

HESS - ROUNTREE, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
9831 SOUTH 51ST STREET, SUITE C110
PHOENIX, ARIZONA 85044 (480)496-0244

DES. DRO	DRN. ANM	CKD. DRO	JOB NO. 2309-04
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GRADING AND DRAINAGE
CONSTRUCTION NOTES:

1. INSTALL CONCRETE SIDEWALK (CITY OF PHOENIX STANDARD DETAIL NO. P1230). SEE ARCHITECTURAL DRAWINGS FOR SCORING AND FINISH.
2. INSTALL CONCRETE VERICAL CURB AND GUTTER (MAG STANDARD DETAIL NO. 220-1, TYPE A).
3. INSTALL CONCRETE SINGLE CURB (MAG STANDARD DETAIL NO. 222, TYPE 'A').
4. INSTALL ASPHALTIC CONCRETE PAVEMENT (2" A.C. (1/2 INCH) OVER 6" A.B.C. OVER COMPACTED SUBGRADE). TYPICAL FOR AUTO PARKING AND DRIVES.
5. INSTALL ASPHALTIC CONCRETE PAVEMENT (3" A.C. (1/2 INCH) OVER 8" A.B.C. OVER COMPACTED SUBGRADE). TYPICAL FOR BUS/TRUCK PARKING AND FIRE LANES.
6. INSTALL TWO 6" STEPS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
7. CONSTRUCT SIDEWALK RAMP, TYPE PER PLAN (SEE DETAIL ON SHEET C-2).
8. INSTALL 8" THICK CONCRETE PAVEMENT (4,000 P.S.I. CONCRETE OVER COMPACTED SUBGRADE).
9. MATCH EXISTING ELEVATION AND LOCATION.
10. PAINT STRIPE PARKING LOT TO THE ALIGNMENTS INDICATED.
11. CONSTRUCT LANDSCAPE CURB (SEE DETAIL ON SHEET C-2)
12. INSTALL 30" HIGH CHAIN LINK FENCE BACKSTOP BETWEEN THE LIMITS SHOWN (SEE DETAIL ON SHEET C-2).
13. INSTALL NEW DUGOUT (SEE DETAIL ON SHEET C-2).
14. INSTALL TWO 10' LONG PATTERSON-WILLIAMS ALUMINUM BENCHES (SEE PATTERSON WILLIAMS PRODUCT MODEL NO. 1103-15G).
15. INSTALL HOME PLATE, BASE OR PITCHING RUBBER (SEE DETAIL ON SHEET C-2).
16. INSTALL 4" THICK STABILIZED INFIELD MIX OR APPROVED EQUAL.
17. CONSTRUCT CURB TERMINATION (MAG STANDARD DETAIL NO. 222).
18. BLACKOUT EXISTING STRIPING.
19. CONSTRUCT CONCRETE SPLASHPAD (SEE DETAIL ON SHEET C-2).
20. CONSTRUCT CONCRETE RIBBON CURB (MAG STANDARD DETAIL NO. 220-1, TYPE B).
21. CONSTRUCT THICKENED PAVEMENT EDGE (MAG STANDARD DETAIL NO. 201, TYPE 'B').
22. CONSTRUCT CONCRETE VALLEY GUTTER (MAG STANDARD DETAIL NO. 240, MODIFIED TO BE 3' WIDE).

STORM DRAIN CONSTRUCTION NOTES:

- 1 INSTALL NEW CATCH BASIN (MAG STANDARD DETAIL NO. 537, SINGLE).
- 2 INSTALL NEW 18" H.D.P.E. STORM DRAIN PIPE WITH SMOOTH INTERIOR AND 10.8 P.S.I. JOINTS.
- 3 INSTALL NEW 6" H.D.P.E. STORM DRAIN PIPE WITH SMOOTH INTERIOR AND 10.8 P.S.I. JOINTS.
- 4 CONSTRUCT DUAL CHAMBER DRYWELL (SEE DETAIL ON SHEET C-2).
- 5 CORE DRILL AND CONNECT NEW 6" H.D.P.E. PIPE TO EXISTING CATCH BASIN USING NON-SHRINKING MORTAR TO PROVIDE A WATERTIGHT CONNECTION. RAISE EXISTING CATCH BASIN RIM TO NEW FINISH GRADE.
- 6 RAISE EXISTING CATCH BASIN RIM TO FINISH GRADE PER MAG SPECIFICATIONS.

FENCING CONSTRUCTION NOTES:

- ① INSTALL 6' HIGH BY 30' WIDE WROUGHT IRON SWING GATE. (SEE DETAIL ON SHEET C-2).
- ② INSTALL 4' WIDE BY 6' HIGH WROUGHT IRON FENCE GATE. (SEE DETAIL ON SHEET C-2).
- ③ INSTALL 6' HIGH WROUGHT IRON FENCE (SEE DETAIL ON SHEET C-2).
- ④ INSTALL 6' HIGH 20' WIDE WROUGHT IRON FENCE (SEE DETAIL ON SHEET C-2).
- ⑤ INSTALL 30' WIDE AUTOMATIC WROUGHT IRON FENCE ROLL GATE (SEE DETAIL ON SHEET C-2).

GRADING AND DRAINAGE PLAN

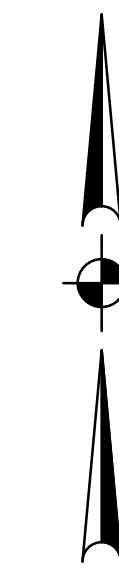
UNION ELEMENTARY DISTRICT NO. 62

**BUILDING ADDITION, PARKING MODIFICATIONS
AND FIELD RENOVATIONS AT UNION ELEMENTARY SCHOOL**

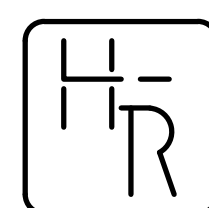
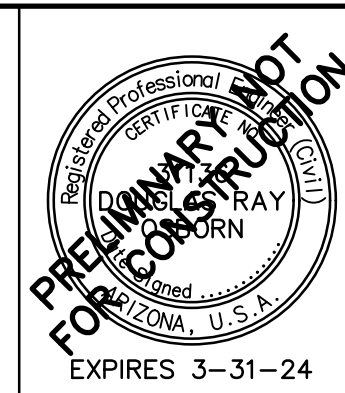
DRAWING STATUS	SHEET	OF	C-9
DD SUBMITTAL SET			
	9	24	
DATE: 01-18-24			

DATE: 01-18-24

0 4 8 20
2 6 10 40
SCALE: 1"=20'



2.30904GR2 DWG



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6. RAISE EXISTING CATCH BASIN RIM TO FINISH GRADE PER MAG SPECIFICATIONS.

FENCING CONSTRUCTION NOTES:

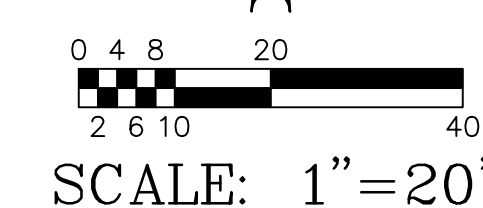
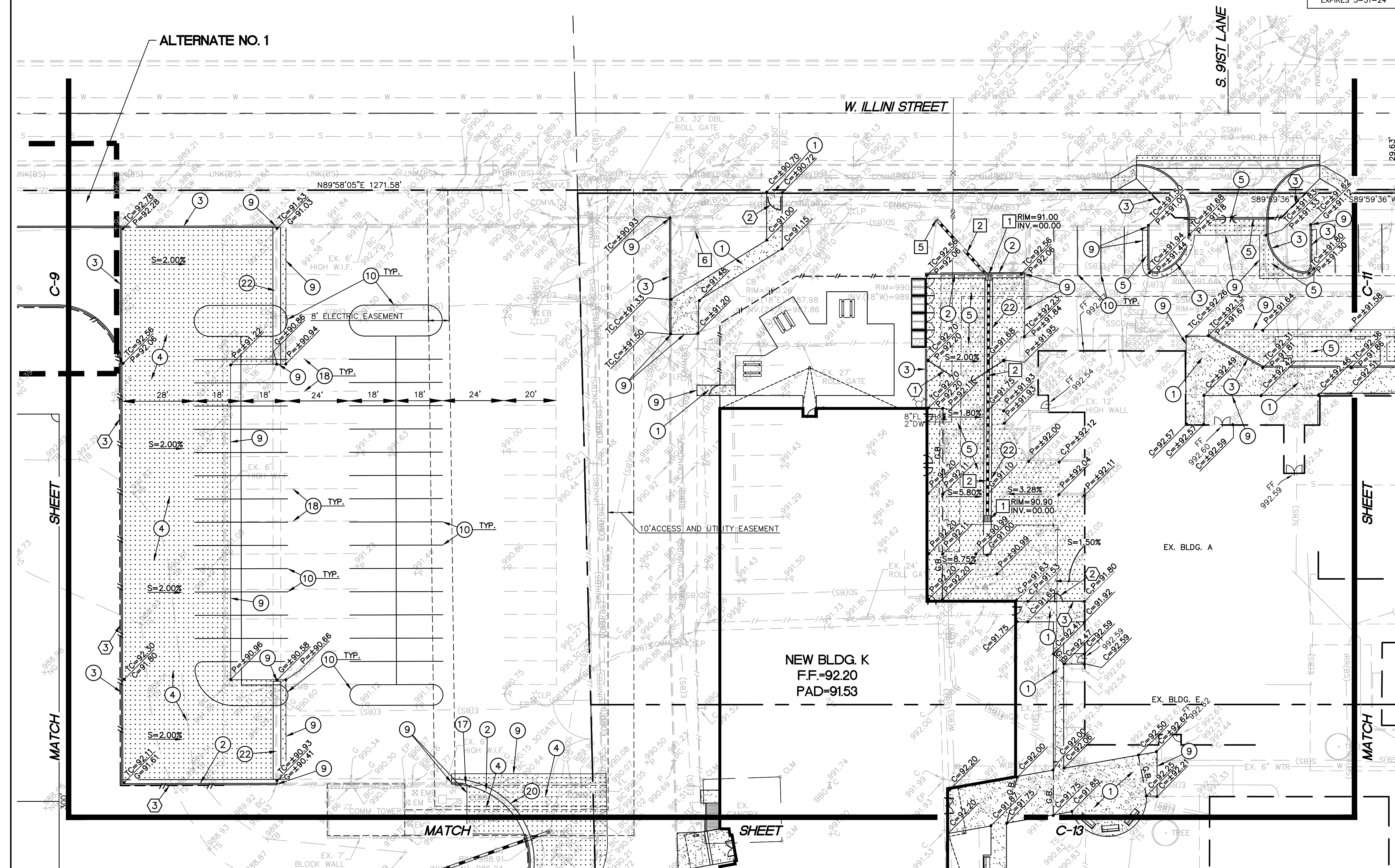
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GRADING AND DRAINAGE PLAN

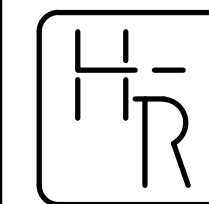
UNION ELEMENTARY DISTRICT NO. 62

BUILDING ADDITION, PARKING MODIFICATIONS AND FIELD RENOVATIONS AT UNION ELEMENTARY SCHOOL

DRAWING STATUS	SHEET	OF	
DD SUBMITTAL SET			
	10	24	C-10
DATE:	01-18-24		



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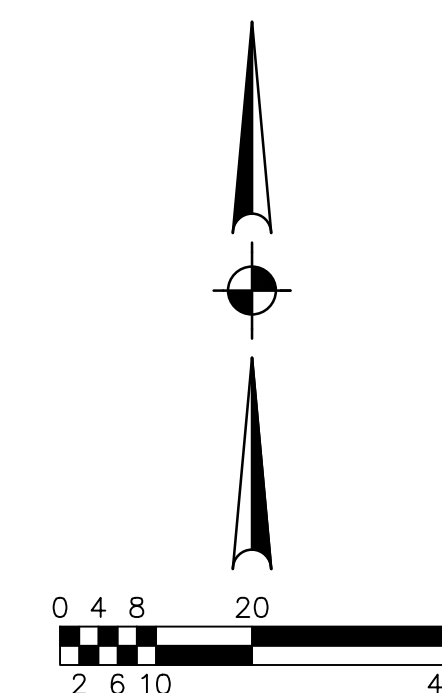


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SCALE: 1"=20'

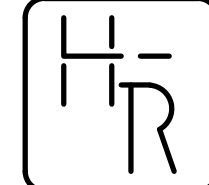
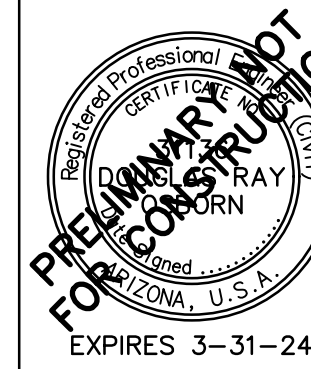
UNION ELEMENTARY DISTRICT NO. 62

**BUILDING ADDITION, PARKING MODIFICATIONS
AND FIELD RENOVATIONS AT UNION ELEMENTARY SCHOOL**

DRAWING STATUS	SHEET	OF	C-11
DD SUBMITTAL SET			
DATE: 01-18-24			
	11	24	



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CONSTRUCTION NOTES:**

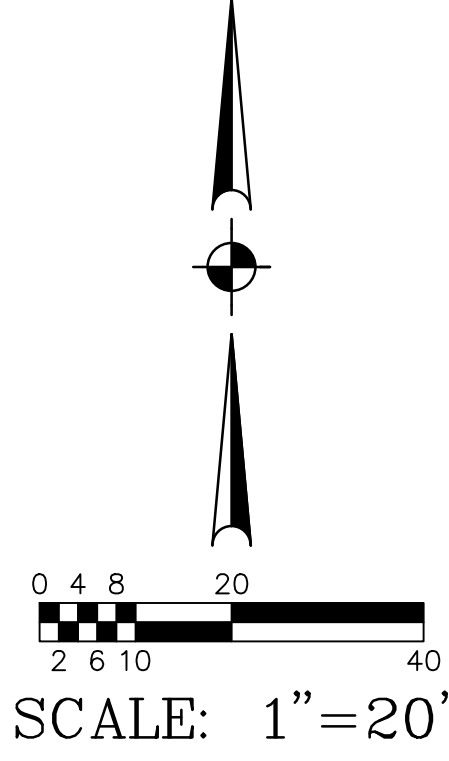
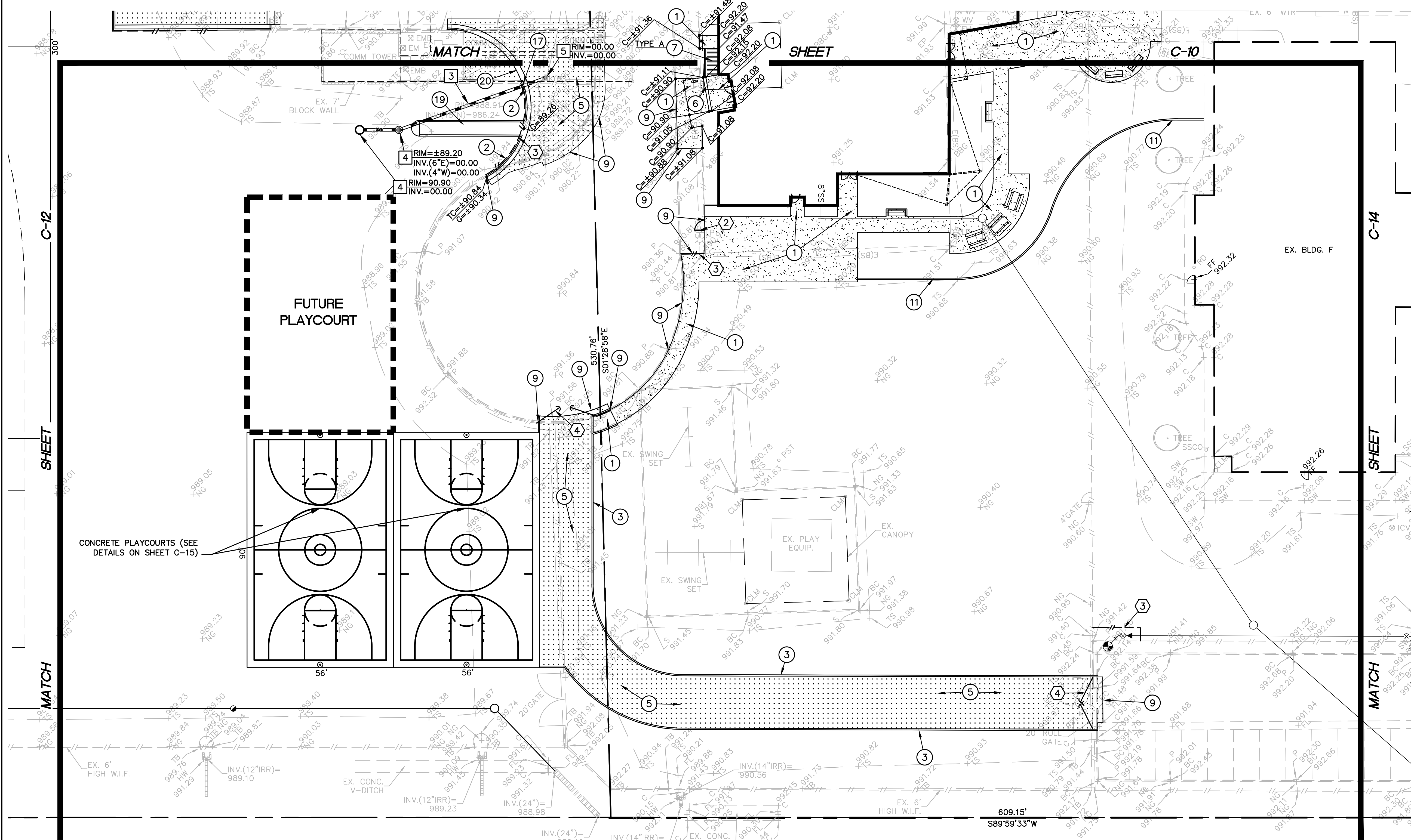
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3. INSTALL NEW 6" H.D.P.E. STORM DRAIN PIPE WITH SMOOTH INTERIOR AND 10.8 P.S.I. JOINTS.
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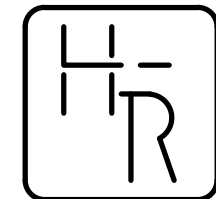
FENCING CONSTRUCTION NOTES:

1. INSTALL 6' HIGH BY 30' WIDE WROUGHT IRON SWING GATE. (SEE DETAIL ON SHEET C-2).
2. INSTALL 4' WIDE BY 6' HIGH WROUGHT IRON FENCE GATE. (SEE DETAIL ON SHEET C-2).
3. INSTALL 6' HIGH WROUGHT IRON FENCE (SEE DETAIL ON SHEET C-2).
4. INSTALL 6' HIGH 20' WIDE WROUGHT IRON FENCE (SEE DETAIL ON SHEET C-2).
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GRADING AND DRAINAGE PLAN			
UNION ELEMENTARY DISTRICT NO. 62			
BUILDING ADDITION, PARKING MODIFICATIONS AND FIELD RENOVATIONS AT UNION ELEMENTARY SCHOOL			
DRAWING STATUS	SHEET	OF	C-13
DD SUBMITTAL SET			
	13	24	
DATE: 01-18-24			





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PRIVATE SANITARY SEWER LINE
CONSTRUCTION NOTES:

1. INSTALL 5' DIAMETER SEWER MANHOLE WITH 30" DIAMETER FRAME AND COVER (MAG STANDARD DETAIL NO.'S 420-1, 420-2, 420-3 AND 423-2).
2. CONNECT TO BUILDING SEWER LINE WITH NECESSARY AND APPROPRIATE FITTINGS. SEE BUILDING PLUMBING DRAWINGS FOR EXACT LOCATION, ELEVATION AND CONTINUATION.
3. INSTALL 8" P.V.C. (ASTM D3034, SDR-35) SEWER LINE.
4. POTHOLE AND FIELD VERIFY THE EXACT ELEVATION AND LOCATION OF THE EXISTING UTILITY PRIOR TO CONSTRUCTION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES.
5. CORE DRILL AND CONNECT TO EXISTING SEWER MANHOLE WITH A WAPERTIGHT CONNECTION. REMOVE AND REFORM BASE AS NEEDED. FIELD VERIFY ELEVATION AND LOCATION OF EXISTING SEWER LINE PRIOR TO CONSTRUCTION.
6. SAWCUT, REMOVE AND REPLACE A.C. PAVEMENT TO THE ALIGNMENTS INDICATED ON THE PLANS.
7. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE SINGLE CURB (MAG STANDARD DETAIL NO. 222, TYPE 'A').
8. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE VALLEY GUTTER (MAG STANDARD DETAIL NO. 240, WIDTH MODIFIED TO BE 3' WIDE)

NOTE:

ALL NEW ONSITE UNDERGROUND UTILITIES (WATER, SEWER, FIRE AND STORM DRAIN LINES) SHALL BE BEDDED WITH A.B.C., PER MAG SECTION 702, FROM 4" (MIN.) BELOW THE BOTTOM OF THE PIPE TO 12" (MIN.) ABOVE THE TOP OF THE PIPE. BEDDING WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO CITY OF MESA AND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS, WHICHEVER IS MORE STRINGENT.

UNDERGROUND UTILITY TRACER WIRE NOTE:

ALL NEW UNDERGROUND FACILITIES/UTILITIES SHALL BE INSTALLED WITH A DETECTABLE UNDERGROUND LOCATION DEVICE. INSTALL A #18 INSULATED TRACER WIRE SECURELY ATTACHED TO EACH UTILITY AT 8- FEET ON CENTER. 12" OF TRACER WIRE SHALL BE ACCESSIBLE ABOVE GRADE AT THE TERMINATION AND SHALL BE SECURELY ATTACHED AT THAT POINT. THE CONTRACTOR SHALL VERIFY WHICH COLOR TO USE FOR A STORM DRAIN, WATER SERVICE, GAS, ETC. THE CITY OF MESA AND APPROPRIATE UTILITY COMPANIES. THE CONTRACTOR SHALL INCLUDE ALL COSTS ASSOCIATED WITH THIS REQUIREMENT IN THEIR BID.

DOMESTIC WATER AND PRIVATE SANITARY SEWER LINE PLAN

UNION ELEMENTARY DISTRICT NO. 62

**BUILDING ADDITION, PARKING MODIFICATIONS
AND FIELD RENOVATIONS AT UNION ELEMENTARY SCHOOL**

DRAWING STATUS	SHEET	OF	C-17
DD SUBMITTAL SET	17	24	
DATE: 01-18-24			

Call at least two full working days
before you begin excavation.

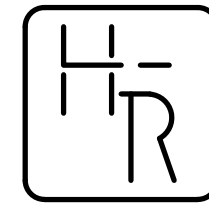
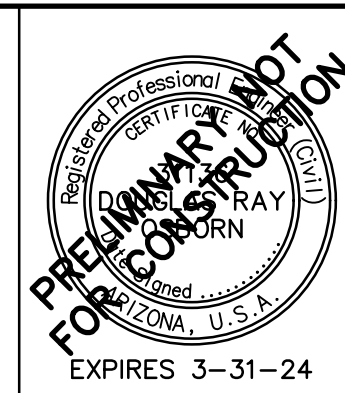
ARIZONA 811
Arizona Blue Stake, Inc.

Dial 8-1-1 or 1-800-STAKE-IT (782-5346)
In Maricopa County: (602) 263-1100

0 4 8 20
2 6 10 40
SCALE: 1"=20'

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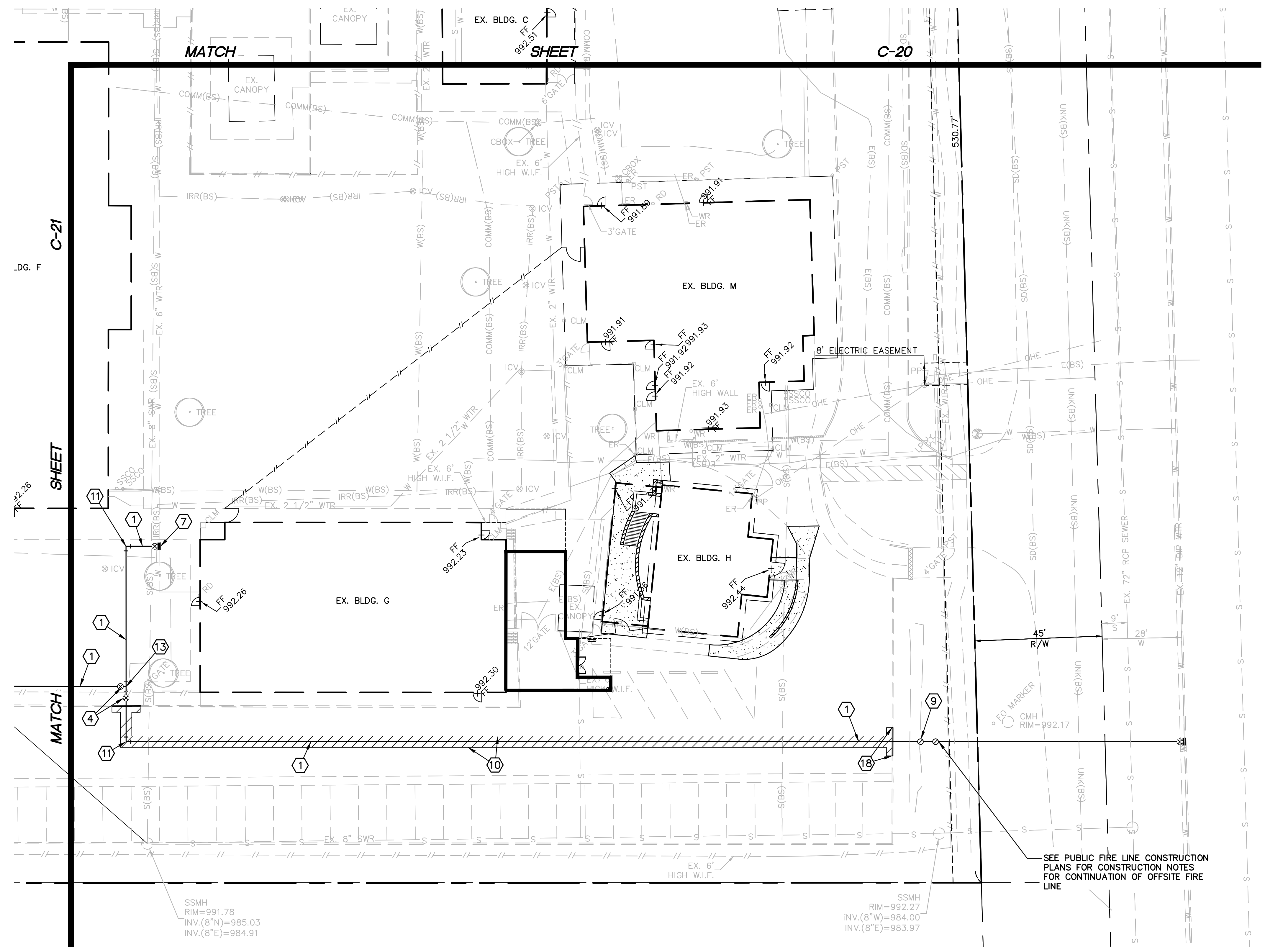
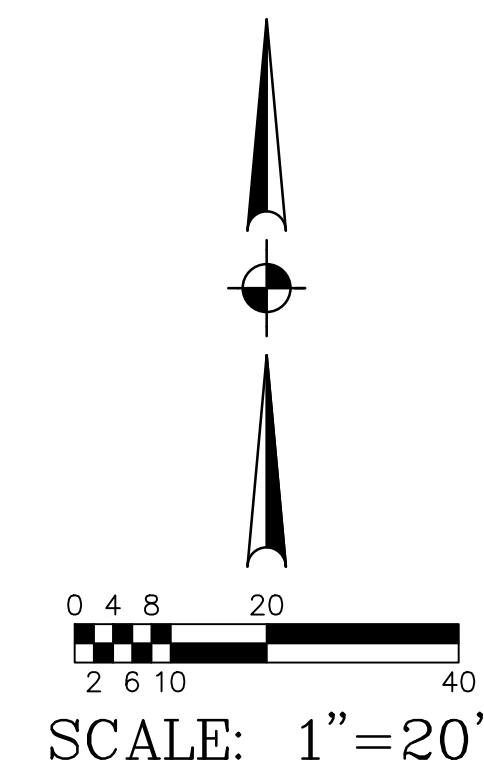
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9831 SOUTH 51ST STREET, SUITE C110
PHOENIX, ARIZONA 85044 (480)496-0244

DES. **DRO** DRN. **ANM** CKD **DRO** JOB NO. **2309-04**

- PRIVATE FIRE LINE CONSTRUCTION NOTES:**
1. INSTALL 8" P.V.C. (AWWA C-900, DR-18 CLASS 235) WATER LINE INCLUDING ALL BENDS, TEES, FITTINGS AND THRUST BLOCKS.
 2. INSTALL FIRE HYDRANT (MAG STANDARD DETAIL NO.'S 360-1 AND 360-3).
 3. INSTALL 6" P.V.C. (AWWA C-900, DR-18 CLASS 235) WATER LINE INCLUDING ALL BENDS, TEES, FITTINGS AND THRUST BLOCKS.
 4. INSTALL 8" GATE VALVE WITH VALVE BOX AND COVER (MAG STANDARD DETAIL NO. 391-1, TYPE 'C').
 5. INSTALL 6" GATE VALVE WITH VALVE BOX AND COVER (MAG STANDARD DETAIL NO. 391-1, TYPE 'C').
 6. SEE PLUMBING AND FIRE SPRINKLER DRAWINGS FOR CONTINUATION.
 7. INSTALL 6" X 8" TAPPING SLEEVE AND 8" GATE VALVE WITH VALVE BOX AND COVER (MAG STANDARD DETAIL NO. 340, MAG STANDARD DETAIL NO. 391-1, TYPE 'C' AND MAG STANDARD DETAIL NO. 270). FIELD VERIFY LOCATION AND ELEVATION OF EXISTING WATER LINE PRIOR TO THE START OF CONSTRUCTION.
 8. INSTALL 8" X 8" TAPPING SLEEVE AND 8" GATE VALVE WITH VALVE BOX AND COVER (MAG STANDARD DETAIL NO. 340, MAG STANDARD DETAIL NO. 391-1, TYPE 'C' AND MAG STANDARD DETAIL NO. 270). FIELD VERIFY LOCATION AND ELEVATION OF EXISTING WATER LINE PRIOR TO THE START OF CONSTRUCTION.
 9. INSTALL 8" REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER (CITY OF PHOENIX STANDARD DETAIL NO. P1351).
 10. SAWCUT, REMOVE AND REPLACE EXISTING A.C. PAVEMENT (MAG SPECIFICATION SECTION 336 AND CITY OF PHOENIX STANDARD DETAIL NO. P1200, TYPE B, OR MATCH EXISTING, WHICHEVER IS GREATER).
 11. INSTALL 8"-90° BEND.
 12. INSTALL 8"-45° BEND.
 13. INSTALL 8" TEE.
 14. CONNECT TO EXISTING FIRE LINE WITH NECESSARY AND APPROPRIATE FITTINGS. CONTRACTOR SHALL POTHOLE AND FIELD VERIFY EXACT LOCATION AND ELEVATION OF EXISTING WATER LINE PRIOR TO START OF CONSTRUCTION. NOTIFY DESIGN ENGINEER OF ANY CONFLICTS.
 15. INSTALL 8" TO 6" REDUCER.
 16. INSTALL 6"-45° BEND.
 17. INSTALL REMOTE FIRE DEPARTMENT CONNECTION (F.D.C.) PER CITY OF PHOENIX REQUIREMENTS. INSTALL REQUIRED SIGNAGE PER CITY OF PHOENIX REQUIREMENTS.
 18. SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE SINGLE CURB (MAG STANDARD DETAIL NO. 222, TYPE 'A').

PRIVATE FIRE LINE THRUST BLOCK NOTE:
ALL THRUST BLOCKS SHALL BE CONSTRUCTED OF M.A.G. CLASS C CONCRETE. FOR ALL PRIVATE FIRE LINE THRUST BLOCKS THE AREA OF BEARING FACE SHALL BE PER NFPA-24. THE FOLLOWING CHART IS FROM NFPA-24. SEE DOMESTIC WATER LINE THRUST BLOCK GENERAL NOTE FOR THRUST BLOCKS WITHIN THE RIGHT-OF-WAY.

PIPE SIZE (IN.)	90° BEND (SQ.FT.)	45° BEND (SQ.FT.)	TEES, PLUGS, CAPS AND HYDRANTS (SQ.FT.)
4	2	2	2
6	5	3	4
8	8	5	6
10	13	7	9
12	18	10	13
14	25	14	18
16	32	18	23



SEE PUBLIC FIRE LINE CONSTRUCTION PLANS FOR CONSTRUCTION NOTES FOR CONTINUATION OF OFFSITE FIRE LINE

ONSITE PRIVATE FIRE LINE PLAN			
UNION ELEMENTARY DISTRICT NO. 62			
BUILDING ADDITION, PARKING MODIFICATIONS AND FIELD RENOVATIONS AT UNION ELEMENTARY SCHOOL			
DRAWING STATUS	SHEET	OF	C-22
DD SUBMITTAL SET			
DATE: 01-18-24	22	24	

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