COVER SHEET
G-000
FOR BLUEBEAM LABELING OCR:

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

CLEAR CREEK ISD

PROJECT NUMBER: 250236

2145 W. NASA BLVD
WEBSTER, TX 77598

ISSUE FOR PROPOSAL

03/05/2026

CLIENT PROJECT NUMBER: 24MCSU01

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CIVIL INDEX

Sheet №	Sheet Name
C 001	NOTES, INDEX, & LEGEND
C 002.1	SURVEY (FOR INFORMATION ONLY)
C 002.2	SURVEY (FOR INFORMATION ONLY)
C 003	DEMOLITION PLAN (AREA A)
C 004	DEMOLITION PLAN (AREA B)
C 005	DEMOLITION PLAN (AREA C)
C 006	DEMOLITION PLAN (AREA D)
C 100	OVERALL SITE PLAN
C 101	SITE PLAN (AREA A)
C 102	SITE PLAN (AREA B)
C 103	SITE PLAN (AREA C)
C 104	SITE PLAN (AREA D)
C 201	DRAINAGE PLAN (AREA A)
C 202	DRAINAGE PLAN (AREA B)
C 203	DRAINAGE PLAN (AREA C)
C 204	DRAINAGE PLAN (AREA D)
C 205	DRAINAGE AREA MAP (AREA A)
C 206	DRAINAGE AREA MAP (AREA B)
C 207	DRAINAGE AREA MAP (AREA C)
C 208	DRAINAGE AREA MAP (AREA D)
C 301	MITIGATION PLAN (AREA A)
C 302	MITIGATION PLAN (AREA B)
C 303	MITIGATION PLAN (AREA C)
C 401	PAVING & JOINTING PLAN (AREA A)
C 402	PAVING & JOINTING PLAN (AREA B)
C 403	PAVING & JOINTING PLAN (AREA C)
C 404	PAVING & JOINTING PLAN (AREA D)
C 405	GRADING PLAN (AREA A)
C 406	GRADING PLAN (AREA B)
C 407	GRADING PLAN (AREA C)
C 408	GRADING PLAN (AREA D)
C 501	EROSION CONTROL PLAN (AREA A)
C 502	EROSION CONTROL PLAN (AREA B)
C 503	EROSION CONTROL PLAN (AREA C)
C 504	EROSION CONTROL PLAN (AREA D)
C 601	DETAILS
C 602	DETAILS

MECHANICAL INDEX

Sheet №	Sheet Name
MD-101	1ST FLOOR DEMO MECHANICAL PLAN
M-001	MECHANICAL GENERAL NOTES AND LEGENDS
M-101	1ST FLOOR MECHANICAL PLAN

ELECTRICAL INDEX

Sheet №	Sheet Name
E-000	ELECTRICAL SYMBOL LEGEND AND GENERAL NOTES
E-201	BUS SHOP POWER PLAN - LEVEL 1 & 2
ET-101	ELECTRICAL/TECHNOLOGY NEW SITE PLAN
ETD-101	DEMO ELECTRICAL/TECHNOLOGY SITE PLAN

PLUMBING INDEX

Sheet №	Sheet Name
P-000	COVER SHEET
PS-101	PLUMBING SITE PLAN

STRUCTURAL INDEX

Sheet №	Sheet Name
STRUCTURAL	
S-011	GENERAL NOTES
S-101	SITE PLAN & DETAILS
S-102	SITE DETAILS
S-300	GENERAL CONCRETE AND STL REINF NOTES AND TYP DETAILS

ISSUE FOR PROPOSAL

2145 W. NASA BLVD
WEBSTER, TX 77598

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

3/5/2026 9:15:53 AM

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE JOBSITE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOBSITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN A SAFE AND WORKMANLIKE MANNER TO PREVENT INJURIES AND AFTER WORKING HOURS, UNTIL PROJECT COMPLETION.
4. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALE DIMENSIONS. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATION FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND CONSTRUCTION INSPECTIONS WITH THE PROPER REGULATORY AGENCIES, PRIOR TO BEGINNING CONSTRUCTION. COPIES OF ALL PERMITS SHALL BE SENT TO THE ENGINEER.
6. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN RIGHT-OF-WAYS.
7. TOPOGRAPHIC SURVEY BY: MILLER SURVEY
   1760 W. SAM HOUSTON PKWY N.
   HOUSTON, TX 77043
   FIRM REG. NO. 10047100
8. BENCHMARK: SEE SURVEY
9. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTACTING THE SURVEYOR AND VERIFYING THE BENCHMARK AND ON SITE TBM'S IN THE FIELD.
10. THE DRAWINGS SHOW AS MUCH INFORMATION AS CAN BE REASONABLY OBTAINED FROM ON THE GROUND OBSERVATION AND EXISTING CONSTRUCTION DRAWINGS REGARDING THE ENTIRE TOPOGRAPHY, CONTOURS, SUB-SURFACE SOILS, AS WELL AS THE LOCATION AND NATURE OF PIPELINES, STORM SEWERS, WATERLINES, NATURAL GAS LINES, UNDERGROUND CABLES, ECT, HOWEVER, THE ACCURACY OF OR COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED.
11. THE EXISTING UTILITIES SHOWN WERE PROVIDED BY THE SURVEYOR, THE CONTRACTOR SHALL VERIFY THE LOCATIONS, SIZES, AND DEPTHS OF ALL UTILITIES. THE CONTRACTOR SHALL CONTACT THE CIVIL ENGINEER IF UTILITIES SHOWN ARE NOT AS SPECIFIED.
12. CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.) REGULATIONS.
13. ALL WORK IS TO BE DONE IN ACCORDANCE WITH APPLICABLE NATIONAL, STATE, MUNICIPAL, AND LOCAL CODES.
14. IT IS THE CONTRACTORS RESPONSIBILITY TO SUPERVISE AND COORDINATE ALL WORK TO ENSURE THE PROPER EXECUTION. ALL WORK IS TO BE ACCOMPLISHED IN A NEAT, WORKMAN LIKE MANNER, AND ALL EXCESS MATERIALS, TRASH, DEBRIS, ECT., SHALL BE REMOVED FROM THE JOB BY THE CONTRACTOR, AT HIS EXPENSE.
15. THE CONTRACTOR SHALL INCLUDE IN HIS BID AS AN INCIDENTAL ITEM FOR THE REMOVAL OF ANY EXISTING SIGNAGE THAT IS IN THE WAY OF THE PROPOSED NEW CONSTRUCTION. IF REMOVAL OF SIGNAGE IS NECESSARY, THE CONTRACTOR SHALL REPLACE SAID SIGNAGE.
16. THE CONTRACTOR SHALL KEEP ALL STREETS FREE OF DIRT, MUD,ETC. DURING THE COURSE OF CONSTRUCTION.
17. THE CONTRACTOR SHALL NOT LEAVE ANY TRENCHES OR PITS OPEN OVER NIGHT. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING THE SCHOOL CHILDREN OUT OF WORK AREA.
18. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA PRIOR TO COMMENCING WORK IN ANY RIGHT-OF-WAY OR EXISTING EASEMENT. A VERIFICATION NUMBER FROM THE ONE-CALL UTILITY COORDINATING COMMITTEE WILL BE REQUIRED. (800) 344-8377.
19. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANIES TO RELOCATE EXISTING POWER POLE(S) AND/OR UTILITY BOX(ES) OR ANY OTHER UTILITIES DEEMED NECESSARY BY THE ENGINEER. CONTRACTOR SHALL COORDINATE THE RELOCATION AND PAY ANY FEES.
20. STRIPING AND CROSS-HATCHING SHALL BE "TRAFFIC YELLOW" PAINTED LINES, FOUR (4) INCHES WIDE UNLESS OTHERWISE NOTED.
21. ALL PAVEMENT MARKINGS (OTHER THAN STRIPING & CROSS-HATCHING) SHALL BE THERMOPLASTIC.
22. REFER TO ARCHITECTURAL SHEETS FOR HANDICAP SIGNAGE.
23. EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY STANDARDS.
24. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.
25. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.
26. WHEEL CHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS AT ALL INTERSECTIONS WHERE SIDEWALKS EXIST AND THE EXISTING CURB OR SIDEWALK IS DAMAGED OR REMOVED DURING CONSTRUCTION.
27. THIS PROPERTY IS LOCATED IN ZONE "X" UNSHADED, AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN & ZONE "X" SHADED IN THE 0.2% ANNUAL CHANCE FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0019G PANEL 19 OF 600, DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.

UTILITY NOTES

28. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR FOR EXCAVATION, INSTALLATION, BACKFILLING OF WATER AND/OR SEWER MAINS AND RELATED APPURTENANCES AS SHOWN ON THE PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.
29. THE CONTRACTOR SHALL COMPLY WITH O.S.H.A. REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION. CONTRACTOR SHALL PROVIDE SHEETING, SHORING AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION.
30. CONTRACTOR SHALL INCLUDE IN BASE PROPOSAL ALL COSTS ASSOCIATED WITH DE-WATERING WELL POINTING, STABILIZING, ETC, THAT MAY BE REQUIRED TO INSTALL ANY AND ALL UNDERGROUND UTILITIES.
31. BEDDING AND BACKFILL SHALL BE SUBSIDIARY TO THE PAY ITEMS FOR PIPE AND SHALL NOT BE PAID FOR DIRECTLY. REFER TO DETAILS. IF WET SAND CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER AND ENGINEER IMMEDIATELY.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHIPPING AND STORING OF ALL WATER AND SEWER MATERIALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE SUCH MATERIALS AT THE POINT OF DELIVERY AND TO REJECT ALL DEFECTIVE MATERIAL. THE CONTRACTOR SHALL REPLACE THE DEFECTIVE MATERIAL WITH SOUND MATERIAL AT HIS OWN EXPENSE.
33. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL AT ALL TIMES BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS FOR MATERIALS AND EQUIPMENT.
34. ALL STORM SEWER TO BE HIGH DENSITY POLYETHYLENE CORRUGATED EXTERIOR / SMOOTH INTERIOR PIPE WITH WATER TIGHT JOINTS PER ASTM D 3212 UNLESS OTHERWISE OR SPECIFICALLY NOTED.
35. HIGH DENSITY POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION OR THE PLANS / SPECIFICATIONS; WHICHEVER IS MORE RESTRICTIVE.
36. ALL WATER MAINS TO HAVE A MINIMUM OF 4' (FOUR FEET) OF COVER FROM PROPOSED TOP OF CURB WHEN CONSTRUCTED IN STREET RIGHT-OF-WAY AND 4' (FOUR FEET) OF COVER FROM FINISHED GRADE WHEN CONSTRUCTED WITHIN EASEMENTS. WATER LINES 4" AND LARGER SHALL CONFORM TO ALL REQUIREMENTS OF AWWA C900 - DR 18, CLASS 150, 2", 2-1/2" AND 3" WATER LINES SHALL CONFORM TO ALL REQUIREMENTS OF ASTM D2241 FOR PVC PIPE AND SHALL BE PRESSURE RATED AT 200 P.S.I. WITH A STANDARD DIMENSION RATION (SDR) OF 21 FOR CLASS 200 FOR BOTH BARREL AND BELL DIMENSIONS. WATER LINES SMALLER THAN 2" SHALL CONFORM TO ALL REQUIREMENTS OF SCHEDULE 40.
37. PIPE SLEEVES ARE TO BE 6" PVC, SCHEDULE 40 PIPE CAPPED AT EACH END. THE TOP OF THE PIPE SLEEVE SHALL BE 12" TO 18" BELOW THE BOTTOM OF CONCRETE PAVEMENT OR WALK. EACH END SHALL EXTEND A MINIMUM OF TWO (2) FEET BEYOND THE EDGE OF CONCRETE PAVEMENT OR WALK. LOCATION OF EACH END TO BE MARKED IN CURB OR PAVEMENT WITH BRASS BOLTS.
38. ROOF DRAIN AND DOWNSPOUT COLLECTOR LINES SHALL BE PVC, SDR-26 PIPE (ASTM D2241) OR SCHEDULE 40 PIPE, AND AT A MINIMUM GRADE OF 0.5% UNLESS NOTED OTHERWISE. COLLECTOR LINES SHALL BE SIZE ON SIZE AND 6" MINIMUM FOR DOWNSPOUTS. ONCE TWO OR MORE ROOF DRAINS / DOWNSPOUTS ARE CONNECTED THE COLLECTOR LINE (RD AND/OR DS) SHALL BE 12" UNLESS NOTED OTHERWISE, NO 90° BENDS SHALL BE USED. ALL BENDS IN LINES SHALL BE MADE WITH EITHER "WYES" OR DOUBLE 45° BENDS. REFER TO THE ARCHITECTURAL SHEETS FOR EXACT LOCATIONS OF GUTTER DOWNSPOUTS AND/OR MEP SHEETS FOR EXACT LOCATION/ SIZES OF ROOF DRAINS. WHERE DOWNSPOUT COLLECTORS ARE LOCATED IN PAVED AREAS, PROVIDE A 24"X24" BLOCK OUT AROUND PIPE. REFER TO DETAILS.
39. CONTRACTOR SHALL PROVIDE A MINIMUM OF 6" (SIX INCHES) VERTICAL CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS AND AT STORM SEWER AND SANITARY SEWER CROSSINGS, AND A MINIMUM OF 12" (TWELVE INCHES) VERTICAL CLEARANCE AT WATER LINE AND SANITARY SEWER CROSSINGS.
40. MARK LOCATIONS OF ALL CABLE AND TELEPHONE LINES EXTENDING BENEATH PAVING BY SETTING A 60D GALVANIZED NAIL FLUSH WITH TOP OF CURB (OR TOP OF PAVEMENT WHERE THERE IS NO CURB).
41. CONNECTION TO EXISTING MANHOLES / INLETS SHALL BE MADE IN A NEAT AND WORKMANLIKE MANNER. NON-SHRINK GROUT SHALL BE USED TO SEAL THE CONNECTION ON BOTH THE INSIDE AND OUTSIDE OF EXISTING MANHOLES / INLETS. ANY DAMAGE TO EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
42. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO WATER LINES, WASTEWATER COLLECTION SYSTEMS AND STORM SEWERS, DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED AT HIS EXPENSE AND IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION AND/OR AS DIRECTED BY THE ENGINEER.

UTILITY NOTES

43. EXISTING UTILITIES SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PERIOD UNTIL SUCH TIME THAT NEW UTILITIES CAN BE MADE OPERATIONAL.
44. REFER TO THE M.E.P. SHEETS FOR EXACT LOCATIONS OF WATER, FIRE, GAS AND SANITARY SEWER CONNECTIONS AT THE BUILDING.
45. REFERENCE M.E.P. SHEETS FOR REMOVAL AND/OR REROUTING OF ANY ELECTRICAL SERVICES OR ANY UTILITY LINE (ROOF DRAIN, SANITARY SEWER, ETC.) THAT LIES UNDER A PROPOSED STRUCTURE.
46. UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURB INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONTRACT IS COMPLETE.
47. CONTRACTOR SHALL PROVIDE SILT BARRIER FENCE ON ALL STAGE 1 CURB INLETS.
48. THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL AN INCIDENTAL AMOUNT FOR THE SAW CUTTING, REMOVAL AND REPLACEMENT OF PAVEMENT AT ALL LOCATIONS WHERE PROPOSED UTILITIES CROSS EXISTING PAVEMENT, WHETHER SHOWN ON THE DRAWINGS OR NOT. THE CONTRACTOR SHALL MATCH THE EXISTING PAVEMENT TYPE, THICKNESS AND GRADES.
49. WHEN CONNECTING TO EXISTING SANITARY SEWERS OR STORM DRAINAGE SYSTEMS, THE CONTRACTOR SHALL START AT THE DOWNSTREAM END AND WORK UPSTREAM, THE CONTRACTOR SHALL ALSO VERIFY THE ELEVATIONS OF THE UPSTREAM AND DOWNSTREAM CONNECTIONS PRIOR TO STARTING WORK. IF ELEVATIONS ARE NOT AS SHOWN ON THE DRAWINGS, CONTACT THE ENGINEER. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR START UPSTREAM AND WORK DOWNSTREAM. PIPE SHALL BE INSTALLED WITH THE BELLS AT THE UPSTREAM END.
50. TELEPHONE COMPANY FACILITIES MAY EXIST ON THE PROPERTY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT BE OCCASIONED BY A FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CALL (800) 344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF TELEPHONE FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING THE CONTRACTOR SHALL EXPOSE THE TELEPHONE FACILITIES. WHEN TELEPHONE FACILITIES ARE EXPOSED, THE CONTRACTOR SHOULD PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT
51. CAUTION: UNDERGROUND GAS FACILITIES
    GAS LINES (TO INCLUDE UNIT GAS TRANSMISSION AND/OR INDUSTRIAL GAS SUPPLY CORPORATION WHERE APPLICABLE) MAY EXIST ON THE PROPERTY. SERVICE LINES ARE USUALLY NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 811 OR (800) 669-8344 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICES LINES FIELD LOCATED
    * WHEN GAS LINE MARKINGS ARE NOT VISIBLE CALL (713) 967-8037 (7:00 AM-4:30 PM) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
    * WHEN EXCAVATING WITHIN 18" OF THE INDICATED LOCATION OF GAS FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
    * WHEN GAS FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING
    THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.
52. WARNING: OVERHEAD ELECTRICAL FACILITIES
    OVERHEAD LINES MAY EXIST ON THE PROPERTY. THESE LINES ARE CLEARLY VISIBLE, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN 6' OF LIVE OVERHEAD HIGH VOLTAGE LINES, PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY, TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL POWER COMPANY AT (713) 207-2222 (CENTERPOINT).
    WARNING: UNDERGROUND ELECTRICAL FACILITIES
    UNDERGROUND ELECTRICAL FACILITIES MAY EXIST ON THE PROPERTY. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL THE UCC AT 811, OR TOLL FREE AT (800) 669-8344, TO VERIFY THAT NO UNDERGROUND FACILITIES EXIST.
53. ALL UNDERGROUND PIPE SHALL HAVE A 12 GAUGE METALLIC TRACER WIRE RUNNING THE FULL LENGTH OF THE PIPE. TRACER WIRE SHALL BE TAPED TO THE PIPE AT INTERVALS NOT TO EXCEED 15 FEET USING DUCT TAPE.

PAVING AND GRADING NOTES

54. REFERENCE THE ARCHITECTURAL SITE PLAN FOR SIDEWALK JOINT PATTERN. SIDEWALK JOINTS SHALL ALIGN WITH PAVING JOINTS WHEN SIDEWALK IS ADJACENT TO PAVING.
55. THE INLETS/MANHOLES SHALL BE COORDINATED WITH THE LOCATION OF PAVEMENT JOINT PATTERN WITHIN PAVEMENT AREAS.
56. EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE BUILDING AND PERIMETER CONCRETE PAVING. SEAL JOINT AS REQUIRED FOR PAVING JOINTS.
57. UNLESS OTHERWISE SPECIFIED, ALL PAVEMENT JOINT SEALANT SHALL BE SELF-LEVELING SILICONE JOINT SEALANT, (DOWSIL / DOW CORNING 888 SILICONE JOINT SEALANT, DAP® SILICONE PLUS™ PREMIUM SILICONE RUBBER CONCRETE SEALANT, GE SILICONE II MASONRY & CONCRETE SEALANT - 5020, SIKASIL - 728 SL, OR PRE-APPROVED EQUIVALENT.)
58. REFER TO STRUCTURAL FOR ANY DOWELS REQUIRED TYING THE BUILDING FOUNDATION AND ADJACENT CONCRETE PAVING TOGETHER.
59. SAWED JOINTS & TRANSVERSE JOINTS ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
60. SAWING OF JOINTS MUST BEGIN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO AVOID EXCESSIVE RAVELING. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
61. THE CONTRACTOR SHALL REPLACE ANY DAMAGED AND/OR REMOVED CONCRETE PAVEMENT, CURB AND/OR WALK TO EQUAL OR BETTER THAN EXISTING CONDITION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INCLUDE ANY CONCRETE PAVEMENT, CURB OR WALK REMOVAL AND REPLACEMENT IN HIS BID AS AN INCIDENTAL TO THE COST OF CONSTRUCTION.
62. THE CONTRACTOR SHALL GRADE THE SITE AS INDICATED BY THE CONTOUR LINES. DIRECTIONAL ARROWS AND ELEVATIONS SHOWN ON DRAWINGS. ALL GRADING SHALL VARY UNIFORMLY BETWEEN ELEVATIONS SHOWN.
63. AT ALL DOORWAYS, THE LANDING SHALL SLOPE AT A MAXIMUM OF 2% AWAY FROM DOORWAY FOR A MINIMUM OF 5 FEET. MATCH FINISH FLOOR ELEVATION AT FACE OF DOORWAYS.
64. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING SILT FENCE OR PLACING SQUARE HAY BALES AT ALL POINTS WHERE STORMWATER RUNOFF EXITS THE SCHOOL PROPERTY, AND AT ALL STORM SEWER INLETS AND MANHOLES, TO PREVENT SEDIMENT CONTAMINATION OF THE EXISTING DRAINAGE ARTERIES AND NEW STORM SEWERS DURING CONSTRUCTION OF OF THIS PROJECT. REFERENCE "STORM WATER POLLUTION PREVENTION PLAN".
65. SITE TO BE CLEARED OF VEGETATION AND DEBRIS AS NECESSARY TO COMPLETE PROJECT OR AS DIRECTED BY ENGINEER, STRIPPINGS, IF CLEAN, ARE TO BE STOCKPILED AND USED AS DRESSING FOR GRADING, OTHERWISE THE STRIPPINGS SHALL BE DISPOSED OF BY THE CONTRACTOR.
66. ALL EXCESS DEBRIS, TREES, AND/OR WASTE MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY, ALL ASSOCIATED COST SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
67. BACKFILL TO TOP OF NEW PAVEMENT OR CURBS WITH CLEAN SOIL FREE OF CLODS. ALL DISTURBED AREAS AND AREAS REQUIRING GRADING SHALL BE FINE GRADED. REMOVE ALL TRASH/DEBRIS AND PROVIDE A SMOOTH SURFACE FOR PROPER TURF MANAGEMENT. ENDROMULCH DISTURBED AREAS NOT NOTED TO BE SOLID SOD OR AS DIRECTED BY THE ENGINEER.
68. WHERE NEW CONCRETE PAVING MEETS EXISTING CONCRETE PAVING, INSTALL 3/4" SMOOTH DOWELS, (18" LONG AND 18" C-C), BY DRILLING 8" INTO THE CENTER OF THE EXISTING SLAB AND EMBEDDING WITH EPOXY. WHEN PAVING UP TO BUILDING FOUNDATIONS, ALSO INSTALL IMPREGNATED FIBER BOARD EXPANSION MATERIAL WITH TOP PULL STRIP FOR CAULKING.
69. PAVEMENT GRADES SHALL VARY UNIFORMLY BETWEEN ELEVATIONS SHOWN.
70. SECURE PRECAST CONCRETE WHEEL STOPS BY DRILLING AND SETTING #4 DOWELS INTO PAVEMENT.
71. FILL AREAS NOTED ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 8" IN DEPTH AND EACH LAYER COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY. FILL AREA SHALL BE SEEDED AND FERTILIZED WITHIN 10 WORKING DAYS.
72. CONTRACTOR SHALL INSTALL A GRASS SOLID SOD ADJACENT TO ALL PROPOSED CURBS, DRIVES AND /OR WALKS,
73. MATCH ALL ELEVATIONS WHERE PROPOSED PAVEMENT ADJOINS EXISTING PAVEMENT.
74. PRIOR TO ANY CHEMICAL STABILIZATION OF SOIL WITH LIME, FLY ASH OR ANY OTHER MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER, CONTRACTOR SHALL HAVE A THIRD PARTY TESTING LAB PERFORM A SOIL ANALYSIS, INCLUDING BUT NOT LIMITED TO A LIME SERIES TEST, TO CONFIRM THE REQUIRED APPLICATION RATE OF THE CHEMICAL USED FOR STABILIZATION.
75. TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL SANDY LOAM SURFACE SOIL WITH A MINIMUM OF 4 PERCENT ORGANIC MATERIAL CONTENT FREE OF STONES 1 INCH OR LARGER IN ANY DIMENSION AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH. COMPLY WITH ASTM D 5268.
76. HYDROMULCH ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED. HYDROMULCH TO BE INSTALLED 90 DAYS PRIOR TO SUBSTANTIAL COMPLETION OR AS SOON AS POSSIBLE IN ORDER TO ESTABLISH GROW-IN PER SPEC, ALTERNATIVELY, GENERAL CONTRACTOR TO PROVIDE SOLID SOD IN LIEU OF HYDROMULCH.

CIVIL LEGEND

201	PROPOSED CONTOUR
	PROPOSED CATCH BASIN (C-1)
	PROPOSED "A" INLET (A-1)
	PROPOSED "E" INLET (E-1)
	PROPOSED STORM MANHOLE W/ GRATE TOP
	PROPOSED MANHOLE
	PROPOSED H-2 OR JUNCTION BOX INLET
	GATE VALVE & BOX
	PIPE SLEEVES
	PROP. 45° EL
	TAPPING SLEEVE & VALVE
TC	TOP OF CURB ELEVATION
TP	TOP OF PAVEMENT ELEVATION
TG	TOP OF GRATE ELEVATION
TR	TOP OF RIM (MANHOLE)
FG	FINISH GRADE ELEVATION
MEG	MATCH EXISTING GRADE
FL	FLOWLINE ELEVATION
	SWALE
TFL	THROAT FLOWLINE ELEVATION ("E" INLET)
FH	FIRE HYDRANT
MH	MANHOLE
CO	CLEAN OUT
DCO	DOUBLE CLEAN OUT
DS	DOWNSPOUT COLLECTOR
NIC	NOT IN CONTRACT
RD	ROOF DRAIN COLLECTOR
GV	GATE VALVE
STM	STORM SEWER
SAN	SANITARY SEWER
RCP	REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE
FFF	FILTER FABRIC FENCE
RFB	REINFORCED FABRIC BARRIER
IPB	INLET PROTECTION BARRIER
X	EXPANSION JOINT
L	LONGITUDINAL CONSTRUCTION JOINT
LT	LONGITUDINAL-TIED CONSTRUCTION JOINT
T	TRANSVERSE CONTRACTION JOINT
S	SAWED PAVEMENT JOINT
UE	UTILITY EASEMENT
SSE	SANITARY SEWER EASEMENT
EP	EDGE OF PAVEMENT
HB	HIGH BANK OF DITCH
CL	CENTERLINE OF DITCH
PP	POWER POLE
GW	GUY WIRE
GM	GAS METER
PB	PHONE BOX
FC	FENCE CORNER
CB	CABLE BOX
NG	NATURAL GROUND
23.0	EXISTING ELEVATION
TP XX.XX	PROPOSED ELEVATION
	ATHLETIC LIGHTPOLE
	ELECTRICAL PEDISTAL
	HOSE BIB

PERMITTING INFORMATION

PROJECT NAME:
CSF & MAIN TRANSPORTATION DRIVEWAY PORTION

LEGAL DESCRIPTION:
LT 9 & TRS 4A 5A & 10A & TR 26Q
ABST 15 J DICKINSON WEBSTER OUTLOTS 9

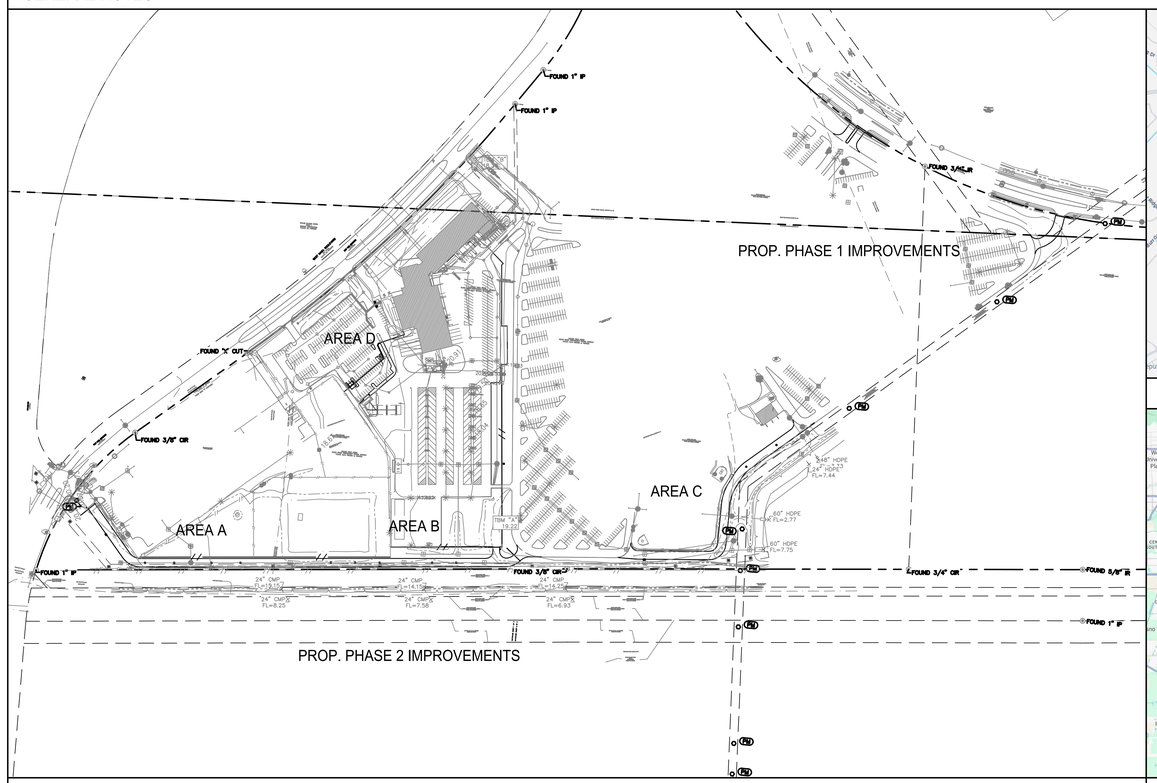
PHYSICAL ADDRESS:
2145 W. NASA BLVD.
WEBSTER, TX 77598

TOTAL ACREAGE OF EXISTING LOT:
98.1290 ACRES

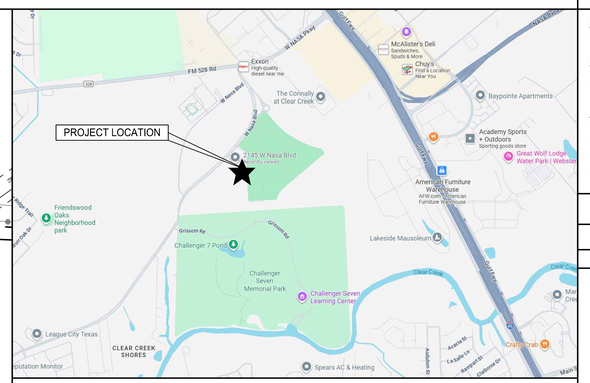
INDEX OF DRAWINGS

SHEET	DESCRIPTION
C 001	NOTES, INDEX, & LEGEND
C 002.1	SURVEY (FOR INFORMATION ONLY)
C 002.2	SURVEY (FOR INFORMATION ONLY)
C 003	DEMOLITION PLAN (AREA A)
C 004	DEMOLITION PLAN (AREA B)
C 005	DEMOLITION PLAN (AREA C)
C 006	DEMOLITION PLAN (AREA D)
C 100	OVERALL SITE PLAN
C 101	SITE PLAN (AREA A)
C 102	SITE PLAN (AREA B)
C 103	SITE PLAN (AREA C)
C 104	SITE PLAN (AREA D)
C 201	DRAINAGE PLAN (AREA A)
C 202	DRAINAGE PLAN (AREA B)
C 203	DRAINAGE PLAN (AREA C)
C 204	DRAINAGE PLAN (AREA D)
C 205	DRAINAGE AREA MAP (AREA A)
C 206	DRAINAGE AREA MAP (AREA B)
C 207	DRAINAGE AREA MAP (AREA C)
C 208	DRAINAGE CALCULATIONS
C 301	MITIGATION PLAN (AREA A)
C 302	MITIGATION PLAN (AREA B)
C 303	MITIGATION PLAN (AREA C)
C 401	PAVING & JOINTING PLAN (AREA A)
C 402	PAVING & JOINTING PLAN (AREA B)
C 403	PAVING & JOINTING PLAN (AREA C)
C 404	PAVING & GRADING PLAN (AREA D)
C 405	GRADING PLAN (AREA A)
C 406	GRADING PLAN (AREA B)
C 407	GRADING PLAN (AREA C)
C 408	GRADING PLAN (AREA D)
C 501	EROSION CONTROL PLAN (AREA A)
C 502	EROSION CONTROL PLAN (AREA B)
C 503	EROSION CONTROL PLAN (AREA C)
C 504	EROSION CONTROL PLAN (AREA D)
C 601	DETAILS
C 602	DETAILS

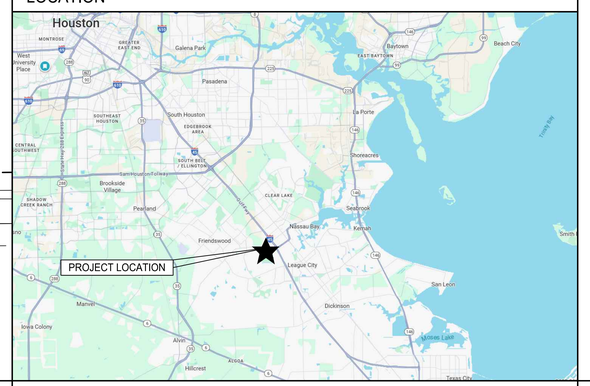
SITE PLAN



LOCATION



VICINITY



CIVIL

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY
2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

PBK
HOUSTON, TX
713-865-6008
TX FIRM: BR 1608
www.pbk.com

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY:
DRAWN BY:

NOTES, INDEX, & LEGEND

C 001

b:\25\250236\FOCD\IGD\dwgs\PHASE 2\C 001 NOTES, INDEX, & LEGEND.dwg Last Saved: KFALKE
Thursday, February 19, 2026 11:49:08 AM

VICINITY MAP
NOT TO SCALE



50' 25' 0 50' 100' 150'
SCALE IN FEET
1" = 50'

SYMBOLS

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NOTES:

1. THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A CITY PLANNING LETTER ISSUED BY TEXAS AMERICAN TITLE, FILE No.2791024-00650, ISSUED DATE OF SEPTEMBER 30, 2025, WITH REGARD TO ANY RECORDED EASEMENTS, RIGHTS-OF-WAY OR SETBACKS AFFECTING THE SURVEYED PROPERTY. NO ADDITIONAL RESEARCH REGARDING THE EXISTENCE OF EASEMENTS, RESTRICTIONS, OR OTHER MATTERS OF RECORD HAS BEEN PERFORMED BY THE SURVEYOR.

2. ALL BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM OF 1983 (NAD83), SOUTH CENTRAL ZONE, PER GPS OBSERVATIONS.

3. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP No. 48167C0019G, EFFECTIVE DATE OF 08/15/2019, THE SURVEYED PROPERTY LIES WITHIN ZONE "X" (SHADED), AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD, AND "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

4. ALL UNDERGROUND UTILITIES SHOWN HEREON ARE FROM SURFACE FEATURES, VISIBLE EVIDENCE, PARTIAL FIELD LOCATION BY TEXAS 811 ONE-CALL AND LONESTAR LOCATING, LLC. ALL UNDERGROUND SANITARY AND STORM SEWER LINES ARE BASED ON SURFACE LOCATIONS AND INVERTS OF MANHOLES AND STORM INLETS. ALL COVER DEPTHS ON UNDERGROUND UTILITIES ARE AS PER LONESTAR LOCATING, LLC. ALL UNDERGROUND UTILITY LOCATIONS AND COVER DEPTHS SHOWN HEREON ARE TO BE CONSIDERED APPROXIMATE AND NEED TO BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. LONESTAR LOCATING, LLC USES TRANSMISSION SIGNALS TO MARK THE LOCATION AND COVER DEPTHS OF THE UNDERGROUND UTILITIES. SOME OF THE UNDERGROUND UTILITIES SUCH AS WATER LINES, FIBER OPTIC LINES WITHOUT TRACERS, PLASTIC, FIBERGLASS AND PVC PIPES ARE NOT LOCATABLE BY TRANSMISSION SIGNALS.

5. PROJECT BENCHMARK: HCFCD RM No. 010075 (STREAM No. A100-00-00)
BEING AN ALUMINUM ROD WITH A COVER STAMPED "RM 010075" SET IN A METAL CASING. TO REACH THE BENCHMARK START FROM I-45 AT FM 528 AND TRAVEL WEST +/- 0.5 MILE TO W. NASA BLVD., THEN SOUTH ON W. NASA +/- 1.0 MILE TO CHALLENGER SEVEN MEMORIAL PARK. ENTER THE PARK AND FOLLOW PARK ROAD +/- 1.0 MILE TO LARGE PARKING AREA AND NATURE CENTER BUILDING. MONUMENT IS WEST OF PARKING LOT AND BETWEEN ASPHALT NATURE TRAIL AND DRIVEWAY TO NATURE CENTER BUILDING.
ELEVATION = 14.26' NAVD88, 2001 ADJUSTMENT

6. TEMPORARY BENCHMARK (TBM) "A":
BEING AN "X" CUT ON TOP OF A CURB LINE LOCATED APPROXIMATELY 121 FEET SOUTH EAST OF THE CENTERLINE INTERSECTION OF THE DRIVEWAY SERVICING A PARKING LOT AND THE CONCRETE DRIVE TO A BUS BARN AND +/- 20 FEET NORTHEAST OF A GRATE INLET.
ELEVATION = 19.22' NAVD88, 2001 ADJUSTMENT

7. TEMPORARY BENCHMARK (TBM) "B":
BEING AN "X" CUT ON TOP OF A CURB INLET LOCATED APPROXIMATELY 100 FEET SOUTHEAST OF THE CENTERLINE INTERSECTION OF W. NASA BOULEVARD AND THE MOST NORTHERLY DRIVEWAY ENTRANCE TO THE COSD CHILD NUTRITIONAL SERVICES BUILDING. BENCHMARK IS ALSO LOCATED APPROXIMATELY 118 FEET NORTH OF THE MOST NORTHERLY BUILDING CORNER SHOWN ON THE SUBJECT TRACT.
ELEVATION = 18.38' NAVD88, 2001 ADJUSTMENT

8. PROJECT SITE IS AFFECTED BY AN ORDINANCE AFFECTING CITY BOUNDARY LINES BETWEEN THE CITY OF LEAGUE CITY, TEXAS AND THE CITY OF WEBSTER, TEXAS. RECORDED IN HARRIS COUNTY CLERK'S FILE NUMBER RP-2021-482413.

9. ALL ELEVATIONS PLOTTED HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), 2001 ADJUSTMENT.

ELEVATIONS SHOWN HEREON ARE TRUE AND CORRECT AND BASED UPON AN ON THE GROUND SURVEY PERFORMED UNDER MY SUPERVISION DURING THE MONTHS OF OCTOBER, NOVEMBER AND DECEMBER, 2025 AND JANUARY 2026

Anthony R. Peacock

ANTHONY R. PEACOCK, R.P.L.S.
TEXAS REGISTRATION No. 5047
PEACOCK@MILLERSURVEY.COM

STATE OF TEXAS
ANTHONY R. PEACOCK
5047
REGISTERED PROFESSIONAL LAND SURVEYOR

2145 W. NASA BLVD.
LEAGUE CITY, TX 77598 SHEET 1 OF 2

REVISED:

PARTIAL TOPOGRAPHIC SURVEY PLAT
CLEAR CREEK I.S.D.
CENTRAL SUPPORT FACILITY

LOCATED IN THE
ROBERT WILSON SURVEY, A-88, AND THE
JOHN DICKINSON SURVEY A-15
HARRIS COUNTY, TEXAS

MillerSurvey
DCCM

Miller Survey | Firm Reg. No. 10047100
1760 W. Sam Houston Pkwy N.
Houston, TX 77043
713.413.1900 | millersurvey.com

JOB No. 73187 PH. 3 (3935)	SCALE: 1"=50'	DATE: 01/14/2026	FIELD BOOK: 27/25-076 GG
DWG. No. 3935-DS-4.DWG	DRAWN BY: DAE	CHECKED BY: BJN/ARP	M&B No.: N/A

PBK
www.pbk.com
TX FIRM: BR 1608
HOUSTON, TX
713-865-0008

NEW DRIVEWAY AT
CENTRAL SUPPORT FACILITY
2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

Karsten H. Falke
STATE OF TEXAS
KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
03/03/2026
PBK ENGINEERS
F-18326

CLIENT: CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE: 03.03.2026	PROJECT NUMBER: 250236

DRAWING HISTORY

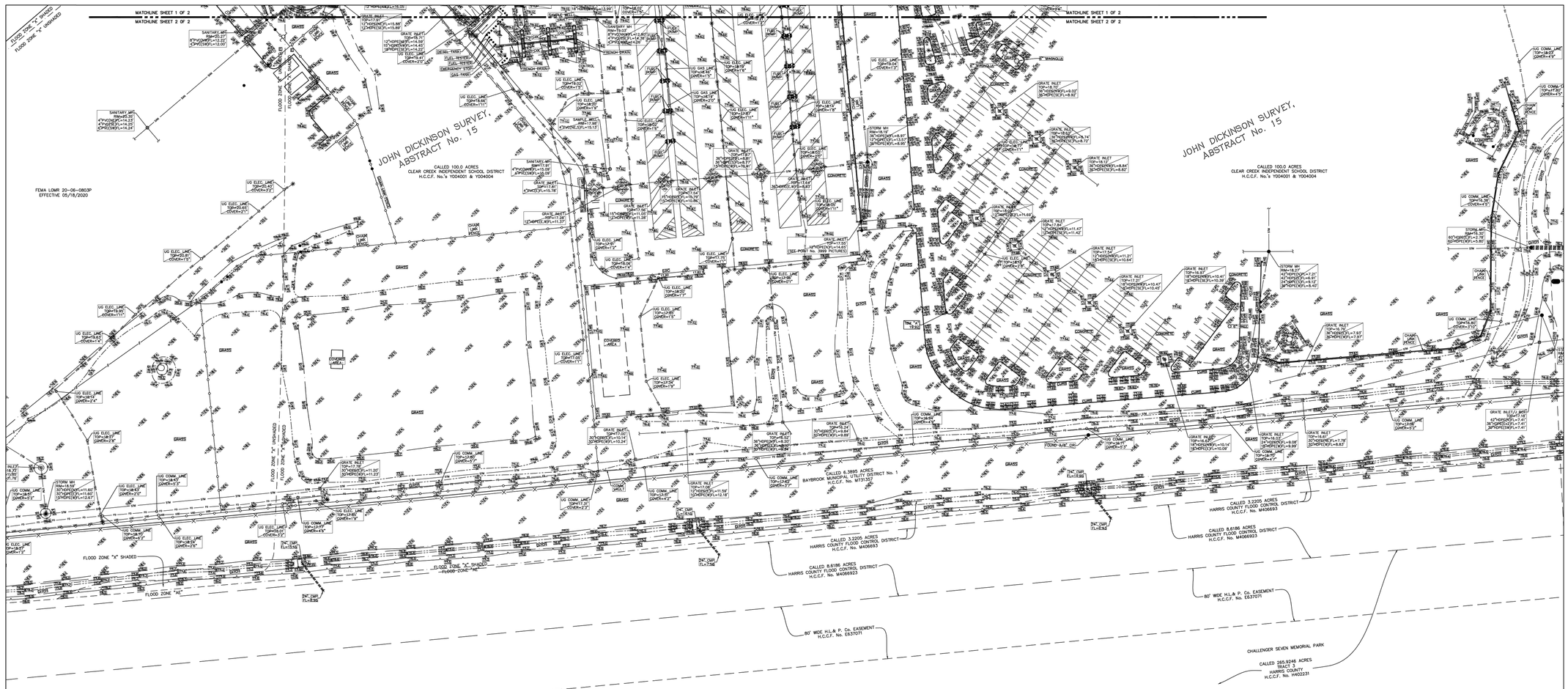
No.	Description	Date

CHECKED BY:
DRAWN BY:

SURVEY (FOR INFORMATION ONLY)

C 002.1

b:\250\250236\FOC\DIG\Dwgs\PHASE 2\C 002.1 SURVEY (FOR INFORMATION ONLY).dwg Last Saved: JWHATLEY
Wednesday, February 18, 2026 3:17:11 PM



SYMBOLS

- = FOUND 5/8-INCH IRON ROD (UNLESS OTHERWISE NOTED)
- = SET 5/8-INCH IRON ROD W/MILLER SURVEY CAP (UNLESS OTHERWISE NOTED)
- = ANGLE POINT
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TEXAS REGISTRATION No. 5047
PEACOCK@MILLERSURVEY.COM

STATE OF TEXAS
REGISTERED
ANTHONY R. PEACOCK
5047
PROFESSIONAL
LAND SURVEYOR

2145 W. NASA BLVD.
LEAGUE CITY, TX 77598 SHEET 2 OF 2

REVISED:

PARTIAL TOPOGRAPHIC SURVEY PLAT CLEAR CREEK I.S.D. CENTRAL SUPPORT FACILITY

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713.413.1900 | millersurvey.com

JOB No. 73187 PH. 3 (3935)	SCALE: 1"=50'	DATE: 01/14/2026	FIELD BOOK: 27/25–076 GG
DWG. No. 3935–DS–4.DWG	DRAWN BY: DAE	CHECKED BY: BJN/ARP	M&B No.: N/A

PBK
HOUSTON, TX
713.865.6008
TX FIRM: BR 1608
www.pbk.com

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
03/03/2026
ENGINEERS
F-18826

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

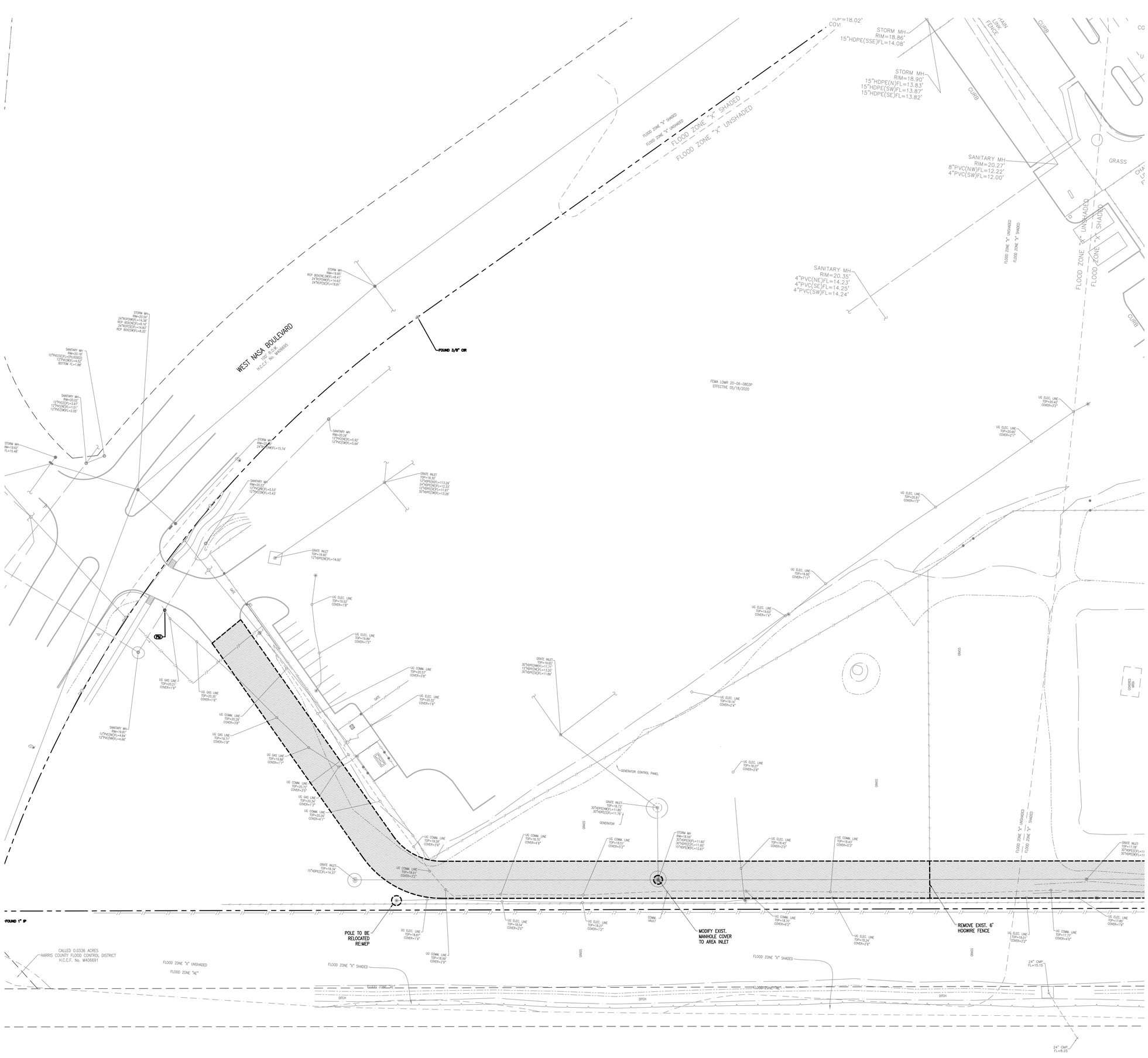
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SURVEY (FOR INFORMATION ONLY)

C 002.2

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Thursday, February 19, 2026 11:50:34 AM



NORTH

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NOTES TO SHEET

1. LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
2. UNLESS OTHERWISE INDICATED, ITEMS SHOWN TO BE DEMOLISHED SHALL BECOME PROPERTY OF THE CONTRACTOR. SALVAGE OR DISPOSE OFF-SITE.
3. CONTRACTOR SHALL RESTORE ANY UTILITIES DAMAGED BY DEMOLITION OR CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER CONDITION. NO SEPARATE PAY.
4. ALL DESIGNATED DEMOLITION OR RELOCATION OF EXISTING PIPING SHALL BE COORDINATED WITH PROPOSED CONSTRUCTION SO THAT EXISTING UTILITIES REMAIN IN SERVICE UNTIL SUCCESSFUL INSTALLATION OF NEW UTILITIES.
5. MODIFY EXISTING DRAINAGE AS INDICATED ON PROPOSED GRADING AND DRAINAGE PLAN.
6. EXIST. UNDERGROUND UTILITIES TO REMAIN UNLESS CALLED TO BE REMOVED.

LEGEND

CLEAR AND GRUB AREA REMOVING ALL TREES & GRASS WITHIN HATCHED ZONE UNLESS OTHERWISE NOTED

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2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

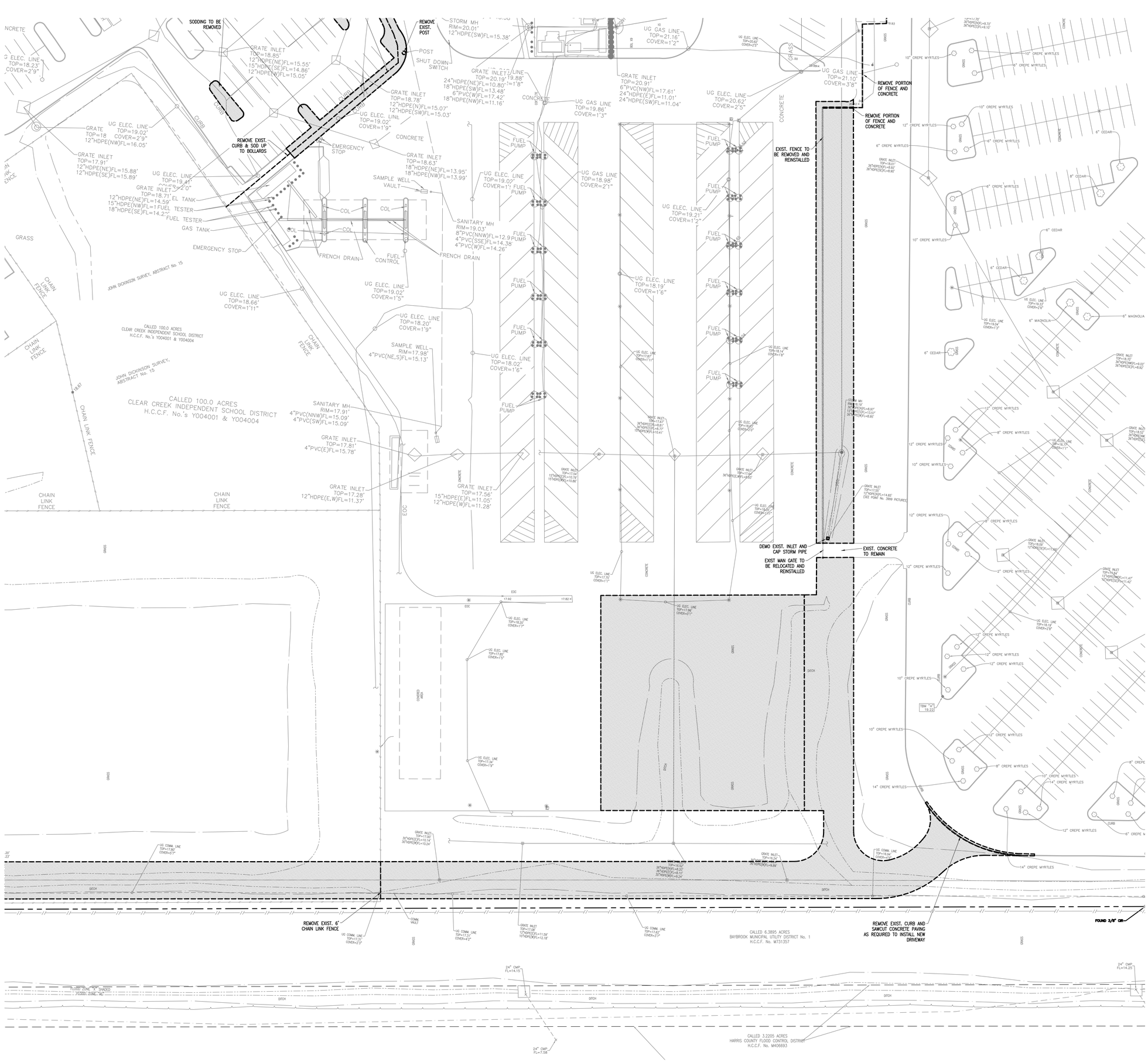
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DEMOLITION PLAN (AREA A)

C 003

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Thursday, February 19, 2026 9:27:42 AM



NORTH

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NOTES TO SHEET

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LEGEND

CLEAR AND GRUB AREA REMOVING ALL TREES & GRASS WITHIN HATCHED ZONE UNLESS OTHERWISE NOTED

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STATE OF TEXAS
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CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

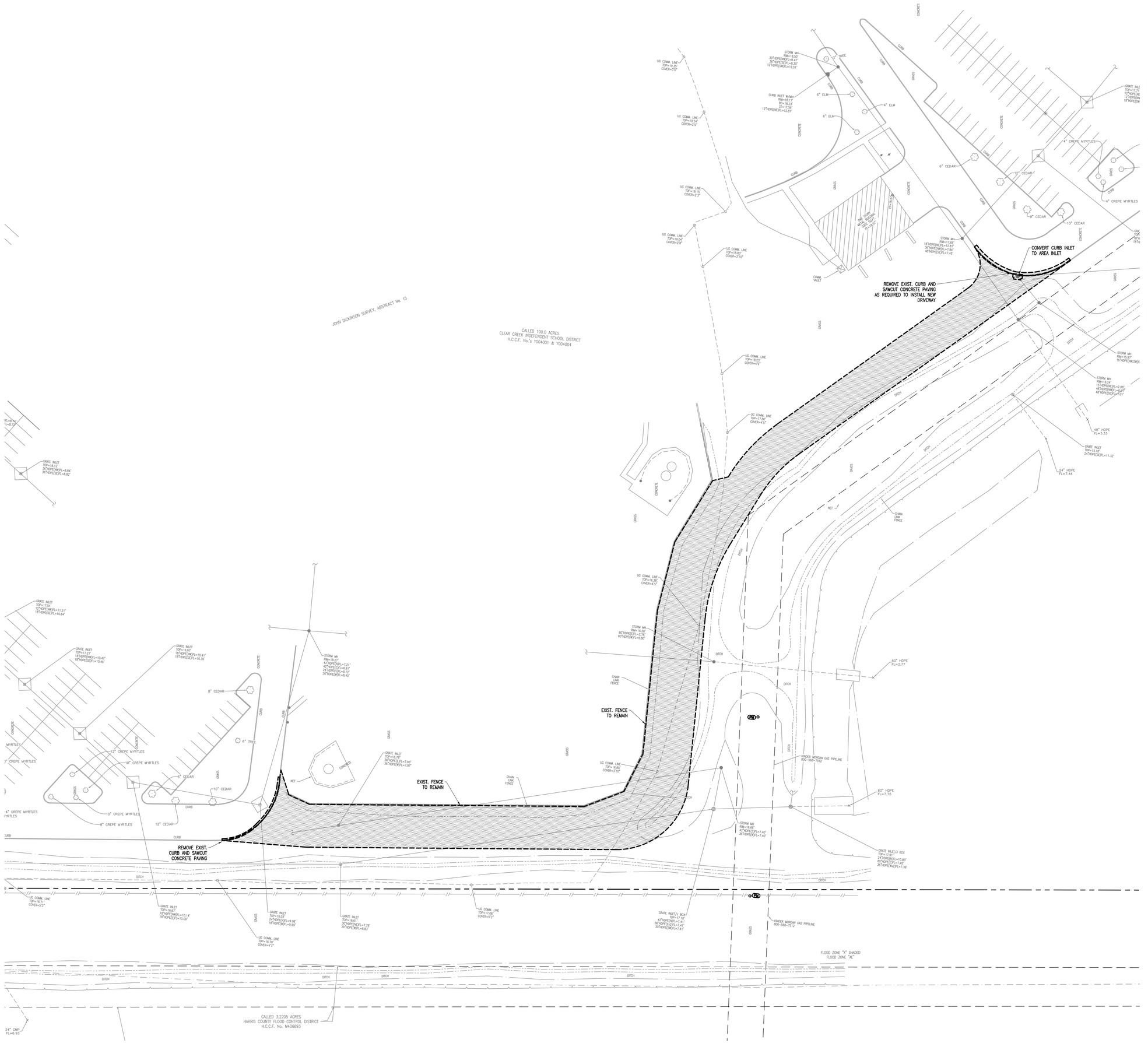
No.	Description	Date

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DEMOLITION PLAN (AREA B)

C 004

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Thursday, February 19, 2026 9:29:39 AM



NOTES TO SHEET

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LEGEND

CLEAR AND GRUB AREA REMOVING ALL TREES & GRASS WITHIN HATCHED ZONE UNLESS OTHERWISE NOTED

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PROFESSIONAL ENGINEER
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CLIENT	
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DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

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DEMOLITION PLAN (AREA C)

C 005

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Thursday, February 19, 2026 9:31:02 AM



NOTES TO SHEET

1. LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
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LEGEND

CLEAR AND GRUB AREA REMOVING ALL TREES & GRASS WITHIN HATCHED ZONE UNLESS OTHERWISE NOTED

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CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

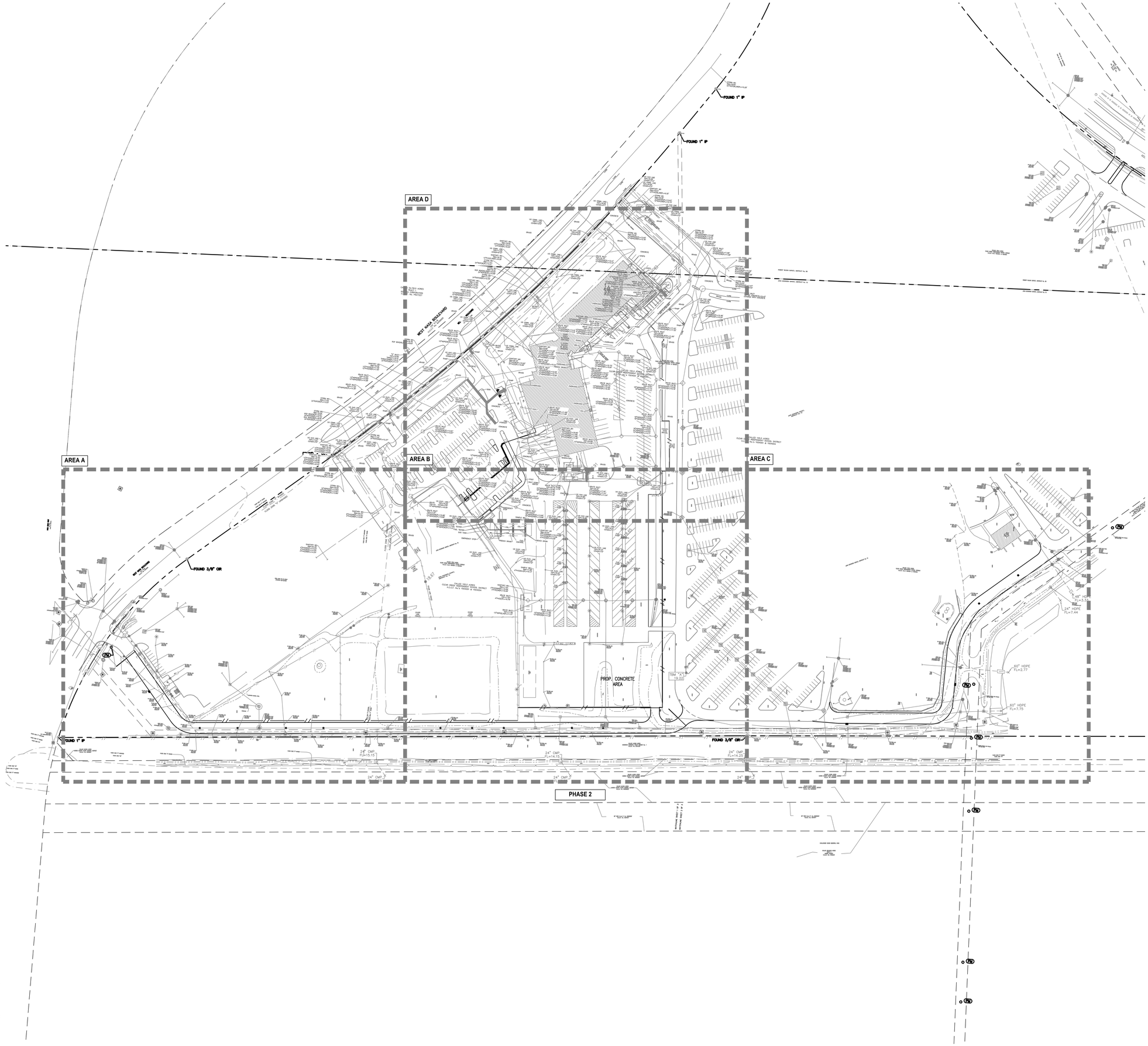
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DEMOLITION PLAN (AREA D)

C 006

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Thursday, February 19, 2026 9:32:04 AM



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144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
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CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

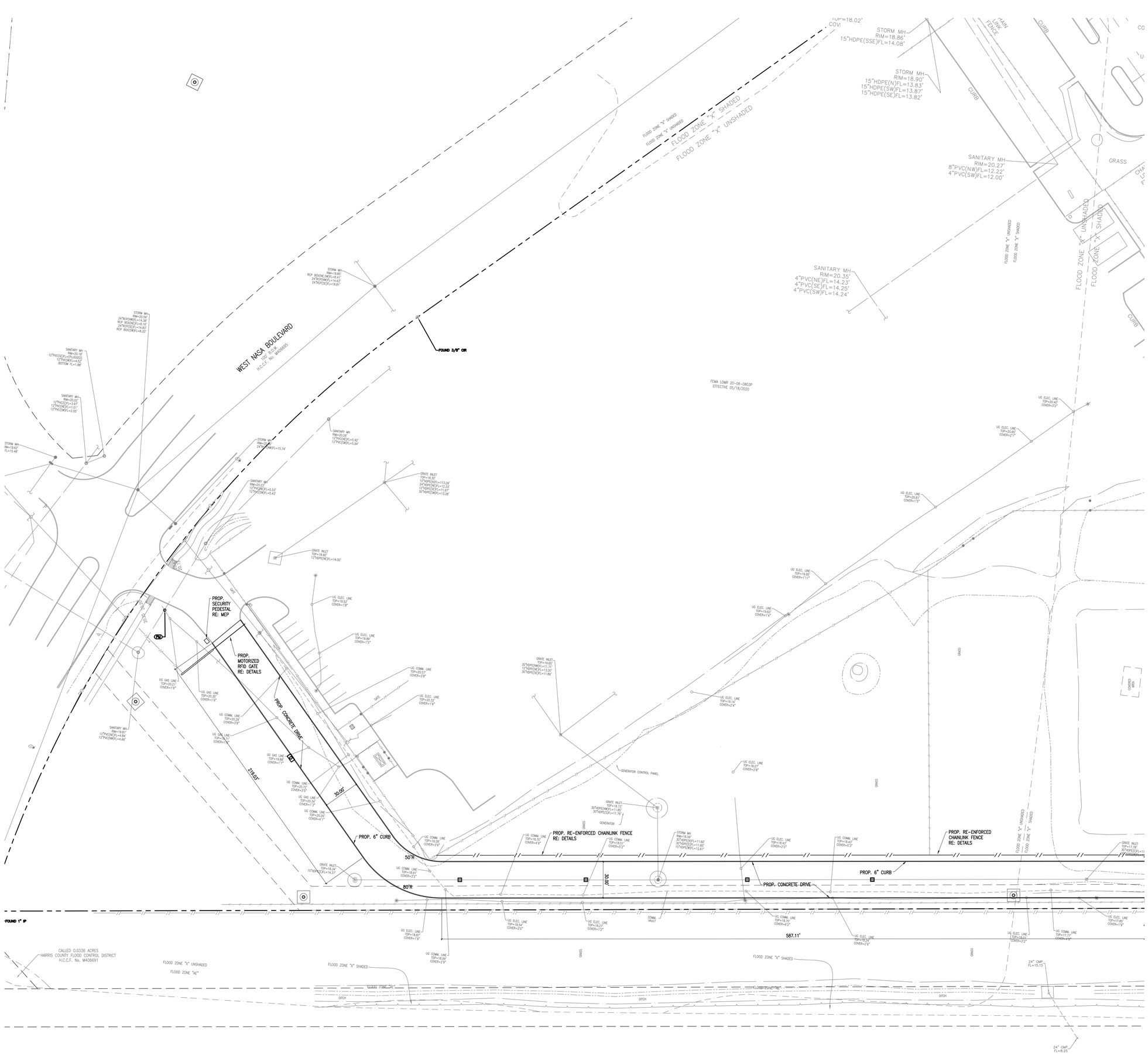
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OVERALL SITE PLAN

C 100

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Wednesday, February 18, 2026 3:14:07 PM



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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

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STATE OF TEXAS
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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY:
DRAWN BY:

SITE PLAN
(AREA A)

C 101

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Friday, February 27, 2026 9:15:58 AM

NORTH

15 30
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NOTES TO SHEET

1. CONTRACTOR SHALL INSTALL CHAINLINK NETTING ON LIVESTOCK SIDE OF THE POLES.

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KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

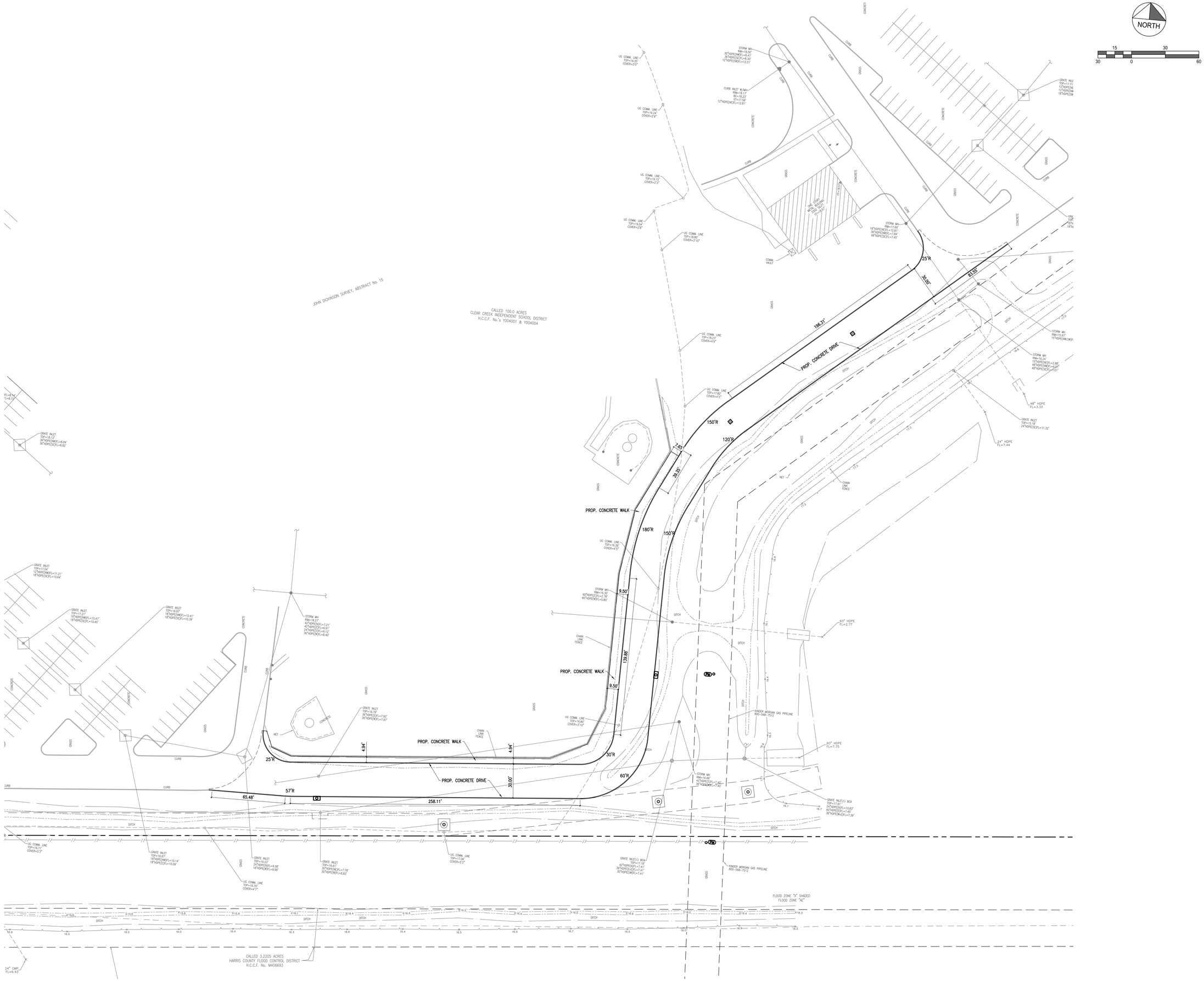
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SITE PLAN
(AREA B)

C 102

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Friday, February 27, 2026 9:15:06 AM



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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
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PROFESSIONAL ENGINEER
STATE OF TEXAS
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F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

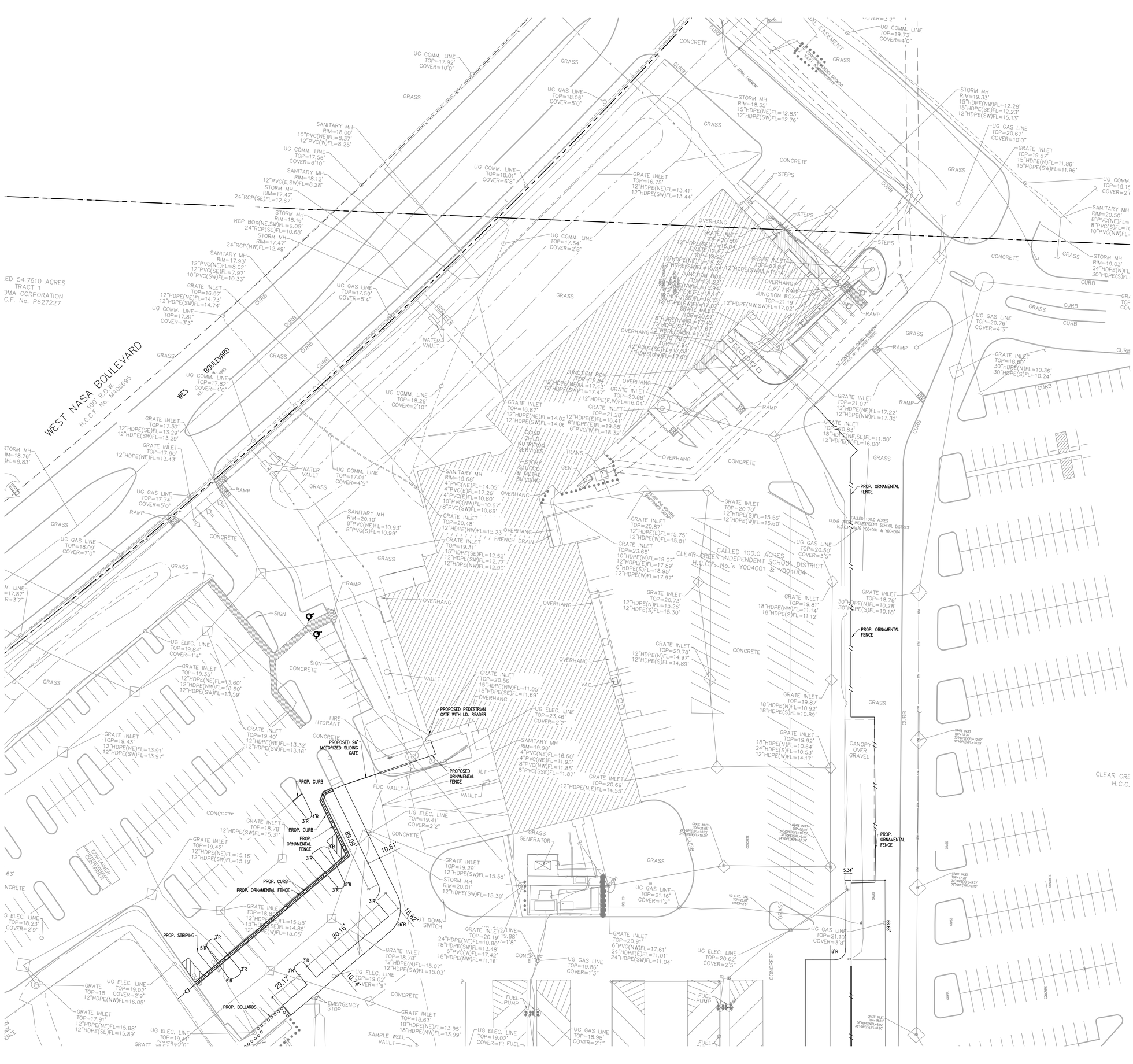
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SITE PLAN
(AREA C)

C 103

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Thursday, February 19, 2026 10:07:29 AM



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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

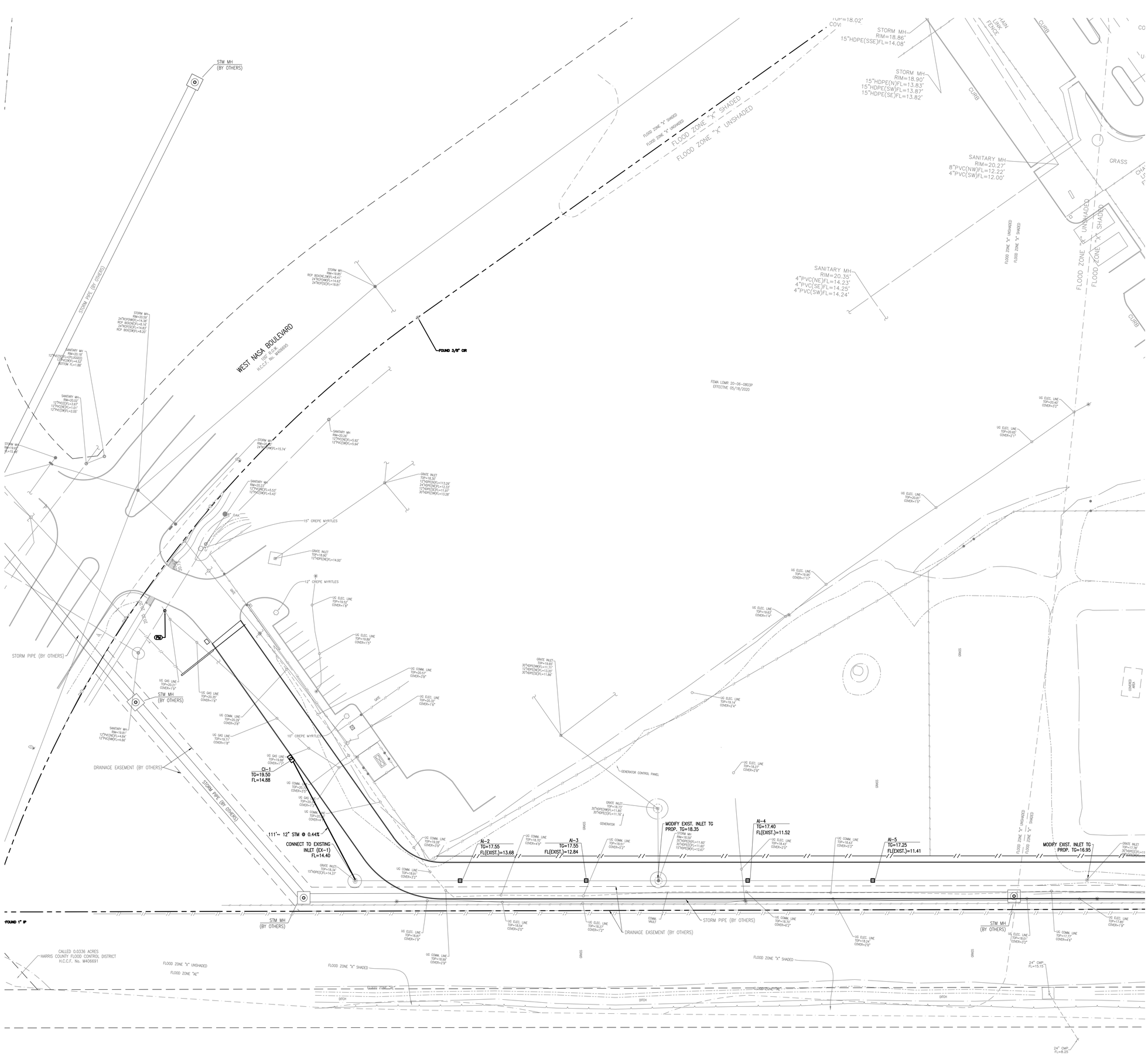
CHECKED BY:

DRAWN BY:

SITE PLAN
(AREA D)

C 104

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Thursday, February 19, 2026 10:08:57 AM



NOTES TO SHEET

1. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS FOR ALL PIPE CONNECTIONS.
2. CONTRACTOR SHALL PROVIDE A MINIMUM OF 6" (SIX INCHES) VERTICAL CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS AND AT STORM SEWER AND SANITARY SEWER CROSSINGS
3. ALL STORM PIPE TO BE DUAL WALL HDPE.

LEGEND

TG	TOP OF GRATE
FL	FLOWLINE
CB-X	CONCRETE BOX
AI-X	AREA INLET
CI-X	CURB INLET

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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
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LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
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CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

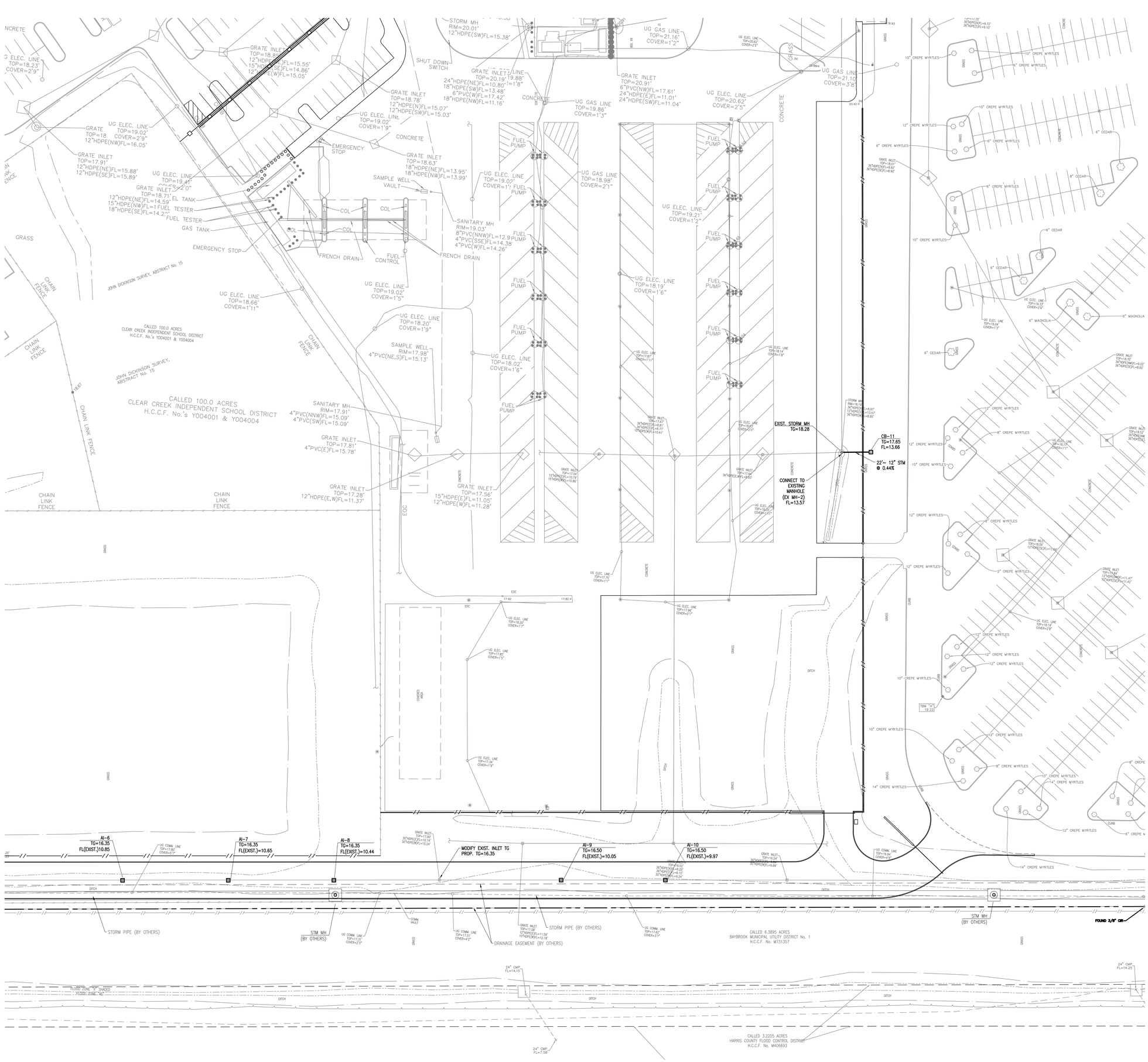
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DRAINAGE PLAN
(AREA A)

C 201

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Thursday, February 19, 2026 10:19:02 AM



NOTES TO SHEET

1. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS FOR ALL PIPE CONNECTIONS.
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LEGEND

TG	TOP OF GRATE
FL	FLOWLINE
CB-X	CONCRETE BOX
AI-X	AREA INLET
CI-X	CURB INLET

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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

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144159
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CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

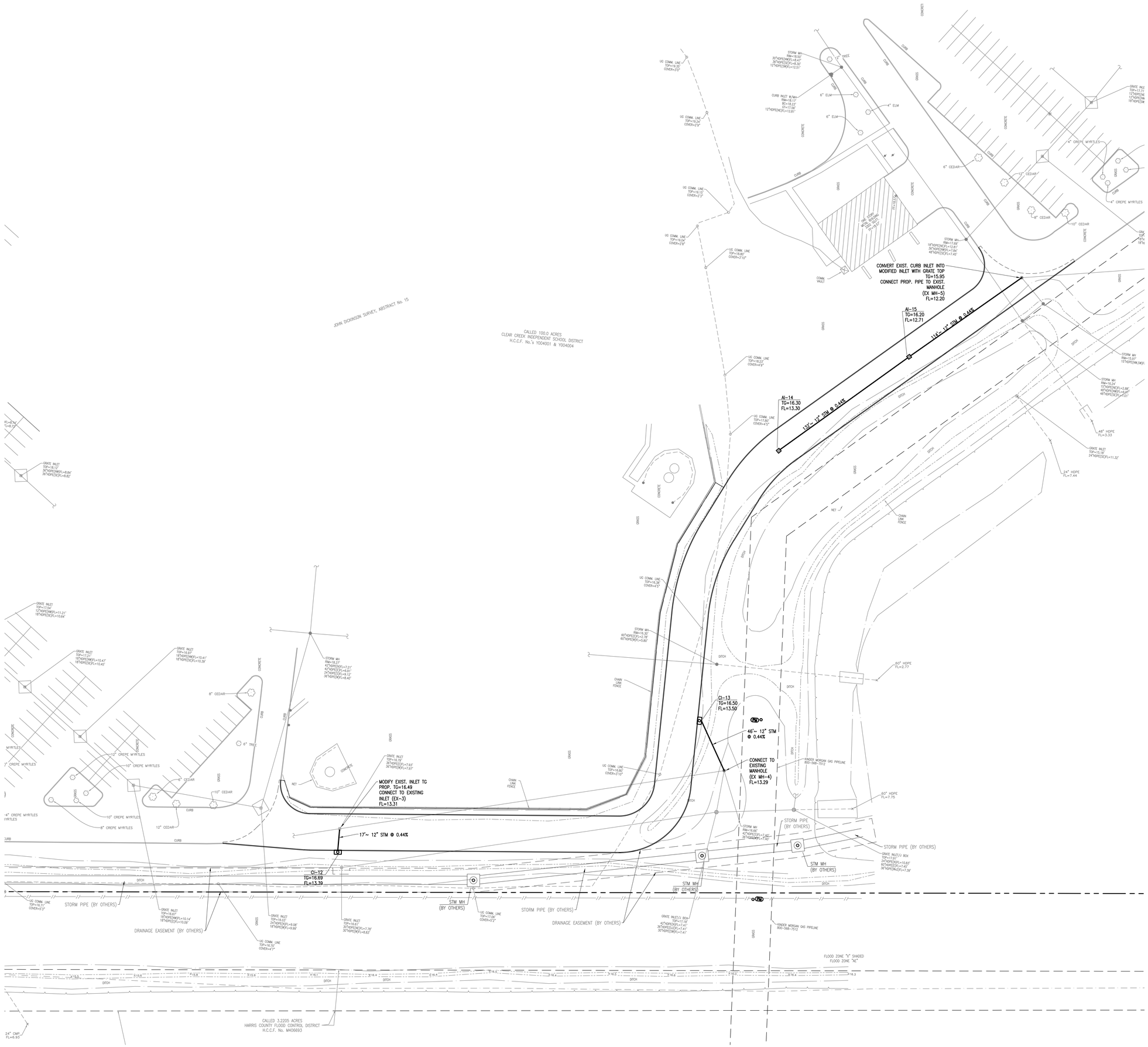
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DRAINAGE PLAN
(AREA B)

C 202

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Thursday, February 19, 2026 10:17:29 AM



NOTES TO SHEET

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LEGEND

TG	TOP OF GRATE
FL	FLOWLINE
CB-X	CONCRETE BOX
AI-X	AREA INLET
CI-X	CURB INLET

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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

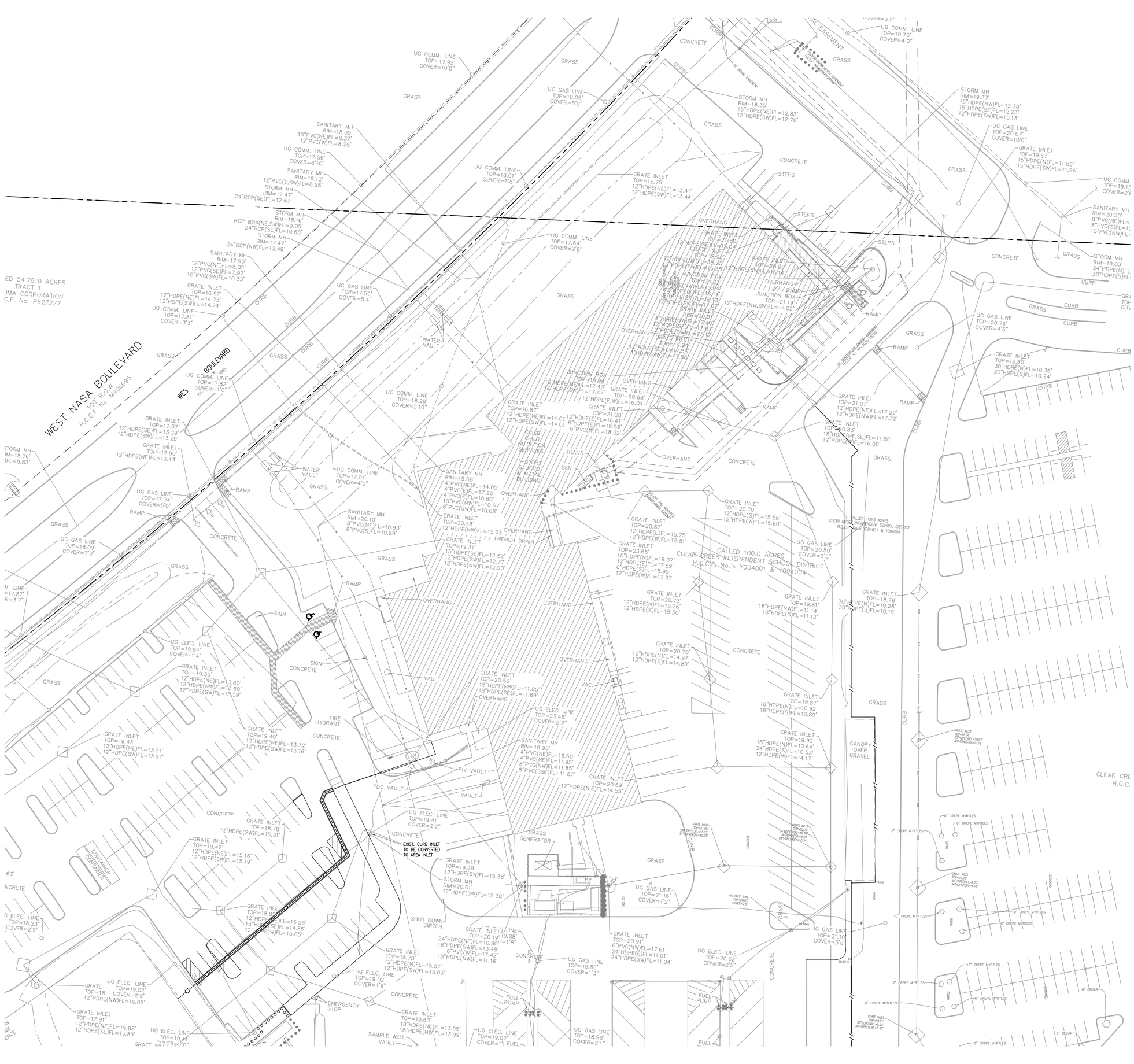
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DRAINAGE PLAN
(AREA C)

C 203

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Thursday, February 19, 2026 10:22:21 AM



NORTH

15 30
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NOTES TO SHEET

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LEGEND

TG	TOP OF GRATE
FL	FLOWLINE
CB-X	CONCRETE BOX
AI-X	AREA INLET
CI-X	CURB INLET

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DATE	PROJECT NUMBER
03.03.2026	250236

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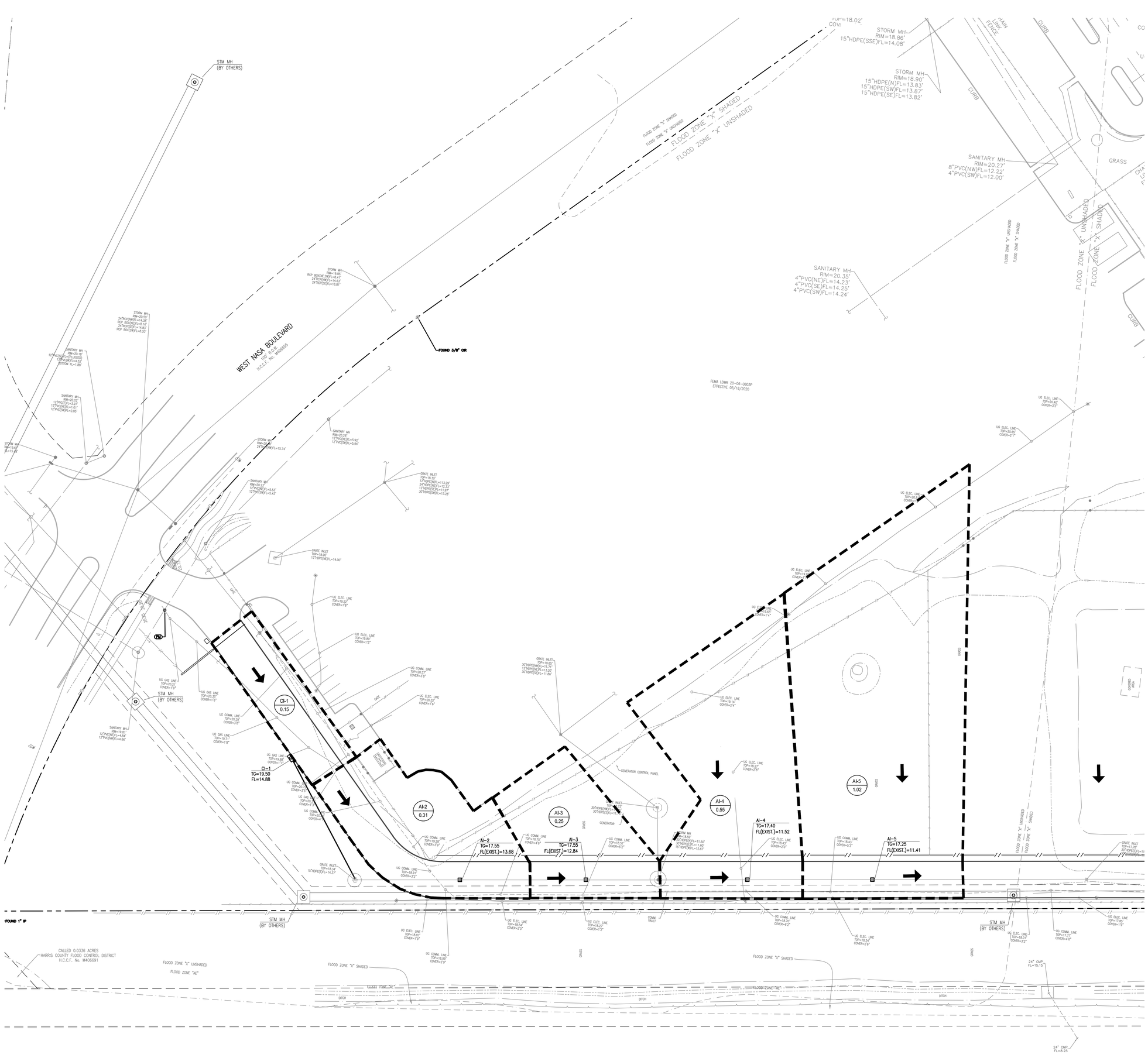
No.	Description	Date

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DRAINAGE PLAN
(AREA D)

C 204

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Thursday, February 19, 2026 10:24:45 AM



NORTH

15 30

30 0 60

LEGEND

PROPOSED DRAINAGE AREA BOUNDARY

A-X
X.XX
AREA #
ACREAGE OF AREA #

FLOW PATH

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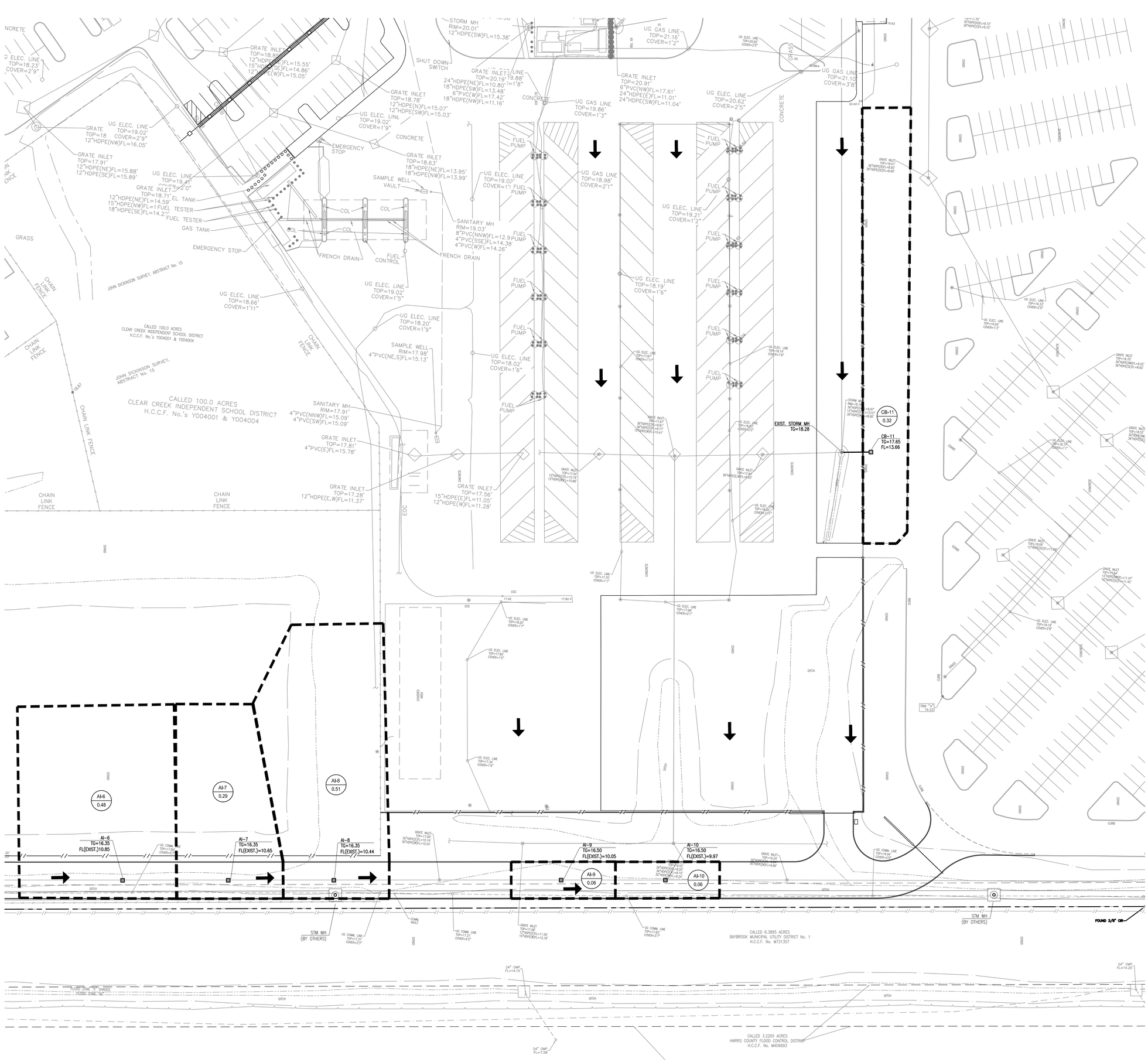
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DRAINAGE AREA MAP (AREA A)

C 205

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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

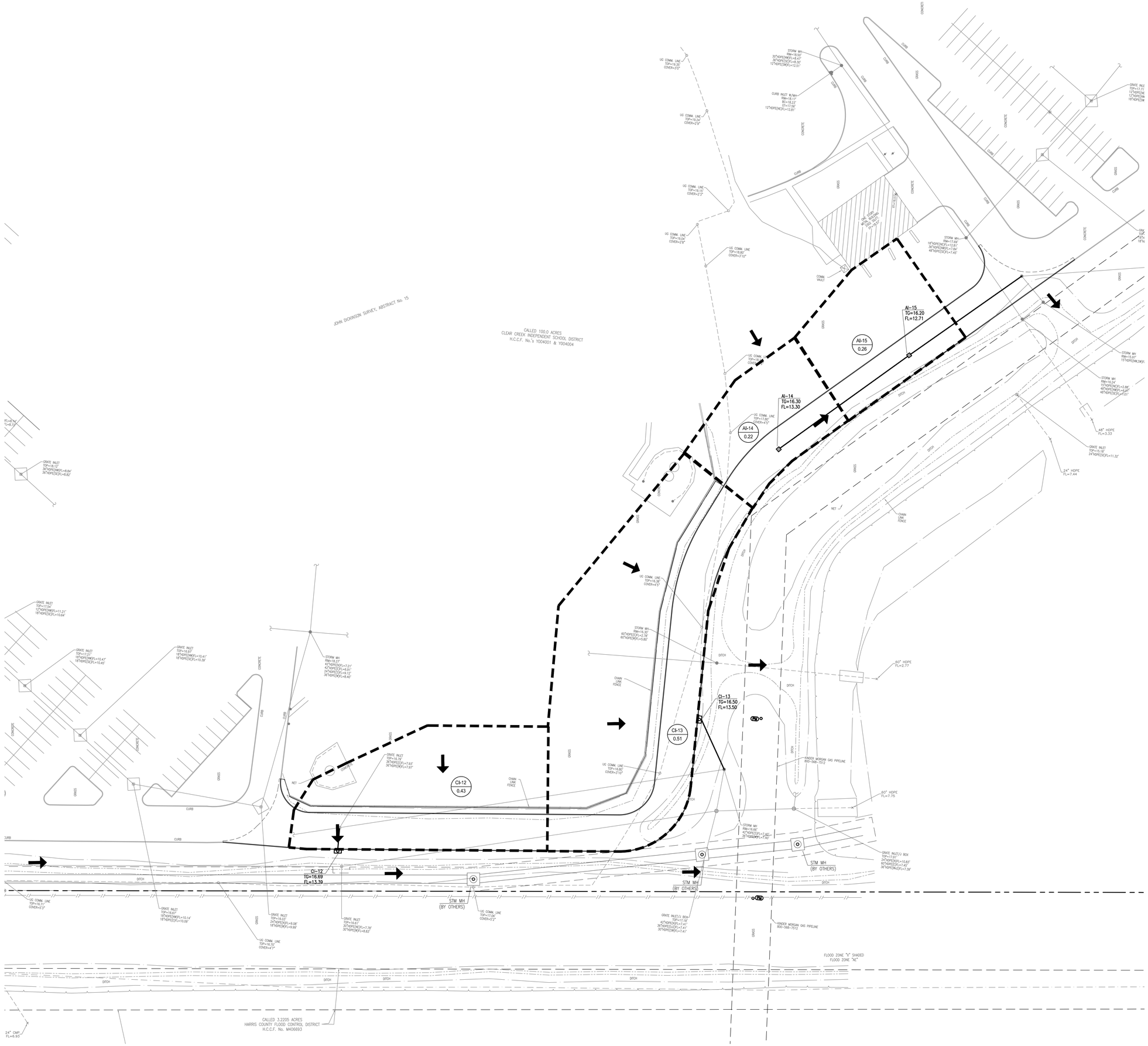
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DRAINAGE AREA MAP (AREA B)

C 206

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Thursday, February 19, 2026 10:43:55 AM



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TX FIRM: BR 1608

HOUSTON, TX
713-865-0008

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598

ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DGENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY:

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DRAINAGE AREA MAP (AREA C)

C 207

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Thursday, February 19, 2026 10:50:02 AM

DIG ENGINEERS
A PBK COMPANY

STORM SEWER SIZING CALCULATIONS

Project Information

Project:	CSF Driveway Portion		
Job No.:	250236		
System:	A		
Designed:	AR	Date:	2/18/2026
Checked:	KF	Date:	2/18/2026

Design Criteria

Starting HGL Elev. (ft):	15.40	Min Cover (ft):	2
		Match C or F:	C
		Min. Tc (min):	
Harris		Default n:	0.013
Design Storm:	2 yr	Junction K:	0.3
b =	48.35	Peaking Factor:	1.25
d =	9.07		
e =	0.7244		

Downstream MH/Inlet	Downstream Flowline	Upstream MH/Inlet	Upstream Flowline	Pipe Length (ft)	Round or Box	Pipe Rise (in or ft)	Pipe Span (ft)	No. of Pipes	Pipe Material	n	Min Slope (%)	C	I (in/hr)	Area (Acres)	Roof Area (sf)	Branch Area (Acres)	Cum. Area (Acres)	Tc (min)	Flow (cfs)	Roof Flow (cfs)	Branch Flow (cfs)	Cum. Flow (cfs)	Design Cap. (cfs)	Flow Velocity (ft/s)	Upstream TG (ft)	HGL (ft)	COV CHK	HGL CHK
EX-1	14.40	CI-1	14.89	111	Round	12		1	HDPE	0.013	0.44%	0.8	4.00	0.15			0.15	22.16	0.48	0.00		0.48	2.37	0.61	19.50	15.89	3.61	
EX MH-2	13.57	CB-11	13.67	22	Round	12		1	HDPE	0.013	0.44%	0.8	3.90	0.32			0.32	23.18	1.00	0.00		1.00	2.37	1.27	17.65	14.67	2.98	
EX-3	13.31	CI-12	13.38	17	Round	12		1	HDPE	0.013	0.44%	0.8	3.87	0.43			0.43	23.62	1.33	0.00		1.33	2.37	1.69	16.69	14.38	2.31	
EX MH-4	13.29	CI-13	13.49	46	Round	12		1	HDPE	0.013	0.44%	0.8	3.84	0.51			0.51	23.88	1.57	0.00		1.57	2.37	2.00	16.50	14.49	2.01	
EX MH-5	12.20	AI-15	12.70	114	Round	12		1	HDPE	0.013	0.44%	0.8	3.93	0.26			0.48	22.89	0.82	0.00		1.51	2.37	1.93	16.30	13.70	2.60	
AI-15	12.70	AI-14	13.28	132	Round	12		1	HDPE	0.013	0.44%	0.8	3.95	0.22			0.22	22.66	0.70	0.00		0.70	2.37	0.89	16.20	14.28	***1.92***	

2-YR STORM SEWER CALCULATIONS

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Thursday, February 19, 2026 11:56:23 AM

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713-865-0008

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DIG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

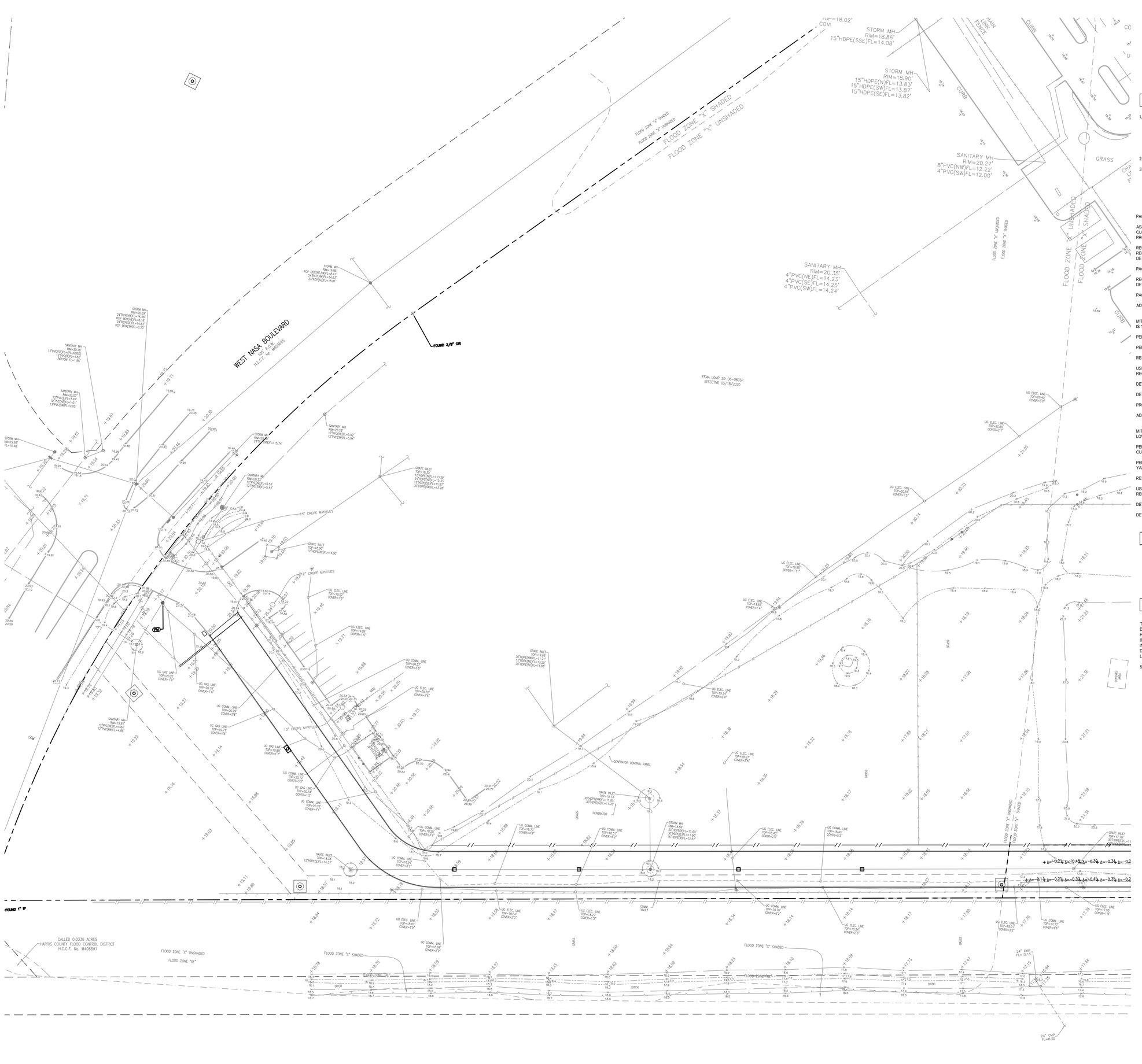
No.	Description	Date

CHECKED BY:

DRAWN BY:

DRAINAGE CALCULATIONS

C 208



NORTH

15 0 30 60

NOTES TO SHEET

1. THIS PROPERTY IS LOCATED IN ZONE "X" UNSHADED, AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN AND ZONE "X" SHADED, AREAS DETERMINED TO BE WITHIN THE 500-YEAR FLOODPLAIN AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0019G DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.
2. 500 YR FLOOD ELEVATION: 18.75
3. INFORMATION BELOW PROVIDED PER APPROVED PLANS LABELED "AGRICULTURAL EVENT CENTER SITE PACKAGE" FOR CLEAR CREEK ISD, DATED MAY 10, 2006, SIGNED BY H.F. SCHNEIDER, III AND APPROVED PLANS LABELED "CLEAR CREEK INDEPENDENT SCHOOL DISTRICT CHILD NUTRITION ADDITION" DATED MAY 2, 2024, SIGNED BY KARSTEN H. FALKE AND PLANS LABELED "CSF & MAIN TRANSPORTATION DRIVEWAY PORTION - PACKAGE 1" SIGNED BY KARSTEN H. FALKE:

PAGE C6.3 DRAINAGE AREA MAP DETENTION OF AG EVENT CENTER:

ASSUMED C VALUE OF CCISD 143± ACRE PROPERTY:	0.85
CURRENT WEIGHTED C VALUE:	0.72
PROPOSED WEIGHTED C VALUE:	0.72
REGIONAL DETENTION PROVIDED:	174.95 AC-FT
REQUIRED DETENTION:	162.80 AC-FT
DETENTION AVAILABLE:	12.15 AC-FT

PAGE C 301 GRADING PLAN OF CHILD NUTRITION ADDITION:

REQUIRED DETENTION:	0.06 AC-FT
DETENTION REMAINING:	12.09 AC-FT

PAGE C 203 MITIGATION ANALYSIS (AREA A):

ADDITIONAL IMPERVIOUS AREA:	9,087 SQFT 0.21 AC

MITIGATION IS REQUIRED AS 500-YR FLOOD ELEVATION IS 18.75, AND LOWEST ELEVATION AFFECTED IS 15.43,

PER ANALYSIS, AREA A DRIVEWAY IS 225.73 CUBIC YARDS OF CUT.

PER ANALYSIS, AREA B DRIVEWAY IS 121 CUBIC YARDS OF FILL.

RESULT OF ANALYSIS IS 104.73 YARDS OF CUT FROM THE FLOODPLAIN.

USING HARRIS COUNTY FLOOD CONTROL DISTRICT DETENTION REQUIREMENT FOR OUTFALL INTO STORM SEWER (0.75 AC-FT/AC)

DETENTION REQUIRED: 0.21 AC * 0.75 AC-FT/AC	0.16 AC-FT
DETENTION REMAINING: 12.09 AC-FT - 0.16 AC-FT:	11.93 AC-FT

PROPOSED DRIVES:

ADDITIONAL IMPERVIOUS AREA:	143,882 SQFT 3.30 AC-FT

MITIGATION IS REQUIRED AS 500-YR FLOOD ELEVATION IS 18.87 AND THE LOWEST ELEVATION AFFECTED IS 15.95.

PER ANALYSIS, DRIVE BELOW BUS BARN (AREA A & AREA B) IS 209.97 CUBIC YARDS OF CUT,

PER ANALYSIS, DRIVE BELOW FIELD EVENTS (AREA C) IS 202.61 CUBIC YARDS OF CUT,

RESULT OF ANALYSIS IS 412.58 CUBIC YARDS OF CUT FROM FLOODPLAIN,

USING HARRIS COUNTY FLOOD CONTROL DISTRICT DETENTION REQUIREMENT FOR OUTFALL INTO STORM SEWER (0.75 AC-FT/AC)

DETENTION REQUIRED: 3.30 AC * 0.75 AC-FT/AC	2.48 AC-FT
DETENTION REMAINING: 11.93 AC-FT - 2.48 AC-FT:	9.45 AC-FT

LEGEND

TC	TOP OF CURB
TP	TOP OF PAVEMENT
MEP	MATCH EXISTING PAVEMENT
Δ=X.XX	AMOUNT OF FILL IN THE FLOODPLAIN
Δ=-X.XX	AMOUNT OF CUT FROM THE FLOODPLAIN

FLOODPLAIN INFORMATION

THIS PROPERTY IS LOCATED IN ZONE "X" UNSHADED, AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD HAZARD AND ZONE "X" SHADED, AREAS DETERMINED TO BE IN THE 0.2% ANNUAL CHANCE FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0019G PANEL 19 OF 600, DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.

500-YR FLOODPLAIN ELEVATION: 18.75

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HOUSTON, TX
713-865-0008

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
03/03/2026

ENGINEERS
F-18325

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

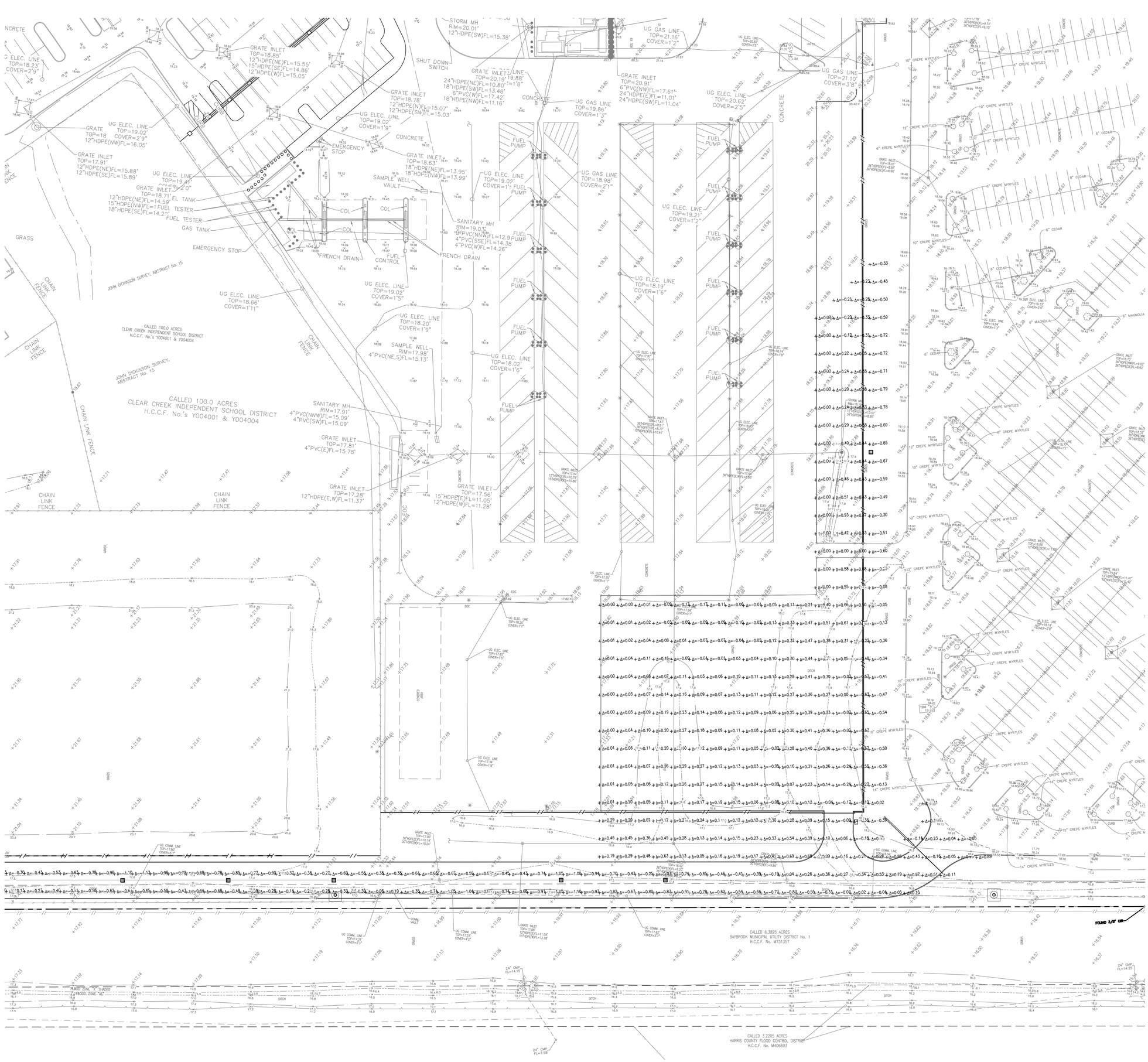
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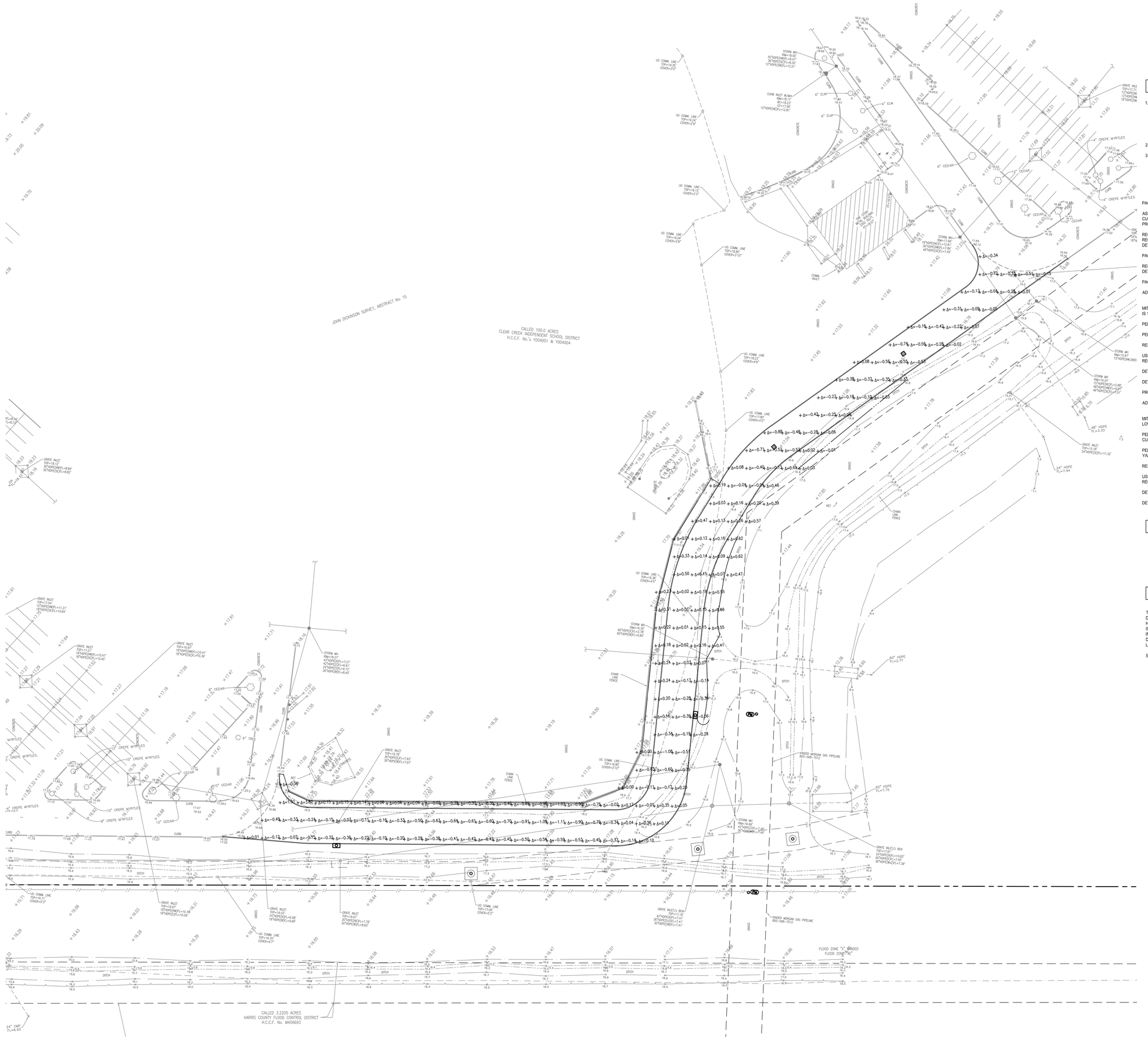
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MITIGATION PLAN
(AREA A)

C 301

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Thursday, February 19, 2026 3:12:02 PM


NORTH
15
30
30
0
60
GRATE INLET TOP=18.23' 12"HDPE(NE)FL=15.55' 15"HDPE(SE)FL=14.86' 12"HDPE(W)FL=15.05'
STORM MH RIM=20.01' 12"HDPE(SW)FL=15.38'
SHUT DOWN SWITCH
GRATE INLET TOP=20.19' 19.88' 24"HDPE(NE)FL=10.80' 18"HDPE(SW)FL=13.48' 6"PVC(W)FL=17.42' 18"HDPE(NW)FL=11.16'
GRATE INLET TOP=20.91' 6"PVC(NW)FL=17.61' 24"HDPE(E)FL=11.01' 24"HDPE(SW)FL=11.04'
UG GAS LINE TOP=21.16' COVER=1'2"
UG GAS LINE TOP=21.10' COVER=3'8"
UG ELEC. LINE TOP=20.62' COVER=2'3"
UG ELEC. LINE TOP=20.62' COVER=2'5"
GRATE INLET TOP=18.78' 12"HDPE(NW)FL=15.07' 12"HDPE(SW)FL=15.03'
UG ELEC. LINE TOP=19.02' COVER=1'9"
UG GAS LINE TOP=19.86' COVER=1'3"
GRATE TOP=18 12"HDPE(NW)FL=16.05'
UG ELEC. LINE TOP=19.02' COVER=2'9"
GRATE INLET TOP=17.91' 12"HDPE(NE)FL=15.88' 12"HDPE(SE)FL=15.89'
GRATE INLET TOP=18.63' 18"HDPE(NE)FL=13.95' 18"HDPE(NW)FL=13.99'
UG ELEC. LINE TOP=19.02' COVER=1'1'
UG GAS LINE TOP=18.98' COVER=2'1"
UG ELEC. LINE TOP=19.21' COVER=1'2"
UG ELEC. LINE TOP=18.19' COVER=1'6"
GRATE INLET TOP=20.0' 12"HDPE(NE)FL=14.59' 15"HDPE(NW)FL=1 18"HDPE(SE)FL=14.2'
EMERGENCY STOP
SAMPLE VAULT
FUEL TESTER
GAS TANK
FUEL CONTROL
FRENCH DRAIN
SANITARY MH RIM=19.03' 8"PVC(NNW)FL=12.9' 4"PVC(SSE)FL=14.38' 4"PVC(W)FL=14.26'
UG ELEC. LINE TOP=19.02' COVER=1'5"
UG ELEC. LINE TOP=18.66' COVER=1'11"
UG ELEC. LINE TOP=18.20' COVER=1'9"
SAMPLE WELL 4"PVC(NE,S)FL=15.13'
UG ELEC. LINE TOP=18.02' COVER=1'6"
SANITARY MH RIM=17.91' 4"PVC(NNW)FL=15.00' 4"PVC(SW)FL=15.09'
GRATE INLET TOP=17.81' 4"PVC(E)FL=15.78'
GRATE INLET TOP=17.28' 12"HDPE(E,W)FL=11.37'
GRATE INLET TOP=17.56' 15"HDPE(E)FL=11.05' 12"HDPE(W)FL=11.28'
GRATE INLET TOP=17.67' 15"HDPE(NW)FL=11.59' 15"HDPE(W)FL=10.79' 15"HDPE(SW)FL=10.66'
GRATE INLET TOP=17.67' 36"HDPE(NW)FL=9.63'
GRATE INLET TOP=17.82' 36"HDPE(NE)FL=8.87' 36"HDPE(SE)FL=8.77' 15"HDPE(W)FL=10.41'
GRATE INLET TOP=18.70' 36"HDPE(NW)FL=9.02' 36"HDPE(SE)FL=8.92



NOTES TO SHEET

1. THIS PROPERTY IS LOCATED IN ZONE "X" UNSHADED, AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN AND ZONE "X" SHADED, AREAS DETERMINED TO BE WITHIN THE 500-YEAR FLOODPLAIN AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0019G DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.
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PAGE C6.3 DRAINAGE AREA MAP DETENTION OF AG EVENT CENTER:

ASSUMED C VALUE OF CCISD 143± ACRE PROPERTY:	0.85
CURRENT WEIGHTED C VALUE:	0.72
PROPOSED WEIGHTED C VALUE:	0.72
REGIONAL DETENTION PROVIDED:	174.95 AC-FT
REQUIRED DETENTION:	162.80 AC-FT
DETENTION AVAILABLE:	12.15 AC-FT

PAGE C 301 GRADING PLAN OF CHILD NUTRITION ADDITION:

REQUIRED DETENTION:	0.06 AC-FT
DETENTION REMAINING:	12.09 AC-FT

PAGE C 203 MITIGATION ANALYSIS (AREA A):

ADDITIONAL IMPERVIOUS AREA:	9,087 SQFT 0.21 AC

MITIGATION IS REQUIRED AS 500-YR FLOOD ELEVATION IS 18.75, AND LOWEST ELEVATION AFFECTED IS 15.43,

PER ANALYSIS, AREA A DRIVEWAY IS 225.73 CUBIC YARDS OF CUT.

PER ANALYSIS, AREA B DRIVEWAY IS 121 CUBIC YARDS OF FILL.

RESULT OF ANALYSIS IS 104.73 YARDS OF CUT FROM THE FLOODPLAIN.

USING HARRIS COUNTY FLOOD CONTROL DISTRICT DETENTION REQUIREMENT FOR OUTFALL INTO STORM SEWER (0.75 AC-FT/AC)

DETENTION REQUIRED: 0.21 AC * 0.75 AC-FT/AC 0.16 AC-FT

DETENTION REMAINING: 12.09 AC-FT - 0.16 AC-FT: 11.93 AC-FT

PROPOSED DRIVES:

ADDITIONAL IMPERVIOUS AREA:	143,882 SQFT 3.30 AC-FT

MITIGATION IS REQUIRED AS 500-YR FLOOD ELEVATION IS 18.87 AND THE LOWEST ELEVATION AFFECTED IS 15.95.

PER ANALYSIS, DRIVE BELOW BUS BARN (AREA A & AREA B) IS 209.97 CUBIC YARDS OF CUT,

PER ANALYSIS, DRIVE BELOW FIELD EVENTS (AREA C) IS 202.61 CUBIC YARDS OF CUT.

RESULT OF ANALYSIS IS 412.58 CUBIC YARDS OF CUT FROM FLOODPLAIN.

USING HARRIS COUNTY FLOOD CONTROL DISTRICT DETENTION REQUIREMENT FOR OUTFALL INTO STORM SEWER (0.75 AC-FT/AC)

DETENTION REQUIRED: 3.30 AC * 0.75 AC-FT/AC 2.48 AC-FT

DETENTION REMAINING: 11.93 AC-FT - 2.48 AC-FT: 9.45 AC-FT

LEGEND

TC	TOP OF CURB
TP	TOP OF PAVEMENT
MEP	MATCH EXISTING PAVEMENT
Δ=X.XX	AMOUNT OF FILL IN THE FLOODPLAIN
Δ=-X.XX	AMOUNT OF CUT FROM THE FLOODPLAIN

FLOODPLAIN INFORMATION

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500-YR FLOODPLAIN ELEVATION: 18.75

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INDEPENDENT SCHOOL DISTRICT

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STATE OF TEXAS
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F-18326

CLIENT	
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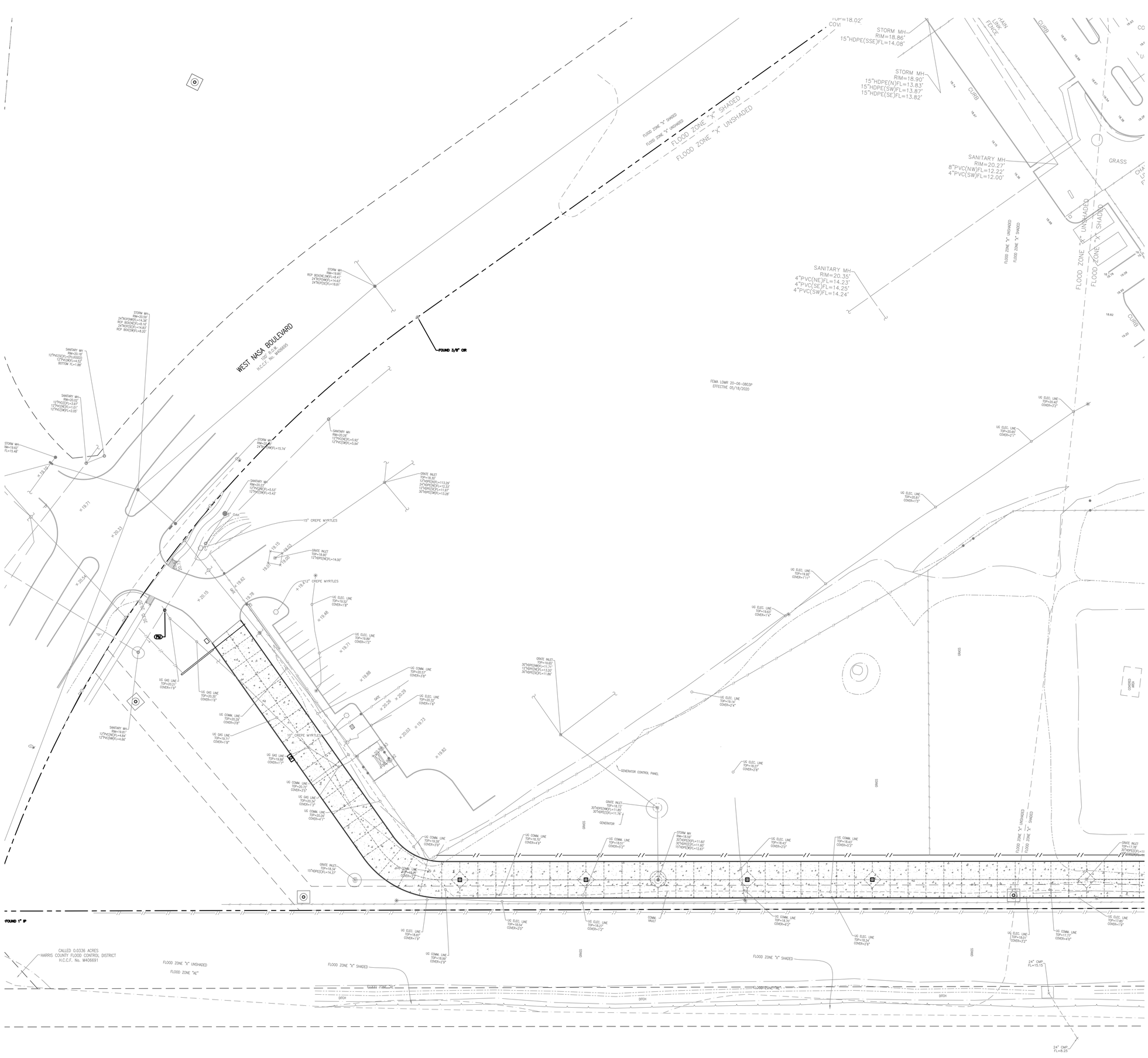
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DRAWN BY:

MITIGATION PLAN
(AREA C)

C 303

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Thursday, February 19, 2026 3:15:18 PM



NOTES TO SHEET

1. THE INLETS/MANHOLES SHALL BE COORDINATED WITH THE LOCATION OF PAVEMENT JOINT PATTERN WITHIN PAVEMENT AREAS.
2. UNLESS OTHERWISE SPECIFIED, ALL PAVEMENT JOINT SEALANT SHALL BE SELF-LEVELING SILICONE JOINT SEALANT, (DOWSIL / DOW CORNING 888 SILICONE JOINT SEALANT, DAP® SILICONE PLUS™ PREMIUM SILICONE RUBBER CONCRETE SEALANT, GE SILICONE II MASONRY & CONCRETE SEALANT - 5020, SIKASIL - 728 SL, OR PRE-APPROVED EQUIVALENT.)
3. SAWED JOINTS & TRANSVERSE JOINTS ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
4. SAWING OF JOINTS MUST BEGIN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO AVOID EXCESSIVE RAVELING. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL REPLACE ANY DAMAGED AND/OR REMOVED CONCRETE PAVEMENT, CURB AND/OR WALK TO EQUAL OR BETTER THAN EXISTING CONDITION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INCLUDE ANY CONCRETE PAVEMENT, CURB OR WALK REMOVAL AND REPLACEMENT IN HIS BID AS AN INCIDENTAL TO THE COST OF CONSTRUCTION.
6. WHERE NEW CONCRETE PAVING MEETS EXISTING CONCRETE PAVING, INSTALL 3/4" SMOOTH DOWELS, (18" LONG AND 18" C-C), BY DRILLING 8" INTO THE CENTER OF THE EXISTING SLAB AND EMBEDDING WITH EPOXY. WHEN PAVING UP TO BUILDING FOUNDATIONS, ALSO INSTALL IMPREGNATED FIBER BOARD EXPANSION MATERIAL WITH TOP PULL STRIP FOR CAULKING.
7. CONTRACTOR SHALL INSTALL A GRASS SOLID SOD ADJACENT TO ALL PROPOSED CURBS, DRIVES AND /OR WALKS.
8. MATCH ALL ELEVATIONS WHERE PROPOSED PAVEMENT ADJOINS EXISTING PAVEMENT.
9. PRIOR TO ANY CHEMICAL STABILIZATION OF SOIL WITH LIME, FLY ASH OR ANY OTHER MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER, CONTRACTOR SHALL HAVE A THIRD PARTY TESTING LAB PERFORM A SOIL ANALYSIS, INCLUDING BUT NOT LIMITED TO A LIME SERIES TEST, TO CONFIRM THE REQUIRED APPLICATION RATE OF THE CHEMICAL USED FOR STABILIZATION.

LEGEND

7" CONCRETE PAVING

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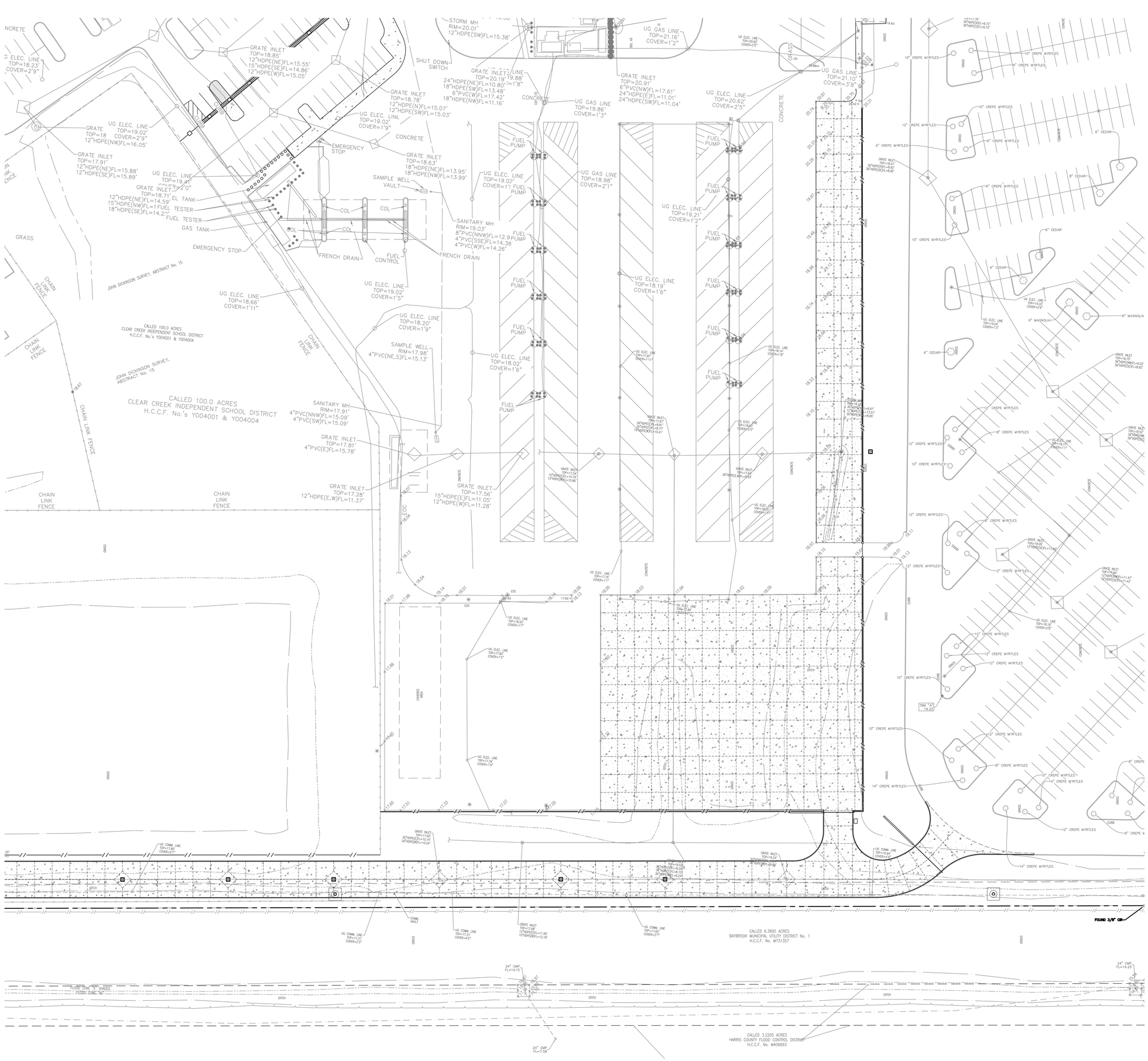
No.	Description	Date

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PAVING & JOINTING PLAN (AREA A)

C 401

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Thursday, February 19, 2026 10:55:48 AM



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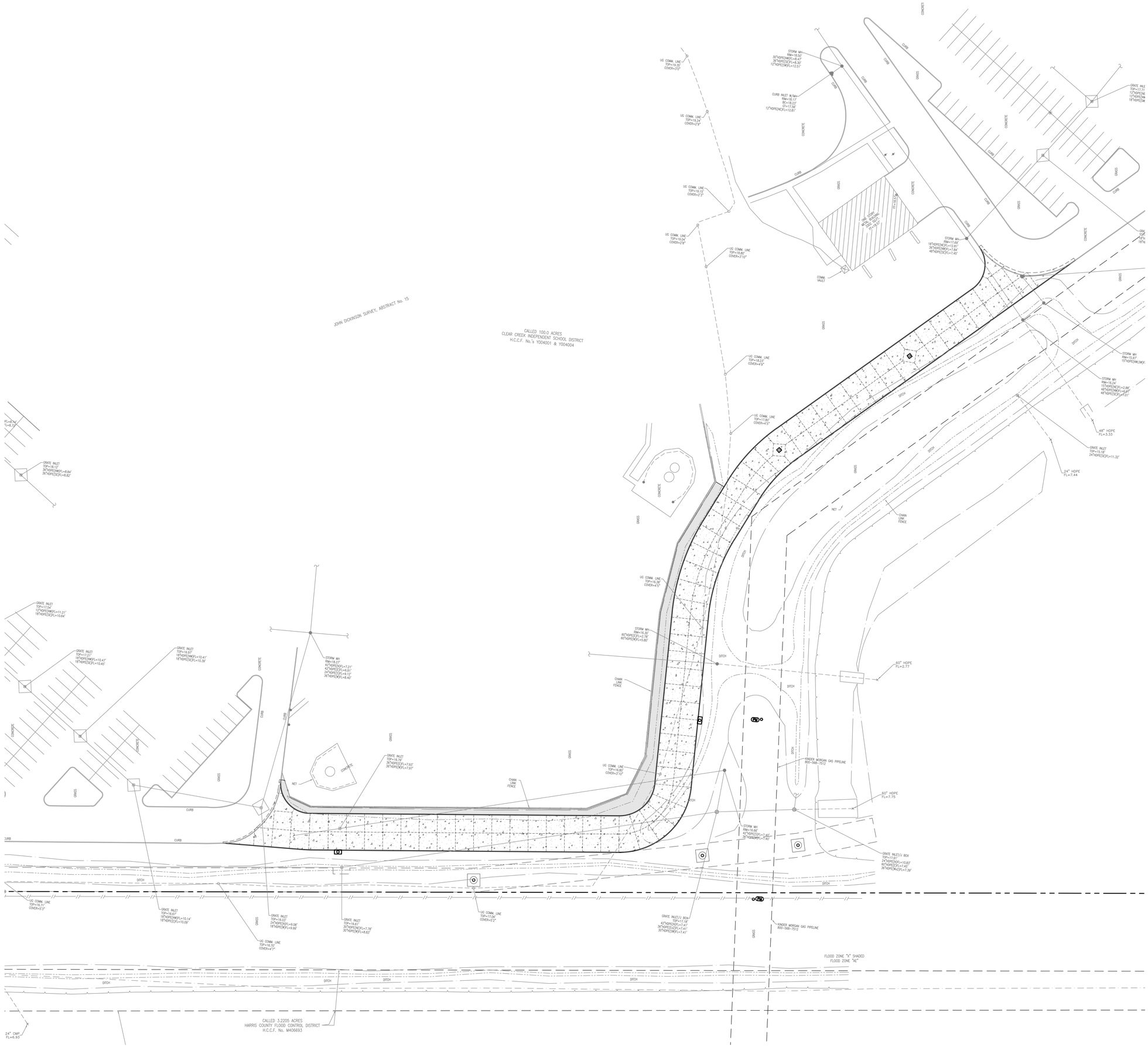
CHECKED BY:

DRAWN BY:

PAVING & JOINTING PLAN (AREA B)

C 402

b:\25\250236\FOC\DIG\Dwgs\PHASE 2\C 402 PAVING & JOINTING PLAN (AREA B).dwg Last Saved: JWHATLEY
Thursday, February 19, 2026 10:56:50 AM



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NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

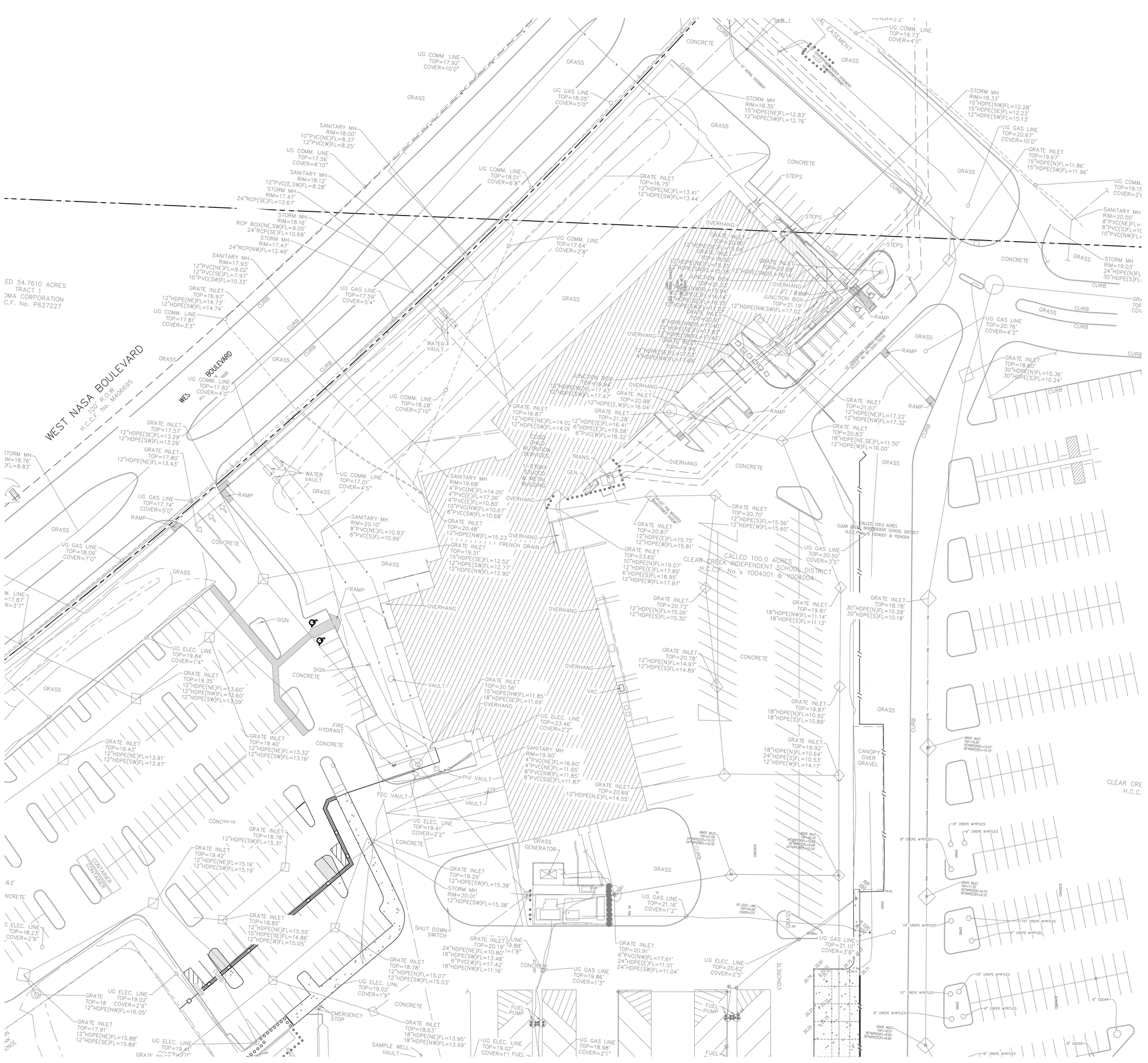
No.	Description	Date

CHECKED BY:
DRAWN BY:

PAVING & JOINTING PLAN (AREA C)

C 403

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Tuesday, March 3, 2026 9:30:27 AM



NORTH

15 30
30 0 60

NOTES TO SHEET

1. THE INLETS/MANHOLES SHALL BE COORDINATED WITH THE LOCATION OF PAVEMENT JOINT PATTERN WITHIN PAVEMENT AREAS.
2. UNLESS OTHERWISE SPECIFIED, ALL PAVEMENT JOINT SEALANT SHALL BE SELF-LEVELING SILICONE JOINT SEALANT, (DOWSIL / DOW CORNING 888 SILICONE JOINT SEALANT, DAP® SILICONE PLUS™ PREMIUM SILICONE RUBBER CONCRETE SEALANT, GE SILICONE II MASONRY & CONCRETE SEALANT - 5020, SIKASIL - 728 SL, OR PRE-APPROVED EQUIVALENT.)
3. SAWED JOINTS & TRANSVERSE JOINTS ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
4. SAWING OF JOINTS MUST BEGIN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO AVOID EXCESSIVE RAVELING. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL REPLACE ANY DAMAGED AND/OR REMOVED CONCRETE PAVEMENT, CURB AND/OR WALK TO EQUAL OR BETTER THAN EXISTING CONDITION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INCLUDE ANY CONCRETE PAVEMENT, CURB OR WALK REMOVAL AND REPLACEMENT IN HIS BID AS AN INCIDENTAL TO THE COST OF CONSTRUCTION.
6. WHERE NEW CONCRETE PAVING MEETS EXISTING CONCRETE PAVING, INSTALL 3/4" SMOOTH DOWELS, (18" LONG AND 18" C-C), BY DRILLING 8" INTO THE CENTER OF THE EXISTING SLAB AND EMBEDDING WITH EPOXY. WHEN PAVING UP TO BUILDING FOUNDATIONS, ALSO INSTALL IMPREGNATED FIBER BOARD EXPANSION MATERIAL WITH TOP PULL STRIP FOR CAULKING.
7. CONTRACTOR SHALL INSTALL A GRASS SOLID SOD ADJACENT TO ALL PROPOSED CURBS, DRIVES AND /OR WALKS.
8. MATCH ALL ELEVATIONS WHERE PROPOSED PAVEMENT ADJOINS EXISTING PAVEMENT.
9. PRIOR TO ANY CHEMICAL STABILIZATION OF SOIL WITH LIME, FLY ASH OR ANY OTHER MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER, CONTRACTOR SHALL HAVE A THIRD PARTY TESTING LAB PERFORM A SOIL ANALYSIS, INCLUDING BUT NOT LIMITED TO A LIME SERIES TEST, TO CONFIRM THE REQUIRED APPLICATION RATE OF THE CHEMICAL USED FOR STABILIZATION.

LEGEND

5" CONCRETE PAVING

7" CONCRETE PAVING

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TX FIRM REGISTRATION NO. 1608

HOUSTON, TX
713-865-6008

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
PBK ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

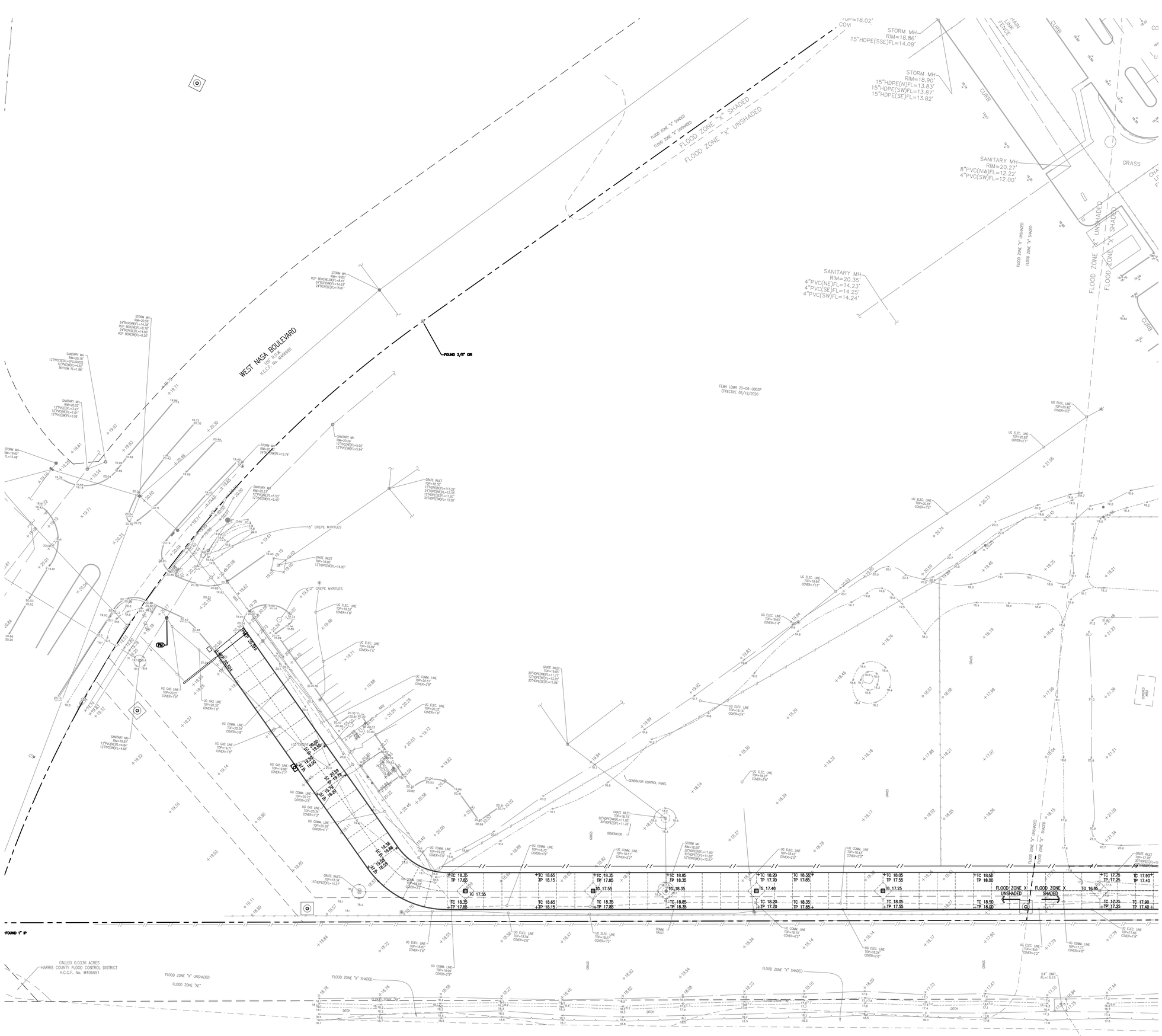
CHECKED BY:

DRAWN BY:

PAVING & JOINTING PLAN (AREA D)

C 404

J:\250250236\FOCD\IGD\Dwgs\PHASE 2\C 404 PAVING & JOINTING PLAN (AREA D).dwg Last Saved: KFALKE
Tuesday, March 3, 2026 9:35:07 AM



NOTES TO SHEET

1. CONTRACTOR SHALL GRADE DOWN FROM TOP OF CURB TO EXISTING GRADE WHERE REQUIRED AT NO GREATER THAN 5:1 SLOPES.
2. CONTRACTOR TO MATCH EXISTING TOP OF PAVEMENT WHERE PROPOSED PAVING MEETS EXISTING PAVING.
3. CONTRACTOR SHALL NOTIFY ENGINEER IF GRADE DISCREPANCY IS LOCATED IN FIELD OR THE EXISTING GRADES TO NOT MATCH SURVEY.

LEGEND

TC	TOP OF CURB
TP	TOP OF PAVEMENT
TG	TOP OF GRATE
MEP	MATCH EXISTING PAVEMENT
MEG	MATCH EXISTING GRADE

FLOODPLAIN INFORMATION

THIS PROPERTY IS LOCATED IN ZONE "X" SHADED, AREAS DETERMINED TO BE IN THE 0.2% ANNUAL CHANCE FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0019G PANEL 19 OF 600, DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.

500-YR FLOODPLAIN ELEVATION: 18.75

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TX FIRM: BR 1608

HOUSTON, TX
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NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
PGE ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

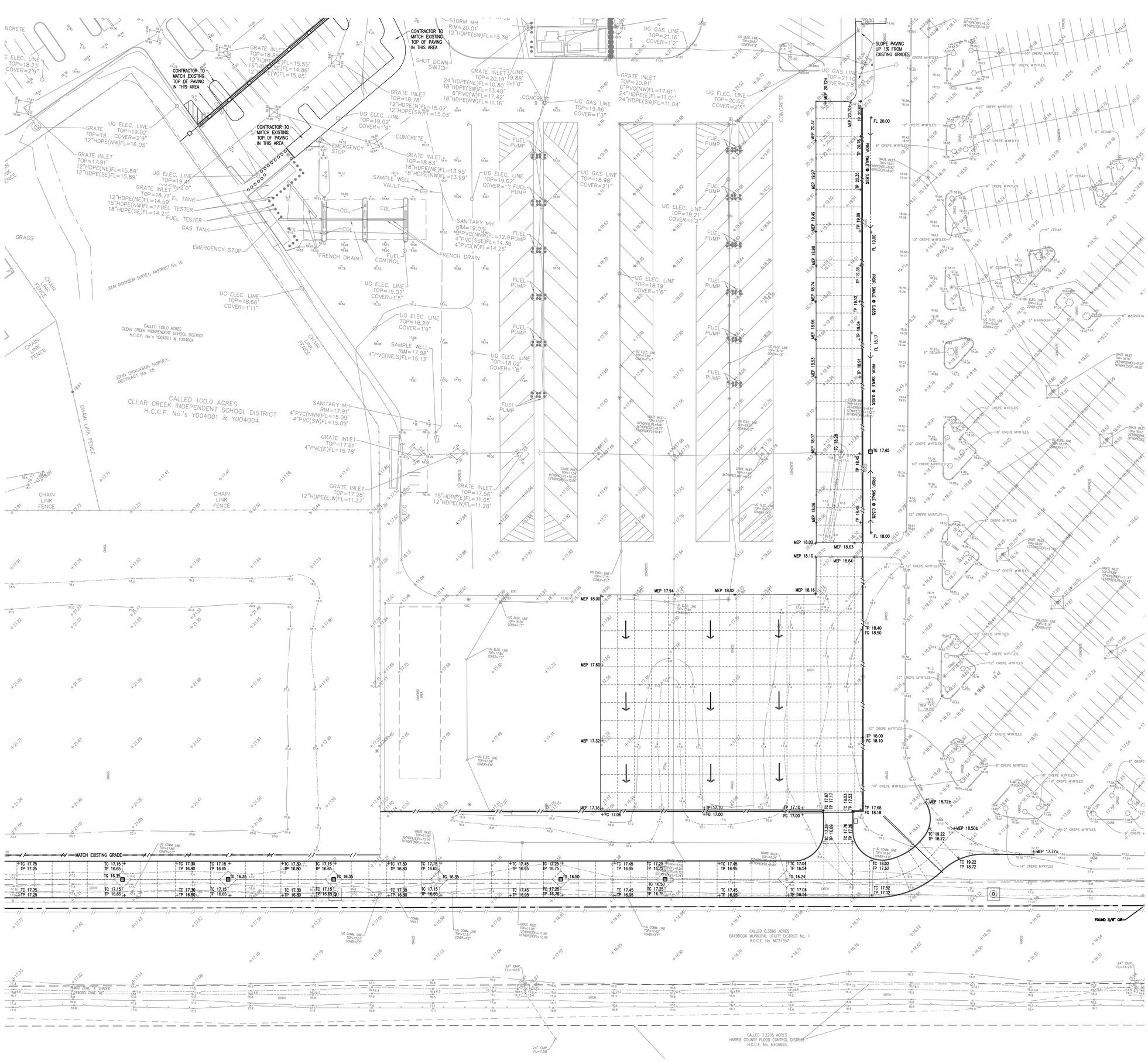
CHECKED BY:

DRAWN BY:

GRADING PLAN
(AREA A)

C 405

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Tuesday, March 3, 2026 9:28:54 AM



NORTH

15 0 30 60

NOTES TO SHEET

1. CONTRACTOR SHALL GRADE DOWN FROM TOP OF CURB TO EXISTING GRADE WHERE REQUIRED AT NO GREATER THAN 5:1 SLOPES.
2. CONTRACTOR TO MATCH EXISTING TOP OF PAVEMENT WHERE PROPOSED PAVING MEETS EXISTING PAVING.
3. CONTRACTOR SHALL NOTIFY ENGINEER IF GRADE DISCREPANCY IS LOCATED IN FIELD OR THE EXISTING GRADES TO NOT MATCH SURVEY.

LEGEND

TC	TOP OF CURB
TP	TOP OF PAVEMENT
TG	TOP OF GRATE
MEP	MATCH EXISTING PAVEMENT
MEG	MATCH EXISTING GRADE

FLOODPLAIN INFORMATION

THIS PROPERTY IS LOCATED IN ZONE "X" SHADED, AREAS DETERMINED TO BE IN THE 0.2% ANNUAL CHANCE FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0019G PANEL 19 OF 600, DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.

500-YR FLOODPLAIN ELEVATION: 18.75

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NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

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ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

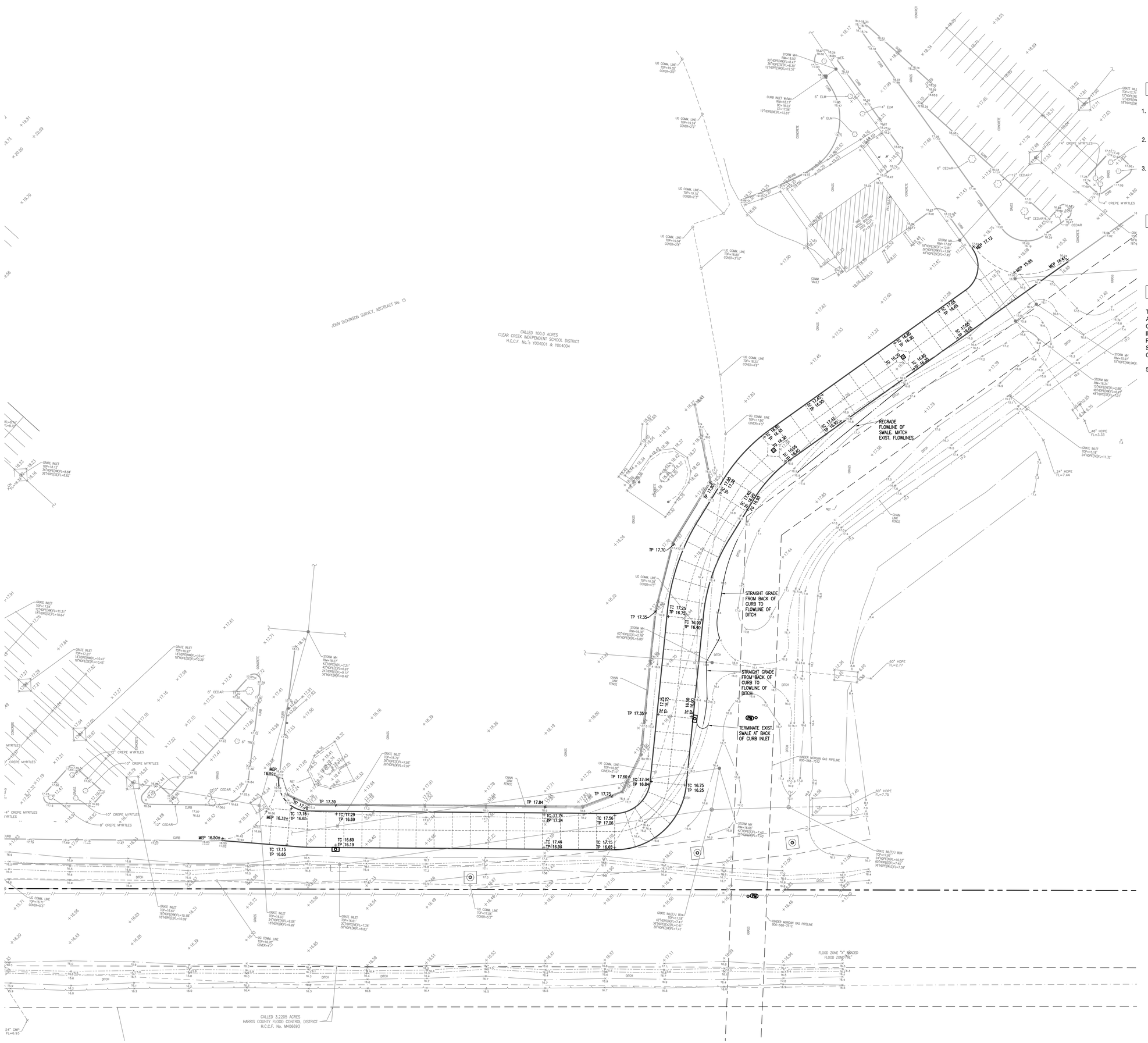
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GRADING PLAN (AREA B)

C 406

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Tuesday, March 3, 2026 9:28:24 AM



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NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

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ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
STATE OF TEXAS
144159
LICENSED
PROFESSIONAL ENGINEER
03/03/2026
ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

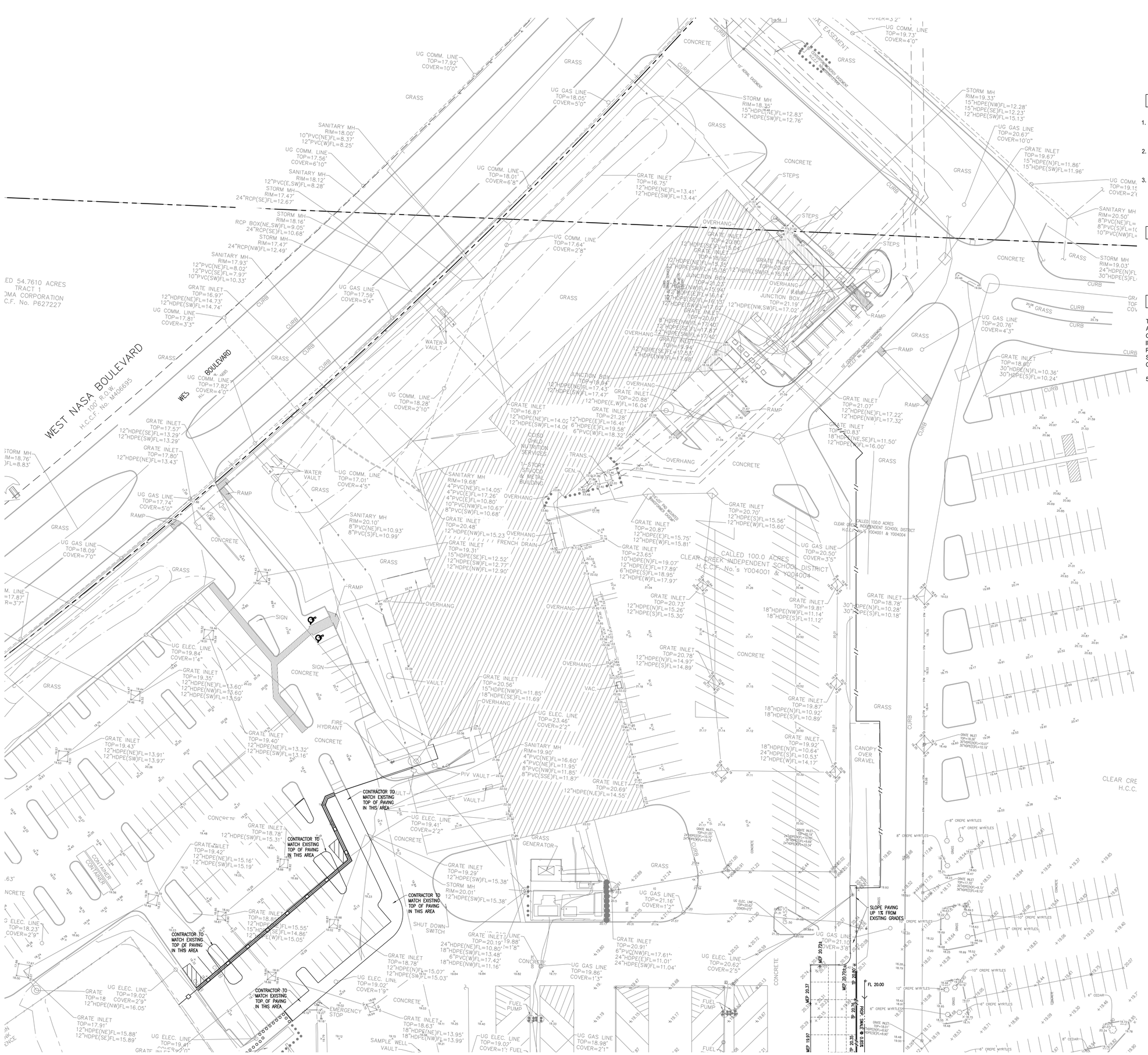
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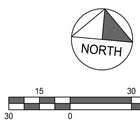
DRAWN BY:

GRADING PLAN
(AREA C)

C 407

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Tuesday, March 3, 2026 9:33:58 AM





NOTES TO SHEET

1. CONTRACTOR SHALL GRADE DOWN FROM TOP OF CURB TO EXISTING GRADE WHERE REQUIRED AT NO GREATER THAN 5:1 SLOPES.
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3. CONTRACTOR SHALL NOTIFY ENGINEER IF GRADE DISCREPANCY IS LOCATED IN FIELD OR THE EXISTING GRADES TO NOT MATCH SURVEY.

LEGEND

TC	TOP OF CURB
TP	TOP OF PAVEMENT
TG	TOP OF GRATE
MEP	MATCH EXISTING PAVEMENT
MEG	MATCH EXISTING GRADE

FLOODPLAIN INFORMATION

THIS PROPERTY IS LOCATED IN ZONE "X" SHADED, AREAS DETERMINED TO BE IN THE 0.2% ANNUAL CHANCE FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0019G PANEL 19 OF 600, DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.

500-YR FLOODPLAIN ELEVATION: 18.75

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TX FIRM: BR 1608

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713-865-0008

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
03/03/2026

DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY:

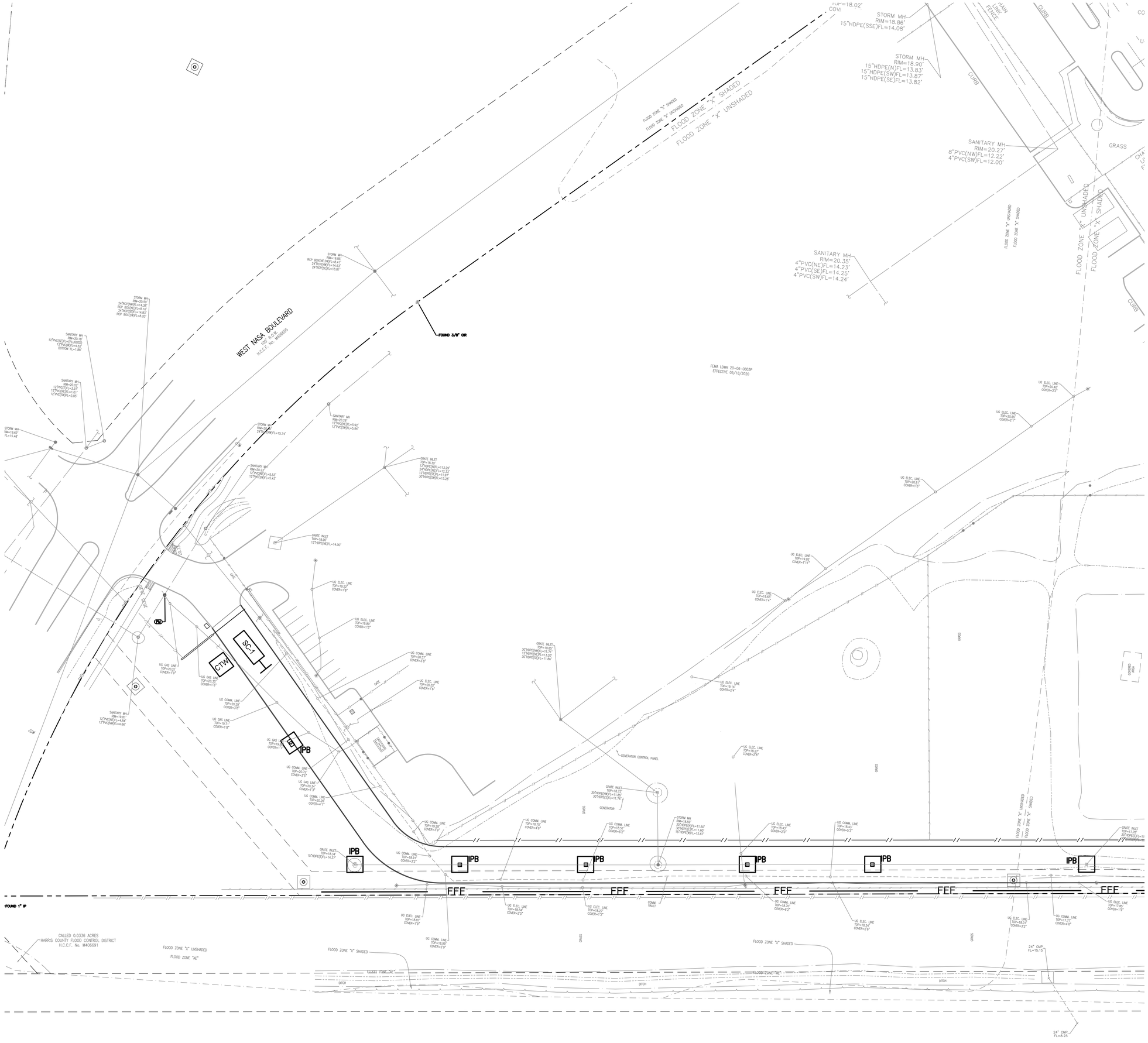
DRAWN BY:

GRADING PLAN
(AREA D)

C 408

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Tuesday, March 3, 2026 9:25:43 AM



NOTES TO SHEET

IPB	INLET PROTECTION BARRIER
FFF	FILTER FABRIC FENCE
CTW	CONCRETE WASH OUT
SC-1	STABILIZED CONSTRUCTION ENTRANCE

NOTES TO SHEET

MS4 OPERATOR INFORMATION:

1. CITY OF LEAGUE CITY, 500 WEST WALKER STREET, LEAGUE CITY, TEXAS 77573
   1.1. CONTACT/TITLE: GARY LYNCH/STORMWATER MANAGEMENT COORDINATOR
2. PHONE: 281-508-8537
3. EMAIL: GARY.LYNCH@LEAGUECITYTX.GOV

PRIMARY OPERATOR INFORMATION:

1. GENEROCITY SERVICES, INC.
   1.1. ATTN: ZACK WALKER, PROJECT MANAGER
   1.2. ADDRESS: 1212 W. WINDING WAY, FRIENDSWOOD, TX 77546
2. PHONE: 713-202-3390
3. EMAIL: ZACK@GENEROCITYSERVICES.COM

SECONDARY OPERATOR INFORMATION:

1. CLEAR CREEK INDEPENDENT SCHOOL DISTRICT
   1.1. ATTN: ALEX ARAGON, PROJECT MANAGER
   1.2. ADDRESS: 2145 W. NASA BLVD, WEBSTER, TX 77598
2. PHONE: 281-660-9646
3. EMAIL: AARAGON@CCISD.NET.

FLOODPLAIN INFORMATION

THIS PROPERTY IS LOCATED IN ZONE "X" SHADED, AREAS DETERMINED TO BE IN THE 0.2% ANNUAL CHANCE FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA), 48167C0015G PANEL 19 OF 600, DATED AUGUST 15, 2019. THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.

500-YR FLOODPLAIN ELEVATION: 18.75

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TX FIRM: BR 1608

HOUSTON, TX
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NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026

ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

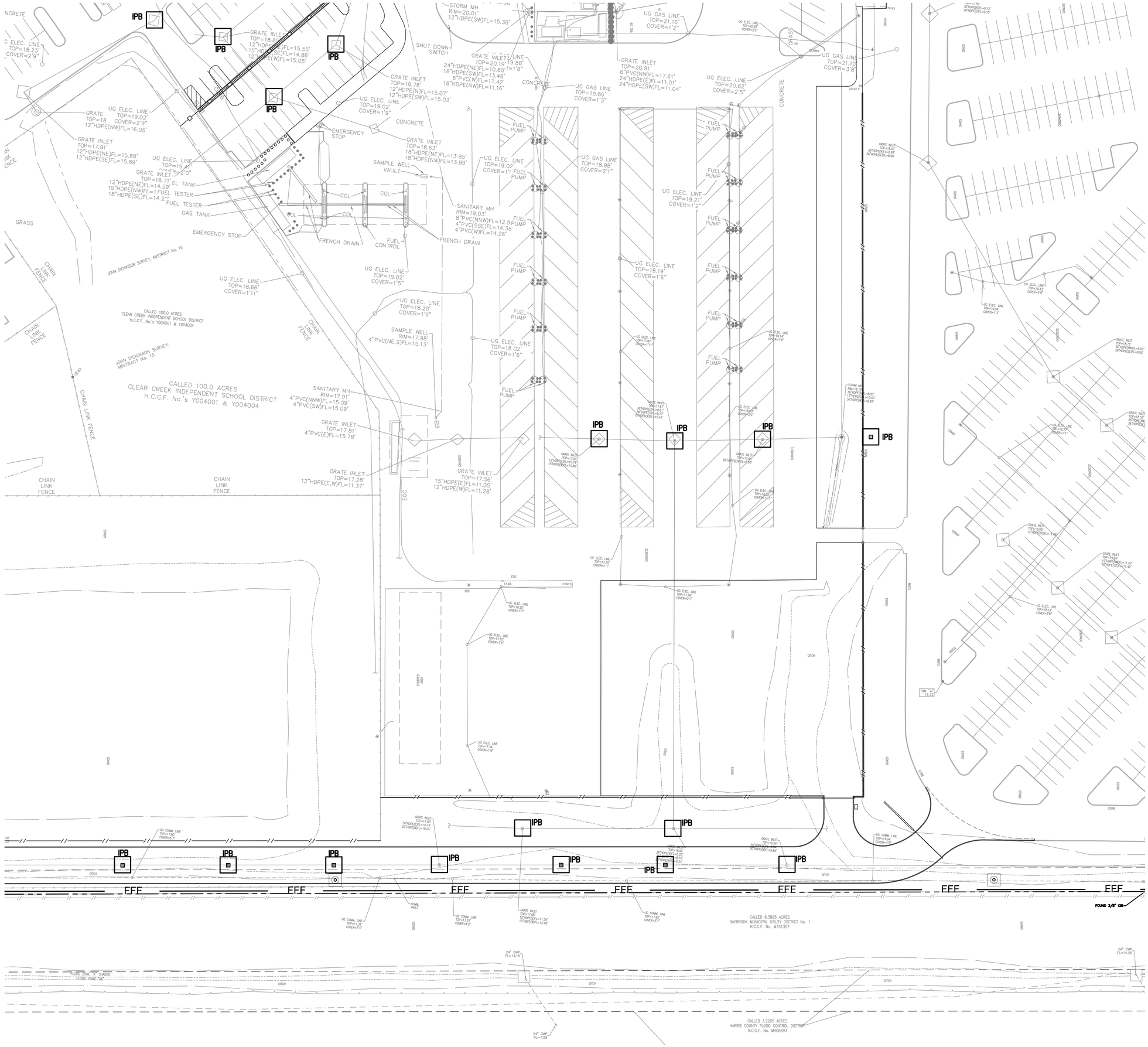
No.	Description	Date

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DRAWN BY:	

EROSION CONTROL PLAN (AREA A)

C 501

b:\250\250236\FOC\DIG\Dwgs\PHASE 2\C 501 EROSION CONTROL PLAN (AREA A).dwg Last Saved: JWHATLEY
Thursday, February 19, 2026 11:17:47 AM



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NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

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WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
JG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

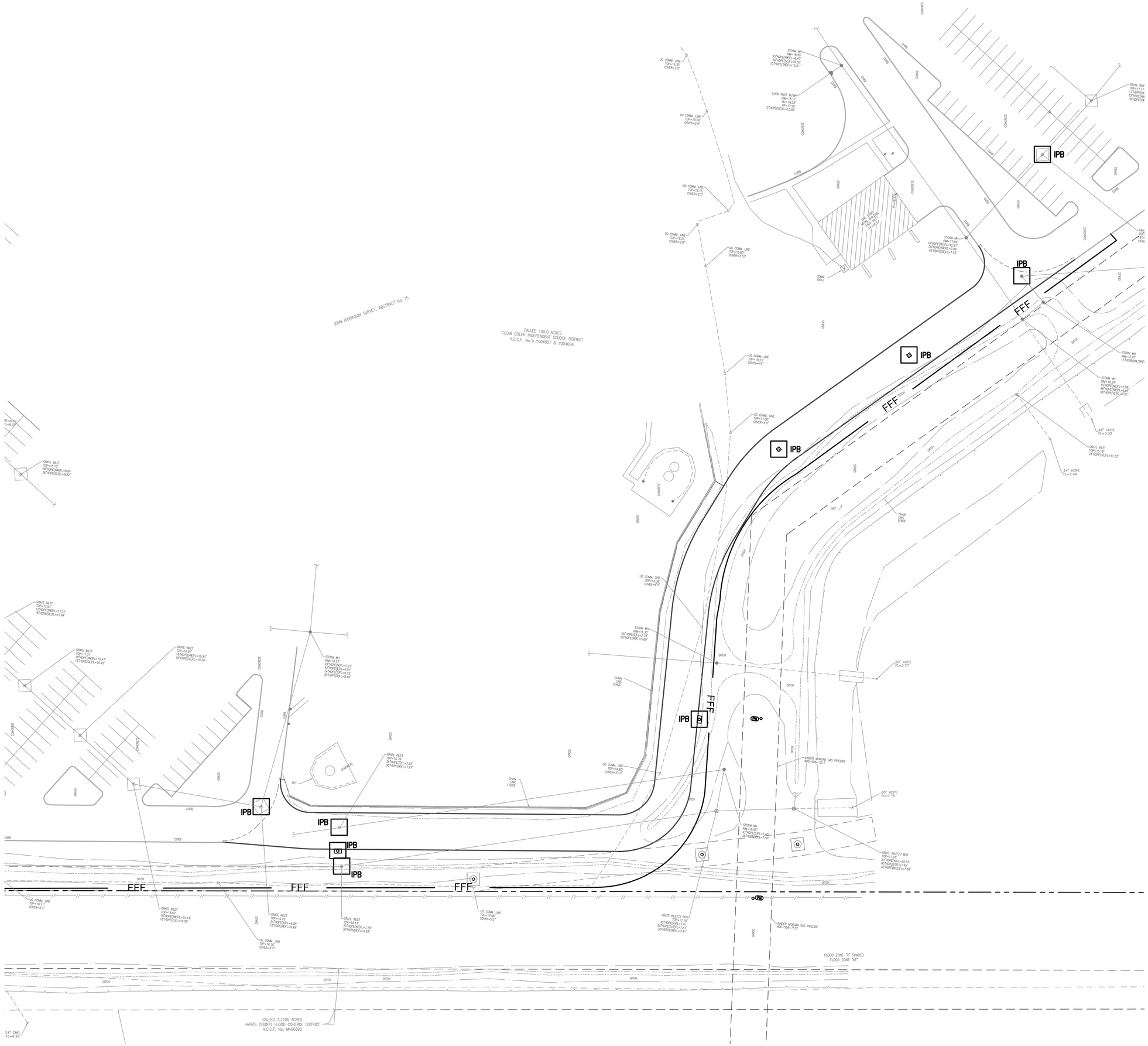
CHECKED BY:

DRAWN BY:

EROSION CONTROL PLAN (AREA B)

C 502

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Thursday, February 19, 2026 11:19:58 AM



NOTES TO SHEET

IPB — INLET PROTECTION BARRIER

FFF — FILTER FABRIC FENCE

CTW — CONCRETE WASH OUT

SC-1 — STABILIZED CONSTRUCTION ENTRANCE

NOTES TO SHEET

MS4 OPERATOR INFORMATION:

1. CITY OF LEAGUE CITY, 500 WEST WALKER STREET, LEAGUE CITY, TEXAS 77573
   1.1. CONTACT/TITLE: GARY LYNCH/STORMWATER MANAGEMENT COORDINATOR
2. PHONE: 281-508-8537
3. EMAIL: GARY.LYNCH@LEAGUECITYTX.GOV

PRIMARY OPERATOR INFORMATION:

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   1.2. ADDRESS: 1212 W. WINDING WAY, FRIENDSWOOD, TX 77546
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3. EMAIL: ZACK@GENEROCITYSERVICES.COM

SECONDARY OPERATOR INFORMATION:

1. CLEAR CREEK INDEPENDENT SCHOOL DISTRICT
   1.1. ATTN: ALEX ARAGON, PROJECT MANAGER
   1.2. ADDRESS: 2145 W. NASA BLVD, WEBSTER, TX 77598
2. PHONE: 281-660-9646
3. EMAIL: AARAGON@CCISD.NET.

FLOODPLAIN INFORMATION

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500-YR FLOODPLAIN ELEVATION: 18.75

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TX FIRM: BR 1608

HOUSTON, TX
713-865-0008

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD.
WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026

DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY:

DRAWN BY:

EROSION CONTROL PLAN (AREA C)

C 503

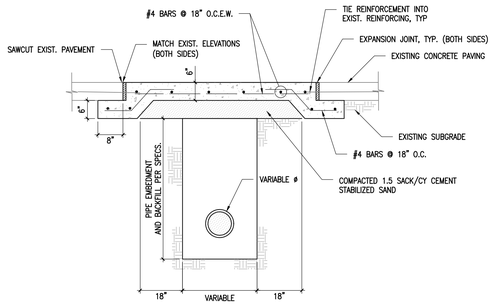
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Thursday, February 19, 2026 11:22:07 AM


WEST NASA BOULEVARD
100' R.O.W.
H.C.C.F. No. M406695
WES BOULEVARD
ED 54.7610 ACRES
TRACT 1
OMA CORPORATION
C.F. No. P627227
CALLED 100.0 ACRES
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT
H.C.C.F. No.'s Y004001 & Y004004
CCISD CHILD NUTRITION SERVICES
1-STORY STUCCO & METAL BUILDING
CANOPY OVER GRAVEL
CONTAINER
CONTAINER
GENERATOR
FUEL PUMP
FUEL PUMP
SAMPLE WELL
VAULT
SHUT DOWN SWITCH
EMERGENCY STOP
SIGN
FIRE HYDRANT
WATER VAULT
PIV VAULT
FDC VAULT
VAULT
VAC
IPB
SC-1
STEPS
RAMP
CONCRETE
GRASS
CURB
OVERHANG
FRENCH DRAIN
SANITARY MH
STORM MH
GRATE INLET
JUNCTION BOX
UG COMM. LINE
UG GAS LINE
UG ELEC. LINE
UG COMM. LINE TOP=17.92' COVER=10'0"
UG GAS LINE TOP=18.05' COVER=5'0"
UG COMM. LINE TOP=18.01' COVER=6'8"
UG COMM. LINE TOP=17.64' COVER=2'9"
UG COMM. LINE TOP=19.73' COVER=4'0"
UG GAS LINE TOP=20.67' COVER=10'0"
UG COMM. LINE TOP=17.56' COVER=6'10"
UG GAS LINE TOP=17.59' COVER=5'4"
UG COMM. LINE TOP=17.81' COVER=3'3"
UG COMM. LINE TOP=17.82' COVER=4'0"
UG COMM. LINE TOP=18.28' COVER=2'10"
UG COMM. LINE TOP=17.01' COVER=4'5"
UG GAS LINE TOP=17.74' COVER=5'0"
UG GAS LINE TOP=18.09' COVER=7'0"
UG ELEC. LINE TOP=19.84' COVER=1'4"
UG ELEC. LINE TOP=18.23' COVER=2'9"
UG ELEC. LINE TOP=19.02' COVER=2'9"
UG ELEC. LINE TOP=19.41' COVER=2'2"
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UG ELEC. LINE TOP=19.41' COVER=2'2"
UG ELEC. LINE TOP=23.46' COVER=2'2"
UG ELEC. LINE TOP=19.41' COVER=2'2"
UG ELEC. LINE TOP=20.07' COVER=2'5"
UG GAS LINE TOP=19.86' COVER=1'3"
UG GAS LINE TOP=18.98' COVER=2'1"
UG GAS LINE TOP=20.50' COVER=3'5"
UG GAS LINE TOP=20.76' COVER=4'3"
UG GAS LINE TOP=21.16' COVER=1'2"
UG GAS LINE TOP=21.10' COVER=3'8"
SANITARY MH RIM=18.00' 10"PVC(NE)FL=8.37' 12"PVC(W)FL=8.25'
SANITARY MH RIM=18.12' 12"PVC(E,SW)FL=8.28'
STORM MH RIM=17.47' 24"RCP(SE)FL=12.67'
STORM MH RIM=18.16' RCP BOX(NE,SW)FL=9.05' 24"RCP(SE)FL=10.68'
STORM MH RIM=17.47' 24"RCP(NW)FL=12.49'
SANITARY MH RIM=17.93' 12"PVC(NE)FL=8.02' 12"PVC(SE)FL=7.97' 10"PVC(SW)FL=10.33'
SANITARY MH RIM=20.10' 8"PVC(NE)FL=10.93' 8"PVC(S)FL=10.99'
SANITARY MH RIM=19.68' 4"PVC(NE)FL=14.05' 4"PVC(E)FL=17.26' 4"PVC(E)FL=10.80' 10"PVC(NW)FL=10.67' 8"PVC(SW)FL=10.68'
SANITARY MH RIM=19.90' 4"PVC(NE)FL=16.60' 4"PVC(NE)FL=11.95' 8"PVC(NW)FL=11.85' 8"PVC(SSE)FL=11.87'
STORM MH RIM=18.35' 15"HDPE(NE)FL=12.83' 12"HDPE(SW)FL=12.76'
STORM MH RIM=19.33' 15"HDPE(NW)FL=12.28' 15"HDPE(SE)FL=12.23' 12"HDPE(SW)FL=15.13'
STORM MH RIM=19.03' 24"HDPE(N)FL 8"PVC(S)FL=1(10"PVC(NW)FL=
SANITARY MH RIM=20.50' 8"PVC(NE)FL= 8"PVC(S)FL=1(10"PVC(NW)FL=
GRATE INLET TOP=16.75' 12"HDPE(NE)FL=13.41' 12"HDPE(SW)FL=13.44'
GRATE INLET TOP=16.97' 12"HDPE(NE)FL=14.73' 12"HDPE(SW)FL=14.74'
GRATE INLET TOP=17.57' 12"HDPE(SE)FL=13.29' 12"HDPE(SW)FL=13.29'
GRATE INLET TOP=17.80' 12"HDPE(NE)FL=13.43'
GRATE INLET TOP=19.35' 12"HDPE(NE)FL=13.60' 12"HDPE(NW)FL=13.60' 12"HDPE(SW)FL=13.59'
GRATE INLET TOP=19.40' 12"HDPE(NE)FL=13.32' 12"HDPE(SW)FL=13.16'
GRATE INLET TOP=19.43' 12"HDPE(NE)FL=13.91' 12"HDPE(SW)FL=13.97'
GRATE INLET TOP=18.78' 12"HDPE(SW)FL=15.31'
GRATE INLET TOP=19.42' 12"HDPE(NE)FL=15.16' 12"HDPE(SW)FL=15.19'
GRATE INLET TOP=18.87' 12"HDPE(NE)FL=14.02' 12"HDPE(SW)FL=14.06'
GRATE INLET TOP=17.43' 12"HDPE(E,W)FL=16.04'
GRATE INLET TOP=21.28' 6"PVC(E)FL=19.58' 6"PVC(W)FL=18.32'
GRATE INLET TOP=20.48' 12"HDPE(NW)FL=15.23'
GRATE INLET TOP=19.31' 15"HDPE(SE)FL=12.52' 12"HDPE(SW)FL=12.77' 12"HDPE(NW)FL=12.90'
GRATE INLET TOP=16.75' 12"HDPE(NE)FL=13.41' 12"HDPE(SW)FL=13.44'
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GRATE INLET TOP=19.81' 18"HDPE(NW)FL=11.14' 18"HDPE(S)FL=11.12'
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GRATE INLET TOP=19.67' 15"HDPE(N)FL=11.86' 15"HDPE(SW)FL=11.96'
GRATE INLET TOP=18.80' 30"HDPE(N)FL=10.36' 30"HDPE(S)FL=10.24'
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GRATE INLET TOP=19.88' 6"PVC(NW)FL=17.61' 24"HDPE(E)FL=11.01' 24"HDPE(SW)FL=11.04

16 NOT USED

15 NOT USED

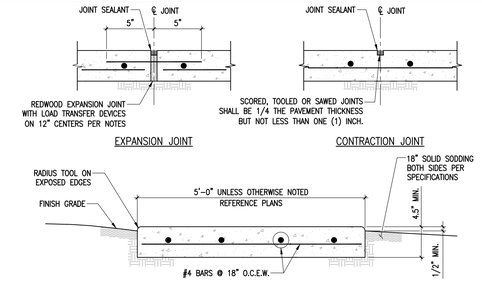
14 REPAIR OF CONCRETE PAVEMENT



NOTES:

1. CENTER REINFORCING IN SLAB THICKNESS.

13 CONCRETE SIDEWALK

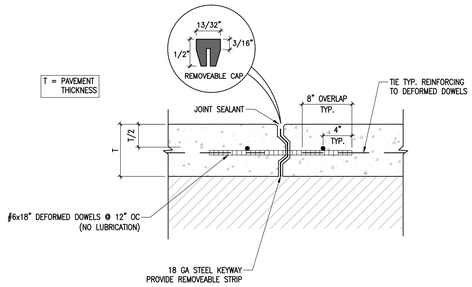


SIDEWALK SECTION

NOTES:

1. SLOPE TRANSVERSE SURFACE 2% (1:50) IN DIRECTION OF GENERAL SITE AREA DRAINAGE.
2. RUNNING SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT EXCEED 5% (1:20).
3. FLOAT EDGES 1/4" MAXIMUM AT CONTROL JOINTS.
4. USE REDWOOD BOARD EXPANSION JOINT w/ #4 SMOOTH BAR w/ LOAD KEY (10" LONG).
5. REDWOOD BOARD EXPANSION JOINTS ON 15 FOOT CENTERS MAXIMUM.
6. CONTROL JOINT SPACING NOT TO EXCEED FIVE (5) FEET. SCORED, TOOLED OR SAWN JOINTS SHALL BE 1/4 THE PAVEMENT THICKNESS BUT NOT LESS THAN ONE (1) INCH.
7. SIDEWALK JOINTS SHALL ALIGN WITH PAVING JOINTS WHEN SIDEWALK IS ADJACENT TO PAVING.

8 EXIST. TO PROP. CONCRETE PAVEMENT

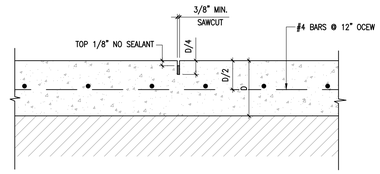


NOTE:

1. SMOOTH DOWELS AND REINFORCING BARS TO BE SECURELY ANCHORED AND SHALL BE SUPPORTED BY AN APPROVED DEVICE TO PREVENT MOVEMENT DURING PAVING OPERATIONS.

2. STAKES TO SUPPORT FORMS SHALL BE DRIVEN A MINIMUM OF 2" BELOW THE TOP OF PAVEMENT.

7 CONCRETE PAVEMENT

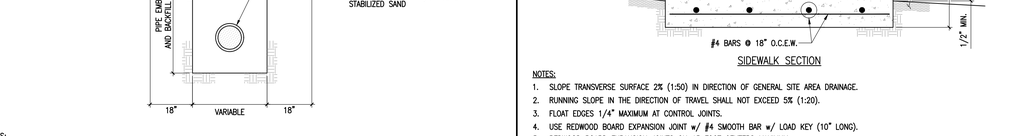


NOTE:

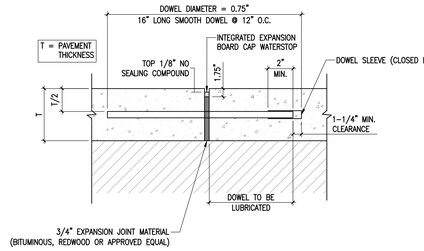
1. SAWCUTS 1/4" WIDE ARE TO BE SEALED WITH SILICONE JOINT SEALING COMPOUND UP TO 1/8" BELOW TOP OF PAVEMENT. SEE SPECIFICATIONS FOR REQUIRED JOINT SEALANT.

2. COMPLETE SAWCUT JOINTS WITHIN 12 HOURS OF CONCRETE PLACEMENT.

6 VEHICULAR GATE



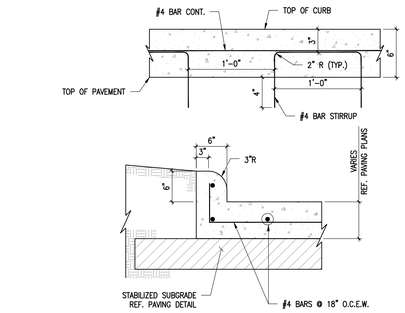
10 EXPANSION JOINT (X)



NOTE:

1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

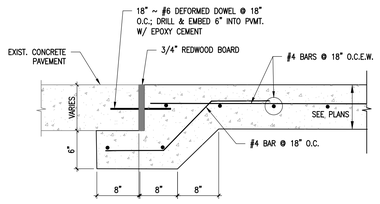
9 CONCRETE CURB



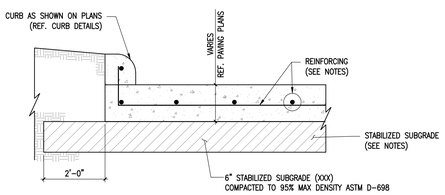
NOTES:

1. FOR NEW PAVEMENT STIRRUPS SHALL BE SET IN FRESH CONCRETE AND SECURED.
2. FOR NEW CURB ON EXISTING PAVEMENT STIRRUPS SHALL BE DRILLED AND EPOXIED INTO THE EXISTING PAVEMENT.
3. MIN COVER ON ALL REINFORCING STEEL SHALL BE 2".
4. PLACE 3/4" INCH PREFORMED EXPANSION JOINTS THROUGH CURB AND GUTTERS AT LOCATIONS OF EXPANSION JOINTS IN PAVEMENT, AT END OF RADIUS RETURNS AT STREET INTERSECTIONS AND DRIVEWAYS, AND AT CURB INLETS. MAXIMUM SPACING SHALL BE 60' CENTERS.
5. PLACE 1/4" TOOLED JOINTS THROUGH CURB AND GUTTERS AT LOCATIONS OF SAWED JOINTS IN PAVEMENT.

12 LONGITUDINAL TIED JOINT (LT)



11 SAWCUT JOINT (S)

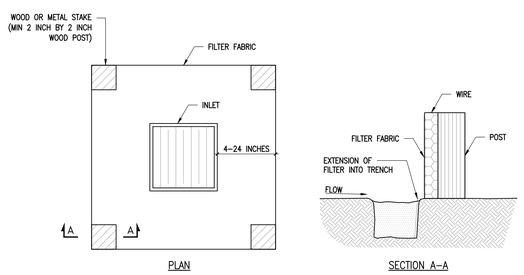


NOTES:

1. AREAS TO RECEIVE PAVING SHALL BE STRIPPED OF THE ORGANIC TOPSOIL TO A DEPTH OF AT LEAST 6-INCHES AND TO A DEPTH AS NECESSARY TO OBTAIN THE DESIRED FINISH GRADE. AFTER REMOVAL OF THE TOPSOIL THE EXPOSED SUBGRADE SHALL BE PROOFROLLED WITH A 15-TON ROLLER TO DETECT ANY WET, SOFT, OR UNSTABLE SOILS. WET, SOFT OR UNSTABLE SOILS SHALL BE TREATED WITH SUITABLE DRYING OR STABILIZING AGENTS OR REMOVED AND REPLACE WITH PROPERLY COMPACTED FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
2. IF IT IS NECESSARY TO PLACE FILL IN ORDER TO BRING THE PAVEMENT SUBGRADE TO THE REQUIRED ELEVATION, SUITABLE EARTH FILL OR SELECT FILL SHALL BE UTILIZED. SUITABLE EARTH FILL AND SELECT FILL SHALL BE FREE OF ORGANICS, DELETERIOUS SUBSTANCES AND BE A CLAYEY SAND OR INACTIVE LEAN CLAY WITH A MAXIMUM LIQUID LIMIT OF 35 AND PLASTICITY INDEX RANGE OF 8 TO 20. FILL MATERIAL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN +/-2% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.
3. REFERENCE PAVING PLANS FOR SUBGRADE STABILIZATION REQUIREMENTS.
4. CONCRETE PAVEMENT SHALL CONSIST OF NOT LESS THAN 5.5 SACKS OF CONCRETE PER CUBIC YARD AND OBTAIN A 28-DAY COMPRESSIVE STRENGTH OF AT LEAST 3,500 PSI. REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
5. REINFORCING SHALL CONSIST OF THE THE FOLLOWING:
   - 5-INCH THICK PAVING – #4 BARS AT 18" O.C.E.W.
   - 6-INCH THICK PAVING – #4 BARS AT 12" O.C.E.W. OR #5 BARS AT 18" O.C.E.W.
   - 7-INCH AND 8-INCH THICK PAVING – #5 BARS AT 18" O.C.E.W.

5 NOT USED

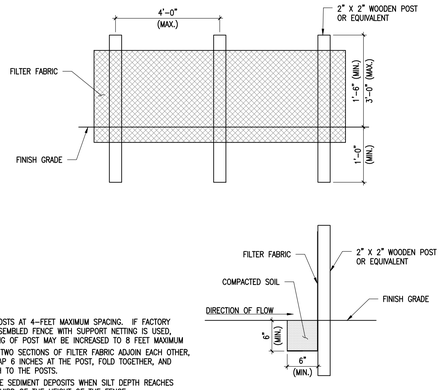
4 SILT FENCE INLET PROTECTION BARRIER (IPB)



CONSTRUCTION NOTES

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
5. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
6. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.

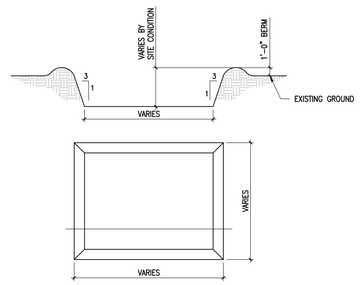
3 FILTER FABRIC FENCE (FFF)



NOTES:

1. SET POSTS AT 4-FEET MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM
2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POST, FOLD TOGETHER, AND ATTACH TO THE POSTS.
3. REMOVE SEDIMENT DEPOSITS WHEN SILT DEPTH REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE.

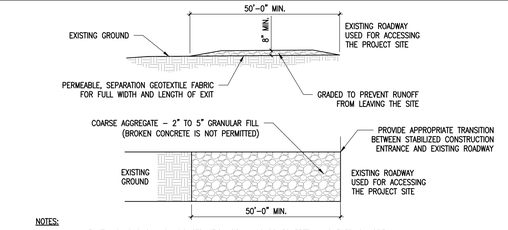
2 CONCRETE TRUCK WASHOUT AREA



NOTES:

1. POST A SIGN READING "CONCRETE WASH OUT PIT" NEXT TO THE PIT.
2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASH OUT THEIR TRUCKS IN THE PIT AND NO WHERE ELSE.
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASH OUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
4. CONCRETE WASH OUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.

1 STABILIZED CONSTRUCTION ENTRANCE



NOTES:

1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
4. WHEN REQUIRED, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
7. ALTERNATIVE METHODS OF CONSTRUCTION INCLUDE:
   CEMENT STABILIZED SOIL: COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
   WOOD MATS: OAK OR OTHER HARDWOOD TIMBERS PLACED EDGE TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 6 INCHES.
   STEEL MATS: PERFORATED MATS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.
8. MINIMUM 14' WIDTH FOR ONE WAY TRAFFIC AND 20' WIDTH FOR TWO WAY TRAFFIC.

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CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
DG ENGINEERS
F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY:

DRAWN BY:

DETAILS

C 601

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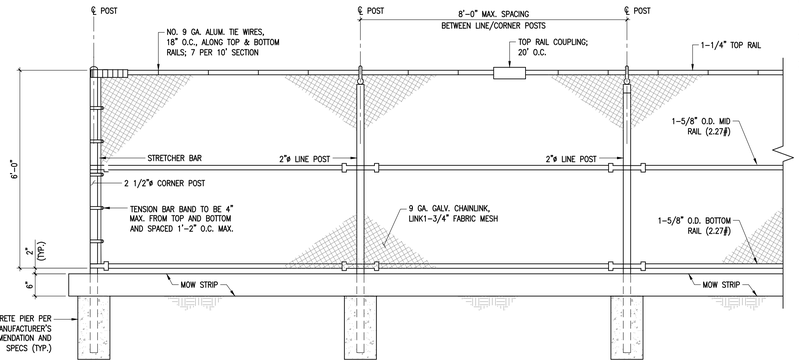
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14 | NOT USED

13 | NOT USED

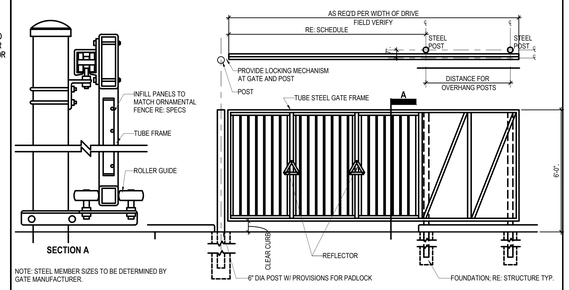
12 | NOT USED

NOMINAL PIPE SIZE SCHEDULE 40	WEIGHT LBS/FT
1-1/4"	2.27
1-1/2"	2.72
2"	3.65
2-1/2"	5.79
3	7.58
3-1/2"	9.12
4	10.80
6	18.99
8	28.58

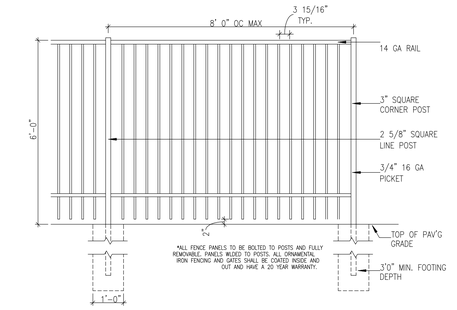


NOTES:

1. UNLESS OTHERWISE NOTED, ALL FENCE PIPING SHALL BE HOT DIP GALVANIZED, SCHEDULE 40 STEEL PIPE.
2. DIMENSIONS AND SIZES SHOWN ARE MINIMUM REQUIRED.
3. CONTRACTOR SHALL DESIGN AND BUILD FENCE TO WITHSTAND WIND LOADS PER REGULATIONS AND BE RESPONSIBLE FOR ITS FUTURE PERFORMANCE.



NOTE: STEEL MEMBER SIZES TO BE DETERMINED BY GATE MANUFACTURER.



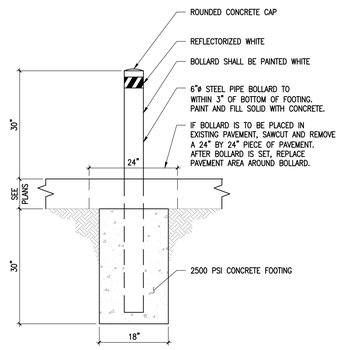
*ALL FENCE PANELS TO BE BOLTED TO POSTS AND FULLY REMOVABLE. PANELS WELDED TO POSTS. ALL ORNAMENTAL IRON FENCING AND GATES SHALL BE COATED INSIDE AND OUT AND HAVE A 20 YEAR WARRANTY.

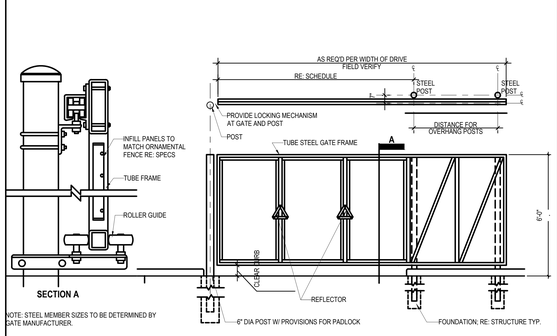
NOTE:
1. ALL ORNAMENTAL METAL FENCING MATERIAL SHALL BE PRE-FINISHED COATED INSIDE AND OUT AND HAVE A 20 YEAR WARRANTY.
2. POST SIZE DEPENDS ON FENCE HEIGHT AND WIND LOADS. POST SIZES PER ORNAMENTAL FENCE MANUFACTURER
3. REFER TO GATE SCHEDULE FOR GATES TO RECEIVE CARD READERS.
4. POST SIZE SHALL BE 4" x 4" x HGA POST FOR <6' LEAVES, 4" x 4" 1/4" THICK POST FOR 6'-10' LEAVES, AND 6" x 6" 1/4" THICK POST FOR >10' LEAVES

11 | 6' CHAINLINK FENCE (GALVANIZED)

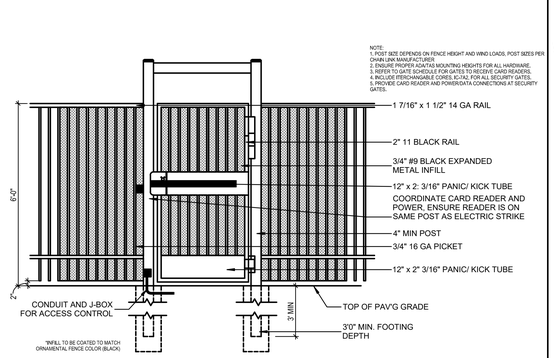
10 | ORNAMENTAL ROLLING GATE

9 | ORNAMENTAL FENCE

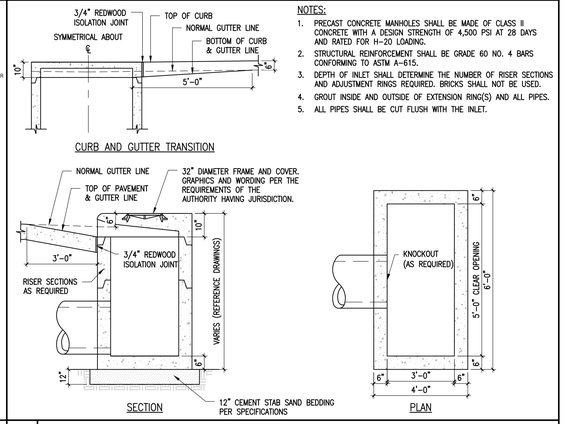




NOTE: STEEL MEMBER SIZES TO BE DETERMINED BY GATE MANUFACTURER.



NOTE:
1. POST SIZE DEPENDS ON FENCE HEIGHT AND WIND LOADS. POST SIZES PER CHAIN LINK MANUFACTURER.
2. SEE DETAIL 6/C602 FOR MOUNTING HEIGHTS FOR ALL HARDWARE.
3. REFER TO GATE SCHEDULE FOR GATES TO RECEIVE CARD READERS.
4. INCLUDE ITEMIZED/ABLE CORES, ICI KIT, FOR ALL SECURITY GATES.
5. PROVIDE CARD READER AND POWER/DATA CONNECTIONS AT SECURITY GATES.



NOTES:
1. PRECAST CONCRETE MANHOLES SHALL BE MADE OF CLASS II CONCRETE WITH A DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS AND RATED FOR H-20 LOADING.
2. STRUCTURAL REINFORCEMENT SHALL BE GRADE 60 CONFORMING TO ASTM A-615.
3. DEPTH OF INLET SHALL DETERMINE THE NUMBER OF RISER SECTIONS AND ADJUSTMENT RINGS REQUIRED. BRICKS SHALL NOT BE USED.
4. GROUT INSIDE AND OUTSIDE OF EXTENSION RING(S) AND ALL PIPES.
5. ALL PIPES SHALL BE CUT FLUSH WITH THE INLET.

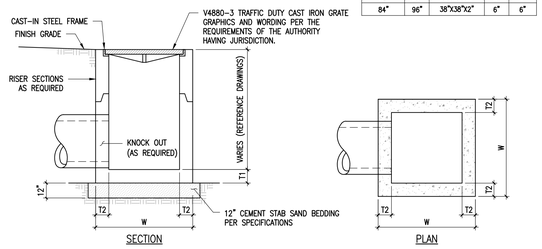
8 | CONCRETE PIPE BOLLARD

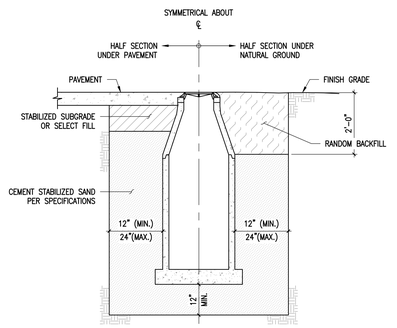
7 | NON-ORNAMENTAL ROLLING GATE

6 | ORNAMENTAL SINGLE GATE

5 | TYPE "C" STORM SEWER INLET

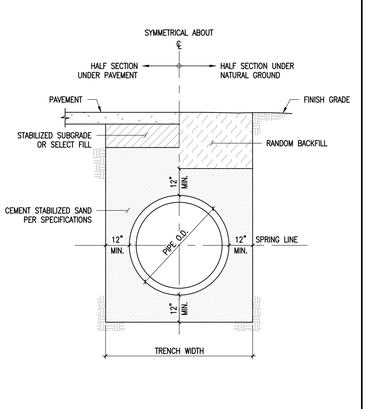
KNOCK OUT	W	GRATE SIZE	T1	T2
10"	15"	12"X12"X1"	3"	2 1/2"
12"	20"	14"X14"X1 1/2"	4"	3"
15"	24"	18"X18"X1 1/2"	4"	4"
17"	26"	20"X20"X1 1/2"	4"	4"
22"	32"	24"X24"X2"	5"	5"
24"	37"	27"X27"X2"	6"	6"
30"	42"	32"X32"X2"	6"	6"
32"	48"	38"X38"X2"	6"	6"
48"	60"	38"X38"X2"	6"	6"
60"	72"	38"X38"X2"	6"	6"
72"	84"	38"X38"X2"	6"	6"
84"	96"	38"X38"X2"	6"	6"





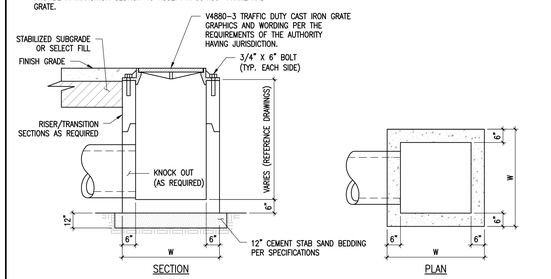
NOTES:
1. THIS DETAIL MAY BE USED ONLY FOR BEDDING AND BACKFILLING OF MANHOLES, INLETS AND OTHER STRUCTURES IN DRY STABLE TRENCH CONDITIONS. WHERE WET SAND CONDITIONS ARE ENCOUNTERED STRUCTURES SHALL BE BACKFILLED PER THE REQUIREMENTS OF THE WET CONDITION BEDDING AND BACKFILLING DETAIL.
2. ALL BACKFILL SHALL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN +/-2% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.

NOTES:
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS. WHERE WET SAND CONDITIONS ARE ENCOUNTERED SEWERS SHALL BE BACKFILLED PER THE REQUIREMENTS OF THE WET CONDITION BEDDING AND BACKFILLING DETAIL.
2. ALL BACKFILL SHALL SHALL BE PLACED IN 8-INCH THICK LOOSE LIFTS AND COMPACTED TO AN IN-PLACE DENSITY EQUAL TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN +/-2% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.
3. FOR R.C.P. STORM SEWERS MIN. TRENCH WIDTH SHALL BE PIPE O.D. PLUS 24-INCHES FOR PIPES WITH A NOMINAL SIZE OF 30-INCHES OR LESS AND O.D. PLUS 36-INCHES FOR PIPES WITH A NOMINAL SIZE GREATER THAN 30-INCHES.
4. FOR H.D.P.E. STORM SEWERS MIN. TRENCH WIDTH SHALL BE PIPE O.D. PLUS 24-INCHES FOR PIPES WITH A NOMINAL SIZE OF 24-INCHES OR LESS AND O.D. PLUS 36-INCHES FOR PIPES WITH A NOMINAL SIZE GREATER THAN 24-INCHES.



NOTES:
1. PRECAST CONCRETE MANHOLES SHALL BE MADE OF CLASS II CONCRETE WITH A DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS AND RATED FOR H-20 LOADING.
2. STRUCTURAL REINFORCEMENT SHALL BE GRADE 60 CONFORMING TO ASTM A-615.
3. DEPTH OF INLET SHALL DETERMINE THE NUMBER OF RISER SECTIONS AND ADJUSTMENT RINGS REQUIRED. BRICKS SHALL NOT BE USED.
4. GROUT INSIDE AND OUTSIDE OF EXTENSION RING(S) AND ALL PIPES.
5. ALL PIPES SHALL BE CUT FLUSH WITH THE INLET.
6. IF BOTTOM SECTION INSIDE DIMENSIONS ARE GREATER THAN 30"X30", PROVIDE A TRANSITION SECTION TO ACCEPT A 30"X30" FRAME AND GRATE.

KNOCK OUT	W	GRATE SIZE
30"	42"	30"X30"X2"
32"	48"	30"X30"X2"
48"	60"	30"X30"X2"
60"	72"	30"X30"X2"
72"	84"	30"X30"X2"
84"	96"	30"X30"X2"



4 | GRATE INLET NON-PAVED AREAS

3 | STORM SEWER STRUCTURE BEDDING AND BACKFILL

2 | STORM SEWER BEDDING AND BACKFILL

1 | GRATE INLET PAVED AREAS

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WEBSTER, TX 77598
ISSUE FOR PERMIT

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

KARSTEN H. FALKE
144159
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03/03/2026
ENGINEERS F-18326

CLIENT	
CLEAR CREEK INDEPENDENT SCHOOL DISTRICT	
DATE	PROJECT NUMBER
03.03.2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY:

DRAWN BY:

DETAILS

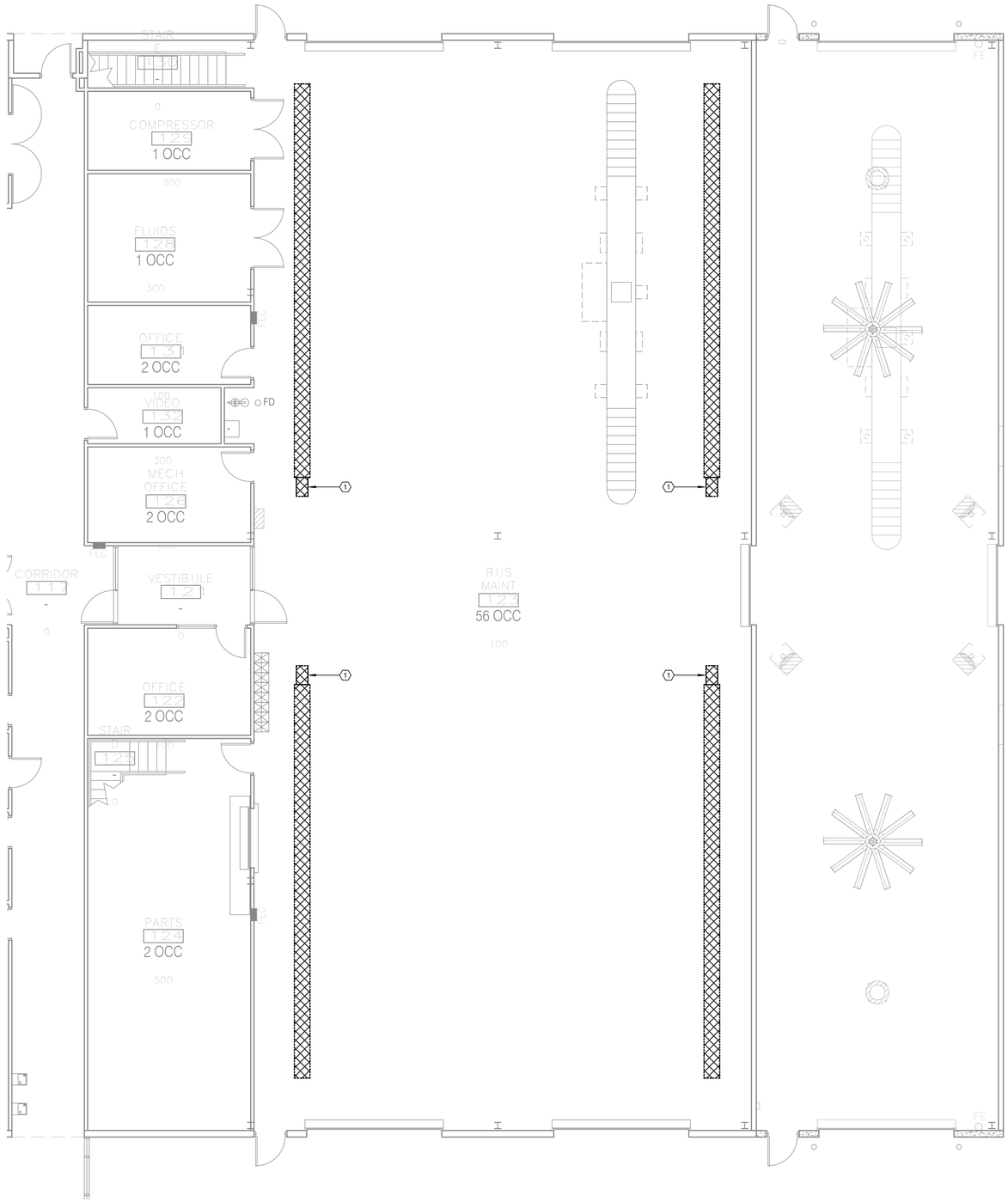
C 602

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Wednesday, March 4, 2026 3:45:09 PM

1ST FLOOR
DM-101
FOR BLUEBEAM LABELING/OCR:

DEMO MECHANICAL PLAN

0"
1"



1 1ST FLOOR MECHANICAL DEMO PLAN
SCALE: 3/16" = 1'-0"

KEYED NOTES:

1 EXISTING GAS RADIANT HEATER AND ASSOCIATED THERMOSTAT AND FLUE PIPE TO BE DEMOLISHED. PATCH ROOF OPENING. MATCH EXISTING CONDITIONS.

GENERAL NOTE:

1. ALL WORK ON THIS SHEET IS ASSOCIATED WITH ALTERNATE #3

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LEAF ENGINEERS

CENTRAL SUPPORT FACILITY

2145 West NASA Blvd., Webster, Texas

ISSUE FOR PROPOSAL

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
MITAL J. PATEL
111622
LICENSED
PROFESSIONAL
ENGINEER
03/05/2026
LEAF ENGINEERS
F-18672

CLIENT	
CLEAR CREEK ISD	
DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: MP
DRAWN BY: HV

1ST FLOOR
DEMO MECHANICAL
PLAN

MD-101

Plot Stamp:
3/3/2026 12:36:40 PM

0"

1"

MECHANICAL GENERAL NOTES AND LEGENDS
M-001
FOR BLUEBEAM LABELING/OCR:

MECHANICAL PIPING LEGEND

DESCRIPTION	ABBV.
PUMPED CONDENSATE RETURN	PCR
CONDENSATE DRAIN (INSULATED)	CD
REFRIGERANT LINE (LIQUID)	RL
REFRIGERANT LINE (SUCTION)	RS
REFRIGERANT LINE (HOT GAS)	RHG
LOW PRESSURE CONDENSATE	LPC
MEDIUM PRESSURE CONDENSATE	MPC
HIGH PRESSURE CONDENSATE	HPC

MECHANICAL PIPING SYMBOLS LEGEND

DRAWINGS	DETAILS	DESCRIPTION
		DIRECTION OF FLOW
		DROP IN PIPE
		RISE IN PIPE
		GATE VALVE
		BALL VALVE
		CHECK VALVE
		SUPERVISED VALVE WITH FLOW SWITCH
		PLUG VALVE / GAS COCK
		BUTTERFLY VALVE
		HOT WATER BALANCING VALVE
		PIPE UNION
		PRESSURE CONTROL VALVE
		3-WAY VALVE
		SOLENOID VALVE
		FLOW SWITCH
		PRESSURE GAUGE WITH GAUGE COCK
		THERMOMETER
		T & P RELIEF VALVE
		STRAINER
		CAP
		FLEXIBLE CONNECTION
		NEW CONNECTION TO EXISTING PIPING

NOTES:

1. NOT ALL SYMBOLS MAY BE USED ON THESE DRAWINGS.

MECHANICAL RENOVATIONS NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID DATE.
2. OWNER RETAINS SALVAGE RIGHTS, PROVIDE A MINIMUM OF 72 HOURS NOTICE PRIOR TO REMOVAL OF EQUIPMENT.
3. PATCH AND SEAL ALL SLAB, ROOF AND WALL OPENINGS WITH LIKE MATERIAL WHERE MECHANICAL EQUIPMENT ONCE PENETRATED.
4. ALL FLOOR DRAINS EXISTING TO REMAIN. CONTRACTOR SHALL CLEAN AND KEEP FLOOR DRAINS UNOBSTRUCTED AND REUSE.
5. UNLESS SHOWN OTHERWISE, CONTRACTOR SHALL UTILIZE EXISTING OPENINGS IN WALLS, ROOF AND FLOOR SLABS FOR PIPING ETC. PROVIDE NEW SLEEVES FOR PIPING AND INFILL ANNULAR SPACES.
6. FLUSH AND CLEAN EXISTING CHILLED WATER LOOPS AND PROVIDE NEW CHEMICAL TREATMENT.
7. CONTRACTOR TO AVOID EXISTING CABLE RUNS DURING CONSTRUCTION.
8. PROVIDE ALL NEW PIPE SUPPORTS WHERE PIPING IS SCHEDULED TO BE REPLACED.
9. RE-INSTALL ANY CEILING AFTER COMPLETION OF WORK. REPLACE ANY EXISTING DAMAGED CEILING TILES IN THE AREAS OF CONSTRUCTION.
10. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN EXISTING BUILDING CLIMATE CONTROLLED DURING CONSTRUCTION. ALL REQUIRED EQUIPMENT AND ASSOCIATED POWER, WIRING SHALL BE PROVIDED BY THE CONTRACTOR.
11. CONTRACTOR TO PROVIDE NEW DUCT DETECTOR AS REQUIRED BY CODE ON ALL AIR HANDLING UNITS EQUAL TO OR MORE THAN 2,000 CFM SUPPLY. DETECTOR MANUFACTURER TO MATCH EXISTING DEVICES AND BE COMPATIBLE WITH EXISTING FACP. CONTRACTOR TO PROVIDE AND INSTALL ALL CABLING AND EQUIPMENT/MODULES AS REQUIRED TO CONNECT ADDITIONAL DEVICES TO EXISTING FIRE ALARM CONTROL PANEL.

MECHANICAL DEMOLITION NOTES

1. DEMOLISH EQUIPMENT SCHEDULED FOR REPLACEMENT. EQUIPMENT NOT SCHEDULED FOR REPLACEMENT SHALL REMAIN IN WORKING CONDITION.
2. PATCH AND SEAL ALL ROOF AND WALL OPENINGS WHERE MECHANICAL EQUIPMENT ONCE PENETRATED.
3. DEMOLITION DOES NOT INCLUDE PLUMBING EQUIPMENT.
4. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION TO PRIOR TO DEMOLITION.
5. COORDINATE ALL WORK WITH ALL OTHER TRADES.

MECHANICAL SYMBOLS LEGEND

SYMBOL	DESCRIPTION	ABBV.
	SUPPLY AIR CEILING DIFFUSER	SAG/SAR
	RETURN AIR GRILLE / REGISTER	RAG / RAR
	EXHAUST GRILLE / REGISTER	EG / ER
	SUPPLY AIR CEILING DIFFUSER	CD
	LINEAR SLOT DIFFUSER	LD
	SIDEWALL SUPPLY AIR GRILLE/REGISTER	SAG/SAR
	SIDEWALL RETURN AIR GRILLE/REGISTER	RAG/RAR
	DUCT MT'D. SIDEWALL SUPPLY AIR GRILLE/REGISTER	SAG/SAR
	SUPPLY DUCT RISE/DROP	
	RETURN DUCT RISE/DROP	
	EXHAUST DUCT RISE/DROP	
	DOOR GRILLE	DG
UC 3/4"	UNDERCUT DOOR	UC
WxD TD	LINED RETURN TRANSFER DUCT ABOVE CEILING (SIZE AS INDICATED)	TD
	SQUARE ELBOW WITH DOUBLE THICKNESS TURNING VANES	
	VOLUME DAMPER	MVD
	FLEXIBLE DUCT	FLEX.CONN.
	NEW DUCTWORK	
	EXISTING DUCTWORK / EQUIPMENT	
	DEMO DUCTWORK / EQUIPMENT	
	NEW MECHANICAL EQUIPMENT	
	THERMOSTAT SENSOR	
	HUMIDISTAT SENSOR	
T1	COMBINATION TEMPERATURE AND CO2 SENSOR	
T2	COMBINATION TEMPERATURE, HUMIDITY, & CO2 SENSOR	
T3	COMBINATION TEMPERATURE & HUMIDITY SENSOR	
SD	SMOKE DAMPER	SD
FD	FIRE DAMPER	FD
F/S	COMBINATION FIRE AND SMOKE DAMPER	F/SD
CO^2	CARBON DIOXIDE SENSOR	CO2
CO	CARBON MONOXIDE SENSOR	CO
BD	BAROMETRIC DAMPER	BD
S	SMOKE DETECTOR (BY DIVISION 28)	S
A	PNEUMATIC DAMPER ACTUATOR	A
BDD	BACKDRAFT DAMPER	BDD
FMS	FLOW MEASURING STATION	FMS
	SPIN-IN VOLUME DAMPER	
M	MOTORIZED DAMPER	M
	AIRFLOW DIRECTION	
	SUPPLY AIR	SA
	RETURN AIR	RA
	OUTSIDE AIR	OA
	EXHAUST AIR	EA
	OWNER-FURNISHED EQUIPMENT	OFE
	ABOVE FINISHED FLOOR	AFF
	BOTTOM OF DUCT	BOD
	NOT IN CONTRACT	NIC
	FURNISHED BY OTHERS	FBO
	REFLECTIVE CEILING PLAN	RCP
	EXISTING	(E)
	SCOPE OF WORK	SOW
	VARIABLE FREQUENCY DRIVE	VFD
	DISCONNECT FROM EXISTING	FBO
	CONNECT TO EXISTING	
1 / M.401	PLAN SECTION SECTION NUMBER SHEET NUMBER	
A.150	DIFFUSER SCHEDULE CFM	
RE:01/M-401	DRAWING REFERENCE DETAIL NUMBER SHEET NUMBER	

NOTES:

1. NOT ALL SYMBOLS MAY BE USED ON THESE DRAWINGS.

MECHANICAL GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED AS PER THE LOCAL MECHANICAL CODE, THE LOCAL BUILDING CODES AND LOCAL ENERGY CONSERVATION CODE.
2. PROVIDE ALL MATERIALS, LABOR, EQUIPMENT AND ANY OTHER INCIDENTALS ESSENTIAL FOR A COMPLETE AND OPERATIONAL INSTALLATION OF THE HVAC WORK SHOWN ON THE PLANS.
3. ALL DUCTWORK SHALL BE FABRICATED PER THE LATEST SMACNA STANDARDS.
4. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL INFO FOR COORDINATION AND POTENTIAL CONFLICTS. THE MECHANICAL SUBCONTRACTOR SHALL, WITHOUT EXTRA COST TO THE PROJECT SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICTS WITH OTHER TRADES, OR FOR PROPER EXECUTION OF THE WORK.
5. DUCT DIMENSIONS INDICATED ON DRAWINGS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.
6. ALL NEW HVAC EQUIPMENT SHALL BE CLEANED AFTER THE FINISHING OF DRYWALL AND PRIOR TO THE RELEASE OF BUILDING TO THE OWNER. IF THE DUCTWORK AND AIR DEVICES ARE NOT PROPERLY PROTECTED DURING CONSTRUCTION THAN IT SHALL BE CLEANED AS WELL. CONTRACTOR TO PROVIDE DOCUMENTATION WITH DATE AND TIME OF ALL THE PERFORMED SERVICES.
7. ALL WALL MOUNTED TEMPERATURE, HUMIDITY AND CO2 SENSORS SHALL BE MOUNTED AT THE SAME ELEVATION AS THE LIGHT SWITCHES. COORDINATE WITH ELECTRICAL DRAWINGS AND ARCHITECTURAL ELEVATION PLAN.
8. REFER TO MECHANICAL ROOF PLAN FOR ROOF MOUNTED EQUIPMENTS.
9. PRIOR TO INSTALLATION OF EQUIPMENT, VERIFY MANUFACTURER'S RECOMMENDED AND CODE REQUIRED CLEARANCES ARE AVAILABLE.
10. COORDINATE ALL WORK WITH ALL OTHER TRADES.
11. PROVIDE FIRE DAMPERS, SMOKE DAMPERS, OR COMBINATION FIRE/SMOKE DAMPERS IN ALL DUCTWORK AND RETURN AIR OPENINGS WHICH PENETRATE FIRE OR SMOKE RATED WALL OR FLOOR SLABS. FIRE OR SMOKE RATED WALLS CAN INCLUDE BUT NOT LIMITED TO CORRIDOR WALLS, MECHANICAL ROOMS, ELECTRICAL ROOMS, AND STORAGE ROOMS. REFER TO ARCHITECTURAL PLANS FOR PARTITION AND WALL TYPES INDICATING FIRE OR SMOKE RATED WALL LOCATION AND RATING.
12. REFER TO ARCHITECTURAL LOUVER SCHEDULE AND ELEVATION PLANS FOR EXACT SIZE, LOCATION AND ELEVATION.
13. ALL FAN POWERED BOXES SHALL BE EQUIPPED WITH FACTORY PROVIDED AND MOUNTED INDUCED AIR INLET ELBOW SOUND ATTENUATOR.
14. ALL TERMINAL UNITS AND INLINE EXHAUST FANS SHALL BE INSTALLED IN PROPER ACCESSIBLE AREA.
15. PROVIDE 24"x24" ACCESS PANEL IN THE GYP BOARD CEILING WHERE TERMINAL UNITS AND INLINE EXHAUST FANS ARE INSTALLED. COORDINATE WITH ARCHITECTURAL CEILING PLANS.
16. COORDINATE ALL AIR DEVICES LOCATIONS WITH FINAL ARCHITECTURAL REFLECTED CEILING PLAN.
17. ALL SUPPLY AND RETURN AIR CEILING DEVICES SHALL BE INSULATED ON TOP OF DEVICES TO PREVENT CONDENSATION. INSULATE DEVICES WITH 1-1/2" WRAPAROUND INSULATION AND TOTALLY COVER ALL SURFACES. SECURE INSULATION IN PLACE AND APPLY INSULATION PRIOR TO MOUNTING AIR DEVICES.
18. PROVIDE TURNING VANES ON ALL RECTANGULAR ELBOWS.
19. ALL EXPOSED DUCTWORK SHALL BE DOUBLE WALL DUCT. REFER TO SPECIFICATION. PAINT DUCTWORK. COORDINATE COLOR WITH THE ARCHITECT.
20. PROVIDE 16x16 RETURN AIR OPENING IN WALL ABOVE CEILING WHERE WALLS GO UPTO DECK AND RETURN OPENING NOT SHOWN ON THE DRAWINGS. SHOW RETURN AIR OPENINGS IN DUCT SHOP DRAWINGS.
21. PROVIDE INTERNALLY LINED DUCT FOR THE FOLLOWING DUCTWORK UNLESS OTHERWISE NOTED ON THE DRAWINGS:
    -FIRST 20'-0" OF SUPPLY AND RETURN DUCT FROM ROOF MOUNTED AIR HANDLING UNITS.
    -FIRST 10'-0" OF ROOF MOUNTED EXHAUST FANS.
    -ALL RETURN AIR BOOTS AND TRANSFER DUCTS.
22. BUILDING AUTOMATION SYSTEM THERMOGRAPHICS SHALL BE UPDATED TO REFLECT CURRENT FLOOR PLAN, ROOM NAMES AND ALL ASSOCIATED HVAC EQUIPMENT.
23. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE ELECTRICAL AND PLUMBING CHANGES FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
24. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE BETWEEN CONTRACTORS SHALL BE WITHOUT ANY ADDITIONAL COST TO THE PROJECT.
25. ALL DUCTWORK (SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR) IN UNCONDITIONED / NON-RETURN PLENUM SHALL BE PROVIDED WITH DUCT WRAP INSULATION.
26. REFER TO SNAP 'N SHIELD REFRIGERANT PIPING SUPPORT DETAIL FOR REFRIGERANT PIPING SUPPORT.
27. PROVIDE INSULATED CONDENSATE DRAIN PIPE FROM FLOOR MOUNTED OR SUSPENDED UNIT TO NEAREST FLOOR DRAIN. REFER TO PLUMBING DRAWINGS FOR EXACT DRAIN LOCATION.
28. PROVIDE CLEAR, WEATHERPROOF ENCLOSURE FOR THE CONTROL VALVE ACTUATORS LOCATED OUTDOORS.
29. ALL EXPOSED AND OUTDOOR REFRIGERANT AND CONDENSATE PIPING SHALL BE PROVIDED WITH INSULATION AND ALUMINUM JACKET.
30. ALL OUTSIDE AIR INTAKE OPENINGS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY PLUMBING VENT, FUEL-FIRED APPLIANCE VENT OR EXHAUST AIR DISCHARGE.
31. FOR ALL OPEN SPACES (MAIN CORRIDOR, GYM, CAFETERIA, LIBRARY ETC.), PROVIDE SENSORS IN CLEAR LOCKABLE PROTECTIVE ENCLOSURE.
32. NOT ALL SYMBOLS OR ABBREVIATIONS MAY BE USED ON THESE DRAWINGS.
33. CONTRACTOR SHALL FIELD VERIFY EXISTING EQUIPMENT TAG / DESIGNATION NOTATIONS PRIOR TO ORDERING NEW EQUIPMENT SCHEDULED FOR REPLACEMENT.

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LEAF ENGINEERS

CENTRAL SUPPORT FACILITY
2145 West NASA Blvd., Webster, Texas
ISSUE FOR PROPOSAL

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
MITAL J. PATEL
111622
LICENSED
PROFESSIONAL ENGINEER
03/05/2026
LEAF ENGINEERS
F-18672

CLIENT	
CLEAR CREEK ISD	
DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: MP
DRAWN BY: HV

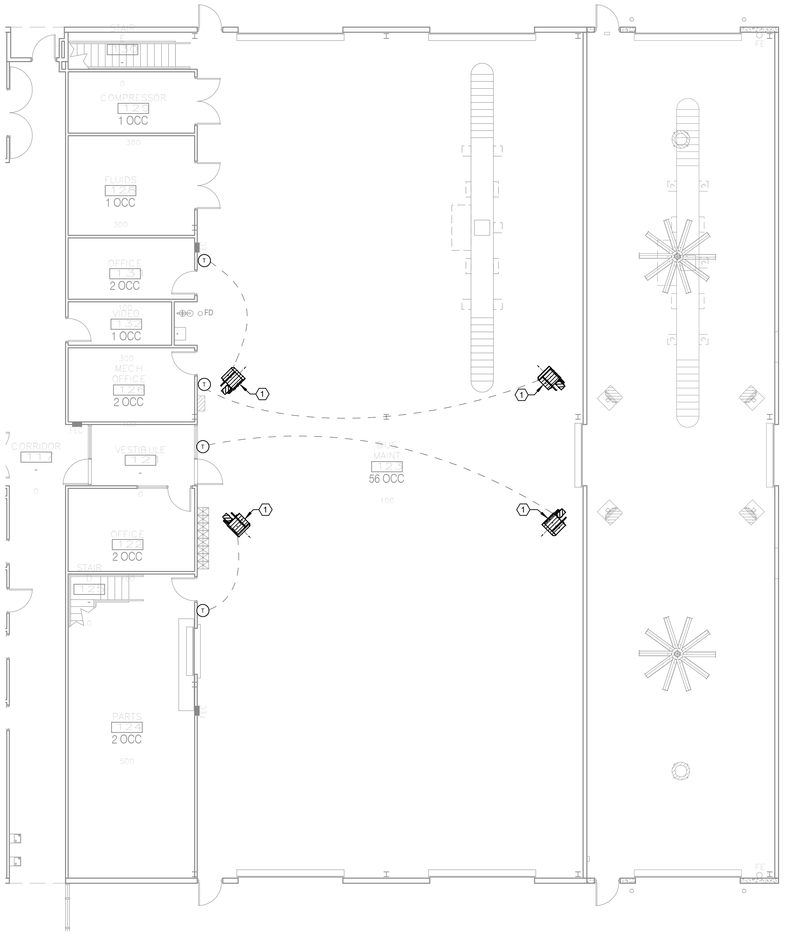
MECHANICAL GENERAL NOTES AND LEGENDS

M-001

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0"
1"

1ST FLOOR MECHANICAL PLAN
M-101
FOR BLUEBEAM LABELING/OCR:



1 1ST FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

KEYED NOTES:

1. NEW HORIZONTAL GAS-FIRED UNIT HEATER TO BE SUSPENDED FROM STRUCTURE. CONTRACTOR TO FIELD VERIFY LOCATION IN RELATION TO STRUCTURAL SUPPORT. INSTALL HEATER AT THE SAME ELEVATION AS DEMOED UNIT. REFER TO PLUMBING FOR GAS LINE CONNECTION. ROUTE NEW FLUE PIPE UP TO ROOF. SIZE PER MANUFACTURER'S RECOMMENDATION.

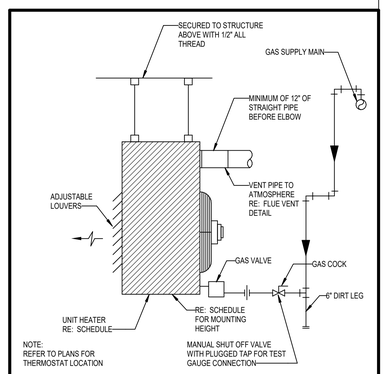
GENERAL NOTE:

1. ALL WORK ON THIS SHEET IS ASSOCIATED WITH ALTERNATE #3

GAS-FIRED UNIT HEATER SCHEDULE

DESIGNATION	LOCATION	ARRANGEMENT	MANUFACTURER	MODEL NUMBER	WEIGHT (LBS)	FAN DATA			HEATER DATA		ELECTRICAL DATA		
						CFM	RPM (MAX.)	H.P.	INPUT (BTUH)	OUTPUT (BTUH)	FLA	MOCP	VOLTAGE
GUH-01	BUS MAINTENANCE	HORIZONTAL	REZNOR	UDXC	300	769	1,550	3/50	60,000	49,800	2.4	15	115 / 1 / 60
GUH-02	BUS MAINTENANCE	HORIZONTAL	REZNOR	UDXC	300	769	1,550	3/50	60,000	49,800	2.4	15	115 / 1 / 60
GUH-03	BUS MAINTENANCE	HORIZONTAL	REZNOR	UDXC	300	769	1,550	3/50	60,000	49,800	2.4	15	115 / 1 / 60
GUH-04	BUS MAINTENANCE	HORIZONTAL	REZNOR	UDXC	300	769	1,550	3/50	60,000	49,800	2.4	15	115 / 1 / 60

1. REFERENCE ELECTRICAL DRAWINGS FOR ELECTRICAL DATA.
2. INSTALL THERMOSTAT ON WALL AS INDICATED ON DRAWING.



HORIZONTAL GAS UNIT HEATER DETAIL
NOT TO SCALE
01

2 MEACHANICAL SCHEDULE & DETAIL
SCALE: 12" = 1'-0"

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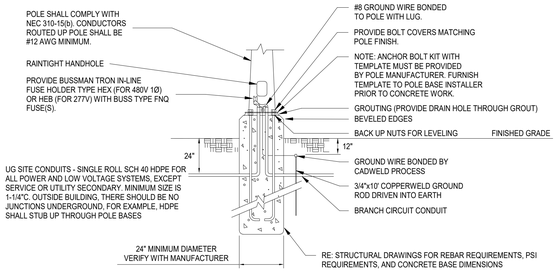
No.	Description	Date

CHECKED BY: MP
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1ST FLOOR MECHANICAL PLAN

M-101

0"
1"



2 POLE BASE DETAIL
NOT TO SCALE

GENERAL ELECTRICAL REMODEL NOTES

1. UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR OTHERWISE INSTRUCTED BY THE ARCHITECT, ELECTRICAL OUTLETS SHALL HAVE THE FOLLOWING MOUNTING HEIGHTS. DIMENSIONS ARE TO CENTER OF BOX UNLESS OTHERWISE NOTED:

WALL SWITCHES	•
WALL CONVENIENCE RECEPTACLES	15" AFF TO BOTTOM OF BOX
WALL DATA/VOICE OUTLETS	15" AFF TO BOTTOM OF BOX
WALL OUTLETS FOR WALL MTD. TELEPHONE	•
WALL CLOCK OUTLETS	7'-0" AFF (OR ABOVE CHALKBOARDS WHERE REQUIRED)*
MANUAL FIRE ALARM PULL STATIONS	•
FIRE ALARM SPEAKER/HORN	1'-0" BELOW CEILING, OR IN CEILING, AS REQUIRED*
INTERIOR BELLS,BUZZERS, HORNS	1'-0" BELOW CEILING, OR IN CEILING, AS REQUIRED*
SPECIAL PURPOSE WALL OUTLETS	15" AFF TO BOTTOM OF BOX (OR HIGHER AS REQUIRED TO SERVE EQUIPMENT)
PUSH BUTTONS	
ADA VISUAL ALARM	80" AFF TO BOTTOM OF LENS OR 6" BELOW CEILING, WHICHEVER IS LOWER. ENTIRE LENS TO BE WITHIN 80" TO 96" AFF*

• TOP OF BOX SHALL BE 42" AFF MAX. FOR WHEELCHAIR FRONTAL APPROACH AND 48" AFF MAX. FOR SIDE APPROACH. VERIFY EXACT HEIGHT WITH ARCHITECT

* 7'-0" AFF TO BOTTOM OF DEVICE IF DEVICE PROTRUDES MORE THAN 4" FROM WALL (PER ADA)

AFF = ABOVE FINISHED FLOOR
AFG = ABOVE FINISHED GRADE

2. UNLESS SPECIFICALLY INDICATED ON THE ELECTRICAL DRAWINGS, OUTLETS LOCATED AT COUNTERS AND CABINETS SHALL BE MOUNTED AS SHOWN ON ARCHITECTURAL DETAILS AND ELEVATIONS, OR AS DIRECTED BY ARCHITECT.
3. COORDINATE MOUNTING HEIGHTS AND DETAILS OF ALL OUTLETS (POWER, SIGNAL, ETC.) WITH ARCHITECTURAL CASEWORK DRAWINGS PRIOR TO DIVISION 26 ROUGH-IN. PROVIDE COORDINATION DRAWINGS IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS WHERE CONFLICTS EXIST. OBTAIN APPROVAL FROM ARCHITECT BEFORE ELECTRICAL ROUGH-IN WHEN CONFLICTS ARISE.
4. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL HVAC AND PLUMBING EQUIPMENT.
5. CIRCUITING
   A. BRANCH CIRCUITING IS SCHEMATIC IN NATURE AND IS INTENDED TO INDICATE CIRCUIT LOADING AND CONTROL, NOT METHODS OF INSTALLATION. REFER TO SPECIFICATIONS FOR METHODS OF INSTALLATION AND MATERIALS, INCLUDING WHETHER OR NOT BX IS ALLOWED AND WHETHER "THROUGH-FIXTURE" OR "OCTOPUS (EMT WITH FLEXIBLE WHIPS)" TYPE LIGHTING BRANCH CIRCUITING IS REQUIRED.
   B. WHERE WIRE SIZE AND CONDUIT SIZE IS NOT INDICATED ON THE DRAWINGS AND/OR PANEL SCHEDULES, REFER TO SPECIFICATIONS FOR MINIMUM SIZE REQUIRED.
   C. BRANCH CIRCUITS ON THE DRAWINGS ARE GENERALLY NOT SHOWN GROUPED IN SINGLE RACEWAYS. HOWEVER, GROUPING IS ALLOWED UNDER CERTAIN CONDITIONS. REFER TO DIVISION 26 SPECIFICATIONS UNDER SECTION ENTITLED "ELECTRICAL WIRING" FOR REQUIREMENTS.
   D. THE DRAWINGS GENERALLY INDICATE QUANTITY OF CONDUCTORS ON BRANCH CIRCUIT HOME RUNS ONLY. ELSEWHERE WITHIN CIRCUITS, PROVIDE QUANTITY OF CONDUCTORS AS NEEDED TO ACCOMPLISH CIRCUITING AND SWITCHING REQUIREMENTS SHOWN.
6. WHEN REMOVING EXISTING ELECTRICAL WORK WHERE OTHER ITEMS REMAIN ON THE SAME CIRCUIT, THE CONTRACTOR SHALL TAKE WHATEVER STEPS ARE NECESSARY TO MAINTAIN CIRCUIT CONTINUITY.
7. ALL ITEMS NOTED TO BE REMOVED ARE TO REMAIN THE PROPERTY OF THE OWNER; HOWEVER, CONTRACTOR SHALL REMOVE FROM JOB SITE ALL MATERIAL NOT RETAINED BY OWNER.
8. FIELD VERIFY CONDITION OF, AND MODIFICATIONS AND ADDITIONS TO, ALL EXISTING ELECTRICAL FIXTURES, PANELS, WIRING, ETC.
9. WHERE DOORS ARE ADDED, OR PORTIONS OF WALLS REMOVED, CONTRACTOR SHALL REMOVE OR RELOCATE ALL ELECTRICAL WORK NECESSARY FOR THE REMODELING MODIFICATION, WHETHER OR NOT THIS WORK IS NOTED ON PLANS.
10. WHERE EXISTING JUNCTION BOXES ARE COVERED OR REMOVED, CONTRACTOR SHALL TAKE WHATEVER STEPS ARE NECESSARY TO COMPLY WITH NEC 314-19.
11. EXISTING ELECTRICAL BOXES TO REMAIN IN AREAS WHERE NEW WALL FINISHES ARE TO BE APPLIED SHALL BE RESET AS NECESSARY TO PROVIDE FLUSH MOUNTING FOR BOXES.
12. CONTRACTOR SHALL FIELD VERIFY EXISTING BRANCH CIRCUIT LOADING WHEN MAKING MODIFICATIONS AND/OR ADDITIONS TO THAT CIRCUIT. IF NEW WORK WOULD OVERLOAD EXISTING CIRCUIT, CONTRACTOR SHALL LOCATE ANOTHER EXISTING CIRCUIT (THE CLOSEST), WHICH WOULD NOT BE OVERLOADED UPON ADDING NEW LOAD, AND SHALL TIE NEW LOAD INTO THAT CIRCUIT.
13. WHEN EXISTING ELECTRICAL WORK IS REMOVED, ALL EXPOSED CONDUIT, WIRING, CONTROL AND JUNCTION BOXES ALONG WALLS, FLOOR, AND CEILING SHALL BE REMOVED. BRANCH CIRCUIT WIRES SHALL BE REMOVED BACK TO CIRCUIT BREAKER(S). BLANK COVER PLATES SHALL BE PROVIDED FOR RECESSED BOXES. WHERE THIS WORK IS DONE, THE WALLS, FLOOR, AND CEILING SHALL BE PATCHES AS NECESSARY UNDER WORK COVERED IN OTHER SECTIONS.
14. EXISTING RECESSED INCANDESCENT AND HID LUMINAIRES DESIGNATED FOR TEMPORARY REMOVAL AND RE-USE SHALL BE STORED. ALL SUCH LUMINAIRES NOT THERMALLY PROTECTED PER NEC 410-118 AND 410-130(F) ARE NOT SUITABLE FOR RE-USE AND SHALL BE GIVEN TO THE OWNER. PROVIDE NEW REPLACEMENT LUMINAIRES WITH UL THERMAL PROTECTION, IDENTICAL APERTURE, EQUIVALENT PHOTOMETRICS AND NEW LAMPS.
15. CONTRACTOR TO REFER TO ARCHITECTURAL DEMOLITION PLANS AND PHASING PLANS AND HAVE A GOOD UNDERSTANDING OF SCOPE OF PROJECT PRIOR TO COMMENCEMENT OF WORK.
16. LUMINAIRE SUPPORT IN SUSPENDED CEILINGS:
   A. PROVIDE MEANS OF SUPPORT FOR LUMINAIRES PER NEC 410-16. T BAR CLIPS SHALL BE INSTALLED ON THE LUMINAIRE AND SHALL BE FIELD SECURED TO THE INVERTED CEILINGS TEES SO THAT THE LUMINAIRE IS SECURELY FASTENED TO THE CEILING SYSTEM FRAMING MEMBERS
   B. CEILING TILES SHALL NOT BEAR THE WEIGHT OF LUMINAIRES. SURFACE MOUNT LUMINAIRES, RECESSED DOWNLIGHTS, LIGHT TRACK, EXIT SIGNS, ETC. SHALL BE SUPPORTED BY PROPER FRAMES OR OTHER ATTACHMENT TO MAIN CEILING SYSTEM GRID OR BUILDING STRUCTURE ABOVE CEILING.
   C. LUMINAIRES SHALL BE CENTERED IN CEILING TILE.
   D. LUMINAIRE SHALL HAVE FLANGE OR TRIM RING FOR CLOSURE OF CEILING CUTOUT OR OPENING.
   E. FIRE-RATED CEILING ASSEMBLY: FOR LUMINAIRES TO BE FLUSH-MOUNTED INTO A FIRE-RATED CEILING OR SURFACE MOUNTED TO A FIRE-RATED CEILING, INSTALL WITH INDEPENDENT, SECURE SUPPORT, RACEWAY, CABLE ASSEMBLIES BOXES AND FITTINGS LOCATED ABOVE A FIRE-RATED FLOOR/CEILING OR ROOF CEILING ASSEMBLY SHALL NOT BE SECURED TO, OR SUPPORTED BY, THE CEILING ASSEMBLY INCLUDING CEILING SUPPORT WIRES. PROVIDE AN INDEPENDENT MEANS OF SECURE SUPPORT. INDEPENDENT SUPPORT WIRES SHALL BE DISTINGUISHABLE BY COLOR, TAGGING, OR OTHER EFFECTIVE MEANS FROM THOSE THAT ARE PART OF THE FIRE-RATED DESIGN.
17. CONTRACTOR SHALL FIELD VERIFY ANY EXISTING UNDERGROUND PIPING, WIRING, OR OTHER FACILITIES PRIOR TO TRENCHING, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY INSTALLATION OF NEW WORK.
18. THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH ALL AUTHORITIES HAVING JURISDICTION, NEC, AND STATE AND LOCAL CODES AND AMENDMENTS.

ELECTRICAL SYMBOL LEGEND

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS.
2. DASHED ELEECTRICAL EQUIPMENT GENERALLY INDICATES EXISTING EQUIPMENT.
3. LONG-SHORT-SHORT-LONG DASHING GENERALLY INDICATES MATCH LINE OR DEFINES AREA FOR SPECIAL NOTE.

CIRCUIT RELATED:

- LIGHTING OR POWER CIRCUIT(S). ARROW INDICATES HOME RUN, LONGER TICK(S) INDICATE NEUTRAL WIRE(S), SHORTER STRAIGHT TICK(S) INDICATE PHASE WIRE(S), SLANTED SHORTER TICK(S) INDICATE SWITCH LEG(S), DOT(S) INDICATE GROUNDING CONDUCTOR(S), DASHED WIRING (LONG-SHORT-LONG DASHES) INDICATES WIRING BELOW SLAB OR GRADE, DASHED WIRING (SERIES OF SHORT DASHES) INDICATES EXISTING WIRING, SLASH THROUGH ARROW INDICATES PARTIAL CIRCUIT, "D" ON HOMERUN ARROW INDICATES DEDICATED CIRCUIT: PROVIDE A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR FOR ENTIRE LENGTH OF CIRCUIT FROM PANEL TO OUTLET; COUNT EACH NEUTRAL AS CURRENT-CARRYING AND GROUP A MAXIMUM OF SIX THHN/THWN CONDUCTORS IN A SINGLE RACEWAY; GROUNDING CONDUCTOR IS NOT COUNTED
- J — JUNCTION BOX
- GROUNDING FIXTURE

LIGHTING:

- LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, CROSS HATCHING INDICATES FIXTURE ON EMERGENCY SYSTEM; FOR SOLID CIRCLE WITHIN FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL
- STRIP TYPE LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE ATTACHED TO FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL
- LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL
- DESIGNATES FIXTURE ON EMERGENCY POWER. RE: LIGHTING PLAN NOTES AND FIXTURE SCHEDULE NOTES FOR ADDITIONAL INFORMATION
- WALL OR BRACKET MOUNTED FIXTURE OR DEVICE
- EXIT LIGHT FIXTURE. LETTER INDICATES TYPE, NUMBER INDICATES CIRCUIT, NUMBER AND LOCATION OF SHADED TRIANGLE SECTIONS INDICATE NUMBER OF EXIT SIGN FACES AND DIRECTION OF EACH FACE. PROVIDE CHEVRON DIRECTIONAL INDICATORS AS SHOWN ON DRAWINGS.

CONTROL:

- $ — SWITCH. SMALL LETTER INDICATES FIXTURES CONTROLLED, "P" INDICATES PILOT LIGHT, "WP" INDICATES WEATHERPROOF, "K" INDICATES KEY POERATED, "MO" INDICATES SPDT MOMENTARY CONTACT, "2" INDICATES DPDT, "3" INDICATES 3-WAY, "4" INDICATES 4-WAY, "M" INDICATES MANUAL MOTOR STARTER, CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER
- $D — WALL BOX DIMMER SWITCH. "MARK" INDICATES WATTAGE IF OTHER THAN 600, "3D" INDICATES 3-WAY DIMMER
- $$ — MULTI-LEVEL SWITCH. CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER
- $T — DIGITAL TIME SWITCH
- PC — PHOTOELECTRIC CONTROL
- EMERGENCY POWER OFF (EPO) PUSHBUTTON
- PUSH BUTTON
- $OC — WALL MOUNT OCCUPANCY SENSOR
- DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR
- CR — CEILING MOUNTED RESTROOM OCCUPANCY SENSOR
- CEILING MOUNTED CORRIDOR OCCUPANCY SENSOR
- HB — CEILING MOUNTED HIGH CEILING OCCUPANCY SENSOR
- PLC — ABOVE CEILING MOUNTED PLUG LOAD CONTROL POWER PACK

POWER OUTLETS:

- 20A-125V DUPLEX RECEPTACLE
- 20A-125V GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE. "WP" INDICATES WEATHER PROOF DEVICE
- 20A-125V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP. REFER TO ARCHITECT FOR EXACT HEIGHT ABOVE COUNTER
- $_{C}$ — 20A-125V CONTROLLED DUPLEX RECEPTACLE
- 20A-125V ISOLATED GROUND TYPE DUPLEX RECEPTACLE
- $_{CH}$ — 20A-125V DUPLEX TAMPER RESISTANT RECEPTACLE WITH (2) USB CHARGING PORTS
- 20A-125V FOURPLEX RECEPTACLE. SAME SYMBOLOGY AS DUPLEX RECEPTACLE
- SPECIAL PURPOSE SINGLE POWER RECEPTACLE. RATED AS INDICATED (IF NO RATING INDICATED, RECEPTACLE RATING SHALL MATCH BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE AND SHALL MEET REQUIREMENTS OF EQUIPMENT BEING CONNECTED), "C" INDICATES CLOCK OUTLET
- 20A-125V FLUSH FLOOR DUPLEX RECEPTACLE. 20A WHEN INDICATED OR IF BRANCH CIRCUIT SERVES ONLY SINGLE DUPLEX. PROVIDE CARPED FLANGE WHERE APPLICABLE
- LC1-X — CIRCUIT DESIGNATION NEXT TO RECEPTACLE DEVICES INDICATES BRANCH CIRCUIT NUMBER. RE: PANEL SCHEDULES FOR INFORMATION.

TELEPHONE/DATA:

- FLUSH FLOOR TELEPHONE OUTLET WITH CARPET FLANGE WHERE APPLICABLE
- WALL COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS
- FLUSH FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE
- SURFACE FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE

EQUIPMENT:

- +42" — A NOTATION INDICATING THE MOUNTING HEIGHT OF A DEVICE AS MEASURED FROM FINISHED FLOOR OR GRADE TO CENTER LINE OF DEVICE
- MOTOR
- DISCONNECT SWITCH. FRAME SIZE/FUSE SIZE/POLES AS INDICATED, "NF" INDICATES NON-FUSIBLE. NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED. PROVIDE FUSED BUSWAY PLUG WHEN SWITCH IS INDICATED ON BUSWAY. ALL DISCONNECT SWITCHES SHALL BE 30/NF/3 UNLESS OTHERWISE NOTED
- SINGLE CIRCUIT BREAKER IN INDIVIDUAL ENCLOSURE
- MAGNETIC MOTOR CONTROLLER. NUMBER INDICATES NEMA SIZE. STARTER NEMA SIZE SHALL BE "NEMA 1" UNLESS OTHERWISE NOTED
- COMBINATION DISCONNECT SWITCH / MOTOR CONTROLLER
- CONTACTOR
- PANELBOARD
- SWITCHBOARD / DP
- T — TRANSFORMER
- GROUNDING CONNECTION TO GROUNDING ELECTRODE AS DEFINED IN NEC ARTICLE 250
- BELL. "WP" INDICATED OUTDOOR RATED

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MATTHEW R. SICKORE
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No.	Description	Date

CHECKED BY: WK/MS
DRAWN BY: JJ

ELECTRICAL SYMBOL LEGEND & DETAILS

E-000

Plot Stamp:
3/3/2026 11:27:33 AM

0"
1"

BUS SHOP POWER PLAN - LEVEL 1 & 2
E-201
FOR BLUEBEAM LABELING/OCR:

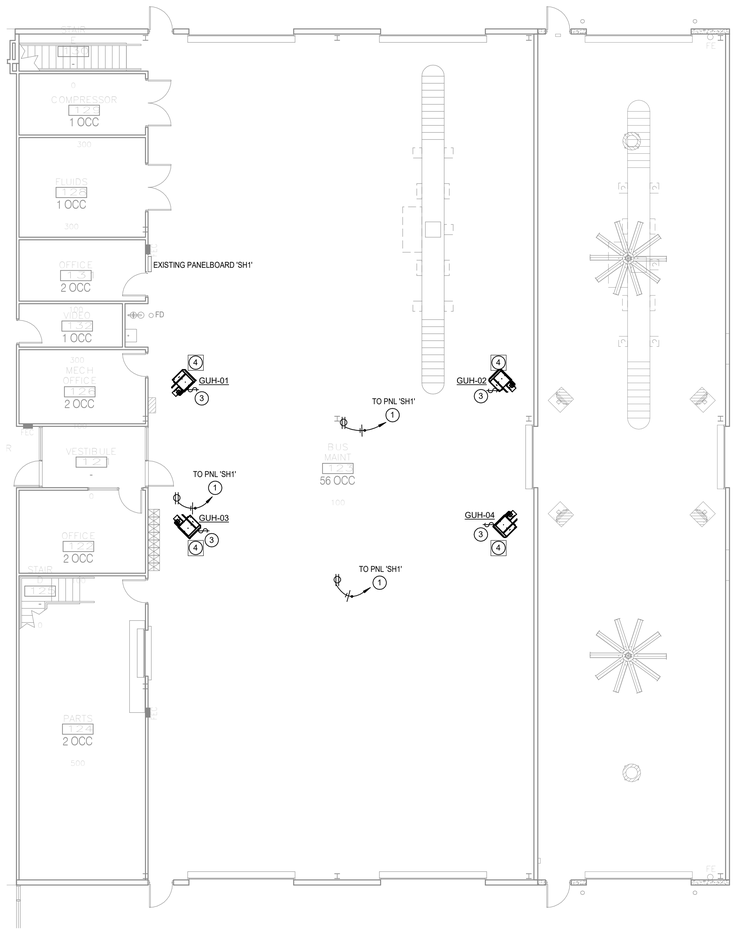
GENERAL NOTE:
1. ALL WORK ON THIS SHEET IS ASSOCIATED WITH ALTERNATE #3.

POWER PLAN GENERAL NOTES:

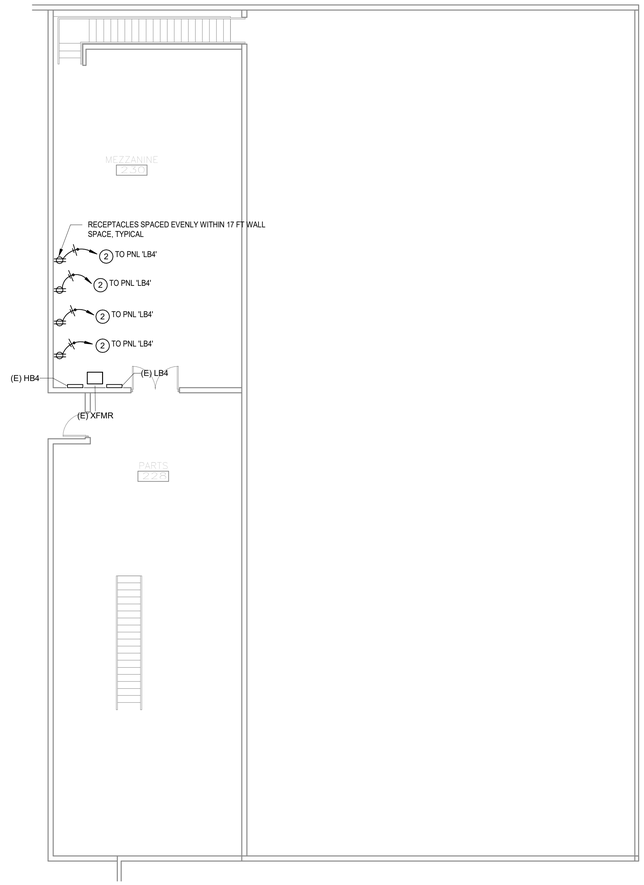
1. FOR EQUIPMENT OR DEVICES SHOWN ON ARCHITECTURAL DRAWINGS THAT REQUIRE POWER AND NOT IDENTIFIED ON ELECTRICAL PLANS, ASSUME AT A MINIMUM A DUPELX OUTLET, A DEDICATED CIRCUIT WITH 2#12,1#12G,3/4"C. WITH HOMERUN TO NEAREST 120/208V PANEL. ITEMS SUCH AS BUT NOT LIMITED TO ROLL DOWN DOORS, COUNTER DOORS, OVERHEAD GRILLES, DISPLAY CASES, HAND DRYERS, WATER COOLERS, ICE MAKERS, GARBAGE DISPOSALS, OSCILLATING FANS, LCD's, PROJECTORS, DISHWASHERS, MOTORIZED PROJECTION SCREENS, ETC.
2. UNLESS OTHERWISE NOTED, ALL DISCONNECT SHOWN SHALL BE 30/NF/3 DISCONNECT.

POWER PLAN KEYED NOTES

1. [ALTERNATE #3] PROVIDE (3) CORD REEL MOUNTED TO ROOF STRUCTURE. WOODHEAD NO. 9383 (50' 12 AWG 3-CONDUCTOR SOW CABLE) WITH BALL STOP AND 20A PENDANT DUPLEX RECEPTACLE END (WOODHEAD NO. 9383-3080). PROVIDE DEDICATED 120V/20A CIRCUIT FROM PANELBOARD NOTED WITH CAPACITY. PROVIDE 20A/1P BREAKER FOR EACH. WIRE VIA 2#12, 1#12G, 3/4"C.
2. [ALTERNATE #3] PROVIDE (4) RECEPTACLES AT MEZZANINE ON PLAN WEST WALL. PROVIDE DEDICATED 120V/20A CIRCUIT EACH FROM PANELBOARD LB4. PROVIDE 20A/1P BREAKER FOR EACH CIRCUIT. WIRE VIA 2#12, 1#12G, 3/4"C.
3. [ALTERNATE #3] EXISTING CIRCUIT RADIANT GAS UNIT HEATER TO BE DISCONNECTED AND RE-CONNECTED TO NEW REPLACEMENT GAS UNIT HEATER. EXTEND EXISTING WIRE/CONDUIT WITH #12 WIRE AND 3/4"C TO THE NEW LOCATION.
4. [ALTERNATE #3] APPROXIMATE LOCATION OF EXISTING RADIANT GAS UNIT HEATER. REFER TO MECHANICAL DEMOLITION PLAN FOR EXACT LOCATION OF EXISTING RADIANT GAS UNIT HEATERS. ELECTRICAL WIRING AND CONDUIT TO BE EXTENDED FROM HERE.



1 1ST FLOOR POWER PLAN - BUS SHOP
1/8" = 1'-0"



2 POWER PLAN - BUS SHOP - MEZZANINE LEVEL
1/8" = 1'-0"

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CHECKED BY: WK
DRAWN BY: JJ

BUS SHOP POWER PLAN - LEVEL 1 & 2

E-201

Plot Stamp:
3/3/2026 12:05:18 PM

0"
1"

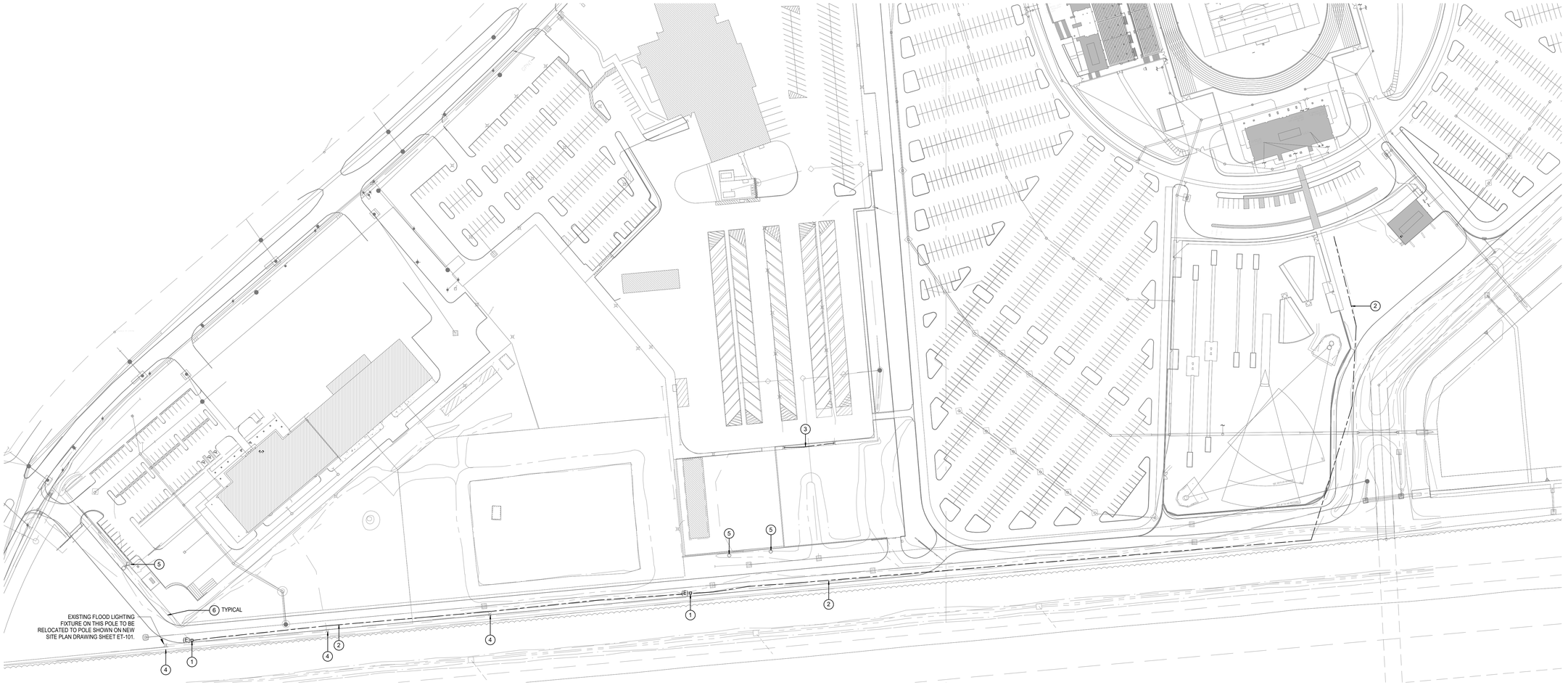
DEMO ELECTRICAL/TECHNOLOGY SITE PLAN
DET-101
FOR BLUEBEAM LABELING/OCR:

SITE PLAN GENERAL NOTES:

1. COORDINATE ROUTING FOR ALL UNDERGROUND ELECTRICAL BRANCH CIRCUITS AND FEEDERS WITH OTHER DISCIPLINES PRIOR TO TRENCHING.
2. UNLESS NOTED OTHERWISE ALL UNDERGROUND CONDUIT SHOWN ON THIS PLAN TO BE MINIMUM 1-1/4" IN SIZE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY INSTALLATION OF NEW WORK.
4. FOR EACH ZONE SHOWN ON THIS DRAWING, PROVIDE LIGHTING CONTACTOR AND LOCATE ADJACENT TO SERVING PANELBOARD IN ELECTRICAL ROOM. CONTROL CONTACTOR VIA BAS.
5. FILL AND PATCH ALL TRENCHES AFTER INSTALLATION OF UNDERGROUND UTILITIES. REFER TO CIVIL FOR MATERIAL SPECIFICATION.
6. ALL OUTDOOR CONDUIT IN AREAS PERMISSIBLE UNDER NEC 353.12 SHALL BE SCHEDULE 40 HDPE.

SITE PLAN KEYED NOTES

1. EXISTING UG TELE-COMMUNICATIONS PULLBOX TO BE PROTECTED IN PLACE. PROVIDE NEW TRAFFIC-RATED COVER AT SAME LOCATION.
2. EXISTING UG TELE-COMMUNICATIONS CONDUIT TO BE PROTECTED IN PLACE.
3. EXISTING UNDERGROUND CONDUIT AND WIRE TO BE RELOCATED 48" BELOW FINISHED SURFACE TO AVOID CONFLICT WITH NEW PAVEMENT TO BE INSTALLED. COORDINATE FINAL ELEVATIONS AND LOCATION WITH CIVIL SURVEY AND DRAWINGS PRIOR TO INSTALLATION. EXTEND EXISTING CONDUIT AND WIRE AS REQUIRED FOR NEW EXTENSION OF CONDUIT/WIRE. EXISTING CONNECTED CIRCUITRY TO REMAIN.
4. EXISTING LIGHTING POLE TO BE RELOCATED. REFER TO DRAWING SHEET ET-101 FOR NEW LOCATION.
5. EXISTING LIGHTING POLE TO REMAIN.
6. EXISTING UNDERGROUND ELECTRICAL POWER LINES SHALL BE PROTECTED IN PLACE, UNLESS NOTED OTHERWISE.



1 ELECTRICAL/TECHNOLOGY SITE PLAN
1" = 80'-0"

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LEAF ENGINEERS

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD
WEBSTER, TX 77598

ISSUE FOR PROPOSAL

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
MATTHEW R. SICKORE
107736
LICENSED
PROFESSIONAL
ENGINEER
03/05/2026
LEAF ENGINEERS
F-10672

CLIENT	
CLEAR CREEK ISD	
DATE: 03/05/2026	PROJECT NUMBER: 250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: WK
DRAWN BY: JJ

DEMO ELECTRICAL/TECHNOLOGY SITE PLAN

ETD-101

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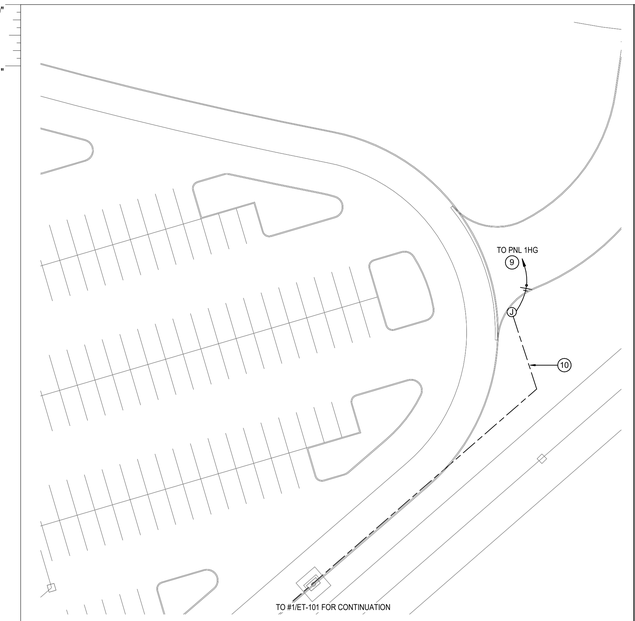
ELECTRICAL/TECHNOLOGY NEW SITE PLAN

ET-101

FOR BLUEBEAM LABELING/OCR:

0"

1"

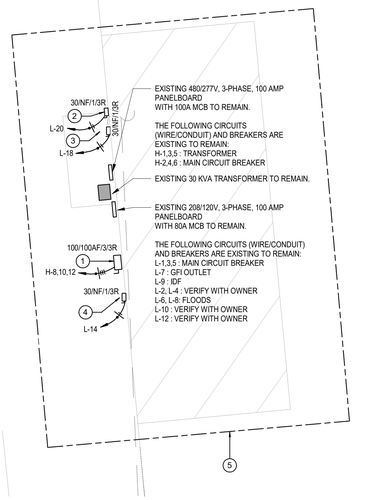


2 ELECTRICAL SITE PLAN - STADIUM DRIVEWAY

1" = 30'-0"

ALL CONDUIT, FITTINGS, ETC. IN CONTROL ROOM SHALL BE PVC.

COORDINATE EXACT LOCATIONS OF DISCONNECTS WITH MANUFACTURER OF THE NEW BUS WASH EQUIPMENT



3 ALT#2 - ENLARGED POWER PLAN - BUS WASH

1/8" = 1'-0"

ENLARGED PLAN KEYED NOTES [ALTERNATE #2]

1. PROVIDE 480V 3-PHASE CIRCUIT TO 50 HP RINSE WATER PUMP. WIRE AND CONNECT VIA 3-#3, 1#8G, 1-1/4"C. PROVIDE 100A/3P BREAKER IN SPACE OF EXISTING PANELBOARD. PUMP AND STARTER PROVIDED BY BUS WASH MANUFACTURER, INSTALLED BY EC. FUSED DISCONNECT PROVIDED AS SHOWN.
2. PROVIDE 120V CIRCUIT TO 1.5 HP BOOSTER PUMP (10.4 FLA). DISCONNECT PROVIDED AS SHOWN. PROVIDE 20A/1P BREAKER IN SPACE OF EXISTING PANELBOARD. WIRE AND CONNECT VIA 2#12, 1# 12G, 3/4"C.
3. PROVIDE 120V CIRCUIT TO MASTER CONTROL PANEL (MCP). PROVIDE 20A/1P BREAKER IN SPACE OF EXISTING PANELBOARD. WIRE AND CONNECT VIA 2#12, 1#12G, 3/4"C.
4. PROVIDE 120V CIRCUIT TO WATER SOFTENER. PROVIDE 15A/1P BREAKER IN SPACE OF EXISTING PANELBOARD. WIRE AND CONNECT VIA 2#12, 1#12G, 3/4"C.
5. EXCEPT FOR (2) EXISTING PANELBOARDS AND (1) EXISTING TRANSFORMER SHOWN AND UNLESS NOTED OTHERWISE, ALL EXISTING BUS WASH EQUIPMENT CIRCUITS AT BUS WASH SHALL BE DISCONNECTED AND REMOVED. REMOVE ALL WIRE AND CONDUIT BACK TO SOURCE PANELS, AND MARK BREAKER AS SPARES.

250236 CSF DRIVEWAY - LIGHTING FIXTURE SCHEDULE

TYPES S2-1 & S4-1 SHOWN FOR REFERENCE ONLY. THESE FIXTURES ARE OWNER PROVIDED, CONTRACTOR INSTALLED

Fixt... Type	Manufac...	Catalog Number	Lamp Type	Mounting	Volt...	Dim... Type	Description
S2-1 & S4-1	GARDCO	OPF-M-A12-740-T2M	150W 4000K 26,482 LM	POLE	UNV	0-10V	SINGLE PARKING FIXTURE WITH A TYPE 2 (TYPE 4) DISTIRBUTION ON A 30' POLE W/ 30IN BASE. LISTED FOR WET LOCATIONS
FL	STONCO	GMFL-A01-740-4X4	4000K 60,561 LM	POLE	UNV	0-10V	SINGLE FLOOD LIGHTING FIXTURE ON A 30' POLE W/ 30IN BASE. LISTED..

1. REFER TO ARCHITECT'S REFLECTED CEILING PLAN AND RELATED DETAILS TO DETERMINE PROPER CEILING TYPE COMPATIBILITY FOR EACH LUMINAIRE. PROVIDE ANY EXTRA FITTINGS OR OPTIONS AS REQUIRED TO ENSURE CORRECT MOUNTING IN THE GIVEN CEILING.
2. PROVIDE FIRE RATED CANOPY OR ENCLOSURE FOR ALL FIXTURES RECESSED IN A FIRE RATED CEILING. THE FIRE RATED CANOPY OR ENCLOSURE SHALL BE REQUIRED BY THE UL DESIGN NUMBER LISTED IN THE UL FIRE RESISTANCE DIRECTORY. REFER TO ARCHITECTURAL DRAWING FOR THE UL DESIGN NUMBER. COORDINATE WITH CEILING INSTALLER AND MANUFACTURER.

CONTACTOR SCHEDULE

DESIGNATION	CIRCUITS SERVED	CONTACTOR CHARACTERISTICS					REMARKS
		CONTACT AMPS	N.O. POLES	COIL VOLTS	CONTROL	SUPPLY CKT.	
C1	RE: KEYNOTE #1	20	6	277	DDC	KEYED #1	REMOTE CONTROL SWITCH (1)
C2	RE: KEYNOTE #1	20	6	277	DDC	KEYED #1	
CS3	RE: KEYNOTE #1	20	3	277	MANUAL/ TIMER	KEYED #1	

CONTACTOR SCHEDULE GENERAL NOTES:

1. UNLESS SPECIFICALLY INDICATED OTHERWISE, LOCATE CONTACTORS IN IMMEDIATE VICINITY OF PANEL FROM WHICH CIRCUITS ORIGINATE.

CONTACTOR SCHEDULE KEYED NOTES:

(1) PROVIDE SIEMENS CLASS LC OR ABB CR460 TWO-WIRE CONTROL INTERFACE MODULE.

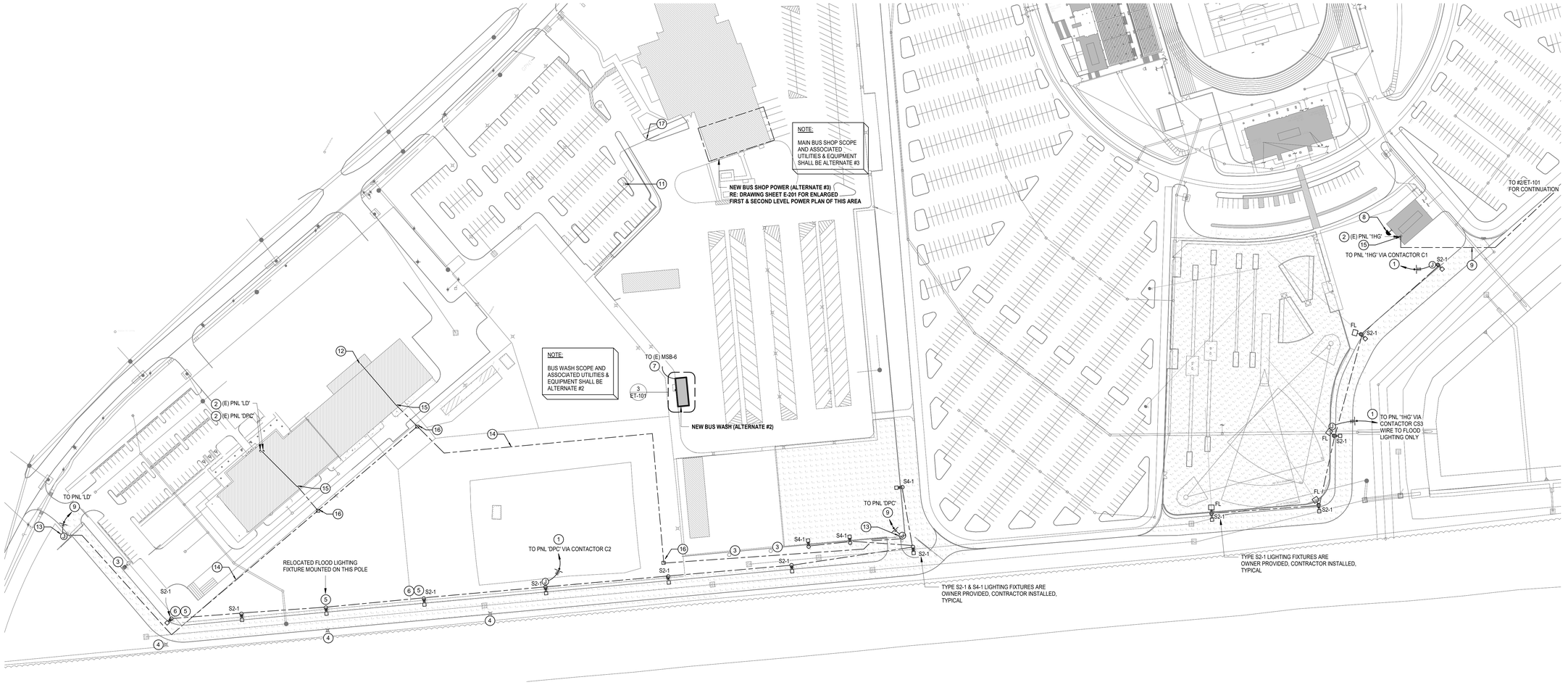
SITE PLAN GENERAL NOTES:

1. COORDINATE ROUTING FOR ALL UNDERGROUND ELECTRICAL BRANCH CIRCUITS AND FEEDERS WITH OTHER DISCIPLINES PRIOR TO TRENCHING.
2. UNLESS NOTED OTHERWISE ALL UNDERGROUND CONDUIT SHOWN ON THIS PLAN TO BE MINIMUM 1-1/4" IN SIZE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY INSTALLATION OF NEW WORK.
4. FOR EACH ZONE SHOWN ON THIS DRAWING, PROVIDE LIGHTING CONTACTOR AND LOCATE ADJACENT TO SERVING PANELBOARD IN ELECTRICAL ROOM. CONTROL CONTACTOR VIA BAS.
5. FILL AND PATCH ALL TRENCHES AFTER INSTALLATION OF UNDERGROUND UTILITIES. REFER TO CIVIL FOR MATERIAL SPECIFICATION.
6. ALL OUTDOOR CONDUIT IN AREAS PERMISSIBLE UNDER NEC 353.12 SHALL BE SCHEDULE 40 HDPE.

BASE SCOPE: EXISTING BUSWASH ELECTRICAL EQUIPMENT TO REMAIN.

SITE PLAN KEYED NOTES

1. PROVIDE 20A 480V 3-PHASE CIRCUIT FROM PANELBOARD NOTED. CONNECT VIA 3#6, 1#8G, 1-1/4"C. PROVIDE 20A/3P BREAKER IN SPACE OF EXISTING PANELBOARD.
2. APPROXIMATE LOCATION OF EXISTING PANELBOARD/DISTRIBUTION BOARD. NEW CONTACTORS C1 & C2 TO BE LOCATED ADJACENT TO THESE PANELS AS NOTED IN CONTACTOR SCHEDULE.
3. EXISTING LIGHTING POLE TO REMAIN.
4. EXISTING LIGHTING POLE TO BE RELOCATED.
5. NEW LOCATION OF RELOCATED LIGHTING POLE.
6. REMOVE EXISTING LIGHTING FIXTURE ON POLE. OWNER PROVIDED FROM STOCK. CONTRACTOR INSTALLED. LED LIGHTING FIXTURE NOTED TO REPLACE EXISTING. MOUNT ON EXISTING POLE.
7. **[ALTERNATE #2]** EXISTING BUSWASH EQUIPMENT TO BE REPLACED WITH NEW. EXISTING CIRCUITS TO BE DISCONNECTED AND RE-CONNECTED TO NEW BUSHWASH UTILITY CONNECTIONS. COORDINATE ALL REQUIRED ELECTRICAL CONNECTIONS AND PROVIDE JUNCTION BOXES, CONDUIT PATHWAYS, UNISTRUT, ETC. AS REQUIRED BY BUSWASH MANUFACTURER. REFER TO ENLARGED PLAN #3/ET-101 FOR ADDITIONAL REQUIREMENTS.
8. PROVIDE MOMENTARY CONTACT SWITCH IN LOCKABLE WEATHERPROOF ENCLOSURE. ENGRAVED 'SPORTS FIELD LIGHTING'. PROVIDE CONNECTION TO CONTACTOR SERVING SPORTS LIGHTING; SWITCH SHALL ENERGIZE SPORTS LIGHTING FOR 2 HOURS (LENGTH OF TIME SHALL BE PROGRAMMABLE IN BAS). PROVIDE 1" EMPTY CONDUIT WITH PULLSTRINGS FROM SPORTS LIGHTING BUTTON BACK TO CONTACTOR FOR CONTROL WIRING INSTALLATION.
9. PROVIDE POWER TO ELECTRIC GATE OPERATOR. CONNECT VIA 2#6, 1#8G, 1-1"C. PROVIDE 20A/1P BREAKER IN SPACE OF EXISTING PANELBOARD. PROVIDE 3 KVA 480-120V STEP-DOWN TRANSFORMER IN NEMA 3R ENCLOSURE.
10. APPROXIMATE ROUTING OF UNDERGROUND CIRCUIT TO GATE OPERATOR.
11. EXISTING LIGHTING POLE TO BE PROTECTED IN PLACE.
12. APPROXIMATE LOCATION OF EXISTING MDF ROOM.
13. INDICATES APPROXIMATE LOCATION OF NEW SECURITY PEDESTAL WITH ACCESS CONTROL CARD READER FOR NEW MECHANICAL VEHICLE GATE. CONTRACTOR SHALL PROVIDE AND INSTALL QTY (1) CARD READER AT SECURITY PEDESTAL AND DOOR CONTACT AT GATE. INTEGRATING INTO OWNER'S EXISTING ACCESS CONTROL SYSTEM. CONTRACTOR SHALL ROUTE ACCESS CONTROL CABLING FROM NEW CARD READER TO THE MAIN BUILDING'S EXISTING ACCESS CONTROL PANEL. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CABLING, FIBER EXTENDER KIT FOR LONG CABLE RUNS, MOUNTING KITS, POWER SUPPLIES, DOOR CONTROLLERS, SOFTWARE / LICENSES, AND PROGRAMMING TO ENSURE A FULLY FUNCTIONAL ACCESS CONTROL CARD READER SYSTEM. CONTRACTOR SHALL COORDINATE WITH ARCHITECT FOR EXACT SECURITY PEDESTAL TYPE AND LOCATION.
14. THE CONTRACTOR SHALL PROVIDE (1) 2" UNDERGROUND CONDUIT FOR LOW VOLTAGE.
15. STUB OUT CONDUITS AT EXTERIOR WALL OF BUILDING AND TRENCH TO EACH LOCATION. REFER TO CIVIL PLANS FOR SAWCUTTING SCOPE. SAWCUT/BORE EXISTING PAVEMENT FOR NEW INSTALLATION.
16. CONTRACTOR SHALL PROVIDE AND INSTALL AN 18"X18"X18" IN GROUND PULLBOX FOR DATA. FOR POWER, PROVIDE PULLBOX SIZED PER NEC.
17. EXISTING CIRCUIT, GATE OPERATOR, AND CLICK-TO-ENTER TO REMAIN.



1 ELECTRICAL SITE PLAN

SCALE: 1" = 80'-0"

Plot Stamp:
3/3/2026 4:01:25 PM

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TX FIRM: BR 1608

HOUSTON, TX
713-366-0608

LEAF ENGINEERS

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD
WEBSTER, TX 77598

ISSUE FOR PROPOSAL

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
MATTHEW R. SICKORE
107736
LICENSED
PROFESSIONAL
03/05/2026
LEAF ENGINEERS
F-18672

CLIENT	
CLEAR CREEK ISD	
DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: WK/MS

DRAWN BY: JJ

ELECTRICAL/TECHNOLOGY NEW SITE PLAN

ET-101

COVER SHEET
P-000

FOR BLUEBEAM LABELING/DOCR:

0"
1"

PLUMBING ABBREVIATION SCHEDULE

(A)	ITEM NOTED TO BE ABANDONED	KW	KILOWATTS
(D)	ITEM NOTED TO BE DEMOLISHED	L	LAVATORY
(E)	EXISTING ITEM	MAP	MASTER ALARM PANEL
(N)	NEW ITEM	MECH	MECHANICAL
(R)	ITEM NOTED TO BE RELOCATED	MH	MANHOLE
AAP	AREA ALARM PANEL	MS	MOP SINK
AAV	AUTOMATIC AIR VENT	NC	NORMALLY CLOSED
AFF	ABOVE FINISHED FLOOR	NIC	NOT IN CONTRACT
AP	ACCESS PANEL	NO	NORMALLY OPEN
BFF	BELOW FINISHED FLOOR	OF / CI	OWNER FURNISHED / CONTRACTOR INSTALLED
BFPV	BACKFLOW PREVENTER	OF / OI	OWNER FURNISHED / OWNER INSTALLED
BOB	BOTTOM OF BEAM	OD	OVERFLOW DRAIN
BOP	BOTTOM OF PIPE	OW	OIL WASTE
BTUH	BRITISH THERMAL UNITS PER HOUR	PIV	POST INDICATOR VALVE
C / C	CUT AND CAP	PRV	PRESSURE REDUCING VALVE
CFH	CUBIC FEET PER HOUR	RD	ROOF DRAIN
CFS	CUBIC FEET PER SECOND	RE:	REFER TO
CI	CAST IRON	RIC	ROUGH-IN AND CONNECT
CLG	CEILING	RO	REVERSE OSMOSIS
CO	CLEANOUT	RP BFPV	REDUCED PRESSURE BACKFLOW PREVENTER
CONN	CONNECTION	RPM	REVOLUTIONS PER MINUTE
CONT	CONTINUATION	RVB	REFRIGERATOR VALVE BOX
DF	DRINKING FOUNTAIN	SD	STORM DRAIN
DPV	DRY PIPE VALVE	SF	SQUARE FEET
DWG	DRAWING	SS	SERVICE (MOP) SINK
EA	EACH	SK	SINK
EDF	ELECTRIC DRINKING FOUNTAIN	TMV	THERMOSTATIC MIXING VALVE
FCO	FLOOR CLEANOUT	TOP	TOP OF PIPE
FD	FLOOR DRAIN	TP	TRAP PRIMER
FDV	FIRE DEPARTMENT VALVE	TYP	TYPICAL
FF	FINISHED FLOOR	U	URINAL
FHC	FIRE HOSE CABINET	U/F	UNDERFLOOR
FL	FLOW LINE	U/S	UNDERSLAB
FS	FLOOR SINK	VB	VACUUM BREAKER
FT	FEET	VCT	VITRIFIED CLAY TILE
FU	FIXTURE UNIT	VTR	VENT THRU ROOF
GC	GENERAL CONTRACTOR	WC	WATER CLOSET
GPH	GALLONS PER HOUR	WCO	WALL CLEANOUT
GPM	GALLONS PER MINUTE	WH	WALL HYDRANT
HB	HOSE BIBB	WMB	WASHING MACHINE BOX
HP	HORSEPOWER	YH	YARD HYDRANT
IE	INVERT ELEVATION	ZV	ZONE VALVE

NOTES:

1. NOT ALL ABBREVIATIONS MAY BE USED ON THESE DRAWINGS.

IPC TABLE FOR HANGER SPACING MINIMUM REQUIREMENTS

PIPING MATERAL	MAX HORIZONTAL SPACING (ft)	MAX VERTICAL SPACING (ft)
ABS PIPE	4	10[b]
ALUMINUM TUBING	10	15
BRASS PIPE	10	10
CAST-IRON PIPE	5[a]	15
COPPER OR COPPER-ALLOY PIPE	12	10
COPPER OR COPPER-ALLOY TUBING, 1-1/4" DIAMETER AND SMALLER	6	10
COPPER OR COPPER-ALLOY TUBING, 1-1/2" DIAMETER AND LARGER	10	10
CROSS-LINKED POLYETHYLENE (PEX) PIPE	2.67 (32in)	10[b]
CROSS-LINKED POLYETHYLENE / ALUMINUM / CROSS-LINKED POLYETHYLENE (PEX-AL-PEX) PIPE	2.67 (32in)	4
CPVC PIPE OR TUBING, 1" AND SMALLER	3	10[b]
CPVC PIPE OR TUBING, 1-1/4" AND LARGER	4	10[b]
STEEL PIPE	12	15
LEAD PIPE	CONTINUOUS	4
POLYETHYLENE / ALUMINUM / POLYETHYLENE (PE-AL-PE) PIPE	2.67 (32in)	4
POLYETHYLENE OF RAISED TEMPERATURE (PE-RT) PIPE	2.67 (32in)	10[b]
POLYPROPYLENE (PP) PIPE OR TUBING, 1" AND SMALLER	2.67 (32in)	10[b]
POLYPROPYLENE (PP) PIPE OR TUBING, 1-1/4" AND LARGER	4	10[b]
PVC PIPE	4	10[b]
STAINLESS STEEL DRAINAGE SYSTEMS	10	10[b]

NOTES:

FOR SI: 1 in = 25.4 mm, 1 ft = 304.8 mm

a. THE MAXIMUM HORIZONTAL SPACING OF CAST-IRON PIPE HANGERS SHALL BE INCREASED TO 10' WHERE 10-FOOT LENGTHS OF PIPE ARE INSTALLED.

b. MIDSTORY GUIDE FOR SIZES 2" AND SMALLER.

PLUMBING SYMBOLS LEGEND

DRAWINGS	DETAILS	ABV.	DESCRIPTION
	AV	AV	ACID VENT
	AW	AW	ACID WASTE
	CA	CA	COMPRESSED AIR
		CW	COLD WATER
		(D)	DEMOLISHED PIPING OR EQUIPMENT
	D	D	CONDENSATE
	DSP	DSP	DRY SPRINKLER
		(E)	EXISTING PIPING OR EQUIPMENT
	F	F	FIRE
	G	G	NATURAL GAS
	GW	GW	GREASE WASTE
		HW	HOT WATER
		HWR	HOT WATER RETURN
	OD	OD	OVERFLOW DRAIN
	SD	SD	STORM DRAIN
	SP	SP	SPRINKLER
	SS	SS	SANITARY SEWER
		V	VENT
			DIRECTION OF FLOW
			DROP IN PIPE
			RISE IN PIPE
			GATE VALVE
			BALL VALVE
			CHECK VALVE
			SUPERVISED VALVE WITH FLOW SWITCH
			PLUG VALVE / GAS COCK
			BUTTERFLY VALVE
			HOT WATER BALANCING VALVE
			PIPE UNION
			PRESSURE CONTROL VALVE
			3-WAY VALVE
			SOLENOID VALVE
			FLOW SWITCH
			PRESSURE GAUGE WITH GAUGE COCK
			THERMOMETER
	RD / ORD		ROOF DRAIN / OVERFLOW DRAIN
	FD		FLOOR DRAIN
	FS		FLOOR SINK
			T & P RELIEF VALVE
			STRAINER
		CO	END OF LINE CLEANOUT
		FCO	FLOOR CLEANOUT
		WCO	WALL CLEANOUT
			CAP
			FLEXIBLE CONNECTION
			NEW CONNECTION TO EXISTING PIPING

NOTES:

1. NOT ALL SYMBOLS MAY BE USED ON THESE DRAWINGS.

PLUMBING PIPE MATERIAL SCHEDULE

PIPING SYSTEM	BELOW GRADE	ABOVE GRADE
SANITARY WASTE	SCH 40 PVC	CAST IRON
DOMESTIC WATER	TYPE 'K' COPPER	TYPE 'L' COPPER
NATURAL GAS	POLYETHYLENE W/ SLEEVE UNDER SLAB	SCH 40 BLACK STEEL
OIL WASTE	SCH 40 CPVC	CAST IRON

WATER HAMMER ARRESTOR SCHEDULE

PIPE SIZE	CROSS FIXTURE UNITS	PDI STD.
1/2"	1-11	"A"
3/4"	12-32	"B"
1"	33-60	"C"
1-1/4"	61-113	"D"
1-1/2"	114-154	"E"
2"	155-330	"F"

NOTES:

1. ASSE 1010 WATER HAMMER ARRESTORS SHALL BE PROVIDED TO ALL FIXTURE RUNOUT AND SHALL BE SIZED ACCORDING TO LOCAL PLUMBING CODE (AHJ) & PDI. WATER HAMMER ARRESTORS SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S REQUIREMENTS. THE DEVICE SHALL HAVE LIFETIME WARRANTY AND BE INSTALLED WITHOUT REQUIRING ACCESS DOORS AND PANELS.

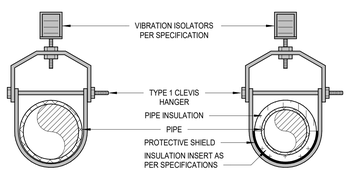
HORIZONTAL DRAIN PIPE SLOPE (IPC)

PIPE SIZE	MINIMUM SLOPE
STORM WASTE DRAINAGE	1/8" PER FOOT (1%)
SANITARY WASTE DRAINAGE 2-1/2" OR SMALLER	1/4" PER FOOT (2%)
SANITARY WASTE DRAINAGE 3" TO 6"	1/8" PER FOOT (1%)
SANITARY WASTE DRAINAGE 8" OR LARGER	1/16" PER FOOT (0.5%)
GREASE WASTE DRAINAGE	1/4" PER FOOT (2%)

NOTES:

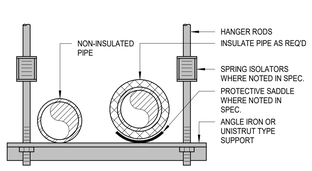
1. SANITARY WASTE DRAINAGE SLOPES SHALL APPLY TO ANY NON-SPECIFIED DRAINAGE PIPING SYSTEMS (E.G., CHEMICAL WASTE, ETC.) OR AS PER CODE REQUIREMENTS.

NOTES:
ROUTE PIPING AS LOW AS POSSIBLE TO CEILING GRID FOR EASE OF ACCESSIBILITY



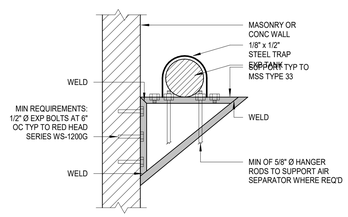
4 SINGLE PIPE TYPE 1 CLEVIS HANGER
N.T.S

NOTES:
SIZE RODS, SPRING CUSHION, AND HORIZONTAL MEMBER APPROVED TO SATISFY LOAD REQUIREMENT W/ SAFETY FACTOR OF 5

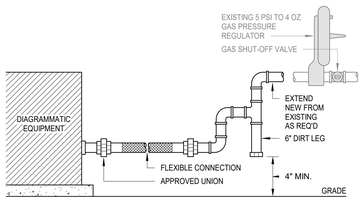


3 PIPE SUPPORT - TRAPEZE TYPE
N.T.S

NOTES:
1. ALL STEEL HOT DIPPED GALV AFTER FABRICATION IF OUTDOORS; SANDBLAST AND SHOP PRIME ALL OTHERS
2. SECURE W/ APPROVED ANCHORS TO MATCH WALL CONSTRUCTION



2 PIPE WALL SUPPORT
N.T.S



1 EQUIPMENT GAS CONNECTION
N.T.S

PROJECT GENERAL NOTES

A. ALL EQUIPMENT AND/OR SYSTEMS NOTED ON THE DRAWINGS "TO REMAIN" SHALL BE INSPECTED AND TESTED ON SITE TO CERTIFY WORKING CONDITION. A WRITTEN REPORT ON THE CONDITION OF ALL EQUIPMENT TO REMAIN, INCLUDING A COPY OF THE TEST RESULTS WITH RECOMMENDED REMEDIAL ACTIONS AND COSTS, SHALL BE MADE BY THIS CONTRACTOR TO THE ARCHITECT/ENGINEER FOR REVIEW.

B. THE PLUMBING WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LOCAL CODES AS WELL AS ALL LOCAL REGULATIONS THAT MAY APPLY. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE, THE MORE STRINGENT STANDARD SHALL APPLY.

C. THE PLUMBING WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE PLUMBING SPECIFICATIONS. IN CASE OF CONFLICTS BETWEEN THE PLUMBING DRAWINGS AND THE PLUMBING SPECIFICATIONS, THE MORE EXPENSIVE OF THE TWO SHALL APPLY.

D. ALL PLUMBING WORK SHALL BE COORDINATED WITH ALL OTHER TRADES BEFORE PROCEEDING WITH THE INSTALLATION.

E. INVERT ELEVATIONS AND EXACT LOCATIONS OF ALL IMPACTED EXISTING UTILITIES SHALL BE CHECKED BEFORE PROCEEDING WITH NEW WORK.

F. NO CHANGES ARE TO BE MADE IN PLUMBING LAYOUT WITHOUT WRITTEN PERMISSION BY THE ARCHITECT OR ENGINEER.

G. NO PIPING SHALL RUN EXPOSED IN FINISHED AREAS.

H. ALL ACCESS PANELS SHALL BE BY GENERAL CONTRACTOR. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR LOCATION.

I. INSTALL ALL REQUIRED CLEANOUTS TO CLEAR EQUIPMENT AND FIXTURES.

J. ALL WORK SHALL BE PROPERLY TESTED, BALANCED, CLEANED AND DISINFECTED. PROVIDE A ONE YEAR WARRANTY FROM DATE OF FINAL INSPECTION ON ALL PARTS AND LABOR.

K. ALL PLUMBING FIXTURES SPECIFIED ARE FOR INFORMATION ONLY. EQUAL EQUIPMENT MAY BE INSTALLED SECURING FIRST THE ENGINEER'S APPROVAL.

L. PITCH ALL WASTE AND SOIL PIPING AT MAXIMUM SLOPE POSSIBLE, BUT NOT LESS THAN AS REQUIRED PER THE APPLICABLE LOCAL CODES. PITCH ALL OIL WASTE PIPING AT A MINIMUM OF 1/4" PER FOOT AS REQUIRED PER THE APPLICABLE LOCAL CODES.

M. PROVIDE ALL PIPE OPENINGS THROUGH PARTITIONS WITH PIPE SLEEVES. WHERE PENETRATING FIRE RATED PARTITIONS, THE SPACE BETWEEN THE PIPE AND THE SLEEVE SHALL BE SEALED WITH FIRE STOPPING MATERIAL.

N. ANY UNAUTHORIZED CHANGES TO THE EQUIPMENT, DESIGN OR INSTALLATION OF THE PLUMBING SYSTEMS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER IS UNACCEPTABLE AND GROUNDS FOR REMOVAL OF ALL LIABILITY OF THE ARCHITECT/ENGINEER FOR THE REVISED DESIGN.

O. ALL PIPING MATERIAL SHALL BE OF DOMESTIC MANUFACTURE AND SHALL COMPLY WITH THE BUY AMERICAN ACT.

PLUMBING TESTING NOTES

1. ALL EQUIPMENT AND/OR SYSTEMS NOTED ON THE DRAWINGS "TO REMAIN" SHALL BE INSPECTED AND TESTED ON SITE TO CERTIFY WORKING CONDITION. A WRITTEN REPORT ON THE CONDITION OF ALL EQUIPMENT TO REMAIN, INCLUDING A COPY OF THE TEST RESULTS WITH RECOMMENDED REMEDIAL ACTIONS AND COSTS SHALL BE MADE BY THIS CONTRACTOR TO THE ARCHITECT/ENGINEER FOR REVIEW.
2. PIPE COVER AND BACKFILLING:
   A. AFTER HYDROSTATIC TEST, EVENLY BACKFILL ENTIRE TRENCH WIDTH BY HAND PLACING BACKFILL MATERIAL AND HAND TAMPING IN FOUR (4) INCHES COMPACTED LAYERS TO TWELVE (12) INCHES MINIMUM COVER OVER TOP OF JACKET. COMPACT TO 95 PERCENT MAXIMUM DENSITY.
   B. EVENLY AND CONTINUOUSLY BACKFILL REMAINING TRENCH DEPTH IN UNIFORM LAYERS WITH BACKFILL MATERIAL.
   C. DO NOT USE WHEELED OR TRACKED VEHICLES FOR TAMPING.
3. PRESSURE TEST ALL DOMESTIC WATER PIPING. AFTER INSTALLATION AND PRIOR TO BACKFILL OR COVER-UP, RINSE PIPING SYSTEM OF PARTICULATE CONTAMINANTS, CAP AND SUBJECT TO STATIC WATER PRESSURE OF 125 PSIG FOR FOUR (4) HOURS. REPAIR LEAKS AND DEFECTS AND RE-TEST ANY PORTION OF PIPING SYSTEM THAT FAILS. PROVIDE WRITTEN TEST REPORT INCLUDING DATE AND TIME OF TEST, PASS OR FAIL INDICATION, SUMMARY OF REMEDIAL WORK REQUIRED AND DATE AND TIME OF EACH RE-TEST.
4. PRIOR TO COVER UP, WATER PIPE, SANITARY PIPE, AND GAS PIPING SHALL BE PRESSURE TESTED. TESTS SHALL BE WITNESSED BY CONSULTANT AND OWNER. NOTIFY OWNER 48 HOURS PRIOR TO TEST. TEST SHALL BE WITNESSED BY CLIENT PLUMBING TECHNICIAN.
5. UPON COMPLETION OF THE SANITARY PIPING SYSTEM, THE CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER TO OBSERVE A SMOKE TEST OF THE SYSTEM. SMOKE TESTING SHALL BE PERFORMED ON SANITARY PIPING SYSTEM TWICE DURING CONSTRUCTION.
6. ALL WASTE PIPING SYSTEMS:
   A. WATER TEST SHALL BE APPLIED TO THESE DRAINAGE SYSTEMS EITHER IN THEIR ENTIRETY OR IN SECTIONS AS REQUIRED, AFTER ROUGH PIPING HAS BEEN INSTALLED. IF THE SYSTEM IS TESTED IN SECTIONS, EACH OPENING SHALL BE TIGHTLY CLOSED EXCEPT THE HIGHEST OPENING IN THE SECTION UNDER TEST. ALL SECTIONS SHALL BE TESTED WITH A MINIMUM OF 10 FEET HEAD OF WATER. IN TESTING SUCCESSIVE SECTIONS AT LEAST THE UPPER 10 FEET OF THE NEXT PRECEDING SECTION SHALL BE TESTED SO THAT NO JOINT OF PIPING IN THE BUILDING EXCEPT THE UPPERMOST 10 FEET OF THE SYSTEM SHALL BE SUBMITTED TO A TEST OF LESS THAN 10 FOOT OF HEAD OF WATER. THE WATER SHALL BE KEPT IN THE SYSTEM FOR AT LEAST 30 MINUTES BEFORE INSPECTION STARTS; THE SYSTEM SHALL THEN BE MADE TIGHT AT ALL POINTS.
   B. ANY POINTS OF THE DRAINAGE SYSTEMS TO BE TESTED WITH AIR INSTEAD OF WATER SHALL BE MADE BY ATTACHING AN AIR COMPRESSOR TESTING APPARATUS TO ANY SUITABLE OPENING AND AFTER CLOSING ALL OTHER INLETS OR OUTLETS, FORCING AIR INTO THE SYSTEM UNTIL THERE IS A MINIMUM GAUGE PRESSURE OF 5 PSI. THIS PRESSURE SHALL BE HELD WITHOUT THE INTRODUCTION OF ADDITIONAL AIR FOR A PERIOD OF AT LEAST 30 MINUTES.
   C. EXTERIOR CONNECTIONS SHALL BE TESTED AS PART OF THE INTERIOR SYSTEMS.
7. ADDITIONAL TESTS:
   A. PROVIDE ALL ADDITIONAL TESTS SUCH AS SMOKE OR PRESSURE TESTS AS REQUIRED BY THE REGULATIONS OR AS DIRECTED BY AUTHORITIES MAKING THE INSPECTION. CONTRACTOR SHALL COORDINATE SAID ADDITIONAL TESTS WITH ANY THIRD-PARTY TESTING ENTITIES AS REQUIRED.
   B. PROVIDE FOR ANY REPEATED TEST AS DIRECTED BY THE OWNER'S REPRESENTATIVE, TO MAKE ALL SYSTEMS TIGHT AS REQUIRED.
   C. VISUAL INSPECTIONS OF JOINTS, VALVES, ETC. SHALL BE MADE AS DIRECTED BY THE ENGINEER.
   D. PRESSURE TEST NATURAL GAS PIPING IN ACCORDANCE WITH NFPA 54. PRESSURE TEST PRIOR TO BACKFILL, MINIMUM 50 PSI FOR 24 HOURS.

DRAWING REFERENCE KEY

REFER TO
DETAIL NUMBER
RE:01/P-401
SHEET NUMBER

PBK
www.pbk.com
TX FIRM: BR 1608
HOUSTON, TX
713-366-0608

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD
WEBSTER, TX 77598

ISSUE FOR PROPOSAL

LEAF ENGINEERS

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
DONALD C. RICHARDS
61525
LICENSED
PROFESSIONAL
ENGINEER

03/05/2026
LEAF ENGINEERS
F-10672

CLIENT	
CLEAR CREEK ISD	
DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: SC
DRAWN BY: SC

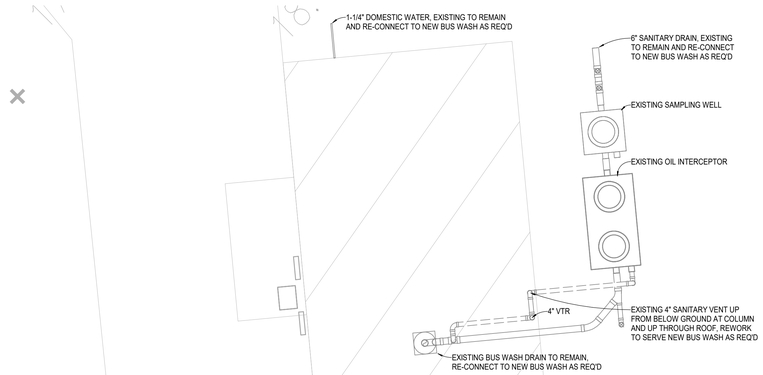
COVER SHEET

P-000

Plot Stamp:
3/3/2026 11:27:30 AM

PLUMBING SITE PLAN
PS-101
FOR BLUEBEAM LABELING/OCR:

0"
1"



NOTE:

ALL PLUMBING UTILITY SERVICES INCLUDING DOMESTIC WATER, OIL WASTE LINE, OIL INTERCEPTOR, SAMPLE WELL, AND SANITARY SEWER LINE, ARE EXISTING TO REMAIN. THIS PLAN IS FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING BUS WASH SYSTEM, AND INSTALLATION OF THE NEW BUS WASH SYSTEM AND ITS CONNECTIONS TO THE EXISTING PLUMBING UTILITIES.

3 ENLARGED PLUMBING PLAN
3/16" = 1'-0"

GENERAL NOTES - PLUMBING PLAN

A. THE CONTRACTOR SHALL COMPLY WITH ALL AUTHORITIES HAVING JURISDICTION.

B. ALL FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT SHALL BE MADE BY THE PLUMBING CONTRACTOR.

C. ALL PLUMBING PIPING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO ANY INSTALLATION OF ALL PLUMBING FIXTURES AND EQUIPMENT BY THE PLUMBING CONTRACTOR.

D. ALL FLOOR DRAINS AND FLOOR SINKS SHOWN ON THIS DRAWING SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.

E. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. DO NOT SCALE FROM PLUMBING DRAWINGS.

F. ALL WALL CLEAN-OUTS SHALL BE ACCESSIBLE BY AN ACCESS PANEL.

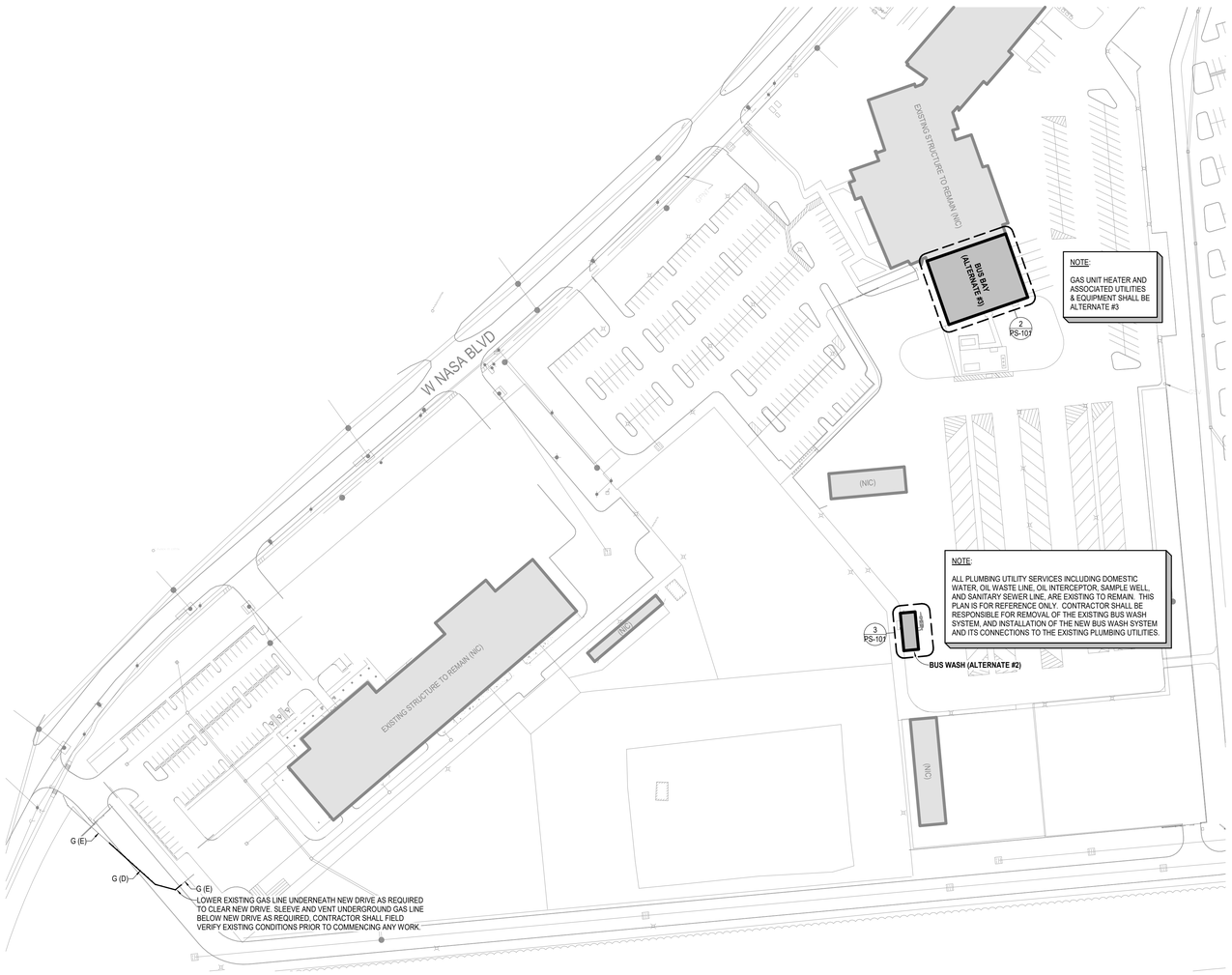
G. ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH A TRAP PRIMER AND INSTALLED BY THE PLUMBING CONTRACTOR.

H. FIXTURES DESIGNATED AS ADA ACCESSIBLE BY ARCHITECT SHALL BE INSTALLED AT ADA ACCESSIBLE HEIGHT PER ARCHITECTURAL DETAILS.

I. ALL DOMESTIC COLD AND HOT WATER TAKE-OFFS SHALL HAVE AN ISOLATION SHUT-OFF VALVE.

J. CONTRACTOR SHALL DEWATER ANY AREA AT OR BELOW GRADE PRIOR TO SETTING EQUIPMENT.

K. ALL SANITARY 3" OR ABOVE SHALL BE INSPECTED BY A CAMERA PRIOR TO SUBSTANTIAL COMPLETION.



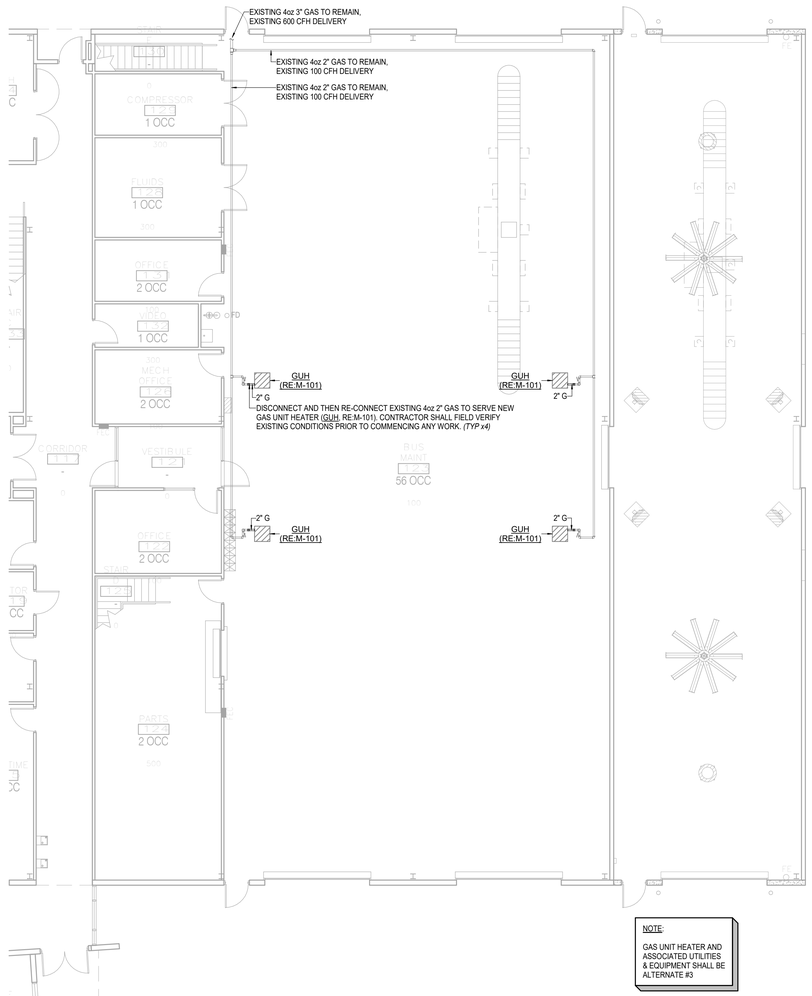
NOTE:

GAS UNIT HEATER AND ASSOCIATED UTILITIES & EQUIPMENT SHALL BE ALTERNATE #3

NOTE:

ALL PLUMBING UTILITY SERVICES INCLUDING DOMESTIC WATER, OIL WASTE LINE, OIL INTERCEPTOR, SAMPLE WELL, AND SANITARY SEWER LINE, ARE EXISTING TO REMAIN. THIS PLAN IS FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING BUS WASH SYSTEM, AND INSTALLATION OF THE NEW BUS WASH SYSTEM AND ITS CONNECTIONS TO THE EXISTING PLUMBING UTILITIES.

1 PLUMBING SITE PLAN
1" = 80'-0"



NOTE:

GAS UNIT HEATER AND ASSOCIATED UTILITIES & EQUIPMENT SHALL BE ALTERNATE #3

2 SUPPORT FACILITY BUS BAY - 1ST FLOOR PLUMBING PLAN
1/8" = 1'-0"

PBK
www.pbk.com
TX FIRM: BR 1608
HOUSTON, TX
713-366-0608

LEAF ENGINEERS

NEW DRIVEWAY AT CENTRAL SUPPORT FACILITY

2145 W. NASA BLVD
WEBSTER, TX 77598

ISSUE FOR PROPOSAL

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
DONALD C. RICHARDS
61525
LICENSED
PROFESSIONAL ENGINEER
03/05/2026
LEAF ENGINEERS
F-18672

CLIENT	
CLEAR CREEK ISD	
DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: SC
DRAWN BY: SC

PLUMBING SITE PLAN

PS-101

Plot Stamp:
3/3/2026 11:27:31 AM

0"

1"

GENERAL NOTES
S-011
FOR BLUEBEAM LABELINGDOCR:

GENERAL:

CODES, DRAWINGS AND SPECIFICATIONS:

1. THE CONSTRUCTION DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE IBC 2021. ALL CODES AND SPECIFICATIONS LISTED ABOVE SHALL INCLUDE ALL AMENDMENTS AND ADDENDA IN FORCE AT THE DATE OF THE CONTRACT DOCUMENTS.

TYPICAL DETAILS:

1. TYPICAL DETAILS SHOWN ON THE DRAWINGS SHALL APPLY TO ALL SIMILAR LIKE CONDITIONS OCCURRING ON THE PROJECT WHETHER OR NOT THEY ARE KEYED IN AT EACH PARTICULAR LOCATION.

MISCELLANEOUS:

1. WHERE CONFLICTS EXIST BETWEEN THE VARIOUS PUBLICATIONS AS SPECIFIED HEREIN, THE STRICTER REQUIREMENTS SHALL GOVERN UNLESS NOTED OTHERWISE. WHERE CONFLICTS EXIST BETWEEN THE VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS (STRUCTURAL DOCUMENTS, SPECIFICATIONS) AS SPECIFIED HEREIN, THE STRICTER REQUIREMENTS SHALL GOVERN.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.
3. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.
4. SLEEVES AND BLOCKOUTS REQUIRED FOR PASSAGE OF DUCTWORK, PIPING, DRAINS, CONDUIT, ETC., AND ANCHORS REQUIRED FOR ANCHORING EQUIPMENT AND PIPING ARE NOT GENERALLY INDICATED ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL DETERMINE SUCH REQUIREMENTS FROM OTHER SERIES DRAWINGS, SUBCONTRACTORS, AND SUPPLIERS AND SHALL COORDINATE THE LOCATIONS AND DETAILS FOR THESE ITEMS PRIOR TO FABRICATION OR CONSTRUCTION OF THE STRUCTURE. ANY CONFLICTS BETWEEN THESE ITEMS AND THE BUILDING STRUCTURE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION.
6. MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL WHICH ARE NOT AS SPECIFIED IN THE DOCUMENTS SHALL BE ACCOMPANIED BY A CURRENT ES REPORT (BY ICC EVALUATION SERVICE, INC.) OR ICBO REPORT (BY INTERNATIONAL CONFERENCE OF BUILDING OFFICALS). MATERIALS OR PRODUCTS THAT DO NOT HAVE AN ES OR ICBO REPORT INDICATING THE SUBSTITUTED MATERIAL OR PRODUCT TO BE EQUAL TO THAT SPECIFIED, WILL NOT BE CONSIDERED.
7. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN OR SPECIFIED IN SIMILAR CONDITIONS.
8. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
10. ERECTION OF STRUCTURAL STEEL MAY NOT BEGIN UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF THREE DAYS. STRUCTURAL STEE[illegible]SHOWN ANY SLAB UNTIL IT HAS CURED FOR A MINIMUM OF SEVEN DAYS.
12. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. THE ABILITY OF THE STRUCTURAL FRAME TO RESIST THE REQUIRED CODE FORCES DERIVES FROM THE COMPLETE INSTALLATION OF THE LATERAL FORCE RESISTING SYSTEMS AND DIAPHRAGMS DESCRIBED BELOW. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND ALL DESIGNATED CONCRETE ELEMENTS (IF ANY) HAVE REACHED A MINIMUM OF 75% OF THEIR DESIGN STRENGTH.
13. THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS IDENTIFIED WITHIN THESE STRUCTURAL DRAWINGS THAT ARE ANTICIPATED TO BE APPLIED TO THE FINAL STRUCTURE ONCE COMPLETED AND OCCUPIED. THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ADEQUACY OF THE STRUCTURE TO SUPPORT ANY APPLIED CONSTRUCTION LOADS, INCLUDING THOSE DUE TO CONSTRUCTION VEHICLES OR EQUIPMENT, MATERIAL HANDLING OR STORAGE, SHORING OR RESHORING, OR ANY OTHER CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED VERIFYING THE ADEQUACY OF THE STRUCTURE FOR ANY PROPOSED CONSTRUCTION LOADS THAT ARE IN EXCESS OF THE STATED DESIGN LOADS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE TO DESIGN OR CHECK THE STRUCTURE FOR LOADS APPLIED TO THE STRUCTURE FOR ANY CONSTRUCTION ACTIVITY.

WIND-BORNE DEBRIS REGION:

1. THE PROPOSED BUILDING IS LOCATED WITHIN ONE OF THE TEXAS DEPARTMENT OF INSURANCE DESIGNATED PER 2018 IBC / IRC CATASTROPHE ZONES. THE OWNER IS HEREBY INFORMED THAT THEY WILL NEED TO HIRE AN INDEPENDENT THIRD-PARTY SPECIAL INSPECTIONS COMPANY TO PROVIDE WINDSTORM CERTIFICATION (WPI-1 FORM, WPI-2 FORM, AND WPI-8 CERTIFICATE) FOR THE BUILDING / PROJECT. THE INDEPENDENT WINDSTORM INSPECTION COMPANY MUST HAVE A LICENSED ENGINEER CERTIFIED BY AND APPROVED BY THE STATE OF TEXAS TO PARTICIPATE IN THE TEXAS WINDSTORM INSURANCE ASSOCIATION'S WINDSTORM PROGRAM. THE APPLICATION FOR WINDSTORM BUILDING INSPECTION, FORM WPI-1, MUST BE SUBMITTED TO THE TEXAS DEPARTMENT OF INSURANCE, DIVISION OF WINDSTORM INSPECTIONS AND APPROVED PRIOR TO THE START OF CONSTRUCTION. PLEASE NOTE: THE WPI-1 FORM, THE WINDSTORM CERTIFICATION AND INSPECTION WORK, AND THE COMPLETION OF THE WPI-2 FORM HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEER'S (EOR'S) SCOPE OF WORK FOR THIS PROJECT. AS NOTED ABOVE, THIS SERVICE SHALL BE PROVIDED BY AN ENGINEER APPOINTED BY THE COMMISSIONER OF INSURANCE TO INSPECT AND CERTIFY COMPLIANCE OF THE STRUCTURES AS ELIGIBLE FOR WINDSTORM, HAIL, AND ANY OTHER AVAILABLE COVERAGE THROUGH THE TEXAS WINDSTORM INSURANCE ASSOCIATION. ARRANGEMENTS FOR WINDSTORM INSPECTIONS SHALL BE COORDINATED BETWEEN THE OWNER, THE GENERAL CONTRACTOR, AND THE WINDSTORM INSPECTOR PRIOR TO THE START OF CONSTRUCTION. ALL PERTINENT SUBMITTALS RELATED TO THE EXTERIOR BUILDING ENVELOPE SHALL NOT BE CONSIDERED APPROVED UNTIL THE WINDSTORM CERTIFICATION COMPANY HAS REVIEW AND APPROVED THE SUBMITTAL. THE GC SHALL COORDINATE WITH THE WINDSTORM CERTIFICATION COMPANY TO DETERMINE ALL SUBMITTALS REQUIRED FOR REVIEW AND APPROVAL.

ASCE WIND HAZARD SPREADSHEET:

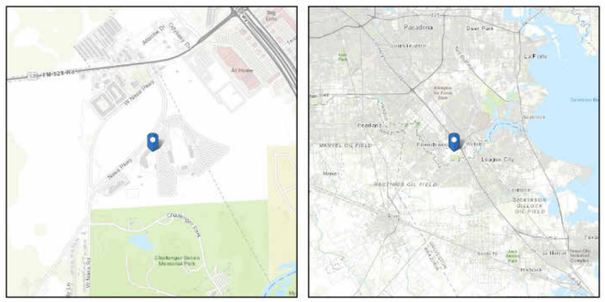
ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS

Address:
2145 W Nasa Blvd
Webster, Texas
77598

ASCE Hazards Report

Standard: ASCE/SEI 7-16
Risk Category: III
Soil Class: undefined

Latitude: 29.518472
Longitude: -95.137801
Elevation: 21.06894099900924 ft (NAVD 88)



Wind

Results:

Wind Speed	152 Vmph
10-year MRI	78 Vmph
25-year MRI	95 Vmph
50-year MRI	109 Vmph
100-year MRI	120 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1C and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Tue Aug 26 2025

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (annual exceedance probability = 0.000588, MRI = 1,700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings shall be protected against wind-borne debris as specified in Section 26.12.3.

DESIGN CRITERIA:

WIND LOADS:

1. WIND PRESSURES ARE BASED ON THE PROVISIONS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-16, [CITY OF WEBSTER AMENDMENTS,] [THE TEXAS DEPARTMENT OF INSURANCE WINDSTORM ZONE,] AND THE FOLLOWING CRITERIA:

   A. WIND DESIGN DATA (USED FOR PRESSURE DETERMINATION FOR THE DESIGN OF BUILDING)

1.	BASIC WIND SPEED, V	152 MPH (3-SECOND GUST) (ULTIMATE)
2.	WIND OCCUPANCY CATEGORY	III
3.	WIND IMPORTANCE FACTOR, I	1.0
4.	WIND EXPOSURE CATEGORY	C
5.	INTERNAL PRESSURE COEFFICIENT, Gcpi	+/-0.18

   B. WIND-BORNE DEBRIS DATA*** (USED TO DETERMINE IF BUILDING IS LOCATED WITHIN A WIND-BORNE DEBRIS REGION)

1.	WIND-BORNE DEBRIS BASIC WIND SPEED TRIGGER, V	140 MPH (3-SECOND GUST) (ULTIMATE)
2.	BASIC WIND SPEED, V	143 MPH
3.	WIND OCCUPANCY CATEGORY	II
4.	WIND-BORNE DEBRIS PROTECTION REQUIRED?	YES

   *** - THE INFORMATION SHOWN IN WIND LOADS SECTION 1.B IS ONLY PROVIDED TO INDICATE IF THE BUILDING IS WITHIN A WIND-BORNE DEBRIS AREA. THIS SECTION DOES NOT APPLY TO ANY COMPONENTS THAT ARE LISTED AS DELEGATED DESIGN. ALL DELEGATED DESIGN COMPONENTS SHALL BE DESIGN FOR THE WIND DESIGN DATA AND DESIGN WIND PRESSURES PROVIDED IN SECTION 1.A AND 1.C.

ALLOWANCE NOTES:

TO ACCOUNT FOR ANY POTENTIALLY UNREALIZED CONDITIONS THE GENERAL CONTRACTOR SHALL PROVIDE THE FOLLOWING ALLOWANCES:

1. PROVIDE AN ALLOWANCE FOR AN ADDITIONAL 32 TONS OF MISCELLANEOUS STEEL. SIZES OF MEMBERS AND USE OF MEMBERS SHALL BE AS DIRECTED BY THE ARCHITECT IN THE FIELD. ALLOWANCE SHALL INCLUDE/ACCOUNT FOR ALL COSTS FOR MATERIAL, FABRICATION, DELIVERY, ERECTION, ETC. ANY UNUSED PORTION OF THE 32 TONS OF STEEL SHALL BE CREDITED BACK TO THE OWNER AT $4,800.00 / TON.
2. PROVIDE AN ALLOWANCE FOR AN ADDITIONAL 211 CUBIC YARDS OF CONCRETE. SIZE OF MEMBERS AND USE OF MEMBERS SHALL BE AS DIRECTED BY THE ARCHITECT IN THE FIELD. ALLOWANCE SHALL INCLUDE/ACCOUNT FOR ALL COSTS FOR MATERIAL, FABRICATION, DELIVERY, LABOR FOR INSTALLATION/ PLACEMENT, FORMWORK, ETC. REINFORCEMENT FOR CONCRETE SHALL ALSO BE INCLUDED AS PART OF THIS ALLOWANCE AND SHALL BE ASSUMED TO BE 2% MINIMUM BY VOLUME. ANY UNUSED PORTION OF THE 211 CUBIC YARDS SHALL BE CREDITED BACK TO THE OWNER AT $190.00 / CUBIC YARD.
3. CONTRACTOR SHALL PROVIDE IN HIS BID A UNIT PRICE ADD AND UNIT PRICE DEDUCT FOR EACH PIER SIZE UTILIZED ON THE PROJECT.
4. THE PRICE FOR CASING OF PIERS SHALL BE INCLUDED WITHIN THE BASE BID FOR ALL DRILLED (BELLED) PIERS ON THE PROJECT. CONTRACTOR SHALL PROVIDE AN ALLOWANCE FOR 100% CASING OF DRILLED PIERS. CONTRACTOR SHALL ALSO PROVIDE UNIT PRICE FOR EACH SIZE OF CASING UTILIZED ON THE PROJECT. PAYMENT FOR CASING SHALL BE BASED UPON NET LENGTH OF CASING UTILIZED MULTIPLIED BY THE UNIT PRICE.

IMPORTANT NOTES TO CONTRACTORS & PROPOSERS:

FOUNDATION / CONCRETE:

1. THESE DRAWINGS AND SPECIFICATIONS DO NOT NECESSARILY INDICATE ALL OF THE WORK REQUIRED FOR THE COMPLETION OF THE PROJECT. THESE DRAWINGS DO NOT NECESSARILY INDICATE ALL FOUNDATION / CONCRETE WORK WHICH MAY BE REQUIRED BASED ON THE ARCHITECTURAL DRAWINGS.
2. WHERE FOUNDATION / CONCRETE ITEMS ARE IMPLIED OR INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF THESE ITEMS. THIS INCLUDES ANY FOUNDATION / CONCRETE ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS AND NOT SHOWN ON THE STRUCTURAL DRAWINGS AND ANY ITEMS SHOWN ON THE STRUCTURAL DRAWINGS AND NOT NOTED. PROPOSERS SHALL ASSUME FOR PROPOSAL PURPOSES ONLY THE SIZE OF THESE ITEMS ARE AS FOLLOWS:

   A. PIER/PLINTH: PIER MATCHING SIZE AND REINF. PER PROVIDED DETAILS.

   THE CONTRACTOR SHALL SUBMIT AN RFI AND THE ENGINEER SHALL APPROVE THE SIZE OF THE MEMBER BEFORE CONSTRUCTION OR FABRICATION

3. THERE ARE NUMEROUS AREAS OF "EXTERIOR CONCRETE" THAT IS SHOWN BY STRUCTURAL. IN ALL CASES THIS CONCRETE IS INTENDED TO BE SUSPENDED WHETHER ADJACENT TO SLAB-ON-GRADE OR SUSPENDED SLAB AREAS. THE FINISH OF THIS CONCRETE SHALL FOLLOW DIRECTION FROM ARCH/CIVIL. STRUCTURAL CANNOT DICTATE THE DIRECTION OF SLOPE OR FINISH OF THESE CONCRETE AREAS, IT IS THE GC'S SOLE RESPONSIBILITY TO COORDINATE WITH THE ARCH AND CIVIL DRAWINGS AND PROVIDE APPROPRIATE SLOPE DIRECTION, SLOPE AMOUNT, AND SURFACE FINISH TO MEET ALL REQUIREMENTS SET FOR IN ARCH AND CIVIL DRAWINGS. TYPICAL. GC SHALL ENSURE ALL STOREFRONTS, DOORS AND/OR OTHER OPENING INFILL ELEMENTS HAVE AN APPROVED WATERSTOP BELOW BETWEEN THE INFILL COMPONENT AND THE SLAB. THIS IS REQUIRED AT ALL AREAS BUT EXCEPTIONALLY CRITICAL AT THE AREAS WITH EXTERIOR STRUCTURAL SLAB.
4. UNLESS SPECIFICALLY DIRECTED OTHERWISE WITHIN THE STRUCTURAL CD'S OR SPECIFICATIONS, AT ALL SAW-CUT AND CONSTRUCTION JOINTS WITHIN CONCRETE SLABS-ON-GRADE THE GENERAL CONTRACTOR SHALL PROVIDE A SEMI-RIGID JOINT FILLER, EITHER MM80 OR EUCO 700 WITHIN EACH JOINT. THE JOINT FILLER MUST BE INSTALLED SOON AFTER CONCRETE SLAB INSTALLATION TO PREVENT SPALL AND BREAK-DOWN OF THE HARD CONCRETE EDGES OF THE SAW-CUTS AND CONSTRUCTION JOINTS UNDER THE CONSTRUCTION EQUIPMENT. FOLLOW ALL MANUFACTURERS RECOMMENDATIONS FOR PROPER CLEANING AND PREP PRIOR TO INSTALL. THE FILLER MUST FILL THE FULL LENGTH AND FULL DEPTH OF THE JOINT. ONCE INSTALLED THE JOINT FILLER SHALL BE PROTECTED UNTIL THE BUILDING IS APPROVED FOR OCCUPANCY. IF THE CONTRACTOR DESIRES TO PROVIDE AN APPROVED EQUAL TO THE PRODUCTS SPECIFIED ABOVE OR WITHIN THE CONSTRUCTION DOCUMENTS THE GENERAL CONTRACTOR MUST RECEIVE WRITTEN APPROVAL FROM THE STRUCTURAL EOR PRIOR TO ASSUMING COST WITHIN BID. UNTIL SUCH APPROVAL CAN BE PROVIDED THE GENERAL CONTRACTOR SHALL ACCOUNT FOR THE COST OF THE APPROVED PRODUCTS WITHIN THE CD'S AND / OR AS NOTED ABOVE.

BIDDING PROCESS:

1. AFTER BIDDING AND PRIOR TO CONTRACT AWARD IT IS COMMON FOR THE GENERAL CONTRACTOR TO SUBMIT THEIR "QUALIFICATIONS AND ASSUMPTIONS", A WRITTEN STATEMENT OF QUALIFICATIONS, EXCEPTIONS, AND ASSUMPTIONS SPECIFIC TO THEIR BID AND THEIR RECOMMENDED SUBCONTRACTORS. THE QUALIFICATIONS AND ASSUMPTIONS RELATED TO THE STRUCTURAL ENGINEERING SCOPE OF WORK MUST BE SUBMITTED TO THE DESIGN TEAM AND THE STRUCTURAL EOR FOR REVIEW AND APPROVAL PRIOR TO RECOMMENDATION OF AWARD. THIS DOCUMENT SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER-OF-RECORD FOR REVIEW A MINIMUM OF FIVE (5) BUSINESS DAYS IN ADVANCE OF THE REQUIRED RECOMMENDATION / AWARD DATE TO ALLOW THE DESIGN TEAM / EOR TO SUBMIT COMMENTS BACK TO THE OWNER. ANY QUALIFICATIONS AND/OR ASSUMPTIONS WHICH CONFLICT WITH THE INFORMATION PROVIDED IN THE STRUCTURAL DRAWINGS AND/OR SPECIFICATIONS ARE NOT ACCEPTED UNLESS EXPLICITLY APPROVED BY THE STRUCTURAL ENGINEER-OF-RECORD DURING THIS PROCESS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COST IMPLICATIONS RESULTING FROM UNAPPROVED QUALIFICATIONS AND ASSUMPTIONS NOT ENDORSED BY THE STRUCTURAL EOR.

SPECIAL INSPECTIONS:

SPECIAL INSPECTION WORK AND THE FINAL LETTER OF COMPLIANCE HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEERS SCOPE OF SERVICES. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING THE SERVICES OF THE SPECIAL INSPECTOR AND THE TESTING LABORATORY. SPECIAL INSPECTIONS CAN BE PROVIDED BY AN INDEPENDENT SPECIAL INSPECTOR WHO IS APPROVED BY THE BUILDING AUTHORITY OR THE ENGINEER OF RECORD. THE SPECIAL INSPECTION WORK DOES NOT INCLUDE THE TESTING LABORATORY SERVICES AS CALLED FOR ON THE DRAWINGS. ARRANGEMENTS FOR SPECIAL INSPECTIONS SHOULD BE MADE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER IF SPECIAL INSPECTIONS ARE REQUIRED ON THE APPROVED PERMIT DRAWINGS AND FOR NOTIFYING THE TESTING LABORATORY AND SPECIAL INSPECTOR IN A TIMELY MANNER BEFORE CONSTRUCTION OPERATIONS CONTINUE. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK REQUIRING INSPECTIONS WITHOUT THE TESTING LABORATORY'S OR SPECIAL INSPECTOR'S PRESENCE. THE STRUCTURAL ENGINEER WILL NOT PROVIDE A FINAL LETTER OF COMPLIANCE AFTER THE WORK IS COMPLETE UNLESS HE HAS REVIEWED ALL SPECIAL INSPECTIONS/TESTING LABORATORY TEST RESULTS.

CHAPTER 17 OF THE 2021 INTERNATIONAL BUILDING CODE, INCLUDING ANY LOCAL AMENDMENTS, REQUIRES SPECIAL INSPECTION ON THE FOLLOWING ITEMS:

SOILS (SECTION 1705.6)

CONCRETE CONSTRUCTION (SECTION 1705.3)

FABRICATED ITEMS (SECTION 1705.10)

SPECIAL INSPECTIONS FOR WIND RESISTANCE (SECTION 1705.11)

SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SECTION 1705.12)

TESTING FOR SEISMIC RESISTANCE (SECTION 1705.13)

SPECIAL INSPECTIONS FOR WINDSTORM CERTIFICATION PER TDI

SHOP DRAWINGS:

1. SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. THE STRUCTURAL DRAWINGS ARE NOT TO BE VIEWED AS DETAILED SHOP OR ERECTION DRAWINGS. VARIOUS DIMENSIONS REQUIRED FOR PROPER FIT-UP OF THE COMPONENTS OF THE STRUCTURE SHALL BE DETERMINED FROM THE INFORMATION THAT IS PROVIDED ELSEWHERE IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ESTABLISH, CALCULATE AND VERIFY THESE DIMENSIONS AS REQUIRED TO ACHIEVE PROPER FIT-UP OF MATERIALS AND TO ACHIEVE COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
2. THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHALL CERTIFY THE REVIEW BY A STAMP NOTING THAT THE SUBMITTAL HAS BEEN "APPROVED" AND WHICH BEARS THE SIGNATURE OF AN AUTHORIZED REPRESENTATIVE OF THE CONTRACTOR AND THE DATE. SUBMITTALS WHICH DO NOT REFLECT THE CONTRACTOR'S APPROVAL, SIGNATURE AND DATE; OR DO NOT APPEAR TO HAVE BEEN REVIEWED BY THE CONTRACTOR, WILL BE RETURNED WITHOUT REVIEW.
3. THE REVIEW OF SUBMITTALS BY THE ENGINEER IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION GIVEN IN THE STRUCTURAL CONTRACT DOCUMENTS. CORRECTIONS OR COMMENTS MADE ON SUBMITTALS DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS, GENERAL NOTES OR SPECIFICATIONS. APPROVAL OF A SPECIFIC ITEM SHALL NOT INCLUDE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOBSITE, INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESSES OR TO THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION, COORDINATION OF THE WORK WITH THAT OF ALL OTHER TRADES AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER.
4. SIGNED AND SEALED CALCULATIONS FOR A PARTICULAR SYSTEM SUBMITTED AS PART OF A SHOP DRAWING ARE REVIEWED FOR LOAD CRITERIA AND GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. CALCULATION REVIEW AND COMMENTS DO NOT INFER A DETAILED CHECK OF THE CALCULATIONS, NOR DO THEY RELIEVE THE SYSTEM ENGINEER OR THE CONTRACTOR OF RESPONSIBILITY.
5. THE USE OF REPRODUCTIONS OR ELECTRONIC FILES OF THE STRUCTURAL DRAWINGS FOR THE PREPARATION OF SHOP DRAWINGS IS NOT ACCEPTABLE WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD. ALTERATION OF A SEALED DOCUMENTS WITHOUT PROPER NOTIFICATION OF THE RESPONSIBLE ENGINEER IS AN OFFENSE OF THE ENGINEERING PRACTICE ACT.
   a. IF SUCH AUTHORIZATION IS OBTAINED, DO NOT SUBMIT SHOP DRAWINGS WITH THE CONTRACT DOCUMENT TITLE BLOCK AND/OR THE SEAL OF THE REGISTERED ENGINEER OF RECORD AFFIXED.
   b. COSTS FOR PREPARATION OF STRUCTURAL SHOP DRAWINGS SHALL BE INCLUDED IN THE BID PRICE ASSUMING THAT REPRODUCTIONS OR ELECTRONIC FILES OF THE STRUCTURAL DRAWINGS WILL NOT BE AVAILABLE.
6. OMISSION FROM THE SHOP DRAWINGS OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH THE OMITTED REQUIREMENTS, EVEN IF THE SHOP DRAWINGS HAVE BEEN REVIEWED AND RETURNED.
7. THE ARCHITECT/ENGINEER SHALL NOT BE RESPONSIBLE FOR DELAYS CAUSED BY REJECTION OF INADEQUATE OR INCORRECT SHOP DRAWINGS, AND THIS RESPONSIBILITY SHALL LIE SOLELY WITH THE CONTRACTOR.
8. SHOP DRAWINGS THAT ARE NOT SPECIFICALLY REQUIRED BY THE GENERAL NOTES OR SPECIFICATIONS WILL NOT BE REVIEWED OR RETURNED.
9. COMPLY WITH THE SUBMITTAL PROCEDURES ESTABLISHED IN OTHER PARTS OF THE CONTRACT DOCUMENTS. AS A MINIMUM, PREPARE AND SUBMIT A STRUCTURAL SUBMITTAL SCHEDULE IN CHRONOLOGICAL ORDER OF SUBMITTALS PRIOR TO THE BEGINNING OF THE STRUCTURAL SUBMITTAL PROCESS.

STRUCTURAL SHEET LIST

SHEET NUMBER	SHEET NAME
S-011	GENERAL NOTES
S-101	SITE PLAN & DETAILS
S-102	SITE DETAILS
S-300	GENERAL CONCRETE AND STL REINF NOTES AND TYP DETAILS

STRUCTURAL SUBMITTALS (NO LEEDS)

SPECIFICATION SECTION	ITEM	SUBMITTAL
03 30 00	CONCRETE MIX DESIGN	FOR APPROVAL
03 30 00	MATERIAL CERTIFICATES FOR CONCRETE RELATED PRODUCTS	FOR APPROVAL
03 30 00	PRODUCT DATA	FOR INFORMATION ONLY
03 30 00	QUALIFICATION DATA	FOR INFORMATION ONLY
03 30 00	MATERIAL TEST REPORTS	FOR INFORMATION ONLY
03 30 00	FLOOR SURFACE FLATNESS	FOR INFORMATION ONLY
03 30 00	FIELD QUALITY CONTROL REPORTS	FOR INFORMATION ONLY
03 30 00	MINUTES OF PRE-INSTALLATION CONFERENCE	
31 63 29	PIER REINFORCEMENT SHOP DRAWINGS	FOR APPROVAL
31 63 29	PIER CONCRETE MIX DESIGN	FOR APPROVAL
31 63 29	PIER DRILLING LOG	FOR INFORMATION ONLY

DELEGATED STRUCTURAL DESIGN OF COMPONENTS:

1. A STRUCTURAL COMPONENT IS AN INDIVIDUAL STRUCTURAL MEMBER DESIGNED TO BE PART OF A STRUCTURAL SYSTEM. A LIST OF STRUCTURAL COMPONENTS THAT ARE TO BE DESIGNED BY THE COMPONENT SUPPLIERS ENGINEERS IS PROVIDED IN THESE PLANS AND SPECIFICATIONS.
2. A COMPONENTS DELEGATED ENGINEER AND RESPONSIBLE CHARGE, SHALL BE A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
3. ALL DRAWINGS AND CALCULATIONS FOR COMPONENTS IN QUESTION, OR THEIR ASSEMBLY INTO STRUCTURAL SYSTEMS SHALL REQUIRE THE SEAL AND SIGNATURE OF THE DELEGATED ENGINEER WHO PREPARED THEM.
4. THE DESIGN OF PRE-ENGINEERED SYSTEMS SPECIFIED IN THE CONTRACT DOCUMENTS WHICH ARE DESIGNED/ENGINEERED BY THE SYSTEM SUPPLIER IS THE SOLE RESPONSIBILITY OF THE SUPPLIER AND ITS DESIGN ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. SUBMITTALS OF SUCH SYSTEMS TO THE STRUCTURAL ENGINEER OF RECORD SHALL BE REVIEWED FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS WITH REGARD TO THE ARRANGEMENT AND/OR SIZES OF MEMBERS SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS AND THE SUPPLIERS INTERPRETATION OF THE DESIGN INFORMATION INCLUDED IN THE CONTRACT DOCUMENTS. SUCH REVIEW BY THE STRUCTURAL ENGINEER OF RECORD SHALL NOT IMPLY ANY RESPONSIBILITY FOR THE ACTUAL DESIGN OF SUCH SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONAL ACCURACY AND CONFORMANCE WITH THE INFORMATION CONTAINED IN CONTRACT DOCUMENTS.
5. SEE APPLICABLE SECTIONS OF GENERAL NOTES AND SPECIFICATIONS FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND ITS LICENSED ENGINEER.

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WEBSTER, TX 77598

ISSUE FOR PROPOSAL

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
JOHN R. KUBALA
106120
LICENSED PROFESSIONAL ENGINEER
03/05/2026

Kubala Engineers
F-29612

CLIENT
CLEAR CREEK ISD

DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: Checker
DRAWN BY: Author

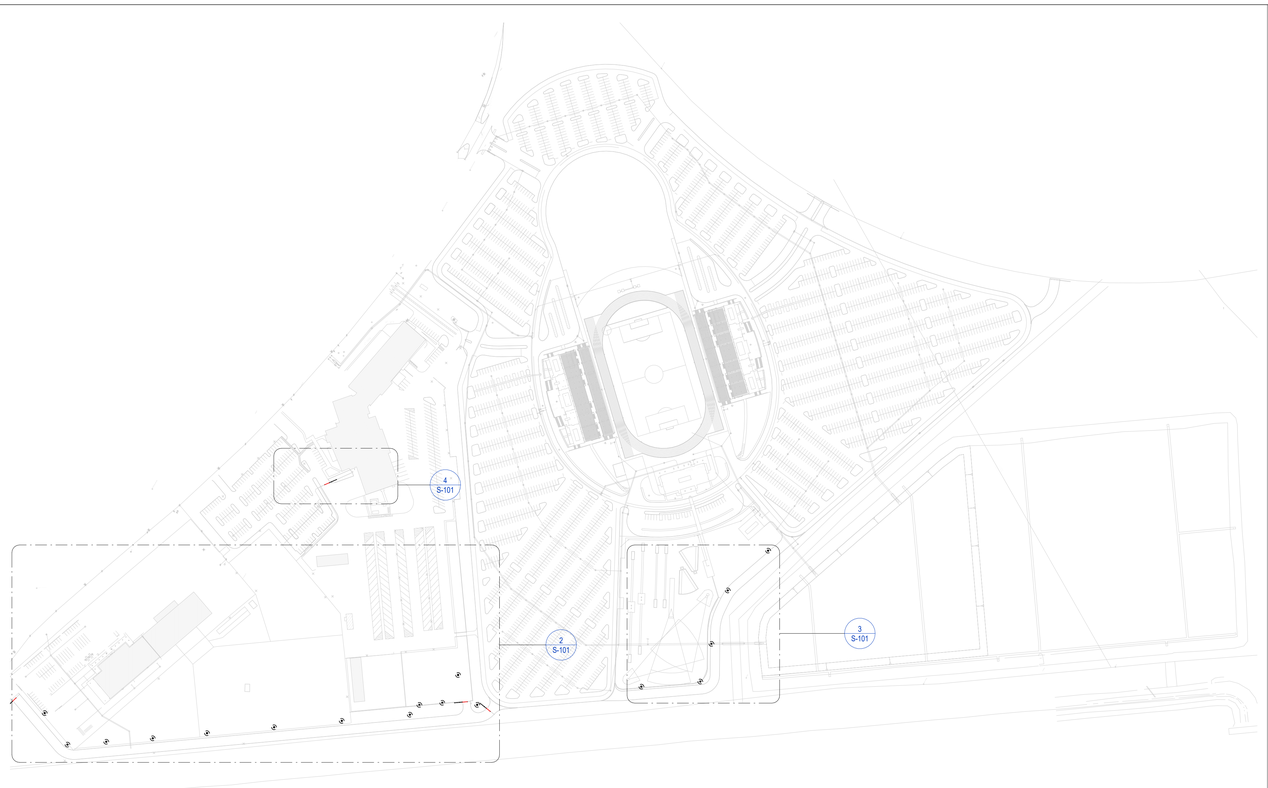
GENERAL NOTES

S-011

Plot Stamp:
3/4/2026 2:02:47 PM

SITE PLAN & DETAILS
S-101
FOR BLUEBEAM LABELING/OCR:

0"
1"



1 SITE PLAN COMPOSITE
1" = 200'-0"

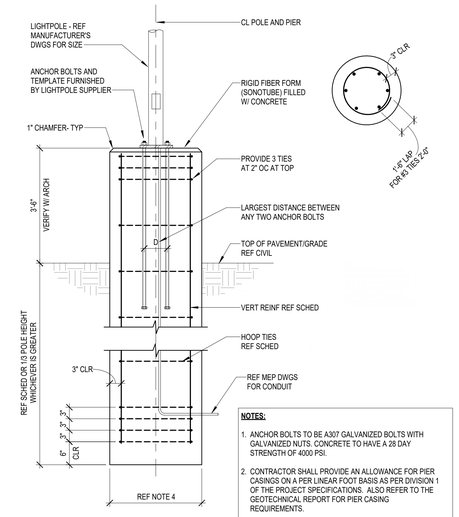
DRILLED PIERS:

1. PIER DESIGN IS BASED UPON THE FOLLOWING CRITERIA. REFER TO LIGHTPOLE PIER DETAIL FOR PIER SCHEDULE AND REINFORCING.
   - A. ALLOWABLE END BEARING PRESSURE..... 1000 PSF
   - B. SIDE FRICTION RESISTANCE..... 300 PSF
   - C. SIDE FRICTION (UPLIFT RESISTANCE)..... 200 PSF
   - D. UPLIFT PRESSURE (FROM SOIL)..... N/A
   - E. MINIMUM PENETRATION INTO BEARING STRATUM..... SEE SCHEDULE
   - F. BEARING STRATUM..... CLAY
2. UNLESS NOTED OTHERWISE BY THE OWNER OR ARCHITECT, THE GENERAL CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR DURING EARTHWORK OPERATIONS, AND KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT ON SITE DURING OPERATIONS. SERVICES PROVIDED SHALL INCLUDE:
   - A. OBSERVING THE BOTTOM OF SHAFT FOR CLEANLINESS.
   - B. PROPER BEARING MATERIAL SHALL BE VERIFIED BEFORE CONCRETE POURING OCCURS. THE TOP ELEVATION OF PIERS IS SHOWN ON THE DRAWINGS. THE ACTUAL BEARING ELEVATION MAY VARY AS REQUIRED TO PROVIDE PROPER CAPACITY AS DETERMINED BY THE GEOTECHNICAL ENGINEER OF RECORD.
   - C. CHECKING SHAFT FOR CONFORMANCE TO REQUIRED TOLERANCES. FOOTINGS SHALL BE WITHIN 3" OF THEIR REQUIRED LOCATIONS AND SHAFTS SHALL NOT BE OUT OF PLUMB BY MORE THAN 2 PERCENT OF THE SHAFT LENGTH. CHECK THAT THE BELL IS CONCENTRIC WITH THE SHAFT.
3. ESTABLISH TOP OF FOOTINGS/PIERS AT ELEVATIONS SHOWN ON PLANS. IF FIELD CONDITIONS REQUIRE CHANGES TO REACH THE DESIRED STRATUM, ADJUSTMENTS TO CONTRACT ARE TO BE MADE ON A UNIT PRICE BASIS. CONTRACTOR SHALL PROVIDE UNIT PRICE ADD AND DEDUCT FOR EACH PIER SIZE ON THE PROJECT.
4. PIER CONSTRUCTION AND CONCRETING SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND AS PER THE LATEST VERSION OF ACI 336. DRILLED HOLES ARE TO BE EXCAVATED, CLEANED, REINFORCED, AND FILLED WITH CONCRETE DURING THE SAME DAY. NO HOLE IS TO BE LEFT OPEN OVERNIGHT. PUMP ANY ACCUMULATED WATER FROM THE PIER HOLES PRIOR TO CONCRETE PLACEMENT. REFER TO THE GEOTECHNICAL REPORT FOR CASING REQUIREMENTS.
5. REINFORCING CAGE SHALL BE HELD SECURELY AWAY FROM EARTH AT SIDES AND BOTTOM BY SETS OF 3 OR MORE SPACERS AT A MAXIMUM SPACING OF 5 FEET ALONG THE LENGTH OF THE CAGE AND 1 FOOT FROM THE BOTTOM.
6. THE CONTRACTOR SHALL VERIFY DEPTHS OF PIERS BEFORE PIER STEEL IS CUT. PIER STEEL MAY BE DELIVERED TO THE JOBSITE IN STANDARD LENGTHS OF 40 OR 60 FEET AND CUT AS REQUIRED. PROVIDE 64 BAR DIAMETER LAPS IN ALL VERTICAL PIER REINFORCING.
7. WHERE THE CLEAR DISTANCE BETWEEN TWO PIERS IS LESS THAN THE PIER DIAMETER OF THE LARGER PIER, WAIT AT LEAST 48 HOURS AFTER CASTING THE FIRST PIER BEFORE DRILLING THE SECOND PIER.
8. CONTRACTOR SHALL PROVIDE IN HIS BID A UNIT PRICE ADD AND UNIT PRICE DEDUCT FOR EACH PIER SIZE UTILIZED ON THE PROJECT.
9. THE PRICE FOR CASING OF PIERS SHALL BE INCLUDED WITHIN THE BASE BID FOR ALL STRAIGHT SHAFT PIERS ON THE PROJECT. CONTRACTOR SHALL PROVIDE AN ALLOWANCE FOR 100% CASING OF DRILLED PIERS. CONTRACTOR SHALL ALSO PROVIDE UNIT PRICE FOR EACH SIZE OF CASING UTILIZED ON THE PROJECT. PAYMENT FOR CASING SHALL BE BASED UPON NET LENGTH OF CASING UTILIZED MULTIPLIED BY THE UNIT PRICE.

LIGHT POLE BASE SCHEDULE

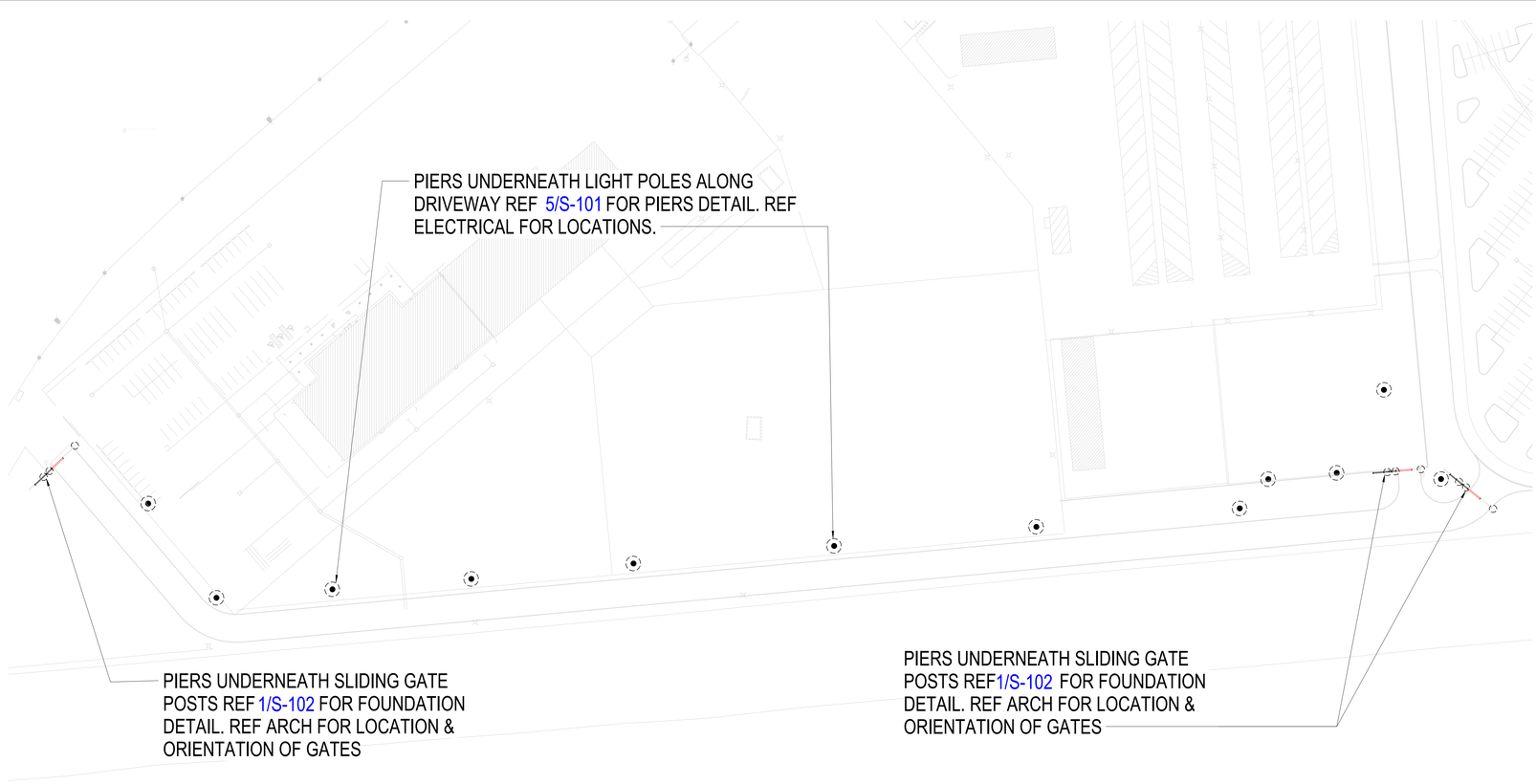
MAX POLE HT	MIN PIER DIAMETER	MIN DEPTH	VERT REINF	HOOP TIES	NOTES
18'-0" TO 24'-0"	18"	12'-0"	(6) #6	#3 AT 12" OC	1,2
25'-0" TO 30'-0"	24"	12'-0"	(6) #6	#3 AT 12" OC	1,2

NOTE(S):
1. CONTRACTOR SHALL PROVIDE AN ALLOWANCE FOR PIER CASINGS ON A PER LINEAR FOOT BASIS AS PER DIVISION 1 OF THE PROJECT SPECIFICATIONS. ALSO REFER TO THE GEOTECHNICAL REPORT FOR PIER CASING REQUIREMENTS.
2. SPLICE VERTICAL REINFORCING IN PIERS WITH CLASS B TENSION LAP SPLICE.
3. OPTIONAL CONSTRUCTION JOINT IS ACCEPTABLE. DO NOT SPLICE VERTICAL REINFORCING ABOVE JOINT.
4. FOUNDATION DETAIL IS BASED ON A MAXIMUM FIXTURE EPA OF 1.2

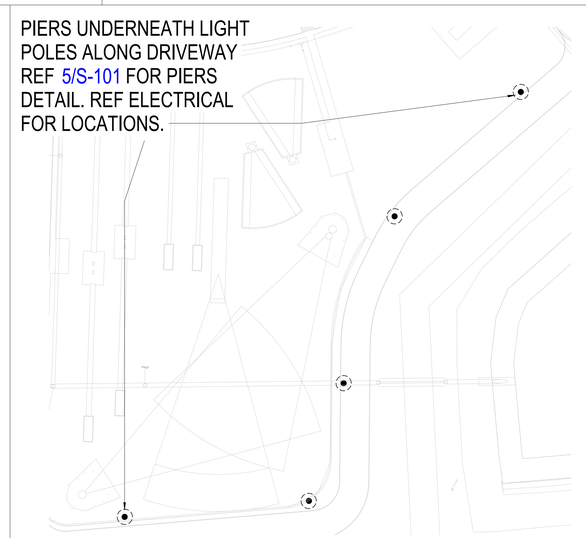


NOTES:
1. ANCHOR BOLTS TO BE A307 GALVANIZED BOLTS WITH GALVANIZED NUTS. CONCRETE TO HAVE A 28 DAY STRENGTH OF 4000 PSI.
2. CONTRACTOR SHALL PROVIDE AN ALLOWANCE FOR PIER CASINGS ON A PER LINEAR FOOT BASIS AS PER DIVISION 1 OF THE PROJECT SPECIFICATIONS. ALSO REFER TO THE GEOTECHNICAL REPORT FOR PIER CASING REQUIREMENTS.
3. REF MEP DRAWINGS FOR EMBEDDED CONDUIT, WIRES, ETC.
4. MIN PIER DIAMETER SHALL BE THE GREATER OF D PLUS 9" OR THE MIN PIER DIAMETER IN THE SCHEDULE.

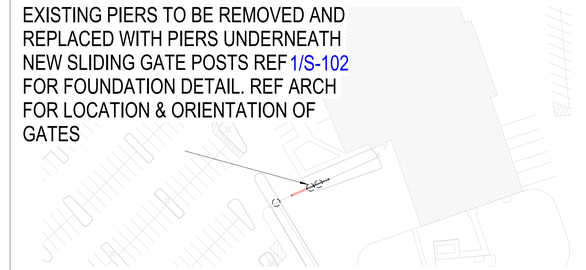
5 LIGHTPOLE PIER DETAIL
NO SCALE



2 PARTIAL SITE PLAN
1/64" = 1'-0"



3 PARTIAL SITE PLAN
1/64" = 1'-0"



4 PARTIAL SITE PLAN
1/64" = 1'-0"

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ISSUE FOR PROPOSAL

CLEAR CREEK INDEPENDENT SCHOOL DISTRICT

STATE OF TEXAS
JOHN R. KUBALA
106120
REGISTERED
PROFESSIONAL
ENGINEER
03/05/2026
Kubala Engineers
F-23612

CLIENT
CLEAR CREEK ISD

DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

CHECKED BY: Checker
DRAWN BY: Author

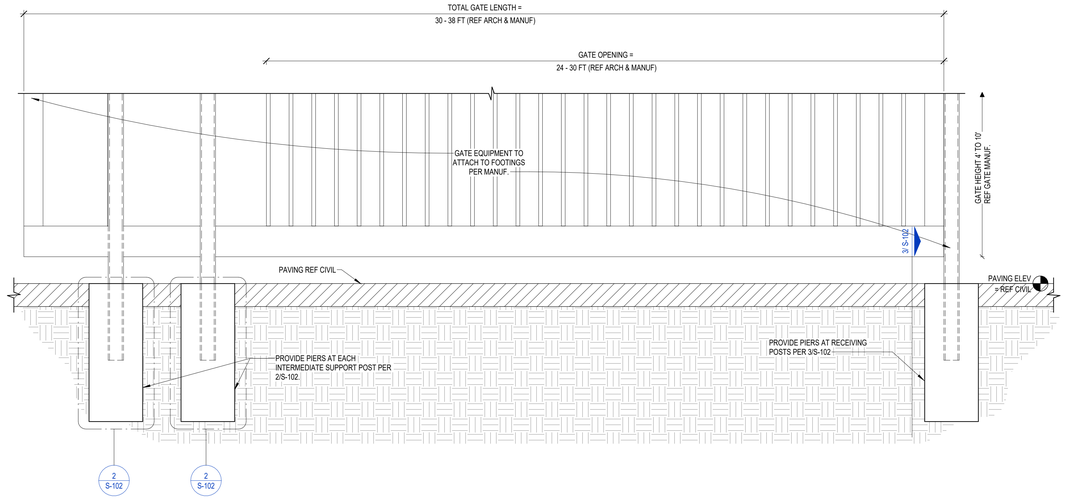
SITE PLAN & DETAILS

S-101

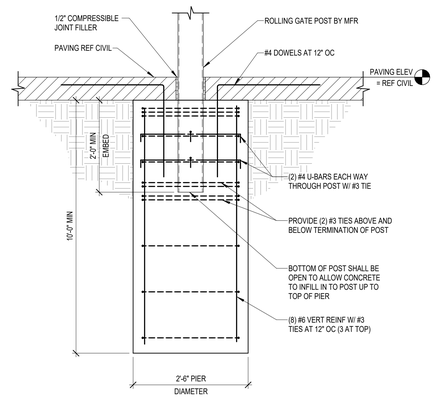
Plot Stamp:
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SITE DETAILS
S-102
FOR BLUEBEAM LABELING/DOOR:

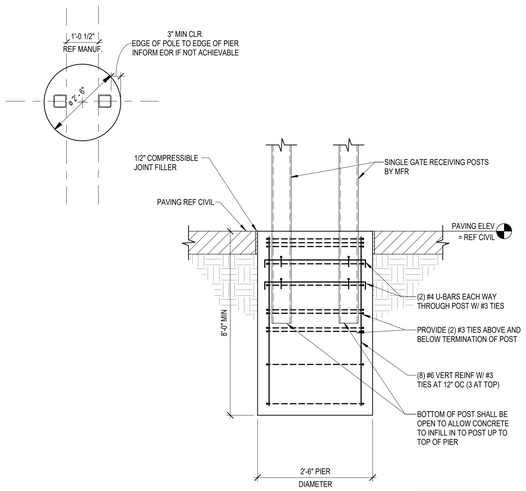
0"
1"



1 CANTILEVER GATE FOUNDATION ELEVATION
3/4" = 1'-0"



2 CANTILEVER ROLLING GATE FOUNDATION
NO SCALE



3 ORNAMENTAL SINGLE GATE FOUNDATION
NO SCALE

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STATE OF TEXAS
JOHN R. KUBALA
106120
LICENSED PROFESSIONAL ENGINEER
03/05/2026
Kubala Engineers
F-23612

CLIENT	
CLEAR CREEK ISD	
DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

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DRAWN BY: Author

SITE DETAILS

S-102

Plot Stamp:
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0"

1"

GENERAL CONCRETE AND STL REINF NOTES AND TYP DETAILS

S-300

FOR BLUEBEAM LABELING/OCR:

CONCRETE MIX:

1. CONCRETE SPECIFICATIONS SHALL BE AS FOLLOWS:

USAGE	CONCRETE MIX DESIGN SCHEDULE									
	28 DAY STRENGTH (PSI)				MAX AGGREGATE SIZE (IN)	SLUMP (IN)	MAX W/C RATIO	MAX CURE DENSITY (PCF)	CEMENT TYPE	MAX ALLOWABLE % FLY ASH (REF CM5)	% AIR ENTRAINMENT
	3000	3500	4000	5000							
1. PIERS			•		1 1/2	6-8	0.55	150	I / II	40	-

2. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, OF TYPES NOTED IN SCHEDULE. NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C33. LIGHT WEIGHT AGGREGATE SHALL CONFORM TO ASTM C330. ALL AGGREGATE SHALL BE FROM A SINGLE SOURCE.
3. FLY ASH WILL NOT BE PERMITTED IN ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH MAY BE USED ELSEWHERE, WITHIN THE SPECIFIED PROPORTION LIMITS, BUT THE CONTRACTOR SHALL FIRST VERIFY COMPATIBILITY WITH CURING COMPOUNDS, SEALERS, BOND BREAKER, FLOORING ADHESIVES AND OTHER MATERIALS PROPOSED TO BE IN CONTACT WITH THE CONCRETE.
4. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW A MINIMUM OF 7 DAYS PRIOR TO THE START OF THE WORK FOR ENGINEER AND OWNERS TESTING LABORATORY APPROVAL, PRIOR TO THE PLACEMENT OF CONCRETE. MIX DESIGNS MUST INDICATE CONFORMANCE WITH ACI 301 SPECIFICATION, SECTION 4.2.3.
5. AT THE POINT OF DISCHARGE SLUMP TESTS, CONFORMING TO ASTM C143, SHALL BE TAKEN. SEE CONCRETE NOTE NO. 5 BELOW FOR RATE OF TESTS.
6. AIR CONTENT TESTS CONFORMING TO ASTM C173 (VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE) SHALL BE TAKEN FOR EACH DAY'S POUR FOR ALL TYPES OF AIR-ENTRAINED CONCRETE BEING USED.
7. CONCRETE TEMPERATURE SHALL BE TESTED HOURLY WHEN THE AIR TEMPERATURE IS 40 DEG F AND BELOW, 80 DEG F AND ABOVE AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS ARE MADE.
8. ONE SET OF FOUR COMPRESSION TEST SPECIMENS CONFORMING TO ASTM C31 SHALL BE MOLDED AND STORED FOR LABORATORY-CURED SPECIMENS. COMPRESSIVE STRENGTH TESTS SHALL CONFORM TO ASTM C39 AND SHALL CONSIST OF ONE SET FOR EACH DAY'S POUR EXCEEDING 5 CU. YDS. PLUS ADDITIONAL SETS FOR EACH 50 CU. YDS. MORE THAN THE FIRST 25 CU. YDS OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, TWO SPECIMENS SHALL BE TESTED AT 28 DAYS, AND ONE SPECIMEN SHALL BE RETAINED FOR LATER TESTING AS REQUIRED.
9. VERIFY THAT POST INSTALLED ANCHORS ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

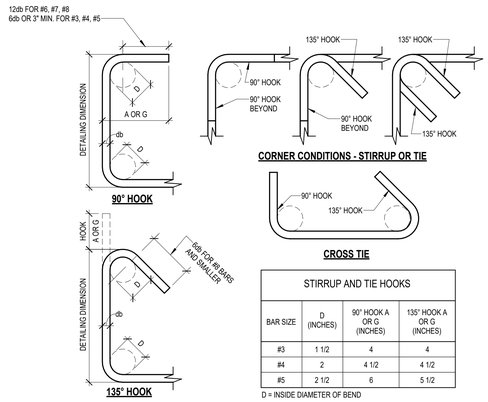
CAST-IN-PLACE CONCRETE:

1. CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE LATE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.
2. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE; ACI 301 AND ACI 318, LATEST EDITIONS.
3. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE SHOWN ON THE DETAILS. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.
4. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE; ACI 301 AND ACI 318, LATEST EDITIONS.
5. ALL BASE PLATES AND ANCHOR BOLTS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR BOLTS SHALL BE FABRICATED FROM FULL BODIED ASTM F1554, GRADE 36 LOW CARBON STEEL RODS HAVING THE SAME DIAMETER AS THE BOLT DIAMETER AND USING CUT THREADS. ROLLED THREADS ARE NOT ACCEPTABLE. BOLTS SHALL BE SET USING RIGID TEMPLATES.
6. AT HORIZONTAL CONCRETE FRAMING, FORMS SHALL NOT BE REMOVED UNTIL THE CONCRETE HAS REACHED 70 PERCENT OF THE 28-DAY COMPRESSIVE STRENGTH INDICATED. FLOOR SLABS AND BEAMS SHALL REMAIN SHORED UNTIL THE UPPER MOST LEVEL OF CONCRETE HAS REACHED 70 PERCENT OF THE 28-DAY COMPRESSIVE STRENGTH. FOR BUILDINGS WITH MORE THAN THREE STORIES IN HEIGHT, SHORING SHALL BE MAINTAINED FOR THREE LEVELS BELOW, UNTIL THE UPPER MOST LEVEL HAS REACHED 70 PERCENT OF THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH.
7. ALL CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL COMPLY WITH ALL PROVISIONS SPECIFIED IN ACI 318,SECTION 26.8, WITH THE FOLLOWING SPECIFIC REQUIREMENTS:
   A. THE MAXIMUM OUTSIDE DIAMETER OF THE CONDUITS AND PIPES SHALL BE 1 1/2". NONE PERMITTED IN SLABS THINNER THAN 4 1/2".
   B. THE MINIMUM CLEAR DISTANCE BETWEEN CONDUITS AND PIPES SHALL BE 6".
   C. NONE PERMITTED IN SLABS-ON-GRADE WHICH WILL BE PERMANENTLY EXPOSED OR SCHEDULED TO RECEIVE THIN SET TILE. PLACE ALL PIPES AND CONDUITS IN THE FILL BENEATH THE VAPOR BARRIER. RE-COMPACT AS SPECIFIED.
   D. IN NON-EXPOSED SLABS-ON-GRADE, LIMIT SIZE TO 1" O.D. IN 5" SLAB SPACE 12" APART AND TIE TO UNDERSIDE OF REINFORCING MAT. WHERE LINES CONVERGE AT SOURCE, DOUBLE UP THE SLAB REINFORCING IN THE CONVERGENCE ZONE AND 3'-0" BEYOND. PLACE ALL LARGER LINES IN THE FILL BENEATH THE VAPOR BARRIER.
   E. NONE PERMITTED IN COLUMNS WITHOUT PRIOR APPROVAL.
   F. DO NOT DISPLACE REINFORCING STEEL FROM ITS PROPER POSITION.
11. SET FORMS TO FOLLOW SLOPES AND GRADES DEFINED ON PLAN, KEEPING MEMBER DEPTHS CONSTANT AT DEPTHS DETAILED OR SCHEDULED, UNLESS NOTED OTHERWISE. SLOPE UNIFORMLY BETWEEN ELEVATIONS GIVEN. BUILD IN CAMBER WHERE SPECIFIED.

CONCRETE REINFORCEMENT:

1. REINFORCING STEEL SHALL CONFORM TO ASTM615. BARS SHALL BE NEW OR RECYCLED DOMESTIC BILLET STEEL OF A DOMESTIC MANUFACTURE. REINFORCING BARS SIZE #3 THROUGH #10 SHALL BE GRADE 60. REINFORCING BARS SIZE #11 THROUGH #18 SHALL BE GRADE 75.
2. DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A496, GRADE 70.
4. CONCRETE COVERAGE AROUND REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 SECTION 20.6, LATEST EDITION, AND MEET REQUIREMENTS BELOW. THE REINFORCING STEEL DETAILER SHALL ADJUST REINFORCING STEEL CAGE SIZES AT INTERSECTING REINFORCING MEMBERS AS REQUIRED TO ALLOW CLEARANCE FOR INTERSECTING BARS.

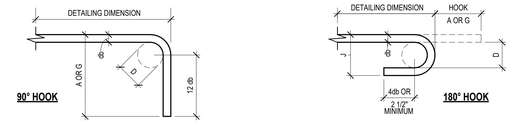
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5. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ACI 315, LATEST EDITION. ALL HOOKED BARS SHOWN SHALL HAVE STANDARD HOOKS, U.N.O.
6. REINFORCING SHALL NOT BE WELDED WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER.
8. WHERE BAR TYPES FROM THE BAR BENDING DIAGRAM ARE SPECIFIED, PROVIDE BARS ACCORDINGLY.



STIRRUP AND TIE HOOKS			
BAR SIZE	D (INCHES)	90° HOOK A OR G (INCHES)	135° HOOK A OR G (INCHES)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2

D = INSIDE DIAMETER OF BEND

1 TYPICAL STIRRUP AND TIE HOOK TYPES
NO SCALE



END HOOK DIMENSIONS				
BAR SIZE	FINISHED BEND DIAMETER D, (INCHES)	180° HOOKS		90° HOOK
		A OR G, (INCHES)	J, (INCHES)	A OR G, (INCHES)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	28 1/2	41

D = INSIDE DIAMETER OF BEND

2 TYPICAL END HOOK TYPE
NO SCALE

DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION GRADE 60 REINFORCEMENT, NORMALWEIGHT CONCRETE							
BAR SIZE	f'c=3000 PSI		f'c=4000 PSI		f'c=5000 PSI		BAR SIZE
	Lhb	0.7 Lhb	Lhb	0.7 Lhb	Lhb	0.7 Lhb	
#3	9	7	8	6	7	6	#3
#4	11	8	10	7	9	7	#4
#5	14	10	12	9	11	8	#5
#6	17	12	15	11	13	10	#6
#7	20	14	17	12	15	11	#7
#8	22	16	19	14	17	12	#8
#9	25	18	22	16	20	14	#9
#10	28	20	25	18	22	16	#10
#11	31	22	27	19	24	17	#11
#14	38	-	33	-	29	-	#14
#18	50	-	43	-	39	-	#18



NOTES:

1. Ldh = DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION (INCHES).
2. Ldh = Lhb UNLESS CONDITIONS OF NOTE 3 ARE SATISFIED.
3. Ldh = 0.7Lhb FOR #11 BARS AND SMALLER WHEN SIDE COVER (NORMAL TO PLANE OF HOOK) IS NOT LESS THAN 2 1/2 INCHES AND FOR 90° HOOKS COVER ON BAR EXTENSION BEYOND HOOK IS NOT LESS THAN 2 INCHES.
4. HOOKS ARE NOT CONSIDERED EFFECTIVE FOR DEVELOPING BARS IN COMPRESSION.
5. Ldh SHALL BE MULTIPLIED BY 1.2 FOR EPOXY-COATED HOOKED REINFORCING BARS.

3 TYPICAL DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION
NO SCALE

TENSION DEVELOPMENT AND LAP SPLICE LENGTHS (CLASS B) GRADE 60 REINFORCEMENT NORMAL WEIGHT CONCRETE						
BAR SIZE	f'c=3000 PSI		f'c=4000 PSI		f'c=5000 PSI	
	TYP. BARS	OTHER BARS	TYP. BARS	OTHER BARS	TYP. BARS	OTHER BARS
#3	28"	22"	24"	19"	22"	17"
#4	37"	29"	32"	25"	29"	22"
#5	47"	36"	40"	31"	36"	28"
#6	56"	43"	48"	37"	43"	33"
#7	81"	63"	70"	54"	63"	49"
#8	93"	72"	80"	62"	72"	55"
#9	105"	81"	91"	70"	81"	63"
#10	118"	91"	102"	79"	91"	70"
#11	131"	101"	113"	87"	101"	78"

NOTES:

1. THE CLASS B TENSION LAP SPLICE SCHEDULE SHOWN IS FOR NORMAL WEIGHT CONCRETE AND GRADE 60 NON-EPOXY-COATED REINFORCING.
2. TYPICAL BARS ARE FOR BEAM TOP AND INTERMEDIATE BARS, WALL TOP AND HORIZONTAL BARS, AND SLAB/FOOTING TOP BARS FOR SLAB/FOOTING THICKNESS GREATER THAN 13". OTHER BARS ARE FOR ANY BAR THAT DOES NOT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR. ALL TYPICAL BARS SHALL HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
3. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS OF TYPICAL BARS BY 1.3 AND THE TABULATED SPLICE LENGTHS OF OTHER BARS BY 1.5.
4. FOR LIGHTWEIGHT CONCRETE, MULTIPLY THE TABULATED SPLICE LENGTHS BY 1.33.
5. FOR GRADE 75 BARS, MULTIPLY THE TABULATED SPLICE LENGTHS BY 1.25.
6. FOR #7 TO #11 SLAB OR WALL REINFORCING WITH CLEAR COVER LESS THAN 1 BAR DIAMETER, MULTIPLY THE TABULATED SPLICE LENGTHS BY 1.5.
7. SPLICE LENGTH FOR BARS OF DIFFERENT SIZE SHALL BE THE GREATER OF SPLICE LENGTH*1.3 OF THE LARGER BAR AND SPLICE LENGTH OF THE SMALLER BAR.
8. FOR CONCRETE STRENGTH IN BETWEEN THOSE SHOWN IN THE SCHEDULE, USE SPLICE LENGTHS OF THE LOWER CONCRETE STRENGTH.
9. THE SCHEDULED LAP SPLICE LENGTH WITH THE APPLICABLE MODIFICATION FACTORS SHALL NOT BE LESS THAN 12".

4 TYPICAL DEVELOPMENT AND LAP SPLICE LENGTHS
NO SCALE

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STATE OF TEXAS
JOHN R. KUBALA
106120
LICENSED PROFESSIONAL ENGINEER
03/05/2026

Kubala Engineers
F-23612

CLIENT
CLEAR CREEK ISD

DATE	PROJECT NUMBER
03/05/2026	250236

DRAWING HISTORY

No.	Description	Date

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GENERAL CONCRETE AND STL REINF NOTES AND TYP DETAILS

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