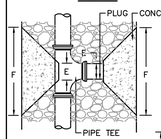
NOT TO SCALE



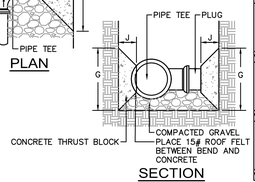
PLAN



SECTION



PLAN



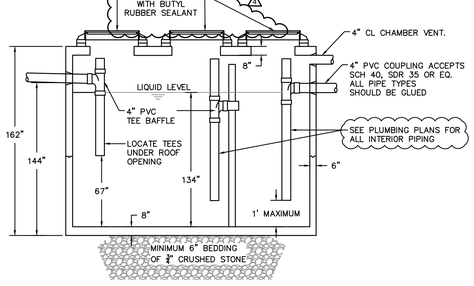
SECTION

TABLE OF DIMENSIONS FOR BLOCKS BEHIND BENDS – HORIZONTAL THRUST *

6"	J	1' 0"	1' 0"	1' 0"	1' 0"
	K	2' 0"	1' 0"	1' 0"	1' 0"
	L	2' 0"	2' 0"	1' 0"	1' 0"
	M	1' 0"	1' 0"	1' 0"	1' 0"
VOLUME (CU YD)		0.07	0.04	0.03	0.03
8"	J	1' 0"	1' 0"	1' 0"	1' 0"
	K	2' 6"	1' 6"	1' 0"	1' 0"
	L	3' 0"	2' 6"	2' 0"	1' 0"
	M	1' 0"	1' 0"	1' 0"	1' 0"
VOLUME (CU YD)		0.13	0.07	0.05	0.03
12"	J	1' 3"	1' 3"	1' 3"	1' 3"
	K	3' 6"	2' 6"	2' 0"	1' 0"
	L	3' 0"	3' 0"	2' 0"	2' 0"
	M	1' 0"	1' 0"	1' 0"	1' 0"
VOLUME (CU YD)		0.07	0.04	0.03	0.03
16"	J	1' 6"	1' 6"	1' 6"	1' 6"
	K	4' 6"	3' 0"	2' 6"	1' 6"
	L	5' 0"	4' 0"	3' 0"	2' 6"
	M	1' 3"	1' 3"	1' 3"	1' 6"
VOLUME (CU YD)		0.58	0.35	0.23	0.16

THRUST BLOCK DETAILS

NOT TO SCALE



GENERAL NOTES:

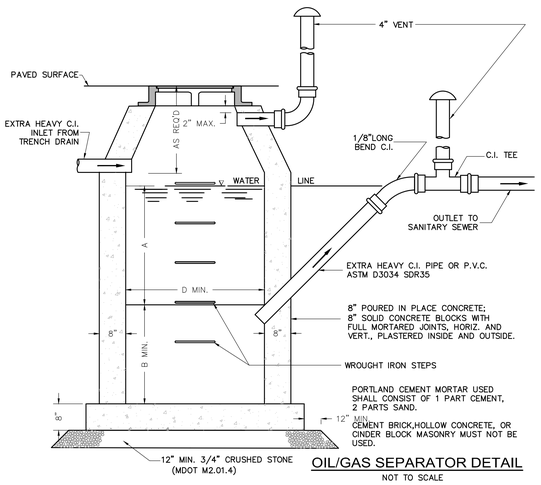
CONCRETE SPECIFICATIONS:
1. 4000 PSI @ 28 DAYS
2. 4%-6% ENTRAINED AIR
3. TANK PENETRATIONS ARE INTEGRALLY CAST
4. ALL JOINTS SEALED WITH BUTYL RUBBER JOINT SEALANT

GREASE TRAP INFORMATION:
1. TANKS SHOULD BE PUMPED AS NEEDED
2. ACCESS COVERS SHOULD HAVE RISERS TO BRING COVER ACCESS TO GRADE

CHAMBER VENT INFORMATION:
1. THE REQUIRED CHAMBER VENT SHALL BE PIPES INTO BUILDING PER 248 CNR10.16.5(e)
2. THE VENT SHALL BE OF CAST IRON, AND HAVE A MINIMUM DIAMETER OF 4"

WORCESTER STANDARD 2 COMPARTMENT GREASE INTERCEPTOR (12,000 GALLON)

NOT TO SCALE

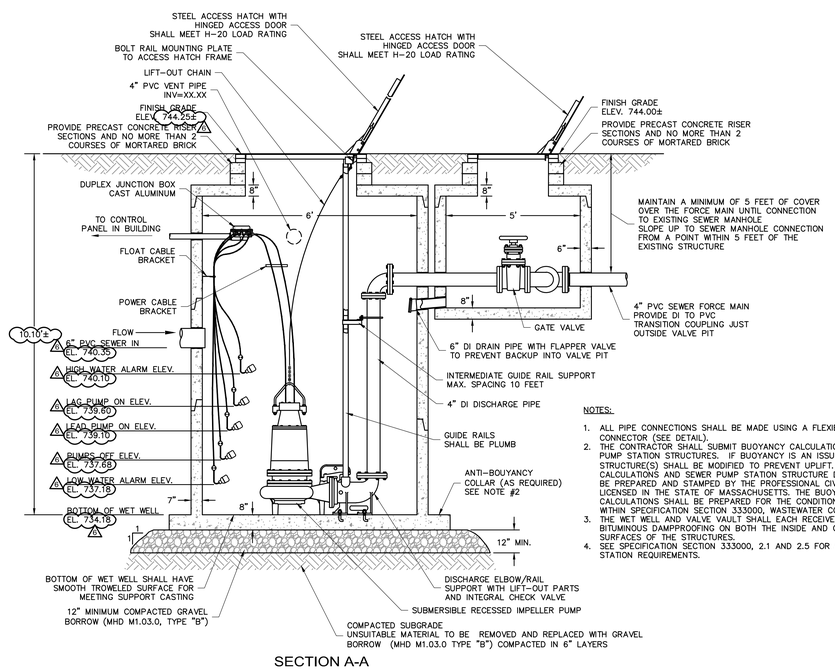


OIL/GAS SEPARATOR DETAIL

NOT TO SCALE

INLET	D	A	B	INLET	D	A	B
4"	3'-6"ø	3'-0"	2'-6"	8"	5'-0"ø	6'-0"	5'-0"
5"	3'-6"ø 5'-6" x 3'-6" 5'-6" x 3'-6" 5'-6" x 3'-6" 5'-6" x 3'-6"	5'-0" 4'-0" 3'-6" 3'-0" 3'-0"	4'-0" 3'-0" 3'-0" 2'-6" 2'-6"		5'-6" x 5'-6" 6'-0"ø 6'-0" x 6'-0" 6'-6"ø 6'-6" x 6'-6"	4'-6" 4'-0" 3'-0" 3'-0" 3'-0"	4'-0" 3'-6" 2'-6" 2'-6" 2'-6"
6"	4'-0"ø 4'-0" x 4'-0" 4'-6"ø 4'-6" x 4'-6" 5'-0"ø 5'-0" x 5'-0"	5'-0" 4'-0" 4'-0" 3'-6" 3'-6" 3'-0"	4'-6" 3'-6" 3'-6" 3'-0" 3'-0" 2'-6"	10"	5'-6"ø 6'-0" x 6'-0" 6'-0"ø 6'-6" x 6'-6"	7'-6" 5'-6" 6'-6" 5'-0"	6'-6" 4'-6" 5'-6" 4'-0"

NOTES:
1. FOR INLETS LARGER THAN 10", THE DESIGN AND DIMENSIONS WILL BE DETERMINED FOR EACH PARTICULAR CASE.
2. PRE-CAST SEPARATORS ARE TO HAVE ALL SPECIFIED HOLES EITHER CORE-BORED OR CAST-IN-PLACE.
3. SEE PLUMBING PLANS FOR ALL INTERIOR PIPING.

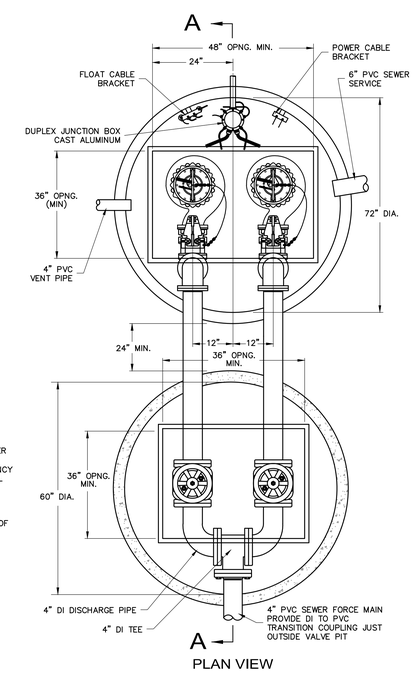


SECTION A-A

NOTES:
1. ALL PIPE CONNECTIONS SHALL BE MADE USING A FLEXIBLE RUBBER CONNECTOR (SEE DETAIL).
2. THE CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR SEWER PUMP STATION STRUCTURES. IF BUOYANCY IS AN ISSUE, THE STRUCTURE(S) SHALL BE MODIFIED TO PREVENT UPLIFT. ALL BUOYANCY CALCULATIONS AND SEWER PUMP STATION STRUCTURE DESIGNS SHALL BE PREPARED AND STAMPED BY THE PROFESSIONAL CIVIL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS. THE BUOYANCY CALCULATIONS SHALL BE PREPARED FOR THE CONDITIONS INDICATED WITHIN SPECIFICATION SECTION 333000, WASTEWATER COLLECTION.
3. THE WET WELL AND VALVE VAULT SHALL EACH RECEIVE TWO COATS OF BITUMINOUS DAMPPROOFING ON BOTH THE INSIDE AND OUTSIDE SURFACES OF THE STRUCTURES.
4. SEE SPECIFICATION SECTION 333000, 2.1 AND 2.5 FOR ALL PUMP STATION REQUIREMENTS.

SANITARY SEWER PUMP STATION DETAIL

NOT TO SCALE



PLAN VIEW

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
108 GROVE STREET, SUITE 300
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MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

CONSULTANT

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL DETAILS

Key Plan

REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/7/18

FILE: 11677cdt

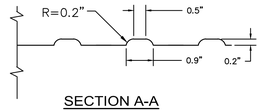
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: As Noted

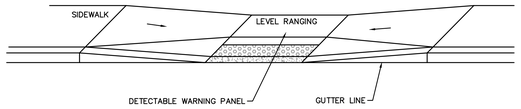
DATE: January 31, 2019

C11.4

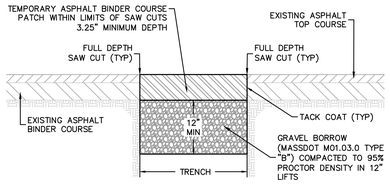
Nitsch Project #11677



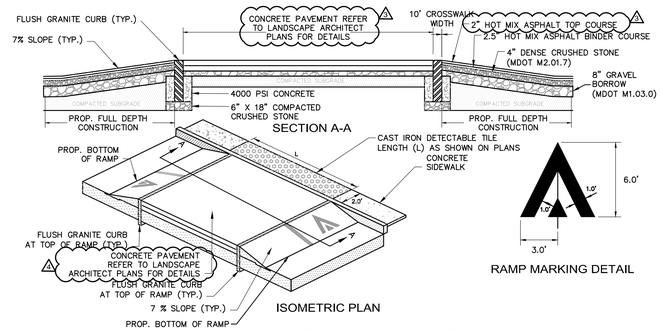
SECTION A-A



TYPICAL INSTALLATION



TEMPORARY PATCH

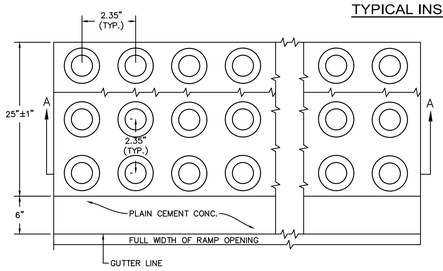


RAMP MARKING DETAIL

MID-BLOCK RAISED CROSSWALK DETAIL

NOT TO SCALE

ASPHALTIC CONCRETE PAVING DETAIL REMOVED

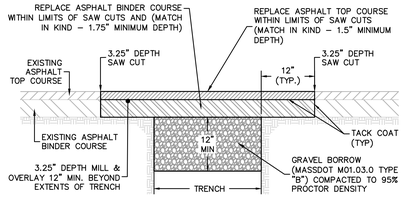


DETECTABLE WARNING PANEL FOR WHEELCHAIR RAMPS

NOT TO SCALE

NOTE:

FRAMES MAY BE CONCRETE PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL PERMANENTLY APPLIED TO THE RAMP. THERE MUST BE A MINIMUM OF 70% CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE.

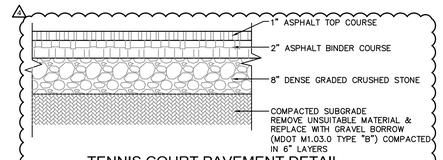


PERMANENT PATCH

NOTES:
1. ALL TRENCH REPAIRS IN CITY STREETS SHALL COMPLY WITH CITY OF WORCESTER DPW STANDARD SPECIFICATIONS.
2. A TEMPORARY PATCH SHALL BE INSTALLED WITHIN 5 DAYS (MAX.) OF COMMENCING EXCAVATIONS IN WORCESTER STREETS.
3. AFTER 90 DAYS, BUT NOT MORE THAN 120 DAYS AFTER INSTALLING THE TEMPORARY PATCH, A PERMANENT PAVEMENT REPAIR PATCH SHALL BE INSTALLED TO A MIN. 8' WIDTH.
4. WHEN TWO TRENCHES ARE LESS THAN 20 FEET APART, MILL AND OVERLAY ALL PAVEMENT BETWEEN TRENCHES.
5. IN WORCESTER STREETS, IF EXISTING PAVEMENT IS LESS THAN 5 YEARS OLD, FLOWABLE FILL SHALL BE USED FOR ALL BACKFILL, AND THE FINISHED PAVEMENT SHALL BE INFRARED TREATED PER DPW STANDARDS.

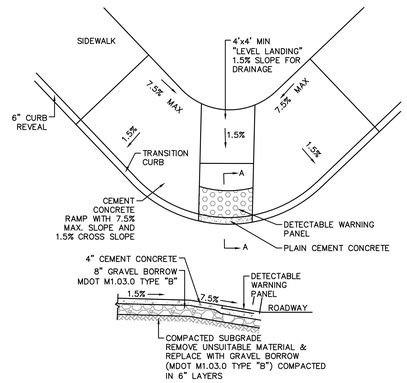
PAVEMENT RESTORATION OVER TRENCH DETAIL (WITHIN PUBLIC RIGHT OF WAY)

NOT TO SCALE



TENNIS COURT PAVEMENT DETAIL

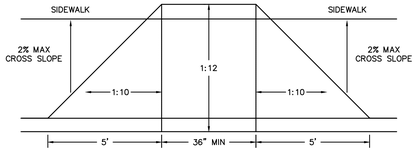
NOT TO SCALE



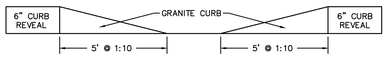
SECTION A-A

PEDESTRIAN RAMP (D) DETAIL

NOT TO SCALE



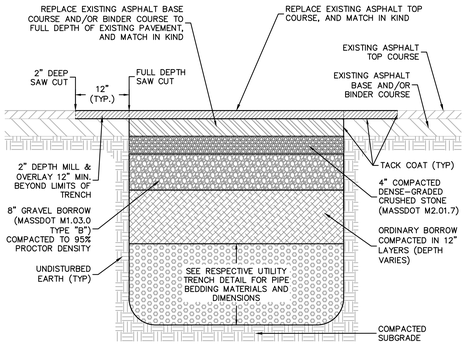
CURB CUT WITH FLARED SIDES



ELEVATION @ CURB LINE

PEDESTRIAN RAMP (E) DETAIL

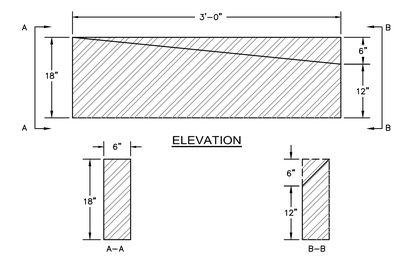
NOT TO SCALE



NOTES:
1. IF TWO PARALLEL TRENCHES ARE LESS THAN 20 FEET APART, THEN ALL PAVEMENT BETWEEN TRENCHES SHALL BE MILLED & OVERLAYED TO A TWO INCH DEPTH.
2. IN PUBLIC STREETS, IF EXISTING PAVEMENT IS LESS THAN 5 YEARS OLD, THEN FLOWABLE FILL SHALL BE USED FOR ALL TRENCH BACKFILL, AND THE FINISHED PAVEMENT SHALL BE INFRARED TREATED IN ACCORDANCE WITH DPW STANDARDS.

PAVEMENT RESTORATION OVER TRENCH DETAIL

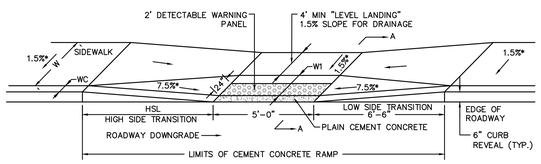
NOT TO SCALE



GRANITE TRANSITION CURB DETAIL VERTICAL TO SLOPE

NOT TO SCALE

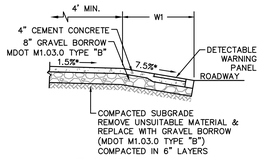
A DERIVATIVE OF MDOT 106.4.0



ROADWAY PROFILE GRADE	HIGH SIDE TRANSITION LENGTH
ROADWAY PROFILE GRADE %	HIGH SIDE TRANSITION LENGTH (FEET)
0	6'–6"
0–1	7'–8"
1–2	9'–0"
2–3	11'–0"
3–4	14'–0"
>4	15' (MAX.)

NOTE–BASED ON A DESIGN SLOPE OF 7.5% & A REVEAL OF 6"

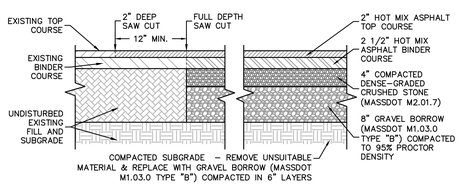
LEGEND
HSL = HIGH SIDE TRANSITION LENGTH (VARIES–SEE CHART)
W = SIDEWALK WIDTH (USABLE WIDTH)
W1 = PERPENDICULAR RAMP LENGTH (W–4')
Wc = CURB WIDTH (VARIES 0"–6")
* = TOLERANCE FOR CONSTRUCTION (±0.5%)



SECTION A-A

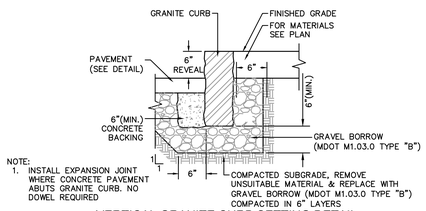
PEDESTRIAN RAMP (C) DETAIL (6'-0" TO 12'-6" WIDE)

NOT TO SCALE



HOT MIX ASPHALT PAVING (TWO COURSES) DETAIL

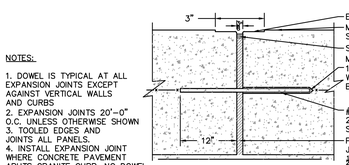
NOT TO SCALE



NOTE:
1. INSTALL EXPANSION JOINT WHERE CONCRETE PAVEMENT ABUTS GRANITE CURB. NO DOWEL REQUIRED

VERTICAL GRANITE CURB SETTING DETAIL

NOT TO SCALE

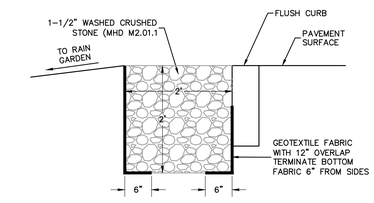


NOTES:

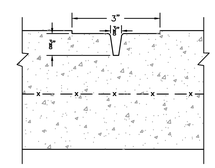
1. DOWEL IS TYPICAL AT ALL EXPANSION JOINTS EXCEPT AGAINST VERTICAL WALLS AND CURBS
2. EXPANSION JOINTS 20'–0" O.C. UNLESS OTHERWISE SHOWN
3. TOOLED EDGES AND JOINTS ALL PANELS.
4. INSTALL EXPANSION JOINT WHERE CONCRETE PAVEMENT ABUTS GRANITE CURB. NO DOWEL REQUIRED.

EXPANSION JOINT DETAIL

NOT TO SCALE



SECTION B-B

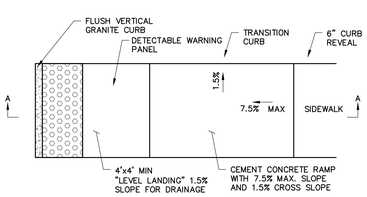


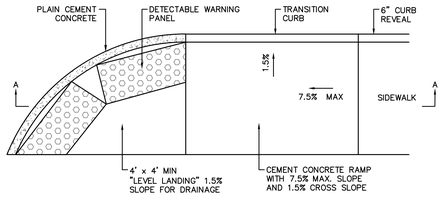
NOTES:

1. CONTROL JOINTS 5' O.C. UNLESS SHOWN OTHERWISE (6' MAX).
2. TOOLED EDGES AND JOINTS ALL PANELS.
3. TOOL CONTROL JOINT TO DIMENSIONS SHOWN WITH 1–1/2" EDGER.

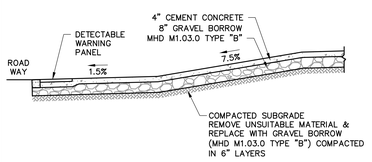
CONTROL JOINT DETAIL

NOT TO SCALE





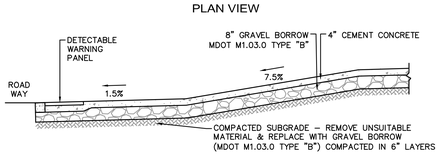
PLAN VIEW



SECTION A-A

PEDESTRIAN RAMP (A) DETAIL

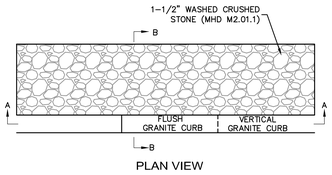
NOT TO SCALE



SECTION A-A

PEDESTRIAN RAMP(B) DETAIL

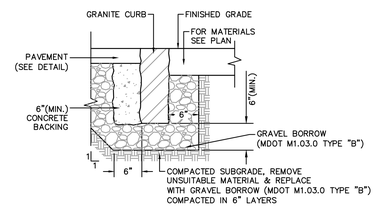
NOT TO SCALE



PLAN VIEW

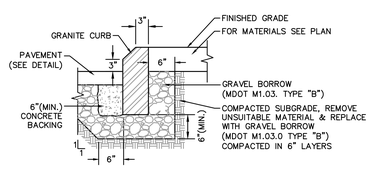
CURB BREAK DETAIL FOR VERTICAL GRANITE CURB

NOT TO SCALE



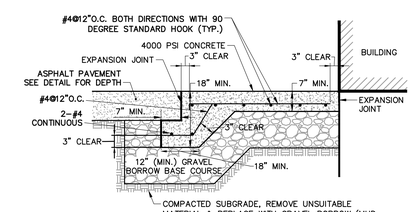
FLUSH CONCRETE CURB SETTING DETAIL

NOT TO SCALE



MOUNTABLE GRANITE CURB SETTING DETAIL

NOT TO SCALE



NOTES:
1. CONTRACTOR SHALL INSTALL AN EXPANSION JOINT AT COLUMNS, WALLS, ASPHALT PAVEMENT, AND AS SHOWN ON THE DRAWINGS.
2. SLOPE PAVEMENT AS SHOWN ON GRADING PLANS.
3. CONTRACTOR SHALL INSTALL CONTROL JOINTS AT THE LOCATIONS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PAVEMENT

NOT TO SCALE

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
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WORCESTER, MASSACHUSETTS 01605
MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

CONSULTANT

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

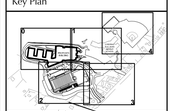
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL DETAILS

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cdt

DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: As Noted

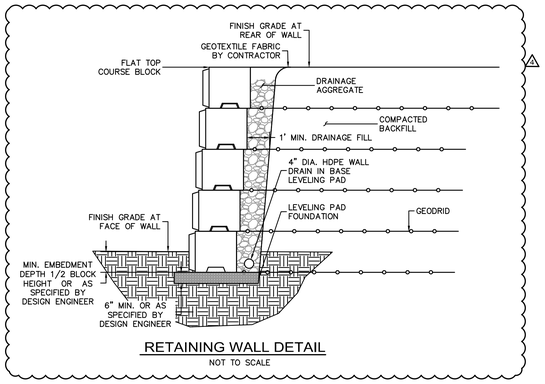
DATE: January 31, 2019

C11.5

Nitsch Project #11677

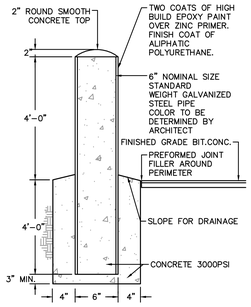
ACCESSIBLE PARKING STENCIL DETAIL

NOT TO SCALE



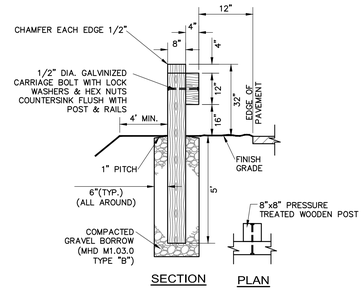
RETAINING WALL DETAIL

NOT TO SCALE



BOLLARD DETAIL

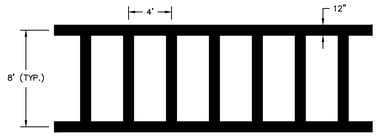
NOT TO SCALE



NOTES:
1. ALL WOOD SHALL BE SELECT STRUCTURAL GRADE SOUTHERN YELLOW PINE OR DOUGLAS FIR, S – 4 – S.
2. ALL WOOD SHALL BE FULL CELL PROCESS PRESSURE TREATED IN ACCORDANCE AWPB – LP33.
3. SPACE POSTS 7'–9" O.C. MAXIMUM.
4. RAIL ENDS SHALL BE BURIED OR HAVE A TERMINAL SECTION.
5. GUARD RAIL AND POST SHALL COMPLY WITH MHD STANDARD SPECIFICATIONS M8.07.0.
6. THE CONTRACTOR SHALL COORDINATE THE SITE LIGHT POST LOCATIONS WITH THE GUARD RAIL POSTS AND RAILS.

TIMBER GUARD RAIL

NOT TO SCALE

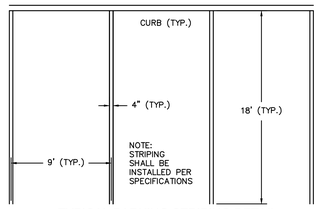


NOTES:

1. ALL 12–INCH CROSSWALK LINES SHALL BE APPLIED IN ONE APPLICATION. NO COMBINATION OF LINES (I.E. TWO 6–INCH LINES) WILL BE ACCEPTED.

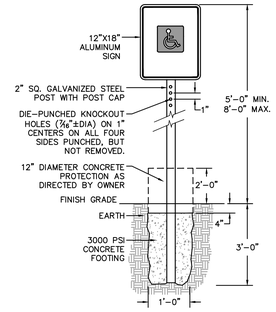
CROSSWALK DETAIL

NOT TO SCALE



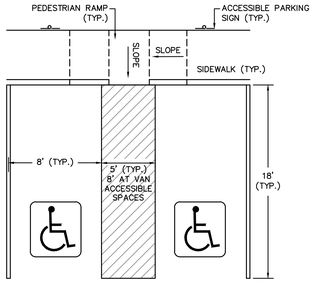
TYPICAL PARKING STRIPING DETAIL

NOT TO SCALE



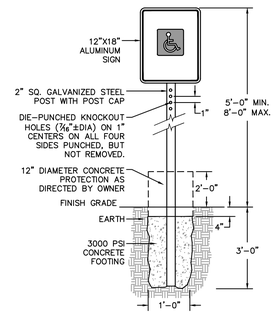
HANDICAPPED PARKING SIGNAGE DETAIL

NOT TO SCALE



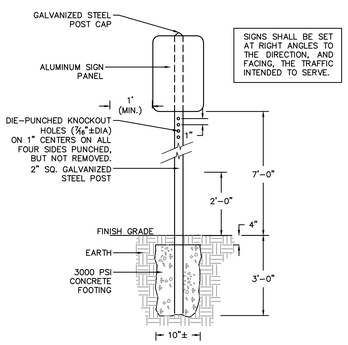
ACCESSIBLE PARKING DETAIL

NOT TO SCALE



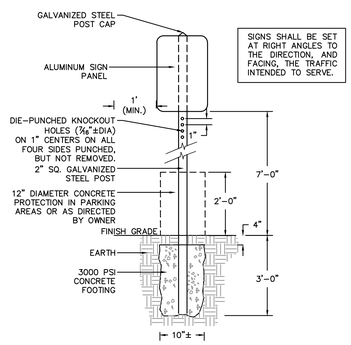
HANDICAPPED PARKING SIGNAGE WITH CONCRETE PROTECTION DETAIL

NOT TO SCALE



SIGN POST SETTING DETAIL

NOT TO SCALE
(SIGN PANEL UNDER 10 SF IN AREA)



SIGN POST SETTING WITH CONCRETE PROTECTION DETAIL

NOT TO SCALE
(SIGN PANEL UNDER 10 SF IN AREA)

TRAFFIC SIGN SUMMARY

IDENTIFI–CATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in.)			NUMBER OF SIGNS REQUIRED	COLOR			MOUNTING SETTING
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK–GROUND	LEGEND	BORDER	
R1–1	24"	24"	STOP	SEE MUTCD STANDARDS	SEE MUTCD STANDARDS	SEE MUTCD STANDARDS	9	SEE MUTCD STANDARDS	SEE MUTCD STANDARDS	SEE MUTCD STANDARDS	POST
R3–1	24"	24"					NA				POST
R3–2	24"	24"					1				POST
R4–7	24"	30"					3				POST
R5–1	24"	24"	DO NOT ENTER				6				POST
R6–1R	36"	12"	ONE WAY				2				POST
R6–1L	36"	12"	ONE WAY				3				POST
R7–8	12"	18"	RESERVED PARKING				15				POST
R7–8A	18"	9"	VAN ACCESSIBLE				8				POST
R5–11	30"	24"	AUTHORIZED VEHICLES ONLY				11				POST
S5–1	24"	48"	SCHOOL (S4–3P) SLOW 20 (R2–1) WHEN FLASHING (S4–4P)				NA				POST
S5–2	24"	30"	END SCHOOL ZONE				NA				POST
W11–2	30"	30"					4				POST
W16–7P	12"	24"					4				POST
R13–1	12"	18"	26 MPH FINES DOUBLE IN THIS WORK ZONE WHEN FLASHING				13				POST
SP–1	12"	18"	DROP–OFF ONLY PICK–UP ONLY				2				POST
SP–2	12"	18"	RESERVED PARKING CARPOOL ONLY VANPOOL ONLY				13				POST
SP–3	12"	18"	ELECTRIC VEHICLES PARKING ONLY				5				POST
SP–4	30"	24"	CONTINUE STRAIGHT FOR STUDENT PICK–UP AND DROP–OFF				1				POST

NOTES:

1. PAVEMENT MARKINGS SHALL MEET THE REQUIREMENTS OF STANDARD PAVEMENT MARKINGS FROM THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION (MUTCD).
2. PROPOSED PAVEMENT MARKINGS SHALL BE PAINT PER SPECIFICATIONS.
3. PROPOSED SIGN POSTS SHALL BE POST TYPE (TELESCOPIC POST).
4. SIGNS SHALL BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
5. SIGNS TO BE MOUNTED NEAR THE CURB LINE SHALL BE SET BACK 12" FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
6. SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISH GRADE UNLESS OTHERWISE INDICATED.
7. SEE LANDSCAPE PLANS FOR LEED SIGNAGE.
8. FINAL LOCATION OF SIGNS TO BE COORDINATED WITH THE OWNER.
9. AUTHORIZED PARKING SIGNS SHALL INDICATE 5 SPACES FOR ADMINISTRATORS, 3 SPACES FOR CUSTODIANS, 2 GUEST PARKING SPACES, AND 1 PARKING SPACE FOR THE NURSE.

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Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

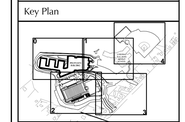
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL DETAILS

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
2	SEBP #1-RFI #1	8/15/18
3	ESBP #2-Addendum #2	9/11/18
4	ESBP #2-Addendum #3	9/19/18
5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cdt

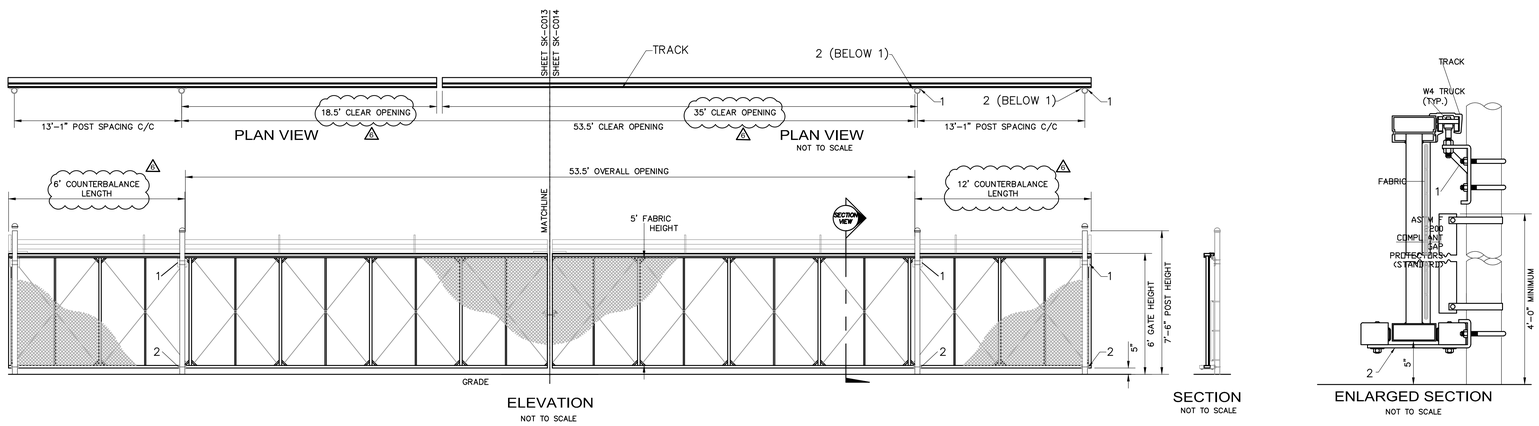
DWN. BY: ER | JOB NO: #1611

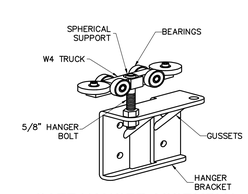
CKD. BY: JEG | SCALE: As Noted

DATE: January 31, 2019

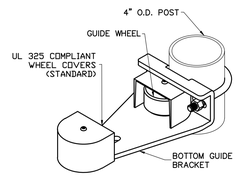
C11.6

Nitsch Project #11677

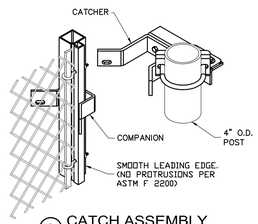




1 GATE HANGER ASSEMBLY
NOT TO SCALE



2 BOTTOM GUIDE
NOT TO SCALE



3 CATCH ASSEMBLY
NOT TO SCALE

MOTORIZED HEAVY DUTY CANTILEVER SLIDE GATE

NOTES:
1. CONTRACTOR SHALL PROVIDE SLIDING GATE MOTOR AS PER MANUFACTURER RECOMMENDATIONS.
2. ALL FITTINGS PROVIDED FOR 4" O.D. POSTS.

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FINAL BID PACKAGE

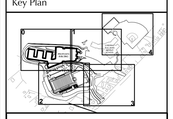
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

CIVIL DETAILS

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1-Addendum #1	5/01/18
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5	ESBP #2-Addendum #4	9/19/18
6	ESBP #2-ASI #1-10	1/31/19
7	ESBP #3-Addendum #5	12/27/18

FILE: 11677cdt

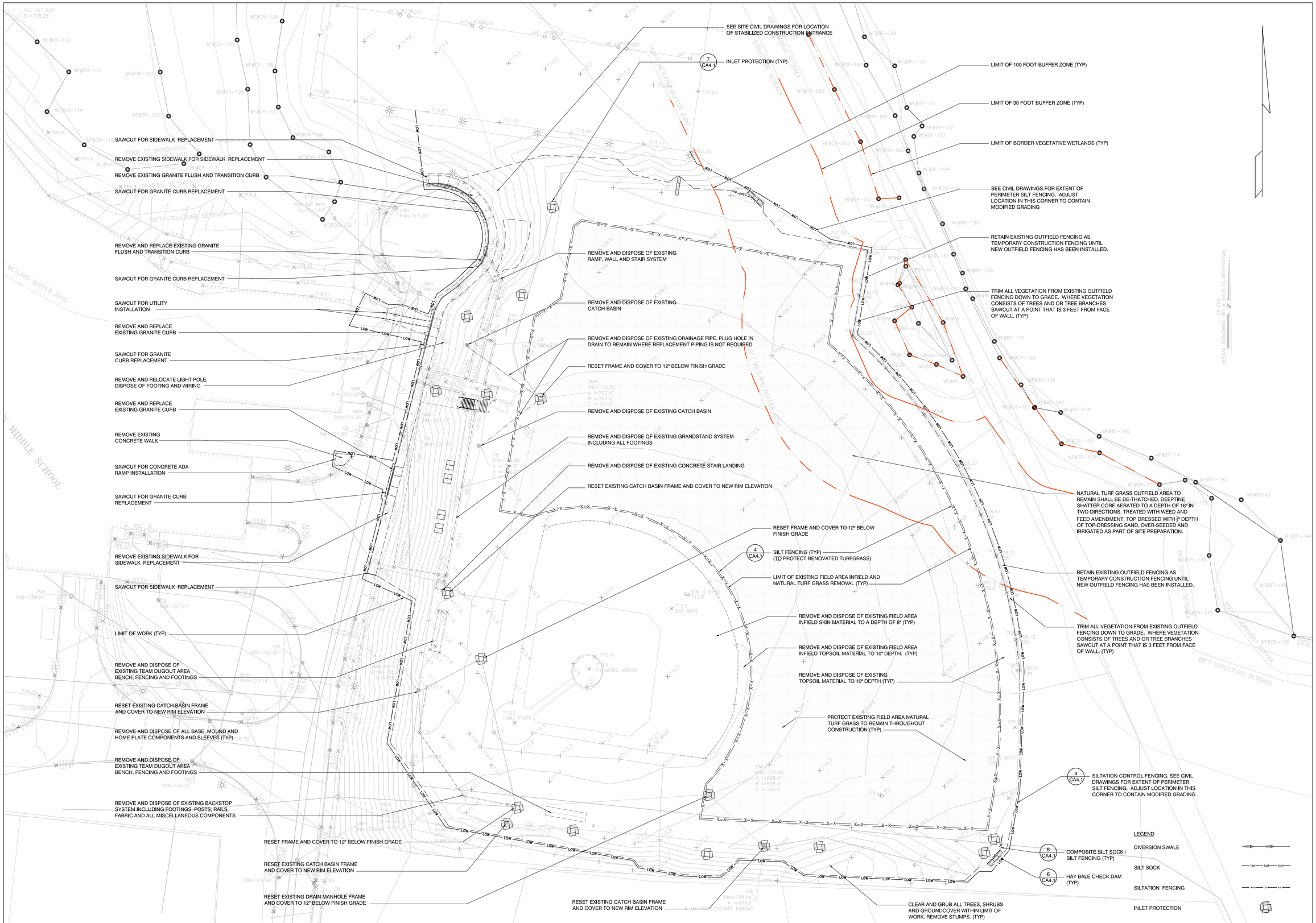
DWN. BY: ER | JOB NO: #1611

CKD. BY: JEG | SCALE: As Noted

DATE: January 31, 2019

C11.7

Nitsch Project #11677



NOTES:

1. THE BACKGROUND EXISTING CONDITIONS SURVEY DEPICTED HERE IN AN INSTRUMENT OF SERVICE OF NITSCH ENGINEERING. IT IS ISSUED TO JJA SPORTS, LLC AND AMOUREUX PAGANO ASSOCIATES FOR PURPOSES RELATED DIRECTLY AND SOLELY TO NITSCH ENGINEERING'S SCOPE OF SERVICES UNDER CONTRACT WITH LAMOUREUX PAGANO ASSOCIATES FOR SOUTH HIGH COMMUNITY SCHOOL. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT AND PROJECT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN AUTHORIZATION IS GIVEN THEREFOR BY NITSCH ENGINEERING.
2. THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING CONDITIONS AS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY WHICH OCCURRED MAY AND AUGUST 2017. ADDITIONAL FIELD SURVEY LOCATIONS WERE OBTAINED IN FEBRUARY 2018 NEAR THE SULLIVAN MIDDLE SCHOOL AND LOWER FIELD.
3. THE HORIZONTAL DATUM SHOWN HEREON REFERENCES THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, NAD83(2011) EPOCH 2010.0. ESTABLISHED USING RTK-GPS.
4. THE VERTICAL DATUM SHOWN HEREON REFERENCES NAVD88, GEOID 12B. SUBTRACT 0.15' TO WORCESTER CITY BASE.
5. PLEASE NOTE THIS PLAN REPRESENTS A COMPILATION OF CONTOUR DATA OBTAINED FROM ON THE GROUND FIELD SURVEYS AND DATA OBTAINED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) LIDAR DATA (CONTOUR DATA). THIS DATA SET IS FROM THE MAINE AND MA 2015 QL1 AND QL2 LIDAR WITH AN ESTIMATED VERTICAL ACCURACY OF SIX-TENTHS OF A FOOT.
6. THE INFORMATION CONTAINED ON THE DISK OR ELECTRONIC DRAWING FILE ACCOMPANYING THIS PLAN MUST BE COMPARED TO THE SEALED AND SIGNED HARD COPY OF THE PLAN TO ENSURE THE ACCURACY OF ALL INFORMATION AND TO ENSURE NO CHANGES, ALTERATIONS, OR MODIFICATIONS HAVE BEEN MADE. RELIANCE SHALL NOT BE MADE ON A DOCUMENT TRANSMITTED BY COMPUTER OR OTHER ELECTRONIC MEANS UNLESS FIRST COMPARED TO THE ORIGINAL SEALED DOCUMENT ISSUED AT THE TIME OF THE SURVEY. DUE TO THE CRITICAL NATURE OF SURVEYING, DATA ACQUISITION, AND AUTOCAD PLAN DEVELOPMENT, IF CRITICAL DIMENSIONAL INFORMATION IS NEEDED AND IS NOT SPECIFICALLY SHOWN ON THE ELECTRONIC DRAWING FILE, PLEASE CONTACT NITSCH ENGINEERING.
7. THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH AND MAY NOT DISCLOSE ANY MATTERS THAT MAY BE REVEALED BY ONE.
8. THIS PLAN DOES NOT SHOW UNWRITTEN OR UNRECORDED EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT AND VISIBLE USES OF THE LAND. THIS PLAN DOES NOT GUARANTEE THAT NO SUCH EASEMENTS EXIST.
9. LEGAL STATUS OF EASEMENTS, WAYS AND RESTRICTIONS NOT DETERMINED BY THIS SURVEY.
10. TITLE TO LAND IN THE ABUTTING WAYS IS NOT SHOWN AND HAS NOT BEEN DETERMINED AS A RESULT OF THIS SURVEY.
11. THE SUB-SURFACE UTILITY INFORMATION SHOWN HEREON RECORD INFORMATION AS SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES, AND PLAN INFORMATION SUPPLIED BY THE CLIENT. IF ANY, THEREFORE WE CANNOT GUARANTEE THE ACCURACY OF SAID COMPILED SUB-SURFACE INFORMATION TO ANY CERTAIN DEGREE OF STATED TOLERANCE. ONLY PHYSICALLY LOCATED SUB-SURFACE UTILITY FEATURES FALL WITHIN NORMAL STANDARD OF CARE ACCURACIES.
12. THE LOCATIONS OF UNDERGROUND PIPES, CONDUITS, AND STRUCTURES HAVE BEEN DETERMINED FROM SAID INFORMATION, VISIBLY OBSERVED AND LOCATED, CAN VARY FROM THEIR ACTUAL LOCATIONS.
13. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED.
14. THE STATUS OF UTILITIES, WHETHER ACTIVE, ABANDONED, OR REMOVED, IS AN UNKNOWN CONDITION AS FAR AS OUR COMPILATION OF THIS INFORMATION.
15. IT IS INCUMBENT UPON INDIVIDUALS USING THIS INFORMATION TO UNDERSTAND THAT COMPILING UTILITY INFORMATION IS NOT EXACT, AND IS SUBJECT TO CHANGE BASED UPON VARYING PLAN INFORMATION RECEIVED AND ACTUAL LOCATIONS.
16. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS, THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER MATTERS.
17. THE PROPER UTILITY ENGINEERING/COMPANY SHOULD BE CONSULTED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHOULD BE VERIFIED IN THE FIELD (V.I.F.) BEFORE PLANNING FUTURE CONNECTIONS. CONTACT THE DIG SAFE CALL CENTER AT 1-888-344-7233, SEVENTY-TWO HOURS PRIOR TO EXCAVATION, BLASTING, GRADING, AND/OR PAVING.
18. AS OF THE DATE OF THIS PLAN RECORD INFORMATION HAS NOT BEEN RECEIVED BY NITSCH ENGINEERING FOR THE FOLLOWING UTILITIES:
19. THE CONTRACTOR IS RESPONSIBLE TO FULLY FAMILIARIZE THEMSELVES WITH THE SITE AND ITS CONDITIONS PRIOR TO THEIR SUBMITTAL OF A BID. WHERE LIMITED SITE PLAN DATA EXISTS THE CONTRACTOR SHALL ESTIMATE THE EXTENT OF UNDERGROUND STRUCTURES, DRAINAGE AND UTILITIES AND INCLUDE ALL NECESSARY REMOVAL, SALVAGING, STOCKPILING AND DISPOSAL COST WITHIN THEIR BID.
20. THE CONTRACTOR SHALL CONTACT DIGSAFE AND OBTAIN A DIGSAFE NUMBER PRIOR TO ANY SITE ACTIVITIES.
21. THE CONTRACTOR SHALL INCLUDE THE EXPENSE OF A PRIVATE UNDERGROUND UTILITY LOCATION SERVICES TO IDENTIFY AND MARK THE LOCATIONS OF UNDERGROUND UTILITIES.
22. THE CONTRACTOR SHALL SECURE THE SITE AT ALL TIMES.
23. THE CONTRACTOR SHALL UTILIZE THE PROVIDED GEOTECHNICAL DATA TO DETERMINE THE LAYER OF TOPSOIL WHICH SHALL BE REMOVED AS PART OF SITE PREPARATION.
24. THE CONTRACTOR SHALL REMOVE TOPSOIL AND SUBSOILS TO THE GRANULAR PARENT SOIL LEVEL IN AREAS OF THE FIELD TO RECEIVE FULL DEPTH RECONSTRUCTION AND ALL AREAS OUTSIDE OF THE FIELD AREA AND WITHIN THE LIMIT OF WORK LINE.
25. EXCAVATED TOPSOIL SHALL BE TESTED FOR THE PRESENCE OF CONTAMINATION AS DEFINED IN 310 CMR 40 MASSACHUSETTS CONTINGENCY PLAN. MATERIAL EXCEEDING THRESHOLDS FOR CONTAMINATION SHALL BE HANDLED IN ACCORDANCE WITH APPLICABLE REGULATIONS AND REQUIREMENTS.
26. TOPSOIL REMOVED FROM WOODED AREA SHALL NOT BE USED IN THE NEW WORK. IT SHALL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.
27. THE CONTRACTOR SHALL NOTIFY THE THE CITY OF WORCESTER DEPARTMENT OF NATURAL RESOURCES PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORK.
28. CONSTRUCTION FENCING SHALL BE DRIVEN CHAIN LINK FENCING SIX FEET IN INSTALLED HEIGHT AT ALL LOCATIONS WHERE NATURAL SOIL EXISTS. AT PAVEMENT OR COMPACTED AGGREGATE BASE LOCATIONS CONSTRUCTION FENCING SHALL BE BASED BASE TYPE FENCING PREVENT OVERTURNING IN HEAVY WINDS. CONSTRUCTION FENCING SHALL BE SCREENED USING 70% OPAQUE SCREENING FOR DUST CONTROL ONTO ADJACENT AREAS.
29. PROTECT EXISTING UTILITY SYSTEMS.
30. THE INSTALLATION AND MAINTENANCE OF SOIL STOCKPILE AREAS DEPICTED IN THE DETAILS ARE THE RESPONSIBILITY OF THE CONTRACTOR, AS PART OF THEIR RESPONSIBILITY TO MAINTAIN SEDIMENTATION AND EROSION CONTROL ON SITE THROUGHOUT THE PROJECT.

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Worcester Public Schools

Worcester, MA

Project North

PROJECT

Final Bid Package

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Demolition and Erosion Control Plan

Key Plan

REVISIONS

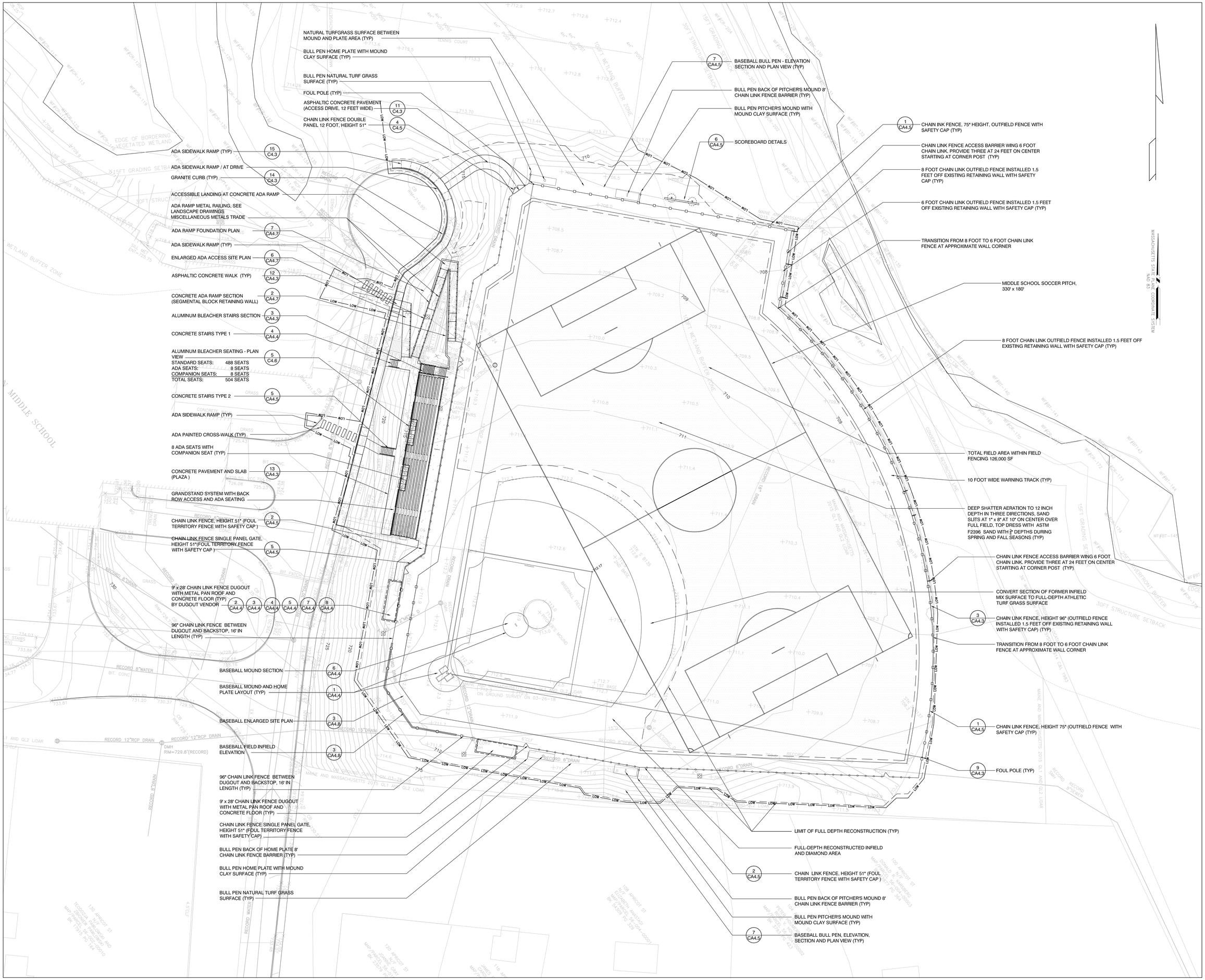
No.	Description	Date

FILE: Final CDs CA1.1 01-31-19

DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: 1" = 20'

DATE: January 31, 2019

CA1.1



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Worcester, MA

Project North

PROJECT

Final Bid Package

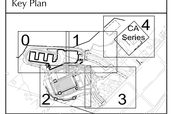
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Materials Plan

Key Plan



REVISIONS

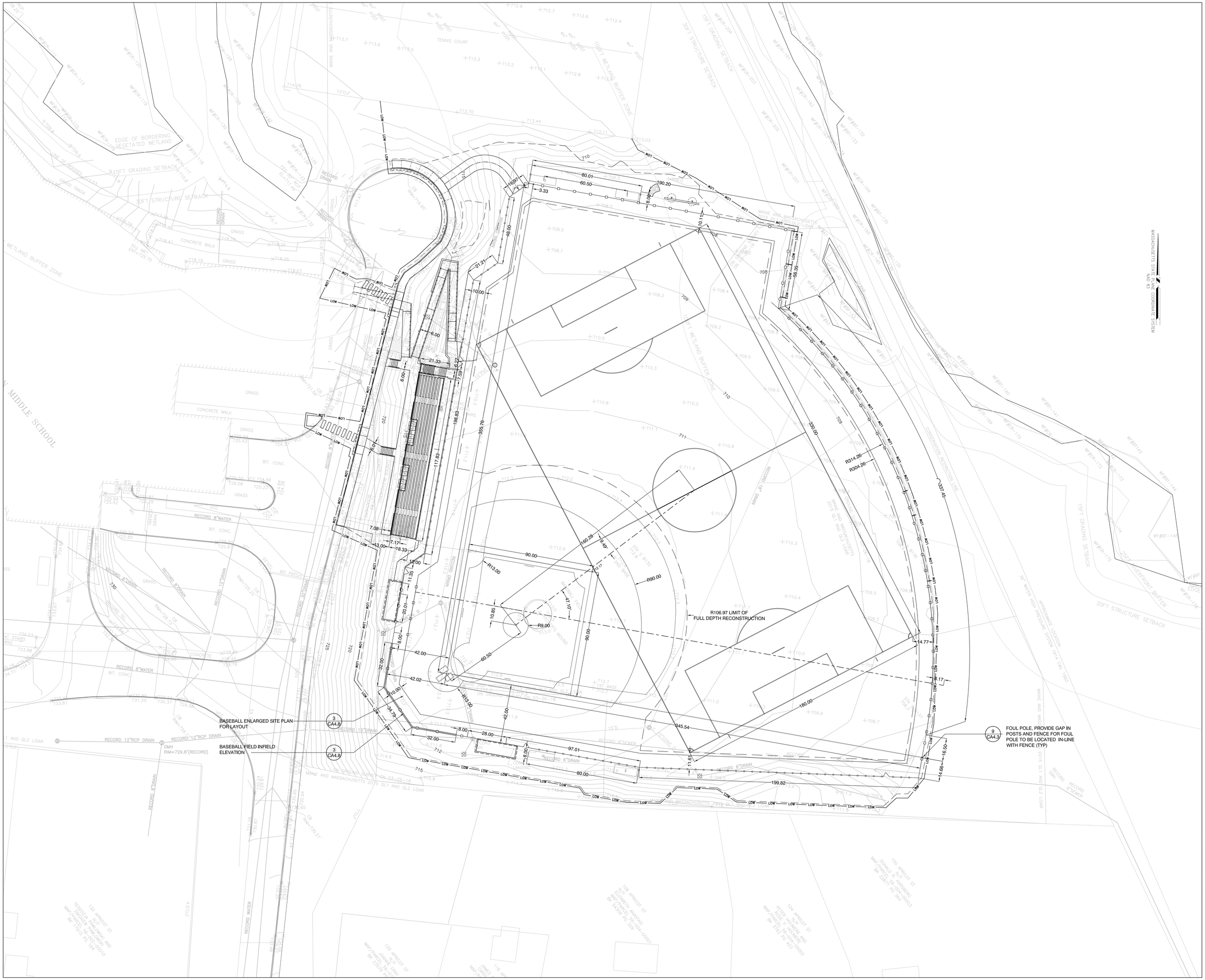
No.	Description	Date

FILE: Final CDs CA2.1 01-31-19

DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: 1" = 20'

DATE: January 31, 2019

CA2.1



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PROJECT

Final Bid Package

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Layout Plan

Key Plan

REVISIONS

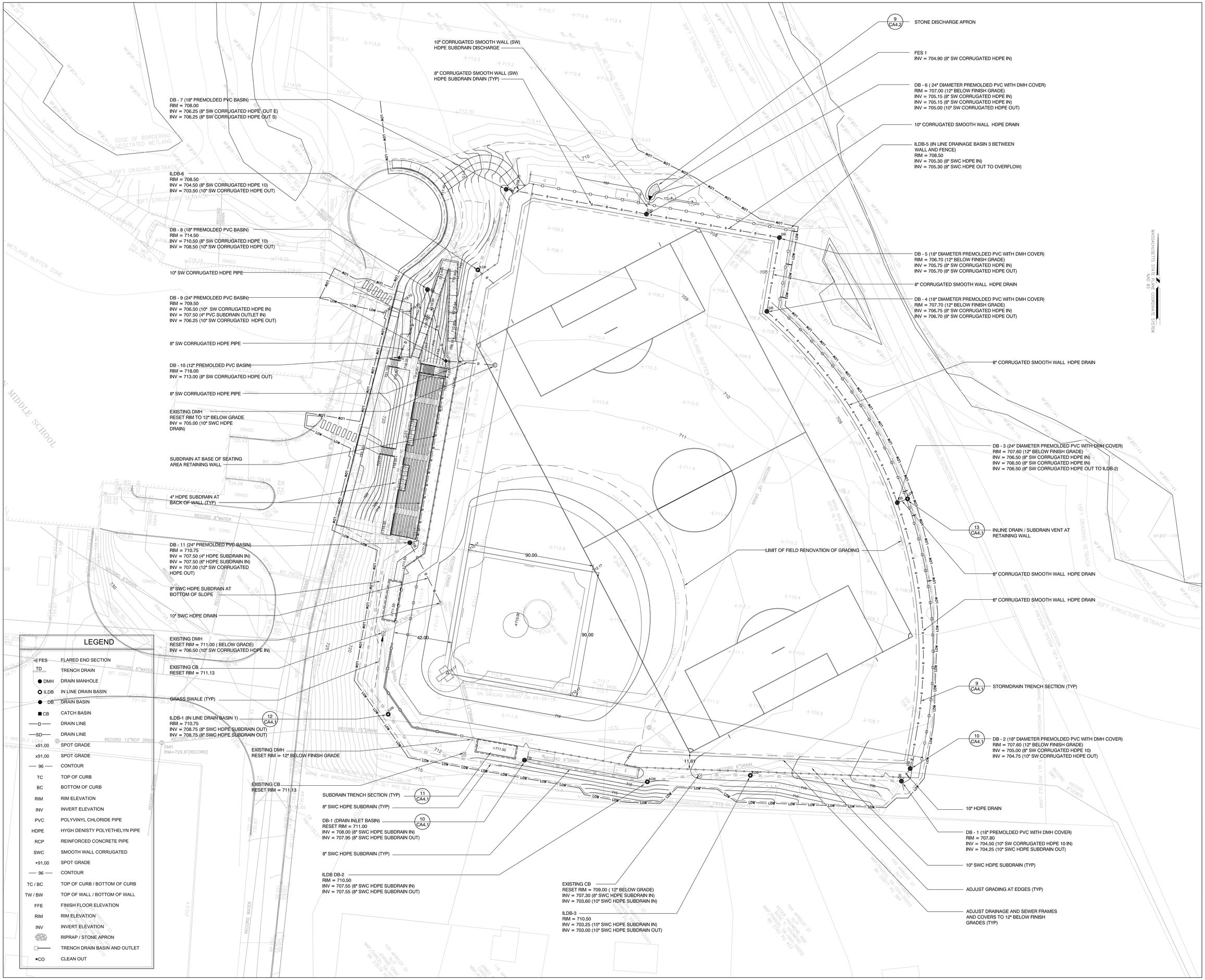
No.	Description	Date

FILE: Final CDs CA2.2 01-31-19

DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: 1" = 20'

DATE: January 31, 2019

CA2.2



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PROJECT

Final Bid Package

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Grading and Drainage Plan

Key Plan

REVISIONS

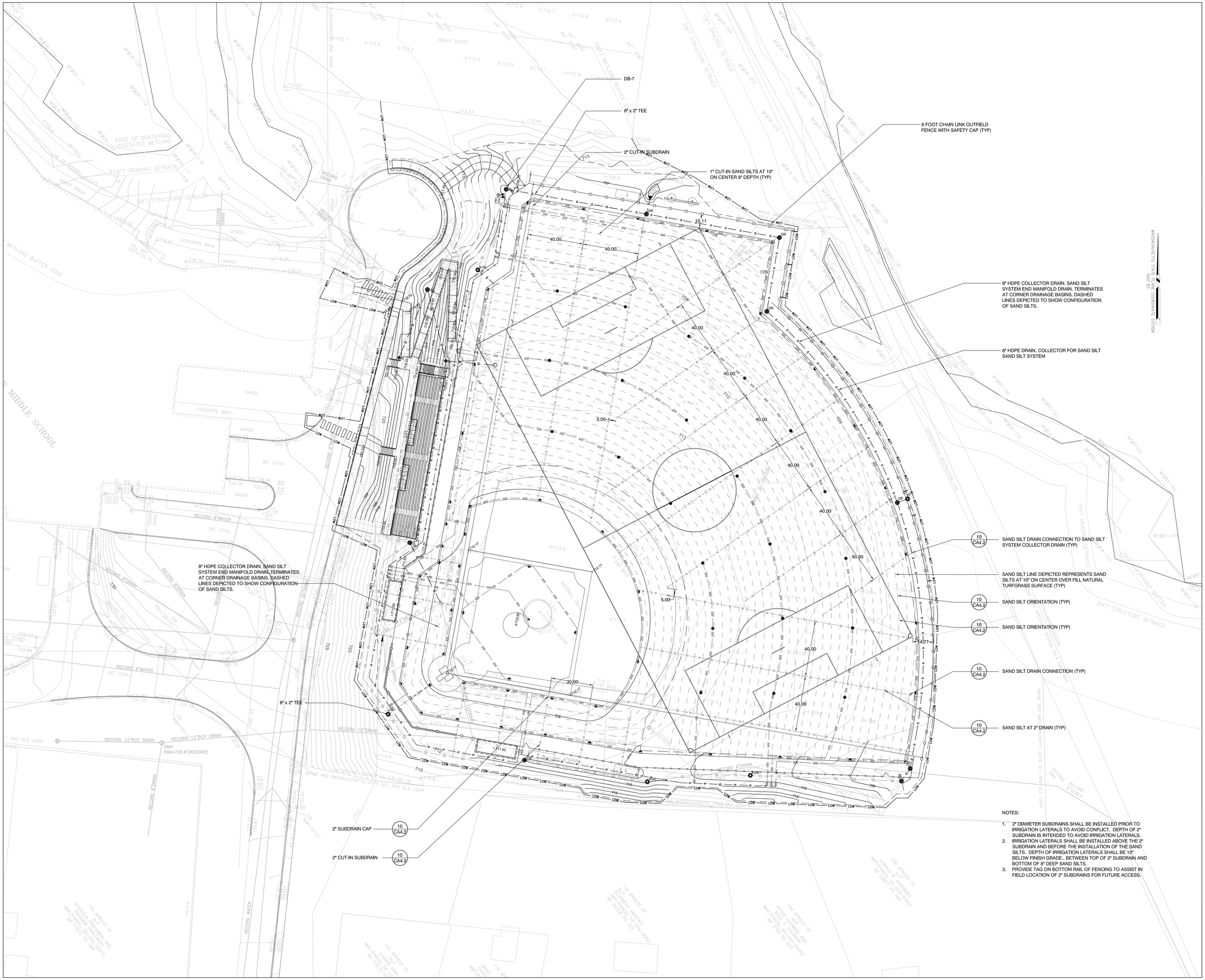
No.	Description	Date

FILE: Final CDs CA3.1 01-31-19

DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: 1" = 20'

DATE: January 31, 2019

CA3.1



NOTES:

1. 2" DIAMETER SUBDRAINS SHALL BE INSTALLED PRIOR TO IRRIGATION LATERALS TO AVOID CONFLICT. DEPTH OF 2" SUBDRAIN IS INTENDED TO AVOID IRRIGATION LATERALS.
2. IRRIGATION LATERALS SHALL BE INSTALLED ABOVE THE 2" SUBDRAIN AND BEFORE THE INSTALLATION OF THE SAND SILTS. DEPTH OF IRRIGATION LATERALS SHALL BE 12" BELOW FINISH GRADE., BETWEEN TOP OF 2" SUBDRAIN AND BOTTOM OF 8" DEEP SAND SILTS.
3. PROVIDE TAG ON BOTTOM RAIL OF FENCING TO ASSIST IN FIELD LOCATION OF 2" SUBDRAINS FOR FUTURE ACCESS.

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PROJECT

Final Bid Package

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Natural Turf Drainage Plan

Key Plan

CA-4 Series

REVISIONS

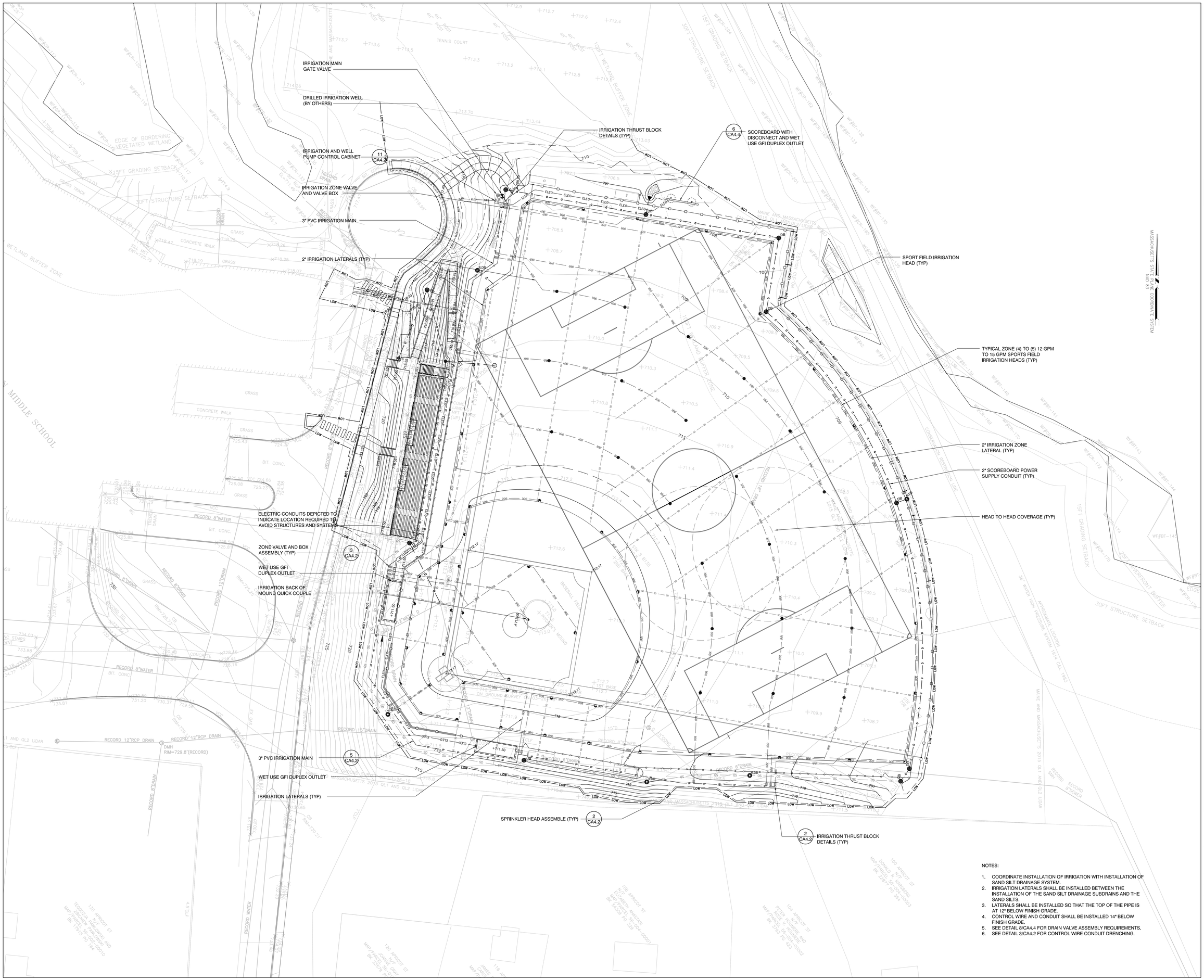
No.	Description	Date

FILE: Final CDs CA3.2 01-31-19

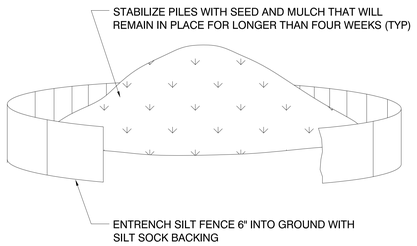
DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: 1" = 20'

DATE: January 31, 2019

CA3.2

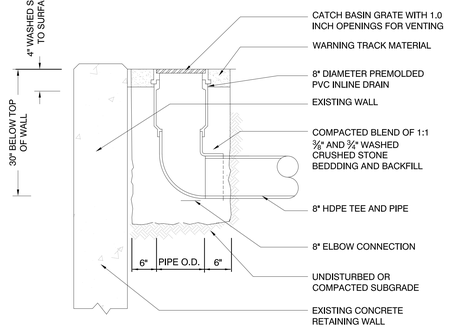

IRRIGATION MAIN GATE VALVE
DRILLED IRRIGATION WELL (BY OTHERS)
IRRIGATION AND WELL PUMP CONTROL CABINET
11 CA4.2
IRRIGATION ZONE VALVE AND VALVE BOX
3" PVC IRRIGATION MAIN
2" IRRIGATION LATERALS (TYP)
IRRIGATION THRUST BLOCK DETAILS (TYP)
6 CA4.4
SCOREBOARD WITH DISCONNECT AND WET USE GFI DUPLEX OUTLET
SPORT FIELD IRRIGATION HEAD (TYP)
TYPICAL ZONE (4) TO (5) 12 GPM TO 15 GPM SPORTS FIELD IRRIGATION HEADS (TYP)
2" IRRIGATION ZONE LATERAL (TYP)
2" SCOREBOARD POWER SUPPLY CONDUIT (TYP)
HEAD TO HEAD COVERAGE (TYP)
ELECTRIC CONDUITS DEPICTED TO INDICATE LOCATION REQUIRED TO AVOID STRUCTURES AND SYSTEMS
ZONE VALVE AND BOX ASSEMBLY (TYP)
3 CA4.2
WET USE GFI DUPLEX OUTLET
IRRIGATION BACK OF MOUND QUICK COUPLE
3" PVC IRRIGATION MAIN
5 CA4.2
WET USE GFI DUPLEX OUTLET
IRRIGATION LATERALS (TYP)
SPRINKLER HEAD ASSEMBLE (TYP)
2 CA4.2
2 CA4.2
IRRIGATION THRUST BLOCK DETAILS (TYP)
MIDDLE SCHOOL
TENNIS COURT
EDGE OF BORDERING VEGETATED WETLAND
WETLAND BUFFER ZONE
15FT GRADING SETBACK
30FT STRUCTURE SETBACK
CONCRETE WALK
GRASS
BIT. CONC.
RECORD 8"WATER
RECORD 12"RCP DRAIN
DMH RIM=729.8'(RECORD)
RECORD 15"DRAIN
RECORD 8"DRAIN
RECORD 12"DRAIN
RECORD WATER
MAINE AND MASSACHUSETTS 2015 QL1 AND QL2 LIDAR
MAINE AND MASSACHUSETTS 2013 QL1 AND QL2 LIDAR
MAINE AND MASSACHUSETTS 2012 QL1 AND QL2 LIDAR
MAINE AND MASSACHUSETTS 2010 QL1 AND QL2 LIDAR
MAINE AND MASSACHUSETTS 2013 QL1 AND QL2 LIDAR
MAINE AND MASSACHUSETTS 2015 QL1 AND QL2 LIDAR
MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NAD 83
APPROXIMATE LOCATION 36" WATER HIGH PRESSURE SYSTEM 1914 CAL 1943
VEGETATED BUFFER
EDGE
BASEBALL FIELD
PITCHER'S MOUND
1ST BASE
2ND BASE
3RD BASE
HOME PLATE
ON GROUND 8" SUPPORT
RECORD 6"DRAIN
RECORD 8"WATER
RECORD 8"SEWER
RECORD 8"DRAIN
RECORD 12"DRAIN
RECORD 15"DRAIN
RECORD 12"RCP DRAIN
RECORD 8"WATER
RECORD 8"DRAIN
RECORD 8"DRAIN
RECORD 8"DRAIN

NOTES:
1. DETAIL PROVIDED FOR USE AS NEEDED TO FACILITATE EROSION AND SEDIMENTATION CONTROL. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATING THIS EROSION CONTROL MEASURE AS NEEDED.
2. CHOOSE DRY AND STABLE AREA FOR STOCKPILE.



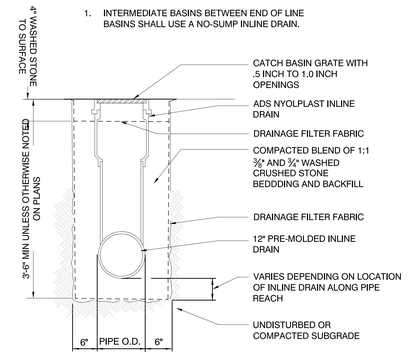
14 STOCKPILE ENCLOSURE DETAIL - TYP.
N.T.S.

NOTES:
1. INTERMEDIATE BASINS BETWEEN END OF LINE BASINS SHALL USE A NO-SUMP INLINE DRAINS.
2. OUTLET AT RETAINING WALL PROVIDED FOR OVERFLOW PROTECTION.
3. SET BASIN BETWEEN WALL AND OUTFIELD FENCE.

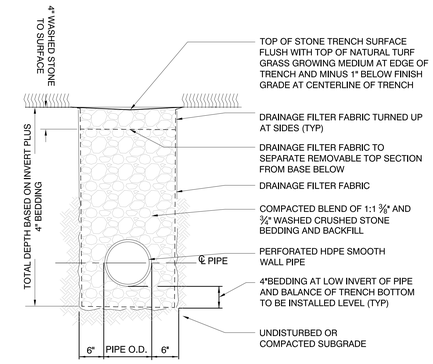


13 INLINE DRAIN/SUBDRAIN VENT AT RETAINING WALL
N.T.S.

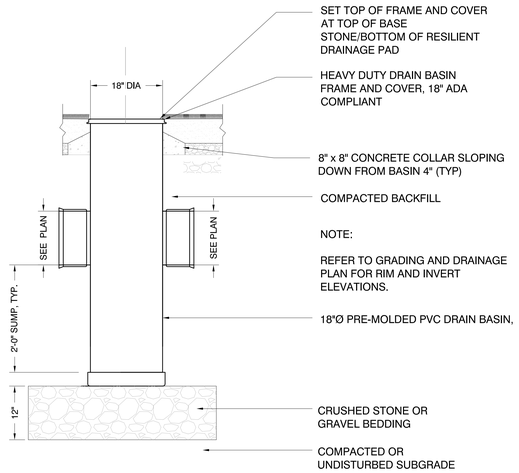
NOTES:
1. INTERMEDIATE BASINS BETWEEN END OF LINE BASINS SHALL USE A NO-SUMP INLINE DRAIN.



12 INLINE DRAIN AT SUBDRAIN TRENCH
N.T.S.

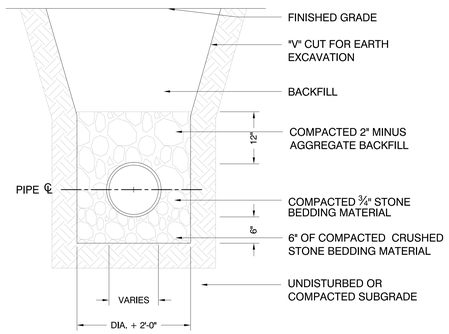


11 SUBDRAINAGE TRENCH SECTION
N.T.S.

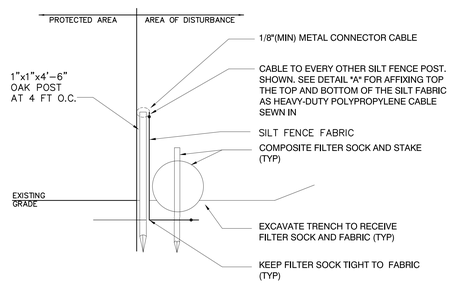


NOTE:
REFER TO GRADING AND DRAINAGE PLAN FOR RIM AND INVERT ELEVATIONS.

10 DRAIN INLET BASIN - TYP
N.T.S.

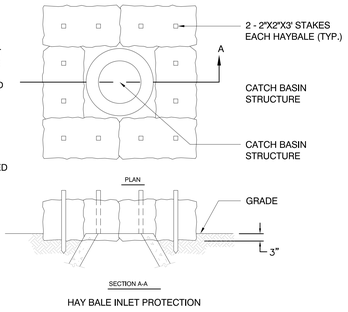


9 STORMDRAINAGE TRENCH SECTION
N.T.S.



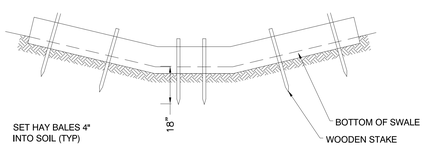
8 COMPOSITE FILTER/SILT FENCE BACKER
N.T.S.

NOTE:
1. HAY BALE INLET PROTECTION SHALL BE USED AT MANHOLE AND BASIN LOCATIONS PRIOR TO THE INSTALLATION OF THE FRAME AND GRATE.
2. SILT SACK INLET PROTECTION SHALL BE USED AT BASIN LOCATIONS ONCE FRAME AND GRATE ARE INSTALLED AND AT ALL EXISTING BASIN FRAMES AND GRATES. FILTER FABRIC SHALL NOT BE USED IN LIEU OF SILT SACK PROTECTION SYSTEMS.



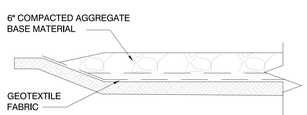
7 INLET PROTECTION- TYP.
N.T.S.

NOTES:
1. DETAIL PROVIDED FOR USE AS NEEDED TO FACILITATE EROSION AND SEDIMENTATION CONTROL. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATING THIS EROSION CONTROL MEASURE AS NEEDED.

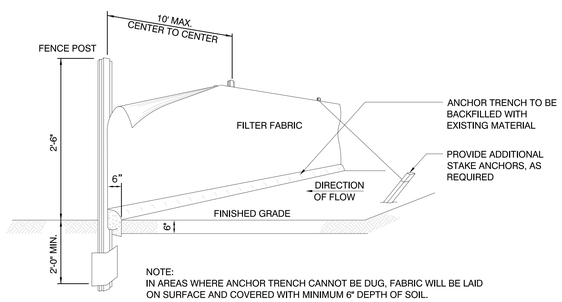


6 HAY BALE CHECK DAM
N.T.S.

NOTE:
1. CONSTRUCT TO A WIDTH OF 12' AND LENGTH AS DEPICTED ON DRAWING
2. GRADE AND SLOPE TO PROMOTE RUNOFF TOWARDS DRAINAGE
3. INSTALL SILTATION FENCING AT DOWN SLOPE EDGE
4. IN AREAS WHERE CONSTRUCTION ENTRANCE IS SCHEDULED TO BE INSTALLED OVER EXISTING PAVEMENT, PLACE TWO LAYERS OF FILTER FABRIC OVER PAVEMENT PRIOR TO INSTALLING STONE MATERIAL.

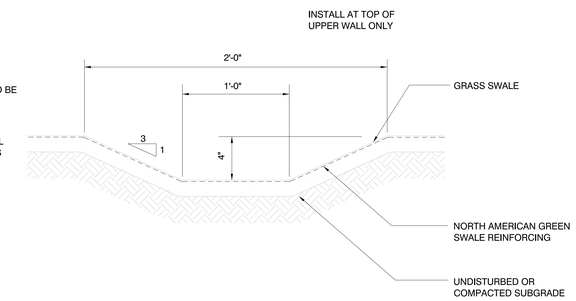


5 ANTI-TRACKING CONSTRUCTION ENTRANCE
N.T.S.



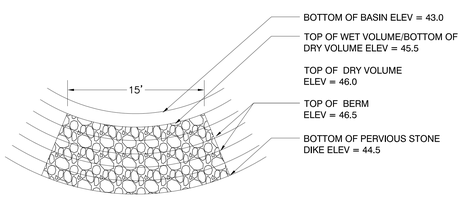
NOTE:
IN AREAS WHERE ANCHOR TRENCH CANNOT BE DUG, FABRIC WILL BE LAID ON SURFACE AND COVERED WITH MINIMUM 6" DEPTH OF SOIL.

4 SILTATION CONTROL FENCING
N.T.S.

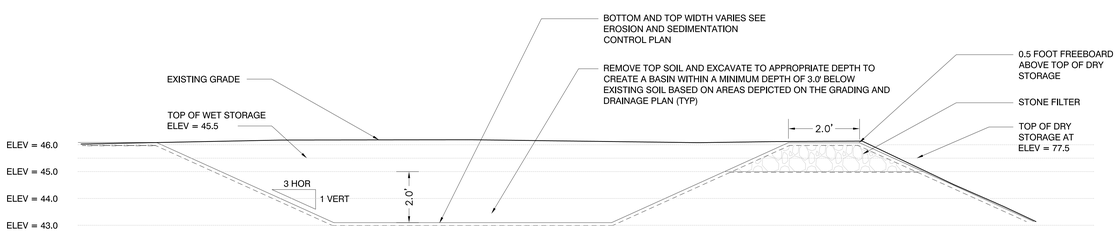


3 TEMPORARY DIVERSION SWALE - TYP
N.T.S.

NOTES:
1. DETAIL PROVIDED FOR USE AS NEEDED TO FACILITATE EROSION AND SEDIMENTATION CONTROL. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATING THIS EROSION CONTROL MEASURE AS NEEDED.
2. DISTURBED AREA = 3.60 ACRES AT FIELD ONLY
3. REQUIRED VOLUME = 3.60 X 134 X 27 = 13,300 CF
4. PROVIDED WET AND DRY STORAGE = 18,900 CF (TOTAL DIVIDED BETWEEN THE NUMBER OF BASINS REQUIRED TO FACILITATE CONTROL)



2 TEMPORARY SEDIMENT BASIN OUTLET
N.T.S.



ELEVATION VIEW

1 TEMPORARY SEDIMENT BASIN
N.T.S.

Sediment Trap Volume Analysis

Elevation	Surface Area (SF)	Incremental Volume (CF)	Total Volume (CF)	Wet Volume (CF)	Freeboard Volume (CF)	Total Four Basin Volume (CF)
0.0	1812.0	0.0	0.0	0.0		0.0
0.5	2075.0	971.8	971.8	971.8		3887.0
1.0	2351.0	1106.5	2078.3	2078.3		8313.0
1.5	2662.0	1253.3	3331.5	3331.5		13326.0
2.0	2948.0	1402.5	4734.0	4734.0		18936.0

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OWNER
Worcester Public Schools
Worcester, MA

Project North

PROJECT
Final Bid Package
South High Community School
170 Apricot Street, Worcester, MA 01603

TITLE
Lower Field Details

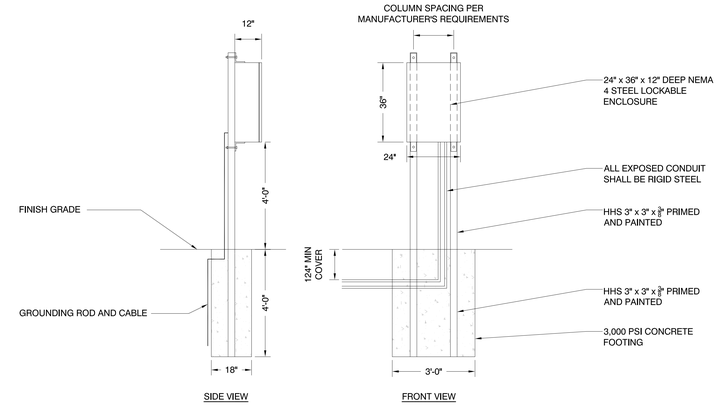
Key Plan

REVISIONS

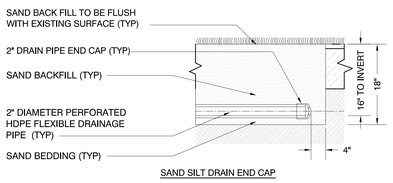
No.	Description	Date

FILE: Final CDs CA4.1 01-31-19
DWN. BY: JJA | JOB NO: #1611
CKD. BY: JJA | SCALE: As Noted
DATE: January 31, 2019

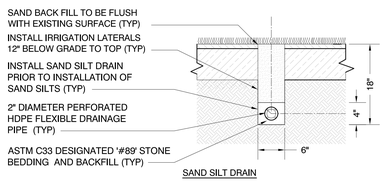
CA4.1



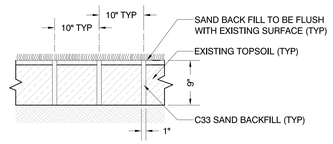
11 IRRIGATION SYSTEM CONTROL CABINET
N.T.S.



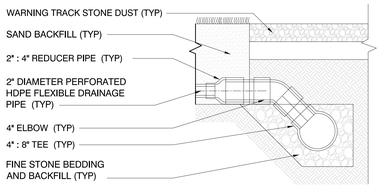
SAND SILT DRAIN END CAP



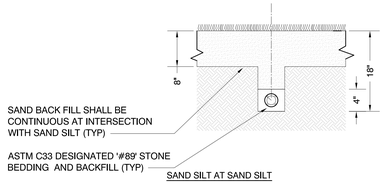
SAND SILT DRAIN



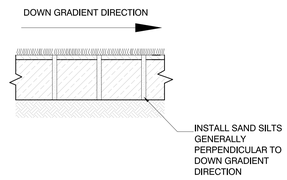
SAND SILTS



SAND SILT DRAIN CONNECTION TO COLLECTOR DRAIN



SAND SILT AT SAND SILT



SAND SILT ORIENTATION

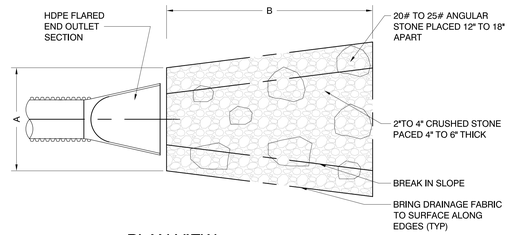
10 SAND SLIT DRAINAGE AND SAND SILT DRAINAGE PIPING
N.T.S.

DISCHARGE APRON DIMENSIONS

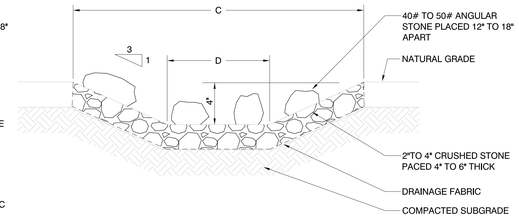
OUTLET I.D.	A	B	C	D
FES 1	3'-0"	8'-0"	6'-0"	2'-0"

NOTES:

1. DISCHARGE APRONS WITHIN BASINS ARE FLAT AND MATCH THE SHAPE OF THE BASIN BOTTOM. THEY DO NOT HAVE SLOPING SIDES.

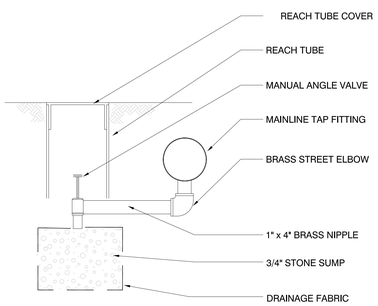


PLAN VIEW

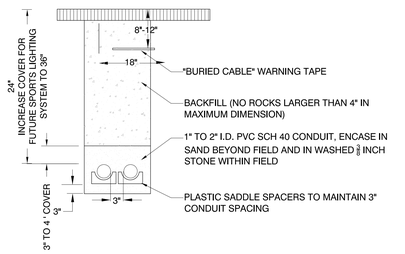


SECTION AT END

9 STONE DISCHARGE APRON
N.T.S.

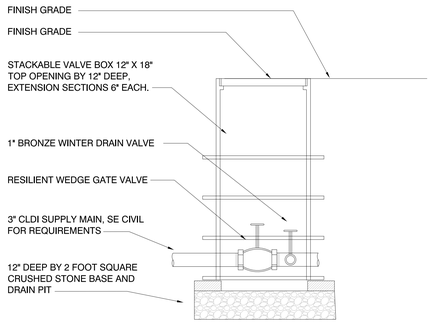


8 DRAIN VALVE ASSEMBLY
N.T.S.



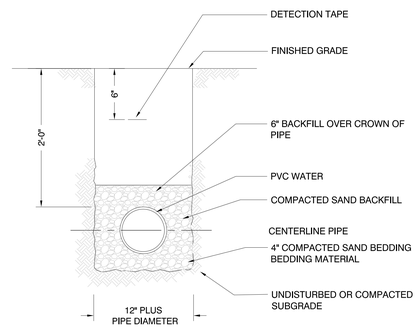
4" I.D. PVC SCH 40 CONDUIT FOR FUTURE SPORTS LIGHTING SYSTEM, ENCASE IN SAND WHERE LOCATED BELOW NATURAL SURFACES AND IN CONCRETE WHEN LOCATED BELOW PAVEMENT (ADJUST THIS REQUIREMENT TO MEET ALL APPLICABLE CODES)

7 CONTROL WIRE CONDUIT TRENCH
NOT TO SCALE

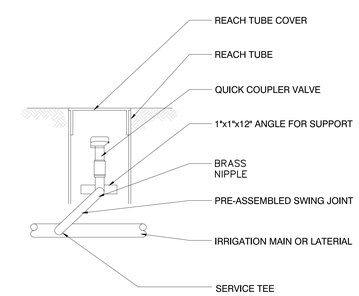


PROVIDE 1" DRAIN TO NEAREST DRAINAGE MANHOLE (TYP)

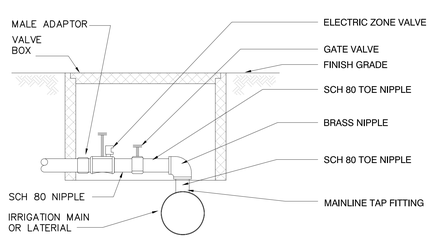
6 IRRIGATION GATE VALVE
N.T.S.



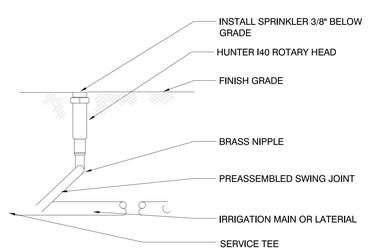
5 IRRIGATION MAIN PIPE TRENCH
N.T.S.



4 QUICK COUPLER ASSEMBLY
N.T.S.



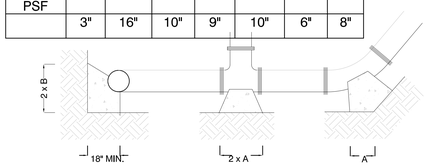
3 ZONE VALVE AND BOX ASSEMBLY
N.T.S.



2 SPRINKLER HEAD ASSEMBLY
N.T.S.

BEARING FACE DIMENSION

SOIL	SIZE	90-A	90-B	45-A	45-B	TEE-A	TEE-B
4000 PSF	2.5"	8"	10"	6"	8"	3"	8"
	3"	8"	10"	6"	8"	3"	8"'
2000 PSF	2.5"	16"	10"	9"	10"	6"	8"
	3"	16"	10"	9"	10"	6"	8"



1 IRRIGATION THRUST BLOCK DETAILS
N.T.S.

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MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

Final Bid Package

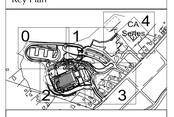
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Details

Key Plan



REVISIONS

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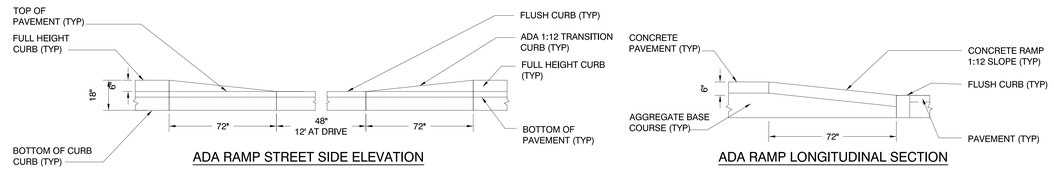
CA4.2



15 ADA SIDEWALK RAMP
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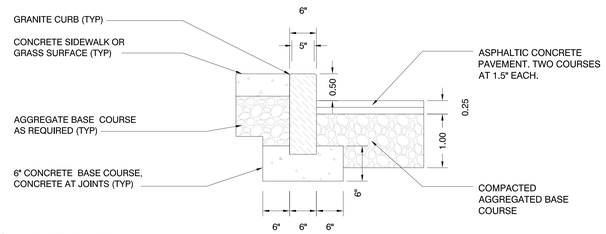
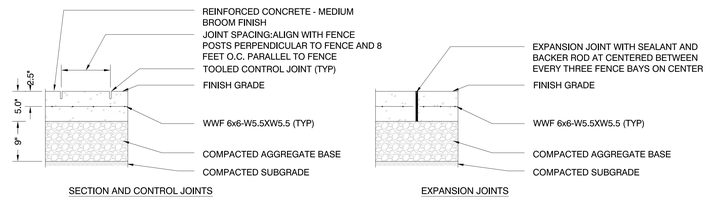


14 GRANITE CURB
N.T.S.



13 CONCRETE PAVEMENT/SLAB
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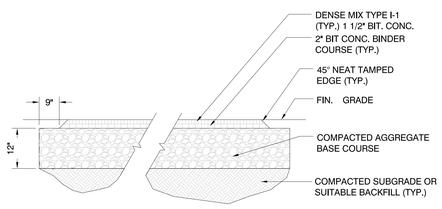
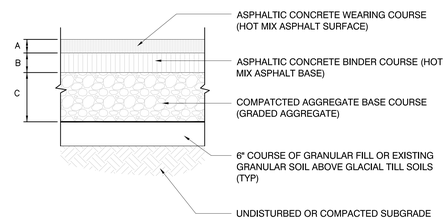
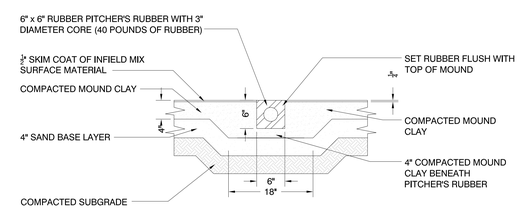


12 ASPHALTIC CONCRETE WALK, TYP.
N.T.S.



	THICKNESS (INCHES)	
	WALK	PARKING
A	1–1/2	1–1/2
B	1–1/2	2
C	9	9

11 ASPHALTIC CONCRETE PAVEMENT
N.T.S.



10 PITCHER'S RUBBER - SECTION
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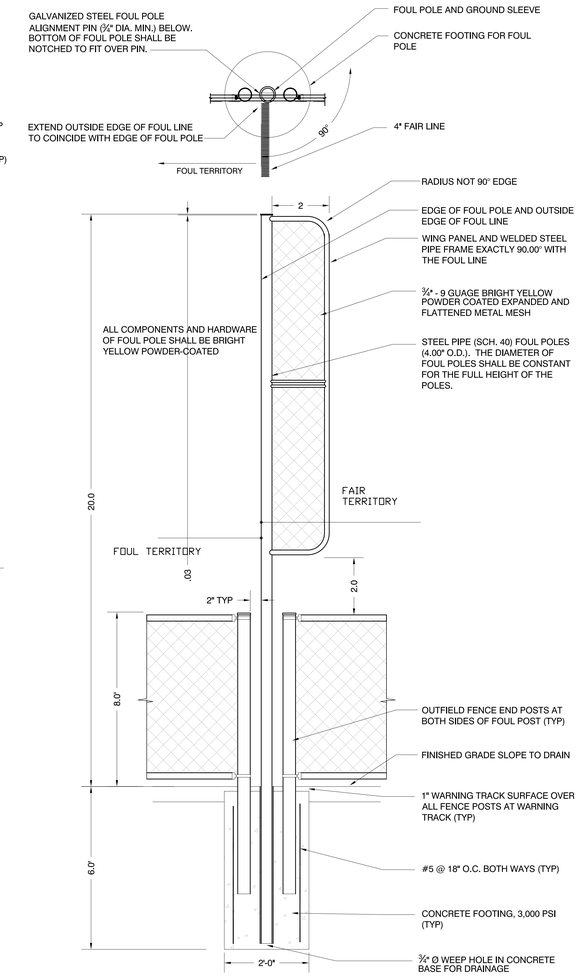

9 FOUL POLE
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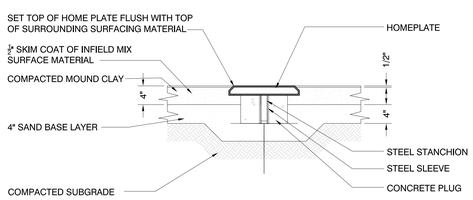

8 HOME PLATE - SECTION
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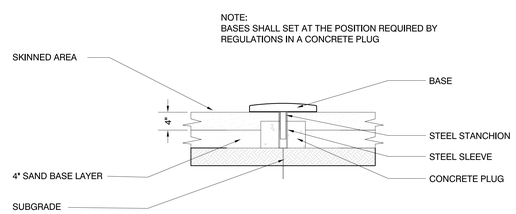
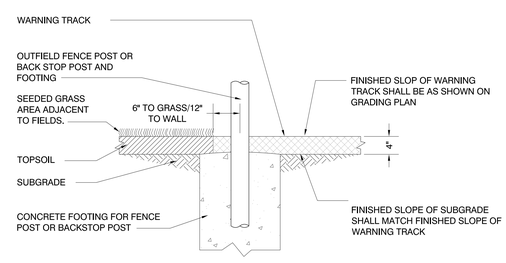


7 BASEBALL BASE - SECTION
N.T.S.



6 WARNING TRACK AT FENCE
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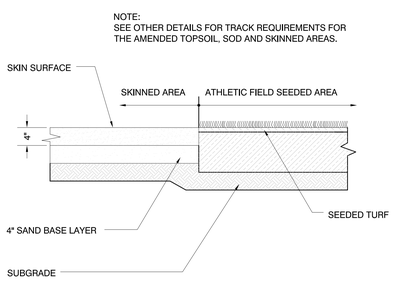

5 SKINNED AREA/SEEDED AREA TRANSITION
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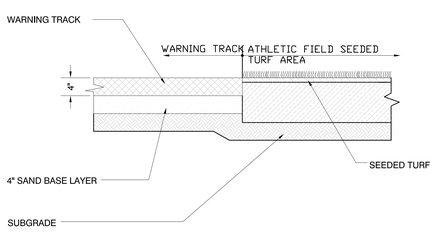
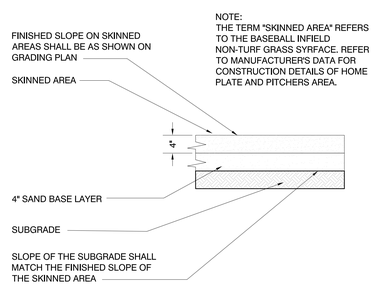


4 WARNING TRACK/SEEDED AREA TRANSITION
N.T.S.



3 SKINNED AREA SECTION
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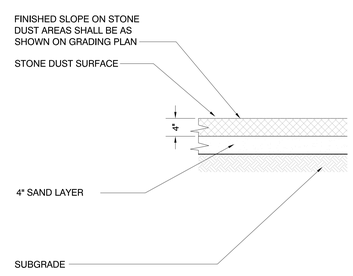

2 STONE DUST WARNING TRACK SURFACE
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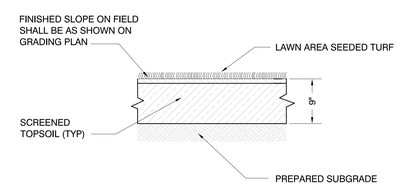

1 TOPSOIL FIELD SURFACE AND LAWN AREA
N.T.S.

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Worcester Public Schools

Worcester, MA

Project North

PROJECT

Final Bid Package

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Details

Key Plan

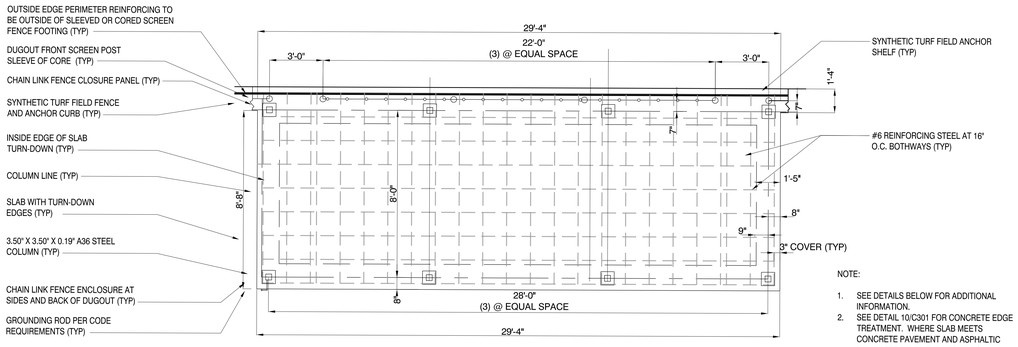
REVISIONS

No.	Description	Date

FILE: Final CDs CA4.3 01-31-19

DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: AS NOTED
DATE: January 31, 2019	

CA4.3



NOTE:

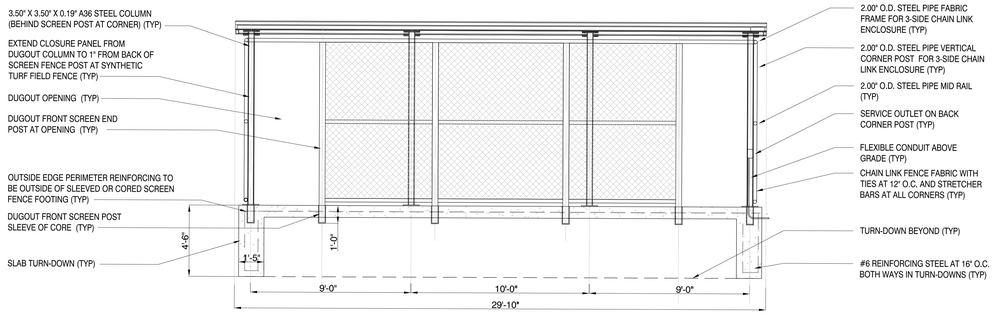
1. SEE DETAILS BELOW FOR ADDITIONAL INFORMATION.
2. SEE DETAIL 10/C301 FOR CONCRETE EDGE TREATMENT. WHERE SLAB MEETS CONCRETE PAVEMENT AND ASPHALTIC CONCRETE PAVEMENT PROVIDE $\frac{1}{2}$" ROUNDING. WHERE SLAB MEETS TURF PROVIDE $\frac{3}{4}$" CHAMFER.

8 BASEBALL METAL ROOFED DUGOUT - FOUNDATION FLOOR PLAN

N.T.S.

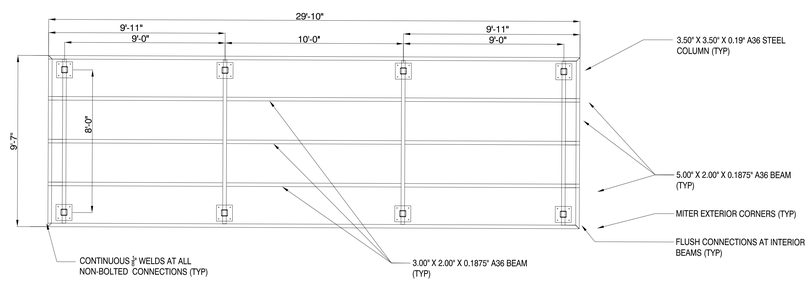
NOTES:

1. FENCE ENCLOSURE TO ALIGN BOTTOM AND MID-RAILS WITH 8 FOOT FENCE RAILS (TYP)
2. TOP RAIL AT SCREEN TO BE LOCATED LEVEL WITH THE BOTTOM OF THE ROOF EDGE.
3. ELECTRIC SERVICE OUTLET IN DUGOUT TO BE LOCATED ON INSIDE BACK CORNER POST CLOSEST TO THE BACKSTOP SIDE.



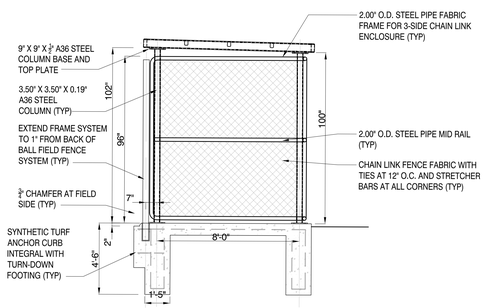
7 BASEBALL METAL ROOFED DUGOUT - FRONT ELEVATION

N.T.S.



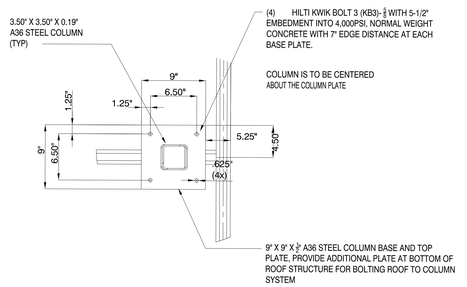
5 BASEBALL METAL ROOFED DUGOUT - ROOF PLAN

N.T.S.



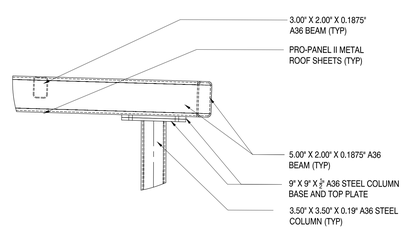
4 BASEBALL DUGOUT - SIDE ELEVATION

N.T.S.



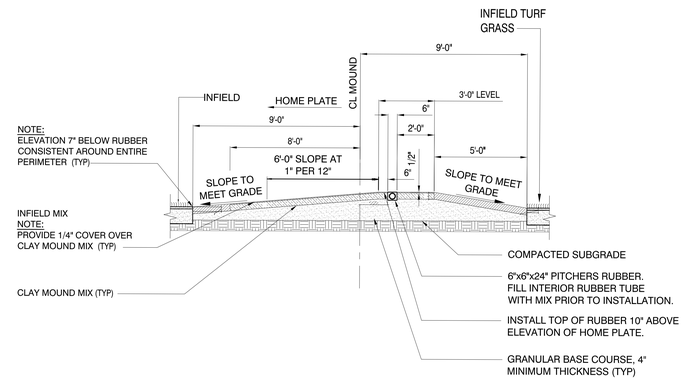
3 ROOF AND COLUMN PLATE PLAN VIEW (TYP)

N.T.S.



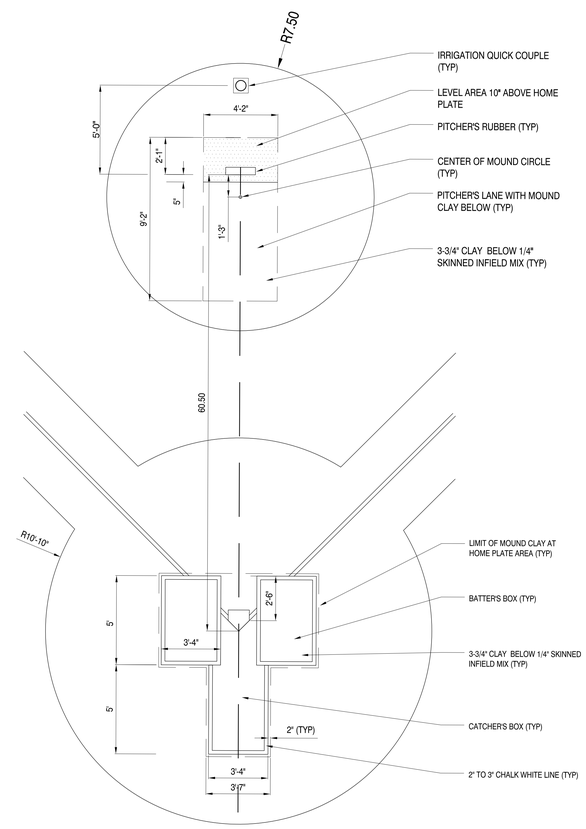
2 ROOF AND COLUMN PLATE SECTION (TYP)

N.T.S.



6 BASEBALL MOUND - SECTION

NOT TO SCALE



1 BASEBALL MOUND AND HOME PLATE LAYOUT

NOT TO SCALE

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MEMBER OF
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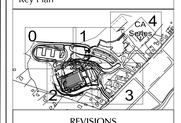


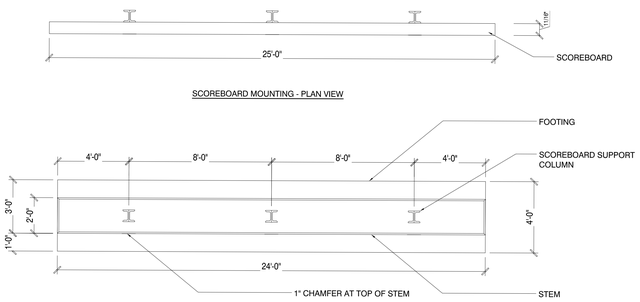
REVISIONS

No.	Description	Date

FILE: Final CDs CA4.4 01-31-19

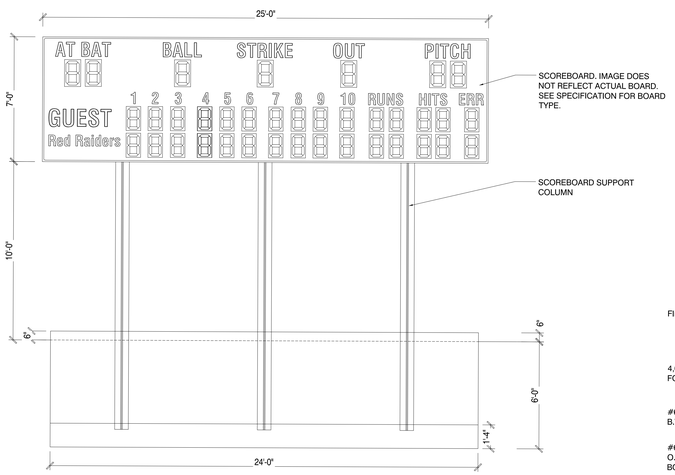
DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: AS NOTED
DATE: January 31, 2019	

CA4.4

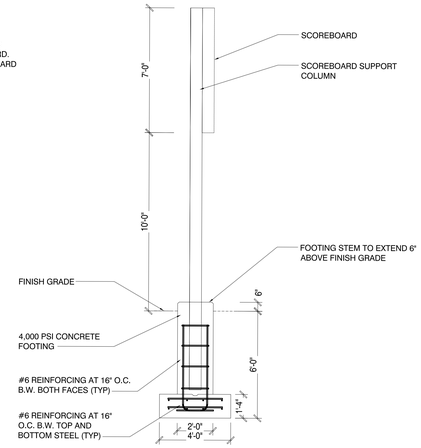


SCOREBOARD MOUNTING - PLAN VIEW

FOUNDATION - PLAN VIEW

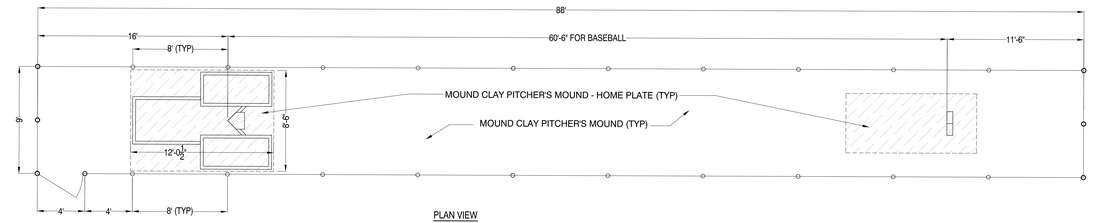


SCOREBOARD - ELEVATION VIEW

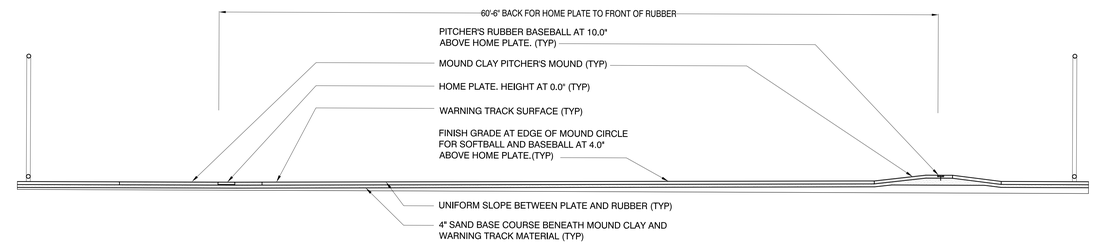


SCOREBOARD - SECTION

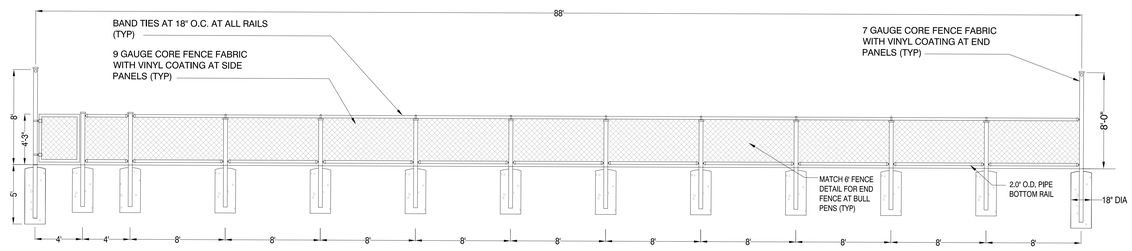
6 SCOREBOARD DETAILS
N.T.S.



PLAN VIEW



BASEBALL SECTION - HOME PLATE TO MOUND

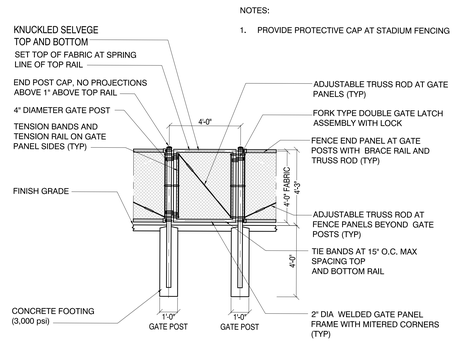


SIDE ELEVATION

7 JUNIOR VARSITY BASEBALL BULL PEN - ELEVATION, SECTION, AND PLAN VIEW
N.T.S.

NOTES:

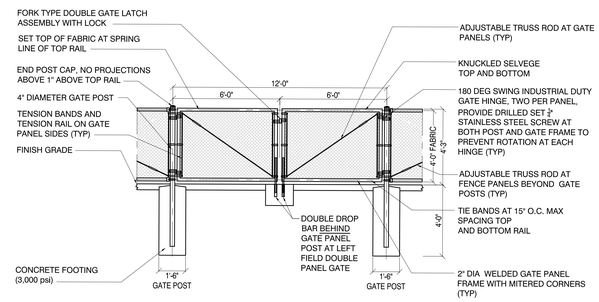
1. PROVIDE PROTECTIVE CAP AT STADIUM FENCING



5 CHAIN LINK FENCE SINGLE PANEL GATE, 51" HEIGHT (SYNTHETIC TURF)
NOT TO SCALE

NOTES:

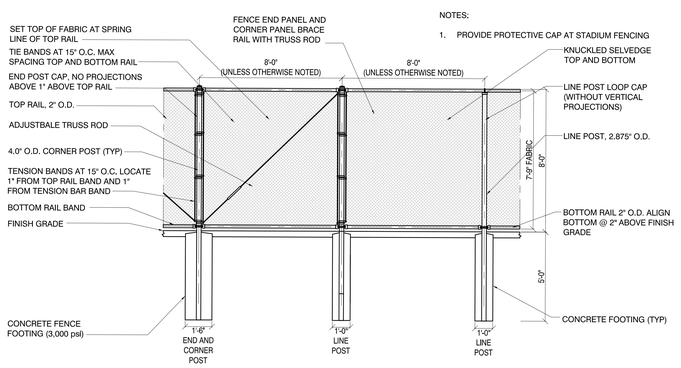
1. PROVIDE PROTECTIVE CAP AT STADIUM FENCING



4 CHAIN LINK FENCE DOUBLE PANEL GATE, 51" HEIGHT (SYNTHETIC TURF)
NOT TO SCALE

NOTES:

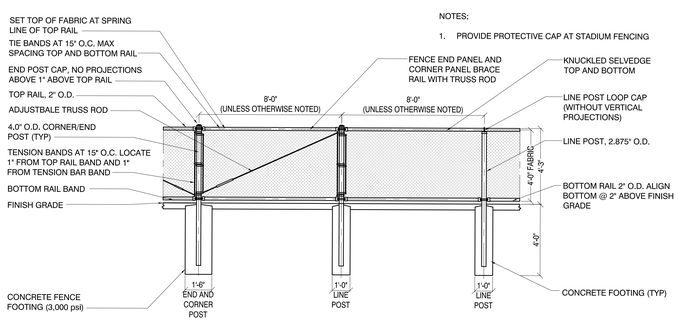
1. PROVIDE PROTECTIVE CAP AT STADIUM FENCING



3 CHAIN LINK FENCE, 96" HEIGHT (SYNTHETIC TURF)
NOT TO SCALE

NOTES:

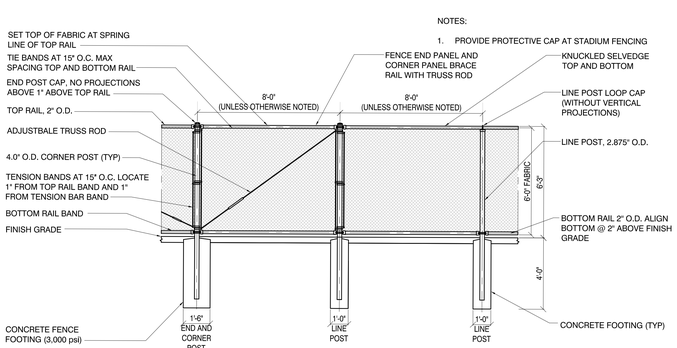
1. PROVIDE PROTECTIVE CAP AT STADIUM FENCING



2 CHAIN LINK FENCE, 51" HEIGHT (SYNTHETIC TURF)
NOT TO SCALE

NOTES:

1. PROVIDE PROTECTIVE CAP AT STADIUM FENCING



1 CHAIN LINK FENCE, 75" HEIGHT (SYNTHETIC TURF)
NOT TO SCALE

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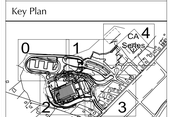


REVISIONS

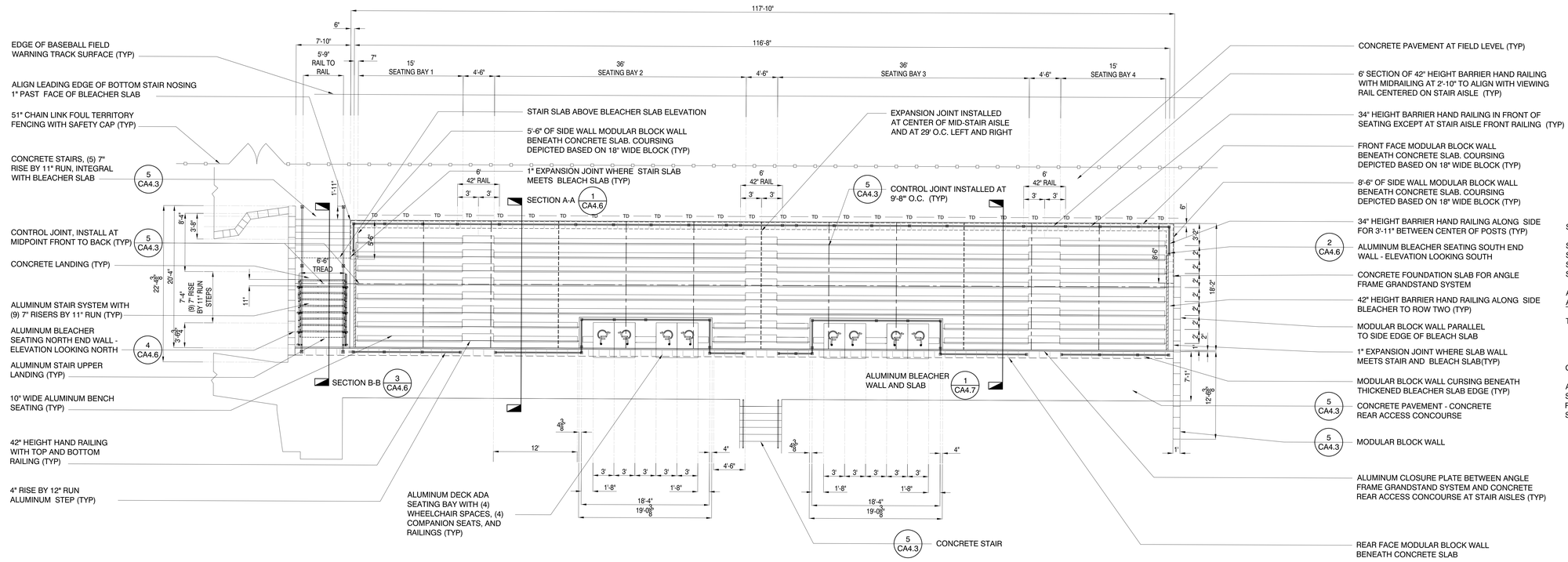
No.	Description	Date

FILE: Final CDs CA4.5 01-31-19

DWN. BY: JJA	JOB NO: #1611
CKD. BY: JJA	SCALE: AS NOTED

DATE: January 31, 2019

CA4.5



5 ALUMINUM BLEACHER SEATING - PLAN VIEW

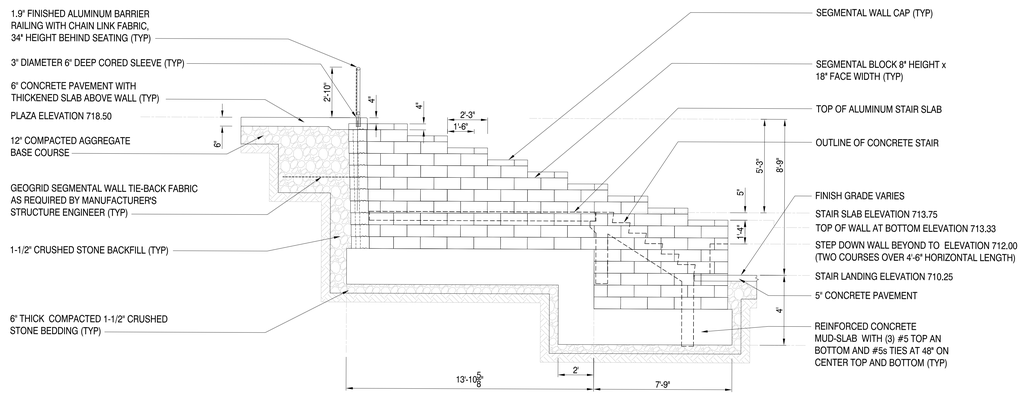
SCALE: 1' = 6'-0"

SEATING SUMMARY:

SEATING BAY 1	80 SEATS
SEATING BAY 2	166 SEATS
SEATING BAY 3	166 SEATS
SEATING BAY 4	166 SEATS
ADA WHEELCHAIR SPACES	8 SEATS
ADA COMPANION SEATS	8 SEATS
TOTAL SEAT COUNT	508 SEATS

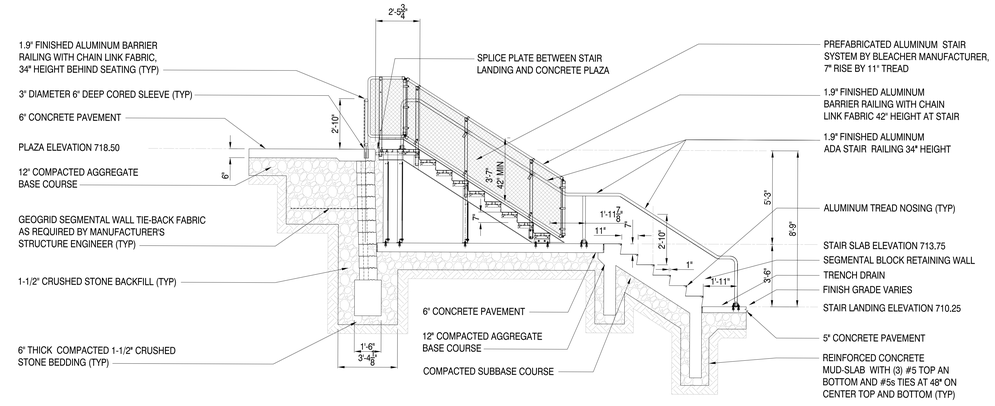
GRANDSTAND STRUCTURE:

ANGLE FRAME SLAB ON GRADE (8) ROW SEATING SYSTEM ON CONCRETE SLAB WITH REAR ACCESS CONCOURSE AND REAR ADA SEATING.



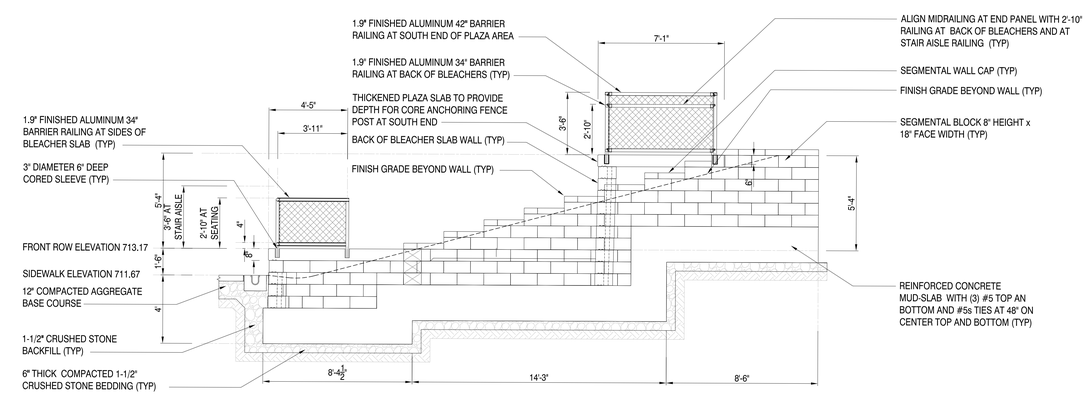
4 ALUMINUM BLEACHER SEATING SOUTH END WALL - ELEVATION LOOKING SOUTH

SCALE: 1' = 3'-0"



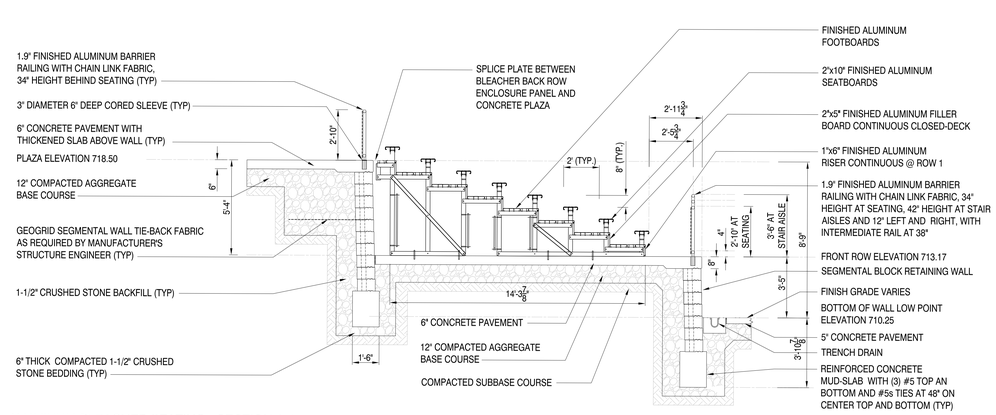
3 ALUMINUM BLEACHER STAIR - SECTION B-B

SCALE: 1' = 3'-0"



2 ALUMINUM BLEACHER SEATING NORTH END WALL - ELEVATION LOOKING NORTH

SCALE: 1' = 3'-0"



1 ALUMINUM BLEACHER SEATING - SECTION A-A

SCALE: 1' = 3'-0"

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Worcester, MA

Project North

PROJECT

Final Bid Package

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Details

Key Plan

REVISIONS

No.	Description	Date

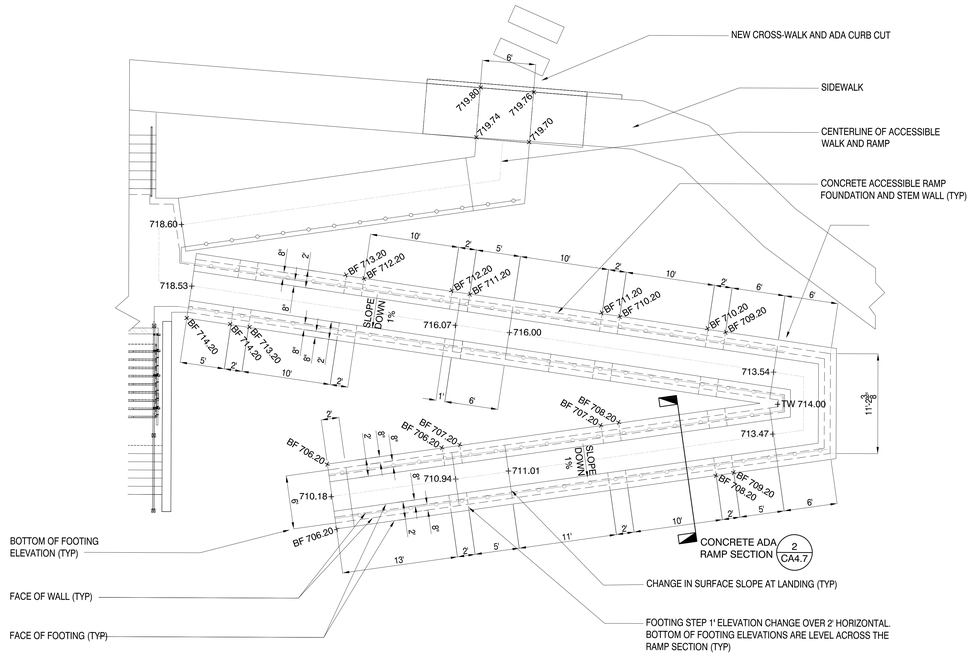
FILE: Final CDs CA4.6 01.31.19

DWN. BY: JJA | JOB NO: #1611

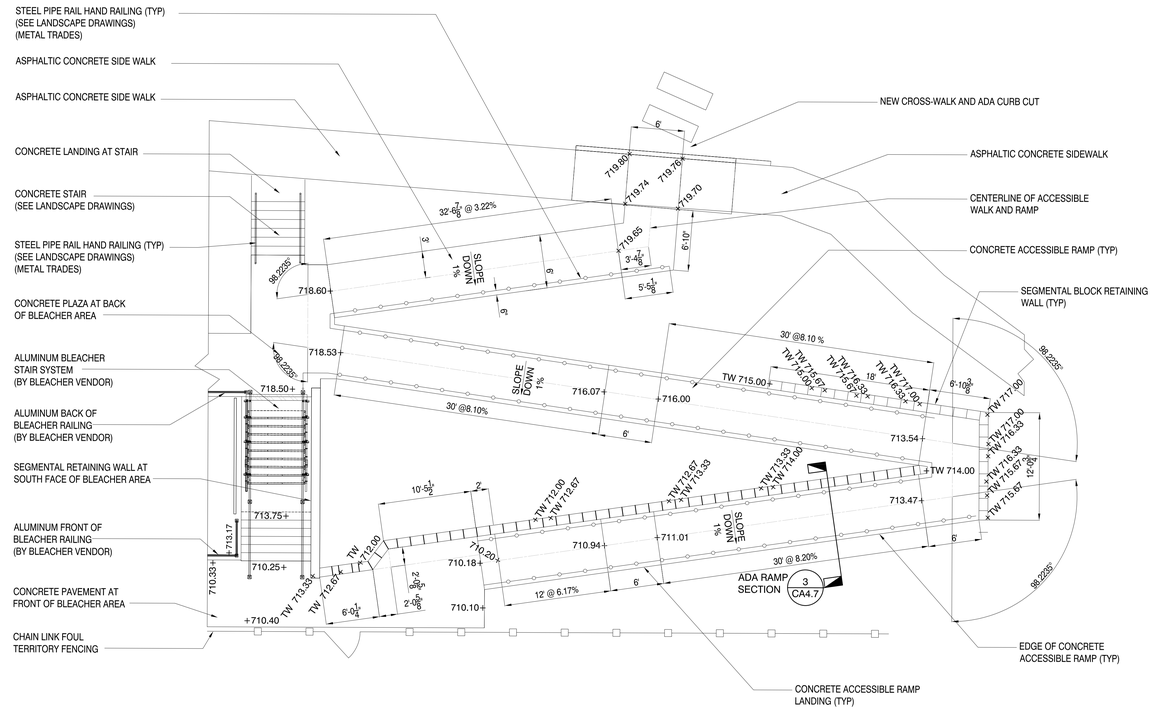
CKD. BY: JJA | SCALE: As Noted

DATE: January 31, 2019

CA4.6



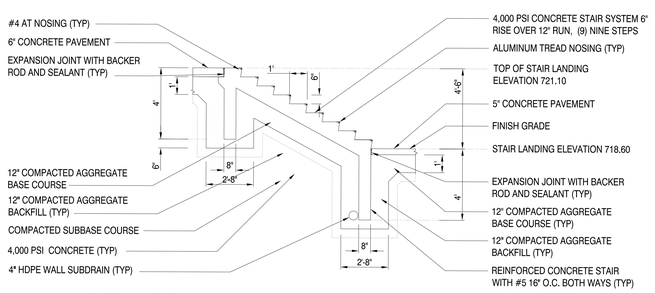
7 ADA RAMP FOUNDATION PLAN
SCALE: 1' = 6'-0"



6 ENLARGED ADA ACCESS SITE PLAN
SCALE: 1' = 6'-0"

NOTE:

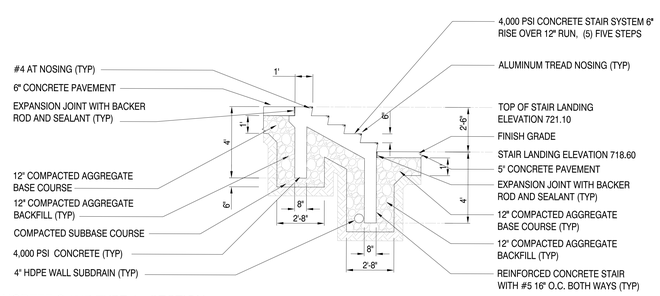
SEE LANDSCAPE DRAWINGS FOR PAINTED STEEL RAILING (TYP) (BY MIS. METALS TRADE)



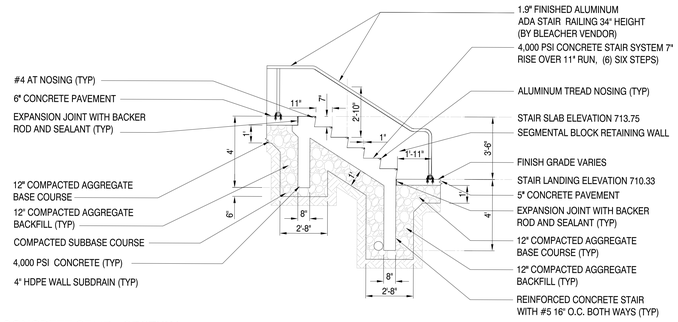
5 CONCRETE STAIR TYPE 2 - SECTION
SCALE: 1' = 3'-0"

NOTE:

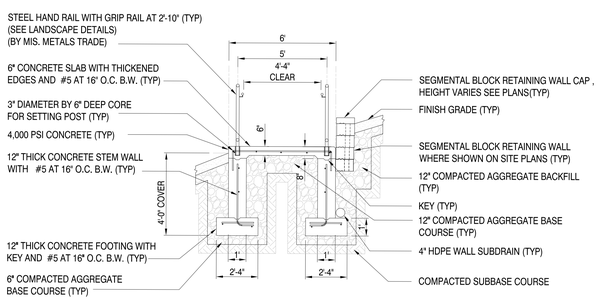
SEE LANDSCAPE DRAWINGS FOR PAINTED STEEL RAILING (TYP) (BY MIS. METALS TRADE)



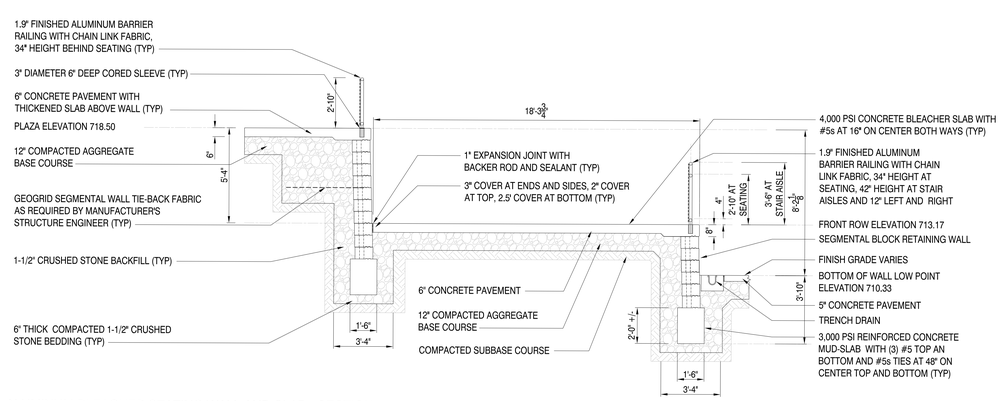
4 CONCRETE STAIR TYPE 1 - SECTION
SCALE: 1' = 3'-0"



3 CONCRETE STAIR - SECTION
SCALE: 1' = 3'-0"



2 CONCRETE ADA RAMP - SECTION
SCALE: 1' = 3'-0"



1 ALUMINUM BLEACHER SEATING WALL AND SLAB - SECTION
SCALE: 1' = 3'-0"

LAMOUREUX PAGANO ASSOCIATES, ARCHITECTS
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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

Final Bid Package

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Details

Key Plan

REVISIONS

No.	Description	Date

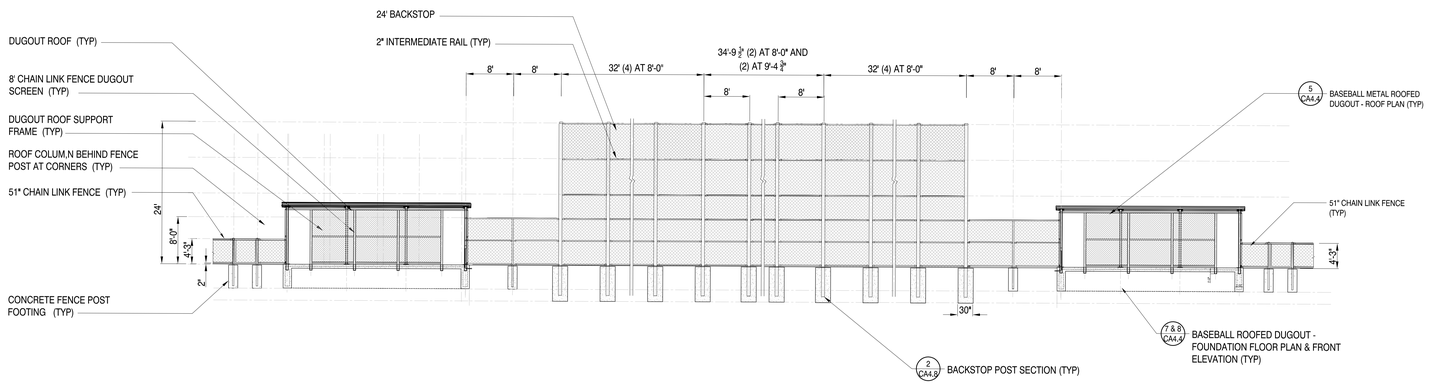
FILE: Final CDs CA4.7 01.31.19

DWN. BY: JJA | JOB NO: #1611

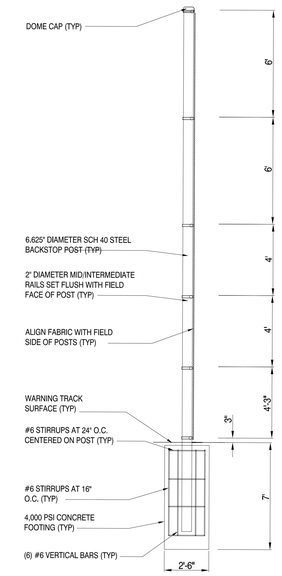
CKD. BY: JJA | SCALE: As Noted

DATE: January 31, 2019

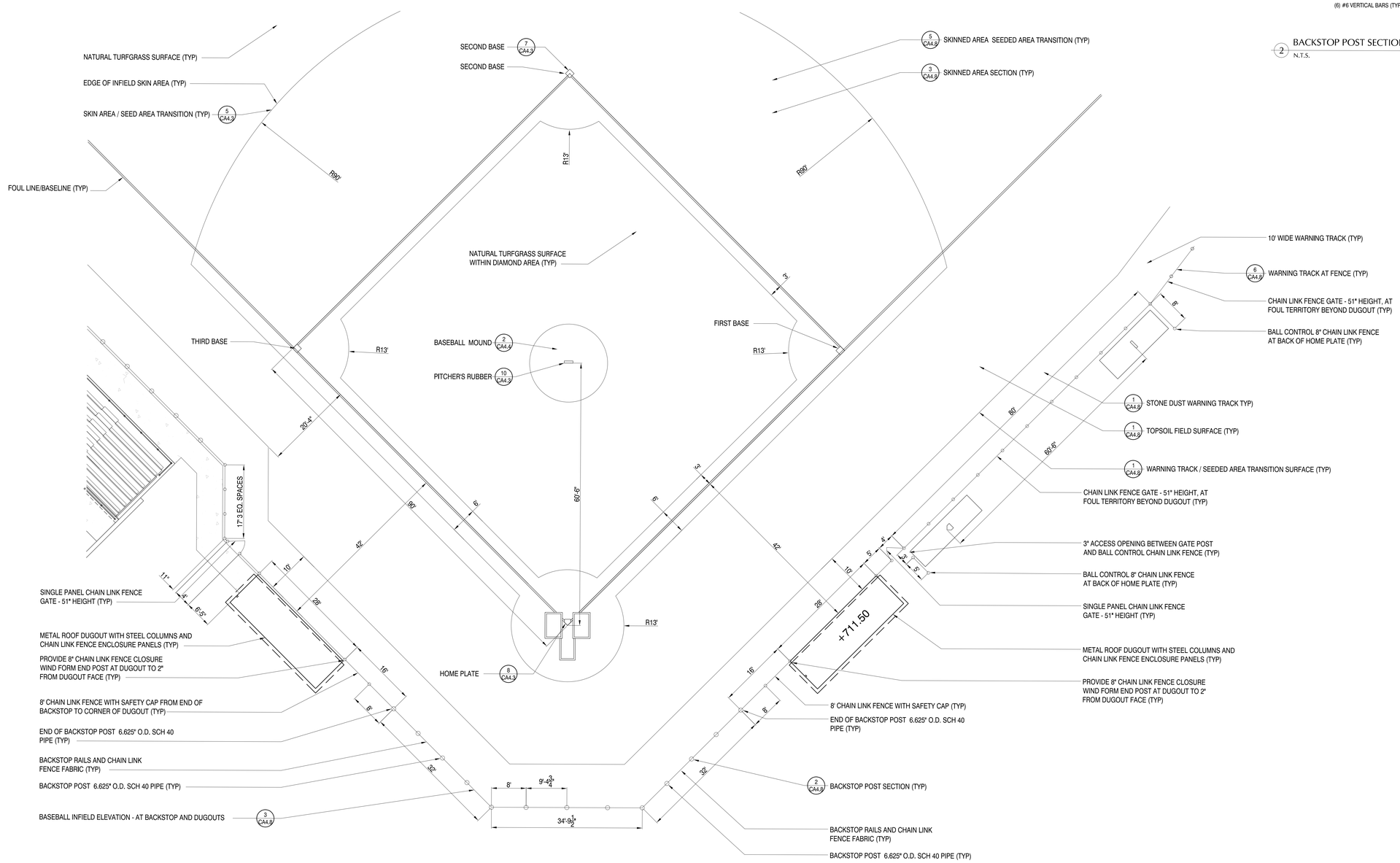
CA4.7



3 BASEBALL FIELD INFIELD ELEVATION - FLATTENED ELEVATION LOOKING FROM THE MOUND TO HOMEPLATE
SCALE: 1/16" = 1'



2 BACKSTOP POST SECTION
N.T.S.



1 BASEBALL FIELD INFIELD ENLARGED SITE PLAN
SCALE: 1/16" = 1'

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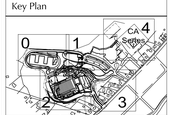
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Lower Field Details

Key Plan



REVISIONS

No.	Description	Date

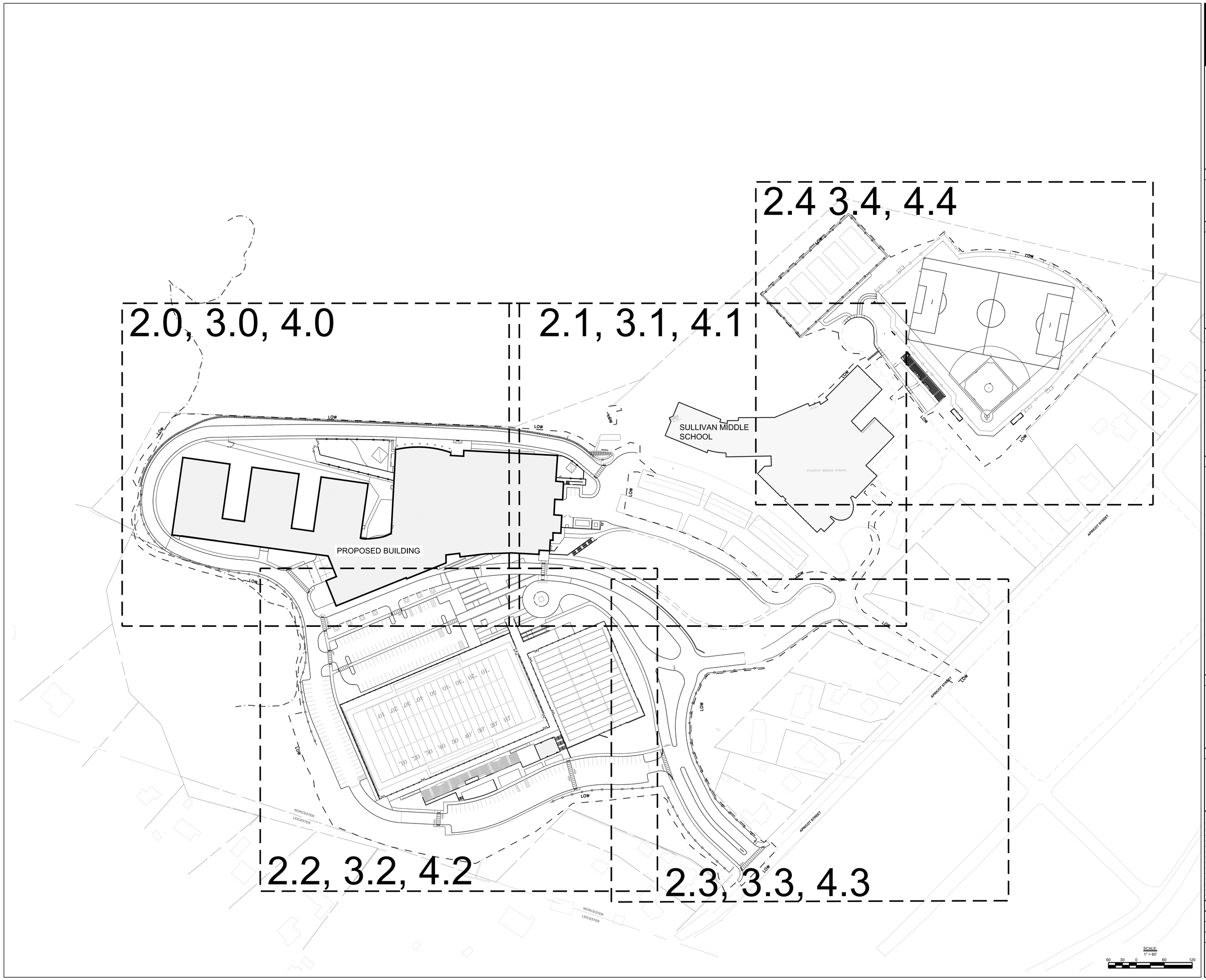
FILE: Final CDs CA4.8 01.31.19

DWN. BY: JJA | JOB NO: #1611

CKD. BY: JJA | SCALE: As Noted

DATE: January 31, 2019

CA4.8



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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Drawing Key

Key Plan

A BUILDING
B BUILDING
A
B1
B2
AB

REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY: JOB NO: #1611

CKD. BY: SCALE: 1"=60'-0"

DATE: January 31, 2019

L1.0

MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
AP	THERMO-APPLIED ASPHALT PATTERN	SPECIFICATIONS
BC	BITUMINOUS CONCRETE ROADWAY	CIVIL DRAWINGS
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
CB	COBBLE PAVEMENT	3 / L5.3
CP	CONCRETE PAVEMENT - PEDESTRIAN	1 / L5.0
CPV	CONCRETE PAVEMENT - VEHICULAR	2 / L5.0
UP	UNIT PAVERS	3,5,6 / L5.0
CR	CONCRETE RAMP	7-A,B / L5.5
CS	CONCRETE STEPS	11 / L5.0
PCS	PRECAST CONCRETE STEPS	12 / L5.0
SA	STABILIZED AGGREGATE PAVEMENT	9 / L5.0
ST	SYNTHETIC TURF WITH FIELD MARKINGS	SPECIFICATIONS 1-5 / L2.8
SM	STONE MULCH	SPECIFICATIONS
	DETECTABLE WARNING SURFACE	CIVIL DRAWINGS
EJ	* EXPANSION JOINT	7 / L5.0

* TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 070001
* * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000
* * * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000 AND 070001

MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
B	* * BENCH, PRECAST	1-3 / L5.2
BA	AMPHITHEATER BENCH, NO WOOD SEAT	7 / L5.2
BAS	AMPHITHEATER BENCH, WOOD SEAT WITH BACK	9,10 / L5.2
BAN	AMPHITHEATER BENCH, BACKLESS WOOD SEAT	11,12 / L5.2
BD	BOLLARD, PRECAST	7 / L5.1
BW	* * BENCH, WALL MOUNTED	4-6 / L5.2
BL	BLEACHERS AND PRESS BOX	SPECIFICATIONS 1 / L5.6
CC	CONCRETE CURB	CIVIL DRAWINGS
GC	GRANITE CURB	CIVIL DRAWINGS
GP	GRANITE PAVERS	4 / L5.0
BR	BIKE RACKS	SPECIFICATIONS
FC	FLUSH GRANITE CURB	CIVIL DRAWINGS
F1	FENCE 1: 4' HT. CHAIN LINK FENCE	SPECIFICATIONS
F2A	FENCE 2A: 4' HT. DECORATIVE FENCE, COLOR TBD	3-5 / L5.1
F2B	FENCE 2B: 4' HT. DECORATIVE FENCE, GALVANIZED	3-5 / L5.1
F3	FENCE 3: 6' HT. CHAIN LINK FENCE	SPECIFICATIONS
F4	SCREEN FENCE	2 / L5.1
F5	FENCE 5: CHAINLINK TENNIS FENCE	SPECIFICATIONS

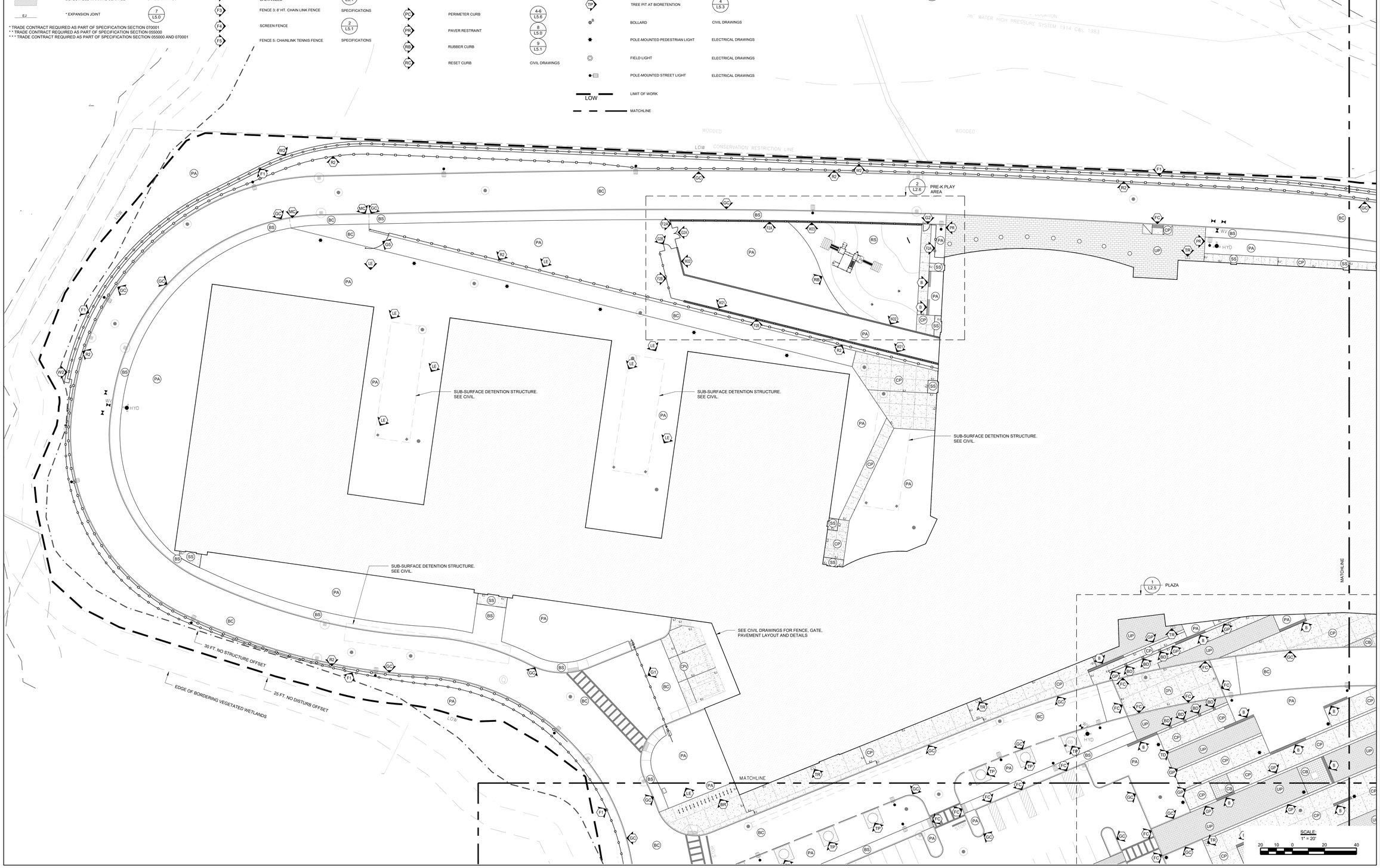
SYM	DESCRIPTION	DETAIL
FP	FLAG POLE	6 / L5.1
FG	FIELD GOAL	SPECIFICATIONS
G1	GATE 1: CANTILEVER GATE	CIVIL DRAWINGS
G2	GATE 2: 4' HT. SINGLE LEAF DECORATIVE GATE, COLOR TBD.	3-5 / L5.1
G2A	GATE 2A: 4' HT. DOUBLE LEAF DECORATIVE GATE, COLOR TBD	3-5 / L5.1
G2B	GATE 2B: 4' HT. SINGLE LEAF DECORATIVE GATE, GALVANIZED	3-5 / L5.1
G3	GATE 3: DOUBLE LEAF 4' HT. CHAIN LINK GATE	SPECIFICATIONS
G4	GATE 4: DOUBLE LEAF 6' HT. CHAIN LINK GATE	SPECIFICATIONS
G5	GATE 5: 10' WIDE VEHICULAR BAR GATE	1 / L5.1
G6	REMOVED IN 100% CD	
G7	GATE 7: 6' HT. x 13' W. DOUBLE LEAF SWING GATE	SPECIFICATIONS 2 / L5.1
G8	GATE 8: CHAIN LINK TENNIS GATE	SPECIFICATIONS
LE	LANDSCAPE EDGING	SPECIFICATIONS
MC	MOUNTABLE CURB	CIVIL DRAWINGS
PA	PLANTING AREA	
PC	PERIMETER CURB	4-6 / L5.6
PR	PAVER RESTRAINT	8 / L5.0
RB	RUBBER CURB	9 / L5.1
RC	RESET CURB	CIVIL DRAWINGS

SYM	DESCRIPTION	DETAIL
RS	RUBBER SAFETY SURFACING	8,9 / L5.1
R1	* * * GUARDRAIL - PEDESTRIAN	16,17 / L5.0
R2	GUARDRAIL - VEHICULAR	CIVIL DRAWINGS 10 / L5.0
R3	* * * GUARDRAIL - ACCESSIBLE	20,21 / L5.0
R4	* * * RAMP RAIL	18,19 / L5.0
R5	* * * HANDRAIL	13-15 / L5.0
RP	RAISED PLANTER BEDS	SPECIFICATIONS
R	RIP RAP (BELOW BLEACHERS)	SPECIFICATIONS
SB	SCOREBOARD	ARCHITECTURAL DRAWINGS
SS	STRUCTURAL APPROACH SLAB	SEE STRUCTURAL
SI	ENTRY SIGN	13,14 / L5.2
SN	BALL SAFETY NET	SPECIFICATIONS
TD	TRENCH DRAIN	CIVIL DRAWINGS
TR	TRASH & RECYCLING RECEPTACLES	SPECIFICATIONS
TP	TREE PIT AT BIORETENTION	4 / L5.3
B	BOLLARD	CIVIL DRAWINGS
	POLE-MOUNTED PEDESTRIAN LIGHT	ELECTRICAL DRAWINGS
	FIELD LIGHT	ELECTRICAL DRAWINGS
	POLE-MOUNTED STREET LIGHT	ELECTRICAL DRAWINGS
LOW	LIMIT OF WORK	
	MATCHLINE	

WALLS SCHEDULE

SYM	DESCRIPTION	DETAIL
	SEE SHEET 2.7, WALL ENLARGEMENT PLAN	
W1	C.I.P. CONCRETE RETAINING WALL	1,8 / L5.6
W2	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W3	ENTRY SIGN WALL	SEE SHEET L2.3 FOR LOCATION 13,14 / L5.2
W4	REMOVED IN 100% CD	
W5	C.I.P. CONCRETE RETAINING WALL	5-A / L5.5
W6	C.I.P. CONCRETE WALL W/ FORMLINER	3-A / L5.5
W7	C.I.P. CONCRETE WALL W/ FORMLINER	2-A,3-A / L5.5
W8	C.I.P. CONCRETE CHEEK WALL W/ SMOOTH FINISH	2-A,B / L5.5
W9	REMOVED IN 100% CD	
W10	PRECAST AMPHITHEATER BENCHES	7-12 / L5.2, 1-A / L5.5
W11	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W12	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2,3,7 / L5.6
W13	C.I.P. CONCRETE RAMP WALL W/ SMOOTH FINISH	7-A,B / L5.5
W14	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	4-A / L5.4

SYM	DESCRIPTION	DETAIL
	SEE SHEET 2.7, WALL ENLARGEMENT PLAN	
W15	C.I.P. CONCRETE RETAINING CHEEK WALL W/ FORMLINER	4-A,B / L5.4
W16	C.I.P. CONCRETE CHEEKWALL W/ SMOOTH FINISH	4-B / L5.4
W17	C.I.P. CONCRETE FREESTANDING WALL W/ SMOOTH FINISH	2-A / L5.4
W18	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2-A / L5.4
W19	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL
W20	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	3-B.C.D / L5.4
W21	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W22	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W23	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	5-A / L5.4
W24	C.I.P. RETAINING WALL W/ FORMLINER FINISH	3-A,B.C.D / L5.4
W25	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B.C.D / L5.4
W26	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B.C.D / L5.4
W27	C.I.P. RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL



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OWNER

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Project North

PROJECT

FINAL BID PACKAGE

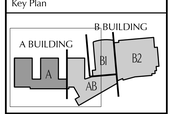
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Materials & Lighting

Key Plan



REVISIONS

No.	Description	Date
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6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY: | JOB NO.: #1611

CKD. BY: | SCALE: 1"=20'-0"

DATE: January 31, 2019

L2.0

MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
AP	THERMO-APPLIED ASPHALT PATTERN	SPECIFICATIONS
BC	BITUMINOUS CONCRETE ROADWAY	CIVIL DRAWINGS
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
CB	COBBLE PAVEMENT	3 / L5.3
CP	CONCRETE PAVEMENT - PEDESTRIAN	1 / L5.0
CPV	CONCRETE PAVEMENT - VEHICULAR	2 / L5.0
UP	UNIT PAVERS	3,5,6 / L5.0
CR	CONCRETE RAMP	7-A,B / L5.5
CS	CONCRETE STEPS	11 / L5.0
PCS	PRECAST CONCRETE STEPS	12 / L5.0
SA	STABILIZED AGGREGATE PAVEMENT	9 / L5.0
ST	SYNTHETIC TURF WITH FIELD MARKINGS	SPECIFICATIONS 1-5 / L2.8
SM	STONE MULCH	SPECIFICATIONS
	DETECTABLE WARNING SURFACE	CIVIL DRAWINGS
EJ	* EXPANSION JOINT	7 / L5.0
B	* * BENCH, PRECAST	1-3 / L5.2
BA1	AMPHITHEATER BENCH, NO WOOD SEAT	7 / L5.2
BA2	AMPHITHEATER BENCH, WOOD SEAT WITH BACK	9,10 / L5.2
BA3	AMPHITHEATER BENCH, BACKLESS WOOD SEAT	11,12 / L5.2
BD	BOLLARD, PRECAST	7 / L5.1

* TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 070001
* * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000
* * * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000 AND 070001

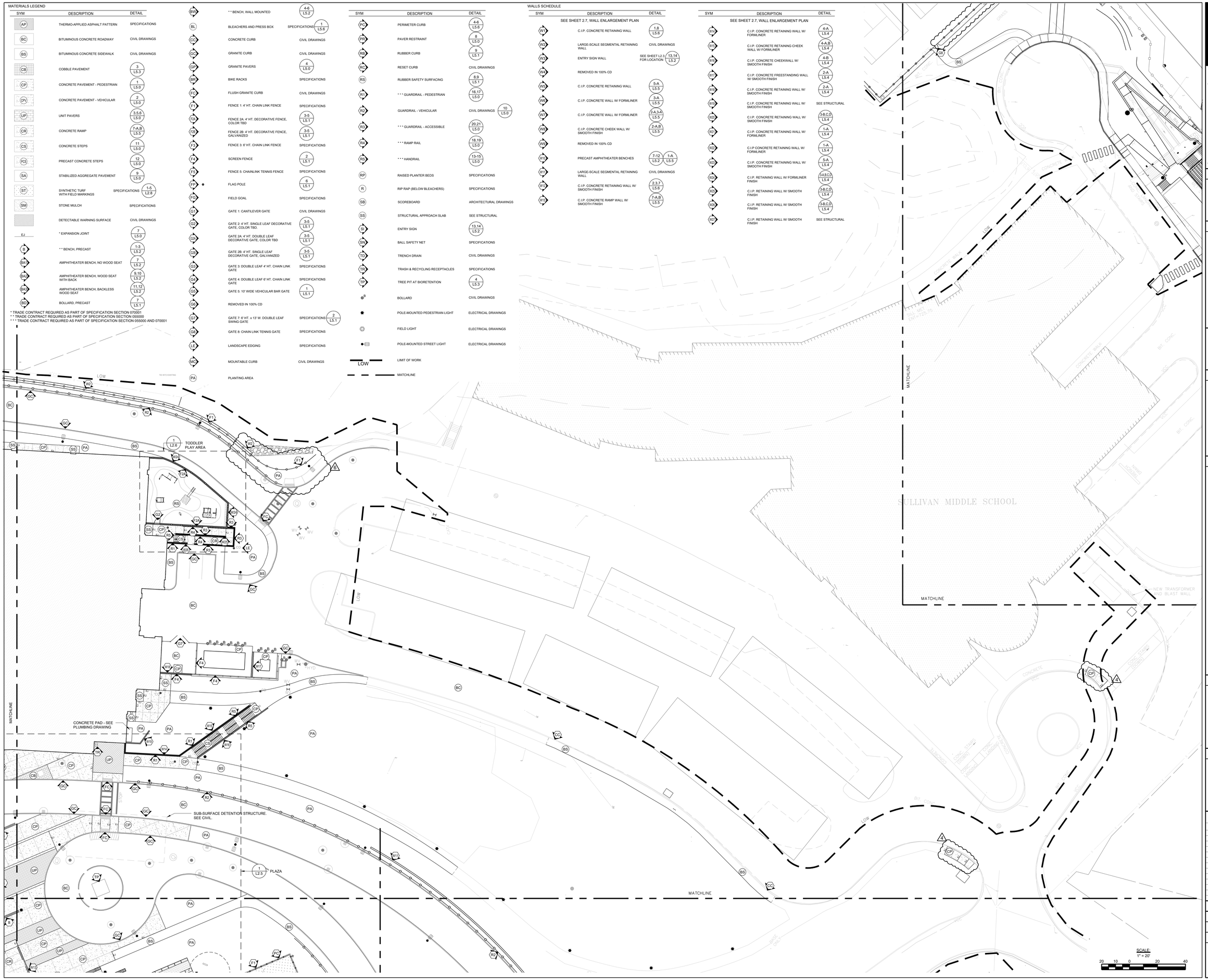
SYM	DESCRIPTION	DETAIL
BW	* * BENCH, WALL MOUNTED	4-6 / L5.2
BL	BLEACHERS AND PRESS BOX	SPECIFICATIONS 1 / L5.6
CC	CONCRETE CURB	CIVIL DRAWINGS
GC	GRANITE CURB	CIVIL DRAWINGS
GP	GRANITE PAVERS	4 / L5.0
BR	BIKE RACKS	SPECIFICATIONS
FD	FLUSH GRANITE CURB	CIVIL DRAWINGS
F1	FENCE 1: 4' HT. CHAIN LINK FENCE	SPECIFICATIONS
F2A	FENCE 2A: 4' HT. DECORATIVE FENCE, COLOR TBD	3-5 / L5.1
F2B	FENCE 2B: 4' HT. DECORATIVE FENCE, GALVANIZED	3-5 / L5.1
F3	FENCE 3: 6' HT. CHAIN LINK FENCE	SPECIFICATIONS
F4	SCREEN FENCE	2 / L5.1
F5	FENCE 5: CHAINLINK TENNIS FENCE	SPECIFICATIONS
FP	FLAG POLE	6 / L5.1
FG	FIELD GOAL	SPECIFICATIONS
G1	GATE 1: CANTILEVER GATE	CIVIL DRAWINGS
G2	GATE 2: 4' HT. SINGLE LEAF DECORATIVE GATE, COLOR TBD.	3-5 / L5.1
G3A	GATE 2A: 4' HT. DOUBLE LEAF DECORATIVE GATE, COLOR TBD	3-5 / L5.1
G3B	GATE 2B: 4' HT. SINGLE LEAF DECORATIVE GATE, GALVANIZED	3-5 / L5.1
G3	GATE 3: DOUBLE LEAF 4' HT. CHAIN LINK GATE	SPECIFICATIONS
G4	GATE 4: DOUBLE LEAF 6' HT. CHAIN LINK GATE	SPECIFICATIONS
G5	GATE 5: 10' WIDE VEHICULAR BAR GATE	1 / L5.1
G6	REMOVED IN 100% CD	
G7	GATE 7: 6' HT. x 13' W. DOUBLE LEAF SWING GATE	SPECIFICATIONS 2 / L5.1
G8	GATE 8: CHAIN LINK TENNIS GATE	SPECIFICATIONS
LE	LANDSCAPE EDGING	SPECIFICATIONS
MC	MOUNTABLE CURB	CIVIL DRAWINGS
PA	PLANTING AREA	

SYM	DESCRIPTION	DETAIL
PC	PERIMETER CURB	4-6 / L5.6
PR	PAVER RESTRAINT	8 / L5.0
RB	RUBBER CURB	9 / L5.1
RC	RESET CURB	CIVIL DRAWINGS
RS	RUBBER SAFETY SURFACING	8,9 / L5.1
R1	* * * GUARDRAIL - PEDESTRIAN	16,17 / L5.0
R2	GUARDRAIL - VEHICULAR	CIVIL DRAWINGS 10 / L5.0
R3	* * * GUARDRAIL - ACCESSIBLE	20,21 / L5.0
R4	* * * RAMP RAIL	18,19 / L5.0
R5	* * * HANDRAIL	13-19 / L5.0
RP	RAISED PLANTER BEDS	SPECIFICATIONS
R	RIP RAP (BELOW BLEACHERS)	SPECIFICATIONS
SB	SCOREBOARD	ARCHITECTURAL DRAWINGS
SS	STRUCTURAL APPROACH SLAB	SEE STRUCTURAL
SI	ENTRY SIGN	13,14 / L5.2
SN	BALL SAFETY NET	SPECIFICATIONS
TD	TRENCH DRAIN	CIVIL DRAWINGS
TR	TRASH & RECYCLING RECEPTACLES	SPECIFICATIONS
TP	TREE PIT AT BIORETENTION	4 / L5.3
B	BOLLARD	CIVIL DRAWINGS
	POLE-MOUNTED PEDESTRIAN LIGHT	ELECTRICAL DRAWINGS
	FIELD LIGHT	ELECTRICAL DRAWINGS
	POLE-MOUNTED STREET LIGHT	ELECTRICAL DRAWINGS
LOW	LIMIT OF WORK	
	MATCHLINE	

WALLS SCHEDULE

SYM	DESCRIPTION	DETAIL
	SEE SHEET 2.7, WALL ENLARGEMENT PLAN	
W1	C.I.P. CONCRETE RETAINING WALL	1,8 / L5.6
W2	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W3	ENTRY SIGN WALL	SEE SHEET L2.3 FOR LOCATION 13,14 / L5.2
W4	REMOVED IN 100% CD	
W5	C.I.P. CONCRETE RETAINING WALL	5-A / L5.5
W6	C.I.P. CONCRETE WALL W/ FORMLINER	3-A / L5.5
W7	C.I.P. CONCRETE WALL W/ FORMLINER	2-A,3-A / L5.5
W8	C.I.P. CONCRETE CHEEK WALL W/ SMOOTH FINISH	2-A,B / L5.5
W9	REMOVED IN 100% CD	
W10	PRECAST AMPHITHEATER BENCHES	7-12 / L5.2 1-A / L5.5
W11	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W12	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2,3,7 / L5.6
W13	C.I.P. CONCRETE RAMP WALL W/ SMOOTH FINISH	7-A,B / L5.5

SYM	DESCRIPTION	DETAIL
	SEE SHEET 2.7, WALL ENLARGEMENT PLAN	
W14	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	4-A / L5.4
W15	C.I.P. CONCRETE RETAINING CHEEK WALL W/ FORMLINER	4-A,B / L5.4
W16	C.I.P. CONCRETE CHEEKWALL W/ SMOOTH FINISH	4-B / L5.4
W17	C.I.P. CONCRETE FREESTANDING WALL W/ SMOOTH FINISH	2-A / L5.4
W18	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2-A / L5.4
W19	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL
W20	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W21	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W22	C.I.P CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W23	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	5-A / L5.4
W24	C.I.P. RETAINING WALL W/ FORMLINER FINISH	3-A,B,C,D / L5.4
W25	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W26	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W27	C.I.P. RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL



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OWNER
Worcester Public Schools
Worcester, MA

Project North

PROJECT
FINAL BID PACKAGE
South High Community School
170 Apricot Street, Worcester, MA 01603

TITLE
Materials & Lighting

Key Plan
A BUILDING
B BUILDING

REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:
DWN. BY:
JOB NO: #1611
CKD. BY:
SCALE: 1"=20'-0"
DATE: January 31, 2019

L2.1

MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
AP	THERMO-APPLIED ASPHALT PATTERN	SPECIFICATIONS
BC	BITUMINOUS CONCRETE ROADWAY	CIVIL DRAWINGS
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
CB	COBBLE PAVEMENT	3 / L5.3
CP	CONCRETE PAVEMENT - PEDESTRIAN	1 / L5.0
CPV	CONCRETE PAVEMENT - VEHICULAR	2 / L5.0
UP	UNIT PAVERS	3,5,6 / L5.0
CR	CONCRETE RAMP	7-A,B / L5.5
CS	CONCRETE STEPS	11 / L5.0
PCS	PRECAST CONCRETE STEPS	12 / L5.0
SA	STABILIZED AGGREGATE PAVEMENT	9 / L5.0
ST	SYNTHETIC TURF WITH FIELD MARKINGS	SPECIFICATIONS 1-5 / L2.8
SM	STONE MULCH	SPECIFICATIONS
	DETECTABLE WARNING SURFACE	CIVIL DRAWINGS
EJ	* EXPANSION JOINT	7 / L5.0
B	* * BENCH, PRECAST	1-3 / L5.2
BA1	AMPHITHEATER BENCH, NO WOOD SEAT	7 / L5.2
BA2	AMPHITHEATER BENCH, WOOD SEAT WITH BACK	9,10 / L5.2
BA3	AMPHITHEATER BENCH, BACKLESS WOOD SEAT	11,12 / L5.2
BD	BOLLARD, PRECAST	7 / L5.1
BW	* * BENCH, WALL MOUNTED	4-6 / L5.2
BL	BLEACHERS AND PRESS BOX	SPECIFICATIONS 1 / L5.6
CC	CONCRETE CURB	CIVIL DRAWINGS
GC	GRANITE CURB	CIVIL DRAWINGS
GP	GRANITE PAVERS	4 / L5.0
BR	BIKE RACKS	SPECIFICATIONS
FC	FLUSH GRANITE CURB	CIVIL DRAWINGS
F1	FENCE 1: 4' HT. CHAIN LINK FENCE	SPECIFICATIONS
F2A	FENCE 2A: 4' HT. DECORATIVE FENCE, COLOR TBD	3-5 / L5.1

SYM	DESCRIPTION	DETAIL
F2B	FENCE 2B: 4' HT. DECORATIVE FENCE, GALVANIZED	3-5 / L5.1
F3	FENCE 3: 6' HT. CHAIN LINK FENCE	SPECIFICATIONS
F4	SCREEN FENCE	2 / L5.1
F5	FENCE 5: CHAINLINK TENNIS FENCE	SPECIFICATIONS
FP	FLAG POLE	6 / L5.1
FG	FIELD GOAL	SPECIFICATIONS
G1	GATE 1: CANTILEVER GATE	CIVIL DRAWINGS
G2	GATE 2: 4' HT. SINGLE LEAF DECORATIVE GATE, COLOR TBD.	3-5 / L5.1
G2A	GATE 2A: 4' HT. DOUBLE LEAF DECORATIVE GATE, COLOR TBD	3-5 / L5.1
G2B	GATE 2B: 4' HT. SINGLE LEAF DECORATIVE GATE, GALVANIZED	3-5 / L5.1
G3	GATE 3: DOUBLE LEAF 4' HT. CHAIN LINK GATE	SPECIFICATIONS
G4	GATE 4: DOUBLE LEAF 6' HT. CHAIN LINK GATE	SPECIFICATIONS
G5	GATE 5: 10' WIDE VEHICULAR BAR GATE	1 / L5.1
G6	REMOVED IN 100% CD	
G7	GATE 7: 6' HT. x 13' W. DOUBLE LEAF SWING GATE	SPECIFICATIONS 2 / L5.1

SYM	DESCRIPTION	DETAIL
GB	GATE 8: CHAIN LINK TENNIS GATE	SPECIFICATIONS
LE	LANDSCAPE EDGING	SPECIFICATIONS
MC	MOUNTABLE CURB	CIVIL DRAWINGS
PA	PLANTING AREA	
PC	PERIMETER CURB	4-6 / L5.6
PR	PAVER RESTRAINT	8 / L5.0
RB	RUBBER CURB	9 / L5.1
RC	RESET CURB	CIVIL DRAWINGS
RS	RUBBER SAFETY SURFACING	8,9 / L5.1

SYM	DESCRIPTION	DETAIL
R1	* * * GUARDRAIL - PEDESTRIAN	16,17 / L5.0
R2	GUARDRAIL - VEHICULAR	CIVIL DRAWINGS 1D / L5.0
R3	* * * GUARDRAIL - ACCESSIBLE	20,21 / L5.0
R4	* * * RAMP RAIL	18,19 / L5.0
R5	* * * HANDRAIL	13-15 / L5.0
RP	RAISED PLANTER BEDS	SPECIFICATIONS
R	RIP RAP (BELOW BLEACHERS)	SPECIFICATIONS
SB	SCOREBOARD	ARCHITECTURAL DRAWINGS

SYM	DESCRIPTION	DETAIL
SS	STRUCTURAL APPROACH SLAB	SEE STRUCTURAL
SI	ENTRY SIGN	13,14 / L5.2
SN	BALL SAFETY NET	SPECIFICATIONS
TD	TRENCH DRAIN	CIVIL DRAWINGS
TR	TRASH & RECYCLING RECEPTACLES	SPECIFICATIONS
TP	TREE PIT AT BIORETENTION	4 / L5.3
B	BOLLARD	CIVIL DRAWINGS
	POLE-MOUNTED PEDESTRIAN LIGHT	ELECTRICAL DRAWINGS
	FIELD LIGHT	ELECTRICAL DRAWINGS
	POLE-MOUNTED STREET LIGHT	ELECTRICAL DRAWINGS
LOW	LIMIT OF WORK	
	MATCHLINE	

WALLS SCHEDULE

SYM	DESCRIPTION	DETAIL
	SEE SHEET 2.7, WALL ENLARGEMENT PLAN	
W1	C.I.P. CONCRETE RETAINING WALL	1,8 / L5.6
W2	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W3	ENTRY SIGN WALL	SEE SHEET L2.3 FOR LOCATION 13,14 / L5.2
W4	REMOVED IN 100% CD	
W5	C.I.P. CONCRETE RETAINING WALL	5-A / L5.5
W6	C.I.P. CONCRETE WALL W/ FORMLINER	3-A / L5.5
W7	C.I.P. CONCRETE WALL W/ FORMLINER	2-A,3-A / L5.5
W8	C.I.P. CONCRETE CHEEK WALL W/ SMOOTH FINISH	2-A,B / L5.5
W9	REMOVED IN 100% CD	
W10	PRECAST AMPHITHEATER BENCHES	7-12 / L5.2 1-A / L5.5
W11	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W12	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2,3,7 / L5.6
W13	C.I.P. CONCRETE RAMP WALL W/ SMOOTH FINISH	7-A,B / L5.5
W14	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	4-A / L5.4

SYM	DESCRIPTION	DETAIL
	SEE SHEET 2.7, WALL ENLARGEMENT PLAN	
W15	C.I.P. CONCRETE RETAINING CHEEK WALL W/ FORMLINER	4-A,B / L5.4
W16	C.I.P. CONCRETE CHEEKWALL W/ SMOOTH FINISH	4-B / L5.4
W17	C.I.P. CONCRETE FREESTANDING WALL W/ SMOOTH FINISH	2-A / L5.4
W18	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2-A / L5.4
W19	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL
W20	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W21	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W22	C.I.P CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W23	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	5-A / L5.4
W24	C.I.P. RETAINING WALL W/ FORMLINER FINISH	3-A,B,C,D / L5.4
W25	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W26	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W27	C.I.P. RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL

* TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 070001
* * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000
* * * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000 AND 070001

SCALE: 1" = 20'
20 10 0 20 40

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Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Materials & Lighting

Key Plan

A BUILDING
B BUILDING
A
B1
B2
AB

REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1.1D	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

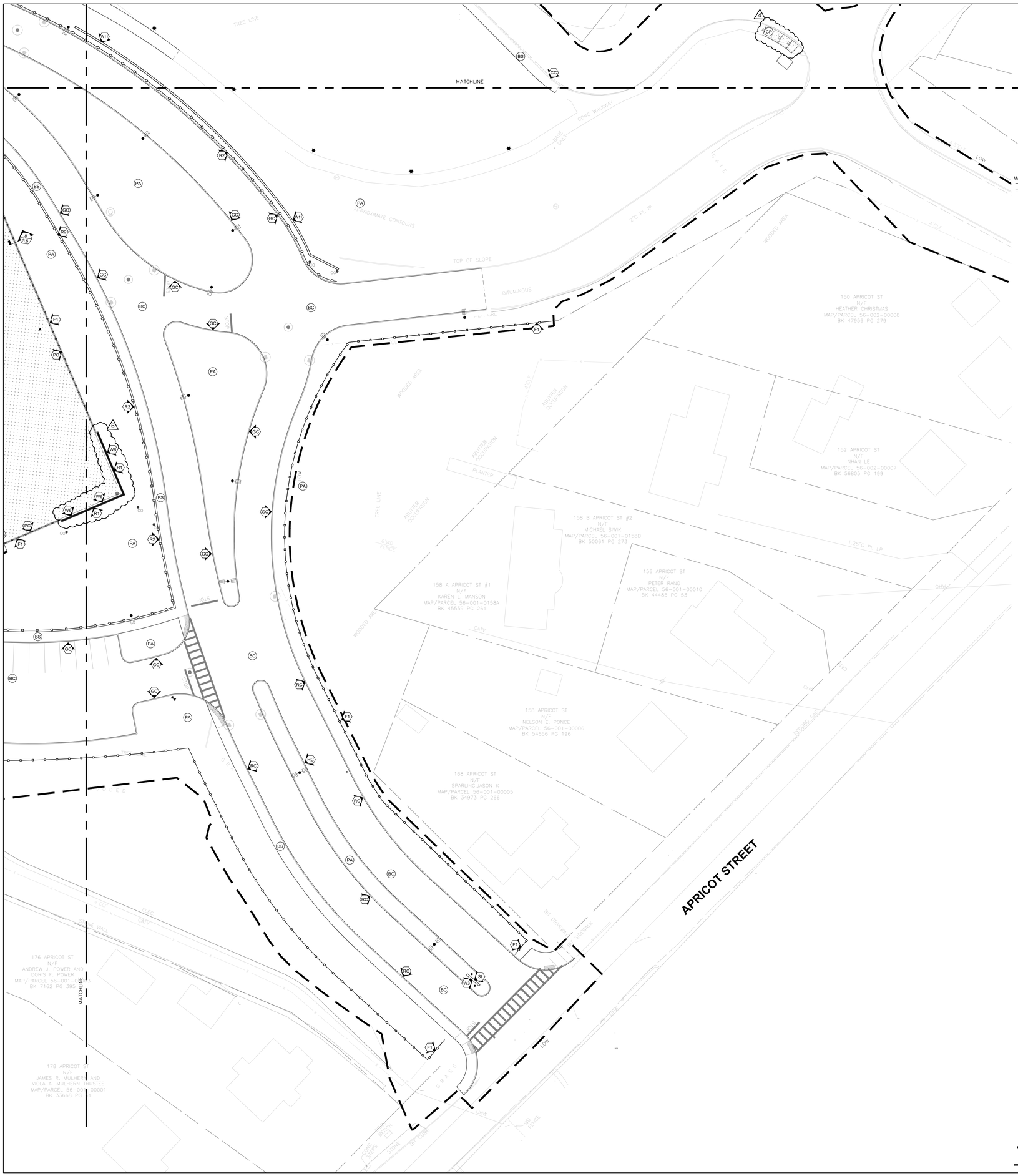
FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1"=20'-0"

DATE: January 31, 2019

L2.2



MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
B	* * BENCH, PRECAST	1-3 / L5.2
BA1	AMPHITHEATER BENCH, NO WOOD SEAT	7 / L5.2
BA2	AMPHITHEATER BENCH, WOOD SEAT WITH BACK	9,10 / L5.2
BA3	AMPHITHEATER BENCH, BACKLESS WOOD SEAT	11,12 / L5.2
BD	BOLLARD, PRECAST	7 / L5.1
BW	* * BENCH, WALL MOUNTED	4-6 / L5.2
BL	BLEACHERS AND PRESS BOX	SPECIFICATIONS 1 / L5.6
CC	CONCRETE CURB	CIVIL DRAWINGS
GC	GRANITE CURB	CIVIL DRAWINGS
GP	GRANITE PAVERS	4 / L5.0
BR	BIKE RACKS	SPECIFICATIONS
FC	FLUSH GRANITE CURB	CIVIL DRAWINGS
F1	FENCE 1: 4' HT. CHAIN LINK FENCE	SPECIFICATIONS
F2A	FENCE 2A: 4' HT. DECORATIVE FENCE, COLOR TBD	3-5 / L5.1
F2B	FENCE 2B: 4' HT. DECORATIVE FENCE, GALVANIZED	3-5 / L5.1
F3	FENCE 3: 6' HT. CHAIN LINK FENCE	SPECIFICATIONS
F4	SCREEN FENCE	2 / L5.1
F5	FENCE 5: CHAINLINK TENNIS FENCE	SPECIFICATIONS
FP	FLAG POLE	6 / L5.1
FG	FIELD GOAL	SPECIFICATIONS
G1	GATE 1: CANTILEVER GATE	CIVIL DRAWINGS
G2	GATE 2: 4' HT. SINGLE LEAF DECORATIVE GATE, COLOR TBD.	3-5 / L5.1
G2A	GATE 2A: 4' HT. DOUBLE LEAF DECORATIVE GATE, COLOR TBD	3-5 / L5.1
G2B	GATE 2B: 4' HT. SINGLE LEAF DECORATIVE GATE, GALVANIZED	3-5 / L5.1
G3	GATE 3: DOUBLE LEAF 4' HT. CHAIN LINK GATE	SPECIFICATIONS
G4	GATE 4: DOUBLE LEAF 6' HT. CHAIN LINK GATE	SPECIFICATIONS
G5	GATE 5: 10' WIDE VEHICULAR BAR GATE	1 / L5.1
G6	REMOVED IN 100% CD	
G7	GATE 7: 6' HT. x 13' W. DOUBLE LEAF SWING GATE	SPECIFICATIONS 2 / L5.1
G8	GATE 8: CHAIN LINK TENNIS GATE	SPECIFICATIONS
LE	LANDSCAPE EDGING	SPECIFICATIONS
MC	MOUNTABLE CURB	CIVIL DRAWINGS
PA	PLANTING AREA	
PC	PERIMETER CURB	4-6 / L5.6
PR	PAVER RESTRAINT	8 / L5.0
RB	RUBBER CURB	9 / L5.1
RC	RESET CURB	CIVIL DRAWINGS
RS	RUBBER SAFETY SURFACING	8,9 / L5.1
R1	* * * GUARDRAIL - PEDESTRIAN	16,17 / L5.0
R2	GUARDRAIL - VEHICULAR	CIVIL DRAWINGS 10 / L5.0
R3	* * * GUARDRAIL - ACCESSIBLE	20,21 / L5.0
R4	* * * RAMP RAIL	18,19 / L5.0
R5	* * * HANDRAIL	13-15 / L5.0
RP	RAISED PLANTER BEDS	SPECIFICATIONS
R	RIP RAP (BELOW BLEACHERS)	SPECIFICATIONS
SB	SCOREBOARD	ARCHITECTURAL DRAWINGS
SS	STRUCTURAL APPROACH SLAB	SEE STRUCTURAL
SI	ENTRY SIGN	13,14 / L5.2
SN	BALL SAFETY NET	SPECIFICATIONS
TD	TRENCH DRAIN	CIVIL DRAWINGS
TR	TRASH & RECYCLING RECEPTACLES	SPECIFICATIONS
TP	TREE PIT AT BIORETENTION	4 / L5.3
B	BOLLARD	CIVIL DRAWINGS
	POLE-MOUNTED PEDESTRIAN LIGHT	ELECTRICAL DRAWINGS
	FIELD LIGHT	ELECTRICAL DRAWINGS
	POLE-MOUNTED STREET LIGHT	ELECTRICAL DRAWINGS
LOW	LIMIT OF WORK	
	MATCHLINE	

MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
AP	THERMO-APPLIED ASPHALT PATTERN	SPECIFICATIONS
BC	BITUMINOUS CONCRETE ROADWAY	CIVIL DRAWINGS
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
CB	COBBLE PAVEMENT	3 / L5.3
CP	CONCRETE PAVEMENT - PEDESTRIAN	1 / L5.0
CV	CONCRETE PAVEMENT - VEHICULAR	2 / L5.0
UP	UNIT PAVERS	3,5,6 / L5.0
CR	CONCRETE RAMP	7-A,B / L5.5
CS	CONCRETE STEPS	11 / L5.0
PCS	PRECAST CONCRETE STEPS	12 / L5.0
SA	STABILIZED AGGREGATE PAVEMENT	9 / L5.0
ST	SYNTHETIC TURF WITH FIELD MARKINGS	SPECIFICATIONS 1-5 / L2.8
SM	STONE MULCH	SPECIFICATIONS
	DETECTABLE WARNING SURFACE	CIVIL DRAWINGS
EJ	* EXPANSION JOINT	7 / L5.0

WALLS SCHEDULE

SYM	DESCRIPTION	DETAIL
	SEE SHEET 2.7, WALL ENLARGEMENT PLAN	
W1	C.I.P. CONCRETE RETAINING WALL	1,8 / L5.6
W2	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W3	ENTRY SIGN WALL	SEE SHEET L2.3 FOR LOCATION 13,14 / L5.2
W4	REMOVED IN 100% CD	
W5	C.I.P. CONCRETE RETAINING WALL	5-A / L5.5
W6	C.I.P. CONCRETE WALL W/ FORMLINER	3-A / L5.5
W7	C.I.P. CONCRETE WALL W/ FORMLINER	2-A,3-A / L5.5
W8	C.I.P. CONCRETE CHEEK WALL W/ SMOOTH FINISH	2-A,B / L5.5
W9	REMOVED IN 100% CD	
W10	PRECAST AMPHITHEATER BENCHES	7-12 / L5.2, 1-A / L5.5
W11	LARGE-SCALE SEGMENTAL RETAINING WALL	CIVIL DRAWINGS
W12	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2,3,7 / L5.6
W13	C.I.P. CONCRETE RAMP WALL W/ SMOOTH FINISH	7-A,B / L5.5
W14	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	4-A / L5.4
W15	C.I.P. CONCRETE RETAINING CHEEK WALL W/ FORMLINER	4-A,B / L5.4
W16	C.I.P. CONCRETE CHEEKWALL W/ SMOOTH FINISH	4-B / L5.4
W17	C.I.P. CONCRETE FREESTANDING WALL W/ SMOOTH FINISH	2-A / L5.4
W18	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	2-A / L5.4
W19	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL
W20	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W21	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W22	C.I.P CONCRETE RETAINING WALL W/ FORMLINER	1-A / L5.4
W23	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	5-A / L5.4
W24	C.I.P. RETAINING WALL W/ FORMLINER FINISH	5-A,B,C,D / L5.4
W25	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W26	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W27	C.I.P. RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL

* TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 070001
* * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000
* * * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000 AND 070001

SCALE:
1" = 20'
20 10 0 20 40

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OWNER

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Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

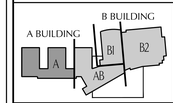
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Materials & Lighting

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

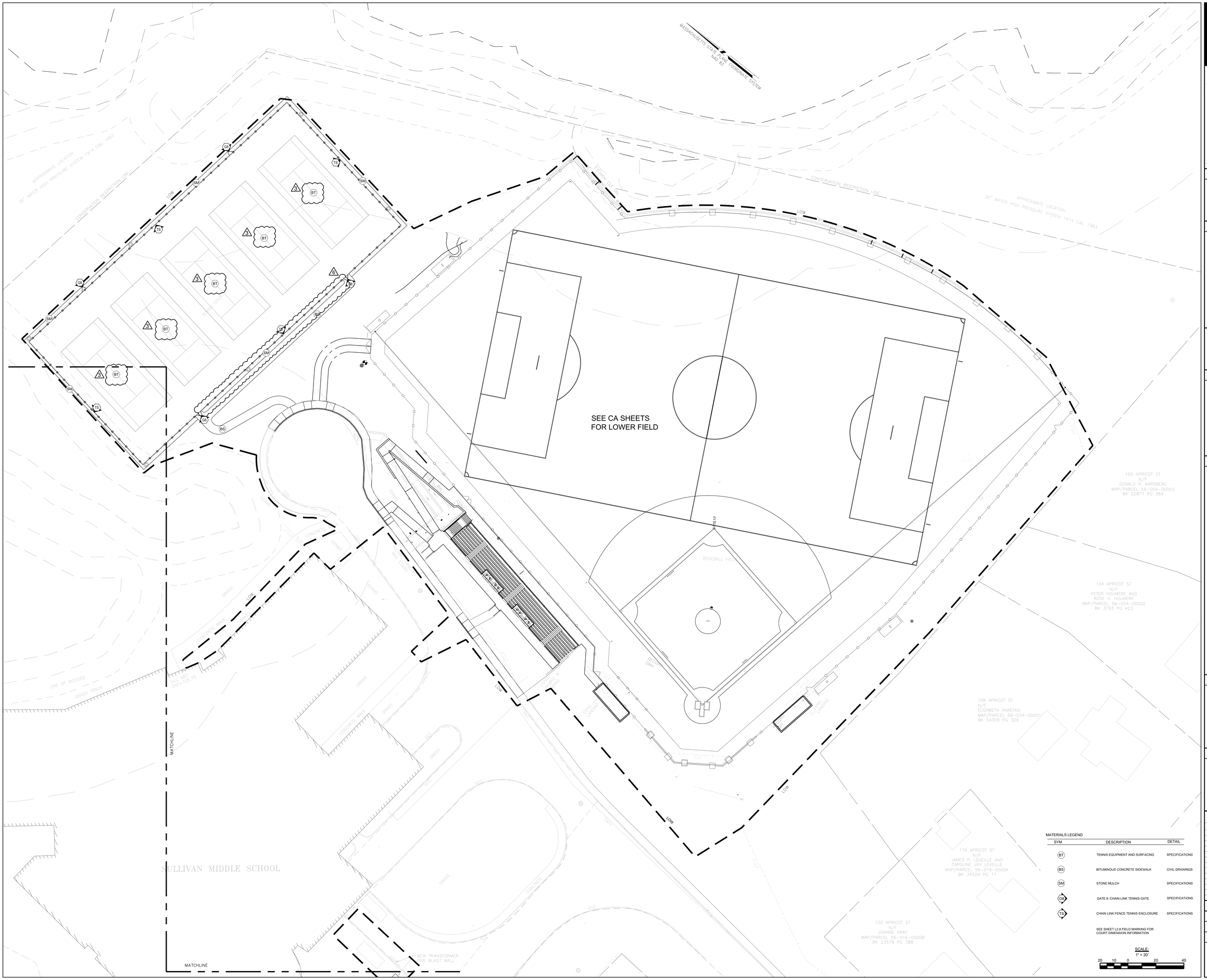
FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1"=20'-0"

DATE: January 31, 2019

L2.3



MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
BT	TENNIS EQUIPMENT AND SURFACING	SPECIFICATIONS
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
SM	STONE MULCH	SPECIFICATIONS
GB	GATE 8: CHAIN LINK TENNIS GATE	SPECIFICATIONS
TS	CHAIN LINK FENCE TENNIS ENCLOSURE	SPECIFICATIONS

SEE SHEET L2.8 FIELD MARKING FOR COURT DIMENSION INFORMATION

SCALE:
1" = 20'

20 10 0 20 40

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

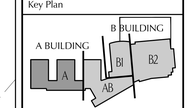
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Materials & Lighting

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

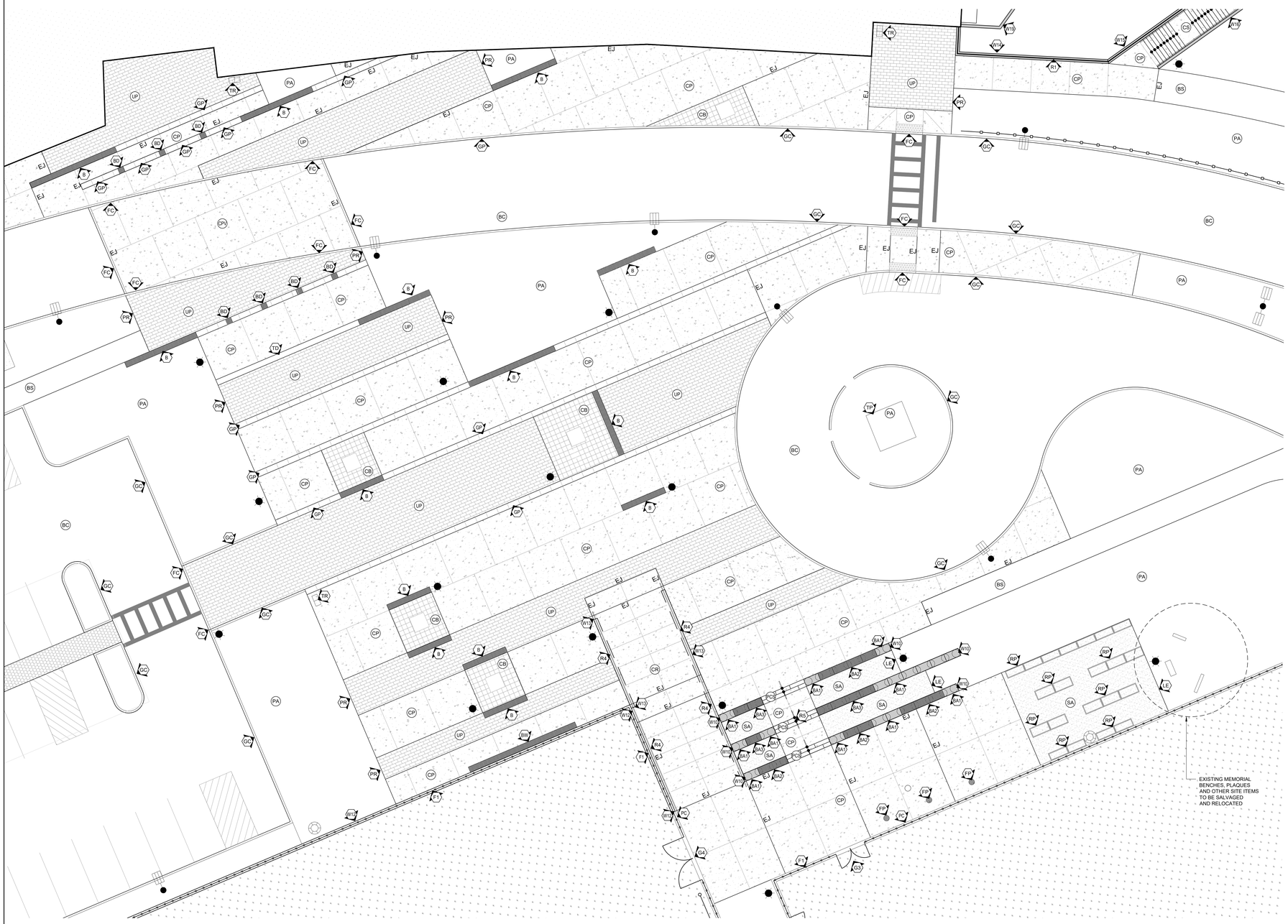
FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1"=20'-0"

DATE: January 31, 2019

L2.4



MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
BC	BITUMINOUS CONCRETE ROADWAY	CIVIL DRAWINGS
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
CB	COBBLE	3 / L5.3
CP	CONCRETE PAVEMENT - PEDESTRIAN	1 / L5.0
CPV	CONCRETE PAVEMENT - VEHICULAR	2 / L5.0
UP	UNIT PAVERS	3,5,6 / L5.0
CR	CONCRETE RAMP	7-A,B / L5.5
PCS	PRECAST CONCRETE STEPS	12 / L5.0
	DETECTABLE WARNING SURFACE	CIVIL DRAWINGS
EJ	* EXPANSION JOINT	7 / L5.0
B	BENCH, PRECAST	1-3 / L5.2
BA1	AMPHITHEATER BENCH, NO WOOD SEAT	7 / L5.2 1-A / L5.5
BA2	AMPHITHEATER BENCH, WOOD SEAT WITH BACK	9,10 / L5.2 1-A / L5.5
BA3	AMPHITHEATER BENCH, BACKLESS WOOD SEAT	11,12 / L5.2 1-A / L5.5
BD	BOLLARD, PRECAST	7 / L5.1
BW	BENCH, WALL MOUNTED	4-6 / L5.2
GC	GRANITE CURB	CIVIL DRAWINGS
GP	GRANITE PAVERS	4 / L5.0
FC	FLUSH GRANITE CURB	CIVIL DRAWINGS
F1	FENCE 1: 4' HT. CHAIN LINK FENCE	SPECIFICATIONS
FP	FLAG POLE	6 / L5.1
G3	GATE 3: DOUBLE 4' HT. CHAIN LINK GATE	SPECIFICATIONS
G4	GATE 4: DOUBLE 6' HT. CHAIN LINK GATE	SPECIFICATIONS
LE	LANDSCAPE EDGING	SPECIFICATIONS
PA	PLANTING AREA	
PC	PERIMETER CURB	4-6 / L5.6
PR	PAVER RESTRAINT	8 / L5.0
R1	GUARDRAIL - PEDESTRIAN	16,17 / L5.0
R2	GUARDRAIL - VEHICULAR	CIVIL DRAWINGS 10 / L5.0
R4	RAMP RAIL	18,19 / L5.0
R5	HAND RAIL	13-15 / L5.0
RP	RAISED PLANTER BEDS	SPECIFICATIONS
TD	TRENCH DRAIN	SEE CIVIL
TP	TREE PIT AT BIO RETENTION	4 / L5.3
TR	TRASH & RECYCLING RECEPTACLES	SPECIFICATIONS
SA	STABILIZED AGGREGATE	9 / L5.0
	POLE-MOUNTED PEDESTRIAN LIGHT	ELECTRICAL DRAWINGS
	FIELD LIGHT	ELECTRICAL DRAWINGS
	POLE-MOUNTED STREET LIGHT	ELECTRICAL DRAWINGS

WALLS SCHEDULE

SYM	DESCRIPTION	DETAIL
W10	PRECAST AMPHITEATER BENCHES	7-12 / L5.2 1-A / L5.5
W12	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH AT FOOTBALL FIELD	2,3,7 / L5.6
W13	C.I.P. CONCRETE RAMP WALL W/ SMOOTH FINISH	7-A,B / L5.5
W14	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER	4-A / L5.4
W15	C.I.P. CONCRETE CHEEKWALL W/ FORMLINER	4-A,B / L5.4
W16	C.I.P. CONCRETE CHEEKWALL W/ SMOOTH FINISH	4-B / L5.4
W19	C.I.P. CONCRETE RETAINING WALL W/ SMOOTH FINISH	SEE STRUCTURAL

* TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 070001
* * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000
* * * TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 055000 AND 070001

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Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

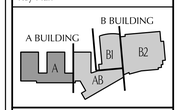
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Plaza Enlargement Materials

Key Plan



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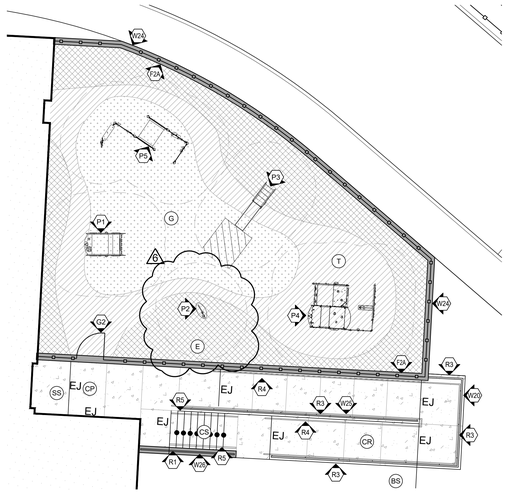
FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1"= 10'-0"

DATE: January 31, 2019

L2.5



1 TODDLER PLAY AREA
1/8" = 1'-0"

MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
CP	CONCRETE PAVEMENT - PEDESTRIAN	1 / L5.0
CR	CONCRETE RAMP	7-A,B / L5.5
CS	CONCRETE STAIRS	11 / L5.0
EJ	* EXPANSION JOINT	7 / L5.0
F2A	FENCE 2A: 4' HT. DECORATIVE FENCE, COLOR TBD	3-5 / L5.1
G2	GATE 2: 4' HT. SINGLE LEAF DECORATIVE GATE, COLOR TBD	3-5 / L5.1
G	RUBBER SAFETY SURFACING - BRIGHT GREEN	8,9 / L5.1
T	RUBBER SAFETY SURFACING - TEAL	8,9 / L5.1
E	RUBBER SAFETY SURFACING - EGGSHELL	8,9 / L5.1
SS	STRUCTURAL APPROACH SLAB	SEE STRUCTURAL
R1	GUARDRAIL - PEDESTRIAN	16,17 / L5.0
R3	GUARDRAIL - ACCESSIBLE	20,21 / L5.0
R4	RAMP RAIL	18,19 / L5.0
R5	HANDRAIL	13-15 / L5.0
W2	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W2	C.I.P. RETAINING WALL W/ FORMLINER FINISH	3-A,B,C,D / L5.4
W2	C.I.P. RETAINING WALL W/ SMOOTH FINISH	3-B,C,D / L5.4
W2	C.I.P. RETAINING WALL W/ FORMLINER FINISH	3-B,C,D / L5.4

PLAYGROUND EQUIPMENT

SYM	DESCRIPTION	DETAIL
P1	COUPE DELUXE	SPECIFICATIONS
P2	B ELEPHANT	SPECIFICATIONS
P3	TREEHOUSE SLIDE	SPECIFICATIONS
P4	HOME & GARDEN LABYRINTH	SPECIFICATIONS
P5	TALK & TUMBLE	SPECIFICATIONS

* TRADE CONTRACT REQUIRED AS PART OF SPECIFICATION SECTION 070001
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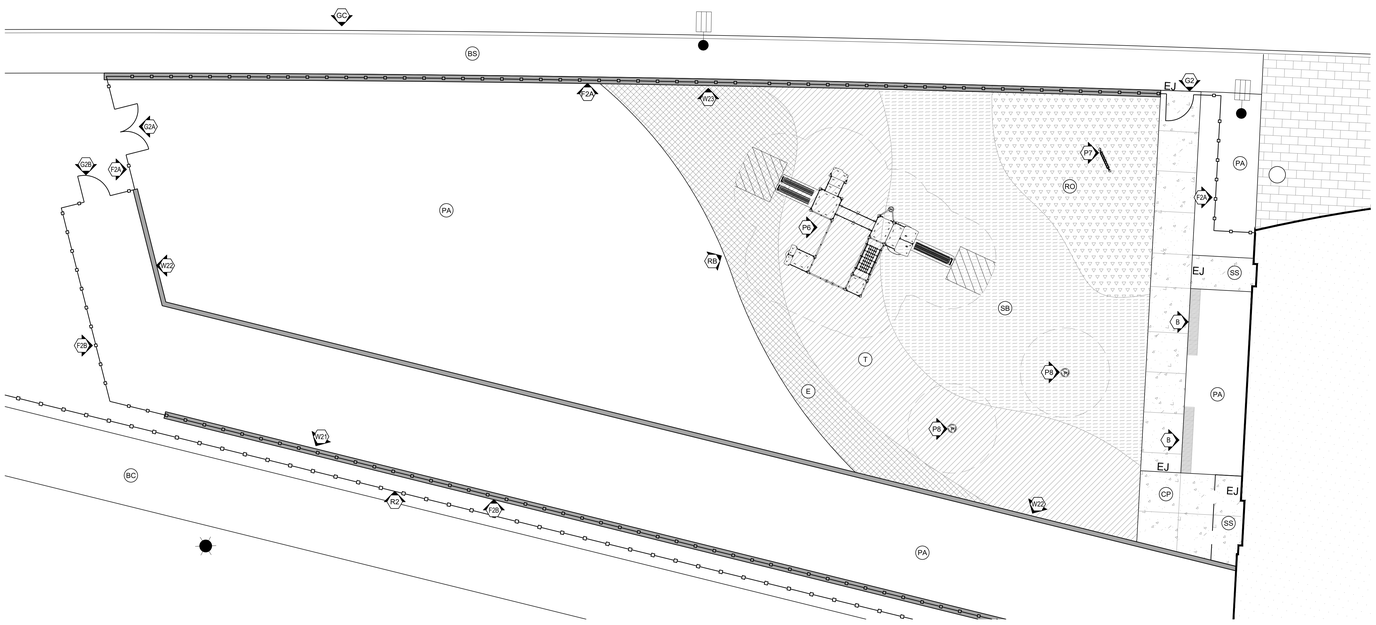

2 PRE-K PLAY AREA
1/8" = 1'-0"

MATERIALS LEGEND

SYM	DESCRIPTION	DETAIL
BC	BITUMINOUS CONCRETE ROADWAY	CIVIL DRAWINGS
BS	BITUMINOUS CONCRETE SIDEWALK	CIVIL DRAWINGS
CP	CONCRETE PAVEMENT - PEDESTRIAN	1 / L5.0
EJ	* EXPANSION JOINT	7 / L5.0
B	BENCH, PRECAST	1-3 / L5.2
GC	GRANITE CURB	CIVIL DRAWINGS
F2A	FENCE 2A: 4' HT. DECORATIVE FENCE, COLOR TBD	3-5 / L5.1
F2B	FENCE 2B: 4' HT. DECORATIVE FENCE, GALVANIZED	3-5 / L5.1
G2	GATE 2: SINGLE LEAF 4' HT. DECORATIVE FENCE, COLOR TBD	3-5 / L5.1
G2A	GATE 2A: DOUBLE LEAF 4' HT. DECORATIVE GATE, COLOR TBD	3-5 / L5.1
G2B	GATE 2B: 4' HT. SINGLE LEAF DECORATIVE GATE, GALVANIZED	3-5 / L5.1
PA	PLANTING AREA	
RB	RUBBER CURB	9 / L5.1
R2	GUARDRAIL - VEHICULAR	CIVIL DRAWINGS 10 / L5.0
RO	RUBBER SAFETY SURFACING - ROYAL BLUE	8,9 / L5.1
SB	RUBBER SAFETY SURFACING - SKY BLUE	8,9 / L5.1
T	RUBBER SAFETY SURFACING - TEAL	8,9 / L5.1
E	RUBBER SAFETY SURFACING - EGGSHELL	8,9 / L5.1
SS	STRUCTURAL APPROACH SLAB	SEE STRUCTURAL

WALLS SCHEDULE

SYM	DESCRIPTION	DETAIL
W2	C.I.P. CONCRETE RETAINING WALL W/ FORMLINER AT RAMP/WALKWAY	1-A / L5.4
W2	C.I.P CONCRETE RETAINING WALL W/ FORMLINER AT PRE-K PLAYRGROUND	1-A / L5.4
W2	C.I.P. RETAINING WALL W/ SMOOTH FINISH AT PRE-K PLAYGROUND	5-A / L5.4

PLAYGROUND EQUIPMENT

SYM	DESCRIPTION	DETAIL
P6	FOUR TOWER, PHYSICAL, ADA STAIRS, PLASTIC SLIDE	SPECIFICATIONS
P7	MUSIC PLAY PANEL	SPECIFICATIONS
P8	JUNIOR SPICA	SPECIFICATIONS

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FINAL BID PACKAGE

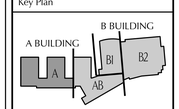
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Playground Enlargement Materials

Key Plan



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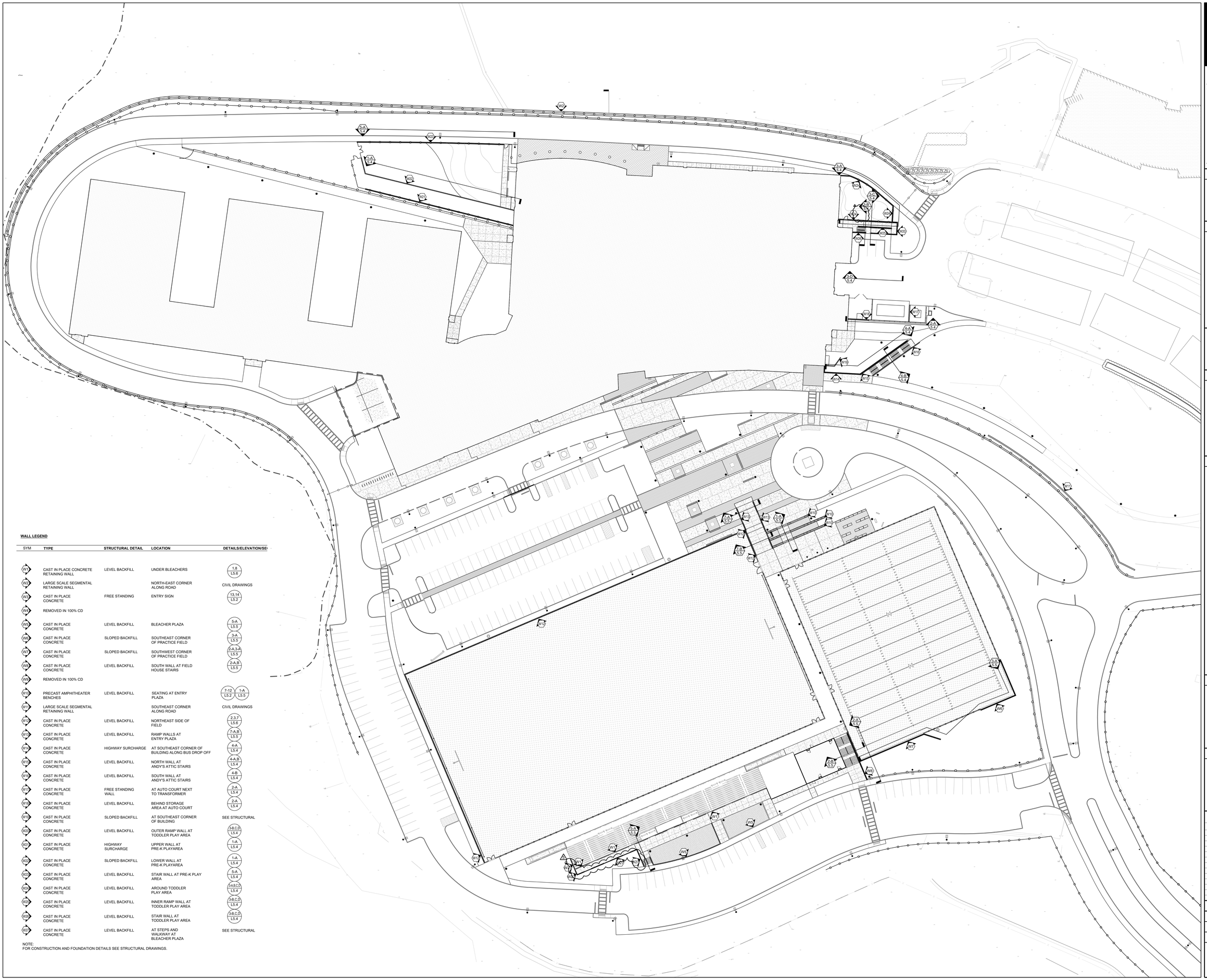
FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1/8"=1'-0"

DATE: January 31, 2019

L2.6



WALL LEGEND

SYM	TYPE	STRUCTURAL DETAIL	LOCATION	DETAILS/ELEVATION/SE
W1	CAST IN PLACE CONCRETE RETAINING WALL	LEVEL BACKFILL	UNDER BLEACHERS	1,8 / L5.6
W2	LARGE SCALE SEGMENTAL RETAINING WALL		NORTH-EAST CORNER ALONG ROAD	CIVIL DRAWINGS
W3	CAST IN PLACE CONCRETE	FREE STANDING	ENTRY SIGN	13,14 / L5.2
W4	REMOVED IN 100% CD			
W5	CAST IN PLACE CONCRETE	LEVEL BACKFILL	BLEACHER PLAZA	5-A / L5.5
W6	CAST IN PLACE CONCRETE	SLOPED BACKFILL	SOUTHEAST CORNER OF PRACTICE FIELD	3-A / L5.5
W7	CAST IN PLACE CONCRETE	SLOPED BACKFILL	SOUTHWEST CORNER OF PRACTICE FIELD	2-A,3-A / L5.5
W8	CAST IN PLACE CONCRETE	LEVEL BACKFILL	SOUTH WALL AT FIELD HOUSE STAIRS	2-A,B / L5.5
W9	REMOVED IN 100% CD			
W10	PRECAST AMPHITHEATER BENCHES	LEVEL BACKFILL	SEATING AT ENTRY PLAZA	7-12 / L5.2, 1-A / L5.5
W11	LARGE SCALE SEGMENTAL RETAINING WALL		SOUTHEAST CORNER ALONG ROAD	CIVIL DRAWINGS
W12	CAST IN PLACE CONCRETE	LEVEL BACKFILL	NORTHEAST SIDE OF FIELD	2-3,7 / L5.6
W13	CAST IN PLACE CONCRETE	LEVEL BACKFILL	RAMP WALLS AT ENTRY PLAZA	7-A,B / L5.5
W14	CAST IN PLACE CONCRETE	HIGHWAY SURCHARGE	AT SOUTHEAST CORNER OF BUILDING ALONG BUS DROP OFF	4-A / L5.4
W15	CAST IN PLACE CONCRETE	LEVEL BACKFILL	NORTH WALL AT ANDY'S ATTIC STAIRS	4-A,B / L5.4
W16	CAST IN PLACE CONCRETE	LEVEL BACKFILL	SOUTH WALL AT ANDY'S ATTIC STAIRS	4-B / L5.4
W17	CAST IN PLACE CONCRETE	FREE STANDING WALL	AT AUTO COURT NEXT TO TRANSFORMER	2-A / L5.4
W18	CAST IN PLACE CONCRETE	LEVEL BACKFILL	BEHIND STORAGE AREA AT AUTO COURT	2-A / L5.4
W19	CAST IN PLACE CONCRETE	SLOPED BACKFILL	AT SOUTHEAST CORNER OF BUILDING	SEE STRUCTURAL
W20	CAST IN PLACE CONCRETE	LEVEL BACKFILL	OUTER RAMP WALL AT TODDLER PLAY AREA	3-B,C,D / L5.4
W21	CAST IN PLACE CONCRETE	HIGHWAY SURCHARGE	UPPER WALL AT PRE-K PLAYAREA	1-A / L5.4
W22	CAST IN PLACE CONCRETE	SLOPED BACKFILL	LOWER WALL AT PRE-K PLAYAREA	1-A / L5.4
W23	CAST IN PLACE CONCRETE	LEVEL BACKFILL	STAIR WALL AT PRE-K PLAY AREA	5-A / L5.4
W24	CAST IN PLACE CONCRETE	LEVEL BACKFILL	AROUND TODDLER PLAY AREA	3-B,C,D / L5.4
W25	CAST IN PLACE CONCRETE	LEVEL BACKFILL	INNER RAMP WALL AT TODDLER PLAY AREA	3-B,C,D / L5.4
W26	CAST IN PLACE CONCRETE	LEVEL BACKFILL	STAIR WALL AT TODDLER PLAY AREA	3-B,C,D / L5.4
W27	CAST IN PLACE CONCRETE	LEVEL BACKFILL	AT STEPS AND WALKWAY AT BLEACHER PLAZA	SEE STRUCTURAL

NOTE:
FOR CONSTRUCTION AND FOUNDATION DETAILS SEE STRUCTURAL DRAWINGS.

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Wall and Stairs Materials

Key Plan

A BUILDING
B BUILDING
A
AB
B1
B2

REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
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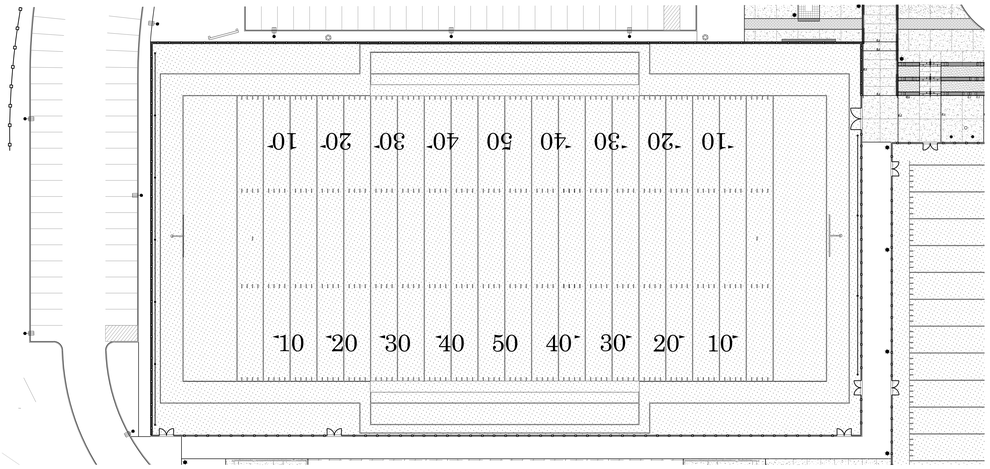
FILE:

DWN. BY:
JOB NO: #1611
CKD. BY:
SCALE: 1" = 30'

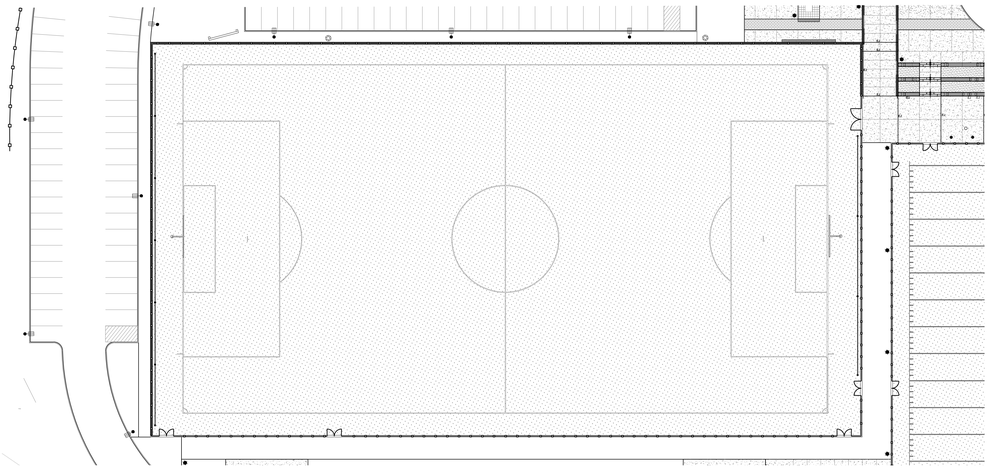
DATE: January 31, 2019

L2.7



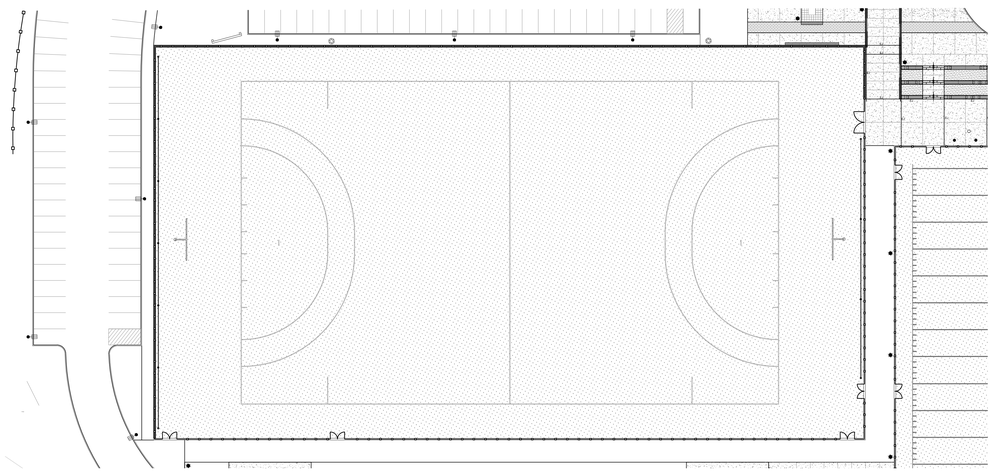
1 FOOTBALL FIELD
1" = 30'-0"

NOTES:
1. FOOTBALL MARKINGS ARE 4" WIDTH WHITE MIAA STANDARDS
2. MARKING COMPLETE COLOR NAME: WHITE. PANTONE COLOR NUMBER: WHITE



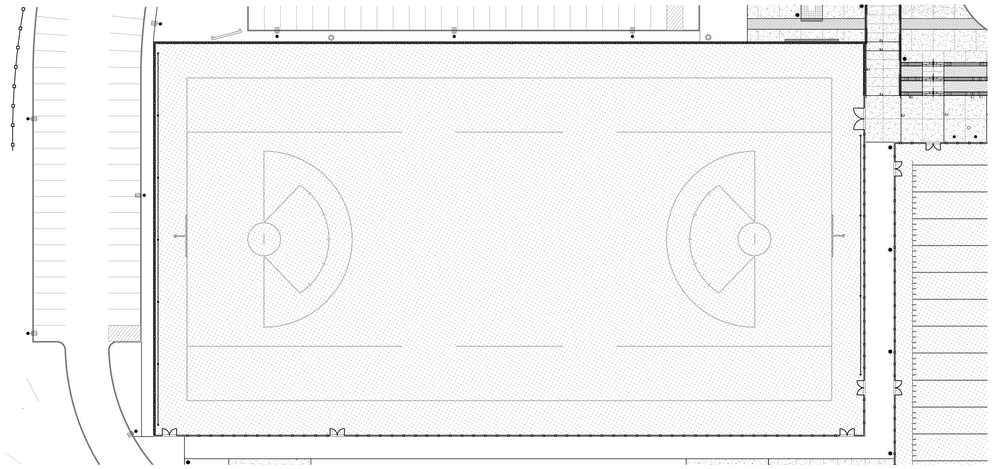
2 SOCCER FIELD
1" = 30'-0"

NOTES:
1. MARKINGS ARE 4" WIDTH CANARY YELLOW NFHS STANDARDS
2. MARKING COMPLETE COLOR NAME: CANARY YELLOW. PANTONE COLOR NUMBER: 136C



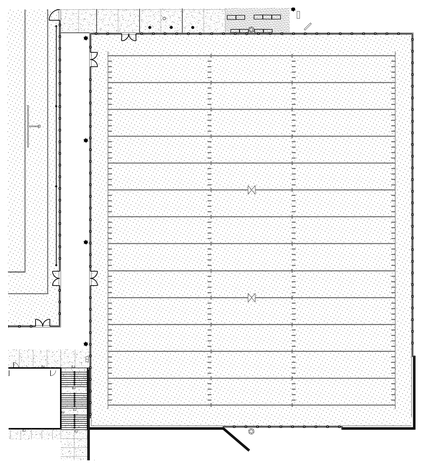
3 FIELD HOCKEY FIELD
1" = 30'-0"

NOTES:
1. MARKINGS ARE 4" WIDTH ORANGE NFHS STANDARDS
2. MARKING COMPLETE COLOR NAME: ORANGE. PANTONE COLOR NUMBER: 166C



4 UNIFIED LACROSSE FIELD
1" = 30'-0"

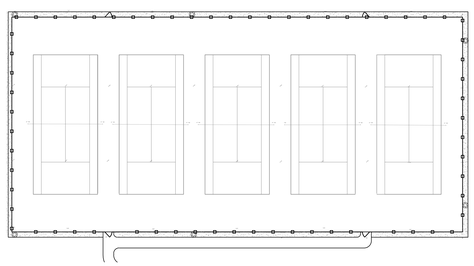
NOTES:
1. MARKINGS ARE 4" WIDTH SUMMER GREEN NFHS STANDARDS
2. MARKING COMPLETE COLOR NAME: SUMMER GREEN. PANTONE COLOR NUMBER: FT LIGHT GREEN
3. MARKINGS WILL BE PAINTED AS NEEDED



5 PRACTICE FIELD
1" = 30'-0"

NOTES:
1. MARKINGS ARE 4" WIDE
2. MARKING COMPLETE COLOR NAME: WHITE. PANTONE COLOR NUMBER: 000C

NOTES:
1. SEE SPECIFICATIONS FOR FIELD MARKINGS
2. ALL FIELDS MARKINGS TO CONFORM TO STANDARD DIMENSIONS.



6 TENNIS COURTS
1" = 30'-0"

NOTES:
1. REPLACE THE (5) EXISTING COURTS TO MATCH CURRENT LAYOUT AND DIMENSIONS. EACH COURT IS A UNIVERSAL SIZE OF 78' x 36' AND SHALL BE STRIPED FOR DOUBLE AND SINGLE PLAY.

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FINAL BID PACKAGE

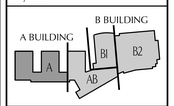
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Field & Court Markings

Key Plan



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5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

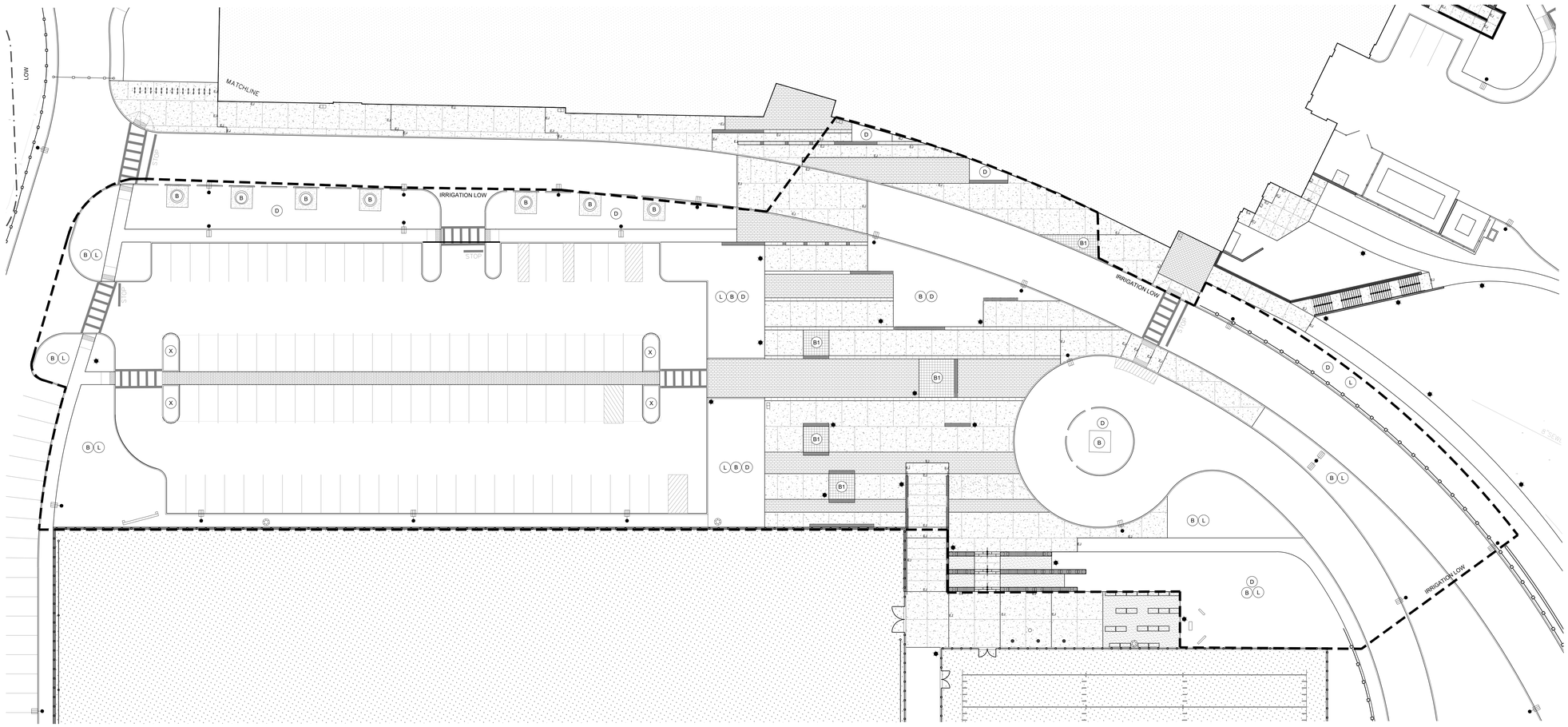
FILE:

DWN. BY: JOB NO: #1611

CKD. BY: SCALE: 1" = 30'

DATE: January 31, 2019

L2.8



IRRIGATION LEGEND

SYMBOL	DESCRIPTION
B	BUBBLER ON TREES
B1	BUBBLER ON TREES IN COBBLE
D	DRIP IN SHRUB + PERENNIAL BEDS
L	SPRAY HEADS IN LAWN
X	NO IRRIGATION

4 NOTE: SEE PLANTING PLAN AND SPECIFICATIONS FOR DETAIL
IRRIGATION CONTROL BOX TO BE LOCATED IN BOILER ROOM ADJACENT TO BFP
- REFER TO PLUMBING DRAWINGS

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Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

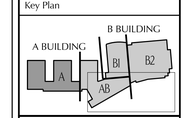
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Irrigation Area

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1" = 20'

DATE: January 31, 2019

L2.9

LAYOUT LEGEND

SYM	DESCRIPTION
	RIGHT ANGLE
ALIGN	ALIGN
℄	CENTERLINE
EQ	EQUAL
TYP	TYPICAL
POB	POINT OF BEGINNING
LOW	LIMIT OF WORK
	MATCHLINES

NOTES:

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2. IF ROADWAY LAYOUT DIFFERS FROM DOCUMENTS PROVIDE INFORMATION TO LANDSCAPE ARCHITECT FOR CLARIFICATION.
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5. PLAZA LAYOUT L3.5 TO BE COMPLETED BEFORE FIELD LAYOUT.
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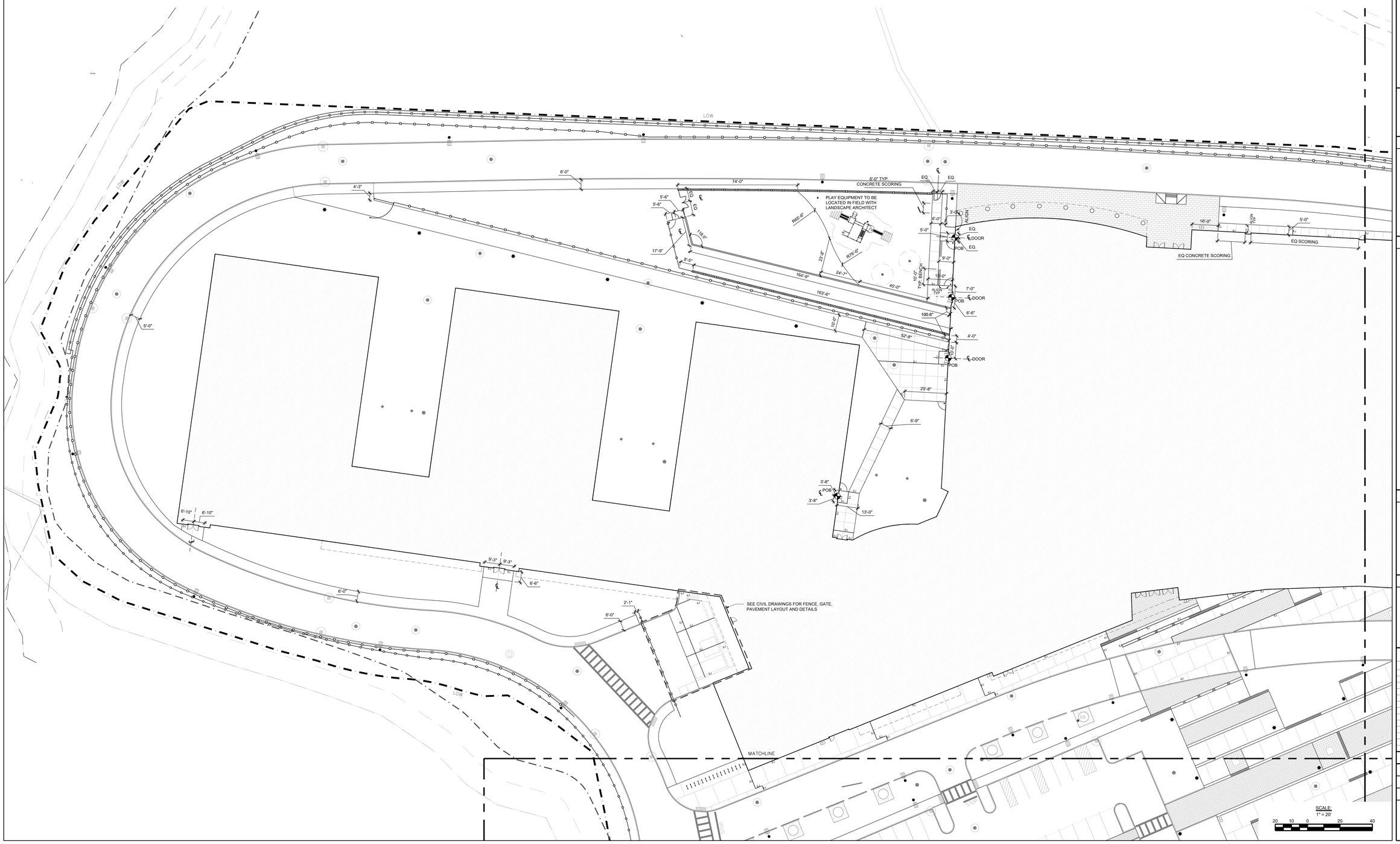

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Layout

Key Plan

A BUILDING
B BUILDING
A
AB
B1
B2

REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1"=20'-0"

DATE: January 31, 2019

L3.0

LAYOUT LEGEND

SYM	DESCRIPTION
	RIGHT ANGLE
ALIGN	ALIGN
℄	CENTERLINE
EQ	EQUAL
TYP	TYPICAL
POB	POINT OF BEGINNING
LOW	LIMIT OF WORK
	MATCHLINES

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South High Community School

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TITLE

Layout

Key Plan

A BUILDING B BUILDING

REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
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5	ESBP #2 - Addendum #4	9/19/18
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7	ESBP #3 - Addendum #5	12/27/18

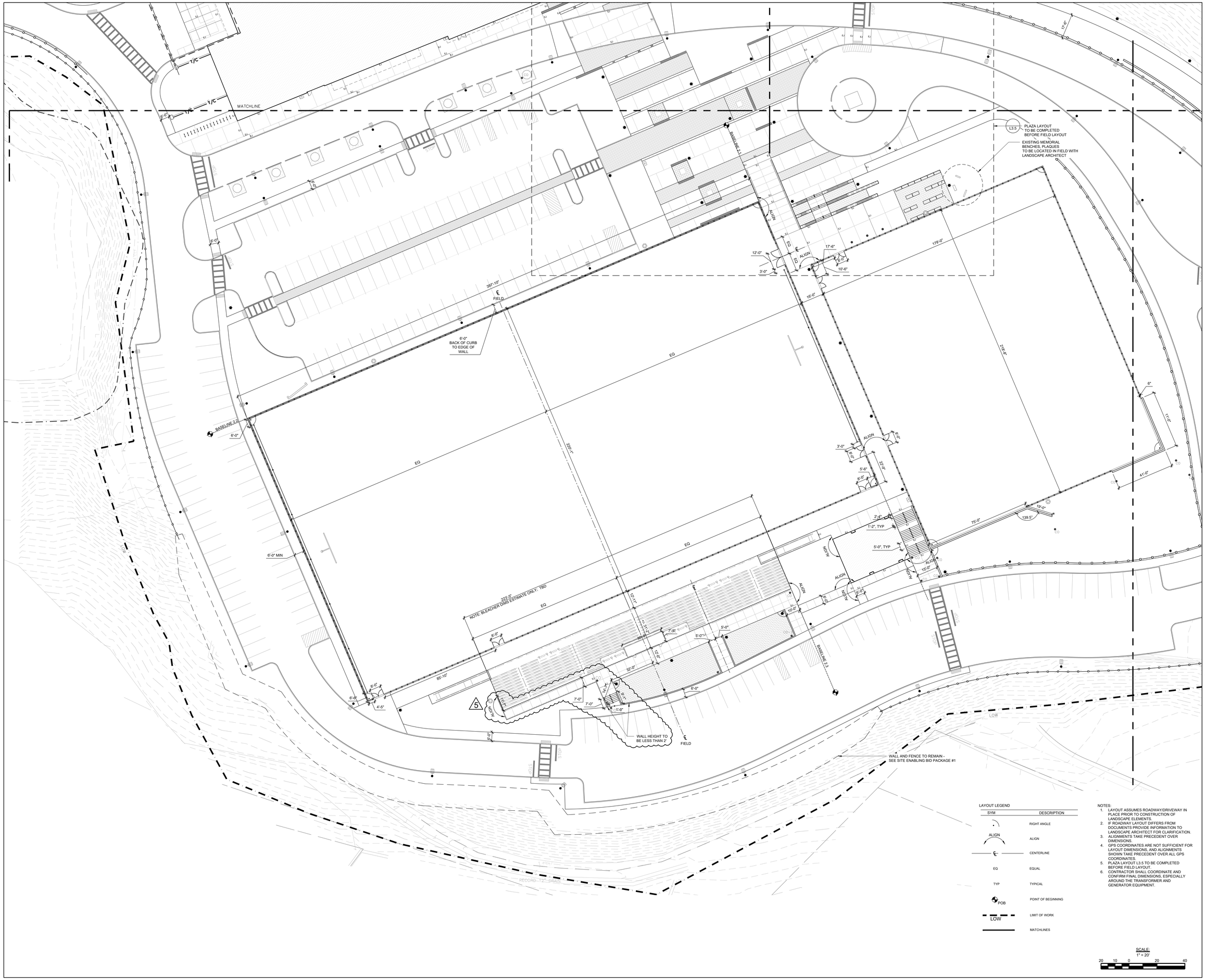
FILE:

DWN. BY: JOB NO: #1611

CKD. BY: SCALE: 1" = 20'-0"

DATE: January 31, 2019

L3.1



LAYOUT LEGEND

SYM	DESCRIPTION
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EQ	EQUAL
TYP	TYPICAL
POB	POINT OF BEGINNING
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SCALE:
1" = 20'

20 10 0 20 40

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FINAL BID PACKAGE

South High Community School

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TITLE

Layout

Key Plan

A BUILDING
B BUILDING
A
B1
B2
AB

REVISIONS

No.	Description	Date
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6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY:

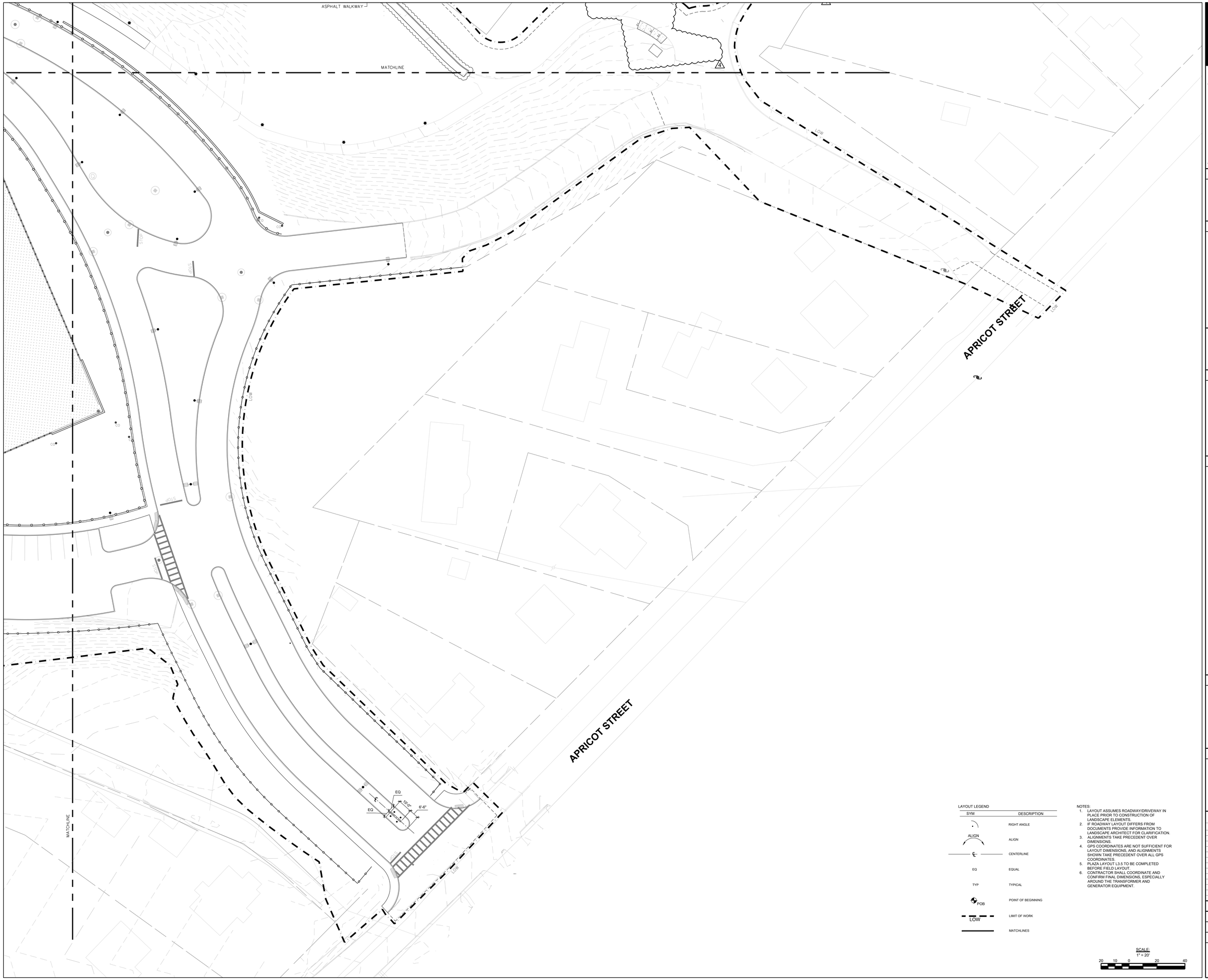
JOB NO: #1611

CKD. BY:

SCALE: 1"=20'-0"

DATE: January 31, 2019

L3.2



LAYOUT LEGEND

SYM	DESCRIPTION
	RIGHT ANGLE
ALIGN	ALIGN
℄	CENTERLINE
EQ	EQUAL
TYP	TYPICAL
POB	POINT OF BEGINNING
LOW	LIMIT OF WORK
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1" = 20'

20 10 0 20 40

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PROJECT

FINAL BID PACKAGE

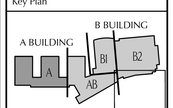
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Layout

Key Plan



REVISIONS

No.	Description	Date
1	SSBP #1 - Addendum #1	5/01/18
2	SSBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/31/18
4	ESBP #2 - Addendum #3	9/19/18
5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY:

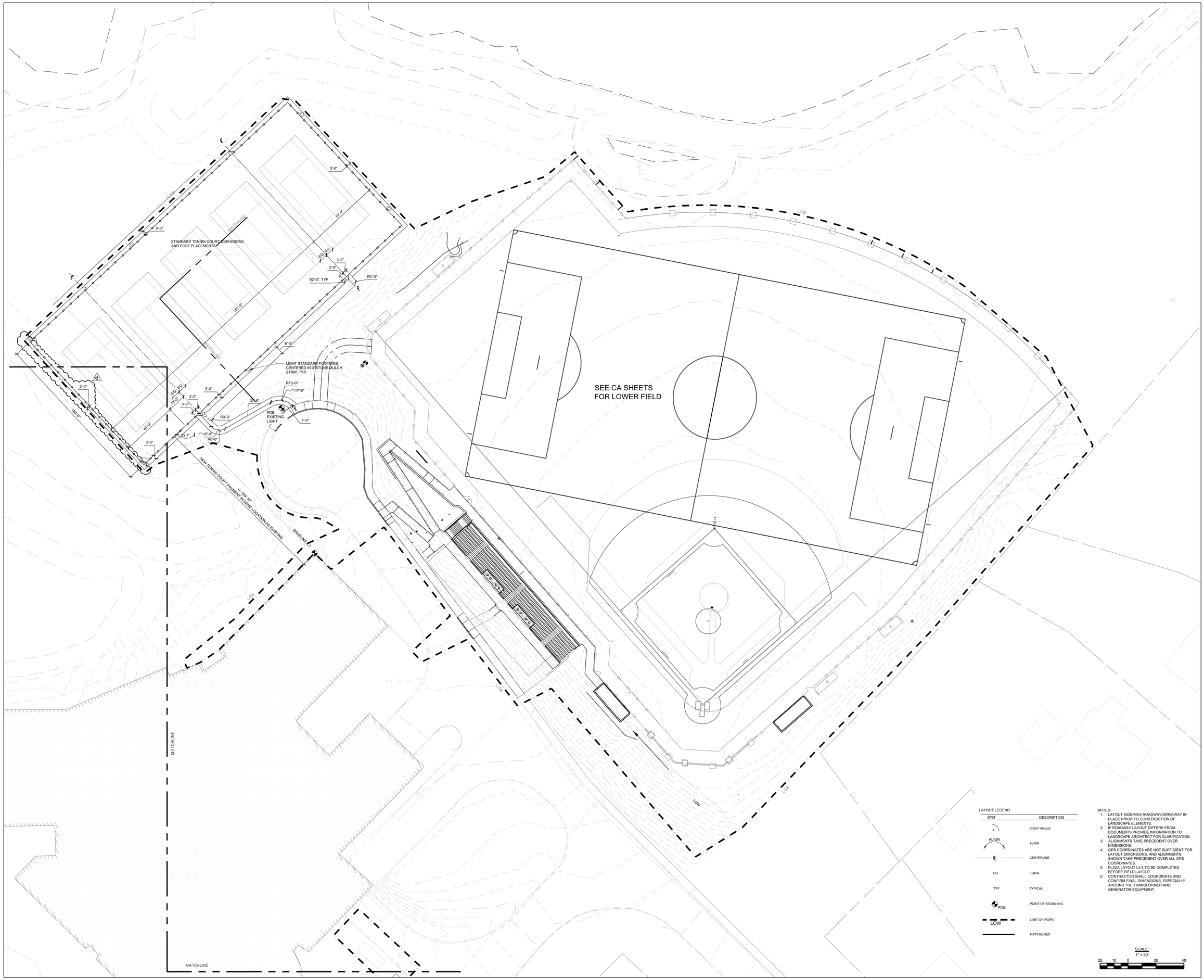
JOB NO: #1611

CKD. BY:

SCALE: 1"=20'-0"

DATE: January 31, 2019

L3.3



LAYOUT LEGEND

SYM	DESCRIPTION
	RIGHT ANGLE
ALIGN	ALIGN
℄	CENTERLINE
EQ	EQUAL
TYP	TYPICAL
POB	POINT OF BEGINNING
LOW	LIMIT OF WORK
	MATCHLINES

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SCALE:
1" = 20'

20 10 0 20 40

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Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

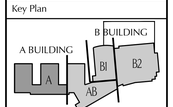
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Layout

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
2	SEBP #1 - RFI #1	8/15/18
3	ESBP #2 - Addendum #2	9/11/18
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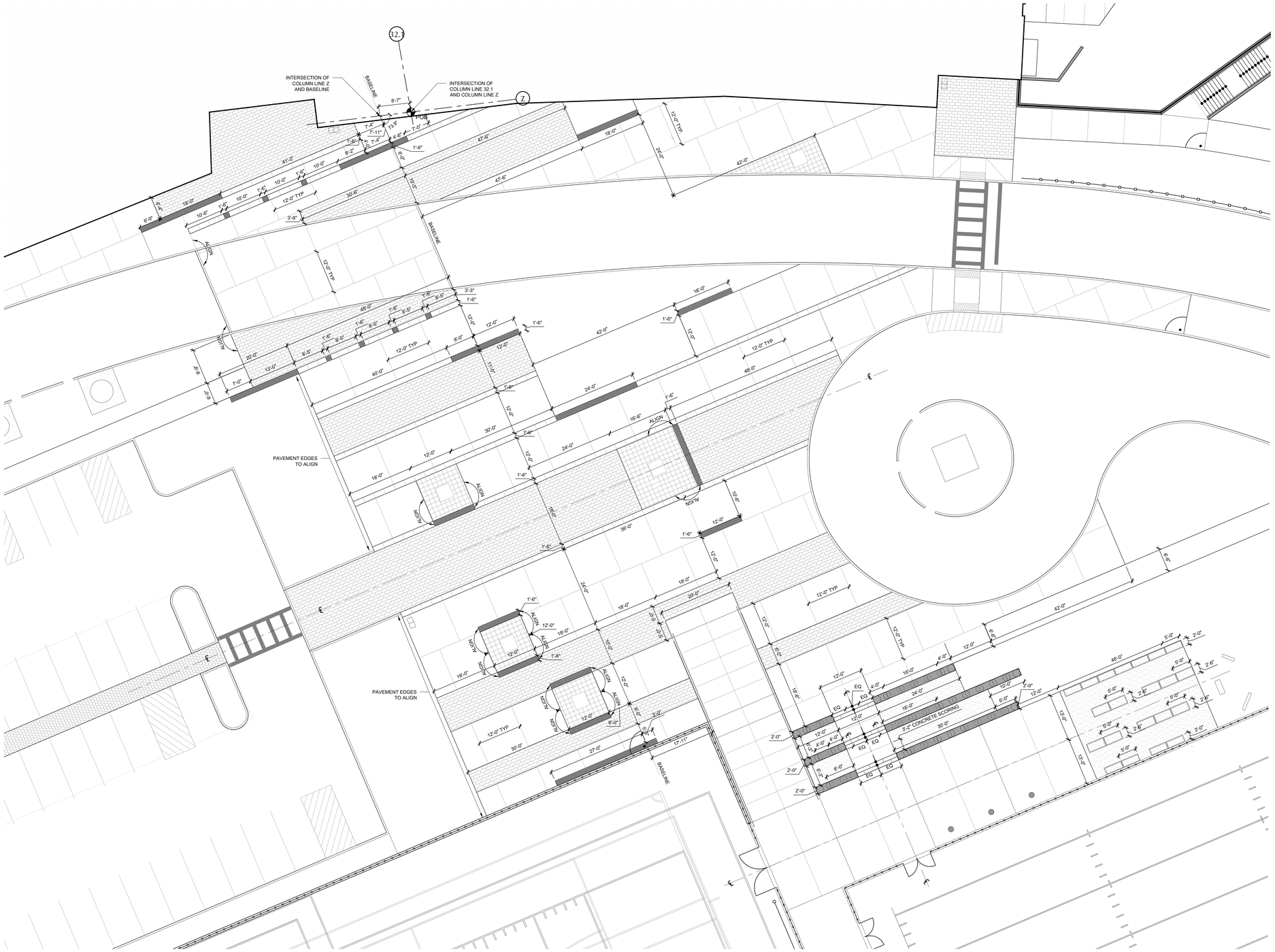
FILE:

DWN. BY: | JOB NO: #1611

CKD. BY: | SCALE: 1"=20'-0"

DATE: January 31, 2019

L3.4



LAYOUT LEGEND

SYMBOL	DESCRIPTION
	RIGHT ANGLE
ALIGN	ALIGN
℄	CENTERLINE
EQ	EQUAL
TYP	TYPICAL
POB	POINT OF BEGINNING

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5. DIMENSIONS ORIGINATING FROM THE BASELINE ARE ASSUMED TO BE PERPENDICULAR TO THE BASELINE.

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Project North

PROJECT

FINAL BID PACKAGE

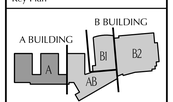
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Plaza Enlargement Layout

Key Plan



REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
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7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY:

JOB NO: #1611

CKD. BY:

SCALE: 1"=10'-0"

DATE: January 31, 2019

L3.5

PLANT LIST NOTE: QUANTITIES LISTED IN THIS TABLE ARE FOR ENTIRE PROJECT. EACH SHEET SHOWS TABLE ONLY FOR REFERENCE

QTY.	SYM.	BOTANICAL	COMMON	SIZE	NOTES/SPACING
TREES					
24	AL	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY	3" CAL.	B+B, SINGLE STEM
6	CF	CORNUS FLORIDA	CORNUS FLORIDA 'APPALACHIAN MIST'	3" CAL.	B+B
5	GD	GYMNOCLADUS DIOICUS	KENTUCKY COFFEE TREE	3" CAL.	B+B
48	GT	GLEDITSIA TRIACANTHOS 'SKYLINE'	SKYLINE HONEYLOCUST	4" CAL.	B+B
30	JC	JUNIPERUS CHINENSIS HETZII 'COLUMNARIS'	HETZ COLUMNAR JUNIPER	8-10' HT.	B+B, UNSHEARED
4	LT	LIRIODENDRON TULIPIFERA 'EMERALD CITY'	TULIP TREE 'EMERALD CITY'	3" CAL.	B+B
12	NS	NYSSA SYLVATICA 'HAYMAN RED'	RED RAGE TUPELO	3" CAL.	B+B
8	OV	OSTRYA VIRGINIANA	HOPHORNBEAM	3" CAL.	B+B
4	PG	PICEA GLAUCA	WHITE SPRUCE	10-12' HT.	B+B
27	QB	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL.	B+B
43	QR	QUERCUS RUBRA	RED OAK	3" CAL.	B+B
14	RC	RHUS COPALLINUM	WINGED SUMAC	10 GAL.	CONTAINER
SHRUBS					
418	CK	CORNUS SERICEA 'KELSEYI'	KELSEY DOGWOOD	3 GAL.	36" O.C.
140	CO	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	3 GAL.	48" O.C.
60	CA	CLETHRA ALNIFOLIA 'SIXTEEN CANDLES'	SIXTEEN CANDLES SUMMER SWEET	3 GAL.	36" O.C.
515	IV	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY (FEMALE)	3 GAL.	36" O.C.
130	IV	ILEX VERTICILLATA 'JIM DANDY'	JIM DANDY WINTERBERRY (MALE)	3 GAL.	36" O.C.
340	IT	ITEA VIRGINICA 'SPRICH'	LITTLE HENRY SWEETSPIRE	3 GAL.	36" O.C.
2430	RA	RHUS AROMATICA 'GRO-LOW'	GROW-LOW SUMAC	3 GAL.	36" O.C.
PERENNIALS & VINES					
100	Axa	ANEMONE HYBRIDA 'ANDREA ATKINSON'	ANDREA ATKINSON ANEMON	1 GAL.	18" O.C.
770	AF	ATHYRIUM FILIX-FEMINA	LADY FERN	1 GAL.	18" O.C.
100	Afm	ASTER FRIKARTII 'MONCH'	MONCH FALL ASTER	1 GAL.	18" O.C.
400	AH	AMSONIA HUBRICHTII	BLUE STAR	1 GAL.	18" O.C.
280	AP	ASTILBE PEACH BLOSSOM	PEACH BLOSSOM ASTILBE	1 GAL.	18" O.C.
310	BM	BRUNNERA MACROPHYLLA	SIBERIAN BUGLOSS	1 GAL.	18" O.C.
810	CAo	CALMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	1 GAL.	18" O.C.
350	DM	DRYOPTERIS MARGINALIS	MARGINAL WOOD FERN	1 GAL.	18" O.C.
290	IS	IRIS SIBERICA CAESAR'S BROTHER	SIBERIAN IRIS	1 GAL.	18" O.C.
365	PA	PENNISETUM ALOPECUROIDES	LITTLE BUNNY FOUNTAIN GRASS	1 GAL.	18" O.C.
130	PLs	PEROVSKIA ATRIPLICIFOLIA	LITTLE SPIRE RUSSIAN SAGE	1 GAL.	18" O.C.
360	PO	POLYGONATUM ORDORATUM VARIGATUM	VARIAGATED SOLOMON'S SEAL	1 GAL.	18" O.C.
SOD / SEED / GRAVEL					
73650	LM	NO-MOW FESCUE SOD			
8440	SL	SOD LAWN GRASS			
27150	HS	HYDROSEED NO-MOW FESCUE			
37300	SM	STONE MULCH	SEE SPECIFICATIONS FOR DIFFERENCE BETWEEN SM AND SMB		

LOW

MATCHLINE

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Planting

Key Plan

A BUILDING B BUILDING

REVISIONS

No.	Description	Date
1	SEBP #1 - Addendum #1	5/01/18
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FILE:

DWN. BY: JOB NO: #1611

CKD. BY: SCALE: 1"=20'-0"

DATE: January 31, 2019

L4.0

PLANT LIST NOTE: QUANTITIES LISTED ON L4.0. EACH SHEET SHOWS TABLE ONLY FOR REFERENCE

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TREES					
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	CF	CORNUS FLORIDA	CORNUS FLORIDA 'APPALACHIAN MIST'	3" CAL.	B+B
	GD	GYMNOCLADUS DIOICUS	KENTUCKY COFFEE TREE	3" CAL.	B+B
	GT	GLEDITSIA TRIACANTHOS 'SKYLINE'	SKYLINE HONEYLOCUST	4" CAL.	B+B
	JC	JUNIPERUS CHINENSIS HETZII 'COLUMNARIS'	HETZ COLUMNAR JUNIPER	8-10' HT.	B+B, UNSHEARED
	LT	LIRIODENDRON TULIPIFERA 'EMERALD CITY'	TULIP TREE 'EMERALD CITY'	3" CAL.	B+B
	NS	NYSSA SYLVATICA 'HAYMAN RED'	RED RAGE TUPELO	3" CAL.	B+B
	OV	OSTRYA VIRGINIANA	HOPHORNBEAM	3" CAL.	B+B
	PG	PICEA GLAUCA	WHITE SPRUCE	10-12' HT.	B+B
	QB	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL.	B+B
	QR	QUERCUS RUBRA	RED OAK	3" CAL.	B+B
	RC	RHUS COPALLINUM	WINGED SUMAC	10 GAL.	CONTAINER
SHRUBS					
	CK	CORNUS SERICEA 'KELSEYI'	KELSEY DOGWOOD	3 GAL.	36" O.C.
	CO	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	3 GAL.	48" O.C.
	CA	CLETHRA ALNIFOLIA 'SIXTEEN CANDLES'	SIXTEEN CANDLES SUMMER SWEET	3 GAL.	36" O.C.
	IV	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY (FEMALE)	3 GAL.	36" O.C.
	IV	ILEX VERTICILLATA 'JIM DANDY'	JIM DANDY WINTERBERRY (MALE)	3 GAL.	36" O.C.
	IT	ITEA VIRGINICA 'SPRICH'	LITTLE HENRY SWEETSPIRE	3 GAL.	36" O.C.
	RA	RHUS AROMATICA 'GRO-LOW'	GROW-LOW SUMAC	3 GAL.	36" O.C.

PERENNIALS & VINES

Axa	ANEMONE HYBRIDA 'ANDREA ATKINSON'	ANDREA ATKINSON ANEMON	1 GAL.	18" O.C.
AF	ATHYRIUM FILIX-FEMINA	LADY FERN	1 GAL.	18" O.C.
Afm	ASTER FRIKARTII 'MONCH'	MONCH FALL ASTER	1 GAL.	18" O.C.
AH	AMSONIA HUBRICHTII	BLUE STAR	1 GAL.	18" O.C.
AP	ASTILBE PEACH BLOSSOM	PEACH BLOSSOM ASTILBE	1 GAL.	18" O.C.
BN	BRUNNERA MACROPHYLLA	SIBERIAN BUGLOSS	1 GAL.	18" O.C.
CAo	CALMAGROSTIS X ACUTIFLORA 'OVERDAM'	OVERDAM FEATHER REED GRASS	1 GAL.	18" O.C.
DM	DRYOPTERIS MARGINALIS	MARGINAL WOOD FERN	1 GAL.	18" O.C.
IS	IRIS SIBERICA CAESAR'S BROTHER	SIBERIAN IRIS	1 GAL.	18" O.C.
PA	PENNISETUM ALOPECUROIDES	LITTLE BUNNY FOUNTAIN GRASS	1 GAL.	18" O.C.
PLs	PEROVSKIA ATRIPLICIFOLIA	LITTLE SPIRE RUSSIAN SAGE	1 GAL.	18" O.C.
PO	POLYGONATUM ORDORATUM VARIGATUM	VARIAGATED SOLOMON'S SEAL	1 GAL.	18" O.C.

SOD / SEED / GRAVEL

LM	NO-MOW FESCUE SOD	
SL	SOD LAWN GRASS	
HS	HYDROSEED NO-MOW FESCUE	
SM	STONE MULCH	SEE SPECIFICATIONS FOR DIFFFERENCE BETWEEN SM AND SMB

LOW

MATCHLINE

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108 GROVE STREET, SUITE 300
WORCESTER, MASSACHUSETTS 01605

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www.studio2112la.com

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Planting

Key Plan

A BUILDING
B BUILDING
A
B1
B2
AB

REVISIONS

No.	Description	Date
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5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY:

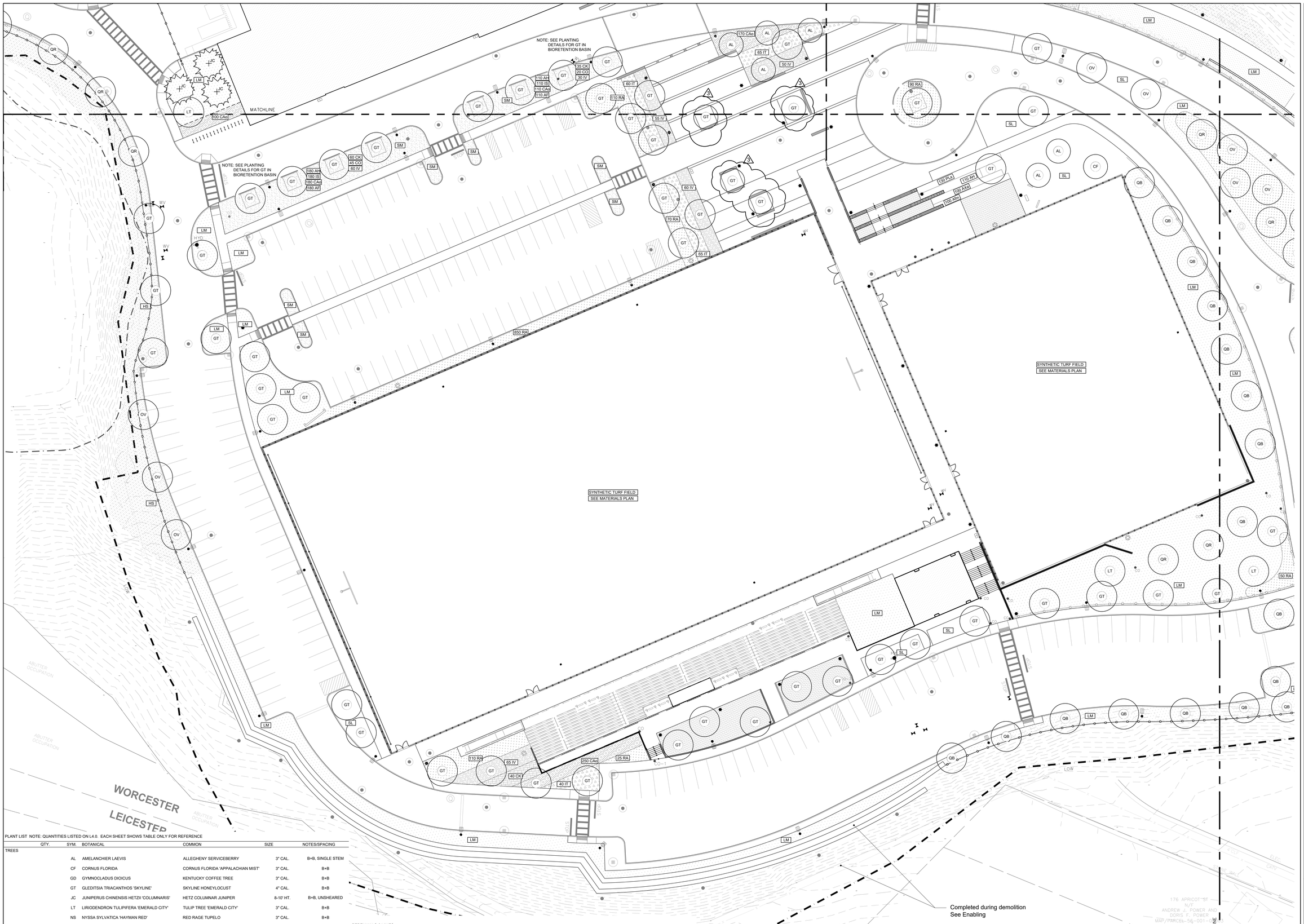
JOB NO: #1611

CKD. BY:

SCALE: 1" = 20'-0"

DATE: January 31, 2019

L4.1



PLANT LIST NOTE: QUANTITIES LISTED ON L4.0. EACH SHEET SHOWS TABLE ONLY FOR REFERENCE

QTY.	SYM.	BOTANICAL	COMMON	SIZE	NOTES/SPACING
TREES					
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BN	BRUNNERA MACROPHYLLA	SIBERIAN BUGLOSS	1 GAL.	18" O.C.
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SEE SPECIFICATIONS FOR DIFFFERENCE BETWEEN SM AND SMB

LOW

MATCHLINE

SCALE:
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20 10 0 20 40

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PROJECT

FINAL BID PACKAGE

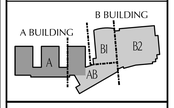
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Planting

Key Plan



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FILE:

DWN. BY:

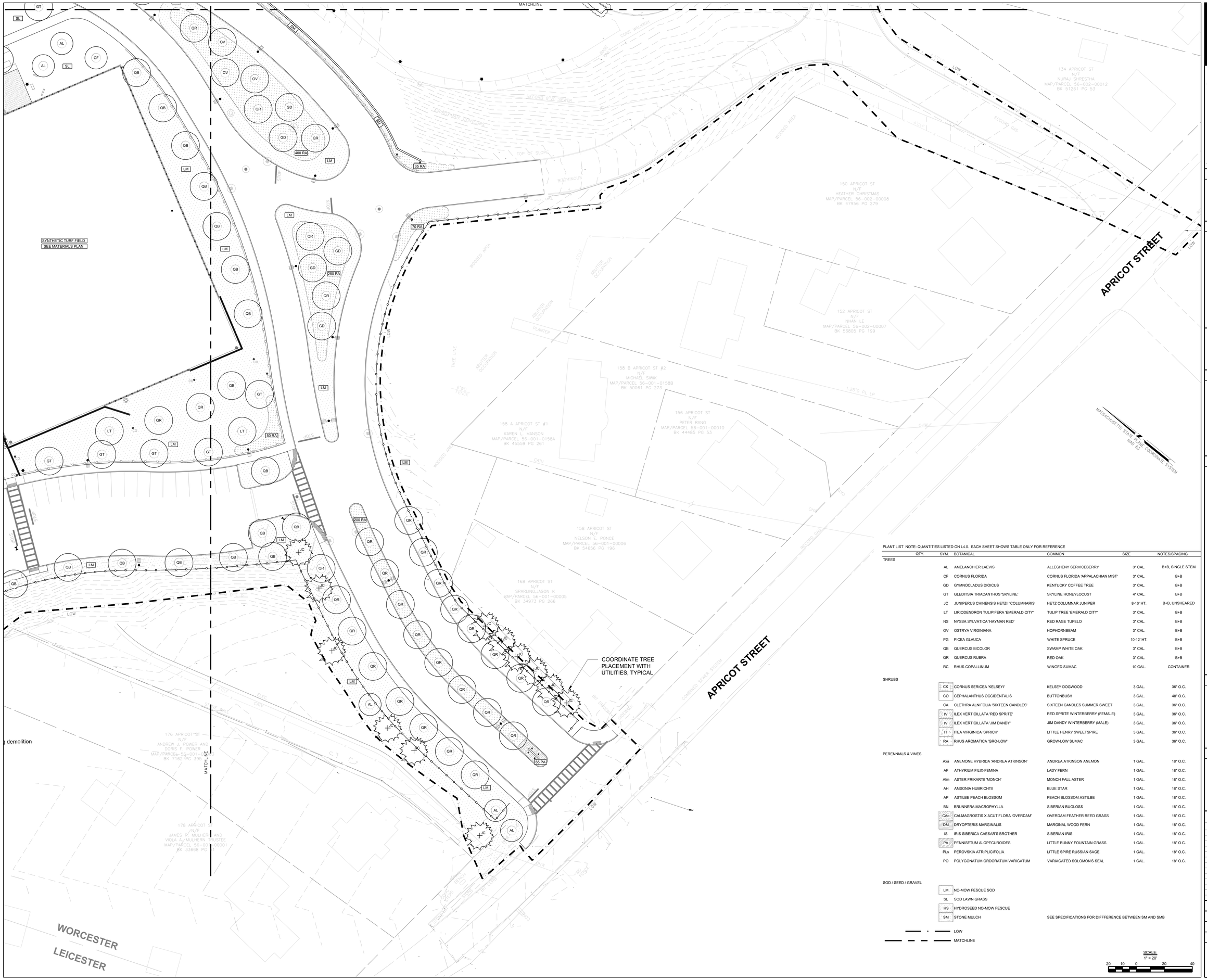
JOB NO: #1611

CKD. BY:

SCALE: 1"=20'-0"

DATE: January 31, 2019

L4.2



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	SL	SOD LAWN GRASS			
	HS	HYDROSEED NO-MOW FESCUE			
	SM	STONE MULCH	SEE SPECIFICATIONS FOR DIFFFERENCE BETWEEN SM AND SMB		

LOW

MATCHLINE

SCALE: 1" = 20'

20 10 0 20 40

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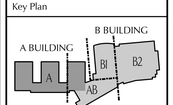

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FILE:

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JOB NO: #1611

CKD. BY:

SCALE: 1"=20'-0"

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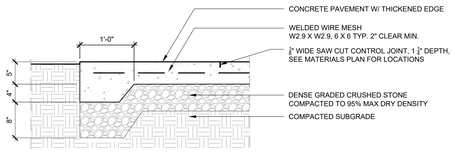
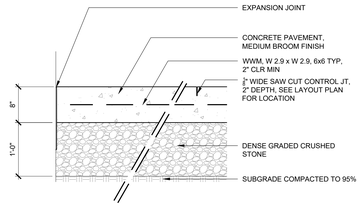
L4.3

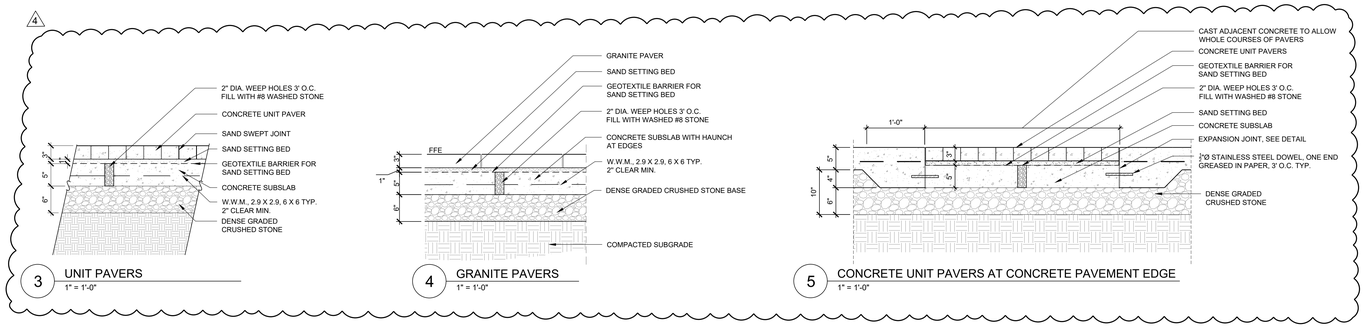


NOTES:
1. ALL JOINTS IN CONCRETE PAVING SHALL CONFORM WITH THE JOINT PATTERN SHOWN ON THE PLANS.
2. INSTALL EXPANSION JOINTS AT ALL FIXED OBJECTS AND AT A MAXIMUM OF 30' APART UNLESS SPACED MORE CLOSELY ON PLANS.

1 CONCRETE PAVEMENT - PEDESTRIAN
1" = 1'-0"



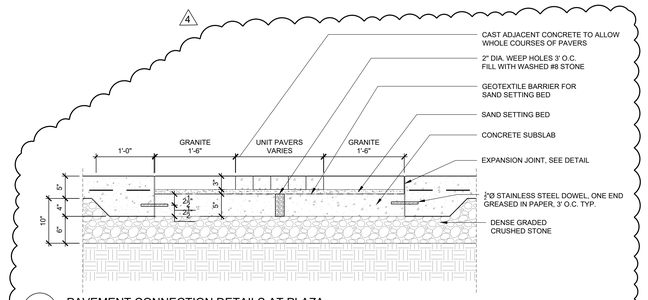
2 CONCRETE PAVEMENT - VEHICULAR
1" = 1'-0"



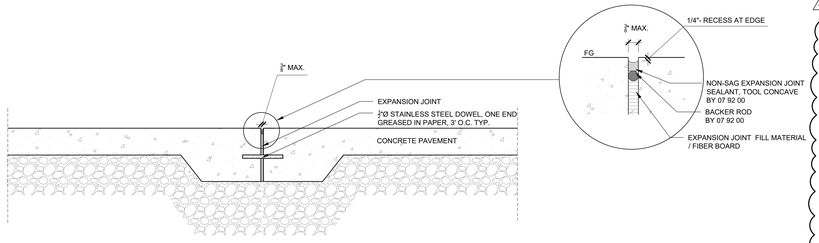
3 UNIT PAVERS
1" = 1'-0"

4 GRANITE PAVERS
1" = 1'-0"

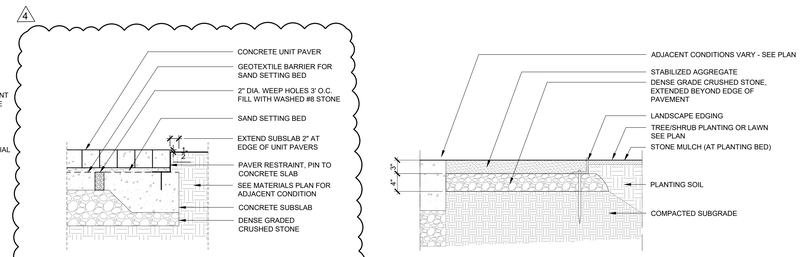
5 CONCRETE UNIT PAVERS AT CONCRETE PAVEMENT EDGE
1" = 1'-0"



6 PAVEMENT CONNECTION DETAILS AT PLAZA
1" = 1'-0"

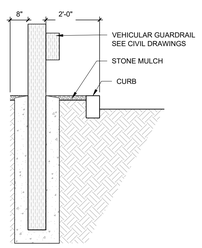


7 EXPANSION JOINT
1 1/2" = 1'-0"

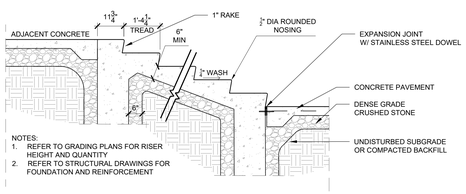


8 PAVER RESTRAINT AT EDGE CONDITION
1" = 1'-0"

9 STABILIZED AGGREGATE PAVEMENT
1" = 1'-0"

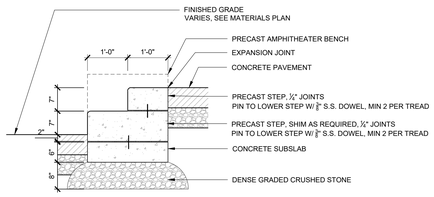


10 STONE MULCH AT VEHICULAR GUARDRAIL
1/2" = 1'

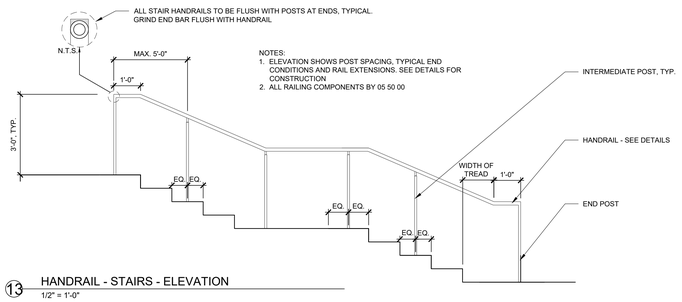


NOTES:
1. REFER TO GRADING PLANS FOR RISER HEIGHT AND QUANTITY
2. REFER TO STRUCTURAL DRAWINGS FOR FOUNDATION AND REINFORCEMENT

11 CONCRETE STEPS
1/2" = 1'-0"

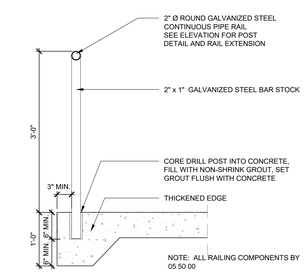


12 PRECAST CONCRETE STEPS
3/4" = 1'-0"



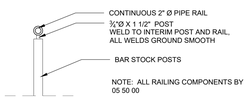
NOTES:
1. ELEVATION SHOWS POST SPACING, TYPICAL END CONDITIONS AND RAIL EXTENSIONS. SEE DETAILS FOR CONSTRUCTION
2. ALL RAILING COMPONENTS BY 05 50 00

13 HANDRAIL - STAIRS - ELEVATION
1/2" = 1'-0"



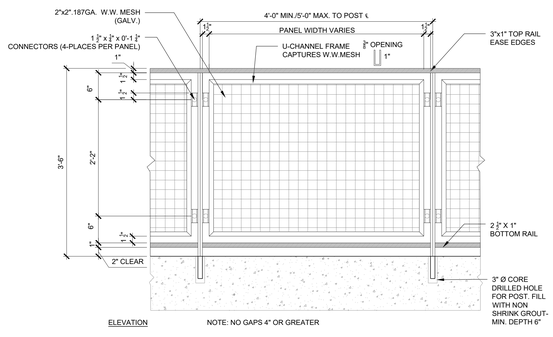
NOTE: ALL RAILING COMPONENTS BY 05 50 00

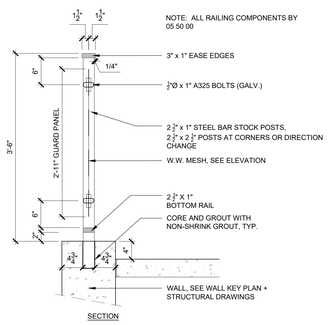
14 HANDRAIL - SECTION
SECTON: 1" = 1'-0"



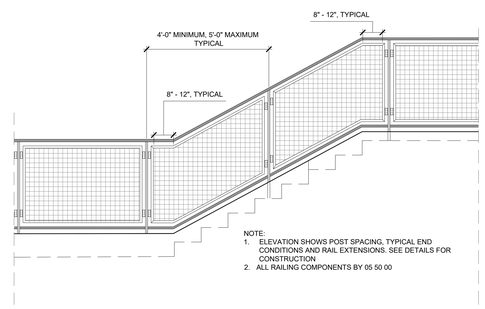
NOTE: ALL RAILING COMPONENTS BY 05 50 00

15 INTERMEDIATE POST RAIL CONNECTION DETAIL
1" = 1'-0"



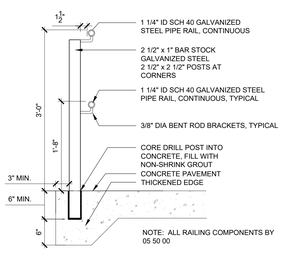


16 GUARDRAIL - PEDESTRIAN
1" = 1'-0"



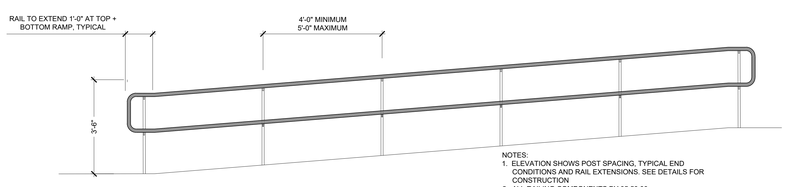
NOTE:
1. ELEVATION SHOWS POST SPACING, TYPICAL END CONDITIONS AND RAIL EXTENSIONS. SEE DETAILS FOR CONSTRUCTION
2. ALL RAILING COMPONENTS BY 05 50 00

17 GUARDRAIL - PEDESTRIAN - SLOPED
1/2" = 1'-0"



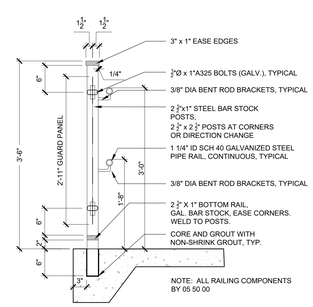
NOTE: ALL RAILING COMPONENTS BY 05 50 00

18 RAMP RAILING - SECTION
SECTON: 1" = 1'-0"

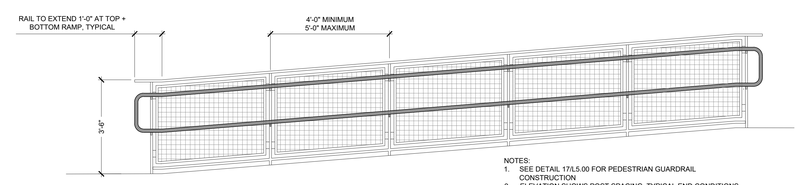


NOTES:
1. ELEVATION SHOWS POST SPACING, TYPICAL END CONDITIONS AND RAIL EXTENSIONS. SEE DETAILS FOR CONSTRUCTION
2. ALL RAILING COMPONENTS BY 05 50 00

19 RAMP RAIL - ELEVATION
1/2" = 1'-0"



20 GUARDRAIL - ACCESSIBLE - SECTION
1" = 1'-0"



NOTES:
1. SEE DETAIL 17/L5.00 FOR PEDESTRIAN GUARDRAIL CONSTRUCTION
2. ELEVATION SHOWS POST SPACING, TYPICAL END CONDITIONS AND RAIL EXTENSIONS. SEE DETAILS FOR CONSTRUCTION
3. ALL RAILING COMPONENTS BY 05 50 00

21 GUARDRAIL - ACCESSIBLE - ELEVATION
1/2" = 1'-0"

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

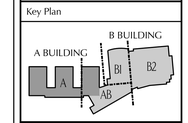
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Details

Key Plan



REVISIONS

No.	Description	Date
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5	ESBP #2 - Addendum #4	9/19/18
6	ESBP #2 - ASI #1-10	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

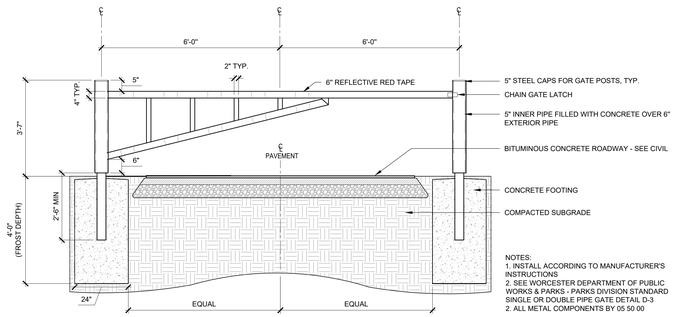
FILE:

DWN. BY: | JOB NO: #1611

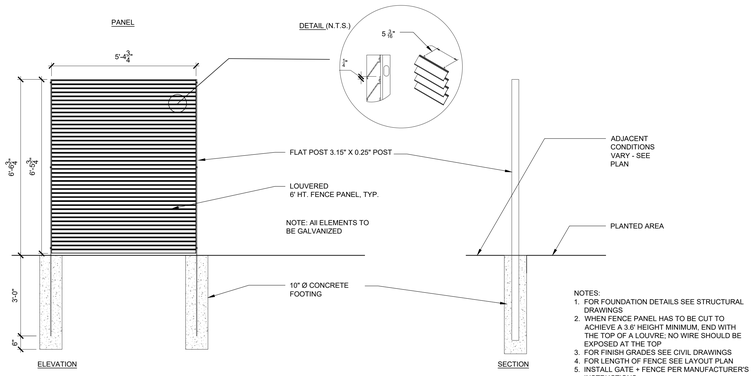
CKD. BY: | SCALE: AS NOTED

DATE: January 31, 2019

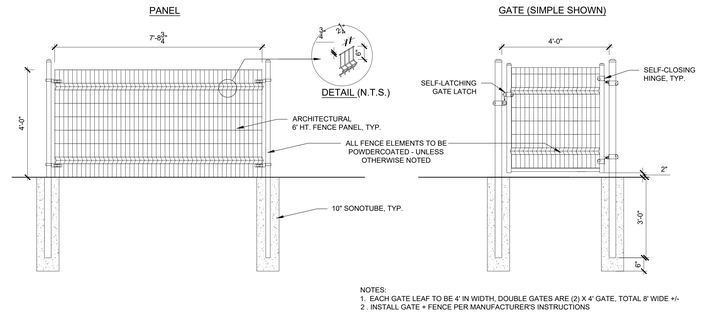
L5.0



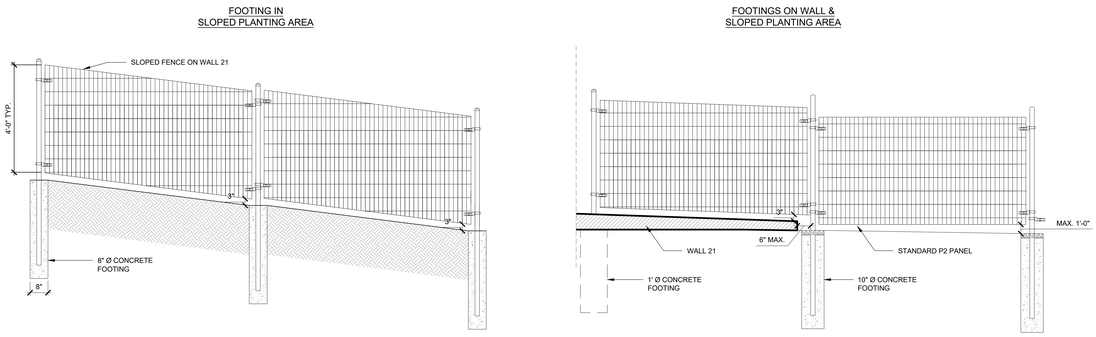
1 SINGLE GATE BARRIER - VEHICULAR - CITY OF WORCESTER STANDARD
1/2" = 1'-0"



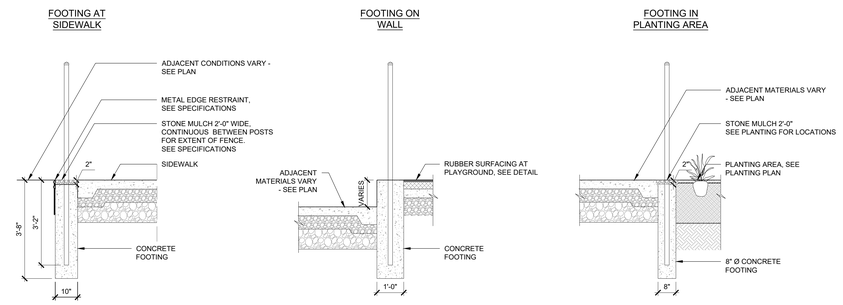
2 SCREEN FENCE
1/2" = 1'-0"



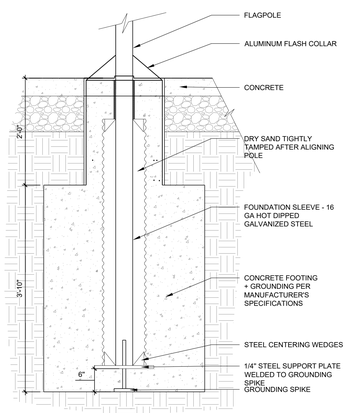
3 FENCE 2 / GATE 2: ARCHITECTURAL FENCE, GATE & FOOTINGS - ELEVATIONS
1/2" = 1'-0"



4 FENCE 2 / GATE 2: ARCHITECTURAL FENCE & STEPPED FOOTINGS - ELEVATIONS
1/2" = 1'-0"

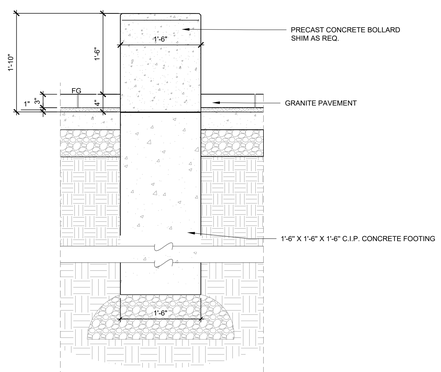


5 FENCE 2 / GATE 2: ARCHITECTURAL FENCE & FOOTINGS - SECTIONS
1/2" = 1'-0"



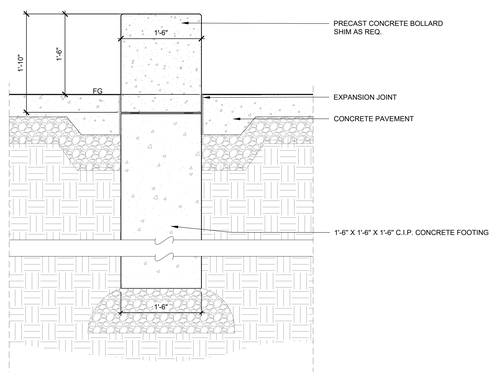
NOTES:
1. INSTALL PER MANUFACTURER'S INSTRUCTIONS

6 FLAG POLE BASE
1" = 1'-0"

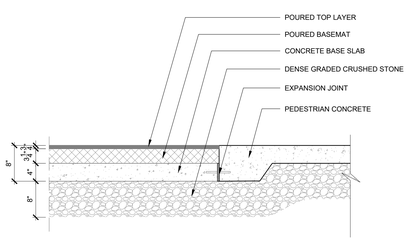


SECTION A: BOLLARD WITH GRANITE PAVEMENT

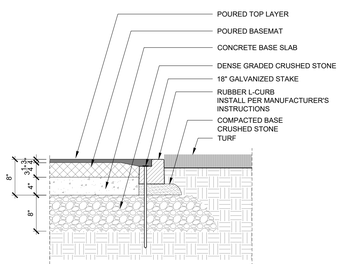
7 PRECAST BOLLARD
1" = 1'-0"



SECTION B: BOLLARD WITH CONCRETE PAVEMENT



8 RUBBER SAFETY SURFACING - CONCRETE EDGE
1" = 1'-0"



9 RUBBER SAFETY SURFACING - RUBBER CURB
1" = 1'-0"

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OWNER

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Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Details

Key Plan

A BUILDING
B BUILDING
A
B1
B2
AB

REVISIONS

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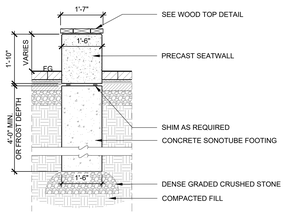
FILE:

DWN. BY: | JOB NO: #1611

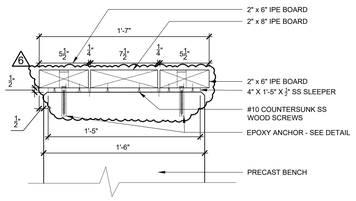
CKD. BY: | SCALE: AS NOTED

DATE: January 31, 2019

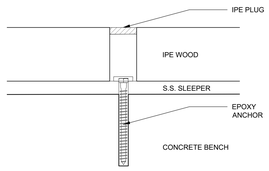
L5.1



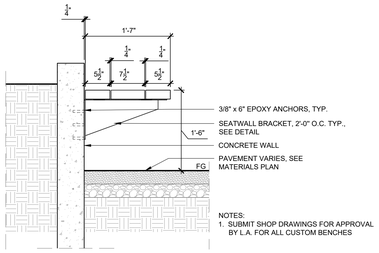
1 STANDARD PRECAST BENCH
1/2" = 1'-0"



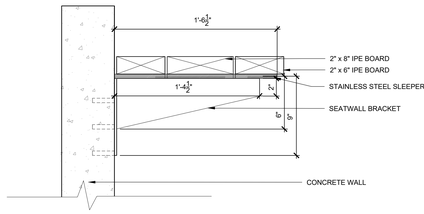
2 STANDARD PRECAST BENCH TOP - SECTION
1" = 1'-0"



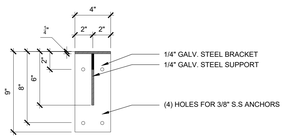
3 EPOX ANCHOR DETAIL
6" = 1'-0"



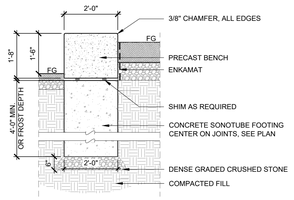
4 WALL MOUNTED BENCH
1" = 1'-0"



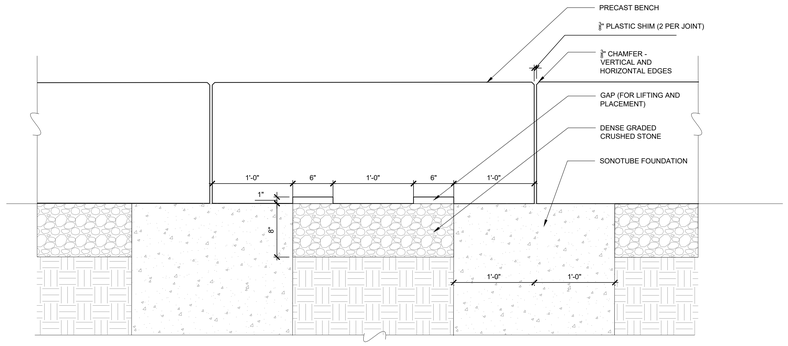
5 WALL MOUNTED BENCH - TOP SECTION
2" = 1'-0"



6 SEATWALL BRACKET - FRONT ELEVATION
2" = 1'-0"



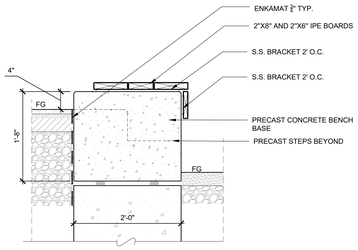
7 AMPHITHEATER PRECAST BENCH - TYPICAL SECTION
1/2" = 1'-0"



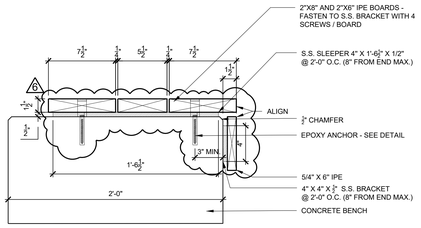
8 AMPHITHEATER BENCH - ELEVATION
1 1/2" = 1'-0"

9 NO LONGER USED

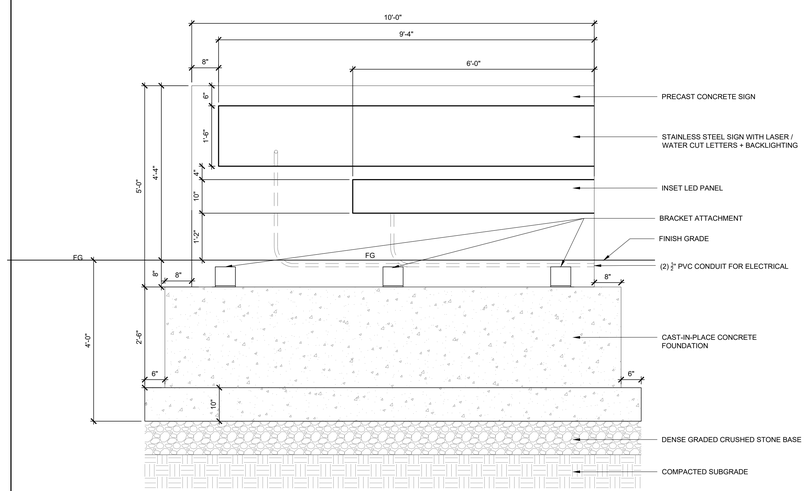
10 NO LONGER USED



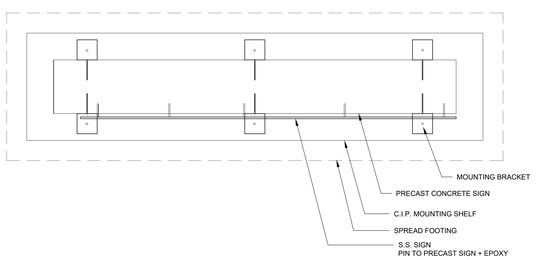
11 AMPHITHEATER BENCH WOOD SEAT - TYPICAL SECTION
1" = 1'-0"



12 AMPHITHEATER BENCH WOOD SEAT - DETAIL SECTION
1" = 1'-0"

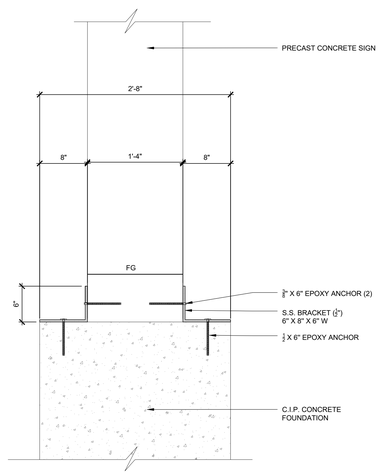


FRONT ELEVATION



PLAN

13 ENTRY SIGN
3/4" = 1'-0"



14 ENTRY SIGN BRACKET ATTACHMENT - SECTION
1" = 1'-0"

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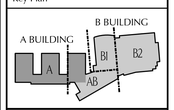

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FILE:

DWN. BY:

JOB NO: #1611

CKD. BY:

SCALE: AS NOTED

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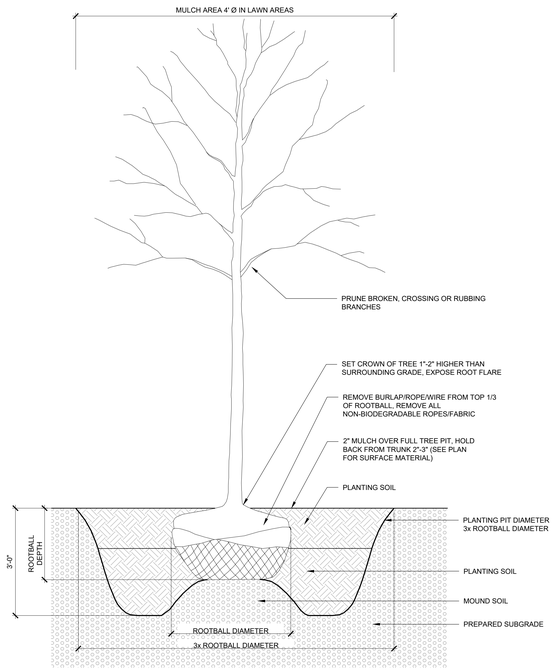
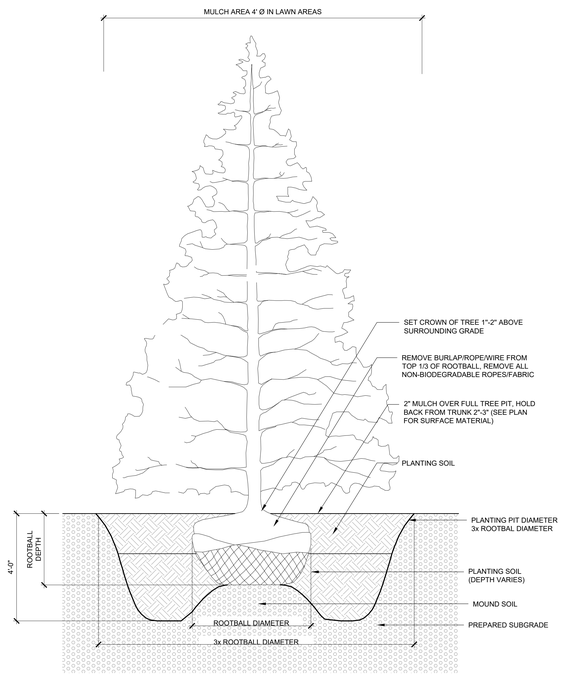
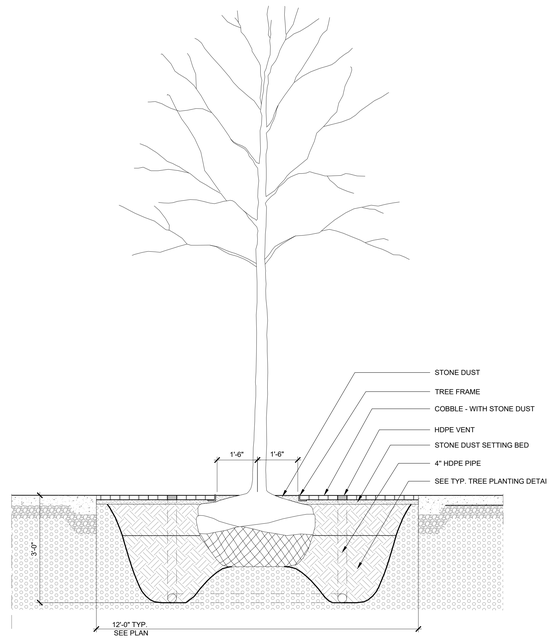
L5.2



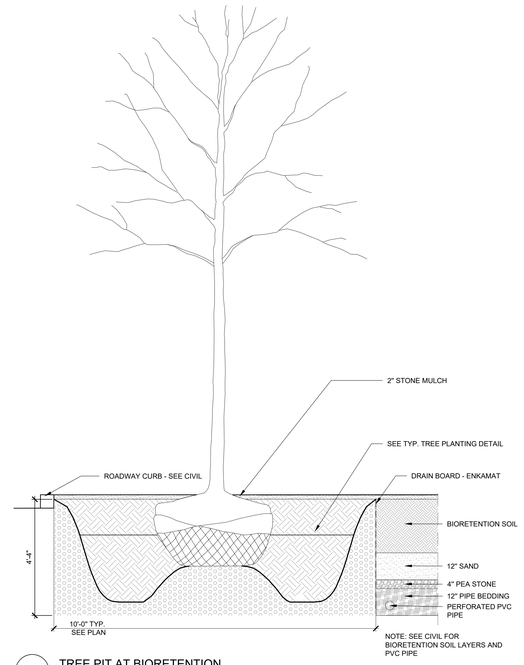
1 DECIDUOUS TREE PLANTING
NOT TO SCALE



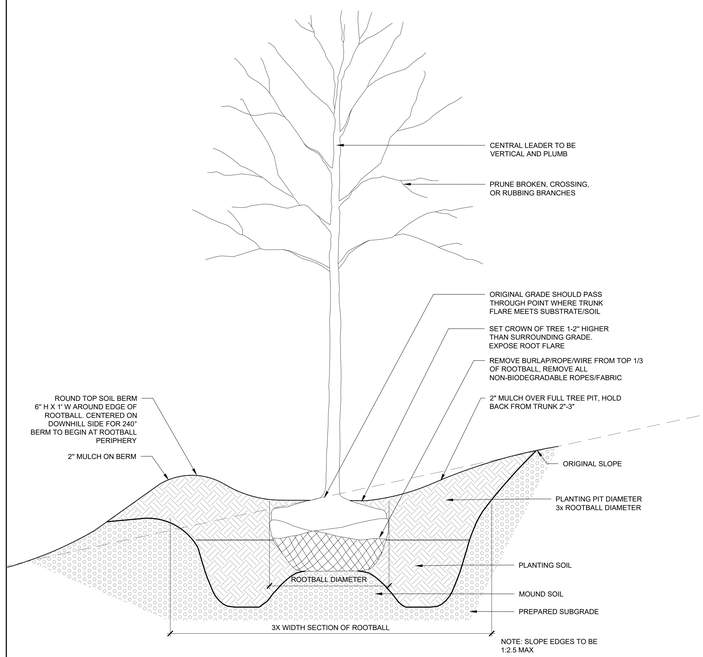
2 EVERGREEN TREE PLANTING
NOT TO SCALE



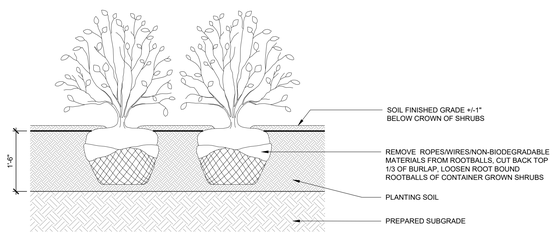
3 TREE PIT WITH COBBLE AT PLAZA
NOT TO SCALE



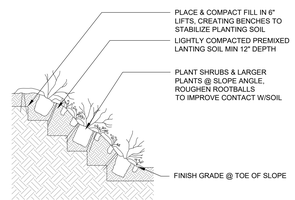
4 TREE PIT AT BIORETENTION
NOT TO SCALE



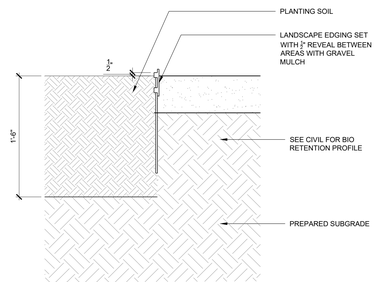
5 TREE PLANTING ON SLOPE
NOT TO SCALE



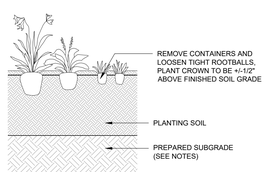
6 SHRUB PLANTING BED
3/4" = 1'



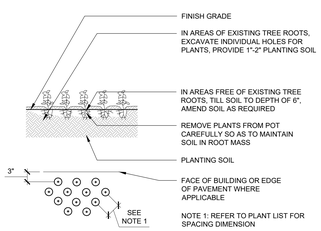
7 PLANTED SLOPE
3/4" = 1'



8 LANDSCAPE EDGING
1 1/2" = 1'

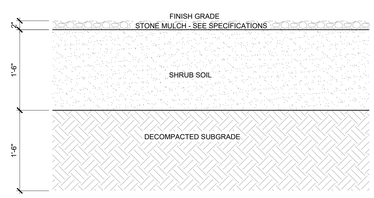


9 PERENNIAL AND GROUNDCOVER PLANTING BED
3/4" = 1'

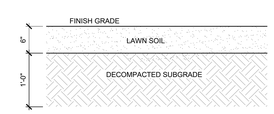


10 PLANTING LAYOUT AND TRIANGULATION
3/4" = 1'

NOTE: SEE TREE + SHRUB PLANTING DETAILS FOR ADDITIONAL INFORMATION ON SOIL REQUIREMENTS AROUND PLANTINGS.



11 SHRUB SOIL PROFILE
1" = 1'-0"



12 LAWN SOIL PROFILE
1" = 1'-0"

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Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

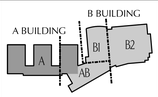
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Planting Details

Key Plan



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7	ESBP #3 - Addendum #5	12/27/18

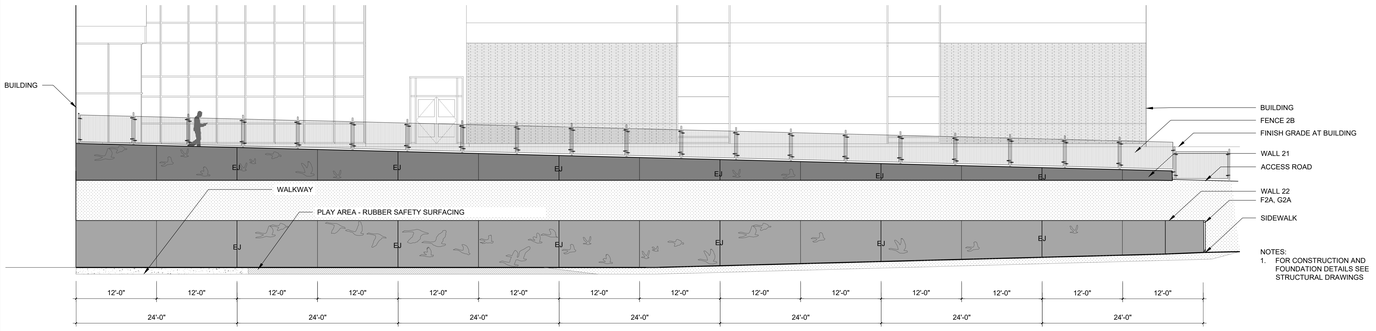
FILE:

DWN. BY: JOB NO: #1611

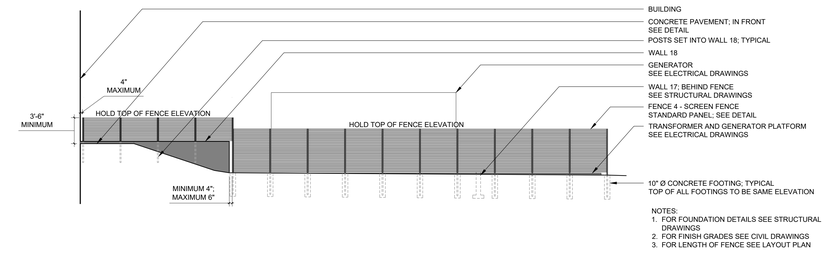
CKD. BY: SCALE: AS NOTED

DATE: January 31, 2019

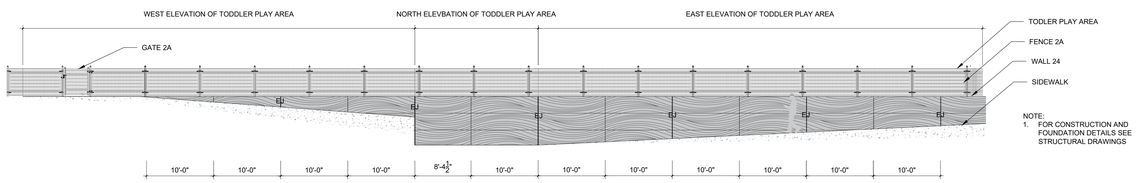
L5.3



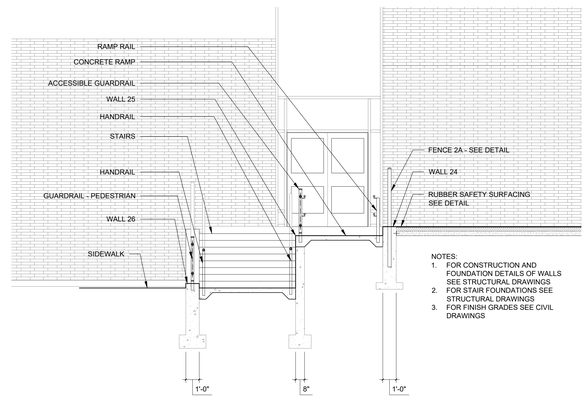
1-A WALL 21 AND 22 - ELEVATION A
1/8" = 1'-0"



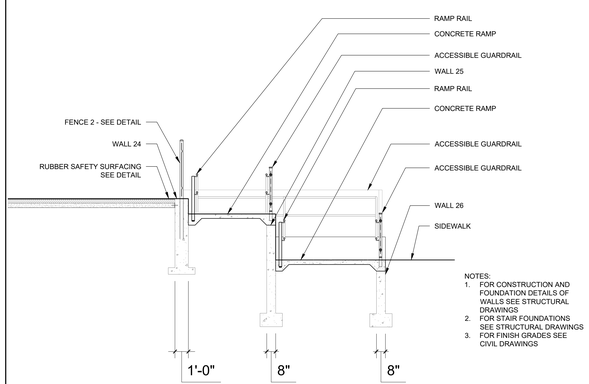
2-A WALL 17 AND 18 - SECTION/ELEVATION A
1/8" = 1'-0"



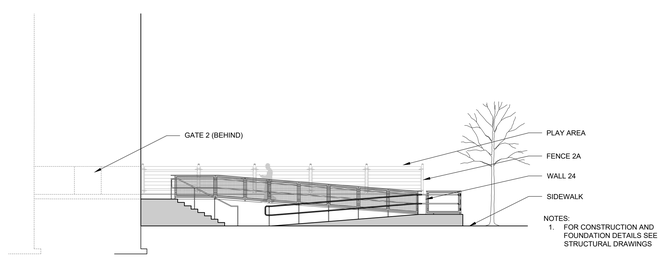
3-A WALL 24 - SECTION/ELEVATION A
1/8" = 1'-0"



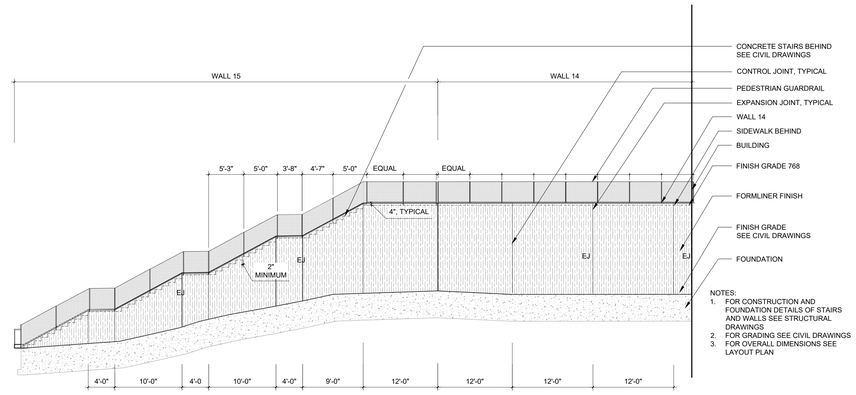
3-B WALL 24, 25, 26 - SECTION/ELEVATION B
1/4" = 1'-0"



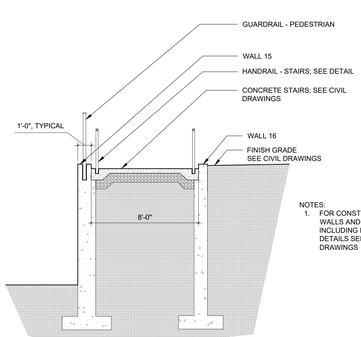
3-C WALL 24, 25, 26 - SECTION/ELEVATION B
1/4" = 1'-0"



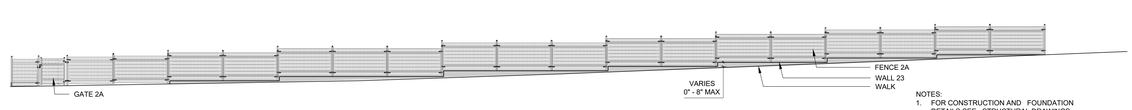
3-D WALLS 25 AND 26 - SECTION/ELEVATION D
1/8" = 1'-0"



4-A WALL 14 AND 15 - SECTION/ELEVATION A
1/8" = 1'-0"



4-B WALL 15 AND 16 - SECTION/ELEVATION
1/4" = 1'-0"



5-A WALL 23 ELEVATION
1/8" = 1'-0"

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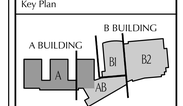
TITLE

Wall Details

Key Plan



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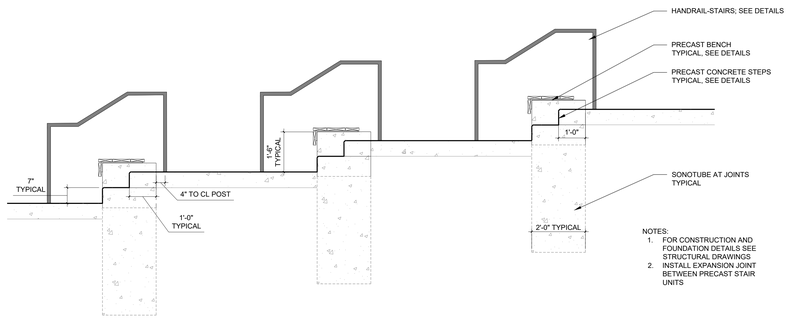
FILE:

DWN. BY: NO | JOB NO: #1611

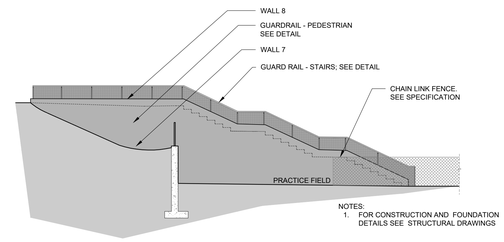
CKD. BY: JR | SCALE: AS NOTED

DATE: January 31, 2019

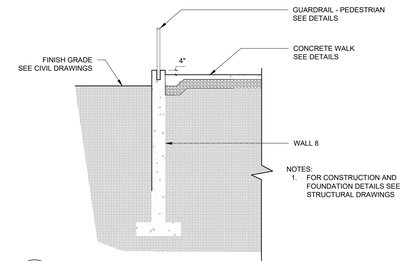
L5.4



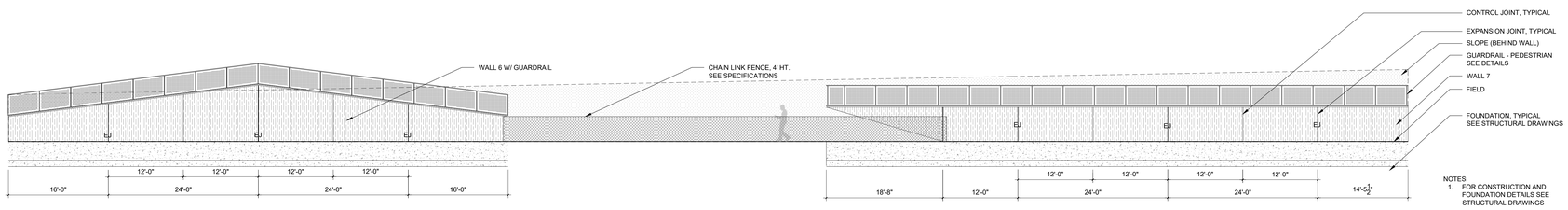
1-A WALL 10 / AMPHITHEATER BENCHES - SECTION/ELEVATION A
1/2" = 1'-0"



2-A WALL 7 AND WALL 8 - SECTION/ELEVATION A
1/8" = 1'-0"

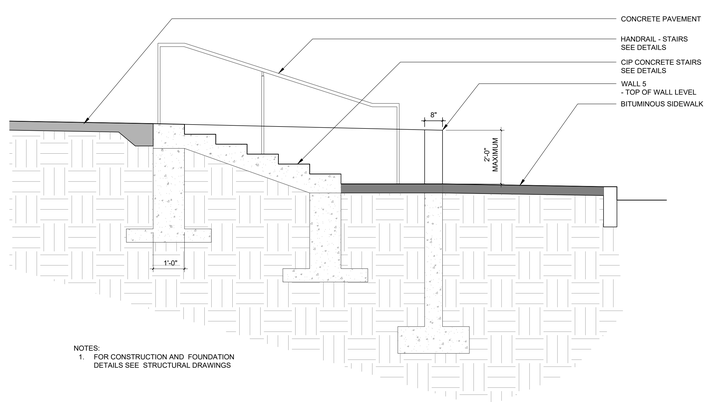


2-B WALL 8 AND WALL 9 - SECTION/ELEVATION A
1/4" = 1'-0"

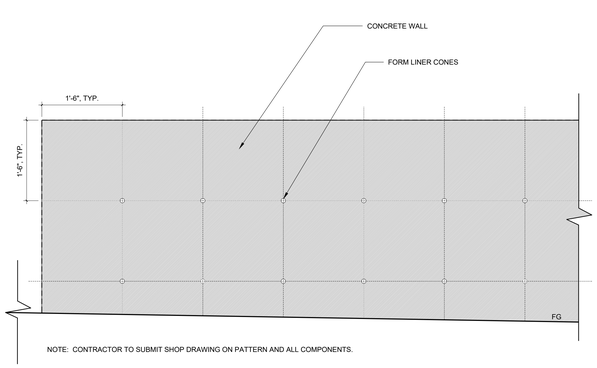


3-A WALL 6 AND 7 - SECTION/ELEVATION A
1/8" = 1'-0"

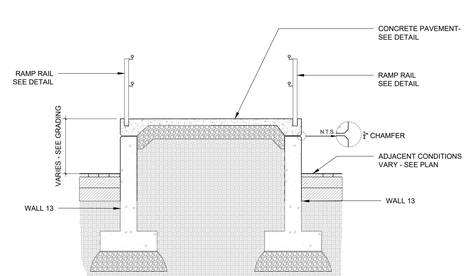
4-A NO LONGER USED



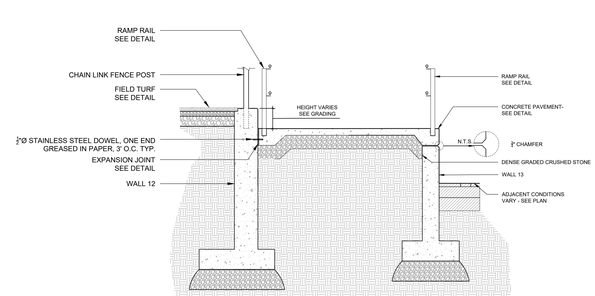
5-A WALL 5 - SECTION/ELEVATION A
1/2" = 1'-0"



6 FORM LINER CONE SPACING
1" = 1'-0"



7-A WALL 13 - CONCRETE RAMP - CROSS SECTION
3/8" = 1'-0"



7-B WALL 12 AND WALL 13 SECTION
3/8" = 1'-0"

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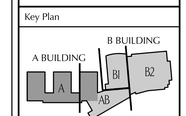

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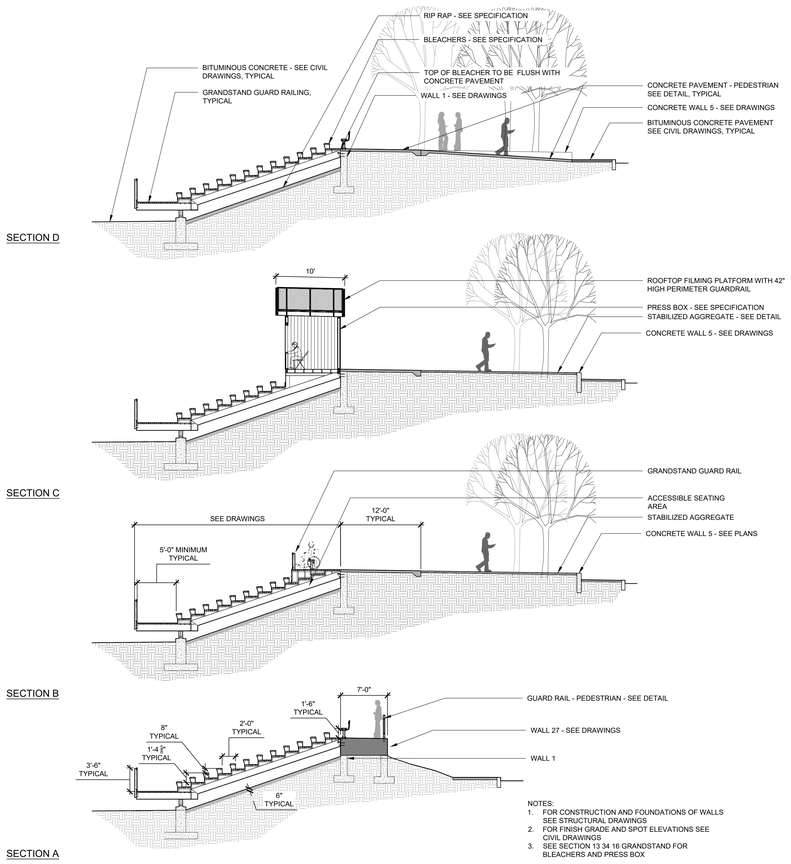
DWN. BY: JOB NO: #1611

CKD. BY: SCALE: AS NOTED

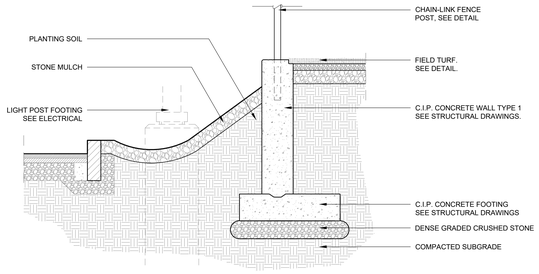
DATE: January 31, 2019

L5.5

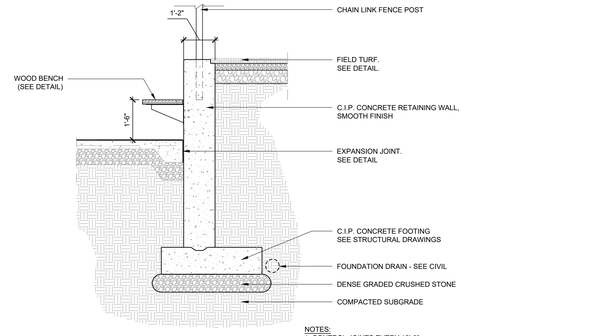


NOTES:
1. FOR CONSTRUCTION AND FOUNDATIONS OF WALLS SEE STRUCTURAL DRAWINGS
2. FOR FINISH GRADE AND SPOT ELEVATIONS SEE CIVIL DRAWINGS
3. SEE SECTION 13 34 16 GRANDSTAND FOR BLEACHERS AND PRESS BOX

1 BLEACHERS - SECTIONS/ELEVATIONS
1/8" = 1'-0"

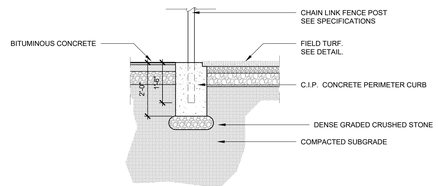


2 WALL 12 | C.I.P. CONCRETE RETAINING WALL / FIELD EDGE
1/2" = 1'-0"

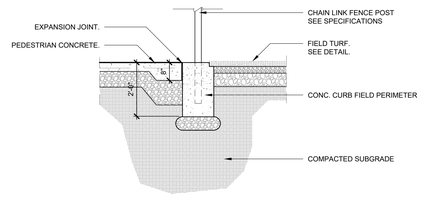


NOTES:
1. CONTROL JOINTS EVERY 12'-0"
2. EXPANSION JOINTS EVERY 24'-0", EVENLY SPACED
3. FOR CONSTRUCTION AND FOUNDATION DETAILS SEE STRUCTURAL DRAWINGS

3 WALL 12 | C.I.P. CONCRETE RETAINING WALL / FIELD EDGE W/ WALL-MOUNTED BENCH
1/2" = 1'-0"

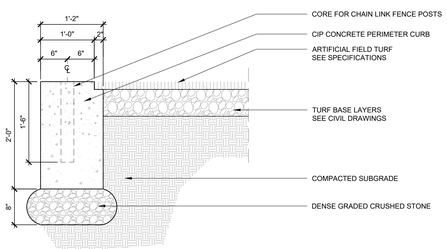


4 CONCRETE PERIMETER CURB AND FENCE POST AT PLAYING FIELDS - BITUMINOUS CONCRETE
1/2" = 1'-0"

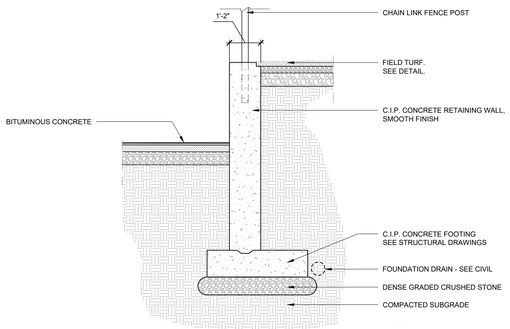


5 CONCRETE PERIMETER CURB AND FENCE POST AT PLAYING FIELD - CONCRETE PAVEMENT
1/2" = 1'-0"

4

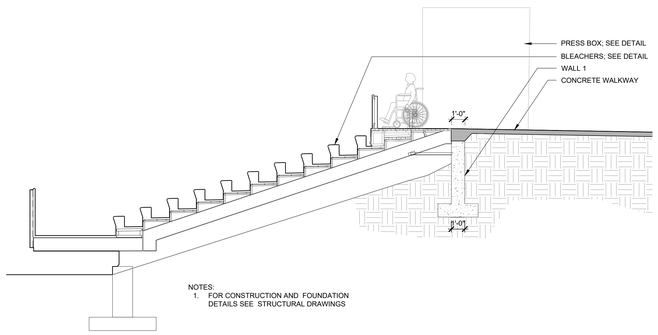


6 FIELD PERIMETER CURB - TYPICAL - SYNTHETIC TURF
1" = 1'-0"



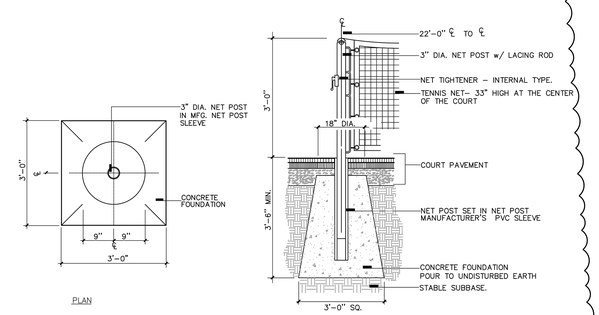
NOTES:
1. CONTROL JOINTS EVERY 12'-0"
2. EXPANSION JOINTS EVERY 24'-0", EVENLY SPACED
3. FOR CONSTRUCTION AND FOUNDATION DETAILS SEE STRUCTURAL DRAWINGS

7 WALL 12 | C.I.P. CONCRETE RETAINING WALL - BITUMINOUS CONCRETE
1/2" = 1'-0"



NOTES:
1. FOR CONSTRUCTION AND FOUNDATION DETAILS SEE STRUCTURAL DRAWINGS

8 WALL 1 AT BLEACHERS - SECTION/ELEVATION A
1/4" = 1'-0"



9 TENNIS NET POST TYPICAL DETAILS
NTS

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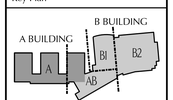

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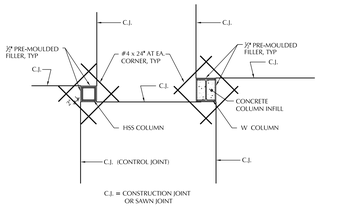
JOB NO: #1611

CKD. BY:

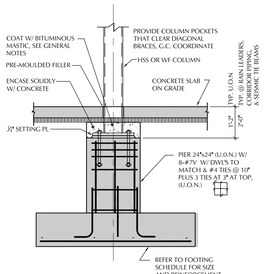
SCALE: AS NOTED

DATE: January 31, 2019

L5.6



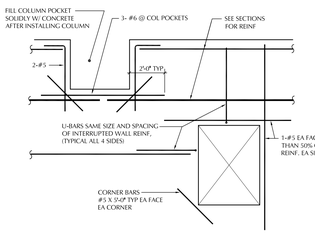
TYPICAL COLUMN AT SLAB ON GRADE



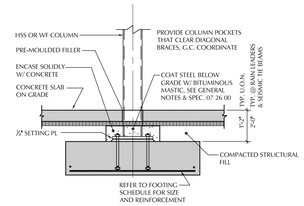
TYPICAL PIER FOOTING DETAIL

ABBREVIATIONS

ADDTL	ADDITIONAL
ALT	ALTERNATE
A.B.	ANCHOR BOLT
ARCH	ARCHITECT
B.P.	BASE PLATE
B	BOTTOM
BEW	BOTTOM EACH WAY
BM	BEAM
BOF	BOTTOM OF FOOTING
BRG	BEARING
BS	BOTH SIDES
C	POSITIVE CAMBER
CIP	CAST-IN-PLACE
COL	COLUMN
COMP DK	COMPOSITE DECK
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
C.J.	CONTROL JOINT
CL	CENTER LINE
CONST JT	CONSTRUCTION JOINT
CONT	CONTINUOUS
DIA	DIAMETER
DWL'S	DOWELS
DWG	DRAWING
EA	EACH
EF	EACH FACE
EW	EACH WAY
EL OR ELEV	ELEVATION
E.J.	EXPANSION JOINT
EQ	EQUAL
FF	FAR FACE
FDN	FOUNDATION
FTG	FOOTING
H	HORIZONTAL
HSS	HOLLOW STRUCTURAL SHAPE
IF	INSIDE FACE
LLV	LONG LEG VERTICAL
LW	LONG WAY
MAX	MAXIMUM
M.C.	MOMENT CONNECTION
MECH	MECHANICAL
M.M.	METAL FABRICATIONS (05 50 00)
MIN	MINIMUM
NF	NEAR FACE
N.S	NON-SHRINK
NTS	NOT TO SCALE
O.C.	ON CENTER
PL	PLATE
REINF	REINFORCING
SC	SHEAR CONNECTOR
SLV	SHORT LEG VERTICAL
SOG	SLAB ON GRADE
SW	SHORT WAY
S.S.	STAINLESS STEEL
STIFF	STIFFENER
STL	STEEL
S.J.	SAWN JOINT
T	TOP
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOW	TOP OF WALL
TSL	TOP OF SLAB
TST	TOP OF STEEL
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
V	VERTICAL
WWF	WELDED WIRE FABRIC
W/	WITH
W.P.	WORKING POINT

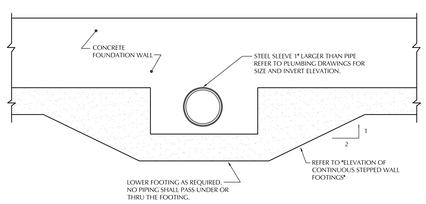


REINFORCING AT OPENINGS IN REINFORCED CONCRETE WALLS

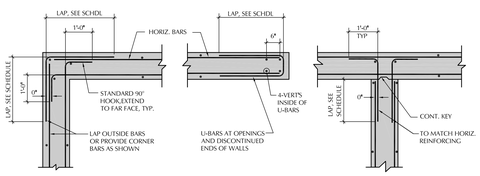


NOTE: IF ROCK IS PRESENT AT FOOTING BEARING ELEVATIONS, OVER-EXCAVATE 12" MIN. AND PROVIDE COMPACTED GRANULAR FILL TO REQUIRED GRADE.

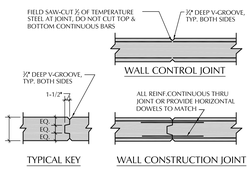
TYPICAL COLUMN FOOTING DETAIL



TYPICAL FOUNDATION WALL PIPE PENETRATION DETAILS



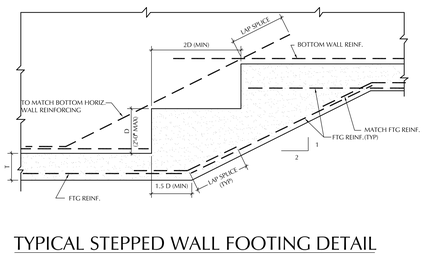
PLAN OF HORIZONTAL REINFORCING OF CONCRETE WALLS AND GRADE BEAMS



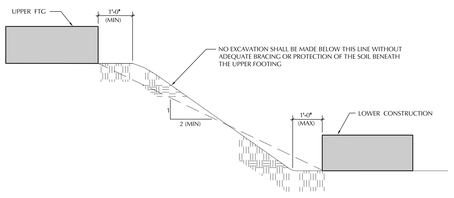
LOCATE ALL EXTERIOR FOUNDATION WALL JOINTS AT LOCATIONS NOT TO IMPAIR THE STRENGTH OF THE FOUNDATION WALL. LOCATE JOINTS TO MATCH BRICK CONTROL JOINTS, TYPICAL (REFER TO ARCH. DWG'S FOR BRICK CONTROL JOINT LOCATIONS)

PROVIDE WALL CONSTRUCTION JTS @ 40' o.c. (MAX), ALTERNATE PLACING OF PANELS, ALLOWING 36 HOURS FROM THE END OF ONE POUR TO THE BEGINNING OF ADJACENT POURS. (U.O.N.)
FROST WALLS ONLY: CONSTRUCTION JOINT SPACING MAY BE INCREASED TO 80' o.c. (MAX) PROVIDED WALL CONTROL JOINTS ARE INSTALLED AT 24' o.c. (MAX) BETWEEN CONSTRUCTION JOINTS. LOCATE ALL JOINTS IN EXTERIOR WALLS AT BRICK CONTROL JOINT LOCATIONS.

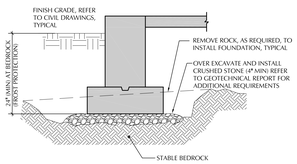
TYPICAL CONSTR./CONTROL JOINTS IN CONCRETE WALLS



TYPICAL STEPPED WALL FOOTING DETAIL



SLOPE BETWEEN FOOTINGS



NOTE: CONTINUOUS FROST WALL FOOTING MAY BE RAISED AT SUITABLE BEDROCK LOCATIONS, AS NOTED. G.C. MUST SUBMIT ALL FOOTING ELEVATION CHANGES TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO INSTALLATION. DETAIL DOES NOT APPLY TO RETAINING WALLS.

TYPICAL FOUNDATION BEARING AT BEDROCK

GENERAL NOTES

FOUNDATION NOTES

F1
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

F2
FOUNDATIONS DESIGNED FOR A MAXIMUM ALLOWABLE NET BEARING PRESSURE OF 4.0 KSF. REFER TO LAHLAF GEOTECHNICAL CONSULTING, INC.'s "PRELIMINARY GEOTECHNICAL REPORT PROPOSED WORCESTER SOUTH HIGH SCHOOL, WORCESTER, MA." DATED APRIL 9, 2018 FOR ADDITIONAL DESIGN AND CONSTRUCTION RECOMMENDATIONS.

F3
ELEVATIONS FOR BOTTOM OF FOOTINGS AS DETERMINED BY THE PLANS ARE ANTICIPATED FOR THE PURPOSE OF ESTIMATION ONLY. FOOTINGS MUST REST ON COMPACTED STRUCTURAL FILL OVER NATURAL SOIL APPROVED BY THE OWNER'S SOIL ENGINEER FOR THE DESIGN LOAD. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL AND SUBGRADE PREPARATION REQUIREMENTS.

F4
NO FOOTING SHALL HAVE ITS BASE HIGHER THAN THAT OF ANY NEARBY FOOTING OR OTHER EXCAVATION BY MORE THAN HALF THE SHORTEST HORIZONTAL DISTANCE BETWEEN THEM UNLESS OTHERWISE SHOWN ON THE PLANS.

F5
SLAB-ON-GRADE PREPARATION (REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS):
1. PROVIDE 12" (MINIMUM) COMPACTED STRUCTURAL FILL, RIGID INSULATION, AND VAPOR RETARDER BELOW EACH CONCRETE SLAB-ON-GRADE.
2. AT RADON MITIGATION SYSTEMS, REPLACE TOP 12" OF STRUCTURAL FILL WITH 12" OF COMPACTED CRUSHED STONE.

F6
DO NOT PLACE FOOTINGS IN WATER OR ON FROZEN GROUND.

F7
DO NOT BACK-FILL AGAINST FOUNDATION WALLS UNTIL LATERAL SUPPORTS, TOP AND BOTTOM, ARE EFFECTIVE AND WALLS ARE ADEQUATELY BRACED. CONCRETE WALLS AND SLABS MUST ATTAIN 28 DAY DESIGN STRENGTH PRIOR TO BACK-FILLING.

F8
THE GLACIAL TILL BEARING SOILS ARE SUSCEPTIBLE TO DISTURBANCE BY FREEZING. SOIL BEARING SURFACES BELOW COMPLETED FOUNDATIONS MUST BE PROTECTED AGAINST FREEZING BEFORE AND AFTER FOUNDATION CONSTRUCTION. IF CONSTRUCTION IS PERFORMED DURING FREEZING WEATHER, FOOTINGS SHOULD BE BACK-FILLED TO A SUFFICIENT DEPTH (3.0' TO FOUR FEET) AS SOON AS POSSIBLE AFTER THEY ARE CONSTRUCTED. ALTERNATIVELY, INSULATING BLANKETS OR OTHER MEANS MAY BE USED FOR PROTECTION AGAINST FREEZING.

F9
COORDINATE UNDER FLOOR AND PERIMETER DRAIN REQUIREMENTS WITH ARCHITECTURAL, CIVIL, AND PLUMBING DRAWINGS AND THE REQUIREMENTS OF THE OWNER'S SOIL ENGINEER.

F10
COORDINATE PIPING PASSING THROUGH EXTERIOR FOUNDATION WALLS SO PIPING DOES NOT PASS THROUGH OR BELOW WALL FOOTING. STEP DOWN FOOTING AS REQUIRED SO PIPING PASSES THROUGH WALL ABOVE FOOTING.

F11
USE SIDE FORMS FOR ALL FOOTINGS. CLEAN REINFORCEMENT IMMEDIATELY PRIOR TO CONCRETE PLACEMENT. PLACE CONCRETE FOR EACH FOOTING IN CONTINUOUS POUR. LIMIT CONCRETE WALL POUR LENGTHS AS NOTED IN "TYPICAL CONSTRCONTROL JOINTS IN CONCRETE WALLS," DWG S1.1.

F12
CONCRETE FOUNDATION WALLS TO RECEIVE WATERPROOFING MEMBRANE ARE TO BE FINISHED FREE OF VOIDS, HIGH SPOTS, FORM MARKS PER THE REQUIREMENTS OF SPECIFICATION 03 30 00. REFER TO ARCHITECTURAL DRAWINGS TO LOCATE WALL SURFACES TO RECEIVE WATERPROOFING MEMBRANE.

CONCRETE NOTES

C1
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C2
CONCRETE STRENGTHS (ALL CONCRETE NORMAL WEIGHT, EXCEPT AS NOTED)

CONCRETE	STRENGTH AT 28 DAYS
FOOTINGS	4,000 PSI
FOUNDATION WALLS & PIERS	4,000 PSI
SUSPENDED SLABS (LIGHT-WEIGHT CONCRETE)	3,000 PSI (115 PCF)
SLABS-ON-GRADE (EXCEPT AS NOTED)	3,000 PSI
SLAB-ON-GRADE AT AUTO/DIESEL SHOP	4,000 PSI
CONCRETE FOR EXTERIOR WORK	4,000 PSI (AIR-ENTRAINED)
ALL OTHER CONCRETE	4,000 PSI

C3
ALL WORK SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OF THE AMERICAN CONCRETE INSTITUTE AND THE MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION. IN CASE OF CONFLICT, THE MASSACHUSETTS STATE BUILDING CODE SHALL GOVERN.

C4
MINIMUM CONCRETE COVER FOR REINFORCEMENT:

	CONCRETE COVER
CONCRETE PLACED AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH, WEATHER	2"
FORMED CONCRETE NOT EXPOSED TO EARTH, WEATHER	½" *
SUSPENDED CONCRETE SLABS, TOP BARS	½"
SUSPENDED CONCRETE SLABS, BOTTOM BARS	1"

C5
CONTROLLED CONCRETE SHALL BE PROPORTIONED, MIXED, AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE CONTROL ENGINEER.

C6
CONCRETE FOR SUSPENDED SLABS SHALL BE 115 PCF, LIGHTWEIGHT CONCRETE (U.O.N.). ALL OTHER CONCRETE SHALL BE NORMAL WEIGHT CONCRETE 145 PCF.

C7
REINFORCING MATERIALS

TYPICAL BARS	ASTM A 615-60
BARS TO BE FIELD WELDED	ASTM A 706-60
WELDED WIRE FABRIC	ASTM A 185

C8
WELDED WIRE FABRIC SHALL BE SUPPLIED IN FLAT SHEETS.

C9
PROVIDE TENSION LAP SPLICE, UNLESS OTHERWISE NOTED. PROVIDE DOWELS TO MATCH MAIN REINFORCEMENT SIZE AND SPACING, UNLESS OTHERWISE NOTED.

C10
PROVIDE KEY AND #4 x 3'-0" LONG @16" O.C. DOWELS AT CONSTRUCTION JOINTS UNLESS OTHERWISE SHOWN ON THE PLANS. SEE "TYPICAL SLAB ON GRADE DETAIL" FOR DOWELS AT CONSTRUCTION JOINTS IN SLABS ON GRADE.

C11
ALL NECESSARY SLEEVES AND INSERTS ARE TO BE FURNISHED AND PLACED BY THE VARIOUS TRADES IN FULL COOPERATION WITH THE CONTRACTOR.

C12
PROVIDE #4@12" HORIZONTAL AND VERTICAL, EACH FACE, IN ALL CONCRETE WALLS AND 2- #6 CONTINUOUS ON TOP AND BOTTOM OF CONCRETE WALLS, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

C13
STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, HVAC, PLUMBING, AND ELECTRICAL DRAWINGS AND THESE DRAWINGS SHALL BE REFERRED TO FOR SIZES AND LOCATIONS OF OPENINGS, DENTS, PIPES, INSERTS, BOXES, AND HANGERS.

C14
CALCIUM CHLORIDE SHALL NOT BE USED IN ANY CONCRETE.

C15
PIPES AND SLEEVES EMBEDDED IN CONCRETE SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN ONE-FOURTH THE THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED, NOR SHALL THEY BE PLACED CLOSER THAN THREE DIAMETERS OR BE LOCATED SO AS TO IMPAIR THE STRENGTH OF THE CONCRETE.

C16
SAWCUT SLABS IN PATTERN SHOWN ON PLANS AND TYPICAL DETAILS. START SAWCUTTING AS SOON AS SAW WILL NOT RAVEL EDGES OR DISLODGE AGGREGATE, BUT IN NO CASE MORE THAN 12 HOURS AFTER THE SLAB IS PLACED.

STRUCTURAL STEEL NOTES

S1
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

S2
STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO THE FOLLOWING ASTM STANDARD SPECIFICATIONS:

W-SHAPES	ASTM A 992
PLATES AND ANGLES	ASTM A 36
CHANNELS	ASTM A 36
STRUCTURAL TUBING	ASTM A 500, GRADE B, FY = 46 KSI
PIPE	ASTM A 53, GRADE B
HIGH STRENGTH BOLTS	ASTM A325, F1852, A490 & F2280
ANCHOR BOLTS	ASTM F 1554, GRADE 55

S3
DETAILS, FABRICATION, AND ERECTION SHALL CONFORM TO THE SPECIFICATIONS AND TO THE LATEST STANDARD SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. ASD USED OR DESGN

S4
NO FABRICATION SHALL BE STARTED UNTIL THE SHOP DRAWINGS COVERING THE WORK HAVE BEEN APPROVED BY THE ARCHITECT IN WRITING.

S5
ALL STRUCTURAL STEEL SHALL BE SHOP-WELDED OR HIGH STRENGTH BOLTED, UNLESS OTHERWISE SHOWN. FIELD CONNECTIONS SHALL BE MADE WITH TORQUE CONTROLLED HIGH STRENGTH BOLTS. FIELD WELDING, OR ½" UNFINISHED BOLTS MAY BE USED FOR ANGLES AND CHANNELS LESS THAN 8" IN SIZE.

S6
INDIVIDUAL COLUMNS SHALL STAND PLUMB WHEN CONNECTED BY ANCHOR BOLTS TO THEIR SUPPORTS WITHOUT THE BENEFIT OF GUYS OR BRACING WITHIN A TOLERANCE OF ½" IN 30 FEET.

S7
PROVIDE FITTED WELDED ½" WEB STIFFENER PLATES ON EACH SIDE OF ALL BEAMS SEATED ON COLUMNS UNLESS OTHERWISE NOTED.

S8
STRUCTURAL STEEL PRIMER (SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS & EXEMPTIONS):
1. PAINT STRUCTURAL STEEL ONE SHOP COAT.
2. NO PAINT AT STEEL TO RECEIVE SPRAYED FIRE PROTECTION SYSTEM.
3. NO PAINT AT TOP FLANGE OF BEAMS TO RECEIVE SHEAR STUDS.
4. PAINT STRUCTURAL STEEL ONE SHOP COAT OF PRIMER COMPATIBLE WITH INTUMESCENT COATING AT STRUCTURAL STEEL SCHEDULED TO RECEIVE INTUMESCENT COATING.
5. REFER TO ARCHITECTURAL FIRE PROTECTION DRAWINGS FOR LOCATIONS OF SPRAYED AND INTUMESCENT FIREPROOFING.

S9
ALL STRUCTURAL STEEL BELOW GROUND FLOOR SLAB SHALL BE COATED WITH AN APPROVED BITUMINOUS MASTIC AND ENCASED IN CONCRETE. BITUMINOUS MASTIC MUST BE COMPATIBLE WITH UNDERSLAB VAPOR RETARDER.

S10
ALL WELDS SHALL BE PERFORMED BY APPROVED CERTIFIED WELDERS USING E70XX ELECTRODES.

S11
SPLICING OF STRUCTURAL MEMBERS OTHER THAN WHERE DETAILED ON STRUCTURAL DRAWINGS IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

STEEL JOIST NOTES

J1
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

J2
OPEN WEB JOISTS SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR DEEP LONGSPAN STEEL JOISTS, DLH SERIES" OF THE STEEL JOIST INSTITUTE.

J3
JOISTS AND JOIST GIRDERS SHALL BE FABRICATED BY A MANUFACTURER WHO SHALL HAVE A STEEL JOIST INSTITUTE DESIGN AND PRODUCTION APPROVAL FOR ALL THE SPECIFIC JOISTS AND JOIST GIRDER DESIGNATIONS ON THE PROJECT.

J4
ROOF JOISTS SHALL BE DESIGNED AND INSTALLED TO RESIST A NET UPLIFT FORCE OF 15 PSF.

J5
OPEN WEB JOISTS WITH CRIMPED ANGLE COMPRESSION DIAGONAL MEMBERS SHALL NOT BE USED ON THIS PROJECT.

J6
MINIMUM BEARING REQUIREMENTS:
a. DLH JOISTS: 4" ON STEEL.

J7
PROVIDE AND INSTALL BRIDGING IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE. ALL REQUIRED CONNECTIONS FOR BRIDGING SHALL BE PROVIDED BY THE JOISTS MANUFACTURER.

J8
ALL JOISTS AND JOIST GIRDERS SHALL BE PROVIDED WITH JOIST SEATS THAT BEAR FULLY ON SUPPORT STRUCTURE.

J9
CONCENTRATED LOADS SHALL BE INSTALLED AT PANEL POINTS, OR JOIST REINFORCEMENT SHALL BE INSTALLED BY THE CONTRACTOR RESPONSIBLE FOR THE CONCENTRATED LOAD. REFER TO TYPICAL DETAIL FOR ADDITIONAL INFORMATION.

J10
BOTTOM CHORD EXTENSIONS SHALL BE PROVIDED AS REQUIRED.

DESIGN LOADS

BUILDING CODE: 780 CMR MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION, CONSISTING OF THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY MASSACHUSETTS.

BUILDING OCCUPANCY RISK CATEGORY: CAT. III

OCCUPANCY LIVE LOADS:

CLASSROOMS (50 PSF + 15 PSF PARTITIONS)	65 PSF
STAIRS & CORRIDORS	100 PSF
FLEXIBLE OPEN AREAS	100 PSF
WEIGHT ROOM	125 PSF
STAGE	150 PSF
AUDITORIUM SEATING (FIXED SEATING)	60 PSF
CATWALKS	40 PSF
ROOF RTU PLATFORMS	60 PSF (PLUS CONDENSER WEIGHTS)

ROOF LOAD:

SOLAR PANELS (SEE PLANS FOR LOCATIONS)	20 PSF
SNOW LOAD	(SEE BELOW)

SNOW LOAD
GROUND SNOW LOAD, P_g (WORCESTER, MA) 55 PSF
FLAT ROOF SNOW LOAD, P_f (SCHOOL ROOF) 42 PSF
EXPOSURE FACTOR, C_t = 1.0
THERMAL FACTOR, C_t = 1.0 (BUILDING ROOFS)
THERMAL FACTOR, C_t = 1.2 (UNHEATED ROOFS, CANOPIES)
IMPORTANCE FACTOR, I_s = 1.1
SNOW DRIFT IN ACCORDANCE WITH BUILDING CODE

WIND LOADS
BASIC WIND SPEED (WORCESTER, MA), V_{ULT} = 134 MPH (V_{ASD} = 104 MPH)
BUILDING RISK CATEGORY = III
EXPOSURE CATEGORY = B
INTERNAL PRESSURE COEFFICIENT = +/- 0.18

SEISMIC LOADS
PER MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN CATEGORY = B
SITE CLASS = D
IMPORTANCE FACTOR, I_e = 1.25
LOCATION FACTORS: (WORCESTER, MA)
S_s = 0.18
S_1 = 0.066
F_a = 1.6
F_v = 2.4
S_{ms} = 0.288
S_{m1} = 0.158

SYSTEM 1: **CLASSROOMS**
STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
RESPONSE MODIFICATION FACTOR, R = 3.0
OVERSTRENGTH FACTOR, Ω = 3.0
DEFLECTION AMPLIFICATION FACTOR, C_d = 3.0
S_{ds} = 0.192
S_{d1} = 0.106
SEISMIC RESPONSE FACTOR, C_s = 0.080
DESIGN BASE SHEAR (ASD) = 215 K BLDG.CL1
DESIGN BASE SHEAR (ASD) = 305 K BLDG.CL2
DESIGN BASE SHEAR (ASD) = 340 K BLDG.CL3

SYSTEM 2: **GYM/AUDITORIUM/CAFETERIA**
STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
& INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
RESPONSE MODIFICATION FACTOR, R = 3.0
OVERSTRENGTH FACTOR, Ω = 3.0
DEFLECTION AMPLIFICATION FACTOR, C_d = 3.0
S_{ds} = 0.192
S_{d1} = 0.106
DESIGN RESPONSE FACTOR, C_s = 0.080
DESIGN BASE SHEAR (ASD) = 780 K

STRUCTURAL STEEL DECK NOTES

MD1
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

MD2
DESIGN, FABRICATION, AND INSTALLATION OF ALL STEEL DECK SHALL BE IN ACCORDANCE WITH THE "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" OF AMERICAN IRON AND STEEL INSTITUTE (AISI). ALL METAL DECK SHALL BE GALVANIZED.

MD3
PROVIDE COMPOSITE STEEL DECK WITH WIDE RIBS SUITABLE FOR SHEAR STUD PLACEMENT.

MD4
WELD SHEAR STUDS THROUGH STEEL DECK BY PRE-QUALIFIED METHODS.

MD5
PROVIDE CONTINUOUS SHEET METAL CLOSURES AT ALL SLAB OPENINGS AND SLAB EDGES AND CONTINUOUS DECK CLOSURES AT ALL DECK ENDS. PROVIDE COLUMN CLOSURES, RIDGE AND VALLEY PLATES, CANT STRIPS, RECESSED DRAIN SUMP PANS, ETC. PROVIDE SUPPLEMENTAL FRAMING AT OPENINGS AS REQUIRED FOR SUPPORT OF STEEL DECK. PROVIDE STRAP ANCHORS OR TEMPORARY SHORING AS NECESSARY TO CONTROL CANTILEVER DEFLECTIONS AT FLOOR SLAB EDGES.

MD6
STEEL DECK SHALL HAVE OPEN SIDE LAPS. SIDE LAPS SHALL BE FASTENED WITH #12 SELF TAPPING STEEL SCREWS SPACED AT 36" ON CENTER, MAXIMUM. WELDED OR BUTTON PUNCHED SIDE LAPS ARE NOT PERMISSIBLE.

MD7
COMPOSITE STEEL DECK SHALL BE FASTENED TO SUPPORT STEEL WITH A MINIMUM ⅝" DIAMETER WELDS AT 12" ON CENTER AT INTERMEDIATE SUPPORTS AND AT ENDS OF SHEET. 1 ½" ROOF DECK SHALL BE FASTENED TO SUPPORT STEEL WITH A MINIMUM ⅝" DIAMETER PUDDLE WELD AT 1'-0" ON CENTER AT INTERMEDIATE SUPPORTS AND AT 6" ON CENTER AT END SUPPORTS. 3" ROOF DECK SHALL BE FASTENED TO SUPPORT STEEL WITH A MINIMUM ⅝" DIAMETER PUDDLE WELD AT 8" ON CENTER AT INTERMEDIATE AND END SUPPORTS.

MD8
STEEL DECK SPANS ARE DESIGNED TO MINIMIZE SHORING REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ACCOMPLISHING ANY SHORING REQUIRED TO RESIST CONSTRUCTION LOADS ON THE STEEL DECK.

CONCRETE BLOCK MASONRY NOTES

B1
ALL LOAD BEARING BLOCK MASONRY SHALL CONFORM TO ACI 531 "BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES".

B2
ALL LOAD BEARING CONCRETE MASONRY SHALL HAVE A MINIMUM PRISM STRENGTH f'm = 1,500 PSI AT 28 DAYS OR AS NOTED ON THE DRAWINGS.

B3
ALL CONCRETE MASONRY SHALL BE LAID IN TYPE M OR S MORTAR. DO NOT USE CALCIUM CHLORIDE IN MORTAR OR GROUT.

B4
ALL VERTICAL REINFORCING SHALL BE SOLIDLY GROUTED IN 4" OR WIDER CELLS.

B5
MINIMUM WALL REINFORCING, UNLESS NOTED OTHERWISE:
8" CMU: #5 @ 48" o.c VERT & 2-#5 CONTINUOUS IN 8" BOND BEAMS.
12" CMU: #7@ 32" o.c. VERT & 2-#7 CONTINUOUS IN 12" BOND BEAMS.

B6
REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL CMU BOND BEAMS. THE MAXIMUM VERTICAL SPACING FOR CMU BOND BEAMS SHALL BE 4'-0" O.C., EXCEPT AS OTHERWISE NOTED.

B7
ALL CONCRETE MASONRY WALLS SHALL BE REINFORCED HORIZONTALLY WITH 9 GAGE WIRE TRUSS REINFORCING SPACED AT 16" o.c.

B8
THE CONTROL ENGINEER SHALL INSPECT ALL GROUTING OPERATIONS AND THE INSTALLATION OF REINFORCING IN LOAD BEARING CONCRETE MASONRY WALLS.

MISCELLANEOUS NOTES

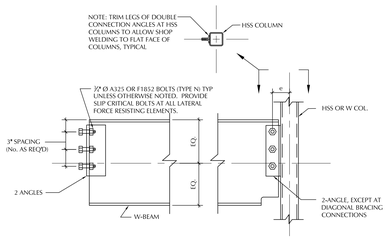
M1
THE INTENT OF THE STRUCTURAL DRAWINGS IS TO SHOW THE MAIN STRUCTURAL FEATURES AND STRUCTURAL DESIGN FOR THE PROJECT. ARCHITECTURAL DETAILS ARE SHOWN INCIDENTALLY ONLY AND NOT COMPLETELY. THEREFORE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS MUST BE USED IN CONJUNCTION WITH STRUCTURAL DRAWINGS DURING ALL PHASES OF CONSTRUCTION.

M2
CONSULT THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATION AND SIZE OF CHASES, INSERTS, OPENINGS, SLEEVES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS. COMBINE THE REQUIREMENTS INTO THE SHOP DRAWINGS COVERING THE WORK. PROVIDE STRUCTURAL FRAMING PER TYPICAL DETAILS AS REQUIRED AT FLOOR AND ROOF OPENINGS WHERE STRUCTURAL FRAMING IS NOT SHOWN.

M3
THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION OF CONSTRUCTION OF THE PROJECT AND THEN, ONLY TO SUPPORT THE DESIGN LOADS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS AND SEQUENCE OF CONSTRUCTION AND FOR THE ADEQUACY OF THE STRUCTURE TO SUPPORT LOADS OCCURRING DURING CONSTRUCTION. FURNISH ALL TEMPORARY BRACING, SHORING, AND/OR SUPPORT AS REQUIRED.

M4
THE BUILDINGS DERIVE LATERAL STABILITY FROM STEEL BRACES, STEEL MOMENT FRAMES, CMU SHEAR WALLS, CONCRETE FOUNDATION WALLS, CONCRETE FLOOR SLABS, AND STEEL ROOF DECK. ALL STRUCTURAL STEEL MUST BE TEMPORARILY BRACED AND GUYED UNTIL THE BUILDING IS LATERALLY STABLE. COLUMN ANCHOR BOLTS ARE NOT DESIGNED TO TEMPORARILY CANTILEVER FROM THE FOUNDATION.

M5
CHECK ALL DIMENSIONS AGAINST THE REQUIREMENTS OF OTHER CONTRACT DOCUMENTS. RESOLVE APPARENT CONSISTENCIES IN THE CONTRACT DOCUMENTS WITH THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE

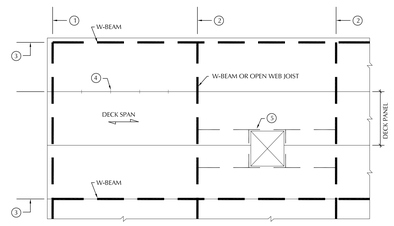


CONNECTION DESIGN FORCES			
NON-COMPOSITE BEAMS		COMPOSITE BEAMS	
BEAM DEPTH	DESIGN END REACTION	BEAM DEPTH	DESIGN END REACTION
ALL BEAMS	0.50 x R	W8 TO W18	1.00 x R
		≥ W21	0.75 x R

R = THE TOTAL UNIFORM LOAD (ASD) CAPACITY SHOWN IN THE MAXIMUM TOTAL UNIFORM LOAD* TABLES, PART 3 OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN BEAM SIZE, SPAN, AND GRADE OF STEEL UNLESS OTHERWISE NOTED ON THE PLANS.

1. SPACING OF BOLTS SHALL EXTEND BEYOND THE MID-DEPTH OF THE BEAM. MINIMUM NUMBER OF ROWS OF BOLTS:
   W8, W10- 2 ROWS W21, W24- 5 ROWS
   W12, W14- 3 ROWS W27, W30- 6 ROWS
   W16, W18- 4 ROWS W33, W36- 7 ROWS
2. SECONDARY W8,W10, AND W12 BEAMS FRAMING OPENINGS NEED NOT APPLY TO THE REQUIREMENTS OF THE TABLE OF ABOVE.
3. CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF PART 9, "CONNECTIONS" OF THE AISC MANUAL OF STEEL CONSTRUCTION, FOURTEENTH EDITION.
4. ALTERNATE BEAM CONNECTIONS MAY BE SUBMITTED BY THE STRUCTURAL STEEL FABRICATOR FOR CONSIDERATION BY THE STRUCTURAL ENGINEER. DO NOT START SHOP DRAWING PREPARATION OF ALTERNATE BEAM CONNECTIONS WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.
5. BOLTS FOR CONNECTIONS TO HSS COLUMNS SHALL BE DESIGNED OF THE ECCENTRICITY *,*
6. REFER TO DWG'S S1.1, S1.2, S5.3, & S5.4 "DIAGONAL BRACING ELEVATIONS AND DETAILS" FOR THRU PLATE CONNECTION DETAILS AT DIAGONAL BRACES.

MINIMUM REQUIREMENTS FOR BEAM CONNECTIONS



ROOF DECK

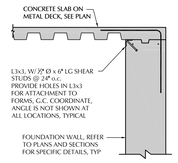
1. DECK PANEL END SUPPORT, 3/8" Ø PUDDLE WELD AT EACH RIB @* OR @* o.c. DEPENDING ON RIB SPACING.
2. DECK PANEL INTERIOR SUPPORT, 3/8" Ø PUDDLE WELD AT EACH RIB AND SPACED AT 12" o.c. (*% OR *% PATTERN, DEPENDING ON DECK PANEL WIDTH).
3. DECK PANEL EDGE SUPPORT, 3/8" Ø WELD AT 24" o.c. OR AT EACH SUPPORT (JOIST OR HSS2.5x2.5 INTERMEDIATE SUPPORT).
4. DECK SIDELAPS, SELF-DRILLING #12 (MIN) SCREWS AT 24" o.c. (MAX) BETWEEN SUPPORTS.
5. OPENINGS LARGER THAN 12" IN ANY DIRECTION, 3/8" Ø PUDDLE WELD AT EACH CORNER, AND AT 8" o.c. (MAX) EACH SIDE.

COMPOSITE DECK

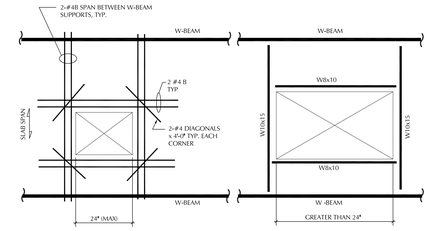
1. DECK PANEL END SUPPORT, 3/8"Ø PUDDLE WELD AT EACH RIB (12" o.c.)
2. DECK PANEL INTERIOR SUPPORT, 3/8"Ø PUDDLE WELD AT EACH RIB (12" o.c.)
3. DECK PANEL EDGE SUPPORT, 3/8"Ø PUDDLE WELDS AT 24" o.c.
4. DECK SIDELAPS, #12 SELF-TAPPING STEEL SCREWS AT 24" o.c. (MAX) BETWEEN SUPPORTS.
5. OPENINGS LARGER THAN 18" IN ANY DIRECTION, 3/8"Ø PUDDLE WELDS AT EACH CORNER AND AT 12" o.c (MAX) EACH SIDE.

NOTE:
1. PUDDLE WELD SIZES REFER TO WELD FUSION DIAMETER, PROPERLY SIZE WELD SURFACE DIAMETER TO ACHIEVE FUSION DIAMETER, ESPECIALLY AT LAPPED DECKS AND HEAVY GAUGE DECK.
2. REFER TO SPECIFICATION FOR ADDITIONAL DECK ATTACHMENT INFORMATION, IN CASE OF CONFLICT, THE MORE STRINGENT SHALL APPLY.
3. INSTALL DECK IN 3-SPAN CONDITION WHERE POSSIBLE.

TYPICAL METAL DECK ATTACHMENT DETAILS

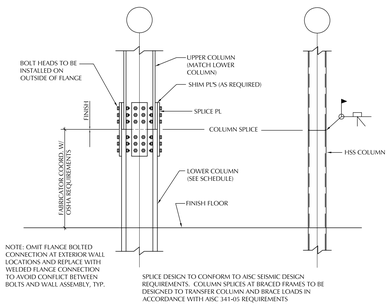


TYPICAL METAL DECK SUPPORT AT FOUNDATION WALL



NOTE: DO NOT CUT OUT METAL DECK UNTIL CONCRETE HAS REACHED 28-DAY COMPRESSIVE STRENGTH

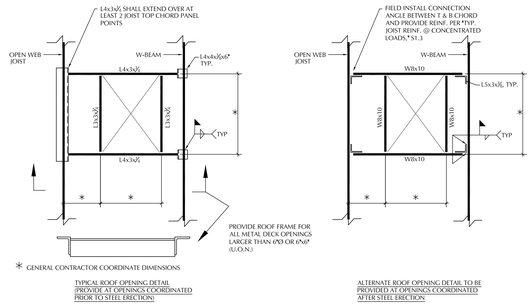
TYPICAL OPENINGS IN COMPOSITE SLABS



NOTE: OMIT FLANGE BOLTED CONNECTION AT EXTERIOR WALL LOCATIONS AND REPLACE WITH WELDED FLANGE CONNECTION TO AVOID CONFLICT BETWEEN BOLTS AND WALL ASSEMBLY, TYP.

SPLICE DESIGN TO CONFORM TO AISC SEISMIC DESIGN REQUIREMENTS. COLUMN SPLICES AT BRACED FRAMES TO BE DESIGNED TO TRANSFER COLUMN AND BRACE LOADS IN ACCORDANCE WITH AISC 341-05 REQUIREMENTS

TYPICAL COLUMN SPLICE DETAIL

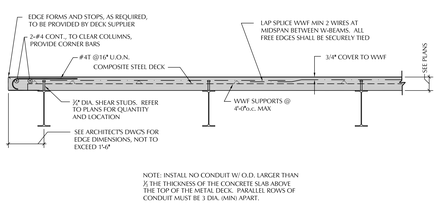


* GENERAL CONTRACTOR COORDINATE DIMENSIONS

TYPICAL ROOF OPENING DETAIL (PROVIDE AT OPENINGS COORDINATED PRIOR TO STEEL ERECTION)

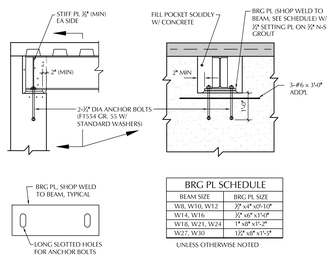
ALTERNATE ROOF OPENING DETAIL TO BE PROVIDED AT OPENINGS COORDINATED AFTER STEEL ERECTION

TYPICAL OPENINGS IN ROOF



NOTE: INSTALL NO CONDUIT W/ O.D. LARGER THAN 1/3 THE THICKNESS OF THE CONCRETE SLAB ABOVE THE TOP OF THE METAL DECK. PARALLEL ROWS OF CONDUIT MUST BE 3 DIA. (MIN) APART.

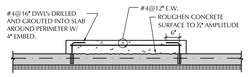
TYPICAL COMPOSITE SLAB SECTION



BRG PL SCHEDULE	
BEAM SIZE	BRG PL SIZE
W8, W10, W12	1/2" x4"-x5'-10"
W14, W16	1/2" x6"-x5'-0"
W18, W21, W24	1" x8"-x5'-2"
W27, W30	1 1/2" x8"-x5'-5"

UNLESS OTHERWISE NOTED

TYPICAL W-BEAM POCKET DETAIL



GENERAL CONTRACTOR TO COORDINATE SIZE AND LOCATION OF ALL HOUSEKEEPING PADS. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFO. COORDINATE ANCHOR BOLT REQUIREMENTS.

TYPICAL HOUSEKEEPING PAD

CLASS B TENSION SPLICE Fy = 60,000 PSI																								
	Fc = 3,000 PSI - NORMAL WEIGHT												Fc = 4,000 PSI - NORMAL WEIGHT											
BAR	TOP BARS CATEGORY						OTHER BARS CATEGORY						TOP BARS CATEGORY						OTHER BARS CATEGORY						BAR
SIZE	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	SIZE
#3	21"	21"	21"	21"	21"	21"	16"	16"	16"	16"	16"	16"	18"	18"	18"	18"	18"	18"	16"	16"	16"	16"	16"	16"	#3
#4	30"	28"	28"	28"	28"	28"	23"	22"	22"	22"	22"	22"	26"	24"	24"	24"	24"	24"	20"	19"	19"	19"	19"	19"	#4
#5	41"	37"	33"	33"	33"	33"	36"	29"	27"	27"	27"	27"	40"	32"	30"	30"	30"	30"	31"	25"	23"	23"	23"	23"	#5
#6	63"	52"	46"	42"	42"	42"	60"	40"	35"	32"	32"	32"	57"	45"	40"	36"	36"	36"	44"	35"	31"	28"	28"	28"	#6
#7	89"	71"	58"	63"	49"	49"	69"	55"	48"	39"	38"	38"	77"	62"	54"	43"	42"	42"	59"	48"	42"	33"	33"	33"	#7
#8	113"	94"	83"	66"	59"	56"	90"	72"	63"	51"	45"	43"	102"	81"	71"	57"	51"	48"	78"	63"	55"	44"	39"	37"	#8
#9	140"	119"	104"	83"	74"	63"	114"	91"	80"	64"	57"	48"	129"	103"	90"	72"	64"	55"	99"	79"	69"	56"	50"	42"	#9
#10	160"	135"	117"	106"	94"	76"	144"	116"	102"	81"	73"	58"	163"	131"	114"	92"	82"	65"	125"	101"	88"	70"	63"	50"	#10
#11	231"	185"	162"	130"	116"	93"	175"	142"	125"	100"	89"	71"	200"	163"	140"	112"	100"	80"	154"	125"	108"	88"	77"	62"	#11

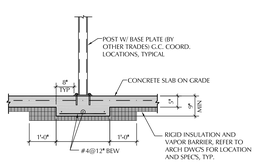
STRUCTURAL ELEMENT	CONCRETE COVER	CATEGORY ACCORDING TO CENTER TO CENTER BAR SPACING			
		≤ 3db	> 3db < 6db	≥ 6db < 6db	≥ 6db
BEAMS COLS AND INNER LAYER OF WALLS AND SLABS	≤ db	1*	1*	1*	2*
	> db	1*	3*	5*	6*
ALL OTHERS	≤ db	1*	1*	1*	2*
	> db < 2db	1*	3*	3*	4*
	≥ 2db	1*	3*	5*	6*

ABBREVIATIONS:
db DENOTES NOMINAL BAR DIAMETER
> DENOTES GREATER THAN
≥ DENOTES EQUAL TO OR GREATER THAN
< DENOTES LESS THAN
≤ DENOTES EQUAL TO OR LESS THAN

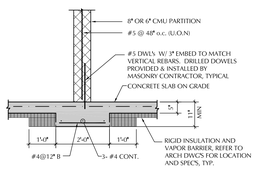
NOTES:
1. AVOID SPLICES IN REGIONS OF MAXIMUM MOMENT, IF THIS IS NOT POSSIBLE STAGGER SPLICES SO THAT NOT MORE THAN 50% OF THE BARS ARE SPLICED WITHIN A REQUIRED LENGTH, OTHERWISE INCREASE THE SPLICE LENGTH BY 30%.
2. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST IN THE MEMBER BELOW THE REINFORCEMENT. WALL REINFORCEMENT IS CLASSIFIED AS OTHER BARS.
3. FOR LIGHTWEIGHT AGGREGATE CONCRETE MULTIPLY THE VALUES IN THE TABLE BY 1.3.

MINIMUM SPLICE AND EMBEDMENT LENGTH

(UNLESS OTHERWISE NOTED)

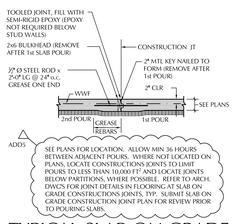


TYPICAL THICKENED SLAB AT MISCELLANEOUS POSTS

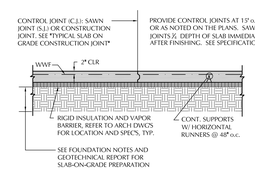


(EXCEPT AS OTHERWISE NOTED)

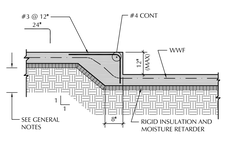
TYPICAL THICKENED SLAB AT MASONRY PARTITION



TYPICAL SLAB ON GRADE CONSTRUCTION JOINT



TYPICAL SLAB ON GRADE DETAIL



TYPICAL DEPRESSION IN SLAB ON GRADE

LAMOUREUX PAGANO ASSOCIATES, ARCHITECTS
108 GROVE STREET SUITE 300
WORCESTER, MASSACHUSETTS 01605

MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

CONSULTANT

BOLTON & DiMARTINO, INC.
CONSULTING STRUCTURAL ENGINEERS
100 GROVE STREET, WORCESTER, MA
P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

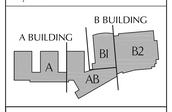
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Typical Details

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

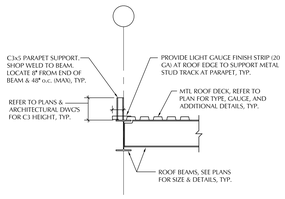
FILE:

DWN. BY: CJT | JOB NO: #1611

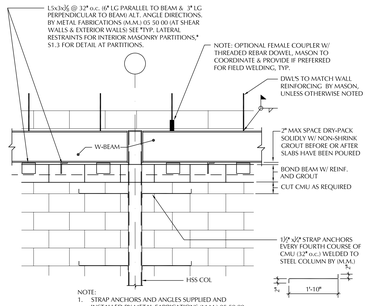
CKD. BY: JDM | SCALE: N.T.S.

DATE: January 31, 2019

S1.2

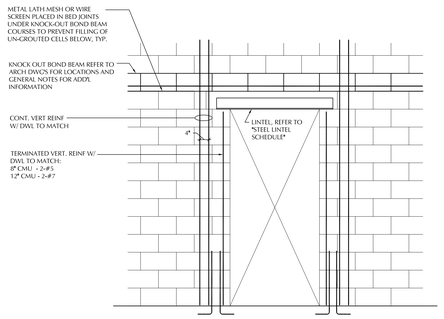


TYPICAL ROOF EDGE DETAIL



NOTE:
1. STRAP ANCHORS AND ANGLES SUPPLIED AND INSTALLED BY METAL FABRICATIONS (M.M.) 05 50 00
2. REFER TO SPECIFICATIONS FOR ATTACHMENT OF INTERIOR PARTITIONS TO STRUCTURAL STEEL.
3. REFER TO PLANS FOR LOCATIONS OF CMU SHEAR WALLS.

TYPICAL CONNECTION OF CMU WALLS & PARTITIONS TO STRUCTURAL STEEL



NOTE: PROVIDE STEEL LINTEL ANGLES AT MASONRY OPENINGS, UNLESS NOTED TO BE REINFORCED CMU LINTELS, TYPICAL

TYPICAL STEEL LINTELS

STEEL LINTEL SCHEDULE
(FOR NON-BEARING WALLS)

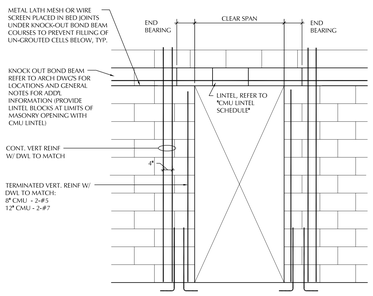
SPAN	WALL THICKNESS		
	4" WALL	8" WALL	12" WALL
TO 3'-0"	L3½x3½x¼	2-L3½x3½x¼	3-L3½x3½x¼
3'-1" TO 4'-0"	L4x3½x¼	2-L4x3½x¼	3-L4x3½x¼
4'-7" TO 6'-0"	L5x3½x¼	2-L5x3½x¼	3-L5x3½x¼
6'-1" TO 8'-0"	L6x3½x⅜	2-L6x3½x⅜	3-L6x3½x⅜
8'-5" TO 10'-0"	L7x4x⅜*	2-L7x4x⅜*	3-L7x4x⅜*
10'-0" TO 12'-0"	L7x4x½*	W8x15+PL½"x7½"*	W12x22+● PL½"x11½"*

* FOR SPANS 10'-0" TO 12'-0" SINGLE L7x4 MUST BE CONNECTED TO ⊥ (L7x4 OR W8 W/ PLATE ½" ⊥ OR T ⊥

● = 12" BEARING EA. END

NOTE:
1. SINGLE ANGLE SIZE FOR EACH 4" WYTHE OF MASONRY FOR WALL THICKNESS OTHER THAN 4" OR 8"
2. SPAN LENGTHS ℄ TO ℄ OF BEARING
3. PROVIDE MIN 8" BEARING EACH END (UON)
4. ALL EXTERIOR LINTELS SHALL BE GALVANIZED
5. LONG LEG SET VERTICAL
6. LOOSE LINTELS SHALL BE FURNISHED BY METAL FABRICATIONS (SPEC. 05 50 00) AND INSTALLED BY UNIT MASONRY ASSEMBLIES (SPEC. 04 20 00)

TYPICAL STEEL LINTEL SCHEDULE

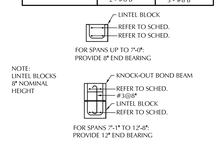


NOTE: PROVIDE STEEL LINTEL ANGLES AT MASONRY OPENINGS, UNLESS NOTED TO BE REINFORCED CMU LINTELS, TYPICAL

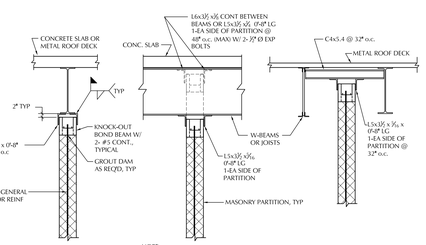
TYPICAL REINFORCED CMU LINTELS

CMU LINTEL SCHEDULE
(FOR NON-BEARING WALLS)

CLEAR SPAN	LINTEL REINFORCING	
	8" CMU	12" CMU
TO 6'-0"	2 - #5 B	2 - #7 B
6'-1" TO 7'-0"	2 - #5 T&B	2 - #7 B
7'-1" TO 8'-0"	2 - #5 T 2 - #6 B	2 - #5 T 2 - #7 B
8'-1" TO 11'-6"	2 - #5 T 2 - #7 B	2 - #5 T 3 - #7 B
11'-7" TO 12'-0"	2 - #6 T 2 - #8 B	2 - #6 T 3 - #8 B



TYPICAL CMU LINTEL SCHEDULE



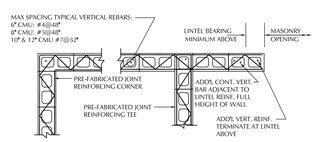
NOTE:
1. ALL RESTRAINT ANGLES ARE TO BE PROVIDED AND INSTALLED BY METAL FABRICATIONS. (M.M.)
2. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF INTERNAL MASONRY PARTITIONS.
3. L5x3 LOCATED MAXIMUM DISTANCE OF 48" FROM CORNERS OR INTERSECTING WALLS

TYPICAL LATERAL RESTRAINTS FOR INTERIOR MASONRY PARTITIONS

MASONRY LAP SPLICE SCHEDULE

BAR SIZE	MASONRY LAP SPLICE (1,500 PSI)						
	BLOCK SIZE W/ SINGLE BAR PER CELL				BLOCK SIZE W/ DOUBLE BAR PER CELL		
	6"	8"	10"	12"	8"	10"	12"
#3	19"	19"	19"	19"	19"	19"	19"
#4	25"	25"	25"	25"	31"	28"	28"
#5	39"	31"	31"	31"	48"	43"	43"
#6	80"	57"	52"	52"	98"	87"	87"
#7		79"	61"	61"	142"	118"	118"
#8		112"	86"	86"	229"	165"	165"
#9			111"	111"		210"	210"

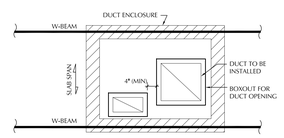
MASONRY LAP SPLICE SCHEDULE



NOTE:
EXCEPT WHERE OTHERWISE NOTED, AT ALL INTERSECTING WALLS AND CORNERS, PROVIDE PRE-FABRICATED CORNERS AND TEES IN ALTERNATE HORIZONTAL COURSES. LAP WITH TYPICAL JOINT REINFORCING.

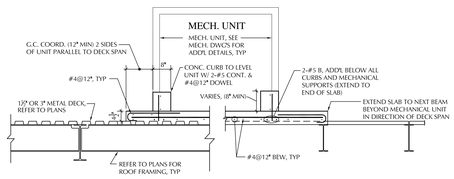
PROVIDE ADDITIONAL REBARS AT CORNERS, TEES, ENDS OF WALLS AND EACH SIDE OF CONTROL JOINTS

PROVISIONS AT CORNERS, ENDS, AND INTERSECTIONS OF CMU WALLS



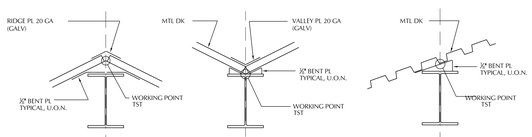
1. INSTALL METAL DECK CONTINUOUS OVER BEAMS.
2. BOX-OUT OPENINGS & INSTALL BEAMS OR REINFORCING PER "TYPICAL OPENINGS IN COMPOSITE SLABS," S1.2.
3. POUR CONCRETE SLAB.
4. CUT METAL DECK AFTER CONCRETE HAS ATTAINED ¾ f'c.
5. INSTALL DUCTS.

TYPICAL DUCT PENETRATIONS IN DUCT ENCLOSURES



NOTE:
1. 4½" CONCRETE SLAB (NORMAL WEIGHT-145 PCF) OVER 1½" OR 3" (GALV) METAL DECK, W/ #4@12" BEW.
2. TOP OF SLAB VARIES WITH SLOPED ROOF FRAMING, MAINTAIN 6" OR 7½" SLAB.
3. REFER TO PLANS FOR SLAB LOCATIONS.
4. REFER TO ARCH. AND MECH. DWGS FOR MECH. UNIT ANCHOR BOLT REQ'MTS AND ADDITIONAL DETAILS.

TYPICAL MECHANICAL UNIT ROOF SLAB

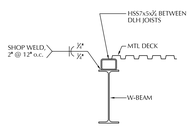


TYPICAL RIDGE & HIP

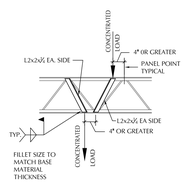
TYPICAL VALLEY

TYPICAL BENT PL DETAILS FOR SUPPORT OF SLOPING METAL ROOF DECK (U.O.N.). PROVIDE 2" MIN BEARING FOR METAL DECK.

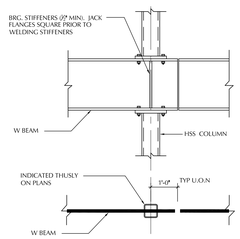
TYPICAL BENT PLATE DETAILS



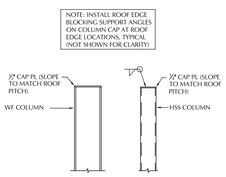
INTERMEDIATE METAL DECK SUPPORTS @ SPANDREL BEAMS WITH OPEN WEB JOISTS



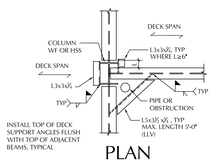
TYPICAL JOIST REINF AT CONCENTRATED LOADS



TYPICAL BEAM OVER OR THRU COLUMN



TYPICAL COLUMN CAP PLATE



PROVIDE SIMILAR DETAIL AT COLUMN BASE PLATES BEARING ON STEEL BEAMS, AND AT FIELD WELDED BEAM TO BEAM MOMENT CONNECTIONS (4-SIDES)

TYPICAL STEEL DECK SUPPORT AT COLUMNS

LAMOUREUX PAGANO ASSOCIATES, ARCHITECTS
108 GROVE STREET SUITE 300
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P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

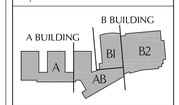
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Typical Details

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - T1	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

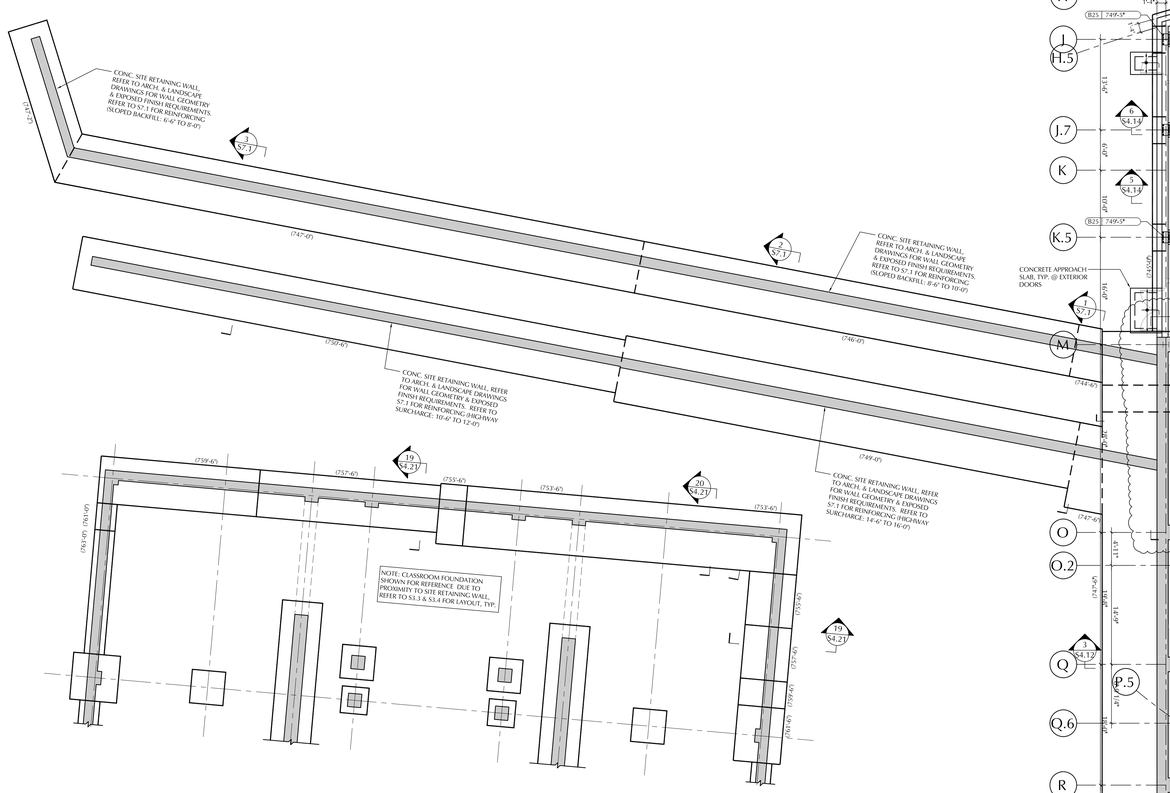
FILE:

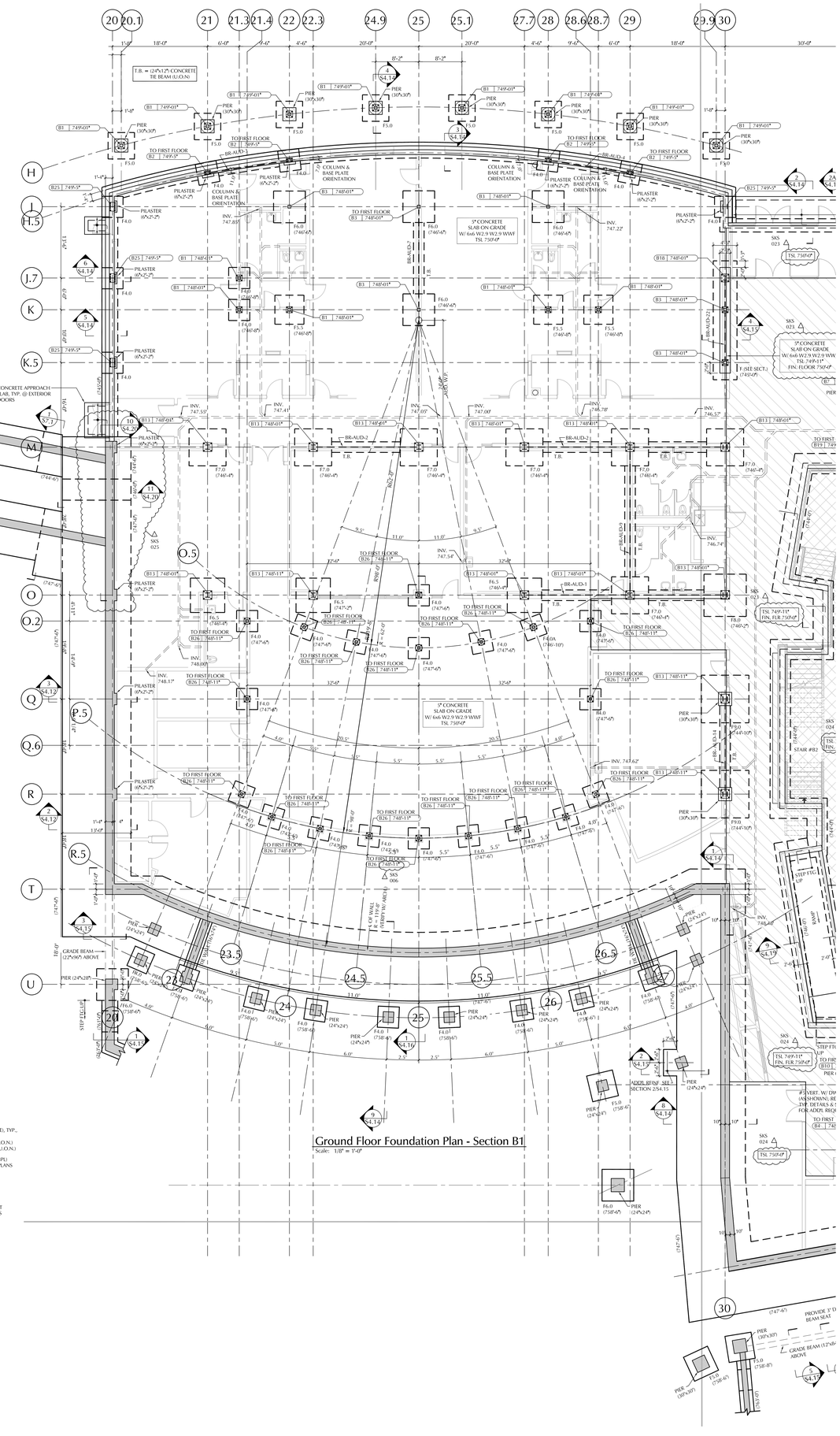
DWN. BY: CJT | JOB NO: #1611

CKD. BY: JDM | SCALE: N.T.S.

DATE: January 31, 2019

S1.3





Ground Floor Foundation Plan - Section B1

Scale: 1/8" = 1'-0"

FOOTING SCHEDULE

ALLOWABLE BEARING CAPACITY = 4 KSF

MARK	SIZE	REINFORCEMENT
F3.0	3'-0" x 3'-0" x 1'-4"	5 - #4 BEW
F4.0	4'-0" x 4'-0" x 1'-4"	5 - #5 BEW
F4.0A	4'-0" x 4'-0" x 2'-0"	5 - #5 T&BEW
F5.0	5'-0" x 5'-0" x 1'-4"	6 - #6 BEW
F5.0A	5'-0" x 5'-0" x 2'-0"	6 - #6 T&BEW
F5.5	5'-6" x 5'-6" x 1'-4"	7 - #6 BEW
F6.0	6'-0" x 6'-0" x 1'-6"	7 - #7 BEW
F6.0A	6'-0" x 6'-0" x 2'-0"	7 - #7 T&BEW
F6.5	6'-6" x 6'-6" x 1'-8"	8 - #7 BEW
F7.0	7'-0" x 7'-0" x 1'-8"	8 - #7 BEW
F8.0	8'-0" x 8'-0" x 1'-10"	9 - #8 BEW
F8.0A	8'-0" x 8'-0" x 3'-0"	9 - #8 T&BEW
F9.0	9'-0" x 9'-0" x 2'-0"	10 - #8 BEW
F10.0	10'-0" x 10'-0" x 2'-2"	11 - #9 BEW

NOTE:
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. ELEVATIONS FOR BOTTOM OF FOOTINGS (BOF) SHOWN ON PLANS.
3. FOUNDATIONS TO BE SUPPORTED ON UNDISTURBED GLACIAL TILL OR COMPACTED STRUCTURAL FILL APPROVED BY THE OWNER'S SOILS ENGINEER FOR THE DESIGN BEARING CAPACITY. REFER TO SITE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. GEOTECHNICAL REPORT BY "LAFLAF GEOTECHNICAL CONSULTING, INC.", DATED APRIL 9, 2018. REFER TO SPECIFICATIONS FOR GEOTECHNICAL REPORT AND ADDITIONAL GEOTECHNICAL RECOMMENDATIONS.

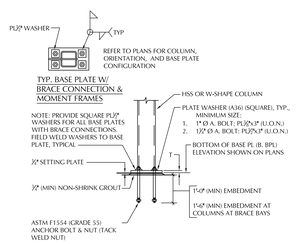
COLUMN SCHEDULE GYM/AUDITORIUM BUILDINGS

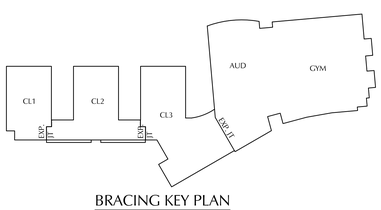
MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
B1	HSS7x7x5/16	1/2" x 15" x 15"	A
B2	HSS7x7x5/16	1/2" x 9" x 15"	B
B3	HSS7x7x1/2	1/2" x 15" x 15"	A
B4	HSS7x7x1/2	1/2" x 15" x 15"	A
B5	HSS7x7x1/2	1/2" x 9" x 15"	B
B6	HSS7x7x1/2	1/2" x 12" x 12"	C
B7	HSS7x7x5/16	1/2" x 15" x 15"	A
B8	HSS7x7x5/16	1/2" x 9" x 15"	B
B9	HSS7x7x5/16	1/2" x 12" x 12"	C
B10	HSS8x8x1/2	1/2" x 16" x 16"	A
B11	HSS8x8x1/2	1/2" x 10" x 16"	B
B12	HSS8x8x1/2	1/2" x 13" x 13"	C
B13	W10x68	1/2" x 20" x 20"	D
B14	W10x100	1/2" x 13" x 20"	F
B15	W10x112	1/2" x 13" x 20"	F
B16	HSS6x6x1/2	1/2" x 8" x 14"	B
B17	W14x90	1/2" x 17" x 24"	E
B18	W10x45	1/2" x 10"x10"	D
B19	HSS12x12x1/2	1/2" x 13" x 20"	B
B20	HSS8x8x1/2	1/2" x 16" x 16"	A
B21	HSS10x10x1/2	1/2" x 10" x 18"	A
B22	HSS6x6x1/2	1/2" x 8" x 14"	B
B23	HSS7x7x1/2	1/2" x 9" x 13"	B
B24	HSS7x7x1/2	1/2" x 12" x 12"	C
B25	W10x60	1/2" x 13" x 20"	F
B26	HSS6x6x1/2	1/2" x 14" x 14"	A

NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS7x7x1/2 COLUMNS WITH BASE PLATE TYPE 'A', UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.
4. BASE PLATE DIMENSIONS MAY BE INCREASED TO ALLOW FOR LATERAL BRACE CONNECTION PLATES.

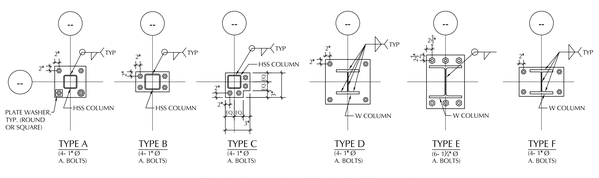
C 634'-6"

COLUMN DESIGNATION, REFER TO "COLUMN SCHEDULE" — INDICATES BOTTOM OF BASE PLATE ELEVATION





BRACING KEY PLAN



TYPE A (4-1"Ø A. BOLTS) | TYPE B (4-1"Ø A. BOLTS) | TYPE C (4-1"Ø A. BOLTS) | TYPE D (4-1"Ø A. BOLTS) | TYPE E (4-1 1/2"Ø A. BOLTS) | TYPE F (4-1"Ø A. BOLTS)

TYPICAL BASE PL DETAILS

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108 GROVE STREET SUITE 300
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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

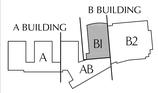
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Ground Floor Foundation Plan Section B1

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

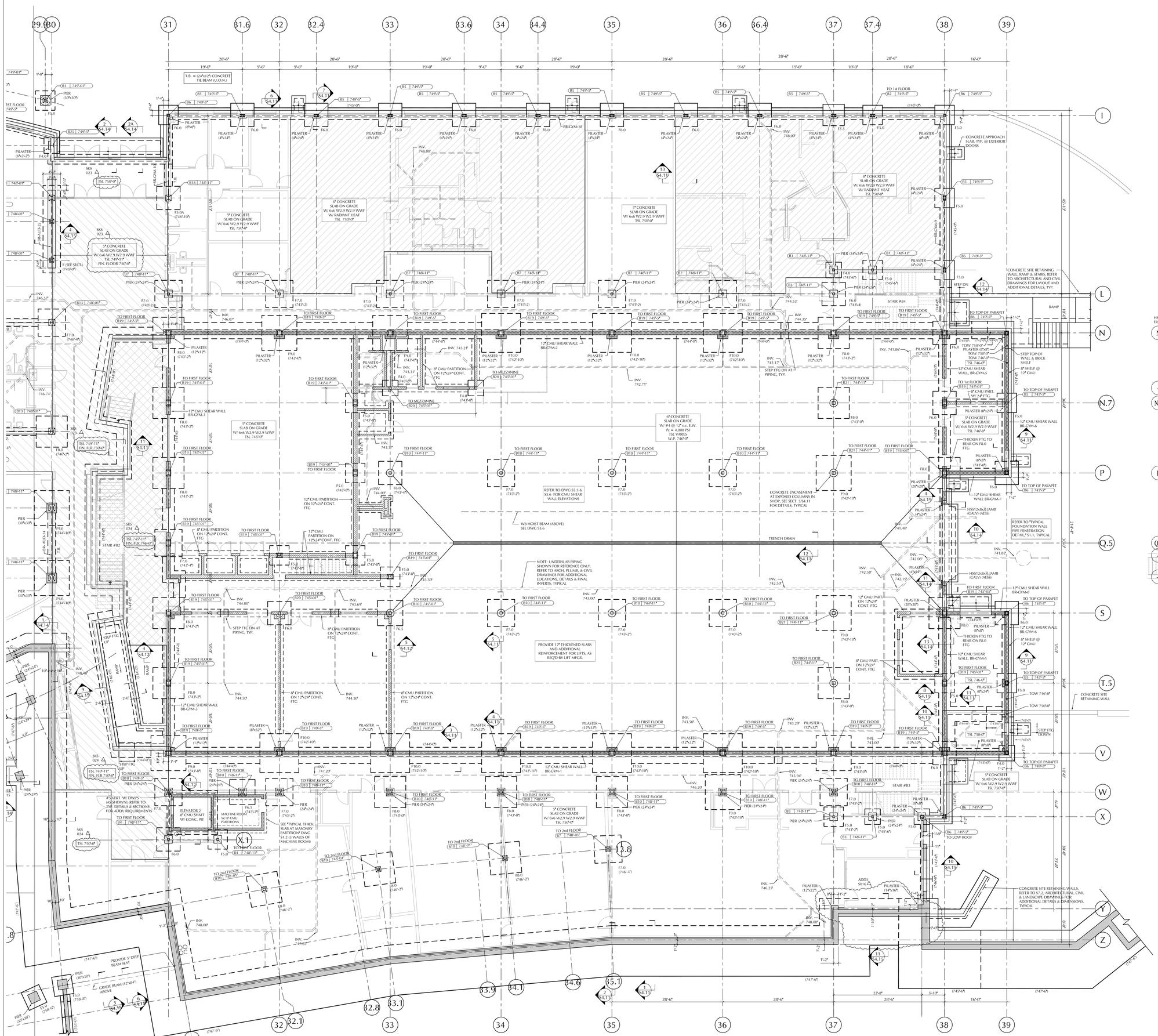
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.1



Ground Floor Foundation Plan - Section B2

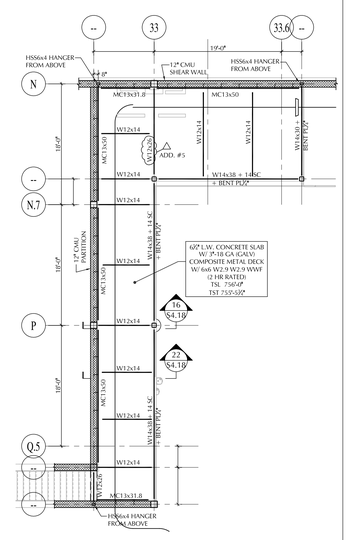
Scale: 1/8" = 1'-0"

FOOTING SCHEDULE

ALLOWABLE BEARING CAPACITY = 4 KSF

MARK	SIZE	REINFORCEMENT
F3.0	3'-0" x 3'-0" x 1'-4"	5 - #4 BEW
F4.0	4'-0" x 4'-0" x 1'-4"	5 - #4 BEW
F4.0A	4'-0" x 4'-0" x 2'-0"	5 - #5 T&BEW
F5.0	5'-0" x 5'-0" x 1'-4"	6 - #6 BEW
F5.0A	5'-0" x 5'-0" x 2'-0"	6 - #6 T&BEW
F5.5	5'-6" x 5'-6" x 1'-4"	7 - #6 BEW
F6.0	6'-0" x 6'-0" x 1'-6"	7 - #7 BEW
F6.0A	6'-0" x 6'-0" x 2'-0"	7 - #7 T&BEW
F6.5	6'-6" x 6'-6" x 1'-8"	8 - #7 BEW
F7.0	7'-0" x 7'-0" x 1'-8"	8 - #7 BEW
F8.0	8'-0" x 8'-0" x 1'-10"	9 - #8 BEW
F8.0A	8'-0" x 8'-0" x 2'-0"	9 - #8 T&BEW
F9.0	9'-0" x 9'-0" x 2'-0"	10 - #8 BEW
F10.0	10'-0" x 10'-0" x 2'-2"	11 - #9 BEW

NOTE:
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. ELEVATIONS FOR BOTTOM OF FOOTINGS (BOF) SHOWN ON PLANS.
3. FOUNDATIONS TO BE SUPPORTED ON UNDISTURBED GLACIAL TILL OR COMPACTED STRUCTURAL FILL APPROVED BY THE OWNER'S SOILS ENGINEER FOR THE DESIGN BEARING CAPACITY. REFER TO SITE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. GEOTECHNICAL REPORT BY "LAHLAF GEOTECHNICAL CONSULTING, INC.", DATED APRIL 9, 2016. REFER TO SPECIFICATIONS FOR GEOTECHNICAL REPORT AND ADDITIONAL GEOTECHNICAL RECOMMENDATIONS.



Partial Framing Plan - Mezzanine

Scale: 1/8" = 1'-0"

COLUMN SCHEDULE GYM/AUDITORIUM BUILDINGS

MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
B1	HSS7x7x5/16	1/2" x 13" x 13"	A
B2	HSS7x7x5/16	1/2" x 9" x 13"	B
B3	HSS7x7x5/16	1/2" x 13" x 13"	A
B4	HSS7x7x5/16	1/2" x 13" x 13"	A
B5	HSS7x7x5/16	1/2" x 9" x 13"	B
B6	HSS7x7x5/16	1/2" x 12" x 12"	C
B7	HSS7x7x5/16	1/2" x 13" x 13"	A
B8	HSS7x7x5/16	1/2" x 9" x 13"	B
B9	HSS7x7x5/16	1/2" x 12" x 12"	C
B10	HSS8x8x5/16	1/2" x 16" x 16"	A
B11	HSS8x8x5/16	1/2" x 16" x 16"	B
B12	HSS8x8x5/16	1/2" x 13" x 13"	C
B13	W10x68	1/2" x 20" x 20"	D
B14	W10x100	1/2" x 13" x 20"	F
B15	W10x112	1/2" x 13" x 20"	F
B16	HSS6x6x3/8	1/2" x 8" x 14"	B
B17	W14x90	1/2" x 17" x 24"	E
B18	W10x45	1/2" x 10"x10"	D
B19	HSS12x12x5/16	1/2" x 13" x 20"	B
B20	HSS8x8x5/16	1/2" x 16" x 16"	A
B21	HSS10x10x5/16	1/2" x 18" x 18"	A
B22	HSS6x6x5/16	1/2" x 8" x 14"	B
B23	HSS7x7x5/16	1/2" x 9" x 13"	B
B24	HSS7x7x5/16	1/2" x 12" x 12"	C
B25	W10x60	1/2" x 13" x 20"	F
B26	HSS6x6x5/16	1/2" x 14" x 14"	A

NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS7x7x5/16 COLUMNS WITH BASE PLATE TYPE 'A', UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.
4. BASE PLATE DIMENSIONS MAY BE INCREASED TO ALLOW FOR LATERAL BRACE CONNECTION PLATES.

C 634'-0"

COLUMN DESIGNATION, REFER TO "COLUMN SCHEDULE"

INDICATES BOTTOM OF BASE PLATE ELEVATION

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MEMBER OF
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100 GROVE STREET, WORCESTER, MA
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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Ground Floor Foundation Plan Section B2

Key Plan

A BUILDING: A, AB

B BUILDING: B1, B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

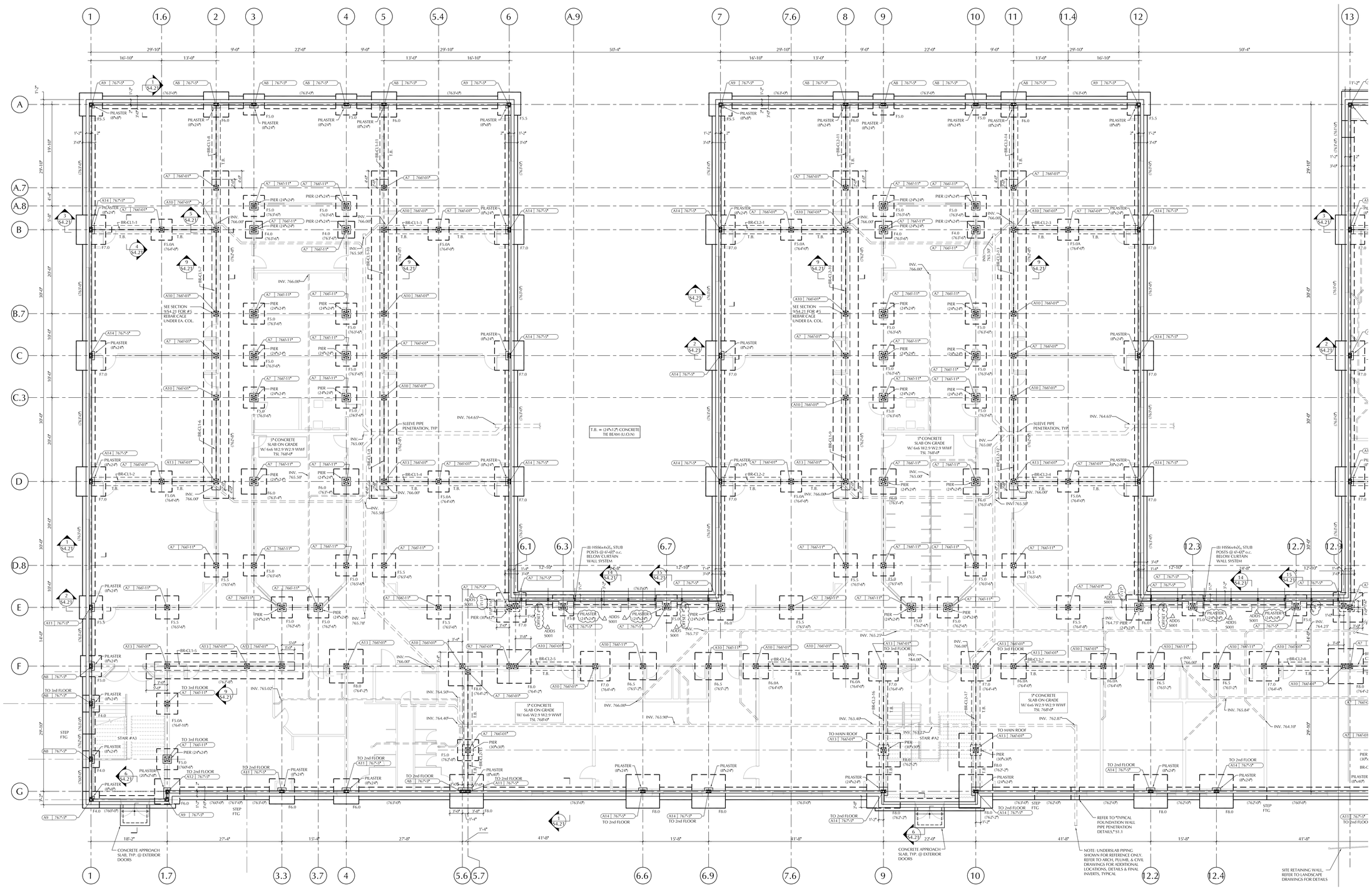
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

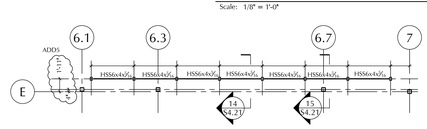
DATE: January 31, 2019

S3.2



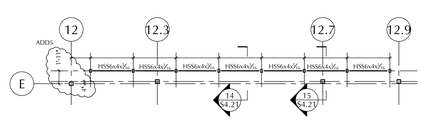
First Floor Foundation Plan- Section A

Scale: 1/8" = 1'-0"



Partial Plan: Curtainwall Support Framing

Scale: 1/8" = 1'-0"



Partial Plan: Curtainwall Support Framing

Scale: 1/8" = 1'-0"

COLUMN DESIGNATION, REFER TO *COLUMN SCHEDULE* — INDICATES BOTTOM OF BASE PLATE ELEVATION

COLUMN SCHEDULE
CLASSROOM BUILDINGS

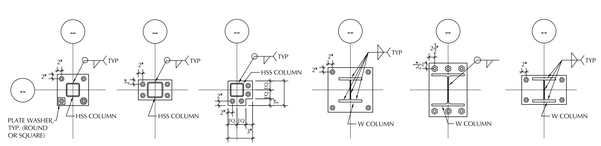
MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
A1	HSS6x6x5/16	12" x 14" x 1/4"	A
A2	HSS6x6x5/16	12" x 18" x 1/4"	B
A3	HSS6x6x5/16	12" x 11" x 1/4"	C
A4	HSS6x6x5/8	12" x 14" x 1/4"	A
A5	HSS6x6x5/8	12" x 18" x 1/4"	B
A6	HSS6x6x5/8	12" x 11" x 1/4"	C
A7	HSS7x7x5/8	12" x 15" x 1/4"	A
A8	HSS7x7x5/8	12" x 18" x 1/4"	B
A9	HSS7x7x5/8	12" x 12" x 1/4"	C
A10	HSS7x7x5/8	12" x 15" x 1/4"	A
A11	HSS7x7x5/8	12" x 9" x 1/4"	B
A12	HSS7x7x5/8	12" x 12" x 1/4"	C
A13	HSS7x7x5/8	12" x 15" x 1/4"	A
A14	HSS7x7x5/8	12" x 9" x 1/4"	B
A15	HSS7x7x5/8	12" x 12" x 1/4"	C
A16	HSS6x6x5/8	12" x 15" x 1/4"	A
A17	HSS6x6x5/8	12" x 8" x 1/4"	B
A18			

NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS7x7x5/8 COLUMNS WITH BASE PLATE TYPE "A", UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.
4. BASE PLATE DIMENSIONS MAY BE INCREASED TO ALLOW FOR LATERAL BRACE CONNECTION PLATES.

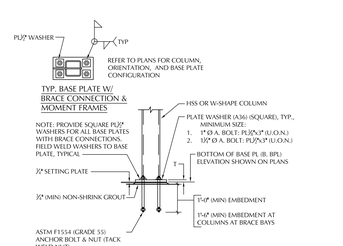
FOOTING SCHEDULE
ALLOWABLE BEARING CAPACITY = 4 KSF

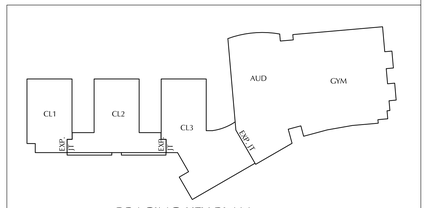
MARK	SIZE	REINFORCEMENT
F3.0	3'-0" x 3'-0" x 1'-0"	5 - #4 BEW
F4.0	4'-0" x 4'-0" x 1'-0"	5 - #5 BEW
F4.0A	4'-0" x 4'-0" x 2'-0"	5 - #5 T&BEW
F5.0	5'-0" x 5'-0" x 1'-0"	6 - #6 BEW
F5.0A	5'-0" x 5'-0" x 2'-0"	6 - #6 T&BEW
F5.5	5'-6" x 5'-6" x 1'-0"	7 - #6 BEW
F6.0	6'-0" x 6'-0" x 1'-0"	7 - #7 BEW
F6.0A	6'-0" x 6'-0" x 2'-0"	7 - #7 T&BEW
F6.5	6'-6" x 6'-6" x 1'-0"	8 - #7 BEW
F7.0	7'-0" x 7'-0" x 1'-0"	8 - #7 BEW
F8.0	8'-0" x 8'-0" x 1'-10"	9 - #8 BEW
F8.0A	8'-0" x 8'-0" x 3'-0"	9 - #8 T&BEW
F9.0	9'-0" x 9'-0" x 2'-0"	10 - #8 BEW
F10.0	10'-0" x 10'-0" x 2'-2"	11 - #9 BEW

NOTE:
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. ELEVATIONS FOR BOTTOM OF FOOTINGS (BOF) SHOWN ON PLANS.
3. FOUNDATIONS TO BE SUPPORTED ON UNDISTURBED GLACIAL TILL OR COMPACTED STRUCTURAL FILL APPROVED BY THE OWNERS SOILS ENGINEER FOR THE DESIGN BEARING CAPACITY. REFER TO SITE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. GEOTECHNICAL REPORT BY "LAHLAF GEOTECHNICAL CONSULTING, INC.", DATED APRIL 9, 2018. REFER TO SPECIFICATIONS FOR GEOTECHNICAL REPORT AND ADDITIONAL GEOTECHNICAL RECOMMENDATIONS.



TYPICAL BASE PL DETAILS





BRACING KEY PLAN

LAMOUREUX PAGANO ASSOCIATES, ARCHITECTS
108 GROVE STREET SUITE 300
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CONSULTANT

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CONSULTING STRUCTURAL ENGINEERS
100 GROVE STREET, WORCESTER, MA
P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

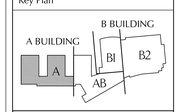
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

First Floor Foundation Plan Section A

Key Plan



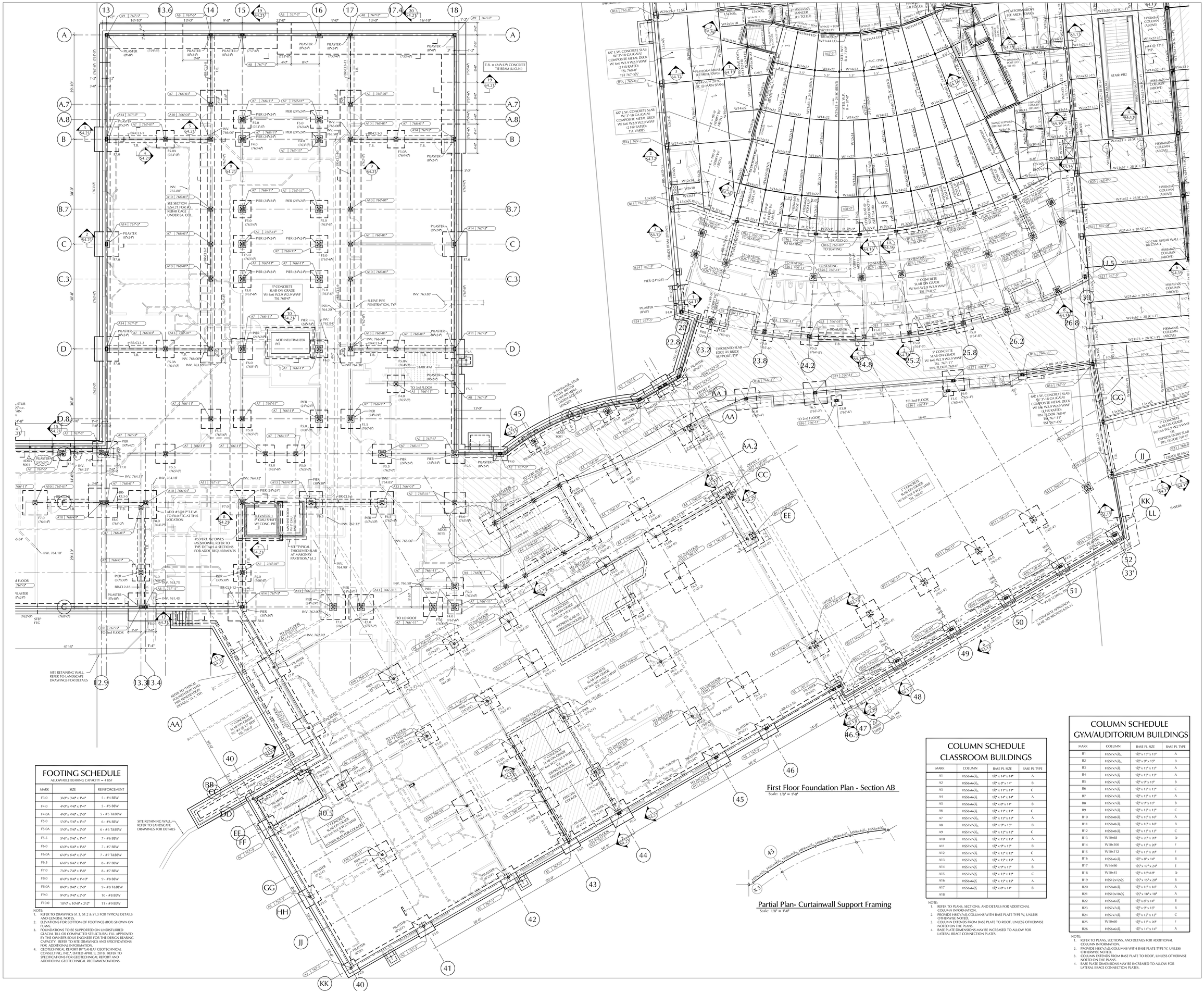
REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY:	BDI	JOB NO:	#1611
CKD. BY:	BDI	SCALE:	1/8" = 1'-0"
DATE:	January 31, 2019		

S3.3



FOOTING SCHEDULE

ALLOWABLE BEARING CAPACITY = 4 KSF

MARK	SIZE	REINFORCEMENT
F3.0	3'-0" x 3'-0" x 1'-4"	5 - #4 BEW
F4.0	4'-0" x 4'-0" x 1'-4"	5 - #5 BEW
F4.0A	4'-0" x 4'-0" x 2'-0"	5 - #5 T&BEW
F5.0	5'-0" x 5'-0" x 1'-4"	6 - #6 BEW
F5.0A	5'-0" x 5'-0" x 2'-0"	6 - #6 T&BEW
F5.5	5'-6" x 5'-6" x 1'-4"	7 - #6 BEW
F6.0	6'-0" x 6'-0" x 1'-6"	7 - #7 BEW
F6.0A	6'-0" x 6'-0" x 2'-0"	7 - #7 T&BEW
F6.5	6'-6" x 6'-6" x 1'-6"	8 - #7 BEW
F7.0	7'-0" x 7'-0" x 1'-6"	8 - #7 BEW
F8.0	8'-0" x 8'-0" x 1'-10"	9 - #8 BEW
F8.0A	8'-0" x 8'-0" x 2'-0"	9 - #8 T&BEW
F9.0	9'-0" x 9'-0" x 2'-0"	10 - #8 BEW
F10.0	10'-0" x 10'-0" x 2'-2"	11 - #9 BEW

NOTE:
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. ELEVATIONS FOR BOTTOM OF FOOTINGS (BOF) SHOWN ON PLANS.
3. FOUNDATIONS TO BE SUPPORTED ON UNDISTURBED GLACIAL TILL OR COMPACTED STRUCTURAL FILL APPROVED BY THE OWNER'S SOILS ENGINEER FOR THE DESIGN BEARING CAPACITY. REFER TO SITE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. GEOTECHNICAL REPORT BY "LAHLAF GEOTECHNICAL CONSULTING, INC.", DATED APRIL 9, 2018. REFER TO SPECIFICATIONS FOR GEOTECHNICAL REPORT AND ADDITIONAL GEOTECHNICAL RECOMMENDATIONS.

First Floor Foundation Plan - Section AB

Scale: 1/8" = 1'-0"

Partial Plan- Curtainwall Support Framing

Scale: 1/8" = 1'-0"

COLUMN SCHEDULE
CLASSROOM BUILDINGS

MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
A1	HSS6x6x3/8	1/2" x 14" x 14"	A
A2	HSS6x6x3/8	1/2" x 8" x 14"	B
A3	HSS6x6x3/8	1/2" x 11" x 11"	C
A4	HSS6x6x3/8	1/2" x 14" x 14"	A
A5	HSS6x6x3/8	1/2" x 8" x 14"	B
A6	HSS6x6x3/8	1/2" x 11" x 11"	C
A7	HSS7x7x3/8	1/2" x 15" x 15"	A
A8	HSS7x7x3/8	1/2" x 9" x 15"	B
A9	HSS7x7x3/8	1/2" x 12" x 12"	C
A10	HSS7x7x3/8	1/2" x 15" x 15"	A
A11	HSS7x7x3/8	1/2" x 9" x 15"	B
A12	HSS7x7x3/8	1/2" x 12" x 12"	C
A13	HSS7x7x3/8	1/2" x 15" x 15"	A
A14	HSS7x7x3/8	1/2" x 9" x 15"	B
A15	HSS7x7x3/8	1/2" x 12" x 12"	C
A16	HSS6x6x3/8	1/2" x 15" x 15"	A
A17	HSS6x6x3/8	1/2" x 8" x 14"	B
A18			

NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS7x7x3/8 COLUMNS WITH BASE PLATE TYPE 'A', UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.
4. BASE PLATE DIMENSIONS MAY BE INCREASED TO ALLOW FOR LATERAL BRACE CONNECTION PLATES.

COLUMN SCHEDULE
GYM/AUDITORIUM BUILDINGS

MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
B1	HSS7x7x5/8	1/2" x 15" x 15"	A
B2	HSS7x7x5/8	1/2" x 9" x 15"	B
B3	HSS7x7x5/8	1/2" x 15" x 15"	A
B4	HSS7x7x5/8	1/2" x 15" x 15"	A
B5	HSS7x7x5/8	1/2" x 9" x 15"	B
B6	HSS7x7x5/8	1/2" x 12" x 12"	C
B7	HSS7x7x5/8	1/2" x 15" x 15"	A
B8	HSS7x7x5/8	1/2" x 9" x 15"	B
B9	HSS7x7x5/8	1/2" x 12" x 12"	C
B10	HSS8x8x5/8	1/2" x 16" x 16"	A
B11	HSS8x8x5/8	1/2" x 10" x 16"	B
B12	HSS8x8x5/8	1/2" x 13" x 13"	C
B13	W10x68	1/2" x 20" x 20"	D
B14	W10x100	1/2" x 13" x 20"	F
B15	W10x112	1/2" x 13" x 20"	F
B16	HSS6x6x3/8	1/2" x 8" x 14"	B
B17	W14x90	1/2" x 17" x 24"	E
B18	W10x45	1/2" x 18"x18"	D
B19	HSS12x12x5/8	1/2" x 15" x 20"	B
B20	HSS8x8x5/8	1/2" x 16" x 16"	A
B21	HSS10x10x5/8	1/2" x 18" x 18"	A
B22	HSS6x6x5/8	1/2" x 8" x 14"	B
B23	HSS7x7x5/8	1/2" x 9" x 15"	B
B24	HSS7x7x5/8	1/2" x 12" x 12"	C
B25	W10x60	1/2" x 13" x 20"	F
B26	HSS6x6x5/8	1/2" x 14" x 14"	A

NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS7x7x5/8 COLUMNS WITH BASE PLATE TYPE 'B', UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.
4. BASE PLATE DIMENSIONS MAY BE INCREASED TO ALLOW FOR LATERAL BRACE CONNECTION PLATES.

LAMOUREUX PAGANO ASSOCIATES. ARCHITECTS
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100 GROVE STREET, WORCESTER, MA
P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

First Floor Foundation Plan Section AB

Key Plan

A BUILDING
B BUILDING
A
AB
BI
B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum #5	12/27/18

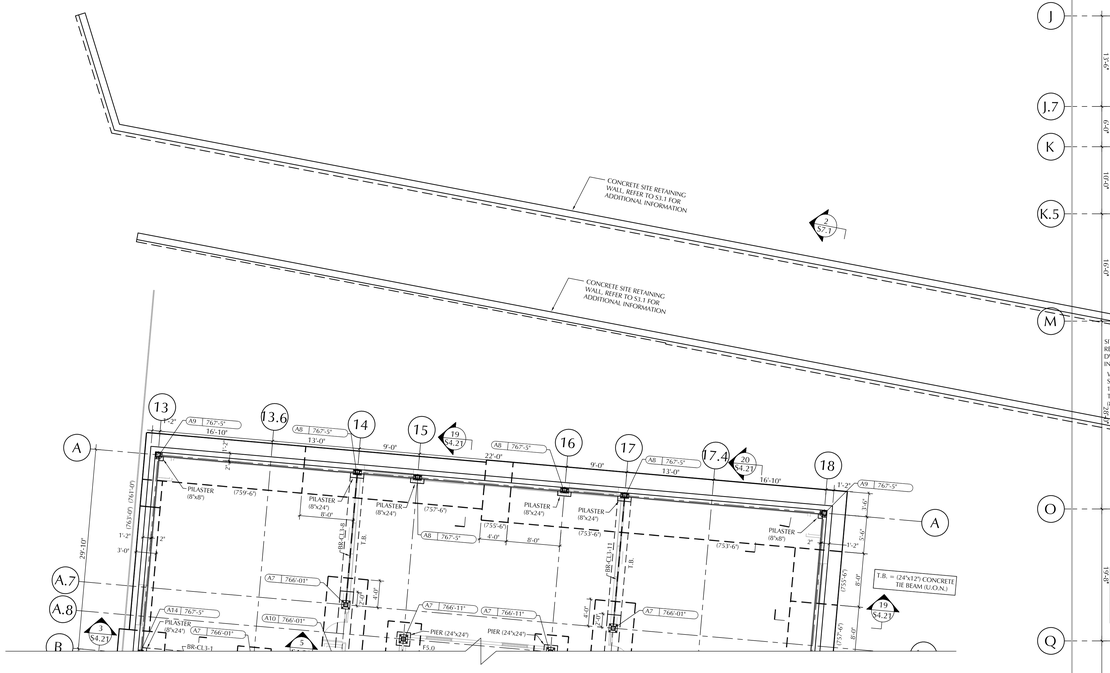
FILE:

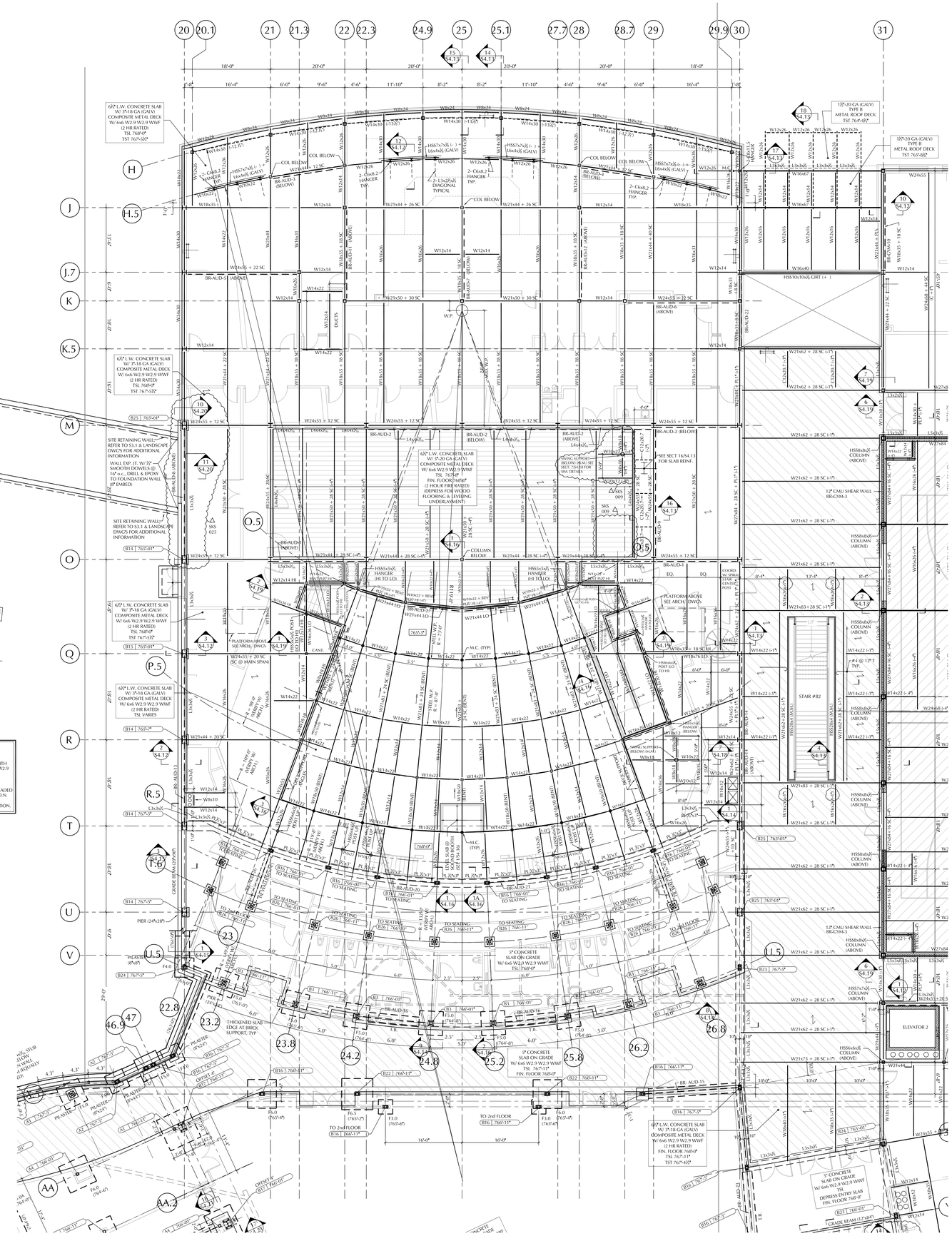
DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.4





First Floor Framing Plan - Section B1

Scale: 1/8" = 1'-0"

COLUMN SCHEDULE
GYM/AUDITORIUM BUILDINGS

MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
B1	HSS7x7x½	10" x 15" x 15"	A
B2	HSS7x7x½	10" x 9" x 15"	B
B3	HSS7x7x½	10" x 15" x 15"	A
B4	HSS7x7x½	10" x 15" x 15"	A
B5	HSS7x7x½	10" x 9" x 15"	B
B6	HSS7x7x½	10" x 12" x 12"	C
B7	HSS7x7x½	10" x 15" x 15"	A
B8	HSS7x7x½	10" x 9" x 15"	B
B9	HSS7x7x½	10" x 12" x 12"	C
B10	HSS8x8x½	10" x 16" x 16"	A
B11	HSS8x8x½	10" x 10" x 16"	B
B12	HSS8x8x½	10" x 13" x 13"	C
B13	W10x68	10" x 20" x 20"	D
B14	W10x100	10" x 13" x 20"	F
B15	W10x112	10" x 13" x 20"	F
B16	HSS6x6x½	10" x 8" x 14"	B
B17	W14x90	10" x 17" x 24"	E
B18	W10x45	10" x 10"x10"	D
B19	HSS12x12x½	10" x 13" x 20"	B
B20	HSS8x8x½	10" x 16" x 16"	A
B21	HSS10x10x½	10" x 10" x 10"	A
B22	HSS6x6x½	10" x 8" x 14"	B
B23	HSS7x7x½	10" x 9" x 15"	B
B24	HSS7x7x½	10" x 12" x 12"	C
B25	W10x60	10" x 13" x 20"	F
B26	HSS6x6x½	10" x 14" x 14"	A

NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS7x7x½ COLUMNS WITH BASE PLATE TYPE 'A', UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.
4. BASE PLATE DIMENSIONS MAY BE INCREASED TO ALLOW FOR LATERAL BRACE CONNECTION PLATES.

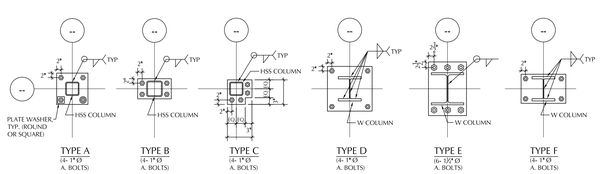
C | 63.6'-0"
COLUMN DESIGNATION REFER TO "COLUMN SCHEDULE" — INDICATES BOTTOM OF BASE PLATE ELEVATION

FOOTING SCHEDULE
ALLOWABLE BEARING CAPACITY = 4 KSF

MARK	SIZE	REINFORCEMENT
F3.0	3'-0" x 3'-0" x 1'-0"	5 - #4 BEW
F4.0	4'-0" x 4'-0" x 1'-0"	5 - #5 BEW
F4.0A	4'-0" x 4'-0" x 2'-0"	5 - #5 T&BEW
F5.0	5'-0" x 5'-0" x 1'-0"	6 - #6 BEW
F5.0A	5'-0" x 5'-0" x 2'-0"	6 - #6 T&BEW
F5.5	5'-0" x 5'-0" x 1'-0"	7 - #6 BEW
F6.0	6'-0" x 6'-0" x 1'-0"	7 - #7 BEW
F6.0A	6'-0" x 6'-0" x 2'-0"	7 - #7 T&BEW
F6.5	6'-0" x 6'-0" x 1'-0"	8 - #7 BEW
F7.0	7'-0" x 7'-0" x 1'-0"	8 - #7 BEW
F8.0	8'-0" x 8'-0" x 1'-10"	9 - #8 BEW
F8.0A	8'-0" x 8'-0" x 3'-0"	9 - #8 T&BEW
F9.0	9'-0" x 9'-0" x 2'-0"	10 - #8 BEW
F10.0	10'-0" x 10'-0" x 2'-2"	11 - #9 BEW

NOTE:
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. ELEVATIONS FOR BOTTOM OF FOOTINGS (BOF) SHOWN ON PLANS.
3. FOUNDATIONS TO BE SUPPORTED ON UNDISTURBED GLACIAL TILL OR COMPACTED STRUCTURAL FILL APPROVED BY THE OWNER'S SOILS ENGINEER FOR THE DESIGN BEARING CAPACITY. REFER TO SITE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. GEOTHCNICAL REPORT BY "LAHLAF GEOTECHNICAL CONSULTING, INC.", DATED APRIL 9, 2018. REFER TO SPECIFICATIONS FOR GEOTECHNICAL REPORT AND ADDITIONAL GEOTECHNICAL RECOMMENDATIONS.

FIRST FLOOR NOTES:
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. 6½" MIN LIGHT-WEIGHT (115 PCF) CONCRETE SLAB WITH 3"-18 GA (GALV) COMPOSITE METAL DECK WITH 6x6 W2.9 W2.9 WWF. SEE PLANS AND TYP. DETAILS FOR ADDITIONAL REINFORCING. EXCEPT AS OTHERWISE NOTED ON PLAN.
3. "N" SC INDICATES THE NUMBER OF ¾" Ø x 5" LONG HEADED SHEAR STUDS SPACED EVENLY ALONG THE BEAM, U.O.N.
4. TSL 768'-0" EXCEPT AS NOTED (± ")
5. ⟵ INDICATES FULL CAPACITY MOMENT CONNECTION.



TYPE A (4- 1" Ø A. BOLTS) | TYPE B (4- 1" Ø A. BOLTS) | TYPE C (4- 1" Ø A. BOLTS) | TYPE D (6- 1" Ø A. BOLTS) | TYPE E (6- 1½" Ø A. BOLTS) | TYPE F (8- 1" Ø A. BOLTS)

TYPICAL BASE PL DETAILS

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

First Floor Foundation/ Framing Plan Section B1

Key Plan

A BUILDING | B BUILDING | BI | B2 | A | AB

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

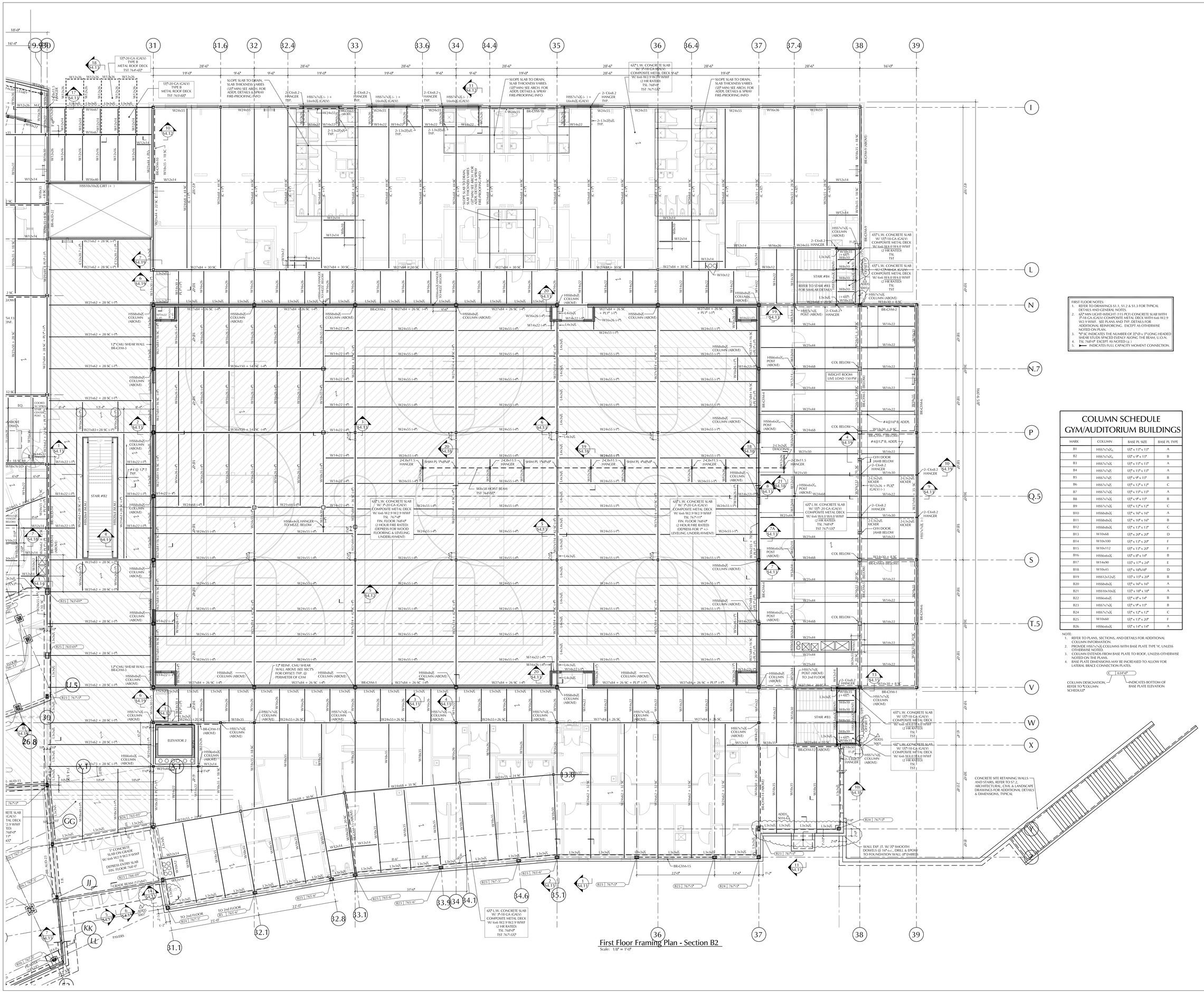
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.5



First Floor Framing Plan - Section B2

Scale: 1/8" = 1'-0"

FIRST FLOOR NOTES:
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. 6½" MIN LIGHT-WEIGHT (115 PCF) CONCRETE SLAB WITH 3"×18 GA (GALV) COMPOSITE METAL DECK WITH 6x6 W2.9/W2.9 WWF. SEE PLANS AND TYP. DETAILS FOR ADDITIONAL REINFORCING. EXCEPT AS OTHERWISE NOTED ON PLAN.
3. "X" SC INDICATES THE NUMBER OF ¾" Ø x 5" LONG HEADED SHEAR STUDS SPACED EVENLY ALONG THE BEAM, U.O.N.
4. TSL 76'-0" EXCEPT AS NOTED (±).
5. ⟶ INDICATES FULL CAPACITY MOMENT CONNECTION.

COLUMN SCHEDULE
GYM/AUDITORIUM BUILDINGS

MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
B1	HSS7x7x½	13" × 13" × 1½"	A
B2	HSS7x7x½	13" × 9" × 1½"	B
B3	HSS7x7x¼	13" × 13" × 1½"	A
B4	HSS7x7x½	13" × 13" × 1½"	A
B5	HSS7x7x½	13" × 9" × 1½"	B
B6	HSS7x7x½	13" × 12" × 1½"	C
B7	HSS7x7x¼	13" × 13" × 1½"	A
B8	HSS7x7x½	13" × 9" × 1½"	B
B9	HSS7x7x¼	13" × 12" × 1½"	C
B10	HSS8x8x½	13" × 16" × 16"	A
B11	HSS8x8x½	13" × 10" × 16"	B
B12	HSS8x8x½	13" × 13" × 13"	C
B13	W10x68	13" × 20" × 20"	D
B14	W10x100	13" × 13" × 20"	F
B15	W10x112	13" × 13" × 20"	F
B16	HSS6x6x½	13" × 8" × 14"	B
B17	W14x90	13" × 17" × 24"	E
B18	W10x45	13" × 10"×10"	D
B19	HSS12x12x½	13" × 15" × 20"	B
B20	HSS8x8x½	13" × 16" × 16"	A
B21	HSS10x10x½	13" × 10" × 18"	A
B22	HSS6x6x½	13" × 8" × 14"	B
B23	HSS7x7x½	13" × 9" × 11"	B
B24	HSS7x7x½	13" × 12" × 12"	C
B25	W10x60	13" × 13" × 20"	F
B26	HSS6x6x½	13" × 14" × 14"	A

NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS7x7x½ COLUMNS WITH BASE PLATE TYPE 'A', UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.
4. BASE PLATE DIMENSIONS MAY BE INCREASED TO ALLOW FOR LATERAL BRACE CONNECTION PLATES.

C 634'-0"

COLUMN DESIGNATION, REFER TO "COLUMN SCHEDULE"

INDICATES BOTTOM OF BASE PLATE ELEVATION

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

First Floor Framing Plan Section B2

Key Plan

A BUILDING | B BUILDING | A | AB | BI | B2

REVISIONS

No.	Description	Date
6	ESBP # 2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum # 5	12/27/18

FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.6

6½" L.W. CONCRETE SLAB
W/ 3"-18 GA (GALV)
COMPOSITE METAL DECK
W/ 6x6 W2.9 W2.9 WWF
(2 HOUR RATED)
TSL 783'-0"
TST 782'-5½"
(2-HR RATED SHAFT)
3" BUILDING EXPANSION JOINT
12'-10"
24'-8"
12'-10"
8'-5"
DK SPAN
STAIR #A3
STAIR #A2
PROVIDE HOLES FOR PIPING, G.C. COORD. SIZE & LOCATION, TYP.
SLOPE TO DRAIN, (½" MIN SLAB SPRAY FIRE-PROOFING UNDERSIDE
4½" L.W. CONCRETE SLAB
W/ 3"-18 GA (GALV)
COMPOSITE METAL DECK
W/ 6x6 W4.0 W4.0 WWF
(2 HR RATED)
TSL 777'-2½"
TST 776'-10"
SLOPE SLAB TO DRAIN, SLAB THICKNESS VARIES (3½" MIN) SEE ARCH. FOR ADDL DETAILS & SPRAY FIRE-PROOFING INFO
TYPICAL SLAB EDGE REINF., REFER TO "TYPICAL COMPOSITE SLAB SECTION" S1.2 FOR ADDITIONAL DETAILS
6½" L.W. CONCRETE SLAB
W/ 3"-18 GA (GALV)
COMPOSITE METAL DECK
W/ 6x6 W2.9 W2.9 WWF
(2 HOUR RATED)
TSL 782'-6½"
TST 782'-5½"
COL. HSS7x7x½ TO 3rd FLOOR
COL. HSS7x7x½ TO 2nd FLOOR
COL. HSS7x7x½ HANGER (BELOW)
COL. HSS7x7x½ TO 3rd FLOOR
HSS7x7x½ TIE (ABOVE)
HSS4x4x¼ TYP. @ 48" o.c.
HSS10x8x½ POST (ABOVE)
HSS14x10x½ (+3")
2-C6x8.2 HANGER (BELOW)
2-C6x8.2 HANGER
2-L3x2½x¼
W16x36 + BENT PL¾"
W16x36 + 18 SC + BENT PL¾"
W21x50 + 26 SC
W16x26 + 10 SC
W21x44 + 18 SC
W21x44 + 20 SC
W18x35 + 8 SC
W18x35 + 20 SC
W24x55 + 15 SC
W24x55 + 30 SC
W24x94
W24x62
W14x30
W27x84
W14x22
W12x26
W12x14
W14x43
W10x12
W16x26
W21x44
W21x44 + 22 SC
W21x44 + 23 SC
W21x44 + 25 SC
W21x44 + 20 SC
W16x26 + 20 SC
W18x35 + 17 SC
W18x35 + 15 SC
W18x35 + 14 SC
W18x35 + 20 SC
W24x55 + 30 SC
W24x55 + 20 SC
W24x55 + 15 SC
HSS7x7x½ (-) + L6x4x½ (GALV)
HSS7x7x½ (-) + L6x6x½ (GALV)
HSS8x8x½ (+ 1½") HSS9x6x½
HSS8x12x½ (+ 1½")
HSS7x7x½ (+ 1½")
HSS7x7x½ (+ 1½")
HSS7x7

Second Floor Framing Plan - Section AB

Scale: 1/8" = 1'-0"

ROOF NOTES:

1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. TST = TOP OF STRUCTURAL STEEL (BOTTOM OF METAL DECK)
3. INDICATES SLOPED MEMBER
4. G.C.: COORDINATE ALL ROOF-TOP HVAC LOCATIONS AND DIMENSIONS. VERIFY UNIT WEIGHTS DO NOT EXCEED DESIGN WEIGHTS AS SHOWN ON PLANS.
5. INDICATES FULL CAPACITY MOMENT CONNECTION.

SECOND FLOOR NOTES:

1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. 6½" MIN LIGHT-WEIGHT (115 PCF) CONCRETE SLAB WITH 3"-18 GA (GALV) COMPOSITE METAL DECK WITH 6x6 W2.9/W2.9 WWF. SEE PLANS AND TYP. DETAILS FOR ADDITIONAL REINFORCING. EXCEPT AS OTHERWISE NOTED ON PLAN.
3. "N" SC INDICATES THE NUMBER OF ½" Ø x 5" LONG HEADED SHEAR STUDS SPACED EVENLY ALONG THE BEAM, U.O.N.
4. TSL 783'-0" EXCEPT AS NOTED (±)
5. INDICATES FULL CAPACITY MOMENT CONNECTION.

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Worcester, MA

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Second Floor/ Low Roof Framing Plan Section AB

Key Plan

A BUILDING: A, AB
B BUILDING: B1, B2

REVISIONS

No.	Description	Date
6	ESBP # 2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum #5	12/27/18

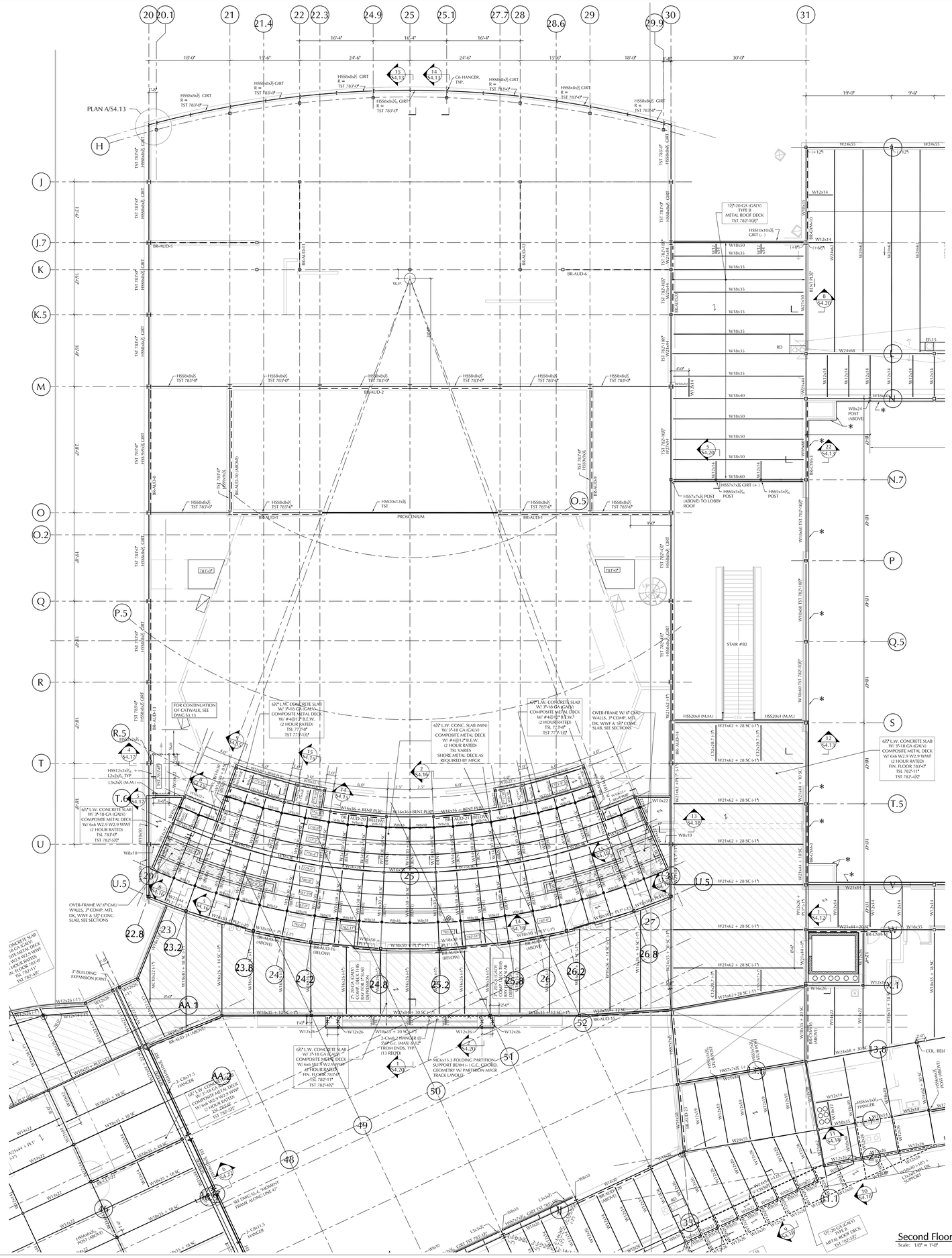
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.8



ROOF NOTES:

1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. TST = TOP OF STRUCTURAL STEEL (BOTTOM OF METAL DECK)
3. ——— INDICATES SLOPED MEMBER
4. G.C.: COORDINATE ALL ROOF-TOP HVAC LOCATIONS AND DIMENSIONS. VERIFY UNIT WEIGHTS. DO NOT EXCEED DESIGN WEIGHTS AS SHOWN ON PLANS.
5. ▶— INDICATES FULL CAPACITY MOMENT CONNECTION.

SECOND FLOOR NOTES:

1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. 6½" MIN LIGHT-WEIGHT (115 PCF) CONCRETE SLAB WITH 3"-18 GA (GALV) COMPOSITE METAL DECK WITH 6x6 W2.9/W2.9 WWF. SEE PLANS AND TYP. DETAILS FOR ADDITIONAL REINFORCING. EXCEPT AS OTHERWISE NOTED ON PLAN.
3. "5"SC" INDICATES THE NUMBER OF ½" Ø x 5" LONG HEADED SHEAR STUDS SPACED EVENLY ALONG THE BEAM, U.O.N.
4. TSL 78'5"-0" EXCEPT AS NOTED (±).
5. ▶— INDICATES FULL CAPACITY MOMENT CONNECTION.

Second Floor/Low Roof Framing Plan - Section B1

Scale: 1/8" = 1'-0"

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PROJECT

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South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Second Floor/ Low Roof Framing Plan Section B1

Key Plan

A BUILDING — A, AB
B BUILDING — BI, B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

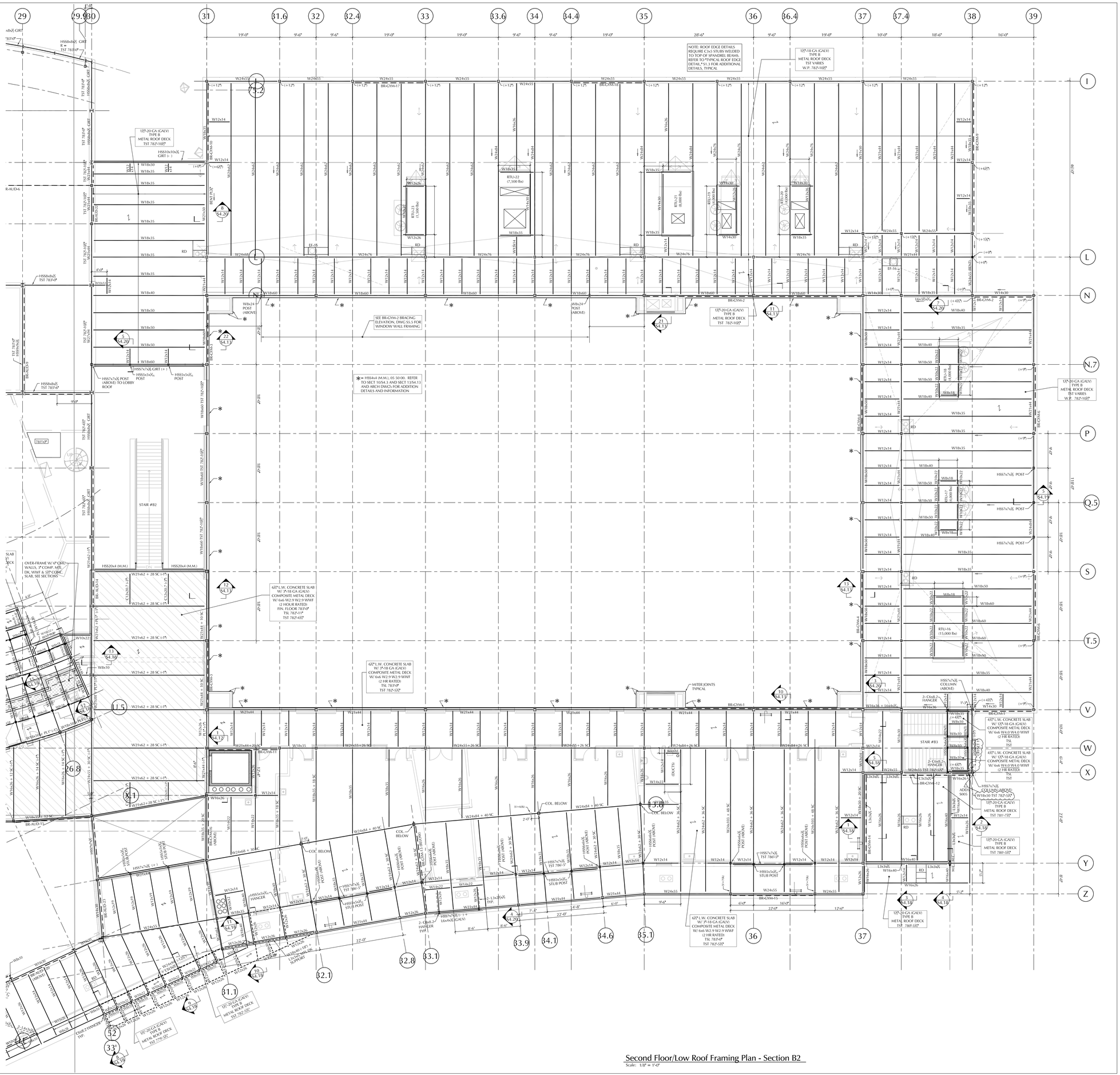
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.9



Second Floor/Low Roof Framing Plan - Section B2
Scale: 1/8" = 1'-0"

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Second Floor/ Low Roof Framing Plan Section B2

Key Plan

A BUILDING
B BUILDING
A
AB
BI
B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

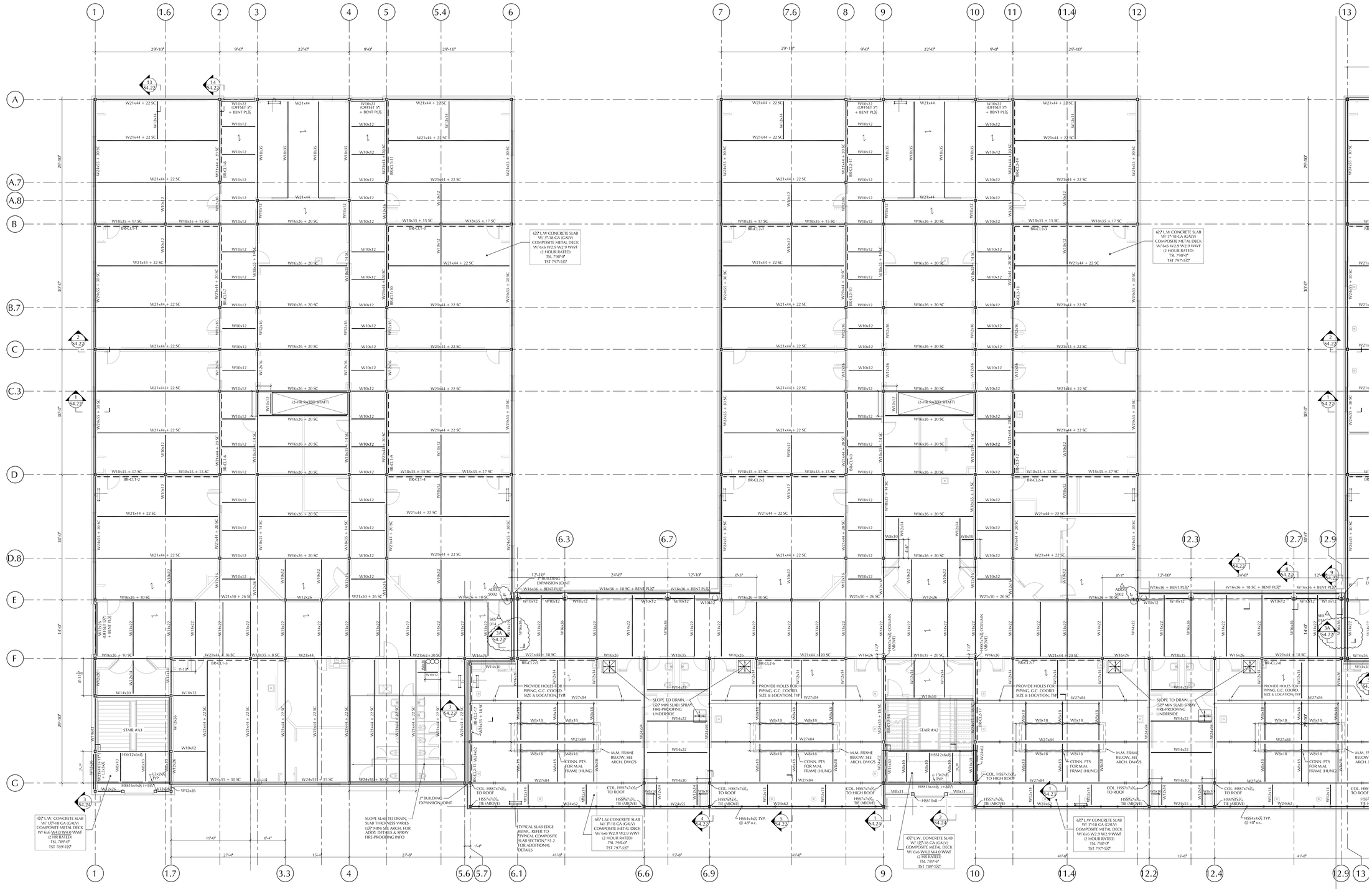
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.10



Third Floor Framing Plan - Section A

Scale: 1/8" = 1'-0"

THIRD FLOOR NOTES:

1. REFER TO DRAWINGS S1.3, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. 62½" MIN LIGHT-WEIGHT (115 PCF) CONCRETE SLAB WITH 3"-18 GA (GALV) COMPOSITE METAL DECK WITH 6x6 W2.9 W2.9 WWF. SEE PLANS AND TYP. DETAILS FOR ADDITIONAL REINFORCING. EXCEPT AS OTHERWISE NOTED ON PLAN.
3. "#" SC INDICATES THE NUMBER OF 3/4" Ø x 5" LONG HEADED SHEAR STUDS SPACED EVENLY ALONG THE BEAM, U.O.N.
4. TSL 798'-0" EXCEPT AS NOTED (±)
5. ►► INDICATES FULL CAPACITY MOMENT CONNECTION.

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Third Floor Framing Plan Section A

Key Plan

A BUILDING

B BUILDING

REVISIONS

No.	Description	Date
6	ESBP # 2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum # 5	12/27/18

FILE:

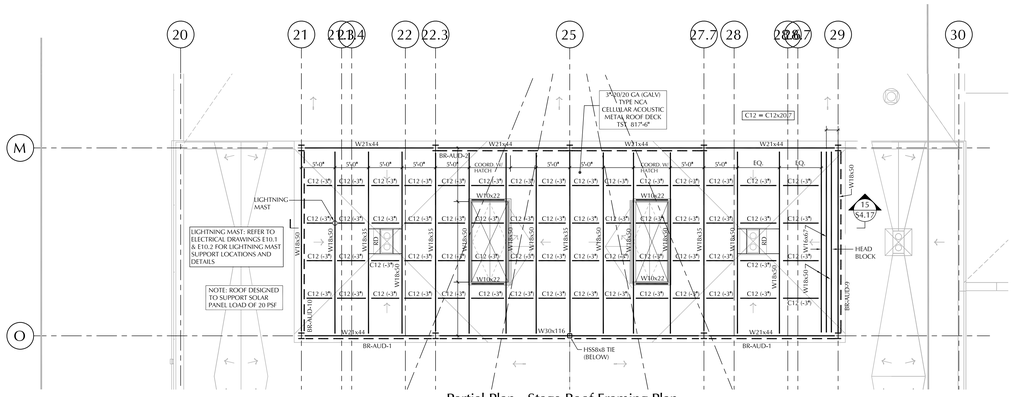
DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

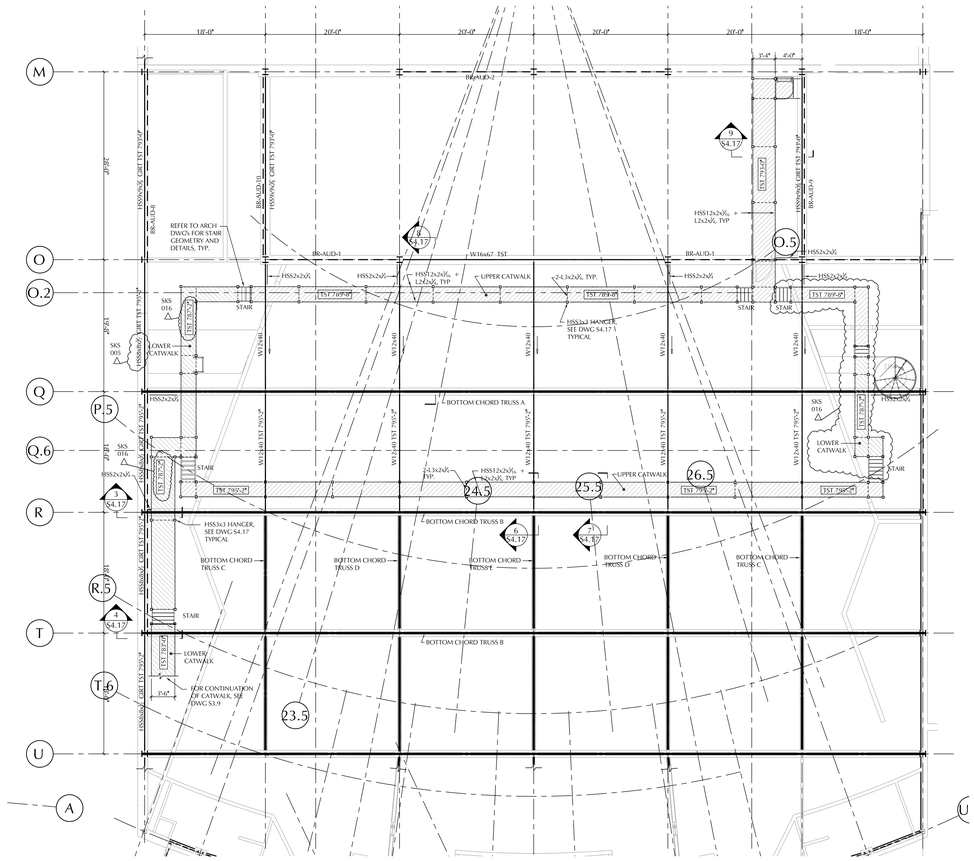
S3.11

6½" L.W. CONCRETE SLAB W/ 3/16-18 GA (GALV) COMPOSITE METAL DECK W/ 6x6 W2.9/W2.9 WWF (2 HOUR RATED) TSL 798'-0" TST 797'-5½"
4½" L.W. CONCRETE SLAB W/ 1½"-18 GA (GALV) COMPOSITE METAL DECK W/ 6x6 W4.0/W4.0 WWF (2 HR RATED) TSL TST
4½" L.W. CONCRETE SLAB W/ 1½"-18 GA (GALV) COMPOSITE METAL DECK W/ 6x6 W4.0/W4.0 WWF (2 HR RATED) TSL 789'-6" TST 789'-1½"
3" BUILDING EXPANSION JOINT
SLOPE TO DRAIN, (1/2" MIN SLAB) SPRAY FIRE-PROOFING UNDERSIDE
(2-HR RATED SHAFT)
STAIR #A1
M.M. FRAME BELOW, SEE ARCH. DWGS
CONN. PTS FOR M.M. FRAME (HUNG)
PROVIDE HOLES FOR PIPING, G.C. COORD. SIZE & LOCATION, TYP.
COL. HSS7x7x5/16 TO ROOF
HSS7x7x5/16 TIE (ABOVE)
SLOPE SLAB TO DRAIN, SLAB THICKNESS VARIES (1/2" MIN) SEE ARCH. FOR ADDL DETAILS & SPRAY FIRE-PROOFING INFO
INDICATES HSS3x3x5/16 HANGER @ TO UPPER CATWALK
INDICATES HSS3x3x5/16 HANGER TO LOWER CATWALK
NOTE: ROOF DESIGNED TO SUPPORT SOLAR PANEL LOAD OF 20 PSF
PLAN A56.1
3" 20 GA (GALV) TYPE N METAL ROOF DECK TST VARIES W.P. 803'-0"
7½" CONCRETE SLAB W/ 3/16-18 GA (GALV) COMPOSITE METAL DECK (2-HR RATED) W/ #4 @ 12" B.E.W. TSL
7½" CONCRETE SLAB W/ 3/16-20 GA (GALV) TYPE N NCA CELLULAR ACOUSTIC METAL ROOF DECK (2-HR RATED) W/ #4 @ 12" B.E.W. TSL
3" BUILDING EXPANSION JOINT
1½" 20 GA (GALV) TYPE N METAL ROOF DECK TST VARIES W.P. 798'-7½"
3" 20 GA (GALV) TYPE N METAL ROOF DECK TST VARIES W.P. 803'-0"
3" 20 GA (GALV) TYPE N METAL ROOF DECK TST VARIES W.P. 798'-7½"
6" CONCRETE SLAB W/ 3/16-18 GA (GALV) COMPOSITE METAL DECK (2-HR RATED) W/ #4 @ 12" B.E.W. TSL VARIES
6" CONCRETE SLAB W/ 3/16-18 GA (GALV) COMPOSITE METAL DECK (2-HR RATED) W/ #4 @ 12" B.E.W. TSL VARIES
6" CONCRETE SLAB W/ 3/16-18 GA (GALV) COMPOSITE METAL DECK (2-HR RATED) W/ #4 @ 12" B.E.W. TSL VARIES
3" 20 GA (GALV) TYPE N METAL ROOF DECK TST VARIES W.P. 798'-7½"
3" 20 GA (GALV) TYPE N METAL ROOF DECK TST VARIES W.P. 798'-7½"
REFER TO DETAIL 3/S3.12 (ABOVE)
REFER TO DETAIL 3/S3.12 (BELOW)



Partial Plan - Stage Roof Framing Plan

Scale: 1/8" = 1'-0"



Partial Plan - Catwalk Plan

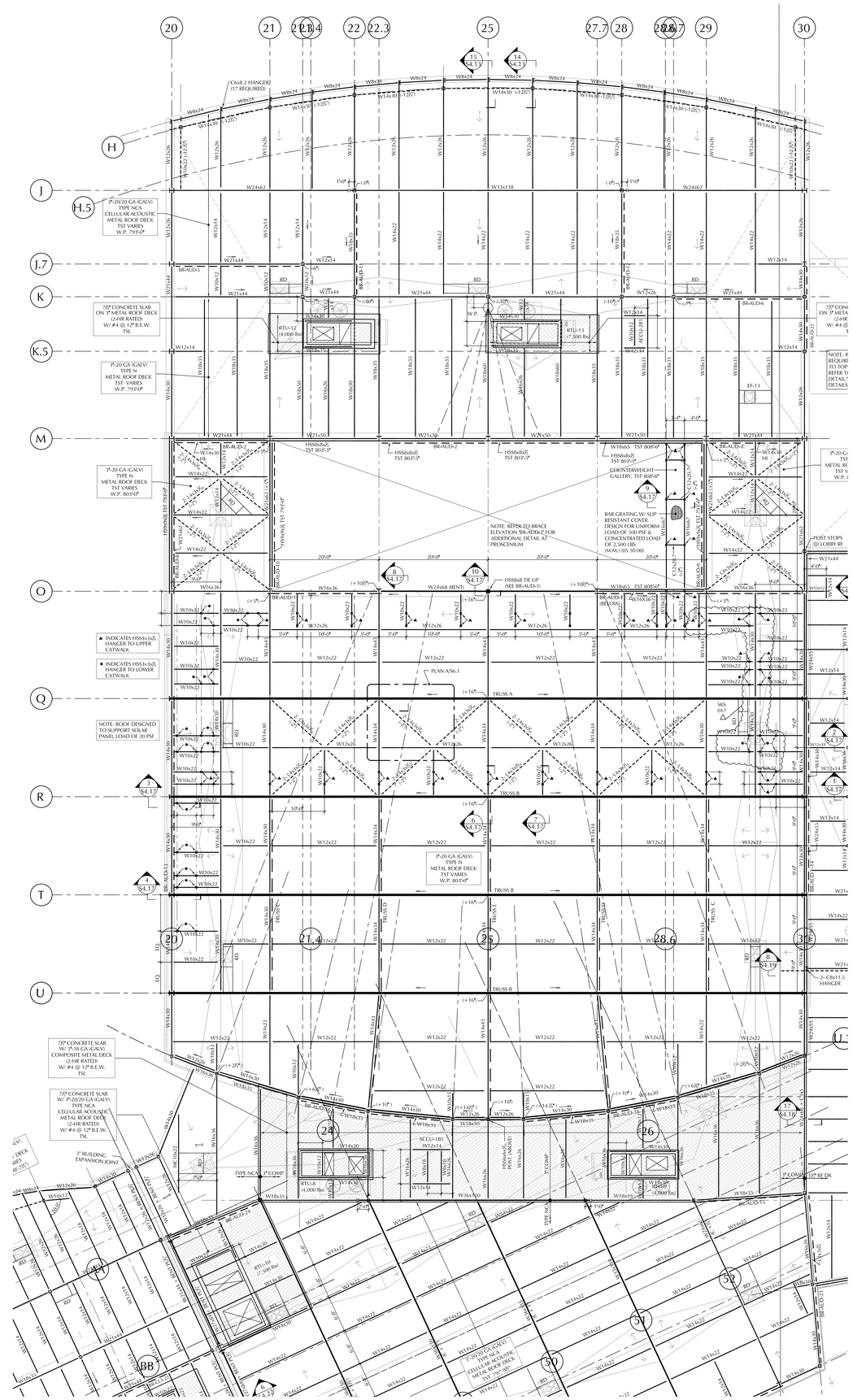
Scale: 1/8" = 1'-0"

ROOF NOTES:

1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. TST = TOP OF STRUCTURAL STEEL (BOTTOM OF METAL DECK)
3. ———— INDICATES SLOPED MEMBER
4. G.C.: COORDINATE ALL ROOF-TOP HVAC LOCATIONS AND DIMENSIONS. VERIFY UNIT WEIGHTS DO NOT EXCEED DESIGN WEIGHTS AS SHOWN ON PLANS.
5. ⟵ INDICATES FULL CAPACITY MOMENT CONNECTION.

PHOTOVOLTAIC PANEL NOTES:

1. ROOF DESIGNED TO SUPPORT 20 PSF SOLAR PANEL LOAD. LOCATE PANELS AND SUPPORTS TO NOT EXCEED THIS LOAD.
2. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.



Roof Framing Plan - Section B1

Scale: 1/8" = 1'-0"

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Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Roof Framing Plan Section B1

Key Plan

A BUILDING: A, AB
B BUILDING: B1, B2

REVISIONS

No.	Description	Date
6	ESBP # 2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum #5	12/27/18

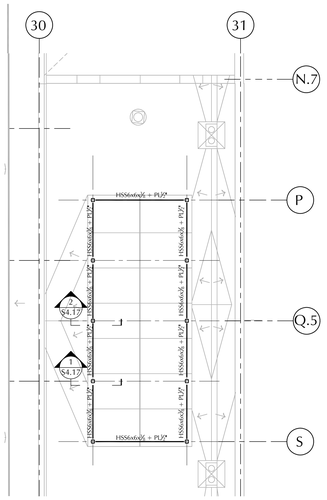
FILE:

DWN. BY: BDI | JOB NO: #1611

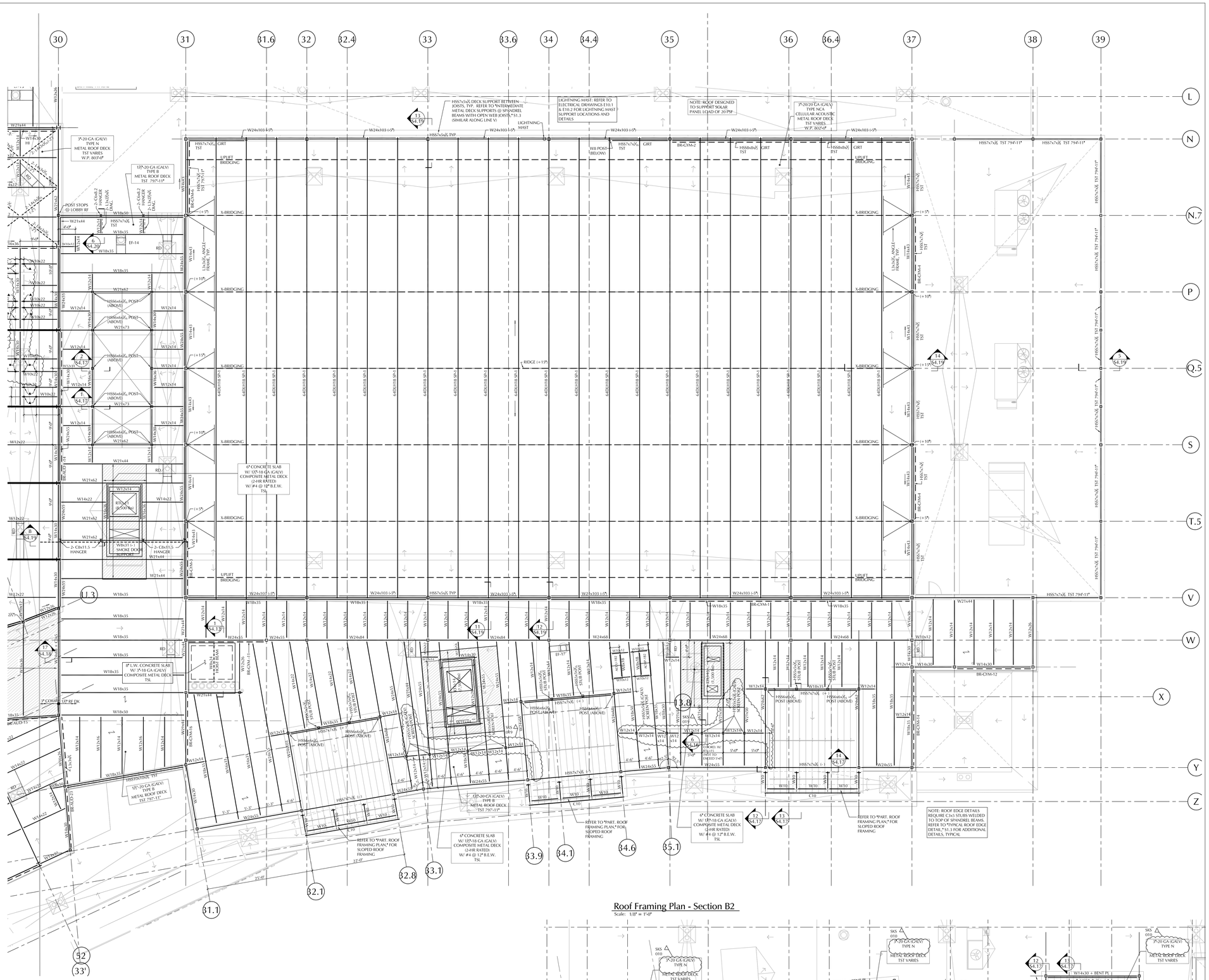
CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.13



Partial Skylight Framing Plan
Scale: 1/8" = 1'-0"



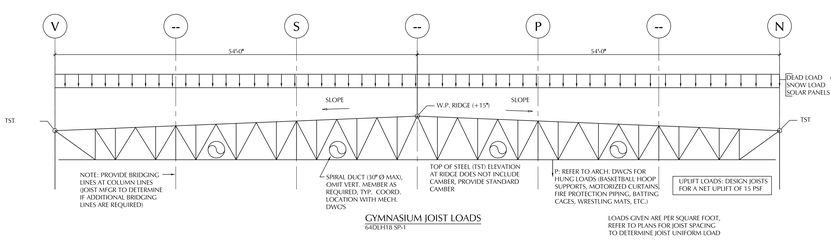
Roof Framing Plan - Section B2
Scale: 1/8" = 1'-0"

ROOF NOTES:

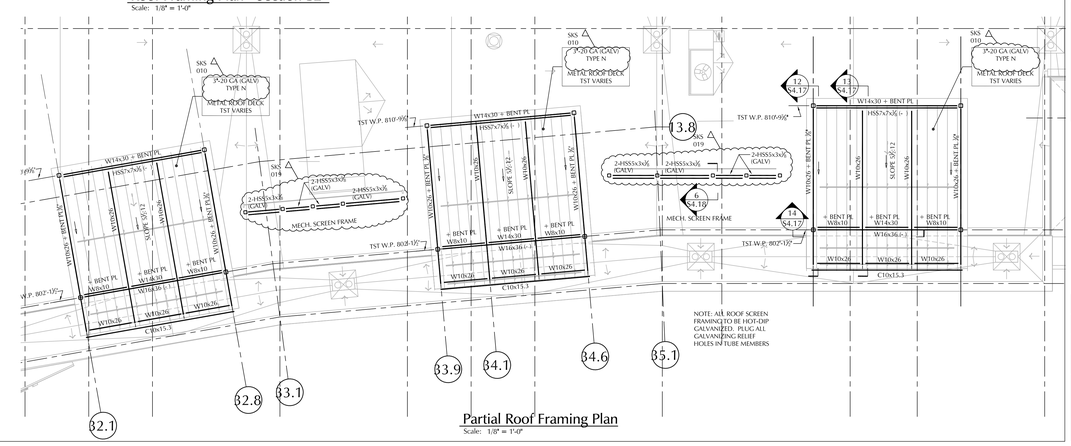
1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. TST = TOP OF STRUCTURAL STEEL (BOTTOM OF METAL DECK)
3. ——— INDICATES SLOPED MEMBER
4. G.C.: COORDINATE ALL ROOF-TOP HVAC LOCATIONS AND DIMENSIONS. VERIFY UNIT WEIGHTS DO NOT EXCEED DESIGN WEIGHTS AS SHOWN ON PLANS.
5. ▬▶ INDICATES FULL CAPACITY MOMENT CONNECTION.

PHOTOVOLTAIC PANEL NOTES:

1. ROOF DESIGNED TO SUPPORT 20 PSF SOLAR PANEL LOAD. LOCATE PANELS AND SUPPORTS TO NOT EXCEED THIS LOAD.
2. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.



GYMNASIUM JOIST LOADS
64DLH18 SP-1



Partial Roof Framing Plan
Scale: 1/8" = 1'-0"

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FINAL BID PACKAGE

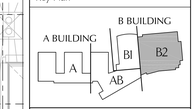
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Roof Framing Plan Section B2

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - T1	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

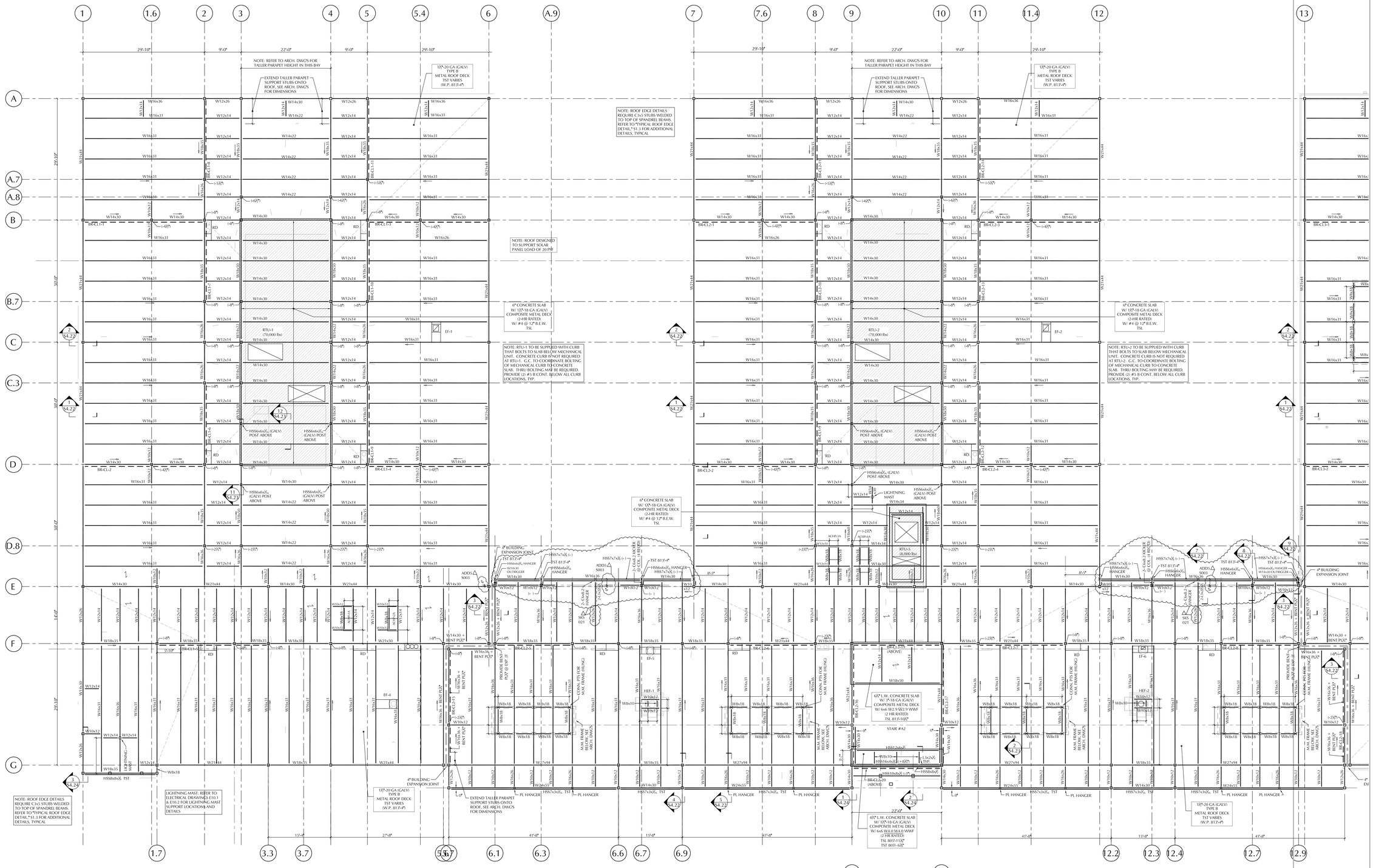
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

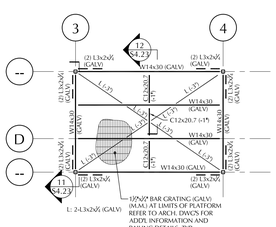
DATE: January 31, 2019

S3.14



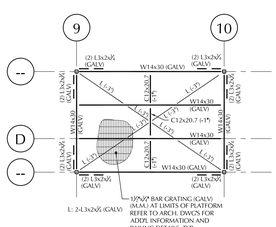
Roof Framing Plan - Section A

Scale: 1/8" = 1'-0"



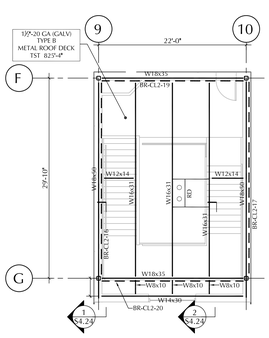
PART. PLAN- RTU 1 CONDENSER PLATFORM

SCALE: 1/2" = 1'-0"



PART. PLAN- RTU 2 CONDENSER PLATFORM

SCALE: 1/2" = 1'-0"



Partial Plan - High Stair #A2 Roof

Scale: 1/8" = 1'-0"

ROOF NOTES:

1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. TST = TOP OF STRUCTURAL STEEL (BOTTOM OF METAL DECK)
3. INDICATES SLOPED MEMBER
4. G.C.: COORDINATE ALL ROOF-TOP HVAC LOCATIONS AND DIMENSIONS. VERIFY UNIT WEIGHTS DO NOT EXCEED DESIGN WEIGHTS AS SHOWN ON PLANS.
5. INDICATES FULL CAPACITY MOMENT CONNECTION.

PHOTOVOLTAIC PANEL NOTES:

1. ROOF DESIGNED TO SUPPORT 20 PSF SOLAR PANEL LOAD. LOCATE PANELS AND SUPPORTS TO NOT EXCEED THIS LOAD.
2. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Roof Framing Plan Section A

Key Plan

A BUILDING
B BUILDING
A
AB
B1
B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

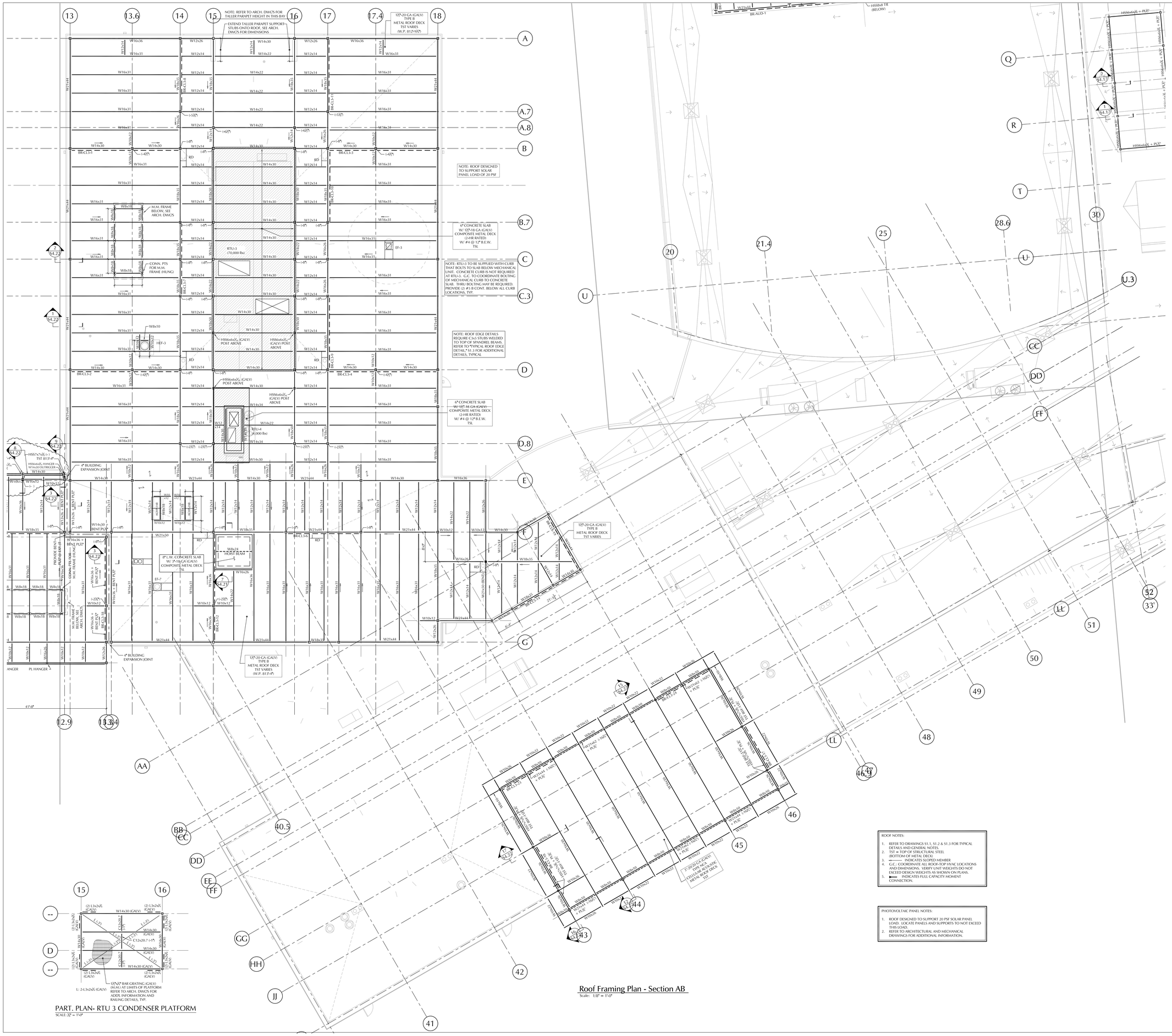
FILE:

DWN. BY: BDI | JOB NO: #1611

CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S3.15



ROOF NOTES:

1. REFER TO DRAWINGS S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. TST = TOP OF STRUCTURAL STEEL (BOTTOM OF METAL DECK)
3. ——— INDICATES SLOPED MEMBER
4. G.C.: COORDINATE ALL ROOF-TOP HVAC LOCATIONS AND DIMENSIONS. VERIFY UNIT WEIGHTS DO NOT EXCEED DESIGN WEIGHTS AS SHOWN ON PLANS.
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FINAL BID PACKAGE

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170 Apricot Street, Worcester, MA 01603

TITLE

Roof Framing Plan Section AB

Key Plan

A BUILDING
B BUILDING
A
AB
B1
B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

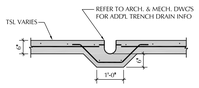
FILE:

DWN. BY: BDI | JOB NO: #1611

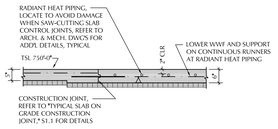
CKD. BY: BDI | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

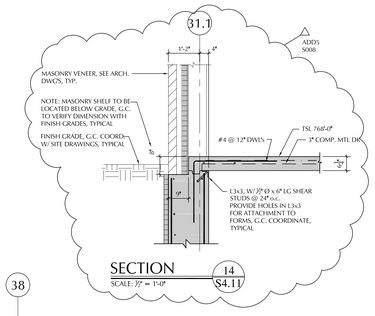
S3.16



SECTION 12 S4.11
SCALE: 3/4" = 1'-0"



SECTION 13 S4.11
SCALE: 3/4" = 1'-0"



SECTION 14 S4.11
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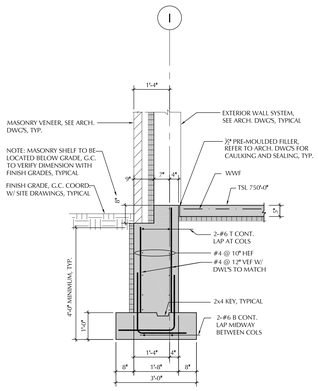
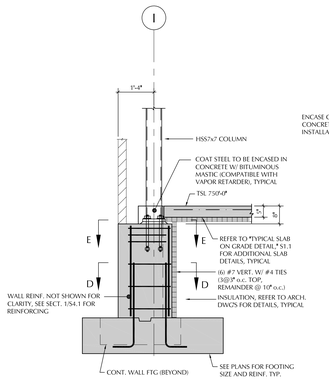


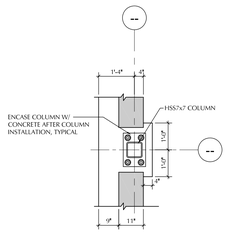
SECTION 6 S4.11
SCALE: 3/4" = 1'-0"

REFER TO "TYPICAL CONSTRUCTION/CONTROL JOINTS IN CONCRETE WALLS," S1.1 FOR MAXIMUM LENGTHS OF WALL POURS & CONTROL JOINT SPACING. COORDINATE LOCATION OF JOINTS W/ BRICK CONTROL JOINT LOCATIONS, TYPICAL

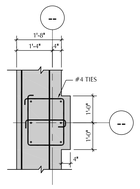
NOTE: LOWER BOTTOM OF FOOTING ELEVATION FOR PIPE PENETRATIONS, REFER TO TYPICAL DETAILS, PLANS, AND MECH. DWGS FOR ADDITIONAL INFORMATION, TYPICAL



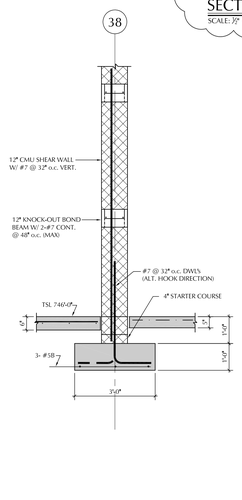
SECTION 7 S4.11
SCALE: 3/4" = 1'-0"



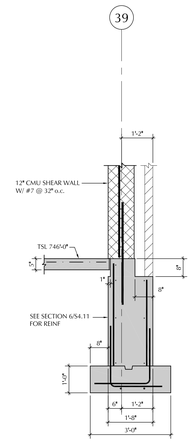
SECTION E-E



SECTION D-D



SECTION 8 S4.11
SCALE: 3/4" = 1'-0"



SECTION 9 S4.11
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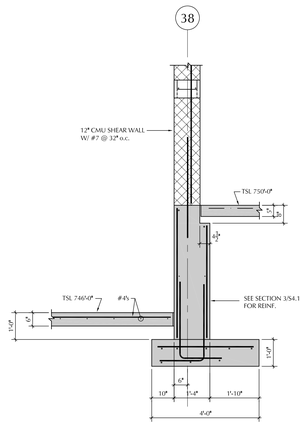

SECTION 10 S4.11
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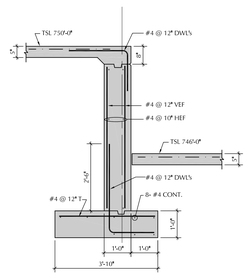

SECTION 11 S4.11
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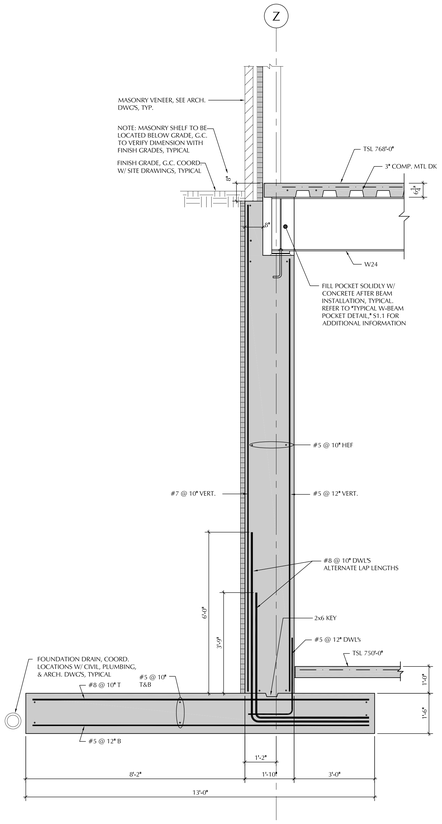

SECTION 1 S4.11
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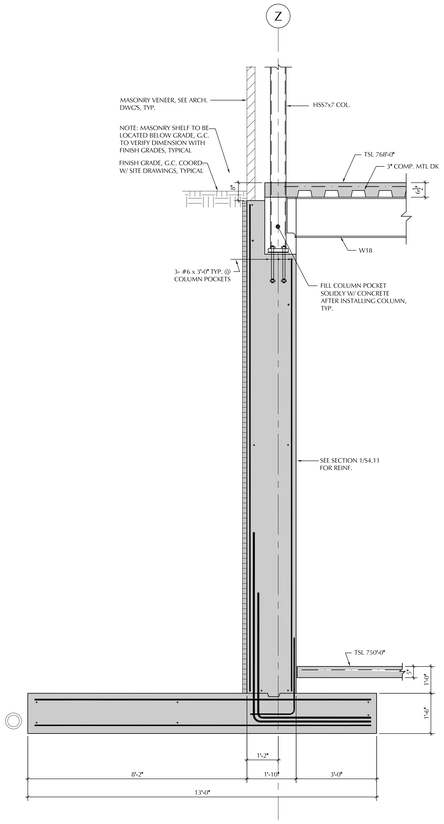

SECTION 2 S4.11
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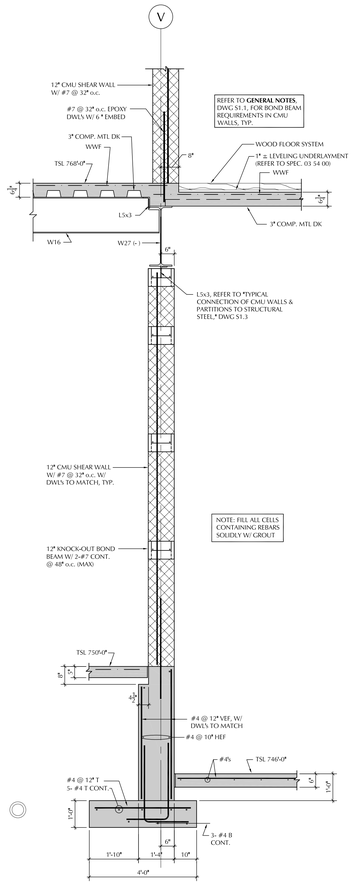

SECTION 3 S4.11
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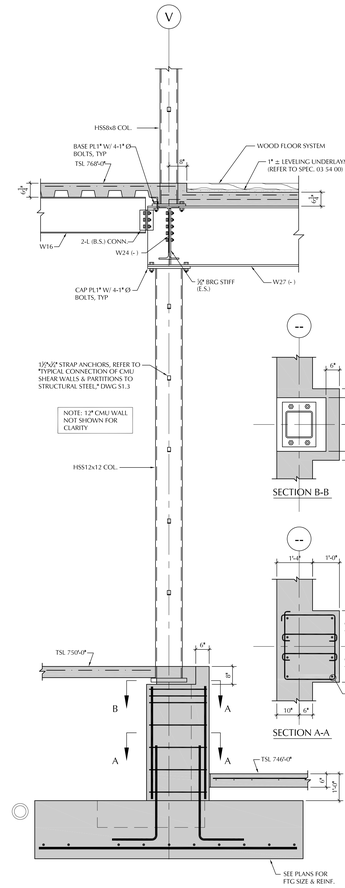

SECTION 4 S4.11
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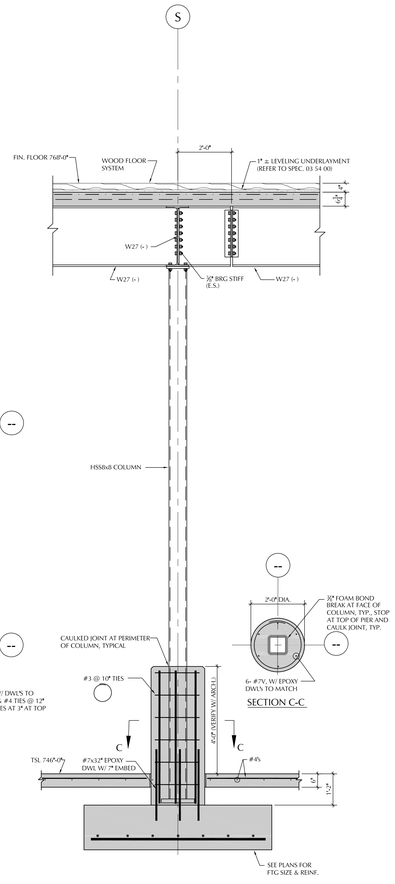

SECTION 5 S4.11
SCALE: 3/4" = 1'-0"

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PROJECT

FINAL BID PACKAGE

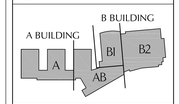
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

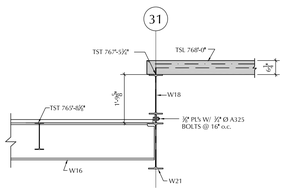
FILE:

DWN. BY: CJT | JOB NO: #1611

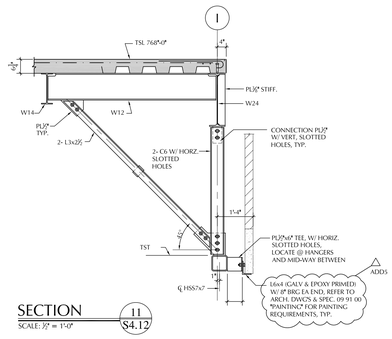
CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S4.11



SECTION 10 / S4.12
SCALE: ½" = 1'-0"



SECTION 11 / S4.12
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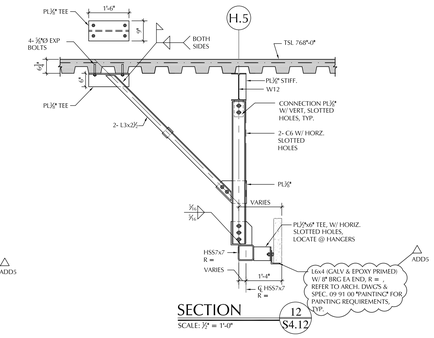

SECTION 12 / S4.12
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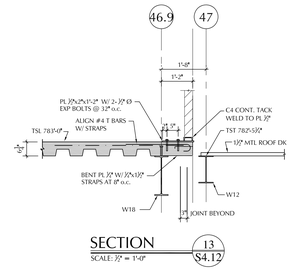

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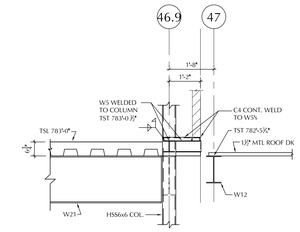

SECTION 14 / S4.12
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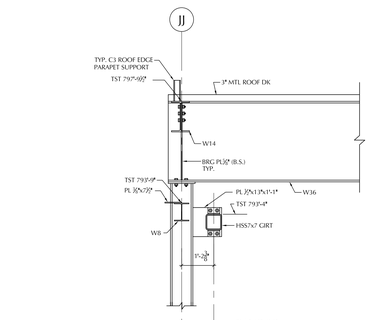
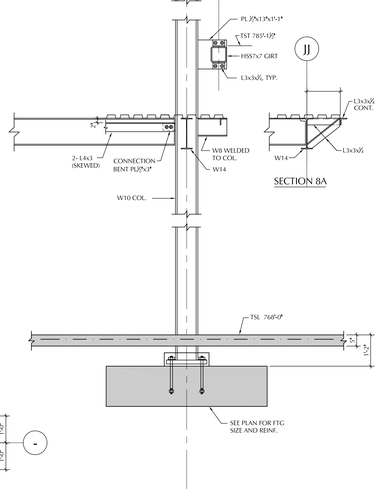
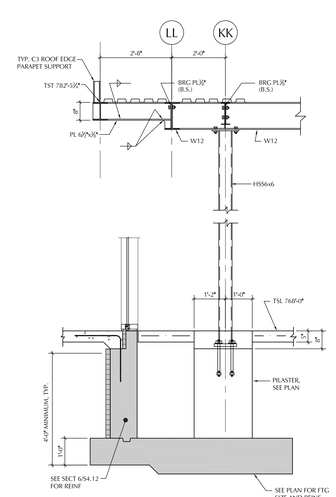




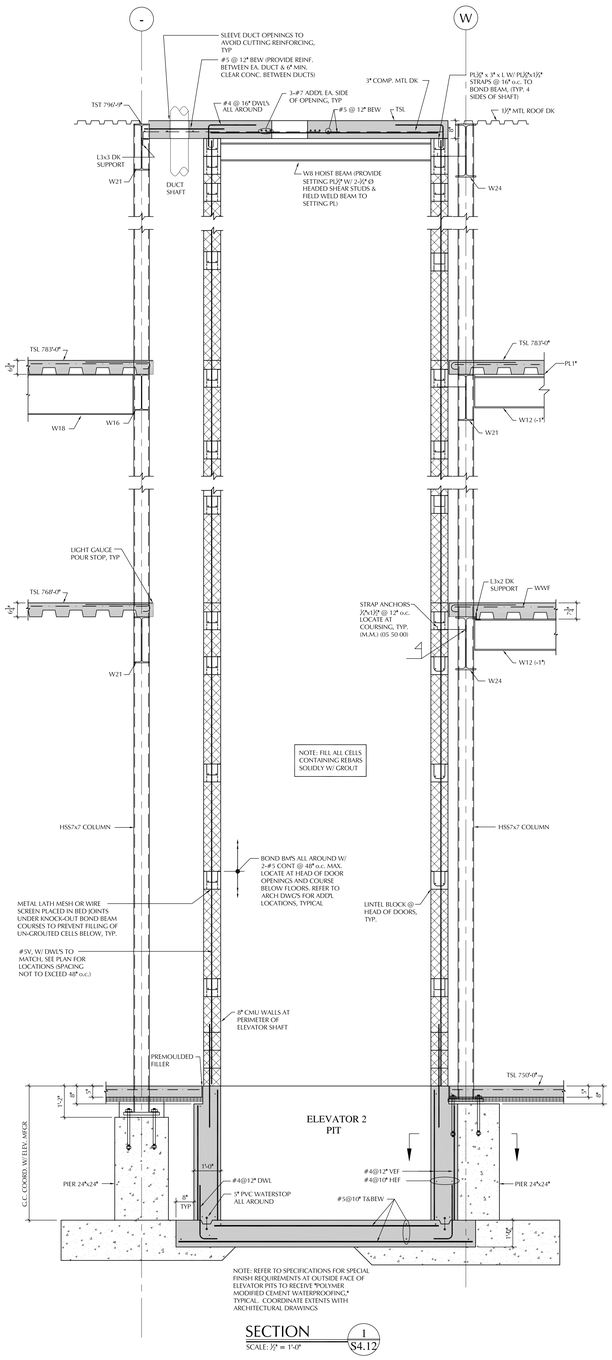


SECTION 6 / S4.12
SCALE: ½" = 1'-0"

SECTION 7 / S4.12
SCALE: ½" = 1'-0"

SECTION 8 / S4.12 / 8A / S4.12
SCALE: ½" = 1'-0"

SECTION 9 / S4.12
SCALE: ½" = 1'-0"



SECTION 1 / S4.12
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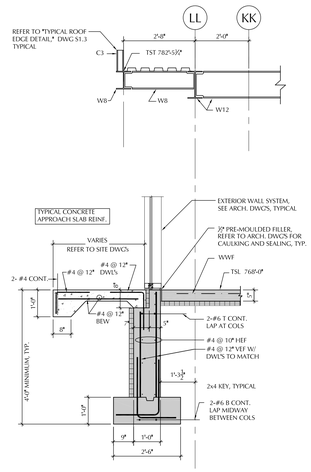
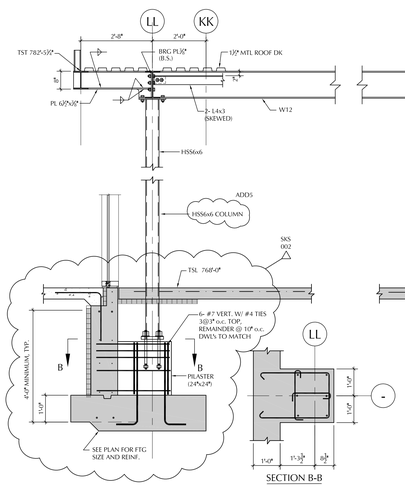


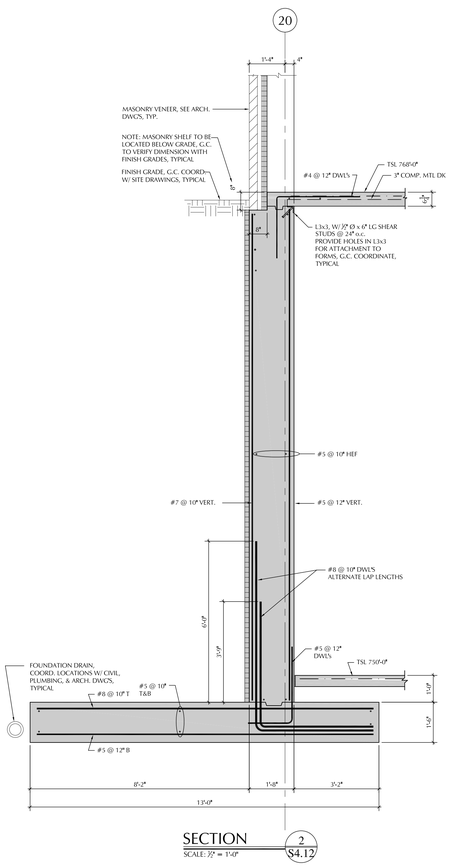
SECTION 6 / S4.12
SCALE: ½" = 1'-0"

NOTE: IF ROCK IS PRESENT AT FOOTING BEARING ELEVATIONS, OVER-EXCAVATE AND PROVIDE COMPACTED STRUCTURAL FILL BELOW FOOTING, TYP.



SECTION 7 / S4.12
SCALE: ½" = 1'-0"

NOTE: MASONRY SHELF TO BE LOCATED BELOW GRADE, G.C. TO VERIFY DIMENSION WITH FINISH GRADES, TYPICAL



SECTION 2 / S4.12
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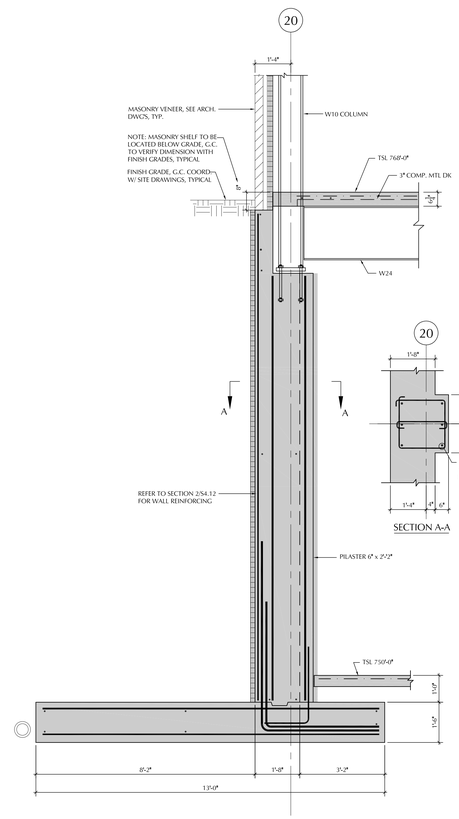

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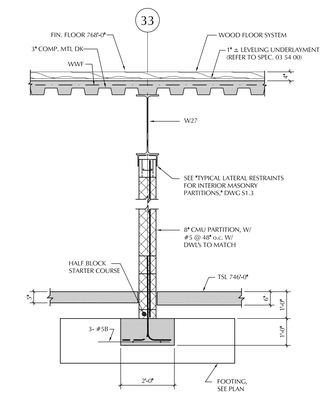

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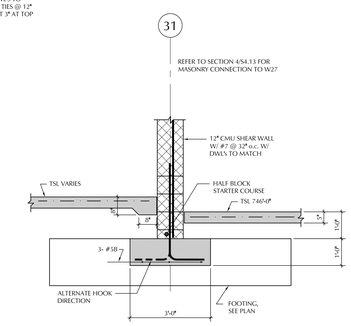

SECTION 4 / S4.12
SCALE: ½" = 1'-0"

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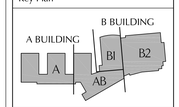


REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

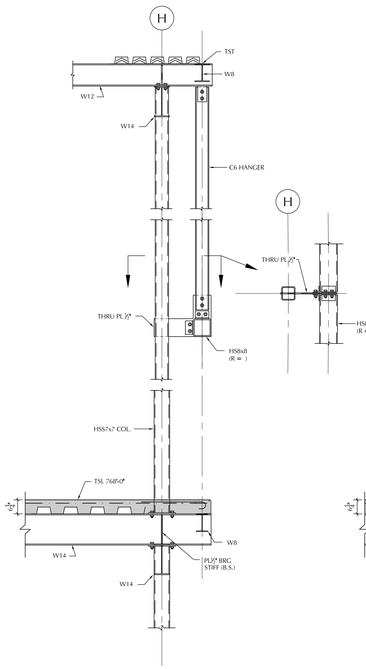
FILE:

DWN. BY: CJT | JOB NO: #1611

CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S4.12



SECTION 14 / S4.13
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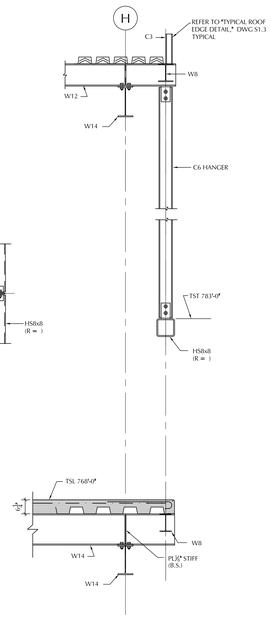
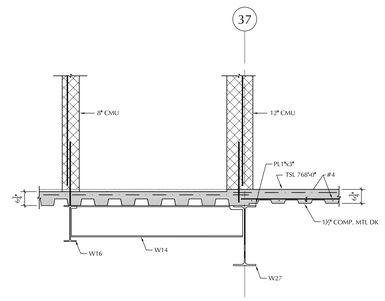
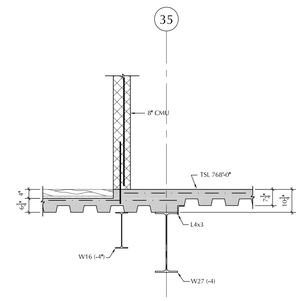


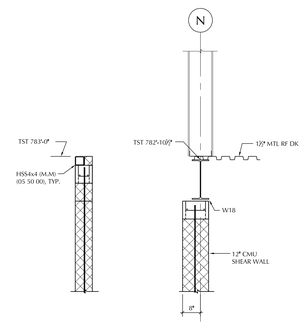
SECTION 15 / S4.13
SCALE: ½" = 1'-0"



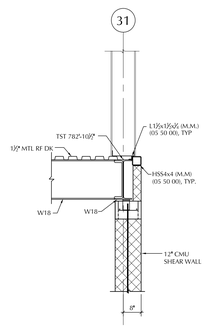
SECTION 19 / S4.13
SCALE: ½" = 1'-0"



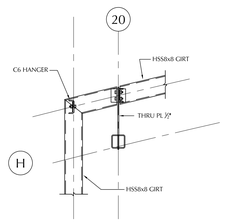
SECTION 20 / S4.13
SCALE: ½" = 1'-0"



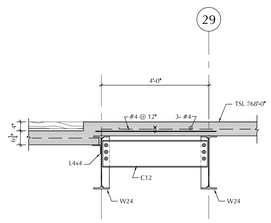
SECTION 21 / S4.13
SCALE: ½" = 1'-0"



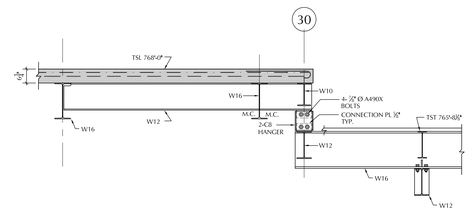
SECTION 22 / S4.13
SCALE: ½" = 1'-0"



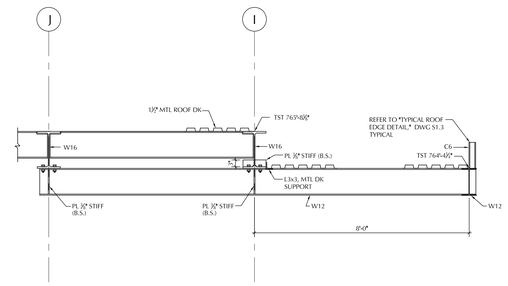
PLAN A / S4.13
SCALE: ½" = 1'-0"



SECTION 16 / S4.13
SCALE: ½" = 1'-0"



SECTION 17 / S4.13
SCALE: ½" = 1'-0"



SECTION 18 / S4.13
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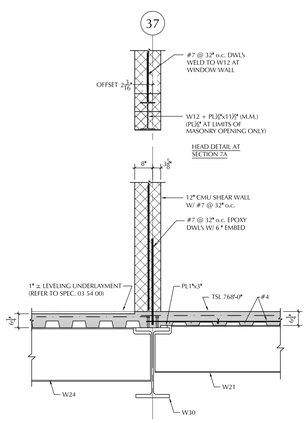
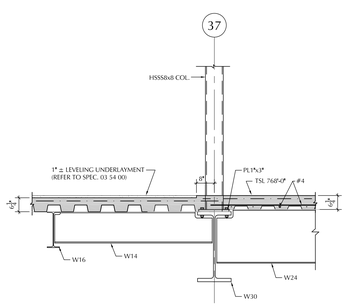


SECTION 7 / 7A / S4.13 / S4.13
SCALE: ½" = 1'-0"



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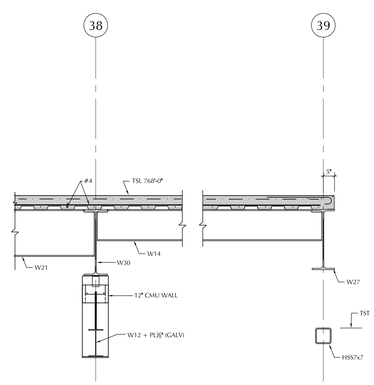
SCALE: ½" = 1'-0"



SECTION 9 / S4.13
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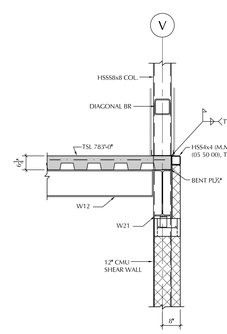

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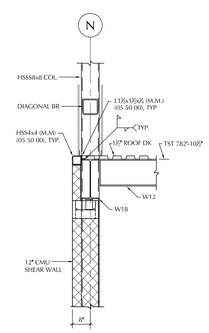

SECTION 11 / S4.13
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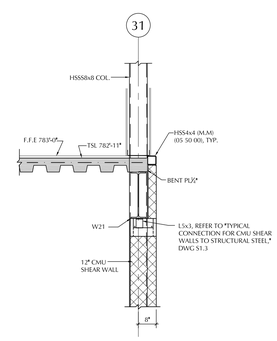

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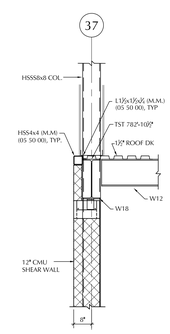
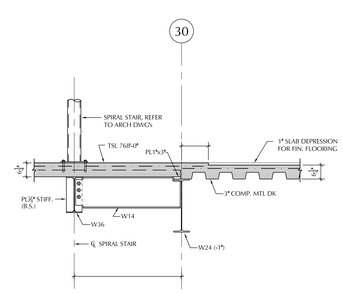
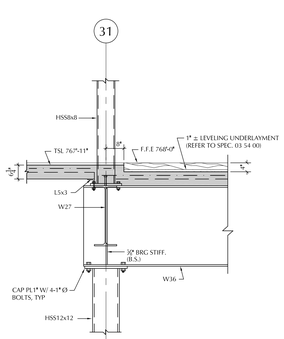


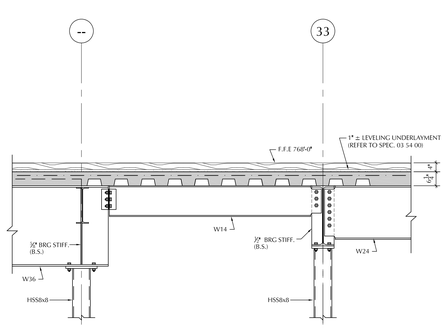
SECTION 13 / S4.13
SCALE: ½" = 1'-0"



SECTION 1 / S4.13
SCALE: ½" = 1'-0"



SECTION 2 / S4.13
SCALE: ½" = 1'-0"



SECTION 3 / S4.13
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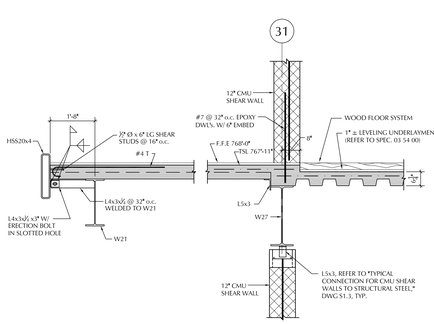

SECTION 4 / S4.13
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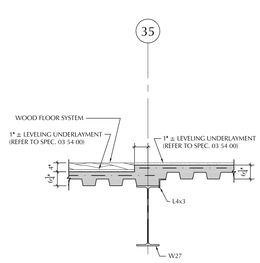
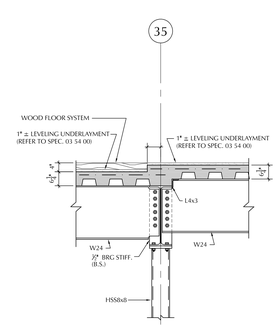


SECTION 5 / S4.13
SCALE: ½" = 1'-0"



SECTION 6 / S4.13
SCALE: ½" = 1'-0"

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

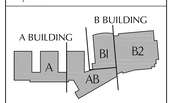
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

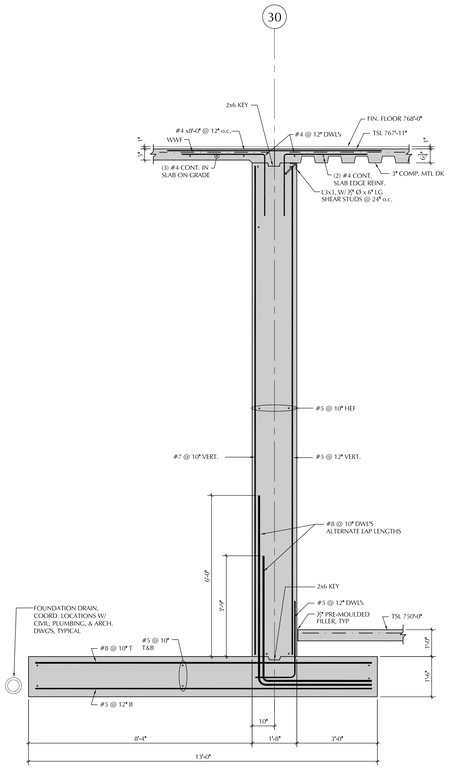
FILE:

DWN. BY: CJT | JOB NO: #1611

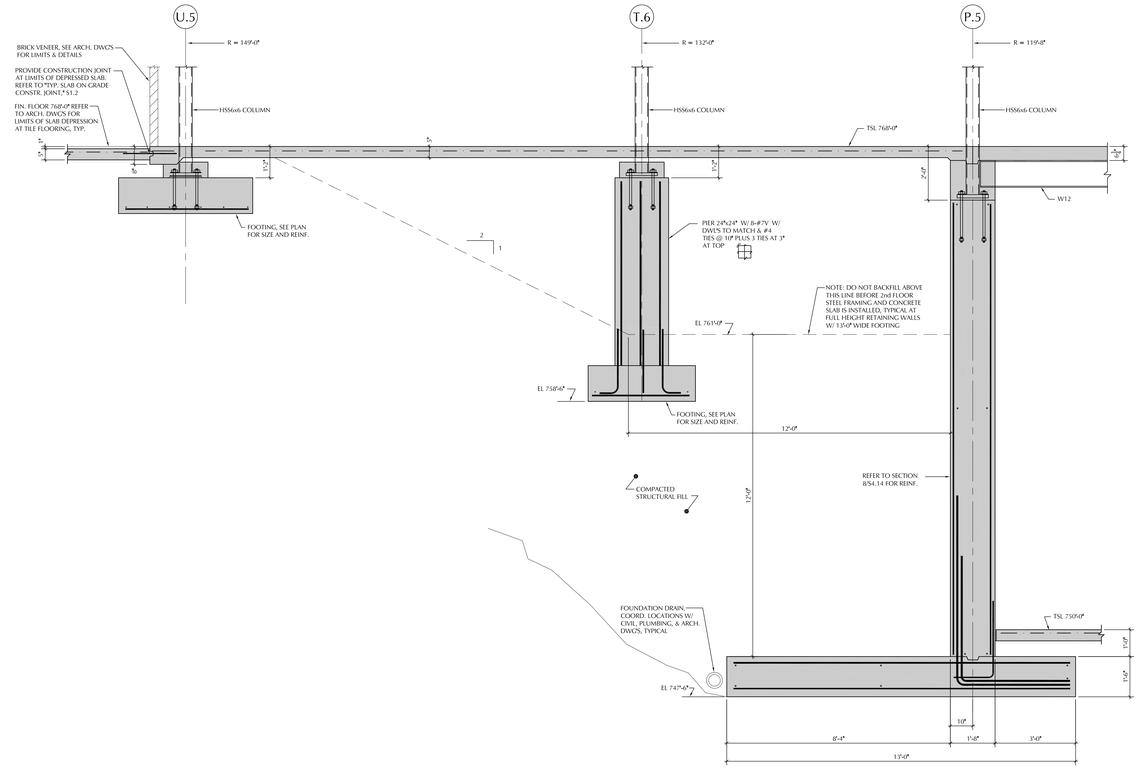
CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

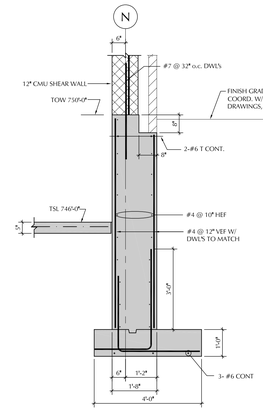
S4.13



SECTION 8 / S4.14
SCALE: 3/4" = 1'-0"



SECTION 9 / S4.14
SCALE: 3/4" = 1'-0"



SECTION 12 / S4.14
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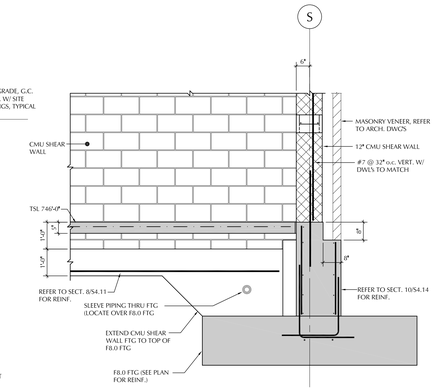
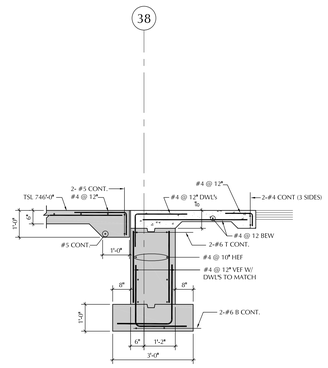
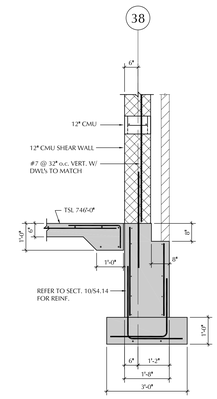


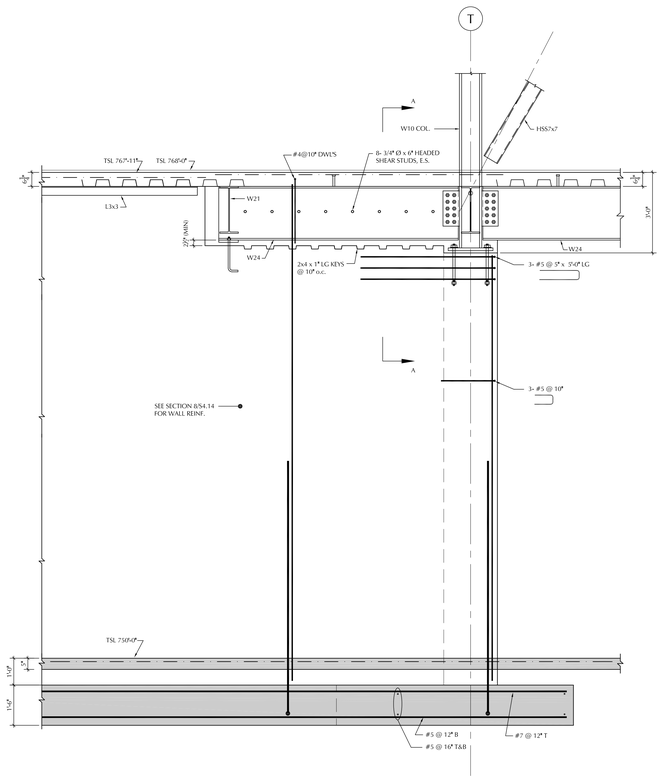
SECTION 13 / S4.14
SCALE: 3/4" = 1'-0"



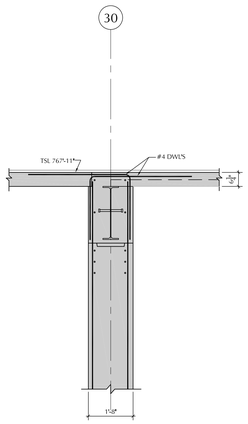
SECTION 10 / S4.14
SCALE: 3/4" = 1'-0"



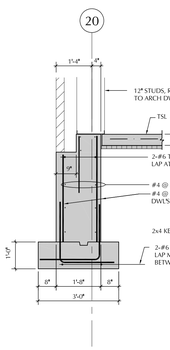
SECTION 11 / S4.14
SCALE: 3/4" = 1'-0"



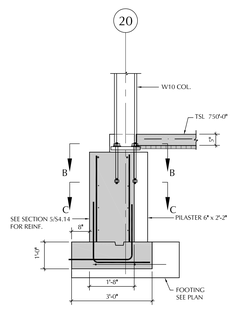
SECTION 1 / S4.14
SCALE: 3/4" = 1'-0"



SECTION A-A



SECTION 5 / S4.14
SCALE: 3/4" = 1'-0"



SECTION 6 / S4.14
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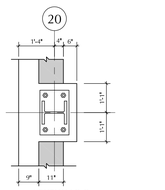
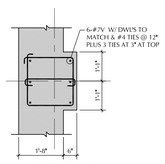
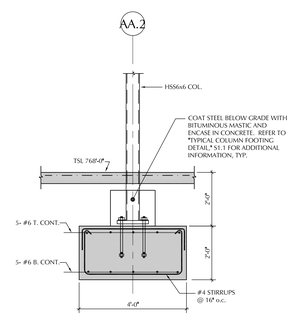


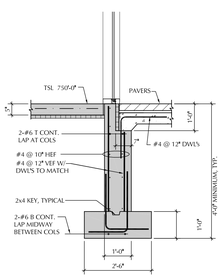
SECTION B-B



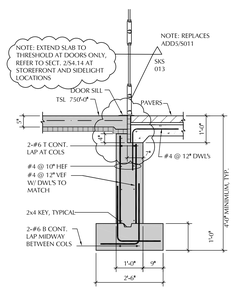
SECTION C-C



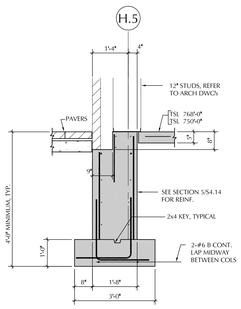
SECTION 7 / S4.14
SCALE: 3/4" = 1'-0"



SECTION 2 / S4.14
SCALE: 3/4" = 1'-0"



SECTION 2A / S4.14
SCALE: 3/4" = 1'-0"



SECTION 3 / S4.14
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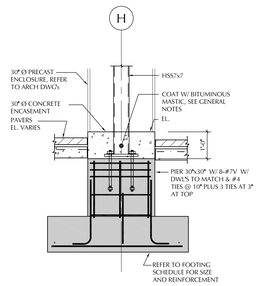

SECTION 4 / S4.14
SCALE: 3/4" = 1'-0"

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P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan

A BUILDING
B BUILDING
A
AB
B1
B2

REVISIONS

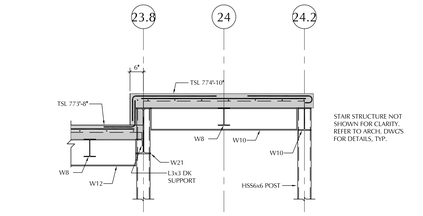
No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

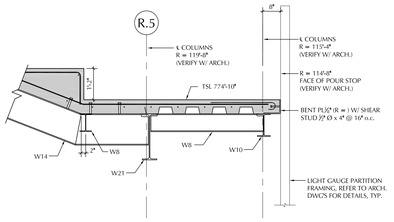
DWN. BY:	CJT	JOB NO:	#1611
CKD. BY:	JDM	SCALE:	As Noted

DATE: January 31, 2019

S4.14



SECTION 14 / S4.15
SCALE: 1/2" = 1'-0"



SECTION 15 / S4.15
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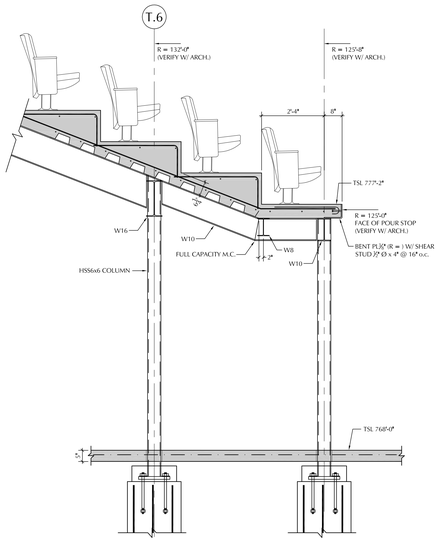
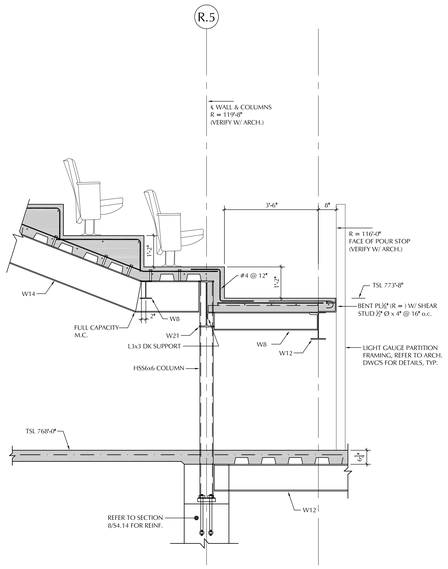
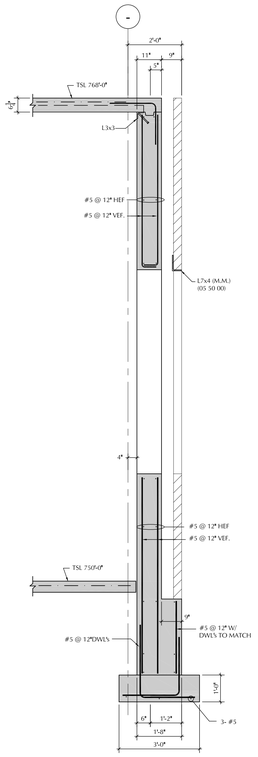


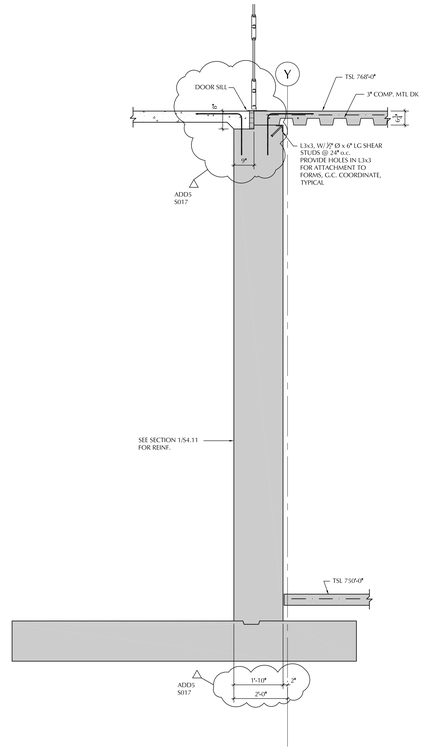
SECTION 8 / S4.15
SCALE: 1/2" = 1'-0"



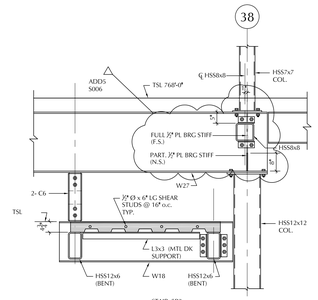
SECTION 9 / S4.15
SCALE: 1/2" = 1'-0"



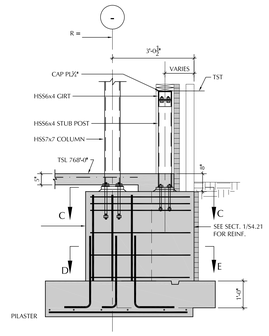
SECTION 10 / S4.15
SCALE: 1/2" = 1'-0"

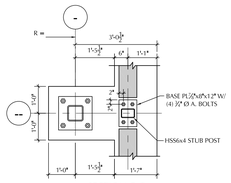


SECTION 11 / S4.15
SCALE: 1/2" = 1'-0"

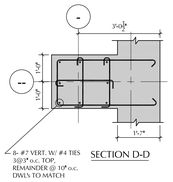


SECTION 13 / S4.15
SCALE: 1/2" = 1'-0"



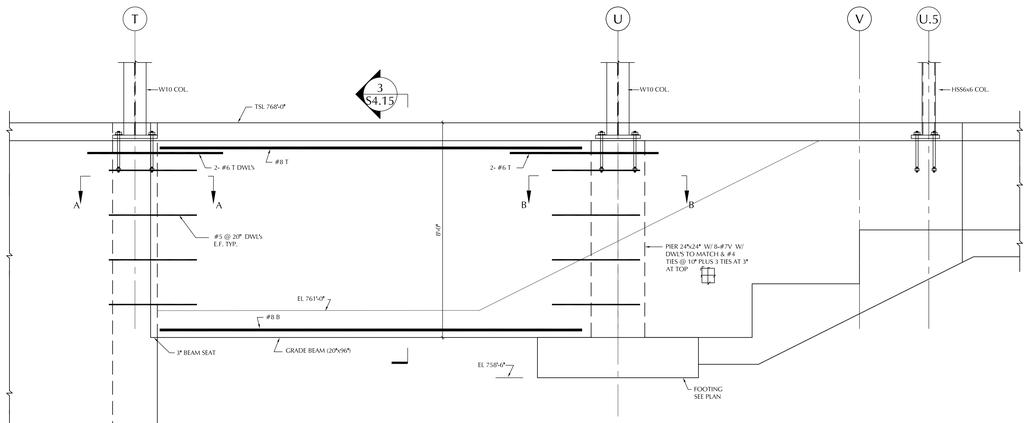


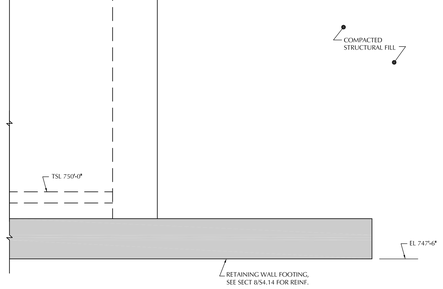
SECTION C-C



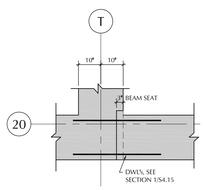
SECTION D-D

SECTION 12 / S4.15
SCALE: 1/2" = 1'-0"

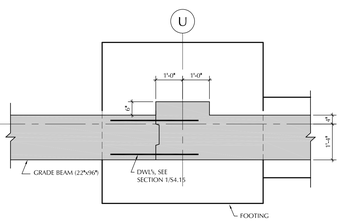




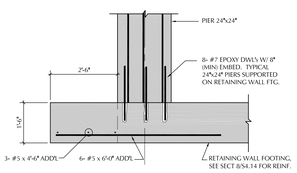
SECTION 1 / S4.15
SCALE: 1/2" = 1'-0"



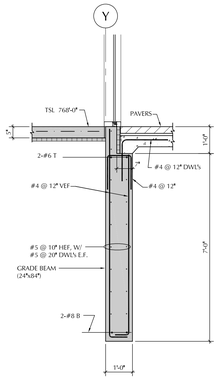
SECTION A-A



SECTION B-B



SECTION 2 / S4.15
SCALE: 1/2" = 1'-0"



SECTION 5 / S4.15
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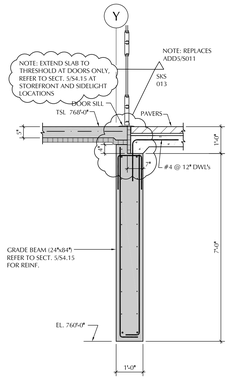

SECTION 6 / S4.15
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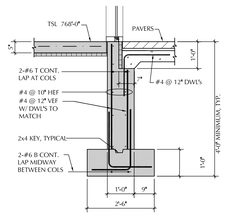
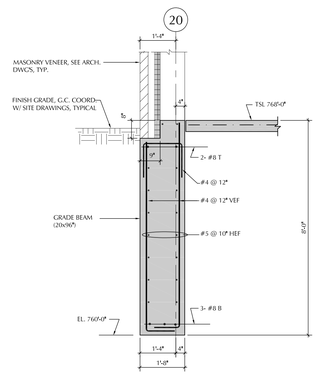


SECTION 7 / S4.15
SCALE: 1/2" = 1'-0"



SECTION 3 / S4.15
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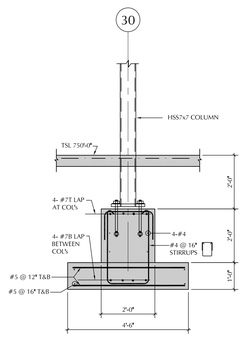

SECTION 4 / S4.15
SCALE: 1/2" = 1'-0"

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CONSULTING STRUCTURAL ENGINEERS
100 GROVE STREET, WORCESTER, MA
P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

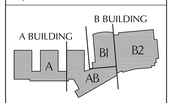
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

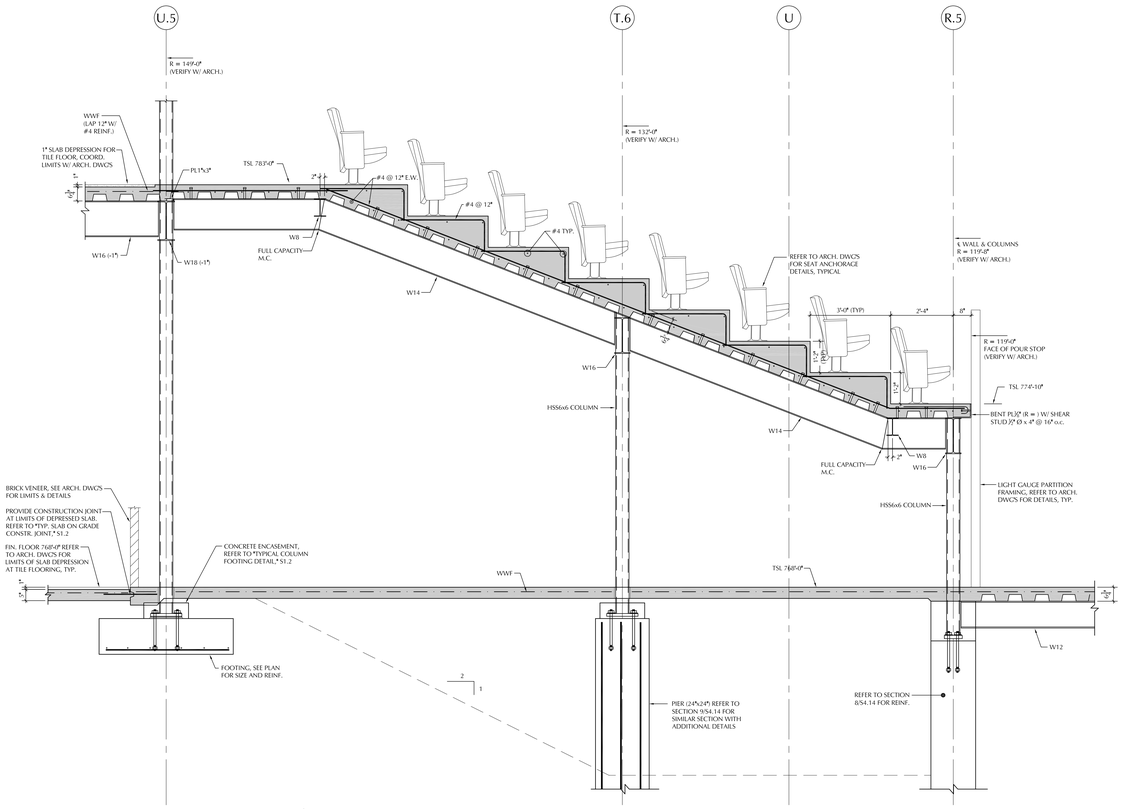
FILE:

DWN. BY: CJT | JOB NO: #1611

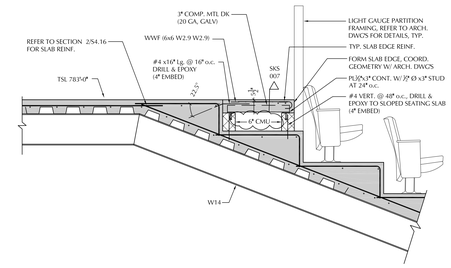
CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S4.15



SECTION 2/S4.16
SCALE: ½" = 1'-0"



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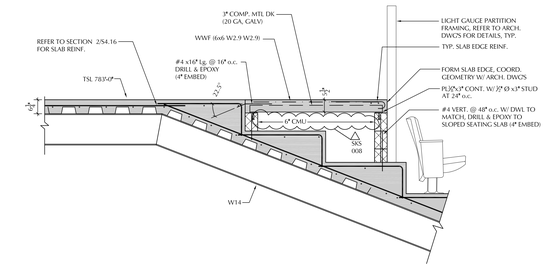
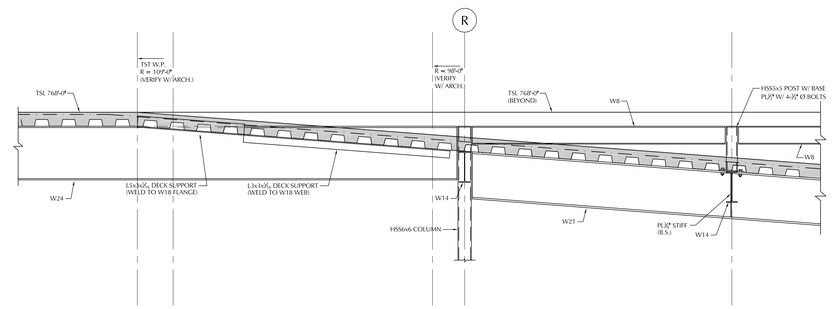


SECTION 6/S4.16
SCALE: ½" = 1'-0"



SECTION 3/S4.16
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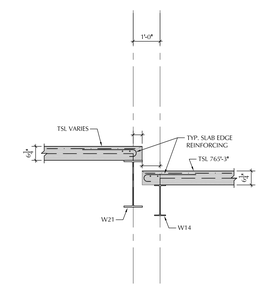

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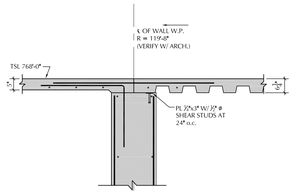

SECTION 1A/S4.16
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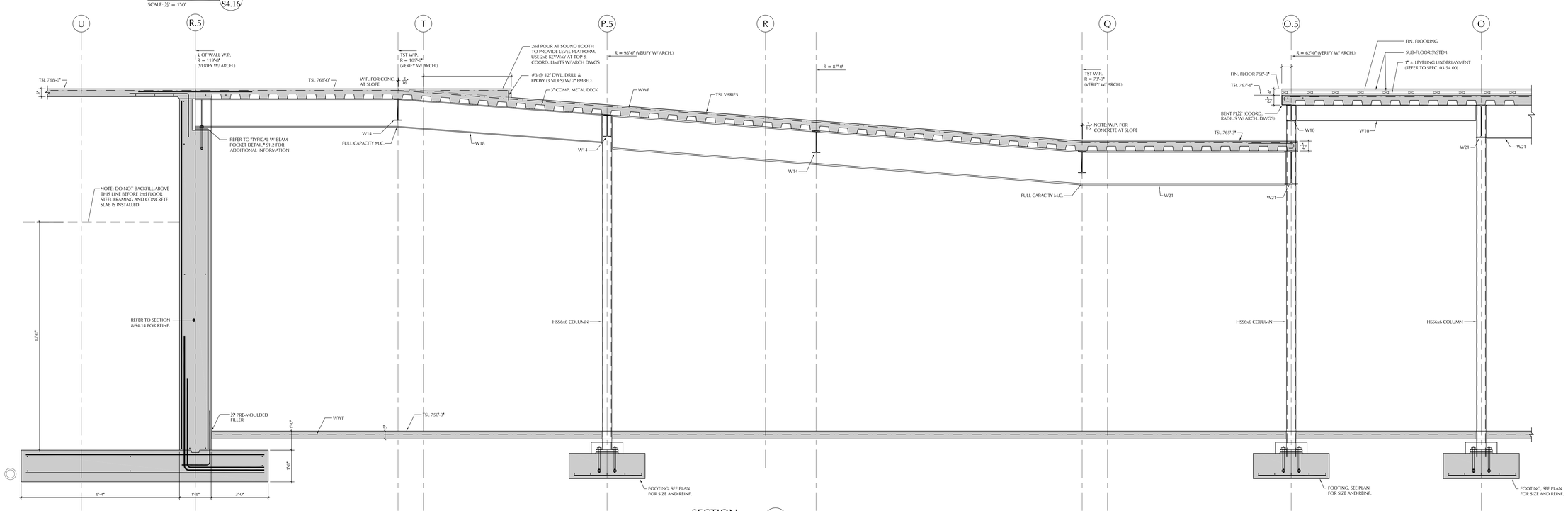

SECTION 1/S4.16
SCALE: ½" = 1'-0"

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FINAL BID PACKAGE

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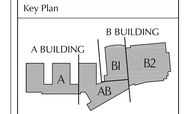
TITLE

Sections

Key Plan



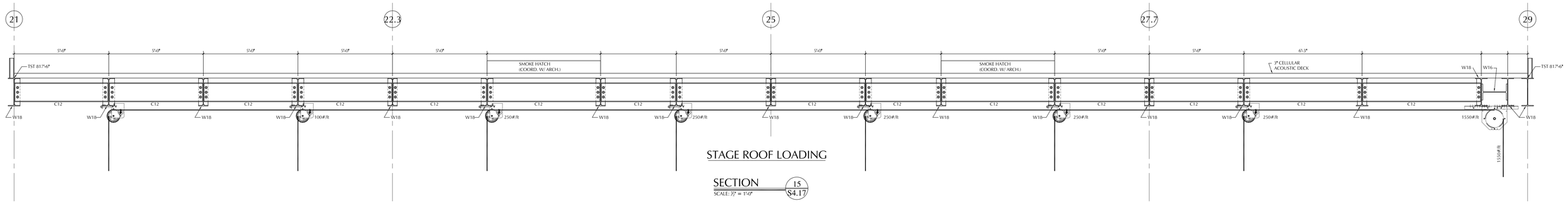
REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

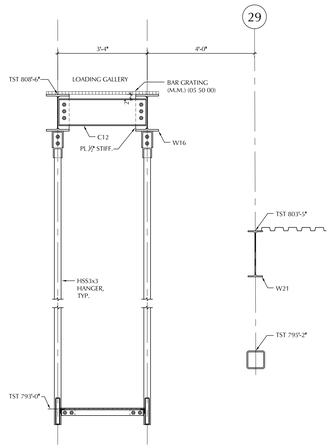
DWN. BY:	CJT	JOB NO:	#1611
CKD. BY:	JDM	SCALE:	As Noted
DATE:	January 31, 2019		

S4.16



STAGE ROOF LOADING

SECTION 15 / S4.17
SCALE: 1/2" = 1'-0"



SECTION 9 / S4.17
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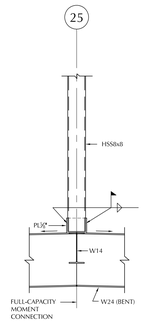
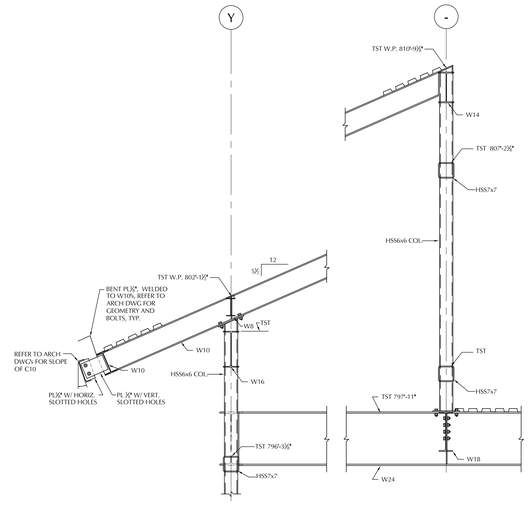


SECTION 10 / S4.17
SCALE: 1/2" = 1'-0"



SECTION 12 / S4.17
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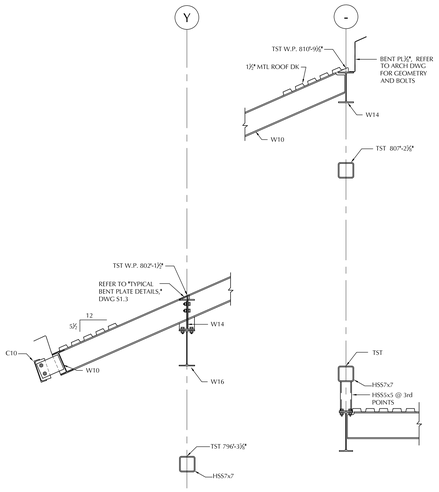

SECTION 13 / S4.17
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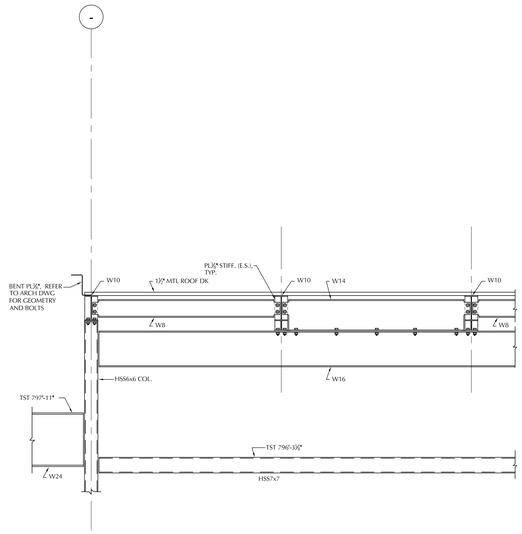

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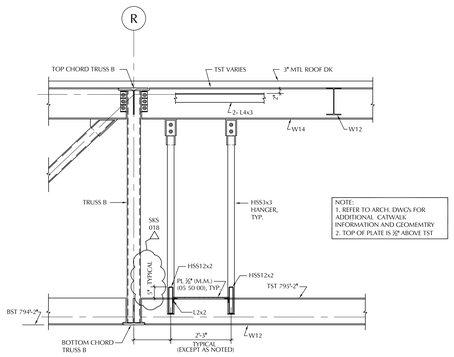

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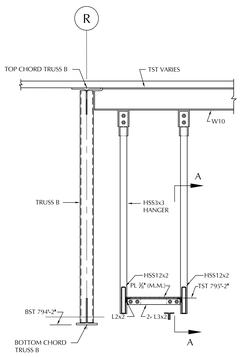

SECTION 7 / S4.17
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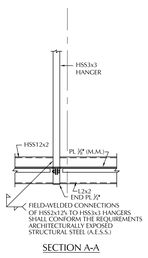
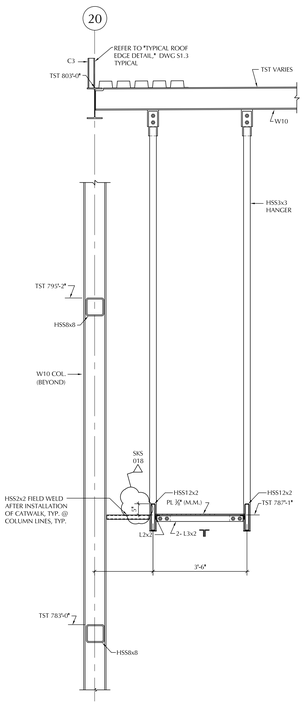


SECTION A-A



SECTION 3 / S4.17
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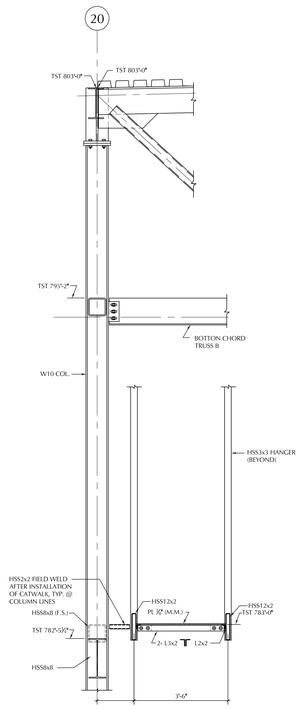

SECTION 4 / S4.17
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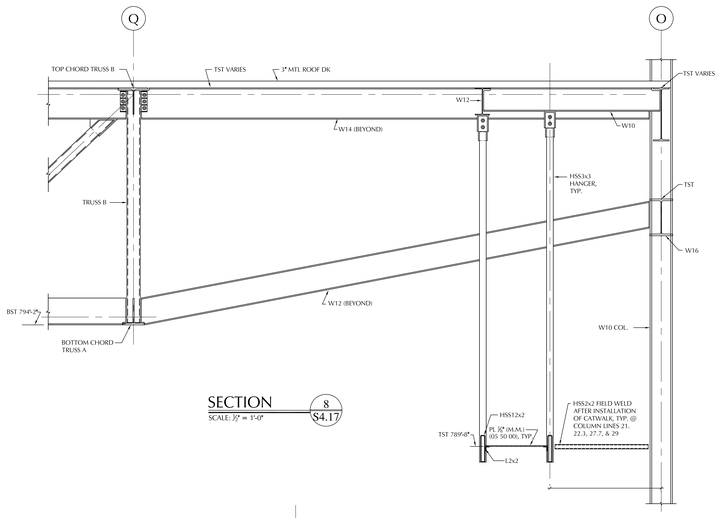

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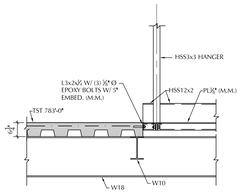

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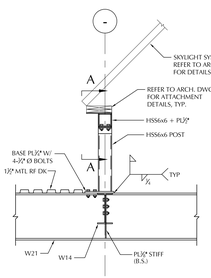
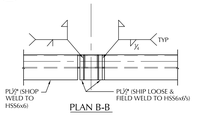
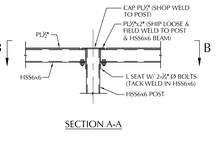


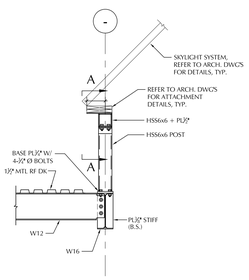
SECTION 1 / S4.17
SCALE: 1/2" = 1'-0"



PLAN B-B



SECTION A-A



SECTION 2 / S4.17
SCALE: 1/2" = 1'-0"

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170 Apricot Street, Worcester, MA 01603

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Sections

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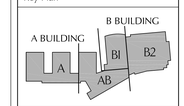


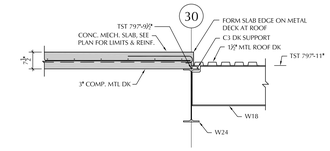
REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY:	CJT	JOB NO:	#1611
CKD. BY:	JDM	SCALE:	As Noted
DATE:	January 31, 2019		

S4.17



SECTION 17 / S4.18
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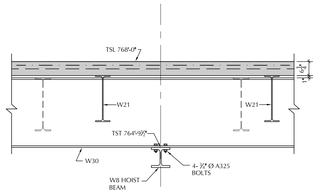

SECTION 18 / S4.18
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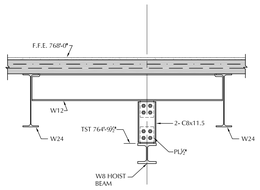

SECTION 19 / S4.18
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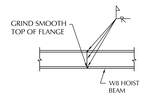
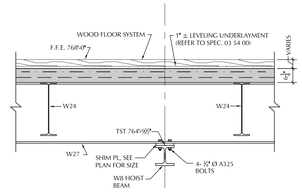
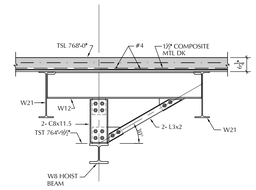


TYPICAL HOIST BEAM SPLICE
LOCATE AT QUARTER-SPAN BETWEEN SUPPORTS



SECTION 20 / S4.18
SCALE: ½" = 1'-0"



SECTION 21 / S4.18
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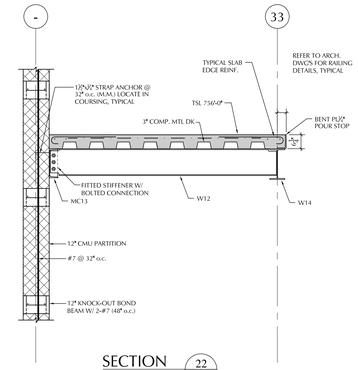

SECTION 22 / S4.18
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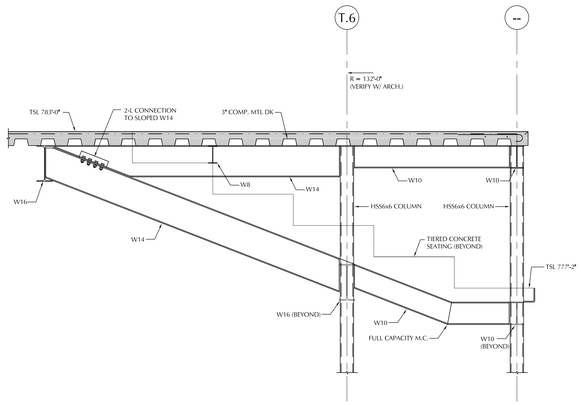

SECTION 12 / S4.18
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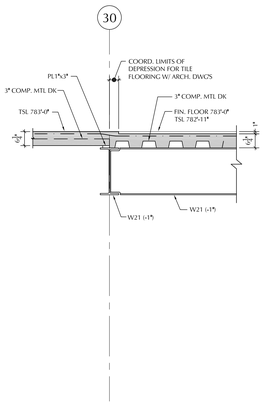

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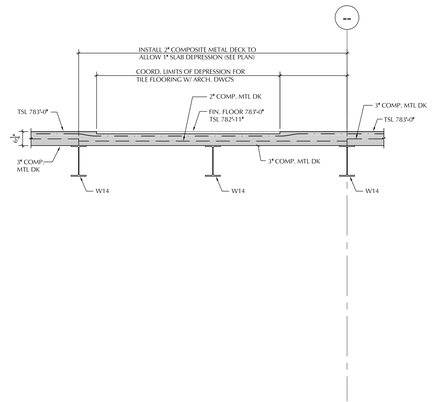

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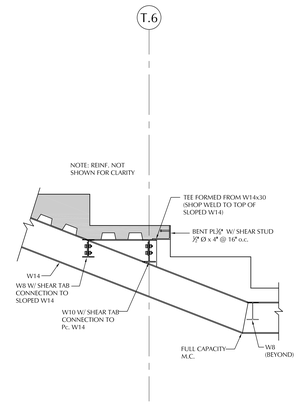

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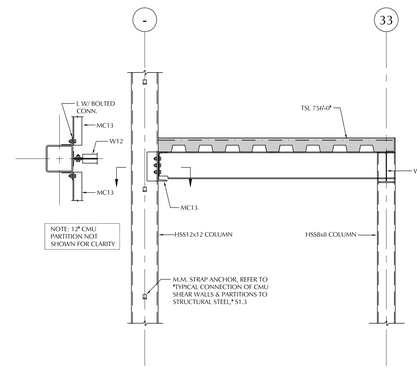

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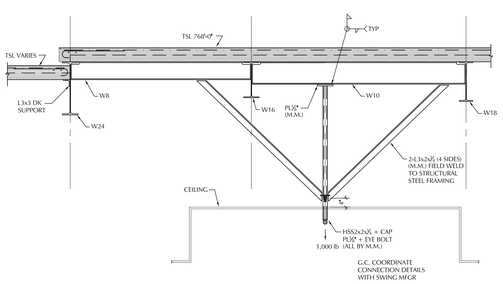
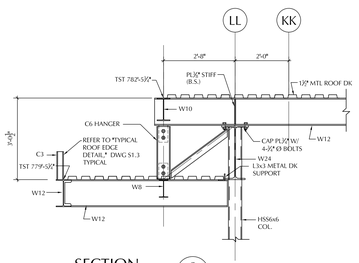


SECTION 7 / S4.18
SCALE: ½" = 1'-0"



SECTION 8 / S4.18
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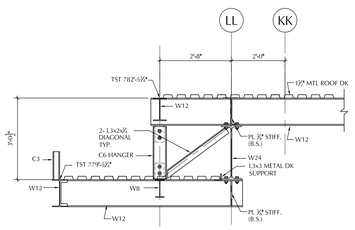

SECTION 9 / S4.18
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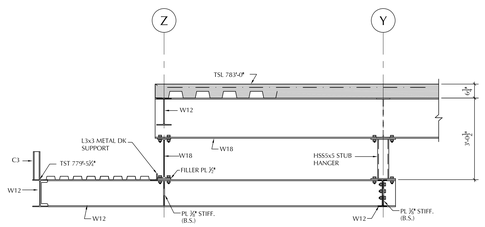

SECTION 10 / S4.18
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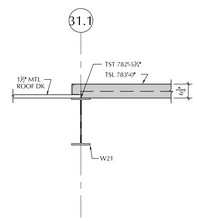

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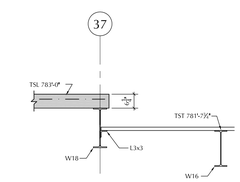

SECTION 1 / S4.18
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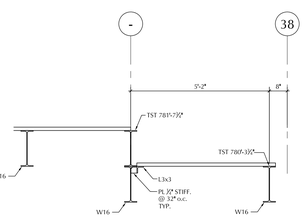

SECTION 2 / S4.18
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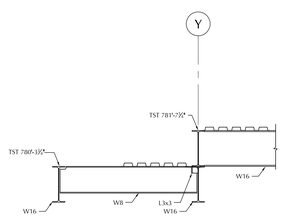

SECTION 3 / S4.18
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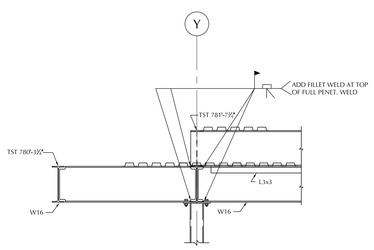

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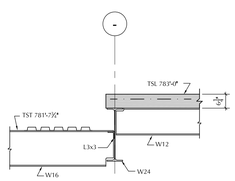

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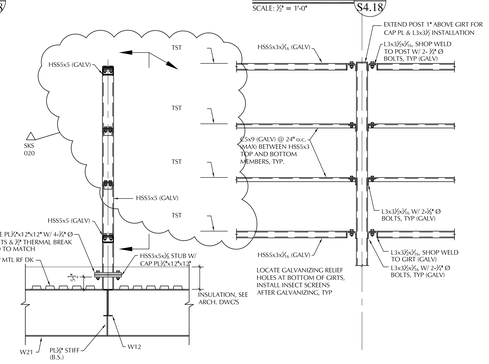

SECTION 6 / S4.18
SCALE: ½" = 1'-0"

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

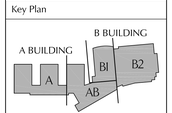
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



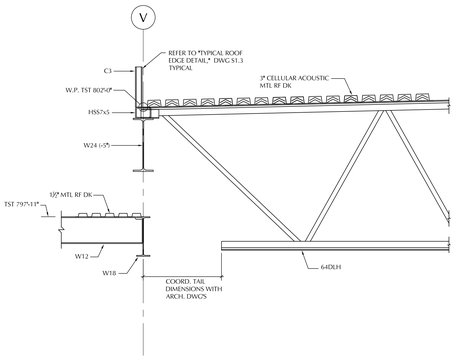
REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY: CJT	JOB NO: #1611
CKD. BY: JDM	SCALE: As Noted
DATE: January 31, 2019	

S4.18



SECTION 11 S4.19
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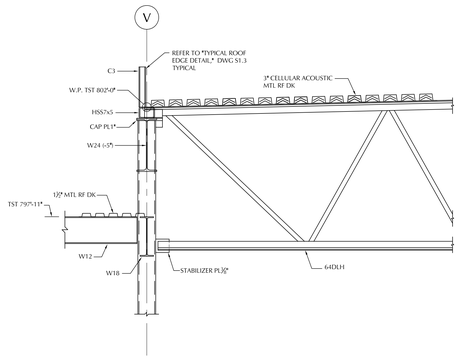

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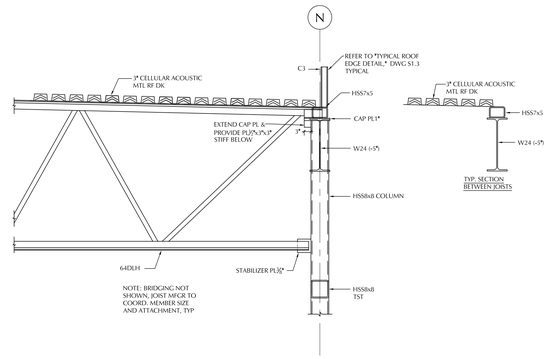

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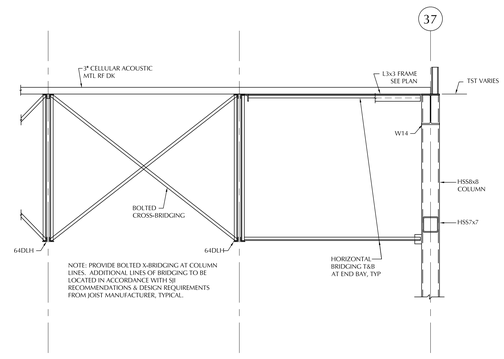

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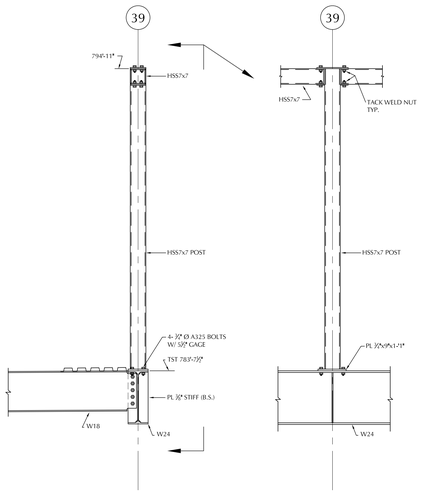

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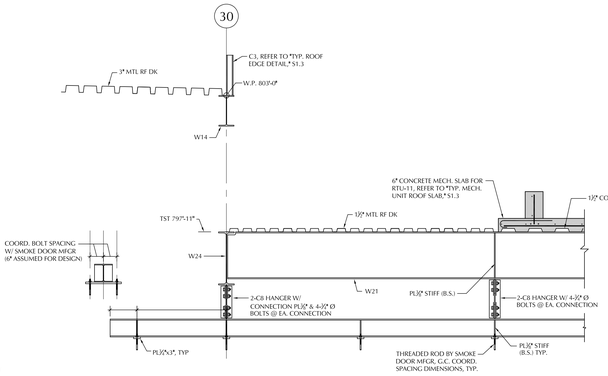

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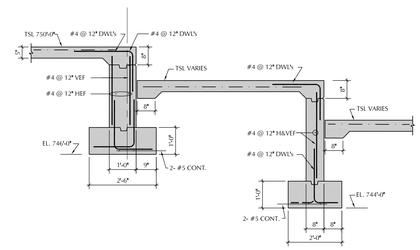

SECTION 9 S4.19
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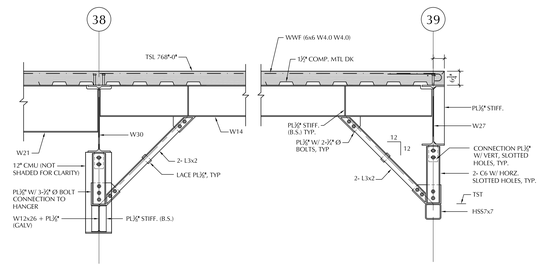

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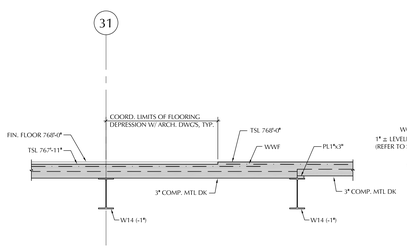

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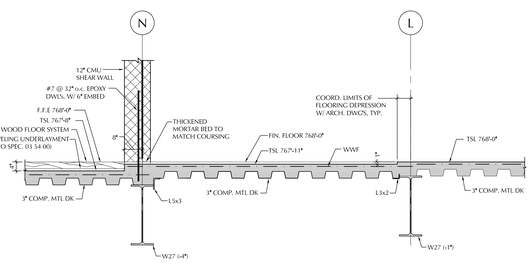

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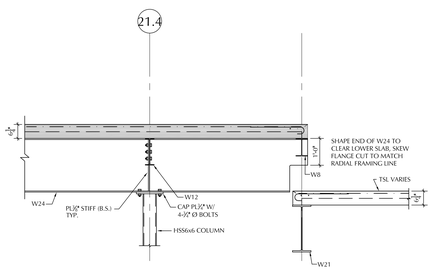

SECTION 1 S4.19
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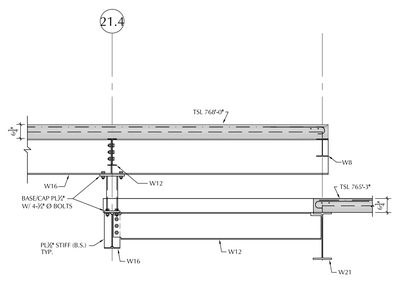

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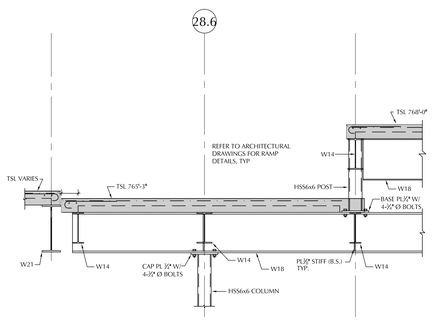

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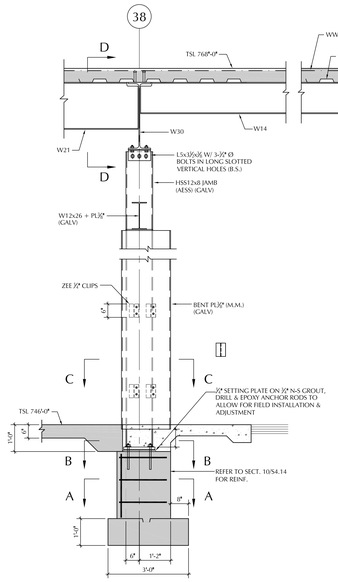

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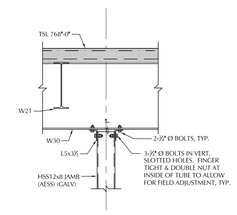
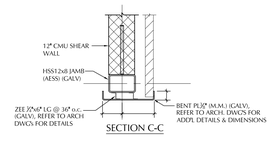
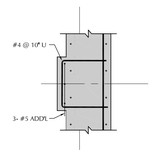


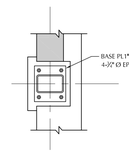
SECTION D-D



SECTION C-C



SECTION A-A



SECTION B-B

LAMOUREUX PAGANO ASSOCIATES, ARCHITECTS
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MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

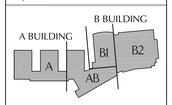
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

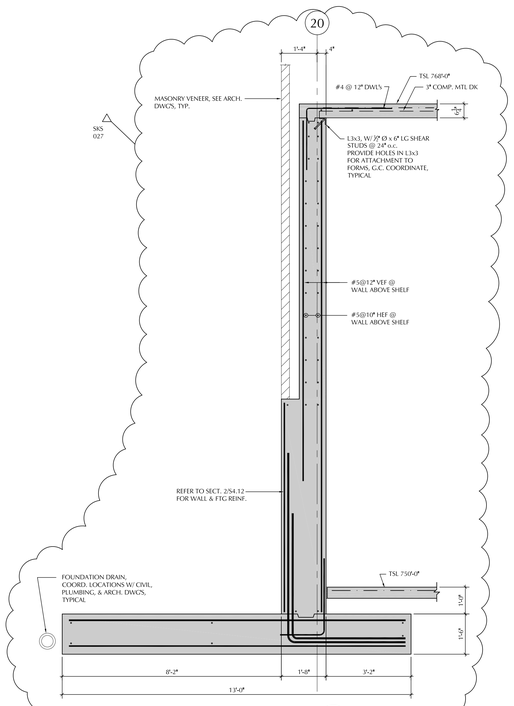
FILE:

DWN. BY: CJT | JOB NO: #1611

CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S4.19



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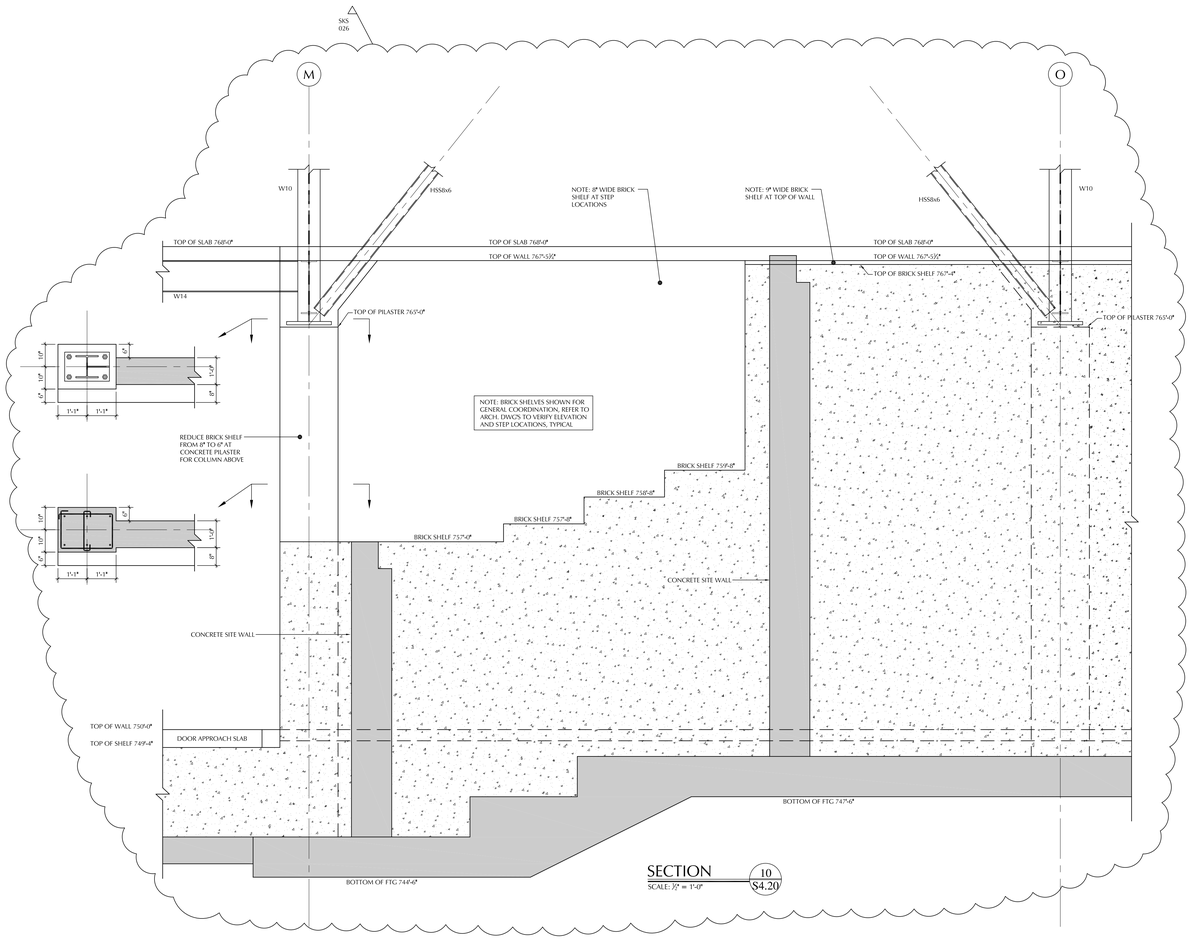

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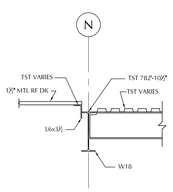

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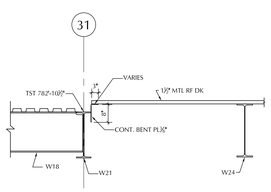

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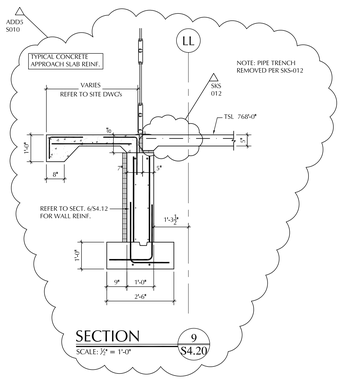

SECTION 9 / S4.20
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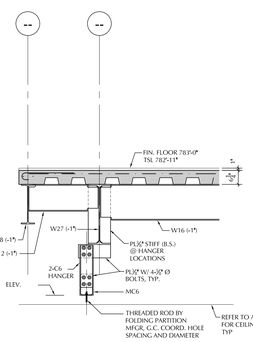

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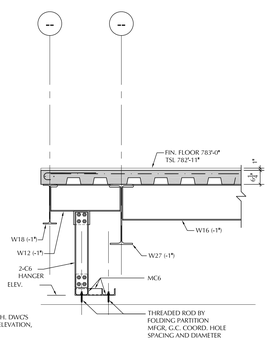

SECTION 2 / S4.20
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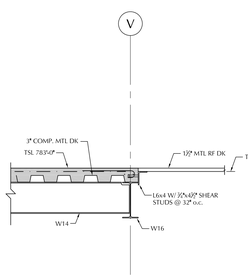

SECTION 3 / S4.20
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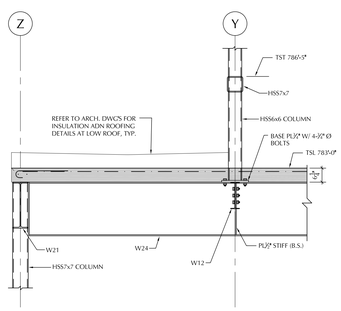

SECTION 4 / S4.20
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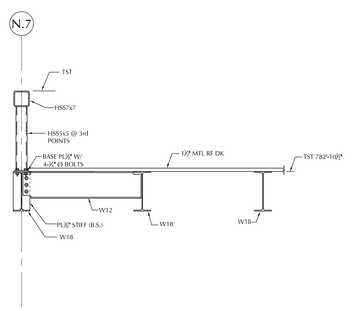
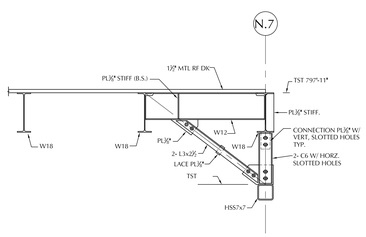


SECTION 5 / S4.20
SCALE: 1/2" = 1'-0"



SECTION 6 / S4.20
SCALE: 1/2" = 1'-0"

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

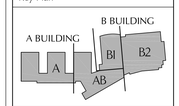
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



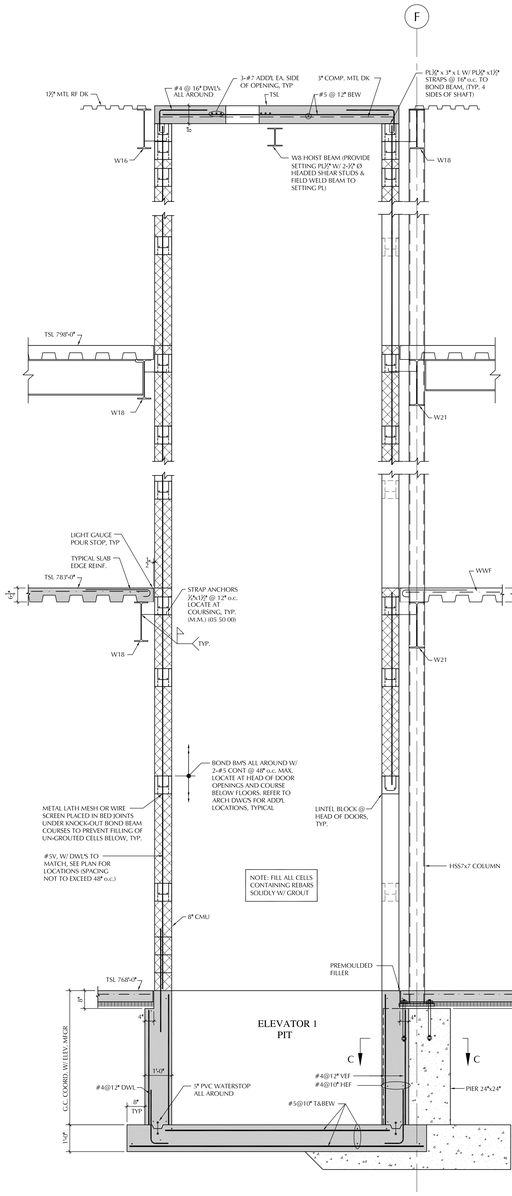
REVISIONS

No.	Description	Date
6	ESBP # 2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum #5	12/27/18

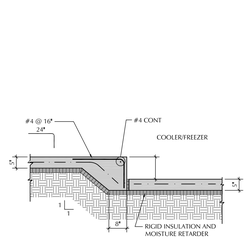
FILE:

DWN. BY: CJT | JOB NO: #1611
CKD. BY: JDM | SCALE: As Noted
DATE: January 31, 2019

S4.20



SECTION 7 (S4.21)
SCALE: ½" = 1'-0"



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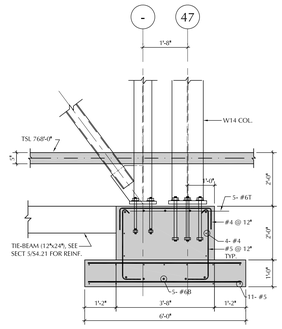

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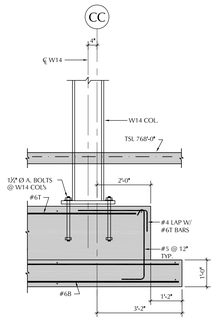

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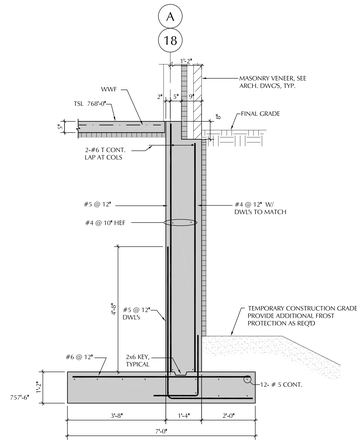

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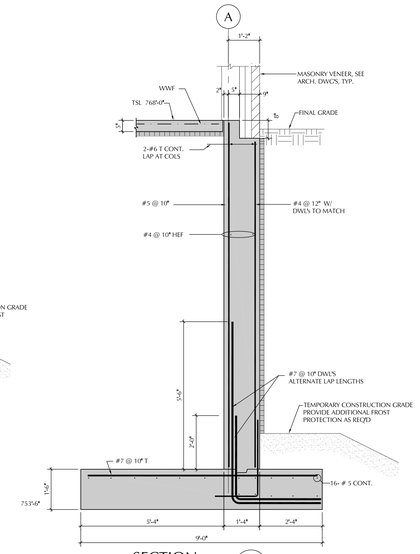

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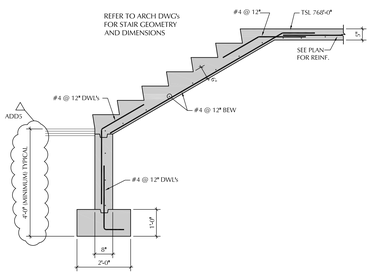

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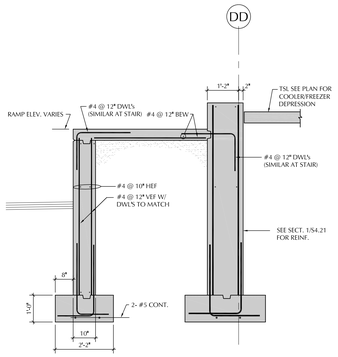

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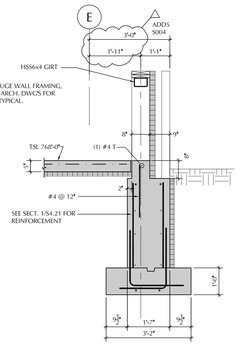

SECTION 14 (S4.21)
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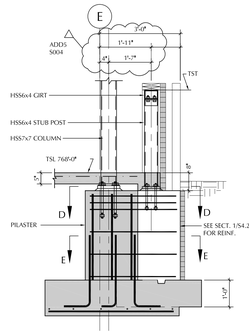

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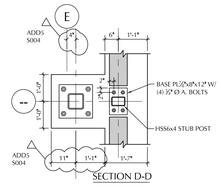

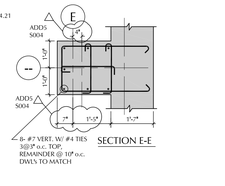

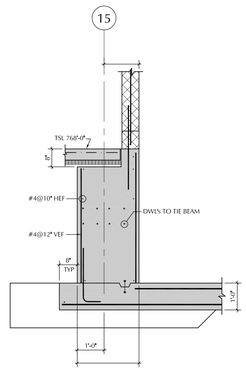

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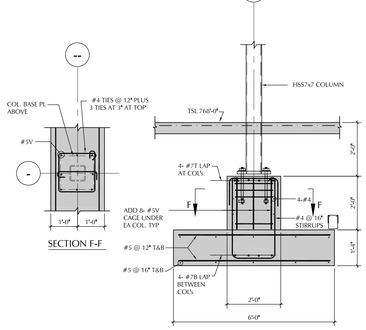

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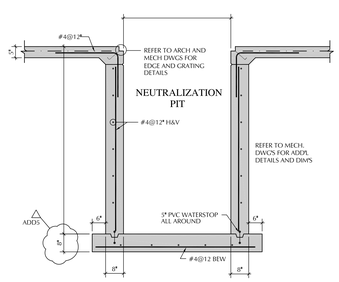

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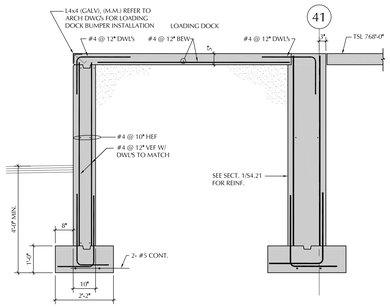

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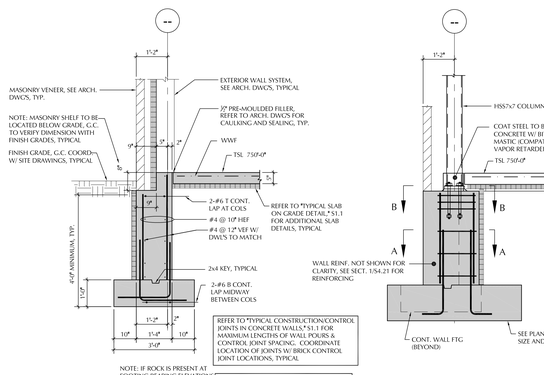

SECTION 1 (S4.21)
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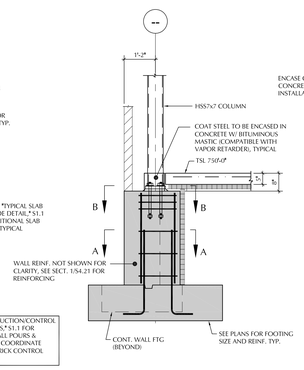

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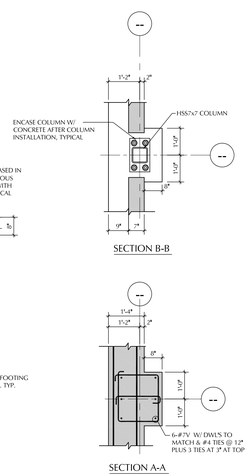

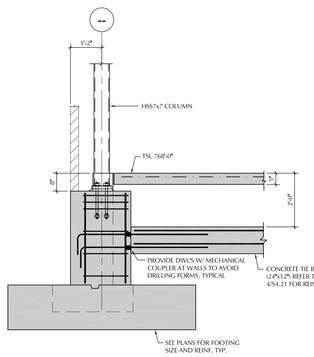

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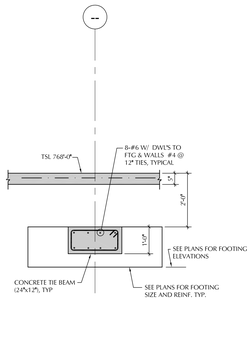

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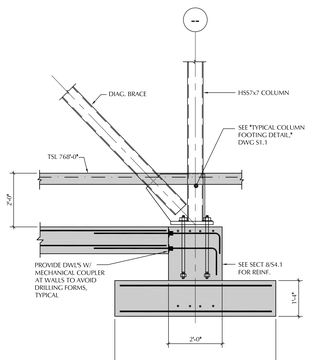

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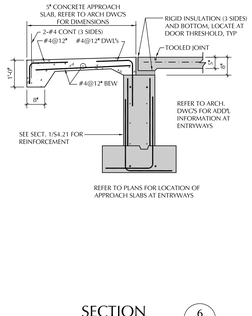

SECTION 6 (S4.21)
SCALE: ½" = 1'-0"

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

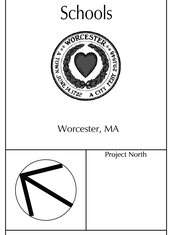
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

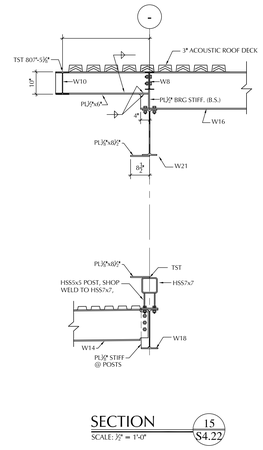
FILE:

DWN. BY: CJT | JOB NO: #1611

CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S4.21



SECTION 15 S4.22
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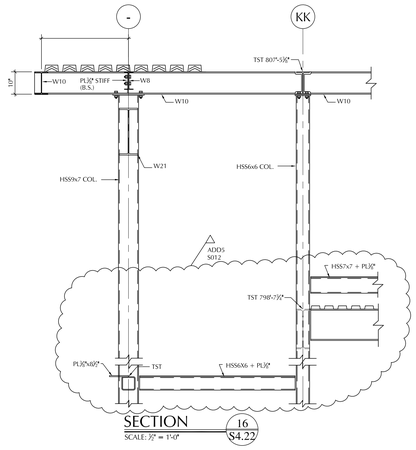

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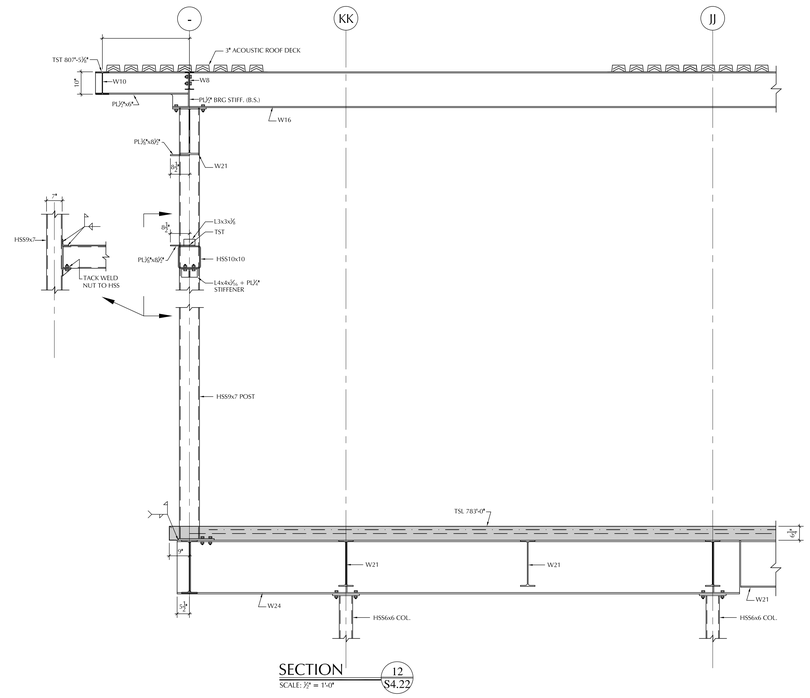

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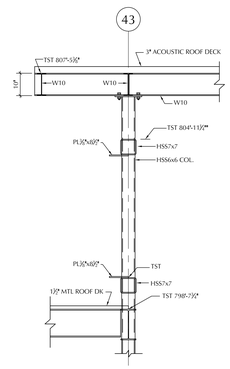

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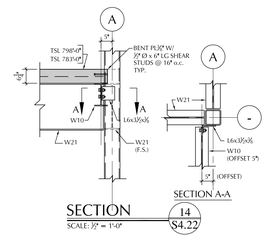

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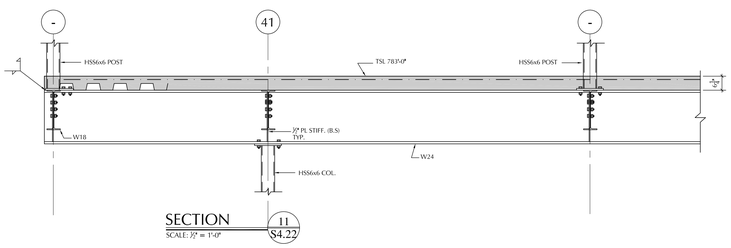

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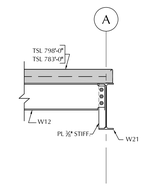

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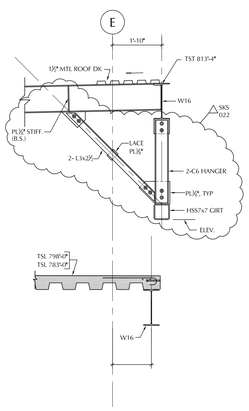

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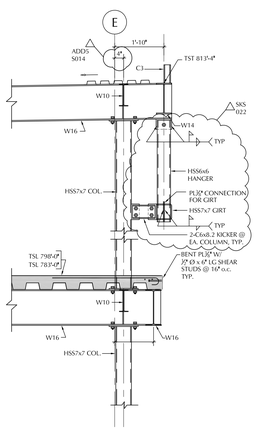

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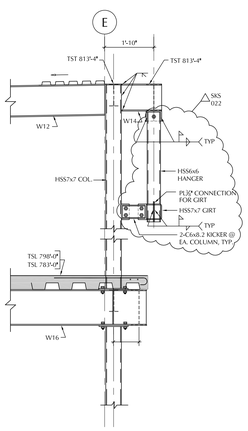

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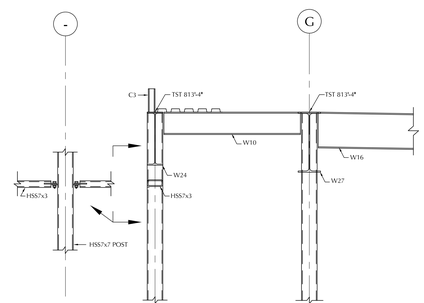

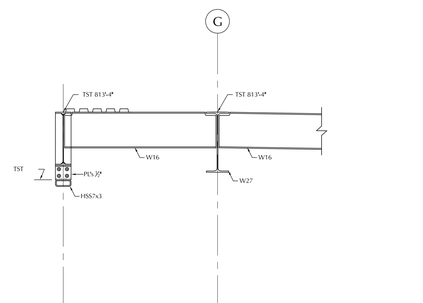

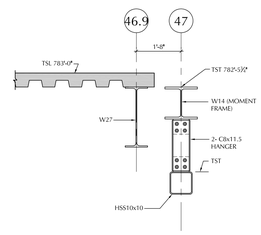

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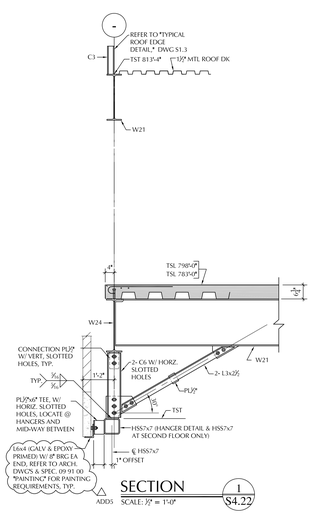

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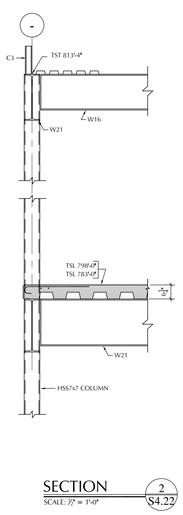

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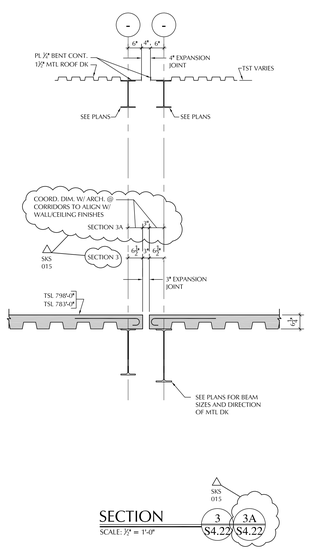
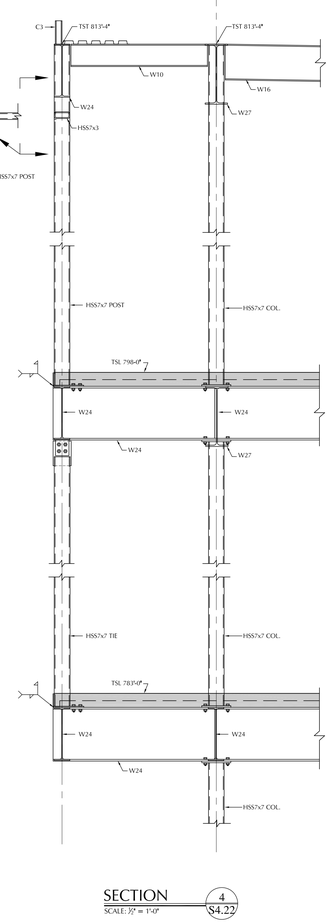


SECTION 3 S4.22 SECTION 3A S4.22
SCALE: ½" = 1'-0"



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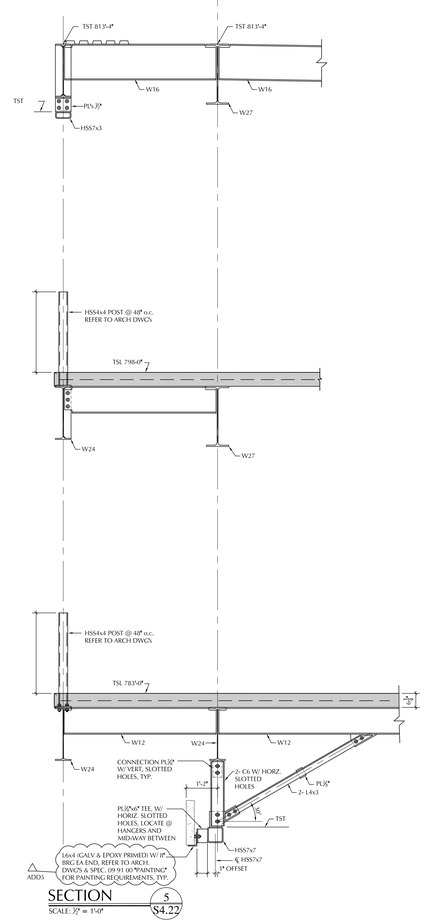

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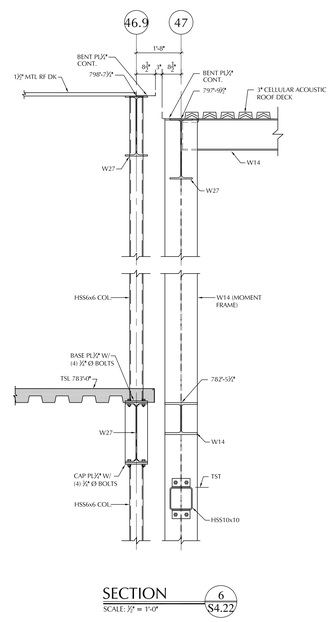

SECTION 6 S4.22
SCALE: ½" = 1'-0"

LAMOUREUX PAGANO ASSOCIATES, ARCHITECTS
108 GROVE STREET SUITE 300
WORCESTER, MASSACHUSETTS 01605

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CONSULTANT

BOLTON & DiMARTINO, INC.
CONSULTING STRUCTURAL ENGINEERS
100 GROVE STREET, WORCESTER, MA
P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

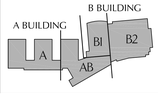
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

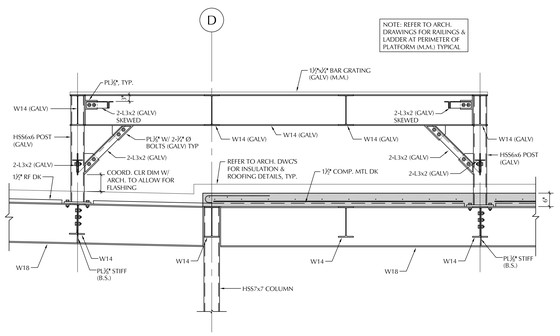
FILE:

DWN. BY: CJT | JOB NO: #1611

CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S4.22



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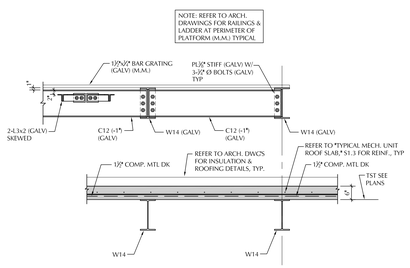

SECTION 12 S4.23
SCALE: ½" = 1'-0"

SECTION 13 S4.23
SCALE: ½" = 1'-0"

SECTION 14 S4.23
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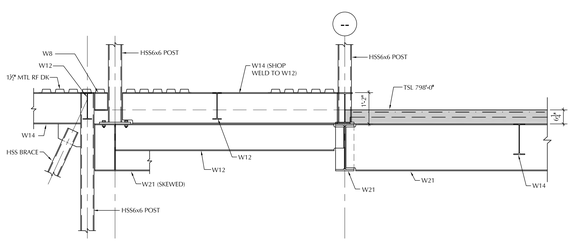

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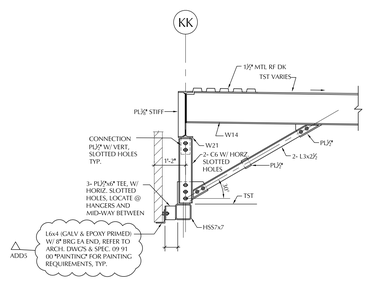

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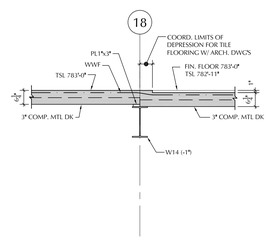

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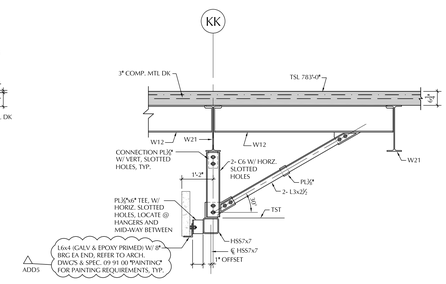

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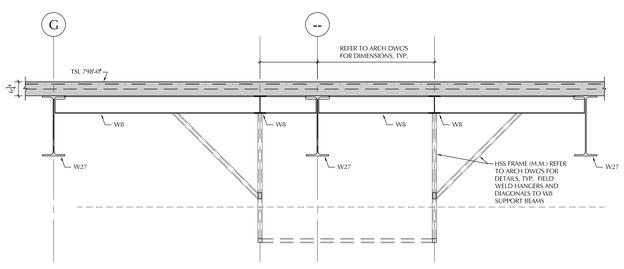
SCALE: ½" = 1'-0"

SECTION 10 S4.23
SCALE: ½" = 1'-0"



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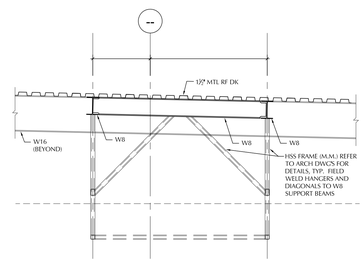

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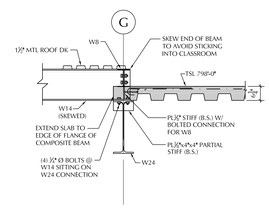

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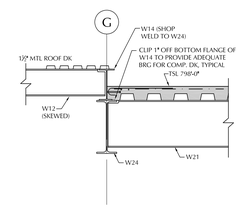

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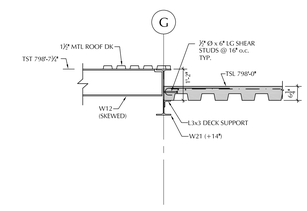

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SCALE: ½" = 1'-0"

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PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan

A BUILDING
B BUILDING
A
AB
B1
B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

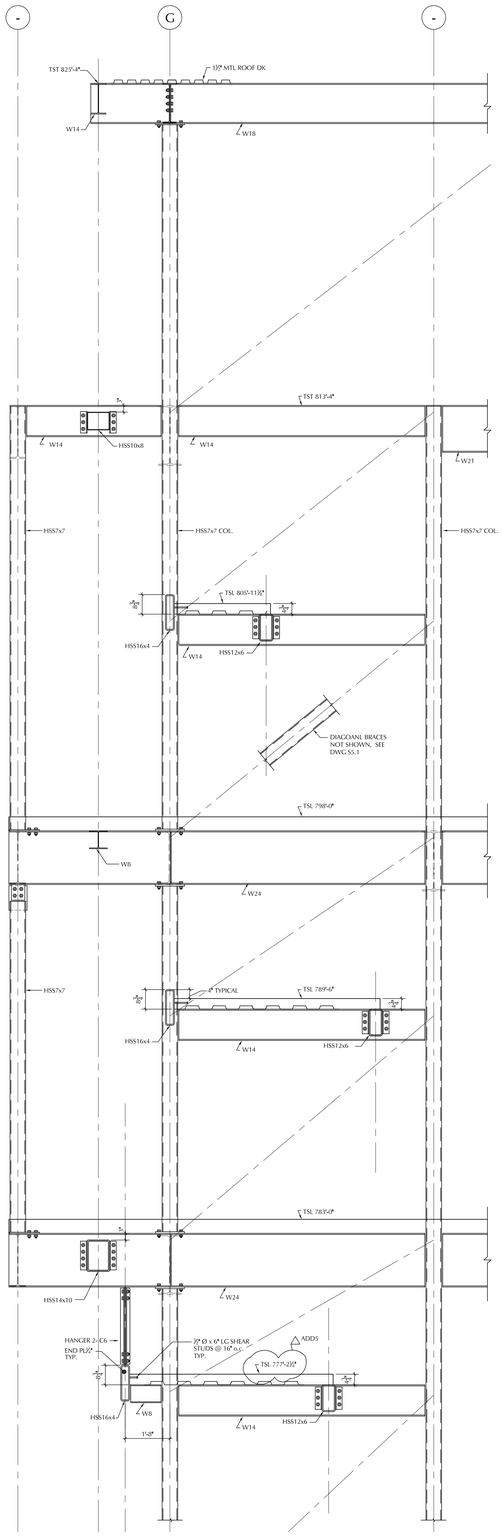
FILE:

DWN. BY: CJT | JOB NO: #1611

CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S4.23



STAIR #A2

SECTION 1 / S4.24
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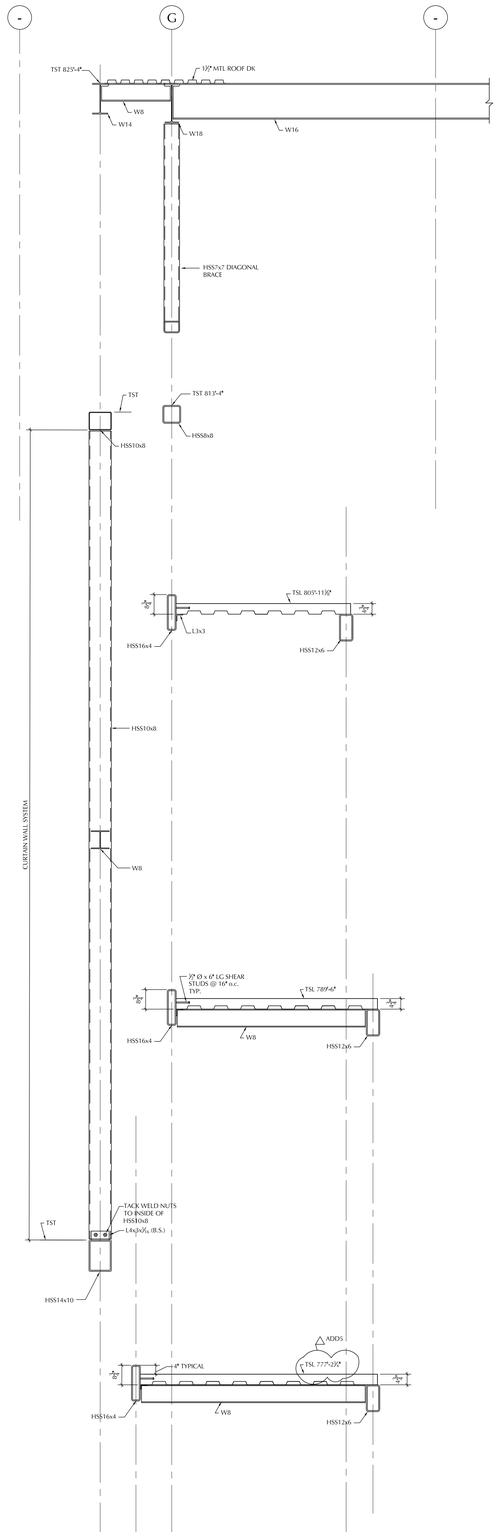

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SECTION 2 / S4.24
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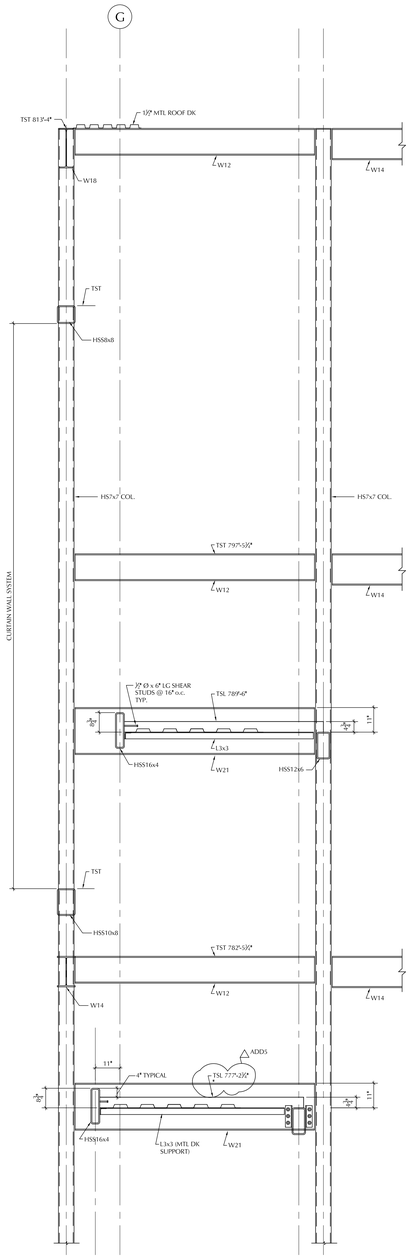

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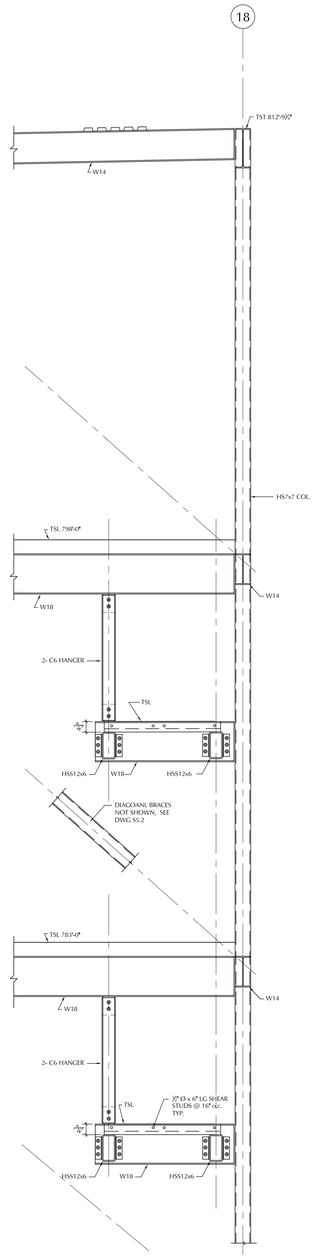

STAIR #A1

SECTION 4 / S4.24
SCALE: ½" = 1'-0"

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PROJECT

FINAL BID PACKAGE

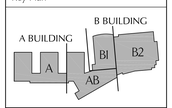
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Sections

Key Plan



REVISIONS

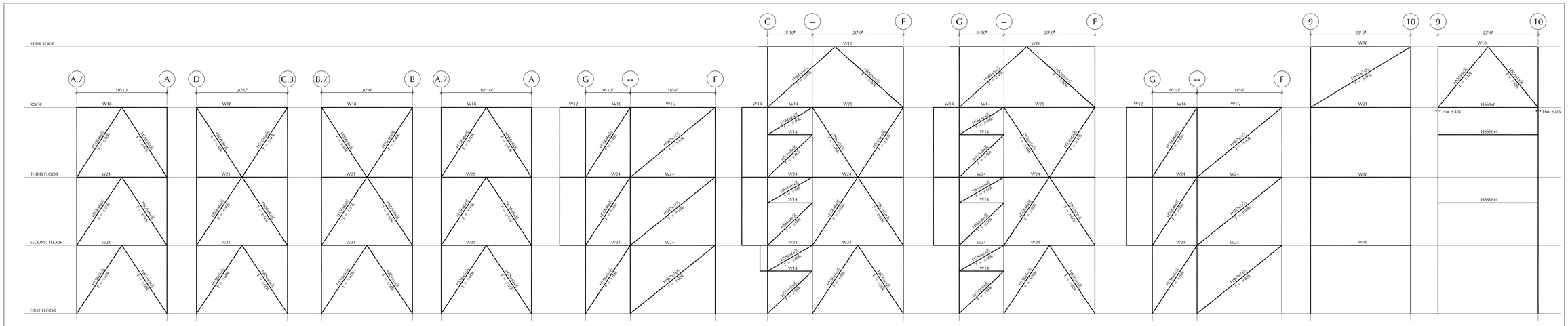
No.	Description	Date
6	ESBP # 2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum #5	12/27/18

FILE:

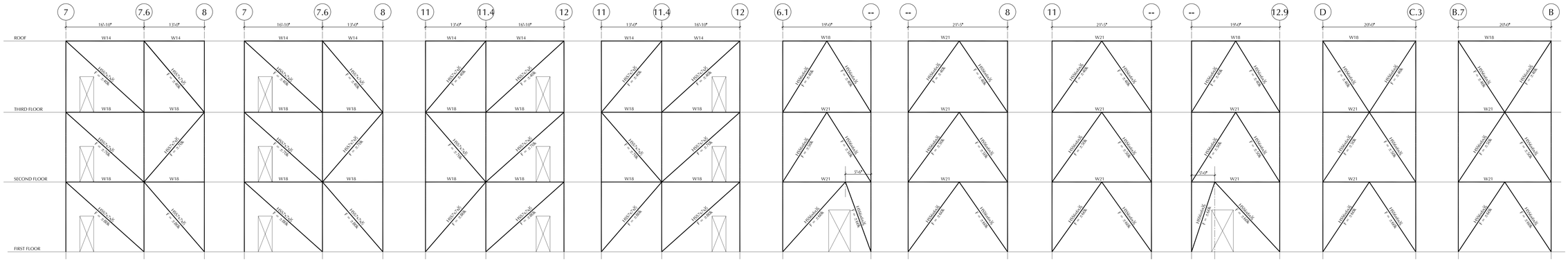
DWN. BY:	CJT	JOB NO:	#1611
CKD. BY:	JDM	SCALE:	As Noted

DATE: January 31, 2019

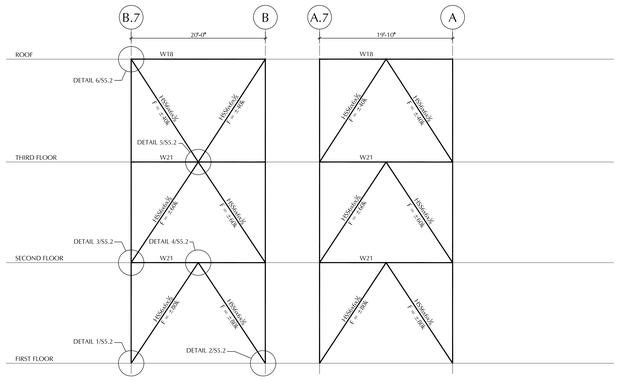
S4.24



BR-CL2-11 LINE 8 | BR-CL2-12 LINE 11 | BR-CL2-13 LINE 11 | BR-CL2-14 LINE 11 | BR-CL2-15 LINE 5.7 | BR-CL2-16 LINE 9 | BR-CL2-17 LINE 10 | BR-CL2-18 LINE 13.3 | BR-CL2-19 LINE F | BR-CL2-20 LINE G



BR-CL2-1 LINE B | BR-CL2-2 LINE D | BR-CL2-3 LINE B | BR-CL2-4 LINE D | BR-CL2-5 LINE F | BR-CL2-6 LINE F | BR-CL2-7 LINE F | BR-CL2-8 LINE F | BR-CL2-9 LINE 8 | BR-CL2-10 LINE 8

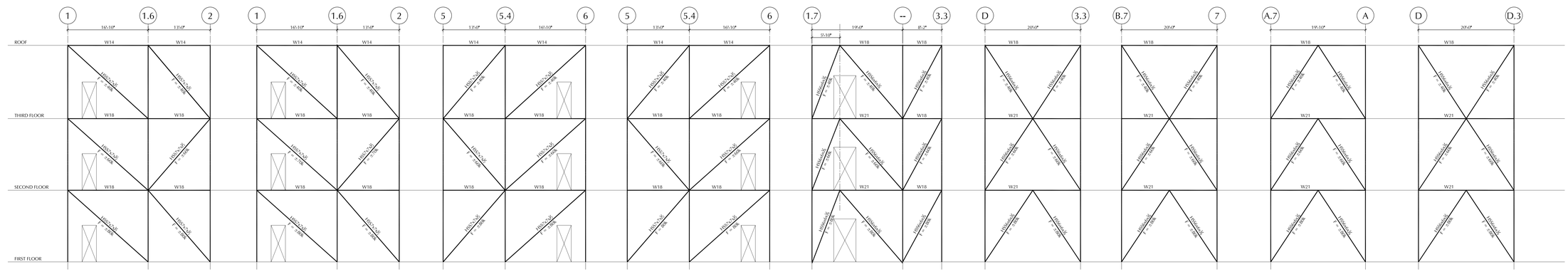


BR-CL1-10 LINE 5 | BR-CL1-11 LINE 5

BRACED FRAME NOTES:

1. REFER TO S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. REFER TO PLANS AND ARCH. DWGS FOR TOP OF STEEL ELEVATIONS.
3. IF = ±100K) INDICATES THE DIAGONAL BRACE AXIAL FORCE TO BE USED FOR BRACE JOINT DESIGN. (+ = TENSION; - = COMPRESSION)
4. ←→ H = ±40k INDICATES THE HORIZONTAL THRU FORCE TO BE USED FOR BEAM/COLUMN CONNECTION DESIGN. THESE FORCES ARE IN ADDITION TO THE VERTICAL REACTIONS, R, AND THE DIAGONAL BRACE FORCE, F.
5. REFER TO "MINIMUM REQUIREMENTS FOR BEAM CONNECTIONS," S1.2 FOR VERTICAL BEAM REACTION, R, TO BE USED FOR CONNECTION DESIGN.
6. BRACED JOINT CONNECTION DESIGN SHALL ACCOUNT FOR THE FORCES F, H, AND R ACTING SIMULTANEOUSLY. THESE FORCES ARE ALLOWABLE STRESS LEVEL TO BE USED WITH AISC PROCEDURES.
7. THE DIAGONAL BRACE FORCE, F, MUST BE CARRIED THRU THE JOINT (I.E. THE HORIZONTAL COMPONENT TRANSFERRED TO THE BEAM OF THE BRACED BAY AND THE VERTICAL COMPONENT TRANSFERRED TO THE COLUMN). IN ADDITION, THE VERTICAL REACTION, R, SHALL BE TRANSFERRED TO THE COLUMN AND THE HORIZONTAL FORCE, H, SHALL BE TRANSFERRED THRU THE COLUMN. ALL CONNECTION DESIGN FORCES SHALL BE IN EQUILIBRIUM ABOUT THE JOINT WORK POINT.
8. REPRESENTATIVE CONNECTION DESIGNS AND CALCULATIONS FOR ALL TYPICAL BRACED FRAME JOINT DETAILS SHALL BE SUBMITTED FOR REVIEW PRIOR TO SUBMITTAL OF PRICE SHOP DRAWINGS.
9. BRACED JOINT CONNECTIONS THAT ARE NOT WELDED SHALL HAVE SLIP CRITICAL BOLTS.
10. AESS: BRACE MEMBERS AND CONNECTIONS TO CONFORM TO AESS REQUIREMENTS & BE PAINTED WITH PRIMER COMPATIBLE WITH INTUMESCENT FIREPROOFING.

BRACING KEY PLAN



BR-CL1-1 LINE B | BR-CL1-2 LINE D | BR-CL1-3 LINE B | BR-CL1-4 LINE D | BR-CL1-5 LINE F | BR-CL1-6 LINE 2 | BR-CL1-7 LINE 2 | BR-CL1-8 LINE 2 | BR-CL1-9 LINE 5

DIAGONAL BRACING ELEVATIONS

NOTE:
1. BRACING ELEVATIONS ARE INTENDED AS SCHEMATIC REPRESENTATION ONLY. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL INFORMATION.
2. FORCES SHOWN ON BRACING ELEVATIONS ARE FOR DESIGN OF CONNECTIONS (ALLOWABLE STRESS DESIGN).

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FINAL BID PACKAGE

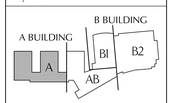
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Diagonal Bracing Elevations Section A

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - T1	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

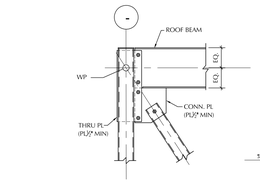
FILE:

DWN. BY: JDM | JOB NO: #1611

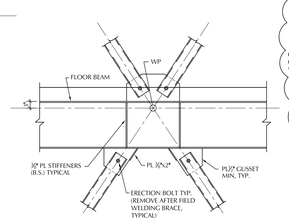
CKD. BY: CJT | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

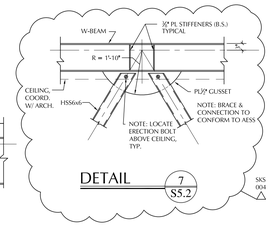
S5.1



DETAIL 6 / S5.2

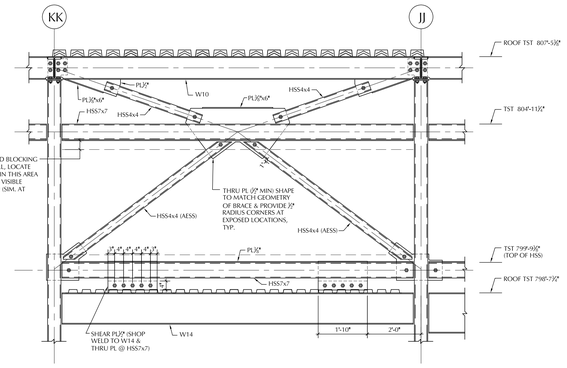


DETAIL 5 / S5.2

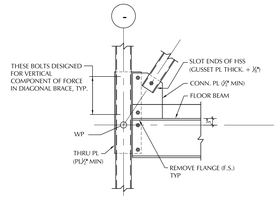


DETAIL 7 / S5.2

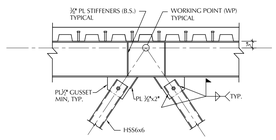
SKS 004



DETAIL 7 / S5.2

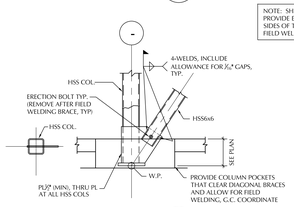


DETAIL 3 / S5.2

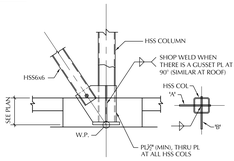


DETAIL 4 / S5.2

NOTE: SHIM SLOTTED TUBES TO PROVIDE EQUAL GAPS ON BOTH SIDES OF THE GUSSET PL BEFORE FIELD WELDING

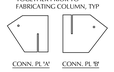


DETAIL 1 / S5.2



DETAIL 2 / S5.2

SLOT BRACE CONNECTION PLATES AND SHOP WELD TOGETHER PRIOR TO FABRICATING COLUMN, TYP



BRACED FRAME NOTES:

1. REFER TO S1.1, S1.2 & S7.1 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. REFER TO PLANS AND ARCH. DWGS FOR TOP OF STEEL ELEVATIONS.
3. (F = ±100k) INDICATES THE DIAGONAL BRACE AXIAL FORCE TO BE USED FOR BRACE JOINT DESIGN. (+ = TENSION, - = COMPRESSION)
4. ➡⬅ (H = ±40k INDICATES THE HORIZONTAL THRU FORCE TO BE USED FOR BEAM/COLUMN CONNECTION DESIGN. THESE FORCES ARE IN ADDITION TO THE VERTICAL REACTIONS, R, AND THE DIAGONAL BRACE FORCE, F.
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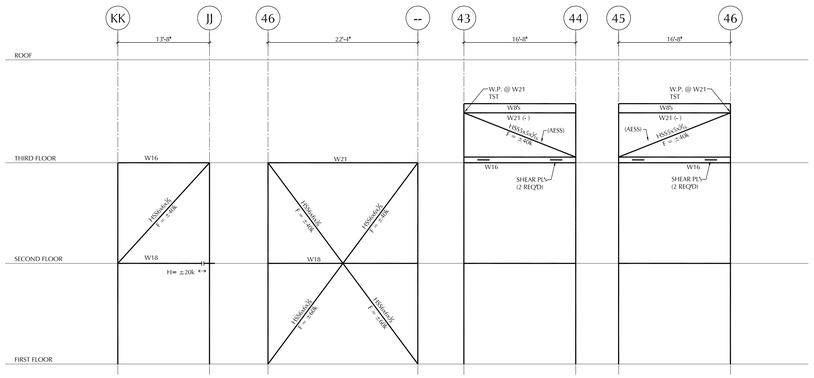
10. AESS: BRACE MEMBERS AND CONNECTIONS TO CONFORM TO AESS REQUIREMENTS & BE PAINTED WITH PRIMER COMPATIBLE WITH INTUMESCENT FIREPROOFING.

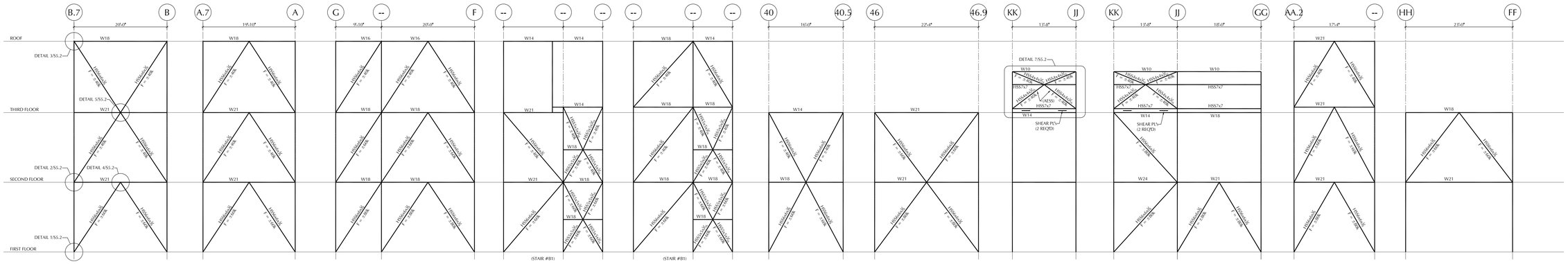


BR-CL3-21
LINE 46.9

BR-CL3-22
LINE CC

BR-CL3-23
LINE GG

BR-CL3-24
LINE GG



BR-CL3-10
LINE 17

BR-CL3-11
LINE 17

BR-CL3-12
LINE 15

BR-CL3-13
LINE

BR-CL3-14
LINE AA.2

BR-CL3-15
LINE DD

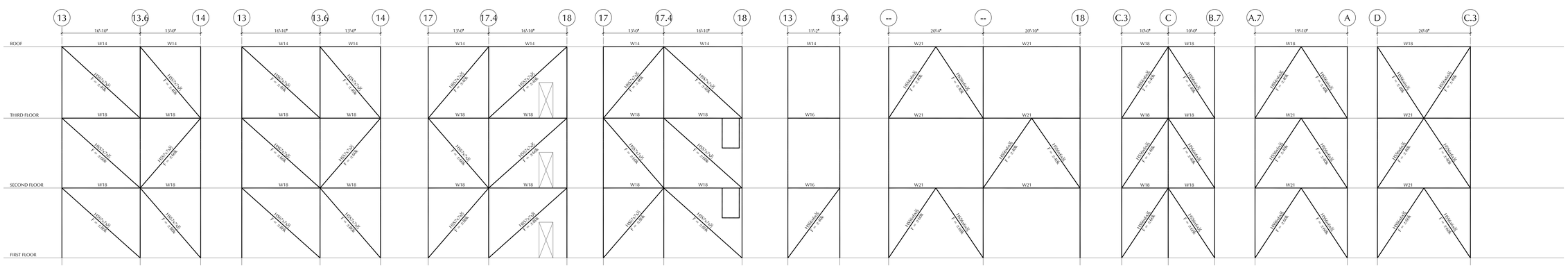
BR-CL3-16
LINE KK

BR-CL3-17
LINE 44

BR-CL3-18
LINE 43

BR-CL3-19
LINE 45

BR-CL3-20
LINE 41



BR-CL3-1
LINE 8

BR-CL3-2
LINE D

BR-CL3-3
LINE 8

BR-CL3-4
LINE D

BR-CL3-5
LINE F

BR-CL3-6
LINE F

BR-CL3-7
LINE 14

BR-CL3-8
LINE 14

BR-CL3-9
LINE 17

DIAGONAL BRACING ELEVATIONS

NOTE:
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2. FORCES SHOWN ON BRACING ELEVATIONS ARE FOR DESIGN OF CONNECTIONS (ALLOWABLE STRESS DESIGN).

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P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

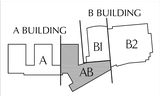
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Diagonal Bracing Elevations and Details Section AB

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

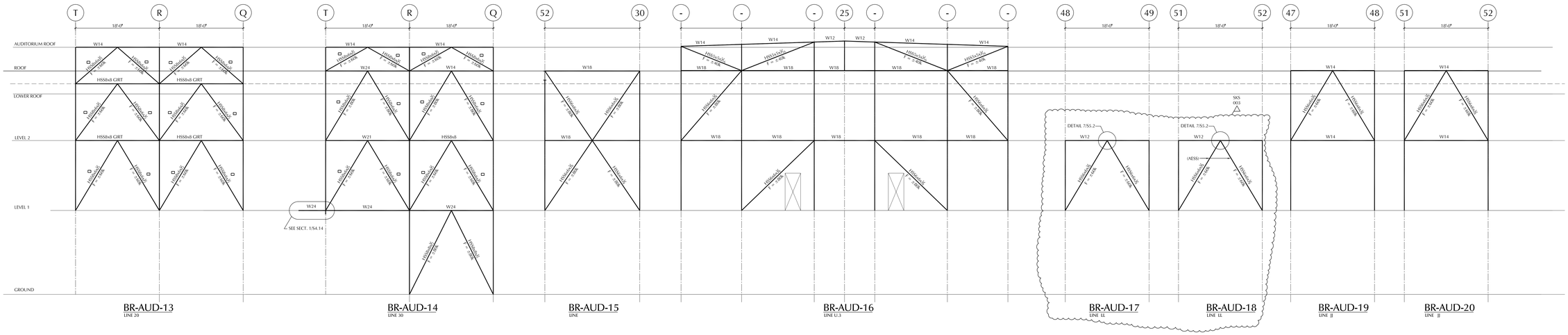
FILE:

DWN. BY: JDM | JOB NO: #1611

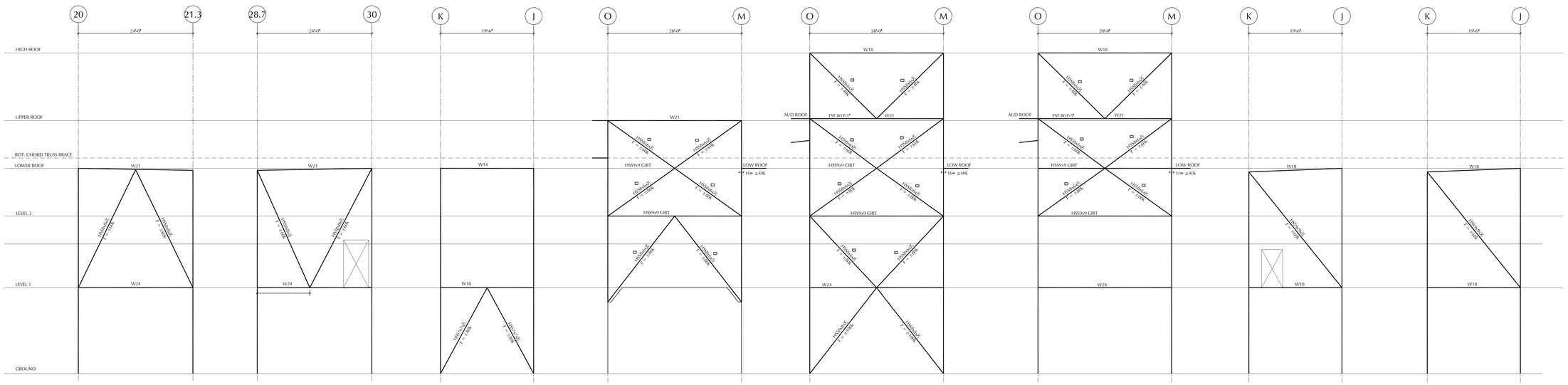
CKD. BY: CJT | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

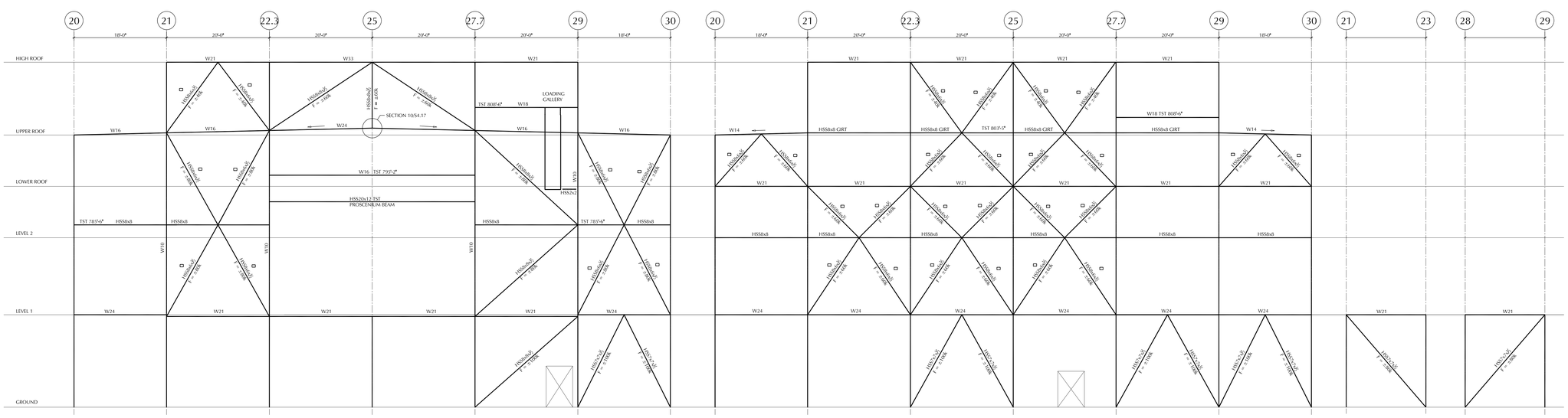
S5.2



BR-AUD-13 LINE 20 | BR-AUD-14 LINE 30 | BR-AUD-15 LINE | BR-AUD-16 LINE U.3 | BR-AUD-17 LINE LL | BR-AUD-18 LINE LL | BR-AUD-19 LINE JJ | BR-AUD-20 LINE JJ



BR-AUD-5 LINE 1.7 | BR-AUD-6 LINE K | BR-AUD-7 LINE 25 | BR-AUD-8 LINE 20 | BR-AUD-9 LINE 29 | BR-AUD-10 LINE 21 | BR-AUD-11 LINE 22 | BR-AUD-12 LINE 28



BR-AUD-1 LINE O | BR-AUD-2 LINE M | BR-AUD-3 LINE H.5 | BR-AUD-4 LINE H.5

DIAGONAL BRACING ELEVATIONS

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BRACED FRAME NOTES:
1. REFER TO S1.1, S1.2 & S1.3 FOR TYPICAL DETAILS AND GENERAL NOTES.
2. REFER TO PLANS AND ARCH. DWGS FOR TOP OF STEEL ELEVATIONS.
3. (F = ±100k) INDICATES THE DIAGONAL BRACE AXIAL FORCE TO BE USED FOR BRACE JOINT DESIGN. (+ = TENSION, - = COMPRESSION)
4. ←→ H = ≥40k INDICATES THE HORIZONTAL THRU FORCE TO BE USED FOR BEAM/COLUMN CONNECTION DESIGN. THESE FORCES ARE IN ADDITION TO THE VERTICAL REACTIONS, R, AND THE DIAGONAL BRACE FORCE, F.
5. REFER TO *MINIMUM REQUIREMENTS FOR BEAM CONNECTIONS,* S1.2 FOR VERTICAL BEAM REACTION, R, TO BE USED FOR CONNECTION DESIGN.
6. BRACED JOINT CONNECTION DESIGN SHALL ACCOUNT FOR THE FORCES F, H, AND R ACTING SIMULTANEOUSLY. THESE FORCES ARE ALLOWABLE STRESS LEVEL TO BE USED WITH AISC PROCEDURES.
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8. REPRESENTATIVE CONNECTION DESIGNS AND CALCULATIONS FOR ALL TYPICAL BRACED FRAME JOINT DETAILS SHALL BE SUBMITTED FOR REVIEW PRIOR TO SUBMITTAL OF PIECE SHOP DRAWINGS.
9. BRACED JOINT CONNECTIONS THAT ARE NOT WELDED SHALL HAVE SLIP CRITICAL BOLTS.
10. AESS- BRACE MEMBERS AND CONNECTIONS TO CONFORM TO AESS REQUIREMENTS & BE PAINTED WITH PRIMER COMPATIBLE WITH INTUMESCENT FIREPROOFING.

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Project North

PROJECT

FINAL BID PACKAGE

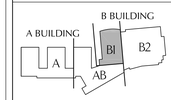
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Diagonal Bracing Elevations Section B1

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY: JDM	JOB NO: #1611
CKD. BY: CJT	SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

S5.3

BRACED FRAME NOTES:

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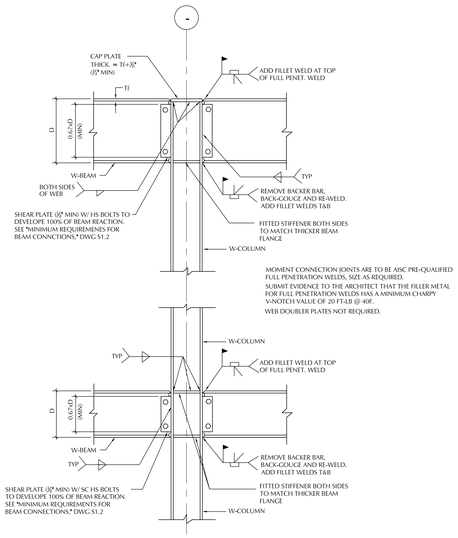
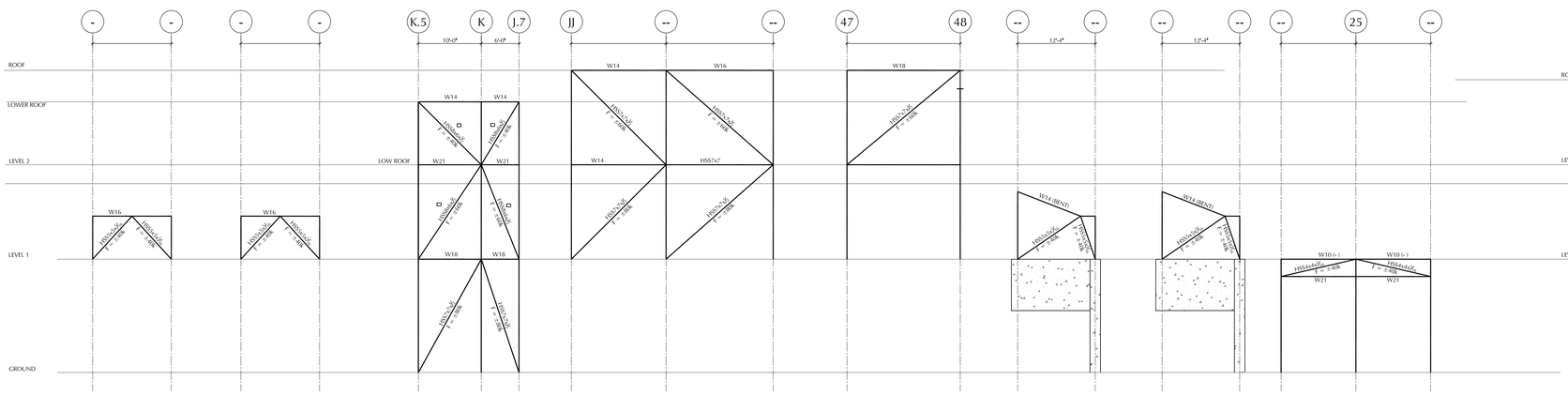
9. BRACED JOINT CONNECTIONS THAT ARE NOT WELDED SHALL HAVE SLIP CRITICAL BOLTS.
10. AESS: BRACE MEMBERS AND CONNECTIONS TO CONFORM TO AESS REQUIREMENTS & BE PAINTED WITH PRIMER COMPATIBLE WITH INTUMESCENT FIREPROOFING.



TYPICAL BEAM TO COLUMN MOMENT CONNECTION DETAILS



BR-AUD-20 LINE

BR-AUD-21 LINE

BR-AUD-22 LINE 30

BR-AUD-23 LINE 33'

BR-AUD-24 LINE

BR-AUD-25 LINE

BR-AUD-26 LINE

BR-AUD-27 LINE

DIAGONAL BRACING ELEVATIONS

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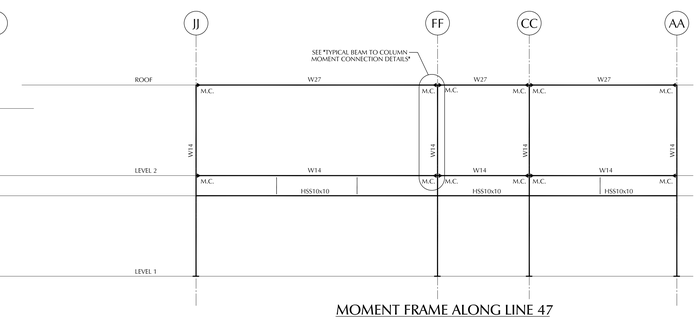

MOMENT FRAME ALONG LINE 47

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PROJECT

FINAL BID PACKAGE

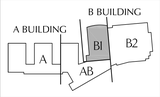
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Diagonal Bracing Elevations and Details Section B1

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

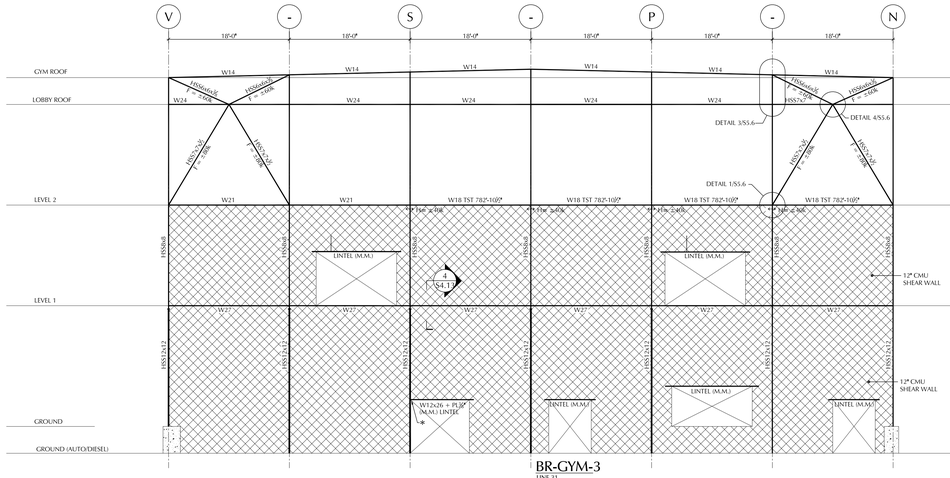
FILE:

DWN. BY: JDM | JOB NO: #1611

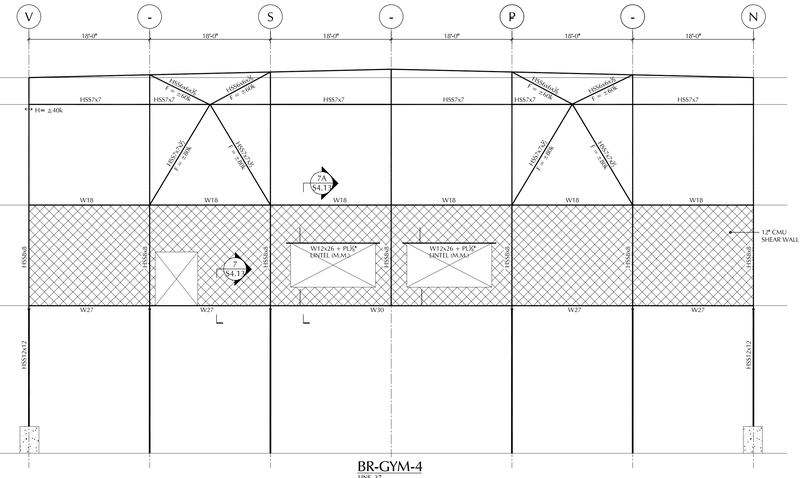
CKD. BY: CJT | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

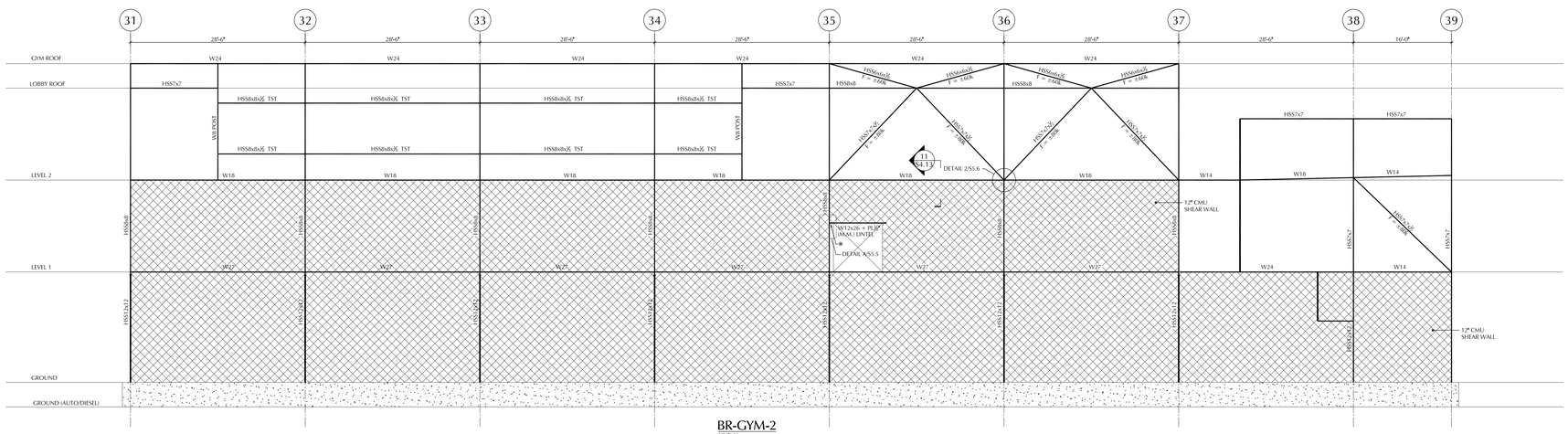
S5.4



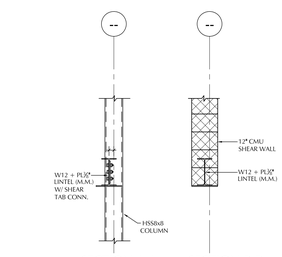
BR-GYM-3
LINE 31



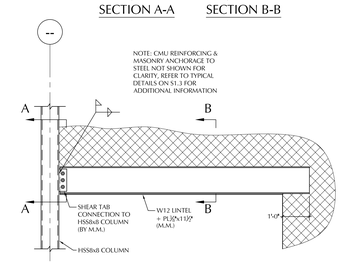
BR-GYM-4
LINE 37



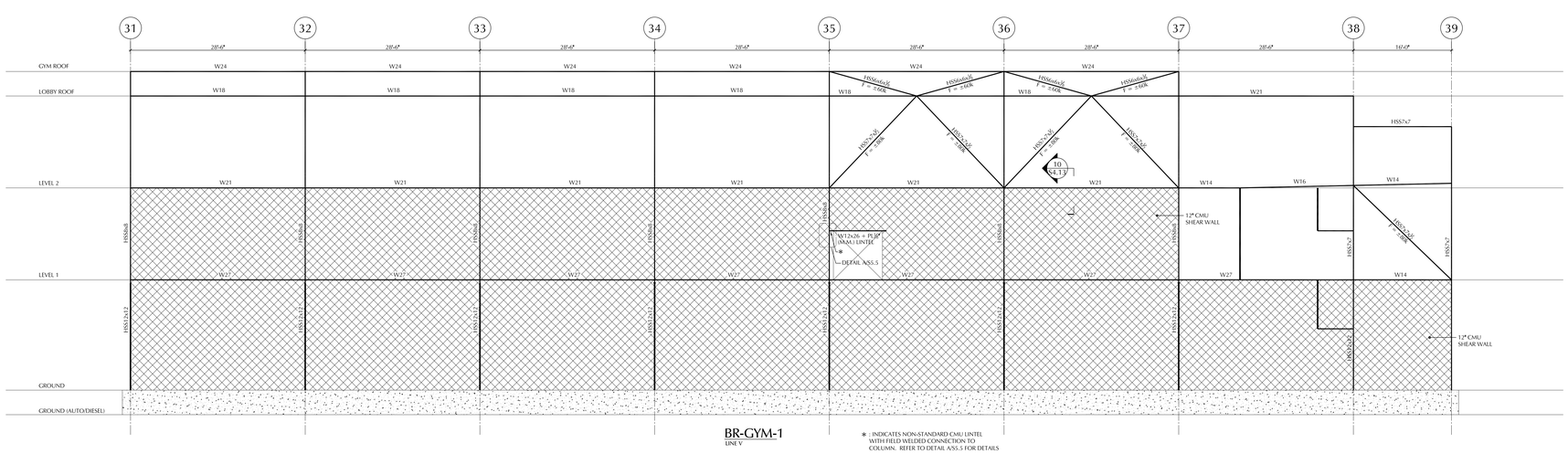
BR-GYM-2
LINE N



SECTION A-A SECTION B-B



DETAIL A/S5.7



BR-GYM-1
LINE V

* : INDICATES NON-STANDARD CMU LINTEL WITH FIELD WELDED CONNECTION TO COLUMN. REFER TO DETAIL A/S5.5 FOR DETAILS

DIAGONAL BRACING ELEVATIONS

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PROJECT

FINAL BID PACKAGE

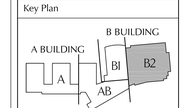
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Diagonal Bracing Elevations and Details Section B2

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - T1	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

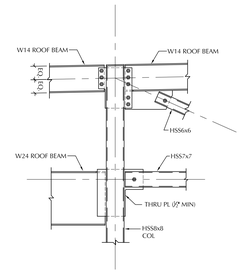
FILE:

DWN. BY: JDM | JOB NO: #1611

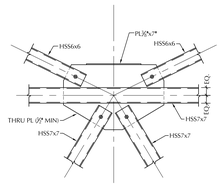
CKD. BY: CJT | SCALE: 1/8" = 1'-0"

DATE: January 31, 2019

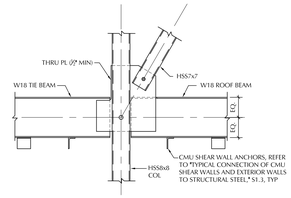
S5.5



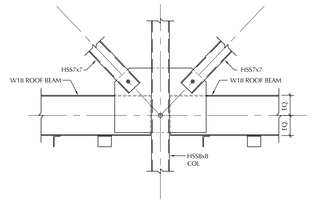
DETAIL 3 / S5.6



DETAIL 4 / S5.6



DETAIL 1 / S5.6



DETAIL 2 / S5.6

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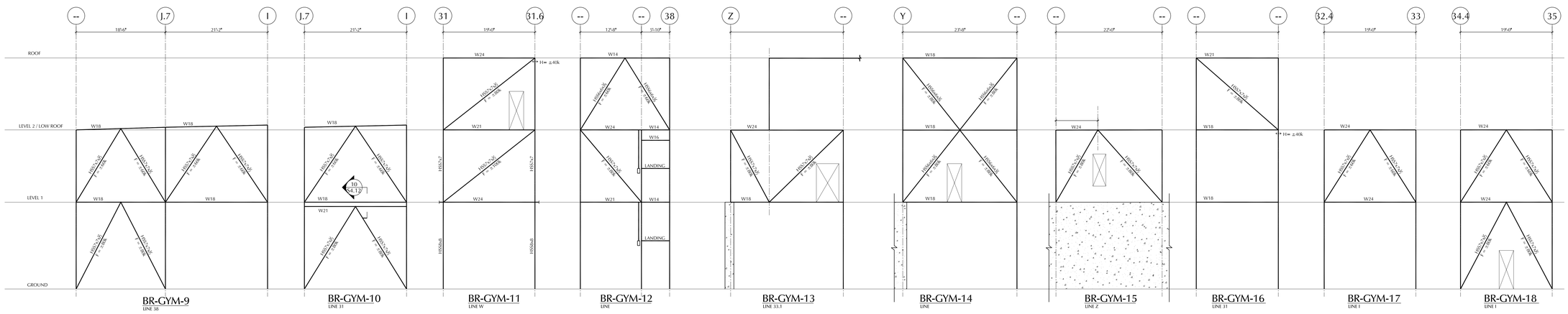
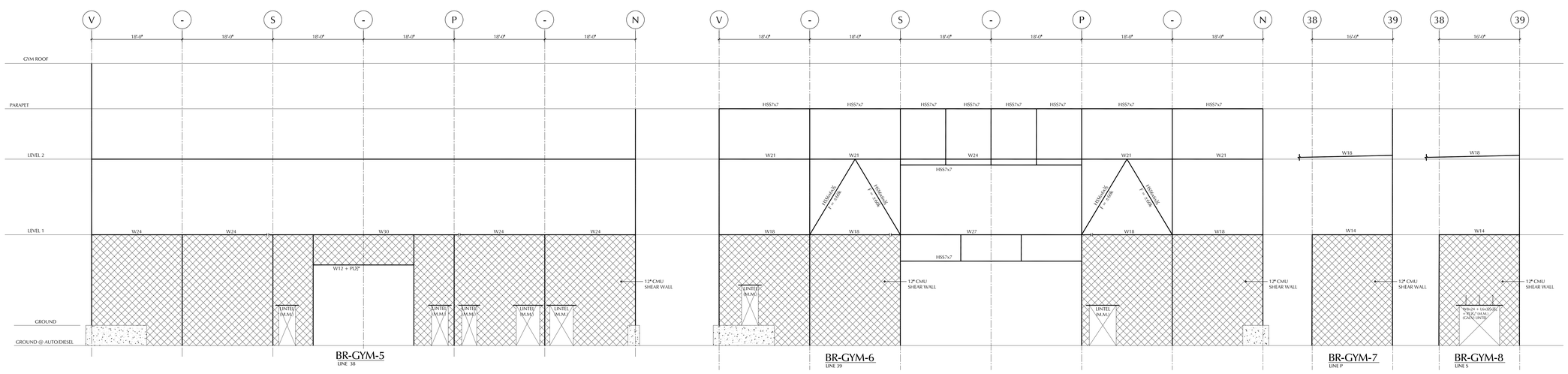


BR-GYM-9 LINE 38 · BR-GYM-10 LINE 31 · BR-GYM-11 LINE W · BR-GYM-12 LINE · BR-GYM-13 LINE 33.1 · BR-GYM-14 LINE · BR-GYM-15 LINE Z · BR-GYM-16 LINE 31 · BR-GYM-17 LINE I · BR-GYM-18 LINE I



BR-GYM-5 LINE 38 · BR-GYM-6 LINE 39 · BR-GYM-7 LINE P · BR-GYM-8 LINE S

DIAGONAL BRACING ELEVATIONS

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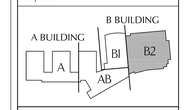
Diagonal Bracing Elevations and Details Section B2

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

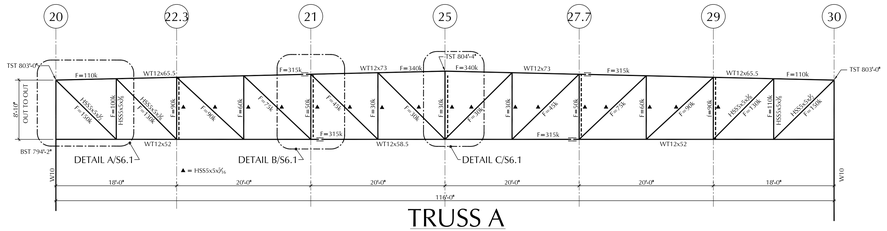
FILE:

DWN. BY: JDM | JOB NO: #1611

CKD. BY: CJT | SCALE: 1/8" = 1'-0"

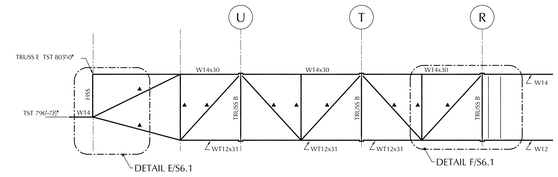
DATE: January 31, 2019

S5.6



TRUSS A

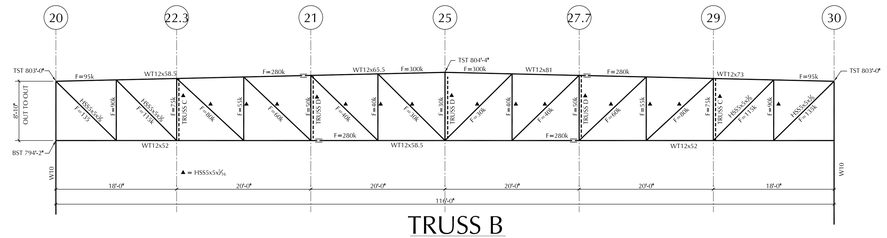
CAMBER 2½"



TRUSS E

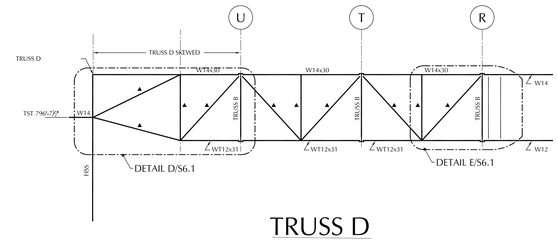
NOTES FOR SCHEMATIC TRUSS ELEVATIONS:

1. CONNECTIONS AND SPLICES FOR THE TRUSS MEMBERS SHALL BE DESIGNED FOR THE FORCE, F, AS SHOWN ON THE ELEVATIONS (F = 30k MIN). GIVEN FORCES ARE FOR "ALLOWABLE STRESS DESIGN"
2. CONNECTIONS FOR THE TRUSSES SHALL CONFORM TO THE REQUIREMENTS OF SECTION 10, "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" AESS OF THE AISC CODE OF STANDARD PRACTICE. REFER TO SPECIFICATIONS.

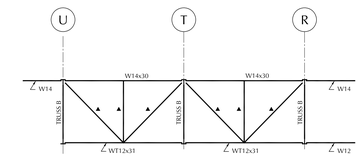


TRUSS B

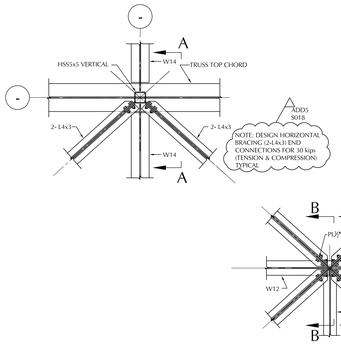
CAMBER 2½"



TRUSS D



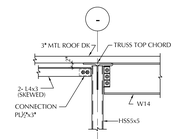
TRUSS C



(REFLECTED PLAN)

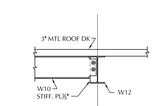
PLAN A/S6.1

½" = 1'-0"



SECTION A-A

½" = 1'-0"



SECTION B-B

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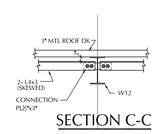

SECTION C-C

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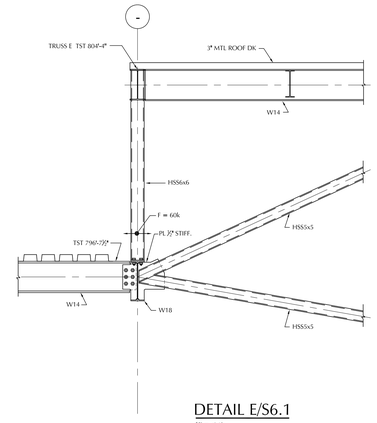
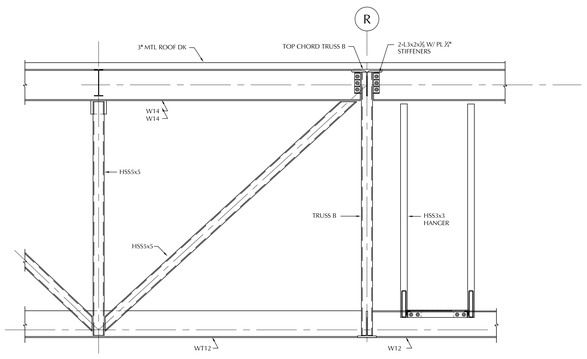


DETAIL E/S6.1

½" = 1'-0"



DETAIL F/S6.1

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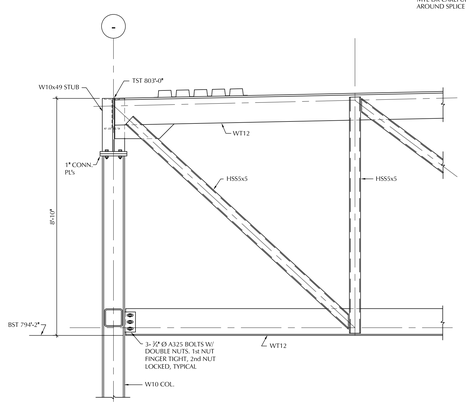
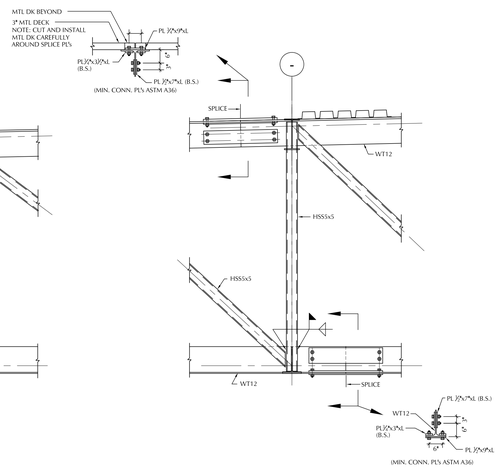


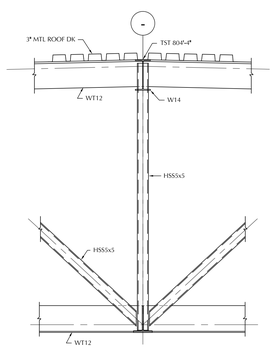
DETAIL A/S6.1

½" = 1'-0"



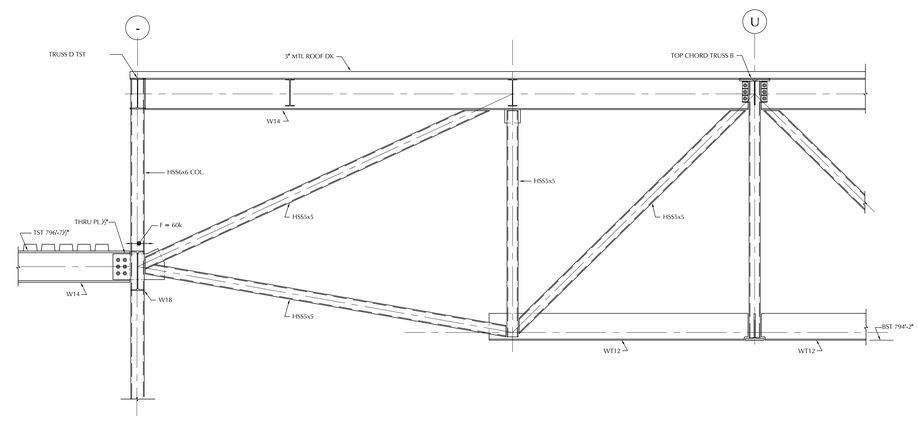
DETAIL B/S6.1

½" = 1'-0"



DETAIL C/S6.1

½" = 1'-0"



DETAIL D/S6.1

½" = 1'-0"

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Trusses

Key Plan

A BUILDING
B BUILDING
A
AB
B1
B2

REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

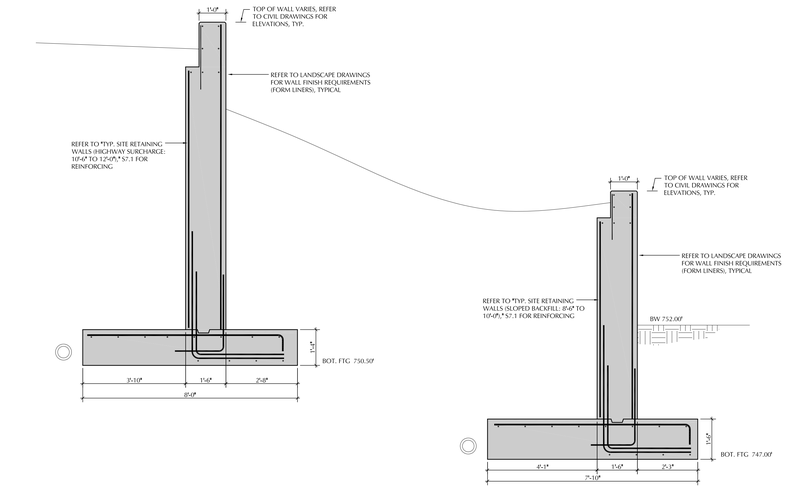
FILE:

DWN. BY: CJT | JOB NO: #1611

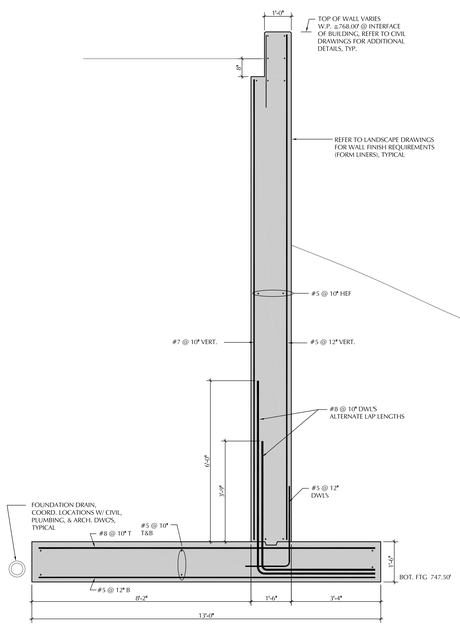
CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

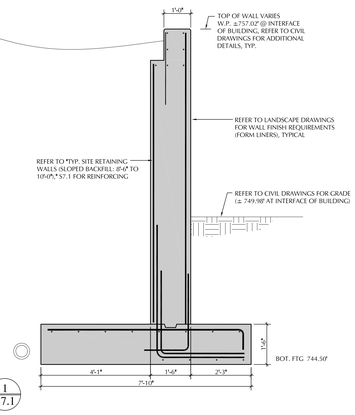
S6.1

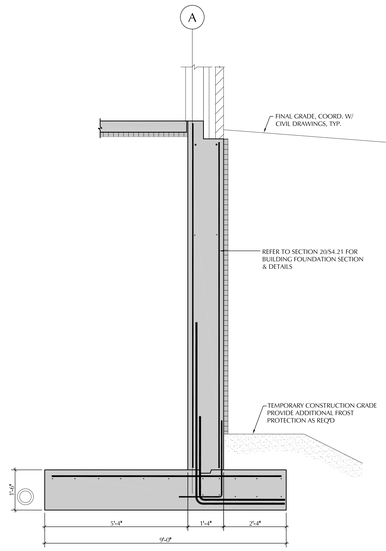


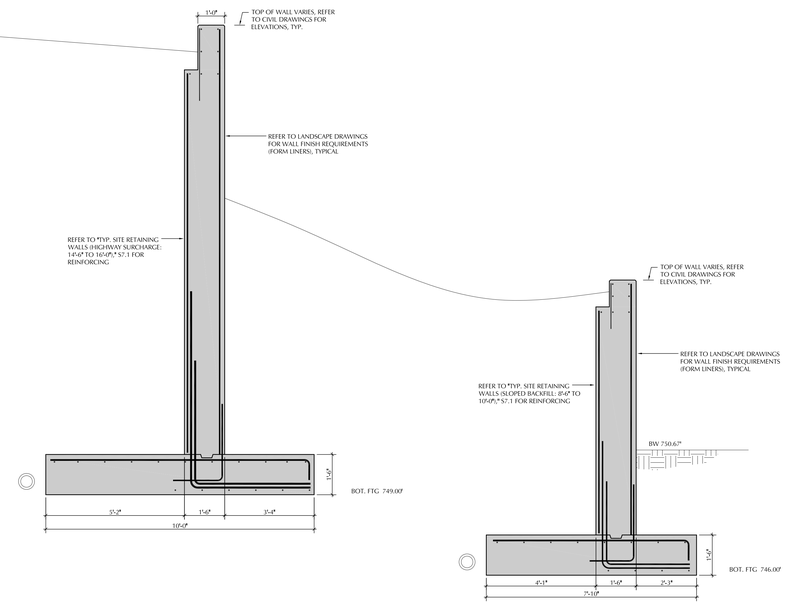
SECTION 3/S7.1
SCALE: 1/4" = 1'-0"



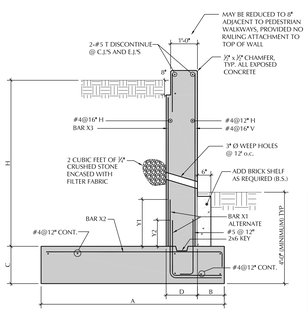
SECTION 1/S7.1
SCALE: 1/4" = 1'-0"

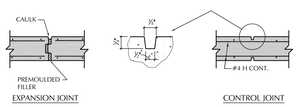






SECTION 2/S7.1
SCALE: 1/4" = 1'-0"



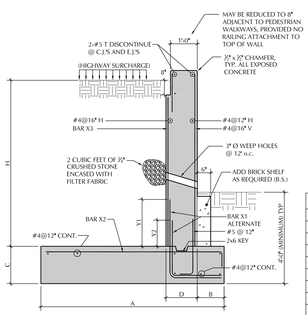


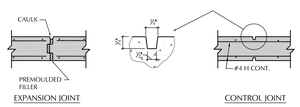
EXPANSION JOINT — CONTROL JOINT

NOTE:
1. REFER TO SITE DRAWINGS FOR LOCATION OF RETAINING WALL EXPANSION JOINTS (E.J.), CONTROL JOINTS (C.J.), WEEP HOLES, AND CONED PLUG FORM TIES.
2. ALL JOINTS @24' O.C. (MAX) ALTERNATE E.J.'S AND C.J.'S @ 12' O.C.

RETAINING WALL SCHEDULE- LEVEL BACKFILL									
WALL HEIGHT	DIMENSIONS				REINFORCING				
H	A	B	C	D	X1	Y1	Y2	X2	X3
LESS THAN 5'-0"	3'-6"	0'-6"	1'-6"	1'-6"	#4 @ 12"	3'-6"	—	#4 @ 12"	#4 @ 12"
5'-0" TO 6'-0"	3'-6"	0'-8"	1'-6"	1'-6"	#4 @ 12"	3'-6"	—	#4 @ 12"	#4 @ 12"
6'-0" TO 8'-0"	4'-6"	1'-2"	1'-6"	1'-2"	#4 @ 12"	3'-6"	—	#4 @ 12"	#4 @ 12"
8'-0" TO 10'-0"	5'-0"	1'-6"	1'-2"	1'-2"	#4 @ 10"	3'-6"	2'-0"	#4 @ 10"	#4 @ 10"
10'-0" TO 12'-0"	6'-10"	1'-10"	1'-4"	1'-4"	#5 @ 12"	4'-0"	2'-6"	#5 @ 10"	#5 @ 12"
12'-0" TO 14'-0"	8'-6"	2'-2"	1'-6"	1'-6"	#5 @ 10"	5'-0"	2'-10"	#6 @ 10"	#5 @ 10"
14'-0" TO 16'-0"	9'-6"	2'-4"	1'-6"	1'-6"	#6 @ 10"	5'-0"	3'-6"	#7 @ 10"	#5 @ 10"

LEVEL BACKFILL



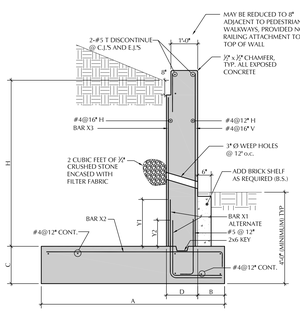


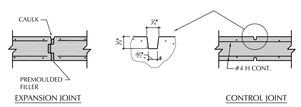
EXPANSION JOINT — CONTROL JOINT

NOTE:
1. REFER TO SITE DRAWINGS FOR LOCATION OF RETAINING WALL EXPANSION JOINTS (E.J.), CONTROL JOINTS (C.J.), WEEP HOLES, AND CONED PLUG FORM TIES.
2. ALL JOINTS @24' O.C. (MAX) ALTERNATE E.J.'S AND C.J.'S @ 12' O.C.

RETAINING WALL SCHEDULE- HIGHWAY SURCHARGE									
WALL HEIGHT	DIMENSIONS				REINFORCING				
H	A	B	C	D	X1	Y1	Y2	X2	X3
LESS THAN 5'-0"	4'-4"	1'-4"	1'-6"	1'-6"	#4 @ 12"	3'-6"	—	#4 @ 12"	#4 @ 12"
5'-0" TO 6'-0"	4'-10"	1'-6"	1'-6"	1'-6"	#4 @ 12"	3'-6"	—	#4 @ 12"	#4 @ 12"
6'-0" TO 8'-0"	6'-0"	2'-0"	1'-6"	1'-2"	#4 @ 10"	3'-6"	—	#4 @ 10"	#4 @ 10"
8'-0" TO 10'-0"	7'-0"	2'-4"	1'-2"	1'-2"	#5 @ 12"	4'-0"	2'-6"	#6 @ 12"	#5 @ 12"
10'-0" TO 12'-0"	8'-0"	2'-8"	1'-4"	1'-4"	#6 @ 12"	5'-0"	2'-6"	#7 @ 12"	#5 @ 12"
12'-0" TO 14'-0"	9'-0"	3'-0"	1'-6"	1'-6"	#7 @ 10"	5'-0"	2'-10"	#7 @ 10"	#5 @ 10"
14'-0" TO 16'-0"	10'-0"	3'-4"	1'-6"	1'-6"	#7 @ 8"	6'-1"	3'-6"	#8 @ 10"	#5 @ 8"

HIGHWAY SURCHARGE





EXPANSION JOINT — CONTROL JOINT

NOTE:
1. REFER TO SITE DRAWINGS FOR LOCATION OF RETAINING WALL EXPANSION JOINTS (E.J.), CONTROL JOINTS (C.J.), WEEP HOLES, AND CONED PLUG FORM TIES.
2. ALL JOINTS @24' O.C. (MAX) ALTERNATE E.J.'S AND C.J.'S @ 12' O.C.

RETAINING WALL SCHEDULE- SLOPED BACKFILL									
WALL HEIGHT	DIMENSIONS				REINFORCING				
H	A	B	C	D	X1	Y1	Y2	X2	X3
LESS THAN 5'-0"	4'-0"	1'-0"	1'-0"	1'-0"	#4 @ 12"	3'-6"	—	#4 @ 12"	#4 @ 12"
5'-0" TO 6'-0"	4'-8"	1'-3"	1'-0"	1'-2"	#4 @ 12"	3'-6"	—	#4 @ 12"	#4 @ 12"
6'-0" TO 8'-0"	6'-0"	1'-0"	1'-4"	1'-4"	#4 @ 10"	3'-6"	—	#4 @ 10"	#4 @ 10"
8'-0" TO 10'-0"	7'-10"	2'-3"	1'-6"	1'-6"	#5 @ 12"	3'-6"	2'-6"	#6 @ 12"	#5 @ 12"
10'-0" TO 12'-0"	9'-4"	2'-9"	1'-6"	1'-8"	#6 @ 10"	4'-6"	2'-6"	#7 @ 10"	#5 @ 10"
12'-0" TO 14'-0"	10'-6"	3'-3"	1'-8"	1'-10"	#7 @ 10"	4'-10"	2'-10"	#8 @ 10"	#5 @ 10"
14'-0" TO 16'-0"	12'-6"	3'-10"	1'-10"	2'-0"	#8 @ 10"	5'-6"	3'-6"	#9 @ 10"	#6 @ 10"

SLOPED BACKFILL

TYPICAL SITE RETAINING WALL SECTIONS

REFER TO ARCHITECTURAL, CIVIL & LANDSCAPE DRAWINGS FOR ADDITIONAL DETAILS, GEOMETRY, LOCATIONS, AND DIMENSIONS.

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P. 508.756.8972

OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

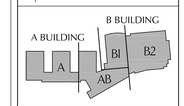
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Site Retaining Walls & Exterior Structures

Key Plan



REVISIONS

No.	Description	Date
6	ESBP # 2 - ASI 1 - 11	1/31/19
7	ESBP # 3 - Addendum #5	12/27/18

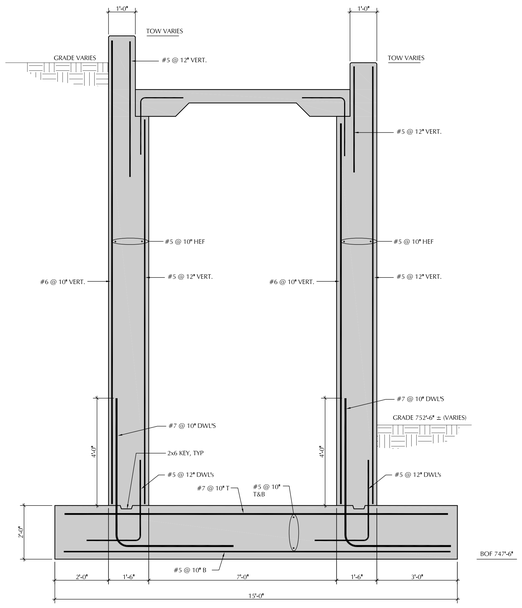
FILE:

DWN. BY: CJT | JOB NO: #1611

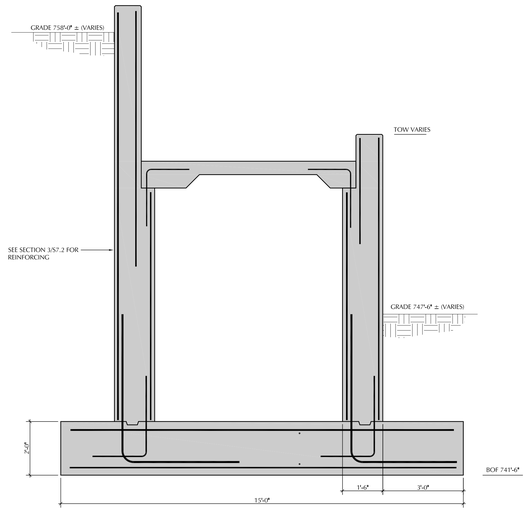
CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

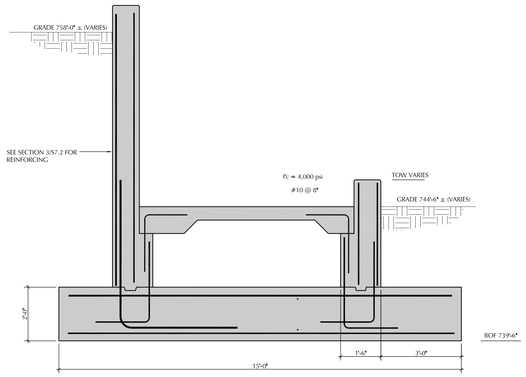
S7.1



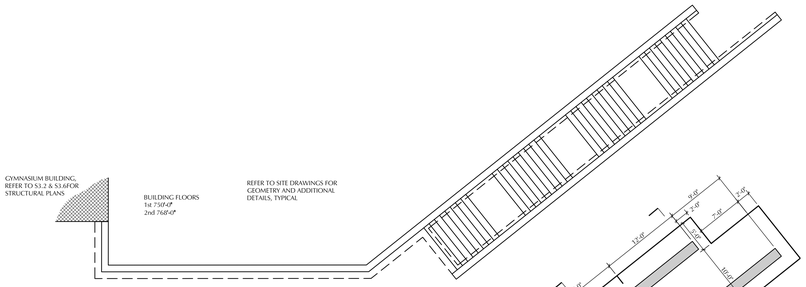
SECTION 3/S7.2
SCALE: 1/2" = 1'-0"

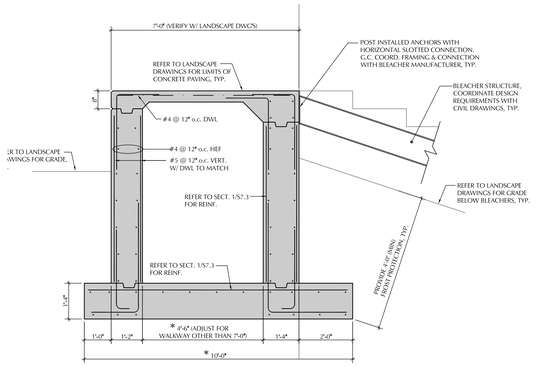


SECTION 4/S7.2
SCALE: 1/2" = 1'-0"

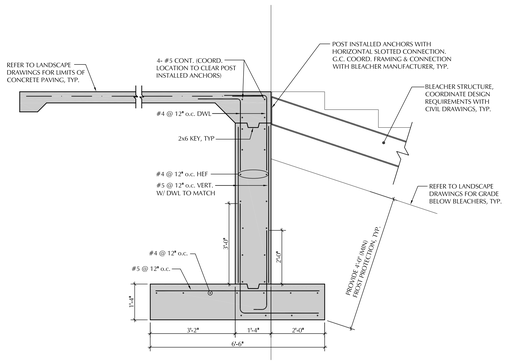


SECTION 5/S7.2
SCALE: 1/2" = 1'-0"

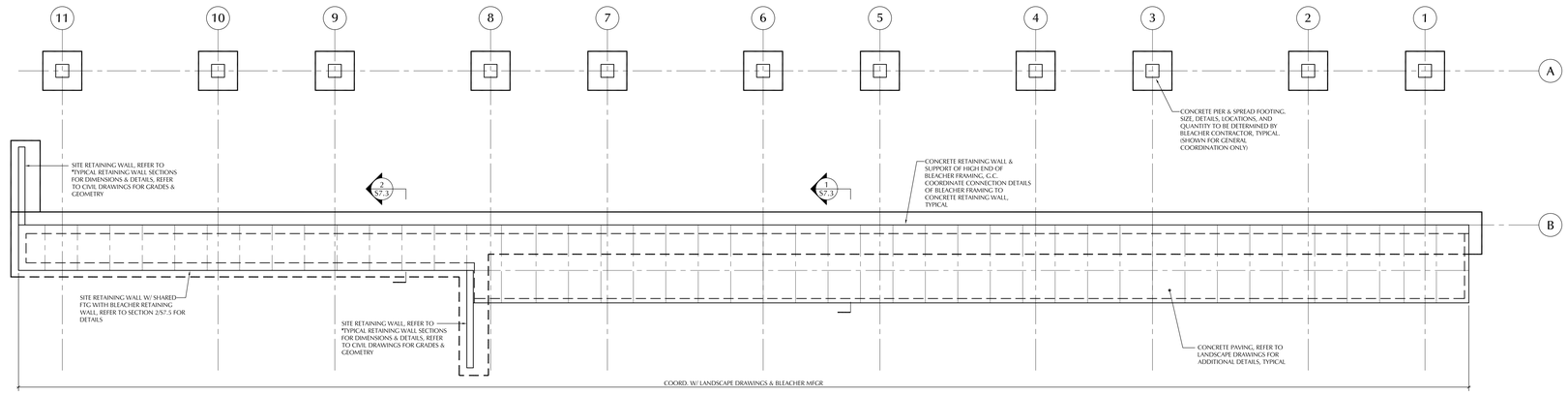

GYMNASIUM BUILDING, REFER TO S3.2 & S3.6FOR STRUCTURAL PLANS
BUILDING FLOORS
1st 758'-0"
2nd 768'-0"
REFER TO SITE DRAWINGS FOR GEOMETRY AND ADDITIONAL DETAILS, TYPICAL
9'-0"
4'-0"
2'-0"
12'-0"
16'-0"
10'-0"
10'-0"
10



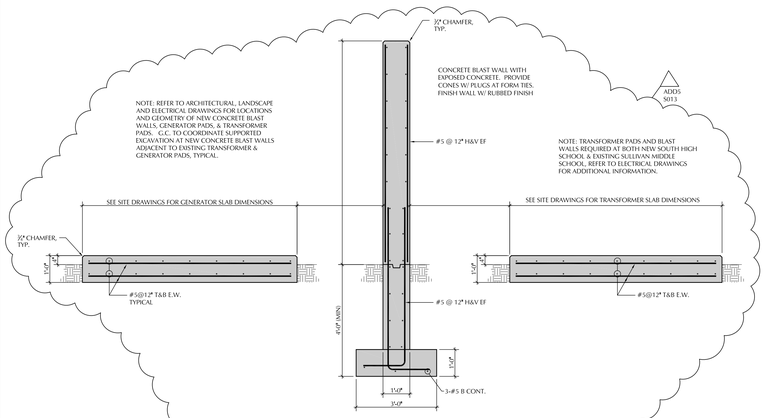
SECTION 2/S7.3
SCALE: 1/2" = 1'-0"



SECTION 1/S7.3
SCALE: 1/2" = 1'-0"

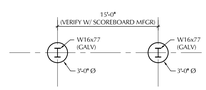


BLEACHER RETAINING WALL PLAN
SCALE: 1/8" = 1'-0"



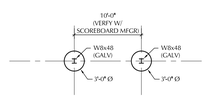
SECTION THRU GENERATOR & TRANSFORMER PADS WITH CONCRETE BLAST WALL.
SCALE: 1/2" = 1'-0"

SECTION THRU DUMPSTER PAD
SCALE: 1/2" = 1'-0"

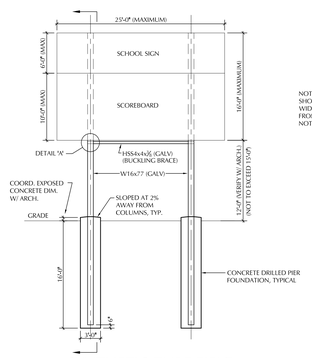


SYNTHETIC TURF FIELD SCOREBOARD PLAN
SCALE: 1/2" = 1'-0"

REFER TO SITE DRAWINGS FOR LOCATION, TYPICAL

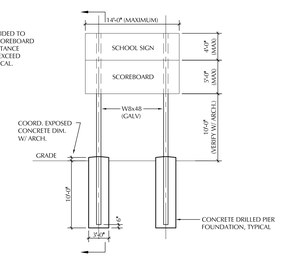


LOWER FIELD SCOREBOARD PLAN
SCALE: 1/2" = 1'-0"

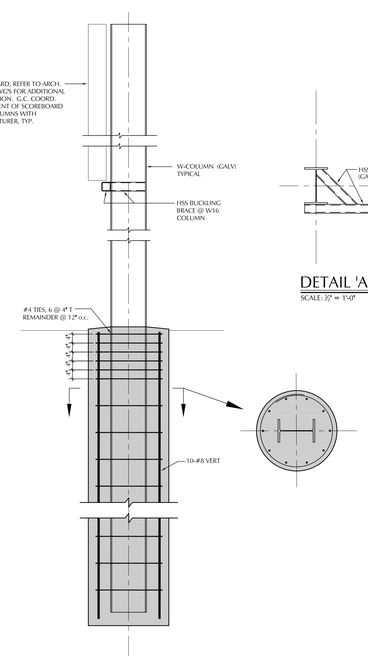


SYNTHETIC TURF FIELD SCOREBOARD ELEVATION
SCALE: 1/2" = 1'-0"

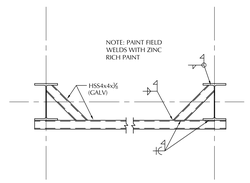
NOTE: DIMENSIONS PROVIDED TO SHOW DESIGN LIMITS. SCOREBOARD WIDTH, HEIGHT, AND DISTANCE FROM GROUND NOT TO EXCEED NOTED DIMENSIONS, TYPICAL.



LOWER FIELD SCOREBOARD ELEVATION
SCALE: 1/2" = 1'-0"



SCOREBOARD SECTION
SCALE: 1/2" = 1'-0"



DETAIL 'A'- BUCKLING BRACE
SCALE: 1/2" = 1'-0"

LAMOUREUX PAGANO ASSOCIATES, ARCHITECTS
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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

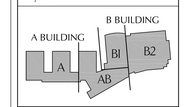
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Site Exterior Structures

Key Plan



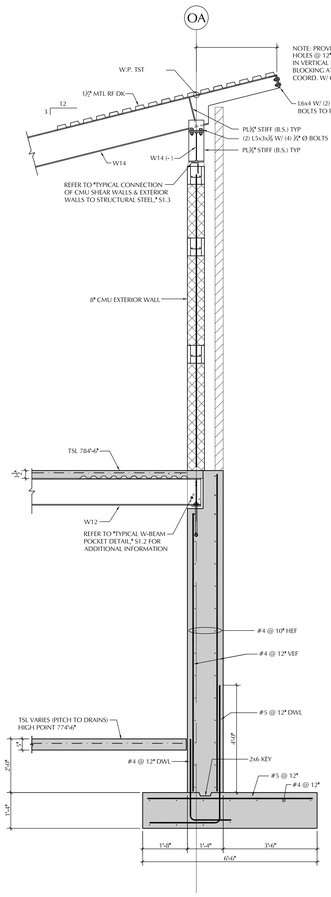
REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - T1	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

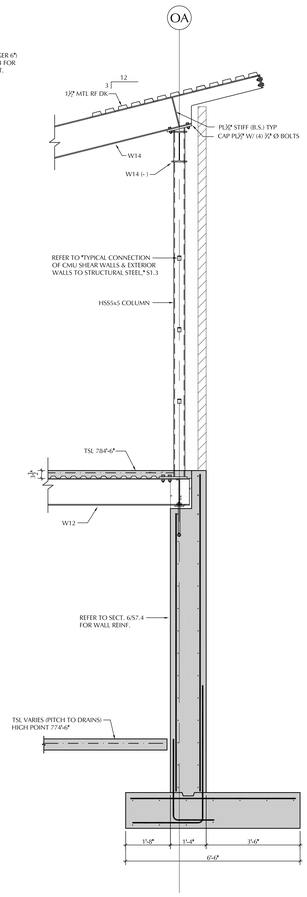
FILE:

DWN. BY: CJT | JOB NO: #1611
CKD. BY: JDM | SCALE: As Noted
DATE: January 31, 2019

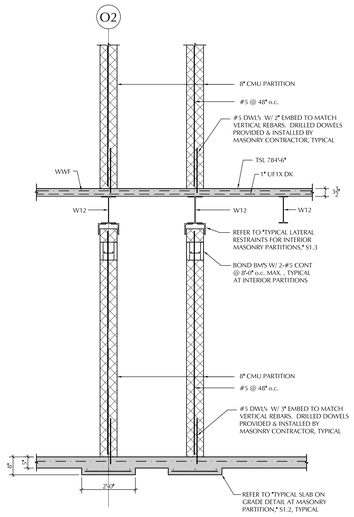
S7.3



SECTION 6 / S7.4
SCALE: 3/4" = 1'-0"



SECTION 7 / S7.4
SCALE: 3/4" = 1'-0"

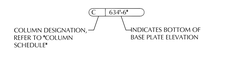


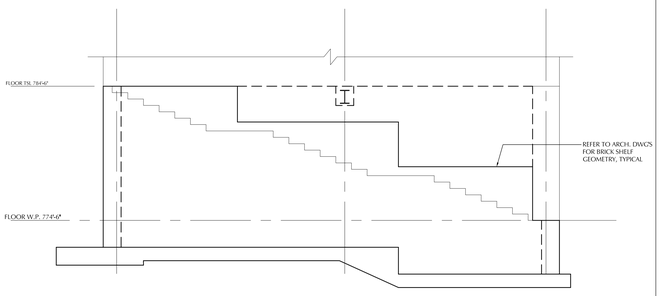
SECTION 8 / S7.4
SCALE: 3/4" = 1'-0"

COLUMN SCHEDULE
OUTBUILDING

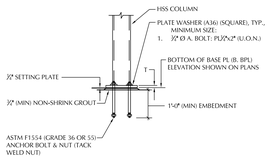
MARK	COLUMN	BASE PL SIZE	BASE PL TYPE
C1	HSS5x5x5/16	1" x 12" x 12"	A1
C2	HSS5x5x5/16	1" x 6" x 13"	B1
C3	HSS5x5x5/16	1" x 10" x 10"	C1
C4	HSS5x5x5/16	1" x 6" x 13"	B2

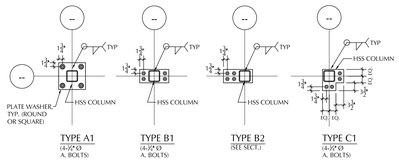
NOTE:
1. REFER TO PLANS, SECTIONS, AND DETAILS FOR ADDITIONAL COLUMN INFORMATION.
2. PROVIDE HSS5x5x5/16 COLUMNS WITH BASE PLATE TYPE 'A', UNLESS OTHERWISE NOTED.
3. COLUMN EXTENDS FROM BASE PLATE TO ROOF, UNLESS OTHERWISE NOTED ON THE PLANS.



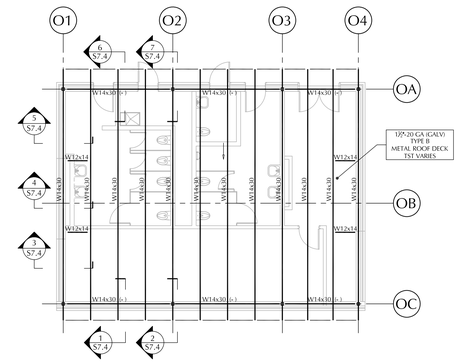


ELEVATION A-A
SCALE: 1/4" = 1'-0"

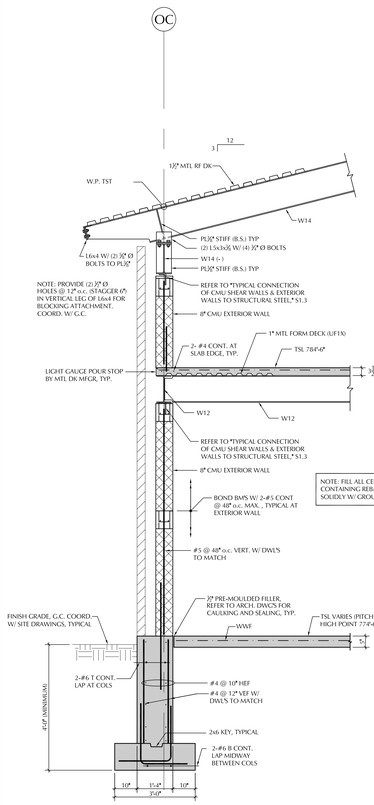




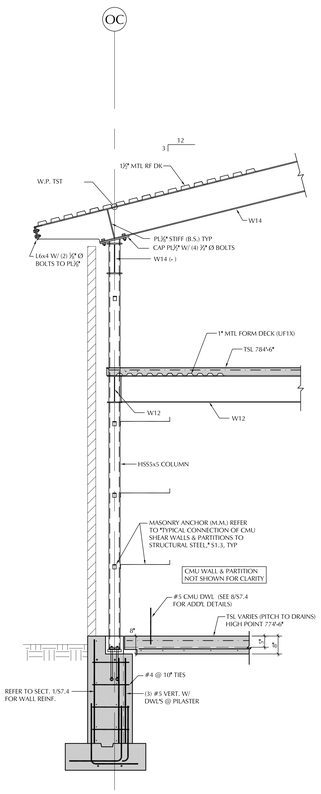
TYPICAL BASE PL DETAILS



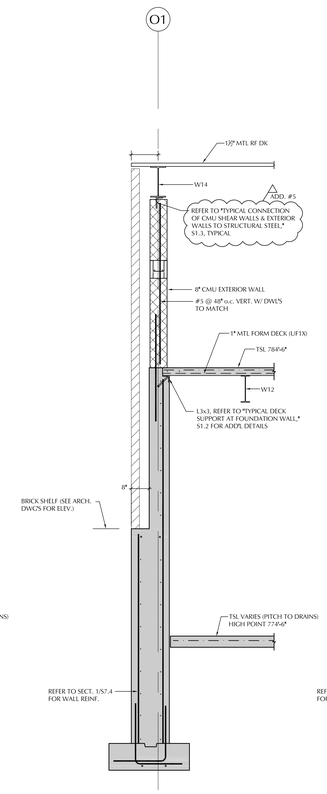
OUTBUILDING ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



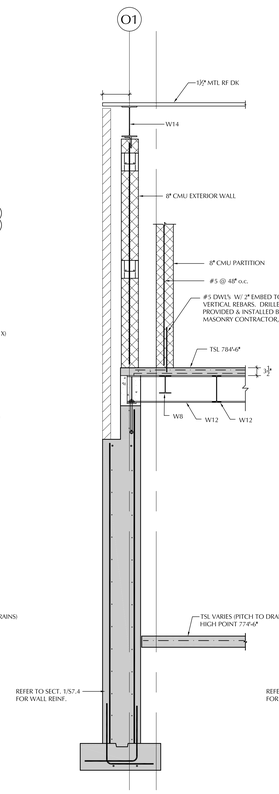
SECTION 1 / S7.4
SCALE: 3/4" = 1'-0"



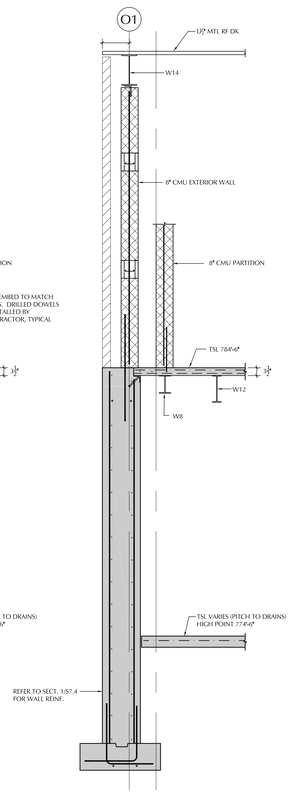
SECTION 2 / S7.4
SCALE: 3/4" = 1'-0"



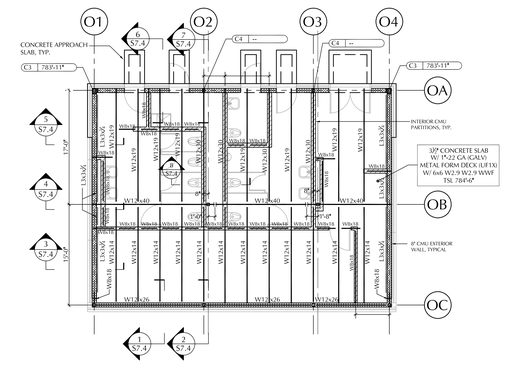
SECTION 3 / S7.4
SCALE: 3/4" = 1'-0"



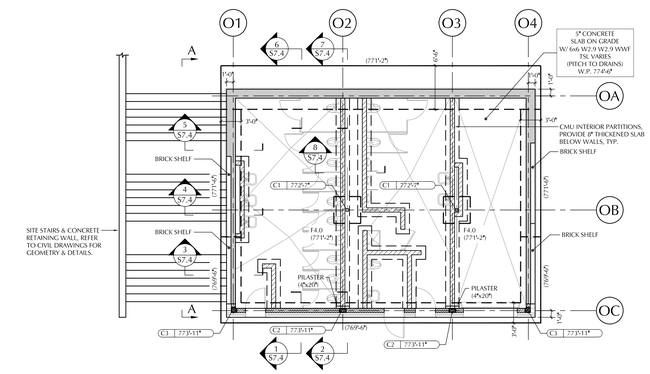
SECTION 4 / S7.4
SCALE: 3/4" = 1'-0"

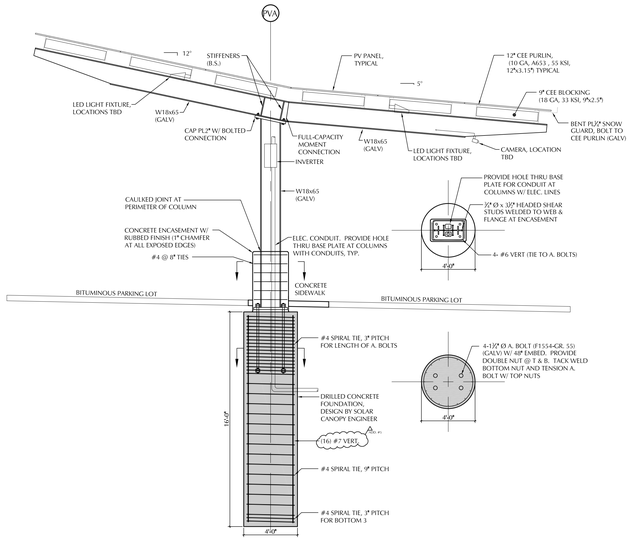


SECTION 5 / S7.4
SCALE: 3/4" = 1'-0"



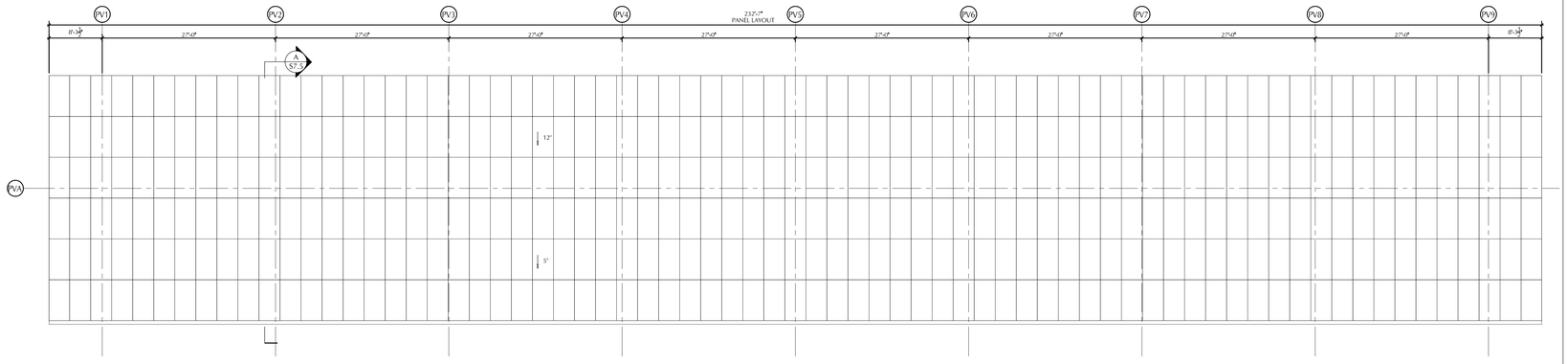
OUTBUILDING FLOOR FRAMING PLAN
SCALE: 1/8" = 1'-0"


O1
O2
O3
O4
OA
OB
OC
A
171'-2"
1'-0"
1'-4"
1'-0"
1'-4"
15" CONCRETE SLAB ON GRADE W/ 6x6 W2.9 W2.9 WWF TSL VARIES (PITCH TO DRAINS) W.P. 774'-6"
CMU INTERIOR PARTITIONS, PROVIDE 8" THICKENED SLAB BELOW WALLS, TYP.
BRICK SHELF
SITE STAIRS & CONCRETE RETAINING WALL, REFER TO CIVIL DRAWINGS FOR GEOMETRY & DETAILS.
C1 777'-11"
C2 777'-11"
C3 777'-11"
C4 777'-11"
PILASTER (8"x20")
PILASTER (4"x20")
F4.0 (771'-2")
F4.0 (771'-2")
17'-0"
17'-0"
17'-0"



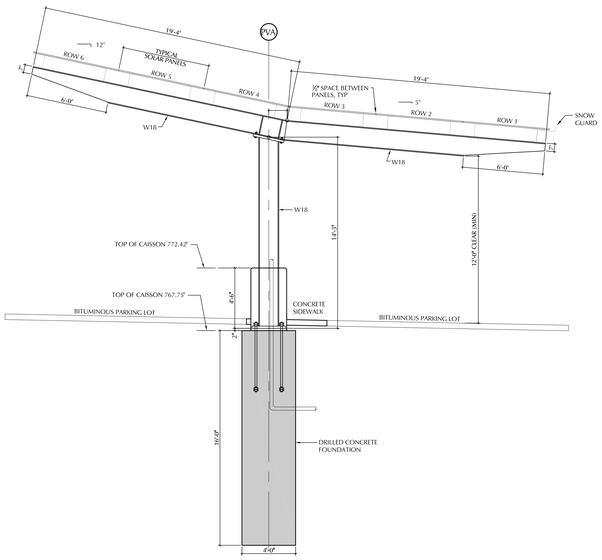
BENT 'A' DETAILS

SCALE : 1/4" = 1'-0"



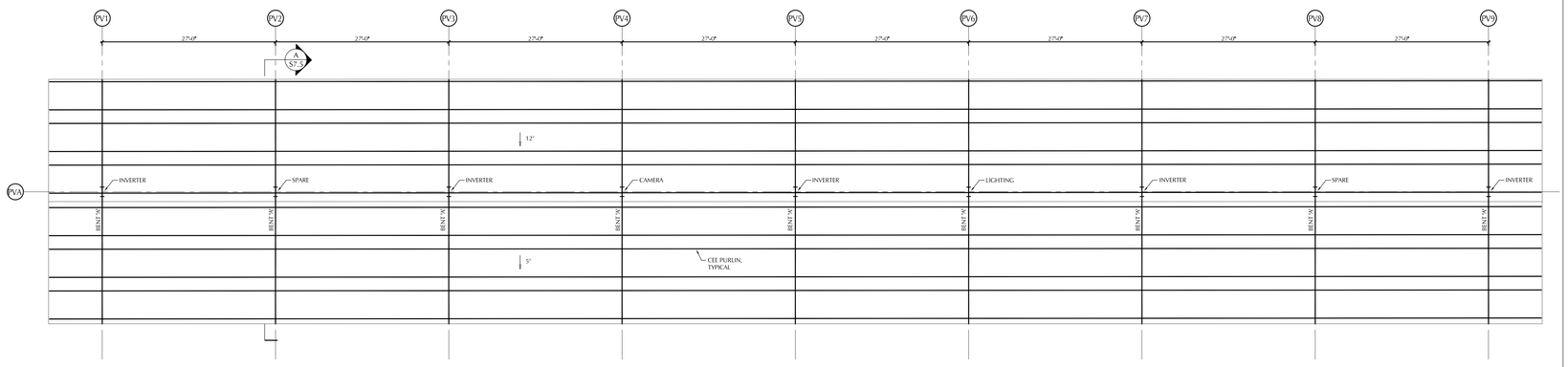
PARKING SOLAR: PANEL LAYOUT

SCALE : 1/8" = 1'-0"



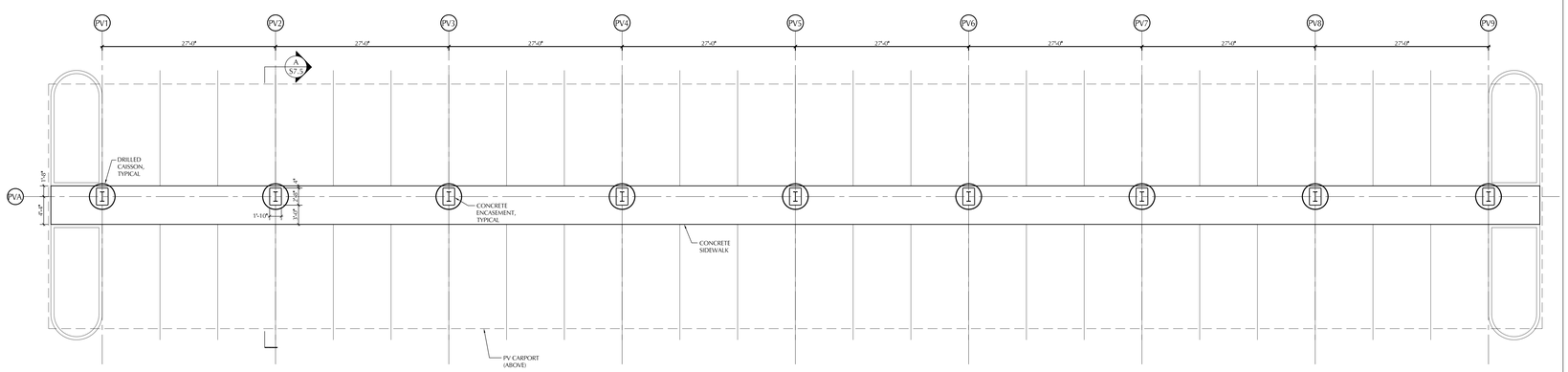
BENT 'A' GEOMETRY

SCALE : 1/4" = 1'-0"



PARKING SOLAR: FRAMING PLAN

SCALE : 1/8" = 1'-0"



PARKING SOLAR: FOUNDATION PLAN

SCALE : 1/8" = 1'-0"

PHOTOVOLTAIC CANOPY STRUCTURE GENERAL NOTES
(SEE S1.1 FOR ADDITIONAL PROJECT REQUIREMENTS)

DESIGN LOADS

BUILDING CODE: 780 CMR MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION, CONSISTING OF THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY MASSACHUSETTS.

BUILDING OCCUPANCY RISK CATEGORY: CAT. III

LIVE LOAD
ROOF LIVE LOAD 20 PSF

SNOW LOAD
GROUND SNOW LOAD, P_g (WORCESTER, MA) 55 PSF
EXPOSURE FACTOR, C_E = 1.0
THERMAL FACTOR, C_t = 1.2 (UNHEATED ROOFS, CANOPIES)
IMPORTANCE FACTOR, I_s = 1.1
SNOW DRIFT IN ACCORDANCE WITH BUILDING CODE

WIND LOADS:
BASIC WIND SPEED (WORCESTER, MA), V_{ULT} = 134 MPH
BUILDING RISK CATEGORY = III
EXPOSURE CATEGORY = B

PV1
PLANS AND SECTIONS SHOWN ON THIS DRAWING ARE INTENDED TO SHOW BASIC DESIGN INTENT ONLY. FINAL PHOTOVOLTAIC CANOPY STRUCTURE AND FOUNDATION TO BE DESIGNED AND STAMPED BY A MASSACHUSETTS REGISTERED STRUCTURAL ENGINEER. C.M. TO PROCURE DESIGNATED DESIGN ENGINEER TO COMPLETE DESIGN.

PV2
DESIGN FOUNDATIONS FOR A MAXIMUM ALLOWABLE NET BEARING PRESSURE OF 4.0 KSF. REFER TO LAHLAF GEOTECHNICAL CONSULTING, INC.'s "PRELIMINARY GEOTECHNICAL REPORT PROPOSED WORCESTER SOUTH HIGH SCHOOL, WORCESTER, MA," DATED APRIL 9, 2018 FOR ADDITIONAL DESIGN AND CONSTRUCTION RECOMMENDATIONS.

PV3
DESIGN FOUNDATIONS FOR AN OVERTURNING FACTOR OF SAFETY OF 2.0.

PV4
CONCRETE STRENGTHS (ALL CONCRETE NORMAL WEIGHT, EXCEPT AS NOTED)

CONCRETE	STRENGTH AT 28 DAYS
DRILLED CAISSONS	5,000 PSI (AIR-ENTRAINED)
CONCRETE FOR EXTERIOR WORK	4,000 PSI (AIR-ENTRAINED)

PV5
STEEL FRAMING MEMBERS AND BOLTS TO BE HOT-DIP GALVANIZED PER ASTM 153.

PV6
STEEL PURLINS ARE TO BE HOT-DIP GALVANIZED: G90.

PV7
ALL STEEL IS TO BE FABRICATED AS ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS).

PV8
REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND GROUNDING REQUIREMENTS.

PV9
ALL STEEL FRAMING TO BE PROVIDED BY STRUCTURAL STEEL CONTRACTOR, INCLUDING CEE PURLINS, BENT PLATE SNOW GUARDS, AND MISCELLANEOUS STEEL FRAMING REQUIRED TO COMPLETE FRAMES. C.M. TO COORDINATE COMPLETE LIST OF MATERIALS WITH STRUCTURAL STEEL FABRICATOR.

NOTE: CANOPY IS DESIGNATED DESIGN. PLANS, DETAILS, MEMBER SIZES, & DIMENSIONS SHOWN ARE FOR ESTIMATING PURPOSES ONLY, AND ARE NOT FOR CONSTRUCTION. FINAL CANOPY & FOUNDATION DESIGN TO BE STAMPED AND SIGNED BY A MASSACHUSETTS REGISTERED STRUCTURAL ENGINEER. C.M. TO PROCURE DESIGN AND COORDINATE LAYOUT WITH CIVIL AND ELECTRICAL DRAWINGS, TYPICAL

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OWNER

Worcester Public Schools

Worcester, MA

Project North

PROJECT

FINAL BID PACKAGE

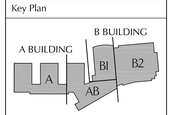
South High Community School

170 Apricot Street, Worcester, MA 01603

TITLE

Solar Canopy Site Structures

Key Plan



REVISIONS

No.	Description	Date
6	ESBP #2 - ASI 1 - 11	1/31/19
7	ESBP #3 - Addendum #5	12/27/18

FILE:

DWN. BY: CJT | JOB NO: #1611

CKD. BY: JDM | SCALE: As Noted

DATE: January 31, 2019

S7.5