DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYMNASIUM IMPROVEMENTS & ADDITIONS

1001 S Jackson Rd, Edinburg, TX 78539

4010 N Doolittle Rd, Edinburg, TX 78541

EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT

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DE LA VINA COVER SHEET

CIVIL

STRUCTURAL

ARCHITECTURAL

MEP

MONTE CRISTO COVER SHEET

CIVIL

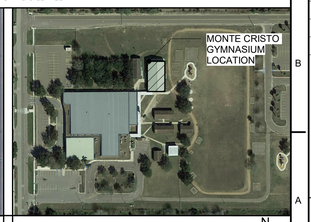
STRUCTURAL

ARCHITECTURAL

MEP

VICINITY MAP

DE LA VINA



MONTE CRISTO

rofa architects
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McAllen
1007 Walnut Ave.
McAllen, Texas 78501
V. 956.686.7771
F. 956.687.3433
www.rofainc.com
McAllen Harlingen

CONSULTANTS:

REGISTERED ARCHITECT JUAN A. FIGUEROA 12858 STATE OF TEXAS

04.15.2020

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYMNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13

DATE: 4/18/2020 1:41:56 PM

STARTING DATE:

CK BY: H.R. DWN BY: B.J.B.

COVER SHEET

CS

DE LA VINA
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS

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COMPANY INFORMATION	GEOTECHNICAL CONSULTANTS

DE LA VINA

COVER SHEET

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LUIS A. FIGUEROA
12858
STATE OF TEXAS
04.15.2020

NO.	DATE	REVISIONS DESCRIPTION

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ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13
DATE: 4/18/2020 1:42:07 PM
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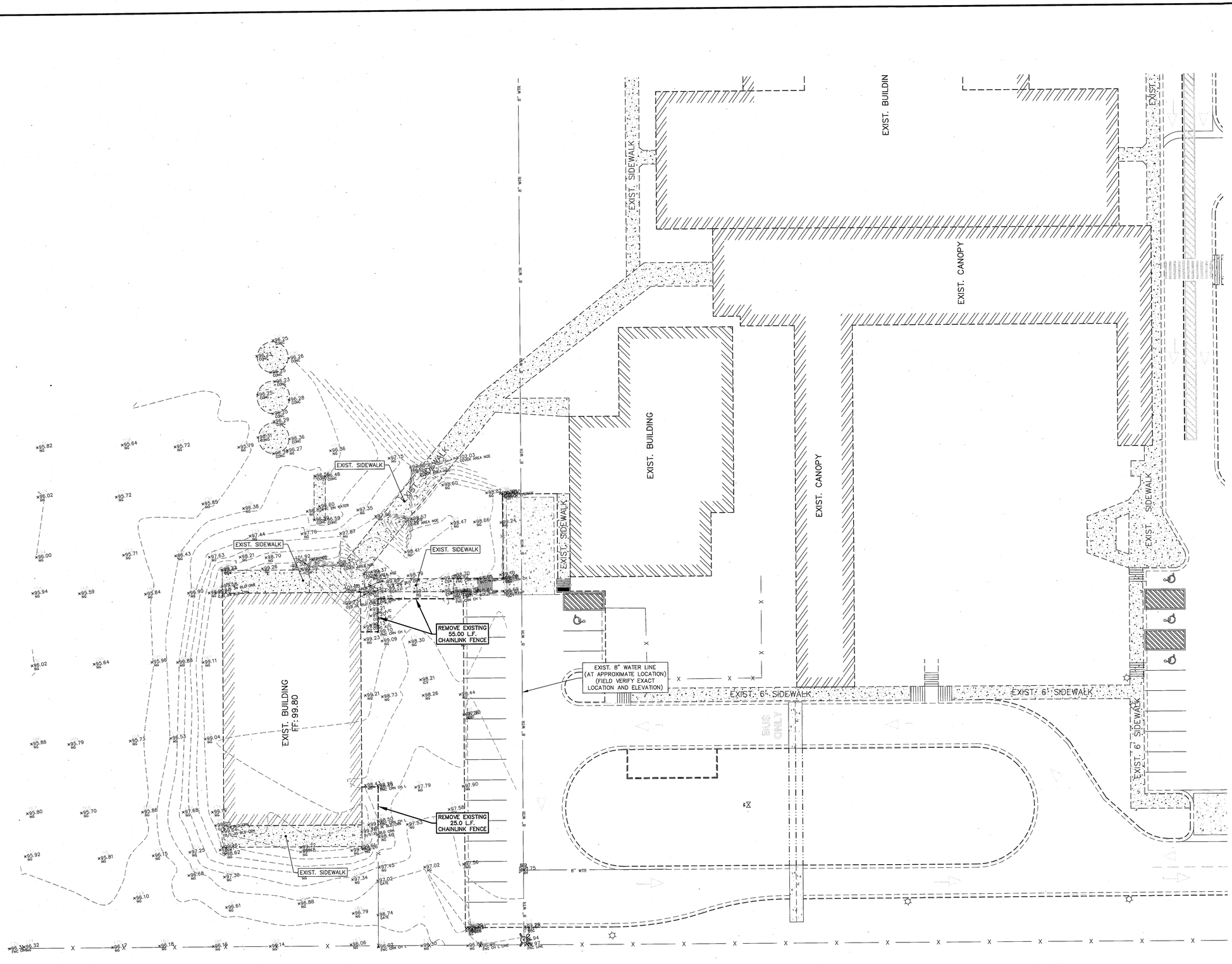
COVER SHEET - DE LA VINA

CSA



EXISTING TOPOGRAPHICAL AND DEMOLITION LAYOUT

DE LA VINA

1" = 20'-0"

1

RIO DELTA ENGINEERING
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IMPROVEMENTS & ADDITIONS
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INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13
DATE: 4/17/2020
STARTING DATE:
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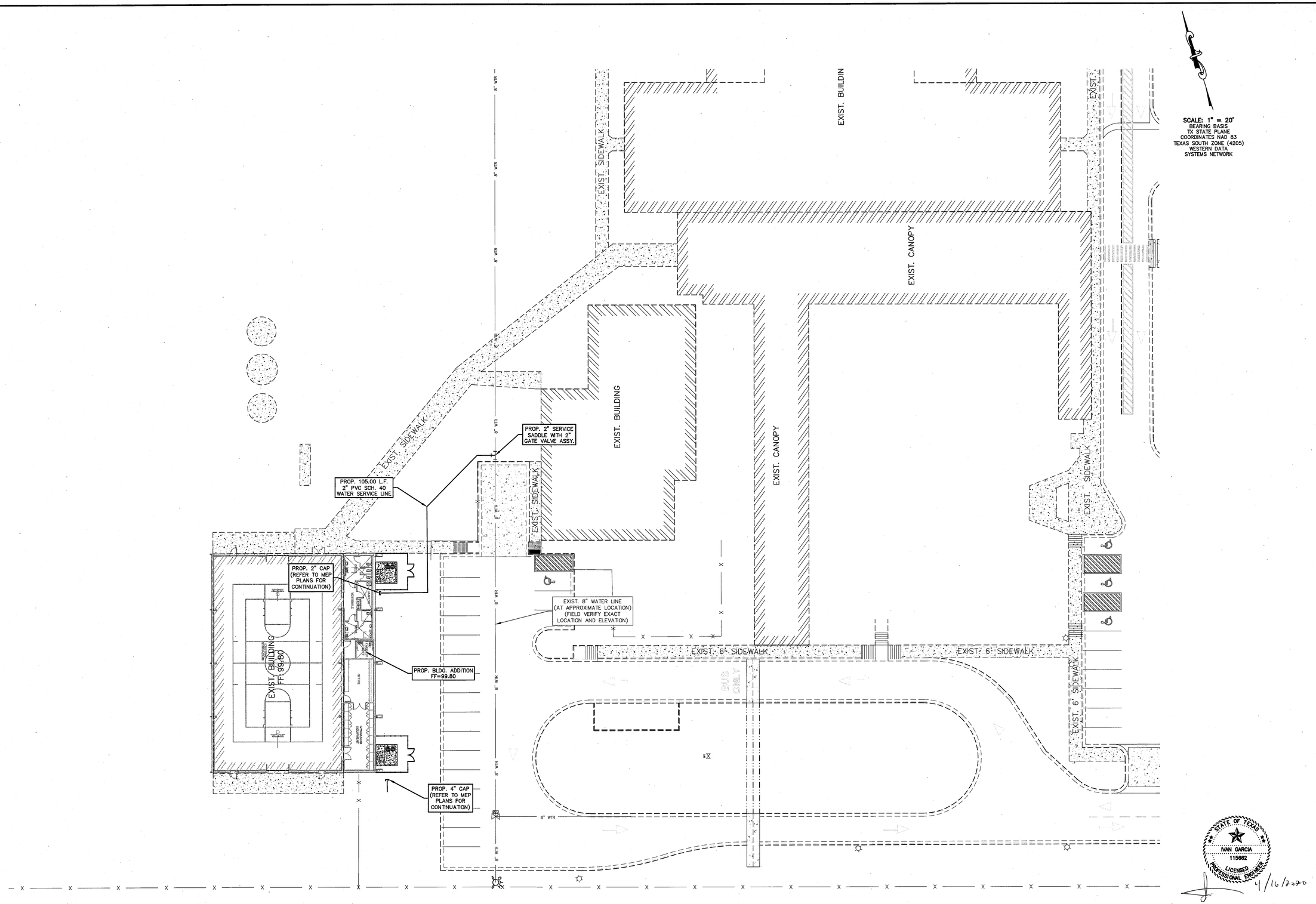
EXISTING
TOPOGRAPHICAL
AND
DEMOLITION
LAYOUT

STATE OF TEXAS
IVAN GARCIA
115682
LICENSED
PROFESSIONAL ENGINEER
4/16/2020

C1



OVERALL UTILITY PLAN
DE LA VINA
1" = 20'-0"
1

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ELEMENTARY SCHOOL GYMNASIUM
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OVERALL UTILITY PLAN

STATE OF TEXAS
IVAN GARCIA
115682
LICENSED
PROFESSIONAL ENGINEER
4/16/2020

RIO DELTA ENGINEERING
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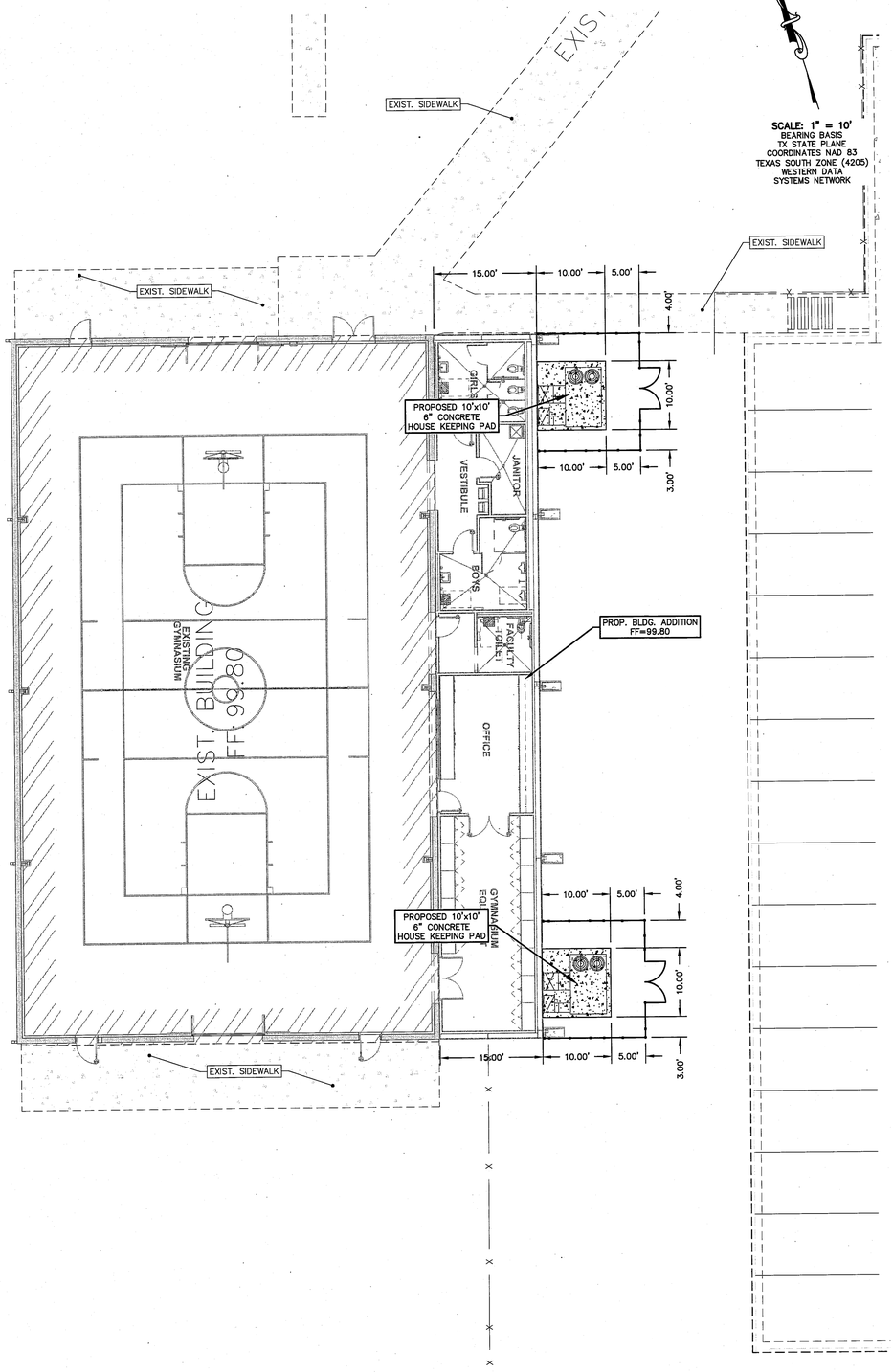
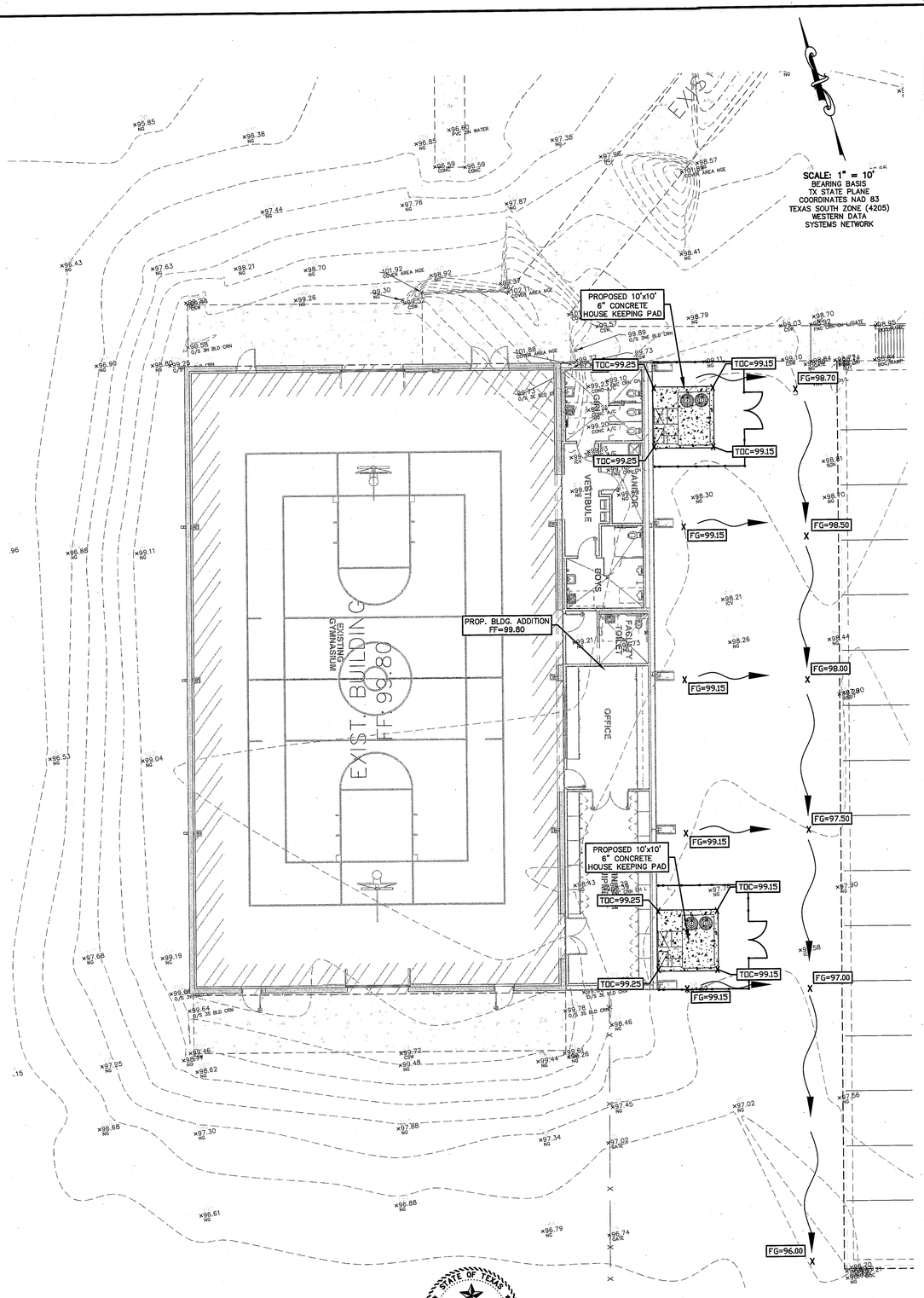
C2



DIMENSION PLAN
DE LA VINA
1" = 10'-0"
1



GRADING PLAN
DE LA VINA
1" = 10'-0"
2

STATE OF TEXAS
IVAN GARCIA
115662
LICENSED
PROFESSIONAL ENGINEER
4/16/2020

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INDEPENDENTSCHOOL DISTRICT

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DATE: 4/17/2020
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DIMENSION
AND
GRADING
PLANS

C3

GENERAL NOTES

1. THIS CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL NCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING SAFETY NETS, SUPPORT AND BRACING FOR CRANES, POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.

2. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.

3. THE CONTRACTOR SHALL Verify ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.

4. IN CASE OF CONFLICT; NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.

5. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.

6. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT ON THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.

7. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.

8. THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING CONSTRUCTION.

9. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

10. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER.

11. ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES, ADDITIONAL COSTS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY IMPACT.

12. THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.

13. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.

14. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROJECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.

15. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR **SHALL** ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

DESIGN CRITERIA

DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED UPON THE FOLLOWING CRITERIA:

1.	CODE:	IBC 2015
2.	LATERAL LOADS	
	A. WIND SPEED (V^3s):	140 MPH
	B. EXPOSURE CATEGORY:	C
	C. IMPORTANCE FACTOR:	1.15
	D. BUILDING CATEGORY	II
	E. SEISMIC DESIGN CATEGORY	A
	F. SITE CLASS	D
	G. SEISMIC COEFFICIENTS	D
	Ss	0.043 g
	S1	0.015 g
	Fa	1.6
	Fv	2.4
	Sms	0.069 g
	Sm1	0.035 g
	Sds	0.046 g
	Sd1	0.023 g
3.	VERTICAL LOADS	
	ROOF:	
	A. COLLATERAL LOAD:	10 PSF
	B. DEAD LOAD:	ACTUAL WEIGHT PSF
	C. LIVE LOAD: (REDUCIBLE)	20 PSF
	D. WIND UPLIFT LOAD (NET):	SEE TABLE PSF
	E. GROUND SNOW LOAD:	0 PSF
	F. CRANE LOADS:	NONE
	G. MECHANICAL UNITS	SEE PLANS
	FLOOR:	
	A. DEAD LOAD:	50 PSF
	B. LIVE LOAD, OFFICE:	50 PSF
	C. LIVE LOAD, LIGHT STORAGE	125 PSF
	D. LIVE LOAD, HEAVY STORAGE:	250 PSF
	E. LIVE LOAD, CLASSROOM:	40 PSF
	F. LIVE LOAD, CORRIDOR:	100 PSF
	G. MECHANICAL UNITS	SEE PLANS
4.	SUBSURFACE INFORMATION	
	A. PREPARED BY:	MEG
	PROJECT NO.:	01-19-29235
	DATE:	February 4, 2020
	B. SHALLOW FOUNDATION	
	MINIMUM FOOTING DEPTH:	24 inches
	MINIMUM FOOTING WIDTH:	12 inches
	ALLOWABLE BEARING PRESSURE (CONTINUOUS FOOTINGS):	1,800 psf
	ALLOWABLE BEARING PRESSURE (ISOLATED FOOTINGS):	2,100 psf
	WIRE REINFORCEMENT INSTITUTE (WRI) CRITERIA	
	CLIMATIC RATING (Cw)	15
	EFFECTIVE PLASTICITY INDEX (UNDISTURBED, NATIVE SOIL)	34
	EFFECTIVE PLASTICITY INDEX (SITE IMPROVED SOIL)	24
	PVR (UNDISTURBED SOIL)	2 1/2 inches
	PVR (WITH SITE IMPROVEMENT)	1 inch

ALLOWANCE

1. IN ADDITION TO THE MATERIAL SHOWN, THE CONTRACTOR TO PROVIDE ADDITIONAL MATERIAL, FOR USE ON THE PROJECT AS DIRECTED BY THE STRUCTURAL ENGINEER FIELD REPRESENTATIVE. THE ALLOWANCE COST SHALL INCLUDE MATERIAL COST, LABOR COSTS AND PLACEMENT AT THE SITE.
2. REMAINING BALANCE AT THE END OF THE PROJECT SHALL BE RETURNED/CREDITED BACK TO THE OWNER.
3. THE ALLOWANCE SHALL APPEAR ON THE SCHEDULE OF VALUE AS A LINE ITEM.

MATERIAL	ALLOWANCE
CONCRETE	10 CU. YD.
REINFORCING STEEL	3000 LBS
STRUCTURAL STEEL	3000 LBS
CMU	1000 SQ. FT.
CONCRETE SPALL REPAIR (x 6" DEEP)	0 SQ. FT.

SHOP DRAWINGS AND SUBMITTALS

1. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS INDICATED IN THE STRUCTURAL GENERAL NOTES AND THE CONTRACT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION
2. SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTERING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN NO REPRODUCTIONS OF THE CONTRACT DRAWING PLANS OR DETAILS.
3. SUBMIT STRUCTURAL SHOP DRAWINGS IN PDF FORMAT.
4. SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL OF THE SAME PLAN.
5. SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION (DETAIL SHEETS AND/OR MATERIAL LISTS) AND INSTALLATION.
6. ALLOW A MINIMUM OF (2) WEEKS FOR REVIEW OF EACH SET OF SHOP DRAWINGS.
7. CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS SUBMITTED BY THE SUB-CONTRACTOR AND COORDINATE SHOP DRAWINGS WITH ALL OTHER TRADING.
8. CONTRACTOR SHALL ANSWER ALL QUESTIONS OR CLARIFICATIONS BY THE SUB-CONTRACTOR BEFORE SUBMITTING TO ENGINEER FOR REVIEW. ANY QUESTIONS THAT THE CONTRACTOR CANNOT ANSWER WITH THE INFORMATION ON THE DRAWINGS SHALL CLEARLY BE MARKED FOR THE ENGINEER FOR REVIEW.
9. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, SEE NOTE NUMBER 3 UNDER GENERAL NOTES.
10. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR GENERAL CONFORMANCE TO THE STRUCTURAL DRAWINGS. REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEF THE CONTRACTOR FOR ANY ERRORS IN DIMENSIONS OR MATERIALS INDICATED ON THE SHOP DRAWINGS.
11. IF THERE IS ANY DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND SHOP DRAWINGS, THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS GOVERN. INFORMATION THAT IS NOT INDICATED ON THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE STRUCTURAL DRAWINGS.
12. PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS:

ITEM	REQUIRED
A. CONCRETE MIX DESIGN	X
B. CURING COMPOUND FOR CONCRETE	X
C. REINFORCING STEEL	X
D. STRUCTURAL STEEL	X
E. STEEL JOIST	
F. METAL DECKING (INDICATE LAYOUT AND TYPES OF DECK PANELS, ANCHORAGE DETAILS, REINFORCING CHANNELS, PANS, DECK OPENINGS, SPECIAL JOINTING, ACCESSORIES, AND ATTACHMENTS TO OTHER CONSTRUCTION.)	
G. PRE-MANUFACTURED METAL BUILDING (INCLUDE CALC'S & REACTIONS)	X
H. PRE-MANUFACTURED WOOD TRUSSES	

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1. GRADE 40 - #3 AND SMALLER GRADE 60 - #4 AND LARGER
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED.
3. VERTICAL REINFORCEMENT SHALL BE TIED OR OTHERWISE FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 192 BAR DIAMETERS NOR FOUR (4) FEET ON CENTER.
4. WELDED STEEL WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185
5. LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES SHALL BE NOT LESS THAN 12 INCHES.
6. WALLS, PILASTER, COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTER, OR COLUMNS.
7. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
8. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
9. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT. PROVIDE CONCRETE OR MASONRY CHAIRS AT 4'-0" O.C. MAX. (PLASTIC CHAIRS NOT ALLOWED.
10. PROVIDE CORNER BARS TOP AND BOTTOM AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL LAP BEAM REINFORCEMENT 40 BAR DIAMETERS.
11. BARS DETAILED AS CONTINUOUS SHALL BE LAPPED 40 BAR DIAMETERS AT SPLICES.
12. EXTEND SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS.
13. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 3". THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL 40 BAR DIAMETERS.
14. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB REINFORCING. ALL CONDUIT TO BE NO GREATER THAN 1" DIAMETER AND TO BE PLACED IN CENTER OF SLAB. NO PLUMBING LINES GREATER THAN 1 INCH ALLOWED IN THE SLAB.
15. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
16. WELDING OF REINFORCING STEEL, IF PERMITTED BY THE STRUCTURAL ENGINEER, SHALL BE PERFORMED IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE REINFORCING STEEL" ON THE AMERICAN WELDING SOCIETY, AWS D1.4-96 AS INCORPORATED IN CBC CHAPTER No. 19, AND BY CERTIFIED WELDERS QUALIFIED USING PROCEDURES CONTAINED THEREIN, E70XX ELECTRODES SHALL BE USED IN WELDING GRADE 60 REINFORCEMENT. REINFORCEMENT SHALL NOT BE WELDED UNTIL A CHEMICAL ANALYSIS SUFFICIENT TO DETERMINE THE CARBON EQUIVALENT (C.E.) IS PERFORMED. THE C.E. OF REINFORCING STEEL SHALL BE CALCULATED FORM THE CHEMICAL COMPOSITION AS SHOWN IN THE MILL TEST REPORT. IF MILL TEST REPORTS ARE NOT AVAILABLE, A CHEMICAL ANALYSIS SHALL BE MADE ON REINFORCEMENT REPRESENTATIVE OF THOSE TO BE WELDED. THE C.E. SHALL NOT EXCEED 0.55 AS CALCULATED PER CBC CHAPTER 19, A COPY OF THE MILL TEST OF REINFORCING STEEL IN CONCRETE MEMBERS. (SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING).
17. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
18. CONCRETE COVER FOR REINFORCING AS FOLLOWS:

EXPOSURE CONDITION	MINIMUM COVER	TOLERANCE
DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND:	3"	3/8"
WHERE CONCRETE SURFACES, AFTER REMOVAL OF FORMS, ARE EXPOSED TO WEATHER OR GROUND:		
FOR BARS 5/8" IN DIAMETER	2"	1/4"
FOR BARS 5/8" OR LESS IN DIAMETER	1 1/2"	1/4"
WHERE SURFACES ARE NOT DIRECTLY EXPOSED TO WEATHER OR GROUND:		
FOR SLAB ON GRADE (FROM TOP OF SLAB)	1 1/2"	1/4"
FOR BEAMS, COLUMNS	1 1/2"	1/4"
FOR JOISTS AND SLABS	1"	1/8"

20. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

MASONRY - GRADE 60: LAP 50 DIA. (30" MIN.)
GRADE 40: LAP 48 DIA. (24" MIN.)

CONCRETE - LAP PER SCHEDULE BELOW

BAR SPLICE LAP LENGTH IN CONCRETE

BAR SIZE	f'c = 2000 PSI	f'c = 3000 PSI	f'c = 4000 PSI	f'c = 5000 PSI
#3	22	22	22	22
#4	29	29	29	29
#5	40	36	36	36
#6	57	46	43	43
#7	77	63	54	54
#8	100	82	71	71
#9	128	104	90	90
#10	162	132	115	115
#11	200	163	141	141

FOR WELDED WIRE FABRIC: SPACING OF WIRE PLUS 12".

SPECIAL NOTES TO OWNER

1. UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.

2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.

3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.01 INCH MAY NEED TO BE PRESSURE EPOXIED. REFER TO THE NOTES UNDER "ALLOWANCES".

4. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

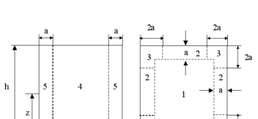
STRUCTURAL STEEL

1. MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING ASTM DESIGNATIONS:

MATERIAL	DESIGNATION		STRENGTH
ANCHOR BOLTS	A36		Fy=36 ksi
PLATES	A36		Fy=36 ksi
ANGLES	A36		Fy=36 ksi
CHANNELS	A36		Fy=36 ksi
WIDE FLANGE SHAPES	A572		Fy=50 ksi
STEEL PIPE	A53	GRADE B	Fy=35 ksi
SQUARE & RECT. STEEL TUBES (HSS)	A500	GRADE B	Fy=46 ksi
ROUND TUBES (HSS)	500	GRADE B	Fy=42 ksi

3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
   - SECTION 4.2.1, DELETE FIRST TWO SENTENCES.
   - SECTION 7., ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
   - SECTION 7.9.3, THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF PLACEMENT OF NON-SELF SUPPORTING STEEL FRAMES.
   - SECTION 7.9.4, THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
4. WELDING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AS PUBLISHED BY THE AMERICAN WELDING SOCIETY, EXCEPT THAT ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ANSI/AWS D1.1-04
5. DETAILED AND OR SCHEDULED CONNECTIONS HAVE BEEN DESIGNED BY STRUCTURAL ENGINEER. ANY CONNECTION NOT DETAILED OR SCHEDULED OR ALTERED FOR FABRICATION PURPOSES SHALL BE SIZED AND DETAILED BY FABRICATOR AND SHALL BE MARKED FOR ENGINEER'S VERIFICATION. FABRICATOR SIZED AND DETAILED CONNECTIONS SHALL SUPPORT ONE HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF UNIFORM CONSTANTS, PART 2 OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED. THE EFFECT OF ANY CONCENTRATION LOADS MUST BE TAKEN INTO ACCOUNT.
6. SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL ITEMS NOT INDICATED ON STRUCTURAL DRAWINGS. STEEL ITEMS SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGN BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LOADING.
7. ALL WELDED CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, U.N.O.
8. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION w/ WASHERS ASTM F436, U.N.O. ON DESIGN DRAWINGS. SPECIAL INSPECTION REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563
9. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE NOTED ON PLANS.
10. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. (INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO). SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED.
11. ALL EXPOSED STEEL SHALL FOLLOW SECTION 10 OF THE CODE OF STANDARD PRACTICE OF AISC. SECTION 10 OF THE CODE ADDRESSES ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)
12. CONNECTIONS SHALL BE PER HOLLOW STRUCTURAL SECTIONS, CONNECTION MANUAL BY AISC
13. WHERE STEEL MEMBER PASS THROUGH CMU WALLS, PROVIDE HALF INCH GAP BETWEEN THE CMU AND THE STEEL MEMBER. PROVIDE ELASTOMERIC MATERIAL BETWEEN THE THE STEEL MEMBER AND CMU WALL.
14. ALL BEAMS NOT SHOWN SHALL BE W14x26. ALL COLUMNS NOT SHOWN SHALL BE HSS4x4x1/4.
15. STEEL SHOP SHALL BE AISC CERTIFIED
16. HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED. UNLESS NOTED OTHERWISE, HOLES SHALL BE STANDARD SIZE 1/16 INCH LARGER THAN THE BOLT.
17. ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. PRIMER SHALL NOT BE APPLIED TO THE IMMEDIATE AREA OF STEEL INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS
18. HIGH STRENGTH BOLTS INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR. FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    - A. HE SHALL VERIFY THE MILL CERTIFICATES FOR MATERIAL.
    - B. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    - C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES, TOOL CALIBRATIONS WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND AND BUILDING CODE.
    - D. FOR SNUG-TIGHT CONNECTIONS, HE SHALL VERIFY THAT THE PLIES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT WITH EACH OTHER.
    - E. FOR SLIP-TIGHT CONNECTIONS, HE SHALL VERIFY THE PRETENSION METHOD SELECTED BY THE CONTRACTOR HAS INDUCED THE REQUIRED MINIMUM TENSION IN THE BOLT.
    - F. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
19. WELDING IN THE FIELD SHALL BE CONTINUOUSLY INSPECTED, BY A SPECIAL INSPECTOR FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    - A. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    - B. HE SHALL VERIFY THE WELDER'S QUALIFICATIONS.
    - C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES AND WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
    - D. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
20. ALL NON SHRINK GROUT FOR LEVELING OF BASE PLATES SHALL HAVE A MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. GROUT SHALL COMPLY WITH CORPS OF ENGINEERS SPECIFICATION CRD-C 621.

Drawing List



All pressures shown are based upon ASD Design, with a Load Factor of .6

Width of Pressure Coefficient Zone "a" = = 8.00 ft

Description	Width ft	Span ft	Area ft^2	Zone	Max GCp	Min GCp	Max P psf	Min P psf
Zone 1	2.00	5.00	10.0	1	0.30	-1.00	9.60	-21.15
Zone 2	2.00	5.00	10.0	2	0.30	-1.80	9.60	-35.50
Zone 3	2.00	5.00	10.0	3	0.30	-2.80	9.60	-53.43
Zone 4	2.00	5.00	10.0	4	0.90	-0.99	19.36	-20.98
Zone 5	2.00	5.00	10.0	5	0.90	-1.26	19.36	-25.82

CAST-IN-PLACE CONCRETE

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, ACI #301 LATEST EDITION. DRILLED PIERS SHALL COMPLY WITH ACI 336.1 AND ACI 336.3R, LATEST EDITIONS
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI #315 LATEST EDITION
4. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:

LOCATION	STRENGTH AT 28 DAYS	MAXIMUM SLUMP	SIZE OF LARGE AGGREGATE	WATER/CEMENT RATIO
FOUNDATIONS	3000 PSI	5"	1 1/2"	0.53
SLAB ON GRADE	3000 PSI	5"	1 1/2"	0.53
GRADE BEAMS	3000 PSI	5"	1 1/2"	0.53
WALL	3000 PSI	6"	3/4"	0.53

5. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN SLABS OR BEAMS.
6. VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS OR AS APPROVED BY ENGINEER.
7. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2 SEALANT '2A' (SELF-LEVELING 2-PART POLYURETHANE).
8. UTILITIES THAT PROJECT THROUGH SLAB FLOORS SHOULD BE DESIGNED WITH EITHER SOME DEGREE OF FLEXIBILITY OR WITH SLEEVES IN ORDER TO PREVENT DAMAGE TO THESE LINE SHOULD VERTICAL MOVEMENT OCCUR.
9. BACKFILL AROUND PERIMETER TO PROVIDE POSITIVE DRAINAGE AWAY FROM SLAB.
10. FLOOR TOLERANCES
F-NUMBER SYSTEM

	COMPOSITE	MINIMUM LOCAL VALUE
FLATNESS (F) :	30	23
LEVELNESS (F)	25	19

IN ALL INSTANCES MINIMUM SLAB THICKNESS SHALL BE OBTAINED. COORDINATE SLAB FINISHES WITH ARCHITECTURAL PLANS.

11. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
12. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLDS. GROOVES, REGLETS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS AND PIPES. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE, FOOTINGS, OR SLAB UNLESS SPECIFICALLY DETAILED IN THESE PLANS, OR AS DIRECTED BY THE ENGINEER.
13. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
14. CONCRETE TESTING SHALL BE ONE SET OF CYLINDERS FOR EVERY 50 CUBIC YARDS OR PORTION THEREOF FOR EACH TYPE OF CONCRETE POURED ON ANY GIVEN DAY. ONE SET CONSISTS OF 2 CYLINDERS TESTED FOR COMPRESSION AT 7 DAYS AND 2 CYLINDERS AT 28 DAYS.
15. VAPOR RETARDANT
    - A. VAPOR RETARDANT (UNDER SLAB): SHALL CONFORM TO ASTM E1745, CLASS C OR BETTER AND SHALL HAVE A MINIMUM WATER VAPOR PERMEANCE OF 0.044 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. VAPOR RETARDANT SHALL BE NO LESS THAN 15 MILS THICK.

APPROVED PRODUCTS
- A. STEGO WRAP (15 MIL). BY STEGO INDUSTIES LLC. (887) 464-7834.
- B. HUSKY YELLOW GUARD (15 MIL)
- C. OR APPROVED EQUAL BEFORE BIDDING PER SECTION 01600

INSTALLATION
- A. LAY SHEETS SMOOTHLY, STRETCH AND WEIGHT EDGES, LAP JOINTS TWELVE (12) INCHES AND SEAL WITH TAPE AS SPECIFIED BY VAPOR RETARDANT MANUFACTURER. TURN BARRIER UP SIX 6 INCHES AT WALLS AND AT ALL PIPES, ABUTMENTS, ETC. TAPE AND SEAL AT PENETRATIONS AND AT EDGES.
- B. AT GRADE BEAMS, EXTEND VAPOR RETARDANT DOWN SIDES OF BEAM TRENCHES AND ALONG BOTTOM OF FOOTING EXCAVATIONS, SECURE TO SIDES OF TRENCH.

PATCHING:
- A. PATCH ALL PUNCTURES WITH A MINIMUM OVERLAP OF 6" IN ALL DIRECTIONS AND TAPE AROUND ENTIRE PERIMETER OF REPAIR.

A. PREINSTALLATION CONFERENCE:
1. AT LEAST 30 DAYS PRIOR TO THE START OF THE CONCRETE SLAB CONSTRUCTION SCHEDULE, THE CONTRACTOR SHALL CONDUCT A MEETING TO REVIEW THE PROPOSED MIX DESIGNS AND TO DISCUSS THE REQUIRED METHODS AND PROCEDURES TO ACHIEVE THE REQUIRED CONCRETE CONSTRUCTION. THE CONTRACTOR SHALL SEND A PRE-CONCRETE CONFERENCE AGENDA TO ALL ATTENDEES 20 DAYS PRIOR TO THE SCHEDULED DATE OF THE CONFERENCE.
2. THE CONTRACTOR SHALL REQUIRE RESPONSIBLE REPRESENTATIVES OF EVERY PARTY CONCERNED WITH THE CONCRETE WORK TO ATTEND THE CONFERENCE, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
    - A) CONTRACTOR'S SUPERINTENDENT
    - B) LABORATORY RESPONSIBLE FOR CONCRETE MIXES AND/ OR FIELD QUALITY CONTROL
    - C) READY-MIX CONCRETE PRODUCER
    - D) CONCRETE SUBCONTRACTOR
    - E) ADMIXTURE MANUFACTURER(S)
    - F) LIQUID DENSIFIER AND SEALER MANUFACTURER
    - G) LIQUID DENSIFIER AND SEALER APPLICATION
    - H) JOINT FILLING APPLICATOR
3. MINUTES OF THE MEETING SHALL BE RECORDED, TYPED AND PRINTED BY THE CONTRACTOR AND DISTRIBUTED BY HIM TO ALL CONCERNED PARTIES, INCLUDING THE OWNER'S REPRESENTATIVE, THE ARCHITECT, AND THE STRUCTURAL ENGINEER WITHIN FIVE DAYS OF THE MEETING.

B. CONCRETE SUBCONTRACTOR QUALIFICATION:
1. THE CONCRETE SUBCONTRACTOR SHALL INCLUDE IN THEIR BID PACKAGE TO THE CONTRACTOR, SUFFICIENT DATA THAT CLEARLY INDICATES THE CONCRETE CONTRACTOR'S ABILITY TO SUCCESSFULLY PERFORM THE WORK AND TO ACHIEVE THE FLOOR SLAB TOLERANCES SPECIFIED IN THIS SECTION. THE CONCRETE SUBCONTRACTOR'S TEAM SHALL HAVE PARTICIPATED IN THE MAJORITY OF THESE PROJECTS, AND THAT TEAM SHALL REMAIN THE SAME THROUGH THE DURATION OF THIS PROJECT. THE CONCRETE PLANT SHALL BE LOCATED WITHIN 50 MILES OF THE PROJECT SITE AND BE A CONTINUOUS OPERATING PLANT.

C. CONCRETE MATERIAL:
1. CEMENT: TEXAS LEHIGH ASTM C 150, TYPE I. USE ONE BRAND OF CEMENT THROUGHOUT THE PROJECT; OR APPROVED EQUAL BEFORE BIDDING PER SECTION 01600.
2. COARSE AND FINE AGGREGATES: ASTM C33. COMBINED AGGREGATE GRADATION FOR SLABS ON GRADE AND OTHER DESIGNATED CONCRETE SHALL BE 8% - 18% FOR LARGE TOP AGGREGATES (1 1/2") OR 8% - 22% FOR SMALLER TOP SIZE AGGREGATES (1" OR 3/4") RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE. SLABS ON GRADE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1-1/2" FOOTINGS AND PIERS 1" AND BEAMS 3/4".
3. WATER: COMPLYING WITH ASTM C 94.
4. ALL CONCRETE SHALL CONTAIN "POZZOLITH" ADMIX AS PER MANUFACTURER'S SPECIFICATIONS, IN ACCORDANCE WITH ASTM C494.

D. ADMIXTURES:
1. AIR-ENTRAINING ADMIXTURES: SHALL CONFORM TO ASTM C-260. ADMIXTURE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION THAT THE AIR-ENTRAINING ADMIXTURE IS COMPATIBLE WITH OTHER REQUIRED ADMIXTURES. ALL EXTERIOR SLABS SHALL BE AIR-ENTRAINED (4% - 6%). ACCEPTABLE PRODUCTS: EUCLID CHEMICAL AEA-92 AND AIRMIX 200, MASTER BUILDERS MICROAIR, W.R. GRACE DARAVAIR 1000 AND DAREX-11.
NOTE: AIR-ENTRAINING ADMIXTURE SHALL NOT BE USED ON INTERIOR CONCRETE.
2. WATER-REDUCING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE A AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL WR-89 AND WR-91, MASTER BUILDERS 200N AND 322N, W.R. GRACE WRDA 36 AND WRDA 64.
3. WATER REDUCING, RETARDING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE D, AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL RETARDER 75, MASTER BUILDERS POZZOLITH R, W.R. GRACE DARATARD 17.
4. HIGH RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER): SHALL CONFORM TO ASTM C494, TYPE F OR TYPE G AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS : EUCLID CHEMICAL EUCON 37, MASTER BUILDERS REOBUILD 1000 W.R. GRACE DARACEM - 1000.
5. WATER-REDUCING, NON-CORROSIVE ACCELERATING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE C OR E, AND CONTAIN NOT MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURER MUST HAVE LONG-TERM, NON-CORROSIVE TEST DATA FROM AN INDEPENDENT TESTING LABORATORY (OF AT LEAST A YEAR'S DURATION) USING AN ACCEPTABLE ACCELERATED CORROSION TEST METHOD SUCH AS THAT USING ELECTRICAL POTENTIAL MEASURES. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL ACCELGUARD 80/90 AND ACCELGUARD NCA, MASTER BUILDERS NC534 AND POZZUTEC 20, W.R. GRACE POLARSET.
6. PROHIBITED ADMIXTURES:
    - a.) CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED.
    - b.) FLYASH; A MAXIMUM OF 20% AS CEMENT REPLACEMENT ALLOWED

E. EVAPORATION RETARDER:
1. WATERBORNE, MONOMOLECULAR FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
    - a.) ACCEPTABLE PRODUCTS:
"EUCOBAR" BY THE EUCLID CHEMICAL COMPANY - CONTACT: PHIL BRANDT
(877) 438-3826

F. CURING MATERIALS:
1. EXTERIOR CURING: ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND. THE LIQUID MEMBRANE-FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C 1315 WITH A MAXIMUM V.O.C. CONTENT OF 700 G/L.
    - a.) ACCEPTABLE PRODUCTS:
"SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT
(877) 438-3826
2. INTERIOR CURING: ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A REDUCED ODOR, DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND THAT IS FORMULATED FROM HYDROCARBON RESINS. THE DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C-309 AND V.O.C. CONTENTS IN ACCORDANCE TO EPA 40 CFR, PART 59, TABLE I, SUBPART D FOR CONCRETE CURING COMPOUNDS WITH A MAXIMUM V.O.C. CONTENT OF 350 G/L. APPLY AT 400 S.F./GALLON.
    - a.) ACCEPTABLE PRODUCTS:
"KUREZ DR VOX" BY THE EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT
(877) 438-3826

ALL CONCRETE SLABS SHALL ALSO BE MAINTAINED MOIST FOR 7 DAYS

G. CONCRETE MIXES
1. COMPLY WITH ACI 301 REQUIREMENTS FOR CONCRETE MIXTURE, U.N.O..
2. PREPARE DESIGN MIXES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, PROPORTIONED ACCORDING TO ACI 301, FOR NORMAL WEIGHT CONCRETE DETERMINED BY EITHER LABORATORY TRIAL MIX OR FIELD TEST DATA AS FOLLOWS:
CONCRETE MATERIALS INCLUDED IN THE MIX DESIGN SHALL BE THE SAME MATERIALS PROVIDED TO THE PROJECT, AND SHALL BE PREPARED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE OWNER. THE LABORATORY MIX DESIGN SHALL NOT EXCEED THE DESIRED JOB STRENGTH OF CONCRETE BY 1,200 PSI. FOUR COPIES OF THE MIX DESIGN SHALL BE SUBMITTED TO THE OWNER BEFORE CONCRETE WORK BEGINS.
3. SLUMP: CONCRETE CONTAINING HRWR SHALL HAVE A MAXIMUM SLUMP OF 8" (200MM). ALL OTHER CONCRETE SHALL NOT EXCEED 4 INCHES (100 MM) UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. ADJUSTMENT TO CONCRETE MIXES: MIX DESIGN ADJUSTMENTS MAY BE REQUESTED BY CONTRACTOR WHEN CHARACTERISTICS OF MATERIALS, JOB CONDITIONS, WEATHER, TEST RESULTS OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO OWNER AND AS ACCEPTED BY OWNER. LABORATORY TEST DATA FOR REVISED MIX DESIGN AND STRENGTH RESULTS MUST BE SUBMITTED TO AND ACCEPTED BY OWNER BEFORE USING IN WORK. BOTH THE CONCRETE TESTING AND INSPECTION AGENCY AND THE CONCRETE CONTRACTOR SHALL SATISFY THEMSELVES THAT THE CONCRETE MIX DESIGN WILL PRODUCE A CONCRETE WHICH WILL MEET THE SPECIFICATIONS FOR THIS PROJECT. IN ADDITION, THE CONTRACTOR AND CONCRETE FINISHER SHALL VERIFY THAT THE WORKABILITY, FINISHABILITY AND SETTING TIMES ARE APPROPRIATE FOR SLAB INSTALLATIONS. PLACEMENT SHALL BE MADE BY CHUTE DIRECTLY FROM THE CONCRETE TRUCKS. IF PUMPING OF THE CONCRETE IS CONTEMPLATED FOR ANY SPECIAL LOCATIONS, THE PROPORTIONS ESTABLISHED ABOVE SHALL NOT BE ALTERED TO SUIT THE CAPABILITIES OF THE PUMPING EQUIPMENT.
5. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. WHEN AIR TEMPERATURE IS BETWEEN 85° AND 90° F, REDUCE MIXING AND DELIVERY TIME FROM 90 MINUTES TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90° F, REDUCE MIXING AND DELIVERY TIME TO 6O MINUTES.
6. WATER CEMENT RATIO SHALL BE BASED ON SURFACE DRY MATERIAL.

H. CONTRACTION JOINTS IN SLABS-ON-GRADE:
FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS, AS FOLLOWS:
SAWED JOINTS: ALL SAW CUTTING SHALL BE ACCOMPLISHED WITH A SOFT-CUT SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR. NOTE: CONCRETE DUST SHALL BE REMOVED COMPLETELY AND IMMEDIATELY. IF CHALK LINES ARE USED FOR SAW CUTS, ALL CHALK REMAINING ON SLAB SHALL BE REMOVED COMPLETELY AND IMMEDIATELY AFTER SAWING.

I. FLOOR SLAB TOLERANCES:
COMPLY WITH ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS." ALL INTERIOR FLOOR SLABS SHALL MEET THE REQUIREMENTS OF A TYPE 5, SINGLE COURSE, HARD STEEL - TROWELED FINISH AS DESCRIBED IN ACI 302.IR- LATEST EDITION.

J. CONCRETE CURING AND PROTECTION:

a) FIRST, ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE- FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.

b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN (7) DAYS AFTER PLACEMENT.

3. INTERIOR SLABS - CURING:

a) FIRST, ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.

b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND PONDED WITH WATER FOR SEVEN (7) DAYS AFTER CONCRETE PLACEMENT.

c) THIRD, CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE- FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F.

4. INTERIOR SLAB PROTECTION:
TAKE THE FOLLOWING MEASURES TO PROTECT FLOOR SLAB:
- A. WRAP OR "DIAPER" ALL MOTORIZED AND HYDRAULIC EQUIPMENT TO PREVENT FLUID LEAKS.
- B. PROVIDE NON-MARKING TIRES ON RUBBER TIRED VEHICLES OR EQUIP RUBBER TIRES WITH TIRE BOOTS MADE OF NYLON FABRIC.
- C. SOURCE FOR DIAPERS AND BOOTS: R&R TIRE SURFACE PROTECTORS, INC., FORT COLLINS CO 80526, (970) 266-4082
- D. PROVIDE MATS AT ALL ENTRANCES TO PREVENT MUD STAINS.
- E. COVER SLAB PRIOR TO PAINTING. ALL SPILLS TO BE CLEANED WITH SOAP AND WATER. LACQUER THINNER WILL NOT BE ACCEPTABLE.

STRUCTURAL OBSERVATIONS

1. JOB SITE OBSERVATIONS BY THE PROFESSIONAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE INTENT.

2. SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT.

3. SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR FOR ITEMS NOT INSTALLED OR IMPROPERLY INSTALLED BY THE CONTRACTOR OR HIS SUBCONTRACTORS.

4. NOTIFY ENGINEER 48 HOURS IN ADVANCE WHEN A STRUCTURAL OBSERVATION IS REQUIRED.

CONSTRUCTION STAGE	REQUIRED
BEFORE PLACEMENT OF CONCRETE FOR SLAB/FOUNDATION	X
BEFORE PLACEMENT OF FOUR (4) FEET OF CONCRETE IN CMU WALL	
AFTER FRAMING OF ROOF STRUCTURE BUT BEFORE PLACEMENT OF ROOFING MATERIAL.	X

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SIMON G. SOLORIO JR.
83066
4/15/2020

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Document issued for:
100 CD

NO.	DATE	DESCRIPTION

DE LA VINA ELEMENTARY
GYMNASIUM RENOVATIONS &
ADDITION

PROJECT NO: 20119a
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:
General Notes

S101

SPECIAL INSPECTION, MATERIALS TESTING.

1. RESPONSIBILITIES OF THE OWNER
   - A. EMPLOY AND PAY THE SPECIAL INSPECTION AGENCY TO PERFORM INSPECTIONS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
   - B. EMPLOY AND PAY THE MATERIALS TESTING LABORATORY TO PERFORM TESTS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
     - 1) RETESTING - THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR RE-TESTING WHERE RESULTS OF INSPECTIONS AND TESTS PROVE UNSATISFACTORY AND INDICATE NONCOMPLIANCE WITH REQUIREMENTS.
   - C. EMPLOY THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN OR ANOTHER ENGINEER OR ARCHITECT DESIGNATED BY THE (DPR) TO PERFORM STRUCTURAL OBSERVATION. (REF 1702)
2. DEFINITIONS
   - A. APPROVED FABRICATOR: A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD, TO PERFORM WORK, OFF SITE, REQUIRING SPECIAL INSPECTION WITHOUT SPECIAL INSPECTION. THE DESCRIPTION IN SECTION 1701.1 OF THE 1998 CALIFORNIA BUILDING CODE IS APPLICABLE.
   - B. SPECIAL INSPECTION AGENCY: THE ACCREDITED INSPECTION BODIES DESIGNATED HEREIN AND APPROVED BY THE ENGINEER OF RECORD TO PERFORM SPECIAL INSPECTION AS REQUIRED BY THE BUILDING CODE AND THE PROJECT SPECIFICATIONS AND AS DESCRIBED IN SECTION 1701 1998 CALIFORNIA BUILDING CODE.
   - C. SPECIAL INSPECTOR: A QUALIFIED PERSON, EMPLOYED BY THE SPECIFIED SPECIAL INSPECTION AGENCY, WHO HAS DEMONSTRATED COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. DUTIES INCLUDE VISUAL OBSERVATIONS AND FIELD MEASUREMENTS OF MATERIALS, OBTAINING SPECIMENS FOR TESTS AND RELATED ACTIONS INCLUDING PREPARATION OF REPORTS.
   - D. TESTING LABORATORY: AN ACCREDITED MATERIALS TESTING LABORATORY, APPROVED BY THE ENGINEER OF RECORD, TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS.
   - E. CONTINUOUS INSPECTION: ON SITE INSPECTION BY THE SPECIAL INSPECTOR ON A CONTINUOUS BASIS OBSERVING ALL WORK REQUIRING SPECIAL INSPECTION.
   - F. PERIODIC INSPECTION: INTERMITTENT INSPECTION AS PERMITTED BY THE PLAN SPECIFICATIONS AT PREDETERMINED INTERVALS OR MORE FREQUENTLY AS WORK PROGRESSES. NO SIGNIFICANT ELEMENTS OR AREAS SHALL BE COVERED BY ADDITIONAL WORK UNTIL APPROVED BY THE MUNICIPAL BUILDING INSPECTOR AND/OR THE SPECIAL INSPECTOR.
   - G. STRUCTURAL OBSERVATION: THE VISUAL OBSERVATION, BY THE ENGINEER OF RECORD OR HIS DESIGNEE, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS, OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL AND MUNICIPAL INSPECTIONS REQUIRED BY CODES AND SPECIFICATIONS.
   - H. EOR: ENGINEER OF RECORD
   - I. DPR: ENGINEER OF RECORD/DESIGN PROFESSIONAL OF RECORD
   - J. SPECIAL INSPECTION AND MATERIALS TESTING
     THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTORS DUTIES ARE DESCRIBED IN CBC 1701.3 AND CBC 1701.5
     DOCUMENTED METHODS AND PROCEDURES SHALL BE USED FOR INSPECTION AND TESTING REQUIRED OF CONTRACTUAL DOCUMENTS, AND FOR ESTABLISHING ACCEPTANCE CRITERIA. ALL INSTRUCTIONS, STANDARDS, PROCEDURES, CHECKLISTS RELEVANT TO THE WORK WILL BE KEPT UP TO DATE AND READILY AVAILABLE FOR USE. NO INSPECTION OR TEST WILL BE PERFORMED IF THE SAFETY OF THE TESTING PERSONNEL IS IN QUESTION DUE TO JOB SITE CONDITIONS. PRIOR TO PROJECT COMMENCEMENT, THE TESTING AGENCY WILL CONFER WITH AND OBTAIN THE APPROVAL FROM THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD REGARDING THE INSPECTION AND TESTING PROCEDURES OR SPECIFICATIONS INCLUDING ANY APPROPRIATE ASTM METHODS, CODE REQUIREMENTS OR PROJECT SPECIFICATION REQUIREMENTS. AT THE START OF AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS, AS REQUIRED, AND PROCEDURS WITH APPLICABLE CODES, PLANS, AND SPECIFICATIONS.
     - 1. ALL INSPECTIONS SHALL BE PERFORMED BY AN ACCREDITED, APPROVED SPECIAL INSPECTION AGENCY EMPLOYED BY THE OWNER OR OWNER'S AGENT, NOT THE CONTRACTOR OR SUBCONTRACTOR,
       ACCREDITATION TO ASTM E-329-95C, STANDARD SPECIFICATIONS FOR AGENCIES ENGAGED IN THE TESTING AND/OR INSPECTION OF MATERIALS USED IN CONSTRUCTION, IS PREFERRED.
       COPIES OF THE TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THE ENGINEER OF RECORD (EOR) IN ADDITION TO OTHER NORMAL DISTRIBUTIONS, WITHIN TWO DAYS OF THE TEST. IN THE CASE OF DISCREPANCIES OR DEFICIENCIES, THE SPECIAL INSPECTION AGENCY SHALL IMMEDIATELY NOTIFY THE EOR. TESTING FREQUENCY SHALL BE PER APPLICABLE STRUCTURAL MASONRY, REINFORCED CONCRETE, AND STRUCTURAL STEEL WELDING CODES AND STANDARDS AND ARE PART OF THIS SPECIFICATION.
       - A. CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITED TO THE INSPECTION SERVICES DIVISION BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND/OR INSPECTION FIRM WITH A CONSTRUCTION SCHEDULE TO FACILITATE THE PROPER COORDINATION.
4. THE SPECIAL INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE ENGINEER AT A MINIMUM PER WEEK FREQUENCY. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT, SIGNED BY BOTH HE AND HIS SUPERVISOR, STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE WORKMANSHIP PROVISIONS OF THE CBC.
5. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN IF UNCORRECTED, TO THE PROPER DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
6. SPECIAL INSPECTION REPORTS
   THESE REPORTS SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING INFORMATION:
   - A. PERMIT NUMBER
   - B. NAME OF THE MUNICIPAL INSPECTOR, IF AVAILABLE, AND OF THE GOVERNING MUNICIPALITY
   - C. SPECIAL INSPECTION AGENCY NAME, ADDRESS, AND PHONE NUMBER
   - D. UNIQUE IDENTIFICATION OF THE REPORT AND OF EACH PAGE.
   - E. CLIENT NAME AND ADDRESS
   - F. NAME AND ADDRESS OF THE DESIGN PROFESSIONAL OF RECORD, AND OTHER DESIGNERS OR ENGINEERS APPLICABLE TO THE PROJECT
   - G. DESCRIPTION OF THE TYPE OF INSPECTION PERFORMED
   - H. ANY UNRESOLVED DEVIATIONS, EXCLUSIONS, AND ADDITIONS TO OR FROM THE APPROVED DRAWINGS AND SPECIFICATIONS RELEVANT TO THE SPECIFIC INSPECTION OR TEST.
   - I. COMPLIANCE FINDINGS AND REFERENCE
   - J. DESCRIPTION OF LOCATION WHERE THE INSPECTION WAS PERFORMED WITHIN THE PROJECT
   - K. TIME AND DATE OF THE INSPECTION
   - L. MEASUREMENTS, EXAMINATIONS, AND DERIVED RESULTS SUPPORTED BY TABLES, GRAPHS, SKETCHES, OR PHOTOGRAPHS AS APPROPRIATE
   - M. THE NAME, SIGNATURE, TITLE, AND IDENTIFICATION NUMBER, AS APPROPRIATE, OF THE FIELD INSPECTOR PERFORMING THE INSPECTION
   - N. IDENTIFICATION OF SUBCONTRACTORS EMPLOYED TO CARRY OUT TESTS OR PARTS OF TESTS
7. TESTS REPORTS
   LABORATORY TESTS AND MILL CERTIFICATIONS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER OF RECORD. THESE REPORTS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   1. CONCRETE CYLINDERS
   2. REINFORCING STEEL
   3. STRUCTURAL STEEL
   4. CONCRETE MIXES
   5. CONCRETE ANCHORS
8. SPECIAL INSPECTION BY A SPECIAL OR DEPUTY INSPECTOR FROM AN ACCREDITED, EOR APPROVED INSPECTION AGENCY AND WITH THE APPROPRIATE CURRENT MUNICIPAL LICENSES AND CERTIFICATIONS SHALL BE REQUIRED FOR THE TYPE OF WORK LISTED BELOW.

8A CONTINUOUS INSPECTION REQUIRED FOR THE FOLLOWING:

- A. REINFORCED CONCRETE:
  1. DURING PLACEMENT OF REINFORCED CONCRETE WHERE THE STRUCTURAL DESIGN IS BASED ON F'C GREATER THAT 3,000 PSI AND THE TAKING TEST SPECIMENS. THE NUMBER OF AND FREQUENCY OF TAKING OF TEST SPECIMENS SHALL BE THE MINIMUM REQUIRED BY THE GOVERNING MUNICIPAL BUILDING CODE OR AS SPECIFIED BY THE APPROVED STRUCTURAL PLANS, WHICHEVER IS THE GREATER NUMBER.
  2. DURING THE PLACEMENT OF REINFORCING STEEL AND PRE STRESS TENDONS UNLESS THE SPECIAL INSPECTOR HAS INSPECTED FOR CONFORMANCE WITH THE APPROVED PLANS PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE.
  3. DURING THE PLACEMENT OF REINFORCING STEEL AND CONCRETE FOR CAST-IN-PLACE DRILLED PILES OR CAISSONS.
  4. INSPECTION IS REQUIRED ON CAST-IN-PLACE PILES OR CAISSONS, EVEN IF F'C IS LESS THAN 2,500 PSI.
  5. PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS WHEN STRESS INCREASES PERMITTED BY FOOTNOTE 5 OF TABLE 19E, SECTION 1925 OF THE UNIFORM BUILDING CODE FOR THE USE OF FULL VALUES FOR EMBEDDED BOLTS.
  6. PRIOR TO AND DURING THE INSTALLATION OF ANCHORS REQUIRING TO BE DRILLED INTO CONCRETE.
  7. DURING THE STRESSING AND GROUTING OF TENDONS IN PRE STRESSED
  8. CONTINUOUS INSPECTION FOR THE PLACEMENT OF THE REINFORCEMENT AND CONCRETE AT CONCRETE MOMENT FRAMES WITHIN SEISMIC ZONES 3 & 4
  9. SHOT CRETE PLACEMENT AND DURING THE TAKING OF TEST SPECIMENS.
     PERIODIC INSPECTION FOR REINFORCED CONCRETE SHALL BE PERFORMED WHEN SPECIFIED, AS MINIMUMS:
     1. AT THE START OF AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
     2. REINFORCEMENT VERIFICATION PRIOR TO THE PLACEMENT OF CONCRETE
     3. DURING THE PLACEMENT OF CONCRETE
     4. DURING THE MOLDING, CONSTRUCTION OF TAKING OF COMPRESSION SAMPLES, BEAMS, CORES OR PANELS.
     5. AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STIRRUPS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT (IE @ OPENINGS, BEAMS, CORNERS, COLUMNS, PIERS, AND CAISSONS) BEFORE THEY ARE COVERED.
     6. DURING SAMPLING OF CONCRETE AT DISCHARGE FROM MIXER.
     7. BEFORE ANY CONCRETE IS PLACED FOR VERIFICATION OF MIX DESIGN
     8. ALL FUNCTIONS AT THE BATCHING PLANT FOR READY MIX. THIS COULD INCLUDE CEMENT SAMPLING OR TEST RESULTS, GRAVEL GRADATION, CHECKING CALIBRATION OF EQUIPMENT AND ADMIXTURE APPROVALS.
- B. STRUCTURAL WELDING - GENERAL - INSPECTOR'S DUTIES
  1. ALL FIELD WELDING NOT DONE IN AN APPROVED FABRICATORS SHOP EXCEPT THAT PERIODIC INSPECTION THE FREQUENCY OF WHICH IS DETERMINED PRIOR TO THE START OF THE PROJECT SHALL BE ALLOWED PER SECTION 1701.5, #5 EXCEPTIONS.
  2. DURING ALL FIELD WELDING OF SPECIAL MOMENT-RESISTING FRAMES; IN ADDITION, NONDESTRUCTIVE TESTING AS REQUIRED BY SECTION 1703.
  3. THE SPECIAL INSPECTOR SHALL REVIEW EOR APPROVED WELDING PROCEDURES SPECIFICATIONS (WPS) WHEN OTHER THAN STANDARD AWS PRE QUALIFIED JOINTS AND PROCEDURES ARE INVOLVED.
  4. THE SPECIAL INSPECTOR SHALL REVIEW APPLICABLE SECTION OF REFERENCED CODES, PARTICULARLY THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (AWS D1.1) AND THE MANUAL, AND SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
  5. THE SPECIAL INSPECTOR SHALL REVIEW MILL TEST REPORTS AND CHECK HEAT NUMBERS WITH MATERIAL AS RECEIVED. VERIFY THAT PROPER IDENTIFICATION OF STEEL IS MAINTAINED DURING FABRICATION.
  6. THE SPECIAL INSPECTOR SHALL, WHEN REQUIRED BY PROJECT SPECIFICATIONS, MARK SAMPLE LOCATION WITH STEEL STAMP ON EACH PIECE TESTED.
  7. THE SPECIAL INSPECTOR SHALL RECORD SAMPLE NUMBER AND LOCATION AND CHECK THAT SAMPLE IDENTIFICATION IS MAINTAINED AS SAMPLES ARE DELIVERED TO LABORATORY AND TESTED.
  8. THE SPECIAL INSPECTOR SHALL WHEN STEEL MEMBERS ARE DELIVERED TO FINISH AND NO "CROP ENDS" ARE AVAILABLE FOR SAMPLE CUTTING, COORDINATE CUTTING AND PATCHING REQUIREMENTS WITH THE ARCHITECT/ENGINEER

9A. WELDING OBSERVATION - (APPLICABLE TO SHOP AND FIELD)

1. THE SPECIAL INSPECTOR SHALL CHECK EACH WELDER'S CERTIFICATION AND VERIFY THAT THE WELDER DOES WORK ONLY AS QUALIFIED BY HIS CERTIFICATION
2. THE SPECIAL INSPECTOR SHALL KEEP A WRITTEN RECORD OF EACH WELDER BY NAME, IDENTIFICATION NUMBER AND HIS IDENTIFYING STEEL MARK, IF APPLICABLE, AND THE PERCENTAGE OF REJECTABLE WELDS.
3. THE SPECIAL INSPECTOR SHALL UPON DETECTION OF REJECTABLE WELD (EITHER VISUALLY OR BY NONDESTRUCTIVE TEST), THE INSPECTOR OF RECORD WILL NOTIFY THE WELDER AND HIS FOREMAN FOR VERIFICATION OF DEFECT. THE INSPECTOR OF RECORD WILL OBSERVE REMOVAL, REWORK, OR REPAIRS.
4. THE SPECIAL INSPECTOR SHALL CHECK STRUCTURAL MEMBERS FOR THICKNESS ADJACENT TO WELDS, OPENING, ETC. REWORK, OR REPAIRS.
5. THE SPECIAL INSPECTOR SHALL INSPECT JOINTS FOR PROPER PREPARATION, INCLUDING BEVEL, ROOT FACES, ROOT OPENING, ETC. REWORK, OR REPAIRS.
6. THE SPECIAL INSPECTOR SHALL CHECK THE TYPE AND SIZE OF ELECTRODES TO BE USED FOR THE VARIOUS JOINTS, AND POSITIONS. CHECK THE STROGAGE FACILITIES TO SEE IF THEY ARE ADEQUATE TO KEEP THE ELECTRODES DRY.
7. THE SPECIAL INSPECTOR SHALL OBSERVE THE TECHNIQUE OF EACH THE SPECIAL INSPECTOR SHALL WELDER WITH USE OF A WELDING INSPECTION SHIELD.
8. THE SPECIAL INSPECTOR SHALL VERIFY THE USE OF PROPER PREHEAT AND INTER PASS TEMPERATURES. INSPECTOR SHALL WELDER WITH USE OF A WELDING INSPECTION SHIELD.
9. THE SPECIAL INSPECTOR SHALL CONTINUOUSLY OBSERVE MULTI-PASS WELDS. CONTINUOUS INSPECTION IS DEFINED AS FOLLOWS: THE INSPECTOR IS PRESENT IN THE WELDING AREA AT ALL TIMES AND IS FULLY AWARE OF THE PROGRESS OF THE WELDING AT ANY GIVEN TIME. THE INSPECTOR MAY WATCH MULTIPLE WELDERS PROVIDED THEY ALL BE IN THE AREA, CLOSE ENOUGH FOR EFFECTIVE VISUAL INSPECTION OF THE WORK PERFORMED.
10. THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE OPERATOR IS CAPABLE OF PRODUCING THE REQUIRED WELDS.
11. THE SPECIAL INSPECTOR SHALL OBSERVE SINGLE PASS FILLET WELDS PERIODICALLY, OR MORE OFTEN IF CODES AND SPECIFICATIONS REQUIRE.
12. THE SPECIAL INSPECTOR SHALL, IF STRAIGHTENING OR RESTRAINING OF WELDMENTS IS NECESSARY, VERIFY THAT APPROVED METHODS WILL BE USED.
13. THE SPECIAL INSPECTOR SHALL TAG OR STAMP ACCEPTED WELDMENTS WITH THE INSPECTOR'S IDENTIFICATION STAMP. APPROVED METHODS WILL BE USED.

8A. PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:		YES	NO	N/A
FOUNDATION	A. COMPACTED FILL, GRADING, AND EXCAVATIONS	X		
	B. CONTINUOUS INSPECTION OF PIERS			X
CONCRETE	A. CONTINUOUS INSPECTION AND TEST CYLINDERS FOR CONCRETE.	X		
	B. CONTINUOUS INSPECTION FOR SLAB CONCRETE		X	
	C. TEST CYLINDERS FOR SLAB CONCRETE	X		
	D. ANCHOR BOLTS OR EMBEDS IN CONCRETE (INSTALLATION AND CONCRETE PLACEMENT)		X	
DRILLED IN ANCHORS	A. ALL ADHESIVE ANCHORS, RODS, DOWELS, SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION.			X
	B. ADDITIONAL TESTING MAY BE REQUIRED AS SPECIFIED ON THE PLANS.			X
	C. ADHESIVE ANCHORS IN CONCRETE OR MASONRY	X		
REINFORCING STEEL	A. PLACING OF REINFORCING		X	
	B. SAMPLING AND TESTING STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL)		X	
WELDING	A. ALL STRUCTURAL WELDING EXCEPT WELDING IN APPROVED SHOPS	X		
	B. ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS , AND FIELD WELDS.	X		
	C. STRUCTURAL LIGHT GAGE METAL FRAME WELDING.			X
	D. REINFORCING STEEL WELDING	X		
BOLTING	A. HIGH STRENGTH BOLT A325 & A490 (TORQUE VERIFICATION)	X		
	B. HIGH STRENGTH BOLT A325N,X & A480N,X (SNUG CONTACT OF PLYS)	X		
MASONRY	A. SAMPLING OF MASONRY UNITS	X		
	B. MASONRY PRISM CONSTRUCTION			X
	C. MORTAR SAMPLING			X
	D. CONTINUOUS INSPECTION DURING PLACEMENT AND GROUTING OF MASONRY UNITS AND REINFORCEMENT PLACEMENT.			X
	E. ANCHOR BOLTS OR EMBEDS IN MASONRY (INSTALLATION AND GROUT PLACEMENT)			X
INSULATING CONCRETE FILL	A. TEST CYLINDERS AND INSPECTIONS			X
STRUCTURAL STEEL	A. MILL REPORTS AND IDENTIFICATION OF STEEL (AFFIDAVIT OF COMPLIANCE)		X	
	B. SAMPLING AND TESTING		X	
	C. DURING PLACEMENT OF PAINT AS SPECIFIED BY THE ARCHITECT.		X	
SHEAR DIAPHRAGMS	A. INSPECTION OF SHEATHING PLACEMENT AND NAIL SPACING			X
APPROVED FABRICATORS	APPROVED FABRICATORS: MUST SUBMIT CERTIFICATE OF COMPLIANCE FOR ALL OFF SITE FABRICATION SUCH AS STRUCTURAL STEEL GLU-LAMS PRECAST CONCRETE, ETC.	X		
STRUCTURAL OBSERVATION	STRUCTURAL OBSERVATIONS REQUIRED. WHEN REQUIRED BY THIS ENGINEER OR THE BUILDING DEPARTMENT, THE CONTRACTOR SHALL EMPLOY AN ENGINEER APPROVED BY THE EOR TO PERFORM STRUCTURAL OBSERVATION.	X		

FASTENING SCHEDULE

MATERIALS	FASTENER	FREQUENCY OR QUANTITY
CEILING JOIST TO WOOD TOP PLATE	1" - 1 1/8" #10	1 AT EACH JOIST
CEILING JOIST TO TOP PLATE TRACK	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	1 AT EACH JOIST
CONNECTION CLIP TO TOP PLATE TRACK	1" -1 1/8" #10	4 AT EACH CLIP TO TOP PLATE
CONNECTION CLIP TO TOP PLATE TRACK	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	4 AT EACH CLIP TO TOP PLATE
CONNECTION CLIP TO CEILING JOIST	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 3 AT EACH CLIP TO CEILING JOIST AND AS PER LOADING
CONNECTION CLIP TO RAFTER	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 3 AT EACH CLIP TO RAFTER AND AS PER LOADING
CEILING JOIST TO PARALLEL RAFTER	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	NO. VARIES AS PER LOADING
CEILING JOIST TO TRUSS WEB	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 2 AT FLANGE AND AS PER LOADING JOIST
CEILING JOIST, OVERLAPPED AT SUPPORT	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 2 AT WEB
CONNECTION CLIP TO RIDGE BOARD	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	4 - 6 AT EACH CLIP TO RIDGE
RAFTERS OVERLAPPED AT RIDGE	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 6 AT OVERLAPPED WEB SECTION AND AS PER LOADING
BUILT UP BEAM (RIDGE BOARD)	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	1 AT EACH FLANGE AT 12" O.C.
STIFFBACK BRACING TO JOIST	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 2 AT EACH JOIST
SUB-FASCIA TRACK TO RAFTER	5/8" - 3/4" #10 SELF DRILLING LOW PROFILE PAN HEAD	1 AT EACH CONNECTION CLIP AND MAX TOP PLATE
WOOD FASCIA TO SUB-FASCIA TRACK	1 5/8" #6 TRIM HEAD	2 AT 24" O.C. AND AT MAXIMUM OF 12" FROM EACH END OF BOARD OR CORNER
STUD TO PLATE TRACK (BOTTOM)	5/8" - 3/4" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH FLANGE
STUD TO PLATE TRACK (TOP)	5/8" - 3/4" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH FLANGE
DIAGONAL BRACING TO STUD	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH STUD
LATERAL BRACING TO STUD	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH STUD PER STRAP OR 3 AT CONNECTION CLIP WITH COLD ROLLED CHANNEL
STUD TO STUD (NESTED)	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT 24" O.C. THROUGH FLANGE
STUD TO STUD (BACK TO BACK)	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT 24" O.C. THROUGH WEB
STUD TO STUD (AT WALL INTERSECTION)	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT 24" O.C. OR 1 AT EACH BLOCKING
LINTEL TO STUD	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	REQUIREMENT VARIES WITH DIFFERENT LOADING
WALL BOTTOM TRACK (RUNNER) TO FOUNDATION	1/2" DIAMETER ANCHOR BOLT	4'-0" O.C., (1) 9" FROM END OF WALL OR EACH SIDE OF SPLICE

NOTES:

(1) LOW PROFILE HEAD IS USED IN LIEU OF PAN OR HEX WASHER HEADS WHERE LEAST PROJECTION OF FASTENER IS DESIRED.

(2) S-7 POINT WILL SUBSTITUTE S-12 WHEN ATTACHING .07" MEMBERS TOGETHER.

(3) #2 POINT SELF DRILLING SCREW WILL BE SUBSTITUTED BY #3 POINT SELF DRILLING SCREW WHEN STEEL THICKNESS VARIES BETWEEN .09" TO .250". CONSULT MFG. RECOMMENDED THICKNESS FOR DRILL CAPACITY.

METAL BUILDING SYSTEM

1. PRE-MANUFACTURED METAL BUILDING SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND HAVING THREE (3) OR MORE YEARS EXPERIENCE IN THE DESIGN OF THE TYPE OF THE BUILDING INDICATED ON THE CONTRACT DOCUMENTS.
2. THE METAL BUILDING AND COMPONENTS SHALL BE DESIGNED TO CARRY ITS OWN WEIGHT PLUS ALL SUPERIMPOSED DEAD AND LIVE LOADS INCLUDING WIND LOADS FROM ALL DIRECTIONS AND INCLUDING ALL MECHANICAL, ELECTRICAL AND ARCHITECTURAL LOADS. VERIFY ALL LOADS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL PLANS.
3. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO DESIGN, FABRICATION OR ERECTION OF PRE-MANUFACTURED BUILDINGS.
4. PRE-MANUFACTURED BUILDING FRAMES AND THE CONNECTION OF FRAME TO THE FOUNDATION IS TO BE DESIGNED BY OTHERS AND IS NOT THE RESPONSIBILITY OF SER CONTRACTOR SHALL COORDINATE THE CONNECTION OF THE BUILDING FRAME WITH THE SUPPLIER PRIOR TO CONSTRUCTION.
5. THIS FOUNDATION HAS BEEN DESIGNED USING ASSUMED REACTIONS FROM THE PRE-MANUFACTURED BUILDING COMPONENTS AND IS FOR BID PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT BASE CONNECTION DETAILS (SIZE AND THICKNESS BASE PLATE AND DIAMETER AND LENGTH ANCHOR BOLTS) AND REACTIONS OF THE BUILDINGFRAMES TO THE ENGINEER PRIOR TO CONSTRUCTION SO THE DESIGN ASSUMPTIONS CAN BE VERIFIED. DEPTH OF ANCHOR BOLTS SHALL BE SUFFICIENT TO PREVENT CONICAL SHEAR OF THE CONCRETE FOUNDATION.
6. METAL BUILDING SUPPLIER SHALL PROVIDE AND SUBMIT FOR REVIEW ALL DESIGN CALCULATIONS AND DRAWINGS. ALLOW TWO (2) WEEKS FOR REVIEW OF SHOP DRAWINGS.
7. ANY ADDITIONAL COST OF FOUNDATION WORK REQUIRED BY REVISIONS OF THE FOUNDATION DESIGN AFTER PRE-MANUFACTURED BUILDING REACTIONS ARE SUBMITTED SHALL BE BY OTHERS.
8. METAL ROOF DOES NOT PROVIDE LATERAL BRACING FOR THE PURLINS, BRIDGING SHALL BE DESIGNED AND SUPPLIED BY THE PURLIN MANUFACTURER.
9. REFER TO MECHANICAL DRAWINGS FOR ROOF SUPPORTED HVAC UNITS AND PROVIDE SUPPORT FOR ADDITIONAL LOADS AS REQUIRED.
10. MAXIMUM PURLIN SPACING SHALL BE 5'-0" O.C. WITH A MAXIMUM ALLOWABLE TOTAL DEFLECTION OF L/240.
11. PRE-MANUFACTURED BUILDING MANUFACTURER SHALL PROVIDE ADDITIONAL FRAMING REQUIRED TO SUPPORT THE WEIGHT MECH'L UNITS AND PROVIDE PROPER SERVICEABILITY OF SUSPENDED MECHANICAL UNITS, MECHANICAL DUCTWORK, LIGHT FIXTURES, AND ALL OTHER SUSPENDED ITEMS AND ITEMS SUPPORTED ON TOP OF ROOF.
12. DETAILS SHALL BE INCLUDED WHICH CLEARLY DETAIL RIGID FRAME BASE, HAUNCH, RIDGE PLATE CONNECTIONS AND OTHER MEMBER-TO-MEMBER CONNECTIONS.
13. WIND LOAD DESIGN SHALL INDICATE METHOD OF TRANSFERRING FORCES TO: A. END WALL WIND LOAD TO SIDE WALL FOUNDATIONS. B. AT END BAY SIDE WALL WIND LOAD TO END WALL FOUNDATIONS, CALCULATIONS SHALL SHOW HOW WIND LOAD IS TRANSFERRED TO EAVE STRUT.
14. PORTAL MOMENT FRAMES SHALL BE USED TO RESIST HORIZONTAL WIND FORCES. DESIGN OF ALL CONNECTIONS SHALL BE CLEARLY INDICATED.
15. DESIGN OF HORIZONTAL CROSS-BRACING IN PLANE OF ROOF FRAMING SHALL BE COMPLETE AND SHALL INDICATE METHOD OF TRANSFERRING TRIBUTARY WIND LOAD TO RIGID FRAMES OR THE SIDE WALL PORTAL FRAMES.
16. ALL COLUMN BASE PLATES SHALL BE SET AND GROUTED UNDER FOR FULL CONTACT BEARING.
17. ALL BASES FOR THE COLUMNS SHALL BE "PINNED" AND NOT ASSUMED AS FIXED. NO MOMENT FORCES SHALL BE TRANSFERRED INTO THE BUILDING FOUNDATION.
18. PROVIDE BUILDING CROSS SECTIONS AND ELEVATIONS WHICH CLEARLY SHOW THE PRIMARY STRUCTURAL RIGID MOMENT FRAME, PORTAL MOMENT FRAME, END WALL POST AND BEAMS, INTERIOR COLUMNS, AND OTHER STRUCTURAL MEMBERS THAT ARE TO BE USED ON THE SUBMITTED BUILDING. SIZE OF ALL STANDARD AISC MEMBERS AND OF ALL WEB AND FLANGE SECTIONS USED IN BUILT UP MEMBER SHALL BE NOTED AS WELL AS ALL BOLTS AND WELDING.
19. DESIGN AND MEMBERS FOR FRAMED OPENINGS SHALL BE PROVIDED AS PART OF THE METAL BUILDING DESIGN.
20. LATERAL SUPPORT BEAMS SHALL BE DESIGNED BY METAL BUILDING SYSTEM SUPPLIER
21. DEFLECTION CRITERIA
    - a. GIRTS SUPPORTING METAL STUD WALLS L/360
    - b. GIRTS SUPPORTING CMU WALLS L/480
    - c. HORIZONTAL DEFLECTION OF FRAME L/360
    - d. VERTICAL DEFLECTION OF FRAME L/240
    - e. LATERAL SUPPORT BEAMS FOR METAL STUD WALLS L/360
    - f. LATERAL SUPPORT BEAMS FOR CMU WALLS L/480

22. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
    - a. SECTION 3. IN CASE OF DESCREPENCY, STRUCTURAL ENGINEERS DRAWINGS GOVERN.
    - b. SECTION 4.2.1, DELETE FIRST TWO SENTENCES.
    - c. SECTION 4.2.2. ANY CHANGES, ADDITIONS OR DELETIONS REQUIRER APPROVAL FROM OWNER, CONTRACTOR AND ENGINEER.
    - d. SECTION 7. ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
    - e. SECTION 7.9.3, THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF CONSTRUCTION
    - f. SECTION 7.9.4, THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
23. STEEL SHOP SHALL BE AISC CERTIFIED AND LOCATED WITHIN 200 MILES FROM JOBSITE.

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4/15/2020

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NO.	DATE	DESCRIPTION

DE LA VINA ELEMENTARY
GYMNASIUM RENOVATIONS &
ADDITION

PROJECT NO: 20119a	
DATE: 4/15/2020	
STARTING DATE:	
CK BY:	DWN BY:

General Notes

S102

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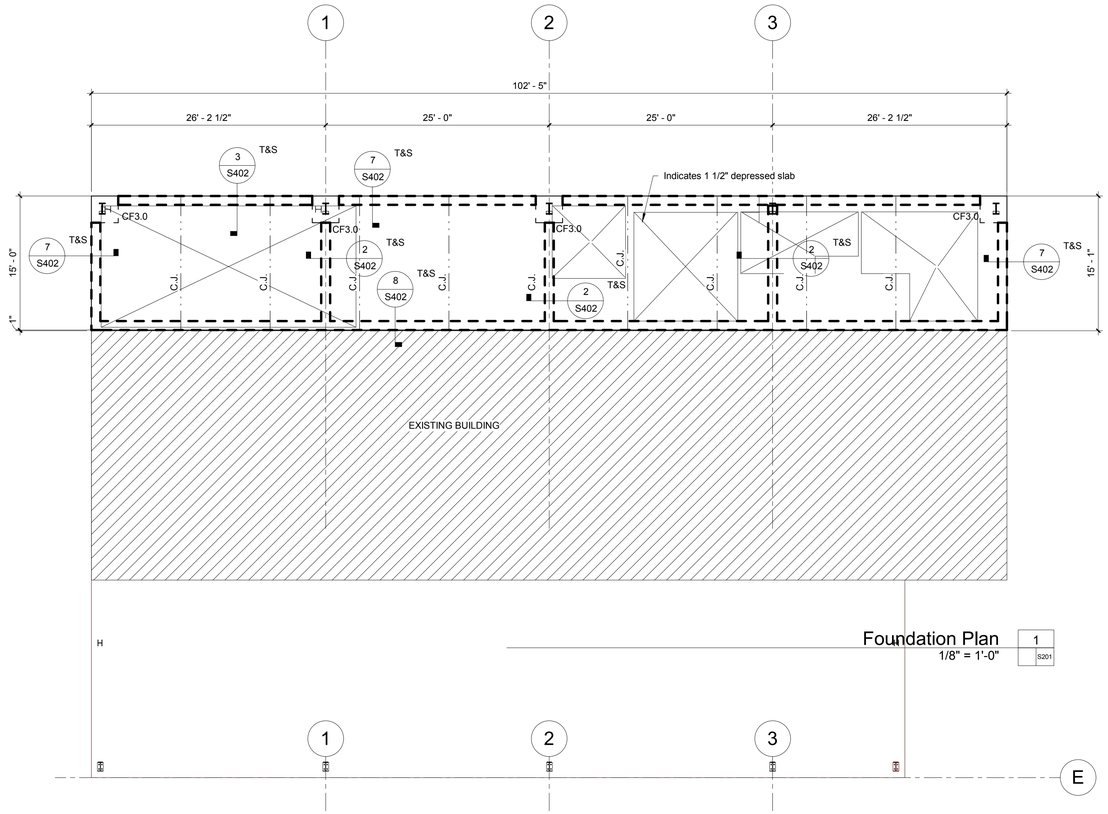
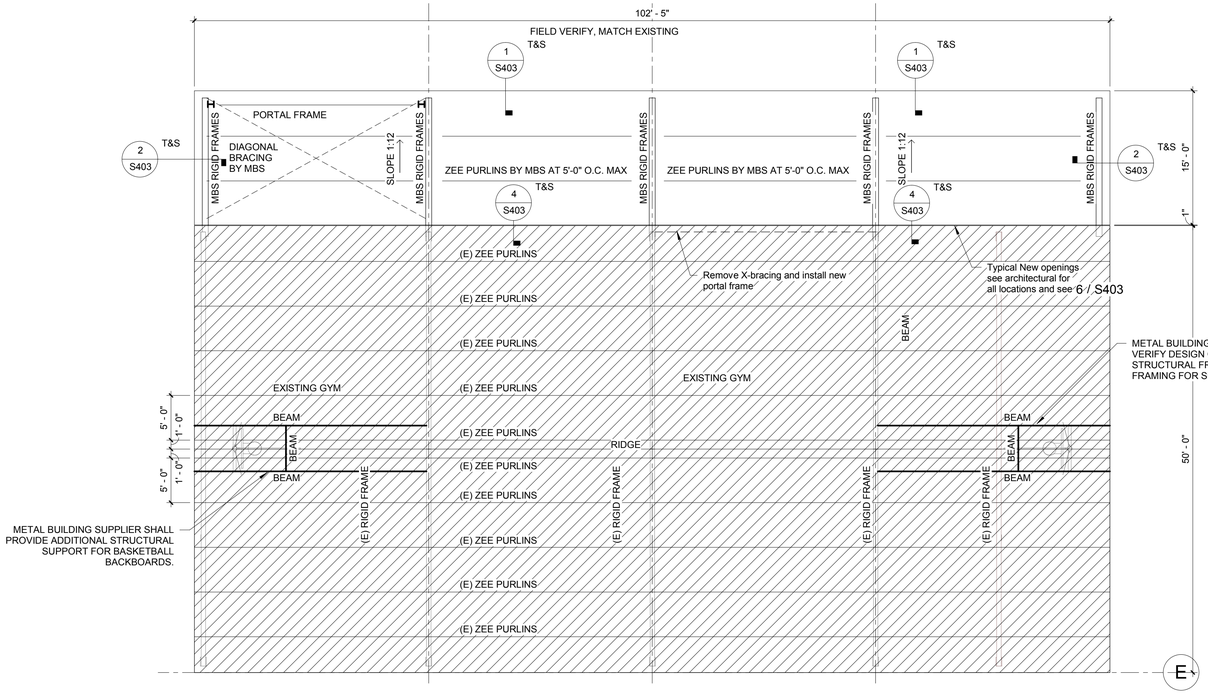


Foundation Plan 1
1/8" = 1'-0" S201



Roof Framing Plan 2
1/8" = 1'-0" S201

Structural Foundation Schedule							
Type	Length	Width	Thickness	Reinforcing A Bar Quantity	Reinforcing A Bar Size	Reinforcing B Bar Quantity	Reinforcing B Bar Size
CF3.0	3' - 0"	3' - 0"	3' - 0"	4	5	4	5

FOUNDATION NOTES

1. FOR GENERAL NOTES SEE SHEET S101 AND S102.
2. FOR TYPICAL DETAILS SEE SHEETS NUMBER S400
3. CONTRACTOR/SUBCONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR AND OR SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER BEFORE THE WORK HAS BEGUN.
4. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS.
5. REFER TO ARCHITECTURAL PLANS FOR FLOOR DRAIN LOCATIONS.
6. SLOPE SLAB TO DRAINS, SEE ARCHITECTURAL PLANS FOR SLOPE.
7. REFER TO ARCHITECTURAL PLANS FOR FLOOR FINISHES. ENGINEER IS NOT RESPONSIBLE FOR TYPE OF FLOOR FINISHES.
8. PROVIDE SLAB CONTRACTION JOINTS PER TYPICAL DETAIL.
9. THE TESTING LABORATORY SHALL BE THE OWNERS REPRESENTATIVE TO CONTROL THE PLACEMENT OF COMPACTED FILL. THE TESTING LABORATORY SHALL APPROVE THE SUBGRADE PREPARATION, THE FILL MATERIALS, THE METHOD OF PLACEMENT AND COMPACTION, AND COMPACTION, AND SHALL GIVE WRITTEN APPROVAL OF THE COMPLETED FILL. THE TESTING LABORATORY SHALL INDICATE ON THERE REPORT THE ELEVATION OF THE COMPACTED SUBGRADE.
10. ALL EARTHWORK AND GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING STUDY. THE MORE STRINGENT REQUIREMENTS BETWEEN THESE SUBGRADE NOTES AND GEOTECHNICAL ENGINEERING STUDY SHALL GOVERN AND EXECUTED BY THE CONTRACTOR.
11. IN THE EVENT FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
12. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.
13. THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED BY THE TESTING LABORATORY PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED IN THE STUDY. THIS IS ESPECIALLY IMPORTANT TO IDENTIFY THE ACCEPTABILITY OF THE SUBGRADE OR FILL MATERIAL UNDER THE FOOTING. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING OR BEAM EXCAVATIONS SHOULD BE EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT SOIL AS DIRECTED BY THE TESTING LABORATORY. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHOULD BE BACKFILLED WITH LEAN CONCRETE OR SELECT FILL AS DETERMINED BY THE TESTING LABORATORY.
14. CARE SHOULD BE TAKEN TO SHAPE THE BUILDING AREAS SUCH THAT WATER WILL NOT POND AROUND THE STRUCTURE DURING CONSTRUCTION AND CAUSE THE NEAR SURFACE CLAYS TO SWELL. THE PROPOSED STRUCTURE SHALL BE ISOLATED FROM ANY MOISTURE SOURCE WHICH MIGHT ALSO CAUSE SWELLING OF THE CLAYS AFTER COMPLETION OF THE CONSTRUCTION.
15. WHEN THE STRUCTURE IS COMPLETE, THE GROUND SURFACE SHOULD SLOPE AWAY FROM THE STRUCTURE AND DOWN SPOUTS SHOULD CARRY RUNOFF WATER SEVERAL FEET FROM THE BUILDING, PREFERABLY INTO PAVED AREAS OR SEWERS, BEFORE DISCHARGING.
16. DO NOT PLANT, OR LEAVE IN PLACE, DEEP ROOTED TREES WITHIN CLOSE PROXIMITY TO THE PERIMETER OF THE STRUCTURE. DEEP ROOTED TREES HAVE POTENTIAL TO REMOVE MOISTURE FROM BENEATH THE BUILDING IF PLANTED CLOSE ENOUGH TO ALLOW THE ROOT BULB EXTEND NEAR OR BENEATH THE BUILDING.
17. AIR CONDITIONING CONDENSER DRAIN LINES TO DISCHARGE WATER A MINIMUM OF 5 FEET FROM THE PERIMETER OF THE STRUCTURE. THE DISCHARGE AREA SHALL HAVE SUFFICIENT SLOPE AWAY FROM THE STRUCTURE TO PREVENT STANDING WATER.
18. THE FINAL ONE (1) FOOT OF FILL OUTSIDE THE BUILDING AREA SHOULD CONSIST OF A COHESIVE CLAYEY (CL) SOIL. FILL CAN NOT BE ALLOWED TO DRY OUT DURING OR AFTER COMPACTION. (P1 BETWEEN 15 AND 25).
19. NOTE THAT SOME LEVELS OF RISK ARE ASSOCIATED WITH ALL FOUNDATION SYSTEMS AND THERE IS NO SUCH THING AS A "ZERO RISK" FOUNDATION. IT ALSO SHOULD BE NOTED THAT THE FOUNDATION PROVIDED IS NOT DESIGNED TO RESIST SOIL MOVEMENT AS A RESULT OF SEWER/PLUMBING LEAKS, EXCESSIVE IRRIGATION, NON UNIFORM IRRIGATION, POOR DRAINAGE, AND WATER PONDING NEAR THE FOUNDATION SYSTEM.
20. CONSTRUCTION FOLLOWING WET WEATHER PERIODS WILL LIKELY ENCOUNTER DIFFICULTIES DUE TO THE WET OR SOFT SURFACE SOILS BECOMING A GENERAL HINDRANCE TO EQUIPMENT DUE TO RUTTING AND PUMPING OF THE SOIL SURFACE. IF THE SUBGRADE CANNOT BE ADEQUATELY COMPACTED TO MINIMUM DENSITIES AS DESCRIBED ABOVE, ONE OF THE FOLLOWING MEASURES WILL BE REQUIRED:
    a) REMOVAL AND REPLACEMENT WITH SELECT FILL;
    b) CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE,
    c) DRYING BY NATURAL MEANS.

SLAB ON GRADE	
THICKNESS	5.0 INCHES
REINFORCING (EACH WAY)	#4 AT 14" O.C.
REINFORCING LOCATION	MID DEPTH
VISQUEEN	15 MIL
CONCRETE CHAIRS (NO PLASTIC CHAIRS ALLOWED)	3' O.C. EACH WAY

SUBGRADE PREPARATION

1. SITE PREPARATION

A. PREPARATION OF EXISTING GROUND

ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL:	8	INCHES
ADDITIONAL DEPTH OF REMOVAL:	*52	INCHES
EXTEND BEYOND BUILDING FOOT PRINT:	5	FEET
EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF:	12	INCHES
MOISTURE: (OPTIMUM MOISTURE CONTENT)	-2 TO +2%	
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):	95%	

B. SELECT FILL MATERIAL

AMOUNT OF COMPACTED SELECT FILL:	60*	INCHES
NO ORGANIC OR OTHER PERISHABLE MATERIAL NO STONES LARGER THAN	2	INCHES

*FINISHED FLOOR SHALL BE AS INDICATED ON CIVIL DRAWINGS, INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENT. INCREASE EXCAVATION AS REQUIRED TO MEET MINIMUM AMOUNT OF SELECT FILL

FILL MATERIAL SHALL BE AS INDICATED ON THE GEOTECHNICAL REPORT.

C. PLACING SELECT FILL

FILL LIFTS (LOOSE MEASURE, NOT EXCEEDING):	8	INCHES

D. COMPACTION OF SELECT FILL

MOISTURE: (OPTIMUM MOISTURE CONTENT)	0 TO +4	
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):	98%	

E. COMPACTION TESTING

ATTERBERG LIMITS (ONE AT A RATE OF):	5,000	CU. YDS.
COMPACTION (ONE TEST PER):	2,500	SQ. FT./ LIFT (MIN. OF 3 PER LIFT)

Framing Notes

1. FOR GENERAL NOTES SEE SHEET S101 and S102.
2. FOR TYPICAL DETAILS SEE SHEETS S400's.
3. DIMENSIONS SHOWN ARE FOR GENERAL INFORMATION. COORDINATE WITH ARCHITECTURAL PLANS.
4. SEE MECHANICAL PLANS FOR MECHANICAL OPENINGS.
5. DESIGN OF MBS PURLINS UNDER UNITS WITH LOADS INDICATED ON THE DRAWINGS PER DESIGN CRITERIA. MBS PURLINS SHALL BE DESIGNED BY MBS SUPPLIER DESIGN PURLINS FOR 1/600. (MECHANICAL WEIGHT+ DEAD LOAD ONLY) COORDINATE OPENINGS WITH MECHANICAL PLANS.
6. PURLIN MANUFACTURER TO VERIFY THE MINIMUM ROW OF BRIDGING AND SIZE.

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STATE OF TEXAS
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REGISTERED PROFESSIONAL ENGINEER

4/15/2020

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NO.	DATE	DESCRIPTION

DE LA VINA ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119a
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:
Foundation Plan

S201

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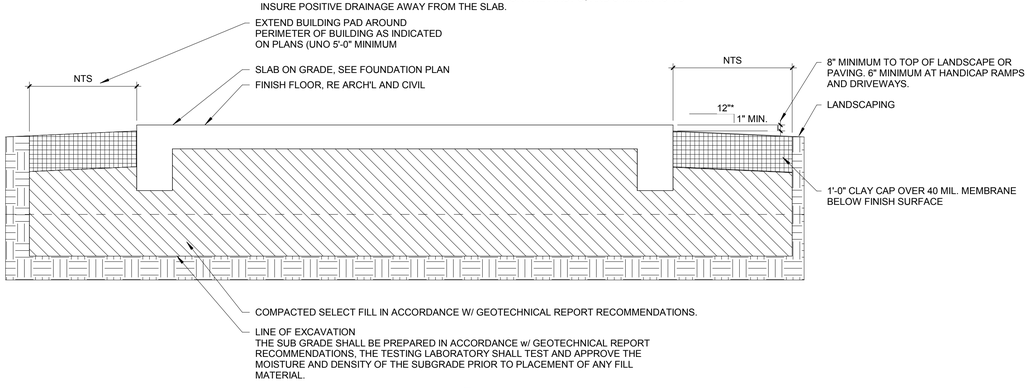
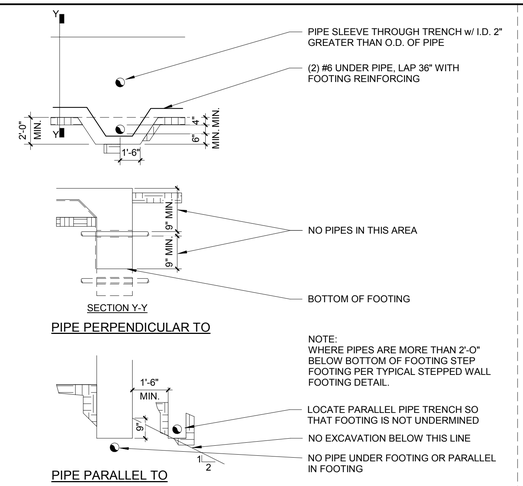
NOTE TO OWNER:
DRAINAGE OF THE SITE MUST BE MAINTAINED THROUGHOUT THE LIFE OF THE STRUCTURE. THE SOIL AT THIS SITE IS HIGHLY SENSITIVE TO CHANGE IN THE SOIL MOISTURE CONTENT AND WILL DAMAGE THE STRUCTURE IF THE MOISTURE CONTENT INCREASES OR DECREASES.

* INITIAL ROUGH GRADING SHALL BE COMPLETED w/ NATURAL CLAY MATERIALS (NO SAND ALLOWED) PRIOR TO FORM SETTING IT SHALL SLOPE 1"/ FOOT FOR THE FIRST 5', AND 6' MIN. IN 10' TO INSURE POSITIVE DRAINAGE AWAY FROM THE SLAB.

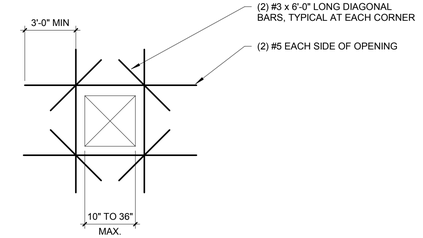
NOTE TO CONTRACTOR
PROVIDE PUMPS ON SITE AND REMOVE ANY WATER FROM THE SITE 100% OF THE TIME. STANDING WATER IN THE EXCAVATION AT ANYTIME, DAY OR NIGHT, IS UNACCEPTABLE.



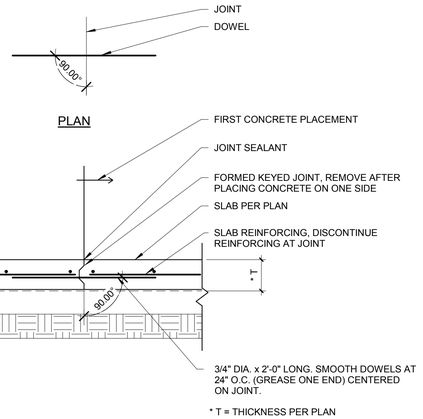
Typical Building Subgrade Preparation
1" = 1'-0"
7 / S401



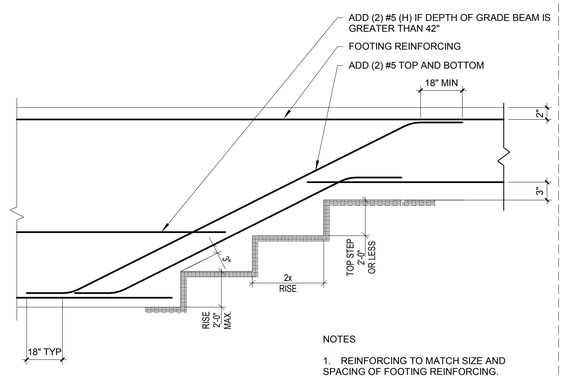
Typical Piping Through Footing
3/8" = 1'-0"
4 / S401



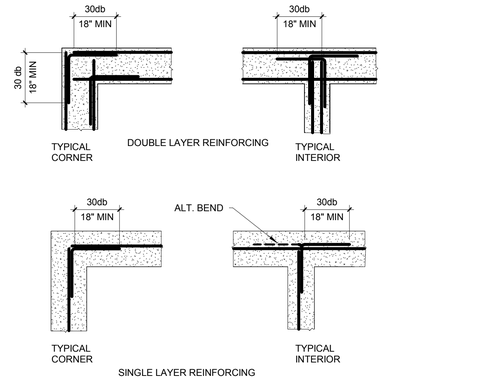
Typical Slab Opening Reinforcing
1/4" = 1'-0"
1 / S401



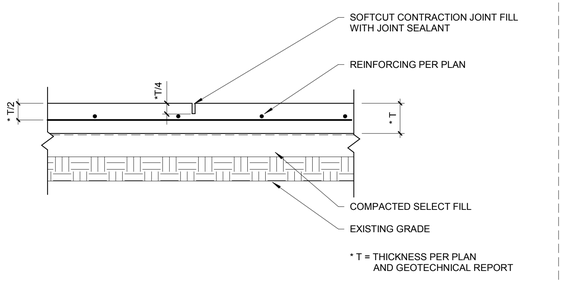
Typical Slab Construction Joint
1" = 1'-0"
8 / S401



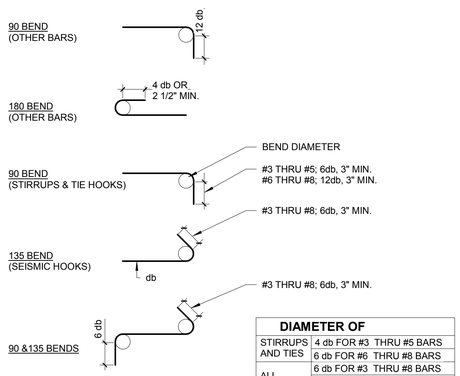
Typical Stepped Footing
1" = 1'-0"
5 / S401



Typical Reinforcing at Concrete Intersections
1/4" = 1'-0"
2 / S401



Typical Slab Contraction Joint
1" = 1'-0"
6 / S401



DIAMETER OF	
STIRRUPS AND TIES	4 db FOR #3 THRU #5 BARS
	6 db FOR #6 THRU #8 BARS
ALL OTHERS	6 db FOR #3 THRU #8 BARS
	8 db FOR #9 THRU #11 BARS
	10 db FOR #14 THRU #18 BARS

Typical Reinforcing Bends
1/4" = 1'-0"
3 / S401

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DE LA VINA ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119a
DATE: 4/15/2020
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CK BY: DWN BY:
Typical Concrete Details

S401

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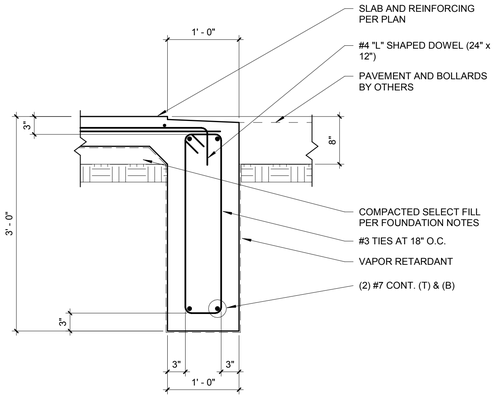
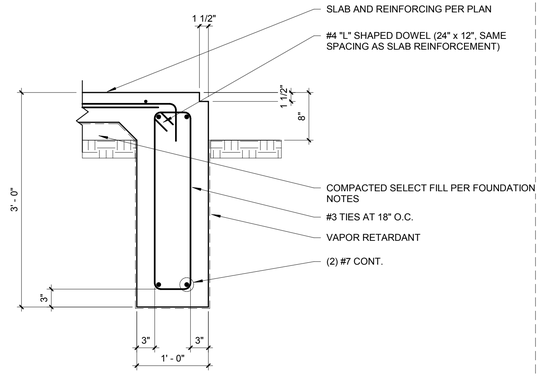
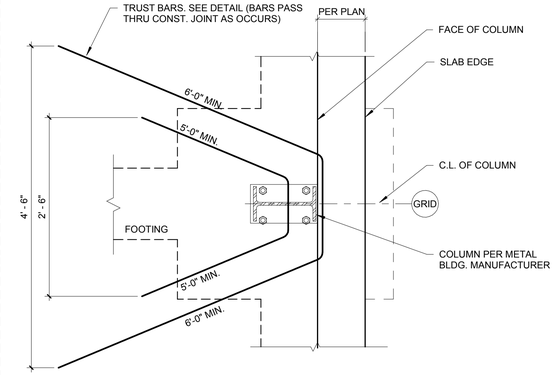


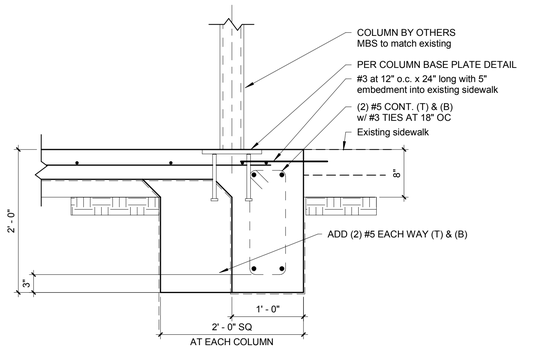
Footing at Exterior Overhead Door — 10 / S402
1" = 1'-0"



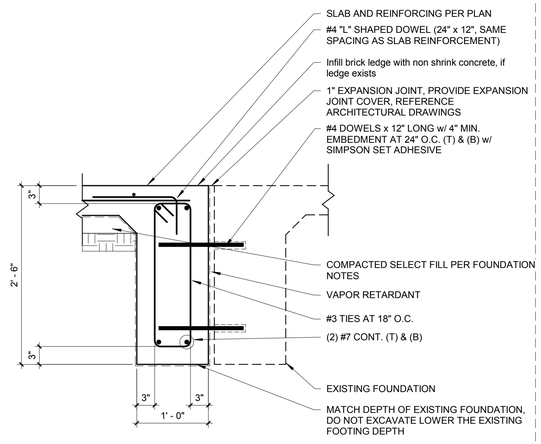
Footing at Exterior Wall at Metal Ledge — 7 / S201 S402
1" = 1'-0"



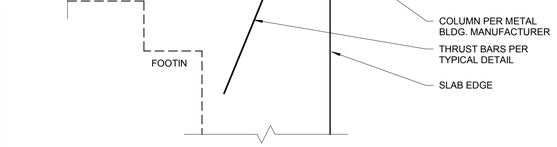
Footing at Thrust Bars at Interior Columns — 4 / S402 S402
1" = 1'-0"



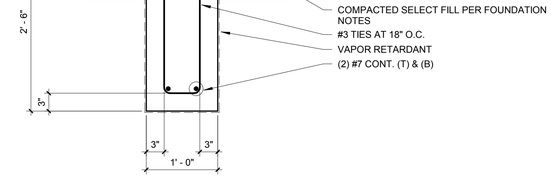
Footing at Exterior Steel Column, Porch — 1 / S402
1" = 1'-0"



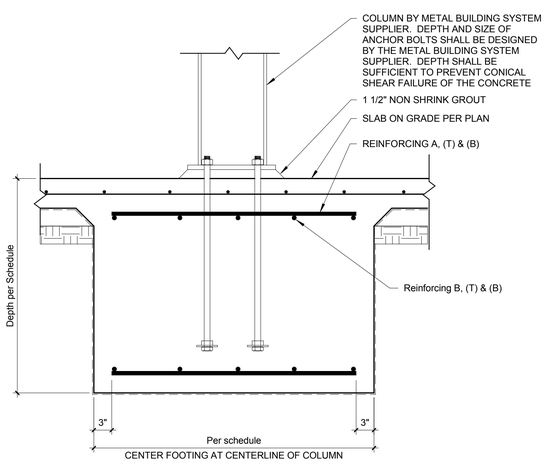
Footing at Expansion Joint at Existing Foundation — 8 / S201 S402
1" = 1'-0"



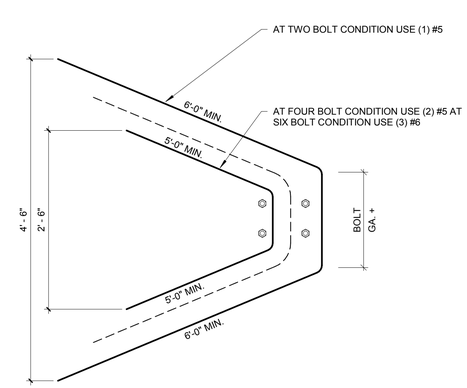
Footing Thrust Bar Detail — 6 / S402 S402
1" = 1'-0"



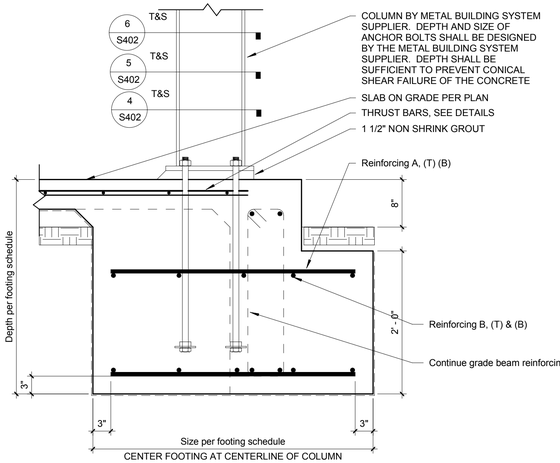
Footing at Interior — 2 / S201 S402
1" = 1'-0"



Footing at MBS Interior Column — 9 / S402
1" = 1'-0"



Footing Thrust Bar Detail — 6 / S402 S402
1" = 1'-0"



Footing at MBS Exterior Column — 3 / S201 S402
1" = 1'-0"

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STATE OF TEXAS
SIMON G. SOLORIO JR.
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REGISTERED PROFESSIONAL ENGINEER

4/15/2020

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DE LA VINA ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119a
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:

Foundation Details

S402

D:\ShareFile\Personal Folders\01 My Projects\2020 Solorio\20119 ROFA eciid\struc\20119a ROFA viva gym addition 04_15_20.rvt
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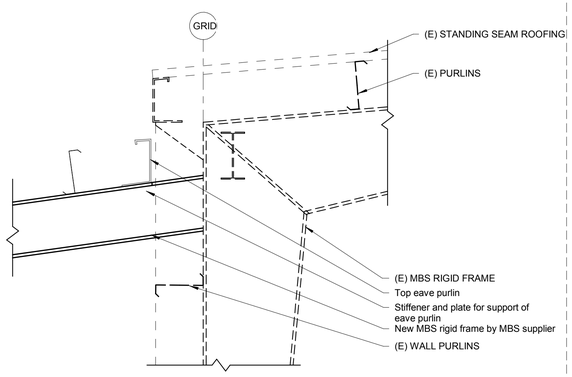
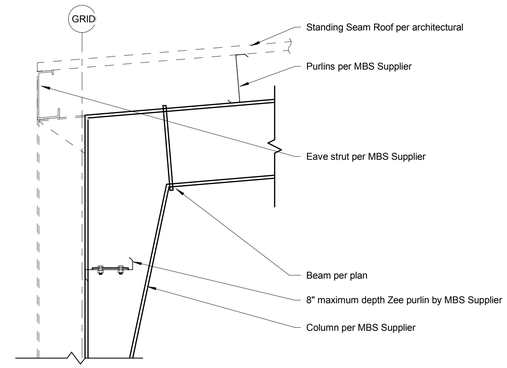


MBS High End at Parallel Purlins, to Existing
1" = 1'-0"

4 | S201 S403



MBS at Parallel Purlins
1" = 1'-0"

1 | S201 S403

Typical Framing for New Openings
1" = 1'-0"

6 | S403

MBS at Perpendicular Purlins
1" = 1'-0"

2 | S201 S403

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STARTING DATE:
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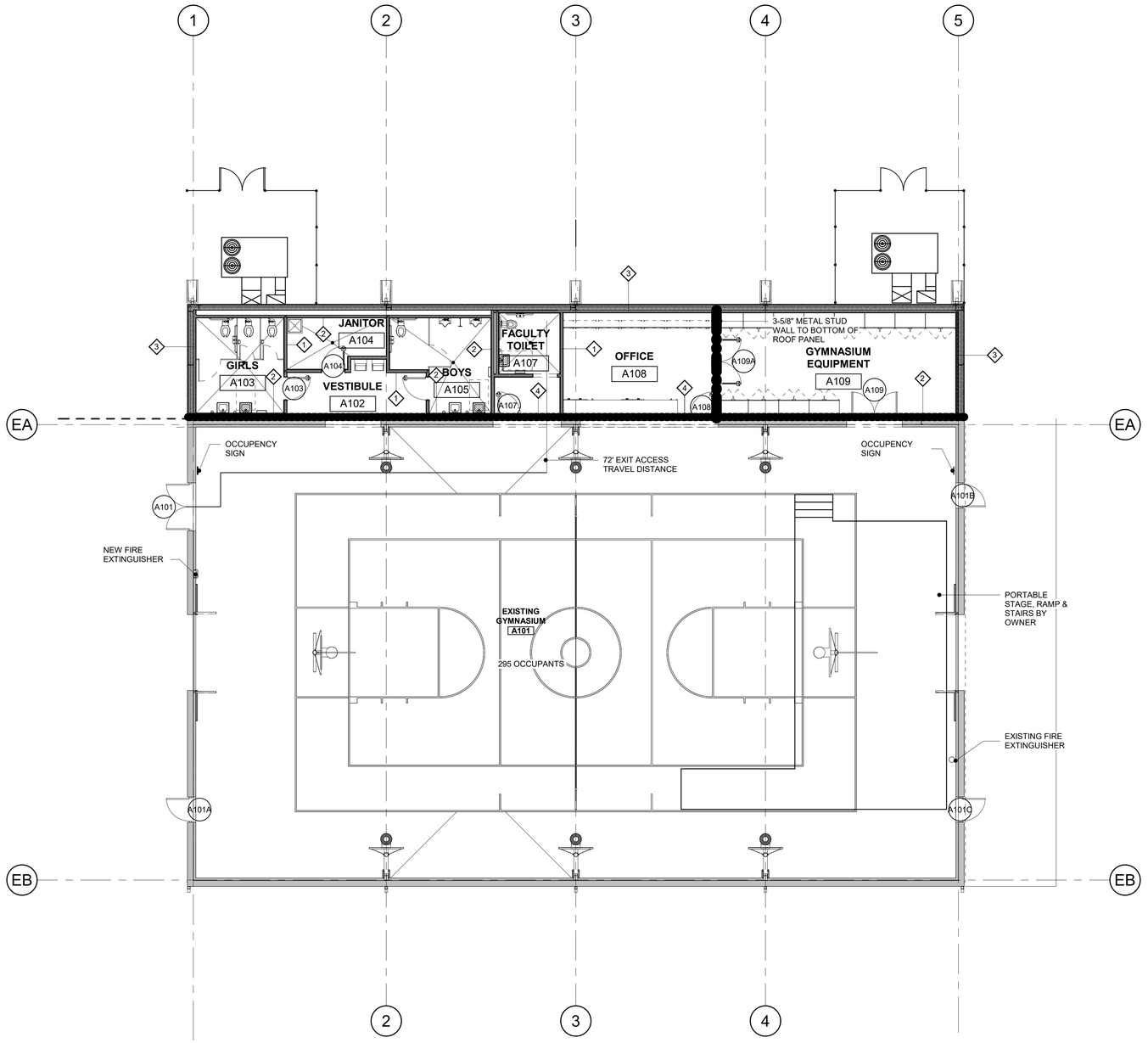
Typical Framing Details

S403

4/15/2020 1:53:02 PM D:\ShareFile\Personal Folders\01 My Projects\2020 Solorio\20119 ROFA ecisd\struc\20119a ROFA vina gym addition 04_15_20.rvt



FIRE PROTECTION. PLAN
DE LA VINA
1/8" = 1'-0"
1
N

1 INTERIOR WALL: 5/8" TYPE X GYPSUM BOARD WITH A 3-5/8" METAL STUD @ 16" O.C. & R-13 SOUND INSULATION FOLLOWED BY A 5/8" TYPE X GYPSUM BOARD. FOR A TOTAL OF 4 7/8"

2 INTERIOR WALL: 5/8" TYPE X GYPSUM BOARD WITH A 3-5/8" METAL STUD @ 16" O.C. & R-13 SOUND INSULATION FOR A TOTAL OF 4 1/4"

3 EXTERIOR WALL: 1-1/4" "PBR" WALL PANEL WITH A 8" C-CHANNEL, FOLLOWED BY A 3-5/8" METAL STUD LAYER, WITH 5/8" TYPE X GYPSUM BOARD. FOR A TOTAL 1'-1-1/2"

4 INTERIOR WALL: 5/8" TYPE X GYPSUM BOARD WITH A 3-5/8" METAL STUD @ 16" O.C. R-13 SOUND INSULATION WITH 5/8" PLYWOOD FOLLOWED BY A 3/8" T1-11.

WALL TYPES
1/4" = 1'-0"

FIRE RATED WALL LEGEND

NON-RATED STUD WALL TO BOTTOM OF ROOF PANELS SEAL AIRTIGHT

EXISTING NON-RATED METAL PANEL WALL TO BOTTOM OF ROOF PANELS

F.E. = SEMI-RECESSED FIRE EXTINGUISHER WITH CABINET INSTALLED AT 48" A.F.F. TO MID-SPAN OF CABINET CONTROL (HANDLE)

NOTE: ALL WALL PENETRATIONS SHALL BE SEALED WITH SEALANT
FIRE RATED SEALANT WITH RESPECTIVE FIRE RATING
SEAL TOP OF WALLS ACCORDINGLY.

FIRE RATED WALL LEGEND
1" = 20'-0"

DE LA VINA

TYPE II (B) CONSTRUCTION (UNPROTECTED UNSPRINKLED)

INTERNATIONAL BUILDING CODE 2015 — NOTE: ENTIRE BUILDING SHALL BE UNSPRINKLED

OCCUPANCY	ASSEMBLY GROUP A-3
ONE STORY	5953 NET SQ. FT. 6318 GROSS SQ.FT.
TABLE 503 ALLOWABLE AREA	9,500 SQ. FT.
ALLOWABLE STORIES	(2) STORIES

TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOUSE)

STRUCTURAL FRAME	UNPROTECTED - NONCOMBUSTIBLE
ROOF CONSTRUCTION	UNPROTECTED - NONCOMBUSTIBLE
NONBEARING WALLS	UNPROTECTED - NONCOMBUSTIBLE

TABLE 602
FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

NON BEARINGWALLS	UNPROTECTED - NONCOMBUSTIBLE EXTERIOR
NON BEARING WALLS	

TABLE 1016.2
EXIT ACCESS TRAVEL DISTANCE

OCCUPANCY	WITHOUT SPRINKLER SYSTEM	WITH SPRINKLER SYSTEM
A,E,F-1,M,R,S-1	200 FT	250 FT

TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	FLOOR AREA IN SQ.FT. PER OCCUPANT
ASSEMBLY CONCENTRATED - CHAIRS ONLY NOT FIXED	7NET

OCCUPANT LOAD

ASSEMBLY - GYMNASIUM	293
COACH OFFICE	2
TOTAL OCCUPANTS	295

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IMPROVEMENTS & ADDITIONS
FOR
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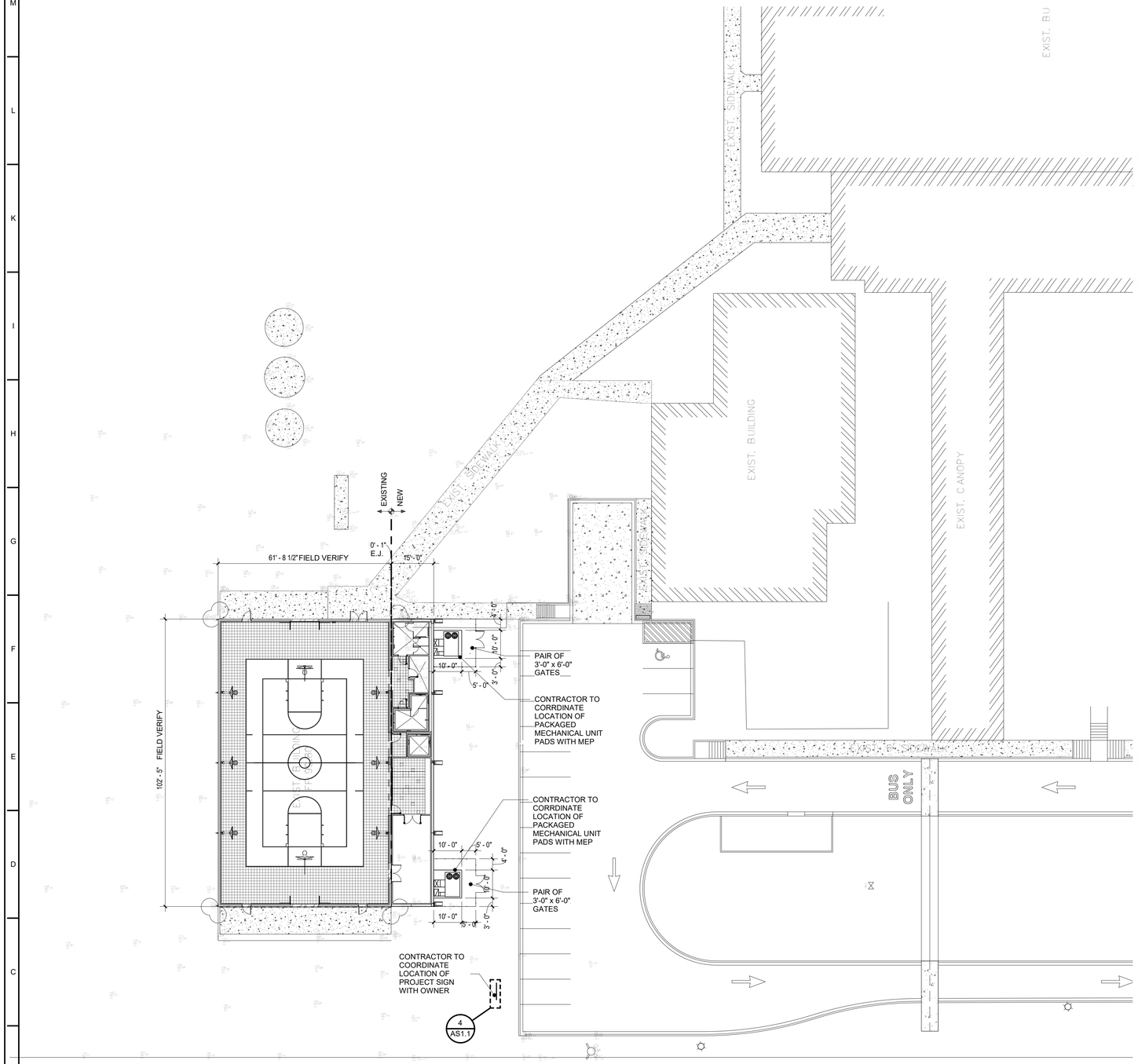
FIRE PROTECTION PLAN

G1.1

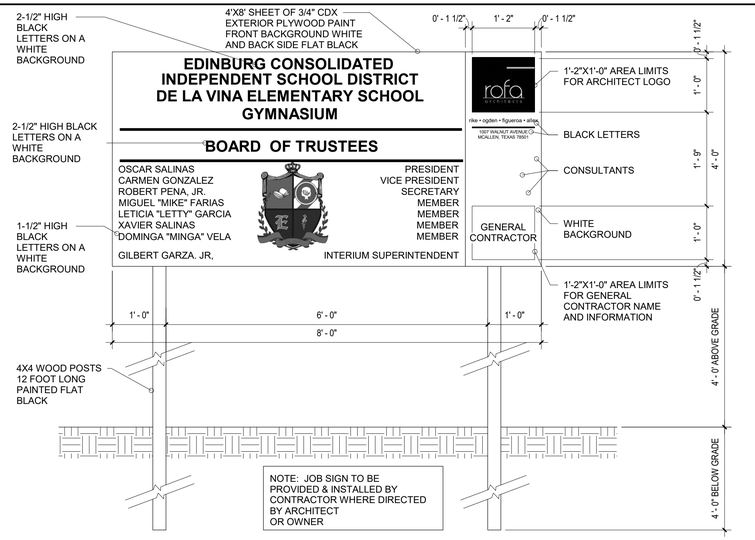


OVERALL PROPOSED SITE PLAN
DE LA VINA

1" = 20'-0"

1

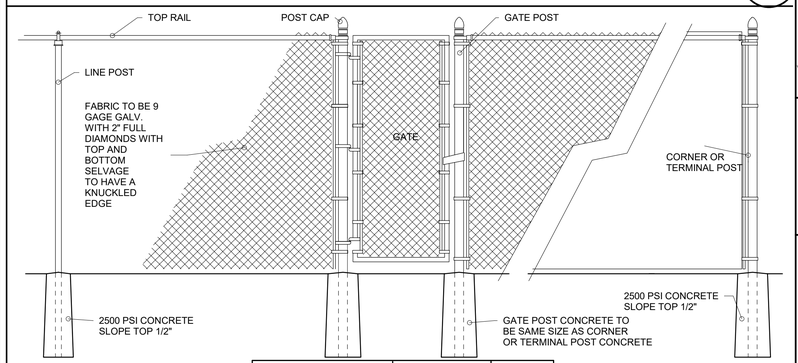
N



JOB SIGN DETAIL

3/4" = 1'-0"

4



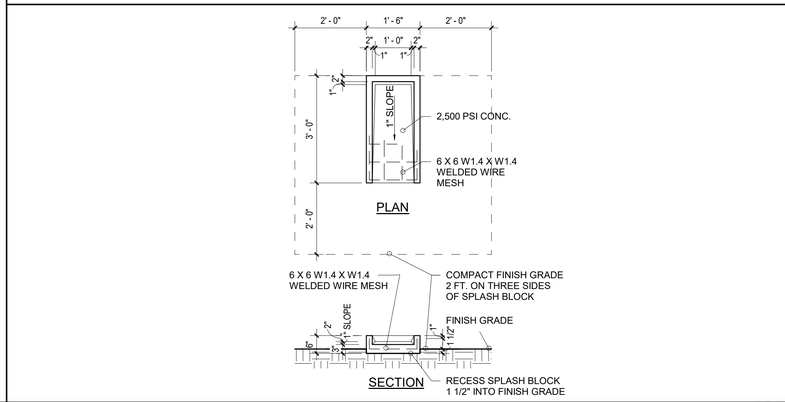
POST USE	FABRIC HT.	POST O.D.
TERMINAL OR CORNER	72" OR LESS	2.375"
TERMINAL OR CORNER	MORE THAN 72"	2.875"
GATE 72" OR LESS WIDE		2.875"
GATE 6 FT. TO 13 FT. WIDE		4.00"
GATE 13 FT. TO 18 FT. WIDE		6.625"
GATE OVER 18 FT. WIDE		8.625"
TOPE RAIL		1.66"
LINE POST	72" OR LESS	1.90"
LINE POST	MORE THAN 72"	2.375"

POST SCHEDULE IF THE SPECS DIFFER FROM THIS SCHEDULE THE SPECS GOVERN.

CHAIN LINK FENCE

1/2" = 1'-0"

3



SPLASH BLOCK

1/2" = 1'-0"

2

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04.15.2020

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PROJECT NO: 2019.13

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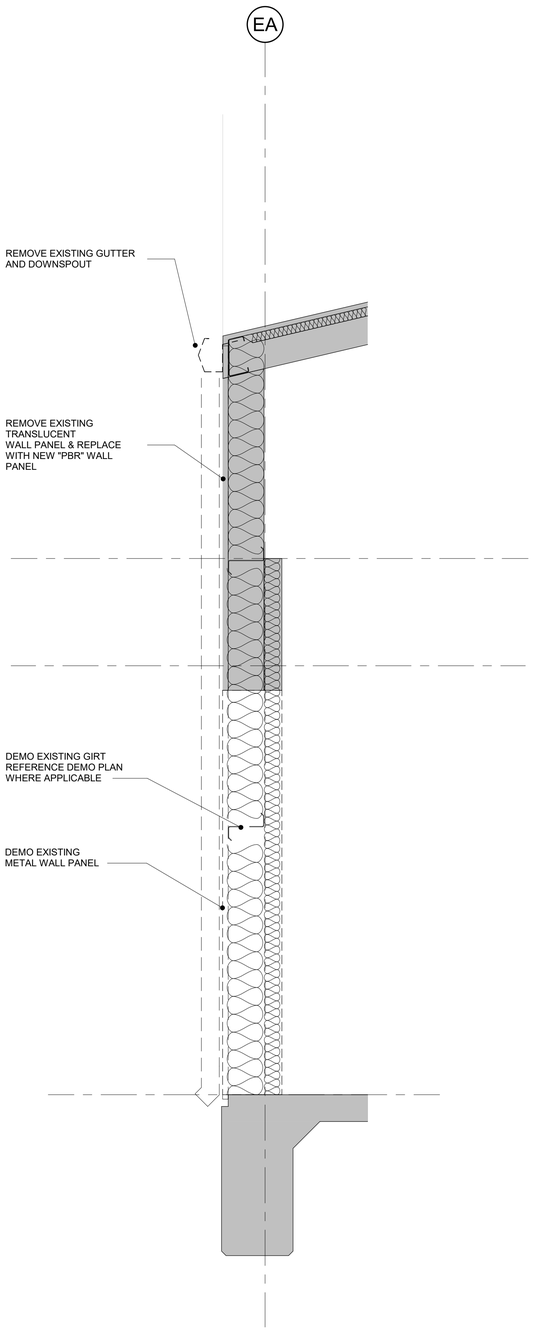
OVERALL PROPOSED SITE PLAN - DE LA VINA

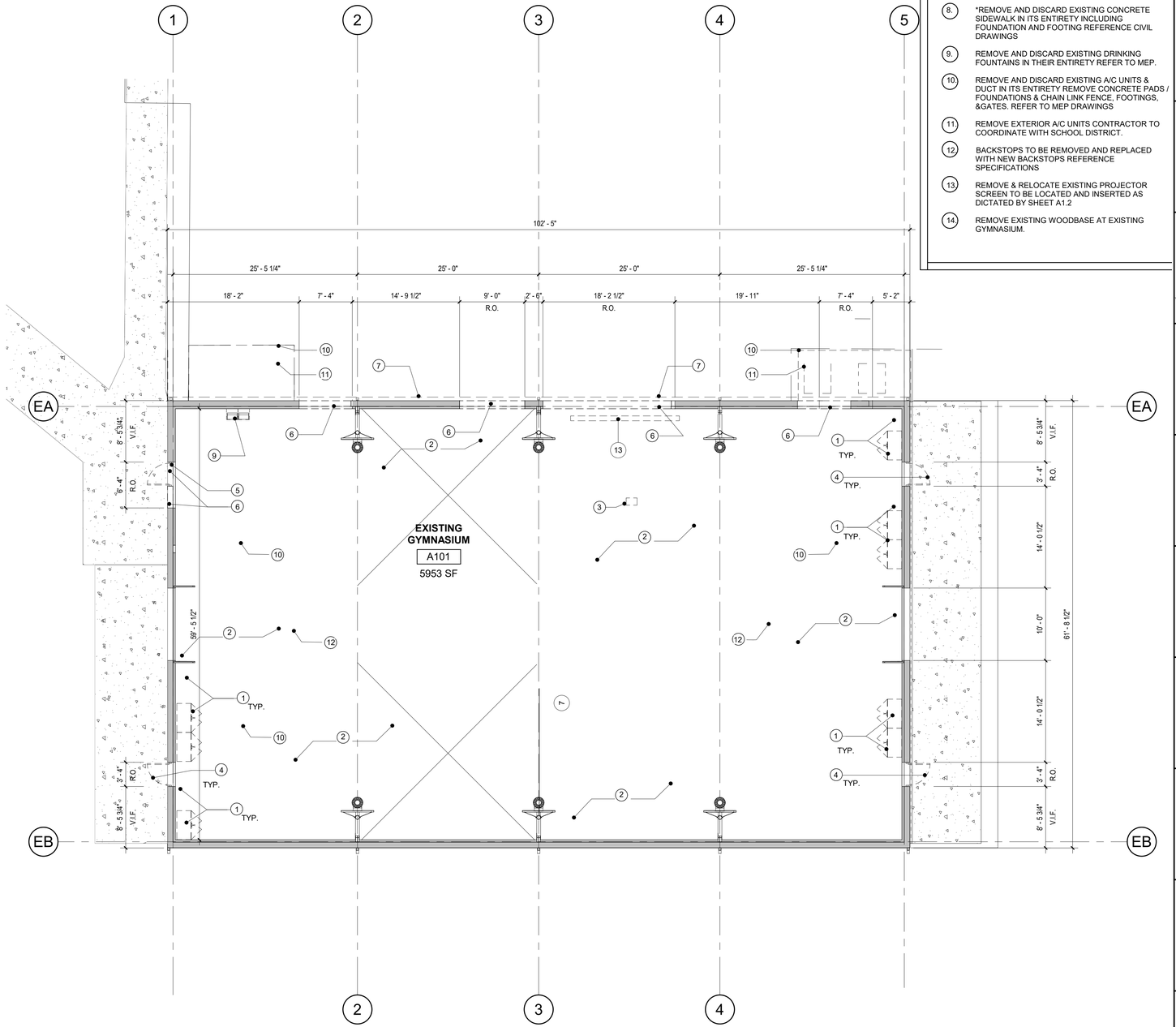
AS1.1



DEMO WALL SECTION DE LA VINA

2

3/4" = 1'-0"



EXISTING / DEMO FLOOR PLAN DE LA VINA

1

1/8" = 1'-0"

N

XX DEMOLITION KEY NOTES:

1. OWNER TO REMOVE AND DISCARD EXISTING MILL WORK AT NORTH & SOUTH END OF GYMNASIUM
2. PREPARE EXPOSED CONCRETE FLOORING FOR LVT / VCT.
3. REMOVE AND SALVAGE EXISTING PROJECTORS VERIFY LOCATION AND CONFIRM WITH OWNER.
4. REMOVE AND DISCARD EXISTING METAL DOORS AND HARDWARE. DOOR FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
5. REFER TO DOOR SCHEDULE FOR NEW DOORS.
6. REMOVE AND DISCARD EXISTING METAL WALL PANELS INCLUDING METAL WALL FRAMING INSULATION AND PLYWOOD PANEL FOR NEW WALL OPENING
7. *REMOVE AND DISCARD EXISTING METAL GUTTER & DOWNSPOUTS
8. *REMOVE AND DISCARD EXISTING CONCRETE SIDEWALK IN ITS ENTIRETY INCLUDING FOUNDATION AND FOOTING REFERENCE CIVIL DRAWINGS
9. REMOVE AND DISCARD EXISTING DRINKING FOUNTAINS IN THEIR ENTIRETY REFER TO MEP.
10. REMOVE AND DISCARD EXISTING A/C UNITS & DUCT IN ITS ENTIRETY REMOVE CONCRETE PADS / FOUNDATIONS & CHAIN LINK FENCE, FOOTINGS, &GATES. REFER TO MEP DRAWINGS
11. REMOVE EXTERIOR A/C UNITS CONTRACTOR TO COORDINATE WITH SCHOOL DISTRICT.
12. BACKSTOPS TO BE REMOVED AND REPLACED WITH NEW BACKSTOPS REFERENCE SPECIFICATIONS
13. REMOVE & RELOCATE EXISTING PROJECTOR SCREEN TO BE LOCATED AND INSERTED AS DICTATED BY SHEET A1.2
14. REMOVE EXISTING WOODBASE AT EXISTING GYMNASIUM.

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FOR
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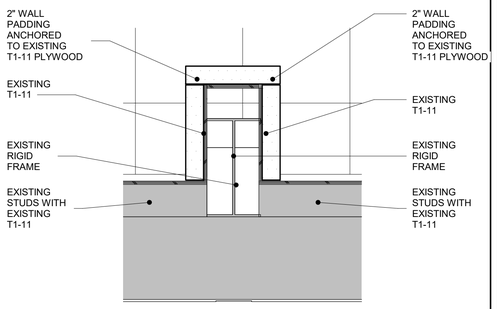
EXISTING / DEMO FLOOR PLAN

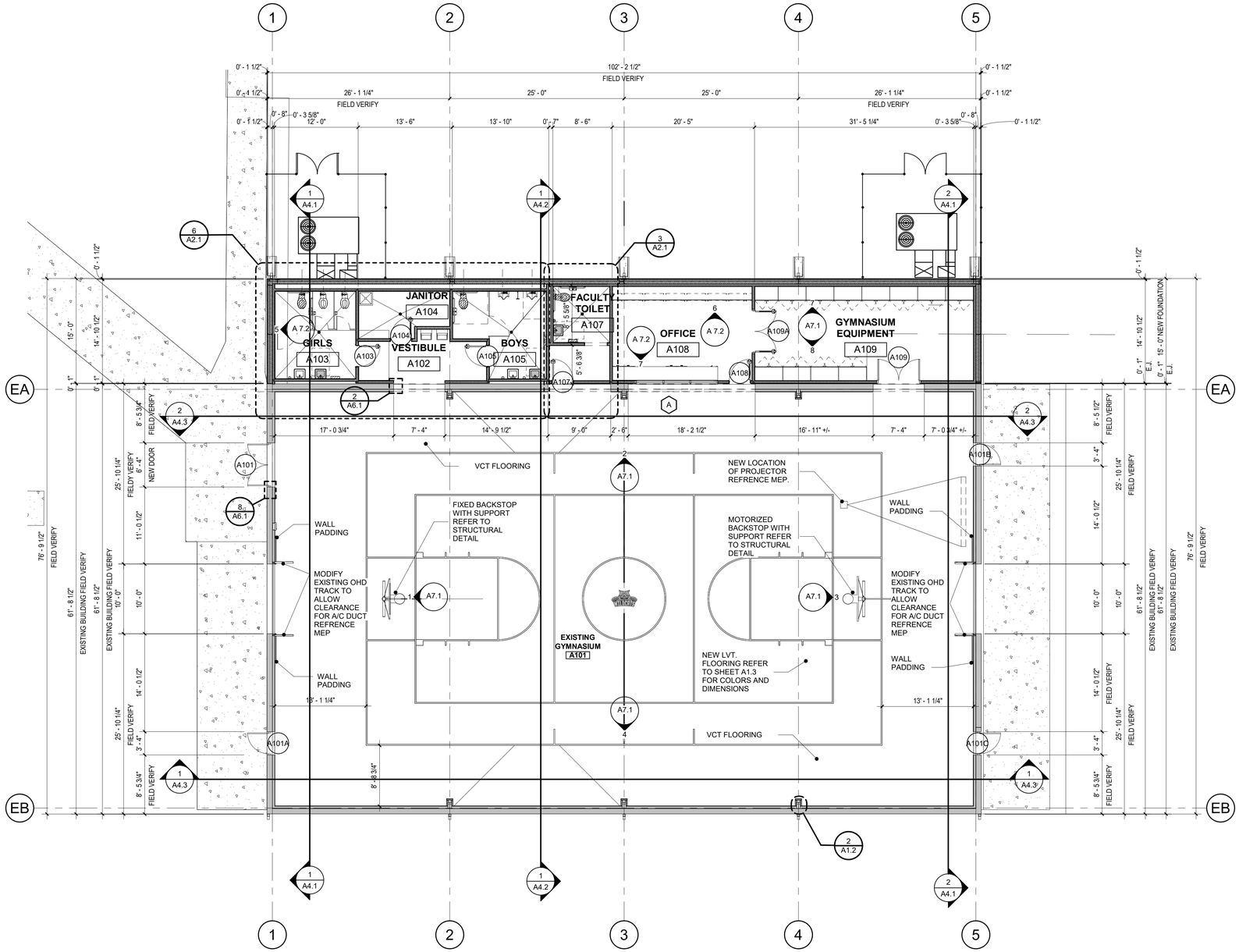
A1.1



COLUMN FUR OUTS / WALL PADING DE LA VINA

2

1 1/2" = 1'-0"



PROPOSED FLOOR PLAN DE LA VINA

1/8" = 1'-0"

1

N

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1		REVISIONS

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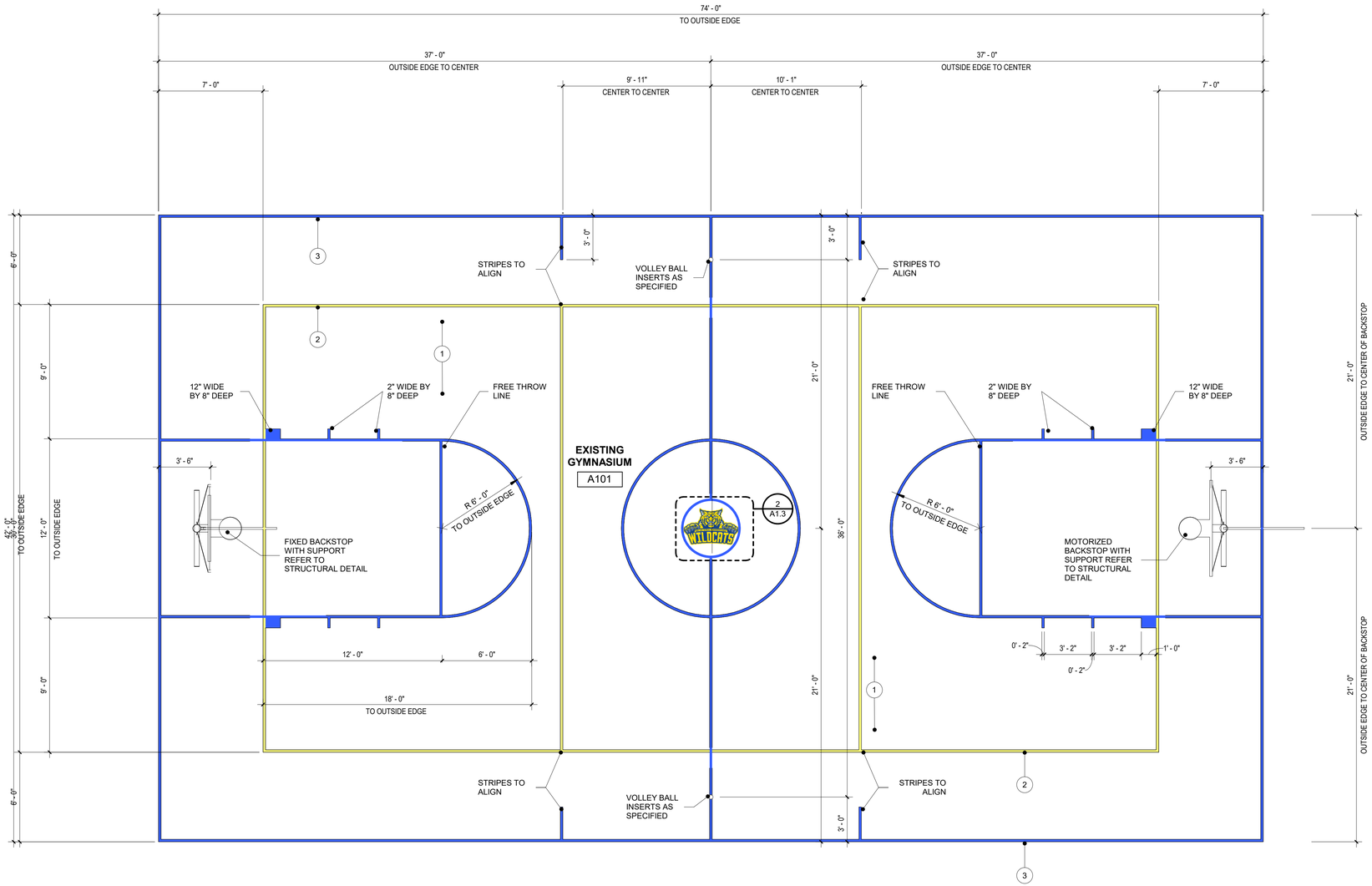
PROPOSED FLOOR PLAN

A1.2



GENERAL NOTES

A. ALL COURTS SHOULD BE SIZED IN ACCORDANCE TO TEXAS UIL RULES.

B. FOR BID PURPOSE ONLY FOLLOWING COLOR SCHEDULE FOR "LVT STRIPING" COLORING REFER TO SCHEDULE. ALL COLORS SHOULD BE VERIFIED WITH ARCHITECT AND OWNER PRIOR TO STRIPING.

C. STRIPING CONTRACTORS SHALL PROVIDE GENERAL CONTRACTOR WITH LOCATIONS OF ALL BASKETBALL GOALS AND VOLLEYBALL COURT & NET LOCATIONS. THE LVT STRIPING CONTRACTOR SHALL FURNISH SCALED SHOP DRAWINGS OF THESE LOCATIONS TO THE ARCHITECT FOR APPROVAL.

D. PROVIDE LVT STRIPING FOR ONE MAIN BASKETBALL COURT, ONE MAIN VOLLEYBALL COURT. NOTE COLOR SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL COLORS WILL BE SELECTED BY THE OWNER.

E. GENERAL CONTRACTOR TO PROVIDE TAS-ADA COMPLIANT FLOOR TRANSITION STRIPS BETWEEN FLOOR FINISHES.

1. LVT-1
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MORIKATO
COLOR: 222 JAPANESE MAPLE
SIZE: 7" x 48"

2. LVT-2
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR:131A LEMON TWIST STONE
SIZE: 12" x 24"

3. LVT-3
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 55 BLUE NIGHT
SIZE: 12" x 24"

4. LVT-4
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 556 MEGA BLUE
SIZE: 12" x 24"

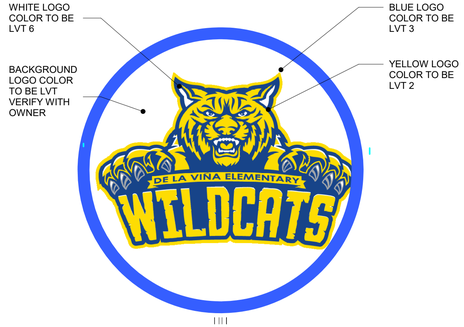
5. LVT-5
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 915A FROSTBITE STONE
SIZE: 12" x 24"

6. LVT-6
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: WHITE
SIZE: 12" x 24"

7. LVT-7
MANUFACTURER: MOHAWK GROUP
LINE/BRAND:
COLOR:
SIZE: 12" x 24"

8. LVT-8
MANUFACTURER: MOHAWK GROUP
LINE/BRAND:
COLOR:
SIZE: 12" x 24"

ACTIVITY	LINE WIDTH	COLORS
1. MAIN COURT STRIPES	2"	LVT BLUE
2. VOLLEYBALL STRIPES	2"	LVT YELLOW



PROPOSED LVT DIMENSIONAL PLAN
DE LA VINA
1

PROPOSED LVT LOGO DETAIL
2

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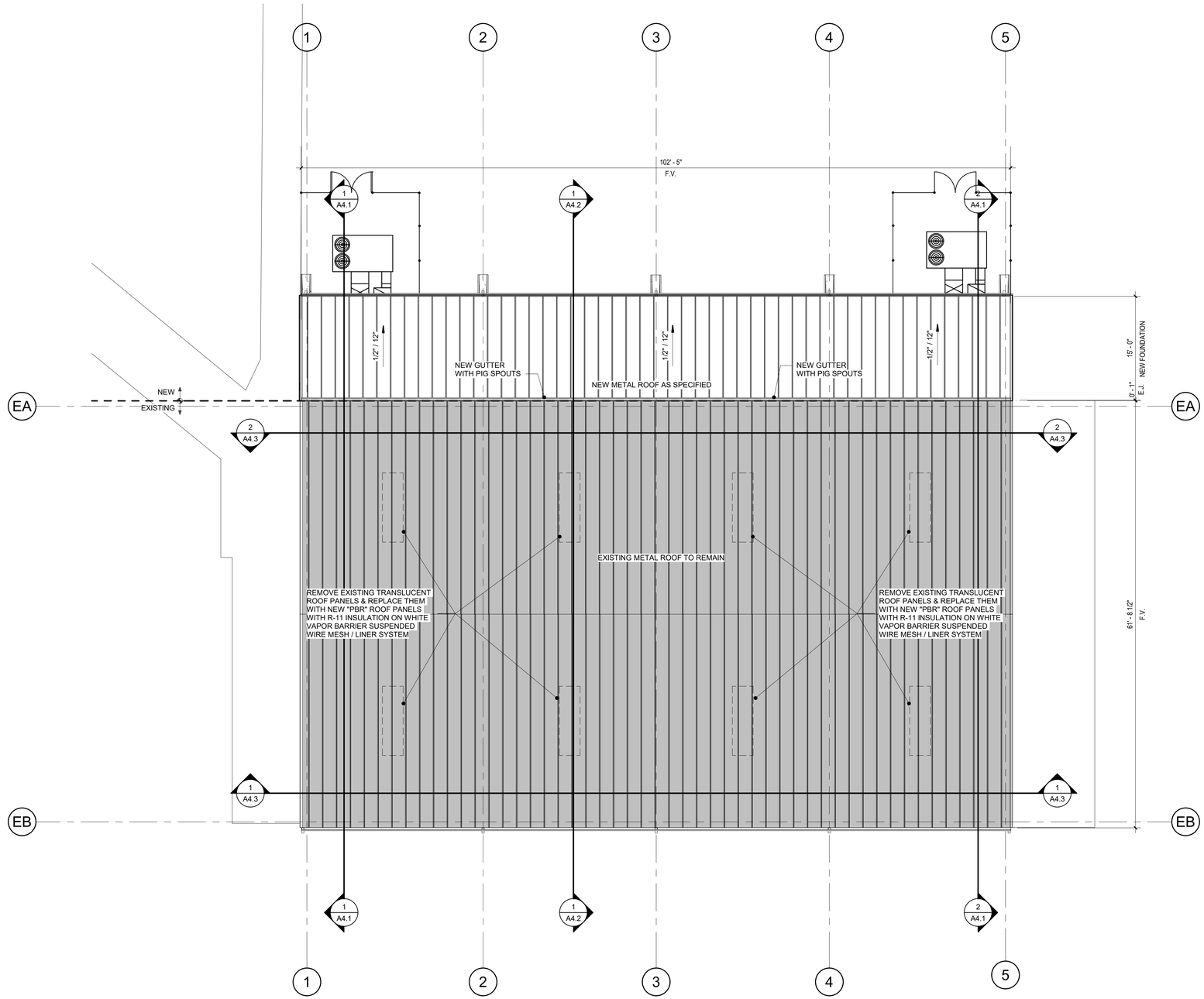
PROPOSED LVT
DIMENSIONAL PLAN

A1.3



ROOF PLAN
DE LA VINA
1/8" = 1'-0"

1 N

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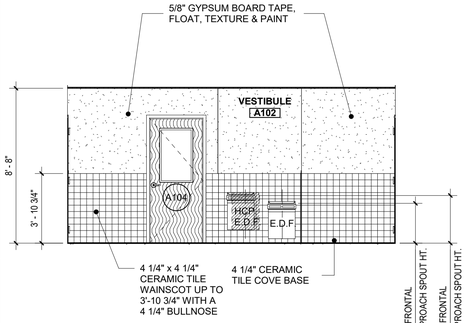
ROOF PLAN

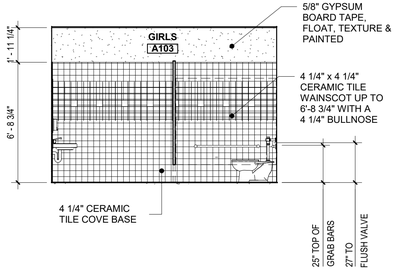
A1.4



VESTIBULE A102-EAST DE LA VINA

1/4" = 1'-0"

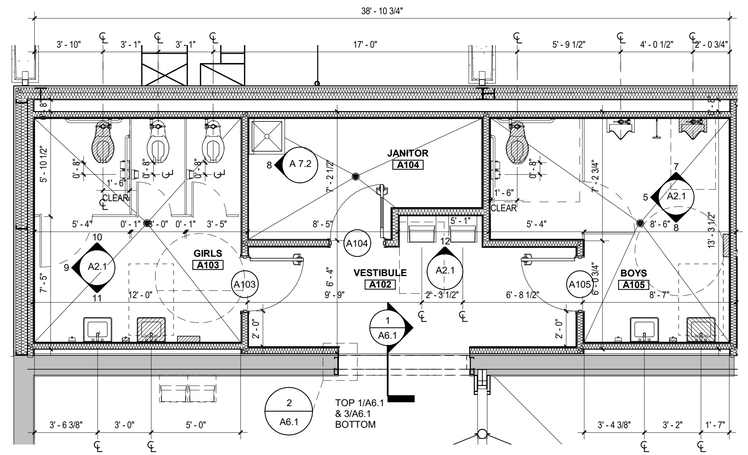
12



GIRLS A103-NORTH DE LA VINA

1/4" = 1'-0"

9

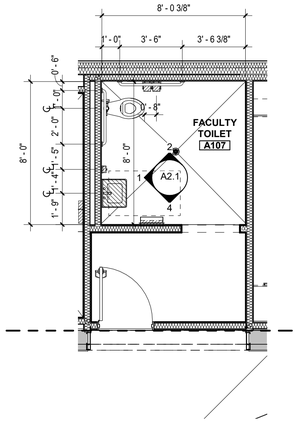


ENLARGED FLOOR PLAN - RESTROOM PLAN DE LA VINA

1/4" = 1'-0"

6

NOTE : TOILET ACCESSORIES ARE OWNER PROVIDED AND CONTRACTOR INSTALLED



A107 - FACULTY DE LA VINA

1/4" = 1'-0"

3

GIRLS A103-WEST DE LA VINA

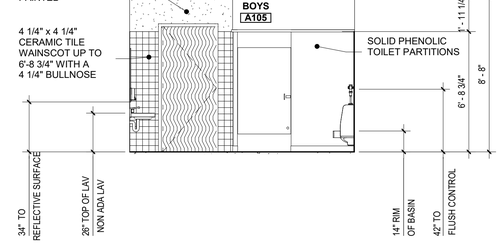
1/4" = 1'-0"

11

BOYS A105-WEST DE LA VINA

1/4" = 1'-0"

8



BOYS A105-NORTH DE LA VINA

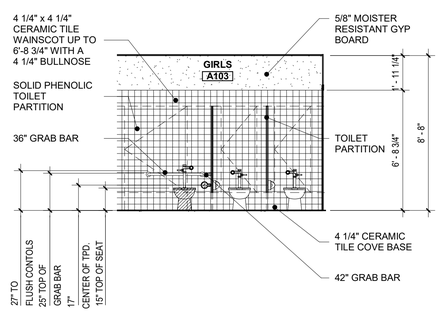
1/4" = 1'-0"

5

FACULTY A107-EAST DE LA VINA

1/4" = 1'-0"

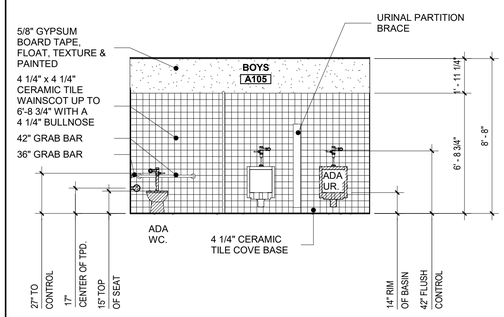
2



GIRLS A103-EAST DE LA VINA

1/4" = 1'-0"

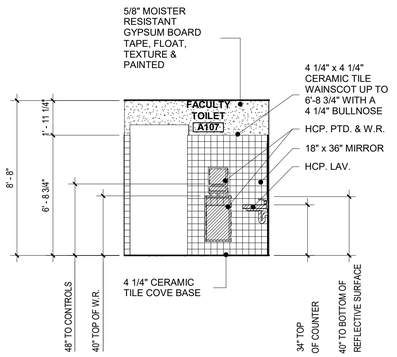
10



BOYS A105-EAST DE LA VINA

1/4" = 1'-0"

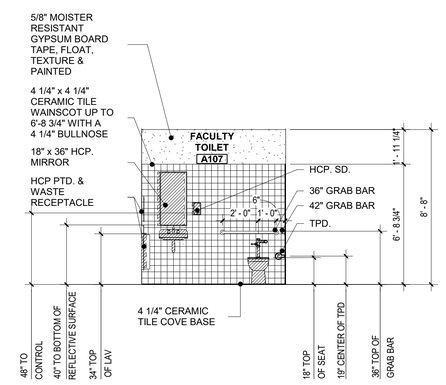
7



FACULTY A107-WEST DE LA VINA

1/4" = 1'-0"

4



FACULTY A107-NORTH DE LA VINA

1/4" = 1'-0"

1

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CONSULTANTS:

REGISTERED ARCHITECT JOSE A. FIGUEROA JR. 12858 STATE OF TEXAS

04.15.2020

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYMNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13

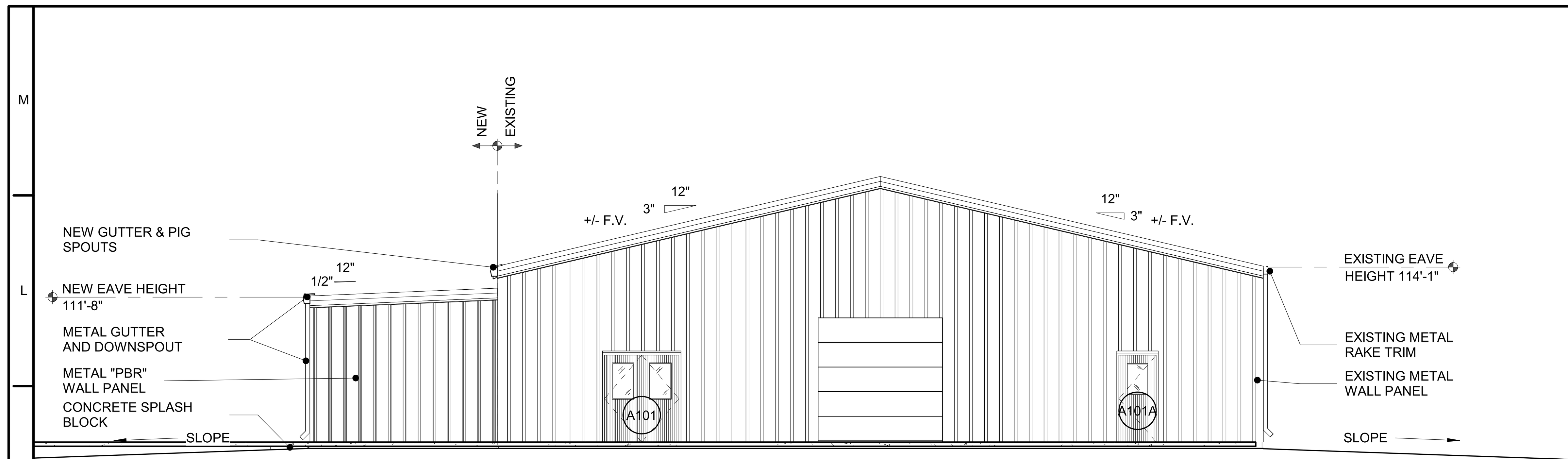
DATE: 4/17/2020 4:00:40 PM

STARTING DATE:

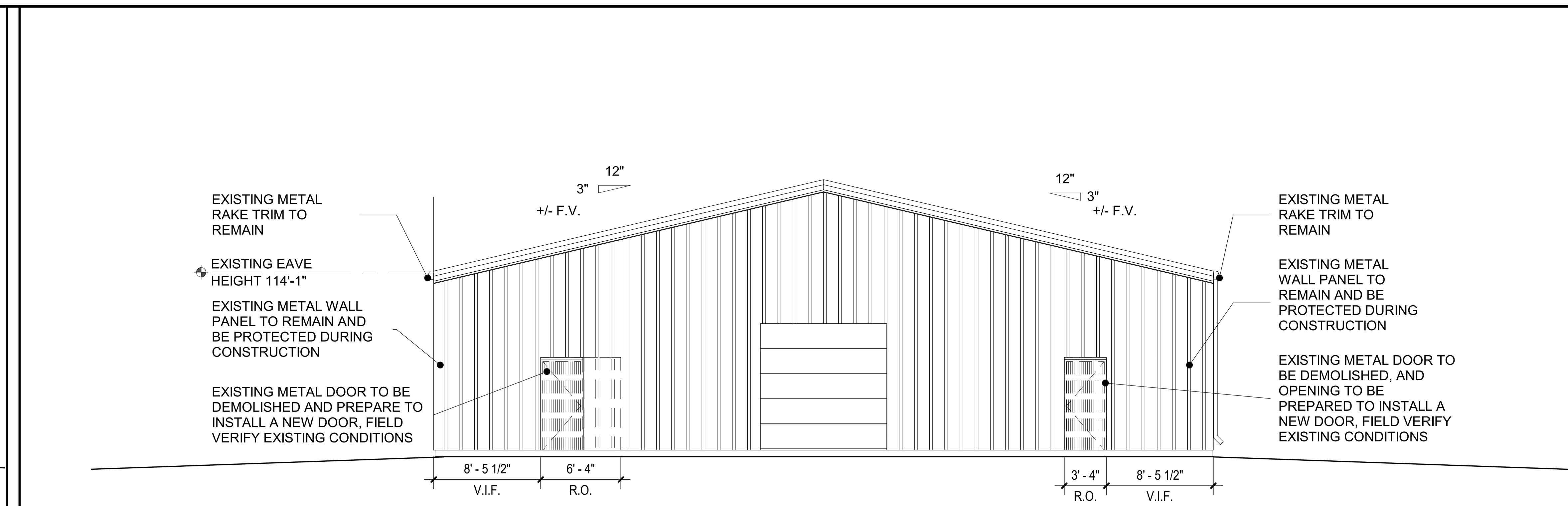
CK BY: Checker DWN BY: Author

ENLARGED FLOOR PLANS

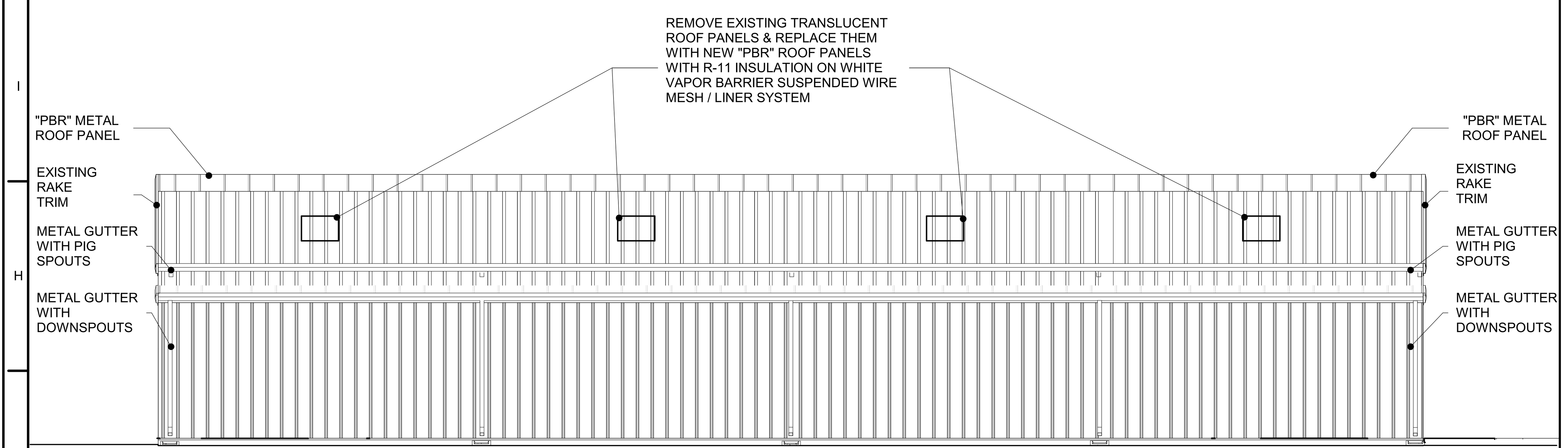
A2.1



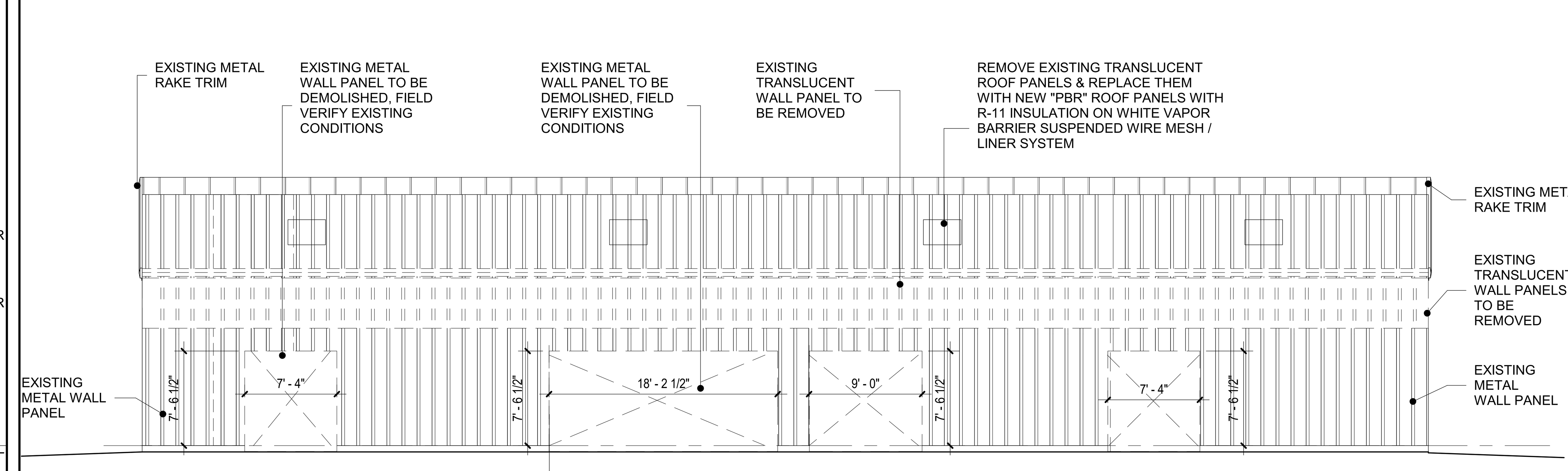
PROPOSED NORTH ELEVATION
DE LA VINA
1/8" = 1'-0"
5



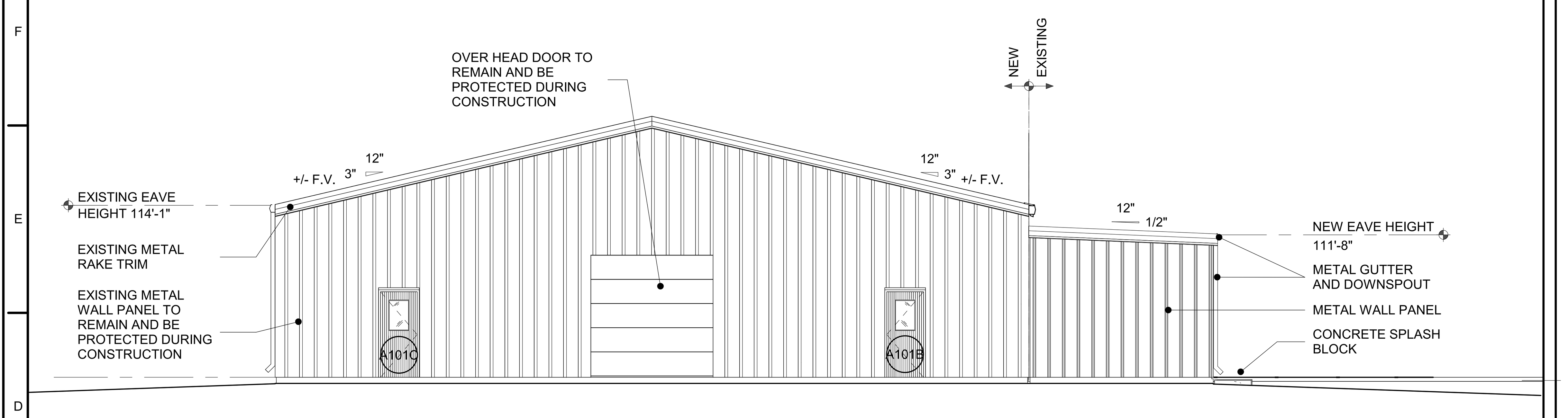
EXISTING NORTH ELEVATION
DE LA VINA
1/8" = 1'-0"
1



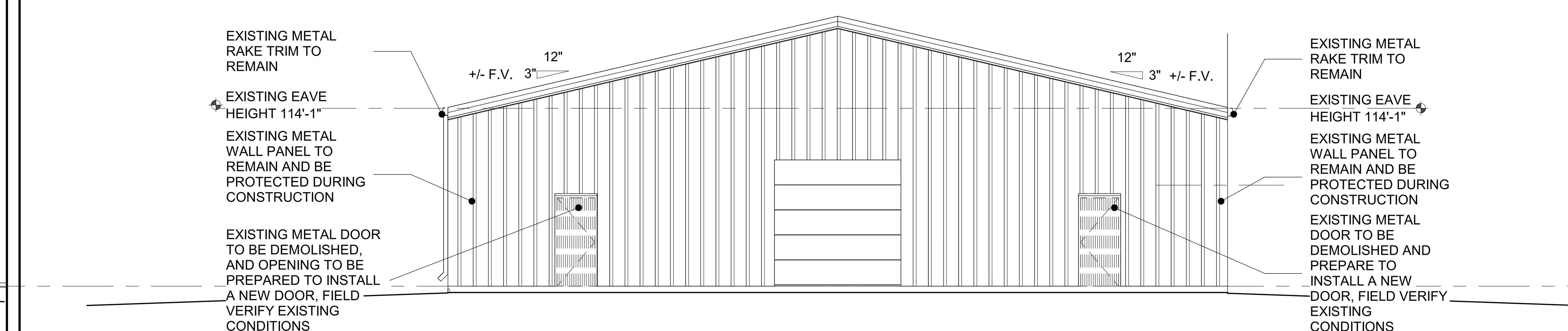
PROPOSED EAST ELEVATION
DE LA VINA
1/8" = 1'-0"
6



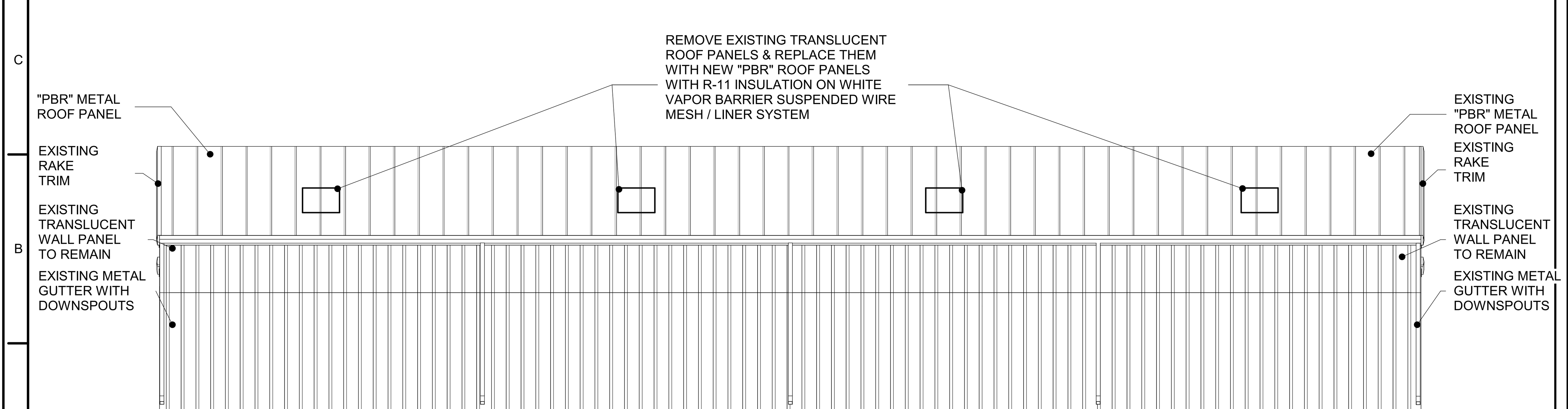
EXISTING EAST ELEVATION
DE LA VINA
1/8" = 1'-0"
2



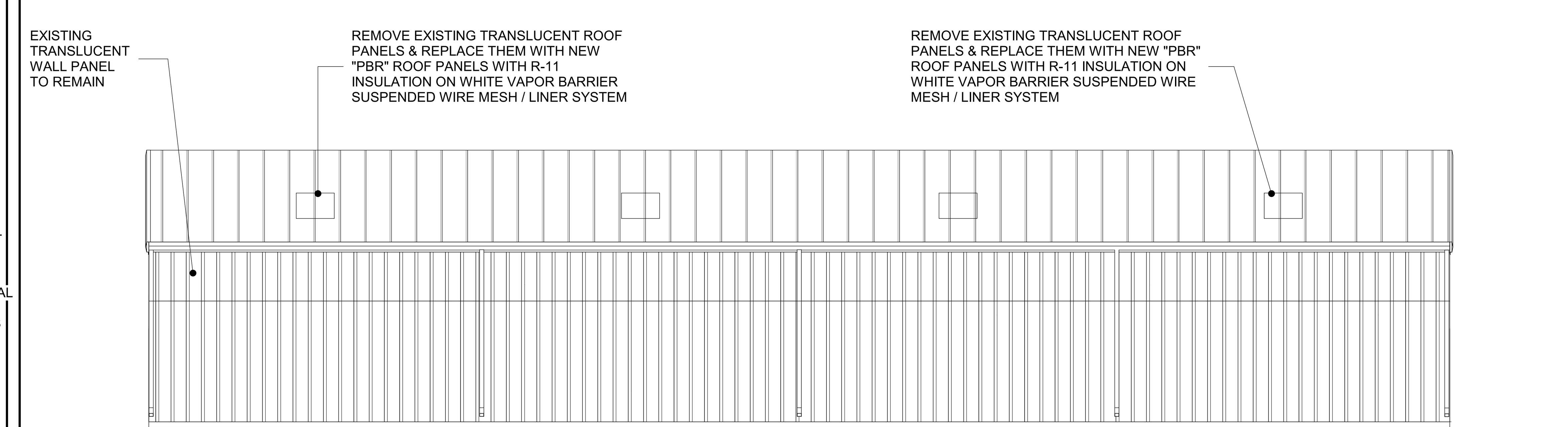
PROPOSED SOUTH ELEVATION
DE LA VINA
1/8" = 1'-0"
7



EXISTING SOUTH ELEVATION
DE LA VINA
1/8" = 1'-0"
3



PROPOSED WEST ELEVATION
DE LA VINA
1/8" = 1'-0"
8



EXISTING WEST ELEVATION
DE LA VINA
1/8" = 1'-0"
4

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04.15.2020

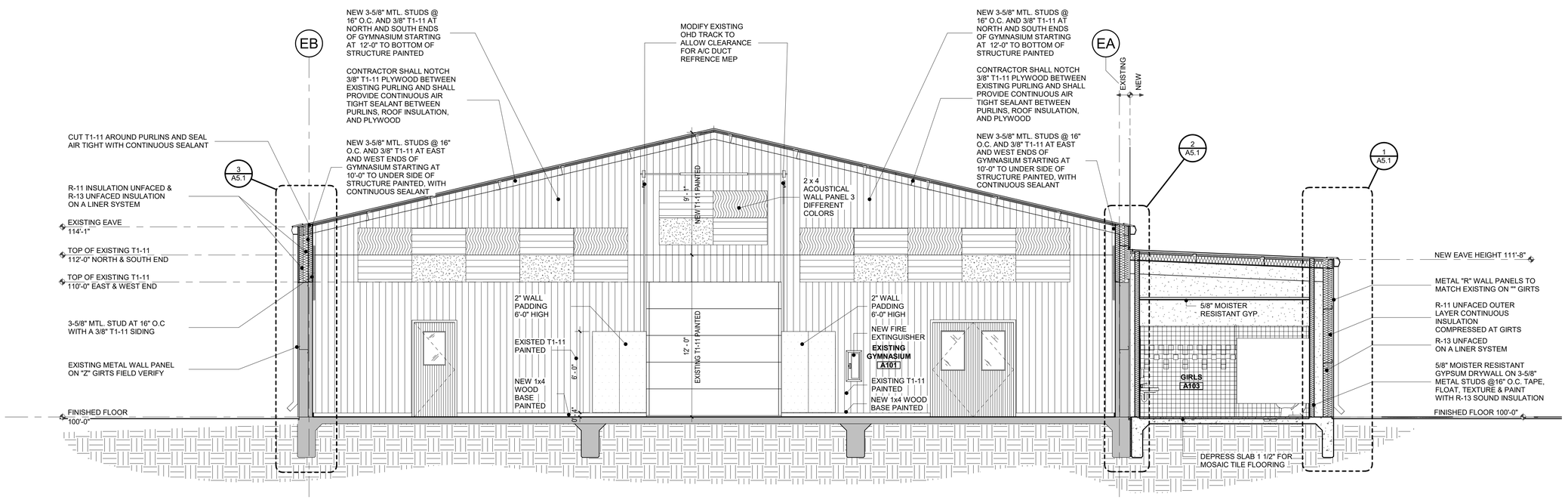
NO.	DATE	DESCRIPTION
REVISIONS		

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYMNASIUM IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

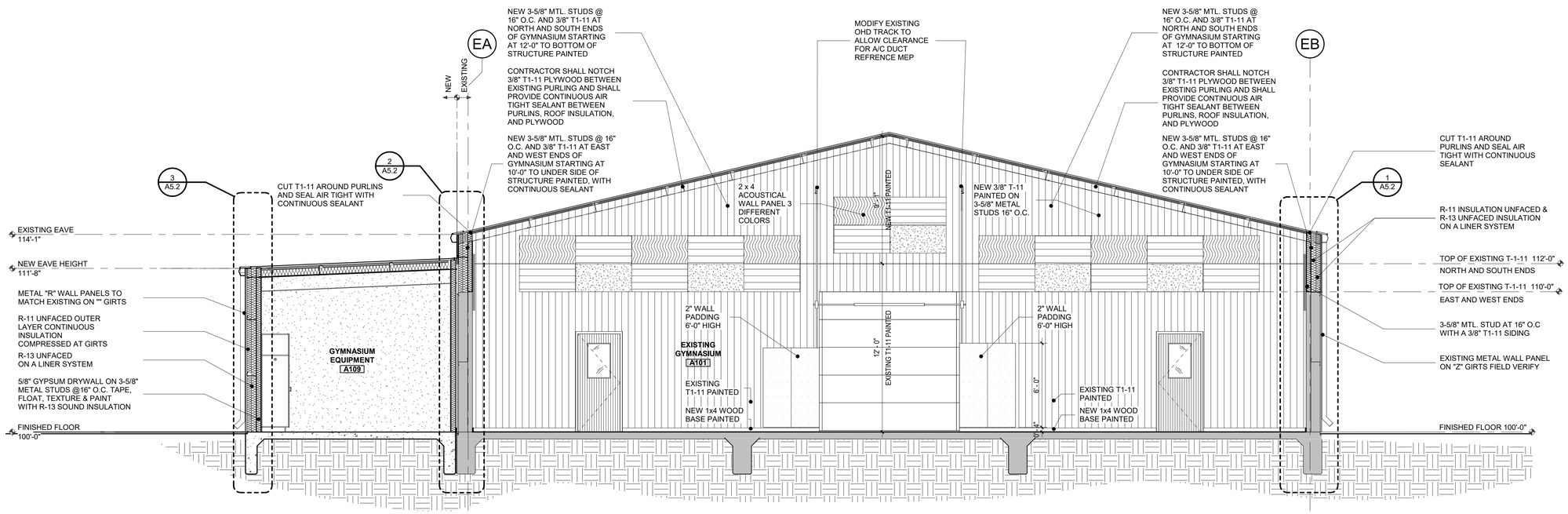
PROJECT NO: 2019.13
DATE: 4/17/2020 4:00:57 PM
STARTING DATE:
CK BY: Checker DWN BY: B.J.B.

EXISTING ELEVATIONS & PROPOSED ELEVATIONS

A3.1



BUILDING SECTION
DE LA VINA
1/4" = 1'-0"
1



BUILDING SECTION.
DE LA VINA
1/4" = 1'-0"
2

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DATE: 4/17/2020 4:01:11 PM
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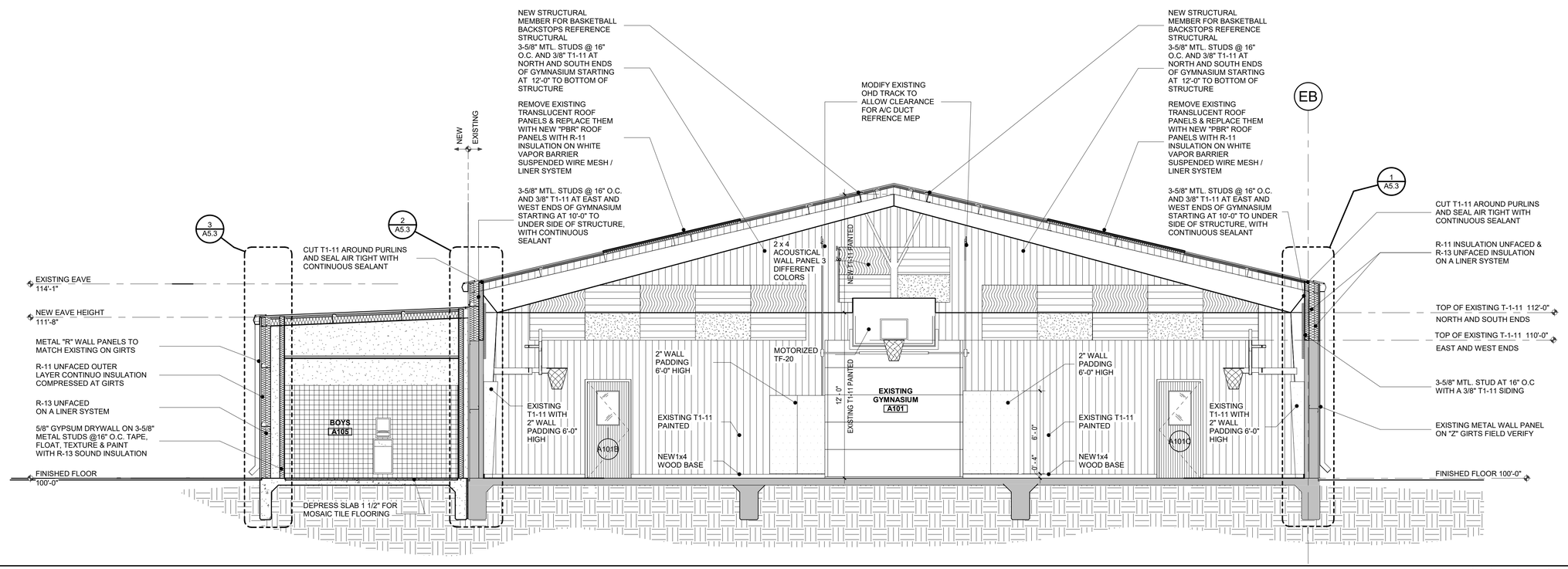
SECTIONS

A4.1



BUILDING SECTION, DE LA VINA

1/4" = 1'-0"

1

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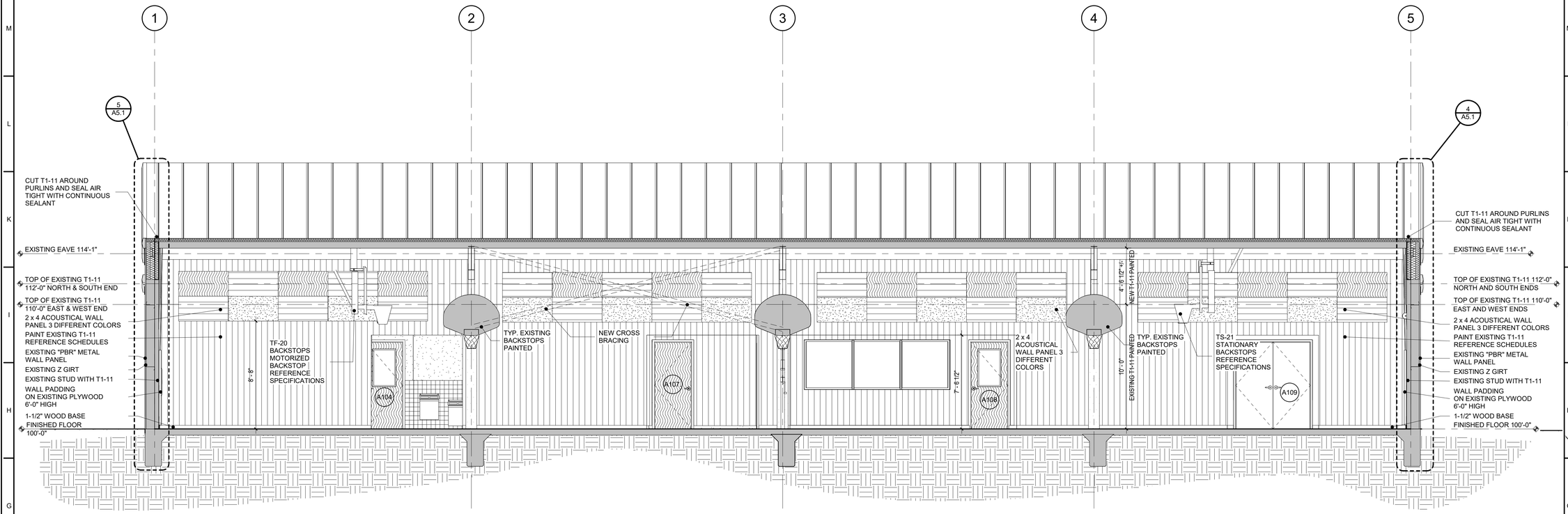
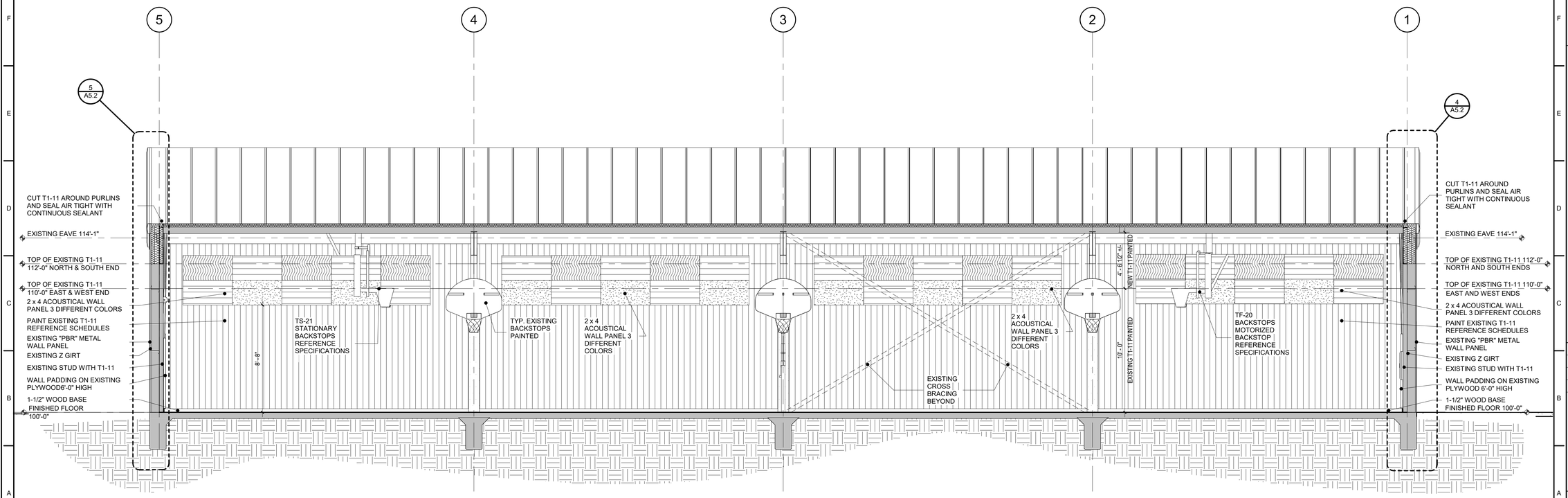
SECTIONS

A4.2



LONGITUDINAL SECTION. 1
DE LA VINA
1/4" = 1'-0"



LONGITUDINAL SECTION 2
DE LA VINA
1/4" = 1'-0"

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PROJECT NO: 2019.13
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STARTING DATE:
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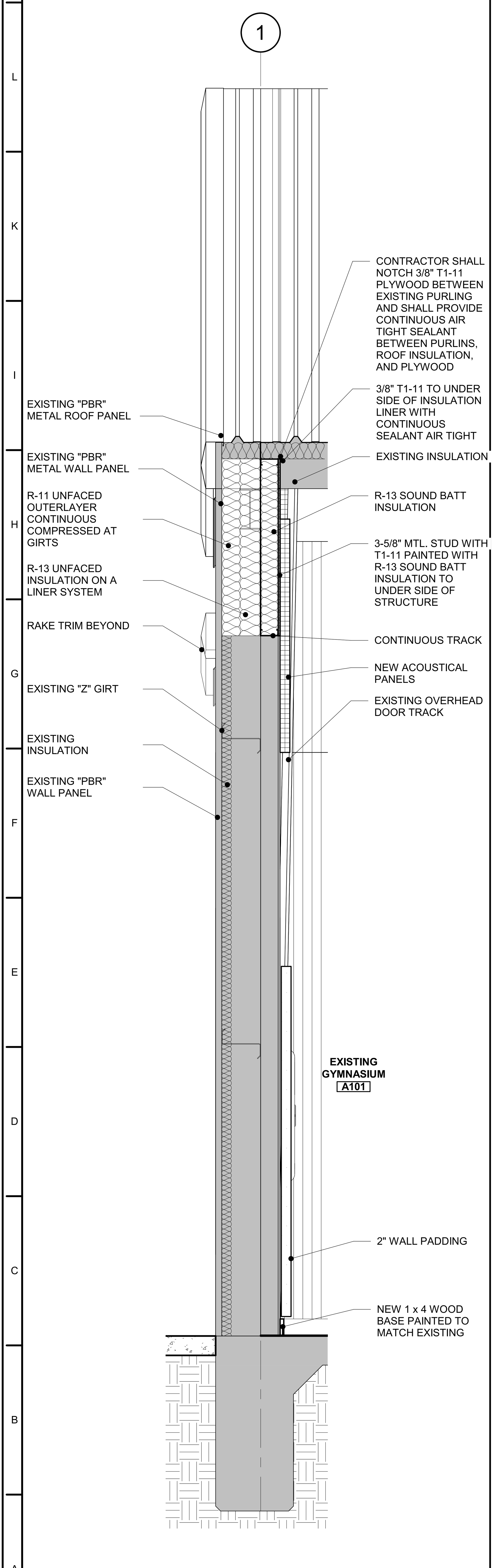
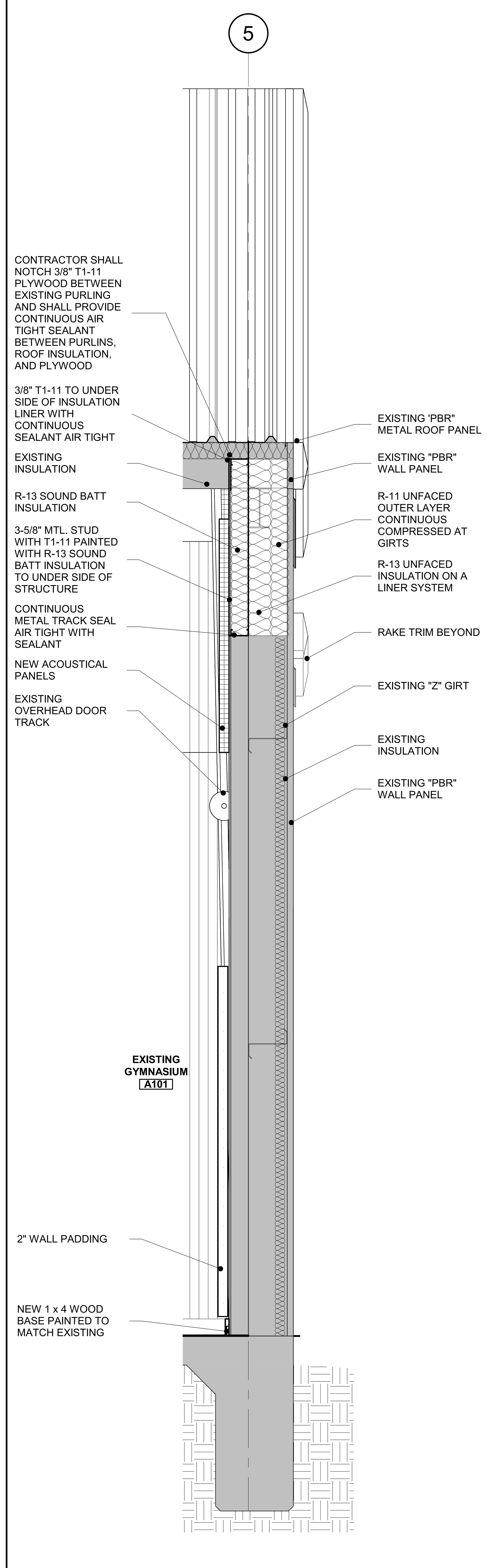
SECTIONS

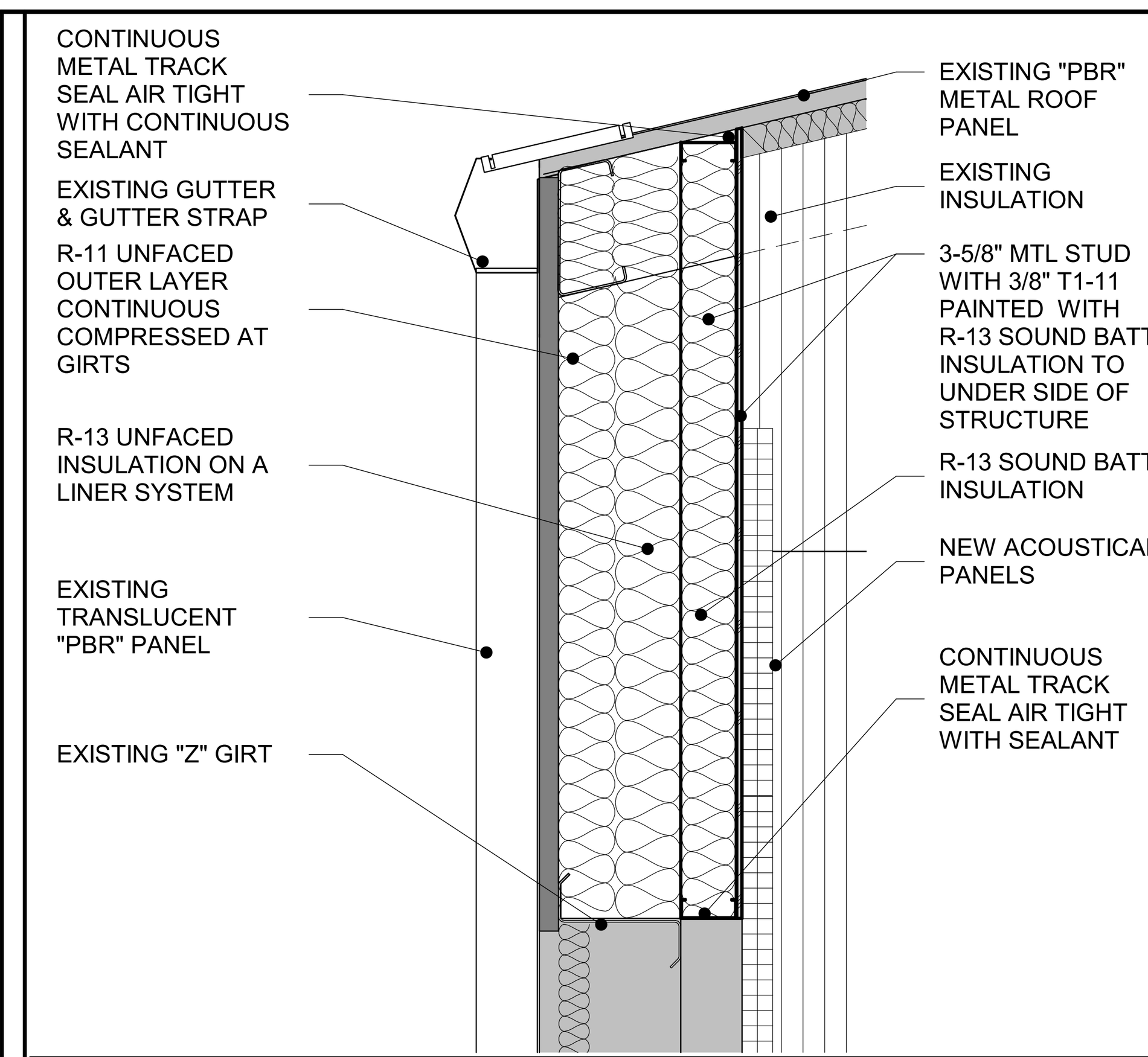
A4.3



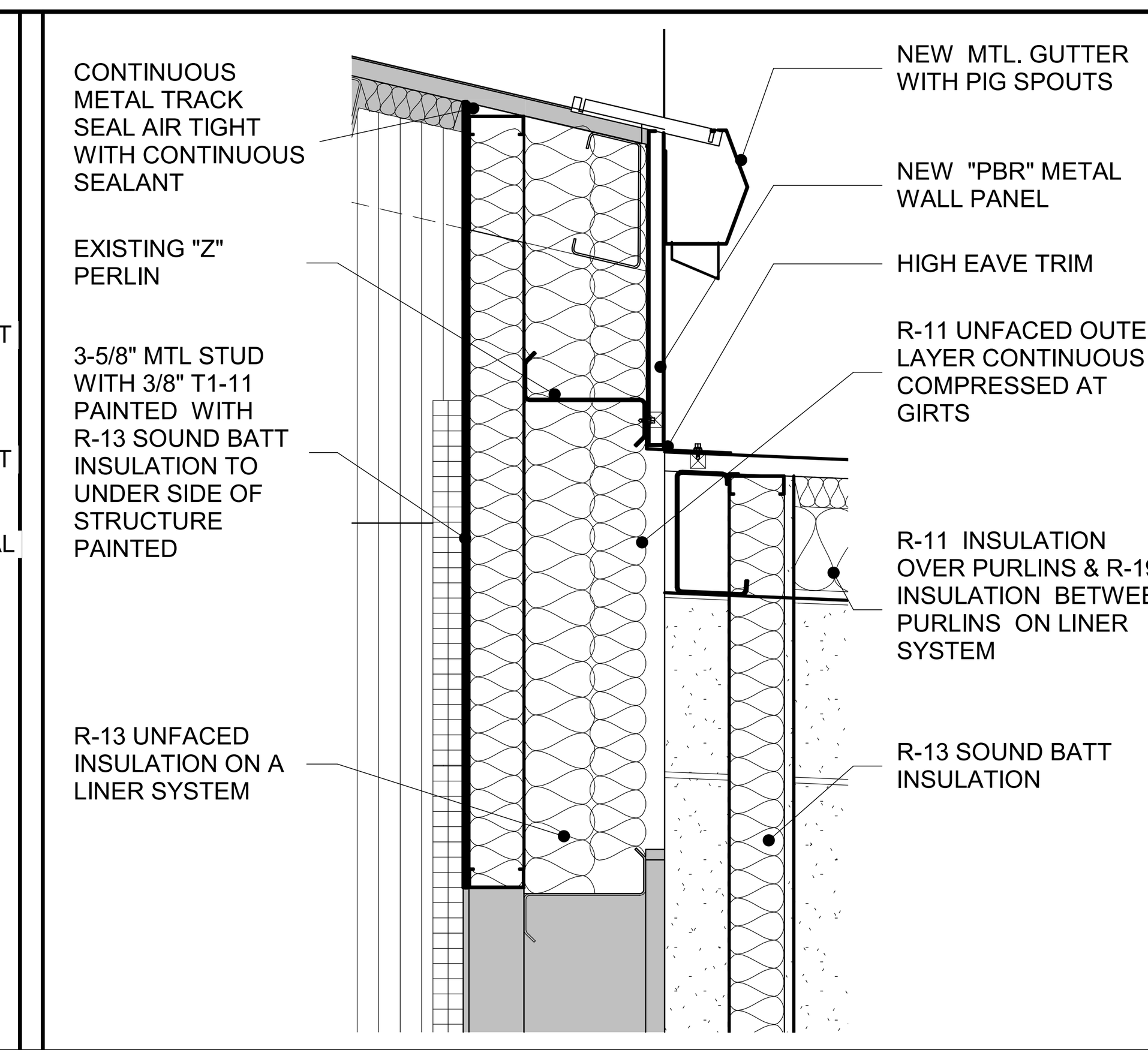
WALL SECTION
DE LA VINA 3/4" = 1'-0" 5



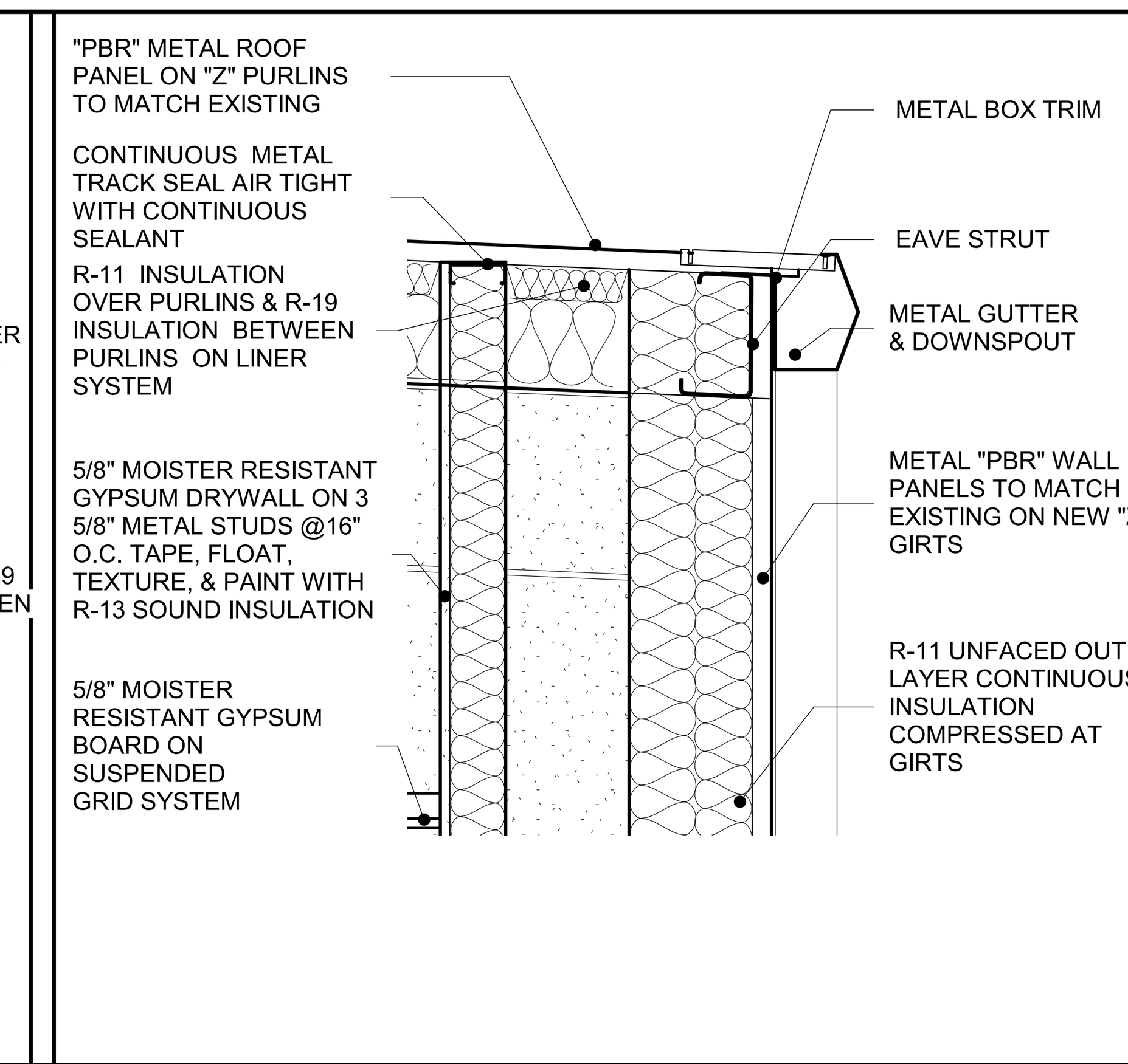
WALL SECTION
DE LA VINA 3/4" = 1'-0" 4



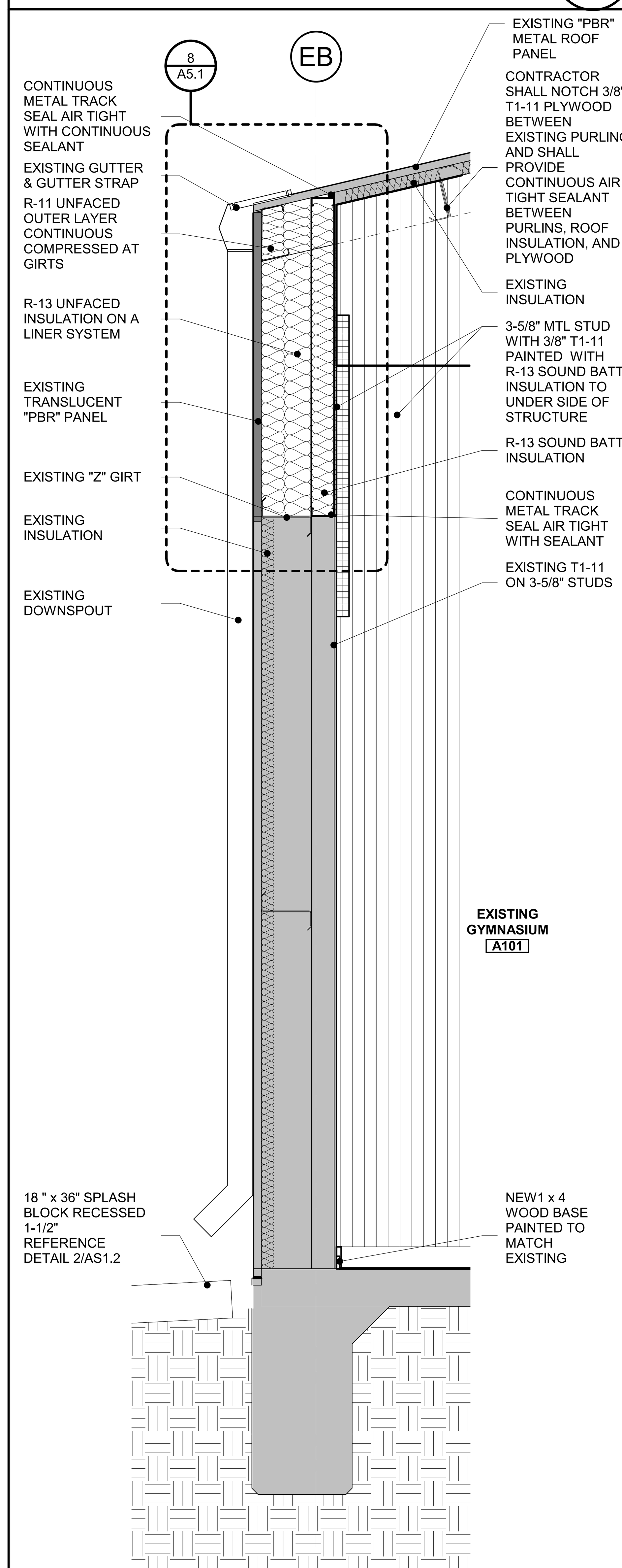
WALL SECTION DETAIL 1" = 1'-0" 8



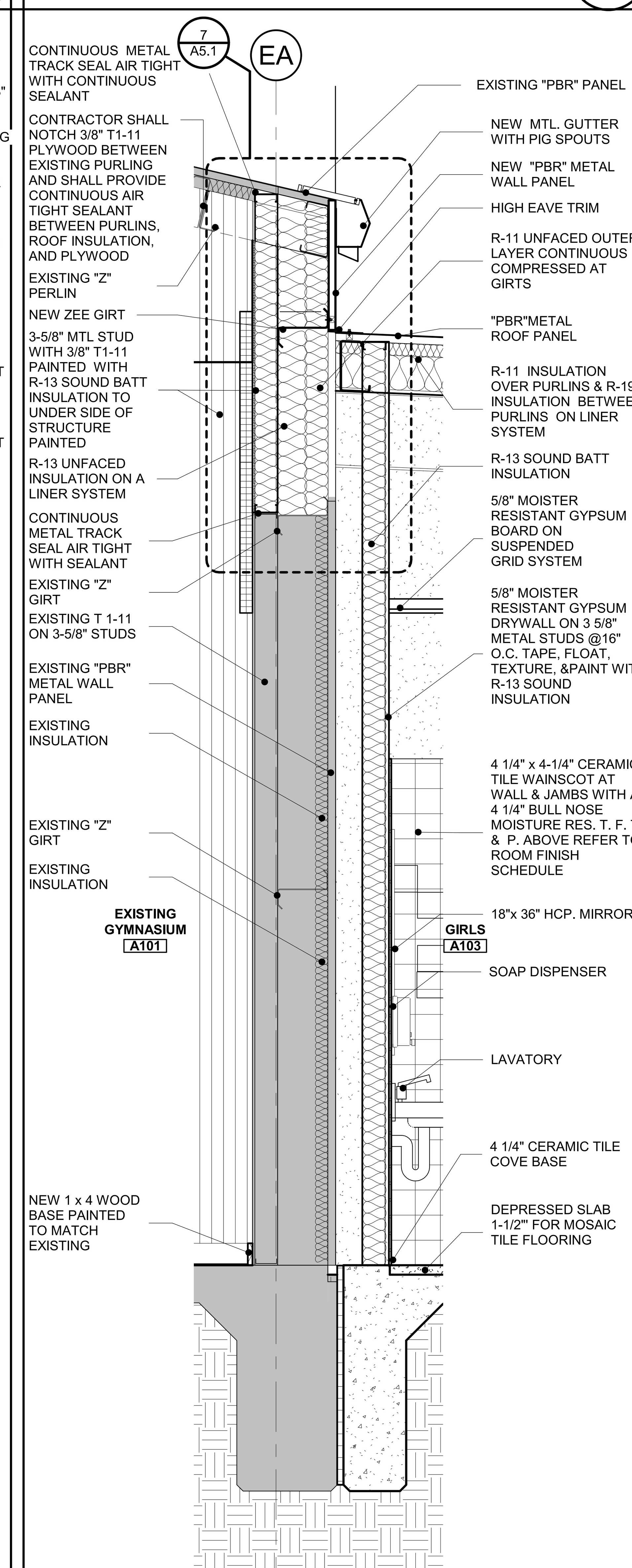
WALL SECTION DETAIL 1" = 1'-0" 7



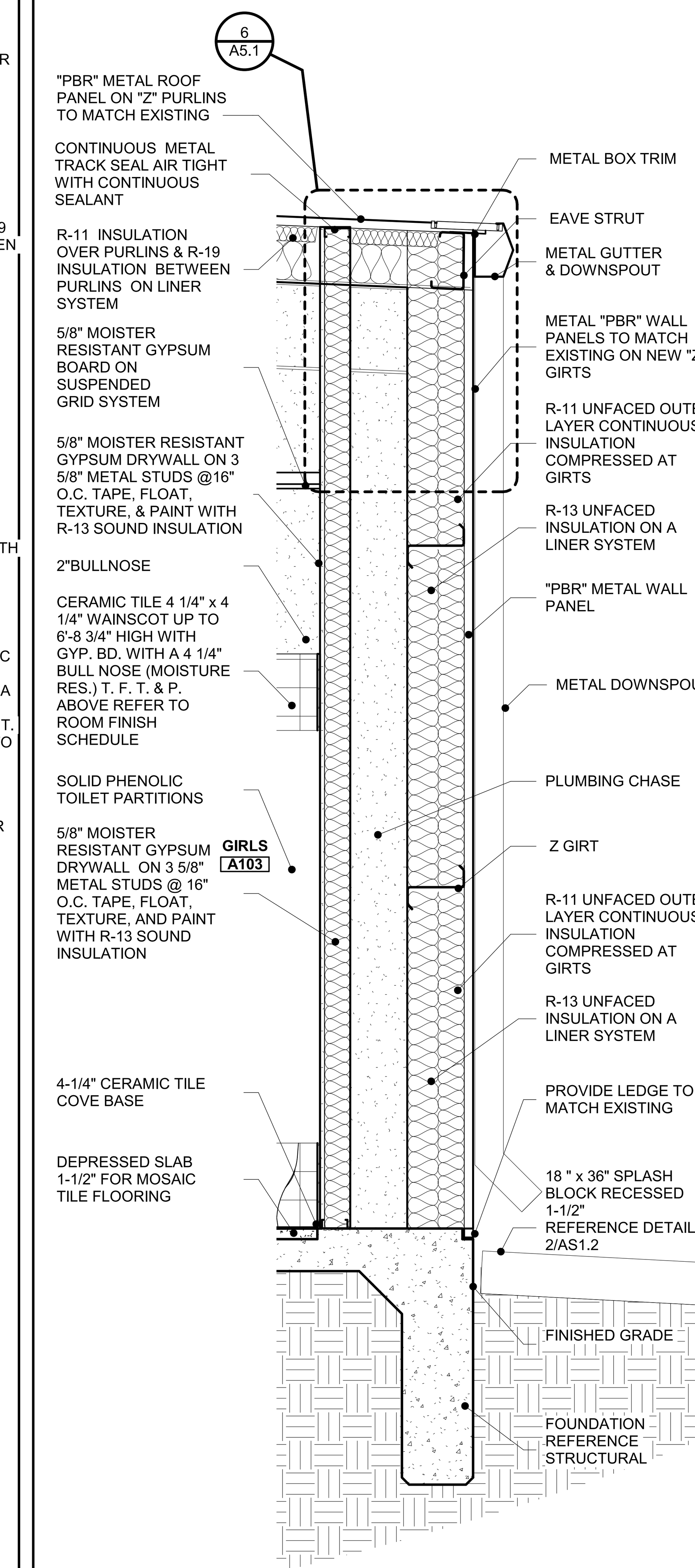
EAVE DETAIL 1" = 1'-0" 6



WALL SECTION
DE LA VINA 3/4" = 1'-0" 3



WALL SECTION .
DE LA VINA 3/4" = 1'-0" 2



WALL SECTION
DE LA VINA 3/4" = 1'-0" 1

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PROJECT NO: 2019.13
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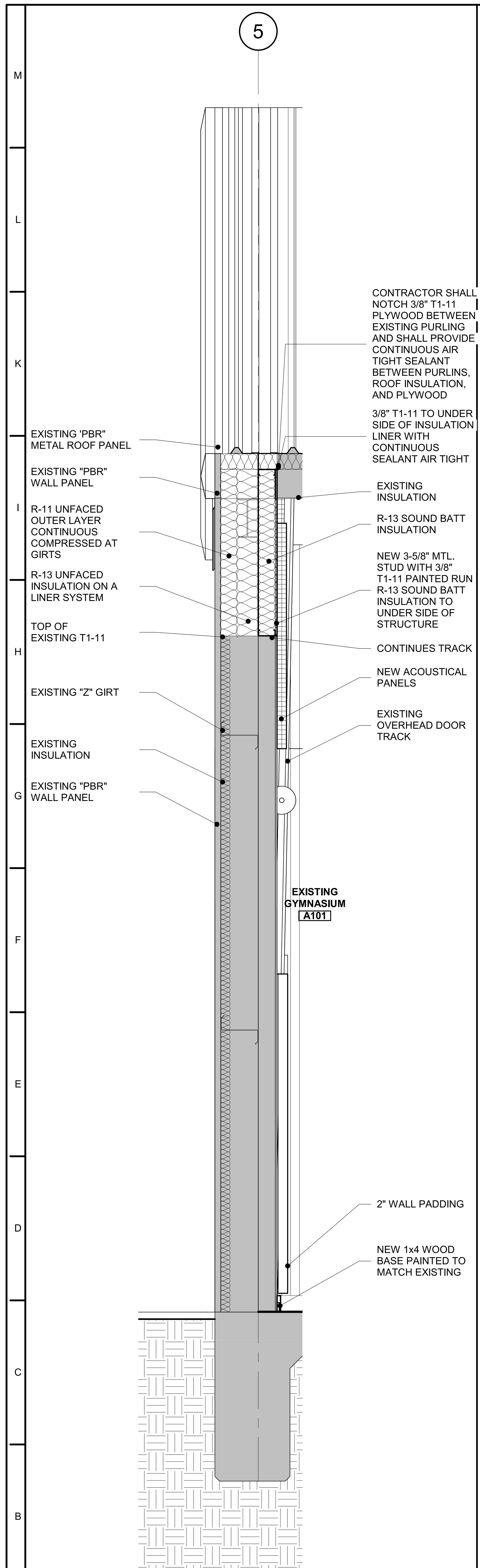
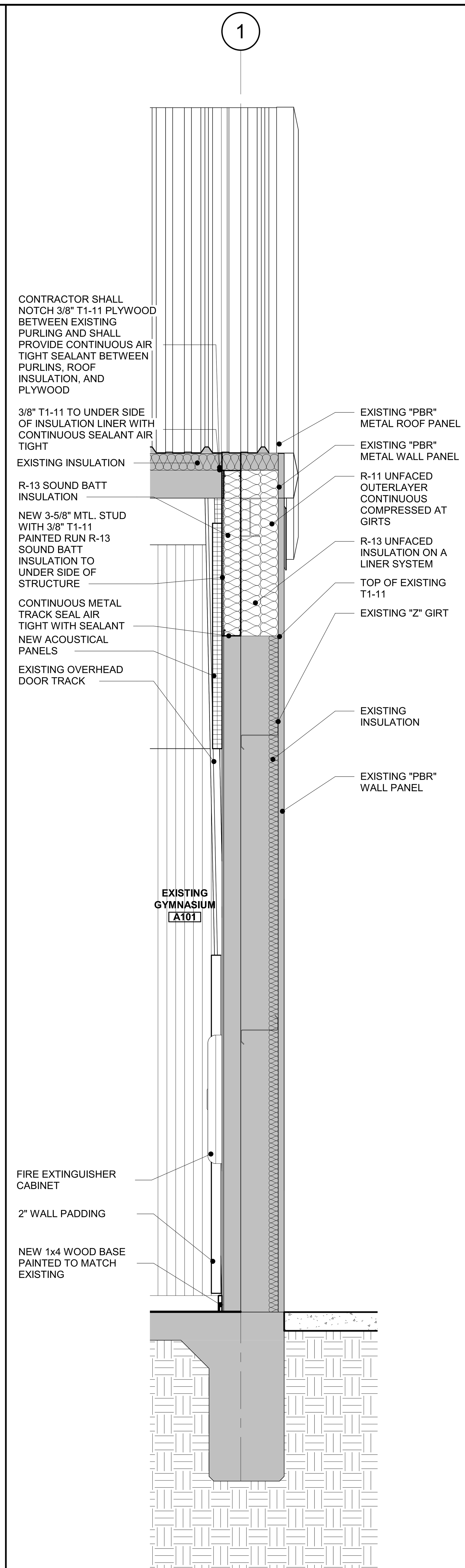
WALL SECTIONS

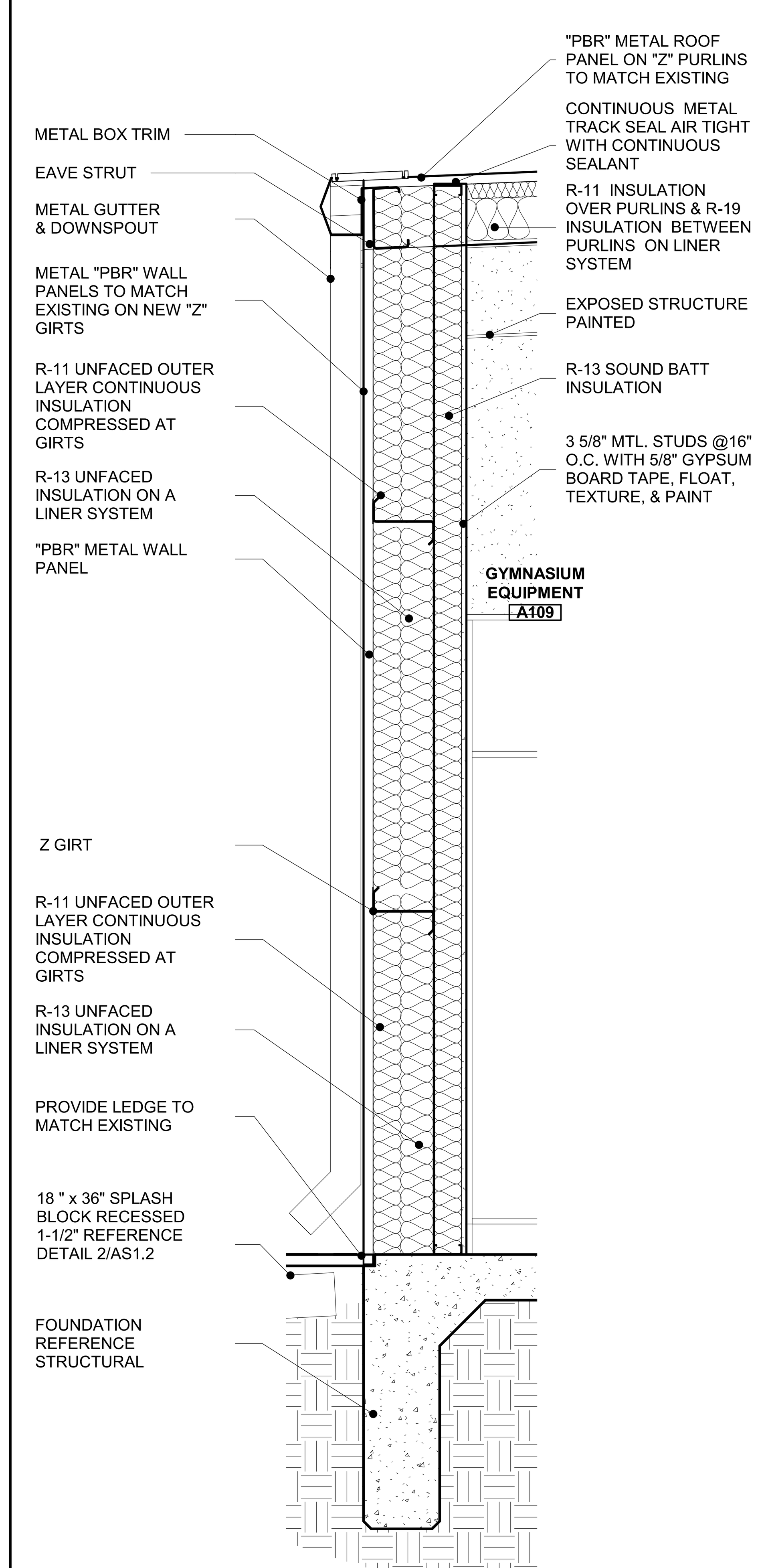
A5.1



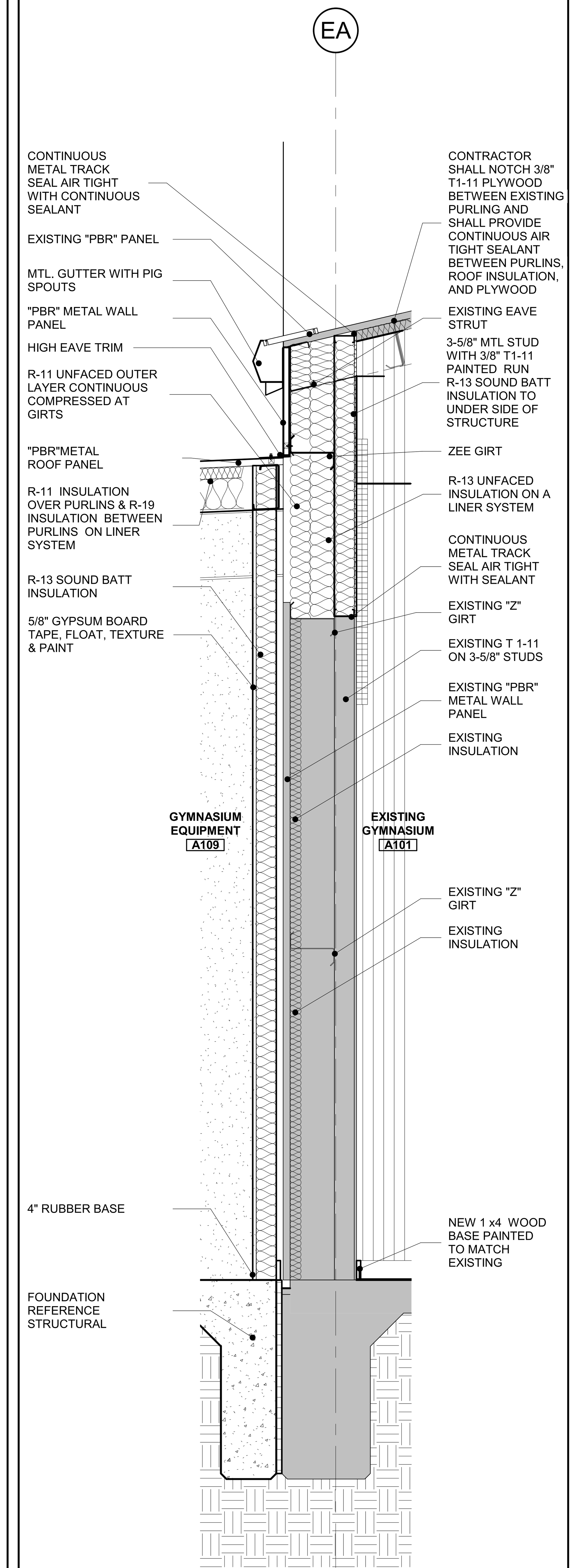
WALL SECTION
DE LA VINA
3/4" = 1'-0"
5



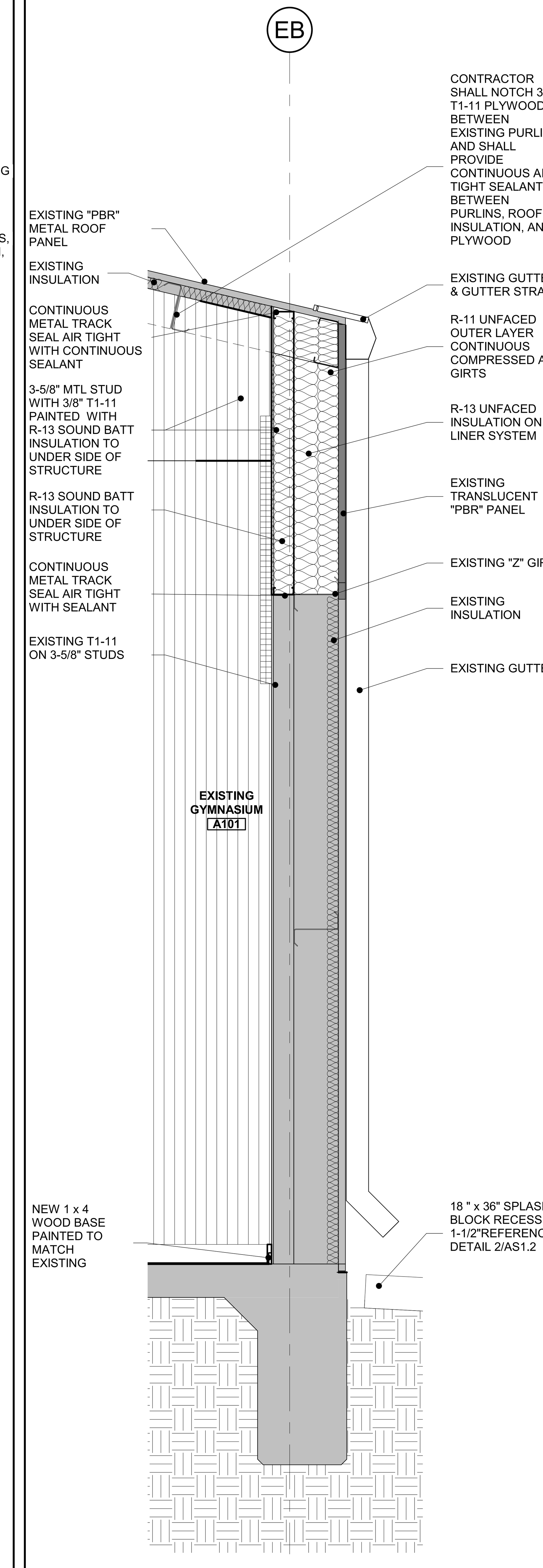
WALL SECTION
DE LA VINA
3/4" = 1'-0"
4



WALL SECTION
DE LA VINA
3/4" = 1'-0"
3



WALL SECTION
DE LA VINA
3/4" = 1'-0"
2



WALL SECTION
DE LA VINA
3/4" = 1'-0"
1

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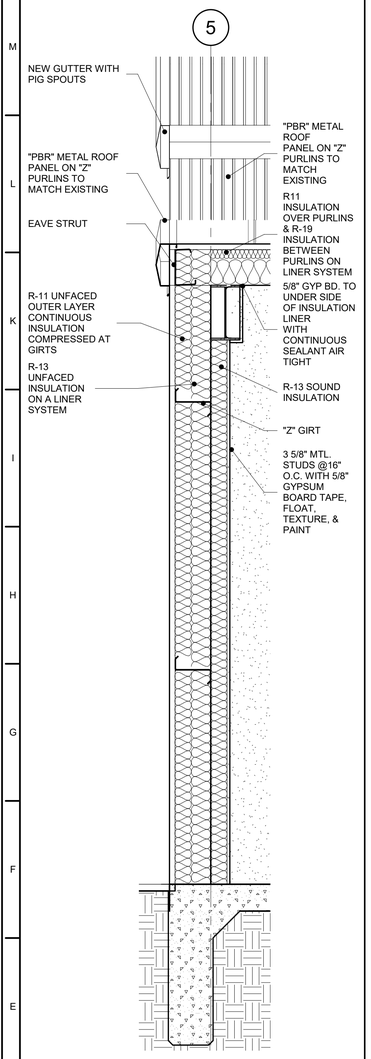
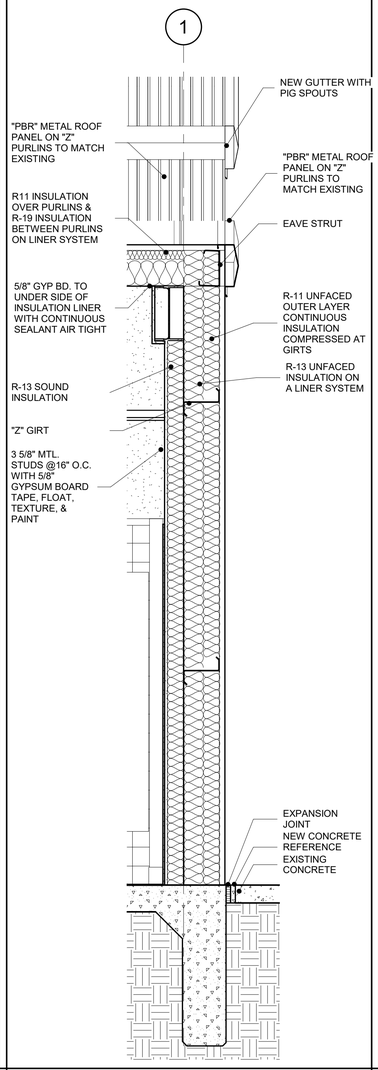
WALL SECTIONS

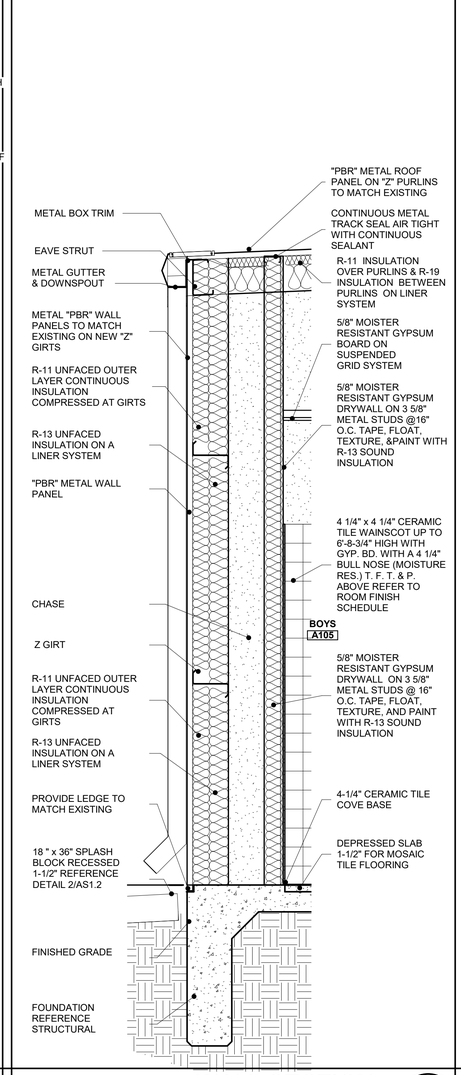
A5.2



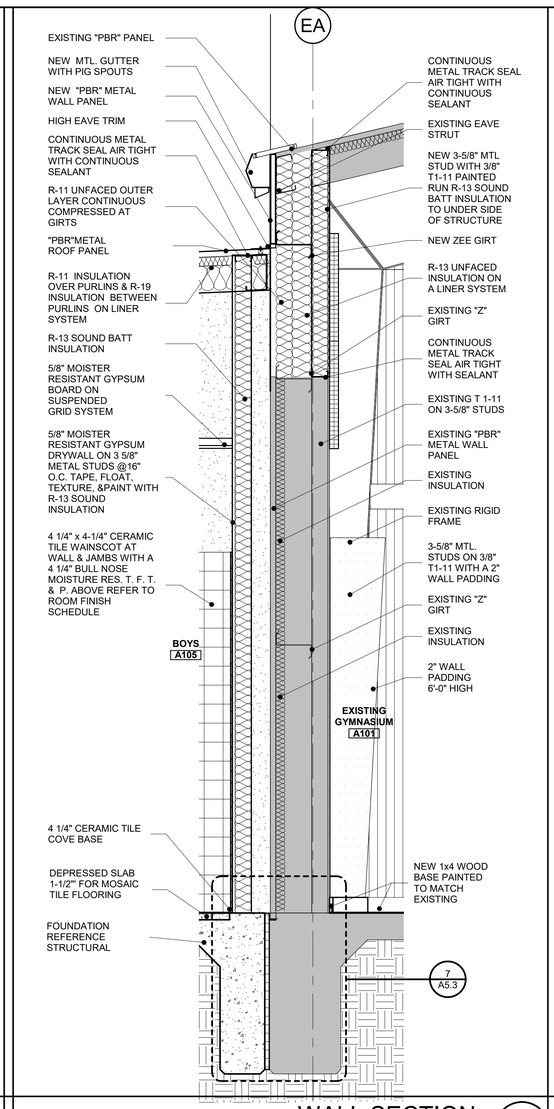
NEW END WALL COND DE LA VINA 3/4" = 1'-0" 8



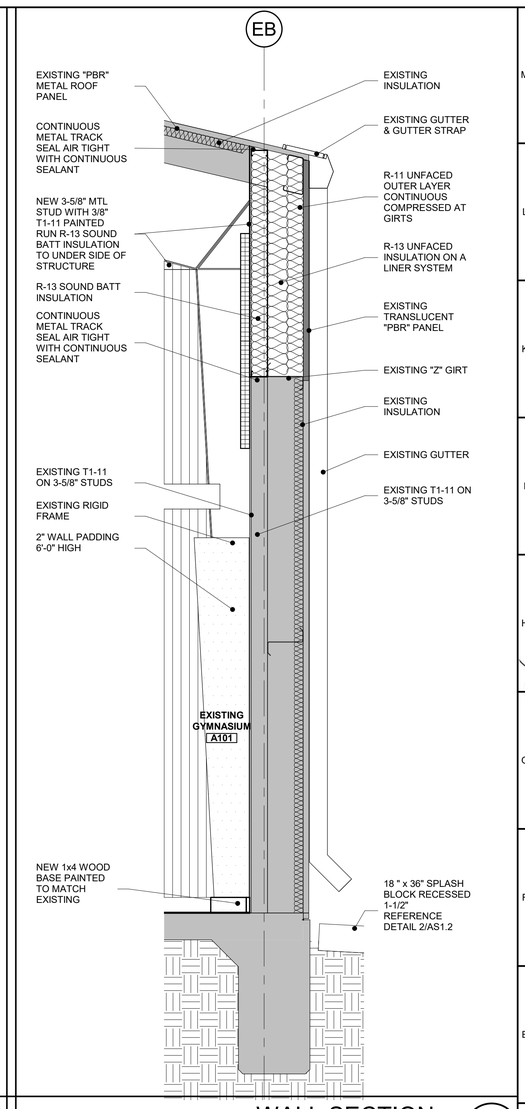
NEW END WALL COND. DE LA VINA 3/4" = 1'-0" 9



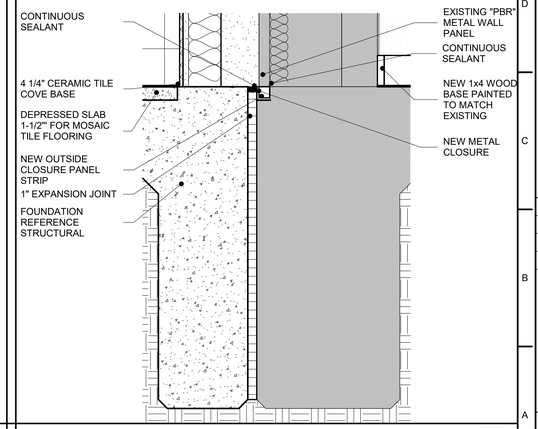
WALL SECTION DE LA VINA 3/4" = 1'-0" 3



WALL SECTION DE LA VINA 3/4" = 1'-0" 2



WALL SECTION DE LA VINA 3/4" = 1'-0" 1



EXPANSION JOINT DETAIL DE LA VINA 1 1/2" = 1'-0" 7

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REGISTERED ARCHITECT MARK A. FIGUEROA 12856 STATE OF TEXAS

04.15.2020

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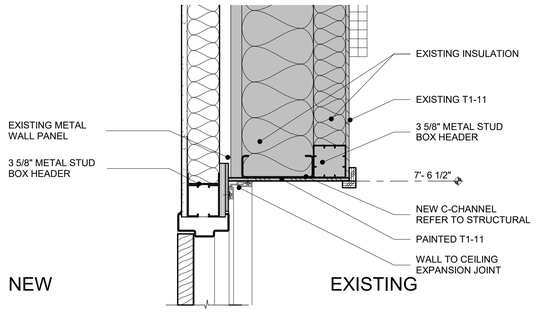
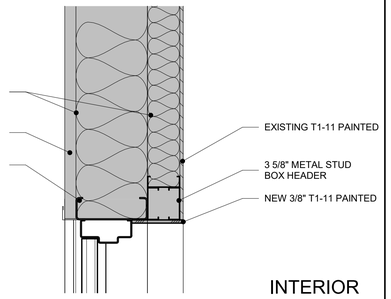
WALL SECTIONS

A5.3



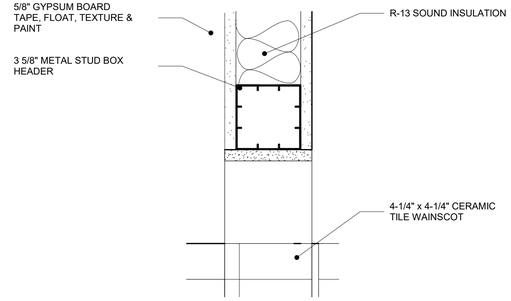
HEAD DEAIL AT A109 — DE LA VINA — 10

1 1/2" = 1'-0"



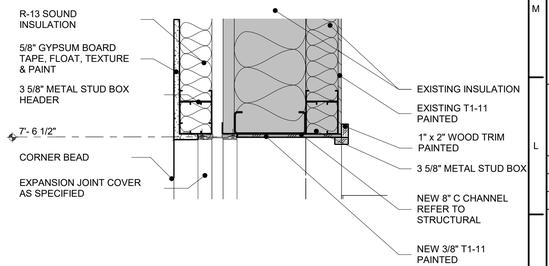
A101 HEAD DETAIL — DE LA VINA — 7

1 1/2" = 1'-0"



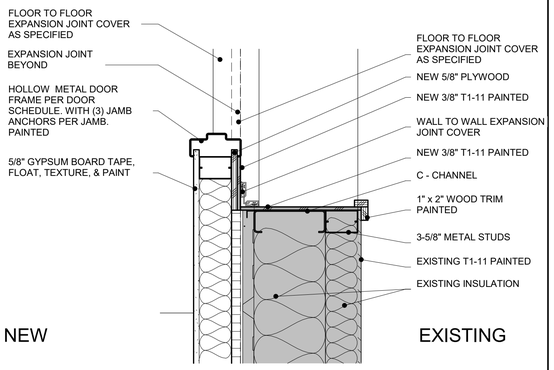
CASED OPENING HEAD AT A107 — DE LA VINA — 4

3" = 1'-0"



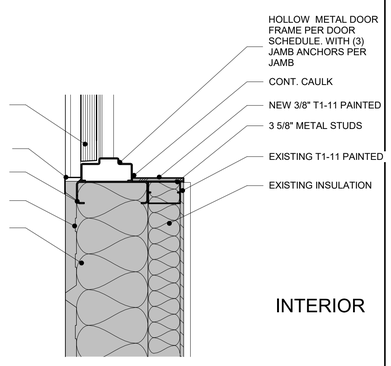
A102 HEAD DETAIL — DE LA VINA — 1

1 1/2" = 1'-0"



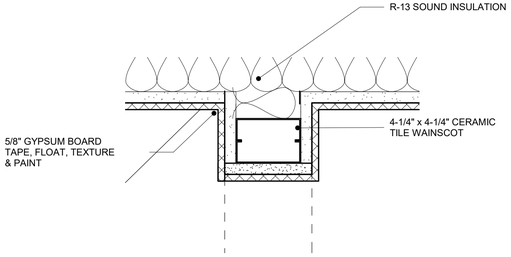
JAMB DETAIL AT A109 — DE LA VINA — 11

1 1/2" = 1'-0"



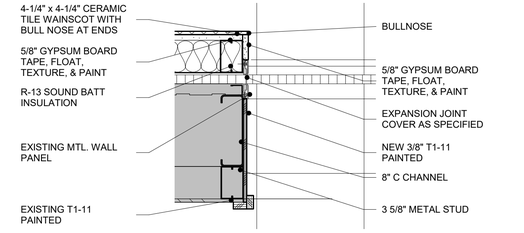
JAMB DETAIL A101 — DE LA VINA — 8

1 1/2" = 1'-0"



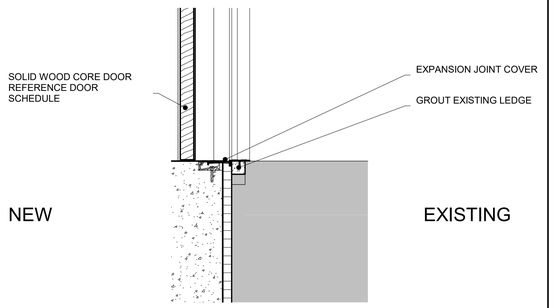
CASED OPENING JAMB AT A107 — DE LA VINA — 5

3" = 1'-0"



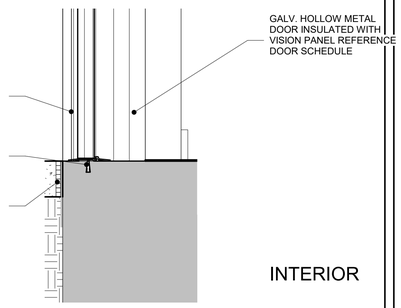
A102 JAMB DETAIL — DE LA VINA — 2

1 1/2" = 1'-0"



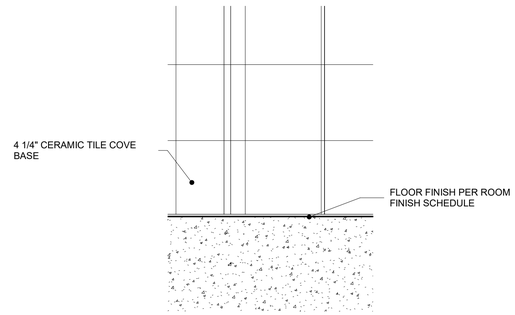
SILL DEAIL AT A109 — DE LA VINA — 12

1 1/2" = 1'-0"



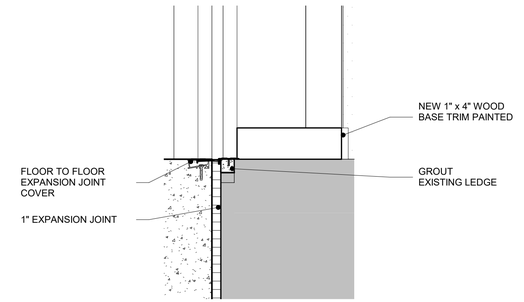
A101 SILL DETAIL — DE LA VINA — 9

1 1/2" = 1'-0"



CASED OPENEING SILL AT A107 — DE LA VINA — 6

3" = 1'-0"



A102 JAMB DETAIL — DE LA VINA — 3

1 1/2" = 1'-0"

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CONSULTANTS:

REGISTERED ARCHITECT — JOSE A. FIGUEROA — 12858 — STATE OF TEXAS

04.15.2020

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYMNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13
DATE: 4/17/2020 4:02:22 PM
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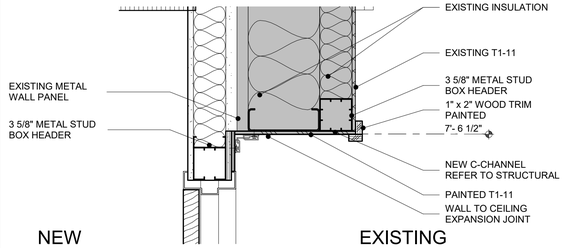
CK BY: Checker DWN BY: Author

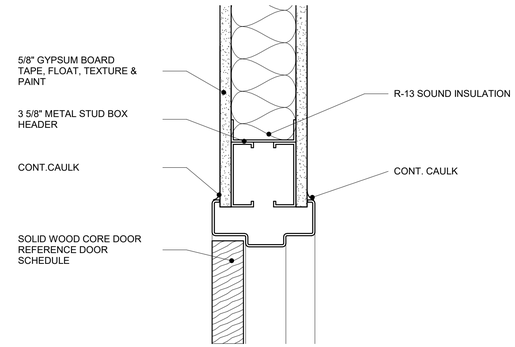
DOOR & WINDOW DETAILS

A6.1



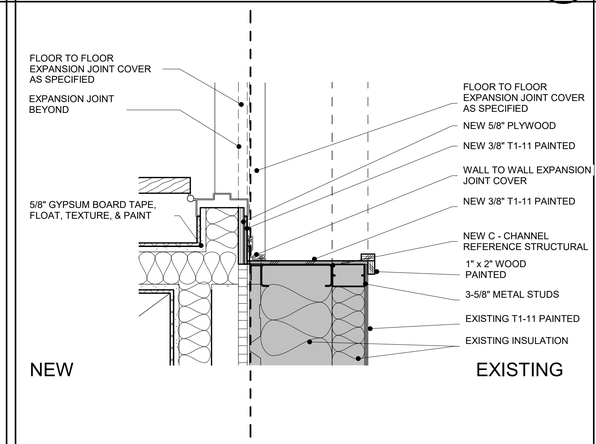
A 107 HEAD DETAIL 4

1 1/2" = 1'-0"



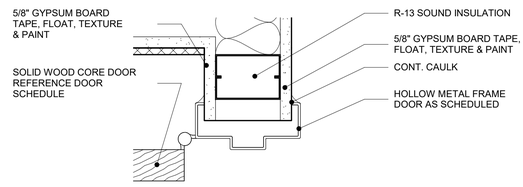
HEAD DETAIL 1

3" = 1'-0"



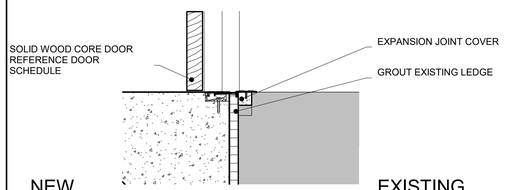
A107 JAMB DEAIL 5

1 1/2" = 1'-0"



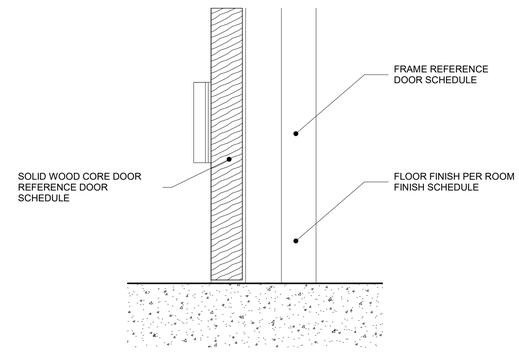
JAMB DETAIL 2

3" = 1'-0"



A 107 JAMB DETAIL 6

1 1/2" = 1'-0"



SILL DETAIL 3

3" = 1'-0"

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IMPROVEMENTS & ADDITIONS
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EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13
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STARTING DATE:
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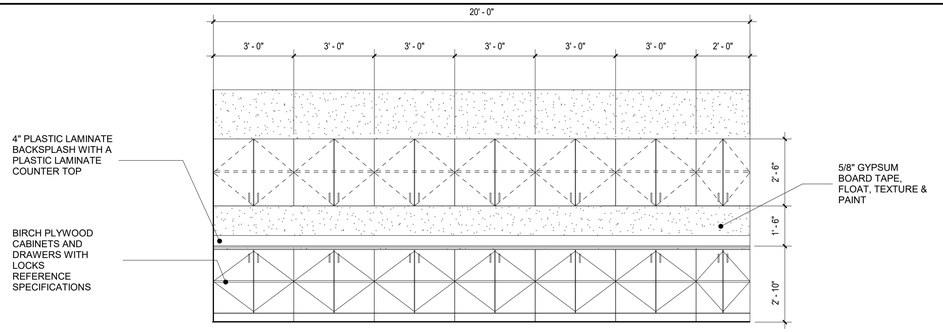
Unnamed

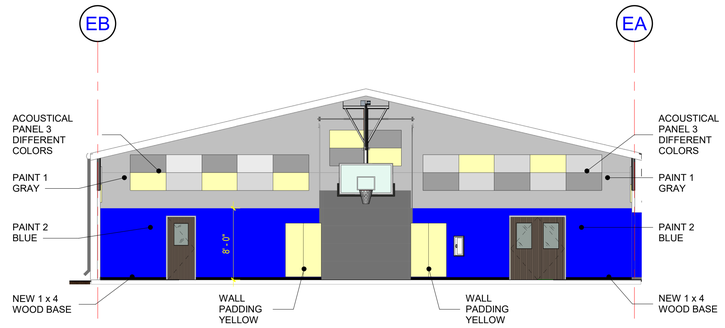
A6.2



A108 OFFICE - EAST DE LA VINA

3/8" = 1'-0"

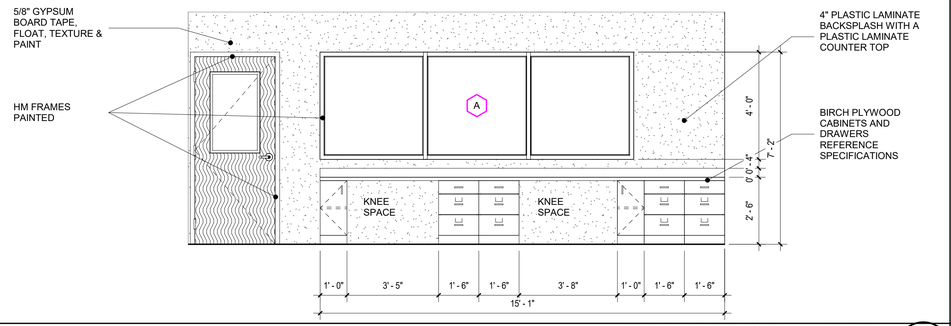
5



PAINT INTERIOR ELEVATION NORTH DE LA VINA

1/8" = 1'-0"

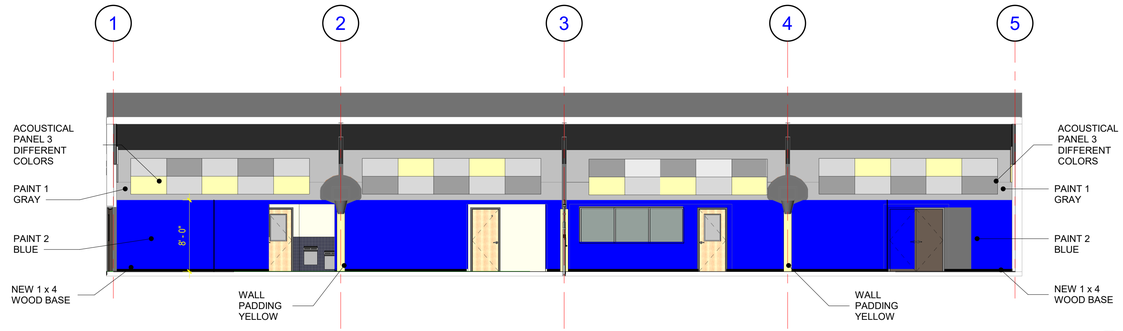
1



A108 OFFICE - WEST DE LA VINA

3/8" = 1'-0"

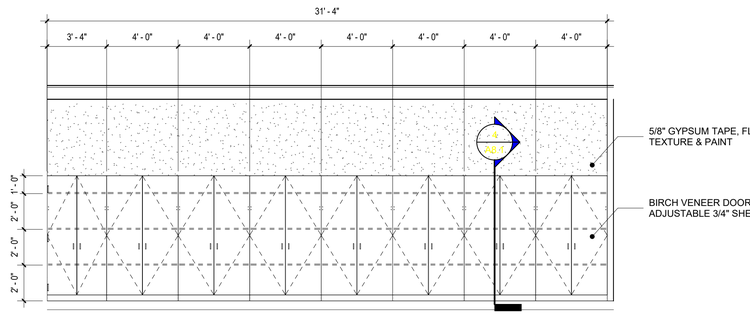
6



PAINT INTERIOR ELEVATION EAST DE LA VINA

1/8" = 1'-0"

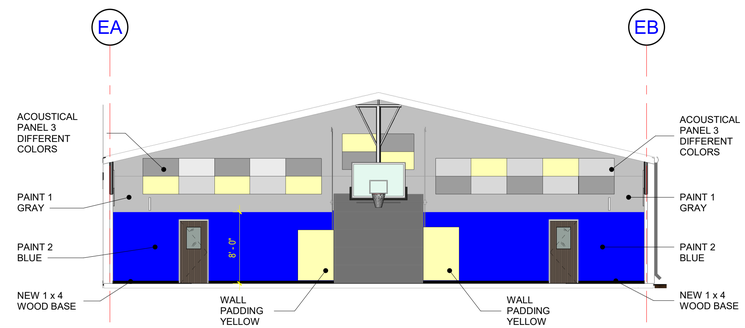
2



A109 GYM EQUIP. - EAST DE LA VINA

1/4" = 1'-0"

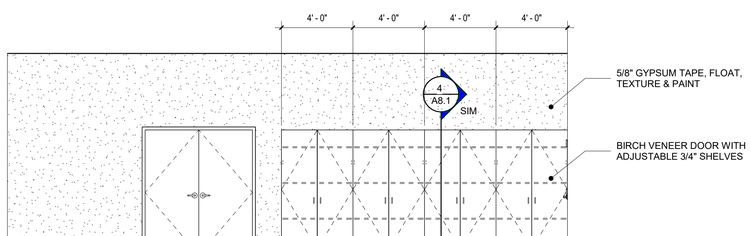
7



PAINT INTERIOR ELEVATION SOUTH DE LA VINA

1/8" = 1'-0"

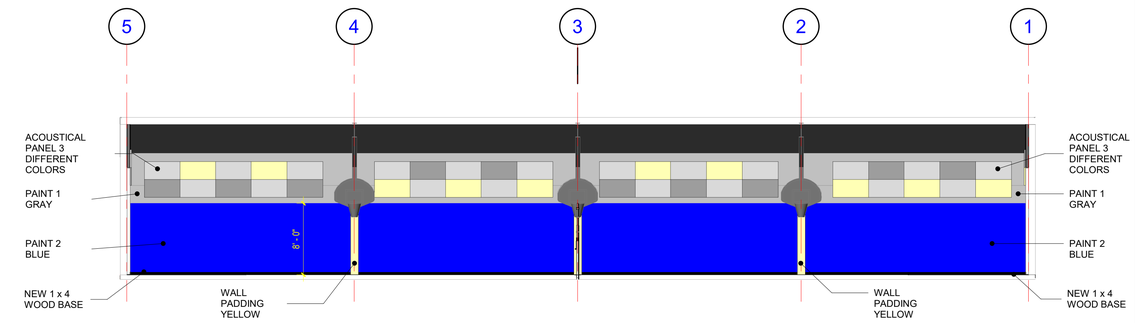
3



A109 GYM EQUIP. - WEST DE LA VINA

1/4" = 1'-0"

8



PAINT INTERIOR ELEVATION WEST DE LA VINA

1/8" = 1'-0"

4

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04.15.2020

NO.	DATE	REVISIONS DESCRIPTION

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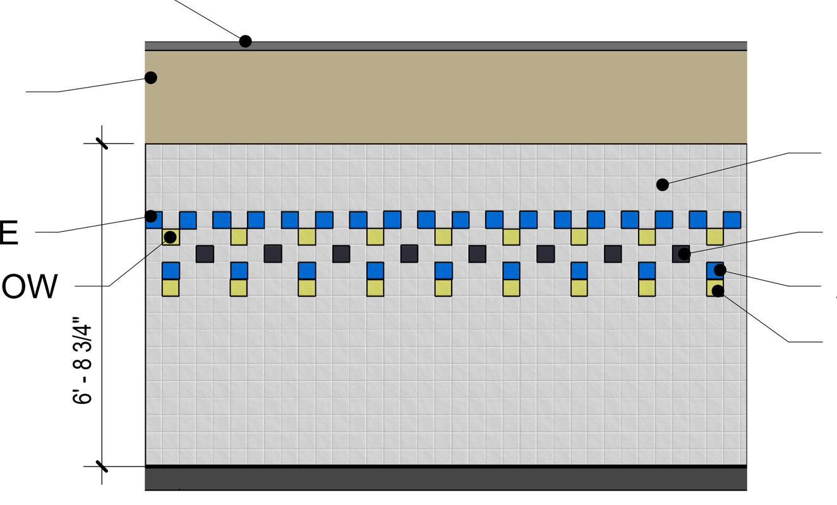
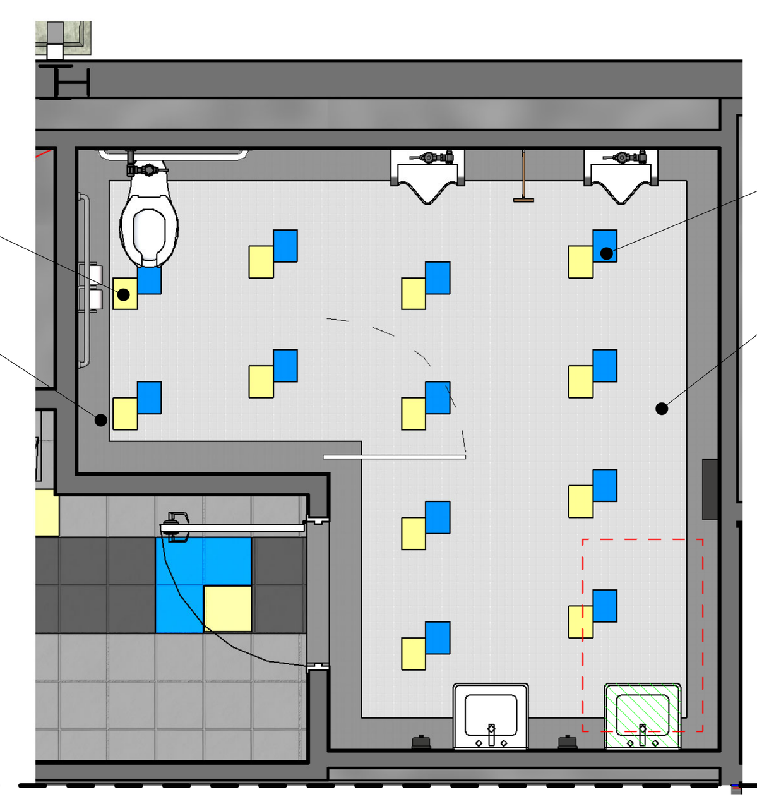
PROJECT NO: 2019.13
DATE: 4/18/2020 1:41:24 PM
STARTING DATE:
CK BY: Checker DWN BY: Author

INTERIOR ELEVATIONS

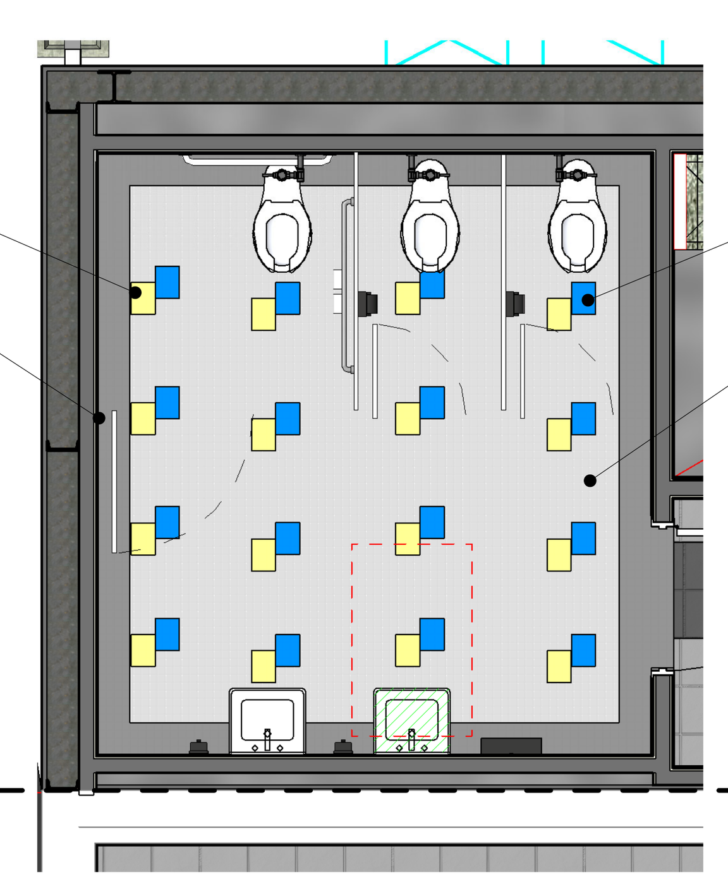
A7.1



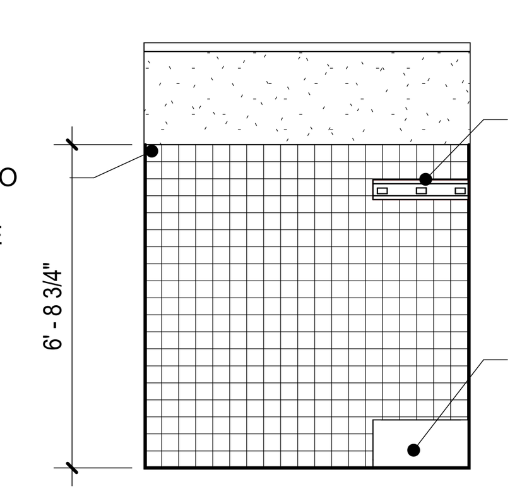
TYPICAL RESTROOM TILE 5



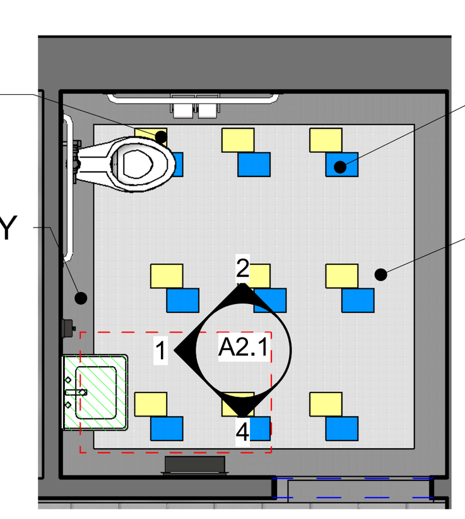
FLOOR PATTERNING - BOYS
DE LA VINA 2



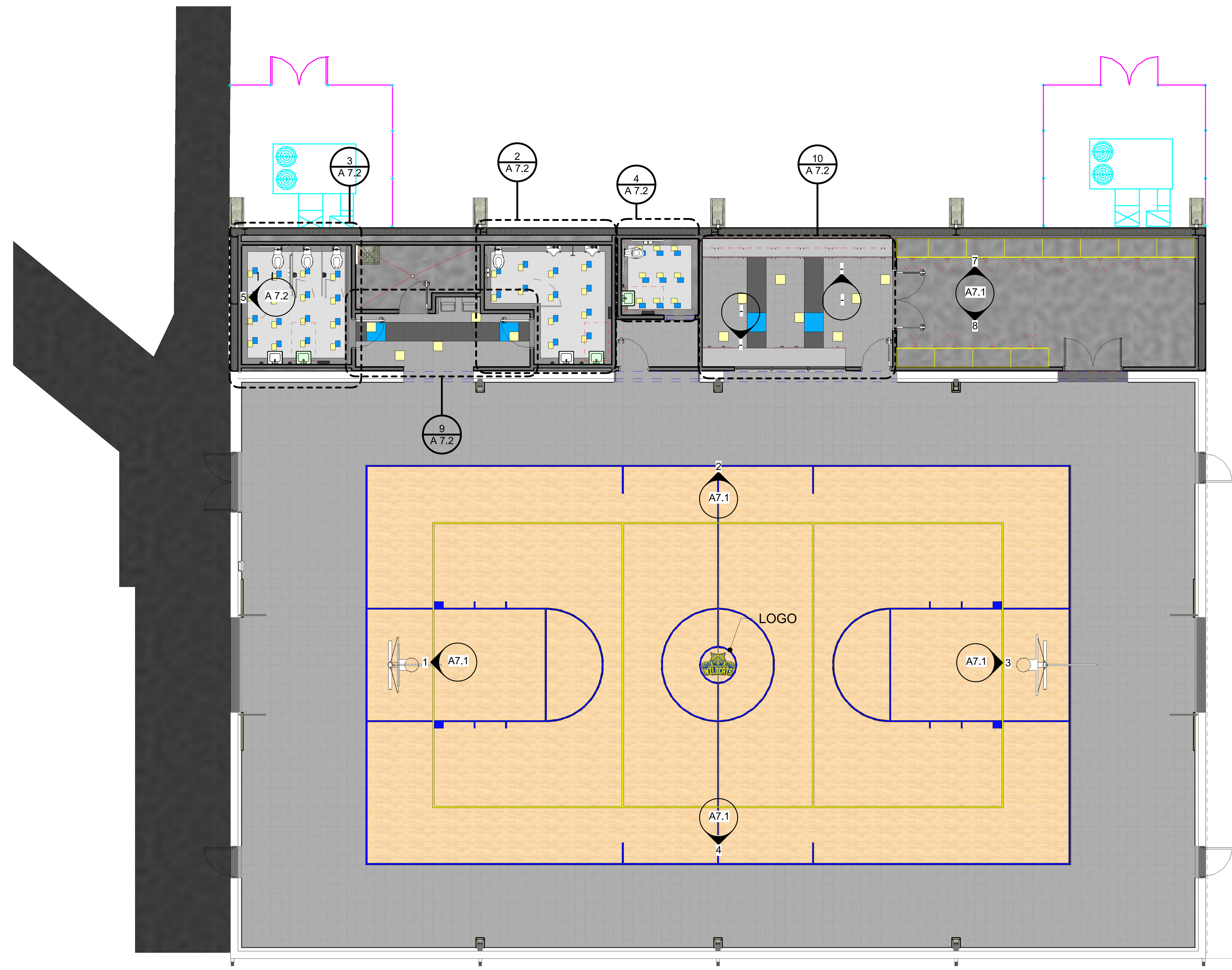
FLOOR PATTERNING - GIRLS
DE LA VINA 3



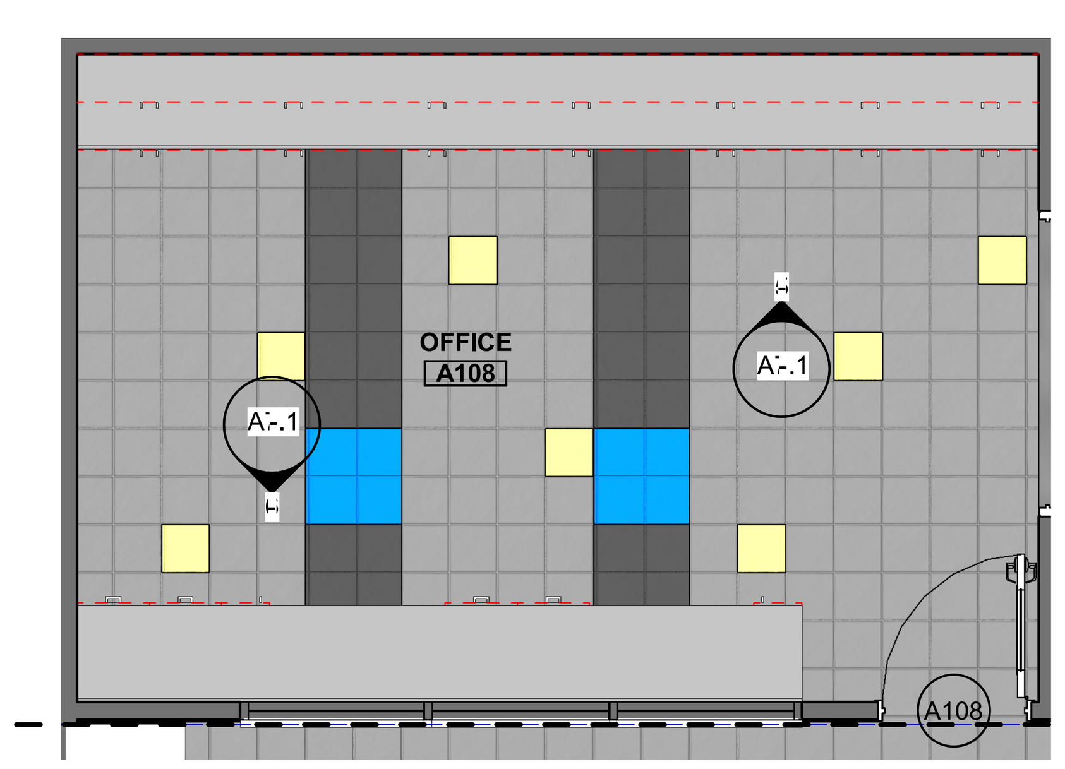
A104 JANITOR - NORTH 8



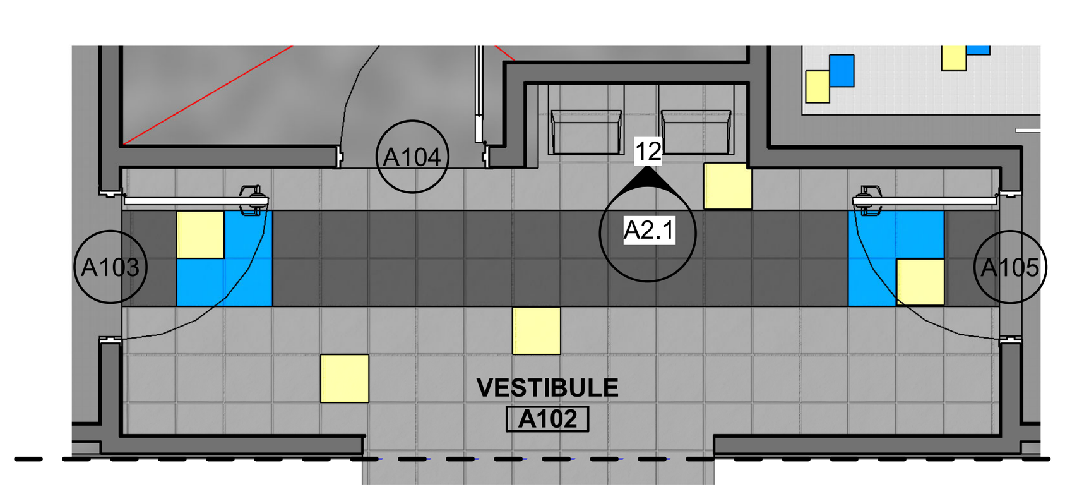
PATTERNING - FACUTLY
DE LA VINA 4



FLOOR PATTERNING 1



FLOOR PATTERNING - OFFICE
DE LA VINA 10



FLOOR PATTERNING -VESTIBULE
DE LA VINA 9

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04.15.2020

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PROJECT NO: 2019.13
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STARTING DATE:
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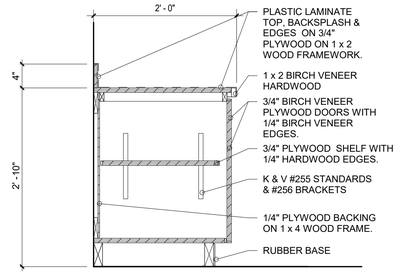
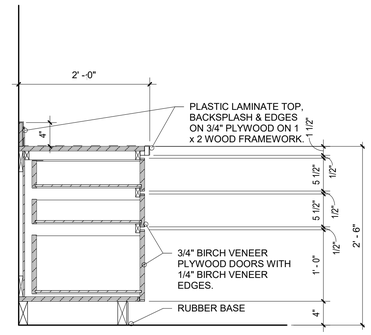
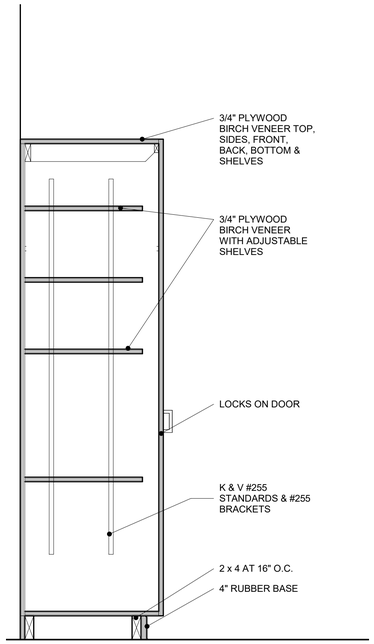
A 7.2



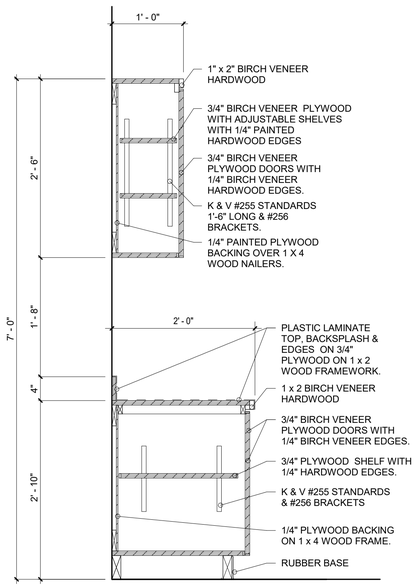
SECTION AT OFFICE A 108 EAST
DE LA VINA
1" = 1'-0"
3



SECTION AT OFFICE A 108 - WEST
DE LA VINA
1" = 1'-0"
2



STORAGE CABINET
DE LA VINA
1" = 1'-0"
4



SECTION AT OFFICE A108 - EAST
DE LA VINA
1" = 1'-0"
1

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04.15.2020

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DATE: 4/17/2020 4:02:52 PM
STARTING DATE:
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Unnamed

A8.1

ROOM FINISH SCHEDULE

NUMBER	NAME	FLOOR	BASE	WALLS				CEILING		COUNTERTOP	REMARKS
				NORTH	EAST	SOUTH	WEST	FINISH	HEIGHT		
A101	EXISTING GYMNASIUM	F.1 / F.2	B.1	W.3	W.3	W.3	W.3	C.3	VARIES		
A102	VESTIBULE	F.1	B.1	W.4	W.4	W.4	W.4	C.1	8'-8"		
A103	GIRLS	F.3	B.2	W.2	W.2	W.2	W.2	C.2	8'-8"		
A104	JANITOR	F.4	B.1	W.1	W.1	W.1	W.1	C.1	8'-8"		
A105	BOYS	F.3	B.2	W.2	W.2	W.2	W.2	C.2	8'-8"		
A107	FACULTY TOILET	F.3	B.2	W.2	W.2	W.2	W.2	C.2	8'-8"		
A108	OFFICE	F.1	B.1	W.1	W.1	W.1	W.1	C.1	8'-8"		
A109	GYMNASIUM EQUIPMENT	F.4	B.1	W.1	W.1	W.1	W.1	C.3	EXPOSED STRUCTURE		

KEY FINISHES-BASE FINISH SCHEDULE

Key	Base Finish
B.1	4" RUBBER COVE BASE
B.2	4-1/4" CERAMIC TILE COVE BASE
B.3	4" HIGH WOOD BASE PAINTED TO MATCH EXISTING SEALED

KEY FINISHES-CEILING FINISH SCHEDULE

Key	Ceiling Finish
C.1	2' X 2' LAY-IN ACOUSTICAL CEILING TILE SYSTEM
C.2	5/8" THICK, MOISTURE RESISTANT GYP. BD. ON SUSPENDED GRID SYSTEM (2 LAYERS OF 5/8" GYP. BD. AT FIRE RATED CONDITIONS)
C.3	EXPOSED STRUCTURE NOT PAINTED

KEY FINISHES-FLOOR FINISH SCHEDULE

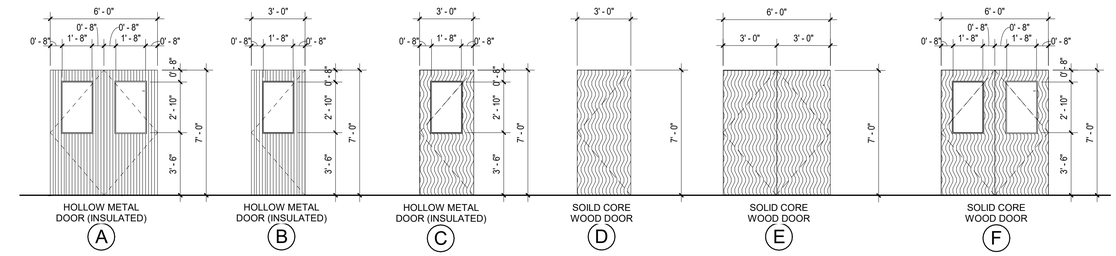
Key	Floor Finish
F.1	V.C.T.
F.2	L.V.T.
F.3	CERAMIC MOSAIC TILE (2" X 2")
F.4	EXPOSED CONCRETE (TROWEL FINISH) SEALED

KEY FINISHES-WALL FINISH SCHEDULE

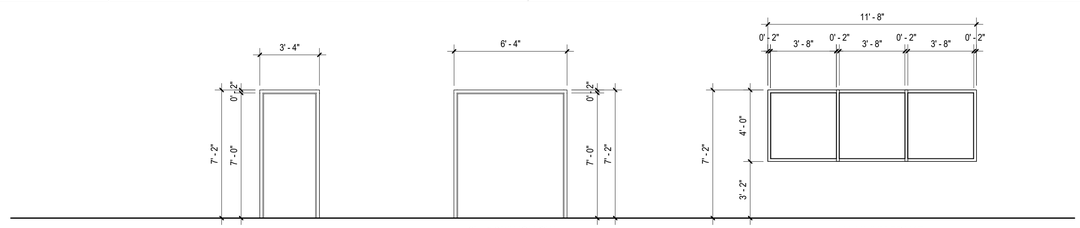
Key	Wall Finish
W.1	5/8" GYPSUM BOARD TAPE, FLOAT, TEXTURE & PAINTED
W.2	CERAMIC TILE 4-1/4" X 4-1/4" WAINSCOT UP TO 6'8 3/4" HIGH WITH GYP. BD. WITH A 4 1/4" x 4 1/4" BULL NOSE (MOISTURE RES.) T.F.T.& P. ABOVE
W.3	T1-11 SEALED AND PAINTED
W.4	CERAMIC TILE 4-1/4" X 4-1/4" WAINSCOT UP TO 3' 8 3/4" HIGH WITH GYP. BD. WITH A 4 1/4" BULL NOSE (MOISTURE RES.) T.F.T.& P. ABOVE

DOOR SCHEDULE

Mark	Pair or Single	DOOR DIMENSIONS			DOOR			DOOR FRAME			DOOR DETAILS			Fire Rating	Remarks
		Width	Height	Thickness	Door Type	Door Material	Door Finish	Frame Type	Frame Material	Frame Finish	Head	Jamb	Sill		
A101	Pair	3' - 0"	7' - 0"	1 3/4"	A	Galv. Hollow Mtl.	Paint	B	Galv. Hollow Mtl.	Paint	7/A6.1	8/A6.1	9/A6.1		
A101A	Single	3' - 0"	7' - 0"	1 3/4"	B	Galv. Hollow Mtl.	Paint	NA	Galv. Hollow Mtl.	Paint	7/A6.1	8/A6.1	9/A6.1		FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
A101B	Single	3' - 0"	7' - 0"	1 3/4"	B	Galv. Hollow Mtl.	Paint	NA	Galv. Hollow Mtl.	Paint	7/A6.1	8/A6.1	9/A6.1		FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
A101C	Single	3' - 0"	7' - 0"	1 3/4"	B	Galv. Hollow Mtl.	Paint	NA	Galv. Hollow Mtl.	Paint	7/A6.1	8/A6.1	9/A6.1		FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
A103	Single	3' - 0"	7' - 0"	1 3/4"	D	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		
A104	Single	3' - 0"	7' - 0"	1 3/4"	C	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		
A105	Single	3' - 0"	7' - 0"	1 3/4"	D	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		
A107	Single	3' - 0"	7' - 0"	1 3/4"	D	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	4/A6.2	5/A6.2	6/A6.2		
A108	Single	3' - 0"	7' - 0"	1 3/4"	C	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	4/A6.2	5/A6.2	6/A6.2		
A109	Pair	6' - 0"	7' - 0"	1 3/4"	E	Solid Core Wood	Natural	B	Galv. Hollow Mtl.	Paint	10/A6.1	11/A6.1	12/A6.1		
A109A	Pair	3' - 0"	7' - 0"	1 3/4"	F	Solid Wood Core	Natural	B	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		



DOOR TYPE ELEVATIONS
DE LA VINA
1/4" = 1'-0"
1



DOOR FRAME ELEVATIONS
DE LA VINA
1/4" = 1'-0"
2

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04.15.2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYMNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13
DATE: 4/17/2020 4:03:09 PM
STARTING DATE:
CK BY: Checker DWN BY: Author

SCHEDULES

A9.1

GENERAL NOTES

MECHANICAL

GENERAL MECHANICAL NOTES:

A. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION EFFORTS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS AS REQUIRED BY FIELD CONDITIONS.

B. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND/OR OWNER.

C. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE WORK IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES UNDER THIS SECTION OF THE CONTRACT. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE LOCAL CODES, HE SHALL INFORM THE OWNER PRIOR TO CONSTRUCTION START FOR DIRECTION. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET APPLICABLE LOCAL CODES, AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE.

D. CONTRACTOR SHALL HANG AND INSTALL ALL DUCTWORK TIGHT WITH THE BUILDING STRUCTURE TO ACCOMMODATE NEW CEILINGS. CONTRACTOR SHALL COORDINATE ALL INSTALLATION WORK WITH ARCHITECTURAL AND ELECTRICAL DESIGN. ALL DUCTWORK SHALL BE MODIFIED AS NECESSARY AND REQUIRED TO FIT AROUND BUILDING STRUCTURES, ARCHITECTURAL BUILD-OUT. MECHANICAL CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE WORK SCOPE OF OTHER TRADES AND PARTICIPATE IN COORDINATING ALL CONSTRUCTION EFFORTS.

E. CONTRACTOR SHALL INSTALL ALL EXHAUST SYSTEMS, INCLUDING FANS AND EXHAUST DUCTS. PROVIDE COMPLETE NEW SYSTEMS AS INDICATED.

F. CONTRACTOR SHALL PROVIDE ALL CEILING DIFFUSERS AS SHOWN. CONNECT EACH DIFFUSER TO THE MAIN DISTRIBUTION DUCT WITH A FLEX-DUCT SECTION; CONNECTIONS SHALL BE COMPLETED IN ACCORDANCE WITH THE DETAIL SHOWN IN THESE PLANS. EACH FLEX-DUCT CONNECTION SHALL INCLUDE A BUTTERFLY DAMPER TO BE INSTALLED AT THE TRUNK DUCT.

G. CONTRACTOR SHALL PROVIDE ALL DUCTWORK REQUIRED TO COMPLETE THE HVAC SYSTEM. TIE IN BRANCH DUCTS TO MAIN DUCTS WITH SHEET METAL FLANGES. FLANGE CONNECTION SHALL BE FASTENED WITH CRIMPED SHEET METAL STRIPS AND SEALED WITH SILICONE CAULK.

H. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CORE DRILLED OR SAWED WHEN POSSIBLE. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS. CONTRACTOR SHALL REINFORCE ALL OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 6000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES.

I. ON ANY WORK SHOWN ON MECHANICAL DRAWINGS REQUIRING DEMOLITION OF EXISTING OR NEW BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH OWNER-APPROVED PATCHING MATERIALS. ALL REFINISHING SHALL BE APPROVED BY THE OWNER.

J. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE INSTALLATION OF THE AIR DISTRIBUTION SYSTEM SHOWN. DUCTWORK, DUCT ACCESSORIES AND CONTROLS SHOWN AND REQUIRED SHALL BE SUPPLIED AND INSTALLED. ALL INSTALLATION WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE CODES, INCLUDING NFPA 90A AND 90B.

K. CONTRACTOR SHALL BALANCE ALL AIR DISTRIBUTION SYSTEMS TO ACHIEVE THE AIR VOLUME REQUIREMENTS INDICATED. BALANCING SHALL INCLUDE ADJUSTMENT OF ALL MANUAL VOLUME DAMPERS, SPLITTER DAMPERS, ZONE DAMPERS (IF REQUIRED), BUTTERFLY DAMPERS AND INDIVIDUAL DIFFUSER VOLUME DAMPERS (FINAL BALANCING ONLY). CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A COMPLETE BALANCING REPORT WHICH INCLUDES VOLUME, ROOM REFERENCE AND ZONE VOLUME TOTALS.

L. MOUNT ALL THERMOSTATS (SENSORS) 48" ABOVE THE FINISHED FLOOR LEVEL UNLESS NOTED OTHERWISE THERMOSTATS SHOWN SHALL BE IN CONTROL OF THE ZONE SYSTEM WHICH IS SUPPLYING AIR TO THE AREA WHERE THE THERMOSTAT IS LOCATED. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EACH THERMOSTAT WITH THE ROOM FINISHES AND USES. CONTRACTOR SHALL SUPPLY AND INSTALL ALL CONTROL VOLTAGE WIRING AND CONDUIT FOR THERMOSTAT INSTALLATION.

M. CONTRACTOR SHALL COORDINATE THE FINAL LOCATIONS OF ALL CEILING DIFFUSERS WITH LIGHTING INSTALLATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS. MOVE THE DIFFUSER LOCATIONS IF REQUIRED TO AVOID OBSTRUCTIONS FROM DUCTWORK AND LIGHT FIXTURES. COORDINATE RELOCATION WITH ENGINEER.

N. VERIFY THE LOCATION OF ALL WALLS, PARTITIONS, DOORS, CABINETS, AND CEILINGS FROM ACTUAL FIELD MEASUREMENTS.

O. PROVIDE SMOKE DETECTOR AND SHUTDOWN CONTROLS ON AIR HANDLERS AND SUPPLY FANS. SMOKE DETECTORS SHALL BE PROVIDED, INSTALLED AND WIRED FOR SHUT DOWN BY DIVISION 16. PROVIDE BOTH SUPPLY AND RETURN SIDE DEVICES.

MECHANICAL GENERAL DEMOLITION NOTES:

A. INFORMATION ON THE PLAN HAS BEEN OBTAINED FROM EXISTING DRAWINGS AND SITE SURVEY. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND/OR ARCHITECT.

B. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE DEMOLITION WORK UNDER THIS SECTION OF THE PROJECT IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE CODES, HE SHALL INFORM THE ARCHITECT PRIOR TO CONSTRUCTION START FOR DIRECTION. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET CODE REQUIREMENTS AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE. APPLICABLE CODES AND STANDARDS ON DEMOLITION WORK SHALL INCLUDE THOSE PUBLISHED BY OSHA AND EPA. AN ASBESTOS SURVEY SHALL BE KEPT ON SITE AT ALL TIMES PER TEXAS DEPARTMENT OF HEALTH REQUIREMENTS.

C. ALL DUST PRODUCTION, SMOKE PRODUCTION AND NOISE SHALL BE SUBJECT TO REAL TIME REVIEW BY THE ARCHITECT. WORK SHALL BE SHUT DOWN DURING CRITICAL ACTIVITIES BY FORMAL REQUEST FROM THE DESIGNATED AUTHORITY OR CONTRACTING ARCHITECT. WORK IN DUSTY AREAS SHALL BE CONTROLLED WITH TEMPORARY PARTIONS. FLAME CUTTING SHALL BE MINIMIZED TO ELIMINATE SMOKE PRODUCTION. PROVIDE FIRE EXTINGUISHERS IN THE IMMEDIATE AREA.

D. GENERAL CONTRACTOR SHALL BE ADVISED OF ALL NEW PROPOSED ROOF OPENINGS BY ANY SUB-CONTRACTOR.

E. ON ANY WORK SHOWN ON MECHANICAL DRAWINGS WHICH REQUIRES DEMOLITION OF BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL BUILDING DAMAGE CREATED BY DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH ARCHITECT APPROVED PATCHING MATERIALS.

F. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CORE-DRILLED OR SAWED WHEN POSSIBLE. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION WITH STRUCTURAL ENGINEER BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 8000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING, OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES.

G. ALL SURFACES COVERED BY "SPRAY POLY" AND PROTECTED BY TEMPORARY PARTITIONS SHALL REMAIN PROTECTED THROUGHOUT THE PROJECT. REMOVE THE PROTECTIVE BARRIERS ONLY AFTER THE NEW EQUIPMENT PIPING AND DUCTWORK IS INSTALLED. PATCH AND MAINTAIN THE PROTECTIVE BARRIERS DURING CONSTRUCTION. COVER ALL EQUIPMENT OPENINGS WITH 4 MIL. POLY AND DUCT TAPE IN PLACE.

H. ALL NEW ROOF PENETRATIONS SHALL BE ROUTED THRU ANY EXISTING OPENING WHEREVER POSSIBLE. LARGER AND NEW OPENINGS SHALL BE KEPT TO A MINIMUM.

I. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES IN AREAS OF EXCAVATION WORK.

J. CONTRACTOR SHALL REMOVE AND RETURN ANY AND ALL EXISTING EQUIPMENT/MATERIALS TO OWNER. OWNER SHALL HAVE FULL RIGHT OF OWNERSHIP UNLESS SPECIFIED OTHERWISE. IF THE OWNER WAIVES THIS OPTION, ANY EQUIPMENT, MATERIAL, ETC SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

K. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES.

L. CONTRACTOR AND OWNER SHALL BE FULLY RESPONSIBLE TO IDENTIFY ANY AND ALL ASBESTOS PRESENT IN THE BUILDING PRIOR TO DEMOLITION AS REQUIRED BY LAW.

M. COORDINATION AMONG OTHER CONSTRUCTION DISCIPLINES PRIOR TO DEMOLITION IS MANDATORY.

N. CONTRACTOR SHALL IDENTIFY ALL WATER CONNECTION LINES, NATURAL GAS LINES AND SANITARY SEWER LINES PRIOR TO COMMENCING DEMOLITION WORK.

ELECTRICAL

GENERAL ELECTRICAL SITE NOTES:

A. ELECTRICAL CONTRACTOR SHALL CONTACT UTILITY COMPANY SERVICE REPRESENTATIVE AND COORDINATE SERVICE INSTALLATION PRIOR TO COMMENCING WORK.

B. ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER ALL FEES AND CONSTRUCTION COSTS CHARGED BY THE POWER, TELEPHONE AND CABLE UTILITY PROVIDERS FOR MAIN LINE EXTENSIONS OF SERVICE FOR A NEW INSTALLATION.

C. ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL POWER, TELEPHONE AND CABLE TO THE NEW FACILITY.

D. ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONDUIT, CONDUCTORS AND CABLES AS SPECIFIED. REFER TO SPECIFICATION SECTIONS FOR REQUIREMENTS.

GENERAL ELECTRICAL LIGHTING NOTES:

A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS (RCP) FOR EXACT LOCATION OF LIGHT FIXTURES. FURNISH FIXTURES WITH TRIM COMPATIBLE WITH THE TYPE OF CEILING AS INDICATED IN RCP.

B. CONNECT EXIT/EMERGENCY LIGHTS AND EMERGENCY BALLASTS IN EMERGENCY LIGHTS IN EACH SPACE TO UNSWITCHED HOT LEGS OF THE LOCAL LIGHTING CIRCUIT

C. COORDINATE PLACEMENT OF LIGHT FIXTURE WITH ACTUAL INSTALLATION OF MECHANICAL EQUIPMENT AND DUCTWORK.

D. COORDINATE LOCATIONS OF ALL WIRING SWITCHES AND MOUNTING HEIGHTS WITH OWNERS DRAWINGS PRIOR TO ROUGH IN.

E. COORDINATE INSTALLATION OF CONDUIT WITH OTHER TRADES PRIOR TO ROUGH-IN.

GENERAL POWER NOTES:

A. ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONDUIT, CONDUCTORS AND CABLES AS SPECIFIED. REFER TO SPECIFICATION SECTIONS FOR REQUIREMENTS.

B. ALL WIRING DEVICES SHALL BE INSTALLED WITH STAINLESS STEEL FACE PLATES.

PLUMBING

GENERAL PLUMBING NOTES:

A. COORDINATE EXACT LOCATION OF ALL FLOOR DRAINS WITH MECHANICAL EQUIPMENT LOCATION AND CONDENSATE DRAIN REQUIREMENTS PRIOR TO ANY INSTALLATION.

B. ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH TRAP PRIMER CONNECTION.

C. PLUMBING CONTRACTOR SHALL ADHERE TO ALL CITY CODES AND OTHER STATE CODES AND LOCAL CODES THAT HAVE AUTHORITY OVER THIS PROJECT.

D. PLUMBING CONTRACTOR SHALL EXTEND ALL CONDENSATE AND INDIRECT DRAINS FROM EQUIPMENT TO FLOOR DRAINS.

E. PLUMBING CONTRACTOR SHALL TERMINATE ALL WATER ROUGH-IN WITH SHUT-OFF VALVES BEFORE CONNECTING TO EQUIPMENT AND RELATED FIXTURES.

F. PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ANY INSTALLATION OF PIPING AND DUCTWORK PRIOR TO BEGINNING OF CONSTRUCTION.

G. INSULATE "P" TRAPS AND SUPPLIES AT HANDICAP LAVATORIES WITH INSULATION KIT.

H. PROVIDE VACUUM BREAKER TO ALL FIXTURES WITH HOSE CONNECTION AND APPLIANCES WITH DIRECT CONNECTIONS TO DOMESTIC WATER.

I. REFER TO OWNERS DRAWINGS FOR MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.

J. ALL VENTS THROUGH ROOF SHALL BE FLASHED A MINIMUM OF 12" ABOVE ROOF. ALL VENTS SHALL BE MINIMUM OF 10' AWAY FROM ANY OUTSIDE AIR INTAKE.

K. PROVIDE CEILING ACCESS PANEL FOR WATER ISOLATION VALVES, WATER HAMMER ARRESTORS AND TRAP PRIMER VALVES IN OTHERWISE INACCESSIBLE AREAS.

TABLE OF CONTENTS DE LA VIÑA ELEMENTARY

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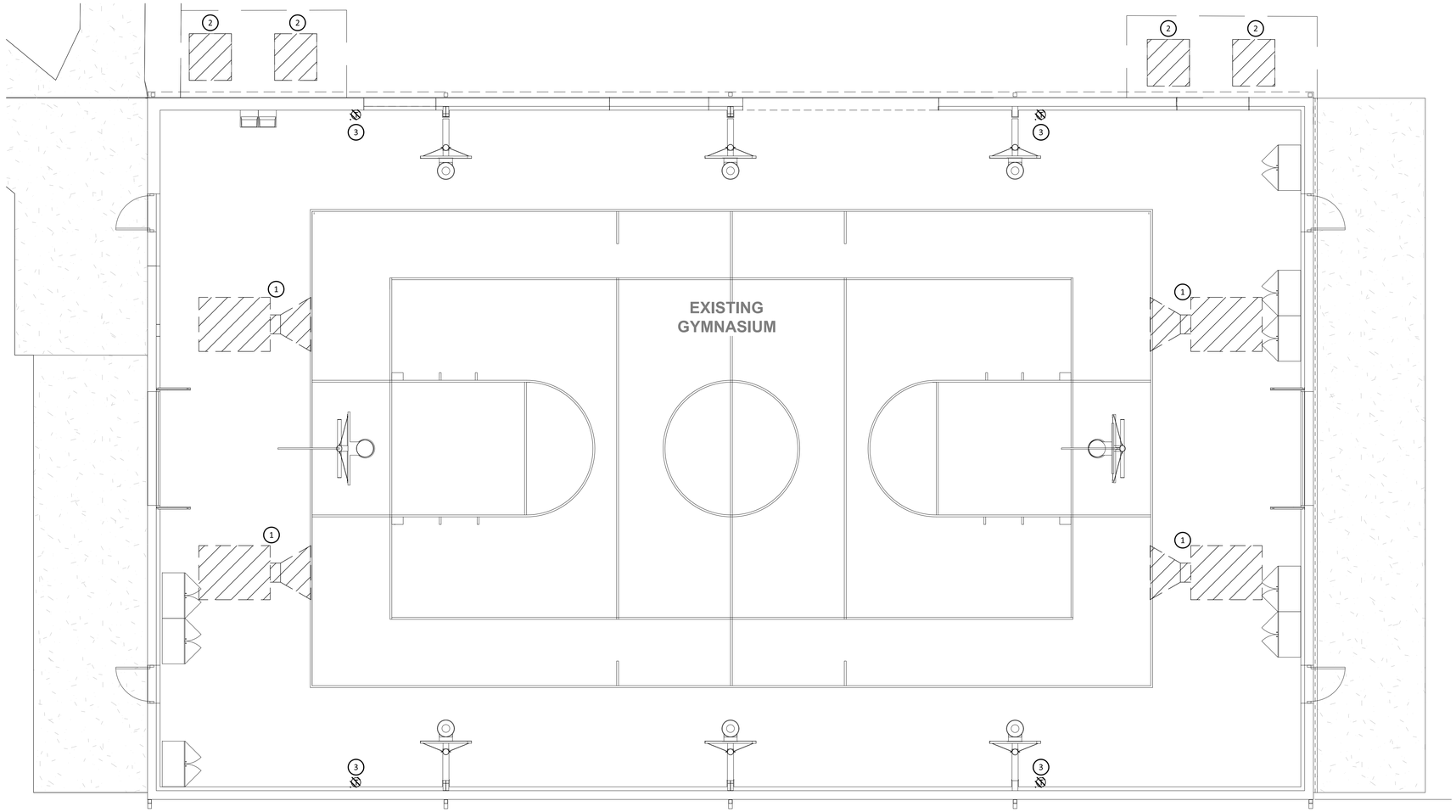
DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:

MEP GENERAL NOTES

MEP-1.0



1 MECHANICAL DEMOLITION PLAN (DE LA VIÑA ELEMENTARY)
SCALE: 3/16"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. REMOVE EXISTING SPLIT DX SYSTEM AIR HANDLING UNIT AND ASSOCIATED REFRIGERANT PIPING, CONTROLS CONDUIT, WIRING, AND ASSOCIATED DUCTWORK. FIELD VERIFY EXISTING CONDITIONS.
2. REMOVE CONDENSING UNIT AND ASSOCIATED REFRIGERANT PIPING, CONTROLS CONDUIT, CONTROLS WIRING, AND EQUIPMENT RAILS. ALL ASSOCIATED ABANDONED WALL PENETRATIONS SHALL BE SEALED WEATHER AND MOISTURE TIGHT WITH VAPOR BARRIER AND MATERIALS TO MATCH EXISTING. REMOVE CONCRETE PADS, CHAIN LINK FENCE, FOOTINGS, & GATES. FIELD VERIFY EXISTING CONDITIONS.
3. DEMOLISH EXISTING THERMOSTAT.

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ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
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INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
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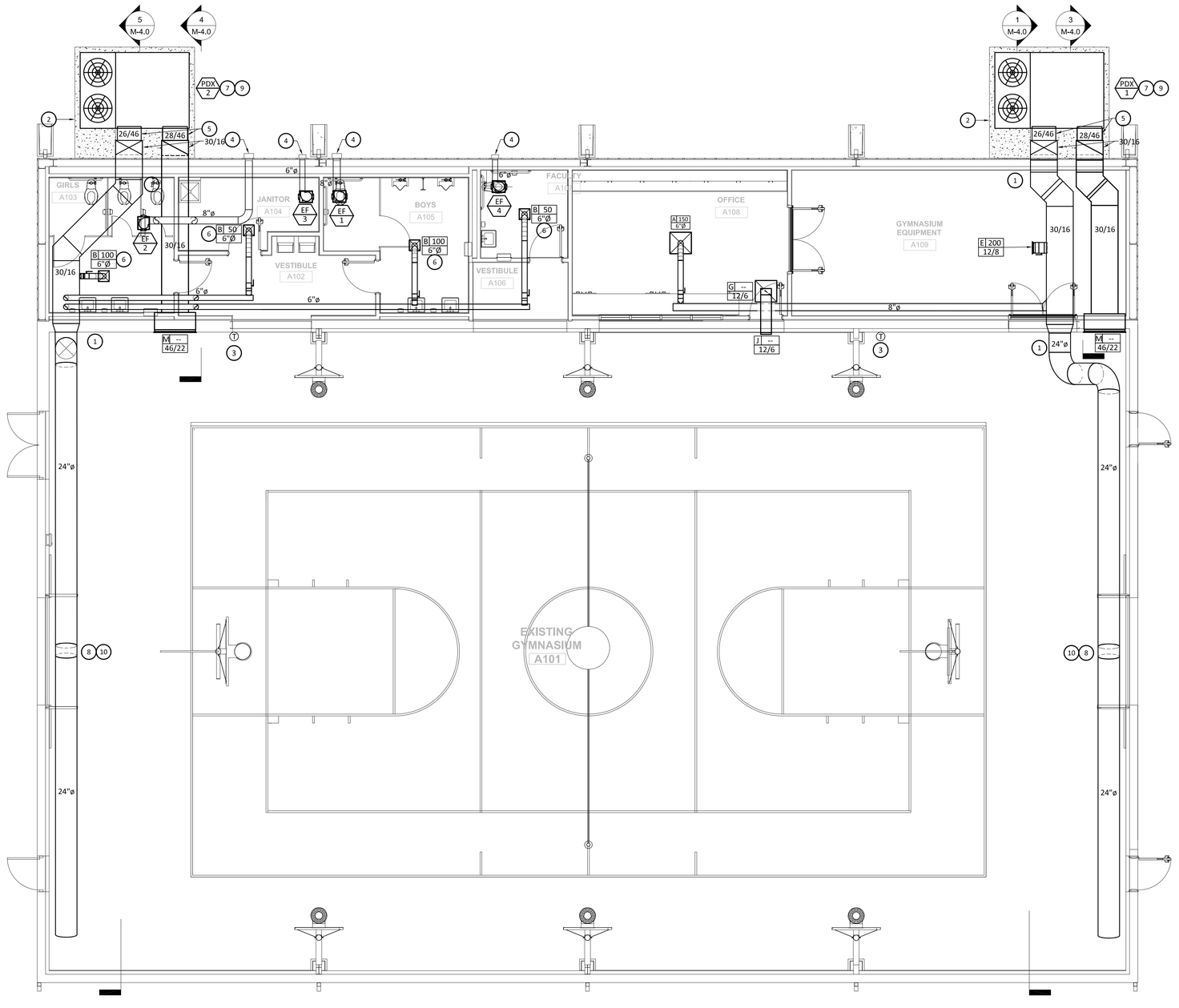
CK BY: G.H. DWN BY: C.C.

MECHANICAL
DEMOLITION PLAN

MD-1.0



GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.
2. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL HVAC UNIT SUPPLY AND RETURN DUCT CONNECTIONS.

KEY NOTES: (#)

1. SLEEVE ALL WALL PENETRATIONS PER SPECS. SEAL AROUND DUCTS & PIPING AT WALLS PENETRATIONS WITH FIRE-PROOF CAULKING. PROVIDE ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE TO PROVIDE A FINISH LOOK. (TYPICAL OF ALL SUCH LOCATIONS.)
2. FURNISH AND INSTALL 6 INCH HIGH HOUSE KEEPING PAD.
3. MOUNT THERMOSTAT 48" AFF AND PROVIDE VANDAL PROOF ENCLOSURE.
4. PROVIDE HOODED WALL CAP WITH ROUND CONNECTION. SEAL WALL PENETRATION VAPOR TIGHT. USE CORRUGATED SLEAVE SEAL TO MATCH WALL PANEL FOR A CLEAN FINISHED LOOK.
5. OUTDOOR SUPPLY AND RETURN DUCTS SHALL BE PRE-INSULATED DUCT SYSTEMS EQUAL TO R-12 THERMADUCT. COORDINATE PACKAGED DX UNIT EQUIPMENT SUPPLY AND RETURN CONNECTIONS, HOUSEKEEPING PAD, CURBS, VIBRATION ISOLATION DEVICES, AND DUCTWORK PRIOR TO COMMENCEMENT OF WORK. EXTERIOR DUCTS SHALL RUN STRAIGHT FROM THE PACKAGED DX UNIT TO THE BUILDING AS SHOWN WITHOUT ANY OFFSET FITTINGS OR ELBOWS. SEAL WALL PENETRATION VAPOR TIGHT. USE CORRUGATED SLEAVE SEAL TO MATCH WALL PANEL FOR A CLEAN FINISHED LOOK.
6. PROVIDE AND INSTALL CABLE OPERATED BALANCING DAMPER EQUAL TO ROTO-TWIST MODEL RT-150. EXTEND CABLE TO SUPPLY AIR DEVICE AND TERMINATE.
7. ROUTE FULL SIZE COPPER CONDENSATE DRAIN PIPE TO HUB DRAIN.
8. EXPOSED DUCT IN GYM SHALL BE FABRIC DUCT, DUCTSOX HOOPS (IHS) WITH VERONA.
9. BIPOLAR IONIZATION DEVICE TO BE LOCATED IN SUPPLY SECTION DISCHARGE PLENUM. COORDINATE INSTALL LOCATION WITH UNIT MANUFACTURER.
10. COORDINATE FABRIC DUCT ROUTING WITH EXISTING OVER HEAD DOOR RAILING. REFER TO ARCHITECTURAL DRAWINGS.

1 MECHANICAL PLAN (DE LA VIÑA ELEMENTARY)
SCALE: 3/16"=1'-0"

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PROJECT NO: 20005
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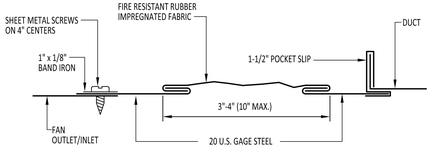
CK BY: G.H. DWN BY: C.C.
MECHANICAL PLAN

M-1.0



1 FLEXIBLE CONNECTION DETAILS

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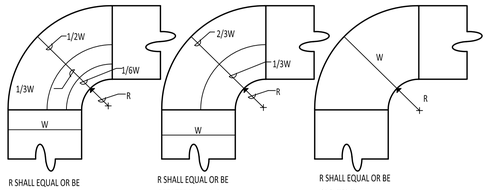

NOTES:

1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND
2. ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

2 RADIUS DUCT ELBOW DETAIL

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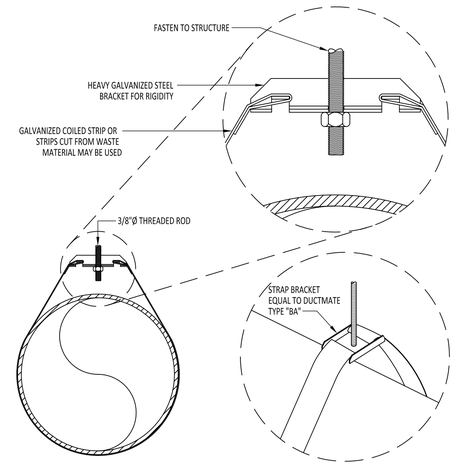

3 ROUND DUCT STRAP BRACKET

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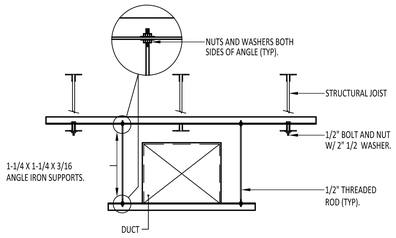

4 DUCT HANGER DETAIL

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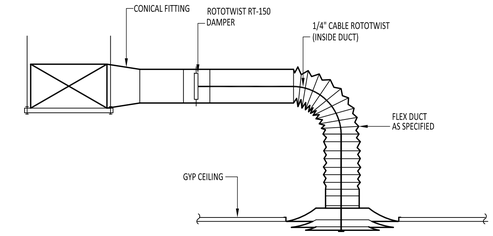

5 REMOTE CABLE OPERATED DAMPER

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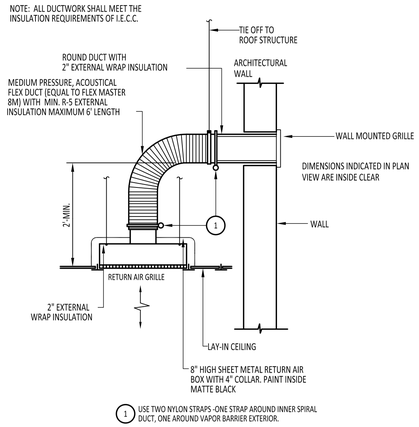
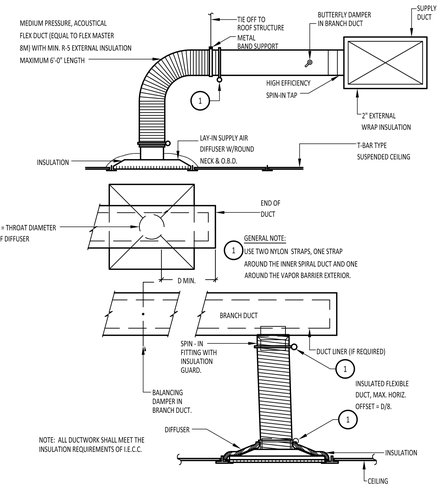


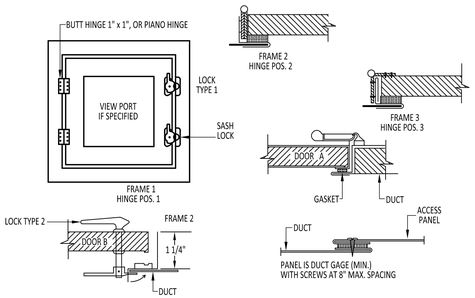
6 TRANSFER DUCT DETAIL

SCALE: N.T.S.



7 SUPPLY AIR DIFFUSER

SCALE: N.T.S.



	DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE FRAME	METAL GAGE DOOR	METAL GAGE BACK
2" W.G. STATIC AND LESS	12" x 12"	2	1-S	24	26	26
	16" x 20"	2	2-S	22	24	26
	24" x 24"	3	2-S	22	22	26
3" W.G. STATIC	12" x 12"	2	1-S	22	22	26
	16" x 20"	2	1-S,1-T,1-B	20	20	26
	24" x 24"	3	2-S,1-T,1-B	20	20	24
4" W.G. TO 10" W.G.	12" x 12"	2	1-S,1-T,1-B	20	20	26
	16" x 20"	3	2-S,1-T,1-B	18	18	24
	24" x 24"	3	2-S,2-T,2-B	18	18	24

S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM

8 DUCT ACCESS DOOR DETAIL

SCALE: N.T.S.

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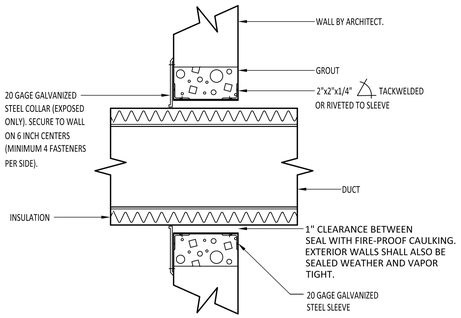
STARTING DATE:
CK BY: G.H. DWN BY: C.C.

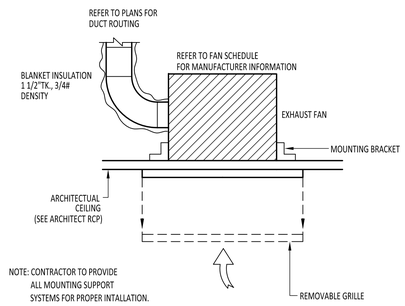
MECHANICAL DETAILS (DE LA VIÑA ELEMENTARY)

SIGMA HN ENGINEERS, PLLC
TBPE Firm No. F-14767
701 S. 15th Street
McAllen, Texas 78501

M-2.0



1 DUCT PENETRATION THRU WALL
SCALE: N.T.S.



2 CEILING MOUNTED EXHAUST FAN
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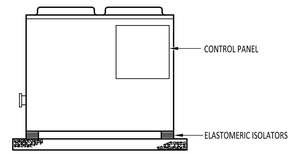
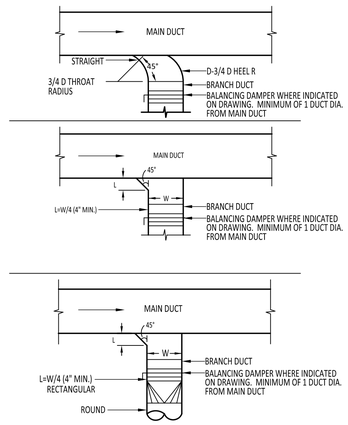


3 PACKAGED DX UNIT MOUNTED ON SLAB ON GRADE
SCALE: N.T.S.



4 TYPICAL BRANCH CONNECTION
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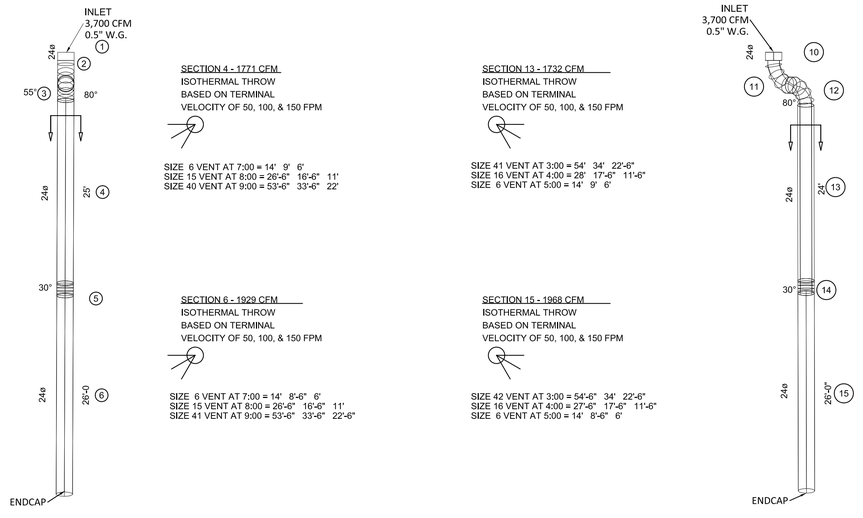
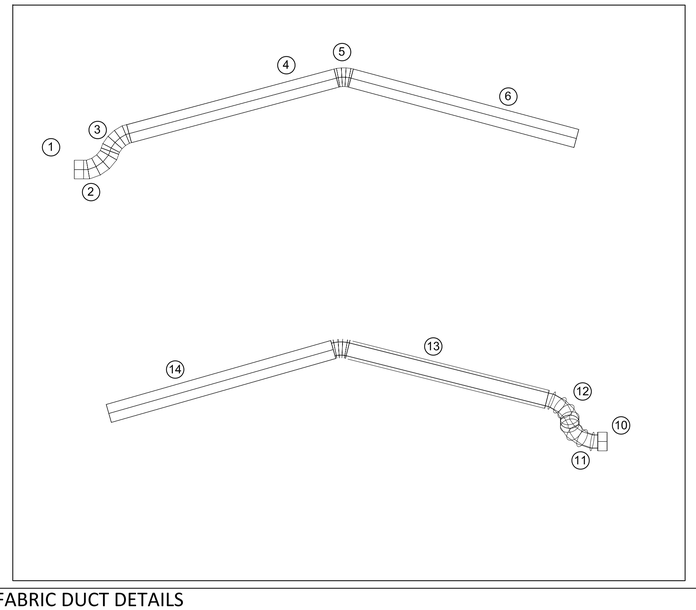
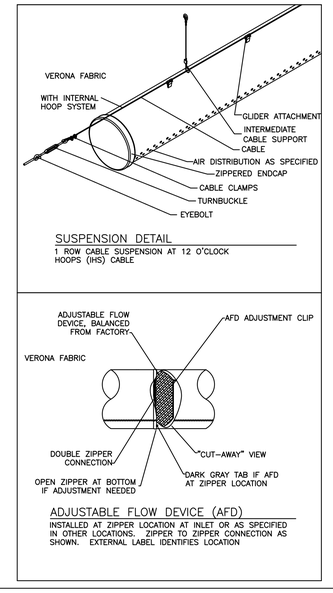


5 FABRIC DUCT DETAILS
SCALE: N.T.S.

ELEVATED VIEW





6 FABRIC DUCT DETAILS
SCALE: N.T.S.

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CONSULTANTS:

STATE OF TEXAS
J. GABRIEL HINOJOSA
96585
LICENSED PROFESSIONAL ENGINEER
04-15-2020

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: G.H. DWN BY: C.C.

MECHANICAL DETAILS
(DE LA VIÑA ELEMENTARY)

M-2.1

PACKAGED DX UNIT SCHEDULE

MARK	BASIS OF DESIGN: MANUF.	MODEL	LXWXH (IN)	WEIGHT (LB)	AMBIENT TEMP. (°F)	IEER	EER	SUPPLY FAN: TYPE	DRIVE	AIRFLOW (CFM)	VENT. (CFM)	RPM	BHP	E.S.P. (IN H20)	T.S.P. (IN H20)	MOTOR POWER (HP)	DX COIL: TOTAL CAPACITY (BTU/HR)	SENSIBLE CAPACITY (BTU/HR)	EAT DB/WB °F	LAT DB/WB °F	ROWS (MIN)	FPI (MAX)	MIN COOLING STAGES	ELECTRIC HEAT: EAT(°F) DB	LAT(°F) DB	HEAT (BTU/HR)	HEAT KW	STAGES	FILTER: TYPE	DEPTH (IN)	EFF, (%)	POWER: VOLTAGE	MCA	MOCP
PDX-1	TRANE	THH150	122x84x57	2508	100	15	12.1	ODP	BELT	4000	1000	670	1.84	1.0	1.037	3	141,300	111,940	81.0/66.2	55.09/54.38	4	15	3	62	90.3	122,940	36.0	2	MERV 8	2	30	460/3/60	62	70
PDX-2	TRANE	THH150	122x84x57	2508	100	15	12.1	ODP	BELT	4000	1000	670	1.84	1.0	1.037	3	141,300	111,940	81.0/66.2	55.09/54.38	4	15	3	62	90.3	122,940	36.0	2	MERV 8	2	30	460/3/60	62	70

NOTES:
1. SINGLE POINT POWER WITH INTEGRAL, NON-FUSED, DISCONNECT.
2. 120V GFCI SERVICE OUTLET, FACTORY MOUNTED, FIELD WIRED.
3. CONDENSER COIL HAIL GUARDS.
4. OUTSIDE AIR HOOD AND COMPARATIVE ENTHALPY ECONOMIZER
5. 5/2 PROGRAMMABLE THERMOSTAT.
6. ON/OFF HOT GAS RE-HEAT COIL & RH SENSOR.
7. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
8. GROUND MOUNTED UINT WITH HORIZONTAL SUPPLY AND RETURN OPENINGS.
9. CONDENSER COIL COATING, MINIMUM 5000 HOUR SALT SPRAY TEST PER ASTM B 117.
10. BACNET INTERFACE CARD FOR FUTURE CONNECTION TO DDC SYSTEM.
11. THREE STAGE COOLING AND VARIABLE SPEED BELT DRIVE FAN MOTOR.
12. HINGED ACCESS DOORS WITH QUARTER-TURN LATCHES.
13. MICROPROCESSOR CONTROLLER WITH 5" TOUCH SCREEN LCD DISPLAY FOR UNIT DIAGNOSTICS.
14. 1 YEAR PARTS, 3 YEAR CONTROLLER PARTS, 5 YEAR COMPRESSOR PARTS WARRANTY.

MECHANICAL GENERAL LEGEND DUCTWORK SYMBOLS

DESCRIPTION	SINGLE LINE	DOUBLE LINE
ACCESS DOOR	AD	AD
BACKDRAFT DAMPER	BDD	BDD
FIRE DAMPER	F	F
FLEXIBLE CONNECTION	FC	FC
MOTORIZED DAMPER	M	M
CONTROL DAMPER	CD M	CD M
VOLUME DAMPER, MANUAL	VD	VD
DUCT ELBOW WITH TURNING VANES		
DUCT SECTION - SUPPLY AIR		
DUCT SECTION - EXHAUST AIR		
DUCT SECTION - RETURN, OUTSIDE, OR RELIEF AIR		
DUCT, INCLINED DROP		
DUCT, INCLINED RISE		
DUCT TRANSITION	14/10 — 10/10	14/10 — 10/10
DUCT TRANSITION (SQUARE OR RECTANGULAR TO ROUND)	10/10 — 8"Ø	12/12 — 8"Ø
RECTANGULAR DUCT, SIZE IN INCHES, FIRST DIMENSION IS SIDE SHOWN (NET CLEAR INSIDE DIMENSION)	10/14	10/14

DESCRIPTION	SINGLE LINE	DOUBLE LINE
ROUND DUCT, DIAMETER IN INCHES (NET CLEAR INSIDE DIMENSION)	8"Ø	8"Ø
AIR FLOW IN DIRECTION OF ARROW		
45°BRANCH TAKE-OFFS		
CONICAL LATERAL BRANCH TAKE-OFFS		
CEILING SUPPLY DIFFUSERS		
DIRECTION SUPPLY GRILLE, HATCH INDICATES BLOCKED QUADRANT		
CEILING RETURN GRILLE/REGISTER		
CEILING EXHAUST FAN (EF-_)		EF-_
CEILING EXHAUST GRILLE/REGISTER		
SIDEWALL SUPPLY GRILLE/REGISTER		
SIDEWALL RETURN/EXHAUST GRILLE/REGISTER		
EXTRACTOR		
DUCT TEE WITH SPLITTER DAMPER		
DOOR UNDERCUT	UC	UC
DOOR LOUVER	L	L

MISCELLANEOUS SYMBOLS

P	DUCT STATIC PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
CO_2	CARBON DIOXIDE SENSOR
	NEW CONNECTION TO EXISTING
H	HUMIDISTAT
RH	RELATIVE HUMIDITY SENSOR
EJ	EXPANSION JOINT
T	THERMOSTAT OR TEMPERATURE SENSOR (MOUNT 48" AFF)
T	DUCT TEMPERATURE SENSOR
TC	TIME CLOCK
F	FREEZESTAT
	MATCHLINE
	LINE WITH HATCHING DESIGNATES DEMOLITION WORK

DIFFUSER, GRILLE OR REGISTER MARK
- A 250 / 12"Ø / 6 TYP. — AIR FLOW (CFM) / NECK SIZE/ RECTANGULAR FACE SIZE / NOTES / QUANTITY / NOTES (WHERE APPLICABLE)
- 1@300 / 300 — QUANTITY OF EXISTING OUTSIDE AIR DIFFUSERS / AIR FLOW (CFM) PER DIFFUSER / TOTAL AIR FLOW (CFM)
- 1@300 / 300 — QUANTITY OF EXISTING SUPPLY DIFFUSERS / AIR FLOW (CFM) PER DIFFUSER / TOTAL AIR FLOW (CFM)
- AHU 1 — EQUIPMENT MARK / EQUIPMENT NUMBER
- 01 / M2.01 — DIRECTION OF SECTION / IDENTIFYING NUMBER OR LETTER FOR SECTIONS. / NUMBER OF REFERENCE DRAWING WHERE SECTION IS SHOWN.
- 01 / M2.01 — IDENTIFYING NUMBER OR LETTER FOR DETAILS. / NUMBER OF REFERENCE DRAWING WHERE DETAIL IS SHOWN.
- ENLARGED DETAIL REFERENCE

EXHAUST FAN SCHEDULE

MARK	CFM	SERVICE	LOCATION	TYPE	RPM	ESP	HP	DRIVE	VOLTAGE	SONES	CONTROL	MANUF.	MODEL	NOTES
EF-1	225	GIRLS RR	CEILING	CABINET	1418	0.5	79.1 WATTS	DIRECT	120/1	3.5	LIGHTS	LOREN COOK	GC-422	ALL
EF-2	225	BOYS RR	CEILING	CABINET	1418	0.5	79.1 WATTS	DIRECT	120/1	3.5	LIGHTS	LOREN COOK	GC-422	ALL
EF-3	100	JANITOR	CEILING	CABINET	1037	0.5	43.0 WATTS	DIRECT	277/1	2.5	LIGHTS	LOREN COOK	GC-148	ALL
EF-4	100	FACULTY	CEILING	CABINET	1037	0.5	43.0 WATTS	DIRECT	277/1	2.5	LIGHTS	LOREN COOK	GC-148	ALL

NOTES:
1. INTEGRAL DISCONNECT SWITCH, PRE-WIRED AT FACTORY.
2. BACK DRAFT DAMPER.
3. FAN SPEED CONTROL, PRE-WIRED AT FACTORY.
4. ROUND HOODED WALL CAP.
5. ROUND DUCT CONNECTION.
6. VIBRATION ISOLATION KIT.
7. DESIGNER GRILLE.

GRILLE/DIFFUSER/REGISTER SCHEDULE

MARK	SERVICE	DESCRIPTION	MANUFACTURER MODEL NO.	MAX. NC. LEVEL (1)	REMARKS
A	SUPPLY	24"X24" MODULE SIZE, ALUMINUM, LOUVERED, LAY IN DIFFUSER WITH 4 WAY THROW, ROUND NECK, FACE SIZE AS INDICATED BELOW.	TITUS OMNI-AA	30	WHITE FINISH
B	SUPPLY	12"X12" MODULE SIZE, ALUMINUM, PLAQUE, SURFACE-MOUNTED DIFFUSER WITH 4-WAY THROW, ROUND NECK.	TITUS OMNI-AA	30	WHITE FINISH
E	SUPPLY	ALUMINUM DRUM LOUVER WITH INDIVIDUALLY ADJUSTABLE BLADES, MINIMUM 50° ANGLE OF ROTATION, OPPOSED BLADE DAMPER.	TITUS DL	35	WHITE FINISH
G	RETURN	24"X24" EGGCRATE FACE, CEILING RETURN GRILL WITH BORDER FOR LAY-IN CEILING, ALUMINUM CONSTRUCTION.	TITUS 50F	30	WHITE FINISH
J	RETURN	SURFACE MOUNTED RETURN GRILLE WITH 3/4" SPACING. ALUMINUM CONSTRUCTION, 35° DEFLECTION.	TITUS 350FL	30	WHITE FINISH
M	RETURN	HEAVY DUTY SURFACE MOUNTED ALUMINUM RETURN GRILLE WITH 1/2" BLADE SPACING AND 0° FIXED DEFLECTION.	TITUS 60FL	30	WHITE FINISH

F =THIS WILL DESIFNATE A STEEL FIRE RATED AIR DEVICE TYPE.

CBA = COLOR BY ARCHITECT

* = SEE ARCHITECTURAL DRAWINGS PROPER BORDER TYPES

AIR OUTLET DESIGNATION ON PLANS

MARK — A 250 (AIR FLOW (CFM) / 12"Ø (RECTANGULAR FACE SIZE) / 6 TYP. (WHERE APPLICABLE)

CAPACITY	FACE	NECK/FLEXIBLE CONNECTION
0-150	6 X 6	6"
151-285	9 X 9	8"
286-440	12 X 12	10"
441-550	12 X 12	12"
551-750	15 X 15	14"
750-1000	18 X 18	16"

NOTE: COORDINATE ALL AIR DEVICE TYPE WITH ARCHITECTURAL RCP.

AtmosAir Air Treatment Schedule

TAG	SERVICE	Design Parameters: Supply CFM	AtmosAir Systems: Model No.	Unit Quantity	Electrical: V	HZ	AMPS/ unit
BPI-1	PDX-1	4,000	M1002	1	120	60	0.50
BPI-2	PDX-2	4,000	M1002	1	120	60	0.50

Notes:
1. BIPOLAR IONIZATION SHALL BE ATMOSAIR OR APPROVED EQUAL.
2. ATMOSAIR UNIT TO BE LOCATED IN SUPPLY SECTION/DISCHARGE PLENUM. CONTRACTOR TO COORDINATE INSTALL LOCATION WITH MANUFACTURER.
3. INSTALL BIPOLAR IONIZATION WITH MERV8 PREFILTERS.
4. INTERLOCK UNIT WITH ASSOCIATED ROOFTOP UNIT SUPPLY FAN TO RUN ONLY WHEN SUPPLY FAN IS RUNNING. AIRSWITCH TO BE PROVIDED BY ATMOSAIR.
5. MANUFACTURER'S TUBES SHALL BE REPLACED EVERY 2 YEARS.
6. CONTACT SAM ROSETTI AT ATMOSAIR FOR PRICING INFORMATION - SROSETTI@ATMOSAIR.COM OR 203.644.5604

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McAllen Harlingen

CONSULTANTS:

STATE OF TEXAS — J. GABRIEL HINOJOSA — 96585 — LICENSED PROFESSIONAL ENGINEER — 04-15-2020

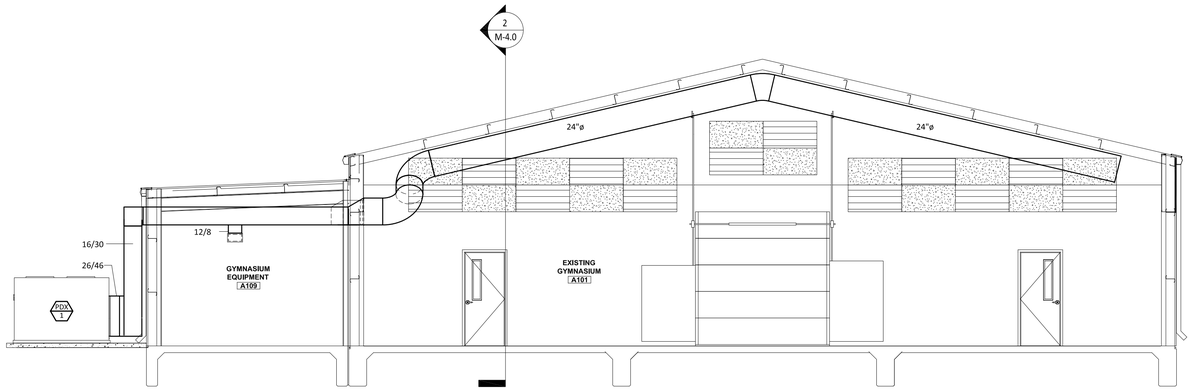
NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: G.H. DWN BY: C.C.
MECHANICAL SCHEDULES

M-3.0

1 MECHANICAL SCHEDULES (DE LA VIÑA ELEMENTARY)
SCALE: N.T.S.



1 PDX-1 SUPPLY DUCT SECTION (DE LA VIÑA ELEMENTARY)
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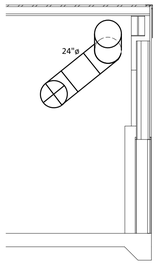

2 PDX-1 SUPPLY DUCT SECTION. (DE LA VIÑA ELEMENTARY)
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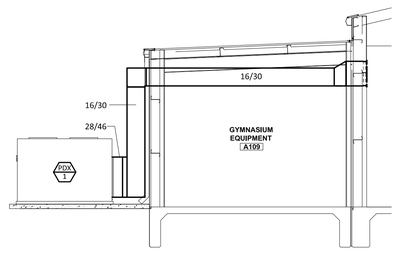

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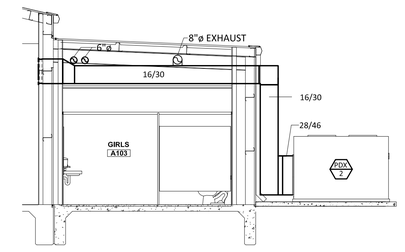

4 PDX-2 RETURN DUCT SECTION (DE LA VIÑA ELEMENTARY)
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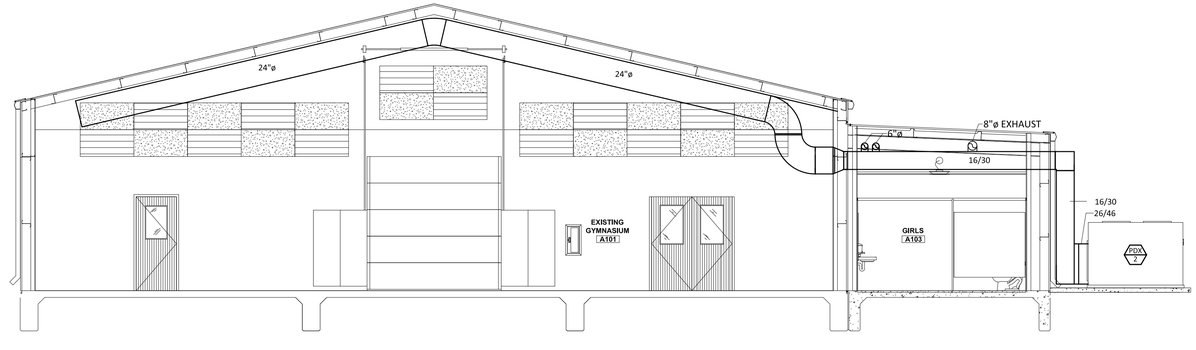

5 PDX-2 SUPPLY DUCT SECTION (DE LA VIÑA ELEMENTARY)
SCALE: 3/16"=1'-0"

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CONSULTANTS:

STATE OF TEXAS
J. GABRIEL HINOJOSA
96585
LICENSED
PROFESSIONAL ENGINEER
04-15-2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
STARTING DATE:	
CK BY: G.H.	DWN BY: C.C.

MECHANICAL SECTIONS

SIGMAHN ENGINEERS, PLLC
TBPE Firm No. F-14767
701 S. 15th Street
McAllen, Texas 78501

M-4.0

TELECOMMUNICATION SPECIFICATION SHEETS ARE INTENDED TO BE ALL-INCLUSIVE AND INCLUDE SPECIFICATION SECTIONS THAT MAY OR MAY NOT APPLY TO THIS PARTICULAR PROJECT. REFER TO THE DRAWINGS FOR SCOPE OF WORK.

DIVISION 17 - TELECOMMUNICATIONS

PROJECT SUMMARY:

A. THE COMMUNICATION CABLING CONTACTOR IS TO PROVIDE A COMPLETE COMMUNICATIONS CABLING INFRASTRUCTURE SYSTEM INSTALLATION INCLUDING BUT NOT LIMITED TO: COPPER AND FIBER BACKBONE SPECIFIED IN DRAWINGS, THESE SPECIFICATIONS, AND CONTRACT DOCUMENTS.

B. THE ITEMS DESCRIBED HEREIN SHALL NOT BE SUBSTITUTED WITHOUT THE WRITTEN CONSENT OF SIGMA HN ENGINEERS (CONSULTANT).

C. COMMUNICATIONS CABLING CONTRACTOR SHALL BE HEREIN AFTER REFERRED TO AS CONTRACTOR FOR THE SCOPE OF THIS DOCUMENT.

D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WRITTEN SPECIFICATIONS AND DRAWINGS THAT CORRESPOND TO THIS PROJECT.

E. THESE SPECIFICATIONS ARE INTENDED FOR BIDDING PURPOSES ONLY. NO PART SHALL BE COPIED OR USED FOR ANY PURPOSE OTHER THAN BIDDING ON THIS PROJECT.

SCOPE OF WORK:

A. THIS SECTION ESTABLISHES A COMMUNICATIONS INFRASTRUCTURE TO BE USED AS SIGNAL PATHWAYS FOR VOICE AND HIGH-SPEED DATA TRANSMISSION. PROVIDE A STRUCTURED CABLING SYSTEM AS DESCRIBED HEREAFTER INCLUDING BUT NOT LIMITED TO:FIBER AND VOICE RISER/BACKBONE CABLE AND EQUIPMENT RACKS/CABINETS FOR NETWORKING HARDWARE AND CABLE TERMINATION PATCH PANELS.

B. FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SERVICES FOR THE INSTALLATION DESCRIBED HEREIN.

C. INSTALLATION PROCEDURES FOR COMMUNICATIONS CABLE WILL BE SUCH THAT THE MECHANICAL AND ELECTRICAL TRANSMISSION CHARACTERISTICS OF THE SPECIFIED CABLE PLANT AND EQUIPMENT ARE MAINTAINED.

D. WORK OF THIS SECTION COVERS A COMPLETE INSTALLATION OF BOTH PERMANENT AND CHANNEL LINKS FOR A DATA AND VOICE COMMUNICATIONS NETWORK UTILIZING COPPER AND FIBER TRANSMISSION MEDIA THAT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

  a. INSTALLATION AND TERMINATION OF SECONDARY FUSED BUILDING ENTRANCE TERMINALS (BET'S) FOR PROTECTION OF INCOMING SERVICE PROVIDER OR CAMPUS INTER-BUILDING COPPER PAIR CIRCUITS. INTERCONNECTION TO SERVICE PROVIDER TELEPHONE DEMARCATION SHALL BE COORDINATED WITH SIGMA HN ENGINEERS, SWITCH PROVIDER, SERVICE PROVIDER AND OWNER'S IT REPRESENTATIVE ON A LATER DATE. ALL COPPER PAIRS ENTERING THE BUILDING FROM AN OUTSIDE DISTRIBUTION NETWORK WILL BE FUSE PROTECTED.

  b. PROVIDE, INSTALL, TERMINATE, TEST, AND DOCUMENT ALL FIBER AND COPPER BACKBONE, RISER CABLE AND VOICE/DATA HORIZONTAL CABLE.

  c. PROVIDE ORGANIZED COMPLETE 100% TEST RESULTS OF ALL COPPER AND FIBER CABLE AND THEIR COMPONENTS.

STAFFING:

A. QUALIFICATION: SUBMIT AN UP-TO-DATE AND VALID CERTIFICATION (ORTRONICS-SUPERIOR ESSEX) VERIFYING THE QUALIFICATIONS OF THE CONTRACTOR AND INSTALLERS TO PERFORM THE WORK SPECIFIED HEREIN AT TIME OF BID SUBMISSION.

B. CONTRACTOR SHALL HAVE A COMPLETE WORKING KNOWLEDGE OF LOW VOLTAGE CABLING APPLICATIONS SUCH AS, BUT NOT LIMITED TO: DATA, VOICE AND VIDEO NETWORK SYSTEMS.

C. CONTRACTING FIRM SHALL HAVE INSTALLED SIMILAR SYSTEMS IN AT LEAST (10) OTHER PROJECTS IN THE LAST FIVE YEARS PRIOR TO THIS BID AND BE REGULARLY ENGAGED IN THE BUSINESS OF INSTALLATION OF THE TYPES OF SYSTEMS SPECIFIED IN THIS DOCUMENT. CONTRACTOR SHALL PROVIDE INFORMATION ON PRIOR PROJECTS INCLUDING, BUT NO LIMITED TO: ITEMS SUCH AS NAME AND LOCATION OF PROJECT CONTACTS AND NUMBERS, TOTAL SQUARE FOOTAGE, TOTAL NUMBER OF CABLES/DROPS, TYPES OF MEDIA, ETC.

D. ALL INSTALLER PERSONNEL ASSIGNED TO THIS PROJECT SHALL BE LISTED IN THE QUALIFICATION QUESTIONNAIRE DOCUMENT. EIGHTY PERCENT (80)% SHALL HAVE A MINIMUM OF 3 YEARS EXPERIENCE IN THE INSTALLATION OF THE TYPES OF SYSTEMS, EQUIPMENT, AND CABLES SPECIFIED IN THIS DOCUMENT PRIOR TO THIS BID. ANY PERSONNEL SUBSTITUTIONS SHALL BE NOTED IN WRITING TO SIGMA HN ENGINEERS PRIOR TO COMMENCEMENT OF WORK.

E. CABLING INSTALLERS SHALL BE TRAINED BY MANUFACTURER AND CERTIFIED FOR TELECOMMUNICATION CABLING INSTALLATIONS AND MAINTENANCE OF SPECIFIED MATERIALS. CONTRACTOR SHALL INCLUDE IN HIS BID CERTIFICATION DOCUMENTATION. CONTRACTORS MUST BE CERTIFIED AT THE TIME OF BID SUBMISSION. POST BID CERTIFICATIONS WILL NOT BE ACCEPTABLE.

F. CHANGE ORDERS SHALL BE SUBMITTED TO THE CONSULTANT/CLIENT REPRESENTATIVE OR GC COMPLETE WITH PRICE BREAKDOWN AND DESCRIPTION. NO WORK RELATED TO ANY CHANGE ORDER WILL COMMENCE UNTIL APPROVED.

PERMITS AND LICENSE:

A. CONTRACTOR SHALL SUPPLY ALL STATE, CITY AND COUNTY TELECOMMUNICATION CABLING PERMITS REQUIRED BY APPROPRIATE GOVERNING AGENCY. CONTRACTOR SHALL BE STATE LICENSED AND/OR BONDED FOR TELECOMMUNICATION CABLING INSTALLATION AND TO COMPLY WITH THE STATE OF TEXAS REQUIREMENTS. THE OWNER OR THEIR REPRESENTATIVE WILL VERIFY THE ABOVE AND DETERMINE ANY ADDITIONAL REQUIREMENTS.

CODES AND STANDARDS (REFERENCES):

A. CODES: COMPLY WITH APPLICABLE SECTIONS OF THE FOLLOWING FOR INTERIOR AND EXTERIOR INSTALLATIONS.

  a. ENSURE YOU ARE USING THE LATEST AND MOST CURRENT STANDARDS AND REGULATIONS APPLICABLE. UNIFORM BUILDING CODE (UBC) AND INTERNATIONAL BUILDING CODE (IBC)

  b. NATIONAL ELECTRICAL CODE (NEC/NFPA 70, 2008) NATIONAL ELECTRICAL SAFETY CODE (NES IEEE C2-1997)

  c. IEEE STD. 1100-1999 RECOMMENDED PRACTICE FOR POWERING AND GROUNDING SENSITIVE ELECTRONIC EQUIPMENT.

  d. LOCAL CODES, AMENDMENTS, AND ORDINANCES.

B. STANDARDS: COMPLY WITH THE MOST RECENTLY PUBLISHED APPLICABLE SECTIONS OF THE FOLLOWING FOR INSTALLATION AND TESTING OF COMMUNICATION CABLING AND CONNECTORS:

  a. ANSI/TIA/EIA-568-B.1-2001: COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD, PART 1: GENERAL REQUIREMENTS.

  b. ANSI/TIA/EIA-568-B.2-1-2002: COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD, PART 2: BALANCED TWISTED-PAIR CABLING COMPONENTS.

  c. ANSI/TIA/EIA-568-B.3-2001 PART 3: OPTICAL FIBER CABLING COMPONENTS STANDARD.

  d. ANSI/TIA/EIA-455-A-1991: STANDARD TEST PROCEDURES FOR FIBER OPTIC CABLES. ANSI/CEA S83-596-1994: FIBER OPTIC PREMISES DISTRIBUTION CABLE.

  e. ANSI/TIA/EIA-526-7-1998: OPTICAL POWER LOSS MEASUREMENTS OF INSTALLED SINGLE MODE FIBER CABLE PLANT-OFSTP-7.

  f. ANSI/TIA/EIA-526-14-A-1998: OPTICAL POWER LOSS MEASUREMENTS OF INSTALLED MULTI MODE FIBER CABLE PLANT-OFSTP-14A.

  g. ANSI/TIA/EIA-569-A-1998: COMMERCIAL BUILDING STANDARDS FOR TELECOMMUNICATIONS PATHWAYS AND SPACES.

  h. ANSI/TIA/EIA-606-1993: THE ADMINISTRATION STANDARD FOR THE TELECOMMUNICATIONS INFRASTRUCTURE OF COMMERCIAL BUILDING.

  i. ANSI/TIA/EIA-607-1994: COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS.

  j. TIA/EIA 758-APRIL 1999: CUSTOMER-OUTSIDE PLANT TELECOMMUNICATIONS CABLING STANDARD.

CONTRACT ADMINISTRATION:

SUBMITTALS

A. PRODUCT DATA: INCLUDE MANUFACTURER'S DATA ON FEATURES, RATINGS AND PERFORMANCE FOR EACH COMPONENT SPECIFIED FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION.

B. DRAWINGS OF RECORD: SHALL BE IN AUTOCAD FORMAT SAME VERSION USED BY SIGMA HN ENGINEERS. UPON COMPLETION, SUBMIT FACILITY FLOOR PLAN DRAWINGS TO SIGMA HN ENGINEERS AND OWNER . DIMENSIONS AND SCALE OF THE DRAWING SHEETS SUBMITTED SHALL MATCH THE SIZE OF THE DRAWING USED FOR THE CONTRACT DOCUMENTS, AND SHALL INCLUDE THE FOLLOWING:

  a. DIMENSIONED PLAN AND ELEVATION VIEWS OF NETWORKING COMPONENTS INCLUDING, BUT NOT LIMITED TO: OUTLET AND RACEWAY LOCATION, ROUGHING-IN DIAGRAMS AND INSTRUCTIONS FOR INSTALLATION. SHOW ACCESS AND WORKSPACE REQUIREMENTS.
  b. ONE-LINE DIAGRAM OF EQUIPMENT/DEVICE INTERCONNECTING CABLING FOR THE DATA AND VOICE SYSTEMS.
  c. STANDARD OR TYPICAL INSTALLATION DETAILS OF INSTALLATIONS UNIQUE TO OWNER'S REQUIREMENTS.
  d. CABLE PATHWAYS, I/O'S, RACK NUMBERING, EQUIPMENT LAYOUT AND NUMBERING.
  e. SUBMIT ONE SOFT COPY (PDF FORMAT) WITH PROJECT DELIVERABLES WITHIN 30 DAYS OF SUBSTANTIAL COMPLETION.

C. WARRANTY: DELIVER MANUFACTURER'S SAMPLE OF 15-YEAR WARRANTY OF INSTALLED CABLING SYSTEM TO INCLUDE ALL COMPONENTS THAT COMPRISE THE COMPLETE CABLING SYSTEM.

D. ACCEPTANCE:

  a. ONCE ALL WORK HAS BEEN COMPLETED, TEST DOCUMENTATION HAS BEEN SUBMITTED, AND OWNER IS SATISFIED THAT ALL WORK IS IN ACCORDANCE WITH CONTRACT DOCUMENTS, THE OWNER SHALL NOTIFY CONTRACTOR IN WRITING OF FORMAL ACCEPTANCE OF THE SYSTEM. CONTRACTOR MUST WARRANT IN WRITING THAT 100% OF THE INSTALLATION MEETS THE REQUIREMENTS SPECIFIED HEREIN (STANDARDS COMPLIANCE & TEST REQUIREMENTS).

  b. NOTIFICATION OF THE LIKELIHOOD OF A CABLE EXCEEDING STANDARDIZED LENGTHS MUST BE MADE PRIOR TO INSTALLATION OF THE CABLE. SIGMA HN ENGINEERS AND OWNERS MAY AGREE TO ALLOW CERTAIN CABLING RUNS TO EXCEED STANDARDIZED PERFORMANCE CRITERIA (E.G. LENGTH). IF IT IS DECIDED TO ALLOW THE DESIGNATED CABLE TO EXCEED STANDARDIZED LENGTHS, SUCH RUNS SHALL BE EXPLICITLY IDENTIFIED AND EXCLUDED FROM REQUIREMENTS TO PASS STANDARDIZED TESTS. TESTS FOR WIRE MAPPING, OPEN, SHORTS, AND GROUNDS SHALL BE MADE IF OTHER TESTS ARE WAIVED.

  c. ACCEPTANCE SHALL BE SUBJECT TO COMPLETION OF ALL WORK, SUCCESSFUL POST-INSTALLATION TESTING WHICH YIELDS 100% PASS RATING, AND RECEIPT OF FULL DOCUMENTATION SOFT AND HARD COPIES AS DESCRIBED HEREIN.

PRODUCTS:

WARRANTY AND CONDITIONS:

A. CONTRACTOR SHALL PROVIDE A MINIMUM ONE (1) YEAR WARRANTY ON INSTALLATION AND WORKMANSHIP. ALL MATERIALS ARE TO BE NEW AND UNUSED.

ACCEPTABLE MANUFACTURERS:

B. ONLY MANUFACTURES OFFERING CERTIFIED PARTNERED SYSTEM SOLUTIONS FOR STRUCTURED CABLING, THAT CARRY A FULL MANUFACTURER WARRANTEE WILL BE ACCEPTED. REFER TO PLANS FOR ACCEPTABLE CABLING MANUFACTURERS.

IDENTIFICATION PRODUCTS:

A. CABLE LABELS: SELF-ADHESIVE VINYL OR VINYL-CLOTH WRAPAROUND TAPE MARKERS, MACHINE PRINTED WITH ALPHANUMERIC CABLE DESIGNATIONS.

B. PROVIDE TRANSPARENT PLASTIC LABEL HOLDERS AND 4-PAIR MARKED COLORED LABELS.

C. INSTALL COLORED LABELS ACCORDING TO THE TYPE OF FIELD AS PER TIA/EIA COLOR CODE DESIGNATIONS.

D. USE TIA/EIA DESIGNATION STRIP COLOR-CODE GUIDELINES FOR VOICE, DATA, CROSS-CONNECT, RISER, AND BACKBONE FIELDS.

TEST RESULTS AND AS-BUILTS:

A. CONTRACTOR SHALL PROVIDE TEST RESULTS IN SOFT COPY FOR EACH CABLE WITH THE DATE AND TIME OF TESTING SHOWN. COPIES SHALL BE PROVIDED VIA EMAIL. COPIES SHALL BE IN MICROSOFT OFFICE SPREADSHEETS.

QUALITY CONTROL

A. MATERIALS: ALL MATERIALS SHALL BE UL AND/OR ETL APPROVED AND LABELED IN ACCORDANCE WITH NEC FOR ALL PRODUCTS WHERE LABELING SERVICE NORMALLY APPLIES.

B. ALL MATERIAL AND EQUIPMENT AS PROVIDED SHALL BE:

  1. THE STANDARD COMMERCIAL-OFF-THE-SHELF (COTS) PRODUCTS OF A MANUFACTURER ENGAGED IN THE MANUFACTURING OF SUCH PRODUCTS;
  2. TYPICAL COMMERCIAL DESIGNS THAT COMPLY WITH THE REQUIREMENTS SPECIFIED;
  3. READILY AVAILABLE THROUGH MANUFACTURERS AND/OR DISTRIBUTORS;
  4. STANDARD CATALOGUED ITEMS OF THE MANUFACTURER;
  5. SUPPLIED COMPLETE WITH ANY OPTIONAL ITEMS REQUIRED FOR PROPER INSTALLATION.

C. COORDINATE THE FEATURES OF MATERIALS AND EQUIPMENT SO THEY FORM AN INTEGRATED SYSTEM. MATCH COMPONENTS AND INTERCONNECTIONS OF OPTIMUM FUTURE PERFORMANCE AND BACKWARD COMPATIBILITY.

D. BACKWARD COMPATIBILITY: THE PROVIDED SOLUTION SHALL BE BACKWARD COMPATIBLE WITH LOWER CATEGORY RATINGS SUCH THAT IF HIGHER CATEGORY COMPONENTS ARE USED WITH LOWER CATEGORY COMPONENTS, THE BASIC LINK AND CHANNEL MEASURES SHALL MEET OR EXCEED THE LOWER CHANNEL'S SPECIFIED PARAMETERS.

E. COMPONENT COMPLIANCE: THE PROVIDED SOLUTION'S COMPONENTS SHALL EACH MEET THE MINIMUM TRANSMISSION SPECIFICATIONS SPECIFIED SUCH THAT NO INDIVIDUAL COMPONENT WILL BE LESS THAN SPECIFICATIONS FOR PERMANENT LINK AND CHANNEL, REGARDLESS OF THE FACT THAT TESTS FOR LINK AND CHANNEL ULTIMATELY MEET REQUIRED SPECIFICATIONS.

F. IN THE EVENT OF A BREACH OF THE REPRESENTATIONS AND WARRANTIES CONTAINED HEREIN, THE CONTRACTOR, AT THEIR OWN EXPENSE, SHALL TAKE ALL MEASURES NECESSARY TO CORRECT AND MAKE THE CABLING SYSTEM WORK IN COMPLIANCE WITH THE APPLICABLE MANUFACTURER WRITTEN TECHNICAL RECOMMENDATIONS AND STANDARDS.

EXECUTION:

OBJECTIVE: THE OBJECTIVE OF THIS AGREEMENT IS TO PROVIDE A COMPLETE COMMUNICATIONS SYSTEM CABLING INFRASTRUCTURE INSTALLATION AS SHOWN ON PLANS.

A. COORDINATION AND COMPLIANCE:

  a. CONTRACTOR SHALL CALL FOR ANY INSPECTIONS REQUIRED BY PUBLIC AGENCIES HAVING JURISDICTION IN THE AREA. FINAL PAYMENT OF THIS CONTRACT WILL NOT BE MADE UNTIL FINAL INSPECTIONS HAVE BEEN COMPLETED AND ALL DEFICIENT ITEMS NOTED HAVE BEEN CORRECTED.

  b. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE AND FEDERAL LAWS OR REGULATIONS APPLICABLE TO THE WORK TO BE PERFORMED, ALTHOUGH SAID LAW; RULE OR REGULATION IS NOT IDENTIFIED HEREIN.

  c. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW OF ALL DRAWINGS OF RECORD TO VERIFY SERVICE REQUIREMENTS FOR PROPER INSTALLATION OF ITEMS SALVAGE: UNLESS INDICATED OTHERWISE, ALL ITEMS THAT MUST BE REMOVED DUE TO INTERFERENCE WITH WORK OF THIS CONTRACT REMAIN THE PROPERTY OF THE OWNER, AND ARE TO BE SALVAGED AT THE OWNER'S DISCRETION.

A. FIBER PATCH CORDS:

  a. FIBER: PROVIDE QTY THREE (3) - TWELVE (12) FOOT PATCH CORDS. COORDINATE CONNECTOR TYPE WITH SIGMA HN ENGINEERS PRIOR TO PURCHASE.

  b. PATCH CORDS SHALL BE MADE AND WARRANTED BY THE MANUFACTURER OF THE CABLING SYSTEM INSTALLED IN THIS PROJECT AND SHALL MEET OR EXCEED FIBER PATCH CORD SPECIFICATIONS AS OUTLINED IN EIA/TIA STANDARDS.

  c. PATCH CORDS SHALL BE IN ORIGINAL PACKAGING WHEN PRESENTED TO THE OWNER (I.E. SEALED PLASTIC BAGS).

  d. FIBER AND COPPER SPLICING REQUIREMENTS: FIBER AND COPPER RISER CABLES SHALL BE CONTINUOUS FROM END TO END WITH NO BRIDGES, TAPS OR SPLICES. NO SPLICING IS ALLOWED.

B. HORIZONTAL PATHWAY SYSTEMS

  e. CONTRACTOR SHALL PROVIDE CONDUIT PATH (SLEEVES) WHERE CABLING PASSES THROUGH FIRE RATED WALLS\DECK\SLAB. SEAL PENETRATION WITH INTUMESCENT FIRE-STOP MATERIAL THAT MATCHES THE RATING OF THE SURFACE PENETRATED UNLESS NOTED OTHERWISE IN PLANS. DO NOT INSTALL COMMUNICATION CABLES IN CONDUITS UNTIL ALL BUSHINGS/COUPLERS ARE INSTALLED ON THE ENDS OF THE CONDUITS. ALL HORIZONTAL PATHWAY SYSTEMS FROM END TO END FILL SHALL NOT EXCEED 40%.

C. FIBER AND COPPER CABLING

  a. BACKBONE CABLING REQUIREMENTS: PROVIDE A 10-FOOT SERVICE LOOP FOR COPPER BACKBONE/RISER AND FIBER OPTIC CABLES AT EACH TELECOMMUNICATION ROOM. LIMIT CABLE-BENDING RADIUS TO 20 TIMES THE CABLE DIAMETER DURING INSTALLATION, AND 15 TIMES THE CABLE DIAMETER AFTER INSTALLATION. PULL CABLES IN SMOOTH AND REGULAR MOTIONS USING METHODS THAT PREVENT CABLE KINKING. IF NECESSARY USE AN APPROVED COMMUNICATIONS CABLE PULLING LUBRICANT TO REDUCE THE OCCURRENCE OF MICRO BENDING OF INDIVIDUAL FIBER STRANDS, USE MESH-TYPE, SWIVEL-EYE FIBER OPTIC PULLING GRIPS. THIS TYPE OF PULLING GRIP IS REQUIRED FOR ALL CABLE PULLING COMPLETE WITH BREAKAWAY SWIVEL AT 600LBS OF PULLING TENSION.

  b. FIBER - GENERAL REQUIREMENTS: THE CABLE SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, BELLCORE GENERIC REQUIREMENTS FOR FIBER AND OPTICAL CABLE (GR-20). THE CABLE SHALL ALSO MEET THE FOLLOWING STANDARDS, WHERE APPROPRIATE:
    1. TIA/EIA 568-A “COMMERCIAL BUILDING TELECOMMUNICATIONS WIRING STANDARD”
    2. ICEA-83-596-1988 INSULATED CABLE ENGINEERS ASSOCIATION STANDARD FOR FIBER OPTIC PREMISES DISTRIBUTION CABLE PUBLICATION S-83-596, DECEMBER 1988, ANSI X3.166-1990
    3. FIBER DATA DISTRIBUTED INTERFACE (FDDI)- TOKEN RING PHYSICAL LAYER MEDIUM DEPENDENT (PMD)
    4. BELLCORE GENERIC REQUIREMENTS FOR PREMISES FIBER OPTIC CABLE (GR-409- CORE),
    5. SECTION 6, CENTRAL MEMBER AND IEEE 802.3-GIGABIT ETHERNET.
    6. THE CABLE MANUFACTURER SHALL BE ISO 9001 CERTIFIED.

  c. TENSILE STRENGTH: CABLES SUBJECTED TO THE MINIMUM RATED TENSILE LOAD DEFINED IN GR-409-CORE, SECTION 6.3.6 (TENSILE STRENGTH OF CABLE) SHALL NOT EXHIBIT AN INCREASE IN ATTENUATION GREATER THAN SPECIFIED BY GR-409-CORE, SECTION 6.3.2. TESTING SHALL BE DONE IN ACCORDANCE WITH TIA/EIA-455-33A, FIBER OPTIC CABLE TENSILE LOADING AND BENDING TEST.

  d. CABLE TWIST: THE CABLE SHALL BE CAPABLE OF WITHSTANDING MECHANICAL TWISTING WITHOUT EXPERIENCING AN ATTENUATION INCREASE GREATER THAN SPECIFIED BY GR-409 CORE, SECTION 6.3.2. AFTER THE CABLE IS SUBJECTED TO THE TWIST TEST, THE CABLE JACKET SHALL NOT EXHIBIT EVIDENCE OF CRACKING OR SPLITTING WHEN OBSERVED UNDER 5X MAGNIFICATION. TESTING SHALL BE DONE IN ACCORDANCE WITH TIA/EIA-455-85A, FIBER OPTIC CABLE TWIST TEST.

  e. CABLE CLEANER AND CABLE PULLING LUBRICANTS: CABLE CLEANERS AND/OR LUBRICANTS SHALL BE MATERIALS DESIGNED AND MANUFACTURED FOR TELECOMMUNICATION CABLING USE.

ADMINISTRATION, TESTING, AND IDENTIFICATIONS

  a. THESE SPECIFICATIONS WILL BE STRICTLY ENFORCED. THE CONTRACTOR MUST VERIFY THAT THE REQUIREMENTS OF THE SPECIFICATIONS ARE FULLY MET THROUGH TESTING, ACTIVE DATA THROUGHPUT, AND DOCUMENTATION AS SPECIFIED BELOW. THIS INCLUDES CONFIRMATION OF REQUIREMENTS BY DEMONSTRATION, TESTING AND INSPECTION. DEMONSTRATION SHALL BE PROVIDED IN FINAL WALK-THROUGH AND IN TESTED DATA REPORTS. IF PART OR ALL PAIRS OF CABLE DO NOT MEET SPECIFICATIONS CONTAINED IN THIS DOCUMENT, THE CABLE SHALL BE REPLACED AT CONTRACTOR'S COST.

  b. TEST PLAN: PROVIDE A COMPLETE AND DETAILED TEST PLAN FOR THE CABLING SYSTEM SPECIFIED HEREIN INCLUDING A COMPLETE LIST OF TEST EQUIPMENT FOR UTP AND LIGHT GUIDE COMPONENTS AND ACCESSORIES. INCLUDE PROCEDURES FOR CERTIFICATION, VALIDATION, AND TESTING. FURNISH FACTORY REEL TESTS FOR ALL CABLE. OWNER WILL REQUIRE THAT THE TELECOMMUNICATIONS CABLING SYSTEM INSTALLED BY THE CONTRACTOR BE FULLY CERTIFIED TO MEET ALL NECESSARY REQUIREMENTS TO BE COMPLIANT WITH REFERENCED IEEE AND EIA/TIA SPECIFICATIONS.

  c. TESTING AGENCY: CONTRACTOR WILL ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM FIELD QUALITY CONTROL TESTING. THIS 'AGENCY' MAY BE CONTRACTOR'S PERSONNEL IF THE MANUFACTURER OF THE TESTING EQUIPMENT CERTIFIES THEM TO CONDUCT THE REQUIRED TESTS. CORRECT MALFUNCTIONING UNITS AT PROJECT SITE, WHERE POSSIBLE, AND RETEST TO DEMONSTRATE COMPLIANCE; OTHERWISE, REMOVE AND REPLACE WITH NEW UNITS AND RETEST. PROVIDE CONTACT INFORMATION FOR THE TESTING AGENCY.

  d. CONTRACTOR WILL COMPLETE ALL WORK AND DOCUMENTATION ACCORDING TO MANUFACTURER GUIDELINES TO INSURE MANUFACTURER'S WARRANTY REMAINS IN EFFECT. CONTRACTOR SHALL OBTAIN CERTIFICATES FROM MANUFACTURER ATTESTING TO WARRANTY BEING IN EFFECT AND INCLUDE CERTIFICATES WITH OTHER DELIVERABLES DUE AT THE COMPLETION OF THE PROJECT. OWNER RESERVES THE RIGHT TO BE PRESENT DURING ANY OR ALL OF TESTING.

  e. STANDARDS COMPLIANCE & TEST REQUIREMENTS: CABLING MUST MEET THE PERFORMANCE SPECIFICATION FOR THE CABLING SPECIFIED. TESTERS SHALL BE CALIBRATED BY FACTORY AND AT FACTORY RECOMMENDED INTERVALS. PROVIDE DOCUMENTATION TO VALIDATE COMPLIANCE. TESTERS SHALL BE A MINIMUM LEVEL IV, BI-DIRECTIONAL, AND CAPABLE OF TESTING THE CABLING SPECIFIED. TESTERS SHALL BE CAPABLE OF REPORTING DATA AT ALL MEASURED POINTS AND UPLOADING THE DATA TO A PC. SERIAL NUMBER OF TESTER SHALL BE INCLUDED WITH THE TEST RESULTS. TEST CORDS SHALL BE NEW FACTORY MANUFACTURED LEADS. NO TEST LEADS SHALL BE USED FOR GREATER THAN 1,000 TESTS, OR THE MAXIMUM NUMBER OF TESTS RECOMMENDED BY MANUFACTURER. FOLLOW MANUFACTURER'S RECOMMENDATIONS. PRODUCE DOCUMENTATION ON MANUFACTURER'S TESTING PROCEDURES AND RECOMMENDATION. PROVIDE DOCUMENTATION ON CONFORMANCE WITH MANUFACTURER TESTING PROCEDURES. USE TEST LEADS/PATCH CORD FACTORY MADE THAT ARE “TUNED” TO TEST THE PARTICULAR MANUFACTURER'S CABLING SYSTEM USED FOR PERMANENT LINK TESTS. CERTIFY THAT TESTER'S SOFTWARE HAS BEEN UPDATED WITHIN THE LAST 30 DAYS PRIOR TO TESTING. USE ONLY APPROVED UTP/FIBER TEST EQUIPMENT: THE LATEST MODEL TO PERFORM TESTS ON SPECIFIED COPPER AND FIBER CABLING. COMPLY WITH THE SPECIFIED CABLE MANUFACTURER REQUIREMENTS.

  f. TESTING ON ALL HORIZONTAL/RISER AND INTER-BUILDING COPPER CABLING SHALL BE OF THE PERMANENT LINK TYPE; HOWEVER, CONTRACTOR SHALL WARRANT PERFORMANCE BASED ON CHANNEL PERFORMANCE AND IF REQUIRED PROVIDE PATCH CORDS THAT MEET CHANNEL PERFORMANCE CRITERIA. THE PERMANENT LINK CONSISTS OF UP TO 90M (295FT) OF HORIZONTAL CABLING AND ONE CONNECTION AT EACH END. ALL CABLING NOT TESTED STRICTLY IN ACCORDANCE WITH THESE PROCEDURES SHALL BE RE-TESTED AT NO ADDITIONAL COST TO THE OWNER. 100% OF THE INSTALLED CABLING MUST BE TESTED. ALL TESTS MUST PASS ACCEPTANCE CRITERIA DEFINED IN APPLICABLE EIA/TIA FOR THE TYPE OF CABLING SPECIFIED.

FIBER TESTING, POWER METER AND OTHER REQUIREMENTS

  a. FIBER CABLE TESTING: SHALL CONFORM TO TEST PROCEDURES, BANDWIDTH, AND ATTENUATION MEASURES TO COMPLY WITH EIA/TIA STANDARDS. CONTRACTOR SHALL USE A POWER METER AND/OR OTDR FOR FIBER TESTING COMPLETE WITH SOFT COPIES OF TEST RESULTS INCLUDING DB LOSS FOR LINKS. MAX LOSS SHALL BE LESS THAN .5DB, UNLESS MANUFACTURER SPECIFICATIONS ARE LESS. TESTING SHALL BE DONE FROM EACH END OF FIBER LINK. CONTRACTOR SHALL OBTAIN CERTIFICATES FROM MANUFACTURER ATTESTING TO WARRANTY BEING IN EFFECT AND INCLUDE CERTIFICATES WITH OTHER DELIVERABLES DUE AT THE COMPLETION OF THE PROJECT.

  b. PATCH CORD TESTING: PROVIDED PATCH CORDS SHALL BE NEW, TESTED TO MANUFACTURER SPECIFICATIONS LISTED AND COME WITH FULL MANUFACTURER FACTORY WARRANTY.

  c. LABELING: LABEL FIBER OPTIC CABLE RUNS WITH ORANGE OR RED “CAUTION - FIBER OPTIC CABLE” TAGS IN TELECOMMUNICATIONS ROOMS, PULL BOXES, AND OTHER VISIBLE OPEN SPACE. LABEL CONDUIT/INNERDUCT INTENDED FOR FIBER OPTICAL CABLING EVERY 50 FEET WITH “CAUTION - FIBER OPTIC CABLE” VISIBLE AND ACCESSIBLE CEILING SPACE.

  d. SYSTEM: USE A UNIQUE, FOUR SYLLABLE ALPHANUMERIC DESIGNATION FOR EACH CABLE, AND LABEL CABLE, AND TERMINALS TO WHICH IT CONNECTS WITH THE SAME DESIGNATION.

  e. COMMUNICATIONS ROOM GROUNDING WILL BE MARKED CONSPICUOUSLY WITH PERMANENT PLASTIC LABELS AT EACH END AND LOCATION STATING “CAUTION: TELECOMMUNICATION GROUND- DO NOT REMOVE”. INDICATE THE ROOM NUMBER OF THE OPPOSITE END OF THE WIRE.

  f. PROVIDE COPY (PRINTED AND ELECTRONIC) OF FLOOR PLANS SHOWING TELECOMMUNICATION INFRASTRUCTURE INSTALLED UNDER THIS CONTRACT. PLACE ONE HARD COPY OF ALL FLOOR PLANS IN EACH TELECOMMUNICATION ROOM OR WALL MOUNTED RACK. PROVIDE PLANS IN LAMINATION FORMAT.

  g. TEST REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION FOR EACH CABLING ELEMENT TESTED:
    1. WIREMAP RESULTS THAT INDICATE THE CABLING HAS NO SHORTS, OPENS, MISS-WIRES, SPLIT, REVERSED, OR CROSSED PAIRS, AND END-TO-END CONNECTIVITY IS ACHIEVED.
    2. FOR CABLING SPECIFIED: ATTENUATION, NEXT, PSNEXT, ACR, POWER SUM ACR, RETURNLOSS, ELFEXT, PSELFEXT, PROPAGATION DELAY, AND DELAY SKEW DATA THAT INDICATE THE WORST CASE RESULT, THE FREQUENCY AT WHICH IT OCCURS, THE LIMIT AT THAT POINT, AND THE MARGIN. THESE TESTS SHALL BE PERFORMED IN A SWEPT FREQUENCY MANNER FROM 1 MHZ TO 500 MHZ OR HIGHEST RELEVANT FREQUENCY, USING A SWEPT FREQUENCY INTERVAL THAT IS CONSISTENT WITH TIA AND ISO REQUIREMENTS. INFORMATION SHALL BE PROVIDED FOR ALL PAIRS OR PAIR COMBINATIONS AND IN BOTH DIRECTIONS WHEN REQUIRED BY THE APPROPRIATE STANDARDS. ANY INDIVIDUAL TEST THAT FAILS THE RELEVANT PERFORMANCE SPECIFICATION SHALL BE MARKED AS A FAIL.
    3. LENGTH (IN FEET), PROPAGATION DELAY, AND DELAY SKEW RELATIVE TO THE RELEVANT LIMIT. ANY INDIVIDUAL TEST THAT FAILS THE RELEVANT PERFORMANCE SPECIFICATION SHALL BE MARKED AS A FAIL.
    4. CABLE MANUFACTURER, CABLE MODEL NUMBER/TYPE, AND NVP.
    5. TESTER MANUFACTURER, MODEL, SERIAL NUMBER, HARDWARE VERSION, AND SOFTWARE VERSION.
    6. CIRCUIT ID NUMBER AND PROJECT NAME.
    7. AUTO TEST SPECIFICATION USED.
    8. OVERALL PASS/FAIL INDICATION.
    9. DATE AND TIME OF TEST.

  h. TEST REPORTS SHALL BE SUBMITTED BEFORE SUBSTANTIAL COMPLETION OF THE PROJECT.

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NO.	DATE	DESCRIPTION

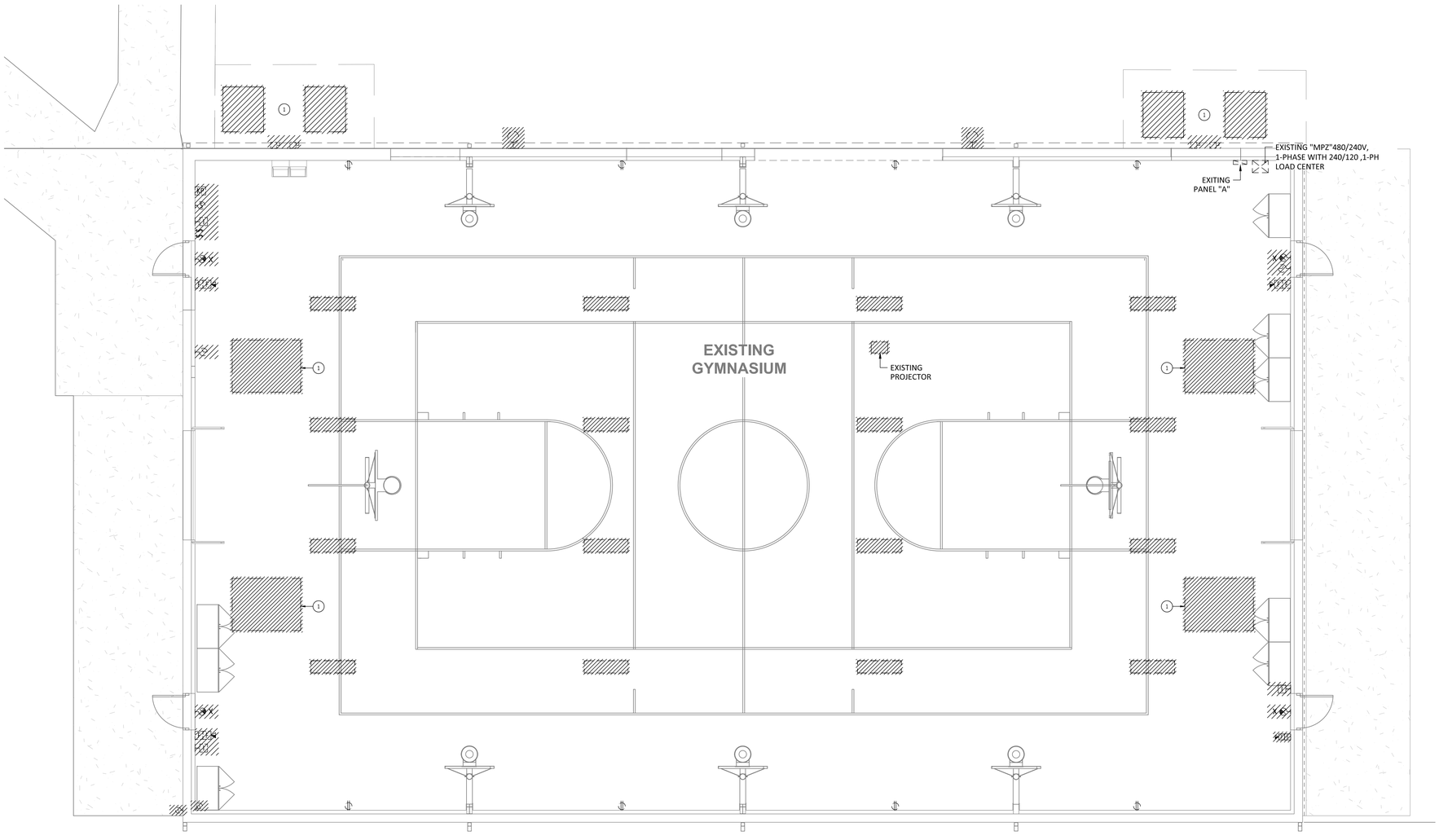
REVISIONS

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: J.A.N. DWN BY: K.A.

TELECOMMUNICATION SPECIFICATIONS

T-0.0



1 ELECTRICAL DEMOLITION PLAN (DE LA VIÑA ELEMENTARY)

SCALE: 3/16"=1'-0"

GENERAL ELECTRICAL DEMOLITION NOTES:

A. INFORMATION ON THE PLAN HAS BEEN OBTAINED FROM EXISTING DRAWINGS AND SITE SURVEY. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

B. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE DEMOLITION WORK UNDER THIS SECTION OF THE PROJECT IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE CODES, HE/SHE SHALL INFORM THE ENGINEER DURING BIDDING PHASE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET CODE REQUIREMENTS AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE. APPLICABLE CODES AND STANDARDS ON DEMOLITION WORK SHALL INCLUDE THOSE PUBLISHED BY OSHA AND EPA. AN ASBESTOS SURVEY SHALL BE KEPT ON SITE AT ALL TIMES PER TEXAS DEPARTMENT OF HEALTH REQUIREMENTS.

C. ALL DUST PRODUCTION, SMOKE PRODUCTION AND NOISE SHALL BE SUBJECT TO REAL TIME REVIEW BY THE ENGINEER. WORK SHALL BE SHUT DOWN DURING CRITICAL ACTIVITIES BY FORMAL REQUEST FROM THE DESIGNATED AUTHORITY OR CONTRACTING ENGINEER. WORK IN DUSTY AREAS SHALL BE CONTROLLED WITH TEMPORARY PARTITIONS. FLAME CUTTING SHALL BE MINIMIZED TO ELIMINATE SMOKE PRODUCTION. PROVIDE FIRE EXTINGUISHERS IN THE IMMEDIATE AREA.

D. ON ANY WORK SHOWN ON ELECTRICAL DRAWINGS WHICH REQUIRES DEMOLITION OF BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL BUILDING DAMAGE CREATED BY DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH ENGINEER APPROVED PATCHING MATERIALS.

E. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CHIPPED AND CHISELED PRIOR TO CORE-DRILLING OR SAW CUTTING. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION WITH STRUCTURAL ENGINEER BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 8000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING, OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES.

F. ALL SURFACES COVERED BY "SPRAY POLY" AND PROTECTED BY TEMPORARY PARTITIONS SHALL REMAIN PROTECTED THROUGHOUT THE PROJECT. REMOVE THE PROTECTIVE BARRIERS ONLY AFTER THE NEW DEVICES, JUNCTION BOXES AND CONDUITS INSTALLED. PATCH AND MAINTAIN THE PROTECTIVE BARRIERS DURING CONSTRUCTION. COVER ALL EQUIPMENT OPENINGS WITH 4 MIL. POLY AND DUCT TAPE IN PLACE.

G. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES.

H. CONTRACTOR AND OWNER SHALL BE FULLY RESPONSIBLE TO IDENTIFY ANY AND ALL ASBESTOS PRESENT IN THE BUILDING PRIOR TO DEMOLITION AS REQUIRED BY LAW.

I. COORDINATION AMONG OTHER CONSTRUCTION DISCIPLINES PRIOR TO DEMOLITION IS MANDATORY.

J. INTERCOM WIRING, INTRUSION DETECTION, AND FIRE ALARM SHALL REMAIN IN PLACE TO BE REUSED WITH NEW DEVICES.

KEY NOTES: (#)

1. CONTRACTOR SHALL DEMOLISH ALL WIRING, CONDUITS, DISCONNECT SWITCHES AND ALL ASSOCIATED ELECTRICAL EQUIPMENT FOR EXISTING CONDENSING UNITS AND AIR HANDLING UNITS. REMOVE ALL THE WAY TO THE ELECTRICAL PANEL.

DEMOLITION LEGEND

//////	EXISTING TO BE DEMOLISH
.....	EXISTING TO BE RELOCATED
– – – –	EXISTING TO REMAIN

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04-15-2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

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STARTING DATE:	
CK BY: J.A.N.	DWN BY: K.A.

ELECTRICAL DEMOLITION PLAN

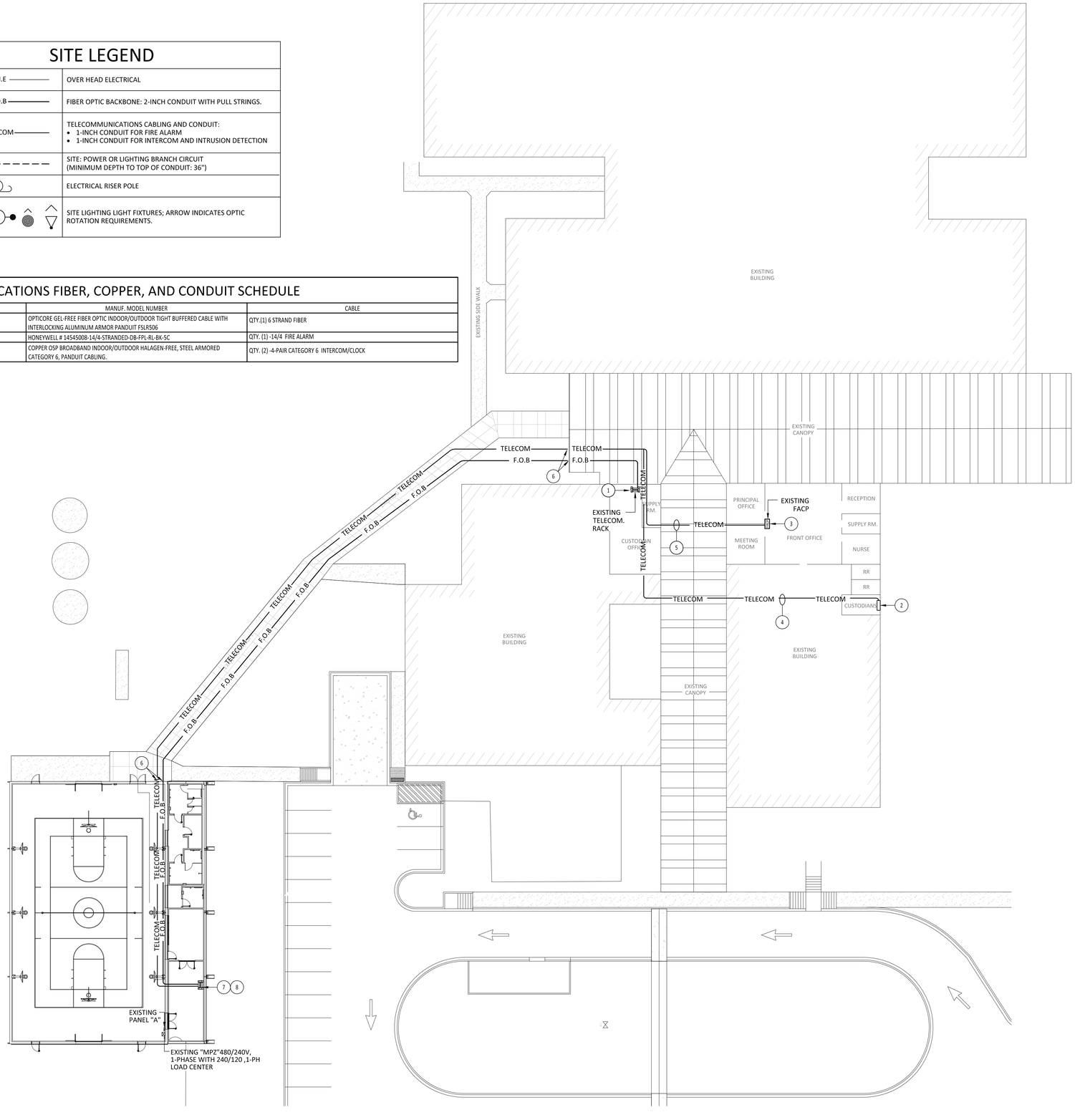
ED-1.0

SITE LEGEND

O.H.E	OVER HEAD ELECTRICAL
F.O.B	FIBER OPTIC BACKBONE: 2-INCH CONDUIT WITH PULL STRINGS.
TELECOM	TELECOMMUNICATIONS CABLING AND CONDUIT: • 1-INCH CONDUIT FOR FIRE ALARM • 1-INCH CONDUIT FOR INTERCOM AND INTRUSION DETECTION
	SITE: POWER OR LIGHTING BRANCH CIRCUIT (MINIMUM DEPTH TO TOP OF CONDUIT: 36")
	ELECTRICAL RISER POLE
	SITE LIGHTING LIGHT FIXTURES; ARROW INDICATES OPTIC ROTATION REQUIREMENTS.

TELECOMMUNICATIONS FIBER, COPPER, AND CONDUIT SCHEDULE

MARK	TYPE	FROM	TO	MANUF. MODEL NUMBER	CABLE
FOB	FIBER	CUSTODIAN OFFICE	GYM EQUIPMENT A109	OPTICORE GEL-FREE FIBER OPTIC INDOOR/OUTDOOR TIGHT BUFFERED CABLE WITH INTERLOCKING ALUMINUM ARMOR PANDUIT FSLR506	QTY.(1) 6 STRAND FIBER
TELECOM	COPPER	CUSTODIAN	GYM EQUIPMENT A109	HONEYWELL # 14545008-14/4-STRANDED-DB-FPL-RL-BK-5C	QTY. (1) -14/4 FIRE ALARM
TELECOM	COPPER	FRONT OFFICE	GYM EQUIPMENT A109	COPPER OSP BROADBAND INDOOR/OUTDOOR HALAGEN-FREE, STEEL ARMORED CATEGORY 6, PANDUIT CABLING.	QTY. (2) -4-PAIR CATEGORY 6 INTERCOM/CLOCK



1 ELECTRICAL SITE PLAN (DE LA VIÑA ELEMENTARY)

SCALE: 1"=20'-0"

N

GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. APPROXIMATE LOCATION OF EXISTING TELECOMMUNICATION/MDF PANDUIT RACK.
2. APPROXIMATE LOCATION OF EXISTING INTERCOM/CLOCK AND INTRUSION DETECTION SYSTEMS. EXISTING INTERCOM/CLOCK SYSTEM IS BY VALCOM. CONTRACTOR SHALL INCLUDE IN HIS HID TO OWNER MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL NEW INTERCOM EXPANSION UNITS AND DIGITAL CLOCK CONTROLLERS AND POWER SUPPLIES, INTERCOM SPEAKERS, PUSH-BUTTONS, DIGITAL CLOCKS AND ALL ASSOCIATED EQUIPMENT FOR THE GYM RENOVATION. GYM CLOCK SYSTEM SHALL BE SET-UP IN A SLAVE MODE TO ALLOW INTERFACE WITH EXISTING MASTER CONTROLLERS. EXISTING INTRUSION DETECTION IS BY HONEYWELL. CONTRACTOR SHALL INCLUDE IN HIS HID TO OWNER MATERIAL AND LABOR REQUIRED FURNISH AND INSTALL NEW INTRUSION DETECTION DEVICES AND KEYPAD FOR THE GYM RENOVATION. INTERFACE WITH THE EXISTING HONEYWELL SYSTEM.
3. APPROXIMATE LOCATION OF EXISTING FIRE ALARM CONTROL PANEL EXISTING FIRE ALARM CONTROL PANEL IS A HOCHIKI-FIRENET-PRODUCT CODE #FNP1127US20RS120. CONTRACTOR SHALL INCLUDE IN HIS HID TO OWNER MATERIAL AND LABOR REQUIRED FURNISH AND INSTALL NEW FIRE ALARM CONTROL PANEL EXPANDER CARD AND EXTENDING PANEL FOR THE GYM RENOVATION.
4. FURNISH AND INSTALL EMT CONDUIT ABOVE CEILING TO ALLOW FOR THE INSTALLATION OF NEW INTERCOM/CLOCK AND INTRUSION DETECTION CABLING.
5. FURNISH AND INSTALL EMT CONDUIT ABOVE CEILING TO ALLOW FOR THE INSTALLATION OF NEW FIRE ALARM CABLING.
6. FURNISH AND INSTALL HOFFMAN A16R126HCR 16"X12"X6"NEMA 3R WITH HINGED COVER.
7. APPROXIMATE LOCATION OF NEW WALL MOUNTED, TELECOMMUNICATION RACK, FIRE ALARM EXTENDING PANEL, INTRUSION DETECTION PANEL, INTERCOM/CLOCK SYSTEM. REFER TO DETAILS FOR INSTALLATION REQUIREMENTS.
   A. QTY. (1) OPTICOM RACK MOUNT FIBER TRAY EQUAL TO PANDUIT #FMT1 WITH QTY.(1) QUICKNET FIBER ADAPTER PANEL EQUAL TO PANDUIT # FAP6WAQDLCZ (AQUA).
   B. MULTIMODE-LC OPTICAM FIBER OPTIC CONNECTORS-PRE POLISHED CAM TERMINATIONS WITH 3.0MM RETENTION BOOT ASSEMBLIES (AQUA), AND LC OPTICAM DUPLEX CLIP-FIBER PATCH CABLE ASSEMBLY.
   C. QTY. (1) CATEGORY 6 ANGLED PATCH PANEL EQUAL TO PANDUIT # QAPP24BL.
   D. FURNISH WITH QTY. (2) HORIZONTAL WIRE MANAGER. INSTALL WIRE MANAGERS ABOVE AND BELOW THE ANGLED PATCH PANELS.
   E. QTY. (12) CATEGORY 6 UTP, 23 AWG PATCH CABLES (COLOR GREEN) 12 FOOT WITH T568B TERMINATION JACKS.
   F. GROUNDING KIT: GROUNDING CABLE HANGER BRACKETS AND CABLE BRAKET JUMPERS.
   G. FURNISH CABINET WITH VENTILATION FAN.
   H. FURNISH WITH RACK FILLER PANELS.
8. CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL 6-STRAND FIBER MULTIMODE TO EXISTING FIBER CABINET AND PANEL. FURNISH FIBER PATCH CABLES AS NOTED ON KEYNOTE 9 FOR CONNECTION TO ETHERNET SWITCH.

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04-15-2020

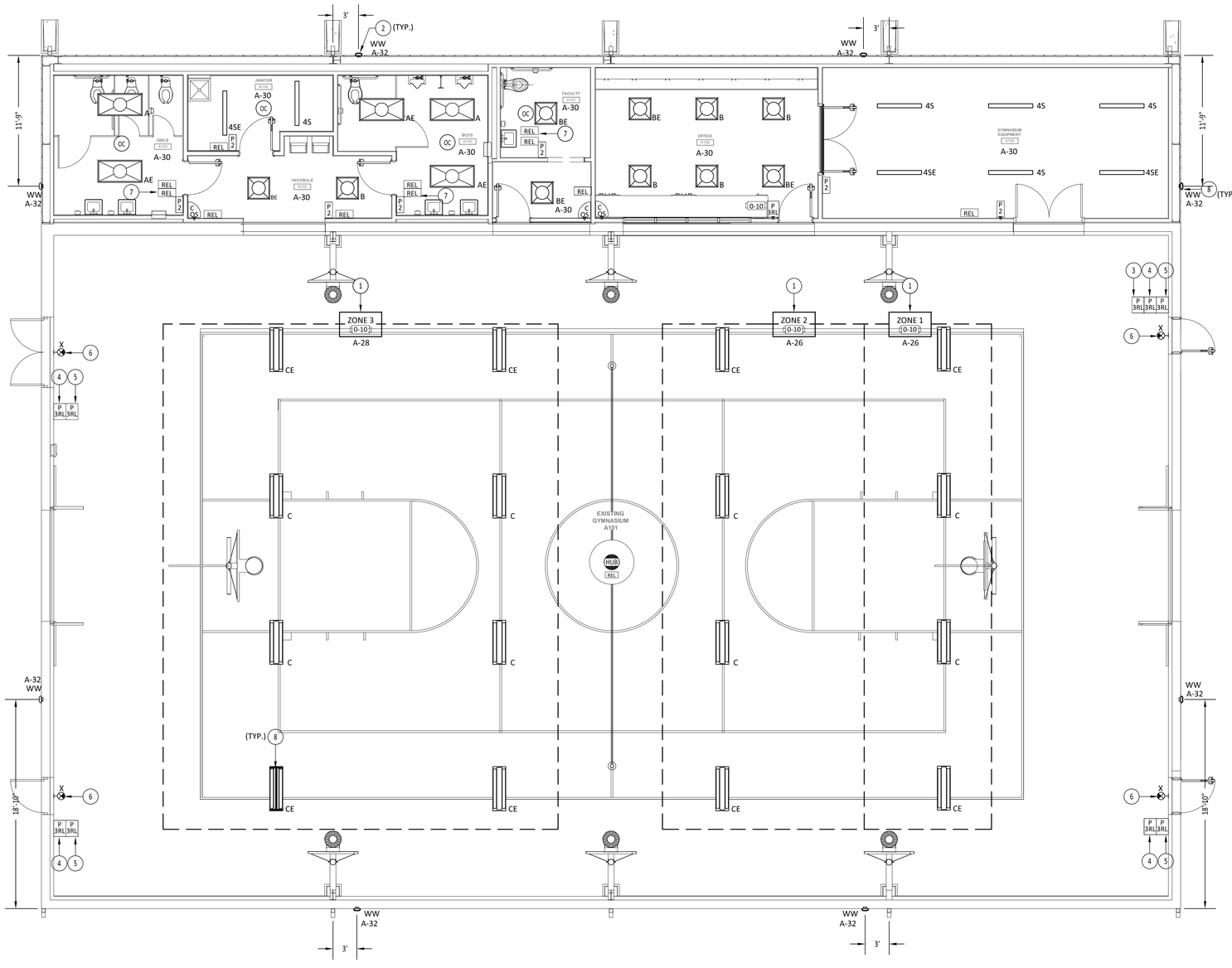
NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
STARTING DATE:	
CK BY: J.A.N.	DWN BY: K.A.

ELECTRICAL SITE PLAN

ES-1.0



GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO ADJUST ILLUMINATION SO THAT IT IS EQUALLY DISTRIBUTED THROUGH OUT THE GYM.
2. INSTALL LIGHT FIXTURES AT 10-FEET ABOVE FINISH FLOOR PROGRAM WITH LIGHTING CONTROL GATEWAY. DO NOT INSTALL SURFACE MOUNTED CONDUIT. CONDUIT SHALL BE CONCEALED WITHIN INTERIOR SPACE.
3. CONTROL SWITCH SHALL CONTROL ON/OFF AND DIMMING OF ZONE 1.
4. CONTROL SWITCH SHALL CONTROL ON/OFF AND DIMMING OF ZONE 1 AND 2.
5. CONTROL SWITCH SHALL CONTROL ON/OFF AND DIMMING OF ZONE 3
6. FURNISH AND INSTALL EXIT LIGHT FIXTURES WITH WIRE GUARDS. REFER TO LIGHT FIXTURE SCHEDULE FOR MODEL NUMBER. INSTALL LIGHT FIXTURE AT 12 INCHES ABOVE DOOR.
7. POWER PACKS TO BE USED TO CONTROL RESTROOM EXHAUST FAN. FAN SHALL REMAIN ON 5 MINUTES AFTER LIGHTS ARE TURNED OFF.
8. FURNISH AND INSTALL SUPERSTRUT EQUAL TO T&B#1400S 209G WITH A-100 REGULAR SPRING NUTS, E-142 HEX HEAD CAP SCREWS WITH FENDER WASHERS, AND NECESSARY MISCELLANEOUS HARDWARE FOR SUPPORT OF LIGHT FIXTURES. USE BC CLAMPS AT THE METAL BEAMS/PURLINS. REFER TO DETAILS FOR LIGHT FIXTURE ELEVATION AND STRUT SUPPORT REQUIREMENTS. AIRCRAFT CABLE OR CHAIN LINK WILL NOT BE ACCEPTACBLE MEANS OF SUPPORT.

LIGHTING CONTROLS LEGEND

C OS	(WALL MOUNTED) LUTRON#LRF2-OKLB-P-WH
P 2	PJ2-2B-GWH-L01 (CW-1-SS-PICOWBX-ADAPT)
P 3RL	PJ2-3BRL-GWH-L01 (CW-1-SS-PICOWBX-ADAPT)
REL	RMJS-16R-DV-B
0-10	RMJS-8T-DV-B
OS PIR 25	MS-OPS6M2-DV-WH
OC	LRF2-OCR2B-P-WH
ARM	LRF-ARM-WH
HUB	LIGHTING CONTROL GATEWAY# HJS-2-FM

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1 ELECTRICAL LIGHTING PLAN (DE LA VIÑA ELEMENTARY)
SCALE: 3/16"=1'-0"

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DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
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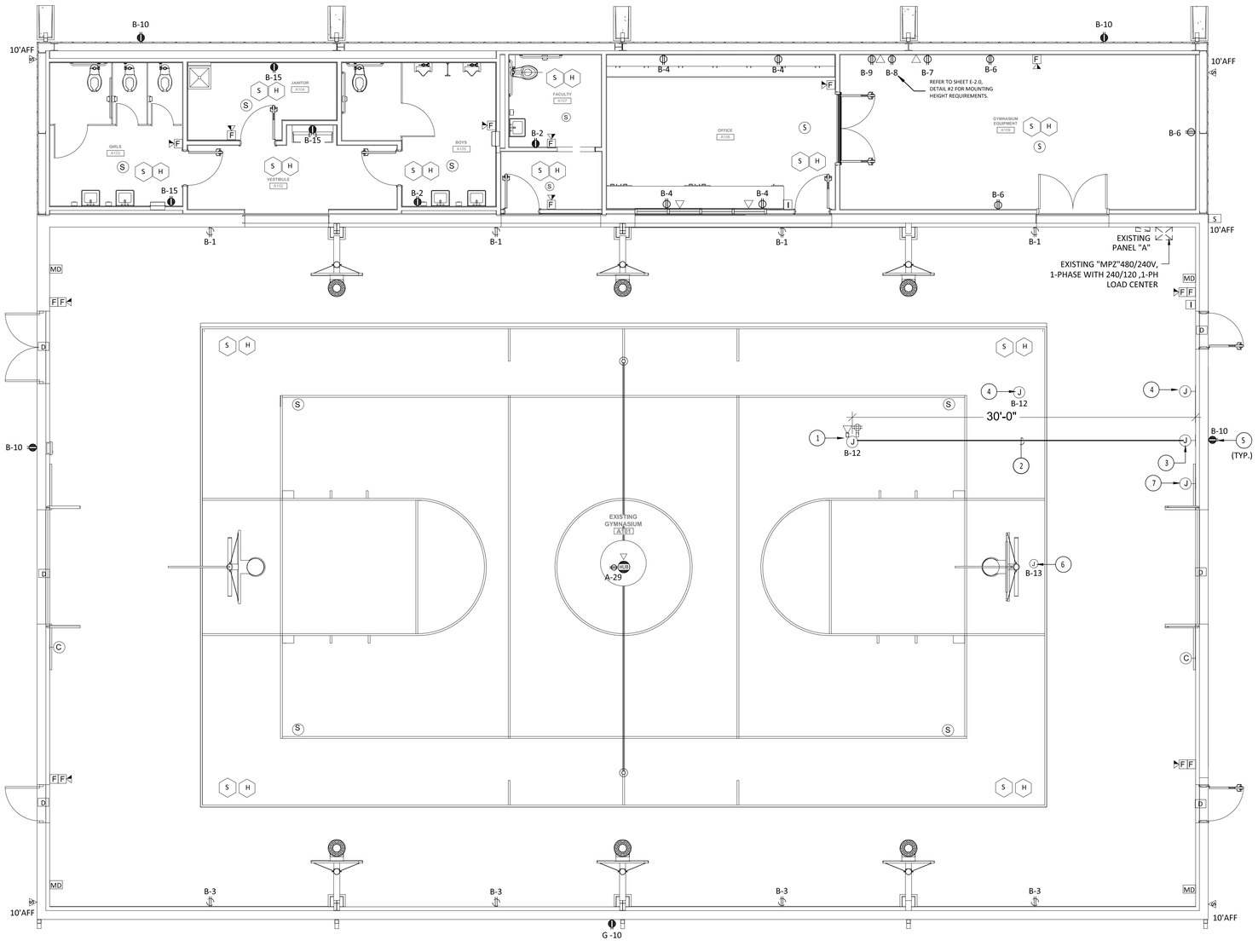
CK BY: J.A.N.	DWN BY: K.A.

ELECTRICAL
LIGHTING PLAN

E-1.0



1 ELECTRICAL POWER AND SPECIAL SYSTEMS PLAN (DE LA VIÑA ELEMENTARY)

SCALE:3/16"=1'-0"

GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. POWER AND DATA FOR PROJECTOR.
2. FURNISH AND INSTALL QTY(1) 1-1/2 EMT CONDUIT WITH PULLSTRING FOR MULTIMEDIA CABLING.
3. FURNISH AND INSTALL 4-INCH SQUARED DEEP JUNCTION FOR MULTIMEDIA OUTLET WITH MUDRINGS. INSTALL AT AT 15" TO BOTTOM OF DEVICE.
4. POWER FOR MOTORIZED SCREEN. FURNISH 1/2 INCH CONDUIT FROM SCREEN CONTROLLER TO 48" AFF FOR RAISE/LOWER CONTROL SWITCH. MOUNT CONTROL SWITCH ABOVE MULTIMEDA JUNCTION BOX.
5. FURNISH AND INSTALL FLUSH/RECESSED MOUNTED COVER ASSEMBLY EQUAL TO LEGRAND #WIUFC10S.
6. FURNISH AND INSTALL POWER FOR ELECTRIC WINCH CONSISTING OF 2#12, 1#12G, 1/2"C. FURNISH AND INSTALL NEMA L14-20 TWIST LOCK RECEPTACLE. MOUNT ADJACENT TO WINCH.
7. FURNISH AND INSTALL 4-INCH SQUARED DEEP JUNCTION WITH 3/4-INCH CONDUIT WITH PULL FROM WINCH TO CONTROL SWITCH FOR KEY SWITCH CONTROL FOR ELECTRIC WINCH.

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DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
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INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
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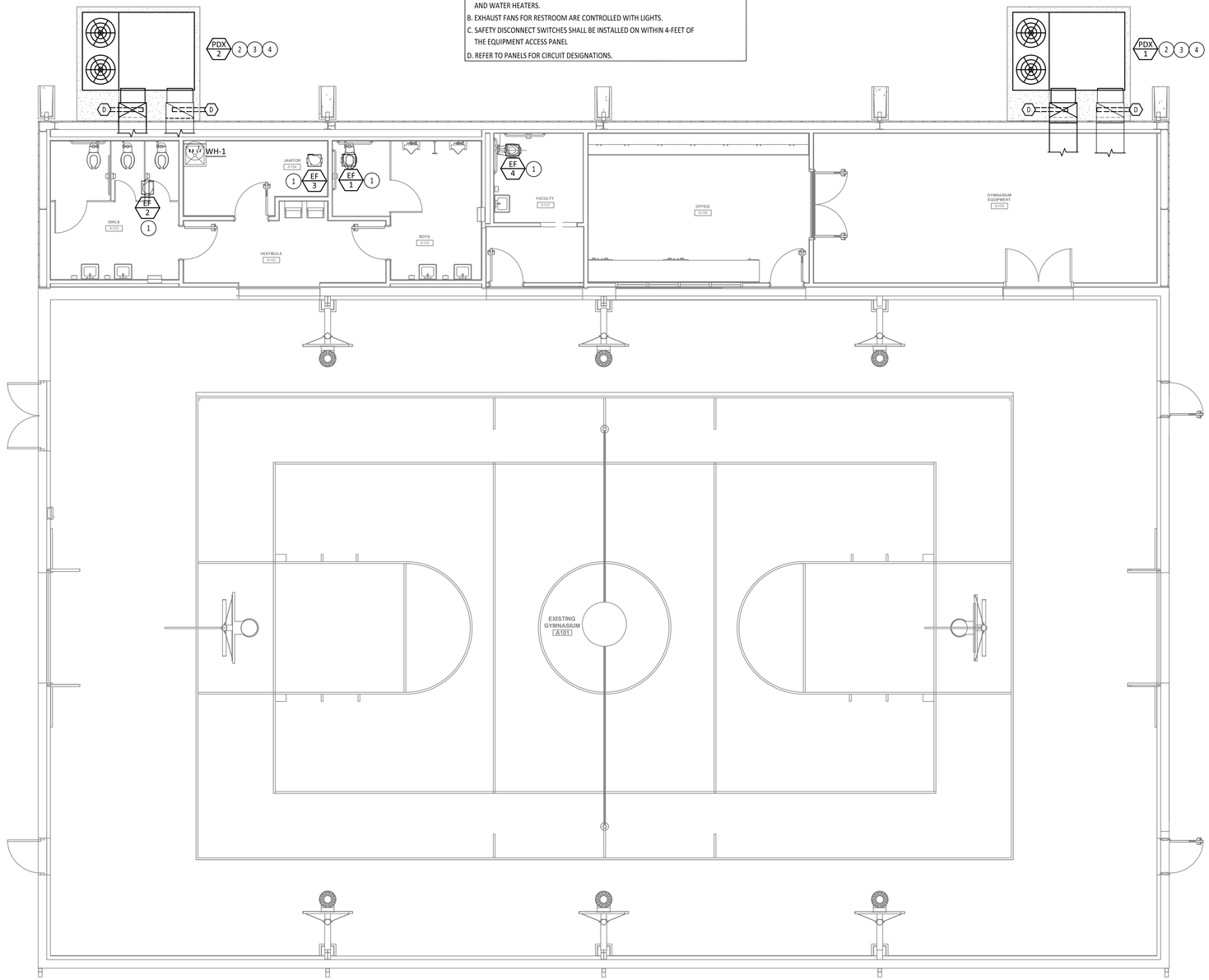
ELECTRICAL POWER AND SPECIAL SYSTEMS PLAN

E-1.1

MECHANICAL EQUIPMENT CONNECTION

AIR HANDLING UNITS		
UNIT MARK	BRANCH CIRCUIT	SAFETY DISCONNECT SWITCHES
PDX-1	3#3, 1#8EGC, 1-1/4"C	FACTORY PROVIDED.
PDX-2	3#3, 1#8EGC, 1-1/4"C	FACTORY PROVIDED.
EXHAUST FANS		
UNIT MARK	BRANCH CIRCUIT	SAFETY DISCONNECT SWITCHES
EF-1	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.
EF-2	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.
EF-3	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.
EF-4	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.
WATER HEATERS		
UNIT MARK	BRANCH CIRCUIT	SAFETY DISCONNECT SWITCHES
WH-1	3#12, 1#12G, 1/2"C	30/20AF/3P, NEMA 1

NOTES:
A. REFER TO MECHANICAL & PLUMBING PLANS FOR LOCATION OF FANS, AND WATER HEATERS.
B. EXHAUST FANS FOR RESTROOM ARE CONTROLLED WITH LIGHTS.
C. SAFETY DISCONNECT SWITCHES SHALL BE INSTALLED ON WITHIN 4-FEET OF THE EQUIPMENT ACCESS PANEL
D. REFER TO PANELS FOR CIRCUIT DESIGNATIONS.



GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. EXHAUST FANS SHALL BE CONTROLLED WITH LIGHT SWITCHES.
2. FURNISH AND INSTALL DUCT SMOKE DETECTORS CONNECT DUCT SMOKE DETECTORS TO FIRE ALARM CONTROL PANEL.
3. PDX UNITS DUPLEX RECEPTACLES TO BE INSTALLED IN METAL FLEX CONDUIT WITHIN THE PACKAGE UNIT.
4. ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR TO FURNISH AND INSTALL POWER FOR BIPOLAR IONIZATION DEVICE.

1 ELECTRICAL MECHANICAL CONNECTION PLAN - (DE LA VIÑA ELEMENTARY)
SCALE: 3/16"=1'-0"

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NO.	DATE	REVISIONS DESCRIPTION

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PROJECT NO:	20005
DATE:	4/15/2020
STARTING DATE:	
CK BY: J.A.N.	DWN BY: K.A.

ELECTRICAL MECHANICAL CONNECTION PLAN

E-1.2

EXISTING PANELBOARD "A" SQUARE D (DE LA VINA ELEMENTARY)

VOLTAGE: 480Y/277 VOLT 3 PHASE 4 WIRE — LOCATION: GYMNASIUM
250 A MAIN CIRCUIT BREAKER — MOUNTING: SURFACE
BUSES: MAIN - 250 A; NEUTRAL - 100%; EQUIPMENT GROUND — Isc = 22,000 A RMS SYM AVAILABLE

VA:L	VA:R	VA:O	LOAD	BKR	CKT	PH	CKT	BKR	LOAD	VA:L	VA:R	VA:O
0		7104	PDX-1	80/3	1	A	2	80/3	PDX-2	0		7104
0		7104	"	-	3	B	4	-	"	0		7104
0		7104	"	-	5	C	6	-	"	0		7104
0		1000	WATER HEATER	20/3	7	A	8	30/3	SPARE	0		
0		1000	"	-	9	B	10	-	"	0		
0		1000	"	-	11	C	12	-	"	0		
0			SPARE	30/3	13	A	14	30/3	SPARE	0		
0			"	-	15	B	16	-	"	0		
0			"	-	17	C	18	-	"	0		
0			SPARE	30/3	19	A	20	30/3	SPARE	0		
0			"	-	21	B	22	-	"	0		
0			"	-	23	C	24	-	"	0		
0	3060	1200	EXIST. MINI POWER ZONE "MPZ"480/240V, 1-PH	40/2	25	A	26	20/1	NEW GYM LIGHTING - ZONE 1 & 2	384		
0	2700	120	"	-	27	B	28	20/1	NEW GYM LIGHTING - ZONE 3	384		
0			LIGHTING CONTROL GATEWAY	20/1	29	C	30	20/1	NEW ADDITION LIGHTING	1014		
0			SPACE	20/1	31	A	32	20/1	NEW BUILDING PERIMETER LIGHTING	296		
0			SPACE	20/1	33	B	34	20/1	SPACE	0		
0			SPACE	20/1	35	C	36	20/1	SPACE	0		
0			SPACE	20/1	37	A	38	20/1	SPACE	0		
0			SPACE	20/1	39	B	40	20/1	SPACE	0		
0			SPACE	20/1	41	C	42	20/1	SPACE	0		

VA:L (LIGHTING)	2078	CONNECTED	2598 DEMAND
VA:R (RECEPTACLES)	5760	CONNECTED	5760 DEMAND
VA:O (OTHER)	46944	CONNECTED	46944 DEMAND
VA: TOTAL	54782	CONNECTED	55302 DEMAND
AMPS: TOTAL	66	CONNECTED	67 DEMAND

L	R	O	TOTAL			
680	3060	16408	VA CONNECTED TO A PHASE	20148	VA =	73 AMPS CONNECTED TO A PHASE @ 277 VOLTS
384	2700	15328	VA CONNECTED TO B PHASE	18412	VA =	66 AMPS CONNECTED TO B PHASE @ 277 VOLTS
1014	0	15208	VA CONNECTED TO C PHASE	16222	VA =	59 AMPS CONNECTED TO C PHASE @ 277 VOLTS
2078	5760	46944	**TOTAL**	54782	VA	

EXISTING "MPZ" LOAD CENTER "B" SQUARE D (DE LA VINA ELEMENTARY)

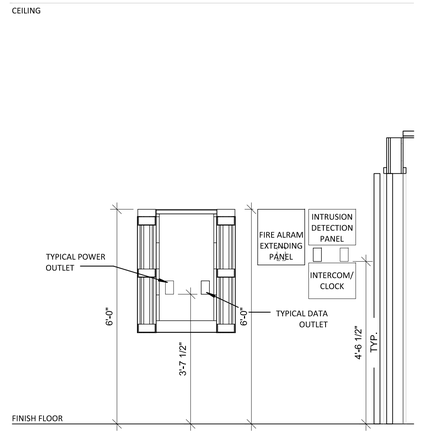
VOLTAGE: 120/240 VOLT 1 PHASE 3 WIRE — LOCATION: GYMNASIUM
70 A MAIN LUGS ONLY — MOUNTING: SURFACE MOUNTED NEMA 1
BUSES: MAIN - 70 A; 100% NEUTRAL: EQUIPMENT GROUND — Isc = 10,000 A RMS SYM AVAILABLE

VA:L	VA:R	VA:O	LOAD	BKR	CKT	PH	CKT	BKR	LOAD	VA:L	VA:R	VA:O
0	720		EXISTNG RCPT. GYM WEST SIDE	20/1	1	A	2	20/1	GFCI RCPT. BOYS RR & FACULTY RR	0	360	
0	720		EXISTING RCPT. GYM EAST SIDE	20/1	3	B	4	20/1	GEN. RCPT OFFICE	0	720	
0	540		GFCI GIRLS RR, JAN. A104, & EWC	20/1	5	A	6	20/1	GEN. RCPT GYM EQUIP.	0	540	
0	180		RCPT. TELECOM. RACK	20/1	7	B	8	20/1	RCPT. INTRUSION & INTERCOM PANEL	0	180	
0	180		RCPT. FIRE ALARM PANEL	20/1	9	A	10	20/1	GFCI RCPT. BUILDING PERIMETER	0	720	
0	180		GFCI EWC-1	20/1	11	B	12	20/1	QUAD RCPT. VIDEO PROJECTOR & SCREEN	0	720	
0	0	1200	ELECTRIC WINCH	20/1	13	A	14	20/1	SPACE	0	0	
0	0	120	BIPOLAR IONIZATION DEVICES "BPI-1"	20/1	15	B	16	20/1	SPACE	0	0	

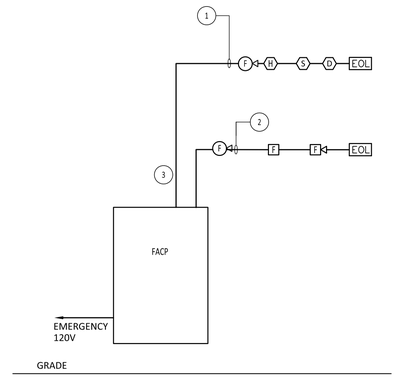
VA:L (LIGHTING)	0	CONNECTED	0 DEMAND
VA:R (RECEPTACLES)	5760	CONNECTED	5760 DEMAND
VA:O (OTHER)	1320	CONNECTED	1320 DEMAND
VA: TOTAL	7080	CONNECTED	7080 DEMAND
AMPS: TOTAL	30	CONNECTED	30 DEMAND

L	R	O	TOTAL			
0	3060	1200	VA CONNECTED TO A PHASE	4260	VA =	36 AMPS CONNECTED TO A PHASE @ 120 VOLTS
0	2700	120	VA CONNECTED TO B PHASE	2820	VA =	24 AMPS CONNECTED TO B PHASE @ 120 VOLTS
0	5760	1320	**TOTAL**	7080	VA	

1 ELECTRICAL PANEL SCHEDULES - DE LA VINA ELEMENTARY
SCALE: N.T.S.



2 SPECIAL SYSTEM EQUIPMENT ELEVATION
SCALE: N.T.S.



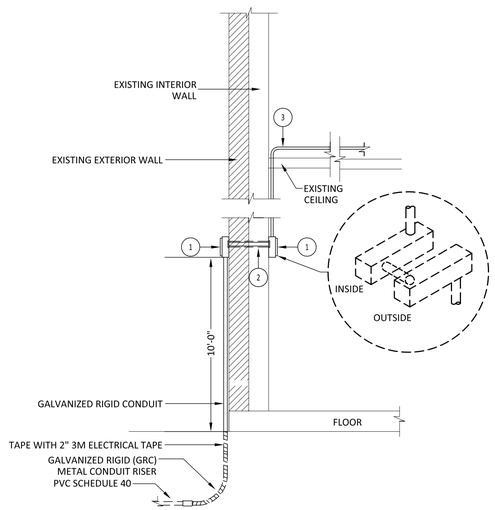
KEYED NOTES: (8)

#18/2 TW/SHLD FPLP, 3/4"C, TYPICAL.

#14/2 TW/SHLD, 3/4"C, TYPICAL.

#18 SINGLE TWISTED SHIELDED PAIR FOR INITIATING DEVICES, #14 SINGLE TWISTED PAIR FOR STROBE DEVICES AND #14/2 FOR RELAY CIRCUITS, TYPICAL.

3 FIRE ALARM RISER DIAGRAM
SCALE: N.T.S.



KEY NOTES: (4)

1. FURNISH AND INSTALL NEMA 3R 12" L X 24" W X 12" D WIREWAY WITH HINGED COVER.
2. FURNISH AND INSTALL EASY PATH SLEEVE SERIES 44 QTY. (1) FOR D TELECOM CABLING; FURNISH CONDUIT SLEEVES FOR ELECTRICAL FEEDERS.
3. FURNISH AND INSTALL EMT-SURFACE MOUNTED CONDUIT FROM THIS POINT TO THE INTERIOR WIREWAY.

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4 TELECOMMUNICATION AND ELECTRICAL WALL PENETRATION BUILDING DETAIL
SCALE: N.T.S.

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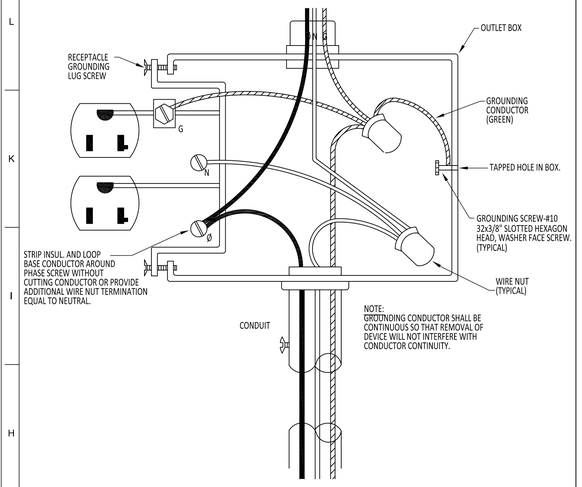
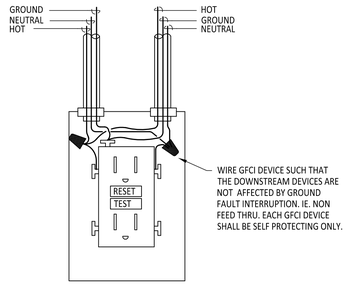
PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: J.A.N. DWN BY: K.A.

ELECTRICAL PANEL SCHEDULES

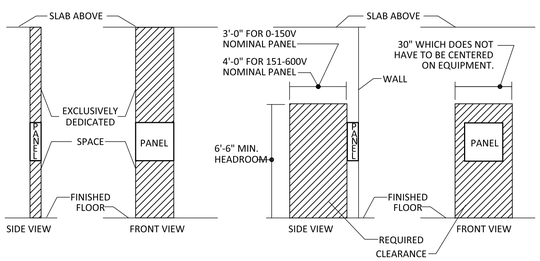
E-2.0



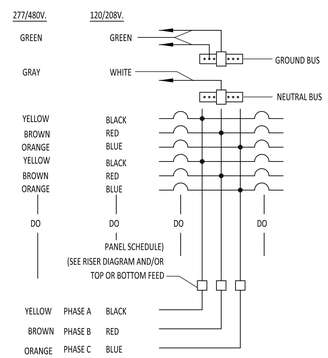
1 TYPICAL RECEPTACLE GROUNDING DETAIL
SCALE: N.T.S.



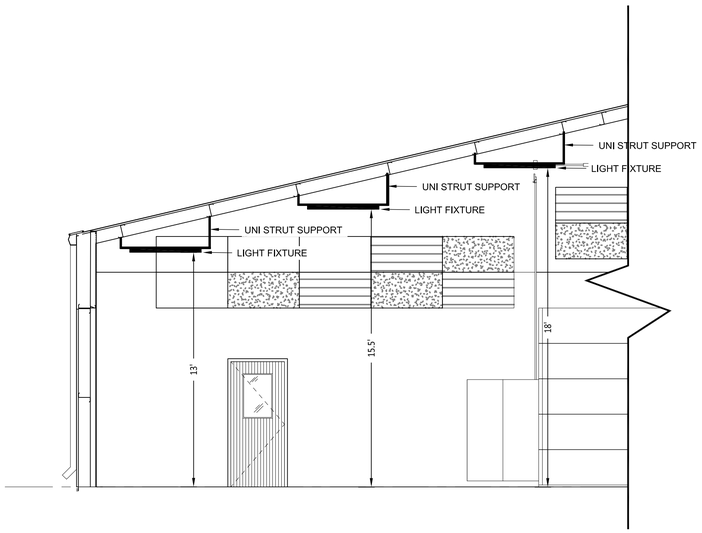
2 GFCI RECEPTACLE-WIRING DIAGRAM
SCALE: N.T.S



3 WIRING METHOD FOR ISOLATED GROUNG
SCALE: N.T.S.



4 TYPICAL PANEL COLOR CODE DETAIL
SCALE: N.T.S.



5 TYPICAL GYM LIGHT FIXTURE INSTALLATION DETAIL
SCALE: N.T.S

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04-15-2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: J.A.N. DWN BY: K.A.

ELECTRICAL DETAILS

SIGMA ENGINEERS, PLLC
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E-2.1

LIGHTING FIXTURE SCHEDULE

TYPE	MANUF.	MODEL NUMBER	LAMPS	VA	VOLTAGE	DESCRIPTION
A	H E WILLIAMS INC.	LP-24-L50/840-DFK-2448W-DIM-UNV FURNISH WITH DRYWALL KIT FOR GYPSUM BOARD CEILING	48W-LED 4000K 4906 LUMENS	48	277	2X4 LED EDGE LIT FLAT PANEL
AE	H E WILLIAMS INC.	LP-24-L50/840-DFK-2448W-DIM-UNV FURNISH WITH DRYWALL KIT FOR GYPSUM BOARD CEILING	48W-LED 4000K 4906 LUMENS	48	277	2X4 LED EDGE LIT FLAT PANEL WITH EMERGENCY BATTERY BACK UP
B	H E WILLIAMS INC.	LP-22-L40/840-DIM-UNV	39W-LED 4000K 4155 LUMENS	39	277	2X2 LED EDGE LIT FLAT PANEL
BE	H E WILLIAMS INC.	LP-22-L40/840-EM/10WRM-DIM-UNV	39W-LED 4000K 4155 LUMENS	39	277	2X2 LED EDGE LIT FLAT PANEL WITH EMERGENCY BATTERY BACK UP
C	GE	ABV3-036-T-49-1D-Q-V-ST-K-Q-W	160W-LED 4000K 35,500LUMENS	160	277	LED HIGH BAY
CE	GE	ABV3-036-T-49-1D-Q-V-ST-K-Q-W-EL1	160W-LED 4000K 47,400 LUMENS	160	277	LED HIGH BAY WITH EMERGENCY BATTERY BACK UP
4S	ILP	WTZ-48WLED-UNIV-50-RAFL-SS	48W-LED 5000K 6676 LUMENS	48	277	4-FOOT LED LINEAR
4SE	ILP	WTZ-48WLED-UNIV-50-RAFL-SS-FI/ILBCP07	48W-LED 5000K 6676 LUMENS	48	277	4-FOOT LED LINEAR WITH EMERGENCY BATTERY BACK UP
WW	GE EVOLVE	EWLS-01-0-40AF-7-50-N-1-FM-G	37W-LED 5000K 4000 LUMENS	37	277	LED WALL PACK
X	H E WILLIAMS INC.	EXIT/EL-SF-R-CP-AN-EM-WG-D REFER TO PLANS FOR SINGLE OR DOUBLE FACE REQUIREMENTS AND CHEVRONS FURNISH WITH WIRE GUARDS.	10W-LED	10	277	LED EDGE-LIT EXIT LIGHT

1 LIGHT FIXTURE SCHEDULE (DE LA VIÑA ELEMENTARY)
SCALE: N.T.S.

ELECTRICAL GENERAL LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS.
SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION
CR	SECURITY SYSTEM CARD READER
T	EXIT DEVICE, (ELECTRIC STRIKE, ELECTROMAGNETIC)
T	POWER TRANSFER HINGE
MC	MICROPHONE
PB	PANIC/DURESS BUTTON
KP	INTRUSION DETECTION KEYPAD
MD	MOTION DETECTION SENSOR
D	DOOR STATUS SWITCH
G	GLASSBREAK SENSOR
C	CLOCKS - SINGLE OR DOUBLE FACE, IP BASED, DIGITAL CLOCKS
IDP	INTRUSION DETECTION PANEL
ACC	ACCESS CONTROL PANEL
	CEILING MOUNTED PROJECTOR MOUNT HARDWARE, CEILING MOUNTED RECESSED AUDIO AND VIDEO DEVICES, AND CEILING MOUNTED RECESSED RECEPTACLE.
	SURVEILLANCE CAMERAS (UNLESS OTHER WISE NOTED, ALL CAMERAS ARE FIXED) PTZ= (PAN-TILT-ZOOM)
S	INTRUSION DETECTION SIREN
S	INTERCOM SPEAKER; WP = WEATHER PROOF
I	INTERCOM PUSH BUTTON SWITCH
PC	PHOTOCELL LIGHTING CONTROL
S (WALL MNTD.)	INTERCOM SPEAKER WALL MOUNTED (WEATHER PROOF)
	DATA OUTLET WALL MOUNTED

SYMBOL	DESCRIPTION	MNTG. HT. UNO (SEE NOTE 1)
	POWER	
	DUPLEX RECEPTACLE - 20A/125V/1P/3W/G	15" AFF
	DUPLEX RECEPTACLE, 20A, GROUND FAULT INTERCEPTOR; C = CEILING MOUNTED.	15" AFF
	DUPLEX RECEPTACLE, 20A, INSULATED GROUND DEVICE WITH ISOLATED GROUNDING CONDUCTOR; CLG = CEILING MOUNTED.	15" AFF
	QUADPLEX RECEPTACLE, 20A, GROUND FAULT INTERCEPTOR; CLG = CEILING MOUNTED.	AS REQD.
	QUADPLEX RECEPTACLE, 20A, INSULATED GROUND DEVICE WITH ISOLATED GROUNDING CONDUCTOR; CLG = CEILING MOUNTED.	AS REQD.
E	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT	AS REQD.
	SPECIAL PURPOSE RECEPTACLE; MOTOR OR EQUIPMENT CONNECTION	AS REQD.
J	JUNCTION BOX - SIZE & MOUNTING AS REQUIRED	15" AFF
MPFB	AUDIO, VIDEO, DATA, AND POWER FLOOR BOX WIRING DIVICE. FURNISH AND INSTALL EQUAL LEGRAND #RBF11; FURNISH WITH THE FOLLOWING: QTY.(2) IG DUPLEX RECEPTACLES AND 6 PORT-DATA WIRING DEVICE PLATE TO ACCOMODATE CATEGORY 6A CABELING.FLOOR BOX CONVER TO MATCH FINISH FLOOR TYPE (IE. CARPET, TILE, WOOD, ETC.)	FLOOR
FB	FURNITURE FEED POKE THRU BOX FOR POWER. FURNISH AND INTALL EQUAL TO LEGRAND 6ATCFF WITH THE FOLLOWING: 5BLH OUTER COMPARTMENT 1 175CHA &1BHA CENTER COMPARTMENT 5BLH OUTER COMPARTMENT 1	SECOND FLOOR CONCRETE SLAB
30/-/3	DISCONNECT SWITCH - 30/-/3 INDICATES 30A, 3-POLE, NONFUSED; 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE	AS REQD.
CB 30/3	CIRCUIT BREAKER DISCONNECT SWITCH - THERMAL MAGNETIC CB IN NEMA 1 ENCL; AMPS/POLES AS INDICATED	AS REQD.
30/30/3	DISCONNECT SWITCH - 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE	AS REQD.
2	MOTOR STARTER FVNR UNO; NUMBER INDICATES NEMA SIZE	AS REQD.
CB CB	COMBINATION MOTOR CONTROLLER/DISCONNECT SWITCH	AS REQD.
	PANELBOARD	-
	MOTOR	-
~	SINGLE LINE CONTINUATION	-
GAAP	GENERATOR ANNUNCIATOR PANEL	-
X,X,X	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	-
X/X/X	MULTI-POLE DEVICE CIRCUIT NUMBERS	
	TRANSFORMER	-

SYMBOL	DESCRIPTION	MNTG. HT. UNO (SEE NOTE 1)
	FIRE ALARM	
F	FIRE ALARM VOICE EVACUATION SPEAKER.	-
F	FIRE ALARM PULL STATION	48" AFF
F	FIRE ALARM AUDIBLE/VISUAL SIGNAL; WP = WEATHER PROOF; S = WITH INTEGRAL VOICE ACTIVATED SPEAKER.	80" AFF
F	FIRE ALARM AUDIBLE SIGNAL; WP = WEATHER PROOF; S = WITH INTEGRAL VOICE ACTIVATED SPEAKER.	80" AFF
F	FIRE ALARM VISUAL SIGNAL; WP = WEATHER PROOF; S = WITH INTEGRAL VOICE ACTIVATED SPEAKER.	80" AFF
FS	FIRE ALARM SPRINKLER FLOW SWITCH	-
TS	FIRE ALARM SPRINKLER TAMPER SWITCH	-
S	FIRE ALARM SMOKE DETECTOR CEILING OR WALL MOUNTED	80" AFF
H	HEAT DETECTOR CEILING OR WALL MOUNTED	-
DH	MAGNETIC DOOR HOLDER, FLOOR MOUNTED	
D	DUCT SMOKE DETECTOR	-
FACP	FIRE ALARM CONTROL PANEL	-
FAAP	FIRE ALARM ANNUNCIATOR PANEL	-
VAFP	VOICE ACTIVATED FIRE ALARM PANEL	80" AFF
R	FIRE ALARM CONTROL RELAY	

GENERAL ABBREVIATIONS

ABS	ABOVE BACK SPLASH	NC (N.C.)	NORMALLY CLOSED
AFF	ABOVE FINISHED FLOOR	NF	NONFUSED
BFC	BELOW FINISHED CEILING	NIC	NOT IN CONTRACT
C	CONDUIT	NL	NIGHT LIGHT
CB	CIRCUIT BREAKER	NO (N.O.)	NORMALLY OPEN
CLG	CEILING	PNL	PANEL
EC	EMPTY CONDUIT	RCPT(S)	RECEPTACLE(S)
EP	ELECTRICAL PRIMARY	SO (S.O.)	SPACE ONLY
EX	EXISTING	SP	SPARE
F	FUSE	ST (S.T.)	SHUNT TRIP
G	GROUND (EQUIPMENT)	SW	SWITCH
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
HCC	HORIZONTAL CROSS CONNECT	UF	UNDERFLOOR
IC	INTERRUPTING CAPACITY	UG	UNDERGROUND
ICC	INTERMEDIATE CROSS CONNECT	UNO	UNLESS NOTED OTHERWISE
IG	ISOLATED GROUND	WG	WIRE GUARD
MTD	MOUNT OR MOUNTED	WP	WEATHERPROOF
		XFMR	TRANSFORMER

NOTES:
1. 48" AFF INDICATES TO TOP OF DEVICE; 15" AFF INDICATES TO BOTTOM OF DEVICE; ALL OTHER MOUNTING HEIGHTS REFER TO CENTERLINE OF DEVICE.

2 ELECTRICAL GENERAL LEGEND
SCALE: N.T.S.

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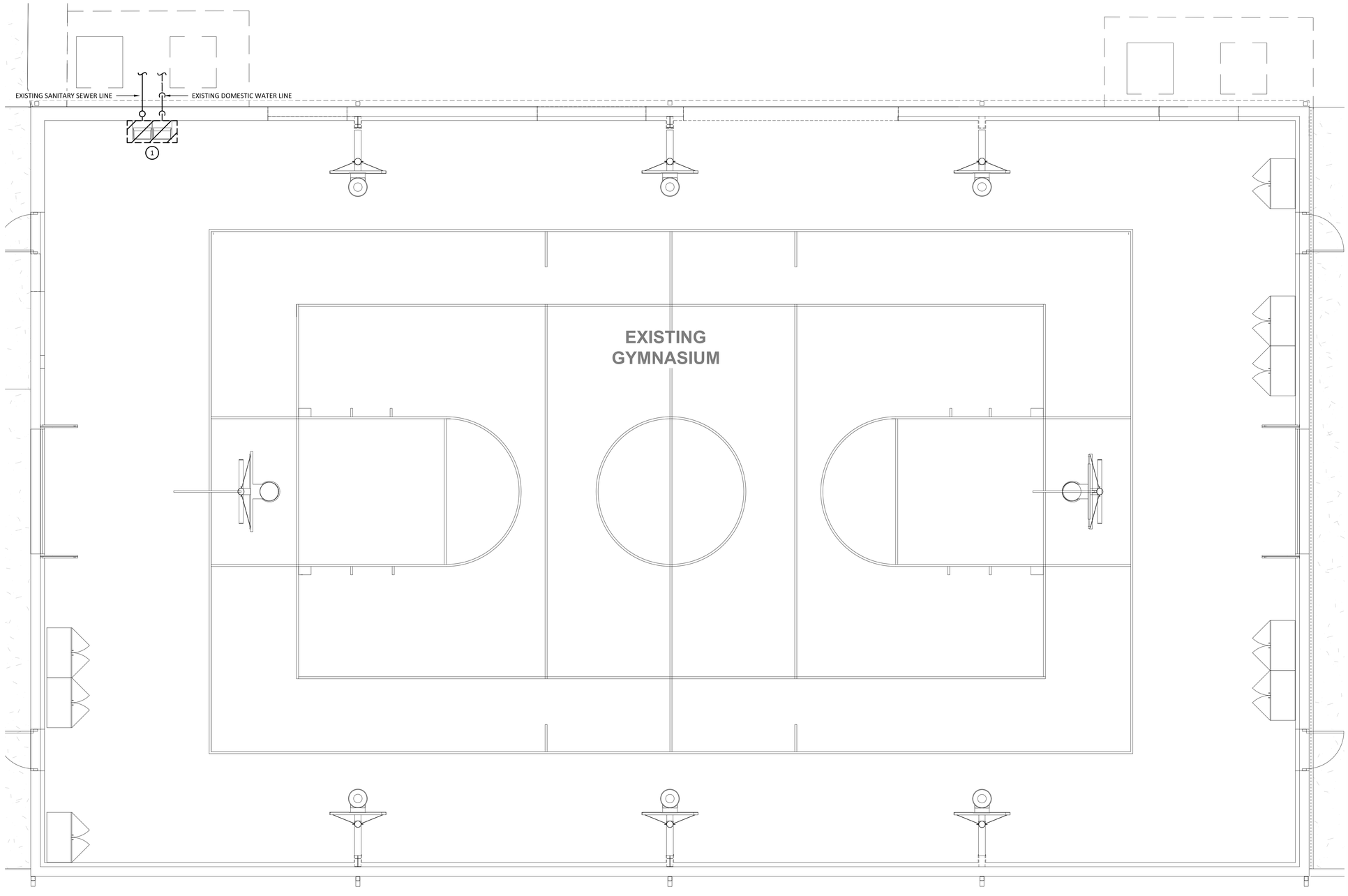
DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: J.A.N. DWN BY: K.A.

LIGHT FIXTURE SCHEDULE & ELECTRICAL GENERAL LEGEND

E-3.0



GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. REMOVE EXISTING ELECTRIC WATER COOLER. CAP EXISTING SANITARY SEWER AND DOMESTIC WATER LINE FLUSH WITH WALL. CAPPED PIPES SHALL NOT BE VISIBLE.

DEMOLITION LEGEND
TO BE DEMOLISHED

1 PLUBING DEMOLITION PLAN (DE LA VINA ELEMENTARY)
SCALE: 1/4"=1'-0"

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04-15-2020

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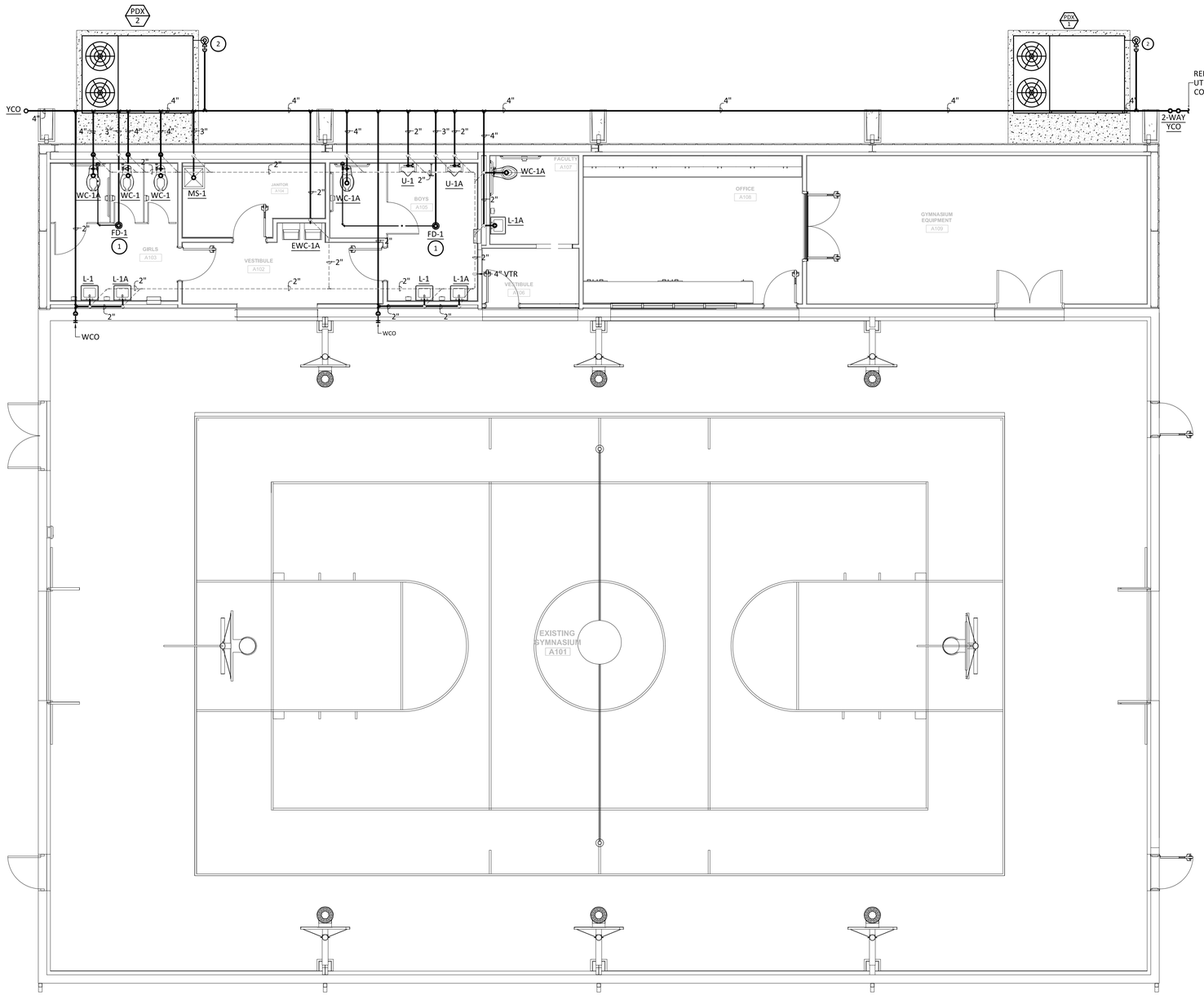
CK BY: G.H.	DWN BY: C.C.

PLUMBING
DEMOLITION PLAN

PD-1.0



1 PLUMBING SANITARY SEWER PLAN (DE LA VIÑA ELEMENTARY)

SCALE: 3/16"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. FLOOR DRAIN SHALL BE PRIMED BELOW SLAB WITH 1/2" LINE FROM NEAREST WATER CLOSET FLUSH VALVE. CONCEAL LINE IN WALL AND BELOW CONCRETE SLAB.
2. FURNISH AND INSTALL 4" HUB DRAIN WITH P-TRAP AND PROSET TRAP GUARD INSTALLED FLUSH WITH MECHANICAL EQUIPMENT CONCRETE PAD. INSTALL FULL SIZE INSULATED COPPER CONDENSATE DRAIN WITH P-TRAP AND DRAIN INDIRECTLY TO HUB DRAIN WITH A 1" AIR GAP.

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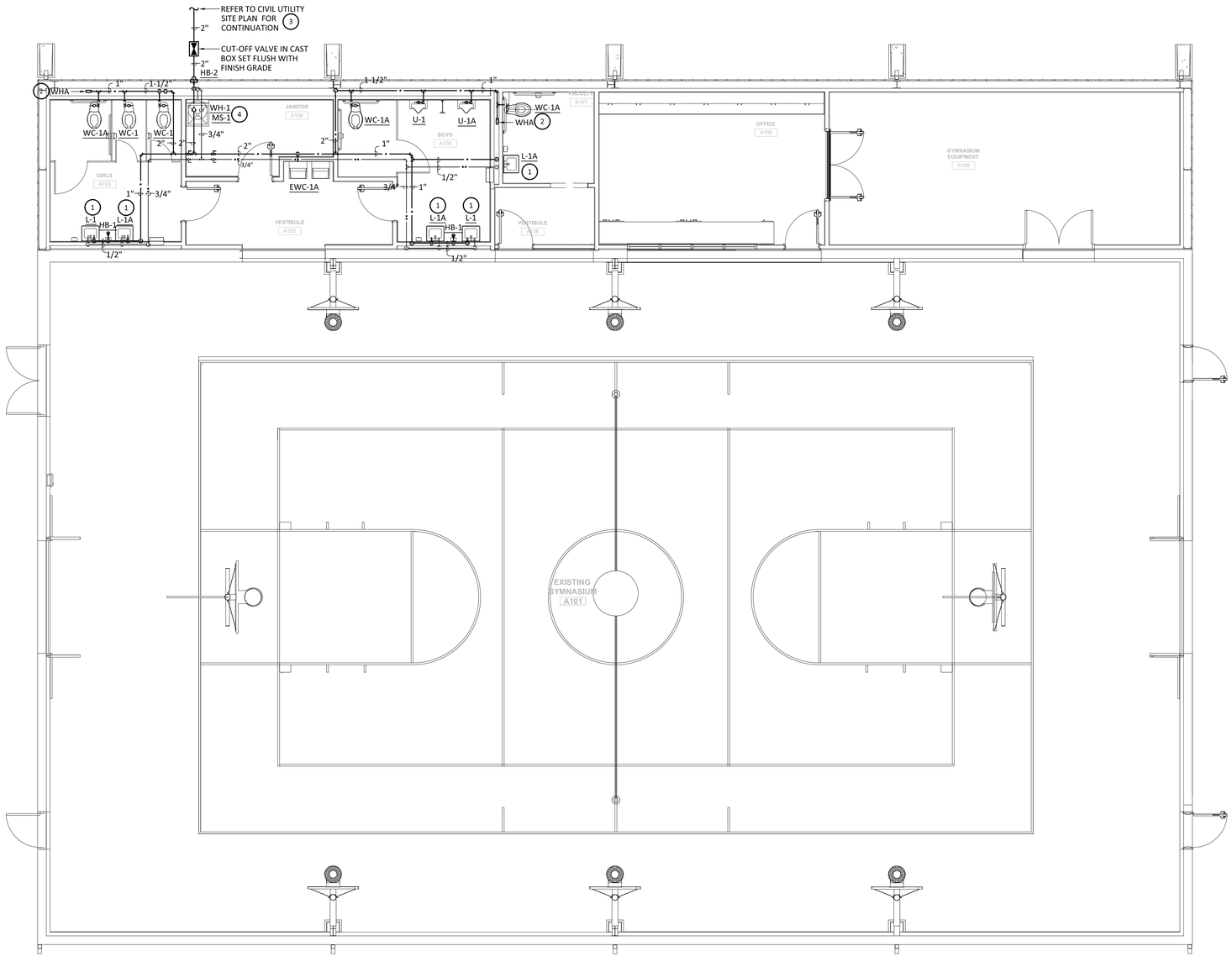
PLUMBING SANITARY SEWER PLAN

P-1.0



GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL THERMOSTATIC MIXING VALVE (MV-1) AT LAVATORY TO DELIVER WATER AT 110°F. REFER TO PLUMBING SCHEDULE FOR SPECIFICATIONS. REFER TO PLUMBING DETAIL FOR INSTALLATION REQUIREMENTS.
2. WATER HAMMER ARRESTOR IN CHASE. PROVIDE 12"X12" HINGED 16 GAUGE STEEL ACCESS PANEL LOCKABLE KEYED DOOR. PRIME COATED WITH RUST INHIBITIVE ELECTROSTATIC POWDER, BAKED GREY ENAMEL AND SHALL BE PAINTED TO MATCH SURRONDING AREAS. COORDINATE LOCATION TO AVOID CONFLICTS WITH GRAB BARS, FLUSH VALVE AND /OR OTHER EQUIPMENT AND DEVICES.
3. DOMESTIC WATER SERVICE LINE WITH CUT-OFF VALVE IN CAST BOX SET FLUSH WITH FINISH GRADE. DOMESTIC WATER SERVICE LINE SHALL BE PROTECTED AGAINST BACKFLOW. PROVIDE AND INSTALL REDUCED PRESSURE BACKFLOW PREVENTER AFTER WATER METER. SIZE OF BACKFLOW PREVENTER SHALL MATCH WATER SERVICE LINE. BACKFLOW PREVENTER SHALL BE INSULATED AND JACKETED AS PER STATE REQUIREMENTS. INSTALL BACKFLOW PREVENTER ON GRASS AREA.
4. PROVIDE BALL VALVES AT INLET AND OUTLET OF WATER HEATER FOR ISOLATION.

1 PLUMBING DOMESTIC WATER PLAN (DE LA VIÑA ELEMENTARY)
SCALE: 3/16"=1'-0"

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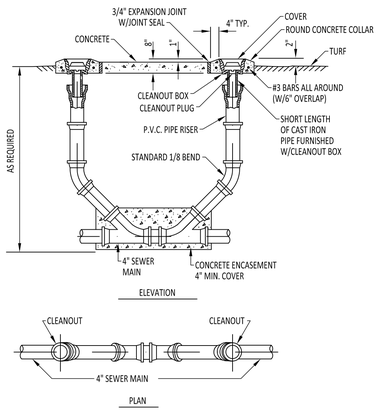
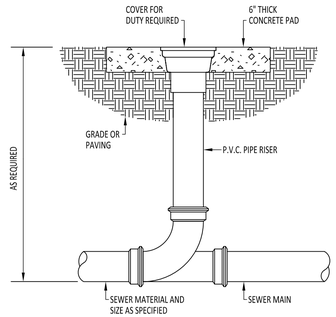
PLUMBING DOMESTIC WATER PLAN

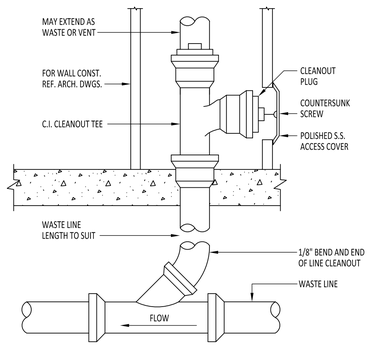
P-1.1



1 TYPICAL EXTERIOR TWO WAY CLEANOUT DETAIL
SCALE: N.T.S.



2 EXTERIOR CLEANOUT DETAIL
SCALE: N.T.S.



3 WALL CLEANOUT DETAIL
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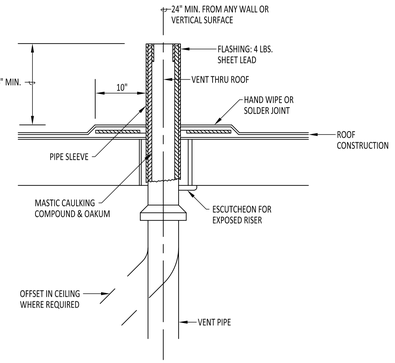
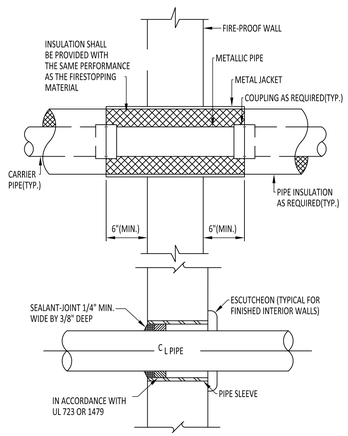
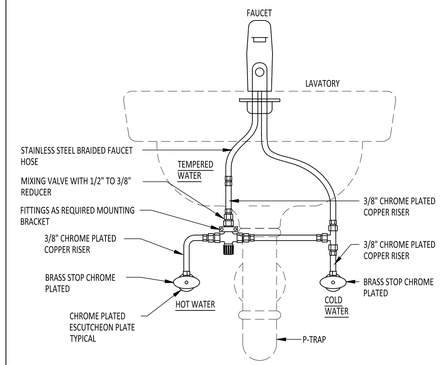


4 VENT THROUGH ROOF DETAIL
SCALE: N.T.S.

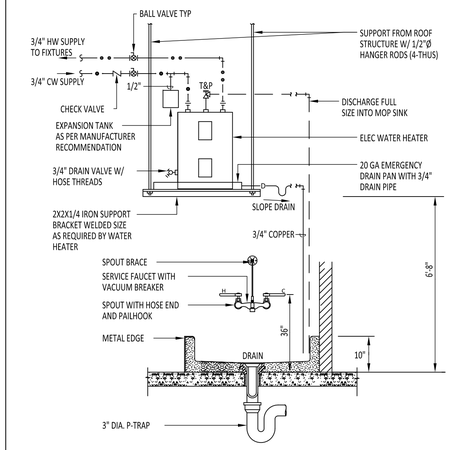


5 TYPICAL FIRE PROOF & WALL PENETRATION
SCALE: N.T.S.

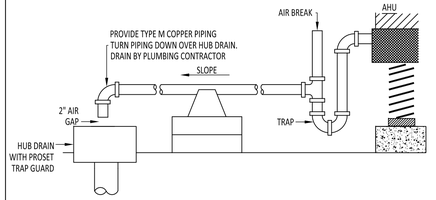


NOTE:
1. MIXING VALVE AND WATER LINES SHALL BE INSTALLED BETWEEN WALL AND P-TRAP TAILPIECE
2. PROVIDE AND INSTALL COVER KIT FOR P-TRAP AND STOPS.
3. FIELD INSULATE MIXING VALVE AND PIPING FROM MIXING VALVE TO FAUCET CONNECTION. JACKET INSULATION TO MATCH TRAP COVER KIT.
4. PROVIDE AND INSTALL REQUIRED 1/2" TO 3/8" REDUCERS AND CONNECTION FITTINGS.

6 MIXING VALVE UNDER LAVATORY DETAIL
SCALE: N.T.S.



7 WATER HEATER ON PLATFORM MOUNTING DETAIL
SCALE: N.T.S.



8 CONDENSATE DRAIN DETAIL
SCALE: N.T.S.

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PLUMBING DETAILS

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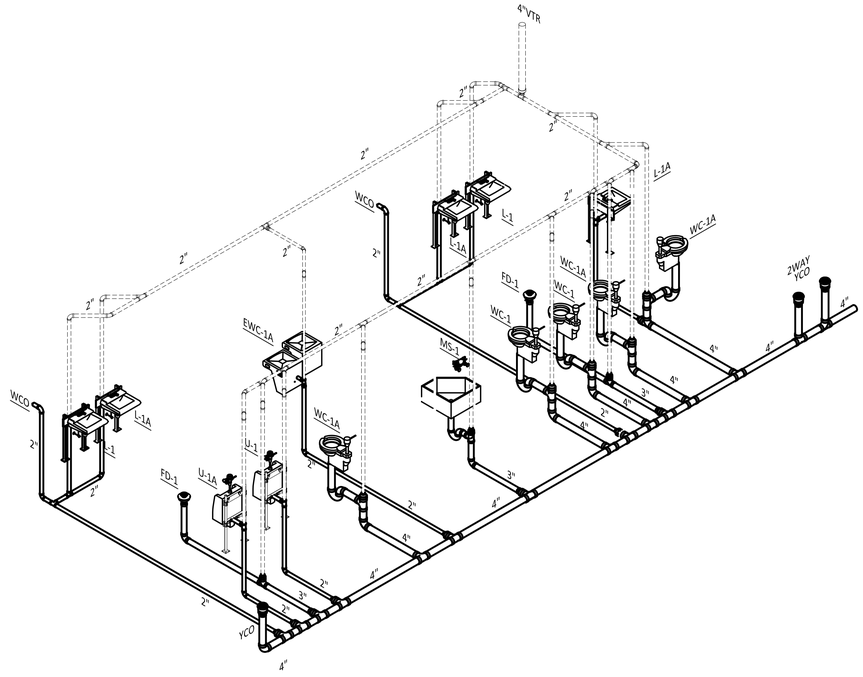
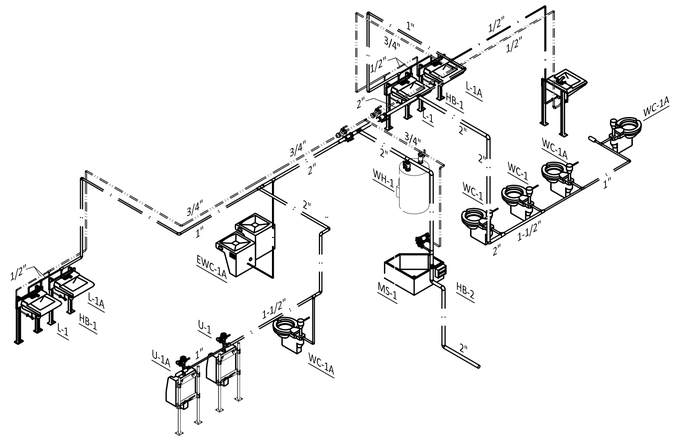
P-2.0



1 SANITARY SEWER RISER DIAGRAM

SCALE: N.T.S.



2 DOMESTIC WATER RISER DIAGRAM

SCALE: N.T.S.

PLUMBING SCHEDULE

MARK	TYPE	CONNECTION				DESCRIPTION
		SS	V	CW	HW	
EWC-1A	BI-LEVEL ELECTRIC WATER COOLER	2"	2"	1/2"	-	BI-LEVEL SELF-CONTAINED WALL HUNG, REFRIGERATED WATER COOLER EQUAL TO ELKAY "LZSTL8C". SELF CLOSING CONTROLS ON FRONT AND SIDE, STAINLESS STEEL BASIN. FLEX-GUARD BUBBLER CAPABLE OF DELIVERING 8.0 GPH OF 50° F WATER WITH 80° F INLET WATER AND 90° F ROOM TEMPERATURE. COMPLETE WITH CANE APRON ELKAY MODEL "LKAPREZL" AND APPROVED CARRIER SYSTEM.
FD-1	FLOOR DRAIN	3"	2"	1/2"	-	ZURN MODEL Z-415B-P, TYPE B STRAINER, LACQUERED CAST IRON TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, AND ROUND, ADJUSTABLE NICKLE-BRONZE STRAINER, TRAP PRIMER CONNECTION.
HB-1	HOSE BIBB	-	-	3/4"	-	WOODFORD MODEL 26P CHROME FINISH WALL MOUNTED FAUCET, WITH BACK FLOW PREVENTER.
HB-2	HOSE BIBB	-	-	3/4"	-	WOODFORD MODEL B26P CHROME FINISH WALL MOUNTED FAUCET, WITH BACK FLOW PREVENTER, AND LOOSE TEE KEY.
L-1	LAVATORY WALL MOUNTED	2"	2"	1/2"	1/2"	KOHLER "CHESAPEAKE" MODEL K-1728, WALL MOUNTED LAVATORY VITREOUS CHINA, 4" CENTERS, DECK MOUNTED DUAL HANDLE ADA METERING LAVATORY FAUCET, 0.5 GPM, CHICAGO FAUCETS 802-VE2805-336ABCP, ANGLE STOPS, FLEXIBLE RISERS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, VALVES, DRAIN, AND APPROVED CARRIER SYSTEM EQUAL TO ZURN Z-1231.
L-1A	LAVATORY WALL MOUNTED (HANDICAP)	2"	2"	1/2"	1/2"	KOHLER "CHESAPEAKE" MODEL K-1728, WALL MOUNTED LAVATORY VITREOUS CHINA, 4" CENTERS, DECK MOUNTED DUAL HANDLE ADA METERING LAVATORY FAUCET, 0.5 GPM, CHICAGO FAUCETS 802-VE2805-336ABCP, ANGLE STOPS, FLEXIBLE RISERS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, OFFSET TAILPIECE, PROVIDE A.D.A. PROTECTIVE COVERS AT WATER PIPING, VALVES, DRAIN, AND APPROVED CARIER SYSTEM EQUAL TO ZURN Z-1231.
MS-1	MOP SINK FLOOR MOUNTED	3"	2"	1/2"	1/2"	TERRAZO, CORNER MOP SINK EQUAL TO FIAT "TSBC-1610" 24"X24"X12" WITH 6" DROP FRONT, STAINLESS STEEL RIM GUARD AND "MSG-2424" WALL GUARD. COMPLETE WITH "830-AA" SERVICE SINK FAUCET WITH 8" CENTERS, PAIL HOOK, AND VACUUM BREAKER SPOUT. COMPLETE WITH "832-AA" HOSE AND BRACKET, "889-CC" STAINLESS STEEL MOP BRACKET AND GRID STRAINER.
MV-1	THERMOSTATIC MIXING VALVE UNDER LAVATORY	-	-	3/8"	3/8"	UNDER LAVATORY THERMOSTATIC MIXING VALVE SHALL BE EQUAL TO LEONARD MODEL "170-LF-BP-BRKT". COMPLETE WITH COLD BYPASS PORT AND MOUNTING BRACKET. OUTLET TEMPERATURE SHALL BE SET TO 110°F.
U-1	URINAL WALL MOUNTED	2"	2"	3/4"	-	KOHLER "DEXTER" MODEL K-5016-ET, VITREOUS CHINA, 3/4" TOP SPUD INLET, WALL HUNG URINAL, 24" RIM HEIGHT, ZURN AQUAVANTAGE MODEL Z6003AV-EWS FLUSHOMETER VALVE, 0.5 GPF. FURNISH WITH CONCEALED URINAL SUPPORT SYSTEM WITH TOP AND BOTTOM PLATES, ZURN MODEL #Z-1222 OR EQUAL.
U-1A	URINAL WALL MOUNTED (HANDICAP)	2"	2"	3/4"	-	KOHLER "DEXTER" MODEL K-5016-ET, VITREOUS CHINA, 3/4" TOP SPUD INLET, WALL HUNG URINAL, 17" RIM HEIGHT, ZURN AQUAVANTAGE MODEL Z6003AV-EWS FLUSHOMETER VALVE, 0.5 GPF, WITH A.D.A. COMPLIANT HANDLE. FURNISH WITH CONCEALED URINAL SUPPORT SYSTEM WITH TOP AND BOTTOM PLATES, ZURN MODEL #Z-1222 OR EQUAL.
WC-1	WATER CLOSET FLOOR MOUNTED	4"	2"	1"	-	ZURN 'Z5654 HET SERIES' VITREOUS CHINA, 14" HEIGHT, FLOOR MOUNTED, BOTTOM OUTLET TOILET WITH SIPHON JET FLUSHING ACTION AND ELONGATED FRONT RIM WITH 1-1/2" TOP SPUD. ZURN AQUAVANTAGE MODEL Z6000 AV-HET FLUSHOMETER VALVE, 1.28 GPF. SCREWDRIVER STOP K-3562, CHINA BOLD CAPS, BRASS FLOOR FLANGE, BOLWAX SEAL, CHURCH 295CT PLASTIC OPEN FRONT SEAT WITH CHECK HINGE. PROVIDE TRAP PRIMER CONNECTION WHERE SHOWN ON PLANS.
WC-1A	WATER CLOSET FLOOR MOUNTED (HANDICAP)	4"	2"	1"	-	ZURN 'Z5654 HET SERIES' VITREOUS CHINA, 14" HEIGHT, FLOOR MOUNTED, BOTTOM OUTLET TOILET WITH SIPHON JET FLUSHING ACTION AND ELONGATED FRONT RIM WITH 1-1/2" TOP SPUD. ZURN AQUAVANTAGE MODEL Z6000 AV-HET FLUSHOMETER VALVE, 1.28 GPF, WITH A.D.A. COMPLIANT OSCILLATING HANDLE. SCREWDRIVER STOP K-3562, CHINA BOLD CAPS, BRASS FLOOR FLANGE, BOLWAX SEAL, CHURCH 295CT PLASTIC OPEN FRONT SEAT WITH CHECK HINGE. PROVIDE TRAP PRIMER CONNECTION WHERE SHOWN ON PLANS.
WCO	WALL CLEAN OUT	-	-	-	-	ZURN MODEL #ZS-1468, ROUND STAINLESS STEEL WALL ACCESS COVER COMPLETE WITH SECURING SCREW AND BRONZE RAISED HEX HEAD PLUG.
WH-1	WATER HEATER ELECTRIC	-	-	3/4"	3/4"	HUBBELL MODEL SE10-0-3SLT4 WITH A 2" FOAM INSULATED STORAGE TANK OF 10 GALLONS WITH 3 KW IN THE LOWER ELEMENT BANK. STORAGE TANK IS LINED WITH HYDRASTONE CEMENT AND THE ELECTRICAL CONTROLS OPERATE AT 480V, 3 PHASE, 60 HZ POWER. THE HEATING ELEMENTS SHALL BE HIGH QULAITY INCOLOY SHEATH ELECTRIC IMMERSION TYPE AND SHALL BE RATED AT 3 KW WHICH WILL HEAT 12 GPH OF WATER AT 100°F RISE.
YCO	YARD CLEAN OUT	4"	-	-	-	GALVANIZED CAST IRON BODY WITH ANCHOR FLANGE, THREADED TOP ASSEMBLY, AND ROUND CAST NICKEL BRONZE ACCESS FRAME WITH NON-SKID COVER. CENTER CLEAN OUT ON 18"X18"X6" THICK CONCRETE BASE FLUSH WITH FINISH GRADE.

3 PLUMBING SCHEDULE

SCALE: N.T.S.

SIGMAHN ENGINEERS, PLLC
TBPE Firm No. F-14767
701 S. 15th Street
McAllen, Texas 78501

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McAllen Harlingen

CONSULTANTS:

STATE OF TEXAS
J. GABRIEL HINOJOSA
96585
LICENSED PROFESSIONAL ENGINEER
04-15-2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: G.H. DWN BY: C.C.

PLUMBING RISER DIAGRAM AND SCHEDULE

P-3.0

MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS

4010 N Doolittle Rd, Edinburg, TX 78541

EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT

BOARD OF TRUSTEES

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CARMEN GONZALEZ	VICE PRESIDENT
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RIO DELTA ENGINEERING	CIVIL ENGINEERS
SOLORIO AND ASSOCIATES, LLC	STRUCTURAL ENGINEERS
SIGMA ENGINEERS, PLLC	M.E.P. ENGINEERS
COMPANY INFORMATION	GEOTECHNICAL CONSULTANTS

MONTE CRISTO
COVER SHEET

VICINITY MAP

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1007 Walnut Ave.
McAllen, Texas 78501
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www.rofainc.com

McAllen Harlingen

CONSULTANTS:

REGISTERED ARCHITECT — JOSE A. FIGUEROA — 12858 — STATE OF TEXAS

04.15.2020

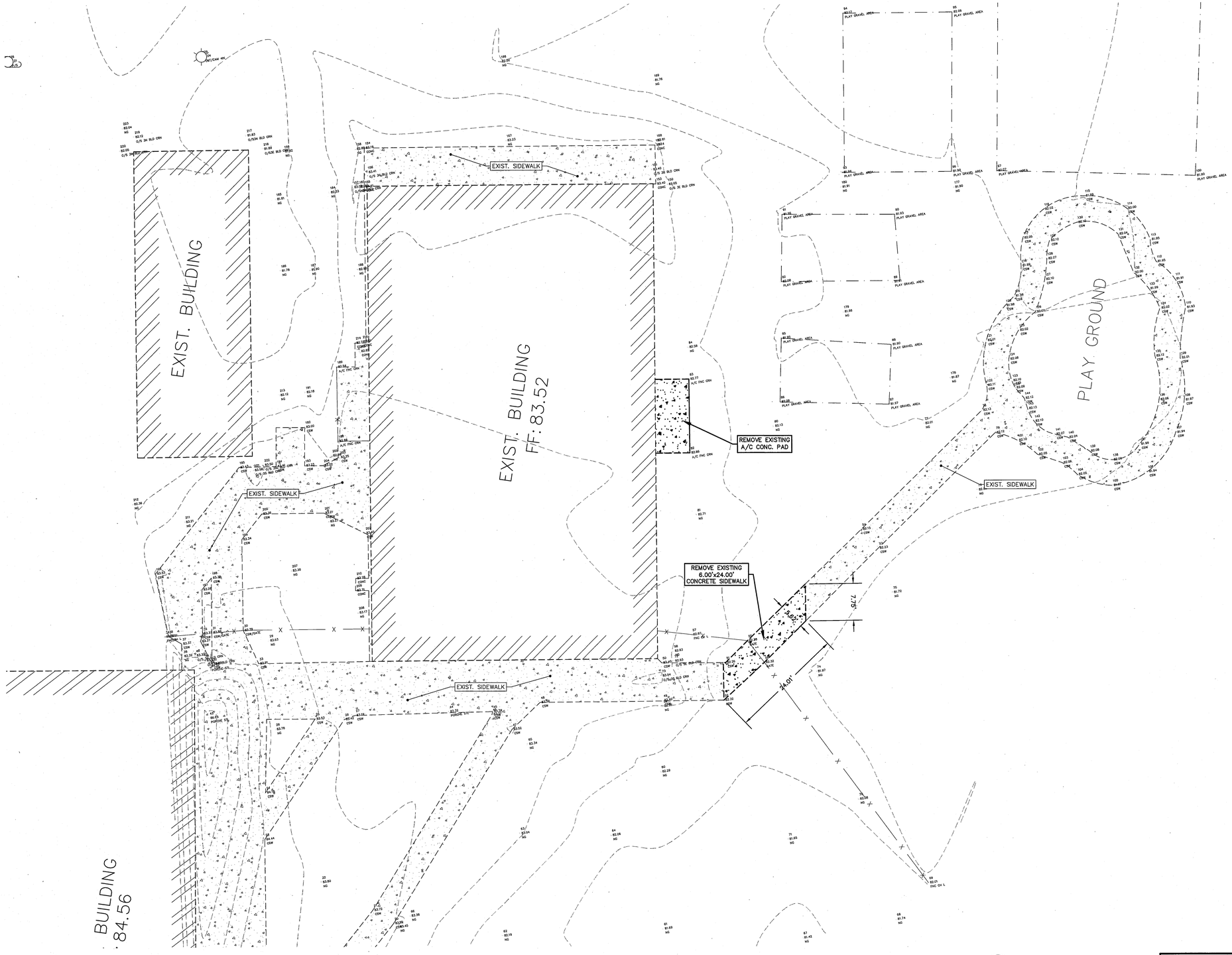
NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
DATE: 4/18/2020 1:32:40 PM
STARTING DATE:
CK BY: Checker DWN BY: Author

COVER SHEET - MONTE CRISTO

CSB



SCALE: 1" = 10'
BEARING BASIS
TX STATE PLANE
COORDINATES NAD 83
TEXAS SOUTH ZONE (4205)
WESTERN DATA
SYSTEMS NETWORK

EXISTING TOPOGRAPHICAL AND DEMOLITION LAYOUT
MONTE CRISTO
1" = 10'-0"
1

STATE OF TEXAS
IVAN GARCIA
115662
LICENSED
PROFESSIONAL ENGINEER
4/16/2020

RIO DELTA ENGINEERING
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SURVEY FIRM No. 10194027
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PROJECT NO: 2019.13
DATE: 4/17/2020
STARTING DATE:
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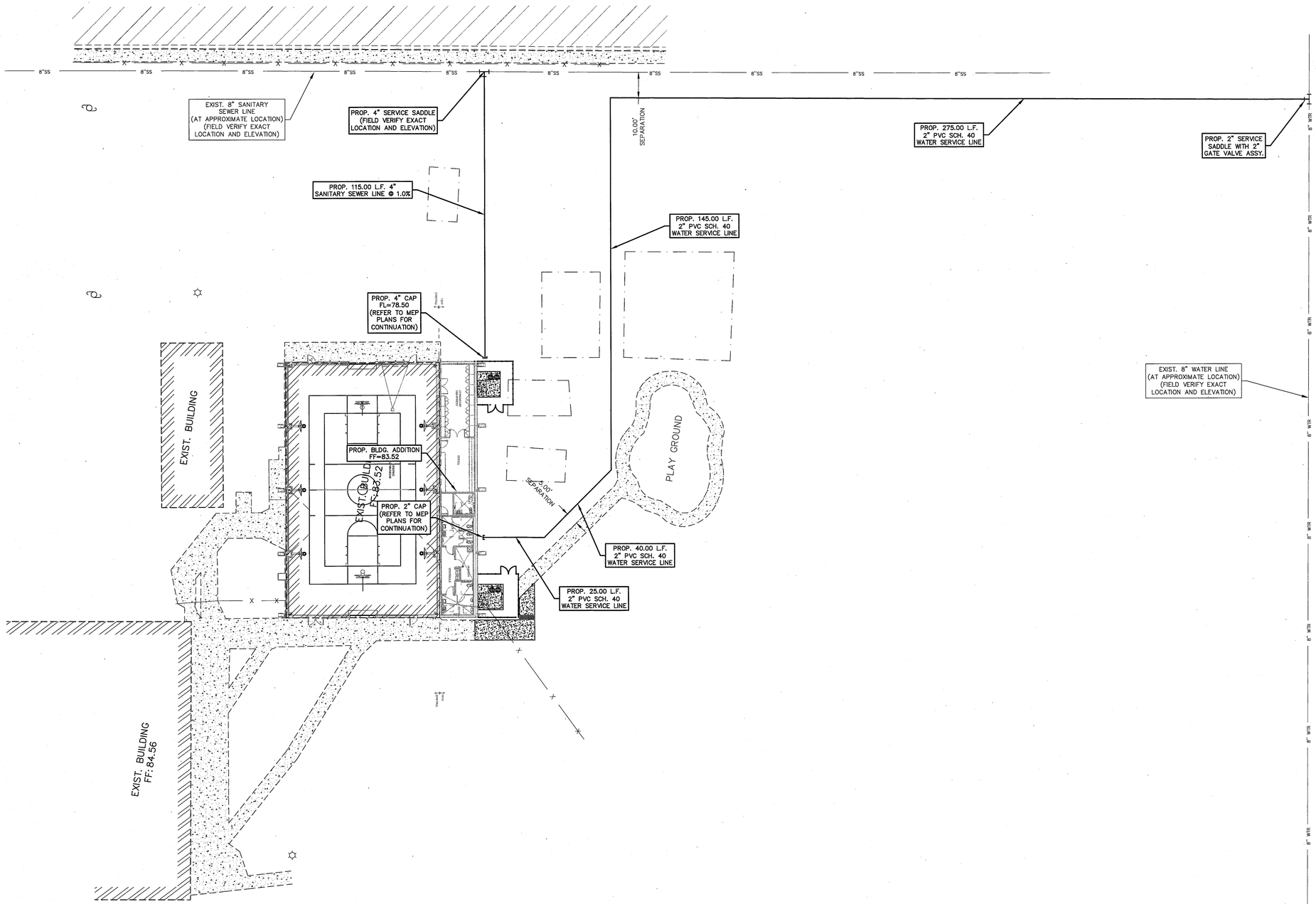
EXISTING
TOPOGRAPHICAL
AND
DEMOLITION
LAYOUT

C1



SCALE: 1" = 20'
BEARING BASIS
TX STATE PLANE
COORDINATES NAD 83
TEXAS SOUTH ZONE (4205)
WESTERN DATA
SYSTEMS NETWORK

OVERALL UTILITY PLAN
MONTE CRISTO
1" = 20'-0"
1

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OVERALL
UTILITY
PLAN

STATE OF TEXAS
IVAN GARCIA
115662
LICENSED
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4/16/2020

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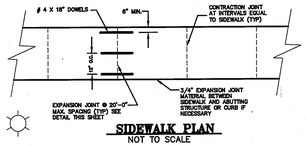
(TEL) 956-380-5152 (FAX) 956-380-5083

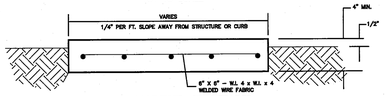
C2

SIDEWALK NOTES:

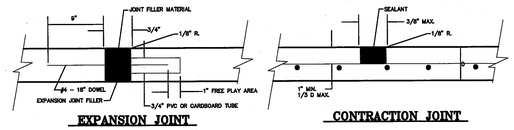
1. MINIMUM 4'-0" WIDE SIDEWALK.
2. SIDEWALK GRADIENT SHALL NOT EXCEED 1:20.
3. SIDEWALK CONCRETE SHALL BE 5 SACK CEMENT MIX AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 psi @28 days.
4. CONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF EXISTING UTILITY LINES WITH APPROPRIATE COMPANIES TO AVOID PLACING SIDEWALKS ON TOP OF LINES.
5. PROVIDE DROP CURBS AT INTERSECTIONS.
6. CONTRACTOR SHALL COMPLY WITH LATEST REGULATIONS AS SET FORTH IN AMERICANS WITH DISABILITIES ACT (ADA).



SIDEWALK PLAN
NOT TO SCALE



CONCRETE SIDEWALK
NOT TO SCALE



EXPANSION JOINT

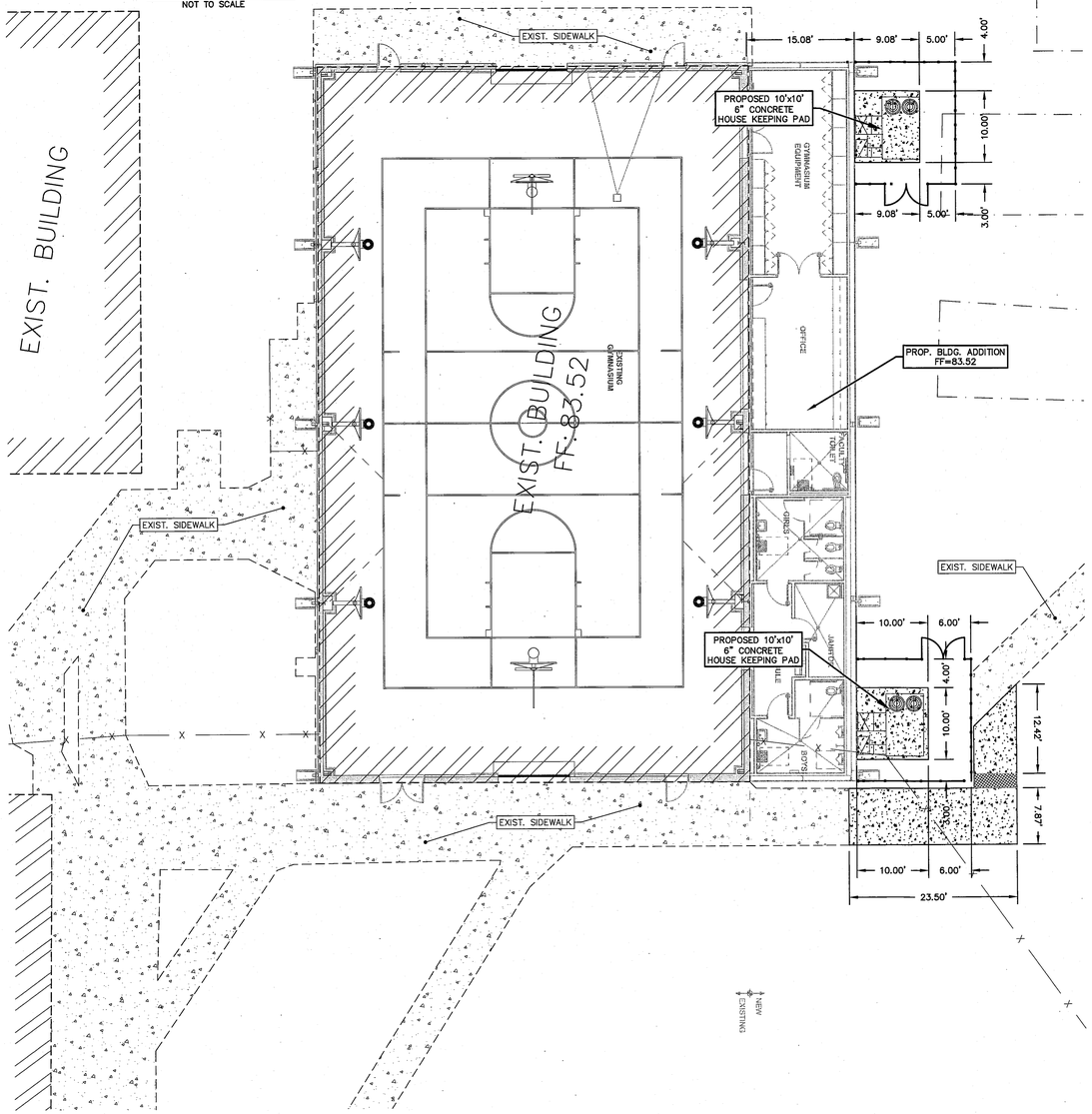
CONTRACTION JOINT

EXPANSION/CONTRACTION JOINT NOTES:

1) JOINT FILLER: TYPE C, ASTM D1752; PRE MOLDED SPONGE RUBBER, FULLY COMPRESSIBLE WITH RECOVERY RATE OF MINIMUM 95 %, OR APPROVED EQUAL.
2) SEALANT: ASTM D1190; HOT APPLIED, RUBBER; SYNTHETIC RUBBER; ASPHALT; POLYMER BASED ASPHALT; COAL TAR AND RUBBER COMPOUND, OR APPROVED EQUAL.
3) MIX CONCRETE IN ACCORDANCE WITH ACI 304. DELIVER CONCRETE IN ACCORDANCE WITH ASTM C94.

EXPANSION/CONTRACTION JOINT DETAIL
NOT TO SCALE

SCALE: 1" = 10'
BEARING BASIS
TX STATE PLANE
COORDINATES NAD 83
TEXAS SOUTH ZONE (4205)
WESTERN DATA
SYSTEMS NETWORK

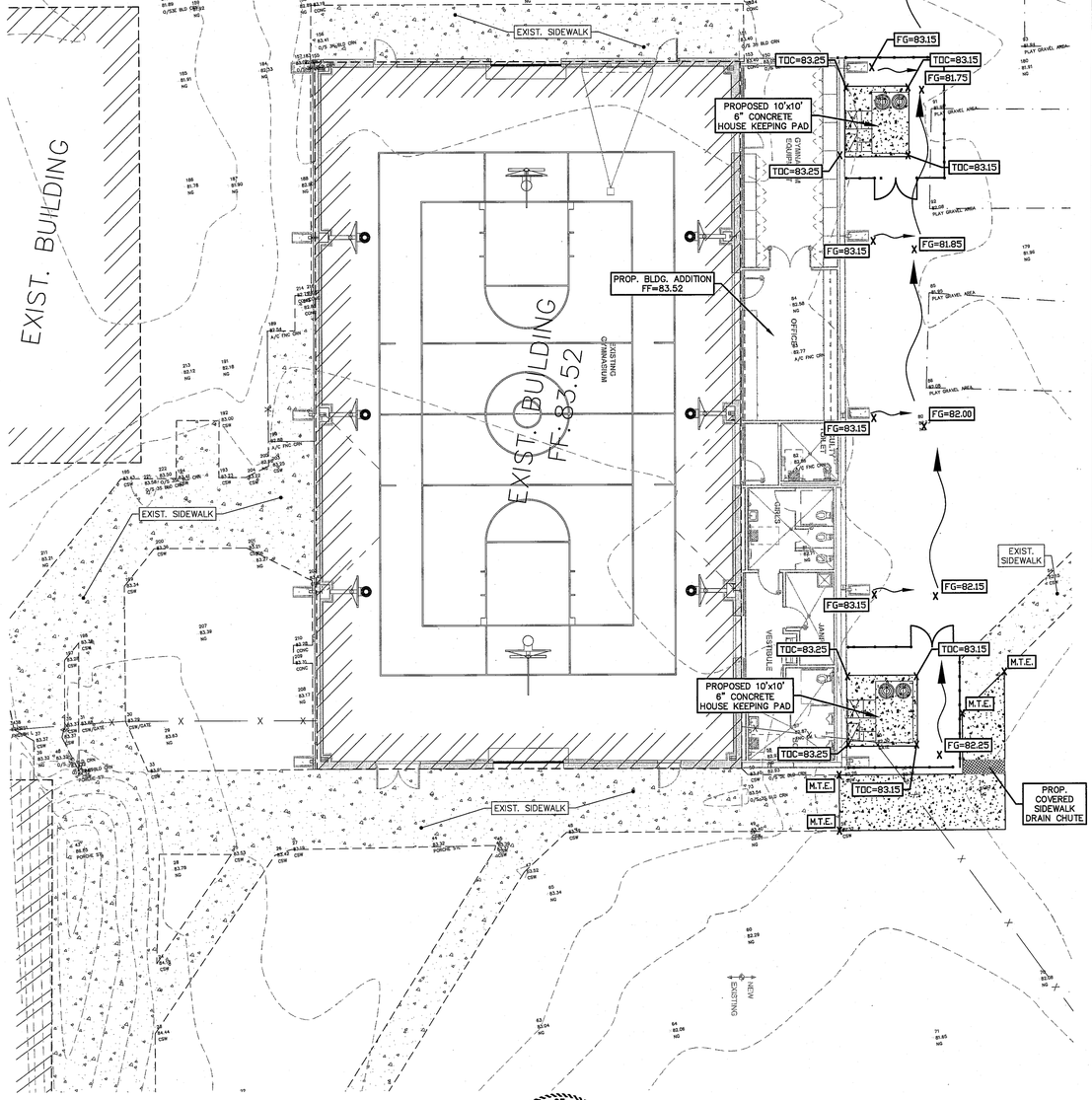


DIMENSION PLAN
MONTE CRISTO
1" = 10'-0"
1

VERTICAL METAL BRACE
PROP. 4" SIDEWALK W/ WIRE MESH (6"x6", #6)
1/4" METAL PLATE (SLIP RESISTANT FINISH)
2"
2"
6"
3" CHAMFER TYP.
4'
4'
2'-0"
CHANNEL WIDTH

DETAIL "A" SIDEWALK CHUTE DRAIN
NOT TO SCALE

SCALE: 1" = 10'
BEARING BASIS
TX STATE PLANE
COORDINATES NAD 83
TEXAS SOUTH ZONE (4205)
WESTERN DATA
SYSTEMS NETWORK



GRADING PLAN
MONTE CRISTO
1" = 10'-0"
2

STATE OF TEXAS
IVAN GARCIA
115662
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4/17/2020

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CONSULTANTS:

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 2019.13
DATE: 4/17/2020
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DIMENSION AND GRADING PLANS

C3

GENERAL NOTES

1. THIS CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL NCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING SAFETY NETS, SUPPORT AND BRACING FOR CRANES, POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.

2. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.

3. THE CONTRACTOR SHALL Verify ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.

4. IN CASE OF CONFLICT; NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.

5. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.

6. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT ON THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.

7. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.

8. THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING CONSTRUCTION.

9. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

10. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER.

11. ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES, ADDITIONAL COSTS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY IMPACT.

12. THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.

13. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.

14. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROJECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.

15. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR **SHALL** ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

DESIGN CRITERIA

DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED UPON THE FOLLOWING CRITERIA:

1.	CODE:	IBC 2015
2.	LATERAL LOADS	
	A. WIND SPEED (V^3s):	140 MPH
	B. EXPOSURE CATEGORY:	C
	C. IMPORTANCE FACTOR:	1.15
	D. BUILDING CATEGORY	II
	E. SEISMIC DESIGN CATEGORY	A
	F. SITE CLASS	D
	G. SEISMIC COEFFICIENTS	D
	Ss	0.043 g
	S1	0.015 g
	Fa	1.6
	Fv	2.4
	Sms	0.069 g
	Sm1	0.035 g
	Sds	0.046 g
	Sd1	0.023 g
3.	VERTICAL LOADS	
	ROOF:	
	A. COLLATERAL LOAD:	10 PSF
	B. DEAD LOAD:	ACTUAL WEIGHT PSF
	C. LIVE LOAD: (REDUCIBLE)	20 PSF
	D. WIND UPLIFT LOAD (NET):	SEE TABLE PSF
	E. GROUND SNOW LOAD:	0 PSF
	F. CRANE LOADS:	NONE
	G. MECHANICAL UNITS	SEE PLANS
	FLOOR:	
	A. DEAD LOAD:	50 PSF
	B. LIVE LOAD, OFFICE:	50 PSF
	C. LIVE LOAD, LIGHT STORAGE	125 PSF
	D. LIVE LOAD, HEAVY STORAGE:	250 PSF
	E. LIVE LOAD, CLASSROOM:	40 PSF
	F. LIVE LOAD, CORRIDOR:	100 PSF
	G. MECHANICAL UNITS	SEE PLANS
4.	SUBSURFACE INFORMATION	
	A. PREPARED BY:	MEG
	PROJECT NO.:	01-19-29234
	DATE:	February 3, 2020
	B. SHALLOW FOUNDATION	
	MINIMUM FOOTING DEPTH:	24 inches
	MINIMUM FOOTING WIDTH:	12 inches
	ALLOWABLE BEARING PRESSURE (CONTINUOUS FOOTINGS):	1,800 psf
	ALLOWABLE BEARING PRESSURE (ISOLATED FOOTINGS):	2,100 psf
	WIRE REINFORCEMENT INSTITUTE (WRI) CRITERIA	
	CLIMATIC RATING (Cw)	15
	EFFECTIVE PLASTICITY INDEX (UNDISTURBED, NATIVE SOIL)	34
	EFFECTIVE PLASTICITY INDEX (SITE IMPROVED SOIL)	24
	PVR (UNDISTURBED SOIL)	1 3/4 inches
	PVR (WITH SITE IMPROVEMENT)	1 inch

ALLOWANCE

1. IN ADDITION TO THE MATERIAL SHOWN, THE CONTRACTOR TO PROVIDE ADDITIONAL MATERIAL, FOR USE ON THE PROJECT AS DIRECTED BY THE STRUCTURAL ENGINEER FIELD REPRESENTATIVE. THE ALLOWANCE COST SHALL INCLUDE MATERIAL COST, LABOR COSTS AND PLACEMENT AT THE SITE.
2. REMAINING BALANCE AT THE END OF THE PROJECT SHALL BE RETURNED/CREDITED BACK TO THE OWNER.
3. THE ALLOWANCE SHALL APPEAR ON THE SCHEDULE OF VALUE AS A LINE ITEM.

MATERIAL	ALLOWANCE
CONCRETE	10 CU. YD.
REINFORCING STEEL	3000 LBS
STRUCTURAL STEEL	3000 LBS
CMU	1000 SQ. FT.
CONCRETE SPALL REPAIR (x 6" DEEP)	0 SQ. FT.

SHOP DRAWINGS AND SUBMITTALS

1. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS INDICATED IN THE STRUCTURAL GENERAL NOTES AND THE CONTRACT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION
2. SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTERING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN NO REPRODUCTIONS OF THE CONTRACT DRAWING PLANS OR DETAILS.
3. SUBMIT STRUCTURAL SHOP DRAWINGS IN PDF FORMAT.
4. SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL OF THE SAME PLAN.
5. SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION (DETAIL SHEETS AND/OR MATERIAL LISTS) AND INSTALLATION.
6. ALLOW A MINIMUM OF (2) WEEKS FOR REVIEW OF EACH SET OF SHOP DRAWINGS.
7. CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS SUBMITTED BY THE SUB-CONTRACTOR AND COORDINATE SHOP DRAWINGS WITH ALL OTHER TRADING.
8. CONTRACTOR SHALL ANSWER ALL QUESTIONS OR CLARIFICATIONS BY THE SUB-CONTRACTOR BEFORE SUBMITTING TO ENGINEER FOR REVIEW. ANY QUESTIONS THAT THE CONTRACTOR CANNOT ANSWER WITH THE INFORMATION ON THE DRAWINGS SHALL CLEARLY BE MARKED FOR THE ENGINEER FOR REVIEW.
9. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, SEE NOTE NUMBER 3 UNDER GENERAL NOTES.
10. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR GENERAL CONFORMANCE TO THE STRUCTURAL DRAWINGS. REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEF THE CONTRACTOR FOR ANY ERRORS IN DIMENSIONS OR MATERIALS INDICATED ON THE SHOP DRAWINGS.
11. IF THERE IS ANY DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND SHOP DRAWINGS, THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS GOVERN. INFORMATION THAT IS NOT INDICATED ON THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE STRUCTURAL DRAWINGS.
12. PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS:

ITEM	REQUIRED
A. CONCRETE MIX DESIGN	X
B. CURING COMPOUND FOR CONCRETE	X
C. REINFORCING STEEL	X
D. STRUCTURAL STEEL	X
E. STEEL JOIST	
F. METAL DECKING (INDICATE LAYOUT AND TYPES OF DECK PANELS, ANCHORAGE DETAILS, REINFORCING CHANNELS, PANS, DECK OPENINGS, SPECIAL JOINTING, ACCESSORIES, AND ATTACHMENTS TO OTHER CONSTRUCTION.)	
G. PRE-MANUFACTURED METAL BUILDING (INCLUDE CALC'S & REACTIONS)	X
H. PRE-MANUFACTURED WOOD TRUSSES	

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1. GRADE 40 - #3 AND SMALLER GRADE 60 - #4 AND LARGER
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED.
3. VERTICAL REINFORCEMENT SHALL BE TIED OR OTHERWISE FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 192 BAR DIAMETERS NOR FOUR (4) FEET ON CENTER.
4. WELDED STEEL WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185
5. LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES SHALL BE NOT LESS THAN 12 INCHES.
6. WALLS, PILASTER, COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTER, OR COLUMNS.
7. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
8. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
9. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT. PROVIDE CONCRETE OR MASONRY CHAIRS AT 4'-0" O.C. MAX. (PLASTIC CHAIRS NOT ALLOWED.
10. PROVIDE CORNER BARS TOP AND BOTTOM AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL LAP BEAM REINFORCEMENT 40 BAR DIAMETERS.
11. BARS DETAILED AS CONTINUOUS SHALL BE LAPPED 40 BAR DIAMETERS AT SPLICES.
12. EXTEND SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS.
13. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 3". THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL 40 BAR DIAMETERS.
14. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB REINFORCING. ALL CONDUIT TO BE NO GREATER THAN 1" DIAMETER AND TO BE PLACED IN CENTER OF SLAB. NO PLUMBING LINES GREATER THAN 1 INCH ALLOWED IN THE SLAB.
15. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
16. WELDING OF REINFORCING STEEL, IF PERMITTED BY THE STRUCTURAL ENGINEER, SHALL BE PERFORMED IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE REINFORCING STEEL" ON THE AMERICAN WELDING SOCIETY, AWS D1.4-96 AS INCORPORATED IN CBC CHAPTER No. 19, AND BY CERTIFIED WELDERS QUALIFIED USING PROCEDURES CONTAINED THEREIN, E70XX ELECTRODES SHALL BE USED IN WELDING GRADE 60 REINFORCEMENT. REINFORCEMENT SHALL NOT BE WELDED UNTIL A CHEMICAL ANALYSIS SUFFICIENT TO DETERMINE THE CARBON EQUIVALENT (C.E.) IS PERFORMED. THE C.E. OF REINFORCING STEEL SHALL BE CALCULATED FORM THE CHEMICAL COMPOSITION AS SHOWN IN THE MILL TEST REPORT. IF MILL TEST REPORTS ARE NOT AVAILABLE, A CHEMICAL ANALYSIS SHALL BE MADE ON REINFORCEMENT REPRESENTATIVE OF THOSE TO BE WELDED. THE C.E. SHALL NOT EXCEED 0.55 AS CALCULATED PER CBC CHAPTER 19, A COPY OF THE MILL TEST OF REINFORCING STEEL IN CONCRETE MEMBERS. (SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING).
17. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
18. CONCRETE COVER FOR REINFORCING AS FOLLOWS:

EXPOSURE CONDITION	MINIMUM COVER	TOLERANCE
DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND:	3"	3/8"
WHERE CONCRETE SURFACES, AFTER REMOVAL OF FORMS, ARE EXPOSED TO WEATHER OR GROUND:		
FOR BARS 5/8" IN DIAMETER	2"	1/4"
FOR BARS 5/8" OR LESS IN DIAMETER	1 1/2"	1/4"
WHERE SURFACES ARE NOT DIRECTLY EXPOSED TO WEATHER OR GROUND:		
FOR SLAB ON GRADE (FROM TOP OF SLAB)	1 1/2"	1/4"
FOR BEAMS, COLUMNS	1 1/2"	1/4"
FOR JOISTS AND SLABS	1"	1/8"

20. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

MASONRY - GRADE 60: LAP 50 DIA. (30" MIN.)
GRADE 40: LAP 48 DIA. (24" MIN.)

CONCRETE - LAP PER SCHEDULE BELOW

BAR SPLICE LAP LENGTH IN CONCRETE

BAR SIZE	f'c = 2000 PSI	f'c = 3000 PSI	f'c = 4000 PSI	f'c = 5000 PSI
#3	22	22	22	22
#4	29	29	29	29
#5	40	36	36	36
#6	57	46	43	43
#7	77	63	54	54
#8	100	82	71	71
#9	128	104	90	90
#10	162	132	115	115
#11	200	163	141	141

FOR WELDED WIRE FABRIC: SPACING OF WIRE PLUS 12".

SPECIAL NOTES TO OWNER

1. UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.

2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.

3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.01 INCH MAY NEED TO BE PRESSURE EPOXIED. REFER TO THE NOTES UNDER "ALLOWANCES".

4. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

STRUCTURAL STEEL

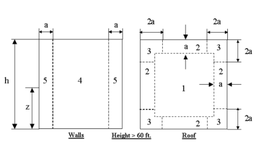
1. MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING ASTM DESIGNATIONS:

MATERIAL	DESIGNATION	STRENGTH
ANCHOR BOLTS	A36	Fy=36 ksi
PLATES	A36	Fy=36 ksi
ANGLES	A36	Fy=36 ksi
CHANNELS	A36	Fy=36 ksi
WIDE FLANGE SHAPES	A572	Fy=50 ksi
STEEL PIPE	A53 GRADE B	Fy=35 ksi
SQUARE & RECT. STEEL TUBES (HSS)	A500 GRADE B	Fy=46 ksi
ROUND TUBES (HSS)	500 GRADE B	Fy=42 ksi

3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
   - SECTION 4.2.1, DELETE FIRST TWO SENTENCES.
   - SECTION 7., ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
   - SECTION 7.9.3, THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF PLACEMENT OF NON-SELF SUPPORTING STEEL FRAMES.
   - SECTION 7.9.4, THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
4. WELDING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AS PUBLISHED BY THE AMERICAN WELDING SOCIETY, EXCEPT THAT ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ANSI/AWS D1.1-04
5. DETAILED AND OR SCHEDULED CONNECTIONS HAVE BEEN DESIGNED BY STRUCTURAL ENGINEER. ANY CONNECTION NOT DETAILED OR SCHEDULED OR ALTERED FOR FABRICATION PURPOSES SHALL BE SIZED AND DETAILED BY FABRICATOR AND SHALL BE MARKED FOR ENGINEER'S VERIFICATION. FABRICATOR SIZED AND DETAILED CONNECTIONS SHALL SUPPORT ONE HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF UNIFORM CONSTANTS, PART 2 OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED. THE EFFECT OF ANY CONCENTRATION LOADS MUST BE TAKEN INTO ACCOUNT.
6. SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL ITEMS NOT INDICATED ON STRUCTURAL DRAWINGS. STEEL ITEMS SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGN BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LOADING.
7. ALL WELDED CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, U.N.O.
8. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION w/ WASHERS ASTM F436, U.N.O. ON DESIGN DRAWINGS. SPECIAL INSPECTION REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563
9. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE NOTED ON PLANS.
10. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. (INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO). SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED.
11. ALL EXPOSED STEEL SHALL FOLLOW SECTION 10 OF THE CODE OF STANDARD PRACTICE OF AISC. SECTION 10 OF THE CODE ADDRESSES ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)
12. CONNECTIONS SHALL BE PER HOLLOW STRUCTURAL SECTIONS, CONNECTION MANUAL BY AISC
13. WHERE STEEL MEMBER PASS THROUGH CMU WALLS, PROVIDE HALF INCH GAP BETWEEN THE CMU AND THE STEEL MEMBER. PROVIDE ELASTOMERIC MATERIAL BETWEEN THE THE STEEL MEMBER AND CMU WALL.
14. ALL BEAMS NOT SHOWN SHALL BE W14x26. ALL COLUMNS NOT SHOWN SHALL BE HSS4x4x1/4.
15. STEEL SHOP SHALL BE AISC CERTIFIED
16. HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED. UNLESS NOTED OTHERWISE, HOLES SHALL BE STANDARD SIZE 1/16 INCH LARGER THAN THE BOLT.
17. ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. PRIMER SHALL NOT BE APPLIED TO THE IMMEDIATE AREA OF STEEL INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS
18. HIGH STRENGTH BOLTS INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR. FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    - A. HE SHALL VERIFY THE MILL CERTIFICATES FOR MATERIAL.
    - B. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    - C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES, TOOL CALIBRATIONS WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND AND BUILDING CODE.
    - D. FOR SNUG-TIGHT CONNECTIONS, HE SHALL VERIFY THAT THE PLIES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT WITH EACH OTHER.
    - E. FOR SLIP-TIGHT CONNECTIONS, HE SHALL VERIFY THE PRETENSION METHOD SELECTED BY THE CONTRACTOR HAS INDUCED THE REQUIRED MINIMUM TENSION IN THE BOLT.
    - F. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
19. WELDING IN THE FIELD SHALL BE CONTINUOUSLY INSPECTED, BY A SPECIAL INSPECTOR FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    - A. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    - B. HE SHALL VERIFY THE WELDER'S QUALIFICATIONS.
    - C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES AND WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
    - D. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
20. ALL NON SHRINK GROUT FOR LEVELING OF BASE PLATES SHALL HAVE A MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. GROUT SHALL COMPLY WITH CORPS OF ENGINEERS SPECIFICATION CRD-C 621.

Drawing List

Sheet Number	Sheet Name
S101	General Notes
S102	General Notes
S201	Foundation Plan
S401	Typical Concrete Details
S402	Foundation Details
S403	Typical Framing Details



All pressures shown are based upon ASD Design, with a Load Factor of .6

Width of Pressure Coefficient Zone "a" = = 8.00 ft

Description	Width ft	Span ft	Area ft^2	Zone	Max GCp	Min GCp	Max P psf	Min P psf
Zone 1	2.00	5.00	10.0	1	0.30	-1.00	9.60	-21.15
Zone 2	2.00	5.00	10.0	2	0.30	-1.80	9.60	-35.50
Zone 3	2.00	5.00	10.0	3	0.30	-2.80	9.60	-53.43
Zone 4	2.00	5.00	10.0	4	0.90	-0.99	19.36	-20.98
Zone 5	2.00	5.00	10.0	5	0.90	-1.26	19.36	-25.82

CAST-IN-PLACE CONCRETE

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, ACI #301 LATEST EDITION. DRILLED PIERS SHALL COMPLY WITH ACI 336.1 AND ACI 336.3R, LATEST EDITIONS
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI #315 LATEST EDITION
4. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:

LOCATION	STRENGTH AT 28 DAYS	MAXIMUM SLUMP	SIZE OF LARGE AGGREGATE	WATER/CEMENT RATIO
FOUNDATIONS	3000 PSI	5"	1 1/2"	0.53
SLAB ON GRADE	3000 PSI	5"	1 1/2"	0.53
GRADE BEAMS	3000 PSI	5"	1 1/2"	0.53
WALL	3000 PSI	6"	3/4"	0.53

5. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN SLABS OR BEAMS.
6. VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS OR AS APPROVED BY ENGINEER.
7. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2 SEALANT '2A' (SELF-LEVELING 2-PART POLYURETHANE).
8. UTILITIES THAT PROJECT THROUGH SLAB FLOORS SHOULD BE DESIGNED WITH EITHER SOME DEGREE OF FLEXIBILITY OR WITH SLEEVES IN ORDER TO PREVENT DAMAGE TO THESE LINE SHOULD VERTICAL MOVEMENT OCCUR.
9. BACKFILL AROUND PERIMETER TO PROVIDE POSITIVE DRAINAGE AWAY FROM SLAB.
10. FLOOR TOLERANCES
    F-NUMBER SYSTEM

	COMPOSITE	MINIMUM LOCAL VALUE
FLATNESS (F) :	30	23
LEVELNESS (F)	25	19

IN ALL INSTANCES MINIMUM SLAB THICKNESS SHALL BE OBTAINED. COORDINATE SLAB FINISHES WITH ARCHITECTURAL PLANS.

11. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
12. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLDS. GROOVES, REGLETS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS AND PIPES. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE, FOOTINGS, OR SLAB UNLESS SPECIFICALLY DETAILED IN THESE PLANS, OR AS DIRECTED BY THE ENGINEER.
13. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
14. CONCRETE TESTING SHALL BE ONE SET OF CYLINDERS FOR EVERY 50 CUBIC YARDS OR PORTION THEREOF FOR EACH TYPE OF CONCRETE POURED ON ANY GIVEN DAY. ONE SET CONSISTS OF 2 CYLINDERS TESTED FOR COMPRESSION AT 7 DAYS AND 2 CYLINDERS AT 28 DAYS.
15. VAPOR RETARDANT
    A. VAPOR RETARDANT (UNDER SLAB): SHALL CONFORM TO ASTM E1745, CLASS C OR BETTER AND SHALL HAVE A MINIMUM WATER VAPOR PERMEANCE OF 0.044 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. VAPOR RETARDANT SHALL BE NO LESS THAN 15 MILS THICK.
    APPROVED PRODUCTS
    A. STEGO WRAP (15 MIL). BY STEGO INDUSTIES LLC. (887) 464-7834.
    B. HUSKY YELLOW GUARD (15 MIL)
    C. OR APPROVED EQUAL BEFORE BIDDING PER SECTION 01600
    INSTALLATION
    A. LAY SHEETS SMOOTHLY, STRETCH AND WEIGHT EDGES, LAP JOINTS TWELVE (12) INCHES AND SEAL WITH TAPE AS SPECIFIED BY VAPOR RETARDANT MANUFACTURER. TURN BARRIER UP SIX 6 INCHES AT WALLS AND AT ALL PIPES, ABUTMENTS, ETC. TAPE AND SEAL AT PENETRATIONS AND AT EDGES.
    B. AT GRADE BEAMS, EXTEND VAPOR RETARDANT DOWN SIDES OF BEAM TRENCHES AND ALONG BOTTOM OF FOOTING EXCAVATIONS, SECURE TO SIDES OF TRENCH.
    PATCHING:
    A. PATCH ALL PUNCTURES WITH A MINIMUM OVERLAP OF 6" IN ALL DIRECTIONS AND TAPE AROUND ENTIRE PERIMETER OF REPAIR.

A. PREINSTALLATION CONFERENCE:
1. AT LEAST 30 DAYS PRIOR TO THE START OF THE CONCRETE SLAB CONSTRUCTION SCHEDULE, THE CONTRACTOR SHALL CONDUCT A MEETING TO REVIEW THE PROPOSED MIX DESIGNS AND TO DISCUSS THE REQUIRED METHODS AND PROCEDURES TO ACHIEVE THE REQUIRED CONCRETE CONSTRUCTION. THE CONTRACTOR SHALL SEND A PRE-CONCRETE CONFERENCE AGENDA TO ALL ATTENDEES 20 DAYS PRIOR TO THE SCHEDULED DATE OF THE CONFERENCE.
2. THE CONTRACTOR SHALL REQUIRE RESPONSIBLE REPRESENTATIVES OF EVERY PARTY CONCERNED WITH THE CONCRETE WORK TO ATTEND THE CONFERENCE, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   - A) CONTRACTOR'S SUPERINTENDENT
   - B) LABORATORY RESPONSIBLE FOR CONCRETE MIXES AND/ OR FIELD QUALITY CONTROL
   - C) READY-MIX CONCRETE PRODUCER
   - D) CONCRETE SUBCONTRACTOR
   - E) ADMIXTURE MANUFACTURER(S)
   - F) LIQUID DENSIFIER AND SEALER MANUFACTURER
   - G) LIQUID DENSIFIER AND SEALER APPLICATION
   - H) JOINT FILLING APPLICATOR
3. MINUTES OF THE MEETING SHALL BE RECORDED, TYPED AND PRINTED BY THE CONTRACTOR AND DISTRIBUTED BY HIM TO ALL CONCERNED PARTIES, INCLUDING THE OWNER'S REPRESENTATIVE, THE ARCHITECT, AND THE STRUCTURAL ENGINEER WITHIN FIVE DAYS OF THE MEETING.

B. CONCRETE SUBCONTRACTOR QUALIFICATION:
1. THE CONCRETE SUBCONTRACTOR SHALL INCLUDE IN THEIR BID PACKAGE TO THE CONTRACTOR, SUFFICIENT DATA THAT CLEARLY INDICATES THE CONCRETE CONTRACTOR'S ABILITY TO SUCCESSFULLY PERFORM THE WORK AND TO ACHIEVE THE FLOOR SLAB TOLERANCES SPECIFIED IN THIS SECTION. THE CONCRETE SUBCONTRACTOR'S TEAM SHALL HAVE PARTICIPATED IN THE MAJORITY OF THESE PROJECTS, AND THAT TEAM SHALL REMAIN THE SAME THROUGH THE DURATION OF THIS PROJECT. THE CONCRETE PLANT SHALL BE LOCATED WITHIN 50 MILES OF THE PROJECT SITE AND BE A CONTINUOUS OPERATING PLANT.

C. CONCRETE MATERIAL:
1. CEMENT: TEXAS LEHIGH ASTM C 150, TYPE I. USE ONE BRAND OF CEMENT THROUGHOUT THE PROJECT; OR APPROVED EQUAL BEFORE BIDDING PER SECTION 01600.
2. COARSE AND FINE AGGREGATES: ASTM C33. COMBINED AGGREGATE GRADATION FOR SLABS ON GRADE AND OTHER DESIGNATED CONCRETE SHALL BE 8% - 18% FOR LARGE TOP AGGREGATES (1 1/2") OR 8% - 22% FOR SMALLER TOP SIZE AGGREGATES (1" OR 3/4") RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE. SLABS ON GRADE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1-1/2" FOOTINGS AND PIERS 1" AND BEAMS 3/4".
3. WATER: COMPLYING WITH ASTM C 94.
4. ALL CONCRETE SHALL CONTAIN "POZZOLITH" ADMIX AS PER MANUFACTURER'S SPECIFICATIONS, IN ACCORDANCE WITH ASTM C494.

D. ADMIXTURES:
1. AIR-ENTRAINING ADMIXTURES: SHALL CONFORM TO ASTM C-260. ADMIXTURE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION THAT THE AIR-ENTRAINING ADMIXTURE IS COMPATIBLE WITH OTHER REQUIRED ADMIXTURES. ALL EXTERIOR SLABS SHALL BE AIR-ENTRAINED (4% - 6%). ACCEPTABLE PRODUCTS: EUCLID CHEMICAL AEA-92 AND AIRMIX 200, MASTER BUILDERS MICROAIR, W.R. GRACE DARAVAIR 1000 AND DAREX-11.
   NOTE: AIR-ENTRAINING ADMIXTURE SHALL NOT BE USED ON INTERIOR CONCRETE.
2. WATER-REDUCING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE A AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL WR-89 AND WR-91, MASTER BUILDERS 200N AND 322N, W.R. GRACE WRDA 36 AND WRDA 64.
3. WATER REDUCING, RETARDING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE D, AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL RETARDER 75, MASTER BUILDERS POZZOLITH R, W.R. GRACE DARATARD 17.
4. HIGH RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER): SHALL CONFORM TO ASTM C494, TYPE F OR TYPE G AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS : EUCLID CHEMICAL EUCON 37, MASTER BUILDERS REOBUILD 1000 W.R. GRACE DARACEM - 1000.
5. WATER-REDUCING, NON-CORROSIVE ACCELERATING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE C OR E, AND CONTAIN NOT MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURER MUST HAVE LONG-TERM, NON-CORROSIVE TEST DATA FROM AN INDEPENDENT TESTING LABORATORY (OF AT LEAST A YEAR'S DURATION) USING AN ACCEPTABLE ACCELERATED CORROSION TEST METHOD SUCH AS THAT USING ELECTRICAL POTENTIAL MEASURES. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL ACCELGUARD 80/90 AND ACCELGUARD NCA, MASTER BUILDERS NC534 AND POZZUTEC 20, W.R. GRACE POLARSET.
6. PROHIBITED ADMIXTURES:
   - a.) CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED.
   - b.) FLYASH; A MAXIMUM OF 20% AS CEMENT REPLACEMENT ALLOWED

E. EVAPORATION RETARDER:
1. WATERBORNE, MONOMOLECULAR FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
   - a.) ACCEPTABLE PRODUCTS:
     "EUCOBAR" BY THE EUCLID CHEMICAL COMPANY - CONTACT: PHIL BRANDT
     (877) 438-3826

F. CURING MATERIALS:
1. EXTERIOR CURING: ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND. THE LIQUID MEMBRANE-FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C 1315 WITH A MAXIMUM V.O.C. CONTENT OF 700 G/L.
   - a.) ACCEPTABLE PRODUCTS:
     "SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT
     (877) 438-3826
2. INTERIOR CURING: ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A REDUCED ODOR, DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND THAT IS FORMULATED FROM HYDROCARBON RESINS. THE DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C-309 AND V.O.C. CONTENTS IN ACCORDANCE TO EPA 40 CFR, PART 59, TABLE I, SUBPART D FOR CONCRETE CURING COMPOUNDS WITH A MAXIMUM V.O.C. CONTENT OF 350 G/L. APPLY AT 400 S.F./GALLON.
   - a.) ACCEPTABLE PRODUCTS:
     "KUREZ DR VOX" BY THE EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT
     (877) 438-3826

   ALL CONCRETE SLABS SHALL ALSO BE MAINTAINED MOIST FOR 7 DAYS

G. CONCRETE MIXES
1. COMPLY WITH ACI 301 REQUIREMENTS FOR CONCRETE MIXTURE, U.N.O..
2. PREPARE DESIGN MIXES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, PROPORTIONED ACCORDING TO ACI 301, FOR NORMAL WEIGHT CONCRETE DETERMINED BY EITHER LABORATORY TRIAL MIX OR FIELD TEST DATA AS FOLLOWS:
   CONCRETE MATERIALS INCLUDED IN THE MIX DESIGN SHALL BE THE SAME MATERIALS PROVIDED TO THE PROJECT, AND SHALL BE PREPARED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE OWNER. THE LABORATORY MIX DESIGN SHALL NOT EXCEED THE DESIRED JOB STRENGTH OF CONCRETE BY 1,200 PSI. FOUR COPIES OF THE MIX DESIGN SHALL BE SUBMITTED TO THE OWNER BEFORE CONCRETE WORK BEGINS.
3. SLUMP: CONCRETE CONTAINING HRWR SHALL HAVE A MAXIMUM SLUMP OF 8" (200MM). ALL OTHER CONCRETE SHALL NOT EXCEED 4 INCHES (100 MM) UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. ADJUSTMENT TO CONCRETE MIXES: MIX DESIGN ADJUSTMENTS MAY BE REQUESTED BY CONTRACTOR WHEN CHARACTERISTICS OF MATERIALS, JOB CONDITIONS, WEATHER, TEST RESULTS OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO OWNER AND AS ACCEPTED BY OWNER. LABORATORY TEST DATA FOR REVISED MIX DESIGN AND STRENGTH RESULTS MUST BE SUBMITTED TO AND ACCEPTED BY OWNER BEFORE USING IN WORK. BOTH THE CONCRETE TESTING AND INSPECTION AGENCY AND THE CONCRETE CONTRACTOR SHALL SATISFY THEMSELVES THAT THE CONCRETE MIX DESIGN WILL PRODUCE A CONCRETE WHICH WILL MEET THE SPECIFICATIONS FOR THIS PROJECT. IN ADDITION, THE CONTRACTOR AND CONCRETE FINISHER SHALL VERIFY THAT THE WORKABILITY, FINISHABILITY AND SETTING TIMES ARE APPROPRIATE FOR SLAB INSTALLATIONS. PLACEMENT SHALL BE MADE BY CHUTE DIRECTLY FROM THE CONCRETE TRUCKS. IF PUMPING OF THE CONCRETE IS CONTEMPLATED FOR ANY SPECIAL LOCATIONS, THE PROPORTIONS ESTABLISHED ABOVE SHALL NOT BE ALTERED TO SUIT THE CAPABILITIES OF THE PUMPING EQUIPMENT.
5. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. WHEN AIR TEMPERATURE IS BETWEEN 85° AND 90° F, REDUCE MIXING AND DELIVERY TIME FROM 90 MINUTES TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90° F, REDUCE MIXING AND DELIVERY TIME TO 6O MINUTES.
6. WATER CEMENT RATIO SHALL BE BASED ON SURFACE DRY MATERIAL.

H. CONTRACTION JOINTS IN SLABS-ON-GRADE:
FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS, AS FOLLOWS:
SAWED JOINTS: ALL SAW CUTTING SHALL BE ACCOMPLISHED WITH A SOFT-CUT SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR. NOTE: CONCRETE DUST SHALL BE REMOVED COMPLETELY AND IMMEDIATELY. IF CHALK LINES ARE USED FOR SAW CUTS, ALL CHALK REMAINING ON SLAB SHALL BE REMOVED COMPLETELY AND IMMEDIATELY AFTER SAWING.

I. FLOOR SLAB TOLERANCES:
COMPLY WITH ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS." ALL INTERIOR FLOOR SLABS SHALL MEET THE REQUIREMENTS OF A TYPE 5, SINGLE COURSE, HARD STEEL - TROWELED FINISH AS DESCRIBED IN ACI 302.IR- LATEST EDITION.

J. CONCRETE CURING AND PROTECTION:

a) FIRST, ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE- FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.

b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN (7) DAYS AFTER PLACEMENT.

3. INTERIOR SLABS - CURING:

a) FIRST, ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.

b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND PONDED WITH WATER FOR SEVEN (7) DAYS AFTER CONCRETE PLACEMENT.

c) THIRD, CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE- FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F.

4. INTERIOR SLAB PROTECTION:
TAKE THE FOLLOWING MEASURES TO PROTECT FLOOR SLAB:
   - A. WRAP OR "DIAPER" ALL MOTORIZED AND HYDRAULIC EQUIPMENT TO PREVENT FLUID LEAKS.
   - B. PROVIDE NON-MARKING TIRES ON RUBBER TIRED VEHICLES OR EQUIP RUBBER TIRES WITH TIRE BOOTS MADE OF NYLON FABRIC.
   - C. SOURCE FOR DIAPERS AND BOOTS: R&R TIRE SURFACE PROTECTORS, INC., FORT COLLINS CO 80526, (970) 266-4082
   - D. PROVIDE MATS AT ALL ENTRANCES TO PREVENT MUD STAINS.
   - E. COVER SLAB PRIOR TO PAINTING. ALL SPILLS TO BE CLEANED WITH SOAP AND WATER. LACQUER THINNER WILL NOT BE ACCEPTABLE.

STRUCTURAL OBSERVATIONS

1. JOB SITE OBSERVATIONS BY THE PROFESSIONAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE INTENT.

2. SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT.

3. SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR FOR ITEMS NOT INSTALLED OR IMPROPERLY INSTALLED BY THE CONTRACTOR OR HIS SUBCONTRACTORS.

4. NOTIFY ENGINEER 48 HOURS IN ADVANCE WHEN A STRUCTURAL OBSERVATION IS REQUIRED.

CONSTRUCTION STAGE	REQUIRED
BEFORE PLACEMENT OF CONCRETE FOR SLAB/FOUNDATION	X
BEFORE PLACEMENT OF FOUR (4) FEET OF CONCRETE IN CMU WALL	
AFTER FRAMING OF ROOF STRUCTURE BUT BEFORE PLACEMENT OF ROOFING MATERIAL.	X

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4/15/2020

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NO.	DATE	DESCRIPTION

MONTECRISTO ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119B
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:

General Notes

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SPECIAL INSPECTION, MATERIALS TESTING.

1. RESPONSIBILITIES OF THE OWNER
   - A. EMPLOY AND PAY THE SPECIAL INSPECTION AGENCY TO PERFORM INSPECTIONS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
   - B. EMPLOY AND PAY THE MATERIALS TESTING LABORATORY TO PERFORM TESTS SPECIFIED IN THIS SECTION AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
     - 1) RETESTING - THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR RE-TESTING WHERE RESULTS OF INSPECTIONS AND TESTS PROVE UNSATISFACTORY AND INDICATE NONCOMPLIANCE WITH REQUIREMENTS.
   - C. EMPLOY THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN OR ANOTHER ENGINEER OR ARCHITECT DESIGNATED BY THE (DPR) TO PERFORM STRUCTURAL OBSERVATION. (REF 1702)
2. DEFINITIONS
   - A. APPROVED FABRICATOR: A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD, TO PERFORM WORK, OFF SITE, REQUIRING SPECIAL INSPECTION WITHOUT SPECIAL INSPECTION. THE DESCRIPTION IN SECTION 1701.1 OF THE 1998 CALIFORNIA BUILDING CODE IS APPLICABLE.
   - B. SPECIAL INSPECTION AGENCY: THE ACCREDITED INSPECTION BODIES DESIGNATED HEREIN AND APPROVED BY THE ENGINEER OF RECORD TO PERFORM SPECIAL INSPECTION AS REQUIRED BY THE BUILDING CODE AND THE PROJECT SPECIFICATIONS AND AS DESCRIBED IN SECTION 1701 1998 CALIFORNIA BUILDING CODE.
   - C. SPECIAL INSPECTOR: A QUALIFIED PERSON, EMPLOYED BY THE SPECIFIED SPECIAL INSPECTION AGENCY, WHO HAS DEMONSTRATED COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. DUTIES INCLUDE VISUAL OBSERVATIONS AND FIELD MEASUREMENTS OF MATERIALS, OBTAINING SPECIMENS FOR TESTS AND RELATED ACTIONS INCLUDING PREPARATION OF REPORTS.
   - D. TESTING LABORATORY: AN ACCREDITED MATERIALS TESTING LABORATORY, APPROVED BY THE ENGINEER OF RECORD, TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS.
   - E. CONTINUOUS INSPECTION: ON SITE INSPECTION BY THE SPECIAL INSPECTOR ON A CONTINUOUS BASIS OBSERVING ALL WORK REQUIRING SPECIAL INSPECTION.
   - F. PERIODIC INSPECTION: INTERMITTENT INSPECTION AS PERMITTED BY THE PLAN SPECIFICATIONS AT PREDETERMINED INTERVALS OR MORE FREQUENTLY AS WORK PROGRESSES. NO SIGNIFICANT ELEMENTS OR AREAS SHALL BE COVERED BY ADDITIONAL WORK UNTIL APPROVED BY THE MUNICIPAL BUILDING INSPECTOR AND/OR THE SPECIAL INSPECTOR.
   - G. STRUCTURAL OBSERVATION: THE VISUAL OBSERVATION, BY THE ENGINEER OF RECORD OR HIS DESIGNEE, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS, OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL AND MUNICIPAL INSPECTIONS REQUIRED BY CODES AND SPECIFICATIONS.
   - H. EOR: ENGINEER OF RECORD
   - I. DPR: ENGINEER OF RECORD/DESIGN PROFESSIONAL OF RECORD
   - J. SPECIAL INSPECTION AND MATERIALS TESTING

     THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTORS DUTIES ARE DESCRIBED IN CBC 1701.3 AND CBC 1701.5

     DOCUMENTED METHODS AND PROCEDURES SHALL BE USED FOR INSPECTION AND TESTING REQUIRED OF CONTRACTUAL DOCUMENTS, AND FOR ESTABLISHING ACCEPTANCE CRITERIA. ALL INSTRUCTIONS, STANDARDS, PROCEDURES, CHECKLISTS RELEVANT TO THE WORK WILL BE KEPT UP TO DATE AND READILY AVAILABLE FOR USE. NO INSPECTION OR TEST WILL BE PERFORMED IF THE SAFETY OF THE TESTING PERSONNEL IS IN QUESTION DUE TO JOB SITE CONDITIONS. PRIOR TO PROJECT COMMENCEMENT, THE TESTING AGENCY WILL CONFER WITH AND OBTAIN THE APPROVAL FROM THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD REGARDING THE INSPECTION AND TESTING PROCEDURES OR SPECIFICATIONS INCLUDING ANY APPROPRIATE ASTM METHODS, CODE REQUIREMENTS OR PROJECT SPECIFICATION REQUIREMENTS. AT THE START OF AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS, AS REQUIRED, AND PROCEDURS WITH APPLICABLE CODES, PLANS, AND SPECIFICATIONS.
     1. ALL INSPECTIONS SHALL BE PERFORMED BY AN ACCREDITED, APPROVED SPECIAL INSPECTION AGENCY EMPLOYED BY THE OWNER OR OWNER'S AGENT, NOT THE CONTRACTOR OR SUBCONTRACTOR,

        ACCREDITATION TO ASTM E-329-95C, STANDARD SPECIFICATIONS FOR AGENCIES ENGAGED IN THE TESTING AND/OR INSPECTION OF MATERIALS USED IN CONSTRUCTION, IS PREFERRED.

        COPIES OF THE TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THE ENGINEER OF RECORD (EOR) IN ADDITION TO OTHER NORMAL DISTRIBUTIONS, WITHIN TWO DAYS OF THE TEST. IN THE CASE OF DISCREPANCIES OR DEFICIENCIES, THE SPECIAL INSPECTION AGENCY SHALL IMMEDIATELY NOTIFY THE EOR. TESTING FREQUENCY SHALL BE PER APPLICABLE STRUCTURAL MASONRY, REINFORCED CONCRETE, AND STRUCTURAL STEEL WELDING CODES AND STANDARDS AND ARE PART OF THIS SPECIFICATION.
        - A. CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITED TO THE INSPECTION SERVICES DIVISION BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND/OR INSPECTION FIRM WITH A CONSTRUCTION SCHEDULE TO FACILITATE THE PROPER COORDINATION.
4. THE SPECIAL INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE ENGINEER AT A MINIMUM PER WEEK FREQUENCY. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT, SIGNED BY BOTH HE AND HIS SUPERVISOR, STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE WORKMANSHIP PROVISIONS OF THE CBC.
5. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN IF UNCORRECTED, TO THE PROPER DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
6. SPECIAL INSPECTION REPORTS

   THESE REPORTS SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING INFORMATION:
   - A. PERMIT NUMBER
   - B. NAME OF THE MUNICIPAL INSPECTOR, IF AVAILABLE, AND OF THE GOVERNING MUNICIPALITY
   - C. SPECIAL INSPECTION AGENCY NAME, ADDRESS, AND PHONE NUMBER
   - D. UNIQUE IDENTIFICATION OF THE REPORT AND OF EACH PAGE.
   - E. CLIENT NAME AND ADDRESS
   - F. NAME AND ADDRESS OF THE DESIGN PROFESSIONAL OF RECORD, AND OTHER DESIGNERS OR ENGINEERS APPLICABLE TO THE PROJECT
   - G. DESCRIPTION OF THE TYPE OF INSPECTION PERFORMED
   - H. ANY UNRESOLVED DEVIATIONS, EXCLUSIONS, AND ADDITIONS TO OR FROM THE APPROVED DRAWINGS AND SPECIFICATIONS RELEVANT TO THE SPECIFIC INSPECTION OR TEST.
   - I. COMPLIANCE FINDINGS AND REFERENCE
   - J. DESCRIPTION OF LOCATION WHERE THE INSPECTION WAS PERFORMED WITHIN THE PROJECT
   - K. TIME AND DATE OF THE INSPECTION
   - L. MEASUREMENTS, EXAMINATIONS, AND DERIVED RESULTS SUPPORTED BY TABLES, GRAPHS, SKETCHES, OR PHOTOGRAPHS AS APPROPRIATE
   - M. THE NAME, SIGNATURE, TITLE, AND IDENTIFICATION NUMBER, AS APPROPRIATE, OF THE FIELD INSPECTOR PERFORMING THE INSPECTION
   - N. IDENTIFICATION OF SUBCONTRACTORS EMPLOYED TO CARRY OUT TESTS OR PARTS OF TESTS
7. TESTS REPORTS

   LABORATORY TESTS AND MILL CERTIFICATIONS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER OF RECORD. THESE REPORTS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   1. CONCRETE CYLINDERS
   2. REINFORCING STEEL
   3. STRUCTURAL STEEL
   4. CONCRETE MIXES
   5. CONCRETE ANCHORS
8. SPECIAL INSPECTION BY A SPECIAL OR DEPUTY INSPECTOR FROM AN ACCREDITED, EOR APPROVED INSPECTION AGENCY AND WITH THE APPROPRIATE CURRENT MUNICIPAL LICENSES AND CERTIFICATIONS SHALL BE REQUIRED FOR THE TYPE OF WORK LISTED BELOW.

8A CONTINUOUS INSPECTION REQUIRED FOR THE FOLLOWING:

- A. REINFORCED CONCRETE:
  1. DURING PLACEMENT OF REINFORCED CONCRETE WHERE THE STRUCTURAL DESIGN IS BASED ON F'C GREATER THAT 3,000 PSI AND THE TAKING TEST SPECIMENS. THE NUMBER OF AND FREQUENCY OF TAKING OF TEST SPECIMENS SHALL BE THE MINIMUM REQUIRED BY THE GOVERNING MUNICIPAL BUILDING CODE OR AS SPECIFIED BY THE APPROVED STRUCTURAL PLANS, WHICHEVER IS THE GREATER NUMBER.
  2. DURING THE PLACEMENT OF REINFORCING STEEL AND PRE STRESS TENDONS UNLESS THE SPECIAL INSPECTOR HAS INSPECTED FOR CONFORMANCE WITH THE APPROVED PLANS PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE.
  3. DURING THE PLACEMENT OF REINFORCING STEEL AND CONCRETE FOR CAST-IN-PLACE DRILLED PILES OR CAISSONS.
  4. INSPECTION IS REQUIRED ON CAST-IN-PLACE PILES OR CAISSONS, EVEN IF F'C IS LESS THAN 2,500 PSI.
  5. PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS WHEN STRESS INCREASES PERMITTED BY FOOTNOTE 5 OF TABLE 19E, SECTION 1925 OF THE UNIFORM BUILDING CODE FOR THE USE OF FULL VALUES FOR EMBEDDED BOLTS.
  6. PRIOR TO AND DURING THE INSTALLATION OF ANCHORS REQUIRING TO BE DRILLED INTO CONCRETE.
  7. DURING THE STRESSING AND GROUTING OF TENDONS IN PRE STRESSED
  8. CONTINUOUS INSPECTION FOR THE PLACEMENT OF THE REINFORCEMENT AND CONCRETE AT CONCRETE MOMENT FRAMES WITHIN SEISMIC ZONES 3 & 4
  9. SHOT CRETE PLACEMENT AND DURING THE TAKING OF TEST SPECIMENS.

     PERIODIC INSPECTION FOR REINFORCED CONCRETE SHALL BE PERFORMED WHEN SPECIFIED, AS MINIMUMS:
     1. AT THE START OF AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
     2. REINFORCEMENT VERIFICATION PRIOR TO THE PLACEMENT OF CONCRETE
     3. DURING THE PLACEMENT OF CONCRETE
     4. DURING THE MOLDING, CONSTRUCTION OF TAKING OF COMPRESSION SAMPLES, BEAMS, CORES OR PANELS.
     5. AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STIRRUPS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT (IE @ OPENINGS, BEAMS, CORNERS, COLUMNS, PIERS, AND CAISSONS) BEFORE THEY ARE COVERED.
     6. DURING SAMPLING OF CONCRETE AT DISCHARGE FROM MIXER.
     7. BEFORE ANY CONCRETE IS PLACED FOR VERIFICATION OF MIX DESIGN
     8. ALL FUNCTIONS AT THE BATCHING PLANT FOR READY MIX. THIS COULD INCLUDE CEMENT SAMPLING OR TEST RESULTS, GRAVEL GRADATION, CHECKING CALIBRATION OF EQUIPMENT AND ADMIXTURE APPROVALS.
- B. STRUCTURAL WELDING - GENERAL - INSPECTOR'S DUTIES
  1. ALL FIELD WELDING NOT DONE IN AN APPROVED FABRICATORS SHOP EXCEPT THAT PERIODIC INSPECTION THE FREQUENCY OF WHICH IS DETERMINED PRIOR TO THE START OF THE PROJECT SHALL BE ALLOWED PER SECTION 1701.5, #5 EXCEPTIONS.
  2. DURING ALL FIELD WELDING OF SPECIAL MOMENT-RESISTING FRAMES; IN ADDITION, NONDESTRUCTIVE TESTING AS REQUIRED BY SECTION 1703.
  3. THE SPECIAL INSPECTOR SHALL REVIEW EOR APPROVED WELDING PROCEDURES SPECIFICATIONS (WPS) WHEN OTHER THAN STANDARD AWS PRE QUALIFIED JOINTS AND PROCEDURES ARE INVOLVED.
  4. THE SPECIAL INSPECTOR SHALL REVIEW APPLICABLE SECTION OF REFERENCED CODES, PARTICULARLY THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (AWS D1.1) AND THE MANUAL, AND SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
  5. THE SPECIAL INSPECTOR SHALL REVIEW MILL TEST REPORTS AND CHECK HEAT NUMBERS WITH MATERIAL AS RECEIVED. VERIFY THAT PROPER IDENTIFICATION OF STEEL IS MAINTAINED DURING FABRICATION.
  6. THE SPECIAL INSPECTOR SHALL, WHEN REQUIRED BY PROJECT SPECIFICATIONS, MARK SAMPLE LOCATION WITH STEEL STAMP ON EACH PIECE TESTED.
  7. THE SPECIAL INSPECTOR SHALL RECORD SAMPLE NUMBER AND LOCATION AND CHECK THAT SAMPLE IDENTIFICATION IS MAINTAINED AS SAMPLES ARE DELIVERED TO LABORATORY AND TESTED.
  8. THE SPECIAL INSPECTOR SHALL WHEN STEEL MEMBERS ARE DELIVERED TO FINISH AND NO "CROP ENDS" ARE AVAILABLE FOR SAMPLE CUTTING, COORDINATE CUTTING AND PATCHING REQUIREMENTS WITH THE ARCHITECT/ENGINEER

9A. WELDING OBSERVATION - (APPLICABLE TO SHOP AND FIELD)

1. THE SPECIAL INSPECTOR SHALL CHECK EACH WELDER'S CERTIFICATION AND VERIFY THAT THE WELDER DOES WORK ONLY AS QUALIFIED BY HIS CERTIFICATION
2. THE SPECIAL INSPECTOR SHALL KEEP A WRITTEN RECORD OF EACH WELDER BY NAME, IDENTIFICATION NUMBER AND HIS IDENTIFYING STEEL MARK, IF APPLICABLE, AND THE PERCENTAGE OF REJECTABLE WELDS.
3. THE SPECIAL INSPECTOR SHALL UPON DETECTION OF REJECTABLE WELD (EITHER VISUALLY OR BY NONDESTRUCTIVE TEST), THE INSPECTOR OF RECORD WILL NOTIFY THE WELDER AND HIS FOREMAN FOR VERIFICATION OF DEFECT. THE INSPECTOR OF RECORD WILL OBSERVE REMOVAL, REWORK, OR REPAIRS.
4. THE SPECIAL INSPECTOR SHALL CHECK STRUCTURAL MEMBERS FOR THICKNESS ADJACENT TO WELDS, OPENING, ETC. REWORK, OR REPAIRS.
5. THE SPECIAL INSPECTOR SHALL INSPECT JOINTS FOR PROPER PREPARATION, INCLUDING BEVEL, ROOT FACES, ROOT OPENING, ETC. REWORK, OR REPAIRS.
6. THE SPECIAL INSPECTOR SHALL CHECK THE TYPE AND SIZE OF ELECTRODES TO BE USED FOR THE VARIOUS JOINTS, AND POSITIONS. CHECK THE STROGAGE FACILITIES TO SEE IF THEY ARE ADEQUATE TO KEEP THE ELECTRODES DRY.
7. THE SPECIAL INSPECTOR SHALL OBSERVE THE TECHNIQUE OF EACH THE SPECIAL INSPECTOR SHALL WELDER WITH USE OF A WELDING INSPECTION SHIELD.
8. THE SPECIAL INSPECTOR SHALL VERIFY THE USE OF PROPER PREHEAT AND INTER PASS TEMPERATURES. INSPECTOR SHALL WELDER WITH USE OF A WELDING INSPECTION SHIELD.
9. THE SPECIAL INSPECTOR SHALL CONTINUOUSLY OBSERVE MULTI-PASS WELDS. CONTINUOUS INSPECTION IS DEFINED AS FOLLOWS: THE INSPECTOR IS PRESENT IN THE WELDING AREA AT ALL TIMES AND IS FULLY AWARE OF THE PROGRESS OF THE WELDING AT ANY GIVEN TIME. THE INSPECTOR MAY WATCH MULTIPLE WELDERS PROVIDED THEY ALL BE IN THE AREA, CLOSE ENOUGH FOR EFFECTIVE VISUAL INSPECTION OF THE WORK PERFORMED.
10. THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE OPERATOR IS CAPABLE OF PRODUCING THE REQUIRED WELDS.
11. THE SPECIAL INSPECTOR SHALL OBSERVE SINGLE PASS FILLET WELDS PERIODICALLY, OR MORE OFTEN IF CODES AND SPECIFICATIONS REQUIRE.
12. THE SPECIAL INSPECTOR SHALL, IF STRAIGHTENING OR RESTRAINING OF WELDMENTS IS NECESSARY, VERIFY THAT APPROVED METHODS WILL BE USED.
13. THE SPECIAL INSPECTOR SHALL TAG OR STAMP ACCEPTED WELDMENTS WITH THE INSPECTOR'S IDENTIFICATION STAMP. APPROVED METHODS WILL BE USED.

8A. PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:		YES	NO	N/A
FOUNDATION	A. COMPACTED FILL, GRADING, AND EXCAVATIONS	X		
	B. CONTINUOUS INSPECTION OF PIERS			X
CONCRETE	A. CONTINUOUS INSPECTION AND TEST CYLINDERS FOR CONCRETE.	X		
	B. CONTINUOUS INSPECTION FOR SLAB CONCRETE		X	
	C. TEST CYLINDERS FOR SLAB CONCRETE	X		
	D. ANCHOR BOLTS OR EMBEDS IN CONCRETE (INSTALLATION AND CONCRETE PLACEMENT)		X	
DRILLED IN ANCHORS	A. ALL ADHESIVE ANCHORS, RODS, DOWELS, SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION.			X
	B. ADDITIONAL TESTING MAY BE REQUIRED AS SPECIFIED ON THE PLANS.			X
	C. ADHESIVE ANCHORS IN CONCRETE OR MASONRY	X		
REINFORCING STEEL	A. PLACING OF REINFORCING		X	
	B. SAMPLING AND TESTING STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL)		X	
WELDING	A. ALL STRUCTURAL WELDING EXCEPT WELDING IN APPROVED SHOPS	X		
	B. ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS , AND FIELD WELDS.	X		
	C. STRUCTURAL LIGHT GAGE METAL FRAME WELDING.			X
	D. REINFORCING STEEL WELDING	X		
BOLTING	A. HIGH STRENGTH BOLT A325 & A490 (TORQUE VERIFICATION)	X		
	B. HIGH STRENGTH BOLT A325N,X & A480N,X (SNUG CONTACT OF PLYS)	X		
MASONRY	A. SAMPLING OF MASONRY UNITS	X		
	B. MASONRY PRISM CONSTRUCTION			X
	C. MORTAR SAMPLING			X
	D. CONTINUOUS INSPECTION DURING PLACEMENT AND GROUTING OF MASONRY UNITS AND REINFORCEMENT PLACEMENT.			X
	E. ANCHOR BOLTS OR EMBEDS IN MASONRY (INSTALLATION AND GROUT PLACEMENT)			X
INSULATING CONCRETE FILL	A. TEST CYLINDERS AND INSPECTIONS			X
STRUCTURAL STEEL	A. MILL REPORTS AND IDENTIFICATION OF STEEL (AFFIDAVIT OF COMPLIANCE)		X	
	B. SAMPLING AND TESTING		X	
	C. DURING PLACEMENT OF PAINT AS SPECIFIED BY THE ARCHITECT.		X	
SHEAR DIAPHRAGMS	A. INSPECTION OF SHEATHING PLACEMENT AND NAIL SPACING			X
APPROVED FABRICATORS	APPROVED FABRICATORS: MUST SUBMIT CERTIFICATE OF COMPLIANCE FOR ALL OFF SITE FABRICATION SUCH AS STRUCTURAL STEEL GLU-LAMS PRECAST CONCRETE, ETC.	X		
STRUCTURAL OBSERVATION	STRUCTURAL OBSERVATIONS REQUIRED. WHEN REQUIRED BY THIS ENGINEER OR THE BUILDING DEPARTMENT, THE CONTRACTOR SHALL EMPLOY AN ENGINEER APPROVED BY THE EOR TO PERFORM STRUCTURAL OBSERVATION.	X		

FASTENING SCHEDULE

MATERIALS	FASTENER	FREQUENCY OR QUANTITY
CEILING JOIST TO WOOD TOP PLATE	1" - 1 1/8" #10	1 AT EACH JOIST
CEILING JOIST TO TOP PLATE TRACK	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	1 AT EACH JOIST
CONNECTION CLIP TO TOP PLATE TRACK	1" -1 1/8" #10	4 AT EACH CLIP TO TOP PLATE
CONNECTION CLIP TO TOP PLATE TRACK	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	4 AT EACH CLIP TO TOP PLATE
CONNECTION CLIP TO CEILING JOIST	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 3 AT EACH CLIP TO CEILING JOIST AND AS PER LOADING
CONNECTION CLIP TO RAFTER	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 3 AT EACH CLIP TO RAFTER AND AS PER LOADING
CEILING JOIST TO PARALLEL RAFTER	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	NO. VARIES AS PER LOADING
CEILING JOIST TO TRUSS WEB	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 2 AT FLANGE AND AS PER LOADING JOIST
CEILING JOIST, OVERLAPPED AT SUPPORT	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 2 AT WEB
CONNECTION CLIP TO RIDGE BOARD	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	4 - 6 AT EACH CLIP TO RIDGE
RAFTERS OVERLAPPED AT RIDGE	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 6 AT OVERLAPPED WEB SECTION AND AS PER LOADING
BUILT UP BEAM (RIDGE BOARD)	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	1 AT EACH FLANGE AT 12" O.C.
STIFFBACK BRACING TO JOIST	5/8" - 3/4" #10 SELF DRILLING PAN HEAD	MIN. 2 AT EACH JOIST
SUB-FASCIA TRACK TO RAFTER	5/8" - 3/4" #10 SELF DRILLING LOW PROFILE PAN HEAD	1 AT EACH CONNECTION CLIP AND MAX TOP PLATE
WOOD FASCIA TO SUB-FASCIA TRACK	1 5/8" #6 TRIM HEAD	2 AT 24" O.C. AND AT MAXIMUM OF 12" FROM EACH END OF BOARD OR CORNER
STUD TO PLATE TRACK (BOTTOM)	5/8" - 3/4" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH FLANGE
STUD TO PLATE TRACK (TOP)	5/8" - 3/4" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH FLANGE
DIAGONAL BRACING TO STUD	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH STUD
LATERAL BRACING TO STUD	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT EACH STUD PER STRAP OR 3 AT CONNECTION CLIP WITH COLD ROLLED CHANNEL
STUD TO STUD (NESTED)	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT 24" O.C. THROUGH FLANGE
STUD TO STUD (BACK TO BACK)	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT 24" O.C. THROUGH WEB
STUD TO STUD (AT WALL INTERSECTION)	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	1 AT 24" O.C. OR 1 AT EACH BLOCKING
LINTEL TO STUD	1/2" - 5/8" #8 OR #10 SELF DRILLING LOW PROFILE HEAD	REQUIREMENT VARIES WITH DIFFERENT LOADING
WALL BOTTOM TRACK (RUNNER) TO FOUNDATION	1/2" DIAMETER ANCHOR BOLT	4'-0" O.C., (1) 9" FROM END OF WALL OR EACH SIDE OF SPLICE

NOTES:

(1) LOW PROFILE HEAD IS USED IN LIEU OF PAN OR HEX WASHER HEADS WHERE LEAST PROJECTION OF FASTENER IS DESIRED.

(2) S-7 POINT WILL SUBSTITUTE S-12 WHEN ATTACHING .07" MEMBERS TOGETHER.

(3) #2 POINT SELF DRILLING SCREW WILL BE SUBSTITUTED BY #3 POINT SELF DRILLING SCREW WHEN STEEL THICKNESS VARIES BETWEEN .09" TO .250". CONSULT MFG. RECOMMENDED THICKNESS FOR DRILL CAPACITY.

METAL BUILDING SYSTEM

1. PRE-MANUFACTURED METAL BUILDING SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND HAVING THREE (3) OR MORE YEARS EXPERIENCE IN THE DESIGN OF THE TYPE OF THE BUILDING INDICATED ON THE CONTRACT DOCUMENTS.
2. THE METAL BUILDING AND COMPONENTS SHALL BE DESIGNED TO CARRY ITS OWN WEIGHT PLUS ALL SUPERIMPOSED DEAD AND LIVE LOADS INCLUDING WIND LOADS FROM ALL DIRECTIONS AND INCLUDING ALL MECHANICAL, ELECTRICAL AND ARCHITECTURAL LOADS. VERIFY ALL LOADS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL PLANS.
3. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO DESIGN, FABRICATION OR ERECTION OF PRE-MANUFACTURED BUILDINGS.
4. PRE-MANUFACTURED BUILDING FRAMES AND THE CONNECTION OF FRAME TO THE FOUNDATION IS TO BE DESIGNED BY OTHERS AND IS NOT THE RESPONSIBILITY OF SER CONTRACTOR SHALL COORDINATE THE CONNECTION OF THE BUILDING FRAME WITH THE SUPPLIER PRIOR TO CONSTRUCTION.
5. THIS FOUNDATION HAS BEEN DESIGNED USING ASSUMED REACTIONS FROM THE PRE-MANUFACTURED BUILDING COMPONENTS AND IS FOR BID PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT BASE CONNECTION DETAILS (SIZE AND THICKNESS BASE PLATE AND DIAMETER AND LENGTH ANCHOR BOLTS) AND REACTIONS OF THE BUILDINGFRAMES TO THE ENGINEER PRIOR TO CONSTRUCTION SO THE DESIGN ASSUMPTIONS CAN BE VERIFIED. DEPTH OF ANCHOR BOLTS SHALL BE SUFFICIENT TO PREVENT CONICAL SHEAR OF THE CONCRETE FOUNDATION.
6. METAL BUILDING SUPPLIER SHALL PROVIDE AND SUBMIT FOR REVIEW ALL DESIGN CALCULATIONS AND DRAWINGS. ALLOW TWO (2) WEEKS FOR REVIEW OF SHOP DRAWINGS.
7. ANY ADDITIONAL COST OF FOUNDATION WORK REQUIRED BY REVISIONS OF THE FOUNDATION DESIGN AFTER PRE-MANUFACTURED BUILDING REACTIONS ARE SUBMITTED SHALL BE BY OTHERS.
8. METAL ROOF DOES NOT PROVIDE LATERAL BRACING FOR THE PURLINS, BRIDGING SHALL BE DESIGNED AND SUPPLIED BY THE PURLIN MANUFACTURER.
9. REFER TO MECHANICAL DRAWINGS FOR ROOF SUPPORTED HVAC UNITS AND PROVIDE SUPPORT FOR ADDITIONAL LOADS AS REQUIRED.
10. MAXIMUM PURLIN SPACING SHALL BE 5'-0" O.C. WITH A MAXIMUM ALLOWABLE TOTAL DEFLECTION OF L/240.
11. PRE-MANUFACTURED BUILDING MANUFACTURER SHALL PROVIDE ADDITIONAL FRAMING REQUIRED TO SUPPORT THE WEIGHT MECH'L UNITS AND PROVIDE PROPER SERVICEABILITY OF SUSPENDED MECHANICAL UNITS, MECHANICAL DUCTWORK, LIGHT FIXTURES, AND ALL OTHER SUSPENDED ITEMS AND ITEMS SUPPORTED ON TOP OF ROOF.
12. DETAILS SHALL BE INCLUDED WHICH CLEARLY DETAIL RIGID FRAME BASE, HAUNCH, RIDGE PLATE CONNECTIONS AND OTHER MEMBER-TO-MEMBER CONNECTIONS.
13. WIND LOAD DESIGN SHALL INDICATE METHOD OF TRANSFERRING FORCES TO: A. END WALL WIND LOAD TO SIDE WALL FOUNDATIONS. B. AT END BAY SIDE WALL WIND LOAD TO END WALL FOUNDATIONS, CALCULATIONS SHALL SHOW HOW WIND LOAD IS TRANSFERRED TO EAVE STRUT.
14. PORTAL MOMENT FRAMES SHALL BE USED TO RESIST HORIZONTAL WIND FORCES. DESIGN OF ALL CONNECTIONS SHALL BE CLEARLY INDICATED.
15. DESIGN OF HORIZONTAL CROSS-BRACING IN PLANE OF ROOF FRAMING SHALL BE COMPLETE AND SHALL INDICATE METHOD OF TRANSFERRING TRIBUTARY WIND LOAD TO RIGID FRAMES OR THE SIDE WALL PORTAL FRAMES.
16. ALL COLUMN BASE PLATES SHALL BE SET AND GROUTED UNDER FOR FULL CONTACT BEARING.
17. ALL BASES FOR THE COLUMNS SHALL BE "PINNED" AND NOT ASSUMED AS FIXED. NO MOMENT FORCES SHALL BE TRANSFERRED INTO THE BUILDING FOUNDATION.
18. PROVIDE BUILDING CROSS SECTIONS AND ELEVATIONS WHICH CLEARLY SHOW THE PRIMARY STRUCTURAL RIGID MOMENT FRAME, PORTAL MOMENT FRAME, END WALL POST AND BEAMS, INTERIOR COLUMNS, AND OTHER STRUCTURAL MEMBERS THAT ARE TO BE USED ON THE SUBMITTED BUILDING. SIZE OF ALL STANDARD AISC MEMBERS AND OF ALL WEB AND FLANGE SECTIONS USED IN BUILT UP MEMBER SHALL BE NOTED AS WELL AS ALL BOLTS AND WELDING.
19. DESIGN AND MEMBERS FOR FRAMED OPENINGS SHALL BE PROVIDED AS PART OF THE METAL BUILDING DESIGN.
20. LATERAL SUPPORT BEAMS SHALL BE DESIGNED BY METAL BUILDING SYSTEM SUPPLIER
21. DEFLECTION CRITERIA
    - a. GIRTS SUPPORTING METAL STUD WALLS L/360
    - b. GIRTS SUPPORTING CMU WALLS L/480
    - c. HORIZONTAL DEFLECTION OF FRAME L/360
    - d. VERTICAL DEFLECTION OF FRAME L/240
    - e. LATERAL SUPPORT BEAMS FOR METAL STUD WALLS L/360
    - f. LATERAL SUPPORT BEAMS FOR CMU WALLS L/480

22. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
    - a. SECTION 3. IN CASE OF DESCREPENCY, STRUCTURAL ENGINEERS DRAWINGS GOVERN.
    - b. SECTION 4.2.1, DELETE FIRST TWO SENTENCES.
    - c. SECTION 4.2.2. ANY CHANGES, ADDITIONS OR DELETIONS REQUIRER APPROVAL FROM OWNER, CONTRACTOR AND ENGINEER.
    - d. SECTION 7. ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
    - e. SECTION 7.9.3, THE CONTRACTOR SHALL PROVIDE THE SEQUENCE AND SCHEDULE OF CONSTRUCTION
    - f. SECTION 7.9.4, THE CONTRACTOR TO DESIGN SHORES, JACKS OR LOADS.
23. STEEL SHOP SHALL BE AISC CERTIFIED AND LOCATED WITHIN 200 MILES FROM JOBSITE.

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4/15/2020

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Document issued for:
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NO.	DATE	DESCRIPTION

MONTECRISTO ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119B
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:

General Notes

S102

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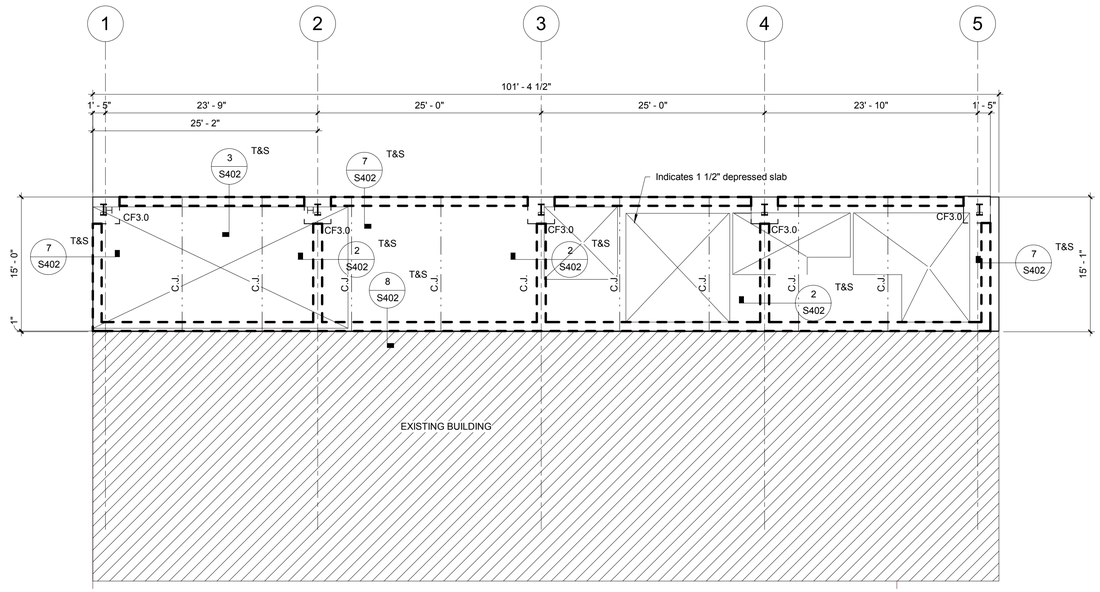


Foundation Plan 1
1/8" = 1'-0" S201

Structural Foundation Schedule							
Type	Length	Width	Thickness	Reinforcing A Bar Quantity	Reinforcing A Bar Size	Reinforcing B Bar Quantity	Reinforcing B Bar Size
CF3.0	3' - 0"	3' - 0"	3' - 0"	4	5	4	5

FOUNDATION NOTES

1. FOR GENERAL NOTES SEE SHEET S101 AND S102.
2. FOR TYPICAL DETAILS SEE SHEETS NUMBER S400
3. CONTRACTOR/SUBCONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR AND OR SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER BEFORE THE WORK HAS BEGUN.
4. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS.
5. REFER TO ARCHITECTURAL PLANS FOR FLOOR DRAIN LOCATIONS.
6. SLOPE SLAB TO DRAINS, SEE ARCHITECTURAL PLANS FOR SLOPE.
7. REFER TO ARCHITECTURAL PLANS FOR FLOOR FINISHES. ENGINEER IS NOT RESPONSIBLE FOR TYPE OF FLOOR FINISHES.
8. PROVIDE SLAB CONTRACTION JOINTS PER TYPICAL DETAIL.
9. THE TESTING LABORATORY SHALL BE THE OWNERS REPRESENTATIVE TO CONTROL THE PLACEMENT OF COMPACTED FILL. THE TESTING LABORATORY SHALL APPROVE THE SUBGRADE PREPARATION, THE FILL MATERIALS, THE METHOD OF PLACEMENT AND COMPACTION, AND COMPACTION, AND SHALL GIVE WRITTEN APPROVAL OF THE COMPLETED FILL. THE TESTING LABORATORY SHALL INDICATE ON THERE REPORT THE ELEVATION OF THE COMPACTED SUBGRADE.
10. ALL EARTHWORK AND GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING STUDY. THE MORE STRINGENT REQUIREMENTS BETWEEN THESE SUBGRADE NOTES AND GEOTECHNICAL ENGINEERING STUDY SHALL GOVERN AND EXECUTED BY THE CONTRACTOR.
11. IN THE EVENT FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
12. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.
13. THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED BY THE TESTING LABORATORY PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED IN THE STUDY. THIS IS ESPECIALLY IMPORTANT TO IDENTIFY THE ACCEPTABILITY OF THE SUBGRADE OR FILL MATERIAL UNDER THE FOOTING. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING OR BEAM EXCAVATIONS SHOULD BE EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT SOIL AS DIRECTED BY THE TESTING LABORATORY. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHOULD BE BACKFILLED WITH LEAN CONCRETE OR SELECT FILL AS DETERMINED BY THE TESTING LABORATORY.
14. CARE SHOULD BE TAKEN TO SHAPE THE BUILDING AREAS SUCH THAT WATER WILL NOT POND AROUND THE STRUCTURE DURING CONSTRUCTION AND CAUSE THE NEAR SURFACE CLAYS TO SWELL. THE PROPOSED STRUCTURE SHALL BE ISOLATED FROM ANY MOISTURE SOURCE WHICH MIGHT ALSO CAUSE SWELLING OF THE CLAYS AFTER COMPLETION OF THE CONSTRUCTION.
15. WHEN THE STRUCTURE IS COMPLETE, THE GROUND SURFACE SHOULD SLOPE AWAY FROM THE STRUCTURE AND DOWN SPOUTS SHOULD CARRY RUNOFF WATER SEVERAL FEET FROM THE BUILDING, PREFERABLY INTO PAVED AREAS OR SEWERS, BEFORE DISCHARGING.
16. DO NOT PLANT, OR LEAVE IN PLACE, DEEP ROOTED TREES WITHIN CLOSE PROXIMITY TO THE PERIMETER OF THE STRUCTURE. DEEP ROOTED TREES HAVE POTENTIAL TO REMOVE MOISTURE FROM BENEATH THE BUILDING IF PLANTED CLOSE ENOUGH TO ALLOW THE ROOT BULB EXTEND NEAR OR BENEATH THE BUILDING.
17. AIR CONDITIONING CONDENSER DRAIN LINES TO DISCHARGE WATER A MINIMUM OF 5 FEET FROM THE PERIMETER OF THE STRUCTURE. THE DISCHARGE AREA SHALL HAVE SUFFICIENT SLOPE AWAY FROM THE STRUCTURE TO PREVENT STANDING WATER.
18. THE FINAL ONE (1) FOOT OF FILL OUTSIDE THE BUILDING AREA SHOULD CONSIST OF A COHESIVE CLAYEY (CL) SOIL. FILL CAN NOT BE ALLOWED TO DRY OUT DURING OR AFTER COMPACTION. (P1 BETWEEN 15 AND 25).
19. NOTE THAT SOME LEVELS OF RISK ARE ASSOCIATED WITH ALL FOUNDATION SYSTEMS AND THERE IS NO SUCH THING AS A "ZERO RISK" FOUNDATION. IT ALSO SHOULD BE NOTED THAT THE FOUNDATION PROVIDED IS NOT DESIGNED TO RESIST SOIL MOVEMENT AS A RESULT OF SEWER/PLUMBING LEAKS, EXCESSIVE IRRIGATION, NON UNIFORM IRRIGATION, POOR DRAINAGE, AND WATER PONDING NEAR THE FOUNDATION SYSTEM.
20. CONSTRUCTION FOLLOWING WET WEATHER PERIODS WILL LIKELY ENCOUNTER DIFFICULTIES DUE TO THE WET OR SOFT SURFACE SOILS BECOMING A GENERAL HINDRANCE TO EQUIPMENT DUE TO RUTTING AND PUMPING OF THE SOIL SURFACE. IF THE SUBGRADE CANNOT BE ADEQUATELY COMPACTED TO MINIMUM DENSITIES AS DESCRIBED ABOVE, ONE OF THE FOLLOWING MEASURES WILL BE REQUIRED:
    a) REMOVAL AND REPLACEMENT WITH SELECT FILL;
    b) CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE,
    c) DRYING BY NATURAL MEANS.

SLAB ON GRADE	
THICKNESS	5.0 INCHES
REINFORCING (EACH WAY)	#4 AT 14" O.C.
REINFORCING LOCATION	MID DEPTH
VISQUEEN	15 MIL
CONCRETE CHAIRS (NO PLASTIC CHAIRS ALLOWED)	3' O.C. EACH WAY

SUBGRADE PREPARATION

1. SITE PREPARATION

A. PREPARATION OF EXISTING GROUND

ALL AREAS TO SUPPORT SELECT FILL SHALL BE STRIPPED OF ALL VEGETATION AND/OR ORGANIC TOPSOIL:	8	INCHES
ADDITIONAL DEPTH OF REMOVAL:	*54	INCHES
EXTEND BEYOND BUILDING FOOT PRINT:	5	FEET
EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF:	9	INCHES
MOISTURE: (OPTIMUM MOISTURE CONTENT)	-2 TO +2%	
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):	95%	

B. SELECT FILL MATERIAL

AMOUNT OF COMPACTED SELECT FILL:	60*	INCHES
NO ORGANIC OR OTHER PERISHABLE MATERIAL NO STONES LARGER THAN	2	INCHES

*FINISHED FLOOR SHALL BE AS INDICATED ON CIVIL DRAWINGS, INCREASE INDICATED AMOUNT OF FILL AS REQUIRED TO ACHIEVE MOST STRINGENT REQUIREMENT. INCREASE EXCAVATION AS REQUIRED TO MEET MINIMUM AMOUNT OF SELECT FILL

FILL MATERIAL SHALL BE AS INDICATED ON THE GEOTECHNICAL REPORT.

C. PLACING SELECT FILL

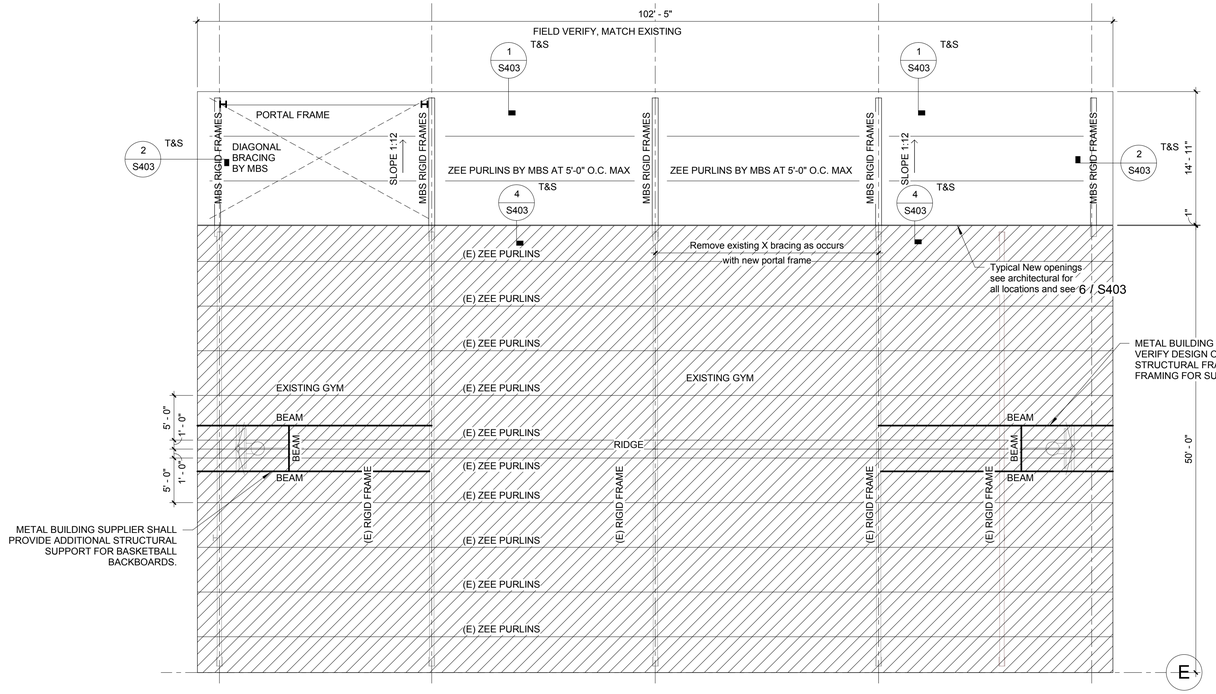
FILL LIFTS (LOOSE MEASURE, NOT EXCEEDING):	8	INCHES

D. COMPACTION OF SELECT FILL

MOISTURE: (OPTIMUM MOISTURE CONTENT)	-2 TO +2
COMPACTION (ASTM D-698) (MAXIMUM DENSITY):	98%

E. COMPACTION TESTING

ATTERBERG LIMITS (ONE AT A RATE OF):	5,000 CU. YDS.
COMPACTION (ONE TEST PER):	2,500 SQ. FT./ LIFT (MIN. OF 3 PER LIFT)



Roof Framing Plan 2
1/8" = 1'-0" S201

Framing Notes

1. FOR GENERAL NOTES SEE SHEET S101 and S102.
2. FOR TYPICAL DETAILS SEE SHEETS S400's.
3. DIMENSIONS SHOWN ARE FOR GENERAL INFORMATION. COORDINATE WITH ARCHITECTURAL PLANS.
4. SEE MECHANICAL PLANS FOR MECHANICAL OPENINGS.
5. DESIGN OF MBS PURLINS UNDER UNITS WITH LOADS INDICATED ON THE DRAWINGS PER DESIGN CRITERIA. MBS PURLINS SHALL BE DESIGNED BY MBS SUPPLIER DESIGN PURLINS FOR 1/600. (MECHANICAL WEIGHT+ DEAD LOAD ONLY) COORDINATE OPENINGS WITH MECHANICAL PLANS.
6. PURLIN MANUFACTURER TO VERIFY THE MINIMUM ROW OF BRIDGING AND SIZE.

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4/15/2020

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MONTECRISTO ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119B
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:
Foundation Plan

S201

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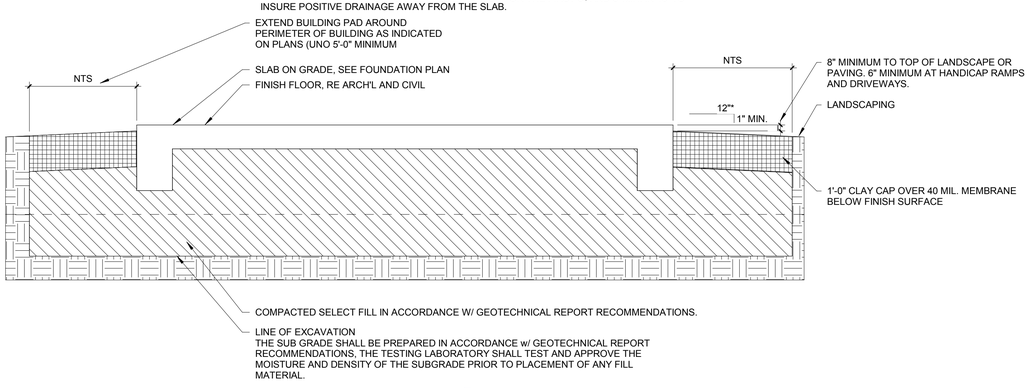
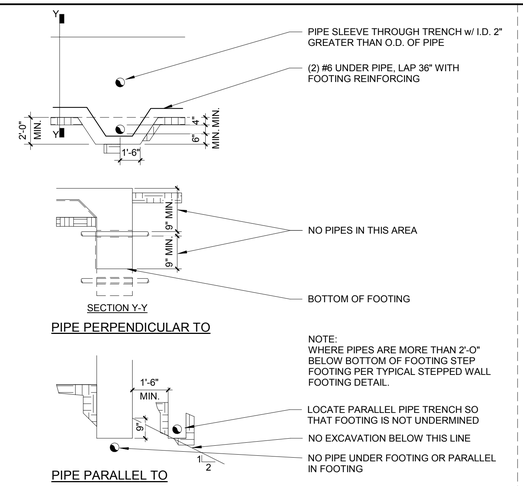
NOTE TO OWNER:
DRAINAGE OF THE SITE MUST BE MAINTAINED THROUGHOUT THE LIFE OF THE STRUCTURE.
THE SOIL AT THIS SITE IS HIGHLY SENSITIVE TO CHANGE IN THE SOIL MOISTURE CONTENT AND WILL DAMAGE THE STRUCTURE IF THE MOISTURE CONTENT INCREASES OR DECREASES.

* INITIAL ROUGH GRADING SHALL BE COMPLETED w/ NATURAL CLAY MATERIALS (NO SAND ALLOWED) PRIOR TO FORM SETTING IT SHALL SLOPE 1"/ FOOT FOR THE FIRST 5', AND 6' MIN. IN 10' TO INSURE POSITIVE DRAINAGE AWAY FROM THE SLAB.

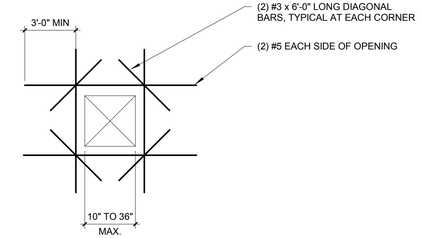
NOTE TO CONTRACTOR
PROVIDE PUMPS ON SITE AND REMOVE ANY WATER FROM THE SITE 100% OF THE TIME. STANDING WATER IN THE EXCAVATION AT ANYTIME, DAY OR NIGHT, IS UNACCEPTABLE.



Typical Building Subgrade Preparation
1" = 1'-0" | 7 | S401



Typical Piping Through Footing
3/8" = 1'-0" | 4 | S401



Typical Slab Opening Reinforcing
1/4" = 1'-0" | 1 | S401

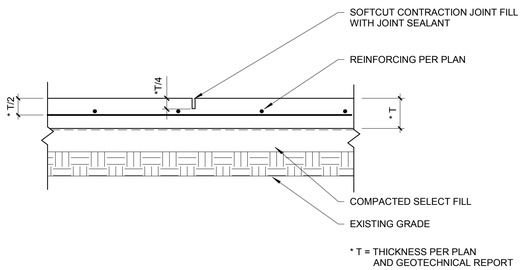
Typical Slab Construction Joint
1" = 1'-0" | 8 | S401

NOTES

1. REINFORCING TO MATCH SIZE AND SPACING OF FOOTING REINFORCING.
2. SLOPE TO BE (1) VERTICAL TO (2) HORIZONTAL, EXCEPT WHERE SHOWN OTHERWISE ON PLAN.
3. FOOTING TO BE STEPPED WHERE SLOPE EXCEEDS 1:10
4. "D" INDICATES MIN. FOOTING THICKNESS.

Typical Stepped Footing
1" = 1'-0" | 5 | S401

Typical Reinforcing at Concrete Intersections
1/4" = 1'-0" | 2 | S401



NOTES

1. SPACING SHALL NOT EXCEED 15 FEET.
2. JOINT PATTERN SHOULD BE NEARLY SQUARE.
3. SAW CUT SHALL BE MADE WITHIN 4 HOURS OF PLACEMENT (OR AS SOON AS SLAB SURFACE CAN BE WALKED UPON WITHOUT MARKING).
4. FILL SAW CUT FULL DEPTH WITH "SKQOUR S1" AFTER SLAB IS CURED (28 DAYS, MINIMUM)
5. THIS DETAIL TO BE USED ONLY IN THE ABSENCE OF ARCHITECTURAL INFORMATION FOR CONTRACTION JOINTS

Typical Slab Contraction Joint
1" = 1'-0" | 6 | S401

DIAMETER OF	
STIRRUPS AND TIES	4 db FOR #3 THRU #5 BARS
	6 db FOR #6 THRU #8 BARS
ALL OTHERS	6 db FOR #3 THRU #8 BARS
	8 db FOR #9 THRU #11 BARS
	10 db FOR #14 THRU #18 BARS

Typical Reinforcing Bends
1/4" = 1'-0" | 3 | S401

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MONTECRISTO ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119B
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:
Typical Concrete Details

S401

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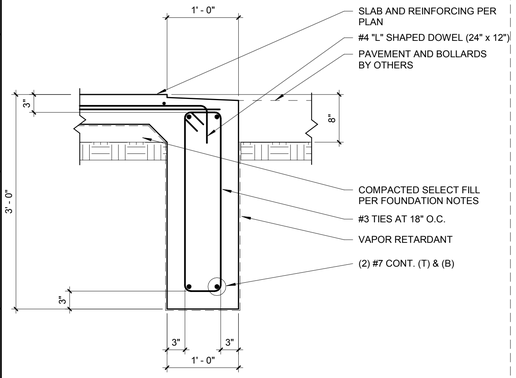
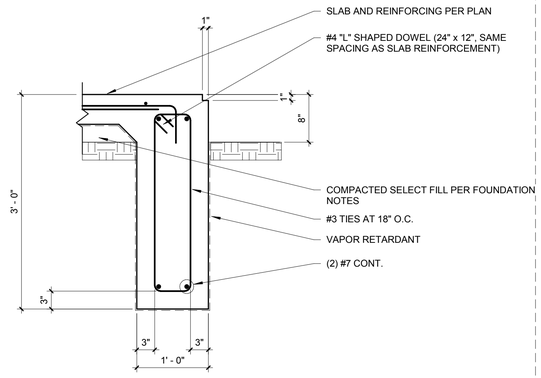


Footing at Exterior Overhead Door

1" = 1'-0"

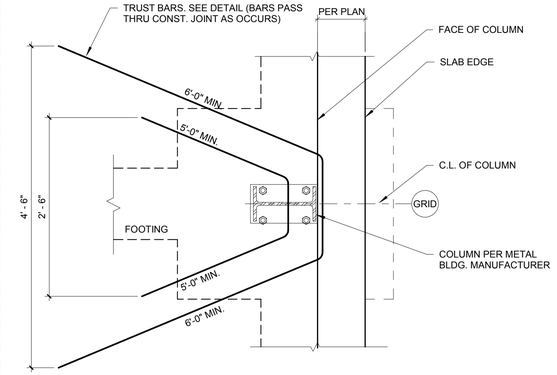
10 | S402



Footing at Exterior Wall at Metal Ledge

1" = 1'-0"

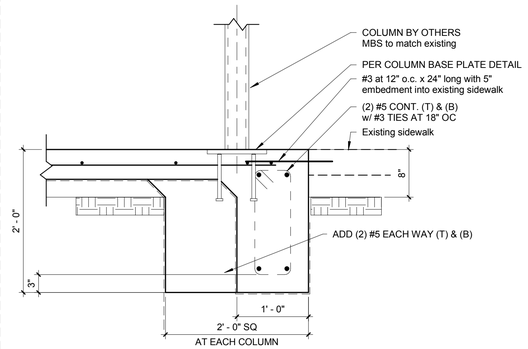
7 | S201 | S402



Footing at Thrust Bars at Interior Columns

1" = 1'-0"

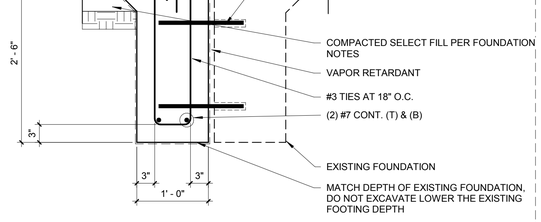
4 | S402 | S402



Footing at Exterior Steel Column, Porch

1" = 1'-0"

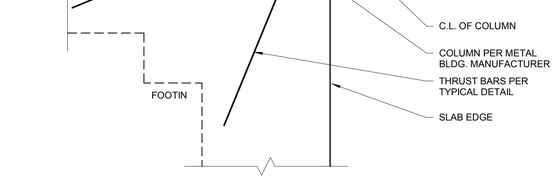
1 | S402



Footing at Expansion Joint at Existing Foundation

1" = 1'-0"

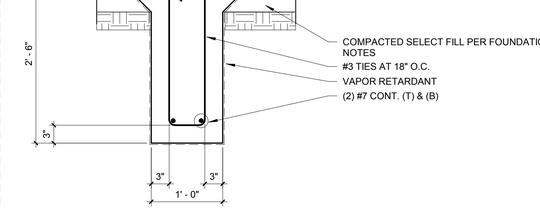
8 | S201 | S402



Footing at Trust Bars at Corner Columns

1" = 1'-0"

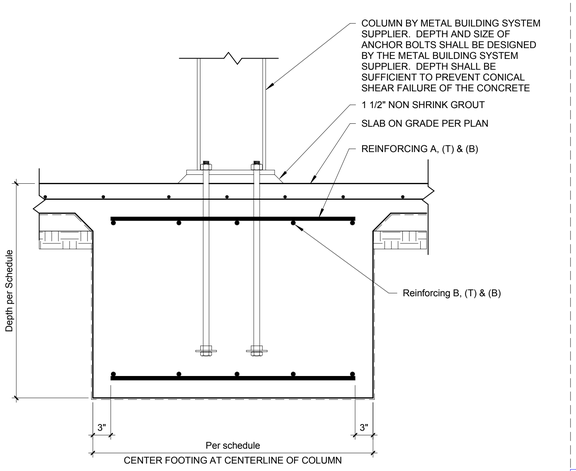
5 | S402 | S402



Footing at Interior

1" = 1'-0"

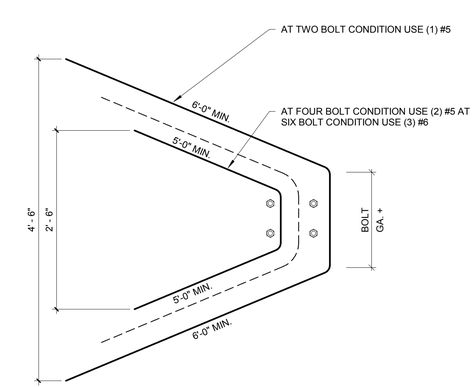
2 | S201 | S402



Footing at MBS Interior Column

1" = 1'-0"

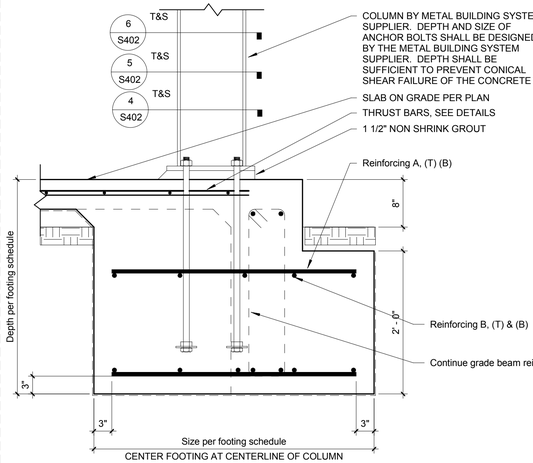
9 | S402



Footing Thrust Bar Detail

1" = 1'-0"

6 | S402 | S402



Footing at MBS Exterior Column

1" = 1'-0"

3 | S201 | S402

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MONTECRISTO ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119B
DATE: 4/15/2020
STARTING DATE:
CK BY: | DWN BY:

Foundation Details

S402

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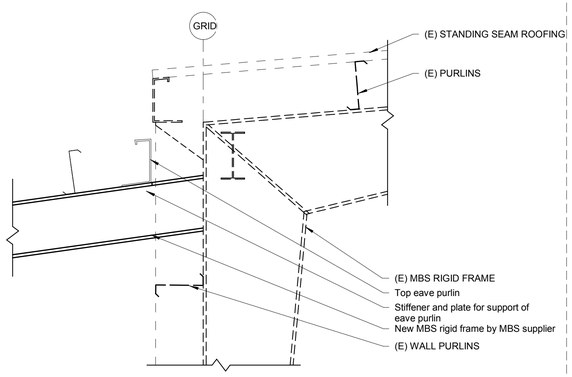
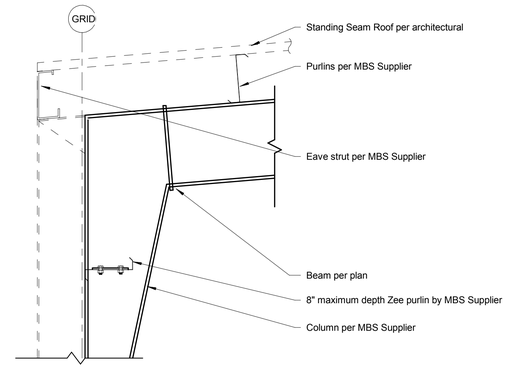


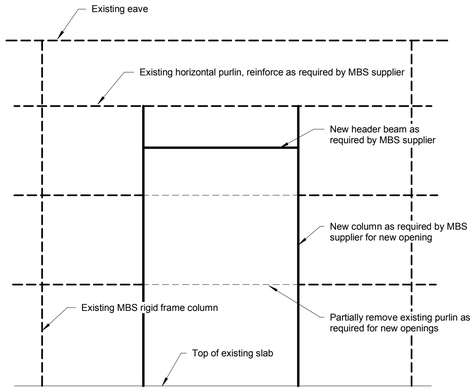
MBS High End at Parallel Purlins, to Existing
1" = 1'-0"

4 | S201 S403



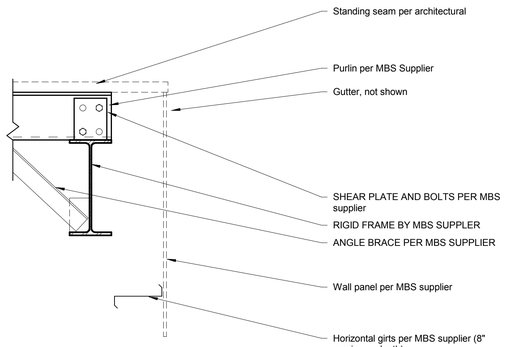
MBS at Parallel Purlins
1" = 1'-0"

1 | S201 S403



Typical Framing for New Openings
1" = 1'-0"

6 | S403



MBS at Perpendicular Purlins
1" = 1'-0"

2 | S201 S403

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MONTECRISTO ELEMENTARY GYMNASIUM RENOVATIONS & ADDITION

PROJECT NO: 20119B
DATE: 4/15/2020
STARTING DATE:
CK BY: | DWN BY:

Typical Framing Details

S403

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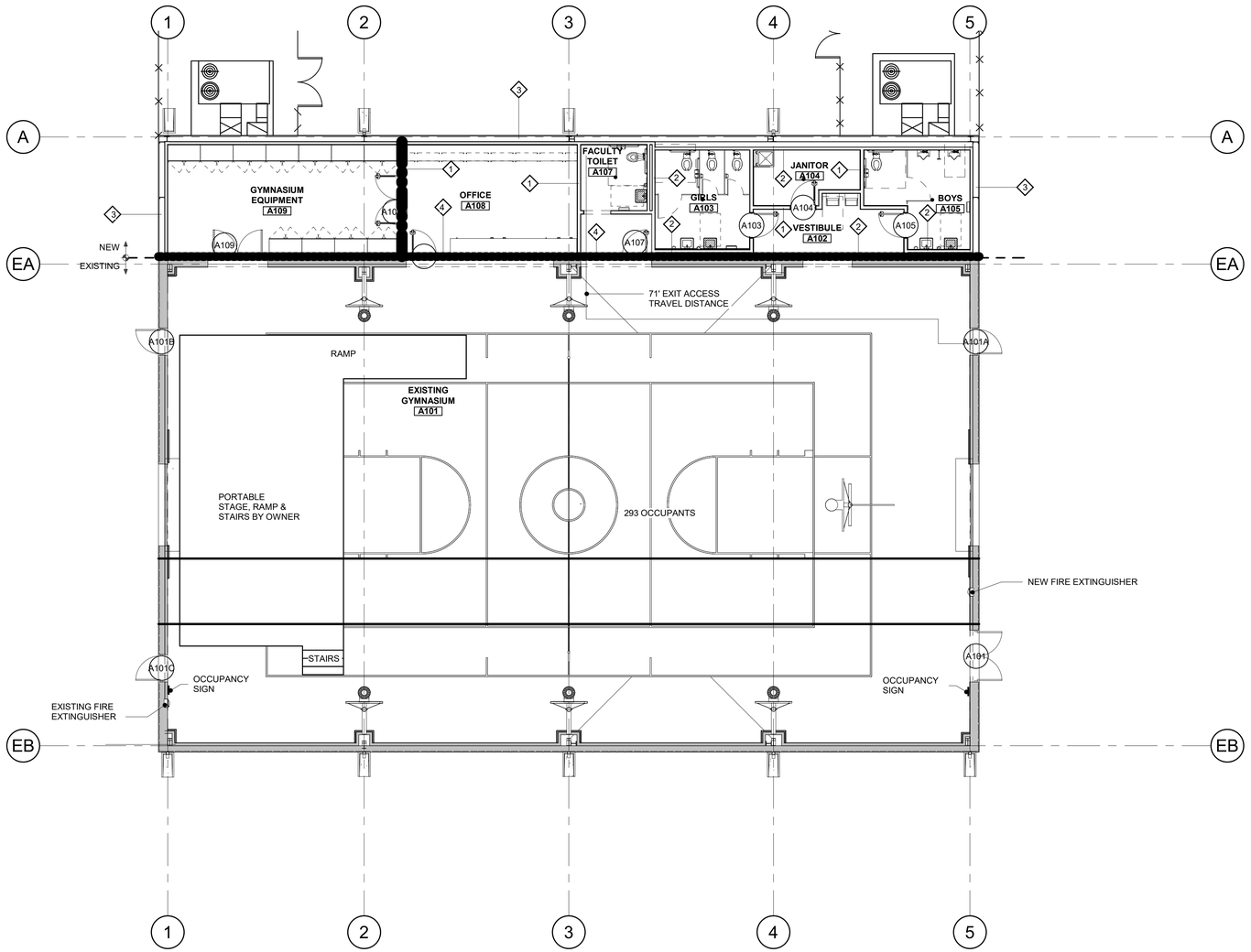

PROPOSED FIRE PROTECTION PLAN
1/8" = 1'-0" MONTE CRISTO

1

1 INTERIOR WALL: 5/8" TYPE X GYPSUM BOARD WITH A 3-5/8" METAL STUD @ 16" O.C. & R-13 SOUND INSULATION FOLLOWED BY A 5/8" TYPE X GYPSUM BOARD. FOR A TOTAL OF 4 7/8"

2 INTERIOR WALL: 5/8" TYPE X GYPSUM BOARD WITH A 3-5/8" METAL STUD @ 16" O.C. & R-13 SOUND INSULATION FOR A TOTAL OF 4 1/4"

3 EXTERIOR WALL: 1-1/4" "PBR" WALL PANEL WITH A 8" C-CHANNEL, FOLLOWED BY A 3-5/8" METAL STUD LAYER, WITH 5/8" TYPE X GYPSUM BOARD. FOR A TOTAL 1'-1-1/2"

4 INTERIOR WALL: 5/8" TYPE X GYPSUM BOARD WITH A 3-5/8" METAL STUD @ 16" O.C. R-13 SOUND INSULATION WITH 5/8" PLYWOOD FOLLOWED BY A 3/8" T1-11.

WALL TYPES
1/4" = 1'-0" MONTE CRISTO

FIRE RATED WALL LEGEND

NON-RATED STUD WALL TO BOTTOM OF ROOF PANELS SEAL AIRTIGHT

EXISTING NON-RATED METAL PANEL WALL TO BOMTTOM OF ROOF PANELS

F.E. = SEMI-RECESSED FIRE EXTINGUISHER WITH CABINET INSTALLED AT 48" A.F.F. TO MID-SPAN OF CABINET CONTROL (HANDLE)

NOTE: ALL WALL PENETRATIONS SHALL BE SEALED WITH SEALANT
FIRE RATED SEALANT WITH RESPECTIVE FIRE RATING
SEAL TOP OF WALLS ACCORDINGLY.

FIRE RATED WALL LEGEND
1" = 20'-0" MONTE CRISTO

MONTE CRISTO

TYPE II (B) CONSTRUCTION (UNPROTECTED UNSPRINKLED)

INTERNATIONAL BUILDING CODE 2015 — NOTE: ENTIRE BUILDING SHALL BE UNSPRINKLED.

OCCUPANCY	ASSEMBLY GROUP A-3
ONE STORY	5684 NET SQ. FT 6059 GROSS SQ. FT.
TABLE 503 ALLOWABLE AREA	9,500 SQ. FT.
ALLOWABLE STORIES	(2) STORIES

TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOUSE)

STRUCTURAL FRAME	UNPROTECTED - NONCOMBUSTIBLE
ROOF CONSTRUCTION	UNPROTECTED - NONCOMBUSTIBLE
NONBEARING WALLS	UNPROTECTED - NONCOMBUSTIBLE

TABLE 602
FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

NON BEARINGWALLS	UNPROTECTED - NONCOMBUSTIBLE EXTERIOR
NON BEARING WALLS	

TABLE 1016.2
EXIT ACCESS TRAVEL DISTANCE

OCCUPANCY	WITHOUT SPRINKLER SYSTEM	WITH SPRINKLER SYSTEM
A,E,F-1,M,S-1	200FT	250FT

TABLE 1004.1.2.
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	FLOOR AREA IN SQ.FT. PER OCCUPANT
ASSEMBLY CONCENTRATED - CHAIRS ONLY NOT FIXED	7NET

OCCUPANT LOAD

ASSEMBLY - GYMNASIUM	293
COACH OFFICE	2
TOTAL OCCUPANTS	295

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STATE OF TEXAS
04.15.2020

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
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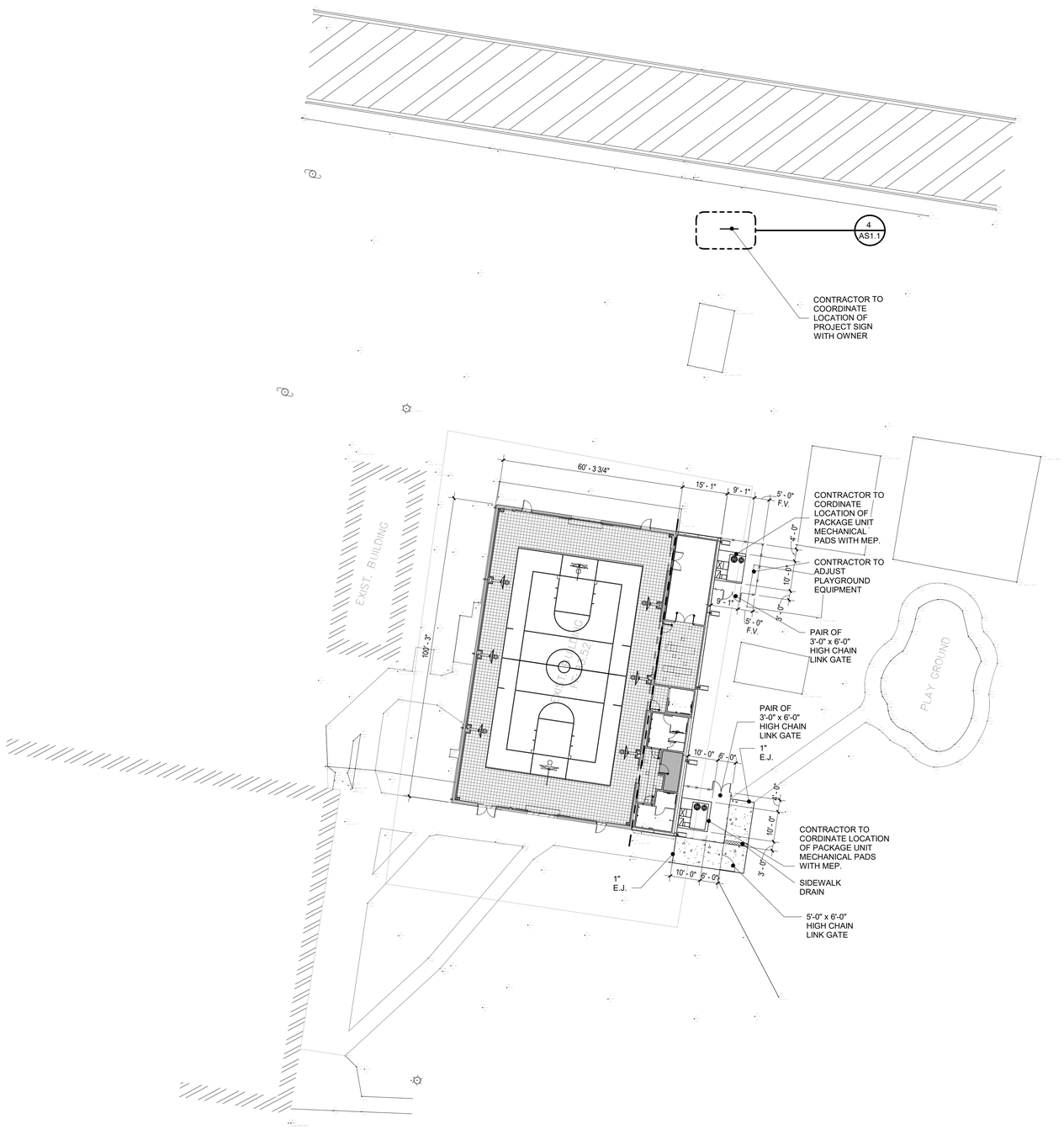
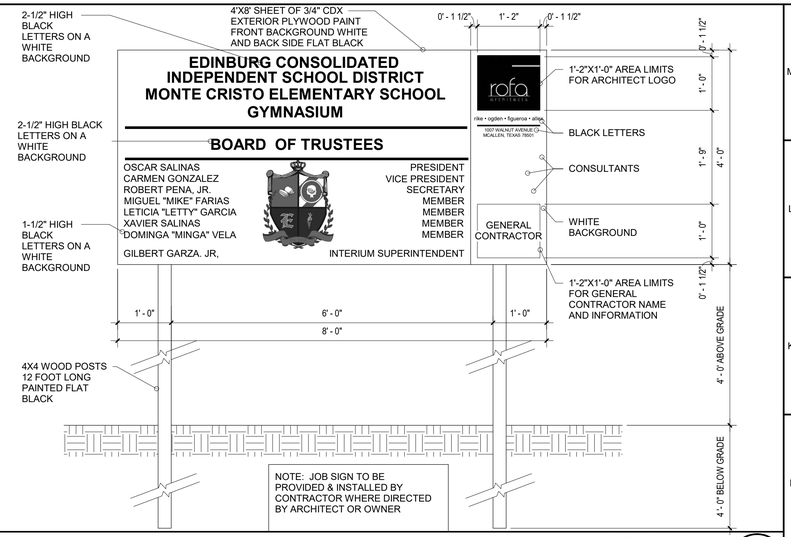
FIRE PROTECTION PLAN

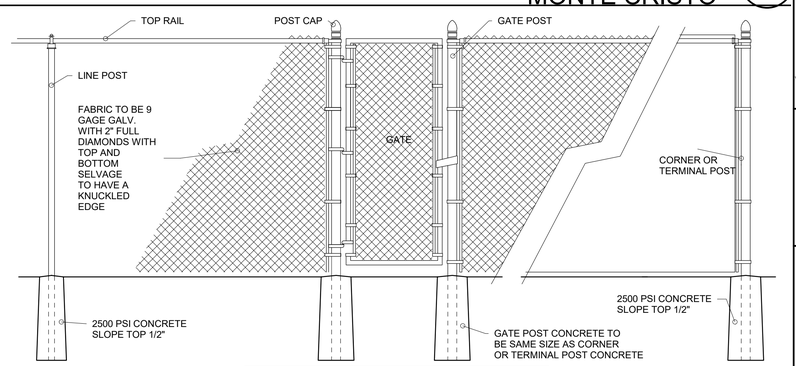
G1.1



OVERALL PROPOSED SITE PLAN
MONTE CRISTO
1" = 20'-0"
1



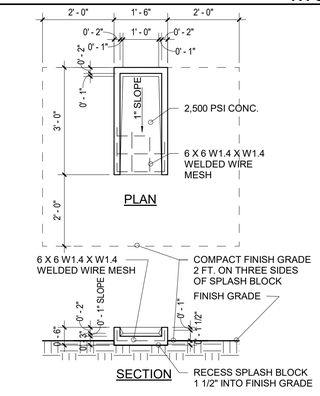
JOB SIGN
3/4" = 1'-0"
MONTE CRISTO
4



POST USE	FABRIC HT.	POST O.D.
TERMINAL OR CORNER	72" OR LESS	2.375"
TERMINAL OR CORNER	MORE THAN 72"	2.875"
GATE 72" OR LESS WIDE		2.875"
GATE 6 FT. TO 13 FT. WIDE		4.00"
GATE 13 FT. TO 18 FT. WIDE		6.625"
GATE OVER 18 FT. WIDE		8.625"
TOPE RAIL		1.66"
LINE POST	72" OR LESS	1.90"
LINE POST	MORE THAN 72"	2.375"

POST SCHEDULE IF THE SPECS DIFFER FROM THIS SCHEDULE THE SPECS GOVERN.

CHAIN LINK FENCE
1/2" = 1'-0"
MONTE CRISTO
2



SPLASH BLOCK
1/2" = 1'-0"
MONTE CRISTO
3

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04.15.2020

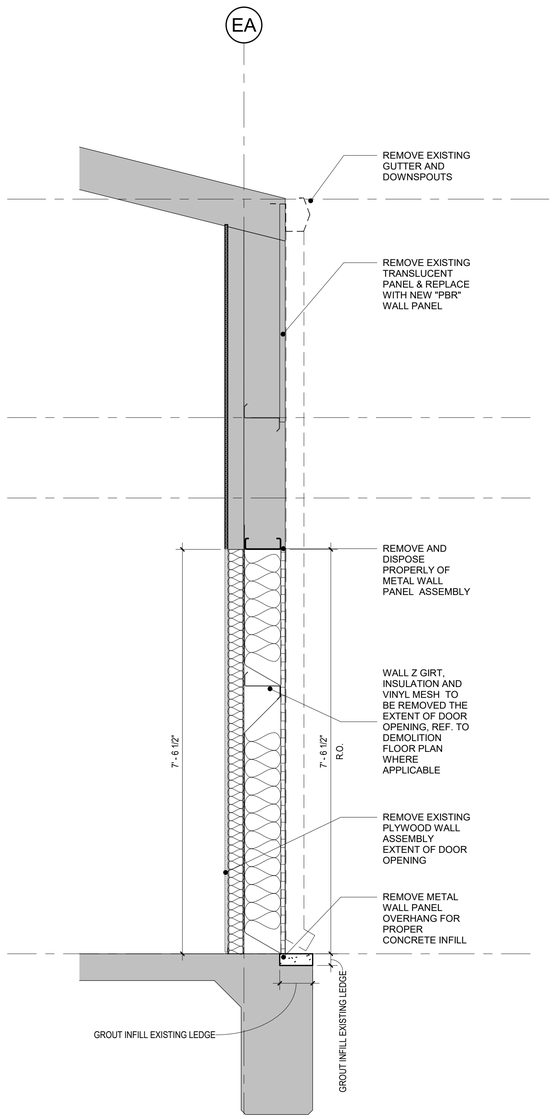
NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

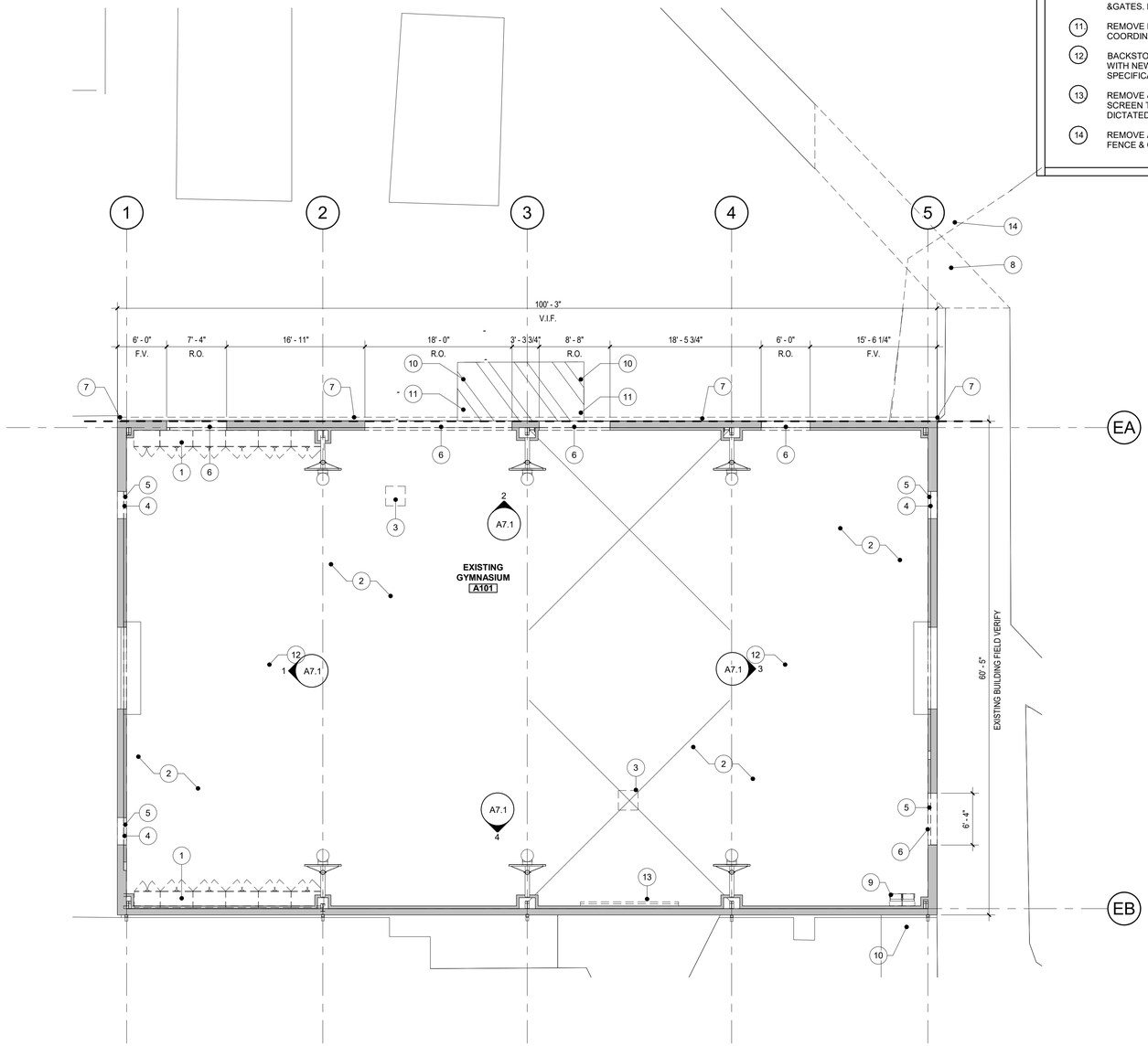
PROJECT NO: Project Number
DATE: 4/18/2020 1:24:22 PM
STARTING DATE:
CK BY: Checker DWN BY: Author

OVERALL PROPOSED SITE PLAN - MONTE CRISTO

AS1.1



DEMO WALL SECTION
3/4" = 1'-0"
MONTE CRISTO
2



EXISTING / DEMO FLOOR PLAN
1/8" = 1'-0"
MONTE CRISTO
1

XX DEMOLITION KEY NOTES:

1. OWNER TO REMOVE AND DISCARD EXISTING MILL WORK AT NORTH END OF GYMNASIUM
2. PREPARE EXPOSED CONCRETE FLOORING FOR LVT / VCT.
3. REMOVE AND SALVAGE EXISTING PROJECTORS VERIFY LOCATION AND CONFIRM WITH OWNER.
4. REMOVE AND DISCARD EXISTING METAL DOORS AND HARDWARE. DOOR FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
5. REFER TO DOOR SCHEDULE FOR NEW DOORS.
6. REMOVE AND DISCARD EXISTING METAL WALL PANELS INCLUDING METAL WALL FRAMING INSULATION AND PLYWOOD PANEL FOR NEW WALL OPENING
7. *REMOVE AND DISCARD EXISTING METAL GUTTER & DOWNSPOUTS
8. *REMOVE AND DISCARD EXISTING CONCRETE SIDEWALK IN ITS ENTIRETY INCLUDING FOUNDATION AND FOOTING REFERENCE CIVIL DRAWINGS
9. REMOVE AND DISCARD EXISTING DRINKING FOUNTAINS IN THEIR ENTIRETY REFER TO MEP.
10. REMOVE AND DISCARD EXISTING A/C UNITS & DUCT IN ITS ENTIRETY REMOVE CONCRETE PADS / FOUNDATIONS & CHAIN LINK FENCE, FOOTINGS, &GATES. REFER TO MEP DRAWINGS
11. REMOVE EXTERIOR A/C UNITS CONTRACTOR TO COORDINATE WITH SCHOOL DISTRICT.
12. BACKSTOPS TO BE REMOVED AND REPLACED WITH NEW BACKSTOPS REFERENCE SPECIFICATIONS
13. REMOVE & RELOCATE EXISTING PROJECTOR SCREEN TO BE LOCATED AND INSERTED AS DICTATED BY SHEET A1.2
14. REMOVE AND DISCARD SECTION OF CHAINLINK FENCE & GATE.

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FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
DATE: 4/17/2020 3:45:58 PM
STARTING DATE:
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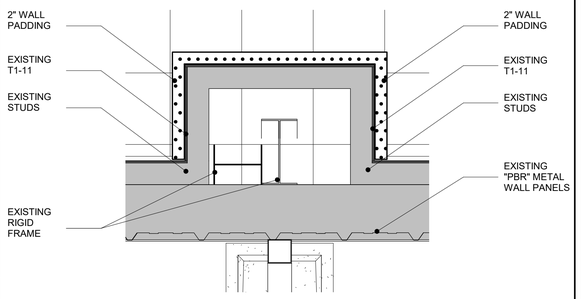
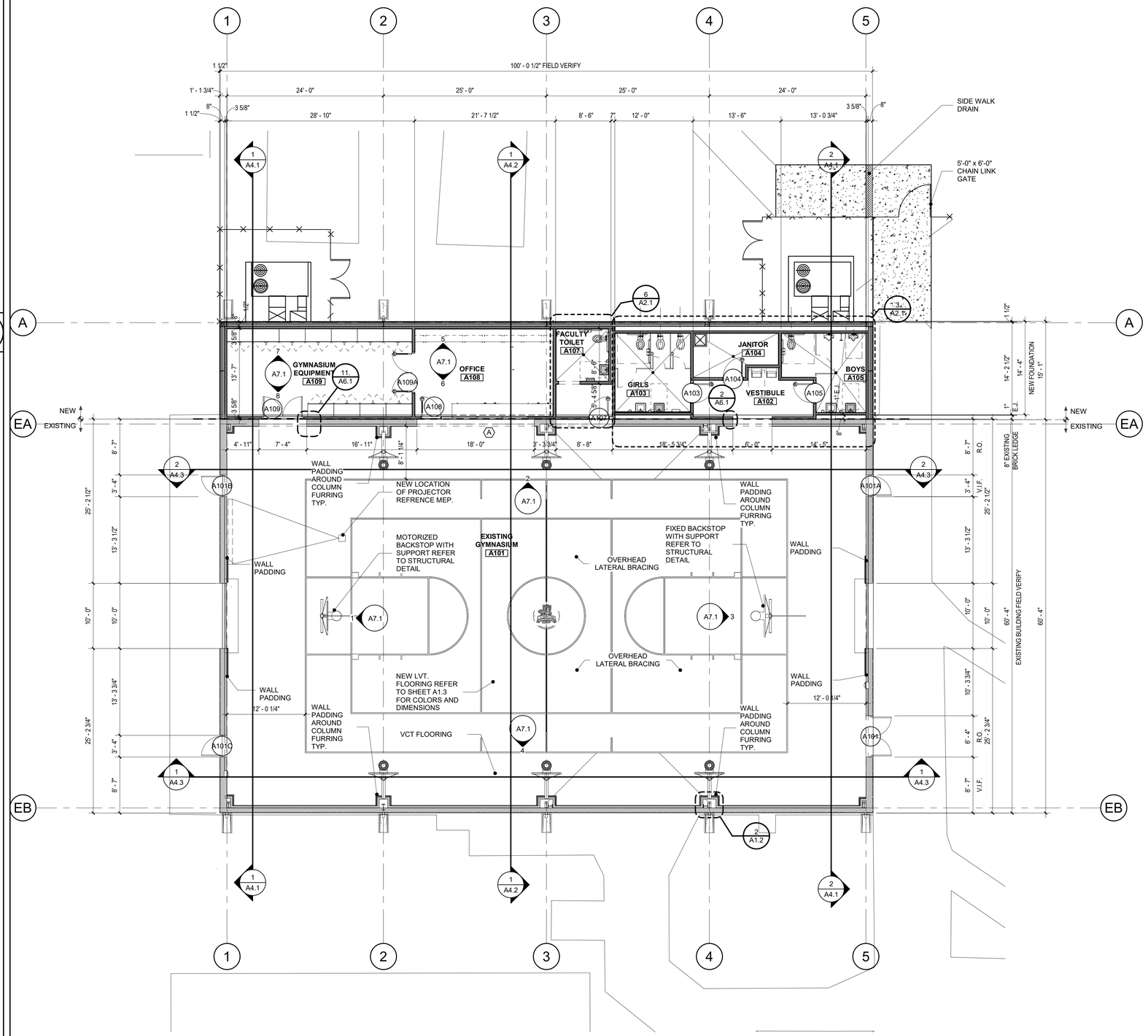
DEMOLITION PLAN

A1.1



COLUMN FUR OUTS / WALL PADING 2
1" = 1'-0"
MONTE CRISTO



PROPOSED FLOOR PLAN 1
1/8" = 1'-0"
MONTE CRISTO

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CONSULTANTS:

REGISTERED ARCHITECT
JOSE A. FIGUEROA JR.
12856
STATE OF TEXAS
04.15.2020

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
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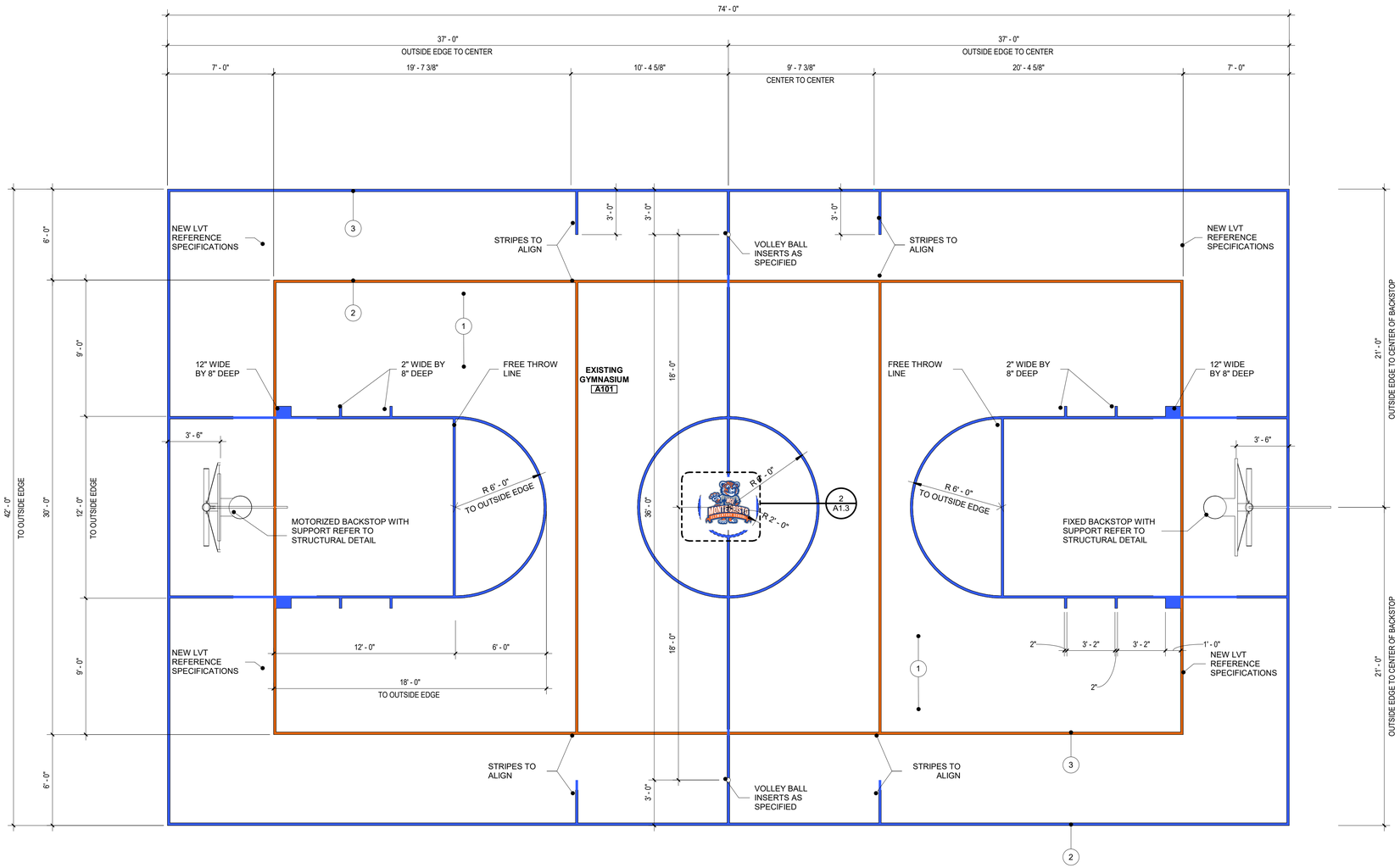
PROPOSED FLOOR PLAN

A1.2



PROPOSED LVT DIMENSIONAL PLAN
1/64" = 1'-0"
MONTE CRISTO
1

GENERAL NOTES

A. ALL COURTS SHOULD BE SIZED IN ACCORDANCE TO TEXAS UIL RULES.

B. FOR BID PURPOSE ONLY FOLLOWING COLOR SCHEDULE FOR "LVT STRIPING" COLORING REFER TO SCHEDULE. ALL COLORS SHOULD BE VERIFIED WITH ARCHITECT AND OWNER PRIOR TO STRIPING.

C. STRIPING CONTRACTORS SHALL PROVIDE GENERAL CONTRACTOR WITH LOCATIONS OF ALL BASKETBALL GOALS AND VOLLEYBALL COURT & NET LOCATIONS. THE LVT STRIPING CONTRACTOR SHALL FURNISH SCALED SHOP DRAWINGS OF THESE LOCATIONS TO THE ARCHITECT FOR APPROVAL.

D. PROVIDE LVT STRIPING FOR ONE MAIN BASKETBALL COURT, ONE MAIN VOLLEYBALL COURT. NOTE COLOR SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL COLORS WILL BE SELECTED BY THE OWNER.

E. GENERAL CONTRACTOR TO PROVIDE TAS-ADA COMPLIANT FLOOR TRANSITION STRIPS BETWEEN FLOOR FINISHES.

1. LVT-1
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MORIKATO
COLOR: 222 JAPANESE MAPLE
SIZE: 7" x 48"

2. LVT-2
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 252 A OUTRAGEOUS ORANGE STONE
SIZE: 12" x 24"

3. LVT-3
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 55 BLUE NIGHT
SIZE: 12" x 24"

4. LVT-4
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 556 MEGA BLUE
SIZE: 12" x 24"

5. LVT-5
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 915A FROSTBITE STONE
SIZE: 12" x 24"

6. LVT-6
MANUFACTURER: MOHAWK GROUP
LINE/BRAND: MATUTO PLUS
COLOR: 599A DEEP SEA STONE
SIZE: 12" x 24"

7. LVT-7
MANUFACTURER: MOHAWK GROUP
LINE/BRAND:
COLOR: WHITE
SIZE: 12" x 24"

8. LVT-8
MANUFACTURER: MOHAWK GROUP
LINE/BRAND:
COLOR:
SIZE: 12" x 24"

ACTIVITY	LINE WIDTH	COLORS
1. MAIN COURT STRIPES	2"	LVT BLUE NIGHT 55A
2. VOLLEYBALL STRIPES	2"	LVT OUTRAGEOUS ORANGE 252A

LOGO DETAIL
1" = 1'-0"
MONTE CRISTO
2

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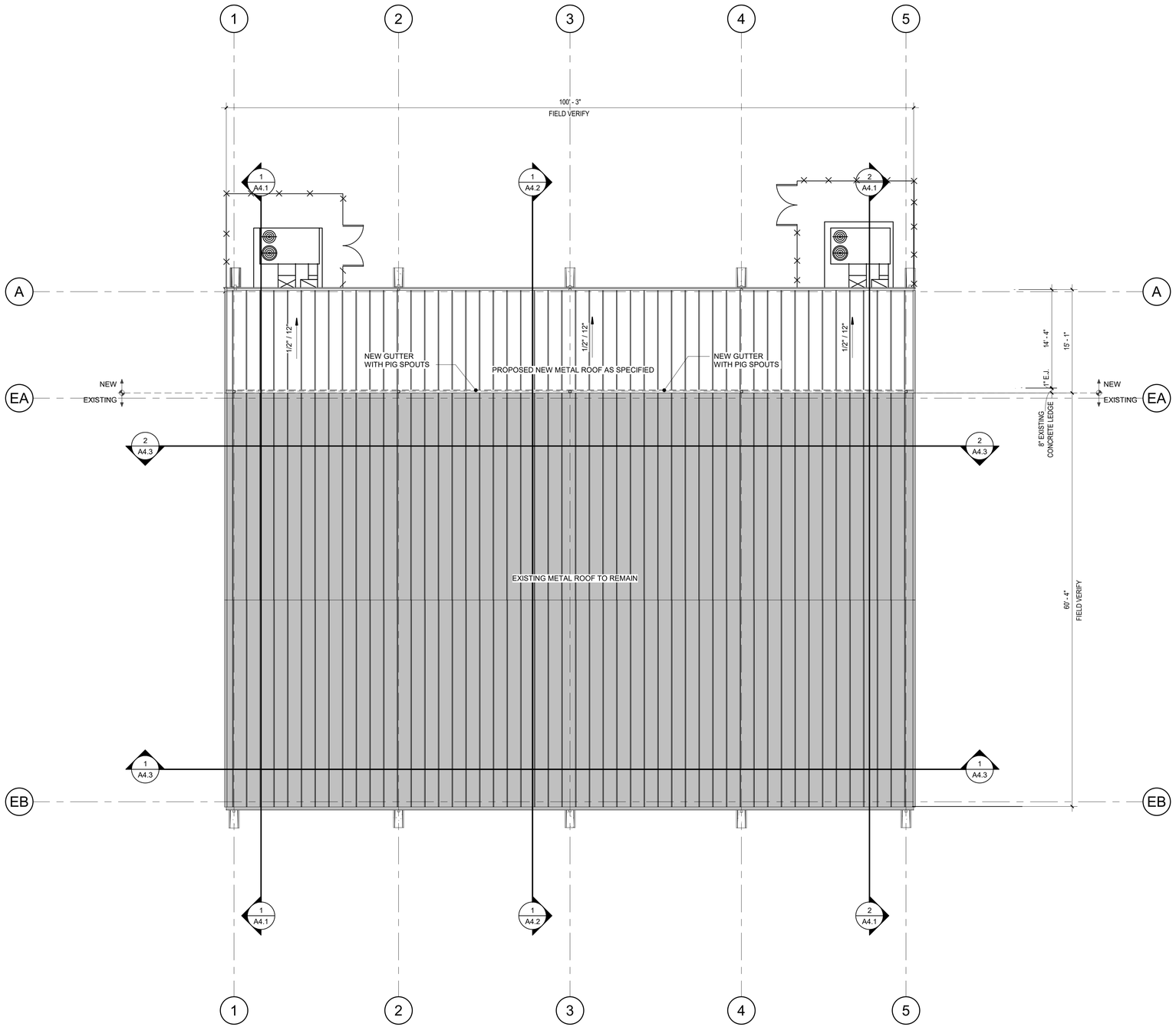
COURT DIMENTIONAL PLAN

A1.3



ROOF PLAN
1/8" = 1'-0"
MONTE CRISTO

1 N

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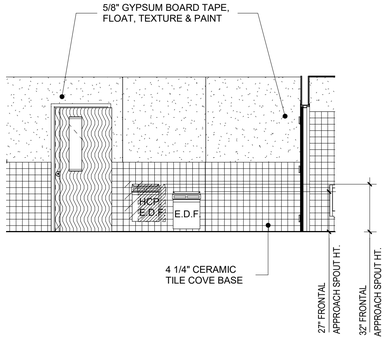
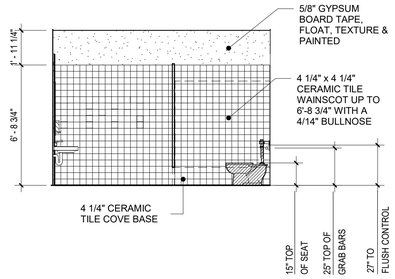
ROOF PLAN

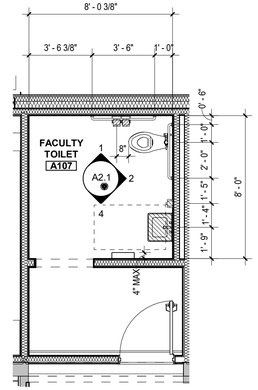
A1.4



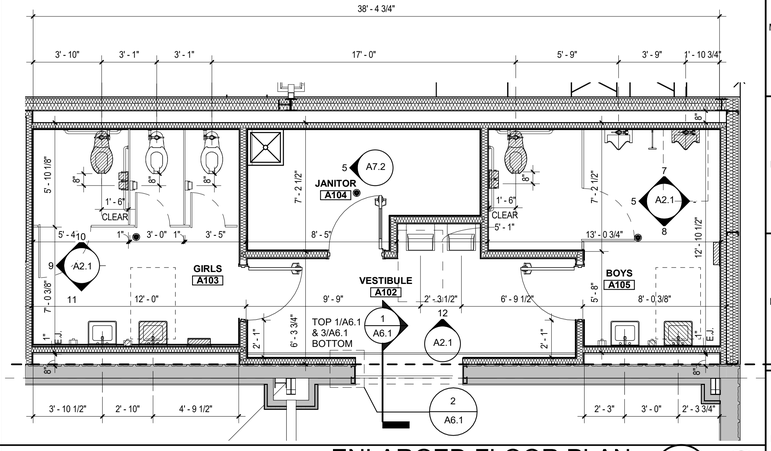
VESTIBULE A102 - EAST
1/4" = 1'-0" MONTE CRISTO — 12



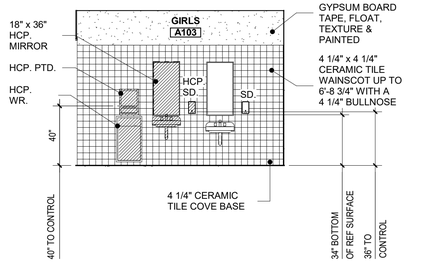
GIRLS A103-NORTH
1/4" = 1'-0" MONTE CRISTO — 9



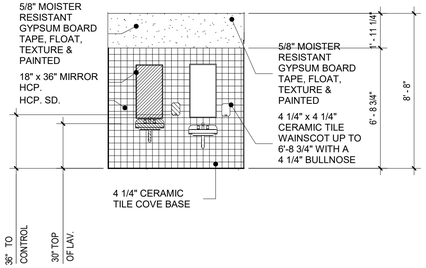
FACULTY TOILET
1/4" = 1'-0" MONTE CRISTO — 6



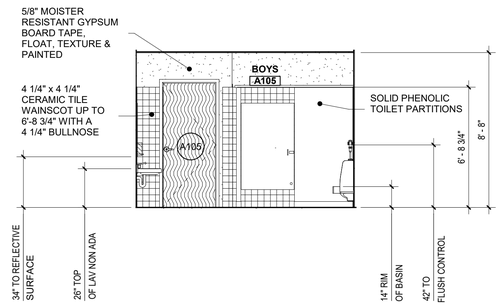
ENLARGED FLOOR PLAN
1/4" = 1'-0" MONTE CRISTO — 3



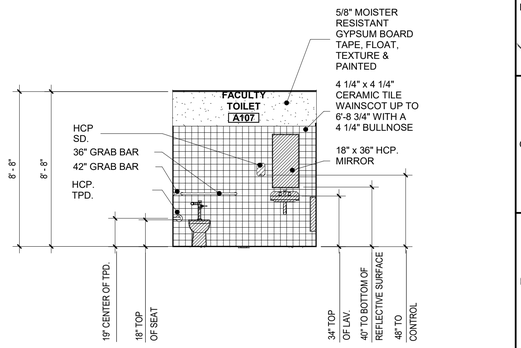
GIRLS A103 - WEST
1/4" = 1'-0" MONTE CRISTO — 11



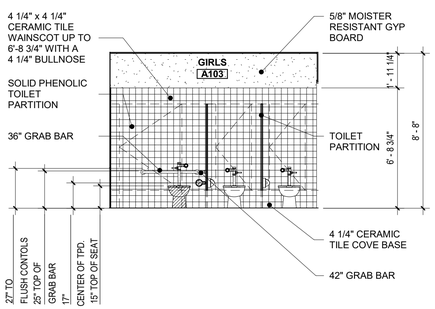
BOYS A105 - WEST
1/4" = 1'-0" MONTE CRISTO — 8



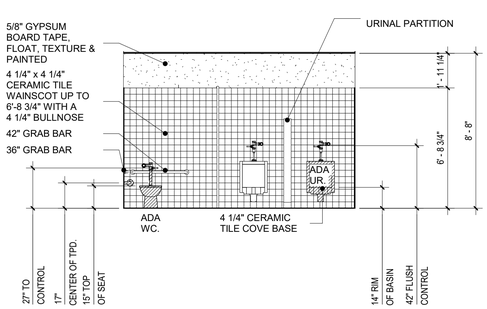
BOYS A105 - NORTH
1/4" = 1'-0" MONTE CRISTO — 5



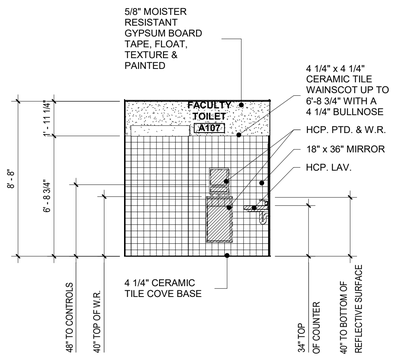
A107 - FACULTY TOILET - SOUTH.
1/4" = 1'-0" MONTE CRISTO — 2



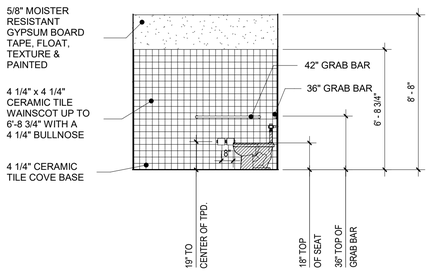
GIRLS 103 - EAST
1/4" = 1'-0" MONTE CRISTO — 10



BOYS A105 - EAST
1/4" = 1'-0" MONTE CRISTO — 7



FACULTY A107-WEST
1/4" = 1'-0" MONTE CRISTO — 4



A107 - FACULTY TOILET - EAST
1/4" = 1'-0" MONTE CRISTO — 1

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EA

REGISTERED ARCHITECT — MARK A. FIGUEROA — 12858 — STATE OF TEXAS
04.15.2020

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DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
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DATE: 4/18/2020 1:23:55 PM
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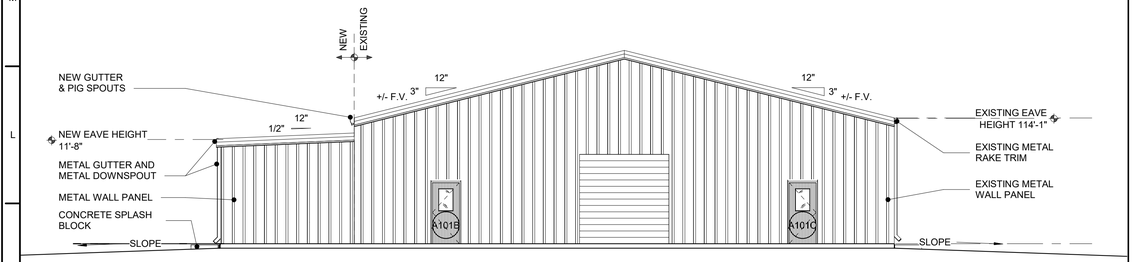
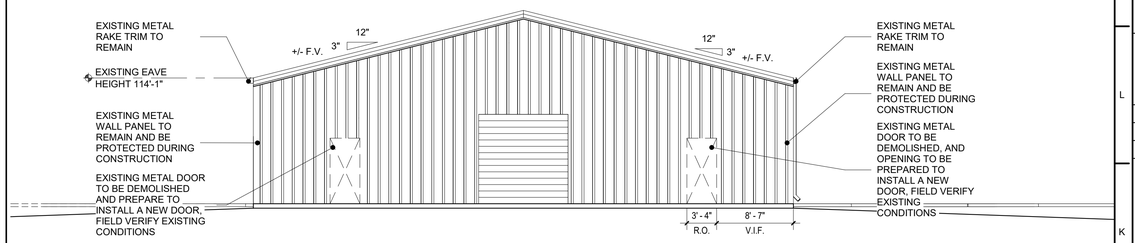
ENLARGED FLOOR PLAN

A2.1



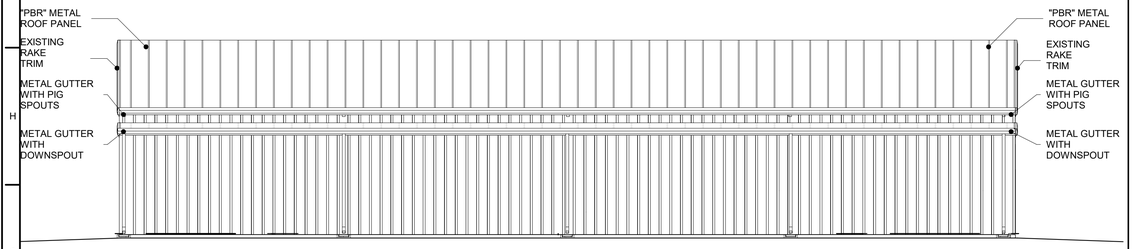
PROPOSED NORTH ELEVATION
1/8" = 1'-0" MONTE CRISTO

5



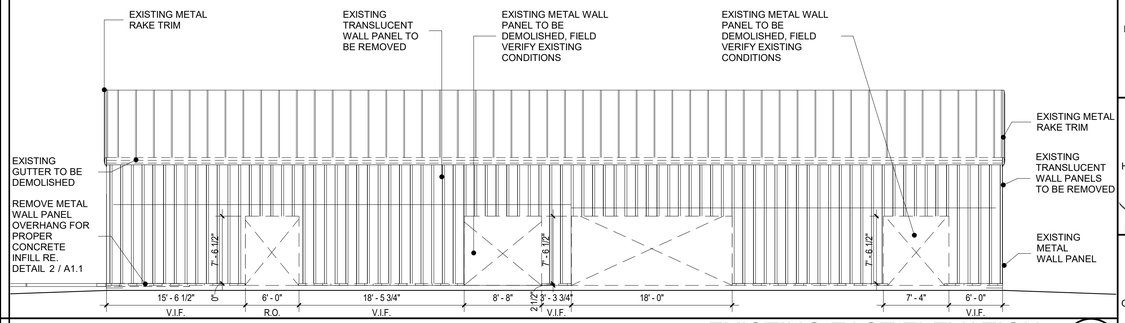
EXISTING NORTH ELEVATION
1/8" = 1'-0" MONTE CRISTO

1



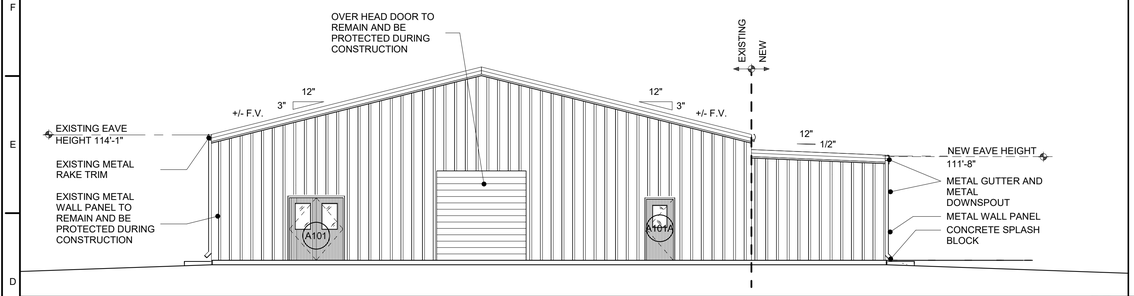
PROPOSED EAST ELEVATION
1/8" = 1'-0" MONTE CRISTO

6



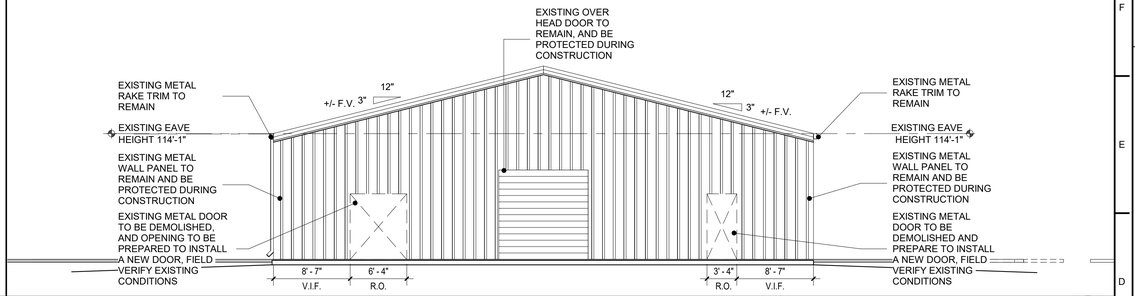
EXISTING EAST ELEVATION
1/8" = 1'-0" MONTE CRISTO

2



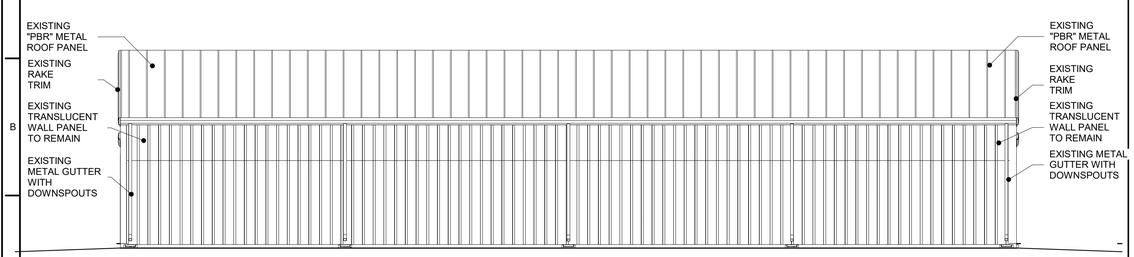
PROPOSED SOUTH ELEVATION
1/8" = 1'-0" MONTE CRISTO

7



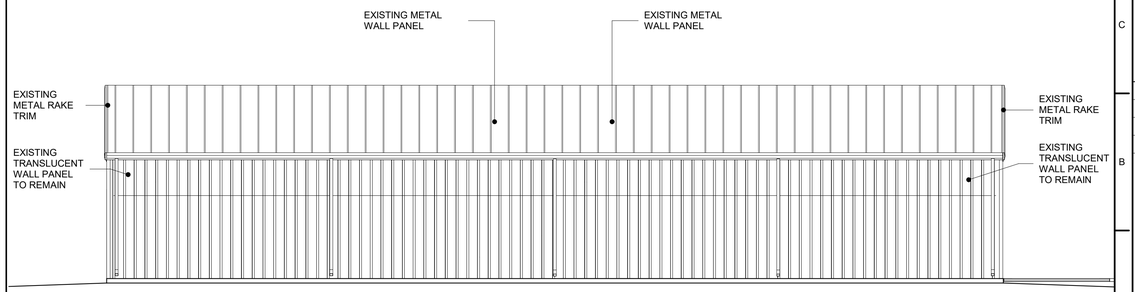
EXISTING SOUTH ELEVATION
1/8" = 1'-0" MONTE CRISTO

3



PROPOSED WEST ELEVATION
1/8" = 1'-0" MONTE CRISTO

8



EXISTING WEST ELEVATION
1/8" = 1'-0" MONTE CRISTO

4

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04.15.2020

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ELEMENTARY SCHOOL GYMNASIUM
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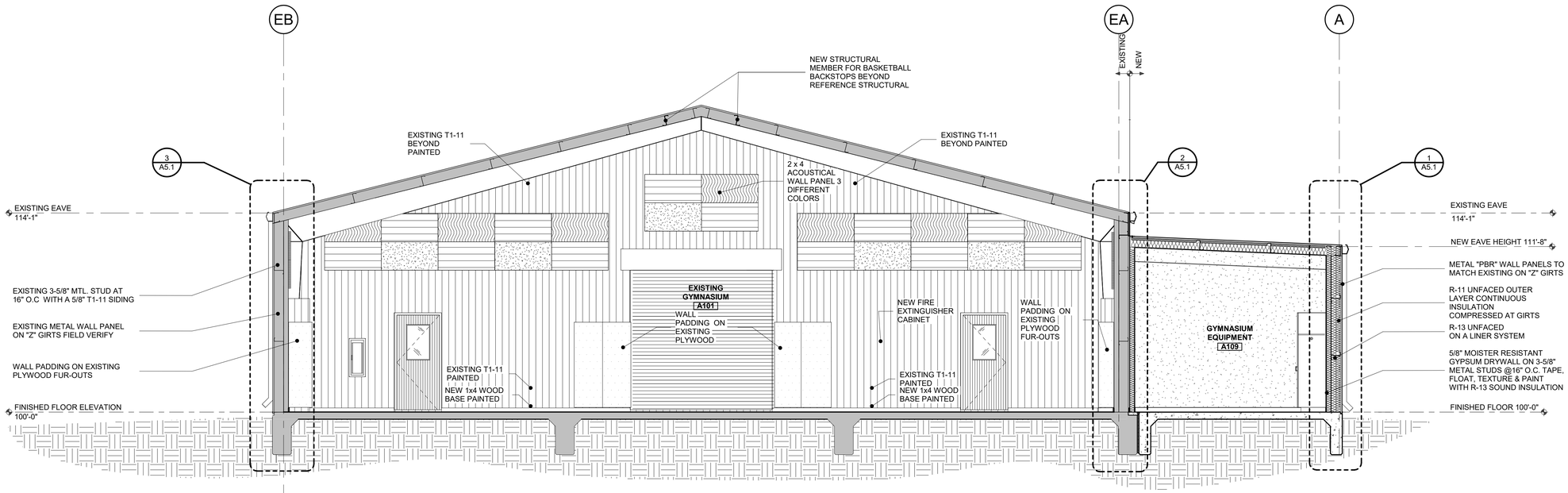
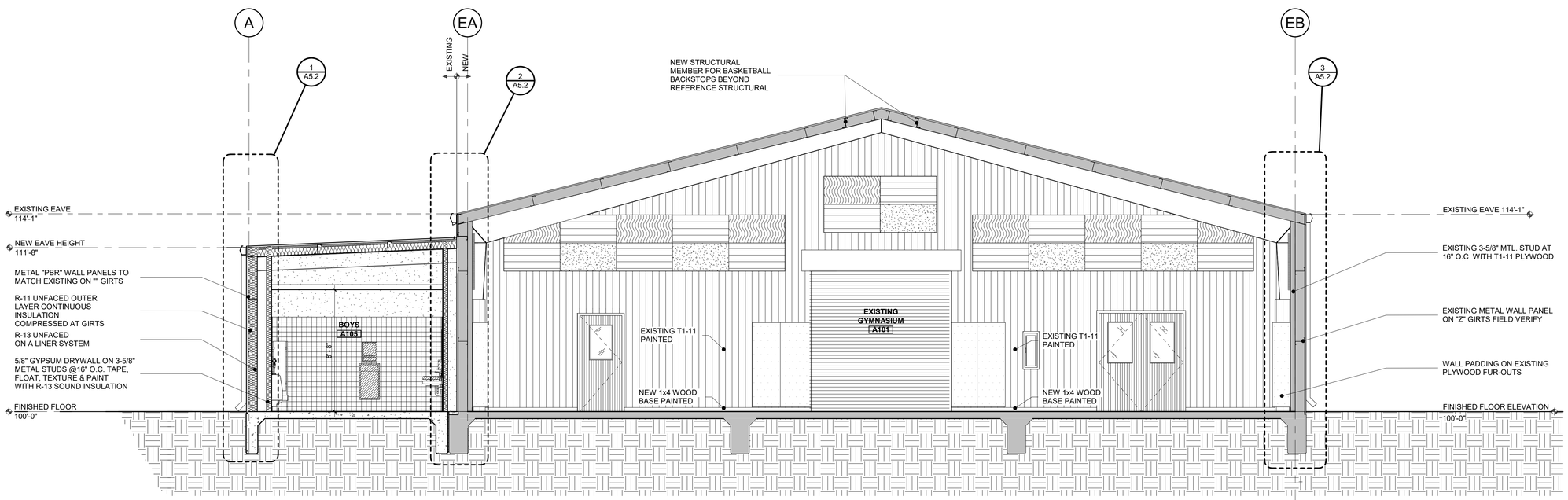
EXISITNG EXTERIOR ELEVATIONS & PROPOSED ELEVATIONS

A3.1



BUILDING SECTION 1
1/4" = 1'-0"
MONTE CRISTO
1



BUILDING SECTION 2
1/4" = 1'-0"
MONTE CRISTO
2

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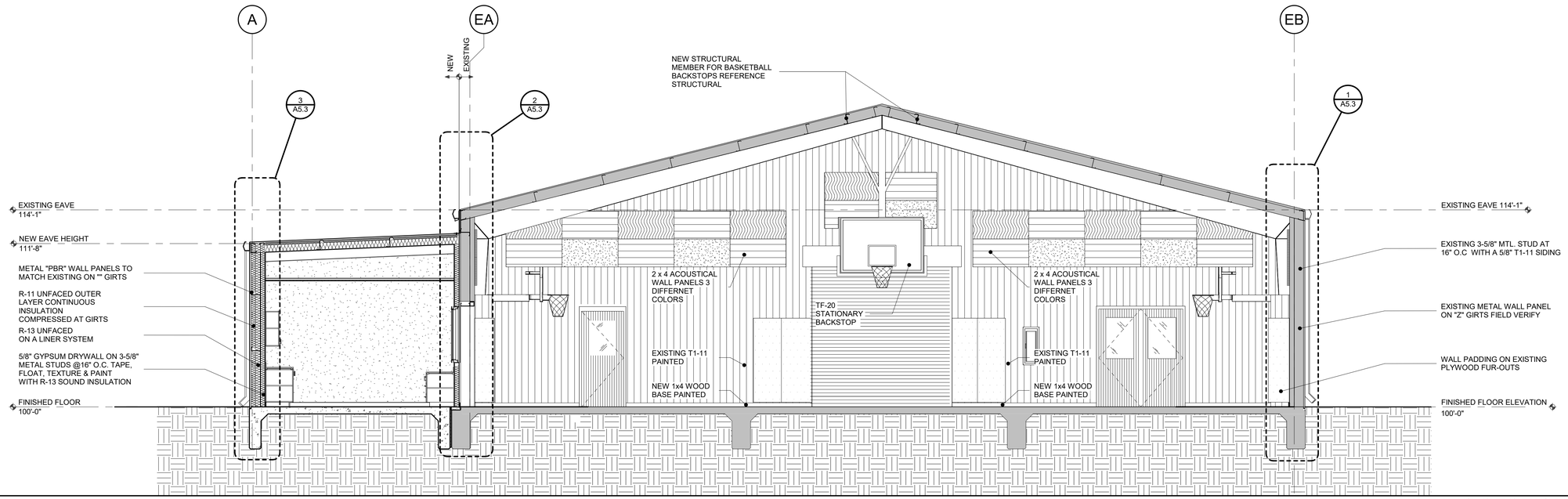
BUILDING SECTIONS

A4.1



BUILDING SECTION 3 — 1

1/4" = 1'-0"

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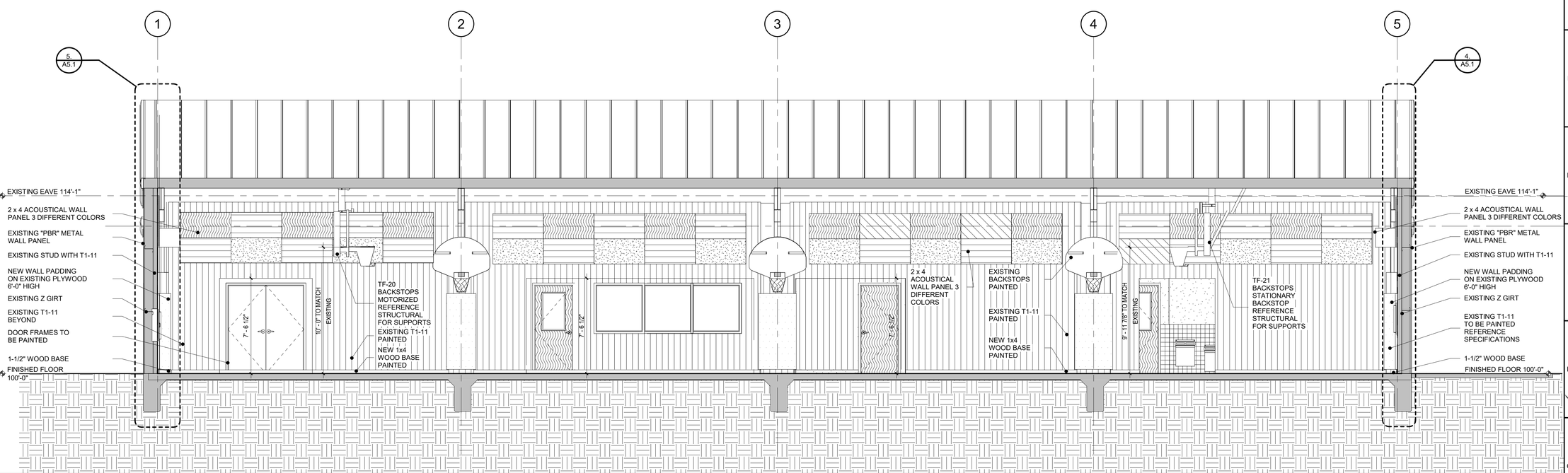
BUILDING SECTIONS

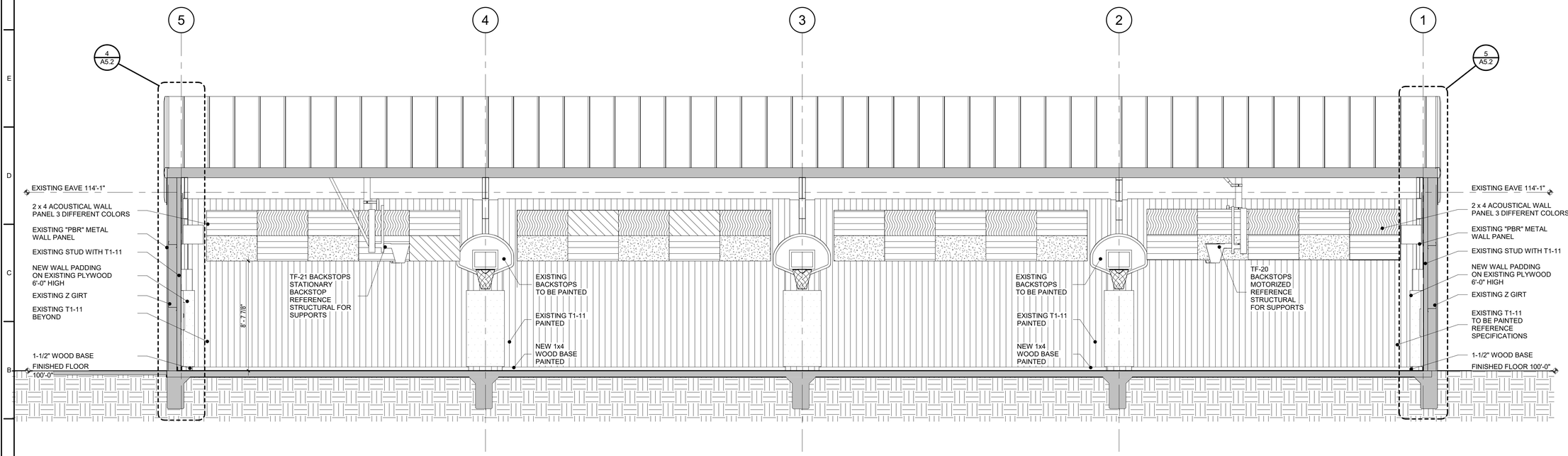
A4.2



BUILDING SECTION 5 — 1

1/4" = 1'-0"

MONTE CRISTO



BUILDING SECTION 4 — 2

1/4" = 1'-0"

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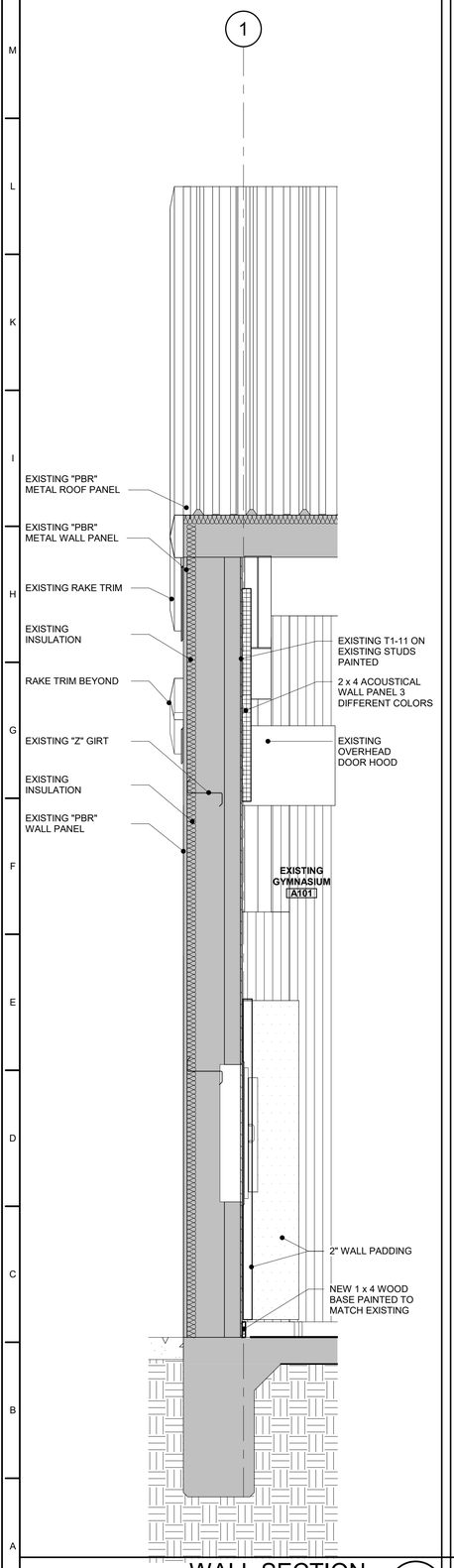
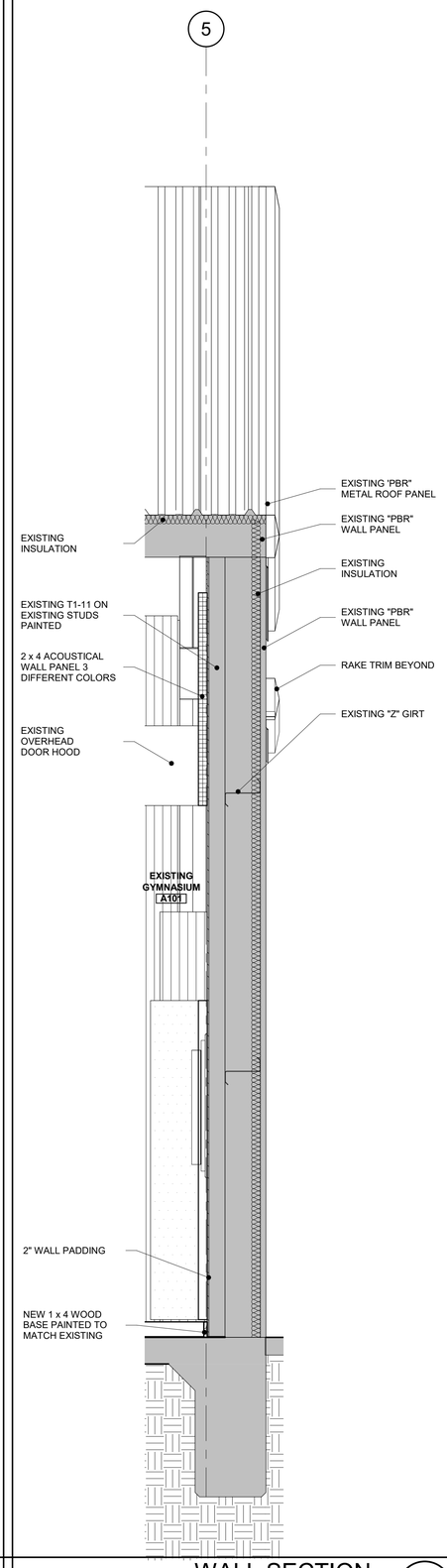
BUILDING SECTIONS

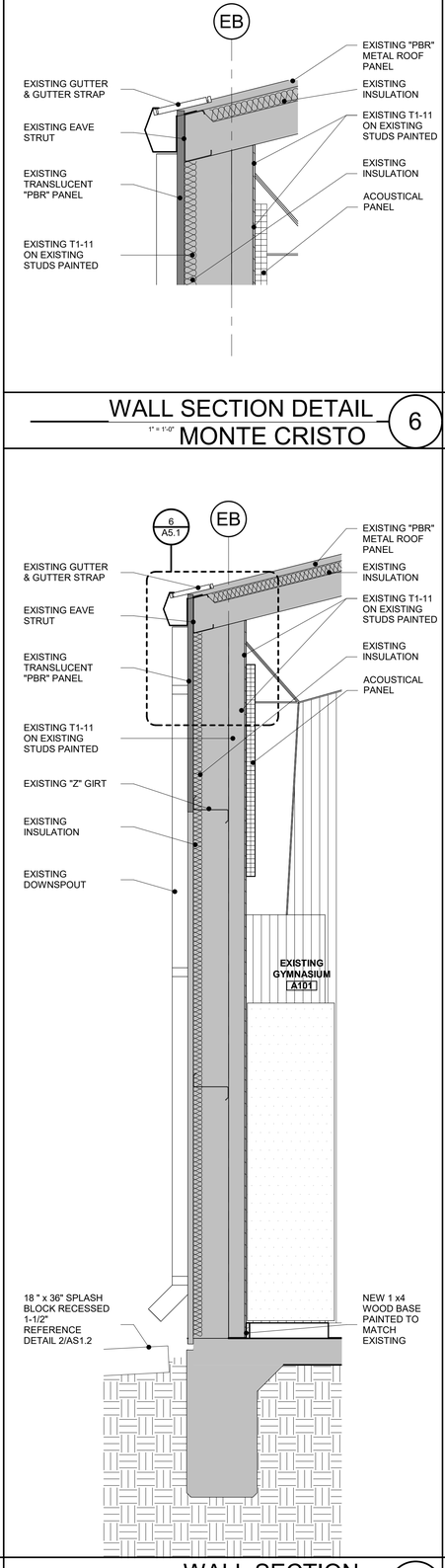
A4.3



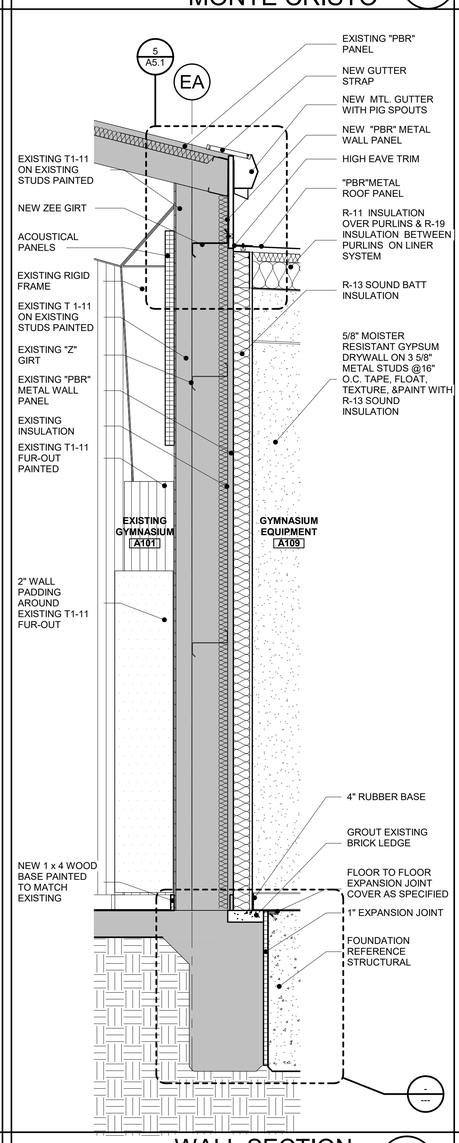
WALL SECTION 5. 3/4" = 1'-0" MONTE CRISTO



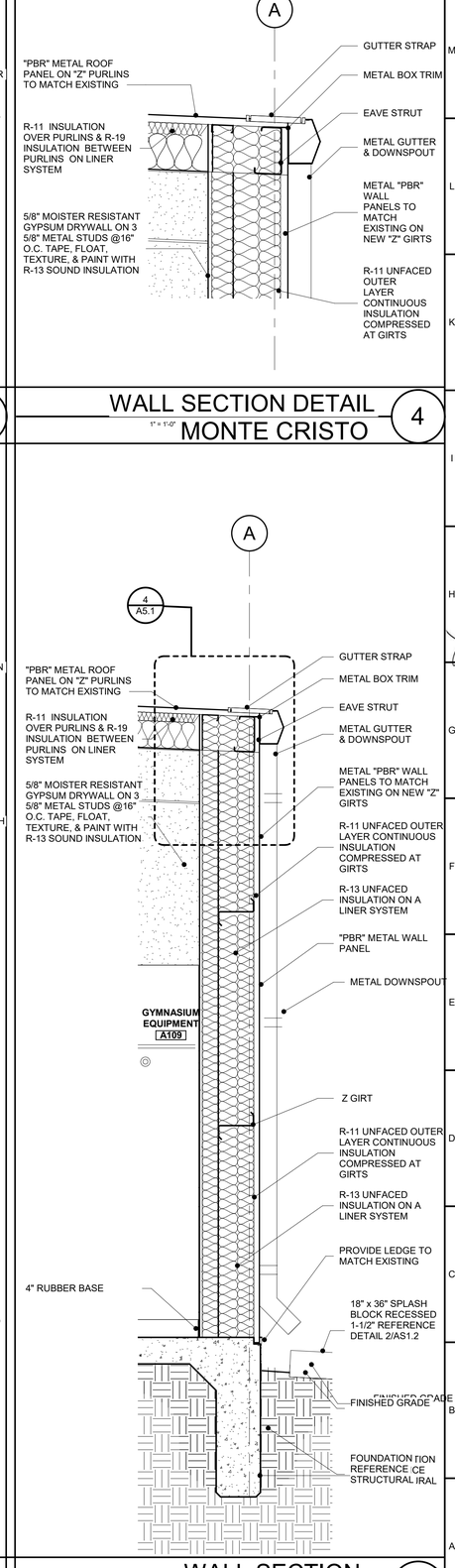
WALL SECTION 4. 3/4" = 1'-0" MONTE CRISTO



WALL SECTION 3. 3/4" = 1'-0" MONTE CRISTO

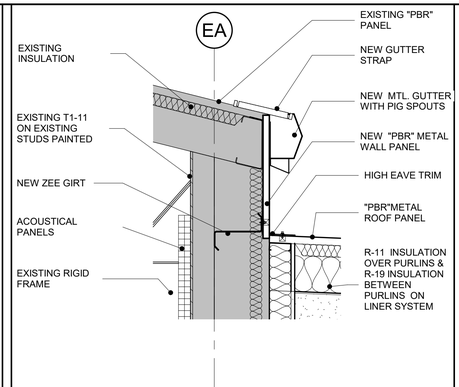


WALL SECTION 2. 3/4" = 1'-0" MONTE CRISTO



WALL SECTION 1. 3/4" = 1'-0" MONTE CRISTO

WALL SECTION DETAIL 6. 1" = 1'-0" MONTE CRISTO



WALL SECTION DETAIL 5. 1" = 1'-0" MONTE CRISTO

WALL SECTION DETAIL 4. 1" = 1'-0" MONTE CRISTO

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04.15.2020

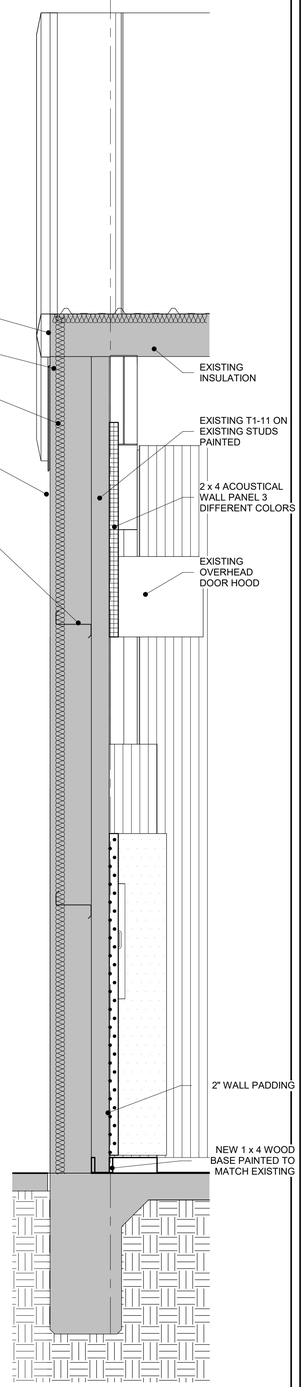
NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
DATE: 4/17/2020 3:47:59 PM
STARTING DATE:
CK BY: Checker DWN BY: Author

WALL SECTIONS

A5.1



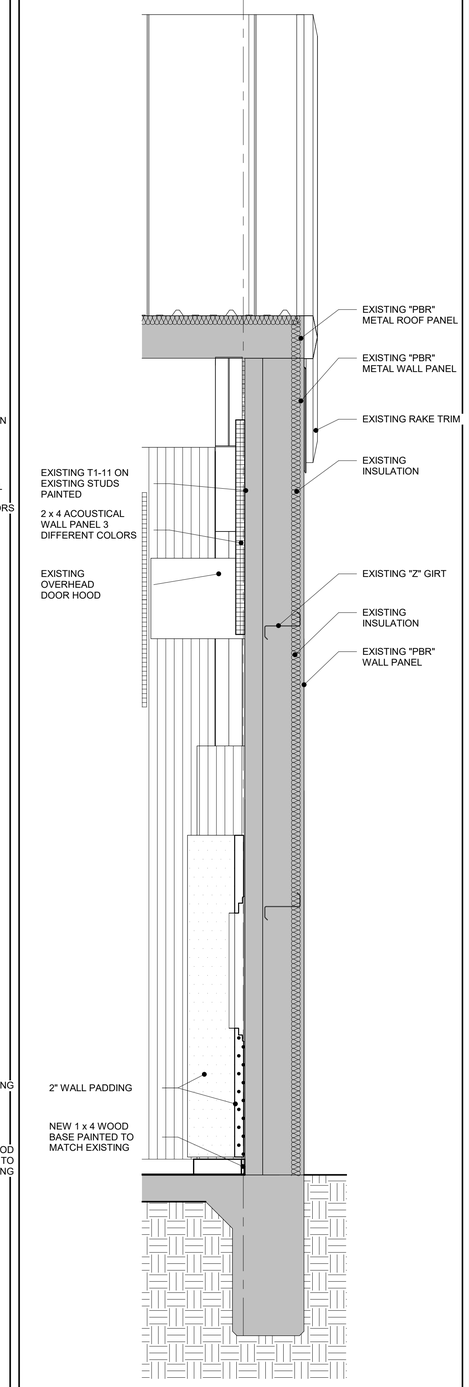
5

EXIST. END WALL CONDITION

3/4" = 1'-0"

MONTE CRISTO

4



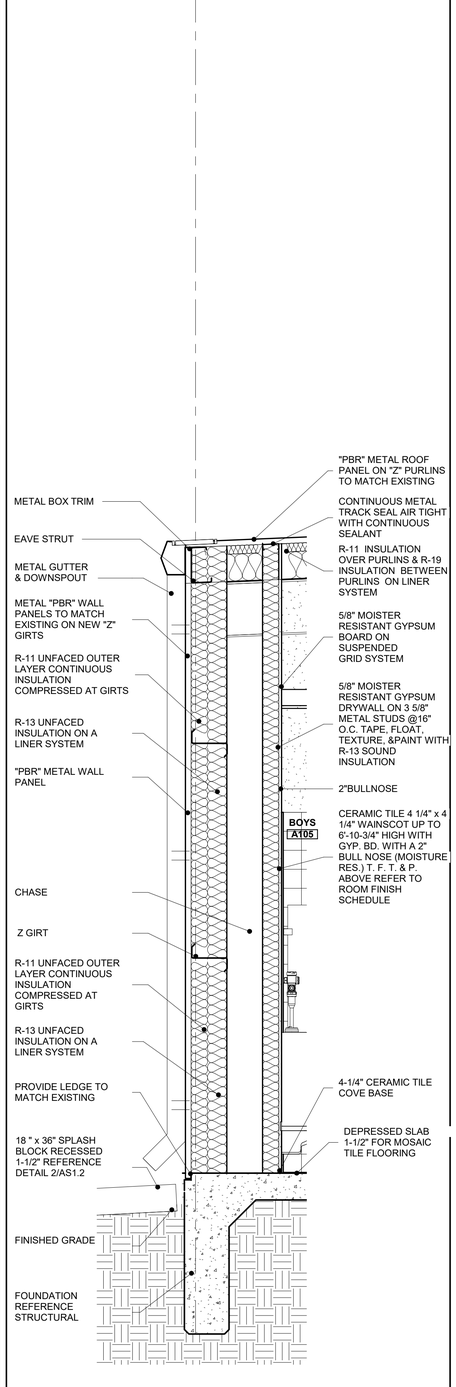
1

EXIST. END WALL CONDITION.

3/4" = 1'-0"

MONTE CRISTO

5



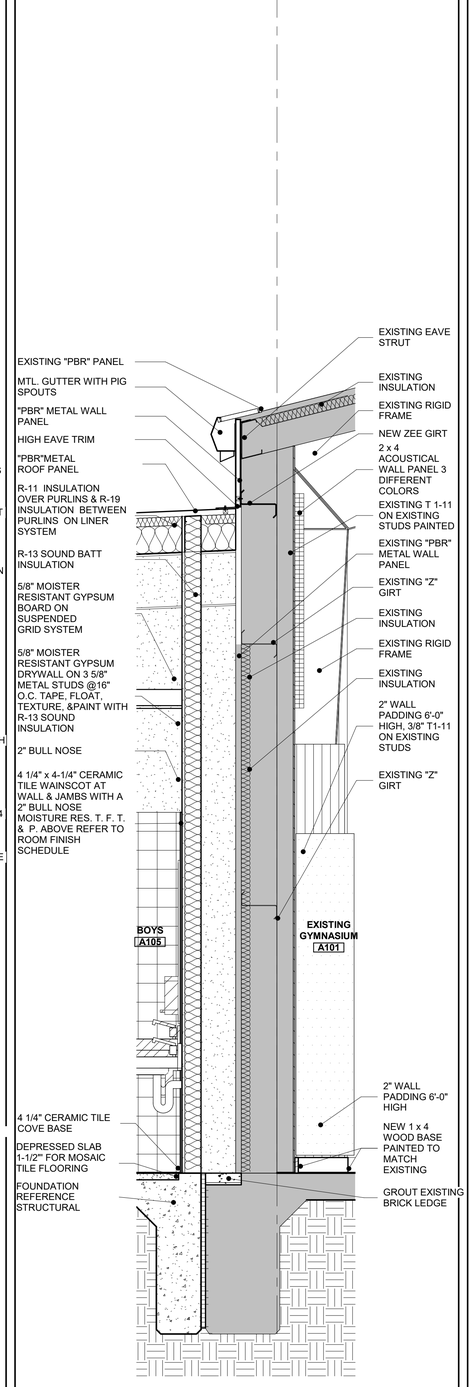
A

WALL SECTION .

3/4" = 1'-0"

MONTE CRISTO

1



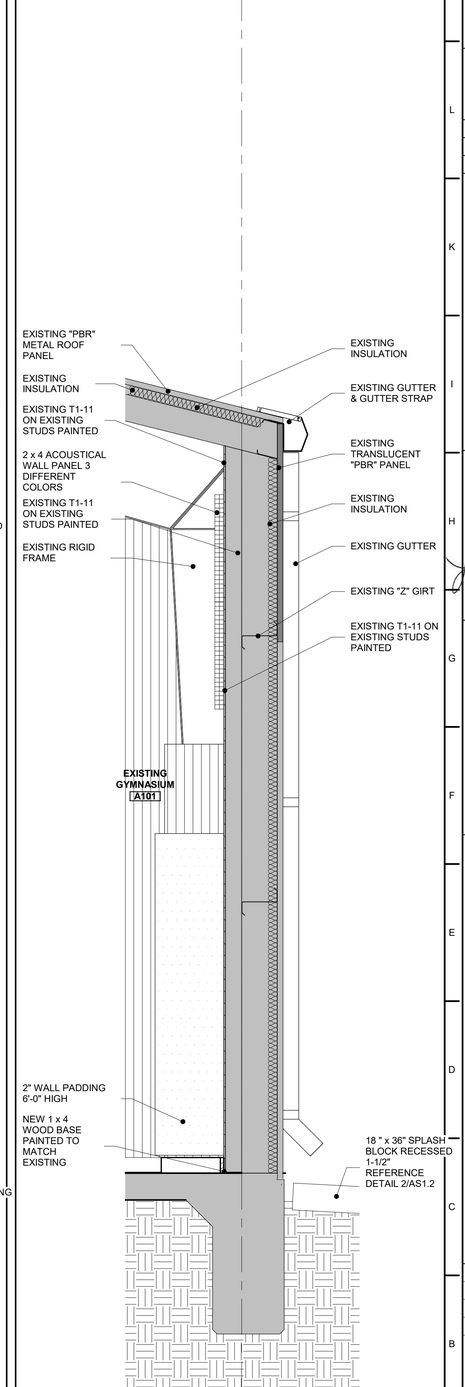
EA

WALL SECTION .

3/4" = 1'-0"

MONTE CRISTO

2



EB

WALL SECTION.

3/4" = 1'-0"

MONTE CRISTO

3

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04.15.2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number

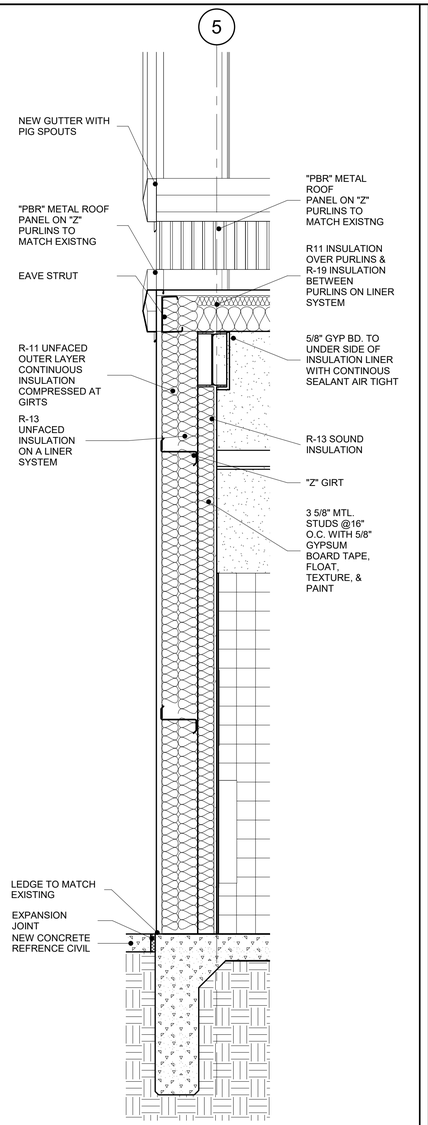
DATE: 4/17/2020 8:00:01 PM

STARTING DATE:

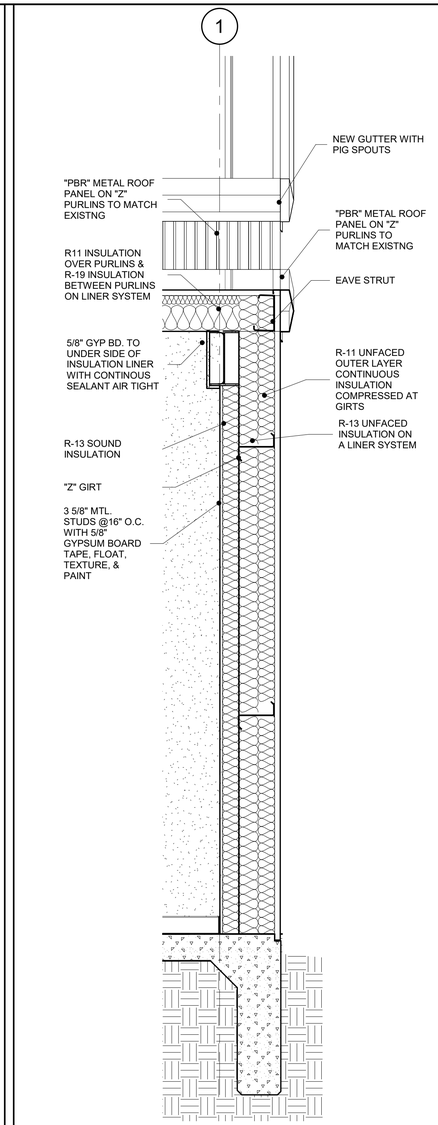
CK BY: Checker DWN BY: Author

WALL SECTIONS

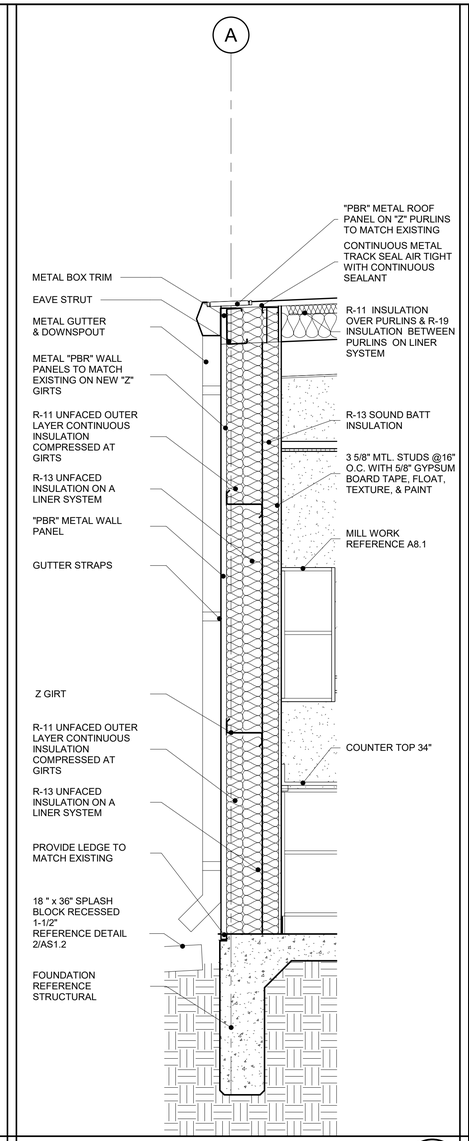
A5.2



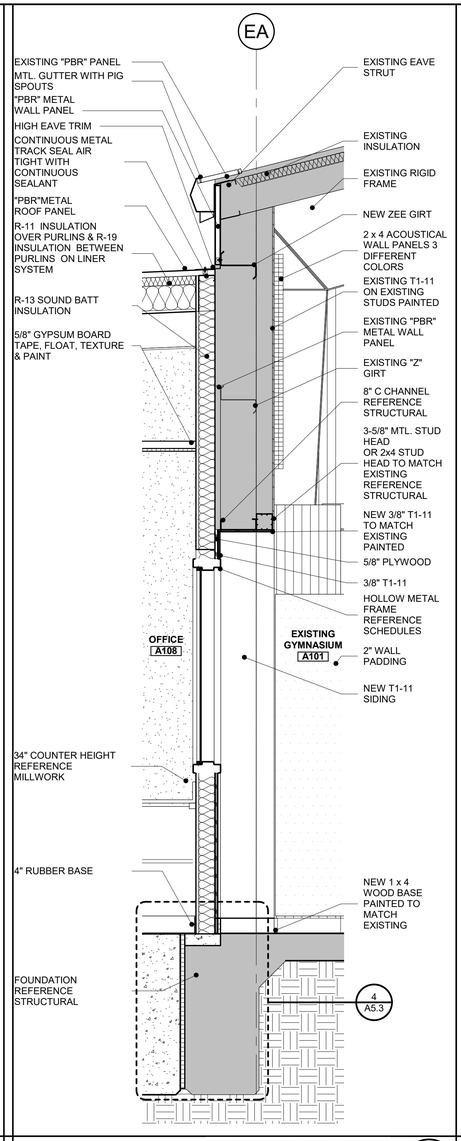
5 NEW END WALL CONDITION
3/4" = 1'-0" MONTE CRISTO



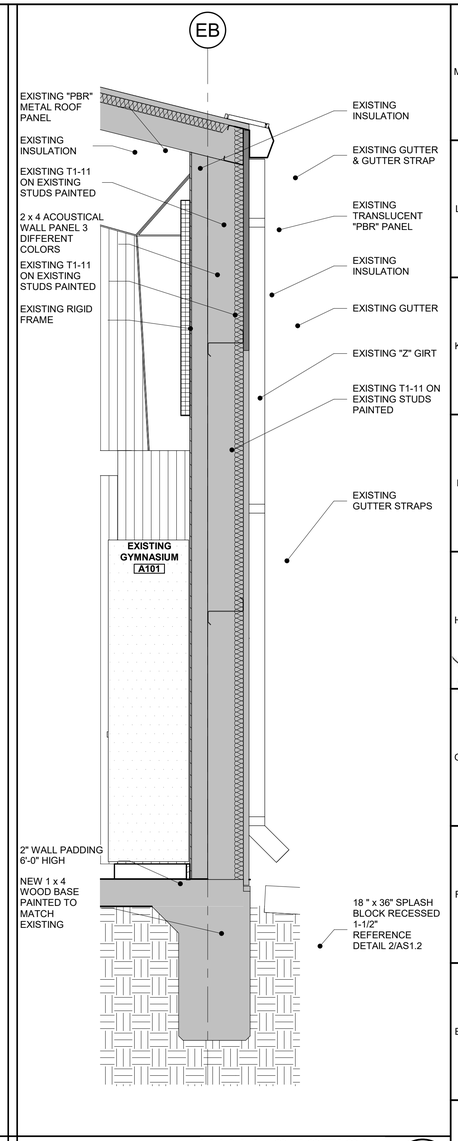
1 NEW END WALL CONDITION.
3/4" = 1'-0" MONTE CRISTO



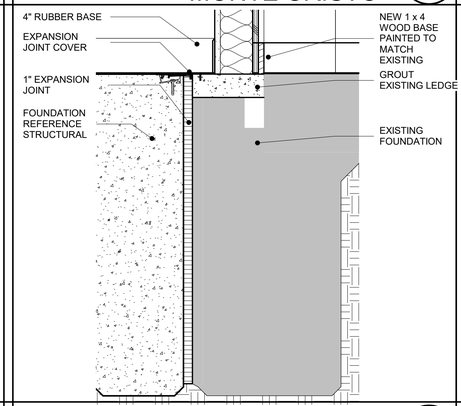
A WALL SECTION
3/4" = 1'-0" MONTE CRISTO 3



EA WALL SECTION
3/4" = 1'-0" MONTE CRISTO 2



EB WALL SECTION
3/4" = 1'-0" MONTE CRISTO 1



EXPANSION JOINT DETAIL
1 1/2" = 1'-0" MONTE CRISTO 4

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04.15.2020

NO.	DATE	DESCRIPTION
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DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
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PROJECT NO: Project Number
DATE: 4/17/2020 8:00:11 PM
STARTING DATE:
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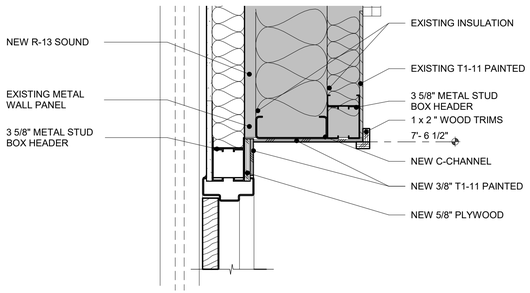
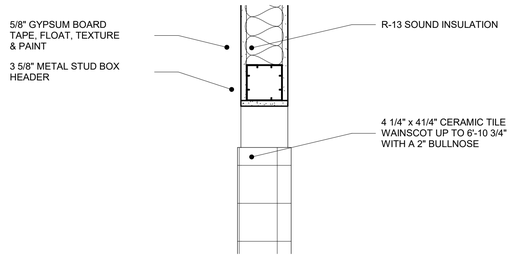
WALL SECTIONS

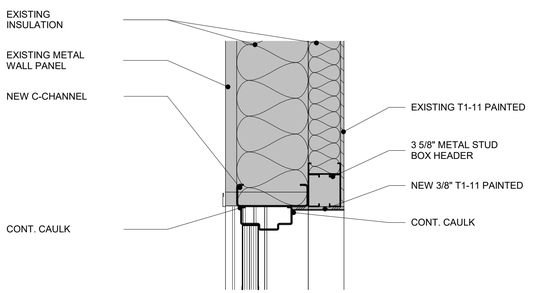
A5.3



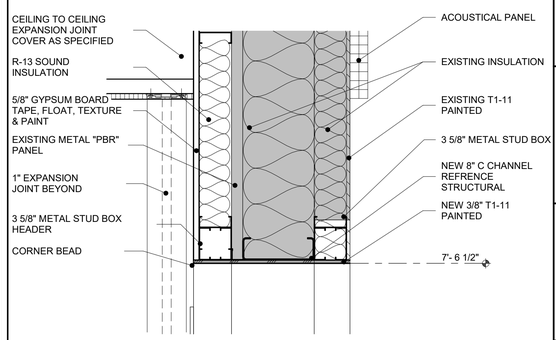
A109 HEAD DETAIL 10
1 1/2" = 1'-0" MONTE CRISTO



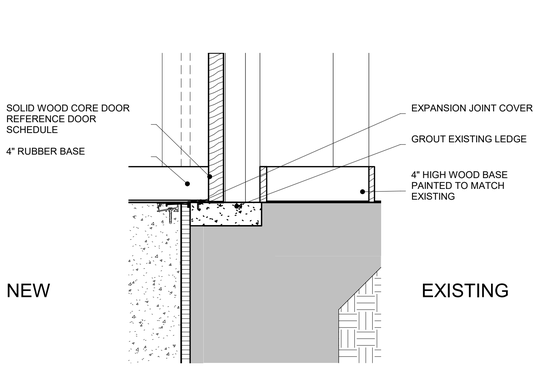
A107 CASED OPENEING HEAD DETAIL 7
1 1/2" = 1'-0" MONTE CRISTO



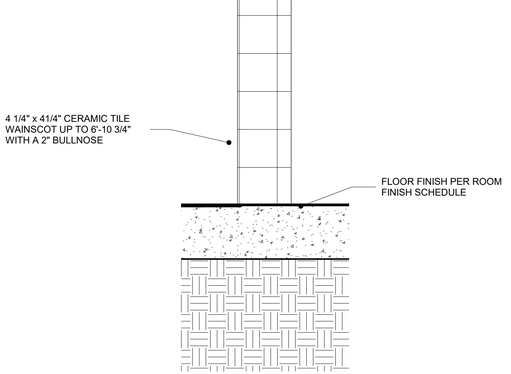
A101 HEAD DETAIL 4
1 1/2" = 1'-0" MONTE CRISTO



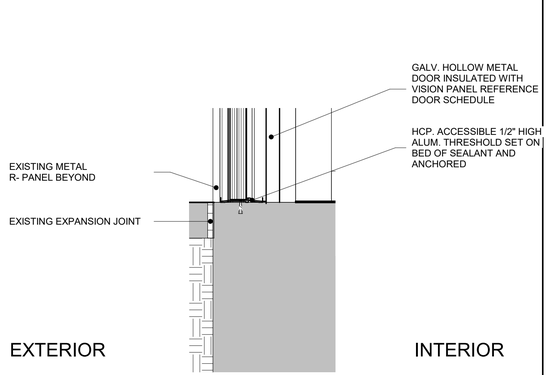
A102 HEAD DETAIL 1
1 1/2" = 1'-0" MONTE CRISTO



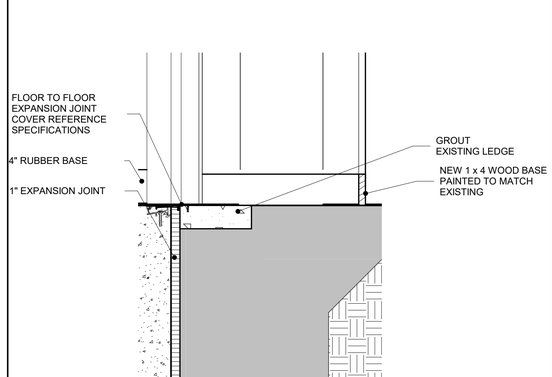
A109 JAMB DETAIL 11
1 1/2" = 1'-0" MONTE CRISTO



A107 CASED OPENING JAMB DETAIL 8
1 1/2" = 1'-0" MONTE CRISTO



A101 JAMB DETAIL 5
1 1/2" = 1'-0" MONTE CRISTO



A102 JAMB DETAIL 2
1 1/2" = 1'-0" MONTE CRISTO

A109 SILL DETAIL 12
1 1/2" = 1'-0" MONTE CRISTO

A107 CASED OPENEING SILL DETAIL 9
1 1/2" = 1'-0" MONTE CRISTO

A101 SILL DETAIL 6
1 1/2" = 1'-0" MONTE CRISTO

A102 SILL DETAIL 3
1 1/2" = 1'-0" MONTE CRISTO

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04.15.2020

NO.	DATE	DESCRIPTION
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DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
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INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
DATE: 4/17/2020 3:48:19 PM
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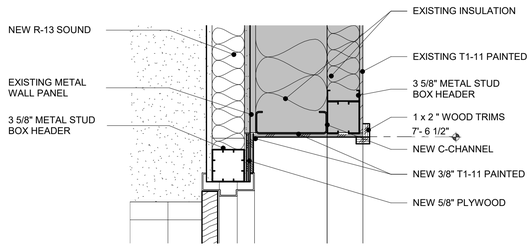
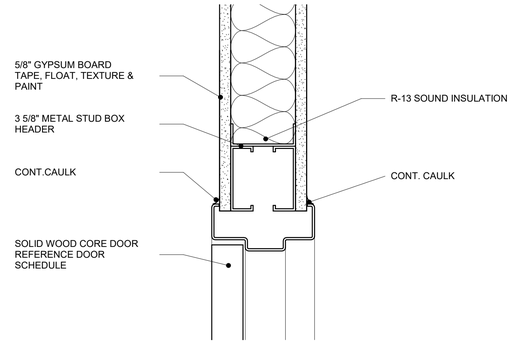
DOOR & WINDOW DETAILS

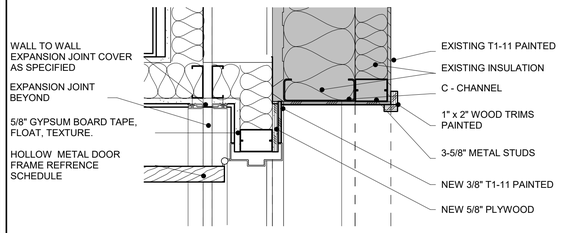
A6.1



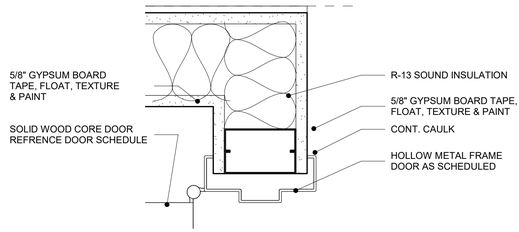
A107 HEAD DETAIL 4
1 1/2" = 1'-0"
MONTE CRISTO



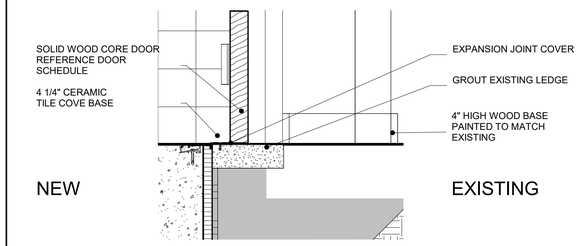
HEAD DETAIL 1
3" = 1'-0"
MONTE CRISTO



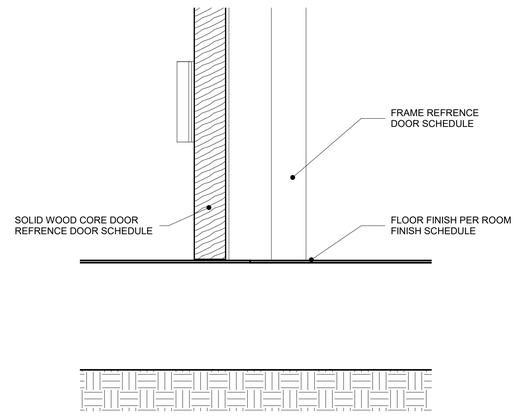
A107 JAMB DETAIL 5
1 1/2" = 1'-0"
MONTE CRISTO



JAMB DETAIL 2
3" = 1'-0"
MONTE CRISTO



A107 SILL DETAIL 6
1 1/2" = 1'-0"
MONTE CRISTO



SILL DETAIL 3
3" = 1'-0"
MONTE CRISTO

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DE LA VINA & MONTE CRISTO
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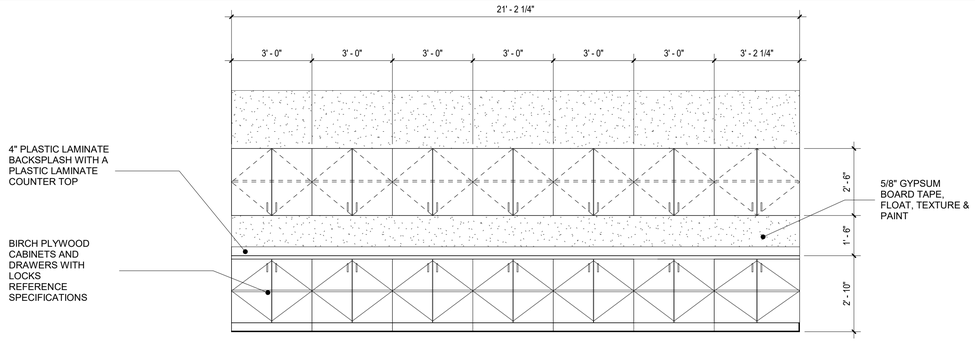
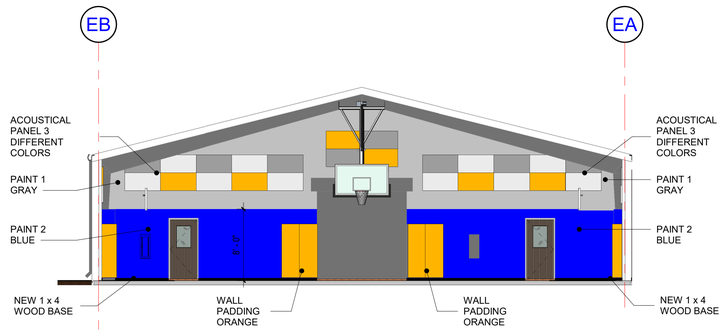
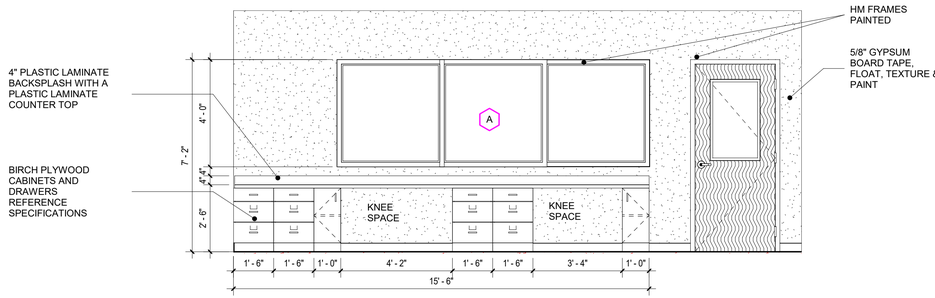
A6.2



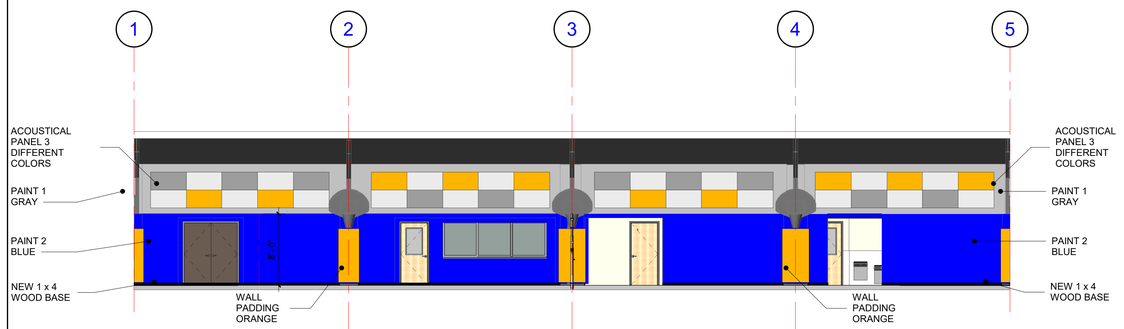
MILLWORK
MONTE CRISTO
5



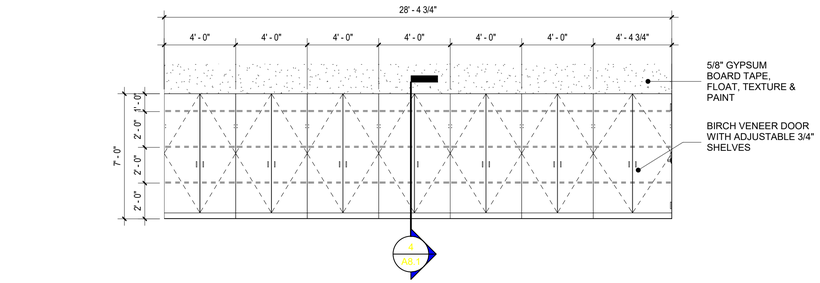
PAINT INTERIOR ELEVATION - NORTH
MONTE CRISTO
1



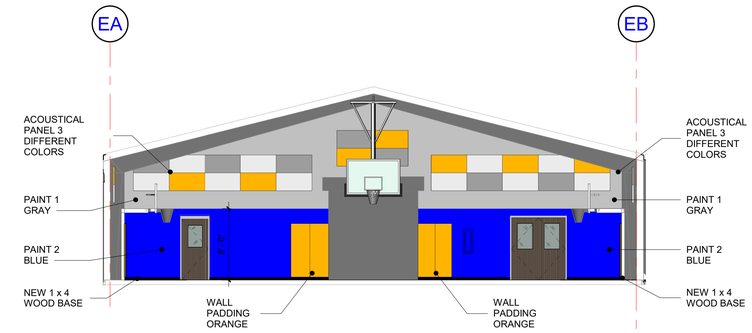
MILLWORK 1
MONTE CRISTO
6



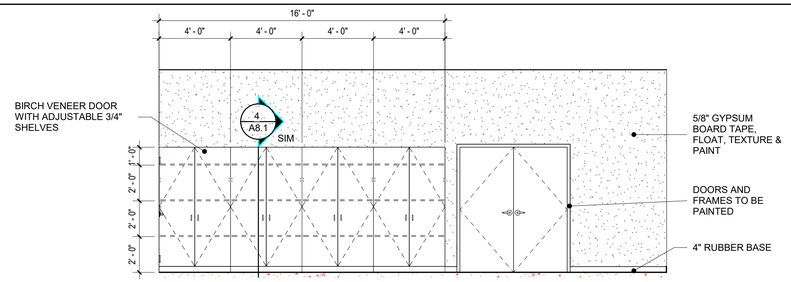
PAINT INTERIOR ELEVATION - EAST
MONTE CRISTO
2



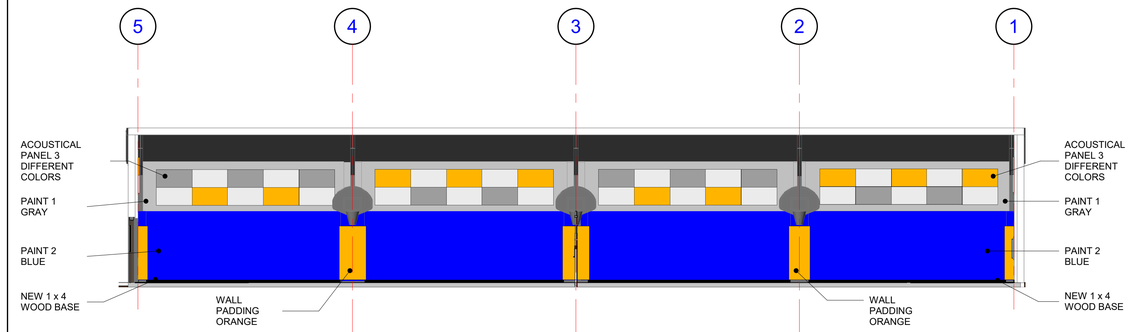
A109 GYM EQUIP. - EAST
MONTE CRISTO
7



PAINT INTERIOR ELEVATION - SOUTH
MONTE CRISTO
3



A109 GYM EQUIP. - WEST
MONTE CRISTO
8



PAINT INTERIOR ELEVATION - WEST
MONTE CRISTO
4

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STATE OF TEXAS
04.15.2020

NO.	DATE	DESCRIPTION
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DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
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INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
DATE: 4/18/2020 1:32:30 PM
STARTING DATE:
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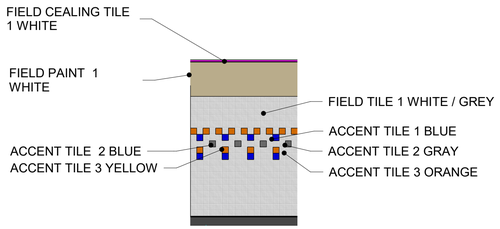
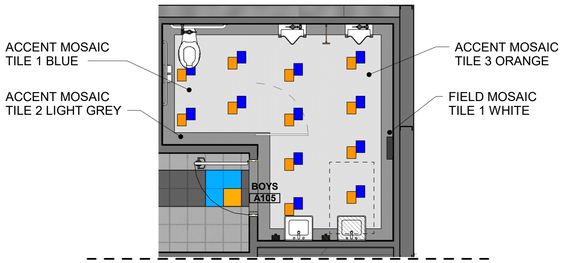
INTERIOR ELEVATIONS

A7.1



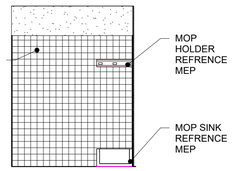
TYPICAL RESTROOM TILE PATTERN — MONTE CRISTO — 6

3/4" = 1'-0"



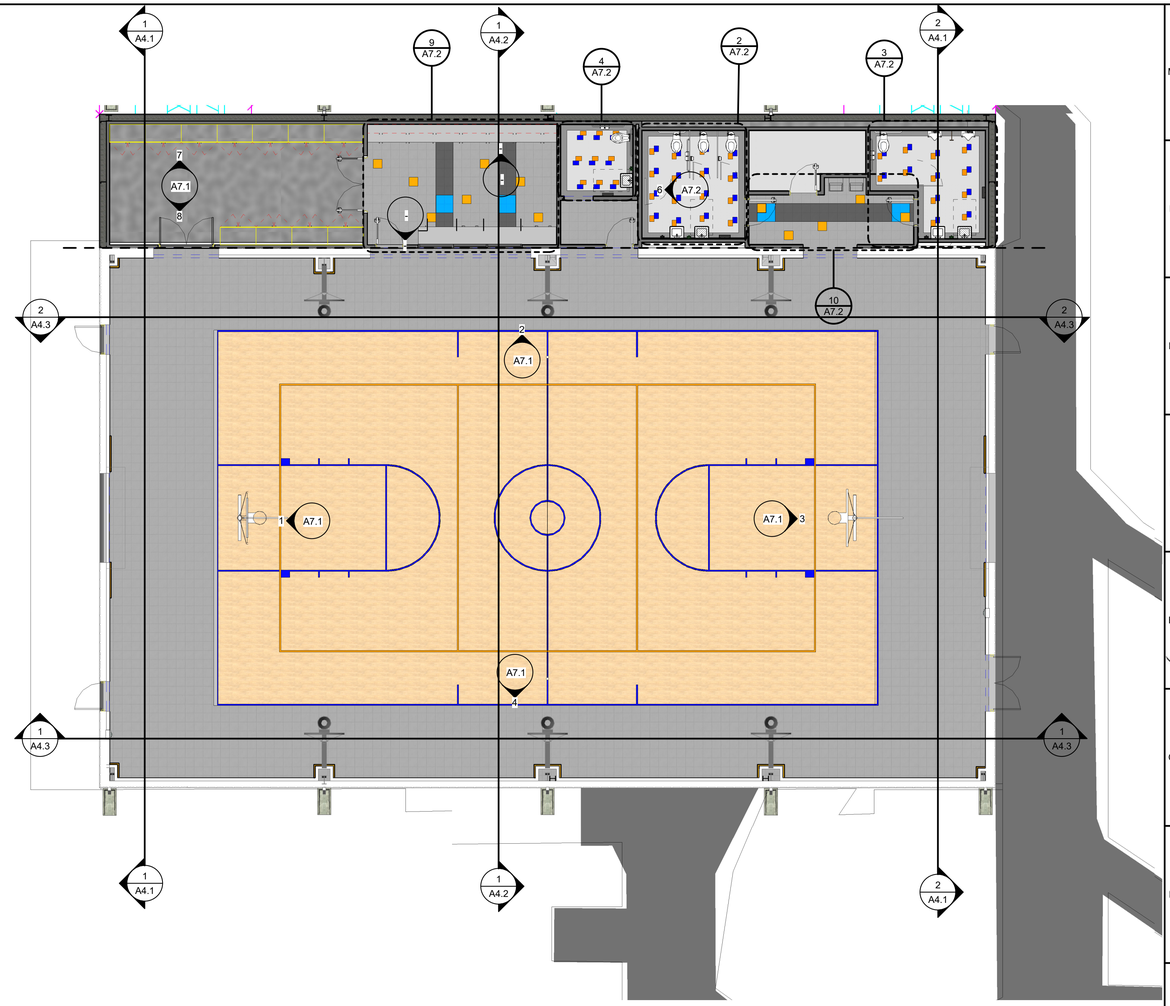
FLOOR PATTERNING - BOYS — MONTE CRISTO — 3

1/4" = 1'-0"



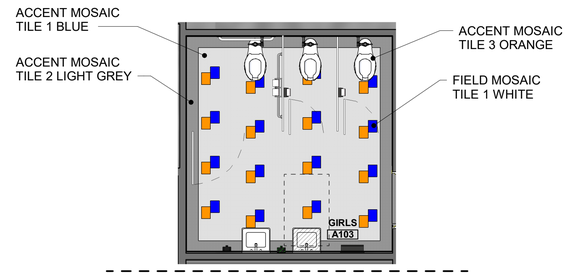
INTERIOR ELEVATION — MONTE CRISTO — 5

3/4" = 1'-0"



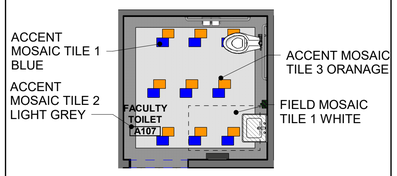
FLOOR PATTERNING — MONTE CRISTO — 1

1/8" = 1'-0"



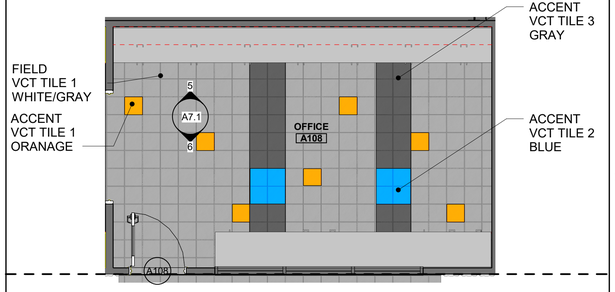
FLOOR PATTERNING - GIRLS — MONTE CRISTO — 2

3/4" = 1'-0"



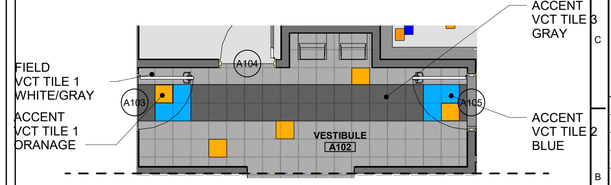
FLOOR PAT. - FAC. TLT. — MONTE CRISTO — 4

3/4" = 1'-0"



FLOOR PATTERNING - OFFICE — MONTE CRISTO — 9

3/4" = 1'-0"



FLOOR PATTERNING - VESTIBULE — MONTE CRISTO — 10

3/4" = 1'-0"

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McAllen Harlingen

CONSULTANTS:

REGISTERED ARCHITECT — JOHN A. FIGUEROA — 12856 — STATE OF TEXAS

04.15.2020

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYMNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: Project Number
DATE: 4/17/2020 6:58:45 PM
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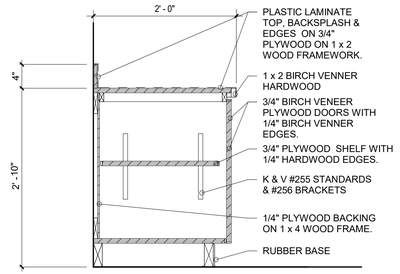
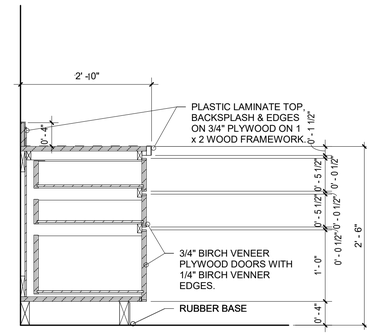
Unnamed

A7.2



SECTION AT OFFICE A108 - EAST 3
1" = 1'-0" MONTE CRISTO



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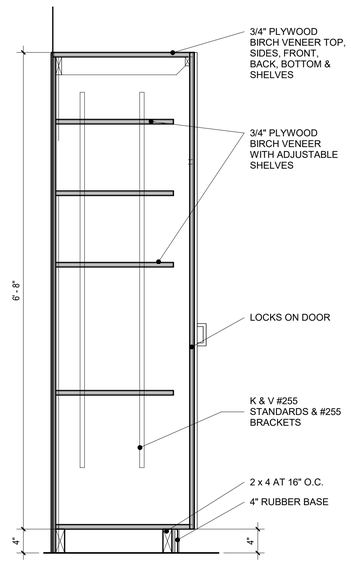
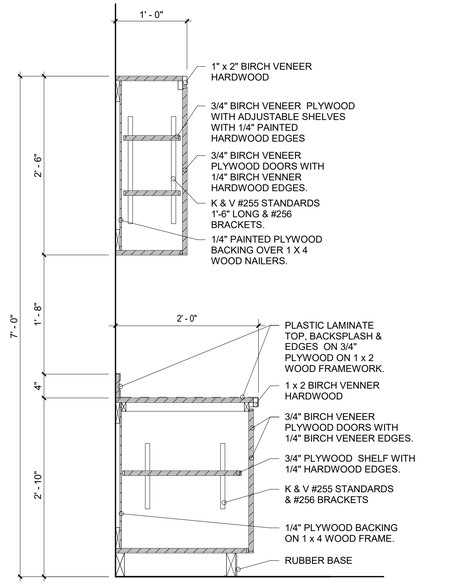


STORAGE CABINET 4
1" = 1'-0" MONTE CRISTO



SECTION AT OFFICE A108 EAST 1
1" = 1'-0" MONTE CRISTO

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JOSE A. FIGUEROA
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04.15.2020

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Unnamed

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ROOM FINISH SCHEDULE FINAL

NUMBER	NAME	FLOOR	BASE	WALLS				CEILING		COUNTERTOP	REMARKS
				NORTH	EAST	SOUTH	WEST	FINISH	HEIGHT		
A101	EXISTING GYMNASIUM	F.1 / F.2	B.3	W.3	W.3	W.3	W.3	C.3	VARIES		
A102	VESTIBULE	F.1	B.1	W.4	W.4	W.4	W.4	C.1	8'-8"		
A103	GIRLS	F.3	B.2	W.2	W.2	W.2	W.2	C.2	8'-8"		
A104	JANITOR	F.4	B.1	W.1	W.1	W.1	W.1	C.1	8-'8"		
A105	BOYS	F.3	B.2	W.2	W.2	W.2	W.2	C.2	8'-8"		
A107	FACULTY TOILET	F.3	B.2	W.2	W.2	W.2	W.2	C.2	8'-8"		
A108	OFFICE	F.1	B.1	W.1	W.1	W.1	W.1	C.1	8'-8"		
A109	GYMNASIUM EQUIPMENT	F.4	B.1	W.1	W.1	W.1	W.1	C.3	EXPOSED STRUCTURE		

KEY FINISHES-BASE FINISH SCHEDULE

Key	Base Finish
B.1	4" RUBBER COVE BASE
B.2	4-1/4" CERAMIC TILE COVE BASE
B.3	4" HIGH WOOD BASE PAINTED TO MATCH EXISTING

KEY FINISHES-CEILING FINISH SCHEDULE

Key	Ceiling Finish
C.1	2' X 2' LAY-IN ACOUSTICAL CEILING TILE SYSTEM
C.2	5/8" THICK, MOISTURE RESISTANT GYP. BD. ON SUSPENDED GRID SYSTEM (2 LAYERS OF 5/8" GYP. BD. AT FIRE RATED CONDITIONS)
C.3	EXPOSED STRUCTURE NOT PAINTED

KEY FINISHES-FLOOR FINISH SCHEDULE

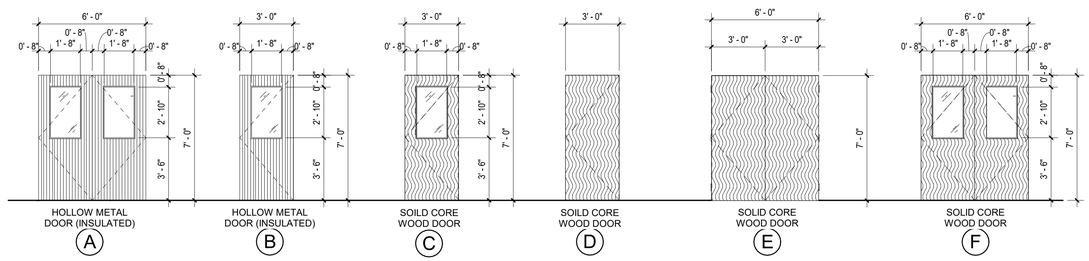
Key	Floor Finish
F.1	V.C.T.
F.2	L.V.T.
F.3	CERAMIC MOSAIC TILE (2" X 2")
F.4	EXPOSED CONCRETE (TROWEL FINISH) SEALED

KEY FINISHES-WALL FINISH SCHEDULE

Key	Wall Finish
W.1	5/8" GYPSUM BOARD TAPE, FLOAT, TEXTURE & PAINTED
W.2	CERAMIC TILE 4-1/4" X 4-1/4" WAINSCOT UP TO 6' 8-3/4" HIGH WITH GYP. BD. WITH A 4 1/4" x 4 1/4" BULL NOSE (MOISTURE RES.) T.F.T.& P. ABOVE
W.3	T1-11 SEALED AND PAINTED
W.4	CERAMIC TILE 4-1/4" X 4-1/4" WAINSCOT UP TO 3'10-3/4" HIGH WITH GYP. BD. WITH A 4 1/4" x 4 1/4" BULL NOSE (MOISTURE RES.) T.F.T.& P. ABOVE

DOOR SCHEDULE

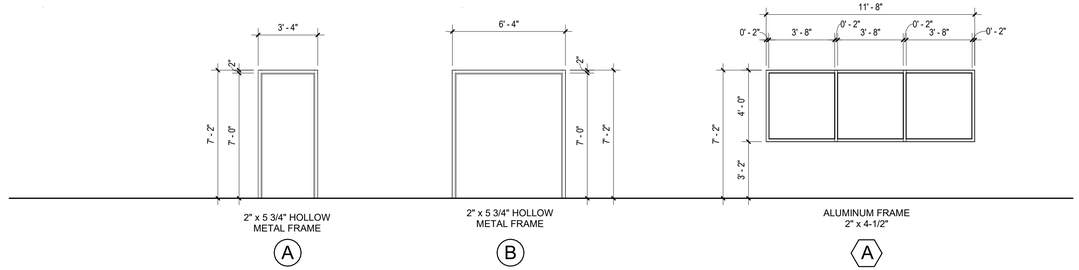
Mark	Pair or Single	DOOR DIMENSIONS			DOOR			DOOR FRAME			DOOR DETAILS			Fire Rating	Remarks
		Width	Height	Thickness	Door Type	Door Material	Door Finish	Frame Type	Frame Material	Frame Finish	Head	Jamb	Sill		
A101	Pair	3' - 0"	7' - 0"	1 3/4"	A	Galv. Hollow Mtl.	Paint	B	Galv. Hollow Mtl.	Paint	4/A6.1	5/A6.1	6/A6.1		
A101A	Single	3' - 0"	7' - 0"	1 3/4"	B	Galv. Hollow Mtl.	Paint	NA	Galv. Hollow Mtl.	Paint	4/A6.1	5/A6.1	6/A6.1		FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
A101B	Single	3' - 0"	7' - 0"	1 3/4"	B	Galv. Hollow Mtl.	Paint	NA	Galv. Hollow Mtl.	Paint	4/A6.1	5/A6.1	6/A6.1		FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
A101C	Single	3' - 0"	7' - 0"	1 3/4"	B	Galv. Hollow Mtl.	Paint	NA	Galv. Hollow Mtl.	Paint	4/A6.1	5/A6.1	6/A6.1		FRAME TO REMAIN AND BE MODIFIED FOR NEW DOORS
A103	Single	3' - 0"	7' - 0"	1 3/4"	D	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		
A104	Single	3' - 0"	7' - 0"	1 3/4"	C	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		
A105	Single	3' - 0"	7' - 0"	1 3/4"	D	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		
A107	Single	3' - 0"	7' - 0"	1 3/4"	D	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	4/A6.2	5/A6.2	6/A6.2		
A108	Single	3' - 0"	7' - 0"	1 3/4"	C	Solid Core Wood	Natural	A	Galv. Hollow Mtl.	Paint	4/A6.2	5/A6.2	6/A6.2		
A109	Pair	3' - 0"	7' - 0"	1 3/4"	E	Solid Core Wood	Natural	B	Galv. Hollow Mtl.	Paint	10/6.1	11/A6.1	12/A8.1		
A109A	Pair	3' - 0"	7' - 0"	1 3/4"	F	Solid Wood Core	Natural	B	Galv. Hollow Mtl.	Paint	1/A6.2	2/A6.2	3/A6.2		



DOOR TYPE ELEVATIONS

1/4" = 1'-0" MONTE CRISTO

1



DOOR FRAME ELEVATIONS

1/4" = 1'-0" MONTE CRISTO

2

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CONSULTANTS:

REGISTERED ARCHITECT
JOSE A. FIGUEROA
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STATE OF TEXAS

04.15.2020

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PROJECT NO: Project Number
DATE: 4/18/2020 1:23:59 PM
STARTING DATE:
CK BY: Checker DWN BY: Author

SCHEDULES

A9.1

GENERAL NOTES

MECHANICAL

GENERAL MECHANICAL NOTES:

A. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION EFFORTS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS AS REQUIRED BY FIELD CONDITIONS.

B. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND/OR OWNER.

C. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE WORK IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES UNDER THIS SECTION OF THE CONTRACT. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE LOCAL CODES, HE SHALL INFORM THE OWNER PRIOR TO CONSTRUCTION START FOR DIRECTION. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET APPLICABLE LOCAL CODES, AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE.

D. CONTRACTOR SHALL HANG AND INSTALL ALL DUCTWORK TIGHT WITH THE BUILDING STRUCTURE TO ACCOMMODATE NEW CEILINGS. CONTRACTOR SHALL COORDINATE ALL INSTALLATION WORK WITH ARCHITECTURAL AND ELECTRICAL DESIGN. ALL DUCTWORK SHALL BE MODIFIED AS NECESSARY AND REQUIRED TO FIT AROUND BUILDING STRUCTURES, ARCHITECTURAL BUILD-OUT. MECHANICAL CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE WORK SCOPE OF OTHER TRADES AND PARTICIPATE IN COORDINATING ALL CONSTRUCTION EFFORTS.

E. CONTRACTOR SHALL INSTALL ALL EXHAUST SYSTEMS, INCLUDING FANS AND EXHAUST DUCTS. PROVIDE COMPLETE NEW SYSTEMS AS INDICATED.

F. CONTRACTOR SHALL PROVIDE ALL CEILING DIFFUSERS AS SHOWN. CONNECT EACH DIFFUSER TO THE MAIN DISTRIBUTION DUCT WITH A FLEX-DUCT SECTION; CONNECTIONS SHALL BE COMPLETED IN ACCORDANCE WITH THE DETAIL SHOWN IN THESE PLANS. EACH FLEX-DUCT CONNECTION SHALL INCLUDE A BUTTERFLY DAMPER TO BE INSTALLED AT THE TRUNK DUCT.

G. CONTRACTOR SHALL PROVIDE ALL DUCTWORK REQUIRED TO COMPLETE THE HVAC SYSTEM. TIE IN BRANCH DUCTS TO MAIN DUCTS WITH SHEET METAL FLANGES. FLANGE CONNECTION SHALL BE FASTENED WITH CRIMPED SHEET METAL STRIPS AND SEALED WITH SILICONE CAULK.

H. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CORE DRILLED OR SAWED WHEN POSSIBLE. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS. CONTRACTOR SHALL REINFORCE ALL OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 6000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES.

I. ON ANY WORK SHOWN ON MECHANICAL DRAWINGS REQUIRING DEMOLITION OF EXISTING OR NEW BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH OWNER-APPROVED PATCHING MATERIALS. ALL REFINISHING SHALL BE APPROVED BY THE OWNER.

J. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE INSTALLATION OF THE AIR DISTRIBUTION SYSTEM SHOWN. DUCTWORK, DUCT ACCESSORIES AND CONTROLS SHOWN AND REQUIRED SHALL BE SUPPLIED AND INSTALLED. ALL INSTALLATION WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE CODES, INCLUDING NFPA 90A AND 90B.

K. CONTRACTOR SHALL BALANCE ALL AIR DISTRIBUTION SYSTEMS TO ACHIEVE THE AIR VOLUME REQUIREMENTS INDICATED. BALANCING SHALL INCLUDE ADJUSTMENT OF ALL MANUAL VOLUME DAMPERS, SPLITTER DAMPERS, ZONE DAMPERS (IF REQUIRED), BUTTERFLY DAMPERS AND INDIVIDUAL DIFFUSER VOLUME DAMPERS (FINAL BALANCING ONLY). CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A COMPLETE BALANCING REPORT WHICH INCLUDES VOLUME, ROOM REFERENCE AND ZONE VOLUME TOTALS.

L. MOUNT ALL THERMOSTATS (SENSORS) 48" ABOVE THE FINISHED FLOOR LEVEL UNLESS NOTED OTHERWISE THERMOSTATS SHOWN SHALL BE IN CONTROL OF THE ZONE SYSTEM WHICH IS SUPPLYING AIR TO THE AREA WHERE THE THERMOSTAT IS LOCATED. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EACH THERMOSTAT WITH THE ROOM FINISHES AND USES. CONTRACTOR SHALL SUPPLY AND INSTALL ALL CONTROL VOLTAGE WIRING AND CONDUIT FOR THERMOSTAT INSTALLATION.

M. CONTRACTOR SHALL COORDINATE THE FINAL LOCATIONS OF ALL CEILING DIFFUSERS WITH LIGHTING INSTALLATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS. MOVE THE DIFFUSER LOCATIONS IF REQUIRED TO AVOID OBSTRUCTIONS FROM DUCTWORK AND LIGHT FIXTURES. COORDINATE RELOCATION WITH ENGINEER.

N. VERIFY THE LOCATION OF ALL WALLS, PARTITIONS, DOORS, CABINETS, AND CEILINGS FROM ACTUAL FIELD MEASUREMENTS.

O. PROVIDE SMOKE DETECTOR AND SHUTDOWN CONTROLS ON AIR HANDLERS AND SUPPLY FANS. SMOKE DETECTORS SHALL BE PROVIDED, INSTALLED AND WIRED FOR SHUT DOWN BY DIVISION 16. PROVIDE BOTH SUPPLY AND RETURN SIDE DEVICES.

MECHANICAL GENERAL DEMOLITION NOTES:

A. INFORMATION ON THE PLAN HAS BEEN OBTAINED FROM EXISTING DRAWINGS AND SITE SURVEY. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND/OR ARCHITECT.

B. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE DEMOLITION WORK UNDER THIS SECTION OF THE PROJECT IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE CODES, HE SHALL INFORM THE ARCHITECT PRIOR TO CONSTRUCTION START FOR DIRECTION. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET CODE REQUIREMENTS AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE. APPLICABLE CODES AND STANDARDS ON DEMOLITION WORK SHALL INCLUDE THOSE PUBLISHED BY OSHA AND EPA. AN ASBESTOS SURVEY SHALL BE KEPT ON SITE AT ALL TIMES PER TEXAS DEPARTMENT OF HEALTH REQUIREMENTS.

C. ALL DUST PRODUCTION, SMOKE PRODUCTION AND NOISE SHALL BE SUBJECT TO REAL TIME REVIEW BY THE ARCHITECT. WORK SHALL BE SHUT DOWN DURING CRITICAL ACTIVITIES BY FORMAL REQUEST FROM THE DESIGNATED AUTHORITY OR CONTRACTING ARCHITECT. WORK IN DUSTY AREAS SHALL BE CONTROLLED WITH TEMPORARY PARTIONS. FLAME CUTTING SHALL BE MINIMIZED TO ELIMINATE SMOKE PRODUCTION. PROVIDE FIRE EXTINGUISHERS IN THE IMMEDIATE AREA.

D. GENERAL CONTRACTOR SHALL BE ADVISED OF ALL NEW PROPOSED ROOF OPENINGS BY ANY SUB-CONTRACTOR.

E. ON ANY WORK SHOWN ON MECHANICAL DRAWINGS WHICH REQUIRES DEMOLITION OF BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL BUILDING DAMAGE CREATED BY DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH ARCHITECT APPROVED PATCHING MATERIALS.

F. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CORE-DRILLED OR SAWED WHEN POSSIBLE. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION WITH STRUCTURAL ENGINEER BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 8000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING, OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES.

G. ALL SURFACES COVERED BY "SPRAY POLY" AND PROTECTED BY TEMPORARY PARTITIONS SHALL REMAIN PROTECTED THROUGHOUT THE PROJECT. REMOVE THE PROTECTIVE BARRIERS ONLY AFTER THE NEW EQUIPMENT PIPING AND DUCTWORK IS INSTALLED. PATCH AND MAINTAIN THE PROTECTIVE BARRIERS DURING CONSTRUCTION. COVER ALL EQUIPMENT OPENINGS WITH 4 MIL. POLY AND DUCT TAPE IN PLACE.

H. ALL NEW ROOF PENETRATIONS SHALL BE ROUTED THRU ANY EXISTING OPENING WHEREVER POSSIBLE. LARGER AND NEW OPENINGS SHALL BE KEPT TO A MINIMUM.

I. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES IN AREAS OF EXCAVATION WORK.

J. CONTRACTOR SHALL REMOVE AND RETURN ANY AND ALL EXISTING EQUIPMENT/MATERIALS TO OWNER. OWNER SHALL HAVE FULL RIGHT OF OWNERSHIP UNLESS SPECIFIED OTHERWISE. IF THE OWNER WAIVES THIS OPTION, ANY EQUIPMENT, MATERIAL, ETC SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

K. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES.

L. CONTRACTOR AND OWNER SHALL BE FULLY RESPONSIBLE TO IDENTIFY ANY AND ALL ASBESTOS PRESENT IN THE BUILDING PRIOR TO DEMOLITION AS REQUIRED BY LAW.

M. COORDINATION AMONG OTHER CONSTRUCTION DISCIPLINES PRIOR TO DEMOLITION IS MANDATORY.

N. CONTRACTOR SHALL IDENTIFY ALL WATER CONNECTION LINES, NATURAL GAS LINES AND SANITARY SEWER LINES PRIOR TO COMMENCING DEMOLITION WORK.

ELECTRICAL

GENERAL ELECTRICAL SITE NOTES:

A. ELECTRICAL CONTRACTOR SHALL CONTACT UTILITY COMPANY SERVICE REPRESENTATIVE AND COORDINATE SERVICE INSTALLATION PRIOR TO COMMENCING WORK.

B. ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER ALL FEES AND CONSTRUCTION COSTS CHARGED BY THE POWER, TELEPHONE AND CABLE UTILITY PROVIDERS FOR MAIN LINE EXTENSIONS OF SERVICE FOR A NEW INSTALLATION.

C. ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL POWER, TELEPHONE AND CABLE TO THE NEW FACILITY.

D. ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONDUIT, CONDUCTORS AND CABLES AS SPECIFIED. REFER TO SPECIFICATION SECTIONS FOR REQUIREMENTS.

GENERAL ELECTRICAL LIGHTING NOTES:

A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS (RCP) FOR EXACT LOCATION OF LIGHT FIXTURES. FURNISH FIXTURES WITH TRIM COMPATIBLE WITH THE TYPE OF CEILING AS INDICATED IN RCP.

B. CONNECT EXIT/EMERGENCY LIGHTS AND EMERGENCY BALLASTS IN EMERGENCY LIGHTS IN EACH SPACE TO UNSWITCHED HOT LEGS OF THE LOCAL LIGHTING CIRCUIT

C. COORDINATE PLACEMENT OF LIGHT FIXTURE WITH ACTUAL INSTALLATION OF MECHANICAL EQUIPMENT AND DUCTWORK.

D. COORDINATE LOCATIONS OF ALL WIRING SWITCHES AND MOUNTING HEIGHTS WITH OWNERS DRAWINGS PRIOR TO ROUGH IN.

E. COORDINATE INSTALLATION OF CONDUIT WITH OTHER TRADES PRIOR TO ROUGH-IN.

GENERAL POWER NOTES:

A. ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONDUIT, CONDUCTORS AND CABLES AS SPECIFIED. REFER TO SPECIFICATION SECTIONS FOR REQUIREMENTS.

B. ALL WIRING DEVICES SHALL BE INSTALLED WITH STAINLESS STEEL FACE PLATES.

PLUMBING

GENERAL PLUMBING NOTES:

A. COORDINATE EXACT LOCATION OF ALL FLOOR DRAINS WITH MECHANICAL EQUIPMENT LOCATION AND CONDENSATE DRAIN REQUIREMENTS PRIOR TO ANY INSTALLATION.

B. ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH TRAP PRIMER CONNECTION.

C. PLUMBING CONTRACTOR SHALL ADHERE TO ALL CITY CODES AND OTHER STATE CODES AND LOCAL CODES THAT HAVE AUTHORITY OVER THIS PROJECT.

D. PLUMBING CONTRACTOR SHALL EXTEND ALL CONDENSATE AND INDIRECT DRAINS FROM EQUIPMENT TO FLOOR DRAINS.

E. PLUMBING CONTRACTOR SHALL TERMINATE ALL WATER ROUGH-IN WITH SHUT-OFF VALVES BEFORE CONNECTING TO EQUIPMENT AND RELATED FIXTURES.

F. PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ANY INSTALLATION OF PIPING AND DUCTWORK PRIOR TO BEGINNING OF CONSTRUCTION.

G. INSULATE "P" TRAPS AND SUPPLIES AT HANDICAP LAVATORIES WITH INSULATION KIT.

H. PROVIDE VACUUM BREAKER TO ALL FIXTURES WITH HOSE CONNECTION AND APPLIANCES WITH DIRECT CONNECTIONS TO DOMESTIC WATER.

I. REFER TO OWNERS DRAWINGS FOR MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.

J. ALL VENTS THROUGH ROOF SHALL BE FLASHED A MINIMUM OF 12" ABOVE ROOF. ALL VENTS SHALL BE MINIMUM OF 10' AWAY FROM ANY OUTSIDE AIR INTAKE.

K. PROVIDE CEILING ACCESS PANEL FOR WATER ISOLATION VALVES, WATER HAMMER ARRESTORS AND TRAP PRIMER VALVES IN OTHERWISE INACCESSIBLE AREAS.

TABLE OF CONTENTS MONTE CRISTO ELEMENTARY

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LICENSED PROFESSIONAL ENGINEER
04-15-2020

STATE OF TEXAS
JOSE ANTONIO NICANOR
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CONSULTANTS:

NO.	DATE	DESCRIPTION
		REVISIONS

DE LA VINA & MONTE CRISTO
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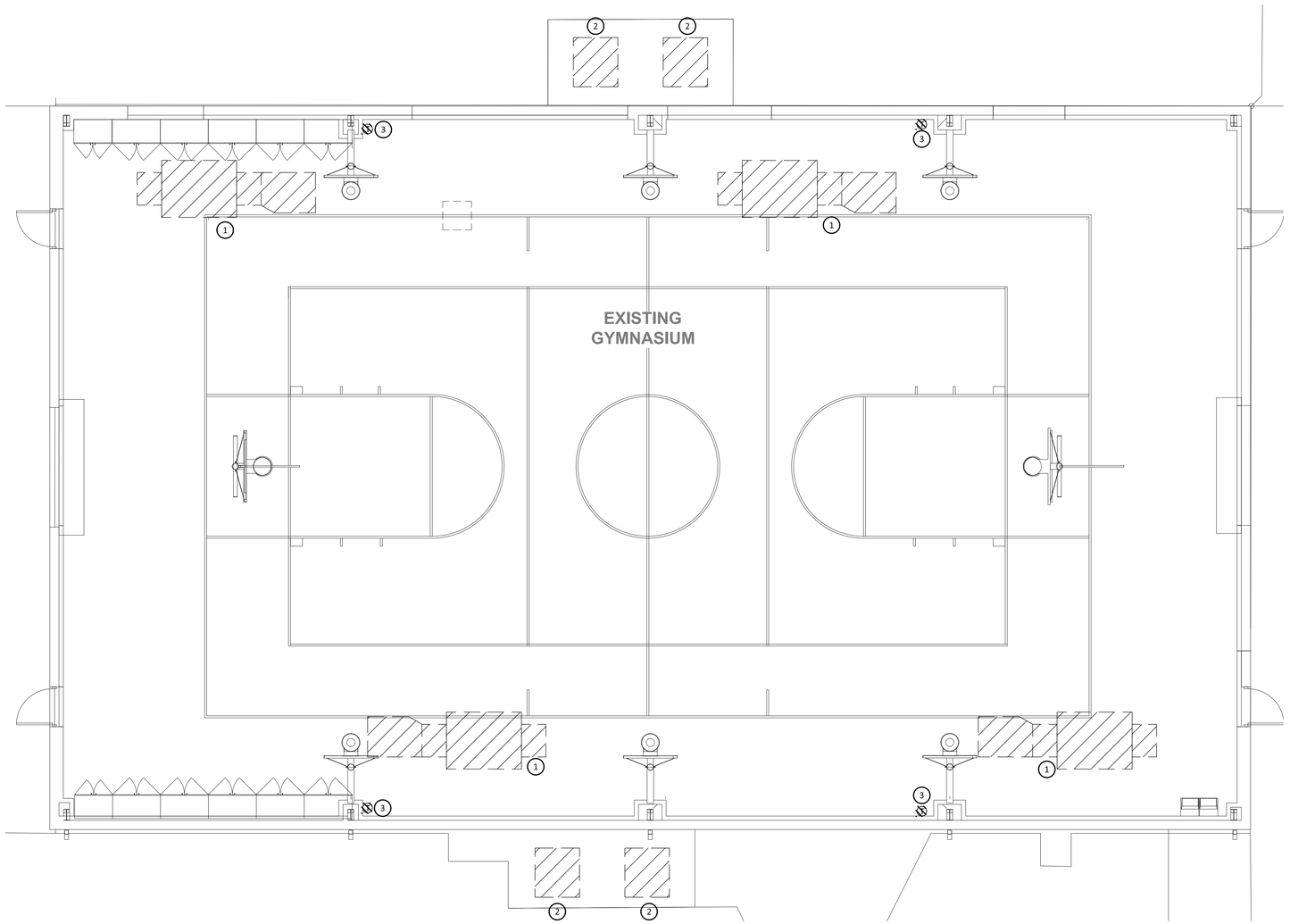
PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: DWN BY:

MEP GENERAL NOTES

MEP-1.0



1 MECHANICAL PLAN (MONTE CRISTO ELEMENTARY)
SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. REMOVE EXISTING SPLIT DX SYSTEM AIR HANDLING UNIT AND ASSOCIATED REFRIGERANT PIPING, CONTROLS CONDUIT, WIRING, AND ASSOCIATED DUCTWORK. FIELD VERIFY EXISTING CONDITIONS.
2. REMOVE CONDENSING UNIT AND ASSOCIATED REFRIGERANT PIPING, CONTROLS CONDUIT, CONTROLS WIRING, AND EQUIPMENT RAILS. ALL ASSOCIATED ABANDONED WALL PENETRATIONS SHALL BE SEALED WEATHER AND MOISTURE TIGHT WITH VAPOR BARRIER AND MATERIALS TO MATCH EXISTING. REMOVE CONCRETE PADS, CHAIN LINK FENCE, FOOTINGS, & GATES. FIELD VERIFY EXISTING CONDITIONS.
3. DEMOLISH EXISTING THERMOSTAT.

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CONSULTANTS:

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J. GABRIEL HINOJOSA
96585
LICENSED
PROFESSIONAL ENGINEER
04-15-2020

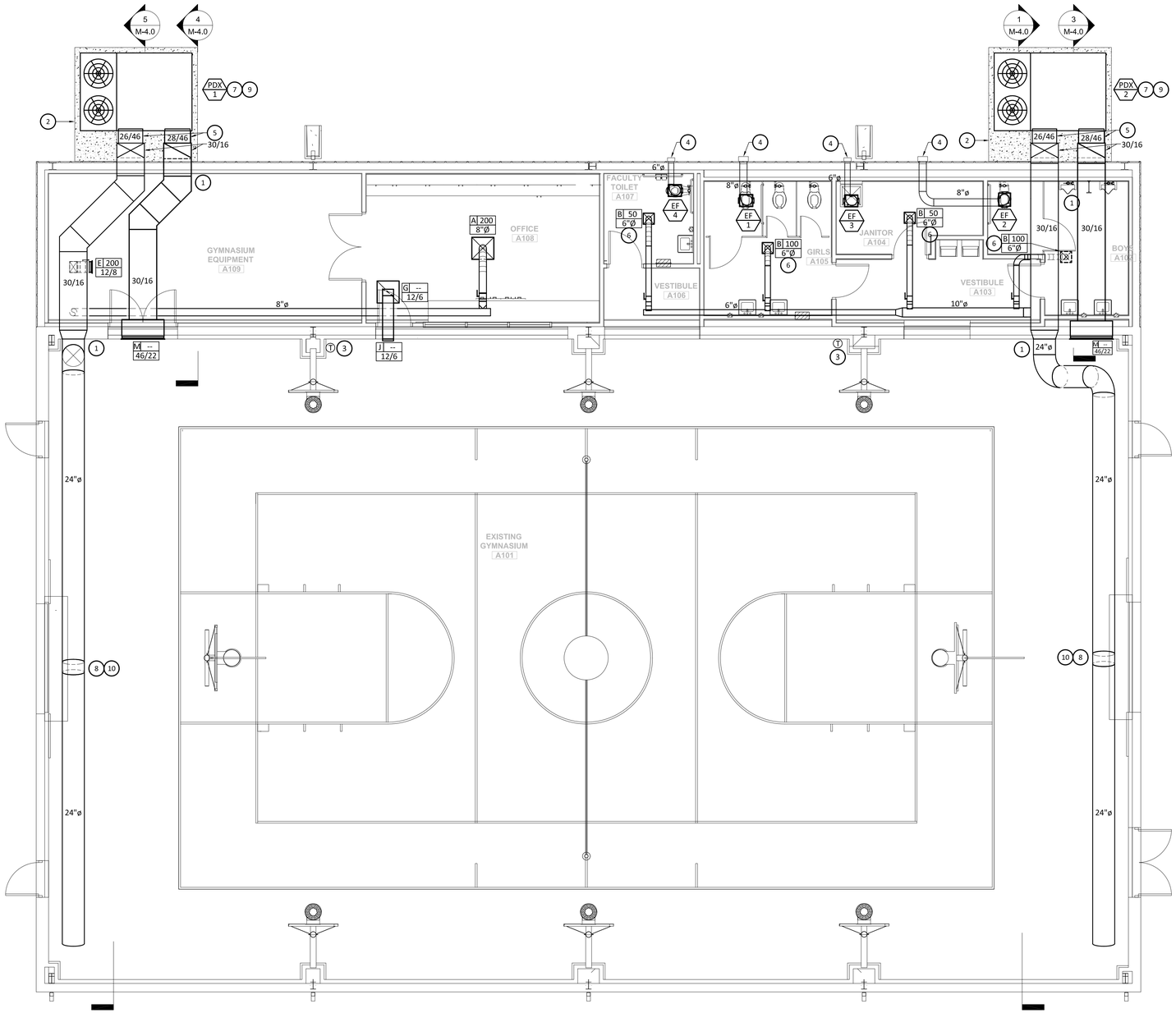
NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
STARTING DATE:	
CK BY: G.H.	DWN BY: C.C.

MECHANICAL
DEMOLITION PLAN

MD-1.0



GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.
2. PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL HVAC UNIT SUPPLY AND RETURN DUCT CONNECTIONS.

KEY NOTES: (#)

1. SLEEVE ALL WALL PENETRATIONS PER SPECS. SEAL AROUND DUCTS & PIPING AT WALLS PENETRATIONS WITH FIRE-PROOF CAULKING. PROVIDE ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE TO PROVIDE A FINISH LOOK. (TYPICAL OF ALL SUCH LOCATIONS.)
2. FURNISH AND INSTALL 6 INCH HIGH HOUSE KEEPING PAD.
3. MOUNT THERMOSTAT 48" AFF AND PROVIDE VANDAL PROOF ENCLOSURE.
4. PROVIDE HOODED WALL CAP WITH ROUND CONNECTION. SEAL WALL PENETRATION VAPOR TIGHT. USE CORRUGATED SLEAVE SEAL TO MATCH WALL PANEL FOR A CLEAN FINISHED LOOK.
5. OUTDOOR SUPPLY AND RETURN DUCTS SHALL BE PRE-INSULATED DUCT SYSTEMS EQUAL TO R-12 THERMADUCT. COORDINATE PACKAGED DX UNIT EQUIPMENT SUPPLY AND RETURN CONNECTIONS, HOUSEKEEPING PAD, CURBS, VIBRATION ISOLATION DEVICES, AND DUCTWORK PRIOR TO COMMENCEMENT OF WORK. EXTERIOR DUCTS SHALL RUN STRAIGHT FROM THE PACKAGED DX UNIT TO THE BUILDING AS SHOWN WITHOUT ANY OFFSET FITTINGS OR ELBOWS. SEAL WALL PENETRATION VAPOR TIGHT. USE CORRUGATED SLEAVE SEAL TO MATCH WALL PANEL FOR A CLEAN FINISHED LOOK.
6. PROVIDE AND INSTALL CABLE OPERATED BALANCING DAMPER EQUAL TO ROTO-TWIST MODEL RT-150. EXTEND CABLE TO SUPPLY AIR DEVICE AND TERMINATE.
7. ROUTE FULL SIZE COPPER CONDENSATE DRAIN PIPE TO HUB DRAIN.
8. EXPOSED DUCT IN GYM SHALL BE FABRIC DUCT, DUCTSOX HOOPS (IHS) WITH VERONA.
9. BIPOLAR IONIZATION DEVICE TO BE LOCATED IN SUPPLY SECTION DISCHARGE PLENUM. COORDINATE INSTALL LOCATION WITH UNIT MANUFACTURER.
10. COORDINATE FABRIC DUCT ROUTING WITH EXISTING OVER HEAD DOOR RAILING. REFER TO ARCHITECTURAL DRAWINGS.

1 MECHANICAL PLAN (MONTE CRISTO ELEMENTARY)
SCALE: 3/16"=1'-0"

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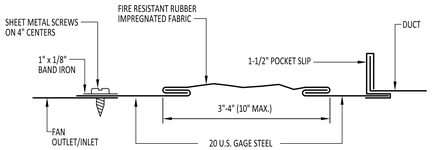
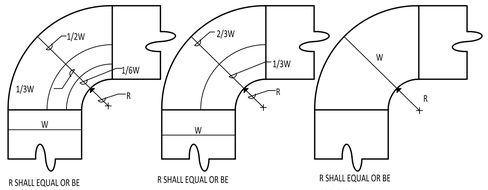
MECHANICAL PLAN

M-1.0

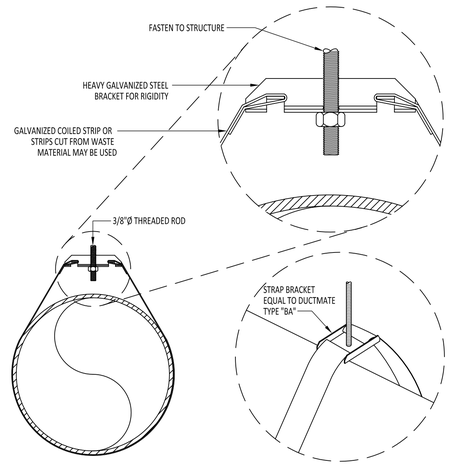


1 FLEXIBLE CONNECTION DETAILS
SCALE: N.T.S.

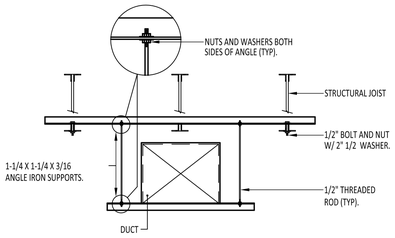


NOTES:
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND
2. ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

2 RADIUS DUCT ELBOW DETAIL
SCALE: N.T.S.

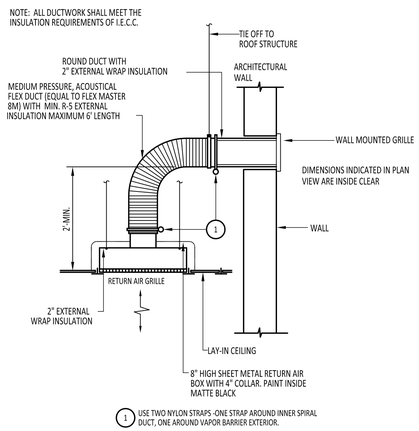


3 ROUND DUCT STRAP BRACKET
SCALE: N.T.S.

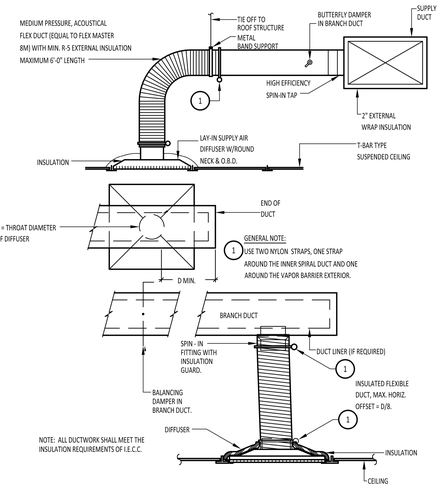


4 DUCT HANGER DETAIL
SCALE: N.T.S.

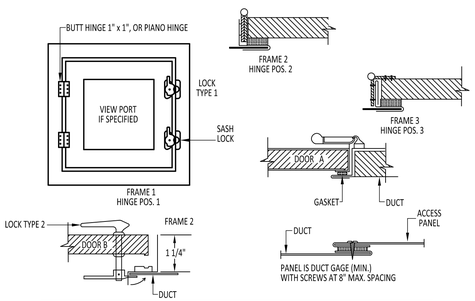
5 REMOTE CABLE OPERATED DAMPER
SCALE: N.T.S.



6 TRANSFER DUCT DETAIL
SCALE: N.T.S.



7 SUPPLY AIR DIFFUSER
SCALE: N.T.S.



	DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE FRAME	METAL GAGE DOOR	METAL GAGE BACK
2" W.G. STATIC AND LESS	12" x 12"	2	1-S	24	26	26
	16" x 20"	2	2-S	22	24	26
	24" x 24"	3	2-S	22	22	26
3" W.G. STATIC	12" x 12"	2	1-S	22	22	26
	16" x 20"	2	1-S,1-T,1-B	20	20	26
	24" x 24"	3	2-S,1-T,1-B	20	20	24
4" W.G. TO 10" W.G.	12" x 12"	2	1-S,1-T,1-B	20	20	26
	16" x 20"	3	2-S,1-T,1-B	18	18	24
	24" x 24"	3	2-S,2-T,2-B	18	18	24
S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM						

8 DUCT ACCESS DOOR DETAIL
SCALE: N.T.S.

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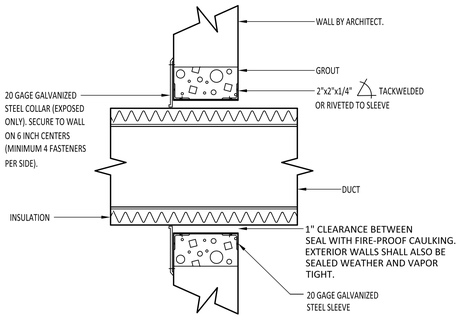
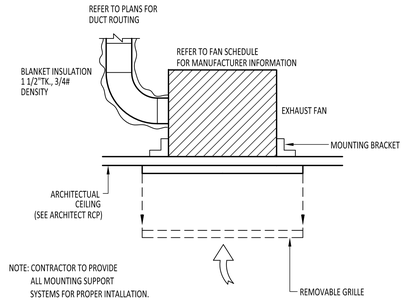
MECHANICAL DETAILS (MONTE CRISTO ELEMENTARY)

M-2.0



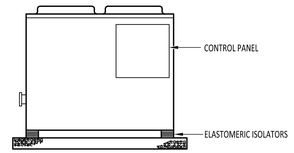
1 DUCT PENETRATION THRU WALL

SCALE: N.T.S.



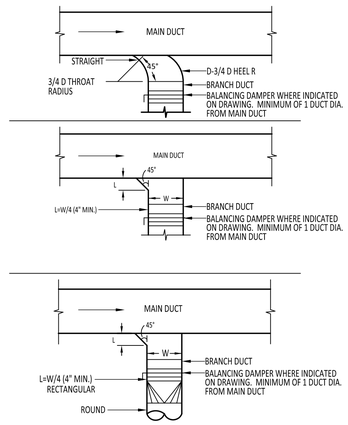
2 CEILING MOUNTED EXHAUST FAN

SCALE: N.T.S.



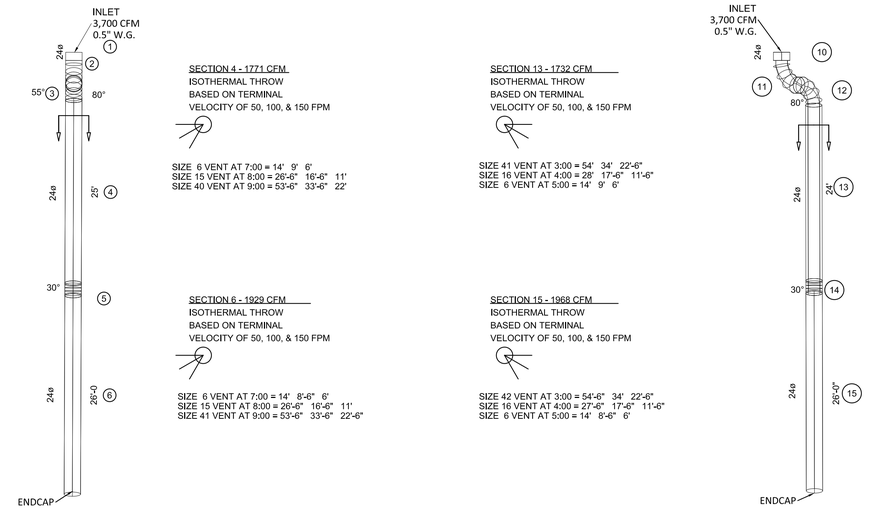
3 PACKAGED DX UNIT MOUNTED ON SLAB ON GRADE

SCALE: N.T.S.



4 TYPICAL BRANCH CONNECTION

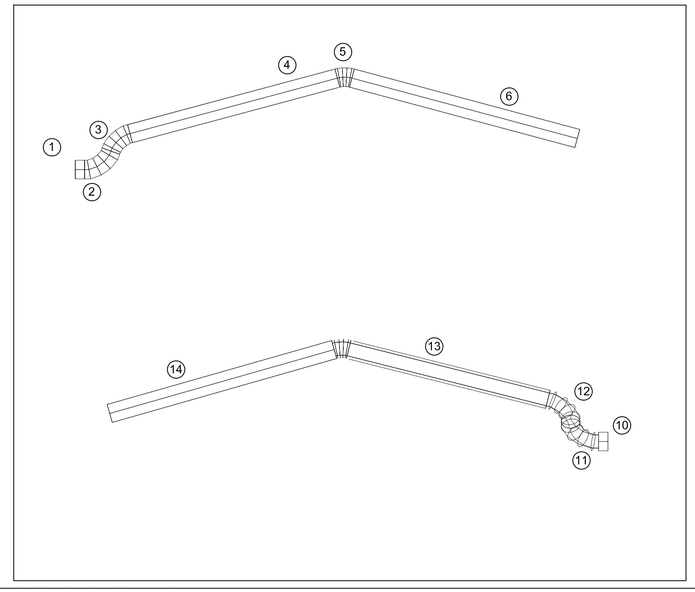
SCALE: N.T.S.

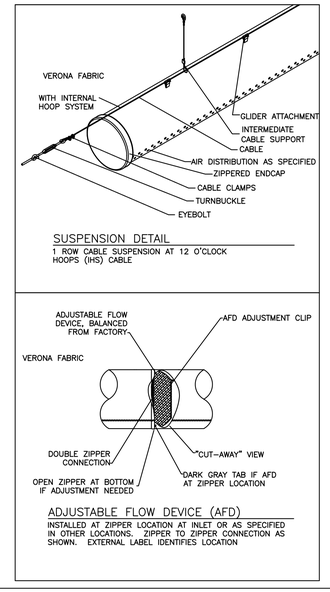


5 FABRIC DUCT DETAILS

SCALE: N.T.S.

ELEVATED VIEW





6 FABRIC DUCT DETAILS

SCALE: N.T.S.

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MECHANICAL DETAILS (MONTE CRISTO ELEMENTARY)

M-2.1

PACKAGED DX UNIT SCHEDULE

MARK	BASIS OF DESIGN: MANUF.	MODEL	LXWXH (IN)	WEIGHT (LB)	AMBIENT TEMP. (°F)	IEER	EER	SUPPLY FAN: TYPE	DRIVE	AIRFLOW (CFM)	VENT. (CFM)	FAN RPM	BHP	E.S.P. (IN H20)	T.S.P. (IN H20)	MOTOR POWER (HP)	DX COIL: TOTAL CAPACITY (BTU/HR)	SENSIBLE CAPACITY (BTU/HR)	EAT DB/WB °F	LAT DB/WB °F	ROWS (MIN)	FPI (MAX)	MIN COOLING STAGES	ELECTRIC HEAT: EAT(°F) DB	LAT(°F) DB	HEAT (BTU/HR)	HEAT KW	STAGES	FILTER: TYPE	DEPTH (IN)	EFF, (%)	POWER: VOLTAGE	MCA	MOCP
PDX-1	TRANE	THH150	122x84x57	2508	100	15	12.1	ODP	BELT	4000	1000	670	1.84	1.0	1.037	3	141,300	111,940	81.0/66.2	55.09/54.38	4	15	3	62	90.3	122,940	36.0	2	MERV 8	2	30	460/3/60	62	70
PDX-2	TRANE	THH150	122x84x57	2508	100	15	12.1	ODP	BELT	4000	1000	670	1.84	1.0	1.037	3	141,300	111,940	81.0/66.2	55.09/54.38	4	15	3	62	90.3	122,940	36.0	2	MERV 8	2	30	460/3/60	62	70

NOTES:
1. SINGLE POINT POWER WITH INTEGRAL, NON-FUSED, DISCONNECT.
2. 120V GFCI SERVICE OUTLET, FACTORY MOUNTED, FIELD WIRED.
3. CONDENSER COIL HAIL GUARDS.
4. OUTSIDE AIR HOOD AND COMPARATIVE ENTHALPY ECONOMIZER
5. 5/2 PROGRAMMABLE THERMOSTAT.
6. ON/OFF HOT GAS RE-HEAT COIL & RH SENSOR.
7. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
8. GROUND MOUNTED UINT WITH HORIZONTAL SUPPLY AND RETURN OPENINGS.
9. CONDENSER COIL COATING, MINIMUM 5000 HOUR SALT SPRAY TEST PER ASTM B 117.
10. BACNET INTERFACE CARD FOR FUTURE CONNECTION TO DDC SYSTEM.
11. THREE STAGE COOLING AND VARIABLE SPEED BELT DRIVE FAN MOTOR.
12. HINGED ACCESS DOORS WITH QUARTER-TURN LATCHES.
13. MICROPROCESSOR CONTROLLER WITH 5" TOUCH SCREEN LCD DISPLAY FOR UNIT DIAGNOSTICS.
14. 1 YEAR PARTS, 3 YEAR CONTROLLER PARTS, 5 YEAR COMPRESSOR PARTS WARRANTY.

MECHANICAL GENERAL LEGEND DUCTWORK SYMBOLS

DESCRIPTION	SINGLE LINE	DOUBLE LINE
ACCESS DOOR	AD	AD
BACKDRAFT DAMPER	BDD	BDD
FIRE DAMPER	F	F
FLEXIBLE CONNECTION	FC	FC
MOTORIZED DAMPER	M	M
CONTROL DAMPER	CD M	CD M
VOLUME DAMPER, MANUAL	VD	VD
DUCT ELBOW WITH TURNING VANES		
DUCT SECTION - SUPPLY AIR		
DUCT SECTION - EXHAUST AIR		
DUCT SECTION - RETURN, OUTSIDE, OR RELIEF AIR		
DUCT, INCLINED DROP		
DUCT, INCLINED RISE		
FLEXIBLE DUCT - ROUND		
DUCT TRANSITION	14/10 — 10/10	14/10 — 10/10
DUCT TRANSITION (SQUARE OR RECTANGULAR TO ROUND)	10/10 — 8"Ø	12/12 — 8"Ø
RECTANGULAR DUCT, SIZE IN INCHES, FIRST DIMENSION IS SIDE SHOWN (NET CLEAR INSIDE DIMENSION)	10/14	10/14

DESCRIPTION	SINGLE LINE	DOUBLE LINE
ROUND DUCT, DIAMETER IN INCHES (NET CLEAR INSIDE DIMENSION)	8"Ø	8"Ø
AIR FLOW IN DIRECTION OF ARROW		
45° BRANCH TAKE-OFFS		
CONICAL LATERAL BRANCH TAKE-OFFS		
CEILING SUPPLY DIFFUSERS		
DIRECTION SUPPLY GRILLE, HATCH INDICATES BLOCKED QUADRANT		
CEILING RETURN GRILLE/REGISTER		
CEILING EXHAUST FAN (EF-_)		EF-_
CEILING EXHAUST GRILLE/REGISTER		
SIDEWALL SUPPLY GRILLE/REGISTER		
SIDEWALL RETURN/EXHAUST GRILLE/REGISTER		
EXTRACTOR		
DUCT TEE WITH SPLITTER DAMPER		
DOOR UNDERCUT	UC	UC
DOOR LOUVER	L	L

MISCELLANEOUS SYMBOLS

P	DUCT STATIC PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
CO_2	CARBON DIOXIDE SENSOR
	NEW CONNECTION TO EXISTING
H	HUMIDISTAT
RH	RELATIVE HUMIDITY SENSOR
EJ	EXPANSION JOINT
T	THERMOSTAT OR TEMPERATURE SENSOR (MOUNT 48" AFF)
T	DUCT TEMPERATURE SENSOR
TC	TIME CLOCK
F	FREEZESTAT
	MATCHLINE
	LINE WITH HATCHING DESIGNATES DEMOLITION WORK

- DIFFUSER, GRILLE OR REGISTER MARK
- A 250 / 12"Ø / 6 TYP. — AIR FLOW (CFM) / NECK SIZE/ RECTANGULAR FACE SIZE / NOTES / QUANTITY / NOTES (WHERE APPLICABLE)
- QUANTITY OF EXISTING OUTSIDE AIR DIFFUSERS
- 1@300 / 300 — AIR FLOW (CFM) PER DIFFUSER / TOTAL AIR FLOW (CFM)
- QUANTITY OF EXISTING SUPPLY DIFFUSERS
- 1@300 / 300 — AIR FLOW (CFM) PER DIFFUSER / TOTAL AIR FLOW (CFM)
- AHU 1 — EQUIPMENT MARK / EQUIPMENT NUMBER
- DIRECTION OF SECTION
- 01 / M2.01 — IDENTIFYING NUMBER OR LETTER FOR SECTIONS. / NUMBER OF REFERENCE DRAWING WHERE SECTION IS SHOWN.
- 01 / M2.01 — IDENTIFYING NUMBER OR LETTER FOR DETAILS. / NUMBER OF REFERENCE DRAWING WHERE DETAIL IS SHOWN.
- ENLARGED DETAIL REFERENCE

EXHAUST FAN SCHEDULE

MARK	CFM	SERVICE	LOCATION	TYPE	RPM	ESP	HP	DRIVE	VOLTAGE	SONES	CONTROL	MANUF.	MODEL	NOTES
EF-1	225	GIRLS RR	CEILING	CABINET	1418	0.5	79.1 WATTS	DIRECT	120/1	3.5	LIGHTS	LOREN COOK	GC-422	ALL
EF-2	225	BOYS RR	CEILING	CABINET	1418	0.5	79.1 WATTS	DIRECT	120/1	3.5	LIGHTS	LOREN COOK	GC-422	ALL
EF-3	100	JANITOR	CEILING	CABINET	1037	0.5	43.0 WATTS	DIRECT	277/1	2.5	LIGHTS	LOREN COOK	GC-148	ALL
EF-4	100	FACULTY	CEILING	CABINET	1037	0.5	43.0 WATTS	DIRECT	277/1	2.5	LIGHTS	LOREN COOK	GC-148	ALL

NOTES:
1. INTEGRAL DISCONNECT SWITCH, PRE-WIRED AT FACTORY.
2. BACK DRAFT DAMPER.
3. FAN SPEED CONTROL, PRE-WIRED AT FACTORY.
4. ROUND HOODED WALL CAP.
5. ROUND DUCT CONNECTION.
6. VIBRATION ISOLATION KIT.
7. DESIGNER GRILLE.

GRILLE/DIFFUSER/REGISTER SCHEDULE

MARK	SERVICE	DESCRIPTION	MANUFACTURER MODEL NO.	MAX. NC. LEVEL (1)	REMARKS
A	SUPPLY	24"X24" MODULE SIZE, ALUMINUM, LOUVERED, LAY IN DIFFUSER WITH 4 WAY THROW, ROUND NECK, FACE SIZE AS INDICATED BELOW.	TITUS OMNI-AA	30	WHITE FINISH
B	SUPPLY	12"X12" MODULE SIZE, ALUMINUM, PLAQUE, SURFACE-MOUNTED DIFFUSER WITH 4-WAY THROW, ROUND NECK.	TITUS OMNI-AA	30	WHITE FINISH
E	SUPPLY	ALUMINUM DRUM LOUVER WITH INDIVIDUALLY ADJUSTABLE BLADES, MINIMUM 50° ANGLE OF ROTATION, OPPOSED BLADE DAMPER.	TITUS DL	35	WHITE FINISH
G	RETURN	24"X24" EGGCRATE FACE, CEILING RETURN GRILL WITH BORDER FOR LAY-IN CEILING, ALUMINUM CONSTRUCTION.	TITUS 50F	30	WHITE FINISH
J	RETURN	SURFACE MOUNTED RETURN GRILLE WITH 3/4" SPACING. ALUMINUM CONSTRUCTION, 35° DEFLECTION.	TITUS 350FL	30	WHITE FINISH
M	RETURN	HEAVY DUTY SURFACE MOUNTED ALUMINUM RETURN GRILLE WITH 1/2" BLADE SPACING AND 0° FIXED DEFLECTION.	TITUS 60FL	30	WHITE FINISH

F = THIS WILL DESIFNATE A STEEL FIRE RATED AIR DEVICE TYPE.

CBA = COLOR BY ARCHITECT

* = SEE ARCHITECTURAL DRAWINGS PROPER BORDER TYPES

AIR OUTLET DESIGNATION ON PLANS

MARK — A 250 (AIR FLOW (CFM) / 12"Ø (RECTANGULAR FACE SIZE) / 6 TYP. (WHERE APPLICABLE)

CAPACITY	FACE	NECK/FLEXIBLE CONNECTION
0-150	6 X 6	6"
151-285	9 X 9	8"
286-440	12 X 12	10"
441-550	12 X 12	12"
551-750	15 X 15	14"
750-1000	18 X 18	16"

NOTE: COORDINATE ALL AIR DEVICE TYPE WITH ARCHITECTURAL RCP.

AtmosAir Air Treatment Schedule

TAG	SERVICE	Design Parameters: Supply CFM	AtmosAir Systems: Model No.	Unit Quantity	Electrical: V	HZ	AMPS/ unit
BPI-1	PDX-1	4,000	M1002	1	120	60	0.50
BPI-2	PDX-2	4,000	M1002	1	120	60	0.50

Notes:
1. BIPOLAR IONIZATION SHALL BE ATMOSAIR OR APPROVED EQUAL.
2. ATMOSAIR UNIT TO BE LOCATED IN SUPPLY SECTION/DISCHARGE PLENUM. CONTRACTOR TO COORDINATE INSTALL LOCATION WITH MANUFACTURER.
3. INSTALL BIPOLAR IONIZATION WITH MERV8 PREFILTERS.
4. INTERLOCK UNIT WITH ASSOCIATED ROOFTOP UNIT SUPPLY FAN TO RUN ONLY WHEN SUPPLY FAN IS RUNNING. AIRSWITCH TO BE PROVIDED BY ATMOSAIR.
5. MANUFACTURER'S TUBES SHALL BE REPLACED EVERY 2 YEARS.
6. CONTACT SAM ROSETTI AT ATMOSAIR FOR PRICING INFORMATION - SROSETTI@ATMOSAIR.COM OR 203.644.5604

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McAllen Harlingen

CONSULTANTS:

STATE OF TEXAS — J. GABRIEL HINOJOSA — 96585 — LICENSED PROFESSIONAL ENGINEER — 04-15-2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: G.H. DWN BY: C.C.

MECHANICAL SCHEDULES

M-3.0

1 MECHANICAL SCHEDULES (MONTE CRISTO ELEMENTARY)
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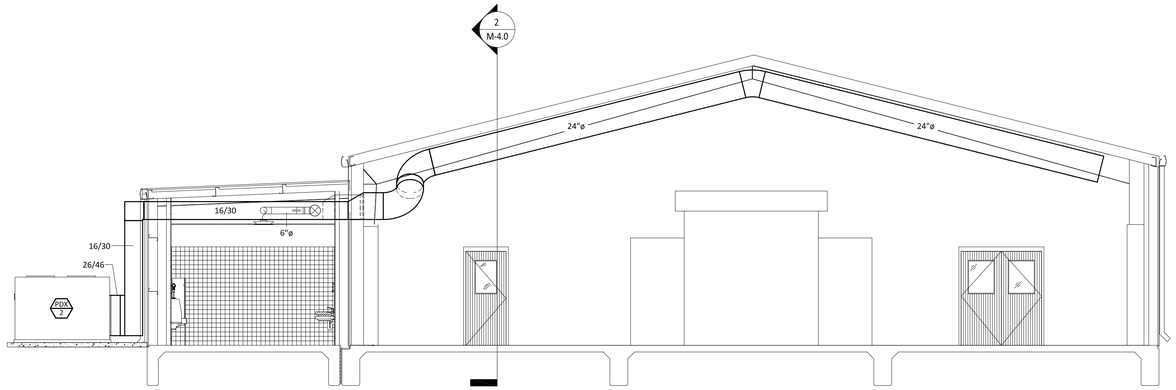

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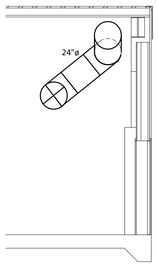

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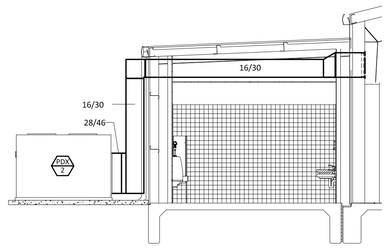

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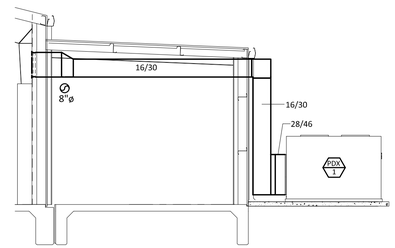

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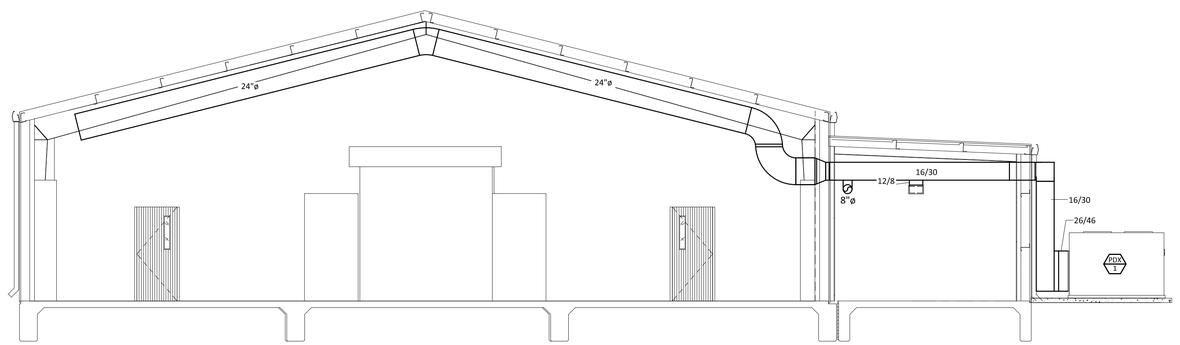

5 PDX-1 SUPPLY DUCT SECTION (MONTE CRISTO ELEMENTARY)
SCALE: 3/16"=1'-0" (MONTE CRISTO ELEMENTARY)

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ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
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MECHANICAL SECTIONS

SIGMA HN
ENGINEERS, PLLC
TBPE Firm No. F-14767
701 S. 15th Street
McAllen, Texas 78501

M-4.0

TELECOMMUNICATION SPECIFICATION SHEETS ARE INTENDED TO BE ALL-INCLUSIVE AND INCLUDE SPECIFICATION SECTIONS THAT MAY OR MAY NOT APPLY TO THIS PARTICULAR PROJECT. REFER TO THE DRAWINGS FOR SCOPE OF WORK.

DIVISION 17 - TELECOMMUNICATIONS

PROJECT SUMMARY:

A. THE COMMUNICATION CABLING CONTACTOR IS TO PROVIDE A COMPLETE COMMUNICATIONS CABLING INFRASTRUCTURE SYSTEM INSTALLATION INCLUDING BUT NOT LIMITED TO: COPPER AND FIBER BACKBONE SPECIFIED IN DRAWINGS, THESE SPECIFICATIONS, AND CONTRACT DOCUMENTS.

B. THE ITEMS DESCRIBED HEREIN SHALL NOT BE SUBSTITUTED WITHOUT THE WRITTEN CONSENT OF SIGMA HN ENGINEERS (CONSULTANT).

C. COMMUNICATIONS CABLING CONTRACTOR SHALL BE HEREIN AFTER REFERRED TO AS CONTRACTOR FOR THE SCOPE OF THIS DOCUMENT.

D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WRITTEN SPECIFICATIONS AND DRAWINGS THAT CORRESPOND TO THIS PROJECT.

E. THESE SPECIFICATIONS ARE INTENDED FOR BIDDING PURPOSES ONLY. NO PART SHALL BE COPIED OR USED FOR ANY PURPOSE OTHER THAN BIDDING ON THIS PROJECT.

SCOPE OF WORK:

A. THIS SECTION ESTABLISHES A COMMUNICATIONS INFRASTRUCTURE TO BE USED AS SIGNAL PATHWAYS FOR VOICE AND HIGH-SPEED DATA TRANSMISSION. PROVIDE A STRUCTURED CABLING SYSTEM AS DESCRIBED HEREAFTER INCLUDING BUT NOT LIMITED TO:FIBER AND VOICE RISER/BACKBONE CABLE AND EQUIPMENT RACKS/CABINETS FOR NETWORKING HARDWARE AND CABLE TERMINATION PATCH PANELS.

B. FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SERVICES FOR THE INSTALLATION DESCRIBED HEREIN.

C. INSTALLATION PROCEDURES FOR COMMUNICATIONS CABLE WILL BE SUCH THAT THE MECHANICAL AND ELECTRICAL TRANSMISSION CHARACTERISTICS OF THE SPECIFIED CABLE PLANT AND EQUIPMENT ARE MAINTAINED.

D. WORK OF THIS SECTION COVERS A COMPLETE INSTALLATION OF BOTH PERMANENT AND CHANNEL LINKS FOR A DATA AND VOICE COMMUNICATIONS NETWORK UTILIZING COPPER AND FIBER TRANSMISSION MEDIA THAT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

  a. INSTALLATION AND TERMINATION OF SECONDARY FUSED BUILDING ENTRANCE TERMINALS (BET'S) FOR PROTECTION OF INCOMING SERVICE PROVIDER OR CAMPUS INTER-BUILDING COPPER PAIR CIRCUITS. INTERCONNECTION TO SERVICE PROVIDER TELEPHONE DEMARCATION SHALL BE COORDINATED WITH SIGMA HN ENGINEERS, SWITCH PROVIDER, SERVICE PROVIDER AND OWNER'S IT REPRESENTATIVE ON A LATER DATE. ALL COPPER PAIRS ENTERING THE BUILDING FROM AN OUTSIDE DISTRIBUTION NETWORK WILL BE FUSE PROTECTED.

  b. PROVIDE, INSTALL, TERMINATE, TEST, AND DOCUMENT ALL FIBER AND COPPER BACKBONE, RISER CABLE AND VOICE/DATA HORIZONTAL CABLE.

  c. PROVIDE ORGANIZED COMPLETE 100% TEST RESULTS OF ALL COPPER AND FIBER CABLE AND THEIR COMPONENTS.

STAFFING:

A. QUALIFICATION: SUBMIT AN UP-TO-DATE AND VALID CERTIFICATION (ORTRONICS-SUPERIOR ESSEX) VERIFYING THE QUALIFICATIONS OF THE CONTRACTOR AND INSTALLERS TO PERFORM THE WORK SPECIFIED HEREIN AT TIME OF BID SUBMISSION.

B. CONTRACTOR SHALL HAVE A COMPLETE WORKING KNOWLEDGE OF LOW VOLTAGE CABLING APPLICATIONS SUCH AS, BUT NOT LIMITED TO: DATA, VOICE AND VIDEO NETWORK SYSTEMS.

C. CONTRACTING FIRM SHALL HAVE INSTALLED SIMILAR SYSTEMS IN AT LEAST (10) OTHER PROJECTS IN THE LAST FIVE YEARS PRIOR TO THIS BID AND BE REGULARLY ENGAGED IN THE BUSINESS OF INSTALLATION OF THE TYPES OF SYSTEMS SPECIFIED IN THIS DOCUMENT. CONTRACTOR SHALL PROVIDE INFORMATION ON PRIOR PROJECTS INCLUDING, BUT NO LIMITED TO: ITEMS SUCH AS NAME AND LOCATION OF PROJECT CONTACTS AND NUMBERS, TOTAL SQUARE FOOTAGE, TOTAL NUMBER OF CABLES/DROPS, TYPES OF MEDIA, ETC.

D. ALL INSTALLER PERSONNEL ASSIGNED TO THIS PROJECT SHALL BE LISTED IN THE QUALIFICATION QUESTIONNAIRE DOCUMENT. EIGHTY PERCENT (80)% SHALL HAVE A MINIMUM OF 3 YEARS EXPERIENCE IN THE INSTALLATION OF THE TYPES OF SYSTEMS, EQUIPMENT, AND CABLES SPECIFIED IN THIS DOCUMENT PRIOR TO THIS BID. ANY PERSONNEL SUBSTITUTIONS SHALL BE NOTED IN WRITING TO SIGMA HN ENGINEERS PRIOR TO COMMENCEMENT OF WORK.

E. CABLING INSTALLERS SHALL BE TRAINED BY MANUFACTURER AND CERTIFIED FOR TELECOMMUNICATION CABLING INSTALLATIONS AND MAINTENANCE OF SPECIFIED MATERIALS. CONTRACTOR SHALL INCLUDE IN HIS BID CERTIFICATION DOCUMENTATION. CONTRACTORS MUST BE CERTIFIED AT THE TIME OF BID SUBMISSION. POST BID CERTIFICATIONS WILL NOT BE ACCEPTABLE.

F. CHANGE ORDERS SHALL BE SUBMITTED TO THE CONSULTANT/CLIENT REPRESENTATIVE OR GC COMPLETE WITH PRICE BREAKDOWN AND DESCRIPTION. NO WORK RELATED TO ANY CHANGE ORDER WILL COMMENCE UNTIL APPROVED.

PERMITS AND LICENSE:

A. CONTRACTOR SHALL SUPPLY ALL STATE, CITY AND COUNTY TELECOMMUNICATION CABLING PERMITS REQUIRED BY APPROPRIATE GOVERNING AGENCY. CONTRACTOR SHALL BE STATE LICENSED AND/OR BONDED FOR TELECOMMUNICATION CABLING INSTALLATION AND TO COMPLY WITH THE STATE OF TEXAS REQUIREMENTS. THE OWNER OR THEIR REPRESENTATIVE WILL VERIFY THE ABOVE AND DETERMINE ANY ADDITIONAL REQUIREMENTS.

CODES AND STANDARDS (REFERENCES):

A. CODES: COMPLY WITH APPLICABLE SECTIONS OF THE FOLLOWING FOR INTERIOR AND EXTERIOR INSTALLATIONS.

  a. ENSURE YOU ARE USING THE LATEST AND MOST CURRENT STANDARDS AND REGULATIONS APPLICABLE. UNIFORM BUILDING CODE (UBC) AND INTERNATIONAL BUILDING CODE (IBC)

  b. NATIONAL ELECTRICAL CODE (NEC/NFPA 70, 2008) NATIONAL ELECTRICAL SAFETY CODE (NES IEEE C2-1997)

  c. IEEE STD. 1100-1999 RECOMMENDED PRACTICE FOR POWERING AND GROUNDING SENSITIVE ELECTRONIC EQUIPMENT.

  d. LOCAL CODES, AMENDMENTS, AND ORDINANCES.

B. STANDARDS: COMPLY WITH THE MOST RECENTLY PUBLISHED APPLICABLE SECTIONS OF THE FOLLOWING FOR INSTALLATION AND TESTING OF COMMUNICATION CABLING AND CONNECTORS:

  a. ANSI/TIA/EIA-568-B.1-2001: COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD, PART 1: GENERAL REQUIREMENTS.

  b. ANSI/TIA/EIA-568-B.2-1-2002: COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD, PART 2: BALANCED TWISTED-PAIR CABLING COMPONENTS.

  c. ANSI/TIA/EIA-568-B.3-2001 PART 3: OPTICAL FIBER CABLING COMPONENTS STANDARD.

  d. ANSI/TIA/EIA-455-A-1991: STANDARD TEST PROCEDURES FOR FIBER OPTIC CABLES. ANSI/CEA S83-596-1994: FIBER OPTIC PREMISES DISTRIBUTION CABLE.

  e. ANSI/TIA/EIA-526-7-1998: OPTICAL POWER LOSS MEASUREMENTS OF INSTALLED SINGLE MODE FIBER CABLE PLANT-OFSTP-7.

  f. ANSI/TIA/EIA-526-14-A-1998: OPTICAL POWER LOSS MEASUREMENTS OF INSTALLED MULTI MODE FIBER CABLE PLANT-OFSTP-14A.

  g. ANSI/TIA/EIA-569-A-1998: COMMERCIAL BUILDING STANDARDS FOR TELECOMMUNICATIONS PATHWAYS AND SPACES.

  h. ANSI/TIA/EIA-606-1993: THE ADMINISTRATION STANDARD FOR THE TELECOMMUNICATIONS INFRASTRUCTURE OF COMMERCIAL BUILDING.

  i. ANSI/TIA/EIA-607-1994: COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS.

  j. TIA/EIA 758-APRIL 1999: CUSTOMER-OUTSIDE PLANT TELECOMMUNICATIONS CABLING STANDARD.

CONTRACT ADMINISTRATION:

SUBMITTALS

A. PRODUCT DATA: INCLUDE MANUFACTURER'S DATA ON FEATURES, RATINGS AND PERFORMANCE FOR EACH COMPONENT SPECIFIED FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION.

B. DRAWINGS OF RECORD: SHALL BE IN AUTOCAD FORMAT SAME VERSION USED BY SIGMA HN ENGINEERS. UPON COMPLETION, SUBMIT FACILITY FLOOR PLAN DRAWINGS TO SIGMA HN ENGINEERS AND OWNER . DIMENSIONS AND SCALE OF THE DRAWING SHEETS SUBMITTED SHALL MATCH THE SIZE OF THE DRAWING USED FOR THE CONTRACT DOCUMENTS, AND SHALL INCLUDE THE FOLLOWING:

  a. DIMENSIONED PLAN AND ELEVATION VIEWS OF NETWORKING COMPONENTS INCLUDING, BUT NOT LIMITED TO: OUTLET AND RACEWAY LOCATION, ROUGHING-IN DIAGRAMS AND INSTRUCTIONS FOR INSTALLATION. SHOW ACCESS AND WORKSPACE REQUIREMENTS.
  b. ONE-LINE DIAGRAM OF EQUIPMENT/DEVICE INTERCONNECTING CABLING FOR THE DATA AND VOICE SYSTEMS.
  c. STANDARD OR TYPICAL INSTALLATION DETAILS OF INSTALLATIONS UNIQUE TO OWNER'S REQUIREMENTS.
  d. CABLE PATHWAYS, I/O'S, RACK NUMBERING, EQUIPMENT LAYOUT AND NUMBERING.
  e. SUBMIT ONE SOFT COPY (PDF FORMAT) WITH PROJECT DELIVERABLES WITHIN 30 DAYS OF SUBSTANTIAL COMPLETION.

C. WARRANTY: DELIVER MANUFACTURER'S SAMPLE OF 15-YEAR WARRANTY OF INSTALLED CABLING SYSTEM TO INCLUDE ALL COMPONENTS THAT COMPRISE THE COMPLETE CABLING SYSTEM.

D. ACCEPTANCE:

  a. ONCE ALL WORK HAS BEEN COMPLETED, TEST DOCUMENTATION HAS BEEN SUBMITTED, AND OWNER IS SATISFIED THAT ALL WORK IS IN ACCORDANCE WITH CONTRACT DOCUMENTS, THE OWNER SHALL NOTIFY CONTRACTOR IN WRITING OF FORMAL ACCEPTANCE OF THE SYSTEM. CONTRACTOR MUST WARRANT IN WRITING THAT 100% OF THE INSTALLATION MEETS THE REQUIREMENTS SPECIFIED HEREIN (STANDARDS COMPLIANCE & TEST REQUIREMENTS).

  b. NOTIFICATION OF THE LIKELIHOOD OF A CABLE EXCEEDING STANDARDIZED LENGTHS MUST BE MADE PRIOR TO INSTALLATION OF THE CABLE. SIGMA HN ENGINEERS AND OWNERS MAY AGREE TO ALLOW CERTAIN CABLING RUNS TO EXCEED STANDARDIZED PERFORMANCE CRITERIA (E.G. LENGTH). IF IT IS DECIDED TO ALLOW THE DESIGNATED CABLE TO EXCEED STANDARDIZED LENGTHS, SUCH RUNS SHALL BE EXPLICITLY IDENTIFIED AND EXCLUDED FROM REQUIREMENTS TO PASS STANDARDIZED TESTS. TESTS FOR WIRE MAPPING, OPEN, SHORTS, AND GROUNDS SHALL BE MADE IF OTHER TESTS ARE WAIVED.

  c. ACCEPTANCE SHALL BE SUBJECT TO COMPLETION OF ALL WORK, SUCCESSFUL POST-INSTALLATION TESTING WHICH YIELDS 100% PASS RATING, AND RECEIPT OF FULL DOCUMENTATION SOFT AND HARD COPIES AS DESCRIBED HEREIN.

PRODUCTS:

WARRANTY AND CONDITIONS:

A. CONTRACTOR SHALL PROVIDE A MINIMUM ONE (1) YEAR WARRANTY ON INSTALLATION AND WORKMANSHIP. ALL MATERIALS ARE TO BE NEW AND UNUSED.

ACCEPTABLE MANUFACTURERS:

B. ONLY MANUFACTURES OFFERING CERTIFIED PARTNERED SYSTEM SOLUTIONS FOR STRUCTURED CABLING, THAT CARRY A FULL MANUFACTURER WARRANTEE WILL BE ACCEPTED. REFER TO PLANS FOR ACCEPTABLE CABLING MANUFACTURERS.

IDENTIFICATION PRODUCTS:

A. CABLE LABELS: SELF-ADHESIVE VINYL OR VINYL-CLOTH WRAPAROUND TAPE MARKERS, MACHINE PRINTED WITH ALPHANUMERIC CABLE DESIGNATIONS.

B. PROVIDE TRANSPARENT PLASTIC LABEL HOLDERS AND 4-PAIR MARKED COLORED LABELS.

C. INSTALL COLORED LABELS ACCORDING TO THE TYPE OF FIELD AS PER TIA/EIA COLOR CODE DESIGNATIONS.

D. USE TIA/EIA DESIGNATION STRIP COLOR-CODE GUIDELINES FOR VOICE, DATA, CROSS-CONNECT, RISER, AND BACKBONE FIELDS.

TEST RESULTS AND AS-BUILTS:

A. CONTRACTOR SHALL PROVIDE TEST RESULTS IN SOFT COPY FOR EACH CABLE WITH THE DATE AND TIME OF TESTING SHOWN. COPIES SHALL BE PROVIDED VIA EMAIL. COPIES SHALL BE IN MICROSOFT OFFICE SPREADSHEETS.

QUALITY CONTROL

A. MATERIALS: ALL MATERIALS SHALL BE UL AND/OR ETL APPROVED AND LABELED IN ACCORDANCE WITH NEC FOR ALL PRODUCTS WHERE LABELING SERVICE NORMALLY APPLIES.

B. ALL MATERIAL AND EQUIPMENT AS PROVIDED SHALL BE:

  1. THE STANDARD COMMERCIAL-OFF-THE-SHELF (COTS) PRODUCTS OF A MANUFACTURER ENGAGED IN THE MANUFACTURING OF SUCH PRODUCTS;
  2. TYPICAL COMMERCIAL DESIGNS THAT COMPLY WITH THE REQUIREMENTS SPECIFIED;
  3. READILY AVAILABLE THROUGH MANUFACTURERS AND/OR DISTRIBUTORS;
  4. STANDARD CATALOGUED ITEMS OF THE MANUFACTURER;
  5. SUPPLIED COMPLETE WITH ANY OPTIONAL ITEMS REQUIRED FOR PROPER INSTALLATION.

C. COORDINATE THE FEATURES OF MATERIALS AND EQUIPMENT SO THEY FORM AN INTEGRATED SYSTEM. MATCH COMPONENTS AND INTERCONNECTIONS OF OPTIMUM FUTURE PERFORMANCE AND BACKWARD COMPATIBILITY.

D. BACKWARD COMPATIBILITY: THE PROVIDED SOLUTION SHALL BE BACKWARD COMPATIBLE WITH LOWER CATEGORY RATINGS SUCH THAT IF HIGHER CATEGORY COMPONENTS ARE USED WITH LOWER CATEGORY COMPONENTS, THE BASIC LINK AND CHANNEL MEASURES SHALL MEET OR EXCEED THE LOWER CHANNEL'S SPECIFIED PARAMETERS.

E. COMPONENT COMPLIANCE: THE PROVIDED SOLUTION'S COMPONENTS SHALL EACH MEET THE MINIMUM TRANSMISSION SPECIFICATIONS SPECIFIED SUCH THAT NO INDIVIDUAL COMPONENT WILL BE LESS THAN SPECIFICATIONS FOR PERMANENT LINK AND CHANNEL, REGARDLESS OF THE FACT THAT TESTS FOR LINK AND CHANNEL ULTIMATELY MEET REQUIRED SPECIFICATIONS.

F. IN THE EVENT OF A BREACH OF THE REPRESENTATIONS AND WARRANTIES CONTAINED HEREIN, THE CONTRACTOR, AT THEIR OWN EXPENSE, SHALL TAKE ALL MEASURES NECESSARY TO CORRECT AND MAKE THE CABLING SYSTEM WORK IN COMPLIANCE WITH THE APPLICABLE MANUFACTURER WRITTEN TECHNICAL RECOMMENDATIONS AND STANDARDS.

EXECUTION:

OBJECTIVE: THE OBJECTIVE OF THIS AGREEMENT IS TO PROVIDE A COMPLETE COMMUNICATIONS SYSTEM CABLING INFRASTRUCTURE INSTALLATION AS SHOWN ON PLANS.

A. COORDINATION AND COMPLIANCE:

  a. CONTRACTOR SHALL CALL FOR ANY INSPECTIONS REQUIRED BY PUBLIC AGENCIES HAVING JURISDICTION IN THE AREA. FINAL PAYMENT OF THIS CONTRACT WILL NOT BE MADE UNTIL FINAL INSPECTIONS HAVE BEEN COMPLETED AND ALL DEFICIENT ITEMS NOTED HAVE BEEN CORRECTED.

  b. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE AND FEDERAL LAWS OR REGULATIONS APPLICABLE TO THE WORK TO BE PERFORMED, ALTHOUGH SAID LAW; RULE OR REGULATION IS NOT IDENTIFIED HEREIN.

  c. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW OF ALL DRAWINGS OF RECORD TO VERIFY SERVICE REQUIREMENTS FOR PROPER INSTALLATION OF ITEMS SALVAGE: UNLESS INDICATED OTHERWISE, ALL ITEMS THAT MUST BE REMOVED DUE TO INTERFERENCE WITH WORK OF THIS CONTRACT REMAIN THE PROPERTY OF THE OWNER, AND ARE TO BE SALVAGED AT THE OWNER'S DISCRETION.

A. FIBER PATCH CORDS:

  a. FIBER: PROVIDE QTY THREE (3) - TWELVE (12) FOOT PATCH CORDS. COORDINATE CONNECTOR TYPE WITH SIGMA HN ENGINEERS PRIOR TO PURCHASE.

  b. PATCH CORDS SHALL BE MADE AND WARRANTED BY THE MANUFACTURER OF THE CABLING SYSTEM INSTALLED IN THIS PROJECT AND SHALL MEET OR EXCEED FIBER PATCH CORD SPECIFICATIONS AS OUTLINED IN EIA/TIA STANDARDS.

  c. PATCH CORDS SHALL BE IN ORIGINAL PACKAGING WHEN PRESENTED TO THE OWNER (I.E. SEALED PLASTIC BAGS).

  d. FIBER AND COPPER SPLICING REQUIREMENTS: FIBER AND COPPER RISER CABLES SHALL BE CONTINUOUS FROM END TO END WITH NO BRIDGES, TAPS OR SPLICES. NO SPLICING IS ALLOWED.

B. HORIZONTAL PATHWAY SYSTEMS

  e. CONTRACTOR SHALL PROVIDE CONDUIT PATH (SLEEVES) WHERE CABLING PASSES THROUGH FIRE RATED WALLS\DECK\SLAB. SEAL PENETRATION WITH INTUMESCENT FIRE-STOP MATERIAL THAT MATCHES THE RATING OF THE SURFACE PENETRATED UNLESS NOTED OTHERWISE IN PLANS. DO NOT INSTALL COMMUNICATION CABLES IN CONDUITS UNTIL ALL BUSHINGS/COUPLERS ARE INSTALLED ON THE ENDS OF THE CONDUITS. ALL HORIZONTAL PATHWAY SYSTEMS FROM END TO END FILL SHALL NOT EXCEED 40%.

C. FIBER AND COPPER CABLING

  a. BACKBONE CABLING REQUIREMENTS: PROVIDE A 10-FOOT SERVICE LOOP FOR COPPER BACKBONE/RISER AND FIBER OPTIC CABLES AT EACH TELECOMMUNICATION ROOM. LIMIT CABLE-BENDING RADIUS TO 20 TIMES THE CABLE DIAMETER DURING INSTALLATION, AND 15 TIMES THE CABLE DIAMETER AFTER INSTALLATION. PULL CABLES IN SMOOTH AND REGULAR MOTIONS USING METHODS THAT PREVENT CABLE KINKING. IF NECESSARY USE AN APPROVED COMMUNICATIONS CABLE PULLING LUBRICANT TO REDUCE THE OCCURRENCE OF MICRO BENDING OF INDIVIDUAL FIBER STRANDS, USE MESH-TYPE, SWIVEL-EYE FIBER OPTIC PULLING GRIPS. THIS TYPE OF PULLING GRIP IS REQUIRED FOR ALL CABLE PULLING COMPLETE WITH BREAKAWAY SWIVEL AT 600LBS OF PULLING TENSION.

  b. FIBER - GENERAL REQUIREMENTS: THE CABLE SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, BELLCORE GENERIC REQUIREMENTS FOR FIBER AND OPTICAL CABLE (GR-20). THE CABLE SHALL ALSO MEET THE FOLLOWING STANDARDS, WHERE APPROPRIATE:
    1. TIA/EIA 568-A “COMMERCIAL BUILDING TELECOMMUNICATIONS WIRING STANDARD”
    2. ICEA-83-596-1988 INSULATED CABLE ENGINEERS ASSOCIATION STANDARD FOR FIBER OPTIC PREMISES DISTRIBUTION CABLE PUBLICATION S-83-596, DECEMBER 1988, ANSI X3.166-1990
    3. FIBER DATA DISTRIBUTED INTERFACE (FDDI)- TOKEN RING PHYSICAL LAYER MEDIUM DEPENDENT (PMD)
    4. BELLCORE GENERIC REQUIREMENTS FOR PREMISES FIBER OPTIC CABLE (GR-409- CORE),
    5. SECTION 6, CENTRAL MEMBER AND IEEE 802.3-GIGABIT ETHERNET.
    6. THE CABLE MANUFACTURER SHALL BE ISO 9001 CERTIFIED.

  c. TENSILE STRENGTH: CABLES SUBJECTED TO THE MINIMUM RATED TENSILE LOAD DEFINED IN GR-409-CORE, SECTION 6.3.6 (TENSILE STRENGTH OF CABLE) SHALL NOT EXHIBIT AN INCREASE IN ATTENUATION GREATER THAN SPECIFIED BY GR-409-CORE, SECTION 6.3.2. TESTING SHALL BE DONE IN ACCORDANCE WITH TIA/EIA-455-33A, FIBER OPTIC CABLE TENSILE LOADING AND BENDING TEST.

  d. CABLE TWIST: THE CABLE SHALL BE CAPABLE OF WITHSTANDING MECHANICAL TWISTING WITHOUT EXPERIENCING AN ATTENUATION INCREASE GREATER THAN SPECIFIED BY GR-409 CORE, SECTION 6.3.2. AFTER THE CABLE IS SUBJECTED TO THE TWIST TEST, THE CABLE JACKET SHALL NOT EXHIBIT EVIDENCE OF CRACKING OR SPLITTING WHEN OBSERVED UNDER 5X MAGNIFICATION. TESTING SHALL BE DONE IN ACCORDANCE WITH TIA/EIA-455-85A, FIBER OPTIC CABLE TWIST TEST.

  e. CABLE CLEANER AND CABLE PULLING LUBRICANTS: CABLE CLEANERS AND/OR LUBRICANTS SHALL BE MATERIALS DESIGNED AND MANUFACTURED FOR TELECOMMUNICATION CABLING USE.

ADMINISTRATION, TESTING, AND IDENTIFICATIONS

  a. THESE SPECIFICATIONS WILL BE STRICTLY ENFORCED. THE CONTRACTOR MUST VERIFY THAT THE REQUIREMENTS OF THE SPECIFICATIONS ARE FULLY MET THROUGH TESTING, ACTIVE DATA THROUGHPUT, AND DOCUMENTATION AS SPECIFIED BELOW. THIS INCLUDES CONFIRMATION OF REQUIREMENTS BY DEMONSTRATION, TESTING AND INSPECTION. DEMONSTRATION SHALL BE PROVIDED IN FINAL WALK-THROUGH AND IN TESTED DATA REPORTS. IF PART OR ALL PAIRS OF CABLE DO NOT MEET SPECIFICATIONS CONTAINED IN THIS DOCUMENT, THE CABLE SHALL BE REPLACED AT CONTRACTOR'S COST.

  b. TEST PLAN: PROVIDE A COMPLETE AND DETAILED TEST PLAN FOR THE CABLING SYSTEM SPECIFIED HEREIN INCLUDING A COMPLETE LIST OF TEST EQUIPMENT FOR UTP AND LIGHT GUIDE COMPONENTS AND ACCESSORIES. INCLUDE PROCEDURES FOR CERTIFICATION, VALIDATION, AND TESTING. FURNISH FACTORY REEL TESTS FOR ALL CABLE. OWNER WILL REQUIRE THAT THE TELECOMMUNICATIONS CABLING SYSTEM INSTALLED BY THE CONTRACTOR BE FULLY CERTIFIED TO MEET ALL NECESSARY REQUIREMENTS TO BE COMPLIANT WITH REFERENCED IEEE AND EIA/TIA SPECIFICATIONS.

  c. TESTING AGENCY: CONTRACTOR WILL ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM FIELD QUALITY CONTROL TESTING. THIS 'AGENCY' MAY BE CONTRACTOR'S PERSONNEL IF THE MANUFACTURER OF THE TESTING EQUIPMENT CERTIFIES THEM TO CONDUCT THE REQUIRED TESTS. CORRECT MALFUNCTIONING UNITS AT PROJECT SITE, WHERE POSSIBLE, AND RETEST TO DEMONSTRATE COMPLIANCE; OTHERWISE, REMOVE AND REPLACE WITH NEW UNITS AND RETEST. PROVIDE CONTACT INFORMATION FOR THE TESTING AGENCY.

  d. CONTRACTOR WILL COMPLETE ALL WORK AND DOCUMENTATION ACCORDING TO MANUFACTURER GUIDELINES TO INSURE MANUFACTURER'S WARRANTY REMAINS IN EFFECT. CONTRACTOR SHALL OBTAIN CERTIFICATES FROM MANUFACTURER ATTESTING TO WARRANTY BEING IN EFFECT AND INCLUDE CERTIFICATES WITH OTHER DELIVERABLES DUE AT THE COMPLETION OF THE PROJECT. OWNER RESERVES THE RIGHT TO BE PRESENT DURING ANY OR ALL OF TESTING.

  e. STANDARDS COMPLIANCE & TEST REQUIREMENTS: CABLING MUST MEET THE PERFORMANCE SPECIFICATION FOR THE CABLING SPECIFIED. TESTERS SHALL BE CALIBRATED BY FACTORY AND AT FACTORY RECOMMENDED INTERVALS. PROVIDE DOCUMENTATION TO VALIDATE COMPLIANCE. TESTERS SHALL BE A MINIMUM LEVEL IV, BI-DIRECTIONAL, AND CAPABLE OF TESTING THE CABLING SPECIFIED. TESTERS SHALL BE CAPABLE OF REPORTING DATA AT ALL MEASURED POINTS AND UPLOADING THE DATA TO A PC. SERIAL NUMBER OF TESTER SHALL BE INCLUDED WITH THE TEST RESULTS. TEST CORDS SHALL BE NEW FACTORY MANUFACTURED LEADS. NO TEST LEADS SHALL BE USED FOR GREATER THAN 1,000 TESTS, OR THE MAXIMUM NUMBER OF TESTS RECOMMENDED BY MANUFACTURER. FOLLOW MANUFACTURER'S RECOMMENDATIONS. PRODUCE DOCUMENTATION ON MANUFACTURER'S TESTING PROCEDURES AND RECOMMENDATION. PROVIDE DOCUMENTATION ON CONFORMANCE WITH MANUFACTURER TESTING PROCEDURES. USE TEST LEADS/PATCH CORD FACTORY MADE THAT ARE “TUNED” TO TEST THE PARTICULAR MANUFACTURER'S CABLING SYSTEM USED FOR PERMANENT LINK TESTS. CERTIFY THAT TESTER'S SOFTWARE HAS BEEN UPDATED WITHIN THE LAST 30 DAYS PRIOR TO TESTING. USE ONLY APPROVED UTP/FIBER TEST EQUIPMENT: THE LATEST MODEL TO PERFORM TESTS ON SPECIFIED COPPER AND FIBER CABLING. COMPLY WITH THE SPECIFIED CABLE MANUFACTURER REQUIREMENTS.

  f. TESTING ON ALL HORIZONTAL/RISER AND INTER-BUILDING COPPER CABLING SHALL BE OF THE PERMANENT LINK TYPE; HOWEVER, CONTRACTOR SHALL WARRANT PERFORMANCE BASED ON CHANNEL PERFORMANCE AND IF REQUIRED PROVIDE PATCH CORDS THAT MEET CHANNEL PERFORMANCE CRITERIA. THE PERMANENT LINK CONSISTS OF UP TO 90M (295FT) OF HORIZONTAL CABLING AND ONE CONNECTION AT EACH END. ALL CABLING NOT TESTED STRICTLY IN ACCORDANCE WITH THESE PROCEDURES SHALL BE RE-TESTED AT NO ADDITIONAL COST TO THE OWNER. 100% OF THE INSTALLED CABLING MUST BE TESTED. ALL TESTS MUST PASS ACCEPTANCE CRITERIA DEFINED IN APPLICABLE EIA/TIA FOR THE TYPE OF CABLING SPECIFIED.

FIBER TESTING, POWER METER AND OTHER REQUIREMENTS

  a. FIBER CABLE TESTING: SHALL CONFORM TO TEST PROCEDURES, BANDWIDTH, AND ATTENUATION MEASURES TO COMPLY WITH EIA/TIA STANDARDS. CONTRACTOR SHALL USE A POWER METER AND/OR OTDR FOR FIBER TESTING COMPLETE WITH SOFT COPIES OF TEST RESULTS INCLUDING DB LOSS FOR LINKS. MAX LOSS SHALL BE LESS THAN .5DB, UNLESS MANUFACTURER SPECIFICATIONS ARE LESS. TESTING SHALL BE DONE FROM EACH END OF FIBER LINK. CONTRACTOR SHALL OBTAIN CERTIFICATES FROM MANUFACTURER ATTESTING TO WARRANTY BEING IN EFFECT AND INCLUDE CERTIFICATES WITH OTHER DELIVERABLES DUE AT THE COMPLETION OF THE PROJECT.

  b. PATCH CORD TESTING: PROVIDED PATCH CORDS SHALL BE NEW, TESTED TO MANUFACTURER SPECIFICATIONS LISTED AND COME WITH FULL MANUFACTURER FACTORY WARRANTY.

  c. LABELING: LABEL FIBER OPTIC CABLE RUNS WITH ORANGE OR RED “CAUTION - FIBER OPTIC CABLE” TAGS IN TELECOMMUNICATIONS ROOMS, PULL BOXES, AND OTHER VISIBLE OPEN SPACE. LABEL CONDUIT/INNERDUCT INTENDED FOR FIBER OPTICAL CABLING EVERY 50 FEET WITH “CAUTION - FIBER OPTIC CABLE” VISIBLE AND ACCESSIBLE CEILING SPACE.

  d. SYSTEM: USE A UNIQUE, FOUR SYLLABLE ALPHANUMERIC DESIGNATION FOR EACH CABLE, AND LABEL CABLE, AND TERMINALS TO WHICH IT CONNECTS WITH THE SAME DESIGNATION.

  e. COMMUNICATIONS ROOM GROUNDING WILL BE MARKED CONSPICUOUSLY WITH PERMANENT PLASTIC LABELS AT EACH END AND LOCATION STATING “CAUTION: TELECOMMUNICATION GROUND- DO NOT REMOVE”. INDICATE THE ROOM NUMBER OF THE OPPOSITE END OF THE WIRE.

  f. PROVIDE COPY (PRINTED AND ELECTRONIC) OF FLOOR PLANS SHOWING TELECOMMUNICATION INFRASTRUCTURE INSTALLED UNDER THIS CONTRACT. PLACE ONE HARD COPY OF ALL FLOOR PLANS IN EACH TELECOMMUNICATION ROOM OR WALL MOUNTED RACK. PROVIDE PLANS IN LAMINATION FORMAT.

  g. TEST REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION FOR EACH CABLING ELEMENT TESTED:
    1. WIREMAP RESULTS THAT INDICATE THE CABLING HAS NO SHORTS, OPENS, MISS-WIRES, SPLIT, REVERSED, OR CROSSED PAIRS, AND END-TO-END CONNECTIVITY IS ACHIEVED.
    2. FOR CABLING SPECIFIED: ATTENUATION, NEXT, PSNEXT, ACR, POWER SUM ACR, RETURNLOSS, ELFEXT, PSELFEXT, PROPAGATION DELAY, AND DELAY SKEW DATA THAT INDICATE THE WORST CASE RESULT, THE FREQUENCY AT WHICH IT OCCURS, THE LIMIT AT THAT POINT, AND THE MARGIN. THESE TESTS SHALL BE PERFORMED IN A SWEPT FREQUENCY MANNER FROM 1 MHZ TO 500 MHZ OR HIGHEST RELEVANT FREQUENCY, USING A SWEPT FREQUENCY INTERVAL THAT IS CONSISTENT WITH TIA AND ISO REQUIREMENTS. INFORMATION SHALL BE PROVIDED FOR ALL PAIRS OR PAIR COMBINATIONS AND IN BOTH DIRECTIONS WHEN REQUIRED BY THE APPROPRIATE STANDARDS. ANY INDIVIDUAL TEST THAT FAILS THE RELEVANT PERFORMANCE SPECIFICATION SHALL BE MARKED AS A FAIL.
    3. LENGTH (IN FEET), PROPAGATION DELAY, AND DELAY SKEW RELATIVE TO THE RELEVANT LIMIT. ANY INDIVIDUAL TEST THAT FAILS THE RELEVANT PERFORMANCE SPECIFICATION SHALL BE MARKED AS A FAIL.
    4. CABLE MANUFACTURER, CABLE MODEL NUMBER/TYPE, AND NVP.
    5. TESTER MANUFACTURER, MODEL, SERIAL NUMBER, HARDWARE VERSION, AND SOFTWARE VERSION.
    6. CIRCUIT ID NUMBER AND PROJECT NAME.
    7. AUTO TEST SPECIFICATION USED.
    8. OVERALL PASS/FAIL INDICATION.
    9. DATE AND TIME OF TEST.

  h. TEST REPORTS SHALL BE SUBMITTED BEFORE SUBSTANTIAL COMPLETION OF THE PROJECT.

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José Antonio Nicanor
04·15·2020

REVISIONS

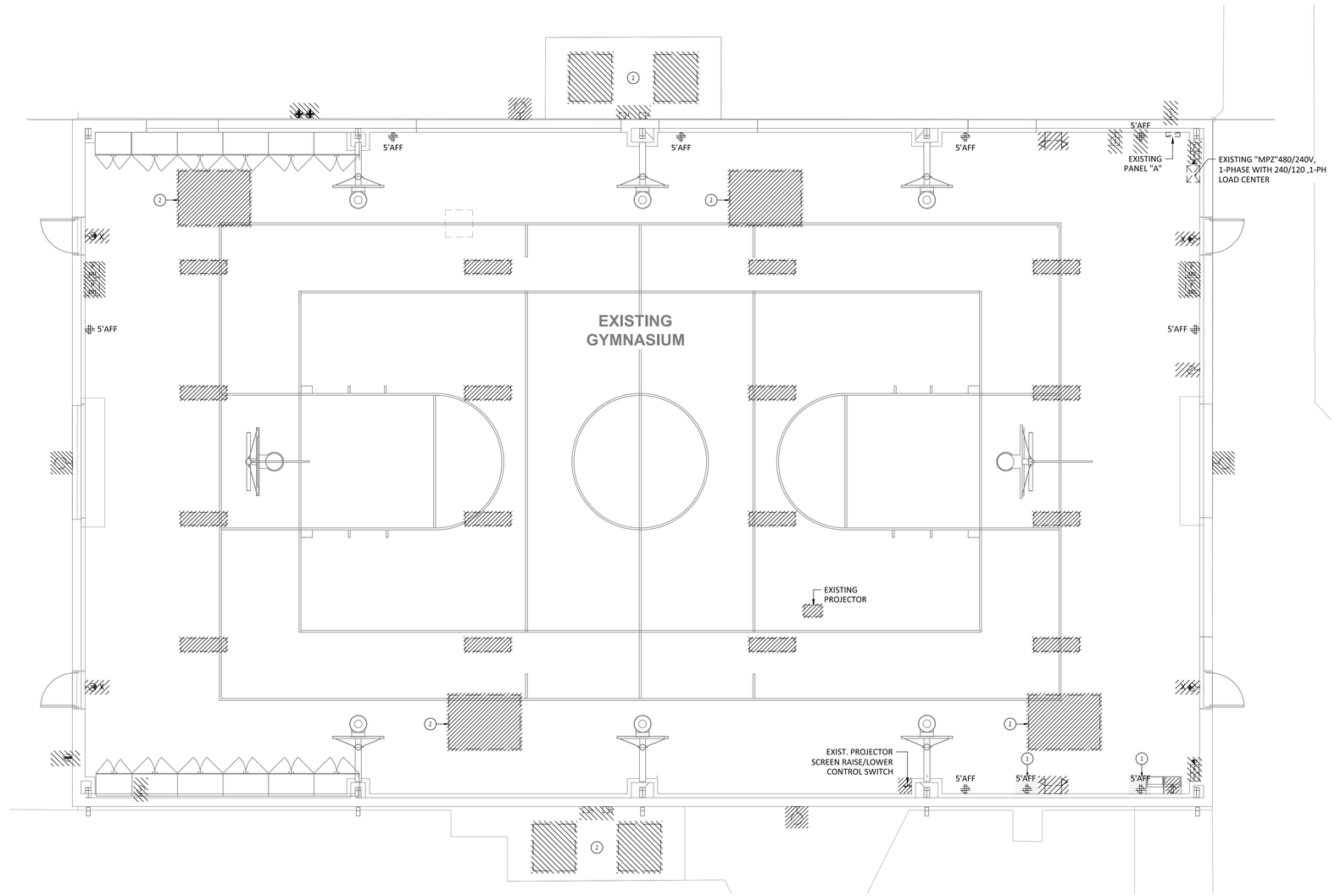
NO.	DATE	DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
STARTING DATE:
CK BY: J.A.N. DWN BY: K.A.

TELECOMMUNICATION SPECIFICATIONS

T-0.0



1 ELECTRICAL DEMOLITION PLAN (MONTE CRISTO ELEMENTARY)

SCALE:3/16"=1'-0"

GENERAL ELECTRICAL DEMOLITION NOTES:

A. INFORMATION ON THE PLAN HAS BEEN OBTAINED FROM EXISTING DRAWINGS AND SITE SURVEY. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

B. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE DEMOLITION WORK UNDER THIS SECTION OF THE PROJECT IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE CODES, HE/SHE SHALL INFORM THE ENGINEER DURING BIDDING PHASE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO MEET CODE REQUIREMENTS AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE. APPLICABLE CODES AND STANDARDS ON DEMOLITION WORK SHALL INCLUDE THOSE PUBLISHED BY OSHA AND EPA. AN ASBESTOS SURVEY SHALL BE KEPT ON SITE AT ALL TIMES PER TEXAS DEPARTMENT OF HEALTH REQUIREMENTS.

C. ALL DUST PRODUCTION, SMOKE PRODUCTION AND NOISE SHALL BE SUBJECT TO REAL TIME REVIEW BY THE ENGINEER. WORK SHALL BE SHUT DOWN DURING CRITICAL ACTIVITIES BY FORMAL REQUEST FROM THE DESIGNATED AUTHORITY OR CONTRACTING ENGINEER. WORK IN DUSTY AREAS SHALL BE CONTROLLED WITH TEMPORARY PARTITIONS. FLAME CUTTING SHALL BE MINIMIZED TO ELIMINATE SMOKE PRODUCTION. PROVIDE FIRE EXTINGUISHERS IN THE IMMEDIATE AREA.

D. ON ANY WORK SHOWN ON ELECTRICAL DRAWINGS WHICH REQUIRES DEMOLITION OF BUILDING STRUCTURES AND FINISHES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE THE NECESSARY DEMOLITION. CONTRACTOR SHALL PATCH AND REPAIR ALL BUILDING DAMAGE CREATED BY DEMOLITION WORK. PATCHING SHALL BE COMPLETED WITH THE SAME MATERIALS AS THE SURROUNDING AREAS, OR WITH ENGINEER APPROVED PATCHING MATERIALS.

E. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CHIPPED AND CHISELED PRIOR TO CORE-DRILLING OR SAW CUTTING. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION WITH STRUCTURAL ENGINEER BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE ENGINEER IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 8000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING, OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE OTHER TRADES.

F. ALL SURFACES COVERED BY "SPRAY POLY" AND PROTECTED BY TEMPORARY PARTITIONS SHALL REMAIN PROTECTED THROUGHOUT THE PROJECT. REMOVE THE PROTECTIVE BARRIERS ONLY AFTER THE NEW DEVICES, JUNCTION BOXES AND CONDUITS INSTALLED. PATCH AND MAINTAIN THE PROTECTIVE BARRIERS DURING CONSTRUCTION. COVER ALL EQUIPMENT OPENINGS WITH 4 MIL. POLY AND DUCT TAPE IN PLACE.

G. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL TIMES.

H. CONTRACTOR AND OWNER SHALL BE FULLY RESPONSIBLE TO IDENTIFY ANY AND ALL ASBESTOS PRESENT IN THE BUILDING PRIOR TO DEMOLITION AS REQUIRED BY LAW.

I. COORDINATION AMONG OTHER CONSTRUCTION DISCIPLINES PRIOR TO DEMOLITION IS MANDATORY.

J. INTERCOM WIRING, INTRUSION DETECTION, AND FIRE ALARM SHALL REMAIN IN PLACE TO BE REUSED WITH NEW DEVICES.

KEY NOTES: (#)

1. EXISTING QUAD RECEPTACLES TO BE RELOCATED. REFER TO NEW ELECTRICAL PLAN E-1.1 FOR NEW LOCATION.
2. CONTRACTOR SHALL DEMOLISH ALL WIRING, CONDUITS, DISCONNECT SWITCHES AND ALL ASSOCIATED ELECTRICAL EQUIPMENT FOR EXISTING CONDENSING UNITS AND AIR HANDLING UNITS. REMOVE ALL THE WAY TO THE ELECTRICAL PANEL.

DEMOLITION LEGEND

- EXISTING TO BE DEMOLISH
- EXISTING TO BE RELOCATED
- EXISTING TO REMAIN

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IMPROVEMENTS & ADDITIONS
FOR
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INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
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CK BY: J.A.N.	DWN BY: K.A.

ELECTRICAL
DEMOLITION PLAN

ED-1.0

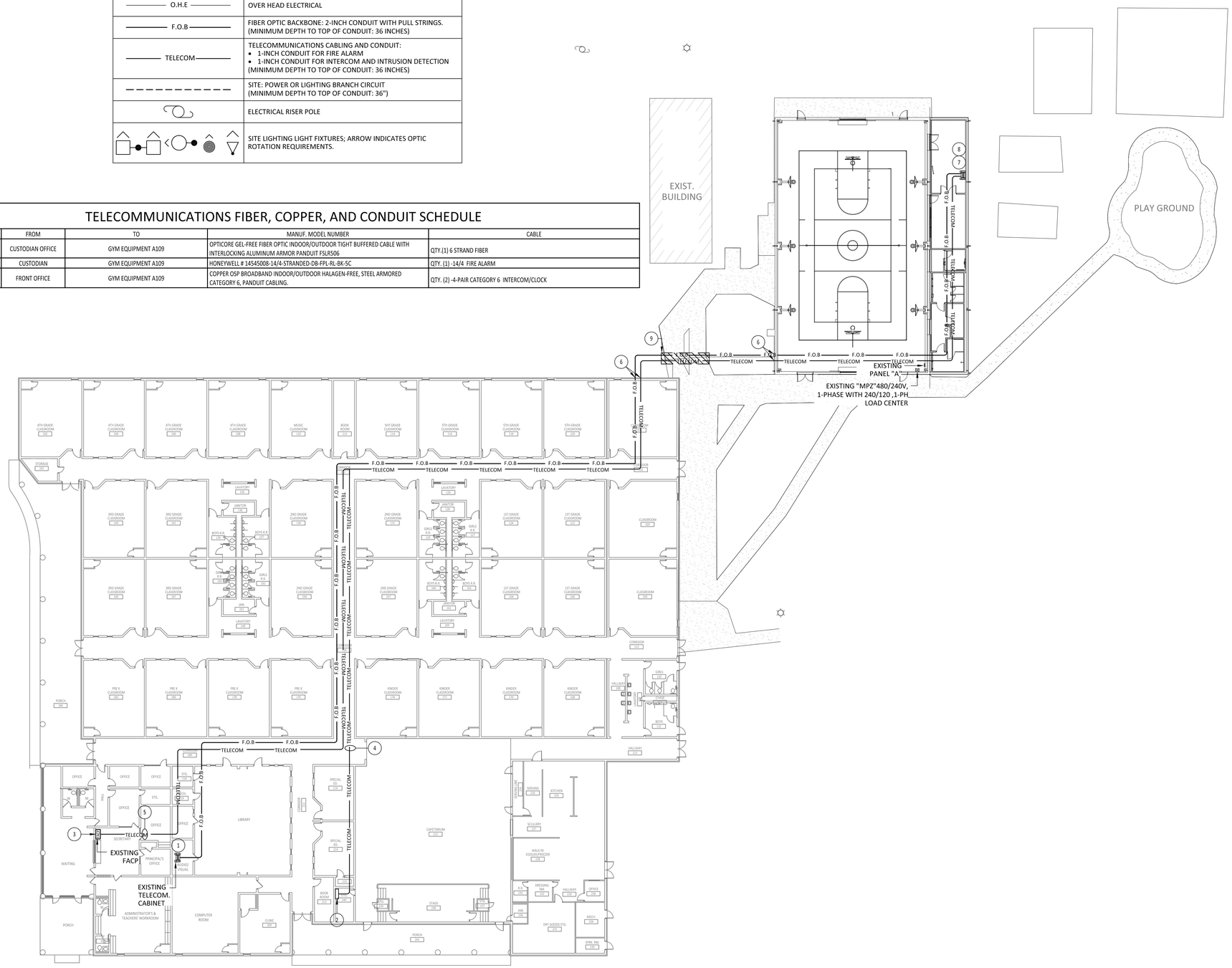
SITE LEGEND

O.H.E	OVER HEAD ELECTRICAL
F.O.B	FIBER OPTIC BACKBONE: 2-INCH CONDUIT WITH PULL STRINGS. (MINIMUM DEPTH TO TOP OF CONDUIT: 36 INCHES)
TELECOM	TELECOMMUNICATIONS CABLING AND CONDUIT: • 1-INCH CONDUIT FOR FIRE ALARM • 1-INCH CONDUIT FOR INTERCOM AND INTRUSION DETECTION (MINIMUM DEPTH TO TOP OF CONDUIT: 36 INCHES)
	SITE: POWER OR LIGHTING BRANCH CIRCUIT (MINIMUM DEPTH TO TOP OF CONDUIT: 36")
	ELECTRICAL RISER POLE
	SITE LIGHTING LIGHT FIXTURES; ARROW INDICATES OPTIC ROTATION REQUIREMENTS.

TELECOMMUNICATIONS FIBER, COPPER, AND CONDUIT SCHEDULE

MARK	TYPE	FROM	TO	MANUF. MODEL NUMBER	CABLE
FOB	FIBER	CUSTODIAN OFFICE	GYM EQUIPMENT A109	OPTICORE GEL-FREE FIBER OPTIC INDOOR/OUTDOOR TIGHT BUFFERED CABLE WITH INTERLOCKING ALUMINUM ARMOR PANDUIT FSLR506	QTY.(1) 6 STRAND FIBER
TELECOM	COPPER	CUSTODIAN	GYM EQUIPMENT A109	HONEYWELL # 14545008-14/4-STRANDED-DB-FPL-RL-BK-5C	QTY. (1) -14/4 FIRE ALARM
TELECOM	COPPER	FRONT OFFICE	GYM EQUIPMENT A109	COPPER OSP BROADBAND INDOOR/OUTDOOR HALAGEN-FREE, STEEL ARMORED CATEGORY 6, PANDUIT CABLING.	QTY. (2) -4-PAIR CATEGORY 6 INTERCOM/CLOCK

GYM EQUIPMENT A109



1 ELECTRICAL SITE PLAN (MONTE CRISTO ELEMENTARY)
SCALE: 1"=20'-0"

GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. APPROXIMATE LOCATION OF EXISTING TELECOMMUNICATION/MDF PANDUIT RACK.
2. APPROXIMATE LOCATION OF EXISTING INTERCOM/CLOCK AND INTRUSION DETECTION SYSTEMS. EXISTING INTERCOM/CLOCK SYSTEM IS BY VALCOM. CONTRACTOR SHALL INCLUDE IN HIS HID TO OWNER MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL NEW INTERCOM EXPANSION UNITS AND DIGITAL CLOCK CONTROLLERS AND POWER SUPPLIES, INTERCOM SPEAKERS, PUSH-BUTTONS, DIGITAL CLOCKS AND ALL ASSOCIATED EQUIPMENT FOR THE GYM RENOVATION. GYM CLOCK SYSTEM SHALL BE SET-UP IN A SLAVE MODE TO ALLOW INTERFACE WITH EXISTING MASTER CONTROLLERS. EXISTING INTRUSION DETECTION IS BY HONEYWELL. CONTRACTOR SHALL INCLUDE IN HIS HID TO OWNER MATERIAL AND LABOR REQUIRED FURNISH AND INSTALL NEW INTRUSION DETECTION DEVICES AND KEYPAD FOR THE GYM RENOVATION. INTERFACE WITH THE EXISTING HONEYWELL SYSTEM.
3. APPROXIMATE LOCATION OF EXISTING FIRE ALARM CONTROL PANEL EXISTING FIRE ALARM CONTROL PANEL IS A HOCHIKI-FIRENET-PRODUCT CODE #FNP1127US20RS120. CONTRACTOR SHALL INCLUDE IN HIS HID TO OWNER MATERIAL AND LABOR REQUIRED FURNISH AND INSTALL NEW FIRE ALARM CONTROL PANEL EXPANDER CARD AND EXTENDING PANEL FOR THE GYM RENOVATION.
4. FURNISH AND INSTALL EMT CONDUIT ABOVE CEILING TO ALLOW FOR THE INSTALLATION OF NEW INTERCOM/CLOCK AND INTRUSION DETECTION CABLING.
5. FURNISH AND INSTALL EMT CONDUIT ABOVE CEILING TO ALLOW FOR THE INSTALLATION OF NEW FIRE ALARM CABLING.
6. FURNISH AND INSTALL HOFFMAN A16R126HCR 16"X12"X6"NEMA 3R WITH HINGED COVER.
7. APPROXIMATE LOCATION OF NEW WALL MOUNTED, TELECOMMUNICATION RACK, FIRE ALARM EXTENDING PANEL, INTRUSION DETECTION PANEL, INTERCOM/CLOCK SYSTEM. REFER TO DETAILS FOR INSTALLATION REQUIREMENTS.
   A. QTY. (1) OPTICOM RACK MOUNT FIBER TRAY EQUAL TO PANDUIT #FMT1 WITH QTY.(1) QUICKNET FIBER ADAPTER PANEL EQUAL TO PANDUIT # FAP6WAQDLCZ (AQUA).
   B. MULTIMODE-LC OPTICAM FIBER OPTIC CONNECTORS-PRE POLISHED CAM TERMINATIONS WITH 3.0MM RETENTION BOOT ASSEMBLIES (AQUA), AND LC OPTICAM DUPLEX CLIP-FIBER PATCH CABLE ASSEMBLY.
   C. QTY. (1) CATEGORY 6 ANGLED PATCH PANEL EQUAL TO PANDUIT # QAPP24BL.
   D. FURNISH WITH QTY. (2) HORIZONTAL WIRE MANAGER. INSTALL WIRE MANAGERS ABOVE AND BELOW THE ANGLED PATCH PANELS.
   E. QTY. (12) CATEGORY 6 UTP, 23 AWG PATCH CABLES (COLOR GREEN) 12 FOOT WITH T568B TERMINATION JACKS.
   F. GROUNDING KIT: GROUNDING CABLE HANGER BRACKETS AND CABLE BRACKET JUMPERS.
   G. FURNISH CABINET WITH VENTILATION FAN.
   H. FURNISH WITH RACK FILLER PANELS.
8. CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL 6-STRAND FIBER MULTIMODE TO EXISTING FIBER CABINET AND PANEL. FURNISH FIBER PATCH CABLES AS NOTED ON KEYNOTE 9 FOR CONNECTION TO ETHERNET SWITCH.
9. CONTRACTOR SHALL BORE UNDER EXISTING SIDE WALK TO ALLOW FOR THE INSTALLATION OF NEW TELECOMMUNICATION SERVICE.

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ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO: 20005
DATE: 4/15/2020
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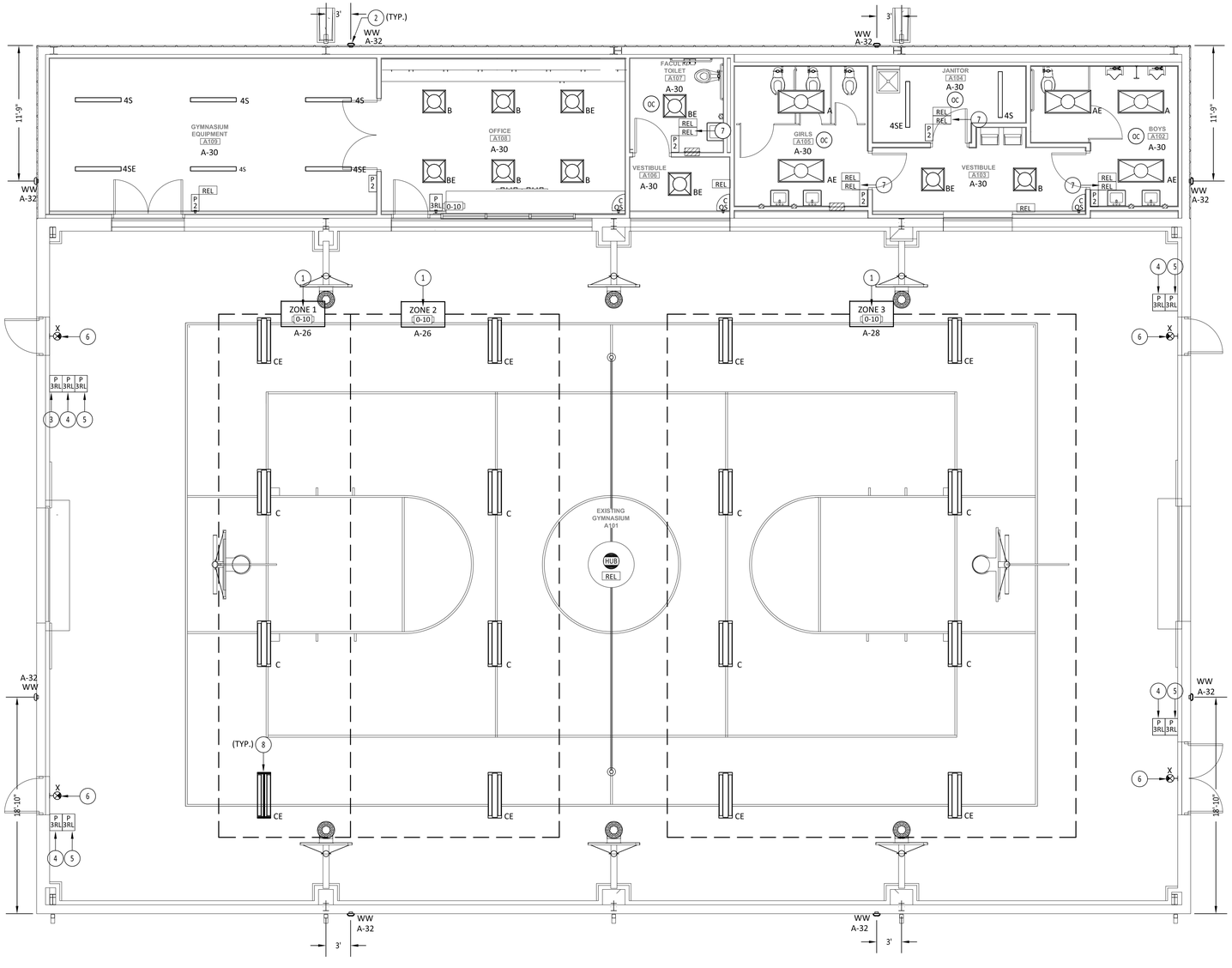
CK BY: J.A.N. DWN BY: K.A.

ELECTRICAL
SITE PLAN

ES-1.0



1 ELECTRICAL LIGHTING PLAN (MONTE CRISTO ELEMENTARY)

SCALE: 3/16"=1'-0"

GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO ADJUST ILLUMINATION SO THAT IT IS EQUALLY DISTRIBUTED THROUGH OUT THE GYM.
2. INSTALL LIGHT FIXTURES AT 10-FEET ABOVE FINISH FLOOR PROGRAM WITH LIGHTING CONTROL GATEWAY. DO NOT INSTALL SURFACE MOUNTED CONDUIT. CONDUIT SHALL BE CONCEALED WITHIN INTERIOR SPACE.
3. CONTROL SWITCH SHALL CONTROL ON/OFF AND DIMMING OF ZONE 1.
4. CONTROL SWITCH SHALL CONTROL ON/OFF AND DIMMING OF ZONE 1 AND 2.
5. CONTROL SWITCH SHALL CONTROL ON/OFF AND DIMMING OF ZONE 3
6. FURNISH AND INSTALL EXIT LIGHT FIXTURES WITH WIRE GUARDS. REFER TO LIGHT FIXTURE SCHEDULE FOR MODEL NUMBER. INSTALL LIGHT FIXTURE AT 12 INCHES ABOVE DOOR.
7. POWER PACKS TO BE USED TO CONTROL RESTROOM EXHAUST FAN. FAN SHALL REMAIN ON 5 MINUTES AFTER LIGHTS ARE TURNED OFF.
8. FURNISH AND INSTALL SUPERSTRUT EQUAL TO T&B#1400S 209G WITH A-100 REGULAR SPRING NUTS, E-142 HEX HEAD CAP SCREWS WITH FENDER WASHERS, AND NECESSARY MISCELLANEOUS HARDWARE FOR SUPPORT OF LIGHT FIXTURES. USE BC CLAMPS AT THE METAL BEAMS/PURLINS. REFER TO DETAILS FOR LIGHT FIXTURE ELEVATION AND STRUT SUPPORT REQUIREMENTS. AIRCRAFT CABLE OR CHAIN LINK WILL NOT BE ACCEPTACBLE MEANS OF SUPPORT.

LIGHTING CONTROLS LEGEND

C OS	(WALL MOUNTED) LUTRON#LRF2-OKLB-P-WH
P 2	PJ2-2B-GWH-L01 (CW-1-SS-PICOWBX-ADAPT)
P 3RL	PJ2-3BRL-GWH-L01 (CW-1-SS-PICOWBX-ADAPT)
REL	RMJS-16R-DV-B
0-10	RMJS-8T-DV-B
OS PIR 2S	MS-OPS6M2-DV-WH
OC	LRF2-OCR2B-P-WH
ARM	LRF-ARM-WH
HUB	LIGHTING CONTROL GATEWAY# HJS-2-FM

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DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
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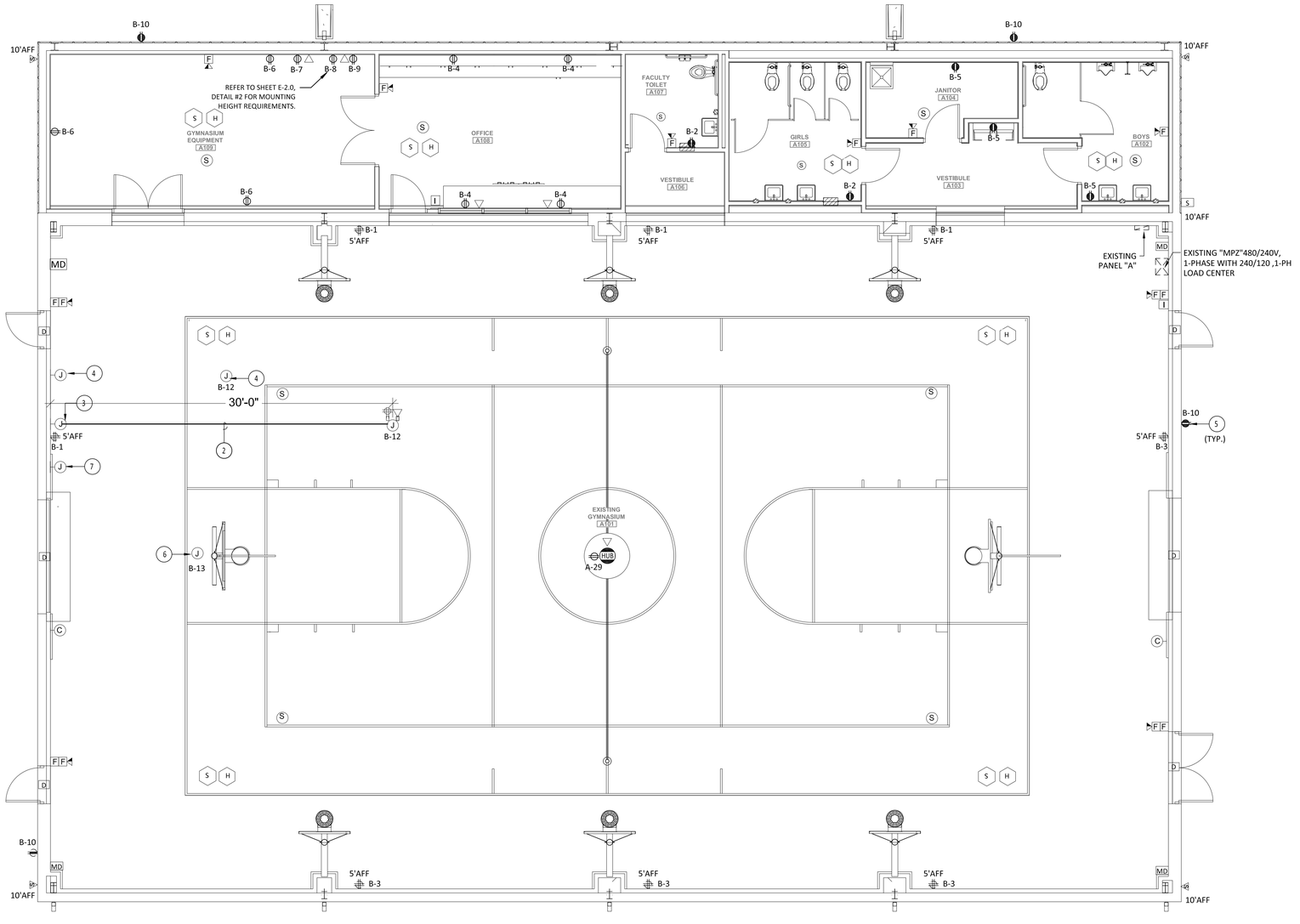
ELECTRICAL
LIGHTING PLAN

E-1.0



GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. POWER AND DATA FOR PROJECTOR.
2. FURNISH AND INSTALL QTY(1) 1-1/2 EMT CONDUIT WITH PULLSTRING FOR MULTIMEDIA CABLING.
3. FURNISH AND INSTALL 4-INCH SQUARED DEEP JUNCTION FOR MULTIMEDIA OUTLET WITH MUDRINGS. INSTALL AT AT 15" TO BOTTOM OF DEVICE.
4. POWER FOR MOTORIZED SCREEN. FURNISH 1/2 INCH CONDUIT FROM SCREEN CONTROLLER TO 48" AFF FOR RAISE/LOWER CONTROL SWITCH. MOUNT CONTROL SWITCH ABOVE MULTIMEDA JUNCTION BOX.
5. FURNISH AND INSTALL FLUSH/RECESSED MOUNTED COVER ASSEMBLY EQUAL TO LEGRAND #WIUCAST1 WITH DUPLEX RECEPTACLE DEVICE PLATE.
6. FURNISH AND INSTALL POWER FOR ELECTRIC WINCH CONSISTING OF 2#12, 1#12G, 1/2"C. FURNISH AND INSTALL NEMA L14-20 TWIST LOCK RECEPTACLE. MOUNT ADJACENT TO WINCH.
7. FURNISH AND INSTALL 4-INCH SQUARED DEEP JUNCTION WITH 3/4-INCH CONDUIT WITH PULL FROM WINCH TO CONTROL SWITCH FOR KEY SWITCH CONTROL FOR ELECTRIC WINCH.

1 ELECTRICAL POWER AND SPECIAL SYSTEMS (MONTE CRISTO ELEMENTARY)
SCALE:3/16"=1'-0"

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04-15-2020

NO.	DATE	DESCRIPTION REVISIONS

DE LA VINA & MONTE CRISTO ELEMENTARY SCHOOL GYNASIUM IMPROVEMENTS & ADDITIONS FOR EDINBURG CONSOLIDATED INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
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CK BY: J.A.N.	DWN BY: K.A.

ELECTRICAL POWER AND SPECIAL SYSTEMS PLAN

E-1.1

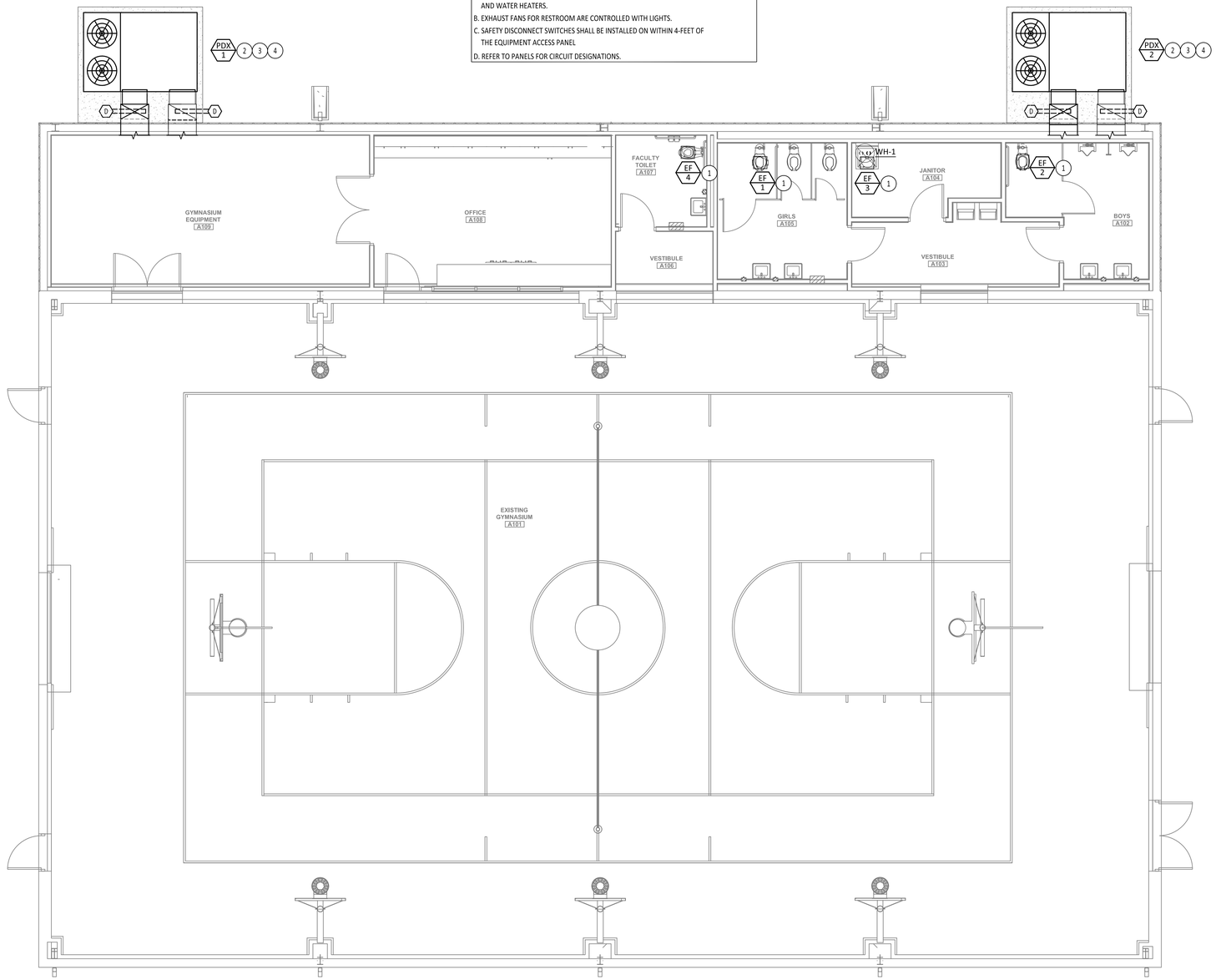
MECHANICAL EQUIPMENT CONNECTION

AIR HANDLING UNITS		
UNIT MARK	BRANCH CIRCUIT	SAFETY DISCONNECT SWITCHES
PDX-1	3#3, 1#8EGC, 1-1/4"C	FACTORY PROVIDED.
PDX-2	3#3, 1#8EGC, 1-1/4"C	FACTORY PROVIDED.

EXHAUST FANS		
UNIT MARK	BRANCH CIRCUIT	SAFETY DISCONNECT SWITCHES
EF-1	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.
EF-2	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.
EF-3	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.
EF-4	2#12, 1#12G, 1/2"C	FACTORY PROVIDED.

WATER HEATERS		
UNIT MARK	BRANCH CIRCUIT	SAFETY DISCONNECT SWITCHES
WH-1	3#12, 1#12G, 1/2"C	30/20AF/3P, NEMA 1

NOTES:
A. REFER TO MECHANICAL & PLUMBING PLANS FOR LOCATION OF FANS, AND WATER HEATERS.
B. EXHAUST FANS FOR RESTROOM ARE CONTROLLED WITH LIGHTS.
C. SAFETY DISCONNECT SWITCHES SHALL BE INSTALLED ON WITHIN 4-FEET OF THE EQUIPMENT ACCESS PANEL
D. REFER TO PANELS FOR CIRCUIT DESIGNATIONS.



GENERAL NOTES:

A. REFER TO SHEET MEP-0.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. EXHAUST FANS SHALL BE CONTROLLED WITH LIGHT SWITCHES.
2. FURNISH AND INSTALL DUCT SMOKE DETECTORS CONNECT DUCT SMOKE DETECTORS TO FIRE ALARM CONTROL PANEL.
3. PDX UNITS DUPLEX RECEPTACLES TO BE INSTALLED IN METAL FLEX CONDUIT WITHIN THE PACKAGE UNIT.
4. ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR TO FURNISH AND INSTALL POWER FOR BIPOLAR IONIZATION DEVICE.

1 ELECTRICAL MECHANICAL CONNECTION PLAN - (MONTE CRISTO ELEMENTARY)
SCALE: 3/16"=1'-0"

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04-15-2020

NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
STARTING DATE:	
CK BY: J.A.N.	DWN BY: K.A.

ELECTRICAL MECHANICAL CONNECTION PLAN

E-1.2

EXISTING PANELBOARD "A" SQUARE D (MONTE CRISTO ELEMENTARY)

VOLTAGE: 480Y/277 VOLT 3 PHASE 4 WIRE — LOCATION: GYMNASIUM

250 A MAIN CIRCUIT BREAKER — MOUNTING: SURFACE

BUSES: MAIN - 250 A; NEUTRAL - 100%; EQUIPMENT GROUND — Isc = 22,000 A RMS SYM AVAILABLE

VA:L	VA:R	VA:O	LOAD	BKR	CKT	PH	CKT	BKR	LOAD	VA:L	VA:R	VA:O
0		7104	PDX-1	80/3	1	A	2	80/3	PDX-2	0		7104
0		7104	"	-	3	B	4	-	"	0		7104
0		7104	"	-	5	C	6	-	"	0		7104
0		1000	WATER HEATER	20/3	7	A	8	30/3	SPARE	0		
0		1000	"	-	9	B	10	-	"	0		
0		1000	"	-	11	C	12	-	"	0		
0			SPARE	30/3	13	A	14	30/3	SPARE	0		
0			"	-	15	B	16	-	"	0		
0			"	-	17	C	18	-	"	0		
0			SPARE	30/3	19	A	20	30/3	SPARE	0		
0			"	-	21	B	22	-	"	0		
0			"	-	23	C	24	-	"	0		
0	4500	1200	EXIST. MINI POWER ZONE "MPZ"480/240V, 1-PH	40/2	25	A	26	20/1	NEW GYM LIGHTING - ZONE 1 & 2	384		
0	4140	120	"	-	27	B	28	20/1	NEW GYM LIGHTING - ZONE 3	384		
0			LIGHTING CONTROL GATEWAY	20/1	29	C	30	20/1	NEW ADDITION LIGHTING	1014		
0			SPACE	20/1	31	A	32	20/1	NEW BUILDING PERIMETER LIGHTING	296		
0			SPACE	20/1	33	B	34	20/1	SPACE	0		
0			SPACE	20/1	35	C	36	20/1	SPACE	0		
0			SPACE	20/1	37	A	38	20/1	SPACE	0		
0			SPACE	20/1	39	B	40	20/1	SPACE	0		
0			SPACE	20/1	41	C	42	20/1	SPACE	0		

VA:L (LIGHTING)	2078	CONNECTED	2598 DEMAND
VA:R (RECEPTACLES)	8640	CONNECTED	8640 DEMAND
VA:O (OTHER)	46944	CONNECTED	46944 DEMAND
VA: TOTAL	57662	CONNECTED	58182 DEMAND
AMPS: TOTAL	69	CONNECTED	70 DEMAND

L	R	O	TOTAL			
680	4500	16408	VA CONNECTED TO A PHASE	21588	VA =	78 AMPS CONNECTED TO A PHASE @ 277 VOLTS
384	4140	15328	VA CONNECTED TO B PHASE	19852	VA =	72 AMPS CONNECTED TO B PHASE @ 277 VOLTS
1014	0	15208	VA CONNECTED TO C PHASE	16222	VA =	59 AMPS CONNECTED TO C PHASE @ 277 VOLTS
2078	8640	46944	**TOTAL**	57662	VA	

EXISTING PANELBOARD "B" SQUARE D (MONTE CRISTO ELEMENTARY)

VOLTAGE: 120/240 VOLT 1 PHASE 3 WIRE — LOCATION: GYMNASIUM

70 A MAIN LUGS ONLY — MOUNTING: SURFACE MOUNTED NEMA 1

BUSES: MAIN - 70 A; 100% NEUTRAL: EQUIPMENT GROUND — Isc = 10,000 A RMS SYM AVAILABLE

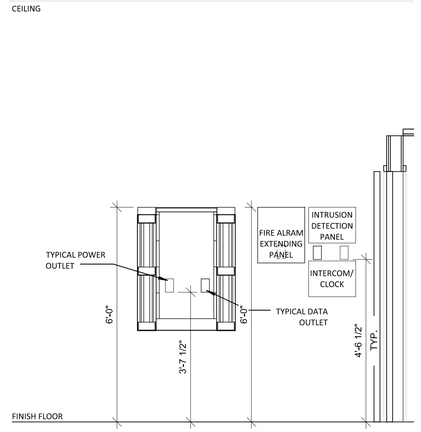
VA:L	VA:R	VA:O	LOAD	BKR	CKT	PH	CKT	BKR	LOAD	VA:L	VA:R	VA:O
0	1440		EXISTNG QUAD RCPT. GYM SOUTH & WEST WALL	20/1	1	A	2	20/1	GFCI RCPT. GIRLS RR & FACULTY RR	0	360	
0	1440		EXISTING QUAD RCPT. GYM NORTH & EAST WALL	20/1	3	B	4	20/1	GEN. RCPT OFFICE	0	720	
0	540		GFCI BOYS RR, JAN. A104, & EWC	20/1	5	A	6	20/1	GEN. RCPT GYM EQUIPMENT	0	540	
0	180		RCPT. TELECOM. RACK	20/1	7	B	8	20/1	RCPT. INTRUSION & INTERCOM PANEL	0	180	
0	180		RCPT. FIRE ALARM PANEL	20/1	9	A	10	20/1	GFCI RCPT. BUILDING PERIMETER	0	720	
0	180		EWC-1	20/1	11	B	12	20/1	QUAD RCPT. VIDEO PROJECTOR & SCREEN	0	720	
0	0	1200	ELECTRIC WINCH	20/1	13	A	14	20/1	SPACE	0	720	
0	0	120	BIPOLAR IONIZATION DEVICES "BPI-1"	20/1	15	B	16	20/1	SPACE	0	720	

VA:L (LIGHTING)	0	CONNECTED	0 DEMAND
VA:R (RECEPTACLES)	8640	CONNECTED	8640 DEMAND
VA:O (OTHER)	1320	CONNECTED	1320 DEMAND
VA: TOTAL	9960	CONNECTED	9960 DEMAND
AMPS: TOTAL	42	CONNECTED	42 DEMAND

L	R	O	TOTAL			
0	4500	1200	VA CONNECTED TO A PHASE	5700	VA =	48 AMPS CONNECTED TO A PHASE @ 120 VOLTS
0	4140	120	VA CONNECTED TO B PHASE	4260	VA =	36 AMPS CONNECTED TO B PHASE @ 120 VOLTS
0	8640	1320	**TOTAL**	9960	VA	

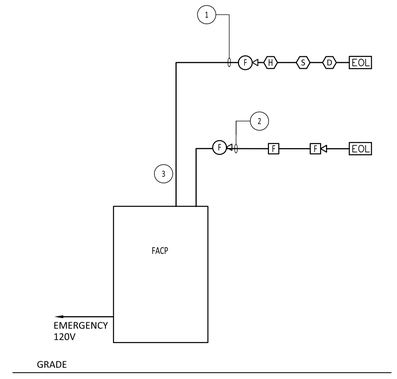
1 ELECTRICAL PANEL SCHEDULES - MONTE CRISTO ELEMENTARY

SCALE: N.T.S.



2 SPECIAL SYSTEM EQUIPMENT ELEVATION

SCALE: N.T.S.



KEYED NOTES: (#)

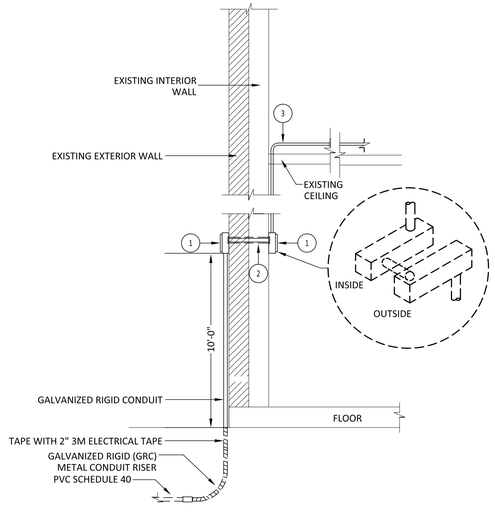
#18/2 TW/SHLD FPLP, 3/4"C, TYPICAL.

#14/2 TW/SHLD, 3/4"C, TYPICAL.

#18 SINGLE TWISTED SHIELDED PAIR FOR INITIATING DEVICES, #14 SINGLE TWISTED PAIR FOR STROBE DEVICES AND #14/2 FOR RELAY CIRCUITS, TYPICAL.

3 FIRE ALARM RISER DIAGRAM

SCALE: N.T.S.



KEY NOTES: (#)

1. FURNISH AND INSTALL NEMA 3R 12" L X 24" W X 12" D WIREWAY WITH HINGED COVER.
2. FURNISH AND INSTALL EASY PATH SLEEVE SERIES 44 QTY. (1) FOR D TELECOM CABLING; FURNISH CONDUIT SLEEVES FOR ELECTRICAL FEEDERS.
3. FURNISH AND INSTALL EMT-SURFACE MOUNTED CONDUIT FROM THIS POINT TO THE INTERIOR WIREWAY.

4 TELECOMMUNICATION AND ELECTRICAL WALL PENETRATION BUILDING DETAIL

SCALE: N.T.S.

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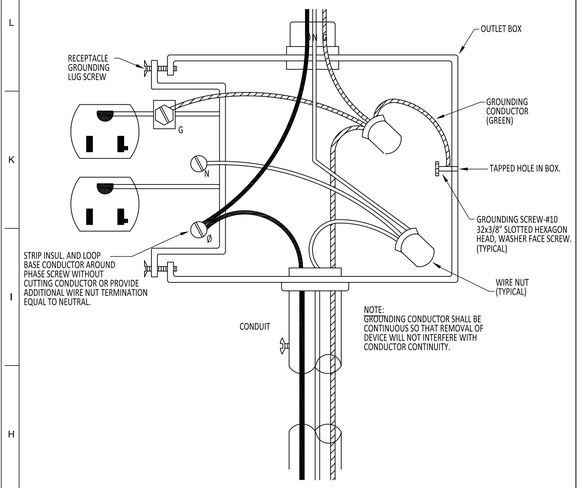
STARTING DATE:

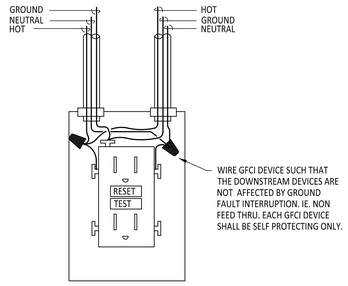
CK BY: J.A.N. DWN BY: K.A.

ELECTRICAL PANEL SCHEDULES

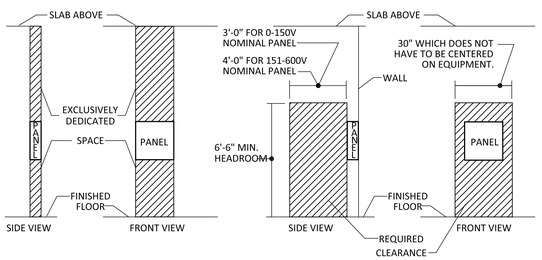
E-2.0



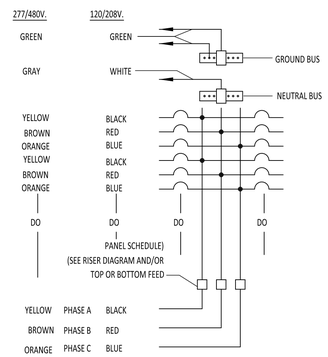
1 TYPICAL RECEPTACLE GROUNDING DETAIL
SCALE: N.T.S.



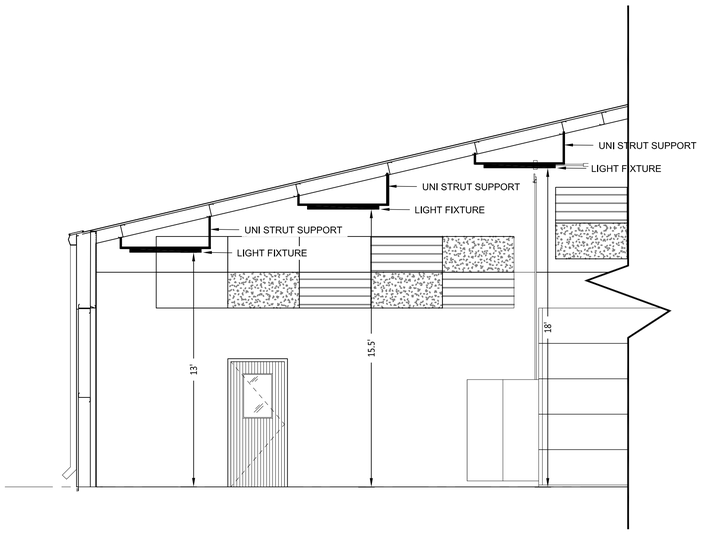
2 GFCI RECEPTACLE-WIRING DIAGRAM
SCALE: N.T.S



3 WIRING METHOD FOR ISOLATED GROUNG
SCALE: N.T.S.



4 TYPICAL PANEL COLOR CODE DETAIL
SCALE: N.T.S.



5 TYPICAL GYM LIGHT FIXTURE INSTALLATION DETAIL
SCALE: N.T.S

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PROJECT NO: 20005
DATE: 4/15/2020
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CK BY: J.A.N. DWN BY: K.A.

ELECTRICAL DETAILS

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E-2.1

LIGHTING FIXTURE SCHEDULE

TYPE	MANUF.	MODEL NUMBER	LAMPS	VA	VOLTAGE	DESCRIPTION
A	H E WILLIAMS INC.	LP-24-L50/840-DFK-2448W-DIM-UNV FURNISH WITH DRYWALL KIT FOR GYPSUM BOARD CEILING	48W-LED 4000K 4906 LUMENS	48	277	2X4 LED EDGE LIT FLAT PANEL
AE	H E WILLIAMS INC.	LP-24-L50/840-DFK-2448W-DIM-UNV FURNISH WITH DRYWALL KIT FOR GYPSUM BOARD CEILING	48W-LED 4000K 4906 LUMENS	48	277	2X4 LED EDGE LIT FLAT PANEL WITH EMERGENCY BATTERY BACK UP
B	H E WILLIAMS INC.	LP-22-L40/840-DIM-UNV	39W-LED 4000K 4155 LUMENS	39	277	2X2 LED EDGE LIT FLAT PANEL
BE	H E WILLIAMS INC.	LP-22-L40/840-EM/10WRM-DIM-UNV	39W-LED 4000K 4155 LUMENS	39	277	2X2 LED EDGE LIT FLAT PANEL WITH EMERGENCY BATTERY BACK UP
C	GE	ABV3-036-T-49-1D-Q-V-ST-K-Q-W	160W-LED 4000K 35,500LUMENS	160	277	LED HIGH BAY
CE	GE	ABV3-036-T-49-1D-Q-V-ST-K-Q-W-EL1	160W-LED 4000K 47,400 LUMENS	160	277	LED HIGH BAY WITH EMERGENCY BATTERY BACK UP
4S	ILP	WTZ-48WLED-UNIV-50-RAFL-SS	48W-LED 5000K 6676 LUMENS	48	277	4-FOOT LED LINEAR
4SE	ILP	WTZ-48WLED-UNIV-50-RAFL-SS-FI/ILBCP07	48W-LED 5000K 6676 LUMENS	48	277	4-FOOT LED LINEAR WITH EMERGENCY BATTERY BACK UP
WW	GE EVOLVE	EWLS-01-0-40AF-7-50-N-1-FM-G	37W-LED 5000K 4000 LUMENS	37	277	LED WALL PACK
X	H E WILLIAMS INC.	EXIT/EL-SF-R-CP-AN-EM-WG-D REFER TO PLANS FOR SINGLE OR DOUBLE FACE REQUIREMENTS AND CHEVRONS FURNISH WITH WIRE GUARDS.	10W-LED	10	277	LED EDGE-LIT EXIT LIGHT

1 LIGHT FIXTURE SCHEDULE (MONTE CRISTO ELEMENTARY)
SCALE:N.T.S.

ELECTRICAL GENERAL LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS.
SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION
CR	SECURITY SYSTEM CARD READER
T	EXIT DEVICE, (ELECTRIC STRIKE, ELECTROMAGNETIC)
T	POWER TRANSFER HINGE
MC	MICROPHONE
PB	PANIC/DURESS BUTTON
KP	INTRUSION DETECTION KEYPAD
MD	MOTION DETECTION SENSOR
D	DOOR STATUS SWITCH
G	GLASSBREAK SENSOR
C	CLOCKS - SINGLE OR DOUBLE FACE, IP BASED, DIGITAL CLOCKS
IDP	INTRUSION DETECTION PANEL
ACC	ACCESS CONTROL PANEL
	CEILING MOUNTED PROJECTOR MOUNT HARDWARE, CEILING MOUNTED RECESSED AUDIO AND VIDEO DEVICES, AND CEILING MOUNTED RECESSED RECEPTACLE.
X DENOTES CAMERA #; X DENOTES CAMERA TYPE; X DENOTES CAMERA #	SURVEILLANCE CAMERAS (UNLESS OTHER WISE NOTED, ALL CAMERAS ARE FIXED) PTZ= (PAN-TILT-ZOOM)
S	INTRUSION DETECTION SIREN
S	INTERCOM SPEAKER; WP = WEATHER PROOF
	INTERCOM PUSH BUTTON SWITCH
PC	PHOTOCELL LIGHTING CONTROL
S (WALL MNTD.)	INTERCOM SPEAKER WALL MOUNTED (WEATHER PROOF)
	DATA OUTLET WALL MOUNTED

SYMBOL	DESCRIPTION	MNTG. HT. UNO (SEE NOTE 1)
	POWER	
	DUPLEX RECEPTACLE - 20A/125V/1P/3W/G	15" AFF
	DUPLEX RECEPTACLE, 20A, GROUND FAULT INTERCEPTOR; C = CEILING MOUNTED.	15" AFF
	DUPLEX RECEPTACLE, 20A, INSULATED GROUND DEVICE WITH ISOLATED GROUNDING CONDUCTOR; CLG = CEILING MOUNTED.	15" AFF
	QUADPLEX RECEPTACLE, 20A, GROUND FAULT INTERCEPTOR; CLG = CEILING MOUNTED.	AS REQD.
	QUADPLEX RECEPTACLE, 20A, INSULATED GROUND DEVICE WITH ISOLATED GROUNDING CONDUCTOR; CLG = CEILING MOUNTED.	AS REQD.
E	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT	AS REQD.
	SPECIAL PURPOSE RECEPTACLE; MOTOR OR EQUIPMENT CONNECTION	AS REQD.
J	JUNCTION BOX - SIZE & MOUNTING AS REQUIRED	15" AFF
MPFB	AUDIO, VIDEO, DATA, AND POWER FLOOR BOX WIRING DIVICE. FURNISH AND INSTALL EQUAL LEGRAND #RBF11; FURNISH WITH THE FOLLOWING: QTY.(2) IG DUPLEX RECEPTACLES AND 6 PORT-DATA WIRING DEVICE PLATE TO ACCOMODATE CATEGORY 6A CABELING.FLOOR BOX CONVER TO MATCH FINISH FLOOR TYPE (IE. CARPET, TILE, WOOD, ETC.)	FLOOR
FB	FURNITURE FEED POKE THRU BOX FOR POWER. FURNISH AND INTALL EQUAL TO LEGRAND 6ATCFF WITH THE FOLLOWING: 5BLH OUTER COMPARTMENT 1 17SCHA &1BHA CENTER COMPARTMENT 5BLH OUTER COMPARTMENT 1	SECOND FLOOR CONCRETE SLAB
30/-/3	DISCONNECT SWITCH - 30/-/3 INDICATES 30A, 3-POLE, NONFUSED; 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE	AS REQD.
CB 30/3	CIRCUIT BREAKER DISCONNECT SWITCH - THERMAL MAGNETIC CB IN NEMA 1 ENCL; AMPS/POLES AS INDICATED	AS REQD.
30/30/3	DISCONNECT SWITCH - 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE	AS REQD.
2	MOTOR STARTER FVNR UNO; NUMBER INDICATES NEMA SIZE	AS REQD.
CB	COMBINATION MOTOR CONTROLLER/DISCONNECT SWITCH	AS REQD.
	PANELBOARD	-
	MOTOR	-
~	SINGLE LINE CONTINUATION	-
GAAP	GENERATOR ANNUNCIATOR PANEL	-
X,X,X	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	-
X/X/X	MULTI-POLE DEVICE CIRCUIT NUMBERS	
	TRANSFORMER	-

SYMBOL	DESCRIPTION	MNTG. HT. UNO (SEE NOTE 1)
	FIRE ALARM	
F	FIRE ALARM VOICE EVACUATION SPEAKER.	-
F	FIRE ALARM PULL STATION	48" AFF
F	FIRE ALARM AUDIBLE/VISUAL SIGNAL; WP = WEATHER PROOF; S = WITH INTEGRAL VOICE ACTIVATED SPEAKER.	80" AFF
F	FIRE ALARM AUDIBLE SIGNAL; WP = WEATHER PROOF; S = WITH INTEGRAL VOICE ACTIVATED SPEAKER.	80" AFF
F	FIRE ALARM VISUAL SIGNAL; WP = WEATHER PROOF; S = WITH INTEGRAL VOICE ACTIVATED SPEAKER.	80" AFF
FS	FIRE ALARM SPRINKLER FLOW SWITCH	-
TS	FIRE ALARM SPRINKLER TAMPER SWITCH	-
S	FIRE ALARM SMOKE DETECTOR CEILING OR WALL MOUNTED	80" AFF
H	HEAT DETECTOR CEILING OR WALL MOUNTED	-
DH	MAGNETIC DOOR HOLDER, FLOOR MOUNTED	
D	DUCT SMOKE DETECTOR	-
FACP	FIRE ALARM CONTROL PANEL	-
FAAP	FIRE ALARM ANNUNCIATOR PANEL	-
VAFP	VOICE ACTIVATED FIRE ALARM PANEL	80" AFF
R	FIRE ALARM CONTROL RELAY	

GENERAL ABBREVIATIONS

ABS	ABOVE BACK SPLASH	NC (N.C.)	NORMALLY CLOSED
AFF	ABOVE FINISHED FLOOR	NF	NONFUSED
BFC	BELOW FINISHED CEILING	NIC	NOT IN CONTRACT
C	CONDUIT	NL	NIGHT LIGHT
CB	CIRCUIT BREAKER	NO (N.O.)	NORMALLY OPEN
CLG	CEILING	PNL	PANEL
EC	EMPTY CONDUIT	RCPT(S)	RECEPTACLE(S)
EP	ELECTRICAL PRIMARY	SO (S.O.)	SPACE ONLY
EX	EXISTING	SP	SPARE
F	FUSE	ST (S.T.)	SHUNT TRIP
G	GROUND (EQUIPMENT)	SW	SWITCH
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
HCC	HORIZONTAL CROSS CONNECT	UF	UNDERFLOOR
IC	INTERRUPTING CAPACITY	UG	UNDERGROUND
ICC	INTERMEDIATE CROSS CONNECT	UNO	UNLESS NOTED OTHERWISE
IG	ISOLATED GROUND	WG	WIRE GUARD
MTD	MOUNT OR MOUNTED	WP	WEATHERPROOF
		XFMR	TRANSFORMER

NOTES:
1. 48" AFF INDICATES TO TOP OF DEVICE; 15" AFF INDICATES TO BOTTOM OF DEVICE; ALL OTHER MOUNTING HEIGHTS REFER TO CENTERLINE OF DEVICE.

2 ELECTRICAL GENERAL LEGEND
SCALE:N.T.S.

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LIGHT FIXTURE SCHEDULE & ELECTRICAL GENERAL LEGEND

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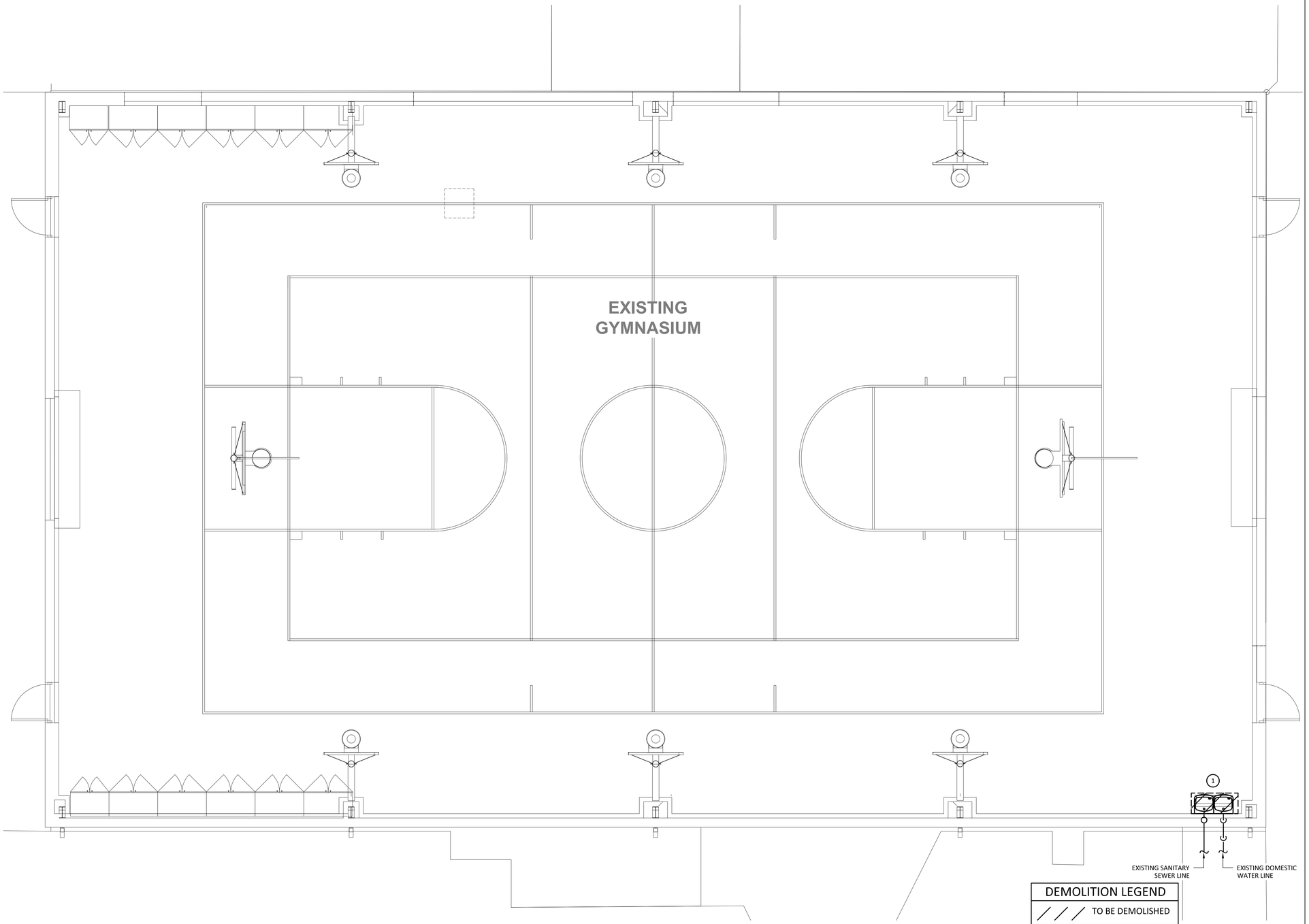
E-3.0



1 PLUBING DEMOLITION PLAN (MONTE CRISTO ELEMENTARY)
SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. REMOVE EXISTING ELECTRIC WATER COOLER. CAP EXISTING SANITARY SEWER AND DOMESTIC WATER LINE FLUSH WITH WALL. CAPPED PIPES SHALL NOT BE VISIBLE.

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CONSULTANTS:

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96585
LICENSED
PROFESSIONAL ENGINEER
04-15-2020

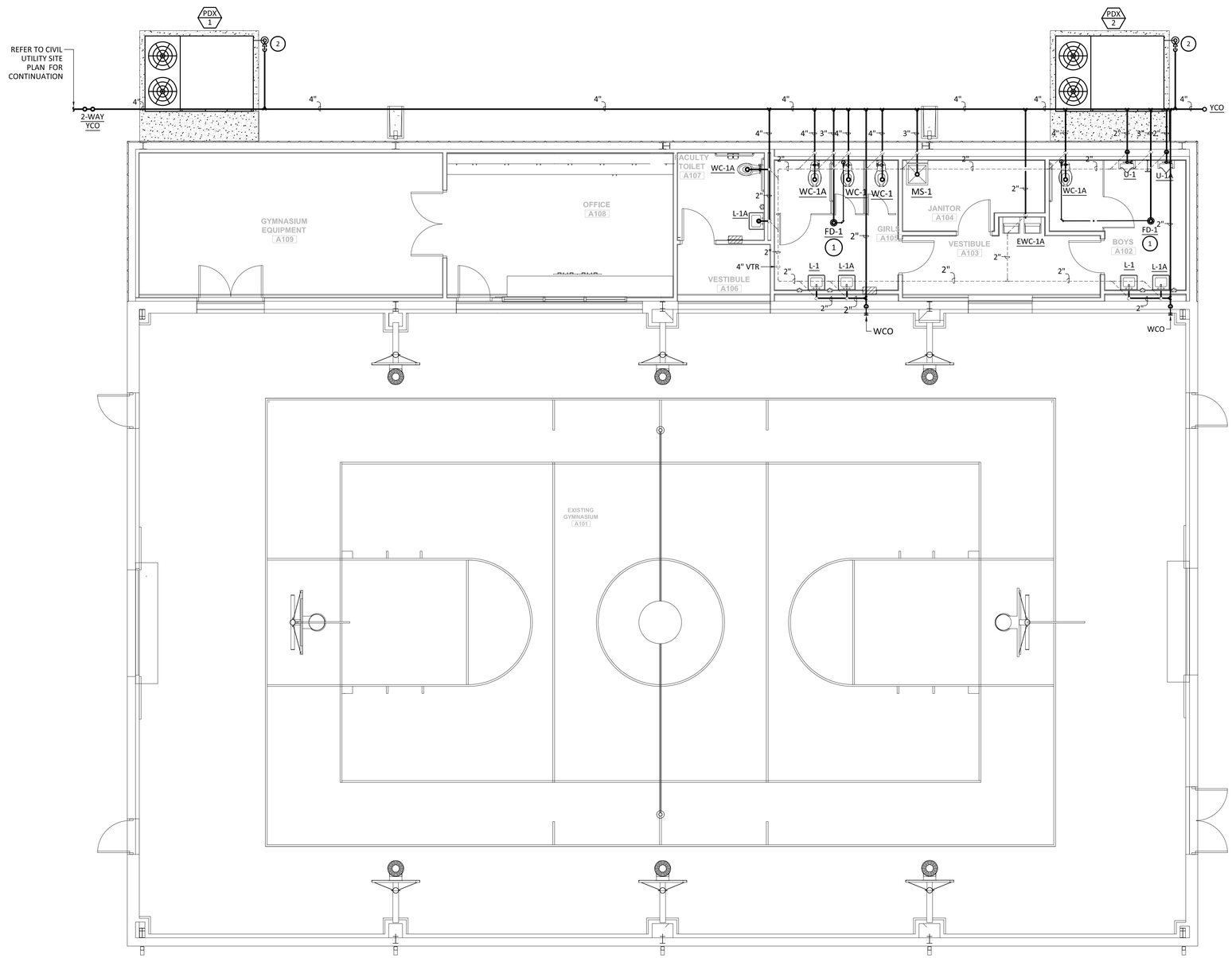
NO.	DATE	REVISIONS DESCRIPTION

DE LA VINA & MONTE CRISTO
ELEMENTARY SCHOOL GYNASIUM
IMPROVEMENTS & ADDITIONS
FOR
EDINBURG CONSOLIDATED
INDEPENDENTSCHOOL DISTRICT

PROJECT NO:	20005
DATE:	4/15/2020
STARTING DATE:	
CK BY: G.H.	DWN BY: C.C.

PLUMBING
DEMOLITION PLAN

PD-1.0



1 PLUMBING SANITARY SEWER PLAN (MONTE CRISTO ELEMENTARY)

SCALE: 3/16"=1'-0"

GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. FLOOR DRAIN SHALL BE PRIMED BELOW SLAB WITH 1/2" LINE FROM NEAREST WATER CLOSET FLUSH VALVE. CONCEAL LINE IN WALL AND BELOW CONCRETE SLAB.
2. FURNISH AND INSTALL 4" HUB DRAIN WITH P-TRAP AND PROSET TRAP GUARD INSTALLED FLUSH WITH MECHANICAL EQUIPMENT CONCRETE PAD. INSTALL FULL SIZE INSULATED COPPER CONDENSATE DRAIN WITH P-TRAP AND DRAIN INDIRECTLY TO HUB DRAIN WITH A 1" AIR GAP.

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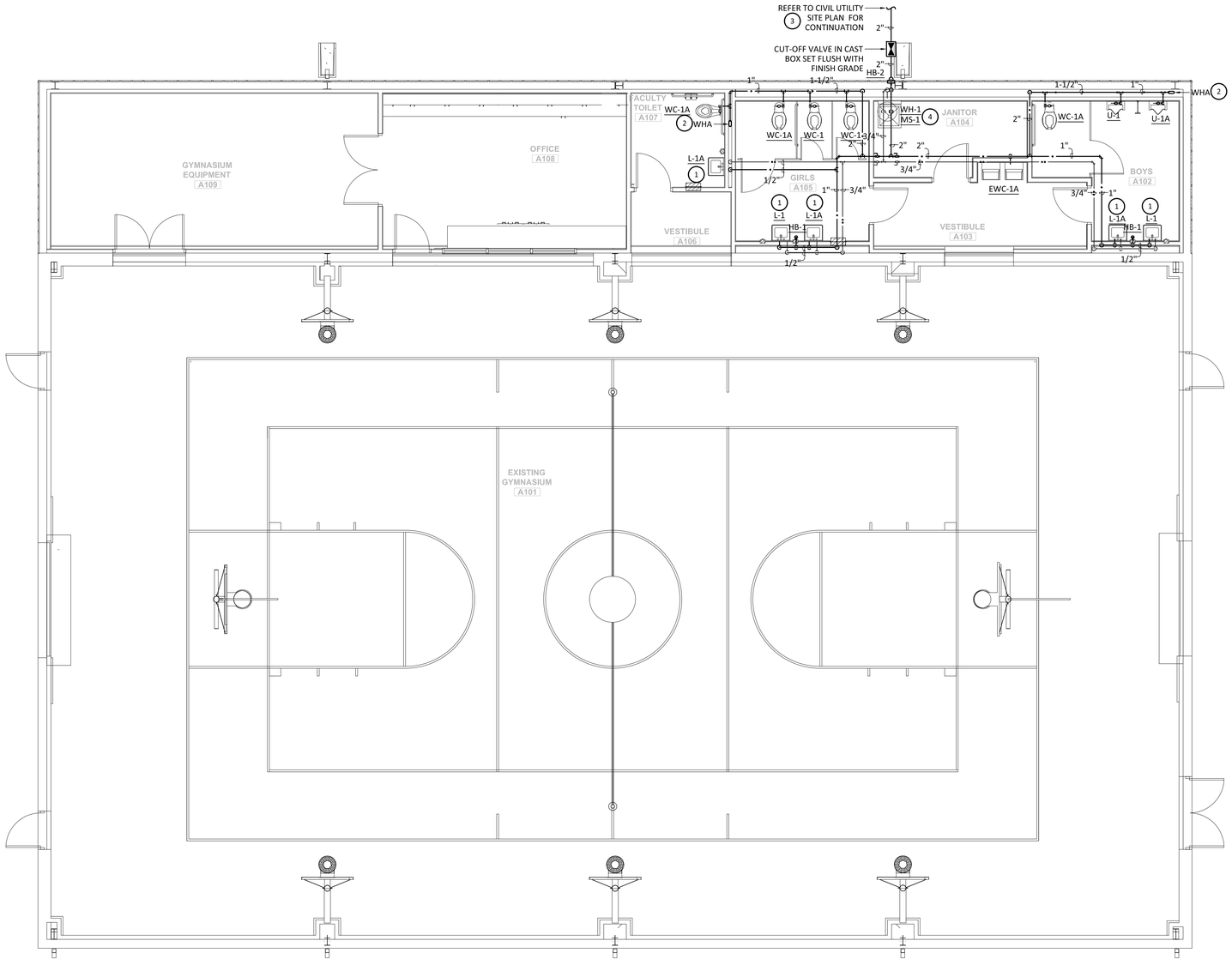
PLUMBING SANITARY SEWER PLAN

P-1.0



GENERAL NOTES:

1. REFER TO SHEET MEP-1.0 FOR GENERAL NOTES.

KEY NOTES: (#)

1. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL THERMOSTATIC MIXING VALVE (MV-1) AT LAVATORY TO DELIVER WATER AT 110°F. REFER TO PLUMBING SCHEDULE FOR SPECIFICATIONS. REFER TO PLUMBING DETAIL FOR INSTALLATION REQUIREMENTS.
2. WATER HAMMER ARRESTOR IN CHASE. PROVIDE 12"X12" HINGED 16 GAUGE STEEL ACCESS PANEL LOCKABLE KEYED DOOR. PRIME COATED WITH RUST INHIBITIVE ELECTROSTATIC POWDER, BAKED GREY ENAMEL AND SHALL BE PAINTED TO MATCH SURROUNDING AREAS. COORDINATE LOCATION TO AVOID CONFLICTS WITH GRAB BARS, FLUSH VALVE AND /OR OTHER EQUIPMENT AND DEVICES.
3. DOMESTIC WATER SERVICE LINE WITH CUT-OFF VALVE IN CAST BOX SET FLUSH WITH FINISH GRADE. DOMESTIC WATER SERVICE LINE SHALL BE PROTECTED AGAINST BACKFLOW. PROVIDE AND INSTALL REDUCED PRESSURE BACKFLOW PREVENTER AFTER WATER METER. SIZE OF BACKFLOW PREVENTER SHALL MATCH WATER SERVICE LINE. BACKFLOW PREVENTER SHALL BE INSULATED AND JACKETED AS PER STATE REQUIREMENTS. INSTALL BACKFLOW PREVENTER ON GRASS AREA.
4. PROVIDE BALL VALVES AT INLET AND OUTLET OF WATER HEATER FOR ISOLATION.

1 PLUMBING DOMESTIC WATER PLAN (MONTE CRISTO ELEMENTARY)
SCALE: 3/16"=1'-0"

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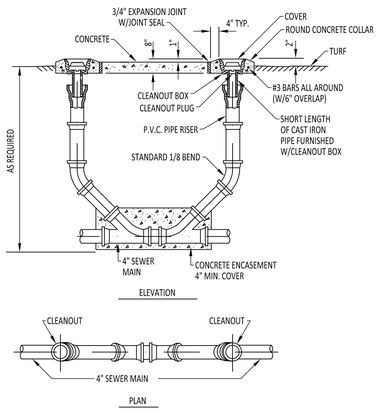
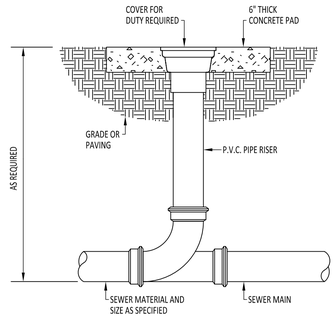
PLUMBING DOMESTIC WATER PLAN

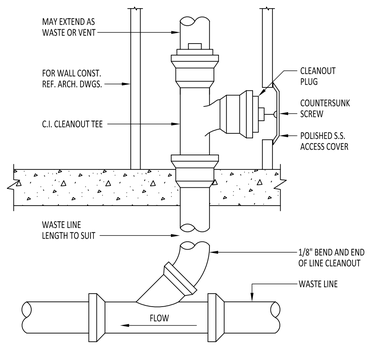
P-1.1



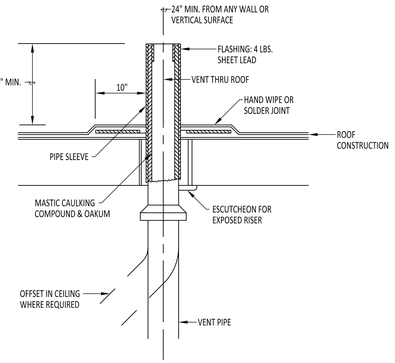
1 TYPICAL EXTERIOR TWO WAY CLEANOUT DETAIL
SCALE: N.T.S.



2 EXTERIOR CLEANOUT DETAIL
SCALE: N.T.S.



3 WALL CLEANOUT DETAIL
SCALE: N.T.S.



4 VENT THROUGH ROOF DETAIL
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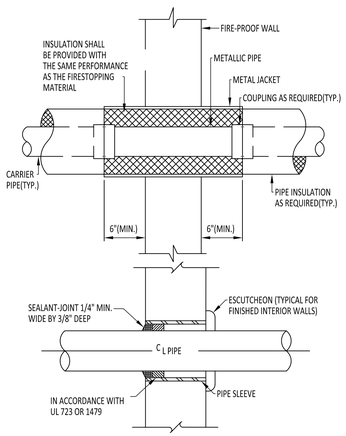
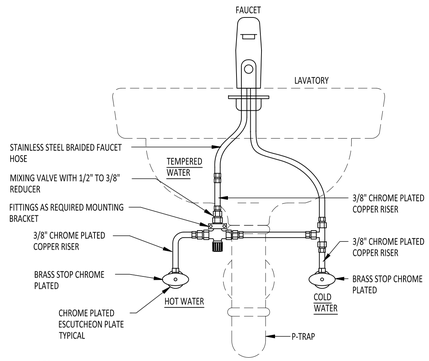
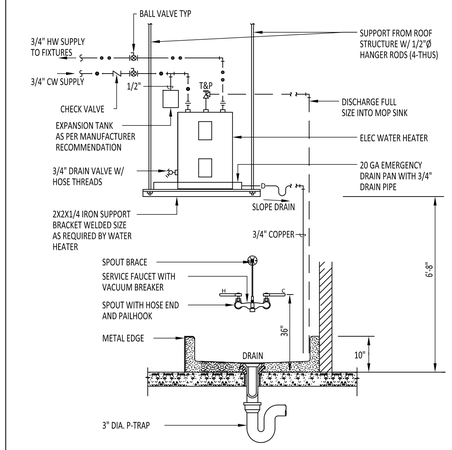


5 TYPICAL FIRE PROOF & WALL PENETRATION
SCALE: N.T.S.

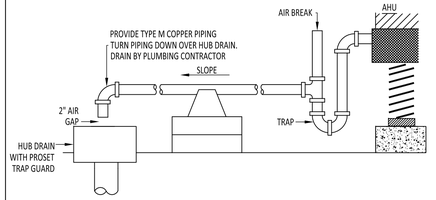


NOTE:
1. MIXING VALVE AND WATER LINES SHALL BE INSTALLED BETWEEN WALL AND P-TRAP TAILPIECE
2. PROVIDE AND INSTALL COVER KIT FOR P-TRAP AND STOPS.
3. FIELD INSULATE MIXING VALVE AND PIPING FROM MIXING VALVE TO FAUCET CONNECTION. JACKET INSULATION TO MATCH TRAP COVER KIT.
4. PROVIDE AND INSTALL REQUIRED 1/2" TO 3/8" REDUCERS AND CONNECTION FITTINGS.

6 MIXING VALVE UNDER LAVATORY DETAIL
SCALE: N.T.S.



7 WATER HEATER ON PLATFORM MOUNTING DETAIL
SCALE: N.T.S.



8 CONDENSATE DRAIN DETAIL
SCALE: N.T.S.

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CK BY: G.H. DWN BY: C.C.

PLUMBING DETAILS

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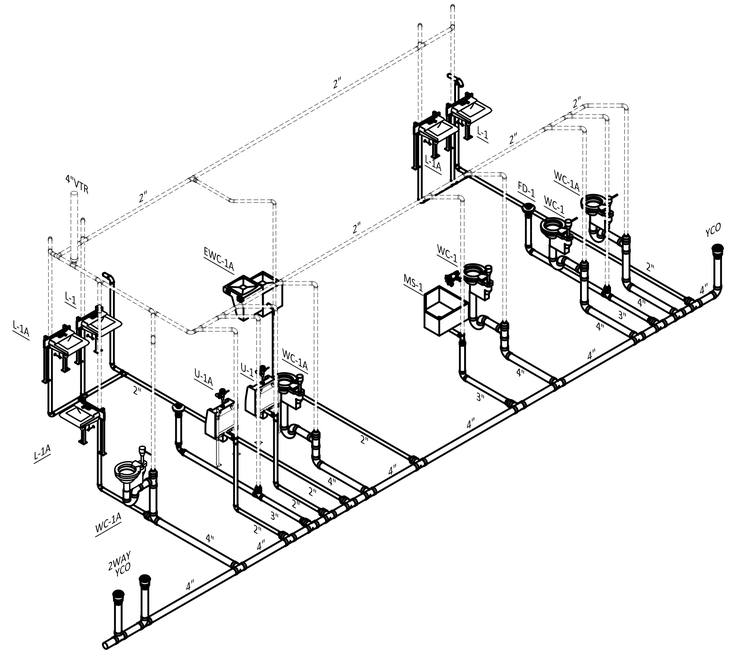
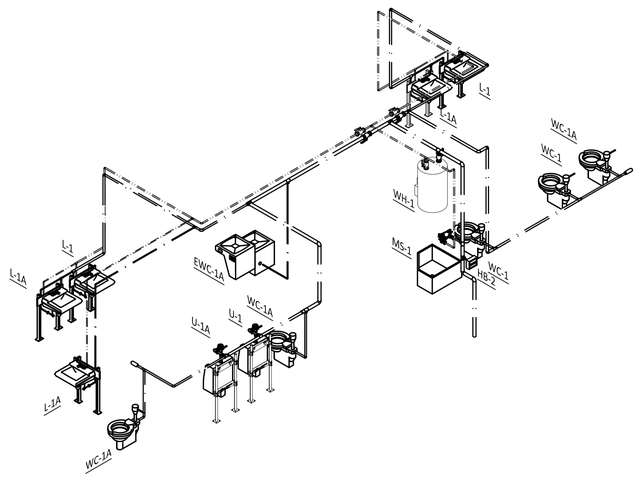
P-2.0



1 SANITARY SEWER RISER DIAGRAM

SCALE: N.T.S.



2 DOMESTIC WATER RISER DIAGRAM

SCALE: N.T.S.

PLUMBING SCHEDULE

MARK	TYPE	CONNECTION				DESCRIPTION
		SS	V	CW	HW	
EWC-1A	BI-LEVEL ELECTRIC WATER COOLER	2"	2"	1/2"	-	BI-LEVEL SELF-CONTAINED WALL HUNG, REFRIGERATED WATER COOLER EQUAL TO ELKAY "LZSTL8C". SELF CLOSING CONTROLS ON FRONT AND SIDE, STAINLESS STEEL BASIN. FLEX-GUARD BUBBLER CAPABLE OF DELIVERING 8.0 GPH OF 50° F WATER WITH 80° F INLET WATER AND 90° F ROOM TEMPERATURE. COMPLETE WITH CANE APRON ELKAY MODEL "LKAPREZL" AND APPROVED CARRIER SYSTEM.
FD-1	FLOOR DRAIN	3"	2"	1/2"	-	ZURN MODEL Z-415B-P, TYPE B STRAINER, LACQUERED CAST IRON TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, AND ROUND, ADJUSTABLE NICKLE-BRONZE STRAINER, TRAP PRIMER CONNECTION.
HB-1	HOSE BIBB	-	-	3/4"	-	WOODFORD MODEL 26P CHROME FINISH WALL MOUNTED FAUCET, WITH BACK FLOW PREVENTER.
HB-2	HOSE BIBB	-	-	3/4"	-	WOODFORD MODEL B26P CHROME FINISH WALL MOUNTED FAUCET, WITH BACK FLOW PREVENTER, AND LOOSE TEE KEY.
L-1	LAVATORY WALL MOUNTED	2"	2"	1/2"	1/2"	KOHLER "CHESAPEAKE" MODEL K-1728, WALL MOUNTED LAVATORY VITREOUS CHINA, 4" CENTERS, DECK MOUNTED DUAL HANDLE ADA METERING LAVATORY FAUCET, 0.5 GPM, CHICAGO FAUCETS 802-VE2805-336ABCP, ANGLE STOPS, FLEXIBLE RISERS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, VALVES, DRAIN, AND APPROVED CARRIER SYSTEM EQUAL TO ZURN Z-1231.
L-1A	LAVATORY WALL MOUNTED (HANDICAP)	2"	2"	1/2"	1/2"	KOHLER "CHESAPEAKE" MODEL K-1728, WALL MOUNTED LAVATORY VITREOUS CHINA, 4" CENTERS, DECK MOUNTED DUAL HANDLE ADA METERING LAVATORY FAUCET, 0.5 GPM, CHICAGO FAUCETS 802-VE2805-336ABCP, ANGLE STOPS, FLEXIBLE RISERS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, OFFSET TAILPIECE, PROVIDE A.D.A. PROTECTIVE COVERS AT WATER PIPING, VALVES, DRAIN, AND APPROVED CARIER SYSTEM EQUAL TO ZURN Z-1231.
MS-1	MOP SINK FLOOR MOUNTED	3"	2"	1/2"	1/2"	TERRAZO, CORNER MOP SINK EQUAL TO FIAT "TSBC-1610" 24"X24"X12" WITH 6" DROP FRONT, STAINLESS STEEL RIM GUARD AND "MSG-2424" WALL GUARD. COMPLETE WITH "830-AA" SERVICE SINK FAUCET WITH 8" CENTERS, PAIL HOOK, AND VACUUM BREAKER SPOUT. COMPLETE WITH "832-AA" HOSE AND BRACKET, "889-CC" STAINLESS STEEL MOP BRACKET AND GRID STRAINER.
MV-1	THERMOSTATIC MIXING VALVE UNDER LAVATORY	-	-	3/8"	3/8"	UNDER LAVATORY THERMOSTATIC MIXING VALVE SHALL BE EQUAL TO LEONARD MODEL "170-LF-BP-BRKT". COMPLETE WITH COLD BYPASS PORT AND MOUNTING BRACKET. OUTLET TEMPERATURE SHALL BE SET TO 110°F.
U-1	URINAL WALL MOUNTED	2"	2"	3/4"	-	KOHLER "DEXTER" MODEL K-5016-ET, VITREOUS CHINA, 3/4" TOP SPUD INLET, WALL HUNG URINAL, 24" RIM HEIGHT, ZURN AQUAVANTAGE MODEL Z6003AV-EWS FLUSHOMETER VALVE, 0.5 GPF. FURNISH WITH CONCEALED URINAL SUPPORT SYSTEM WITH TOP AND BOTTOM PLATES, ZURN MODEL #Z-1222 OR EQUAL.
U-1A	URINAL WALL MOUNTED (HANDICAP)	2"	2"	3/4"	-	KOHLER "DEXTER" MODEL K-5016-ET, VITREOUS CHINA, 3/4" TOP SPUD INLET, WALL HUNG URINAL, 17" RIM HEIGHT, ZURN AQUAVANTAGE MODEL Z6003AV-EWS FLUSHOMETER VALVE, 0.5 GPF, WITH A.D.A. COMPLIANT HANDLE. FURNISH WITH CONCEALED URINAL SUPPORT SYSTEM WITH TOP AND BOTTOM PLATES, ZURN MODEL #Z-1222 OR EQUAL.
WC-1	WATER CLOSET FLOOR MOUNTED	4"	2"	1"	-	ZURN 'Z5654 HET SERIES' VITREOUS CHINA, 14" HEIGHT, FLOOR MOUNTED, BOTTOM OUTLET TOILET WITH SIPHON JET FLUSHING ACTION AND ELONGATED FRONT RIM WITH 1-1/2" TOP SPUD. ZURN AQUAVANTAGE MODEL Z6000 AV-HET FLUSHOMETER VALVE, 1.28 GPF. SCREWDRIVER STOP K-3562, CHINA BOLD CAPS, BRASS FLOOR FLANGE, BOLWAX SEAL, CHURCH 295CT PLASTIC OPEN FRONT SEAT WITH CHECK HINGE. PROVIDE TRAP PRIMER CONNECTION WHERE SHOWN ON PLANS.
WC-1A	WATER CLOSET FLOOR MOUNTED (HANDICAP)	4"	2"	1"	-	ZURN 'Z5654 HET SERIES' VITREOUS CHINA, 14" HEIGHT, FLOOR MOUNTED, BOTTOM OUTLET TOILET WITH SIPHON JET FLUSHING ACTION AND ELONGATED FRONT RIM WITH 1-1/2" TOP SPUD. ZURN AQUAVANTAGE MODEL Z6000 AV-HET FLUSHOMETER VALVE, 1.28 GPF, WITH A.D.A. COMPLIANT OSCILLATING HANDLE. SCREWDRIVER STOP K-3562, CHINA BOLD CAPS, BRASS FLOOR FLANGE, BOLWAX SEAL, CHURCH 295CT PLASTIC OPEN FRONT SEAT WITH CHECK HINGE. PROVIDE TRAP PRIMER CONNECTION WHERE SHOWN ON PLANS.
WCO	WALL CLEAN OUT	-	-	-	-	ZURN MODEL #ZS-1468, ROUND STAINLESS STEEL WALL ACCESS COVER COMPLETE WITH SECURING SCREW AND BRONZE RAISED HEX HEAD PLUG.
WH-1	WATER HEATER ELECTRIC	-	-	3/4"	3/4"	HUBBELL MODEL SE10-0-3SLT4 WITH A 2" FOAM INSULATED STORAGE TANK OF 10 GALLONS WITH 3 KW IN THE LOWER ELEMENT BANK. STORAGE TANK IS LINED WITH HYDRASTONE CEMENT AND THE ELECTRICAL CONTROLS OPERATE AT 480V, 3 PHASE, 60 HZ POWER. THE HEATING ELEMENTS SHALL BE HIGH QULAITY INCOLOY SHEATH ELECTRIC IMMERSION TYPE AND SHALL BE RATED AT 3 KW WHICH WILL HEAT 12 GPH OF WATER AT 100°F RISE.
YCO	YARD CLEAN OUT	4"	-	-	-	GALVANIZED CAST IRON BODY WITH ANCHOR FLANGE, THREADED TOP ASSEMBLY, AND ROUND CAST NICKEL BRONZE ACCESS FRAME WITH NON-SKID COVER. CENTER CLEAN OUT ON 18"X18"X6" THICK CONCRETE BASE FLUSH WITH FINISH GRADE.

3 PLUMBING SCHEDULE

SCALE: N.T.S.

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PLUMBING RISER DIAGRAM AND SCHEDULE

P-3.0