SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI RD, SAN ANTONIO, TX 77223

2018 International Building Code Analysis

02.22.19

Occupancy Classification (311.2) Group S-1 Moderate Hazardous Storage
(304.1) Group B Business

Bldg. 1 – 1st Floor -	Storage (S-1)	43,721 S.F.
	Office (B)	1,112 S.F.
Bldg. 1 – 2nd Floor -	Storage (S-1)	44,253 S.F.
Bldg. 1 – 3rd Floor -	Storage (S-1)	44,253 S.F.
Total Bldg. 1		**133,339 S.F.**

*Occupant load (Table 1004.5):

Bldg. 1 – 1st Floor -	Storage :	(1/300 gross warehouse)	146
	Office:	(1/100 gross business)	7
Bldg. 1 – 2nd Floor -	Storage :	(1/300 gross warehouse)	148
Bldg. 1 – 3rd Floor -	Storage :	(1/300 gross warehouse)	148
Total Buildings			**449**

***Note: Bldg. 1 is 75% unoccupied space with the remainder being: Corridor, AHU Closets, Electrical Rooms, Riser Rooms, Stairs/Elevators, etc.**

**Toilet Count (Table 2902.1): 1 per 100

Men: 1 Water Closet, 1 lavatory
Women: 1 Water Closet, 1 lavatory
General: Hi/Lo D.F., Service Sink (office)

Request for consideration to decrease the Occupant Load Count to an actual number of occupants for whom each occupied space floor or building is designed. The change in Occupancy Load Variance Request is driven solely by the Toilet Room Calculations.

Construction Type (Table 601): **Type II-B**

Height Allowed (Table 504.4): 3 stories allowed: **3 stories provided**

Floor Area Allowed (Table 506.2 & Table 504.4): S-1: **52,500 G.S.F. per floor (S1)**

Sprinkler System (903.2.9): **Required / Provided**

Fire Separation (Table 508.4): **None Required / None Provided**

Rated Corridors (Table 1020.1): **None Required / None Provided**

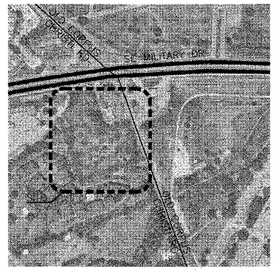
Exiting: (1006.3.2): Exits req. per floor: 2 **Exits provided 2/floor min.**
(Table 1017.2): Exit Distance **250' allowable**
(1020.2): Exit width req. 44" **60" width provided**

ARCHCON architecture

REGISTERED ARCHITECT JEFFREY S. DALLENBACH STATE OF TEXAS 15128 02.20.2019

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

CIVIL ENGINEER	LANDSCAPE ARCHITECT
KFW ENGINEERS + SURVEYING PH: 210.979.8444 3421 PAESANOS PKWY SUITE 200 SAN ANTONIO, TX 78231	RIALTO STUDIO PH: 210.828.1155 FAX: 210.828.1399 2425 BROADWAY SUITE 105 SAN ANTONIO, TX 78215
ARCHITECT	**STRUCTURAL ENGINEER**
ARCHCON ARCHITECTURE PH: 210.493.2234 12035 COLWICK, STE. 200 SAN ANTONIO, TX 78216	DANYSH & ASSOCIATES PH: 210.341.5161 FAX: 210.341.7991 105 BILTMORE, STE. 100 SAN ANTONIO, TX 78213
MEP ENGINEER	
RSW CONSULTANTS PH: 210.408.1860 FAX: 210.408.0273 12035 COLWICK, STE. 101 SAN ANTONIO, TX 78216	



LOCATION MAP

NORTH

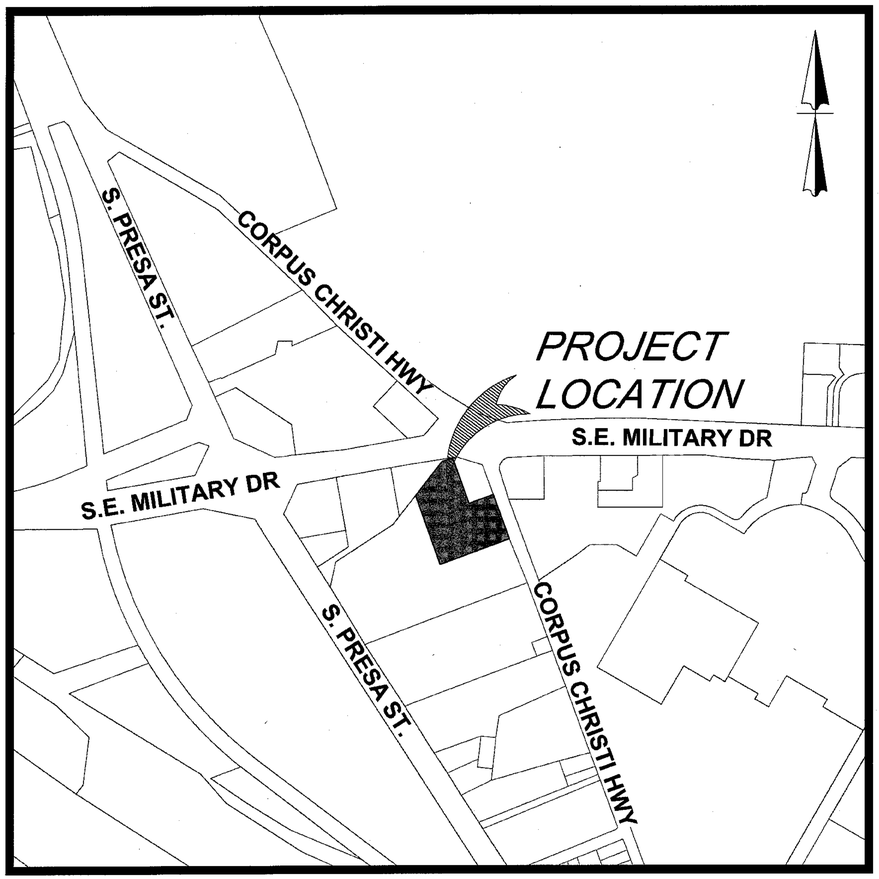
GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL HAVE PARTIAL USE OF THE PREMISES FOR CONSTRUCTION OPERATIONS. CONFINE APPARATUS, OPERATIONS OF WORKMEN, AND STORAGE OF MATERIAL TO THE AREAS DEFINED BY THE OWNER.
2. ALL WORK SHALL BE PERFORMED TO COMPLY WITH THE 2018 INTERNATIONAL BUILDING CODE, 2018 NATIONAL ELECTRICAL CODE, 2018 UNIFORM PLUMBING CODE, 2018 UNIFORM MECHANICAL CODE, 2018 INTERNATIONAL FIRE CODE, ALL CITY ADOPTED AMENDMENTS, AND ANY OTHER APPLICABLE CODES AND BUILDING STANDARDS AS ADOPTED BY CITY OF SAN ANTONIO.
3. THE CONTRACTOR AND OWNER SHALL BE RESPONSIBLE FOR FINAL MATERIAL AND PRODUCT SELECTIONS. THE CONSTRUCTION DOCUMENTS INDICATE GENERAL DESIGN INTENT BUT MAY NOT DEFINE ALL STANDARDS AND PRODUCTS REQUIRED FOR THE FULL PERFORMANCE AND CONSTRUCTION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR REVIEW AND APPROVAL OF SUBMITTALS AND SHOP DRAWINGS FROM THE SUBCONTRACTORS AND FOR COMPLIANCE WITH APPLICABLE INDUSTRY STANDARDS, CITY CODES, AND ORDINANCES. FOLLOWING CONTRACTOR APPROVAL OF SUBMITTALS AND SHOP DRAWINGS, SUBMITTAL TO OWNER FOR FINAL REVIEW IS REQUIRED.
4. COORDINATION OF SUBMITTALS FOR FABRICATION, PURCHASING, TESTING, DELIVERY, WITH OTHER SUBMITTALS AND RELATED CONSTRUCTION OPERATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR. SUBMITTALS TO INCLUDE QUALITY CONTROL PROCEDURES, DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S INSTRUCTIONS, AND WARRANTY INFORMATION (1 YEAR MINIMUM).
5. THE CONTRACTOR IS RESPONSIBLE FOR OVERSIGHT OF ALL PHASES OF THE PROJECT IN RELATION TO APPLICABLE INDUSTRY STANDARDS FOR THE MATERIALS AND PRODUCTS INCORPORATED INTO THE PROJECT.
6. THE GENERAL CONTRACTOR WITH OWNER TO COORDINATE ALL TESTING AND/OR INSPECTIONS WITH OWNER HIRED COMPANIES UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO COORDINATE OVERHEAD DUCTWORK, CONDUIT, ETC. SUBCONTRACTOR TO PROVIDE SHOP DRAWINGS FOR COORDINATION PURPOSES.
8. ALL DRAWINGS AND SPECIFICATIONS ARE PART OF THE CONSTRUCTION DOCUMENTS. CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC. ARE TO BE USED TOGETHER. ANY DISCREPANCIES BETWEEN THE DOCUMENTS OR EXISTING CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT FOR INTERPRETATION AND/ OR CLARIFICATION PRIOR TO PROCEEDING WITH ANY WORK RELATED TO THE DISCREPANCY.
9. NECESSARY FRAMING AND/OR BLOCKING IS REQUIRED FOR ALL WALL MOUNTED ITEMS. ALL WOOD PRODUCTS TO BE FIRE RETARDANT.
10. FIRE-RETARDANT-TREATED WOOD SHALL BE PERMITTED IN NON-BEARING PARTITIONS WHERE THE REQ. FIRE-RESISTANCE RATING IS 2 HOURS OR LESS, NON BEARING EXTERIOR WALLS WHERE NO FIRE RATING IS REQ., AND ROOF CONSTRUCTION INCLUDING GIRDERS, TRUSSES, FRAMING AND DECKING PER IBC 603.1. FIRE-RETARDANT-TREATED WOOD TO COMPLY WITH IBC 2303.2 STANDARDS.
11. CONTRACTOR IS RESPONSIBLE FOR SAFETY, SECURITY AND PROTECTION OF EXISTING IMPROVEMENTS THROUGHOUT THE DURATION OF CONSTRUCTION.
12. ALL WORK TO BE PERFORMED IN COMPLIANCE WITH AIA DOCUMENT A201-2007 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION WHICH BECOMES PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
13. A GEOTECHNICAL REPORT WAS PREPARED FOR THIS PROJECT WHICH IS INCLUSIVE OF DESIGN RECOMMENDATIONS. ENGINEERING DESIGN WAS COMPLETED BASED ON THE GEOTECHNICAL DESIGN RECOMMENDATIONS AND A COPY OF THE GEOTECHNICAL REPORT CAN BE OBTAINED FROM THE OWNER FOR REFERENCE.

LIST OF DRAWINGS

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD , SAN ANTONIO, TEXAS 78223



LOCATION MAP
N. T. S.

INDEX

OWNER:
HPI HORNE STORAGE, LLC
101 WESTLAKE DRIVE, SUITE 148 BOX 7
AUSTIN, TX 78746

LANDSCAPE ARCHITECT:
RIALTO STUDIO
2425 BROADWAY, SUITE 105
SAN ANTONIO, TEXAS 78215
PHONE: (210) 828-1155
CONTACT: SEAN DUNCAN

ARCHITECT:
ARCHCON ARCHITECTURE
12035 COLWICK, SUITE 200
SAN ANTONIO, TX. 78216
PHONE: (210) 493-2234
CONTACT: PATRICK SPENCER

MEP:
RSW CONSULTANTS
12035 COLWICK, SUITE 101
SAN ANTONIO, TX. 78216
PHONE: (210) 408-1860

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER

2/28/2019

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122500

LEGAL DESCRIPTION :
BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS:
BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

JOB NO. 333-09-01

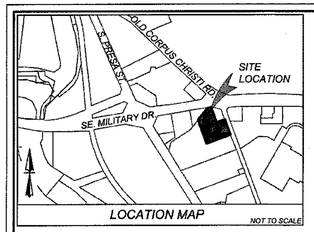
C1.0

Date: Feb 28, 2019, 4:31pm User ID: abustillos
File: N:\333\09\01\design\Civil\C1.0 (COVER SHEET 3330901).dwg

LAND-PLAT-18-900112

SUBDIVISION PLAT
ESTABLISHING
CORPUS CHRISTI STORAGE

BEING ALL OF THAT CALLED 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436, O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, N.C.B. 10930.



LOCATION MAP NOT TO SCALE

SURVEYOR NOTES:

1. 1/2" DIAMETER REBAR WITH A BLUE PLASTIC CAP STAMPED "KFW SURVEYING" SET AT ALL CORNERS UNLESS NOTED OTHERWISE.
2. BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM ESTABLISHED FOR THE TEXAS SOUTH CENTRAL ZONE 4204, NORTH AMERICAN DATUM (NAD) OF 1983.
3. THE COORDINATES SHOWN HEREON ARE GRID WITH A COMBINED SCALE FACTOR OF 1.00017.
4. THE ELEVATIONS FOR THIS SURVEY ARE BASED ON NAVD88 (GEOID09).

CPS/SAWS/COSA UTILITY NOTE:

1. THE CITY OF SAN ANTONIO, AS PART OF ITS ELECTRIC, GAS, WATER, AND WASTEWATER SYSTEMS - CITY PUBLIC SERVICE BOARD (CPS ENERGY) AND SAN ANTONIO WATER SYSTEM (SAWS) - IS HEREBY DEDICATED EASEMENTS AND RIGHTS-OF-WAY FOR UTILITY, TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE AND SERVICE FACILITIES IN THE AREAS DESIGNATED ON THIS PLAT AS "ELECTRIC EASEMENT," "ANCHOR EASEMENT," "SERVICE EASEMENT," "OVERHANG EASEMENT," "UTILITY EASEMENT," "GAS EASEMENT," "TRANSFORMER EASEMENT," "WATER EASEMENT," "SANITARY SEWER EASEMENT" AND/OR "RECYCLED WATER EASEMENT" FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, RECONSTRUCTING, MAINTAINING, REMOVING, INSPECTING, PATROLLING, AND ERECTING UTILITY INFRASTRUCTURE AND SERVICE FACILITIES FOR THE REASONS DESCRIBED ABOVE. CPS ENERGY AND SAWS SHALL ALSO HAVE THE RIGHT TO RELOCATE SAID INFRASTRUCTURE AND SERVICE FACILITIES WITHIN EASEMENT AND RIGHT-OF-WAY AREAS, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT LANDS FOR THE PURPOSE OF ACCESSING SUCH INFRASTRUCTURE AND SERVICE FACILITIES AND THE RIGHT TO REMOVE FROM SAID LANDS ALL TREES OR PARTS THEREOF, OR OTHER OBSTRUCTIONS WHICH ENDANGER OR MAY INTERFERE WITH THE EFFICIENCY OF WATER, SEWER, GAS, AND/OR ELECTRIC INFRASTRUCTURE AND SERVICE FACILITIES. NO BUILDINGS, STRUCTURES, CONCRETE SLABS, OR WALLS WILL BE PLACED WITHIN EASEMENT AREAS WITHOUT AN ENCROACHMENT AGREEMENT WITH THE RESPECTIVE UTILITY.
2. ANY CPS ENERGY OR SAWS MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY OR SAWS INFRASTRUCTURE AND SERVICE FACILITIES LOCATED WITHIN SAID EASEMENTS, DUE TO GRADE CHANGES OR GROUND ELEVATION ALTERATIONS SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS.
3. THIS PLAT DOES NOT AMEND, ALTER, RELEASE OR OTHERWISE AFFECT ANY EXISTING ELECTRIC, GAS, WATER, SEWER, DRAINAGE, TELEPHONE, CABLE TV EASEMENTS OR ANY OTHER EASEMENTS FOR UTILITIES UNLESS THE CHANGES TO SUCH EASEMENTS ARE DESCRIBED HEREON.

SAWS IMPACT FEE:
WATER AND/OR WASTEWATER IMPACT FEES WERE NOT PAID AT THE TIME OF PLATTING FOR THIS PLAT. ALL IMPACT FEES MUST BE PAID PRIOR TO WATER METER SET AND/OR PRIOR TO THE WASTEWATER SERVICE CONNECTION.

SAWS HIGH PRESSURE NOTE:
A PORTION OF THE TRACT IS BELOW THE GROUND ELEVATION OF 640 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO.

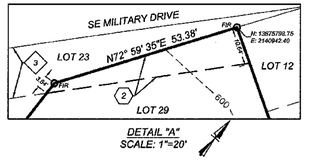
WASTEWATER EDU NOTE:
THE NUMBER OF WASTEWATER EQUIVALENT DWELLING UNITS (EDU'S) PAID FOR THIS SUBDIVISION PLAT ARE KEPT ON FILE UNDER THE PLAT NUMBER AT THE SAN ANTONIO WATER SYSTEM UNDER THE PLAT NUMBER ISSUED BY THE DEVELOPMENT SERVICES DEPARTMENT.

DRAINAGE NOTES:

1. THE MAINTENANCE OF ALL PRIVATE STREETS, OPEN SPACE, GREENBELTS, PARKS, TREE SAVE AREAS, INCLUDING LOT 29, N.C.B. 10930, DRAINAGE EASEMENTS AND EASEMENTS OF ANY OTHER NATURE WITHIN THIS SUBDIVISION SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS, OR THE PROPERTY OWNERS' ASSOCIATION, OR ITS SUCCESSORS OR ASSIGNS AND NOT THE RESPONSIBILITY OF THE CITY OF SAN ANTONIO OR BEXAR COUNTY.
2. NO PORTION OF THE FEMA 1% ANNUAL CHANCE (100 YEAR) FLOODPLAIN EXISTS WITHIN THIS PLAT AS VERIFIED BY FEMA MAP PANEL 48029C0805, EFFECTIVE SEPTEMBER 29, 2010. FLOODPLAIN INFORMATION IS SUBJECT TO CHANGE AS A RESULT OF FUTURE FEMA MAP REVISIONS AND/OR AMENDMENTS.

FIRE:
INGRESS AND EGRESS SHALL BE PROVIDED BETWEEN ALL ADJACENT LOTS FOR ADEQUATE FIRE DEPARTMENT VEHICLE ACCESS PER THE CITY OF SAN ANTONIO FIRE PREVENTION CODE. ANY CROSS ACCESS SHALL NOT BE BLOCKED NOR MAY THIS NOTE BE REMOVED FROM THE PLAT WITHOUT WRITTEN PERMISSION FROM THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

STORM WATER DETENTION NOTE
STORM WATER DETENTION IS REQUIRED FOR THIS PROPERTY. BUILDING PERMITS FOR THIS PROPERTY SHALL BE ISSUED ONLY IN CONJUNCTION WITH NECESSARY STORM WATER DETENTION APPROVED BY THE CITY OF SAN ANTONIO. THE PROPERTY MAY BE ELIGIBLE TO PAY A FEE IN LIEU OF DETENTION (F.I.L.O.) IF OFFSITE DRAINAGE CONDITIONS ALLOW BUT ONLY WHEN APPROVED BY THE CITY OF SAN ANTONIO. MAINTENANCE OF ON-SITE STORM WATER DETENTION SHALL BE THE SOLE RESPONSIBILITY OF THE LOT OWNERS AND/OR PROPERTY OWNERS ASSOCIATION AND THEIR SUCCESSORS OR ASSIGNEES.

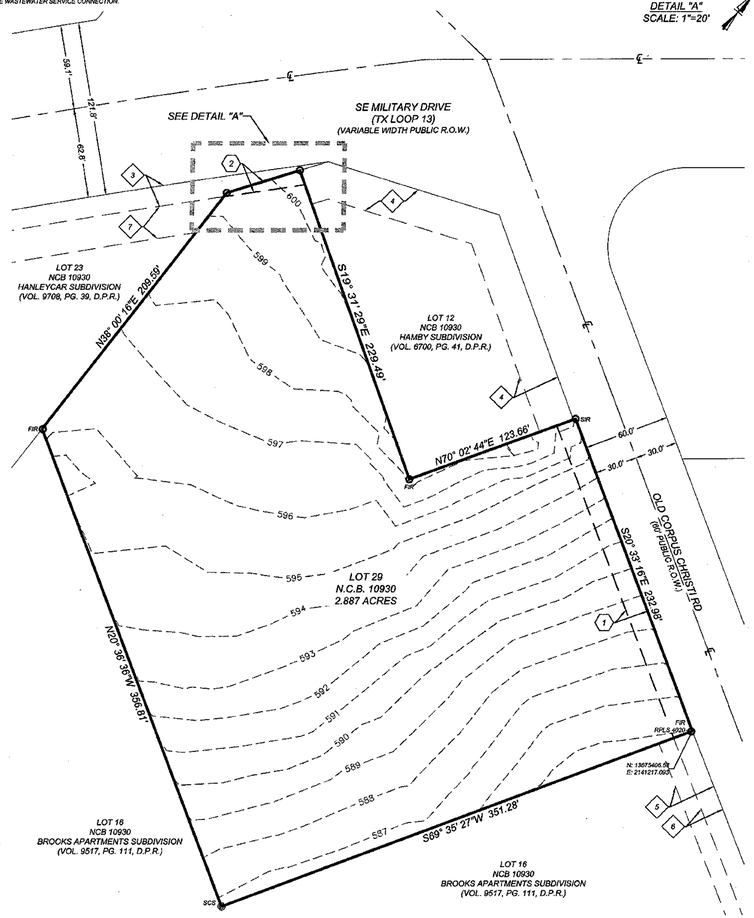


DETAIL "A"
SCALE: 1"=20'

SCALE : 1"=50'
0' 50' 150'
100'

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

2/25/2019



LEGEND

⊘ F.I.P.	=	FOUND IRON PIPE
○ F.I.R.	=	FOUND ½" IRON ROD
● S.I.R.	=	SET ½" IRON ROD WITH BLUE CAP STAMPED "KFW SURVEYING"
▲ S.I.R.	=	SET ½" IRON ROD WITH YELLOW CAP STAMPED "KFW EASEMENT"
⊠ TXDOT	=	TXDOT MONUMENT
R.O.W.	=	RIGHT - OF - WAY
D.P.R.	=	DEED AND PLAT RECORDS OF BEXAR COUNTY, TEXAS
O.P.R.	=	OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS
VOL.	=	VOLUME
PG.	=	PAGE
N.C.B.	=	NEW CITY BLOCK
E.G.T. & TV.	=	ELECTRIC, GAS, TELEPHONE, & CABLE TELEVISION EASEMENT
⬡	=	PROPOSED EASEMENT
◇	=	EXISTING EASEMENT
℄	=	CENTERLINE OF R.O.W.

KEY NOTES

1. 14' E.G.T. & TV. EASEMENT
2. VARIABLE WIDTH E.G.T. & TV. EASEMENT
3. 14' E.G.T. & TV. EASEMENT (VOL. 9708, PG.39 D.P.R.)
4. 20' BUILDING SETBACK LINE (VOL. 6700, PG. 41 D.P.R.)
5. 25' BUILDING SETBACK LINE (VOL. 9517, PG. 111 D.P.R.)
6. 14' E.G.T.TV. EASEMENT (VOL 9517, PG. 111 D.P.R.)
7. 22' SANITARY SEWER EASEMENT (VOL. 9708, PG.39 D.P.R.)

STATE OF TEXAS
COUNTY OF BEXAR

I HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN THIS PLAT TO THE MATTERS OF STREETS, LOTS, AND DRAINAGE LAYOUT. TO THE BEST OF MY KNOWLEDGE THIS PLAT CONFORMS TO ALL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE, EXCEPT FOR THOSE VARIANCES GRANTED BY THE SAN ANTONIO PLANNING COMMISSION.

BENJAMIN D. BUNKER DATE
LICENSED PROFESSIONAL ENGINEER NO. 108512
KFW ENGINEERS
BBUNKER@KFWENGINEERS.COM
3421 PAESANOS PARKWAY, SUITE 200
SAN ANTONIO, TEXAS 78231
PHONE: 210-979-8444
FAX: 210-979-8441

STATE OF TEXAS
COUNTY OF BEXAR

I HEREBY CERTIFY THAT THE ABOVE PLAT CONFORMS TO THE MINIMUM STANDARDS SET FORTH BY THE TEXAS BOARD OF PROFESSIONAL LAND SURVEYING ACCORDING TO AN ACTUAL SURVEY MADE ON THE GROUND.

TIM C. PAPPAS
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5543
KFW SURVEYING, LLC
3421 PAESANOS PKWY, SUITE 101
SAN ANTONIO, TEXAS 78231
PHONE: 210-979-8444
FAX: 210-979-8441

STATE OF TEXAS
COUNTY OF BEXAR

THE OWNER OF LAND SHOWN ON THIS PLAT, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO THE USE OF THE PUBLIC, EXCEPT AREAS IDENTIFIED AS PRIVATE OR PART OF AN ENCLAVE OR PLANNED UNIT DEVELOPMENT, FOREVER, ALL STREETS, ALLEYS, PARKS, WATERCOURSES, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

OWNER/DEVELOPER
TREVINO ROSS AYALA HOLDINGS, LLC
ERNEST VALDEZ AND MIGUEL AYALA
AND ROBERT TREVINO P. ITT AL
7300 SAN LUIS BLVD., SUITE 301
SAN ANTONIO, TX 78224

DULY AUTHORIZED AGENT:
HORNE PARTNERS, LLC
HUGH W. HORNE
101 WESTLAKE DR., SUITE 148-BOX 7
AUSTIN, TX 78746

STATE OF TEXAS
COUNTY OF BEXAR

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED HUGH W. HORNE, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE
THIS _____ DAY OF _____ A.D. _____

_____
NOTARY PUBLIC, BEXAR COUNTY, TEXAS

THIS PLAT OF CORPUS CHRISTI STORAGE HAS BEEN SUBMITTED TO THE CITY OF SAN ANTONIO, TEXAS, AND HAVING BEEN REVIEWED BY THE DIRECTOR OF DEVELOPMENT SERVICES, IS HEREBY APPROVED IN ACCORDANCE WITH STATE OR LOCAL LAWS AND REGULATIONS; AND/OR WHERE ADMINISTRATIVE EXCEPTION(S) HAVE BEEN GRANTED.
DATED THIS _____ DAY OF _____ A.D. 20____

BY: _____
DIRECTOR OF DEVELOPMENT SERVICES

PAGE 1 OF 1

DRAWN BY:

Date: Feb 26, 2019, 8:17am User ID: rparker
File: N:\333\09\01\Design\Civil\PLAT\PL3330901.dwg

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

PROPOSED PLAT

SHEET NO.

C1.1

Date: Feb 28, 2019, 4:31pm User ID: obustillos
File: N:\333\09\01\Design\Civil\C1.1 (PROPOSED PLAT 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.

2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.

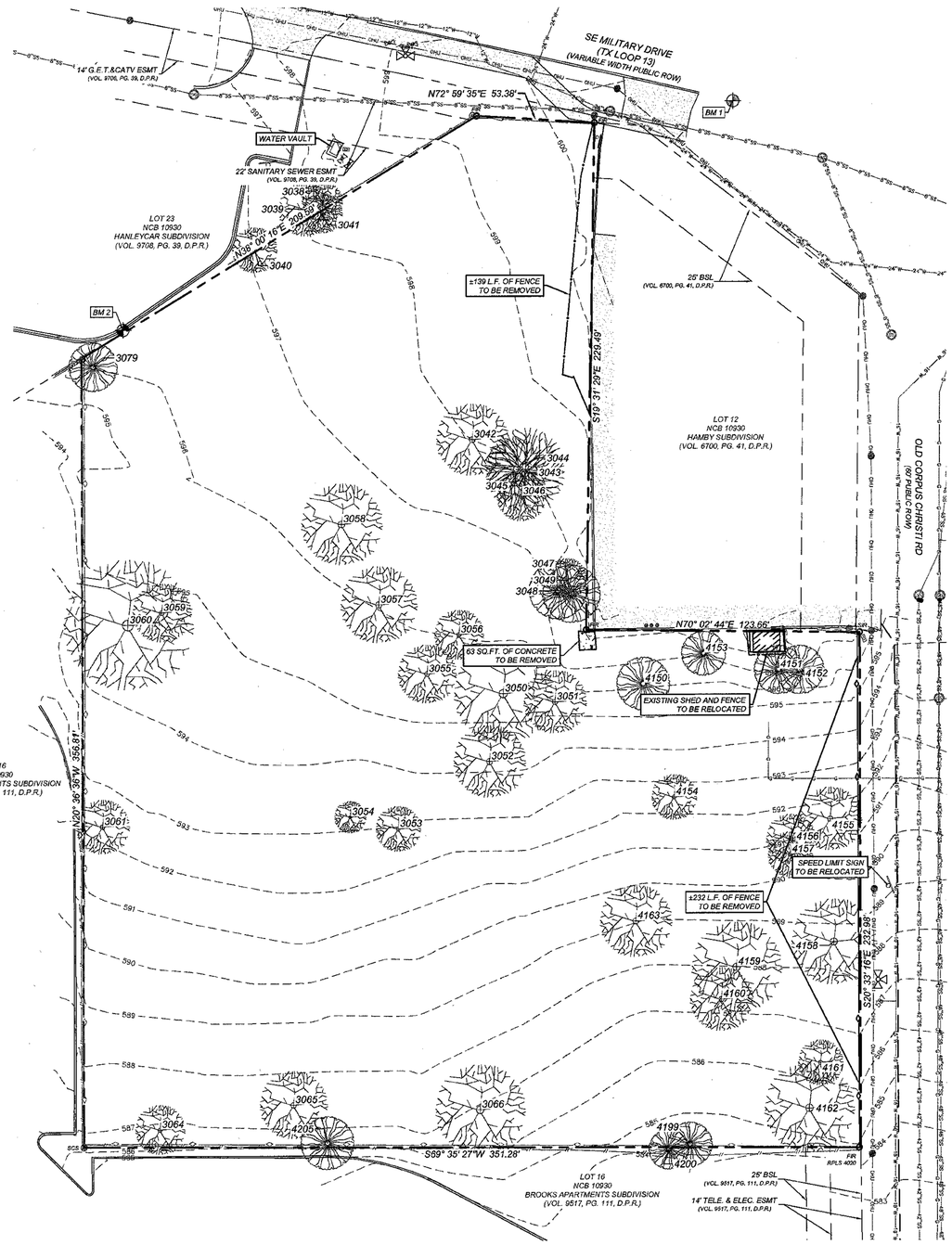
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.

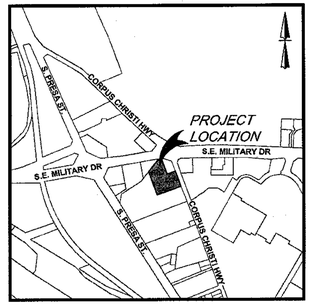
4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.

5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.

6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

TREE LIST		
POINT #	SPECIES	DIAMETER (IN)
3038	HUISACHE	9X7X7X7
3039	HUISACHE	12
3040	HUISACHE	10
3041	HUISACHE	9X7X5
3042	MESQUITE	16X13X12
3043	ELM	14
3044	ELM	17.5
3045	ELM	17.5
3046	MESQUITE	11X8
3047	MESQUITE	9
3048	HACKBERRY	13
3049	HACKBERRY	13
3050	MESQUITE	22
3051	MESQUITE	14X7
3052	MESQUITE	16X7
3053	MESQUITE	10X9X8
3054	MESQUITE	7X7X7X7
3055	MESQUITE	13
3056	MESQUITE	11
3057	MESQUITE	17X15X10
3058	MESQUITE	18
3059	MESQUITE	13X11
3060	MESQUITE	29
3061	HUISACHE	12X12X15X7
3062	LEAN	TO TREE 3061
3063	LEAN	TO TREE 3061
3064	MESQUITE	11X8
3065	HUISACHE	15
3066	HUISACHE	20
3079	HACKBERRY	11
4150	HACKBERRY	12
4151	HACKBERRY	11
4152	HACKBERRY	11
4153	HACKBERRY	10X8
4154	MESQUITE	10X7
4155	MESQUITE	14
4156	MESQUITE	11X10
4157	MESQUITE	10X7
4158	MESQUITE	19
4159	MESQUITE	20
4160	MESQUITE	14
4161	MESQUITE	10X5
4162	HUISACHE	20X14
4163	MESQUITE	16X5
4199	HACKBERRY	10
4200	HACKBERRY	9
4205	HACKBERRY	12





LOCATION MAP
N. T. S.

SCALE : 1"=30'

0' 30' 90'
60'

LEGEND

- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE
- EXISTING CURB
- EXISTING SANITARY SEWER MANHOLE
- SITE BENCHMARK
  SEE DESCRIPTION THIS SHEET
- EXISTING OVERHEAD
  ELECTRIC AND POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING CONTOURS (590)
- EXISTING WATER LINE (12"W)
- EXISTING WATER LINE (16"W)
- EXISTING WATER LINE (24"W)
- EXISTING SEWER LINE (8"SS)
- EXISTING GAS LINE (G)
- EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL

DEMOLITION NOTES

1. *LOCATION OF EXISTING UTILITIES AND DRAINAGE SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.*
2. *DEMOLITION CONTRACTOR IS RESPONSIBLE FOR CLEARING THE SITE OF ALL OBSTRUCTIONS THAT EXIST ON THIS SITE PRIOR TO THE START OF CONSTRUCTION OR DURING THE CONSTRUCTION SO AS TO NOT IMPEDE THE BUILDING CONSTRUCTION PROCESS.*
3. *CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL UTILITY COMPANIES REGARDING REMOVAL OF EXISTING SERVICES. POWER POLES TO BE REMOVED, VERIFYING UTILITIES ARE SHUT OFF OR DISCONNECTED, AND ALL POSSIBLE SAFETY PRECAUTIONS HAVE BEEN ENACTED TO ENSURE THE SAFEST ENVIRONMENT FOR ALL PERSONNEL.*
4. *CONTRACTOR SHALL COORDINATE WITH THE OWNER TO IDENTIFY ANY MATERIAL OR EQUIPMENT SCHEDULED FOR REMOVAL TO BE SALVAGED AND REUSED. CONTRACTOR SHALL REPLACE AT HIS EXPENSE ANY DESTROYED MATERIAL OR EQUIPMENT THAT WAS MARKED FOR SALVAGE.*
5. *CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS/APPROVALS BEFORE BEGINNING DEMOLITION OR CONSTRUCTION.*
6. *DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT THE WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.*
7. *CONTRACTOR SHALL COORDINATE WITH CPS AND OWNER AS REQUIRED BEFORE REMOVAL OF ANY ELECTRIC FACILITIES.*
8. *CONTRACTOR SHALL COORDINATE WITH LANDSCAPE ARCHITECT AND/OR OWNER FOR ANY TREE REMOVAL AND REMOVAL AND/OR REPLACEMENT OF EXISTING ON SITE IRRIGATION PIPING PRIOR TO CONSTRUCTION.*
9. *CONTRACTOR SHALL COORDINATE WITH CPS TO REMOVE ANY OVERHEAD ELECTRIC LINES OR POLES DESIGNATED TO BE REMOVED (IF ANY). ANY DISCREPANCIES BETWEEN THIS PLAN AND EXISTING CONDITIONS SHALL BE COMMUNICATED WITH THE ENGINEER.*
10. *CONTRACTOR SHALL NOT START DEMOLITION OF ANY FEATURE SHOWN ON THIS DRAWING UNTIL A STORM WATER POLLUTION PREVENTION PLAN IS INSTALLED AND COMPLETED. (SEE SHEET C9.0)*
11. *THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH ALL REGULATIONS GOVERNING THE DEMOLITION, REMOVAL, TRANSPORTATION, AND DISPOSAL, OF ALL DEMOLISHED OR UNWANTED MATERIAL.*
12. *THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS FOR DEMOLITION.*
13. *THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNERS AND SHALL HAVE AT HIS EXPENSE, ALL CORNERS REPLACED WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES.*
14. *CONTRACTOR SHALL NOT DEMOLISH ANY WATER OR SANITARY SEWER LINE WITHOUT SAN ANTONIO WATER SYSTEM (SAWS) APPROVAL.*
15. *CONTRACTOR SHALL INSTALL A MINIMUM 6-FOOT HIGH, CHAIN LINK, PROTECTIVE FENCE ALONG THE PERIMETER OF THE CONSTRUCTION/DEMOLITION LIMITS. PROTECTIVE FENCE SHALL BE IN PLACE BEFORE ANY DEMOLITION OR CONSTRUCTION BEGINS AND SHALL REMAIN IN PLACE AND IN GOOD REPAIR THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL TAKE SPECIAL CARE TO INSTALL VEHICULAR BARRIERS AND FENCING TO PROHIBIT VEHICULAR AND PEDESTRIAN ACCESS-TO THAT AREA CONTRACTOR SHALL COORDINATE WITH THE OWNER TO ENSURE THAT FENCING AND BARRIERS INSTALLED ARE ADEQUATE.*

EXISTING UTILITY NOTES:

1. *THIS PLAN HAS BEEN PREPARED TO THE BEST OF OUR ABILITY USING THE DATA AVAILABLE. EXISTING UTILITY DATA SHOWN ON THIS LAYOUT WAS OBTAINED FROM A SURVEY OF THE VISIBLE FEATURES AT THE SITE AND PUBLIC RECORD MAPS OBTAINED FROM UTILITY COMPANIES.*
2. *IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.*
3. *THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.*
4. *LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTING EXISTING UTILITIES DURING CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT.*

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

EXISTING CONDITIONS

SHEET NO.

C1.2

Date: Feb 28, 2019, 4:31pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C1.2 (EXISTING CONDITIONS 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.
2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.
5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

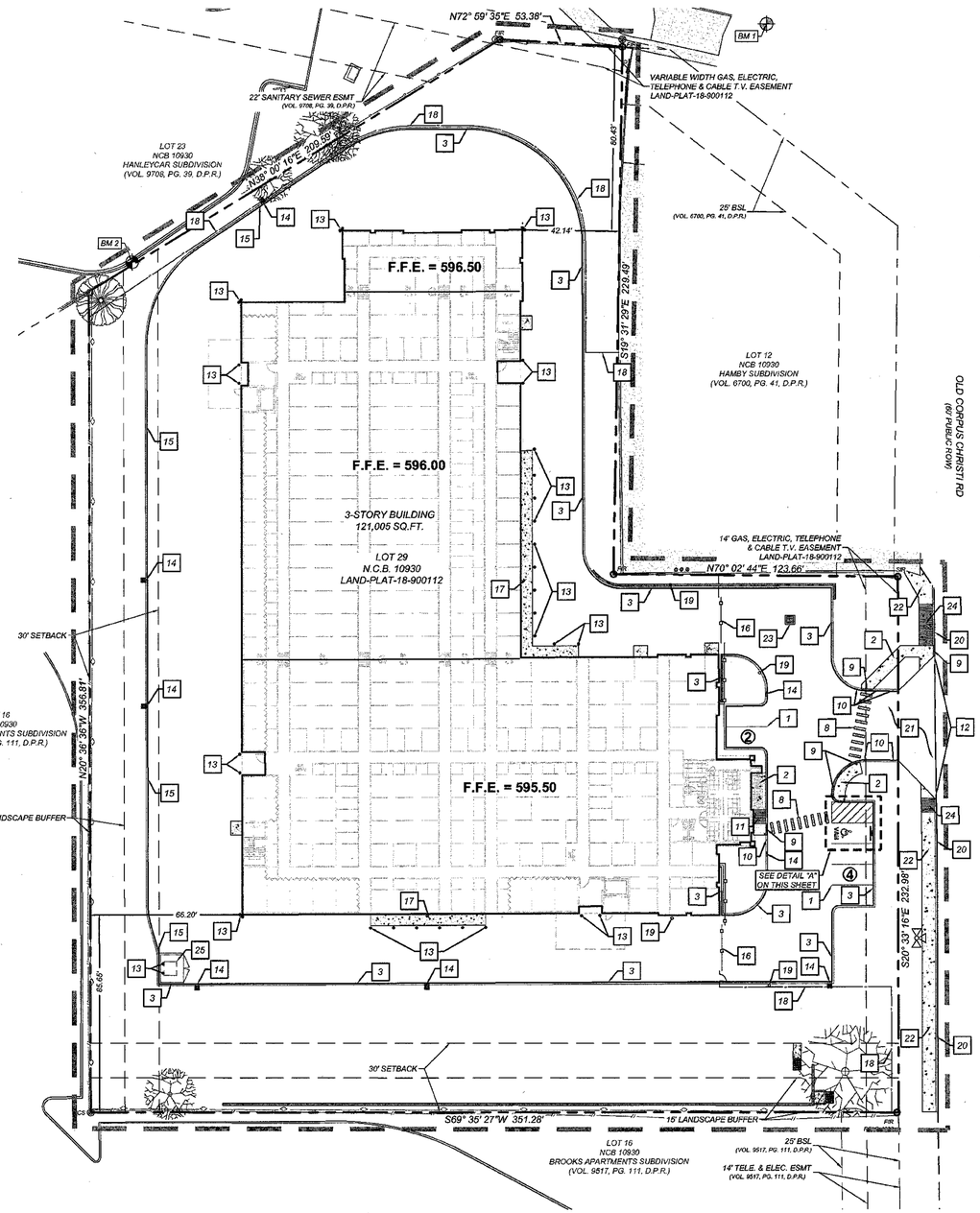
CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

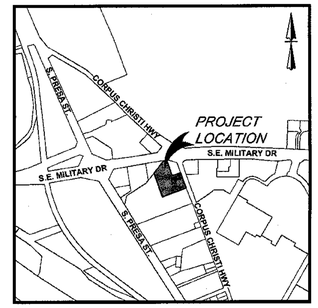
NOTES:
1. *ALL SIDEWALKS, CURBS, RAMPS, AND DRIVE APPROACHES IN THE RIGHT OF WAY SHALL BE IN COMPLIANCE WITH CURRENT TEXAS ACCESSIBILITY STANDARDS AND CITY OF SAN ANTONIO DESIGN STANDARDS PRIOR TO FINAL INSPECTION APPROVAL*

KEY NOTES

1	TYPICAL PARKING SPACES AND PARKING STRIPES (SEE DETAIL 1/C8.0)	14	2' CURB CUT (SEE DETAIL 14/C8.0)
2	PROPOSED SIDEWALK (SEE DETAIL 2/C8.0)	15	EXTENDED CURB (SEE DETAIL 15/C8.0)
3	PROPOSED MONOLITHIC 6" CURB (SEE DETAIL 3/C8.0)	16	ELECTRIC GATE (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
4	HANDICAP PARKING SYMBOL (SEE DETAIL 4/C8.0)	17	MECHANICAL PAD (REFERENCE STRUCTURAL PLANS FOR DETAILS)
5	HANDICAP SIGN (SEE DETAIL 5/C8.0)	18	6' ORNAMENTAL FENCE (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
6	WHEEL STOP (SEE DETAIL 6/C8.0)	19	KEYPADS (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
7	CROSS HATCH STRIPING (SEE DETAIL 7/C8.0)	20	COSA CURB (REFERENCE SHEET C8.1 FOR DETAILS)
8	CROSSWALK (SEE DETAIL 8/C8.0)	21	COSA DRIVEWAY (REFERENCE SHEET C8.1 FOR DETAILS)
9	RIBBON CURB (SEE DETAIL 9/C8.0)	22	COSA SIDEWALK (REFERENCE SHEET C8.1 FOR DETAILS)
10	2' CURB TRANSITION (SEE DETAIL 10/C8.0)	23	GRATE INLET (REFERENCE SHEET C5.1 FOR DETAILS)
11	PROPOSED RAMP (SEE DETAIL 11/C8.0)	24	COSA WHEELCHAIR RAMP (REFERENCE SHEET C8.1 FOR DETAILS)
12	CONCRETE / ASPHALT PAVEMENT JUNCTURE (SEE DETAIL 12/C8.0)	25	DUMPSTER ENCLOSURE (REFERENCE ARCHITECTURAL PLANS FOR DETAILS)
13	BOLLARDS (SEE DETAIL 13/C8.0)		

TRAFFIC/SW SUMMARY TABLE - SELF STORAGE	
Building Use	STORAGE FACILITY
Total Floor Area (sq. ft.)	121,005
PARKING STORAGE STANDARDS	
Minimum Parking Ratio	4 SPACES
Maximum Parking Ratio	N/A
REGULAR	
Minimum Required Parking	4 SPACES
Maximum Required Parking	N/A
Actual/Proposed Parking	6
Maximum Compact Spaces (30%)	2
Compact Spaces Proposed	0
Bicycle Spaces Required	0
HANDI-CAPPED (ADA)	
Required Universal H.C. Parking	0
Required V. A. Parking	1
Proposed Universal H.C. Parking	0
Proposed V.A. Parking	1
APPROACH(ES)	
Approach Width- (ft.)	30'
Flare/Radius (ft.)	25'
Approach Area-(sq. ft.)	N/A
SIDEWALK(S)	
Sidewalk Width - (ft.)	6
Sidewalk Length (linear ft.)	186
Sidewalk Area (sq. ft.)	1116



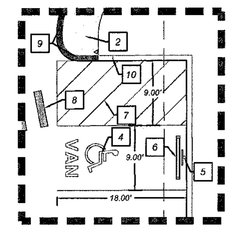


LOCATION MAP
N. T. S.

SCALE : 1"=30'
0' 30' 90'
60'

LEGEND

- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE
- EXISTING CURB
- EXISTING SANITARY SEWER MANHOLE
- SITE BENCHMARK SEE DESCRIPTION THIS SHEET
- EXISTING OVERHEAD ELECTRIC AND POWER POLE
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- PROPOSED CURB
- PROPOSED RIBBON CURB
- PROPOSED FENCE
- PROPOSED SIDEWALK
- PARKING STALL COUNT
- EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL



HANDICAP PARKING DETAIL "A"
SCALE: 1"= 10'

CONTACT TERESA SEIDEL, RPLS WITH KFW SURVEYING AT (210) 979-8444 FOR CONSTRUCTION STAKING SERVICES ON THIS PROJECT.

KFW ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 - TBPLS Firm #: 10128500

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

OVERALL SITE PLAN

SHEET NO.

C2.0

Date: Feb 28, 2019, 4:31pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C2.0 (OVERALL SITE PLAN 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.
2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.
5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

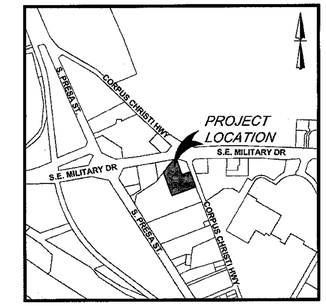
CAUTION!!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION.THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

FIRE DEMAND (IFC 2018)					
BUILDING TYPE	S.F.	PRE-REDUCTION REQUIRED GPM	SPRINKLERED REDUCTION	REQUIRED GPM	HYDRANTS
IIB	121,005	7,500	50%	2200*	2

*Maximum 2,200 GPM required per Table B105.2 in COSA Amendments to 2015 IFC.



LOCATION MAP
N. T. S.

SCALE : 1"=30'
0' 30' 90'
60'

NOTE: RED LETTERS & BORDER ON WHITE BACKGROUND

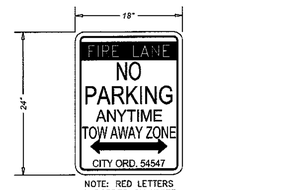
LESS THAN 40' : ONE SIGN WITH DOUBLE ARROW
40' TO 90' : TWO SIGNS WITH RIGHT AND LEFT ARROWS
100' OR MORE : THREE SIGNS WITH RIGHT/LEFT AND DOUBLE ARROWS IN THE MIDDLE
ALL SIGNS SHOULD BE VISIBLE TO THE DRIVER

FIRE LANE SIGN TYPE "A"
N.T.S.

NOTE: RED LETTERS & BORDER ON WHITE BACKGROUND

LESS THAN 40' : ONE SIGN WITH DOUBLE ARROW
40' TO 90' : TWO SIGNS WITH RIGHT AND LEFT ARROWS
100' OR MORE : THREE SIGNS WITH RIGHT/LEFT AND DOUBLE ARROWS IN THE MIDDLE
ALL SIGNS SHOULD BE VISIBLE TO THE DRIVER

FIRE LANE SIGN TYPE "B"
N.T.S.

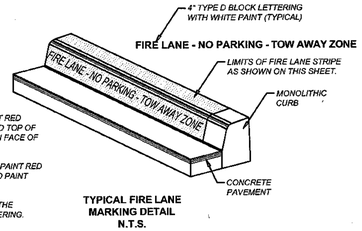


NOTE: RED LETTERS & BORDER ON WHITE BACKGROUND

LESS THAN 40' : ONE SIGN WITH DOUBLE ARROW
40' TO 90' : TWO SIGNS WITH RIGHT AND LEFT ARROWS
100' OR MORE : THREE SIGNS WITH RIGHT/LEFT AND DOUBLE ARROWS IN THE MIDDLE
ALL SIGNS SHOULD BE VISIBLE TO THE DRIVER

FIRE LANE SIGN TYPE "C"
N.T.S.

FIRE SIGN LOCATION NOTE:
FIRE SIGN LOCATION SHALL BE DETERMINED BY FIRE MARSHAL / INSPECTOR PRIOR TO CONSTRUCTION



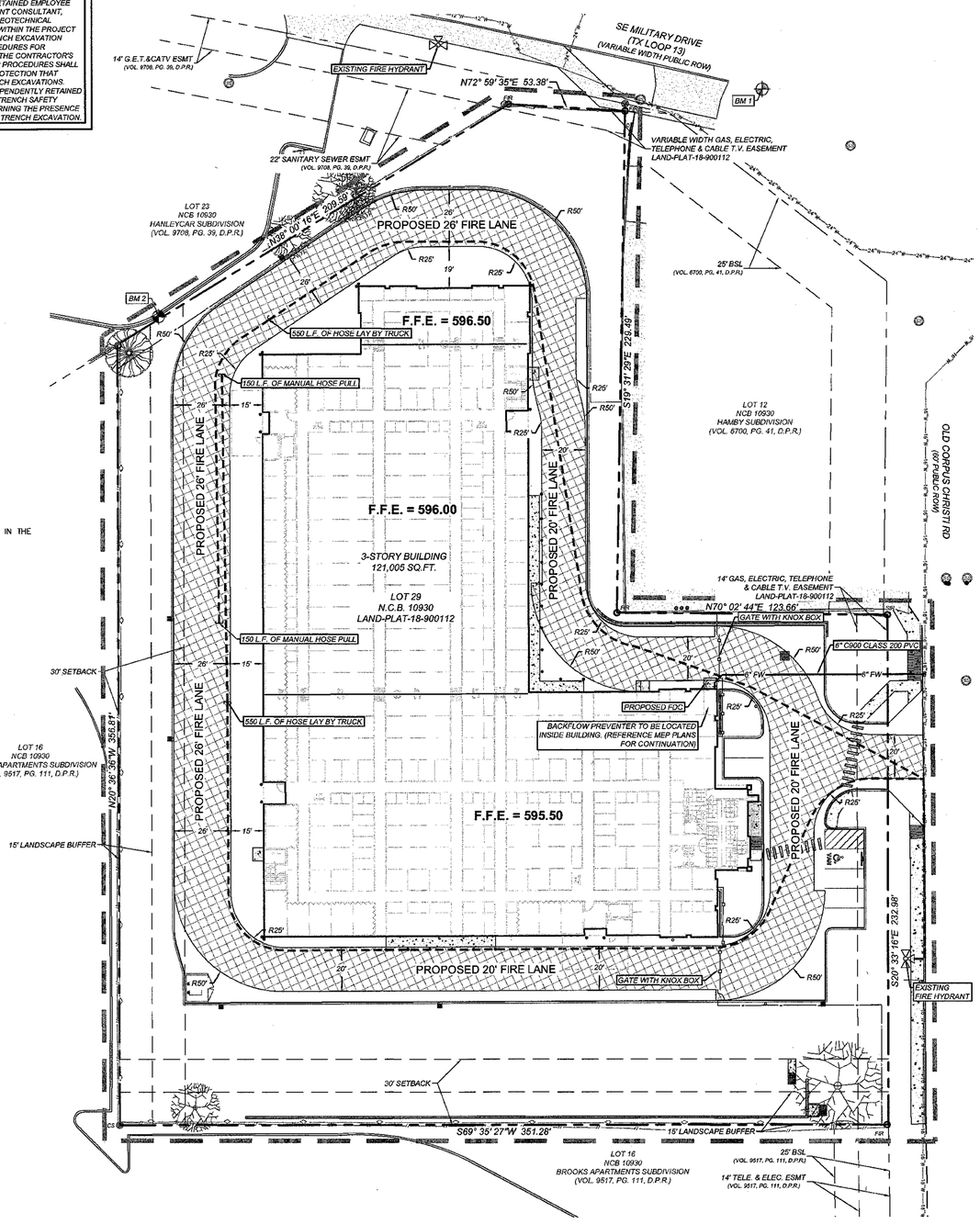
APPLICATION:

1. ALONG CURBED AREAS: PAINT RED LANE STRIPE ON BOTH FACE AND TOP OF CURB. PAINT WHITE LETTERS ON FACE OF CURB ONLY.

2. ALONG NON-CURBED AREAS: PAINT RED LANE STRIPE ON PAVEMENT AND PAINT WHITE LETTERS.

3. 40 FOOT SPACING BETWEEN THE BEGINNING OF THE WHITE LETTERING.

TYPICAL FIRE LANE MARKING DETAIL
N.T.S.



LEGEND

- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE
- EXISTING CURB
- EXISTING SANITARY SEWER MANHOLE
- SITE BENCHMARK SEE DESCRIPTION THIS SHEET
- EXISTING OVERHEAD ELECTRIC AND POWER POLE
- EXISTING FENCE
- EXISTING WATER LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- PROPOSED CURB
- PROPOSED RIBBON CURB
- PROPOSED FENCE
- PROPOSED SIDEWALK
- PROPOSED WATER LINE
- FIRE TRUCK HOSE PULL
- PROPOSED FIRE LANE
- EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL

CONTACT TERESA SEIDEL, RPLS WITH KFW SURVEYING AT (210) 979-8444 FOR CONSTRUCTION STAKING SERVICES ON THIS PROJECT.

KFW ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX, 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

FIRE PROTECTION PLAN

SHEET NO.

C3.0

Date: Feb 28, 2019, 4:31pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C3.0 (FIRE PROTECTION PLAN 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.
2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.
5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION.THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

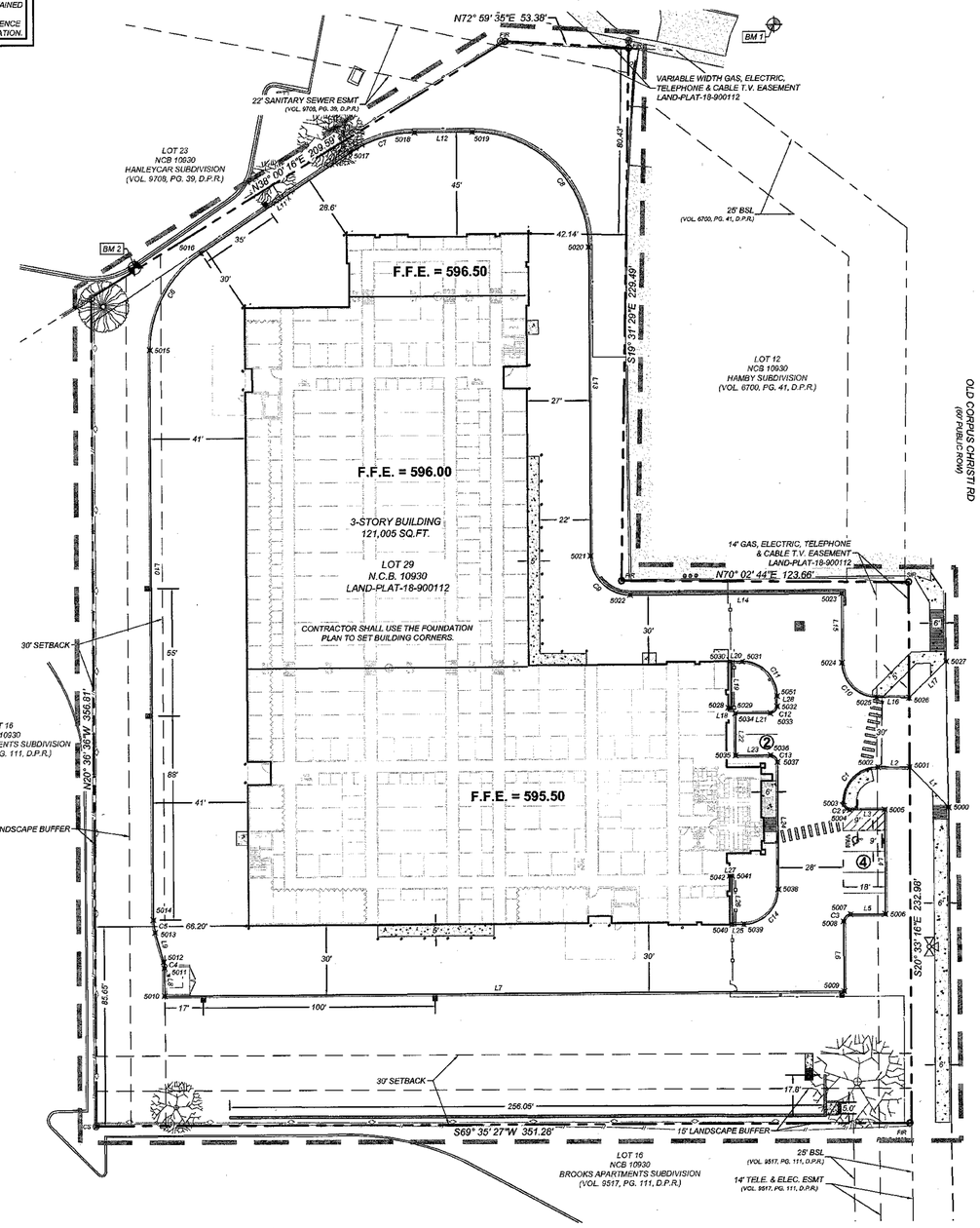
NOTES:

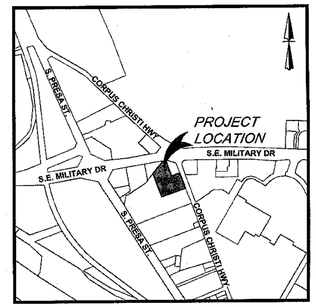
1. *ALL DIMENSIONS ARE TO FACE OF CURB. ALL SIDEWALK DIMENSIONS ARE TO BACK OF CURB.*
2. *CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT,OR LIMITS OF DIMENSIONS NECESSARY FOR CONSTRUCTION OF THIS PROJECT.*
3. *THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.*
4. *ALL CURBS ARE 6" HIGH UNLESS OTHERWISE NOTED.*
5. *CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING UTILITIES, FENCES, PAVEMENT, CURBS, DRIVEWAYS, OR SIDEWALKS (NO SEPARATE PAY ITEM).*
6. *CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL NECESSARY UTILITY COMPANIES FOR PROVIDING TEMPORARY SERVICES DURING CONSTRUCTION.*
7. *ALL DIMENSIONS MUST BE VERIFIED ON THE JOB AND THE ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.*
8. *ALL COORDINATE POINTS FOR THE ROADWAY SYSTEM ARE TO FACE OF CURB.*
9. *THE CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT, CURBS, AND SIDEWALKS AT NEW PAVEMENT, CURBS, AND SIDEWALK JUNCTURES. NO JAGGED OR IRREGULAR CUTS WILL BE ALLOWED OR ACCEPTED.*

Point Table		
Point #	Northing	Easting
5000	13677864.47	2141549.02
5001	13677874.71	2141527.36
5002	13677870.10	2141514.50
5003	13677850.26	2141505.70
5004	13677848.60	2141509.53
5005	13677853.88	2141523.56
5006	13677811.76	2141539.40
5007	13677806.48	2141525.36
5008	13677802.61	2141523.61
5009	13677774.56	2141534.16
5010	13677671.51	2141260.24
5011	13677682.71	2141256.03
5012	13677685.10	2141254.73
5013	13677695.73	2141246.93
5014	13677700.52	2141244.34
5015	13677930.35	2141157.91
5016	13677977.13	2141164.10
5017	13678040.14	2141209.38
5018	13678057.76	2141232.38
5019	13678066.48	2141255.57
5020	13678037.28	2141319.97
5021	13677912.79	2141366.79
5022	13677902.87	2141388.69
5023	13677934.90	2141473.86
5024	13677906.86	2141484.41
5025	13677898.02	2141503.51
5026	13677902.80	2141516.83
5027	13677923.00	2141526.37
5028	13677871.71	2141445.28
5029	13677872.06	2141446.21
5030	13677890.86	2141439.14
5031	13677892.62	2141443.82
5032	13677879.65	2141464.73
5033	13677875.78	2141462.97
5034	13677870.50	2141448.93
5035	13677853.65	2141455.27
5036	13677858.94	2141469.31
5037	13677857.18	2141473.17
5038	13677805.86	2141492.48
5039	13677796.54	2141483.72
5040	13677784.78	2141479.04
5041	13677804.44	2141471.64
5042	13677804.08	2141470.71
5051	13677883.86	2141463.14

Line Table		
LINE #	LENGTH	DIRECTION
L1	23.95	S84° 42' 55"E
L2	13.66	N70° 17' 05"E
L3	14.99	S69° 23' 24"W
L4	45.00	N20° 36' 36"W
L5	15.00	N69° 23' 24"E
L6	30.00	N20° 36' 36"W
L7	292.66	N69° 23' 24"E
L8	11.96	S20° 36' 36"E
L9	13.18	S36° 15' 48"E
L10	245.55	S20° 36' 36"E
L11	77.69	S35° 41' 59"W
L12	24.78	S69° 23' 24"W
L13	133.00	N20° 36' 36"W
L14	91.00	S69° 23' 24"W
L15	29.95	N20° 36' 36"W
L16	14.15	S70° 17' 11"W
L17	22.34	N25° 17' 11"E
L18	1.00	S69° 23' 24"W
L19	20.08	S20° 36' 36"E
L20	5.00	S69° 23' 24"W
L21	15.00	N69° 23' 24"E
L22	18.00	S20° 36' 36"E
L23	15.00	S69° 23' 24"W
L24	54.83	N20° 36' 36"W
L25	5.00	S69° 23' 24"W
L26	21.00	N20° 36' 36"W
L27	1.00	S69° 23' 24"W
L28	4.50	N20° 36' 36"W

CURVE TABLE					
CURVE #	LENGTH	RADIUS	CHORD	CHORD BEARING	TANGENT
C1	24.26	15.00	21.70	S23° 56' 14"W	15.72
C2	4.62	3.00	4.18	S65° 30' 14"E	2.91
C3	4.71	3.00	4.24	S24° 23' 24"W	3.00
C4	2.73	10.00	2.72	N28° 26' 12"W	1.37
C5	5.46	20.00	5.45	S28° 26' 12"E	2.75
C6	49.14	50.00	47.19	S7° 32' 41"W	26.76
C7	29.40	50.00	28.98	S52° 32' 41"W	15.14
C8	78.54	50.00	70.71	N65° 36' 36"W	50.00
C9	26.70	17.00	24.04	S65° 36' 36"E	17.00
C10	23.33	15.00	21.05	S65° 10' 05"E	14.77
C11	23.82	15.00	21.39	N65° 07' 24"W	15.26
C12	4.71	3.00	4.24	N24° 24' 23"E	3.00
C13	4.71	3.00	4.24	N65° 36' 36"W	3.00
C14	23.56	15.00	21.21	N24° 23' 24"E	15.00





LOCATION MAP
N. T. S.

SCALE : 1"=30'
0' 30' 90'
60'

LEGEND

- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE
- EXISTING CURB
- EXISTING SANITARY SEWER MANHOLE
- SITE BENCHMARK SEE DESCRIPTION THIS SHEET
- EXISTING OVERHEAD ELECTRIC AND POWER POLE
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- PROPOSED CURB
- PROPOSED RIBBON CURB
- PROPOSED FENCE
- PROPOSED SIDEWALK
- PARKING STALL COUNT
- EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL

CONTACT TERESA SEIDEL, RPLS WITH KFW SURVEYING AT (210) 979-8444 FOR CONSTRUCTION STAKING SERVICES ON THIS PROJECT.

KFW ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

DIMENSIONAL CONTROL PLAN

SHEET NO.

C4.0

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13066, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

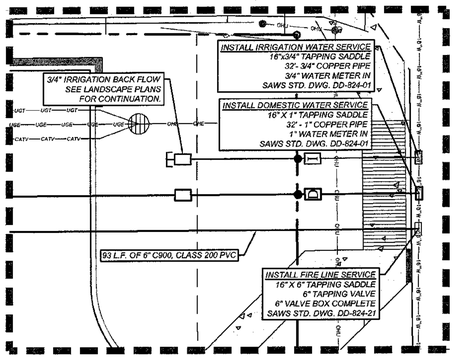
COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.
2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.
5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

CAUTION!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION.THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

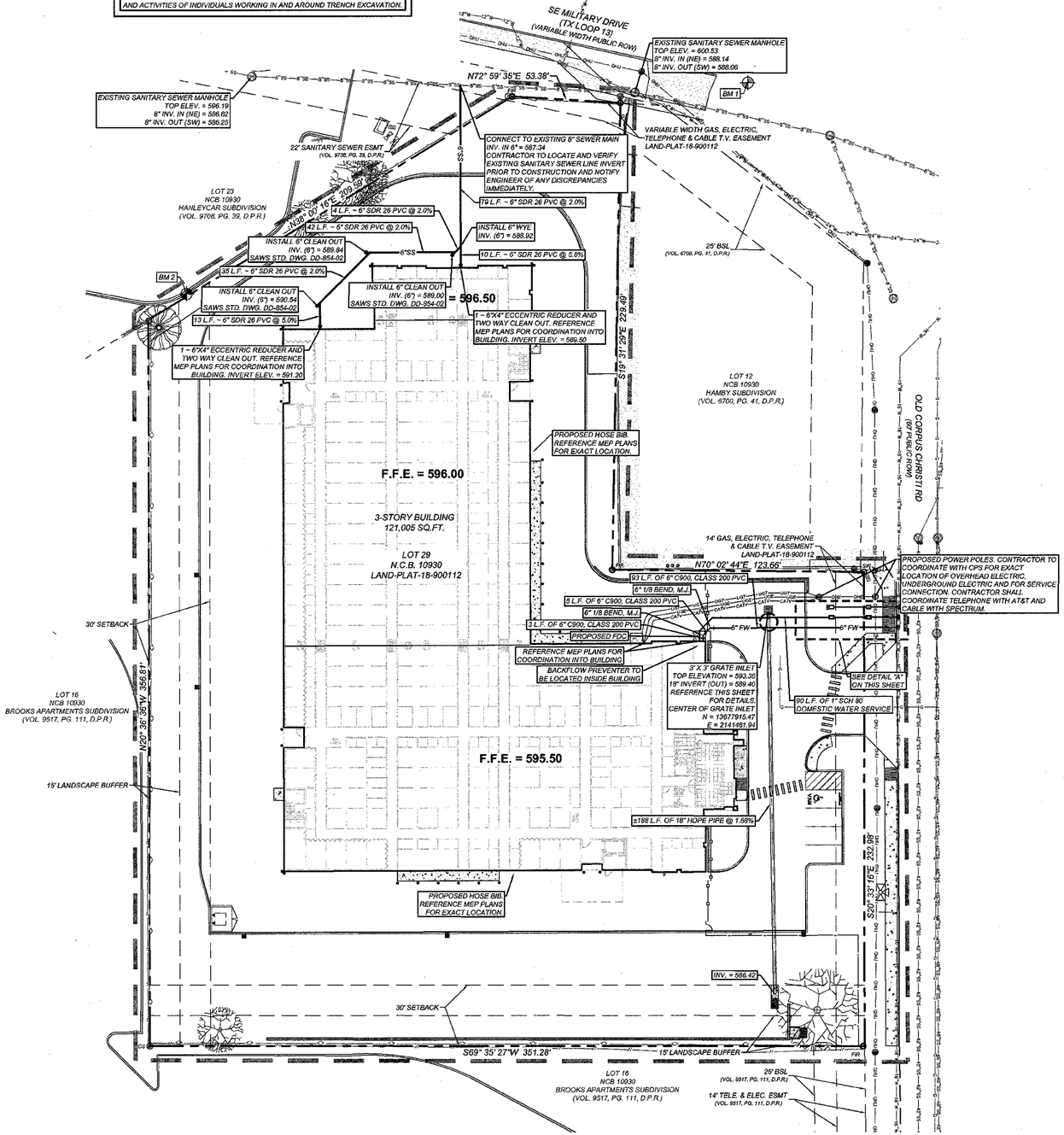
TRENCH EXCAVATION SAFETY PROTECTION

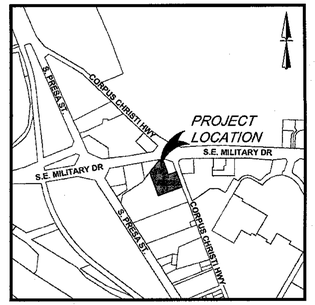
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



DETAIL "A"

SCALE: 1"= 10'





LOCATION MAP
N. T. S.

SCALE : 1"=30'
0' 30' 90'
60'

LEGEND

LIMITS OF CONSTRUCTION	
PROPERTY LINE	
ADJACENT PROPERTY LINE	
EXISTING EDGE OF PAVEMENT	
EXISTING CONCRETE	
EXISTING CURB	
EXISTING SANITARY SEWER MANHOLE	
SITE BENCHMARK SEE DESCRIPTION THIS SHEET	
EXISTING OVERHEAD ELECTRIC AND POWER POLE	
EXISTING FENCE	
EXISTING WATER LINE	
EXISTING WATER LINE	
EXISTING WATER LINE	
EXISTING SEWER LINE	
EXISTING GAS LINE	
EXISTING FIRE HYDRANT	
EXISTING WATER VALVE	
PROPOSED OVERHEAD ELECTRIC AND POWER POLE	
PROPOSED CURB	
PROPOSED RIBBON CURB	
PROPOSED FENCE	
PROPOSED SIDEWALK	
PROPOSED DOMESTIC WATER LINE	1" DW
PROPOSED FIRE WATER LINE	6" FW
PROPOSED SANITARY SEWER LATERAL	6" SS
PROPOSED UNDERGROUND TELEPHONE	
PROPOSED UNDERGROUND ELECTRIC	
PROPOSED UNDERGROUND CABLE T.V.	
EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL	

CONTACT TERESA SEIDEL, RPLS WITH KFW SURVEYING AT (210) 979-8444 FOR CONSTRUCTION STAKING SERVICES ON THIS PROJECT.

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

OVERALL UTILITY PLAN

SHEET NO.

C5.0

Date: Feb 28, 2019, 4:31pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C5.0 (OVERALL UTILITY PLAN 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.

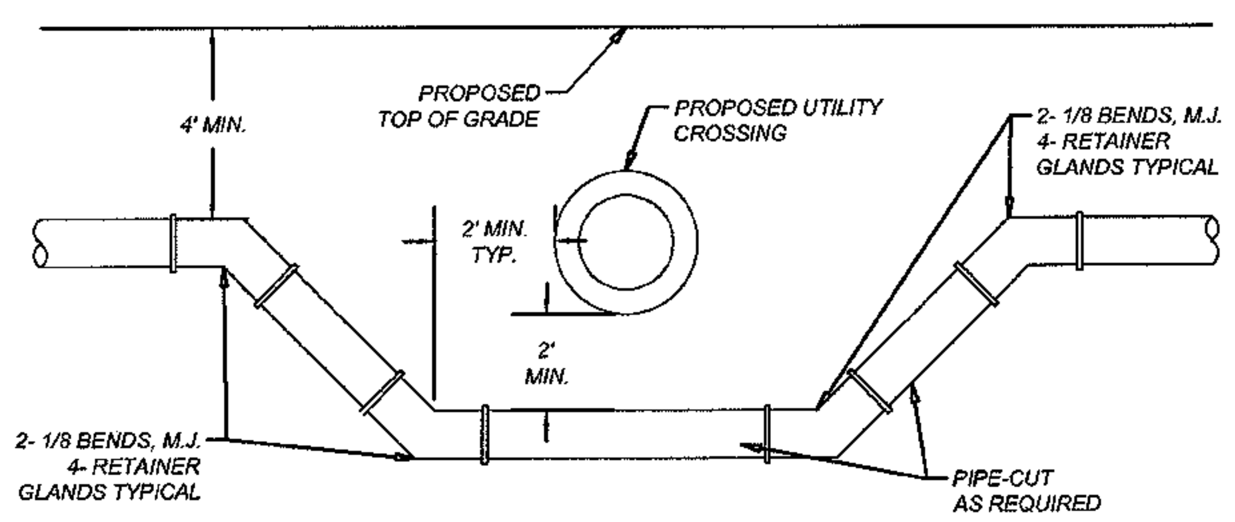
2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.

3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.

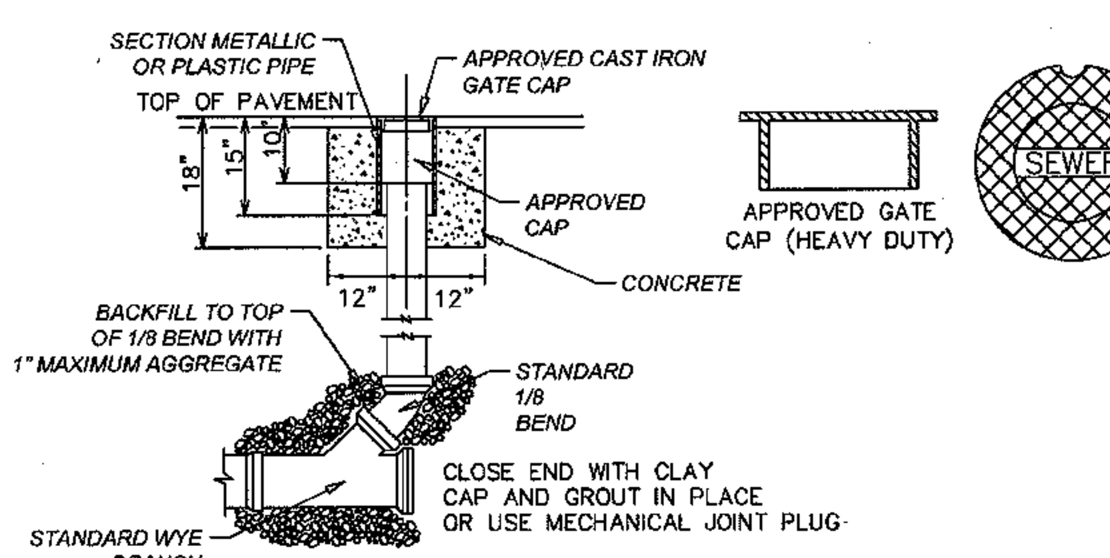
4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.

5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.

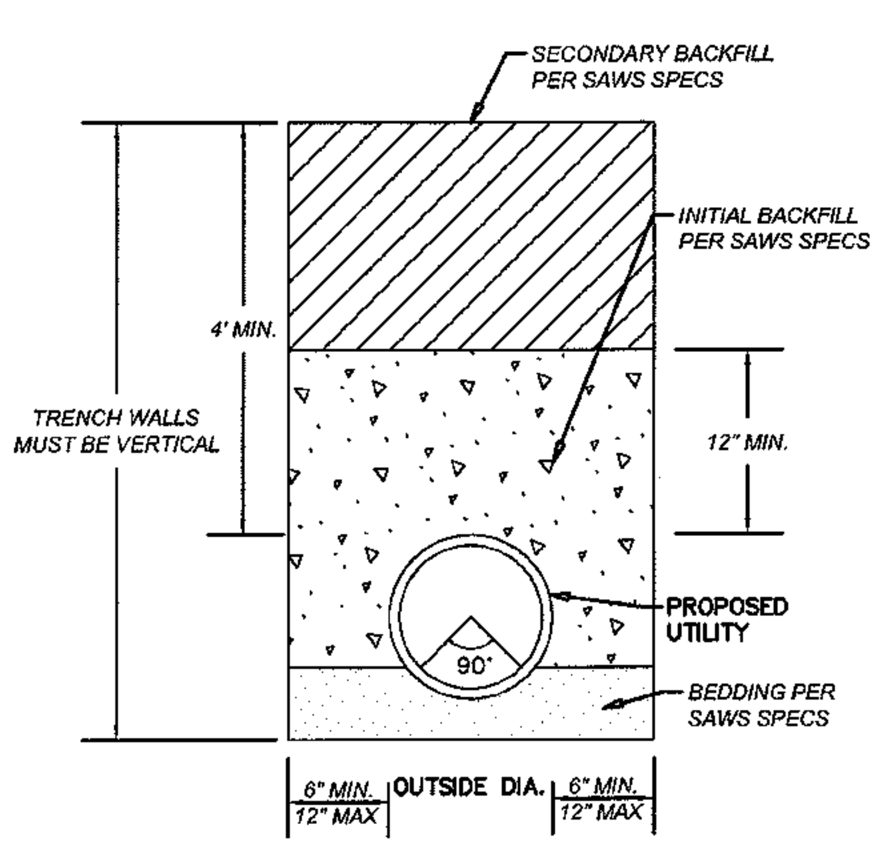
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.



WATER MAIN CROSSING UNDER UTILITY
N.T.S



SANITARY SEWER CLEAN OUT DETAIL
N.T.S



POTABLE WATER MAIN DETAIL
N.T.S.

SAWS GENERAL CONSTRUCTION NOTES

GENERAL SECTION

1.ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:

A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
B.CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
C.CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION."
D.CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION."
E.CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).

2.THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEB SITE,HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.

3.THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 233-2973, AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO EXCAVATION.

4.LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.

5.THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY SIGNIFICANT DISCREPANCIES OR REQUIRED DESIGN CHANGES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
SAN ANTONIO WATER SYSTEM:

SAWS UTILITY LOCATES: LOCATES@SAWS.ORG
COSA DRAINAGE 207-0724 OR 207-6026
COSA TRAFFIC SIGNAL OPERATIONS 206-8480 OR 207-8462
COSA TRAFFIC SIGNAL DAMAGES 207-3951 OR 207-7769
TEXAS STATE WIDE ONE CALL LOCATOR 1-800-344-8377 OR 811

6.THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS ARESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION.

7.ALL WORK IN TEXAS HIGHWAY DEPARTMENT AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.

8.THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.

9.THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.

10.ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE SAN ANTONIO WATER SYSTEM.

11.HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG. ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.

WATER SECTION:

12.PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS INSPECTION AND/OR SAWS PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY. SAWS EOC 233-2015

13.ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".

14.VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)

SEWER SECTION:

15.THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

A.IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT (210)233-2015. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
B.ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
C.CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
D.CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
E.CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
F.MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS. SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA.

16.THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED, IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING

17.PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 233-2973 AND/OR SAWS PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.

UTILITY GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL CONFORM TO ALL APPLICABLE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION), CITY OF SAN ANTONIO SPECIFICATIONS (LATEST EDITION), CITY BUILDING CODE AND REGULATIONS AS WELL AS OTHER SAFETY CODES AND INSPECTION PROVISIONS APPLICABLE TO THE PROJECT AND REQUIREMENTS OF THE FIRE DEPARTMENT. SANITARY SEWER SYSTEM CONSTRUCTION SHALL COMPLY WITH THE CITY SAN ANTONIO STANDARD SPECIFICATIONS AS WELL AS TCEQ RULES (TAC 210 AND TAC 317).

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.

3. THE FIRE AND DOMESTIC WATER LINES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH SAWS REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH THE SAWS FOR PERMITTING INSPECTION, AND CONSTRUCTION OPERATIONS.

4. ALL UTILITY CONNECTIONS TO BUILDING SHALL BE COORDINATED WITH MECHANICAL AND ELECTRIC PLANS. FOR INFORMATION ON GAS, ELECTRIC, AND TELEPHONE UTILITIES, SEE THE MECHANICAL AND ELECTRIC PLANS.

5. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL TRAFFIC CONTROL DEVICES, LIGHTING, OR WARNING CONTROL DEVICES USED OR REQUIRED TO COMPLETE THE WORK.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL CONDITION, OR BETTER, ANY DAMAGES DONE TO EXISTING BUILDINGS, RETAINING WALLS, UTILITIES, FENCES, PAVEMENT, CURBS OR DRIVEWAYS (NO SEPARATE PAY ITEM).

7. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS, OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.

8. THE CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT AT NEW PAVEMENT AND CURB JUNCTURES. NO JAGGED OR IRREGULAR CUTS IN PAVEMENT WILL BE ALLOWED OR ACCEPTED.

9. ALL EXCAVATIONS AND BACK FILLING OF UTILITY TRENCHES SHALL BE AS PER CONTRACT SPECIFICATION NO. 02221 EARTHWORK. ALL BACK FILL MUST BE IN COMPACTED 12-INCH LIFTS AND NO WATER JETTING IS ALLOWED.

10. REFER TO PROJECT SPECIFICATIONS FORADDITIONAL SPECIFICATIONS AND CONTRACT INFORMATION.

11. SEWER PIPE IS SDR 26. WATER PIPE IS CLASS 200 PVC, UNLESS NOTED OTHERWISE.

12. THE CONSTRUCTION OF UNDERGROUND PRIMARY ELECTRIC DISTRIBUTION SYSTEMS SHALL BE GOVERNED BY THE ENGINEERING CONSTRUCTION PLANS PREPARED BY CPS (CITY PUBLIC SERVICE).THIS DRAWING SHALL SERVE ONLY AS REFERENCE DOCUMENT TO COORDINATE LOCATION OF THE PROPOSED PRIMARY ELECTRIC DISTRIBUTION SYSTEM. CPS CONSTRUCTION DRAWINGS AND CONSTRUCTION DETAILS SHALL GOVERN.

13. THE CONSTRUCTION OF UNDERGROUND CABLE T.V. DISTRIBUTION SYSTEMS SHALL BE GOVERNED BY THE ENGINEERING CONSTRUCTION PLANS PREPARED BY TWC (TIME WARNER CABLE). THIS DRAWING SHALL SERVE ONLY AS REFERENCE DOCUMENT TO COORDINATE LOCATION OF THE PROPOSED CABLE T.V. SYSTEM. TWC CONSTRUCTION DRAWINGS AND CONSTRUCTION DETAILS SHALL GOVERN.

14. THE CONSTRUCTION OF UNDERGROUND GAS DISTRIBUTION SYSTEMS SHALL BE GOVERNED BY THE ENGINEERING CONSTRUCTION PLANS PREPARED BY CPS. THIS DRAWING SHALL SERVE ONLY AS REFERENCE DOCUMENT TO COORDINATE LOCATION OF THE PROPOSED GAS SYSTEM. CPS CONSTRUCTION DRAWINGS AND CONSTRUCTION DETAILS SHALL GOVERN.

15. CONTRACTOR SHALL COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO RELOCATE EXISTING POWER POLES UNDERGROUND ELECTRIC WITHIN THE LIMITS OF CONSTRUCTION.

16. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A) (I).

17. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ.

EXISTING UTILITY NOTES:

1. THIS UTILITY PLAN HAS BEEN PREPARED TO THE BEST OF OUR ABILITY USING THE DATA AVAILABLE. EXISTING UTILITY DATA SHOWN ON THIS LAYOUT WAS OBTAINED FROM A SURVEY OF THE VISIBLE FEATURES AT THE SITE AND PUBLIC RECORD MAPS OBTAINED FROM UTILITY COMPANIES.

2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.

3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.

4. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAME DURING CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT.

5. CONTRACTOR SHALL NOTIFY SPECTRUM CABLE COMPANY 48 HOURS PRIOR TO EXCAVATION IN THE IMMEDIATE AREA OF BURIED TELEPHONE CABLE AT (210-244-0500).

6. CONTRACTOR SHALL NOTIFY CPS (CITY PUBLIC SERVICE) 48 HOURS PRIOR TO EXCAVATION IN THE IMMEDIATE AREA OF BURIED ELECTRIC LINES AT (210-353-2256).

7. CONTRACTOR SHALL NOTIFY AT&T 48 HOURS PRIOR TO EXCAVATION IN THE IMMEDIATE AREA OF BURIED TELEPHONE LINES AT (1-800-449-7928).

8. CONTRACTOR SHALL NOTIFY CPS (CITY PUBLIC SERVICE) 48 HOURS PRIOR TO EXCAVATION IN THE IMMEDIATE AREA OF BURIED GAS LINES AT (210-353-2256).

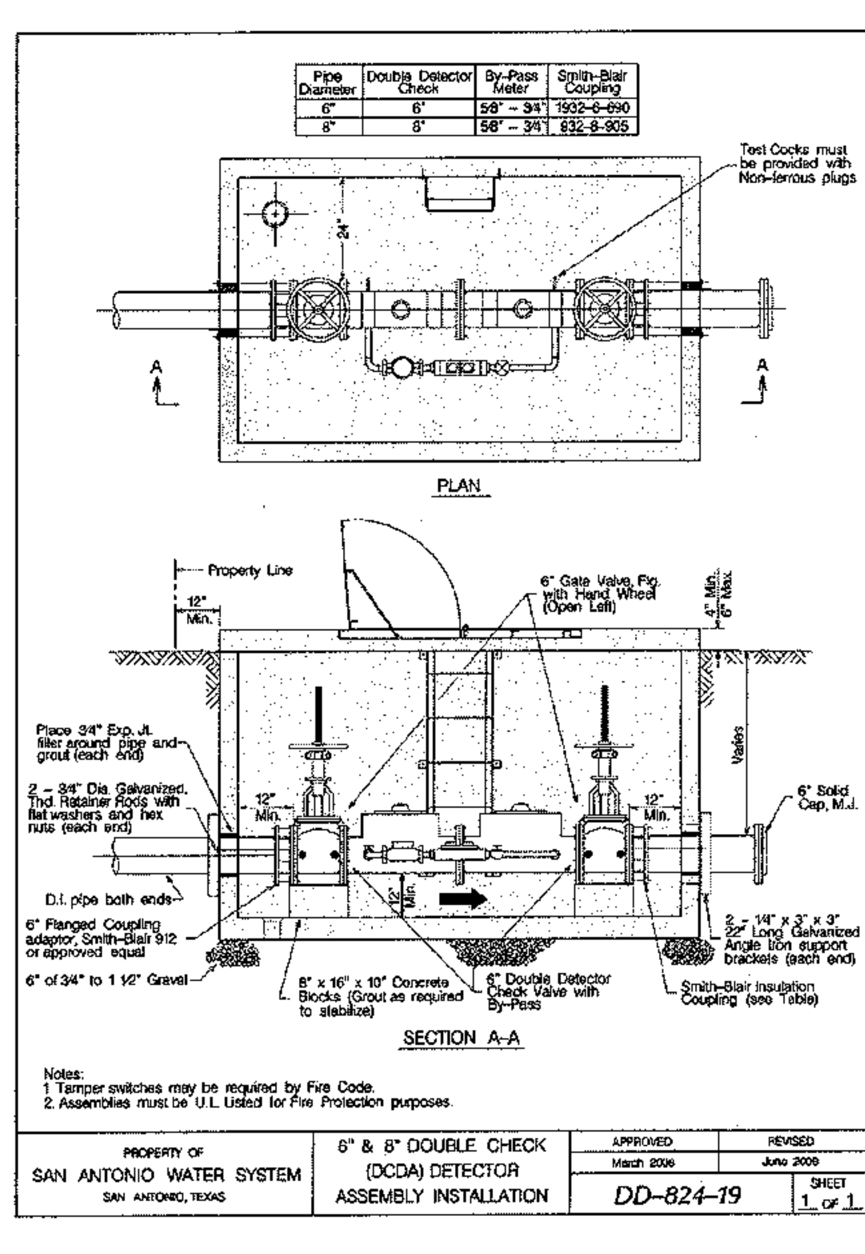
9. CONTRACTOR SHALL NOTIFY THE SAWS (SAN ANTONIO WATER SYSTEM) 48 HOURS PRIOR TO EXCAVATION IN THE IMMEDIATE AREA OF BURIED SANITARY SEWER AND WATER AT (210-704-7297).

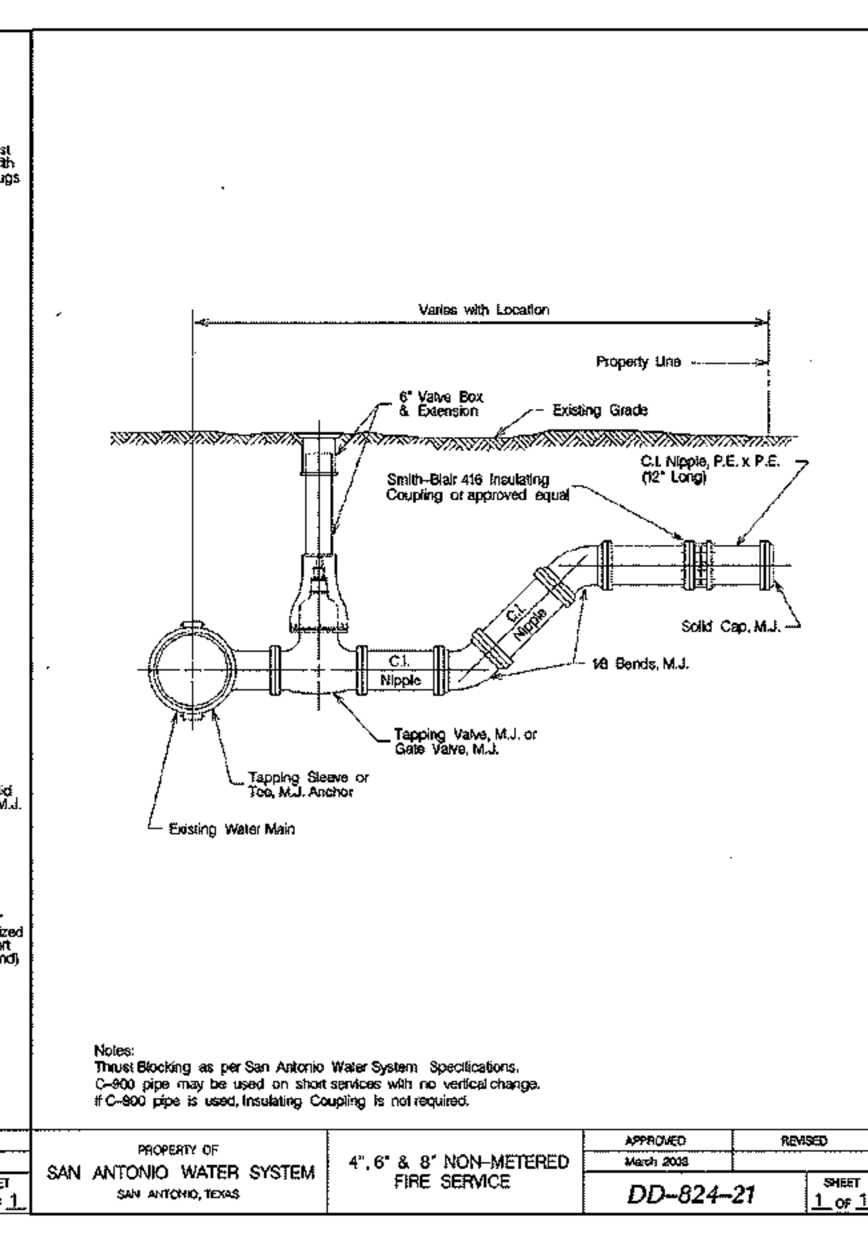
10. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS (CITY PUBLIC SERVICE) MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTORS MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.

12. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE."

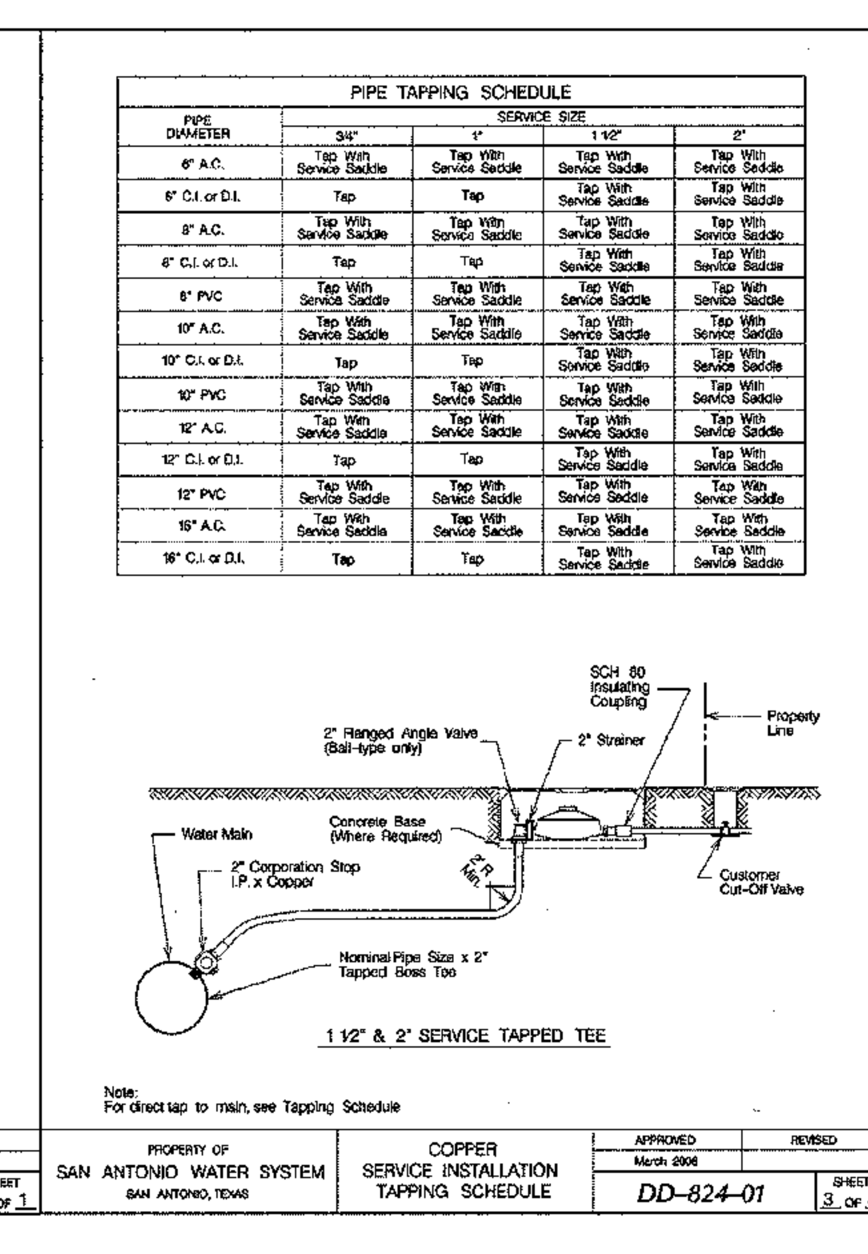
Pipe Diameter	Double Detector Check	By-Pass Meter	Smith-Blair Coupling
6"	6"	58" - 3/4"	1932-6-690
8"	8"	58" - 3/4"	832-8-905

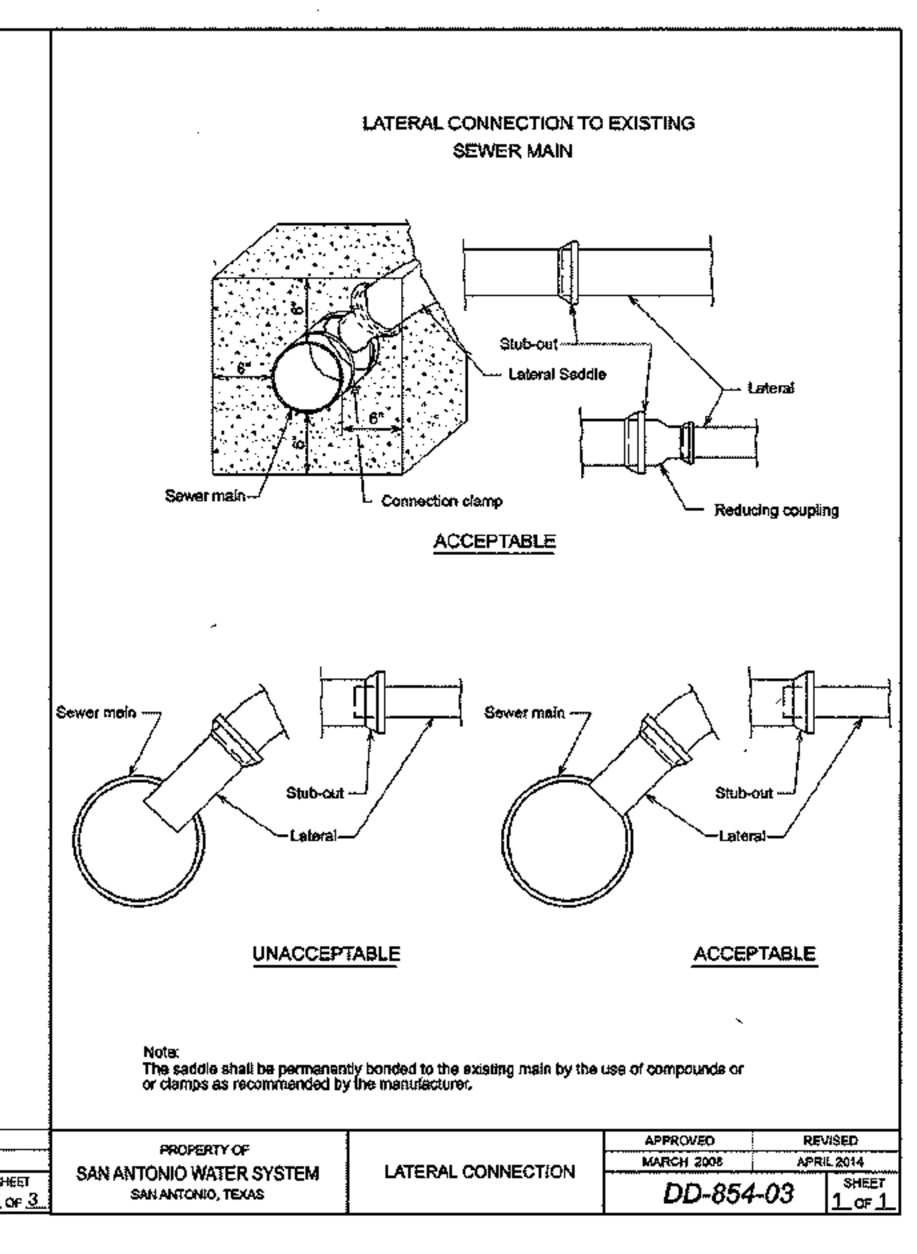


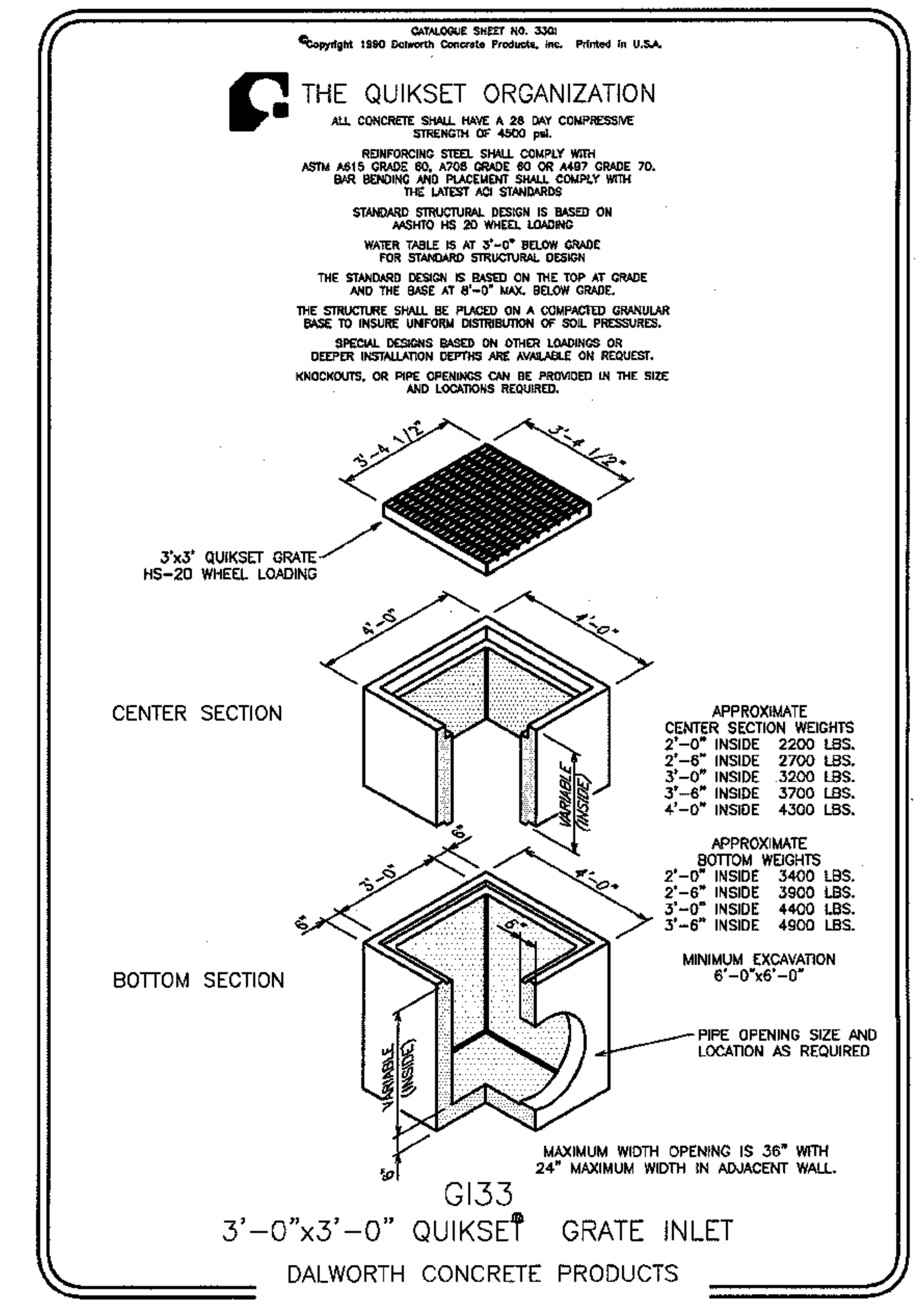


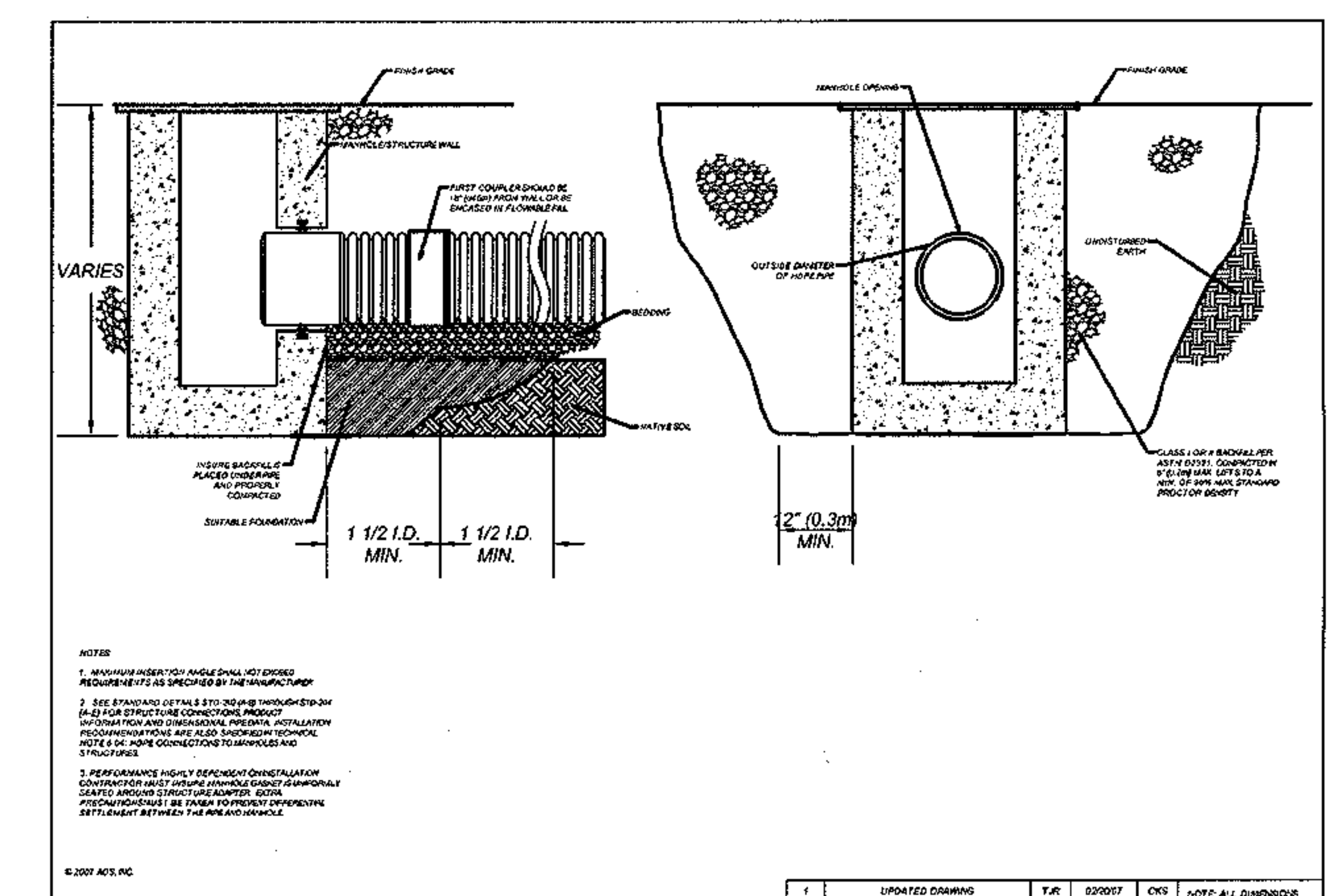
PIPE TAPPING SCHEDULE

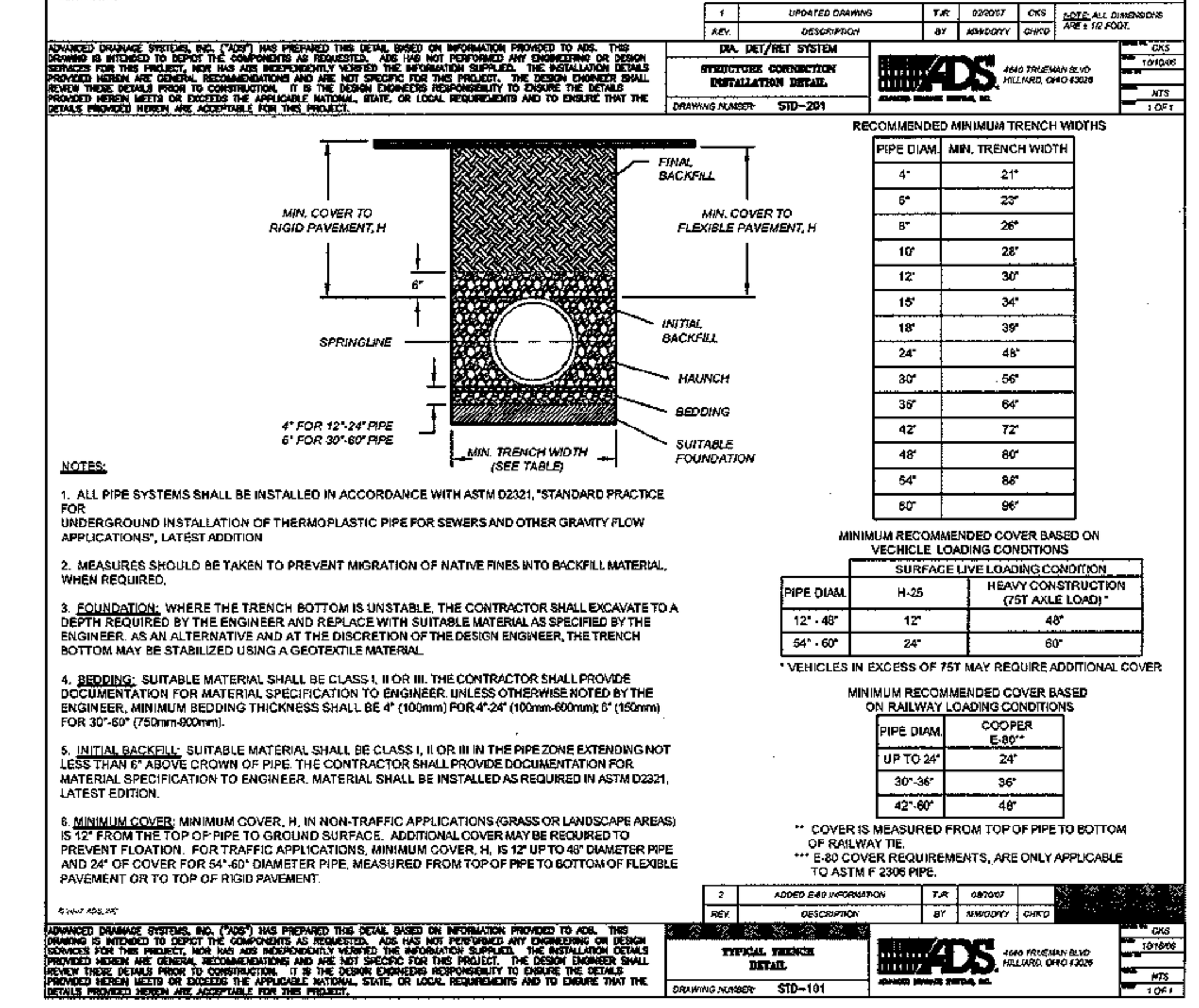
PIPE DIAMETER	SERVICE SIZE 3/4"	1"	1 1/2"	2"
6" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
6" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
8" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
8" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
8" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
10" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
10" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
12" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle
12" PVC	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" A.C.	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle	Tap With Service Saddle
16" C.I. or D.I.	Tap	Tap	Tap With Service Saddle	Tap With Service Saddle











NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	86"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS

PIPE DIAM.	COOPER E-80**
UP TO 24"	24"
30"-36"	36"
42"-60"	48"

** COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.
*** E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

UTILITY NOTES AND DETAILS

SHEET NO.

C5.1

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.

2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.

3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.

4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.

5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.

6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION.THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

NOTE:
BASIN WALLS HAVE NOT BEEN STRUCTURALLY DESIGNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL DESIGN OF ALL BASIN WALLS WITHIN THIS PROJECT. THE WALL DESIGNS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND SUBMITTED AS A SHOP DRAWING.

GRADING NOTES:

1. ALL GRADES AND CONTOURS SHOWN ARE FINAL, TOP OF FINISHED SURFACE ELEVATIONS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL SUBTRACT THICKNESS OF PAVEMENT, BASE, TOP SOIL, SOD, ETC. TO ACHIEVE SUBGRADE ELEVATION.

2. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.

3. NO ABRUPT CHANGE OF GRADE SHALL OCCUR IN THE ROADWAYS, PARKING AREAS, OR SIDEWALKS.

4. CONTRACTOR SHALL CONSTRUCT TO OBTAIN GRADES SHOWN HEREON ± ONE-TENTH (0.10) FOOT.

5. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND LANDSCAPING PLANS.

6. UTILITIES SHOWN ON THE PLANS ARE FROM THE BEST INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.

7. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL APPLICABLE BEXAR COUNTY PUBLIC WORKS STANDARD SPECIFICATIONS, CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION) AND CPS ELECTRIC SERVICE STANDARDS (LATEST EDITION).

8. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL OR BETTER CONDITION ANY DAMAGES DONE TO EXISTING BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, SIDEWALKS, OR DRIVEWAYS (NO SEPARATE PAY ITEM).

9. DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL NECESSARY UTILITY COMPANIES FOR PROVIDING TEMPORARY UTILITY SERVICES DURING CONSTRUCTION. THE CONTRACTOR SHALL PAY FOR ALL TEMPORARY UTILITY SERVICES.

11. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS, AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.

13. ALL EXCAVATION IS UNCLASSIFIED.

14. ALL EXCAVATIONS AND BACKFILLING OF UTILITY TRENCHES SHALL BE AS PER CONTRACT SPECIFICATIONS NO. 02221 – EARTHWORK. ALL BACKFILL MUST BE IN COMPACTED 12 - INCH LIFTS MAXIMUM, AND NO WATER JETTING IS ALLOWED.

15. ALL CURBS ARE 6 INCH UNLESS OTHERWISE SPECIFIED.

16. SEE CIVIL DETAIL SHEETS FOR APPLICABLE DETAILS.

17. ALL CONSTRUCTION AREAS WITHIN THE SITE SHALL BE STRIPPED OF ALL VEGETATION AND LOOSE TOPSOIL. ANY POCKETS OF DEBRIS ENCOUNTERED SHOULD ALSO BE REMOVED.

18. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

19. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL SPECIFICATIONS AND CONTRACT INFORMATION.

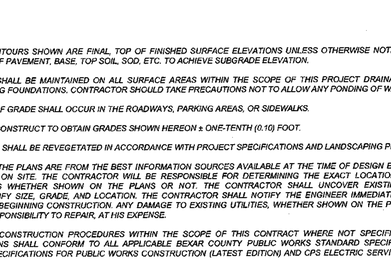
20. REFER TO GEOTECHNICAL REPORT FOR SUBSURFACE INFORMATION AND CONSTRUCTION GUIDELINES.

21. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 2% UNLESS OTHERWISE SHOWN.

22. TREE PROTECTION SHALL BE PERFORMED IN ACCORDANCE WITH LANDSCAPE PLANS AND SPECIFICATIONS.

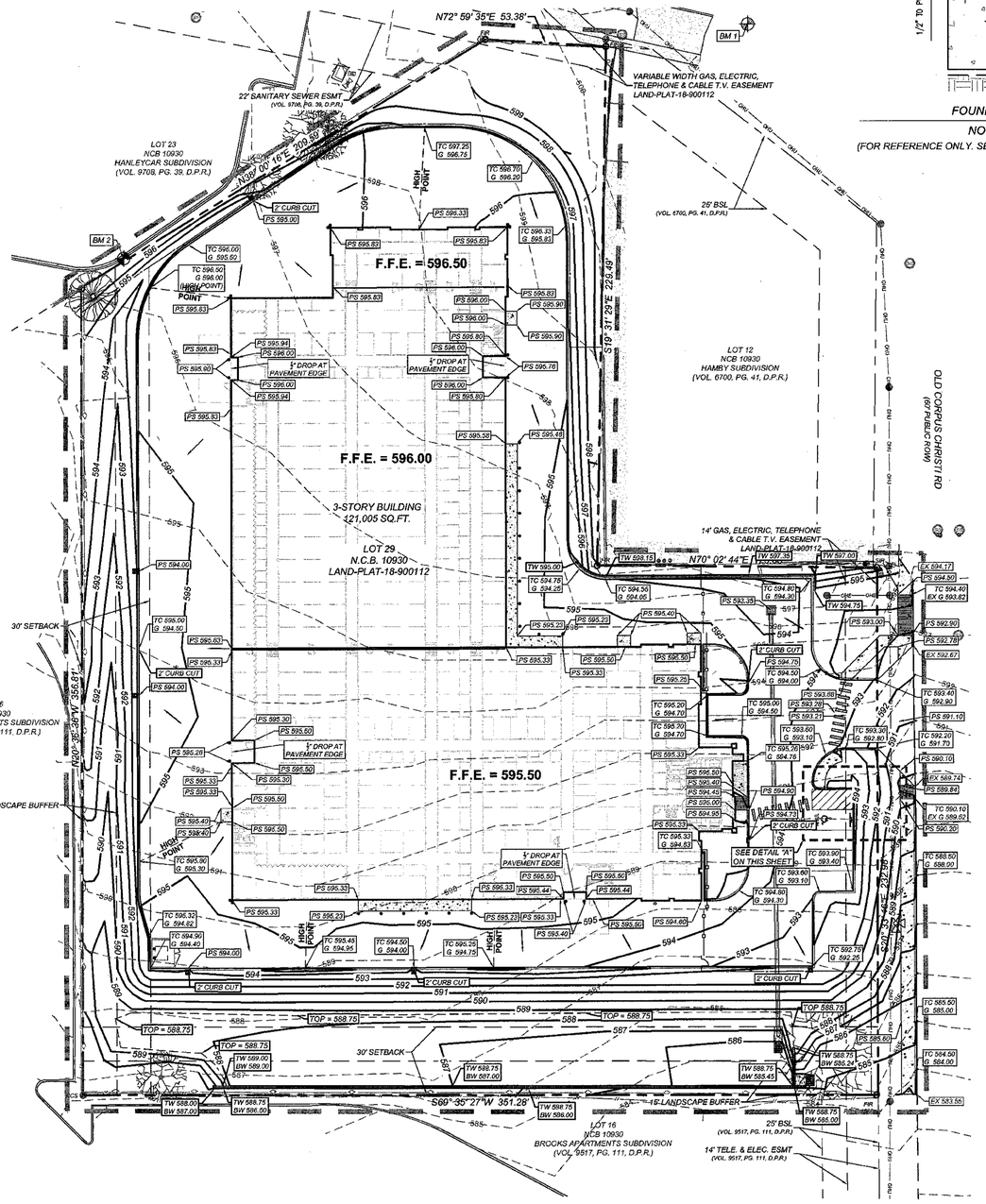
23. MAXIMUM SLOPE ON HANDICAP ACCESSIBLE PARKING SPACES IS 2% IN ANY DIRECTION. CROSS SLOPES ON SIDEWALKS AND FLATWORK AROUND BUILDINGS SHALL NOT EXCEED 2%. SLOPE ALONG THE LENGTH OF SIDEWALKS SHALL NOT EXCEED 5%.

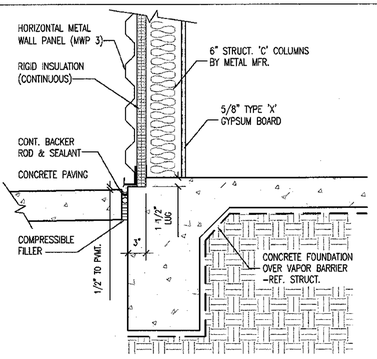
24. ADD 600 FT TO ALL TRUNCATED SPOT ELEVATIONS.



DETAIL "A"

SCALE: 1"= 10'

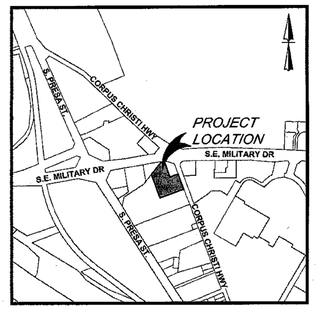




FOUNDATION DETAIL

NOT-TO-SCALE

(FOR REFERENCE ONLY. SEE STRUCTURAL PLANS FOR DETAILS.)



LOCATION MAP

N. T. S.

SCALE: 1"=30'

0' 30' 90'

60'

LEGEND

LIMITS OF CONSTRUCTION	
PROPERTY LINE	
ADJACENT PROPERTY LINE	
EXISTING EDGE OF PAVEMENT	
EXISTING CONCRETE	
EXISTING CURB	
EXISTING SANITARY SEWER MANHOLE	
SITE BENCHMARK SEE DESCRIPTION THIS SHEET	
EXISTING OVERHEAD ELECTRIC AND POWER POLE	
EXISTING FENCE	
EXISTING FIRE HYDRANT	
EXISTING WATER VALVE	
EXISTING CONTOURS	590
PROPOSED OVERHEAD ELECTRIC AND POWER POLE	
PROPOSED CURB	
PROPOSED RIBBON CURB	
PROPOSED FENCE	
PROPOSED SIDEWALK	
FLOW ARROW	
PROPOSED FINISH FLOOR ELEVATION	F.F.E. = XXX.XX
PROPOSED CONTOURS	590
PROPOSED DRAINAGE SWALE	
PROPOSED HIGH POINT	HIGH POINT
PROPOSED SPOT GRADE (TOP OF CURB AND GUTTER)	TC XX.XX G XX.XX
PROPOSED SPOT GRADE	PS XX.XX
EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL	

CONTACT TERESA SEIDEL, RPLS WITH KFW SURVEYING AT (210) 979-8444 FOR CONSTRUCTION STAKING SERVICES ON THIS PROJECT.

KFW ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 8513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

GRADING PLAN

SHEET NO.

C6.0

Date: Feb 28, 2019, 4:32pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C6.0 (GRADING PLAN 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13066, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

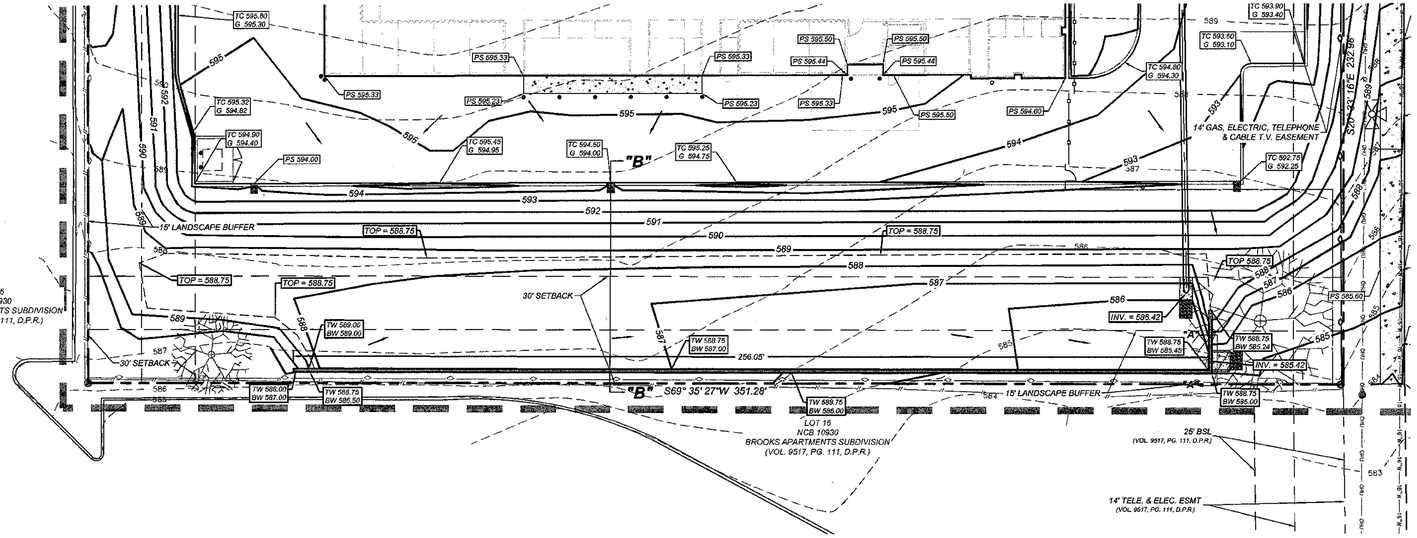
BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

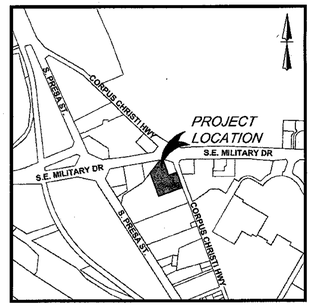
COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.
2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.
5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

NOTE:
BASIN WALLS HAVE NOT BEEN STRUCTURALLY DESIGNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL DESIGN OF ALL BASIN WALLS WITHIN THIS PROJECT. THE WALL DESIGNS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND SUBMITTED AS A SHOP DRAWING.

GRADING NOTES:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL OR BETTER CONDITION ANY DAMAGES DONE TO EXISTING BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, SIDEWALKS, OR DRIVEWAYS (NO SEPARATE PAY ITEM).



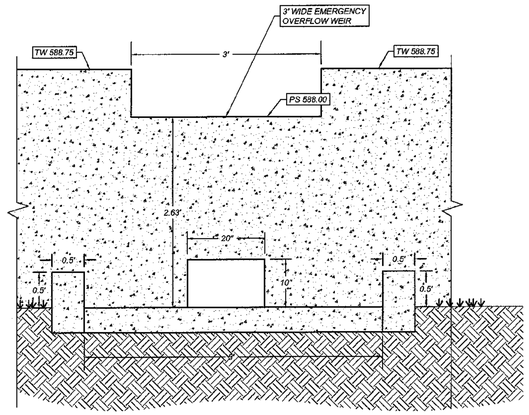


LOCATION MAP
N. T. S.

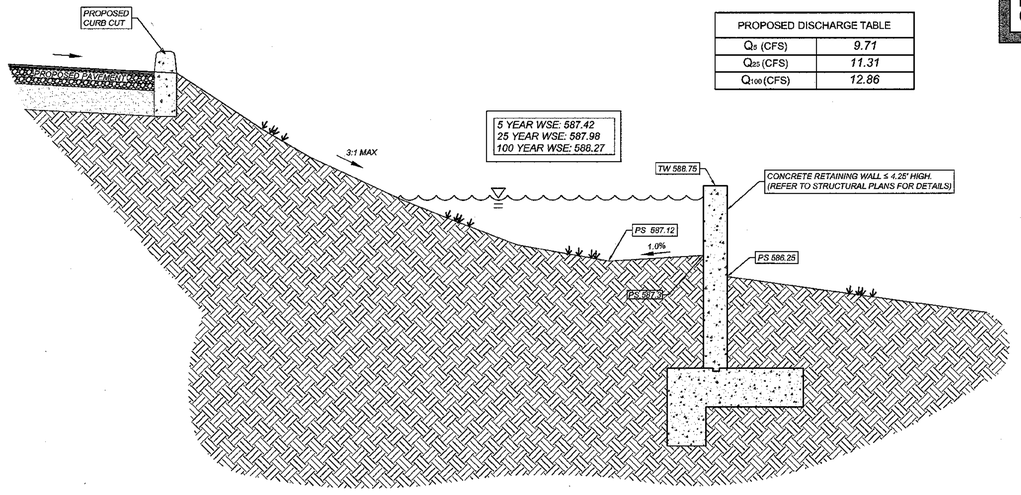
SCALE : 1"=20'
0' 20' 60'
40'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING OVERHEAD UTILITY AND POWER POLE
- EXISTING FENCE
- EXISTING CONTOURS (585)
- SITE BENCHMARK SEE DESCRIPTION THIS SHEET
- PROPOSED SIDEWALK
- PROPOSED CURB
- FLOW ARROW
- PROPOSED CONTOURS (585)
- PROPOSED STORM DRAIN PIPE
- EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL
- PROPOSED SPOT GRADE (TOP OF POND) (TOP XX.XX)



CROSS SECTION "A-A"
N.T.S.



PROPOSED DISCHARGE TABLE	
Q_5 (CFS)	9.71
Q_{25} (CFS)	11.31
Q_{100} (CFS)	12.86

CROSS SECTION "B-B"
N.T.S.

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200 • San Antonio, TX 78231
Phone # (210) 979-8444 • Fax # (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

DETENTION POND PLAN

SHEET NO.

C6.1

Date: Feb 28, 2019, 4:32pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C6.1 (DETENTION POND 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13086, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 63' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.

2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.

3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.

4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.

5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.

6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

NOTES:

1. REFERENCE GEOTECH REPORT FOR INFORMATION REGARDING MOISTURE CONDITIONED SUBGRADE.

2. THIS DRAWING REFLECTS THE GENERAL PLACEMENT OF CONCRETE AND ASPHALT. SEE SHEET C4.0 FOR DIMENSIONS AND CURVE DATA DETAIL.

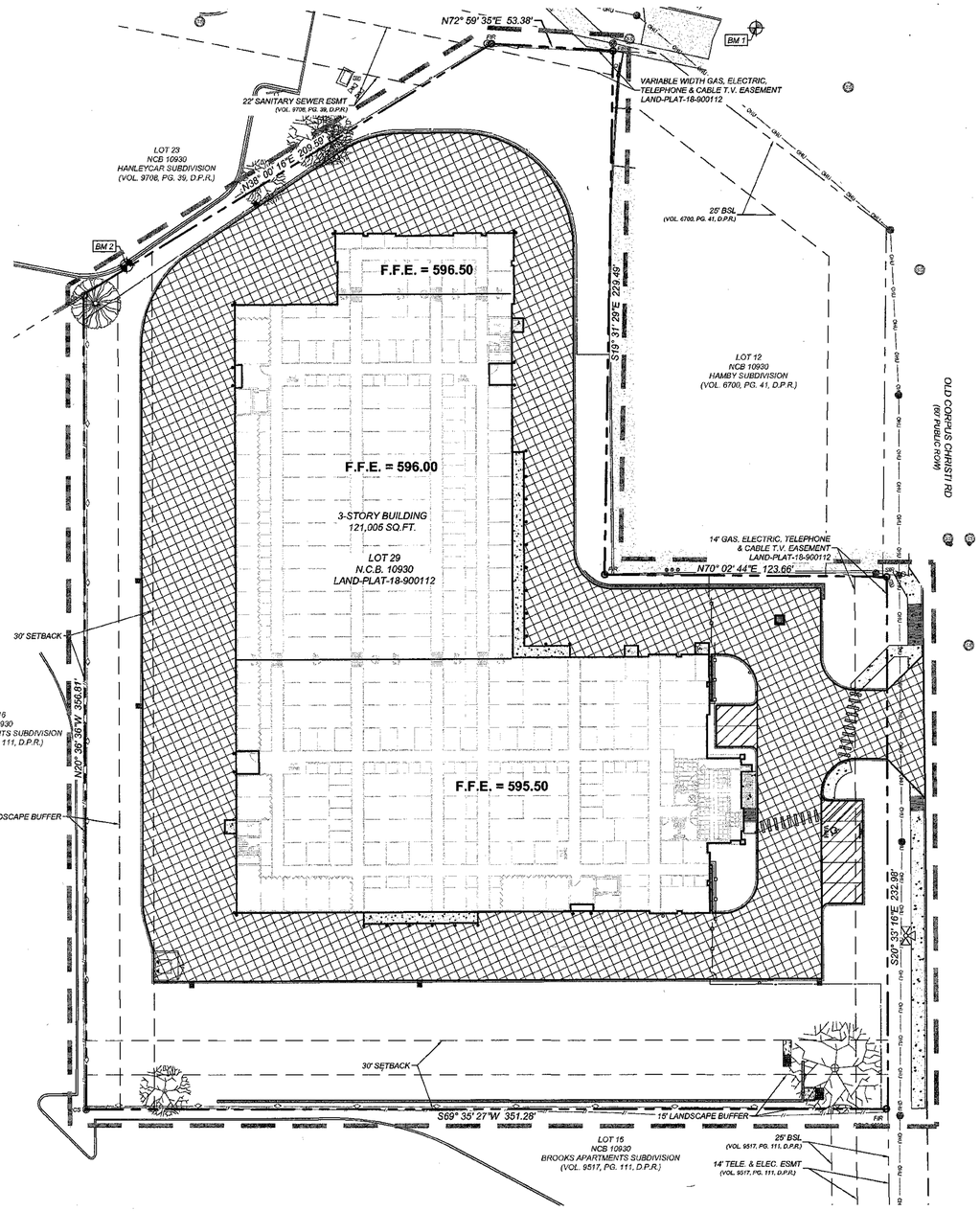
3. REFERENCE GEOTECH REPORT FOR DOWEL AND PAVEMENT JOINT SPECIFICATIONS.

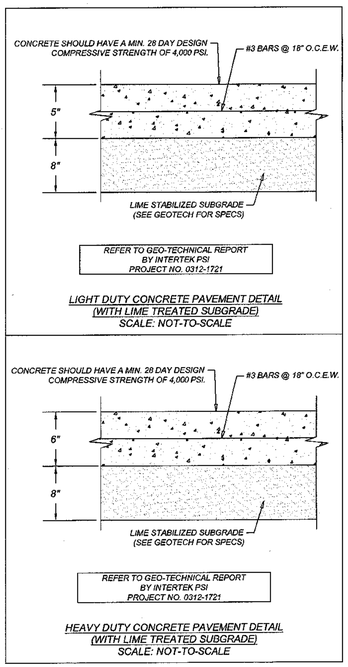
4. REFERENCE GEOTECH REPORT FOR ALL PAVEMENT RECOMMENDATIONS.

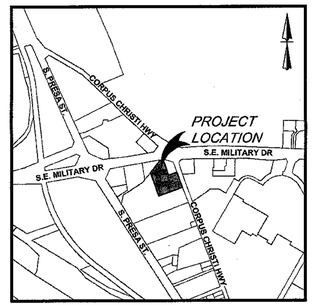
TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION.THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.







LOCATION MAP
N. T. S.

SCALE : 1"=30'

0' 30' 90'

60'

LEGEND

- LIMITS OF CONSTRUCTION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE
- EXISTING CURB
- EXISTING SANITARY SEWER MANHOLE
- SITE BENCHMARK SEE DESCRIPTION THIS SHEET
- EXISTING OVERHEAD ELECTRIC AND POWER POLE
- EXISTING FENCE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- PROPOSED CURB
- PROPOSED RIBBON CURB
- PROPOSED FENCE
- PROPOSED SIDEWALK
- LIGHT CONCRETE PAVEMENT REFERENCE GEOTECH REPORT (FOR SUBGRADE PREP, REINFORCEMENT OPTIONS, PAVEMENT JOINTS, AND CONSTRUCTION SPECIFICATIONS.
- HEAVY CONCRETE PAVEMENT REFERENCE GEOTECH REPORT (FOR SUBGRADE PREP, REINFORCEMENT OPTIONS, PAVEMENT JOINTS, AND CONSTRUCTION SPECIFICATIONS.
- EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL

KFW ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED
PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

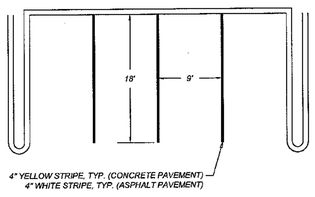
REVISIONS:

PAVING PLAN

SHEET NO.

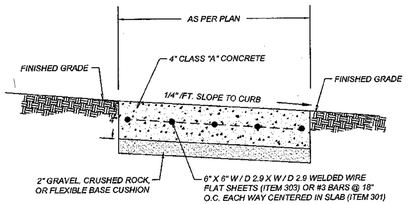
C7.0

Date: Feb 28, 2019, 4:32pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C7.0 (PAVING PLAN 3330901).dwg



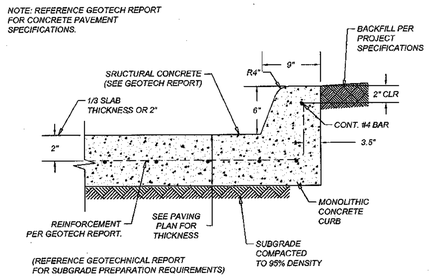
TYPICAL PARKING SPACES AND PARKING STRIPES

1. NOT-TO-SCALE



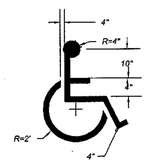
TYPICAL SIDEWALK DETAIL

2. NOT-TO-SCALE



MONOLITHIC 6" CURB DETAIL

3. NOT-TO-SCALE

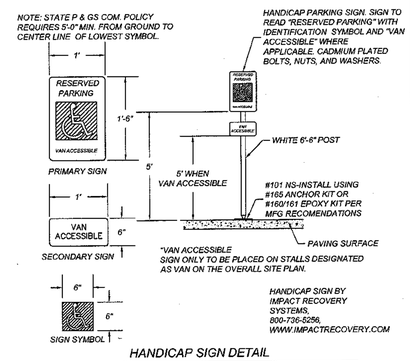


NOTE:

SYMBOL SHALL BE PAINTED IN CENTER OF PARKING STALL WITH 4" YELLOW STRIPE, TYP. (CONCRETE PAVEMENT) OR 4" WHITE STRIPE, TYP. (ASPHALT PAVEMENT)

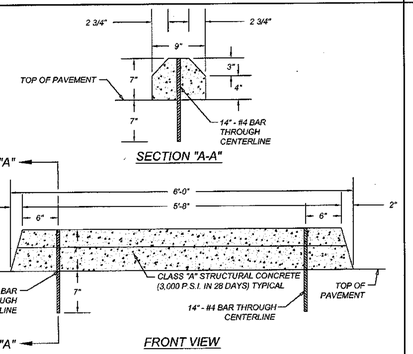
HANDICAP PARKING SYMBOL DETAIL

4. NOT-TO-SCALE



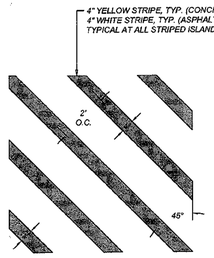
HANDICAP SIGN DETAIL

5. NOT-TO-SCALE



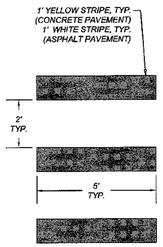
WHEELSTOP DETAIL

6. NOT-TO-SCALE



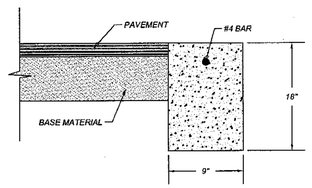
CROSS HATCH STRIPING DETAIL

7. NOT-TO-SCALE



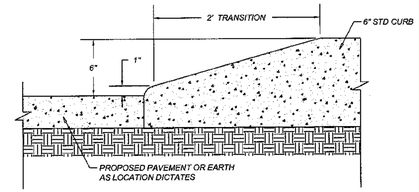
CROSSWALK DETAIL

8. NOT-TO-SCALE



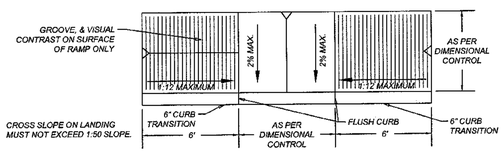
RIBBON CURB DETAIL

9. NOT-TO-SCALE



2' CURB TRANSITION DETAIL

10. NOT-TO-SCALE

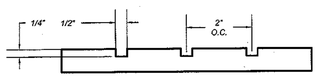


GROOVE CURB RAMP DETAIL

11 NOT-TO-SCALE

CURB RAMP NOTES:

1. CURB RAMP TO COMPLY WITH ALL ADA/TAS CODES.
2. ALL CURB RAMP SURFACES SHALL BE BROOM FINISHED.
3. FULL WIDTH AND DEPTH OF RAMP SHALL HAVE A LIGHT VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES. TEXTURE AND COLOR CONTRAST SHOULD EXTEND ONLY ACROSS THE SURFACE OF THE RAMP AND NOT EXTEND INTO THE FLARES.
4. PROVIDE DRY SHAKE, TERRA COTE COLOR, CONCRETE FOR CONTRASTING COLOR AND SEE SECTION BELOW FOR ACCEPTABLE TEXTURE (VERIFY COLOR WITH OWNER).
5. A 4" MAXIMUM BORDER IS ALLOWABLE BETWEEN THE GROOVES AND THE EDGES OF THE CURB RAMP SURFACE.

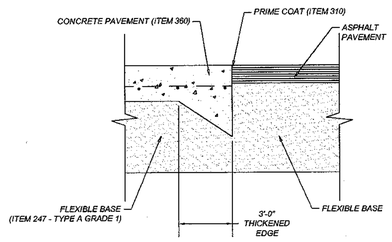


(DRAINAGE GROOVES ARE 1/4" WIDE AND 1/4" DEEP WHERE INDICATED ON CURB RAMP DETAILS).

RAMP SURFACE TO BE STAINED TO PROVIDE VISUAL CONTRAST PER TAS.

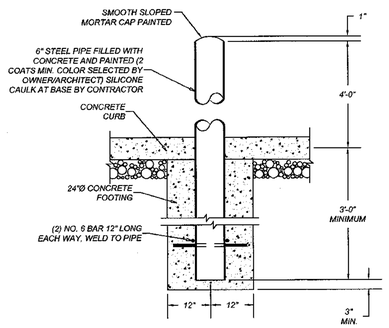
TYPICAL TEXTURE GROOVES & SPACING DETAIL

NOT-TO-SCALE



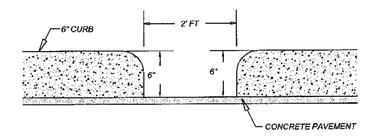
CONCRETE / ASPHALT PAVEMENT JUNCTURE

12. NOT-TO-SCALE



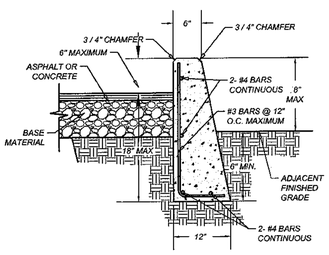
BOLLARD DETAIL

13. NOT-TO-SCALE



2' CURB OPENING

14. NOT-TO-SCALE



EXTENDED CURB DETAIL

17. NOT-TO-SCALE

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

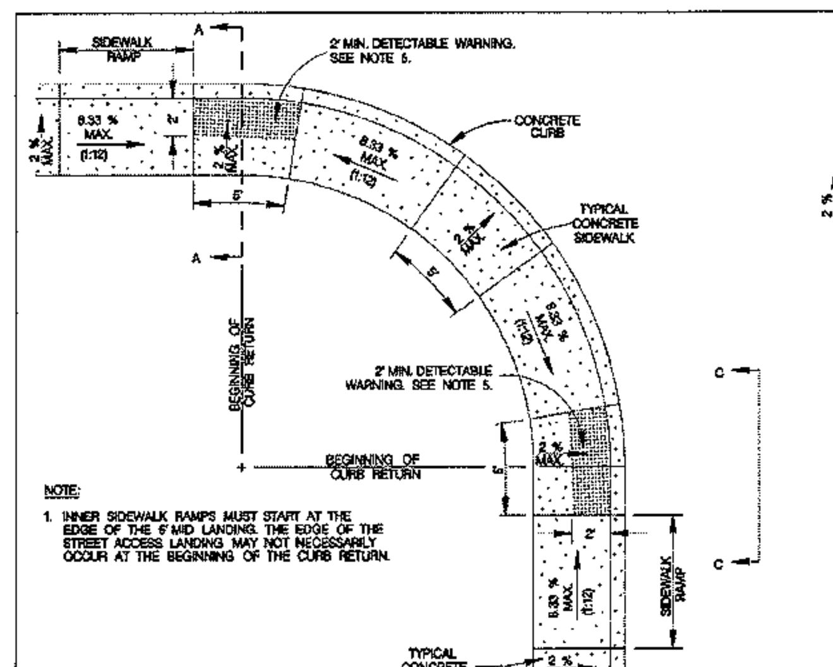
REVISIONS:

CIVIL DETAIL SHEET

SHEET NO.

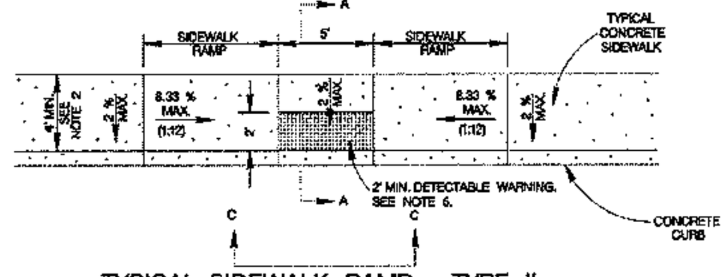
C8.0

Date: Feb 28, 2019, 4:32pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C8.0 (CIVIL DETAIL SHEET 3330901).dwg

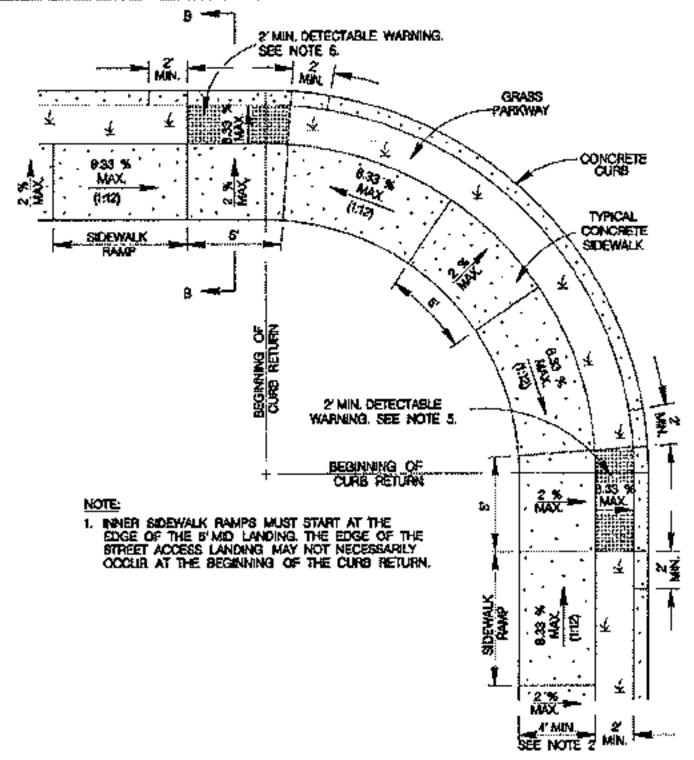


TYPICAL SIDEWALK RAMP – TYPE I
SIDEWALK ABUTS THE CURB
SCALE : 1"=10'

NOTE:
1. INNER SIDEWALK RAMPS MUST START AT THE EDGE OF THE 6' MID LANDING. THE EDGE OF THE STREET ACCESS LANDING MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.

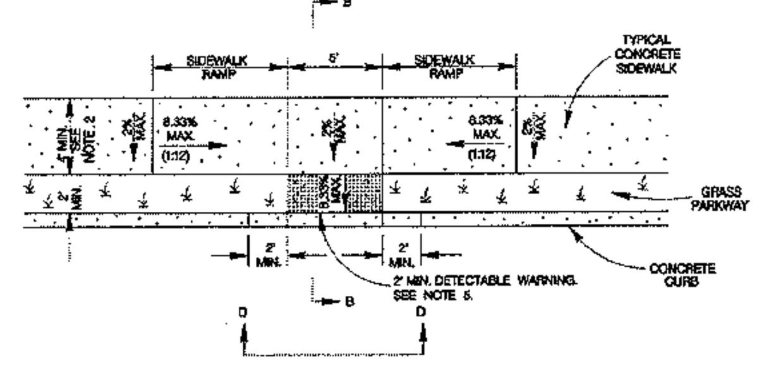


TYPICAL SIDEWALK RAMP – TYPE II
USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB
SCALE : 1"=10'

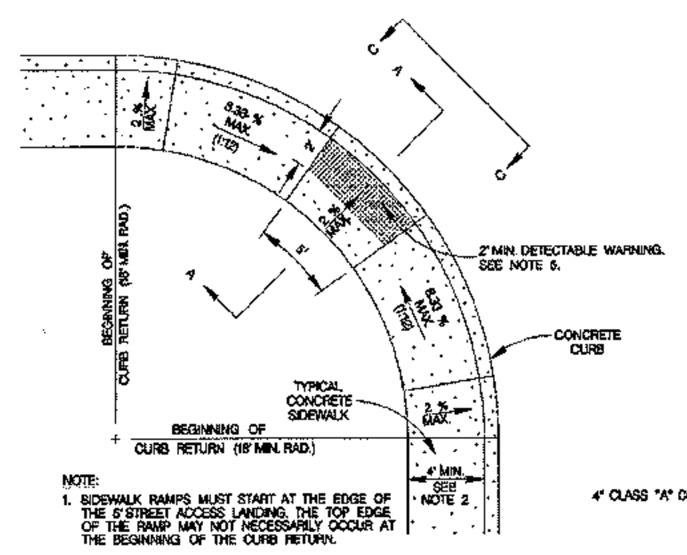


TYPICAL SIDEWALK RAMP – TYPE III
SIDEWALK SEPARATED FROM CURB
SCALE : 1"=10'

NOTE:
1. INNER SIDEWALK RAMPS MUST START AT THE EDGE OF THE 6' MID LANDING. THE EDGE OF THE STREET ACCESS LANDING MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.

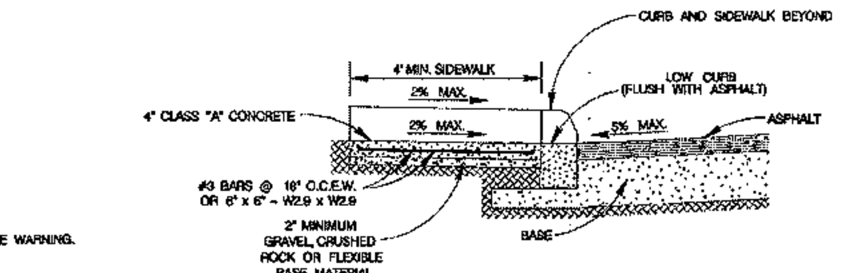


TYPICAL SIDEWALK RAMP – TYPE IV
USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=10'

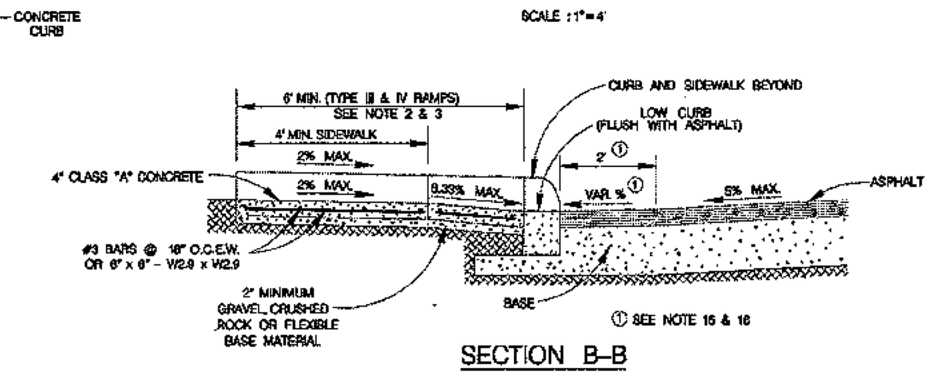


TYPICAL SIDEWALK RAMP – TYPE V
SIDEWALK ABUTS CURB
SCALE : 1"=10'

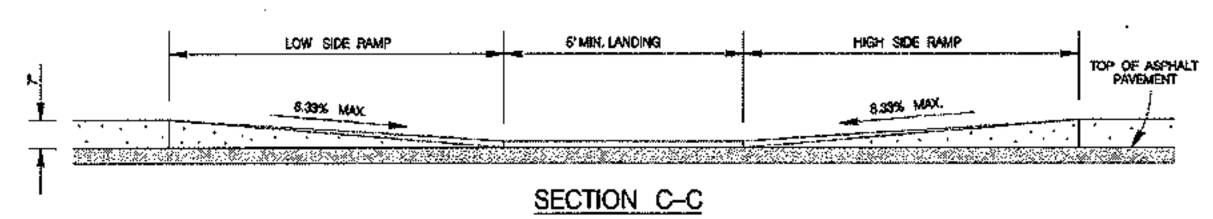
NOTE:
1. SIDEWALK RAMPS MUST START AT THE EDGE OF THE 5' STREET ACCESS LANDING. THE TOP EDGE OF THE RAMP MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.
2. TYPE V RAMPS MUST HAVE 18' MIN. RADIUS.



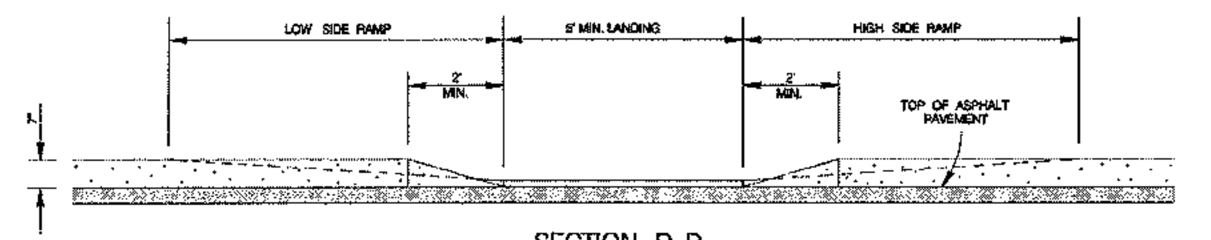
SECTION A–A
SCALE : 1"=4'



SECTION B–B
SCALE : 1"=4'



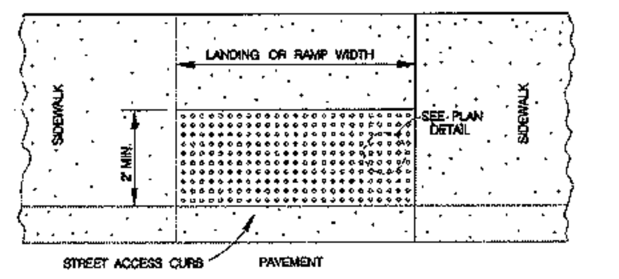
SECTION C–C
CURB PROFILE WHERE SIDEWALK ABUTS CURB
SCALE : 1"=4'



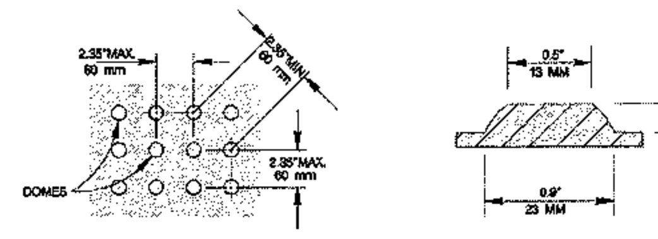
SECTION D–D
CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=4'

GENERAL NOTES

1. WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.
5. ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES, ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM), A HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL BE A CAST-IN-PLACE TILE CONFORMING TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS OR PAVERS CONFORMING TO TXDOT STANDARD PED-05, PEDESTRIAN FACILITIES.
6. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
8. CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEMS "500 – CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER" AND /OR "502 – CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.
9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" – W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33–(-2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.

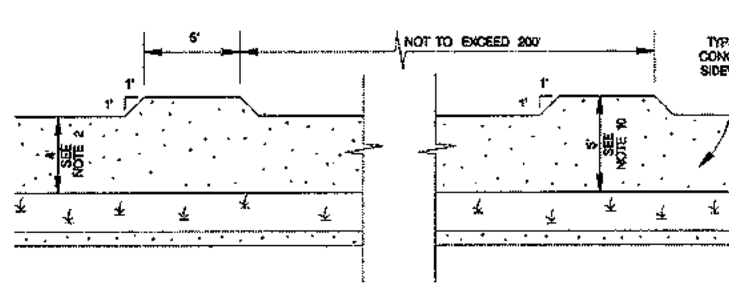


DETECTABLE WARNING SURFACE
SCALE : 1"=4'



PLAN DETAIL
NO SCALE

DOME SECTION
NO SCALE



SIDEWALK PASSING SPACE
SCALE : 1"=10'

TABLE 1 (SEE NOTE 4)		
GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12)	
	LOW SIDE	HIGH SIDE
1%	5'-6"	7'-2"
2%	5'-0"	8'-4"
3%	4'-6"	10'-0"
4%	4'-2"	12'-6"
5%	3'-10"	16'-8"

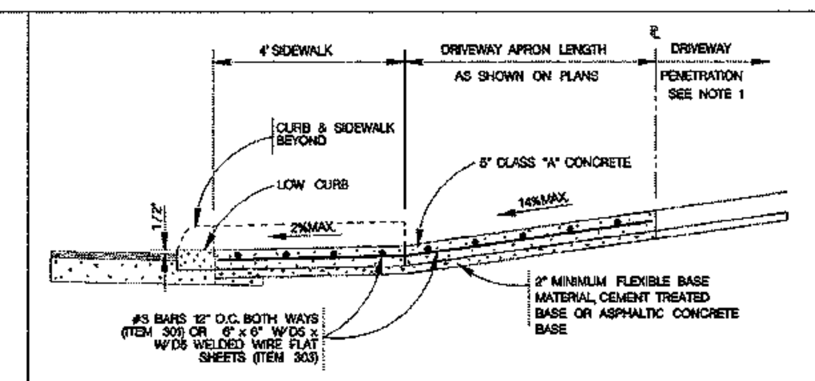
NOTE:
STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.

MAY 2009

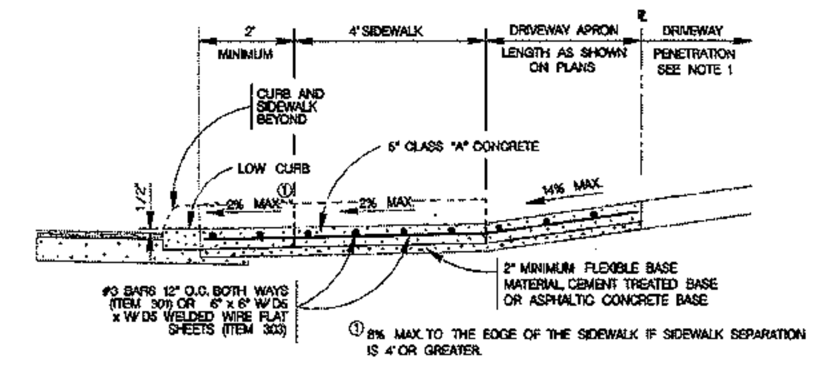
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

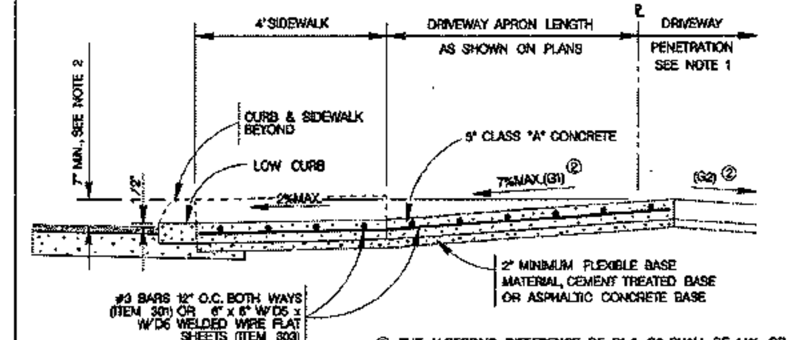
___% SUBMITTAL | PROJECT NO.:___ | DATE:___
DRWN. BY: V. VASQUEZ | DSGN. BY:___ | CHKD. BY: R.S. HOSSEINI, P.E. | SHEET NO.:___ OF___



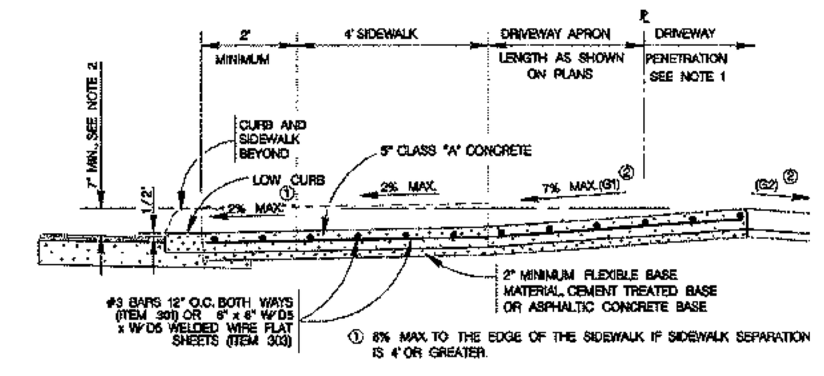
TYPICAL RESIDENTIAL DRIVEWAY SECTION
WITH SIDEWALK ABUTTING CURB
ITEM 503.1



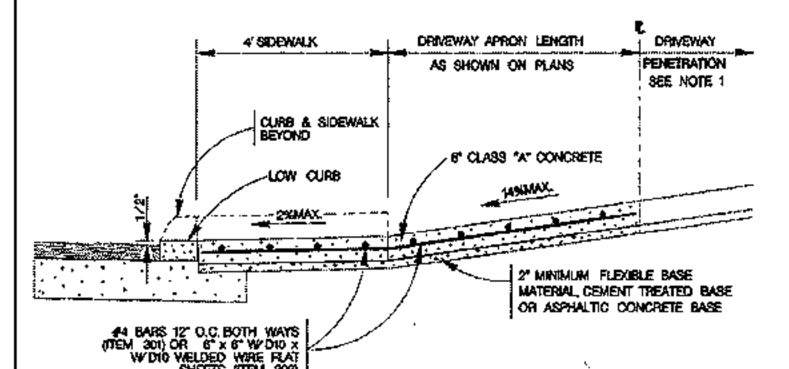
TYPICAL RESIDENTIAL DRIVEWAY SECTION
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1



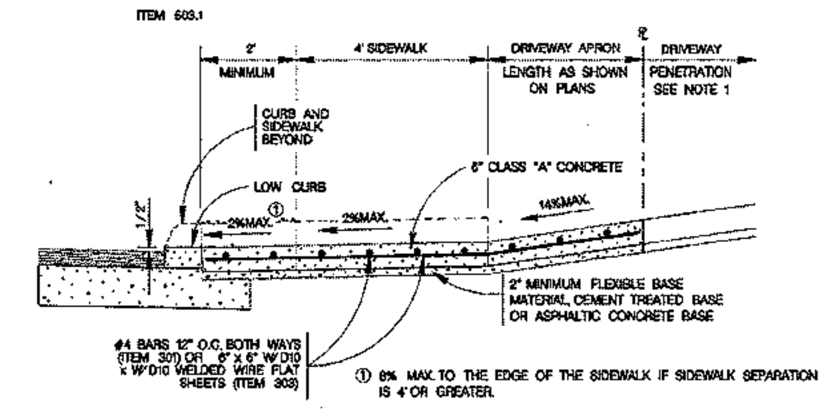
TYPICAL RESIDENTIAL DRIVEWAY SECTION
WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
ITEM 503.1



TYPICAL RESIDENTIAL DRIVEWAY SECTION
WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB
ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION
WITH SIDEWALK ABUTTING CURB
ITEM 503.2



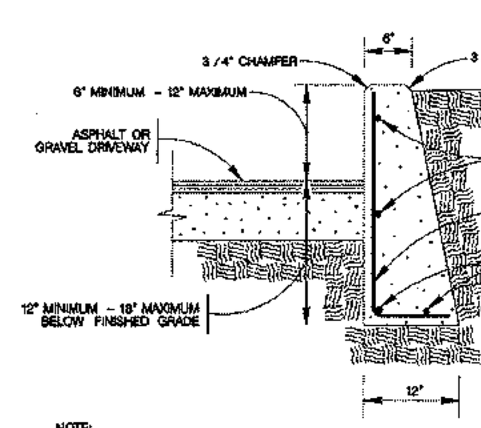
TYPICAL COMMERCIAL DRIVEWAY SECTION
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2

CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
   A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2
   B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE "D" & 6" FLEXIBLE BASE
   C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
2. 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

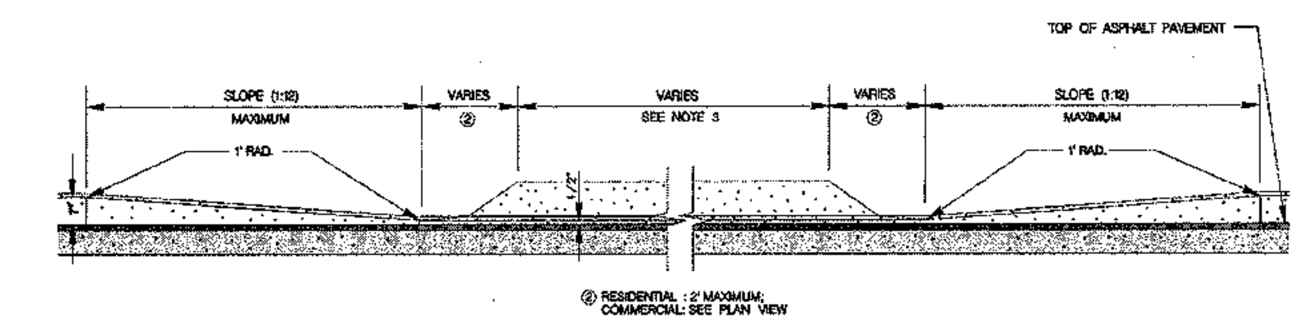
TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL – ONE WAY	12'	20'
COMMERCIAL – TWO WAY	24'	30'

4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
5. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
6. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.

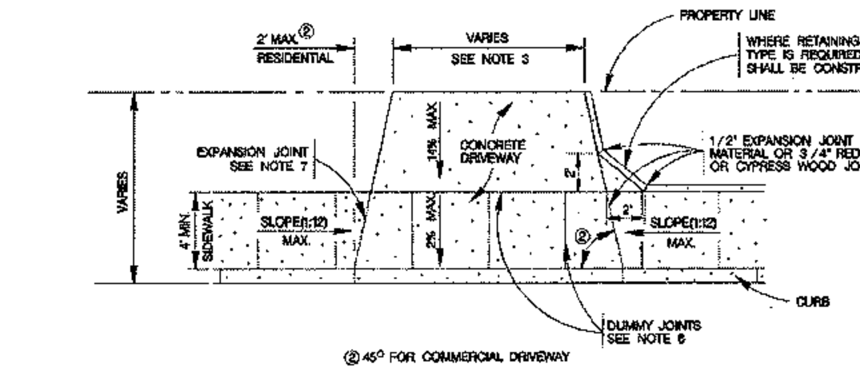


NOTE:
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

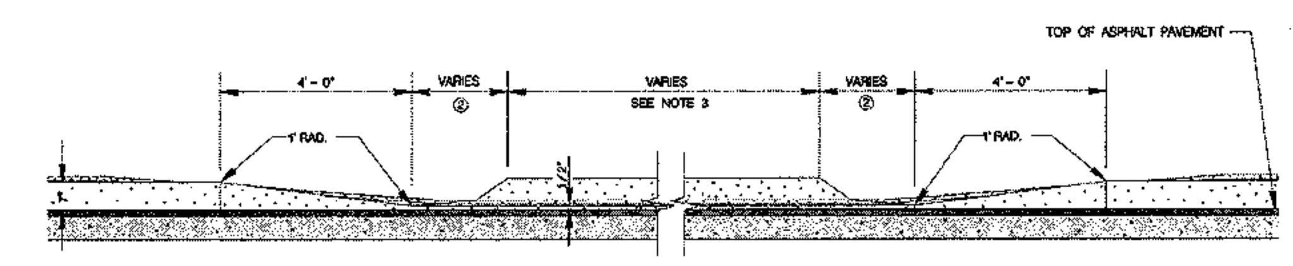
DRIVEWAY – CONCRETE RETAINING WALL
ON COMPACTED SUBGRADE
ITEM 307.1



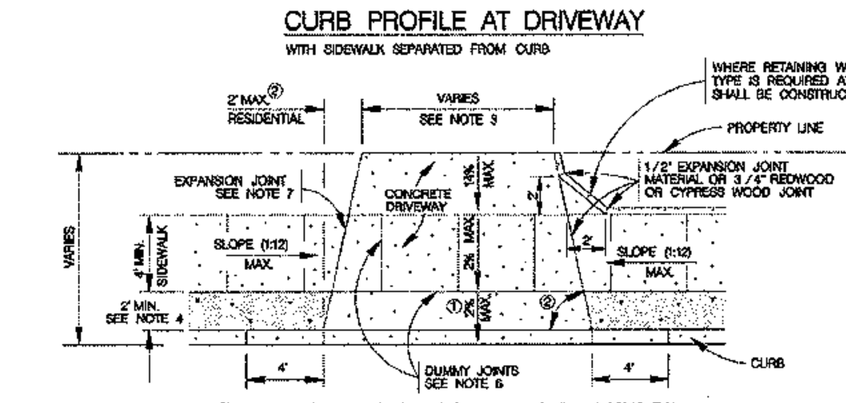
CURB PROFILE AT DRIVEWAY
WITH SIDEWALK ABUTTING CURB



TYPICAL DRIVEWAY PLAN VIEW
WITH SIDEWALK ABUTTING CURB



CURB PROFILE AT DRIVEWAY
WITH SIDEWALK SEPARATED FROM CURB



① 6% MAX. TO THE EDGE OF THE SIDEWALK IF SIDEWALK SEPARATION IS 4' OR GREATER.
② 45° FOR COMMERCIAL DRIVEWAY

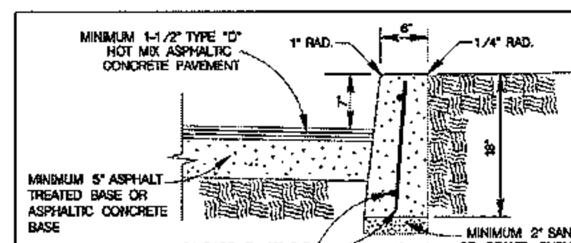
TYPICAL DRIVEWAY PLAN VIEW
WITH SIDEWALK SEPARATED FROM CURB

MAY 2009

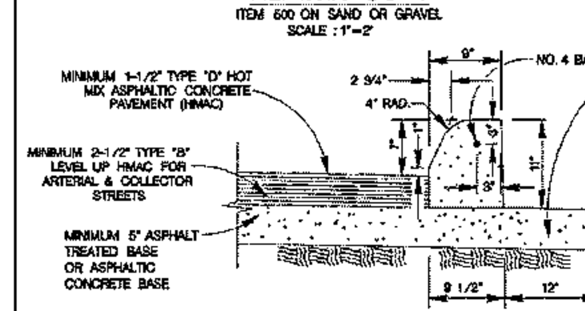
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

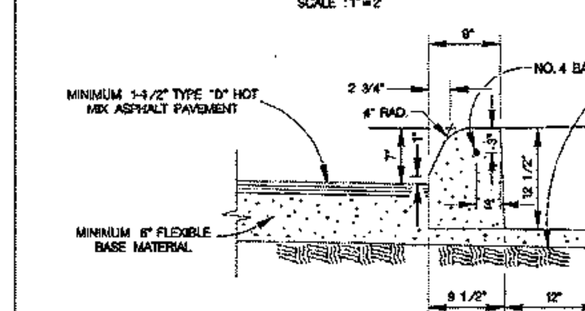
___% SUBMITTAL | PROJECT NO.:___ | DATE:___
DRWN. BY: V. VASQUEZ | DSGN. BY:___ | CHKD. BY: R.S. HOSSEINI, P.E. | SHEET NO.:___ OF___



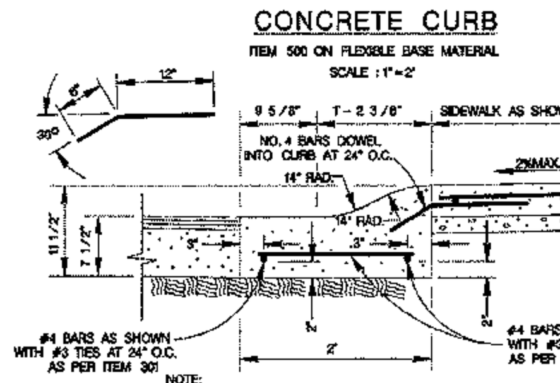
HEADER CURB
ITEM 500 ON SAND OR GRAVEL
SCALE : 1"=2'



CONCRETE CURB
ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
SCALE : 1"=2'

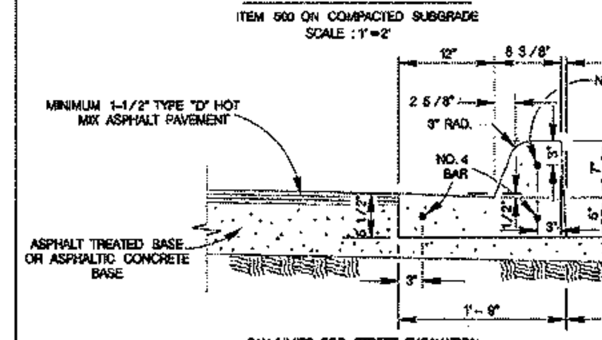


CONCRETE CURB
ITEM 500 ON FLEXIBLE BASE MATERIAL
SCALE : 1"=2'

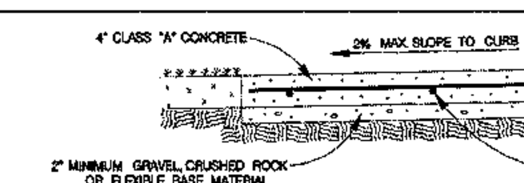


NOTE:
CURB TRANSITIONS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN ITEM 500 CONCRETE CURBING

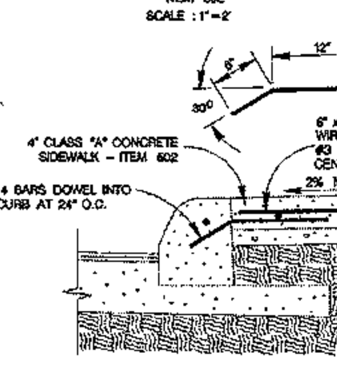
MOUNTABLE CURB
ITEM 500 ON COMPACTED SUBGRADE
SCALE : 1"=2'



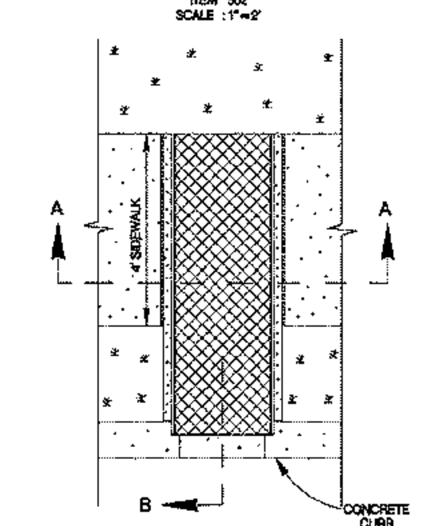
TYPICAL CURB & GUTTER DETAIL
ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
SCALE : 1"=2'



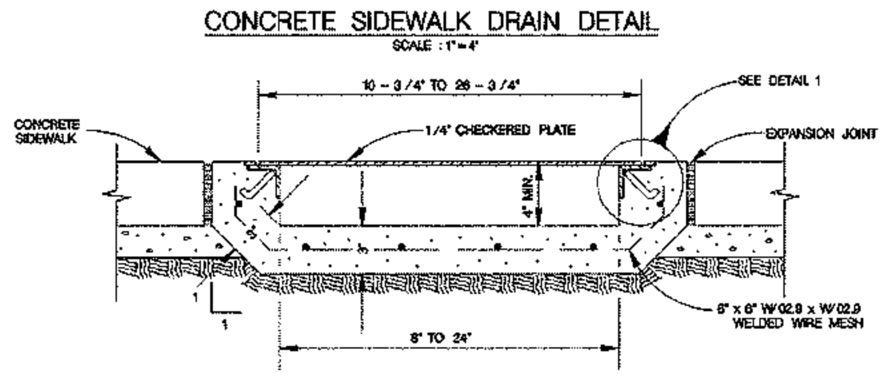
CONCRETE SIDEWALK SECTION
ITEM 502
SCALE : 1"=2'



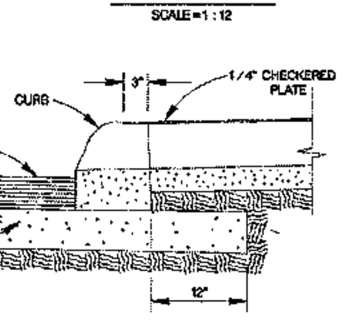
CONCRETE SIDEWALK ABUTTING CURB SECTION
ITEM 502
SCALE : 1"=2'



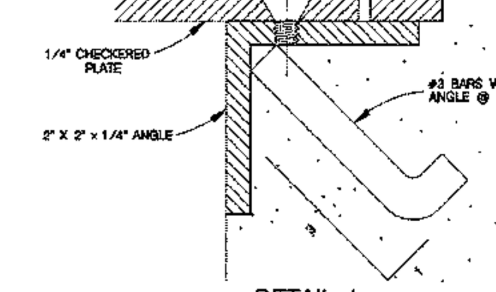
CONCRETE SIDEWALK DRAIN DETAIL
SCALE : 1"=4'



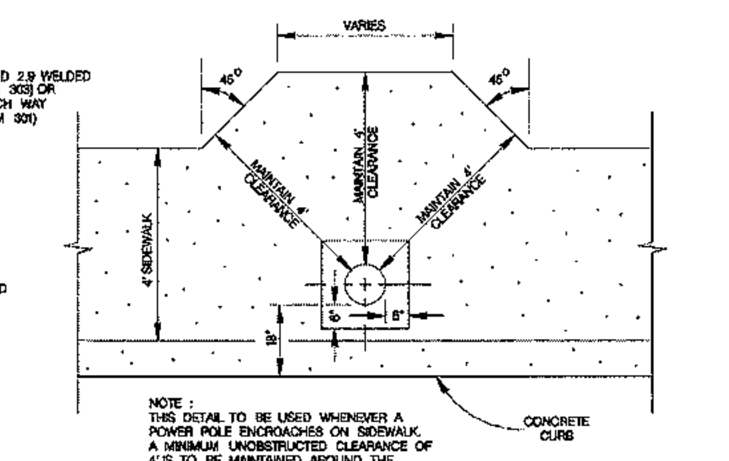
SECTION A–A
SCALE=1 : 12



SECTION B
SCALE : 1"=2'

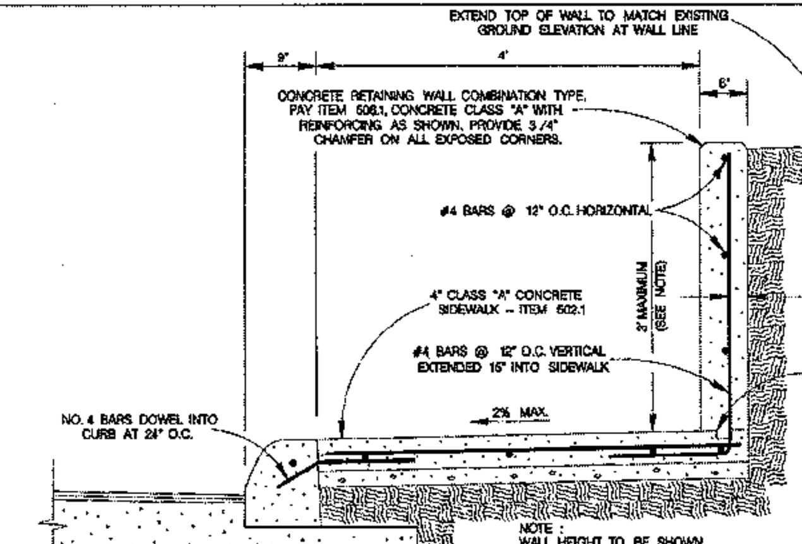


DETAIL 1
SCALE=1 : 1



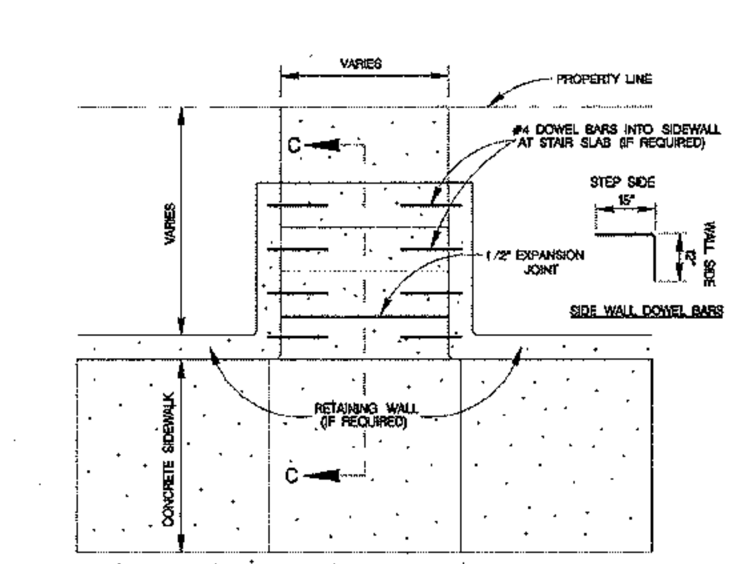
NOTE :
THIS DETAIL TO BE USED WHENEVER A POWER POLE ENCROACHES ON SIDEWALK. A MINIMUM UNOBSTRUCTED CLEARANCE OF 4' IS TO BE MAINTAINED AROUND THE POLE AT THE LOCATIONS.

CONCRETE SIDEWALK @ UTILITY POWER POLE DETAIL
SCALE : 1"=4'



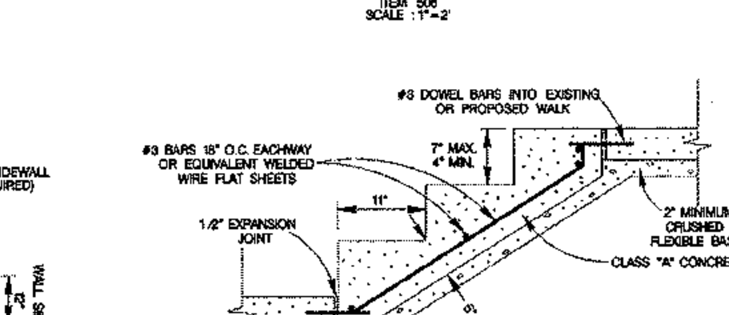
NOTE :
WALL HEIGHT TO BE SHOWN ON PLAN AT SPECIAL LOCATIONS WHERE COMBINATION RETAINING WALL IS REQUIRED

CONCRETE RETAINING WALL – COMBINATION TYPE
ITEM 506
SCALE : 1"=2'

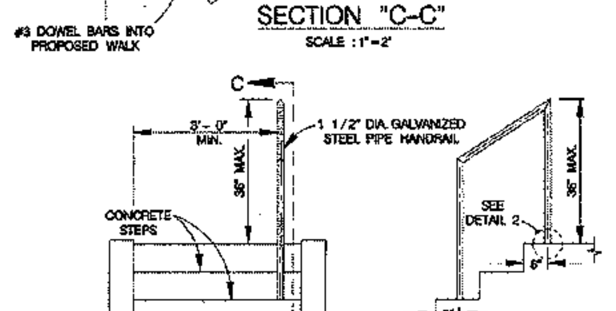


PLAN VIEW
SCALE : 1"=4'

CONCRETE STEPS
ITEM 524

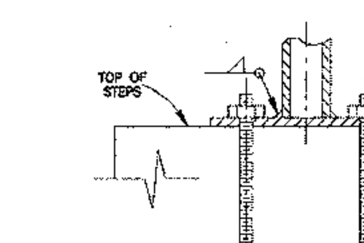


SECTION "C–C"
SCALE : 1"=2'



PIPE HANDRAIL DETAIL
PROFILE VIEW
SCALE : 1"=4'

SECTION "D–D"
FRONT VIEW
SCALE : 1"=4'



DETAIL 2
SCALE = 1 : 8

NOTES :
1. PLACE STEPS TO CONFORM WITH PROPOSED PARKWAY GRADING
2. 1-1/2" DIA. GALVANIZED STEEL PIPE HANDRAIL REQUIRED ON ONE SIDE OF THE STEPS WHEN 3 OR MORE RISERS ARE USED, OR AS DESIGNED BY ENGINEER. TO BE PAID UNDER ITEM 522

HANDRAIL FOR CONCRETE STEPS
ITEM 522

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

MISCELLANEOUS
CONSTRUCTION STANDARDS I

___% SUBMITTAL | PROJECT NO.:___ | DATE:___
DRWN. BY: V. VASQUEZ | DSGN. BY:___ | CHKD. BY: R.S. HOSSEINI, P.E. | SHEET NO.:___ OF___

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED
PROFESSIONAL ENGINEER

[illegible] 2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

COSA DETAILS

SHEET NO.

C8.1

Date: Feb 28, 2019, 4:32pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C8.1 (COSA DETAIL 3330901).dwg

LEGAL DESCRIPTION

BEING A TOTAL OF 2.887 ACRE TRACT OF LAND DESCRIBED IN VOLUME 13066, PAGE 1436 O.P.R. SITUATED IN THE WILLIAM SMALL SURVEY NO. 26, A-670, N.C.B. 10930 CITY OF SAN ANTONIO, BEXAR COUNTY, TEXAS, ESTABLISHING LOT 29, BLOCK 10930.

BENCHMARKS

BM1: SET PK NAIL IN CURB APPROXIMATELY 53' NORTH EAST OF THE NORTH CORNER OF SUBJECT TRACT AT ELEVATION = 601.10 SET BY KFW SURVEYING.

BM2: SET PK NAIL IN CONCRETE CURB APPROXIMATELY 23' NORTH EAST OF THE WEST CORNER OF SUBJECT TRACT AT ELEVATION = 596.31 SET BY KFW SURVEYING.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210)-244-0500.

2. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS (CITY PUBLIC SERVICE) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (210)-353-2256.

3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.

4. CONTRACTOR TO COORDINATE WITH CPS (CITY PUBLIC SERVICE) TO PLAN GAS SERVICES. (210)-353-2256.

5. CONTRACTOR TO COORDINATE WITH SAWS (SAN ANTONIO WATER SYSTEM) TO PLAN SANITARY SEWER AND WATER SERVICES. (210)-704-7297.

6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT. IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

GENERAL NOTES:

1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.

2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORM WATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.

3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A CONSTRUCTION SITE NOTICE (CSN) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.

2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.

3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREA. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREA DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE, AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN IN THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE AREA ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

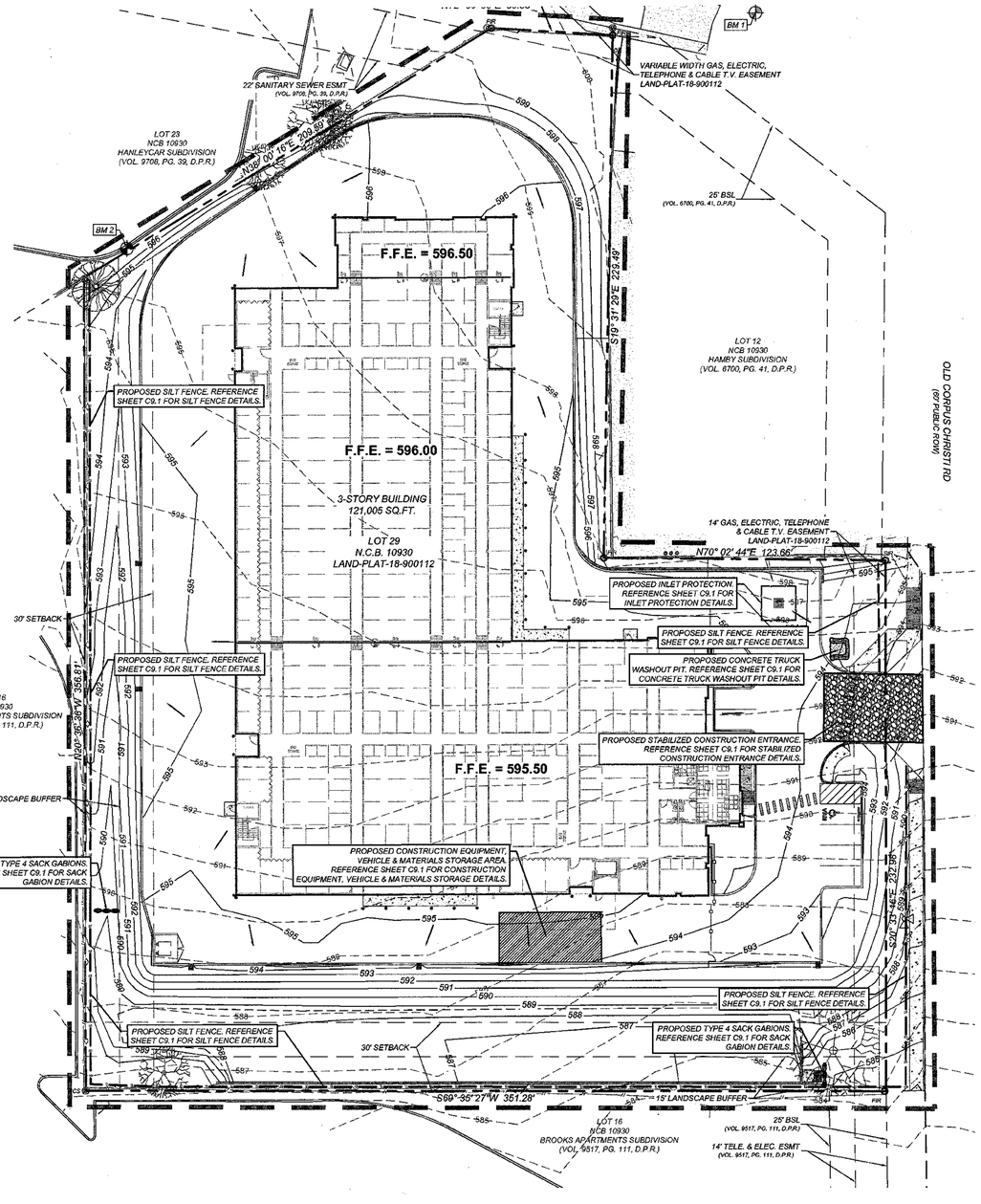
PROJECT COMPLETION:

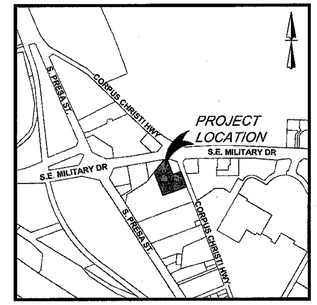
1. ALL DISTURBED AREAS THAT ARE NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).

2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREA HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

SW3P MODIFICATIONS		
DATE	SIGNATURE	DESCRIPTION





LOCATION MAP
N. T. S.

SCALE : 1"=30'
0' 30' 90'
60'

LEGEND

LIMITS OF CONSTRUCTION	
PROPERTY LINE	
ADJACENT PROPERTY LINE	
EXISTING EDGE OF PAVEMENT	
EXISTING CONCRETE	
EXISTING CURB	
EXISTING SANITARY SEWER MANHOLE	
SITE BENCHMARK SEE DESCRIPTION THIS SHEET	
EXISTING OVERHEAD ELECTRIC AND POWER POLE	
EXISTING FENCE	
EXISTING FIRE HYDRANT	
EXISTING WATER VALVE	
EXISTING CONTOURS	595
PROPOSED OVERHEAD ELECTRIC AND POWER POLE	
PROPOSED CURB	
PROPOSED RIBBON CURB	
PROPOSED FENCE	
PROPOSED SIDEWALK	
FLOW ARROW	
PROPOSED FINISH FLOOR ELEVATION	F.F.E. = XXX.XX
PROPOSED CONTOURS	590
PROPOSED DRAINAGE SWALE	
PROPOSED HIGH POINT	HIGH POINT
PROPOSED INLET PROTECTION	
PROPOSED SILT FENCE	
PROPOSED SACK GABIONS	
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	
PROPOSED CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA.	
PROPOSED CONCRETE TRUCK WASHOUT PIT	
EXISTING TREE, REFERENCE LANDSCAPE PLANS FOR TREE PRESERVATION AND TREE REMOVAL	

KFW
ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

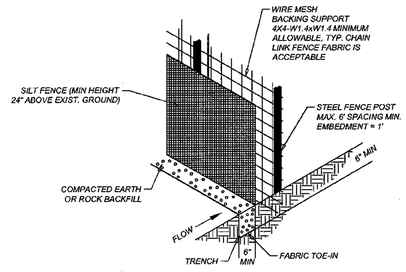
EROSION CONTROL PLAN

SHEET NO.

C9.0

Date: Feb 28, 2019, 4:33pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C9.0 (EROSION CONTROL PLAN 3330901).dwg

SILT FENCE



ISOMETRIC PLAN VIEW

MATERIALS:
(1) SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.

(2) FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL AT LEAST 4 FEET LONG WITH TEE OR YBAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FL2, AND BRINDELL HARDNESS EXCEEDING 140.

(3) WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION:
(1) STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1- FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

(2) LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/ 00 FEET OF FENCE.

(3) THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN- SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

(4) THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

(5) SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

(6) SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STONE FLOW OR DRAINAGE.

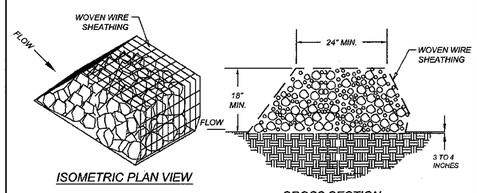
INSPECTION AND MAINTENANCE GUIDELINES:
(1) INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL.
(2) REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

(3) REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

(4) REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

(5) WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

ROCK BERM



ISOMETRIC PLAN VIEW

CROSS SECTION

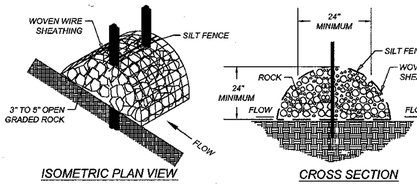
MATERIALS:
(1) THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.

(2) CLEAN, OPEN GRADED 3- TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5- TO 8-INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION:
(1) LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
(2) BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BSING 2:1 (H:V) OR FLATTER.
(3) PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM FIGURE 1-28), TO A HEIGHT NOT LESS THAN 18".
(4) WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AIRL THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
(5) BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
(6) THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

INSPECTION AND MAINTENANCE GUIDELINES:
(1) INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
(2) REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
(3) REPAIR ANY LOOSE WIRE SHEATHING.
(4) THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
(5) THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
(6) THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

HIGH SERVICE ROCK BERM



ISOMETRIC PLAN VIEW

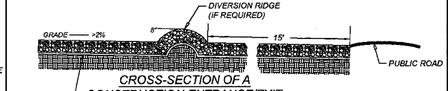
CROSS SECTION

MATERIALS:
(1) SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
(2) FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR YBAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FL2, AND BRINDELL HARDNESS EXCEEDING 140. REBAR (EITHER #5 OR #6) MAY ALSO BE USED TO ANCHOR THE BERM.
(3) WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.
(4) THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH. AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
(5) CLEAN, OPEN GRADED 3- TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5- TO 8-INCH DIAMETER ROCKS MAY BE USED.

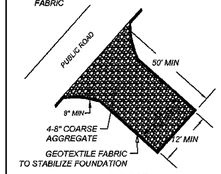
INSTALLATION:
(1) LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1-INCH OPENINGS.
(2) INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT, AS WITH A NORMAL SILT FENCE DESCRIBED IN SECTION 2.4.3.
(3) PLACE THE ROCK ALONG THE SHEATHING ON BOTH SIDES OF THE SILT FENCE AS SHOWN IN THE DIAGRAM (FIGURE 1-29), TO A HEIGHT NOT LESS THAN 24 INCHES. CLEAN, OPEN GRADED 3- 5" DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5- TO 8-INCH DIAMETER ROCK MAY BE USED.
(4) WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
(5) THE HIGH SERVICE ROCK BERM SHOULD BE REMOVED WHEN THE SITE IS REVEGETATED OR OTHERWISE STABILIZED OR IT MAY REMAIN IN PLACE AS A PERMANENT BMP IF DRAINAGE IS ADEQUATE.

INSPECTION AND MAINTENANCE GUIDELINES:
(1) INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE ON ROCK BERM.
(2) REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT OF IN AN APPROVED MANNER.
(3) REPAIR ANY LOOSE WIRE SHEATHING.
(4) THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
(5) THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
(6) THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

STABILIZED CONSTRUCTION ENTRANCE / EXIT



CROSS-SECTION OF A CONSTRUCTION ENTRANCE/EXIT



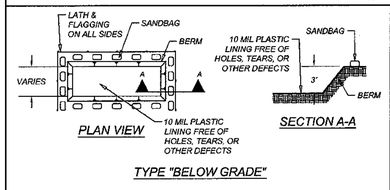
TEMPORARY CONSTRUCTION ENTRANCE/EXIT

MATERIALS:
(1) THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
(2) THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
(3) THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD2, A MULLEN BURST RATING OF 140 LB/IN2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 93 SIEVE.
(4) IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4 INCH DIAMETER WASHED STONE OR COMMERCIAL RACK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION: (NORTH CAROLINA, 1993)
(1) AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
(2) THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
(3) THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
(4) IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6 TO 8 INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
(5) PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
(6) PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
(7) DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
(8) INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES:
(1) THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/LOR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
(2) ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
(3) WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
(4) WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
(5) ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

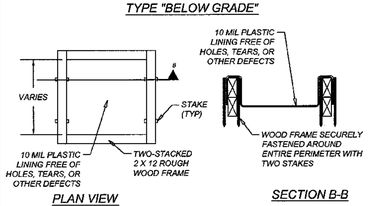
CONCRETE TRUCK WASHOUT PIT



PLAN VIEW

SECTION A-A

TYPE "BELOW GRADE"



PLAN VIEW

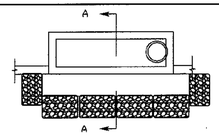
SECTION B-B

TYPE "ABOVE GRADE"

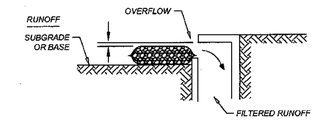
GENERAL NOTES:

- *DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.*
- *WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.*
- *WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF AND AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.*

CURB INLET PROTECTION GRAVEL FILTER BAGS



PLAN VIEW

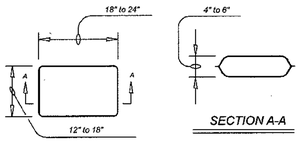


SECTION A-A

GENERAL NOTES:

- *ALL STORM DRAINAGE SYSTEMS INLETS SHOULD FILTER RUNOFF BEFORE THE WATER IS DISCHARGED INTO STREAMS OR ONTO ADJACENT PROPERTIES, UNLESS TREATMENT IS PROVIDED ELSEWHERE.*
- *IF NO ADDITIONAL DOWNSTREAM TREATMENT EXISTS, THE MAXIMUM DRAINAGE AREA TRIBUTARY TO AN AREA DRAIN INSTALLED WITH A GRAVEL FILTER SHOULD BE ONE ACRE.*
- *ALL CURB INLET GRAVEL FILTERS SHOULD BE INSPECTED AND REPAIRED AFTER EACH RUNOFF EVENT. SEDIMENT SHOULD BE REMOVED WHEN MATERIAL IS WITHIN THREE INCHES OF THE TOP OF THE CONCRETE BLOCKS. PERIODICALLY, THE GRAVEL SHOULD BE RAKED TO INCREASE INFILTRATION AND FILTERING OF RUNOFF WATERS.*

GRAVEL FILTER BAG DETAIL

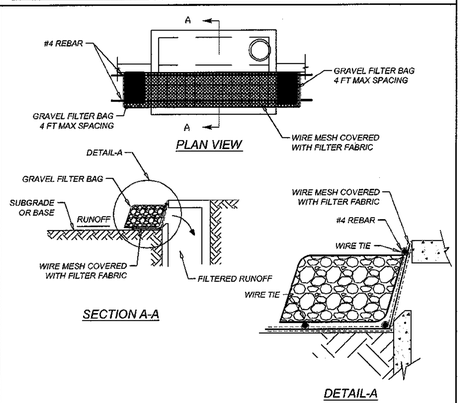


SECTION A-A

GENERAL NOTES:

- *THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN UNIT WEIGHT OF 4 OUNCES/SY, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.*
- *THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).*

CURB INLET PROTECTION (ALTERNATE)

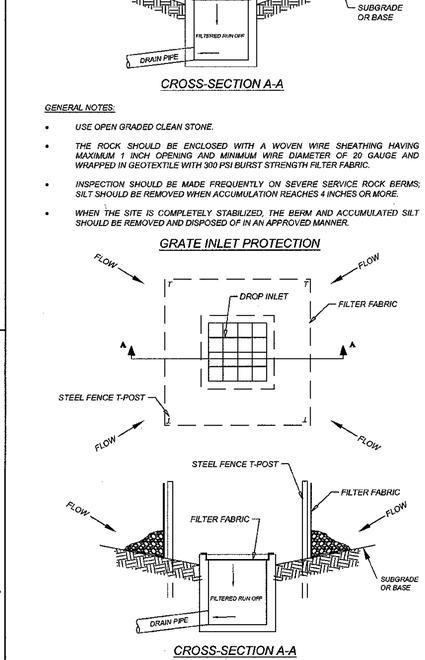


PLAN VIEW

SECTION A-A

DETAIL-A

GRATE INLET PROTECTION (ALTERNATE)



CROSS-SECTION A-A

GENERAL NOTES:

- *USE OPEN GRADED CLEAN STONE.*
- *THE ROCK SHOULD BE ENCLOSED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE AND WRAPPED IN GEOTEXTILE WITH 300 PSI BURST STRENGTH FILTER FABRIC.*
- *INSPECTION SHOULD BE MADE FREQUENTLY ON SEVERE SERVICE ROCK BERMS; SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 4 INCHES OR MORE.*
- *WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHOULD BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.*

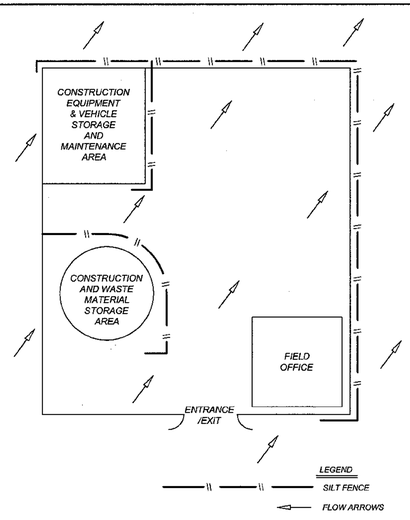
GRATE INLET PROTECTION

CROSS-SECTION A-A

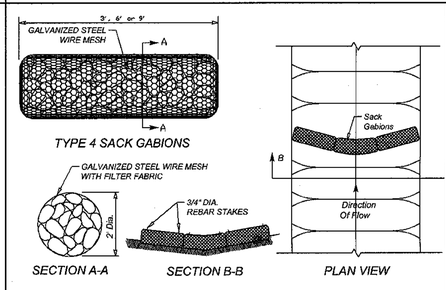
GENERAL NOTES:

- *ALL MATERIALS AND ERECTION PROCEDURES WILL BE THE SAME AS DESCRIBED IN THE STANDARD SILT FENCE REQUIREMENTS.*

TYPICAL CONSTRUCTION STAGING AREA



TYPE 4 SACK GABIONS



TYPE 4 SACK GABIONS

SECTION A-A

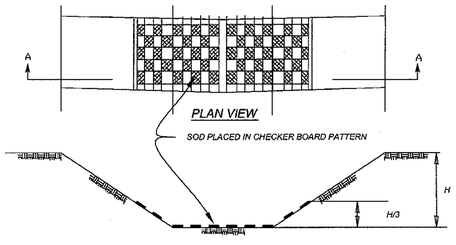
SECTION B-B

PLAN VIEW

GENERAL NOTES:

- *THE TOP OF THE SACK GABIONS SHOULD BE LEVEL AND ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW.*
- *FILTER FABRIC MATERIAL SHALL BE FASTENED TO WOVEN WIRE SUPPORT.*
- *FILTER FABRIC MATERIAL SHOULD MEET THE FOLLOWING SPECIFICATIONS: RESISTANT TO ULTRAVIOLET LIGHT, FABRIC SHOULD BE NON-WOVEN GEOTEXTILE WITH MINIMUM WEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH OF 200 POUNDS PER SQUARE INCH AND A FLOW THRU RATE OF 120 GALLONS PER MINUTE PER SQUARE FOOT OF FRONTAL AREA*
- *STONE SIZE: ±4"-6" OPEN GRADED CRUSHED LIMESTONE.*
- *INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACE AS NEEDED.*
- *WHEN SILT REACHES A DEPTH OF 6 INCHES OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESILTATION. CONTAMINATED SEDIMENT MUST BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.*

CHANNEL LINING



SECTION A-A

- *CHANNEL TO BE STABILIZED WITH SOD PLACED IN A CHECKER BOARD PATTERN TON THE CHANNEL BOTTOM AND ON THE SIDES UP TO 1/3 THE DEPTH OF CHANNEL.*

KFW ENGINEERS + SURVEYING
3421 Paesanos Pkwy, Suite 200, San Antonio, TX 78231
Phone #: (210) 979-8444 • Fax #: (210) 979-8441
TBPE Firm #: 9513 • TBPLS Firm #: 10122300

STATE OF TEXAS
BENJAMIN D. BUNKER
108512
LICENSED PROFESSIONAL ENGINEER
2/28/2019

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.333-09-01

DATE : FEBRUARY 2019

DRAWN : A.B.

REVISIONS:

EROSION CONTROL DETAIL SHEET

SHEET NO.

C9.1

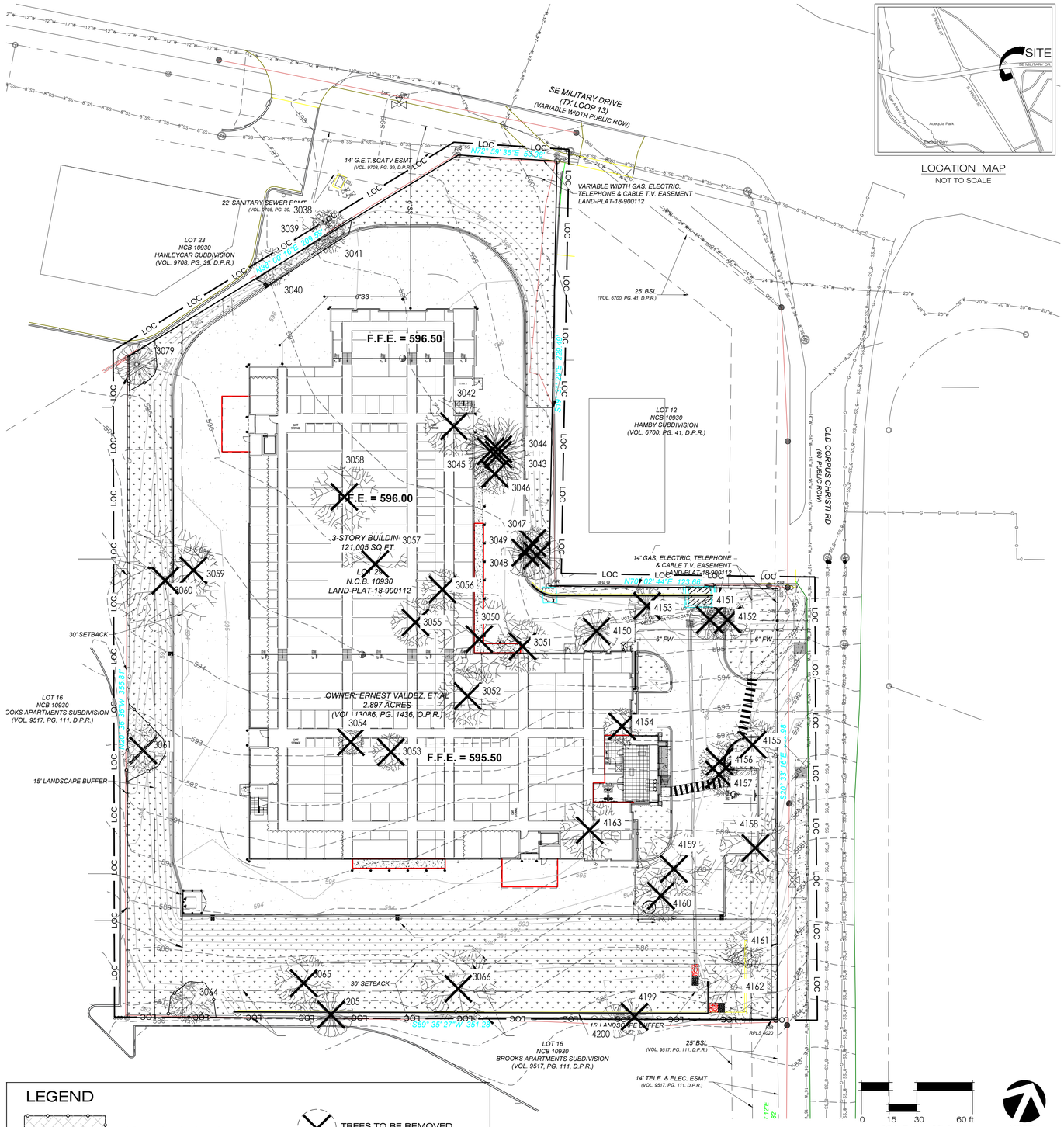
Date: Feb 28, 2019, 4:33pm User ID: abustillos
File: N:\333\09\01\Design\Civil\C9.1 (EROSION CONTROL DETAIL SHEET 3330901).dwg

TREE PRESERVATION NOTES:

1. ALL TREES SHALL REMAIN UNLESS NOTED ON THE PLANS.
2. NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED.
3. ALL EXISTING TREES DENOTED TO REMAIN SHALL BE PROTECTED AT THE ROOT PROTECTION ZONE(RPZ). THE RPZ SHALL BE DETERMINED BY TREE SIZE (RECOMMENDED 12" RADIUS FROM TRUNK FOR EVERY 1" IN DIAMETER OF TRUNK AT 4.5' FROM GROUND) WITH A MINIMUM 5' DIAMETER FROM THE TRUNK.
4. A CHAIN LINK FENCE BARRIER DELINEATING THE RPZ SHALL BE ERECTED AND MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETED.
5. RPZ SHALL BE SUSTAINED IN A NATURAL STATE AND SHALL BE FREE FROM VEHICULAR OR MECHANICAL TRAFFIC.
6. THE RPZ SHALL BE COVERED WITH MULCH AND BE MAINTAINED BY GENERAL CONTRACTOR DURING CONSTRUCTION PHASE TO REDUCE MOISTURE STRESS.
7. DURING CONSTRUCTION, NO EXCESS SOIL, ADDITIONAL FILL MATERIAL, EQUIPMENT, LIQUIDS, OR CONSTRUCTION DEBRIS SHALL BE PLACED INSIDE THE PROTECTION BARRIER, NOR SHALL ANY SOIL BE REMOVED FROM WITHIN THE BARRIER.
8. ANY DAMAGE DONE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE CUT CLEANLY IMMEDIATELY AFTER INJURY. ALL WOUNDS TO LIVE OAKS SHALL BE PAINTED WITH PRUNING PAINT WITHIN 30 MINUTES AFTER DAMAGE. ROOTS EXPOSED DURING CONSTRUCTION OPERATIONS WILL BE CUT CLEANLY.
9. THE PROPOSED FINISH GRADE AND ELEVATION OF LAND WITHIN THE RPZ OF ANY TREE TO BE PRESERVED SHALL NOT BE RAISED OR LOWERED MORE THAN THREE INCHES. WELLING AND RETAINING METHODS ARE ALLOWED OUTSIDE THE RPZ.
10. THE RPZ SHALL REMAIN PERVIOUS, I.E. GROUNDCOVER OR TURF AT COMPLETION OF LANDSCAPE INSTALLATION.
11. THE ASSOCIATED TREE PROTECTION DETAIL COMPLIES WITH THE MINIMUM TREE PROTECTION GUIDELINES FROM THE CITY OF SAN ANTONIO. WHERE POSSIBLE, PROVIDE FENCE TO TREE DRIP LINE OR GROUP TREES IN FENCE PERIMETER TO PROVIDE INCREASED PROTECTION.
12. WHERE TREES HAVE BEEN REMOVED FROM IRRIGATION, GENERAL CONTRACTOR SHALL SUPPLY SUPPLEMENTAL WATER ONCE A WEEK DURING THE DURATION OF CONSTRUCTION. COORDINATE W/ L.A. FOR AMOUNT OF WATER TO BE APPLIED.
13. NO WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
14. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED PER UDC 35-523 (f) MITIGATION.
15. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE BUT IS NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
16. ROOTS SHALL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.

TREE RELOCATION NOTES

1. PRIOR TO DIGGING TREES, EXCAVATE NEW PLANTING PITS WITH VERTICAL SIDES AND SLIGHTLY RAISED CENTERS. LOOSEN SUBSOIL IN BOTTOM. REFER TO TREE PLANTING NOTES IN SPECIFICATIONS.
2. USE SOIL EXCAVATED FROM NEW TREE LOCATIONS TO REFILL HOLES CREATED BY TREES BEING LOCATED. FILL HOLE WITH SOIL AND COMPACT TO MATCH SURROUNDING GRADE. COORDINATE BACKFILL MATERIAL WITH GEOTECH ENGINEER PRIOR TO PLACEMENT.
3. PRIOR TO DIGGING, TRIM TREES SELECTIVELY, ON ADVICE OF ARBORIST. MOISTEN BALL AREA THOROUGHLY AT LEAST TWO DAYS BEFORE DIGGING, WITH APPROXIMATELY 20 GALLONS OF ROOT STIMULATOR MIXTURE AT SPECIFIED RATIO IN POTABLE WATER. SPRAY TREE WITH ANTI-TRANSPIRANT.
4. CUT BALL TO A DEPTH SUFFICIENT TO CONTAIN MAJOR ROOT STRUCTURE. THE DIAMETER OF THE ROOT BALL SHALL BE 1 FOOT DIAMETER PER CALIPER INCH. CUT EXPOSED ROOTS WITH CLIPPERS. BURLAP AND WIRE BALLS TIGHTLY. SECURE BALLS WITH A STRAPPING SYSTEM THAT SUPPORTS THE BALL AND UTILIZES A MINIMUM OF FOUR STRAPS. CONNECT CRANE CABLE LOCK TO STRAP LIFT ON BALL (NOT TREE TRUNK). PAD VULNERABLE UNPROTECTED TRUNK AREAS. PROTECT BALL FROM CRACKING OR BREAKING APART.
5. LIFT TREE, MAINTAINING IT IN A VERTICAL POSITION, AND SET IT ONTO FLAT BED TRAILER. KEEP ROOT BALL MOIST. DO NOT LIFT TREE BY STRAPS WRAPPED AROUND THE TREE TRUNK.
6. IF PLANTING IS DELAYED MORE THAN SIX HOURS FROM TIME OF DIGGING, SET BALLED AND BURLAP STOCK ON THE GROUND, HEEL THEM IN, AND BACKFILL AND COVER THE ROOT BALLS WITH MULCH; WATER AS NECESSARY TO PREVENT ROOT BALL FROM DRYING OUT.
7. TO PLANT TREES, SET THE ROOT BALL ON LAYER OF COMPACTED PLANTING SOIL MIX, PLUMB AND IN CENTER OF PIT WITH TOP OF BALL AT ELEVATION SPECIFIED IN THE PLANS. LOOSEN BURLAP AT BASE OF TRUNK. WHEN SET, PLACE PLANTING SOIL MIX AROUND BASE AND SIDES OF BALL, WORKING EACH LAYER TO SETTLE BACKFILL AND ELIMINATE VOIDS AND AIR POCKETS. WHEN EXCAVATION IS APPROXIMATELY 2/3 FILLED, WATER THOROUGHLY UNTIL NO MORE WATER IS ABSORBED. COMPLETE PLACEMENT OF BACKFILL.
8. DISH TOP OF BACKFILL WITH 4-INCH TALL RING, 6 FEET IN DIAMETER. MULCH TO DEPTH OF 3 INCHES INSIDE RING. INJECT ROOT STIMULATOR INTO THE BALL AND APPLY TO TRANSITION ZONE AT BALL'S EDGE. REMOVE BROKEN LIMBS AND PAINT SCARS. GUY AND STAKE ONLY IF REQUIRED TO MAINTAIN TREE IN PROPER ALIGNMENT.
9. DO NOT LEAVE OPEN EXCAVATED TREE HOLES OVERNIGHT WITHOUT COVER OR APPROPRIATE BARRICADES.



LEGEND

- ROOT PROTECTION ZONE WITH FENCE FOR PRESERVED TREES
- LOC — LIMIT OF CONTRACT
- TREES TO BE REMOVED
- TREE TO BE PRESERVED

RIALTO STUDIO

Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

REGISTERED LANDSCAPE ARCHITECT PETER HINTON STATE OF TEXAS

2-28-19

SE MILITARY STORAGE

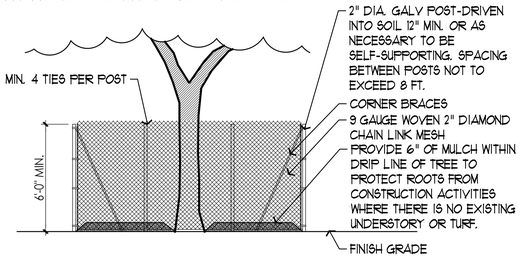
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN :
REVISIONS:

TREE PRESERVATION

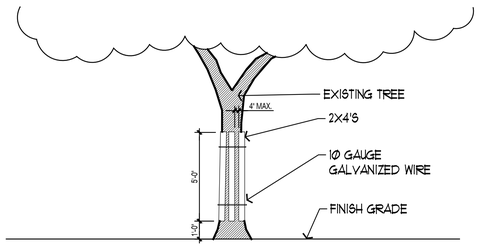
SHEET NO.
L1.0

NOTE:
THE DRAWING BELOW DETAILS COMPLIANCE W/ THE MINIMUM TREE PROTECTION GUIDELINES FROM THE CITY OF SAN ANTONIO.



1 DETAIL: TREE PROTECTION

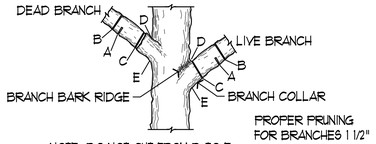
SCALE: 1/4"= 1'-0"



NOTES:
1. PROTECTIVE LUMBER SHALL NOT BE DIRECTLY NAILED TO THE TREE
2. 2X4'S SHALL BE HELD SECURELY IN PLACE WITH 10 GAUGE WIRE WRAPPED OVER THE LUMBER AND AROUND THE TREE AT MIN. OF 2 LOCATIONS.
3. THE GAP BETWEEN THE BOARDS IS TO BE 4 INCHES OR LESS.
4. PROVIDE 6" OF MULCH WITHIN DRIP LINE OF TREE TO PROTECT ROOTS FROM CONSTRUCTION ACTIVITIES WHEN THERE IS NO EXISTING UNDERSTORY OR TURF.

2 DETAIL: 2X4 TREE PROTECTION

SCALE: 1/4"= 1'-0"



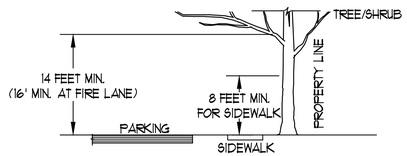
NOTE: DO NOT CUT FROM D TO E

A. FIRST CUT- TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
B. SECOND CUT- TO REDUCE THE WEIGHT OF BRANCH.
C. FINAL CUT- ALLOW FOR HEALING COLLAR BUT NO STUBS.
D. BRANCH RIDGES- INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.

FOR OAKS ONLY:- PAINT ALL WOUNDS OR CUTS WITH PRUNING SPRAY WITHIN 20 MINUTES TO PREVENT SPREAD OF OAK WILT

3 DETAIL: BRANCH PRUNING

SCALE: N.T.S.



A MINIMUM BRANCH CLEARANCE OF 14 FEET ABOVE PARKING LOT/DRIVE LANES (16 FEET ABOVE FIRE LANES) MUST BE MAINTAINED.

4 DETAIL: TREE BRANCH CLEARANCE

SCALE: N.T.S.

MITIGATION TREES					
6	MOK	EA	Monterrey Oak	3" caliper	18
7	COK	EA	Chinkapin Oak	3" caliper	21
8	ELM	EA	Cedar Elm	3" caliper	24
3	OAK	EA	Live Oak	3" caliper	9
24					
				TOTAL MITIGATION INCHES PROVIDED	72
				MINUS 1.5" PER TREE USED FOR ORDINANCE	36
				TOTAL MITIGATION INCHES PROVIDED	36

TREE INVENTORY

Tag #	Species	Understory Species** 5.0" - 11.5" Removed	Understory Species** 5.0" - 11.5" Preserved	Significant Tree 6" - 23.5" Removed	Significant Tree 6" - 23.5" Preserved	Significant Tree*** 10.0" - 23.5" Removed	Significant Tree*** 10.0" - 23.5" Preserved	Heritage 3:1 Removed	Heritage 3:1 Preserved	Heritage 1:1 Removed	Heritage 1:1 Preserved	Additional Inches Preserved for Mitigation **** Preserved
3041	HUISACHE(9")											
3042	MESQUITE					16						
3043	ELM					14						
3044	ELM			17.5								
3045	ELM			17.5								
3046	MESQUITE					11						
3047	MESQUITE (9")											
3048	HACKBERRY					13						
3049	HACKBERRY					13						
3050	MESQUITE					22						
3051	MESQUITE					14						
3052	MESQUITE					16						
3053	MESQUITE					10						
3054	MESQUITE (7")											
3055	MESQUITE					13						
3056	MESQUITE					11						
3057	MESQUITE					17						
3058	MESQUITE					18						
3059	MESQUITE											
3060	MESQUITE (DISEASED)											
3061	MESQUITE					12						
3064	MESQUITE						11					
3065	HUISACHE					15						
3066	HUISACHE					20						
3079	HACKBERRY						11					
4150	HACKBERRY					12						
4151	HACKBERRY					11						
4152	HACKBERRY					11						
4153	HACKBERRY					10						
4154	MESQUITE					10						
4155	MESQUITE					14						
4156	MESQUITE					11						
4157	MESQUITE					10						
4158	MESQUITE					19						
4159	MESQUITE					20						
4160	MESQUITE					14						
4161	MESQUITE						10					
4162	HUISACHE						20					
4163	MESQUITE					16						
4199	HACKBERRY					10						
4205	HACKBERRY					12						
Sub. Tot. Inches=		0	0	35	0	415	52	0	0	0	0	0
Total inches by category=					35		467		0		0	
Preservation percentage=		0%				10%				#DIV/0!		
Mitigation required (Commercial) =		0				148.8				0		
Total Mitigation (inches)		148.8										

No category to fall below 10% preservation;
Preserved- Tree to remain that meets root protection zone requirements described in section 35-523 of the UDC.
Mitigation 1:1 for significant trees below minimum preservation requirements; 3:1 for heritage trees below 100% preservation
^ Warranty Tree to remain that does not meet City root protection zone requirements
^^ Tree to remain that does not meet City root protection zone requirements; therefore ***counted*** *as removed*
** Multi-trunk tree, no cane larger than 6"*
*** Small species: Condalia, Redbud, Tx. Mountain Laurel, Tx. Persimmon, Hawthorn, Possumhaw - these are mitigated at 1:1 for Heritage Trees*
**** Ashe Juniper, Huisache, Mesquite, Arizona Ash, Hackberry protected at 10" dbh and mitigated at 1:1 for heritage trees*
***** Mitigation Trees: Unprotected-sized trees to be used for mitigation calculations; subtract inches from mitigation owed*

TREE INVENTORY OUTSIDE OF LOC

Tag #	Species	Understory Species** 5.0" - 11.5" Removed	Understory Species** 5.0" - 11.5" Preserved	Significant Tree 6" - 23.5" Removed	Significant Tree 6" - 23.5" Preserved	Significant Tree*** 10.0" - 23.5" Removed	Significant Tree*** 10.0" - 23.5" Preserved	Heritage 3:1 Removed	Heritage 3:1 Preserved	Heritage 1:1 Removed	Heritage 1:1 Preserved	Additional Inches Preserved for Mitigation **** Preserved
3038	HUISACHE											9
3039	HUISACHE						12					
3040	HUISACHE						10					
4200	HACKBERRY											9
Sub. Tot. Inches=		0	0	0	0	0	22	0	0	0	0	18
Total inches by category=					0		22		0		0	
Preservation percentage=		0%				100%				#DIV/0!		
Mitigation required (Commercial) =		0				-13.2				0		
Total Mitigation (inches)		-31.2										

No category to fall below 10% preservation;
Preserved- Tree to remain that meets root protection zone requirements described in section 35-523 of the UDC.
Mitigation 1:1 for significant trees below minimum preservation requirements; 3:1 for heritage trees below 100% preservation
^ Warranty Tree to remain that does not meet City root protection zone requirements
^^ Tree to remain that does not meet City root protection zone requirements; therefore ***counted*** *as removed*
** Multi-trunk tree, no cane larger than 6"*
*** Small species: Condalia, Redbud, Tx. Mountain Laurel, Tx. Persimmon, Hawthorn, Possumhaw - these are mitigated at 1:1 for Heritage Trees*
**** Ashe Juniper, Huisache, Mesquite, Arizona Ash, Hackberry protected at 10" dbh and mitigated at 1:1 for heritage trees*
***** Mitigation Trees: Unprotected-sized trees to be used for mitigation calculations; subtract inches from mitigation owed*

TOTAL MITIGATION INCHES REQUIRED: **148.8 INCHES**

Understory:	0.0
Significant:	148.8
Heritage	0.0
Total :	148.8

TOTAL MITIGATION INCHES REQUIRED: **148.8 INCHES**
TOTAL MITIGATION INCHES PROVIDED: **36.0 INCHES**

112.8 INCHES OF MITIGATION REMAINING
112.8 X $200.00 = $22,560 TO BE PAID TO MITIGATION FUND

RIALTO STUDIO
Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

REGISTERED LANDSCAPE ARCHITECT PETER HINTON AIA STATE OF TEXAS
2-28-19

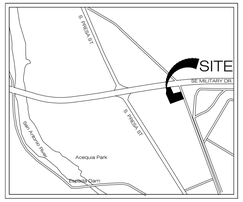
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN :
REVISIONS:

TREE INVENTORY

SHEET NO.
L1.1



LOCATION MAP
NOT TO SCALE

FINAL CANOPY COVERAGE

Lot Size		125,763 SF
Canopy Required (x 25%)		31,441 SF
Existing Tree Canopy:		3,075 SF
Remaining Canopy		28,366 SF
New Tree Canopy:		
(24) Canopy Trees	(90% of 875)	18,900.0 SF
(39) Understory Trees	(90% of 275)	9,652.5 SF
TOTAL CANOPY PROVIDED =		31,627.5 SF

BUFFER ORDINANCE COMPLIANCE

PROPERTY ZONE: C-3

BUFFER YARD - ADJOINING PROPERTY TO NORTH-EAST

Adjoining Property Zone:	C-3
Buffer Required:	No Buffer Required

BUFFER YARD - ADJOINING PROPERTY TO NORTH-WEST

Adjoining Property Zone:	C-2
Buffer Required:	No Buffer Required

BUFFER YARD - ADJOINING PROPERTY TO WEST

Adjoining Property Zone:	MF-25
Buffer Required:	TYPE C
Adjoining Property Length:	356 LF
Canopy Trees (2/100 LF) :	7 TREES
Understory Trees (4/100 LF):	14 TREES
Large Shrubs (9/100 LF):	32 SHRUBS
Medium Shrubs (8/100 LF):	28 SHRUBS

BUFFER YARD - ADJOINING PROPERTY TO SOUTH

Adjoining Property Zone:	MF-25
Buffer Required:	TYPE C
Adjoining Property Length:	350 LF
Canopy Trees (2/100 LF) :	7 TREES
Understory Trees (4/100 LF):	14 TREES
Large Shrubs (9/100 LF):	32 SHRUBS
Medium Shrubs (8/100 LF):	28 SHRUBS

BUFFER YARD - Old Corpus Christi Hwy

Road Classification:	less than 35 mph
not a collector	
Buffer Required:	No Buffer Required

LANDSCAPE ORDINANCE COMPLIANCE

PROPERTY DESCRIPTION
Property Description: NCB 10930, Lot Number: 4
Parcel Key: 204716
Zoned: C-3
Owner: Home Partners LLC.
Watering Method: POTABLE WATER

MANDATORY CRITERIA

1) Irrigation
Landscape areas shall be irrigated with a system that is suitable for the type of plantings installed. An in ground irrigation system consisting of water line, water emitters and a controller is required to have a separate water service if the San Antonio Water System is the purveyor.

2) Parking Lot Shading
Canopy trees shall be provided to shade a minimum of 25% of a parking lot. Existing trees preserved on a site within 12 feet of any edge of a parking lot or in an island or peninsula not less than 9 feet by 18 feet shall be calculated at 100%. Newly planted trees planted in an island or peninsula not less than 9 feet by 18 feet shall be calculated at 75%. Newly planted trees planted adjacent to a parking lot within 12 feet of any edge of a parking lot shall be calculated at 50%. (20) points are awarded for compliance with this section.

PARKING LOT SHADING

Total Parking Area:	2,751 SF
SF of shade required @ 25%: (25% x 2,709 SF = 677 SF)	688 SF
Proposed trees @ 75%: (1) Cedar Elm 875 x .50 SF	437.5 SF Each
Proposed trees @ 75%: (2) Texas Mountain Laurel 275 x .50 SF	275.0 SF Each
TOTAL =	712.5 SF
TOTAL PARKING LOT SHADING:	712.5 SF

POINTS : 20 POINTS

SCREENING OF SURFACE PARKING
(25) points are awarded for screening a surface parking lot within the street yard in accordance with the following subsections.
A. The screening must extend along the entire street frontage of the surface parking lot, exclusive of driveways.
B. The screening must be at least thirty (30) inches in height. If plants are used, they must achieve the minimum height and form an opaque visual barrier at maturity. If non-living materials are used to satisfy the screening requirement, plants must be provided along a minimum of twenty-five (25) percent of the screen's frontage.
C. Any screening placed in a clear vision area must comply with the restrictions contained in section 35-506

POINTS EARNED: 25 POINTS

STREET TREES
1. Street Trees
(25) points will be awarded for providing the installation of large trees that meet the following requirements;
A. The trees extend along a minimum of seventy-five (75) percent of the total frontage of the street yard of the parcel;
B. The trunks shall be spaced on average no more than (50) feet apart measured from trunk to trunk provided the distance between trees does not exceed one hundred (100) feet; and
C. The tree shall be located no more than seventeen (17) feet from the street right-of-way line.

Old Corpus Christi Road Frontage:	233LF
Street frontage required for street trees: (233 LF x 75% = 175 LF)	154 LF
Small/Med. trees required at 30' spacing: (175 LF / 30 LF = 5.833 Street Trees)	6 Trees
SE Military Drive Frontage:	0 LF

Property does not have frontage on SE Military Drive

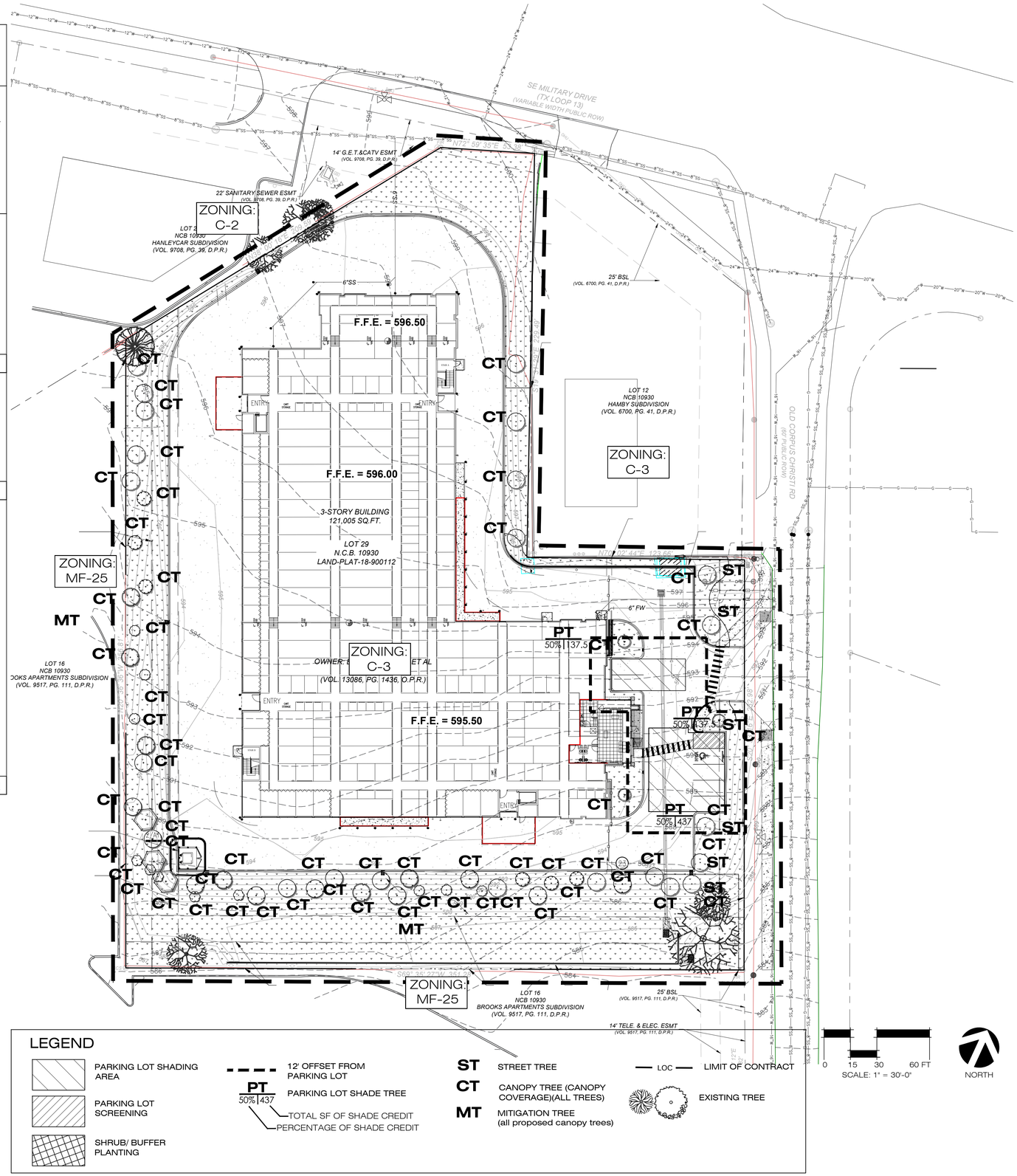
POINTS EARNED: 25 POINTS

LANDSCAPE POINT TABLE

Point Tabulations	
Parking Lot Shading	20 pts.
Parking Lot Screening	25 pts.
Street Trees	25 pts.
Total Points Earned:	70 pts.
Total Points Required:	70 pts.

GENERAL LANDSCAPE NOTES

1. ALL TREES AND PLANTING AREAS TO BE MULCHED TO A DEPTH OF 4 INCHES MULCH. MAINTAIN A 1FT AREA FROM THE BASE OF THE TREE FREE OF MULCH TO ALLOW OXYGEN EXCHANGE.
2. LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY QUESTIONS REGARDING APPLICATION OF PROPOSED PLANT MATERIAL PRIOR TO INSTALLATION.
3. LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL TREES, SHRUBS, AND GROUNDCOVER IN A HEALTHY STATE UNDER THE CONTRACT UNTIL FINAL ACCEPTANCE BY THE OWNER.
4. ALL QUANTITIES SHOWN ON PLANS TO BE VERIFIED BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL LABELED PLANT MATERIAL ON PLANS (NOT TABULATION).
5. ALL PLANTS MUST COMPLY WITH THE AMERICAN STANDARDS FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND MEET OR EXCEED HEIGHT AND SPREAD REQUIREMENTS LISTED ON THE PLANT SCHEDULE.
6. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT EXISTING UTILITES AT ALL TIMES.
7. PLANTS USED FOR PARKING LOT SCREENING SHALL BE PLANTED A MIN. OF 30 INCHES FROM THE CURB AT HEAD IN PARKING SPACE WHERE WHEEL STOPS ARE NOT INSTALLED.



LEGEND

- PARKING LOT SHADING AREA
- PARKING LOT SCREENING
- SHRUB/ BUFFER PLANTING
- 12' OFFSET FROM PARKING LOT
- PT 50% 437 — PARKING LOT SHADE TREE (TOTAL SF OF SHADE CREDIT / PERCENTAGE OF SHADE CREDIT)
- ST — STREET TREE
- CT — CANOPY TREE (CANOPY COVERAGE)(ALL TREES)
- MT — MITIGATION TREE (all proposed canopy trees)
- LOC — LIMIT OF CONTRACT
- EXISTING TREE

RIALTO STUDIO
Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

REGISTERED LANDSCAPE ARCHITECT
PETER HIMMEL
1407
STATE OF TEXAS
2-28-19

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN :
REVISIONS:

LANDSCAPE ORDINANCE

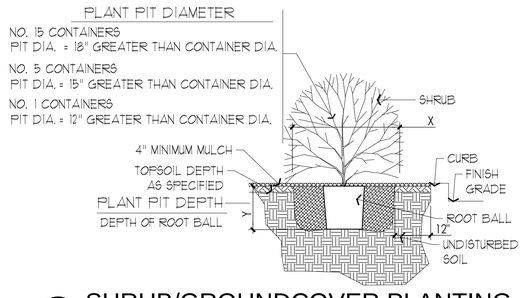
SHEET NO.
L1.2

GENERAL LANDSCAPE NOTES

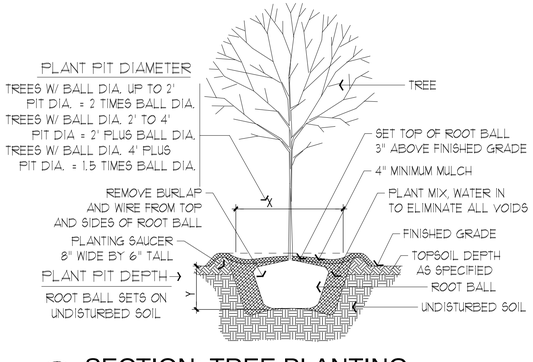
1. ALL TREES AND PLANTING AREAS TO BE MULCHED TO A DEPTH OF 4 INCHES MULCH. MAINTAIN A 1FT AREA FROM THE BASE OF THE TREE FREE OF MULCH TO ALLOW OXYGEN EXCHANGE.
2. LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY QUESTIONS REGARDING APPLICATION OF PROPOSED PLANT MATERIAL PRIOR TO INSTALLATION.
3. LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL TREES, SHRUBS, AND GROUNDCOVER IN A HEALTHY STATE UNDER THE CONTRACT UNTIL FINAL ACCEPTANCE BY THE OWNER.
4. ALL QUANTITIES SHOWN ON PLANS TO BE VERIFIED BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL LABELED PLANT MATERIAL ON PLANS (NOT TABULATION).
5. ALL PLANTS MUST COMPLY WITH THE AMERICAN STANDARDS FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND MEET OR EXCEED HEIGHT AND SPREAD REQUIREMENTS LISTED ON THE PLANT SCHEDULE.
6. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT EXISTING UTILITES AT ALL TIMES.
7. PLANTS USED FOR PARKING LOT SCREENING SHALL BE PLANTED A MIN. OF 30 INCHES FROM THE CURB AT HEAD IN PARKING SPACE WHERE WHEEL STOPS ARE NOT INSTALLED.

LEGEND

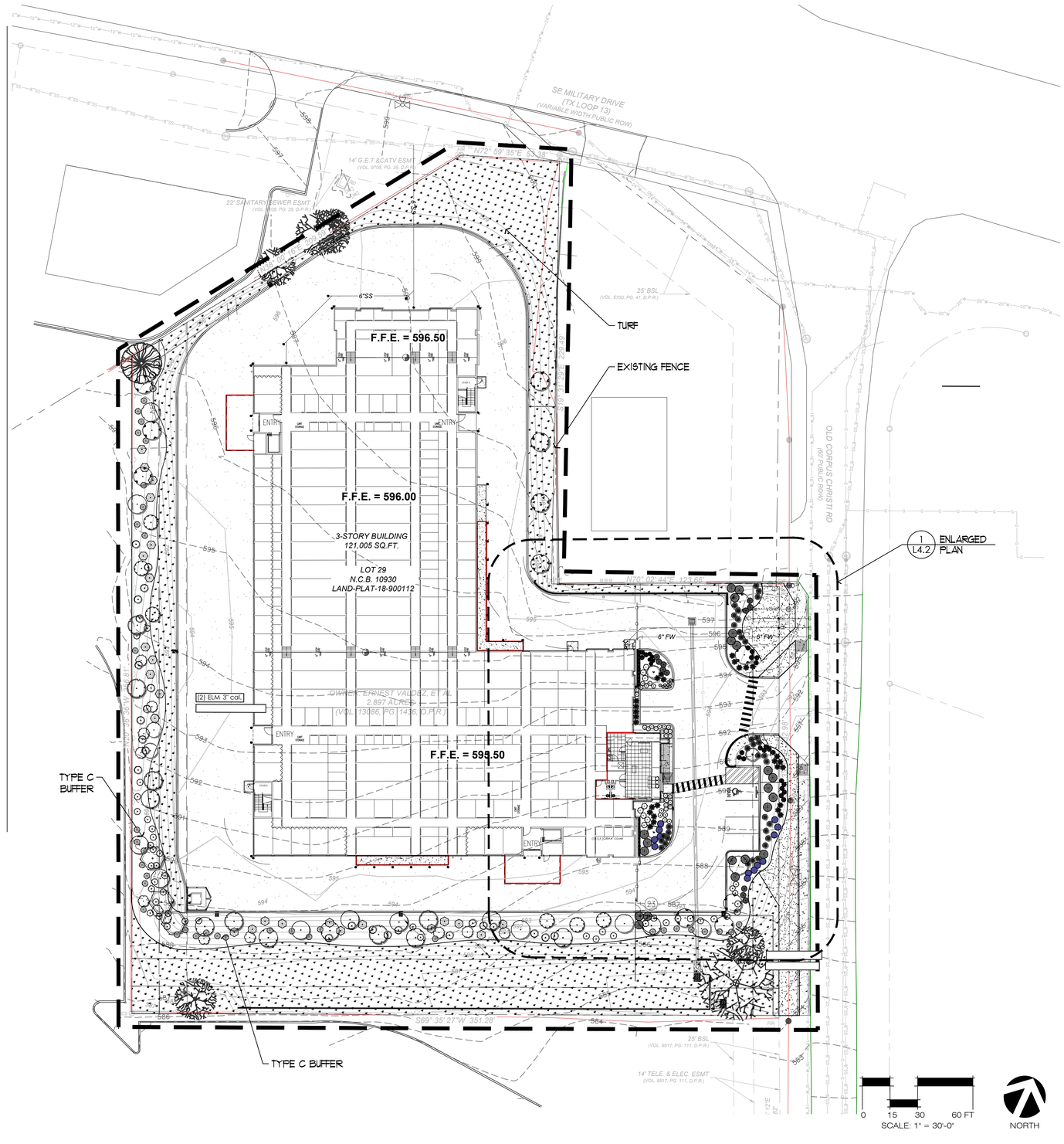
LOC	LIMIT OF CONTRACT
	TURF - HYDROSEED TEMPORARY IRRIGATION
	TURF - SOLID SOD TURF ROTAR / SPRAY IRRIGATION
	SHRUB PLANTING / DRIP IRRIGATION
	PROPOSED TREES - W/ TREE BUBBLERS
	EXISTING TREE



3 SHRUB/GROUNDCOVER PLANTING
SCALE: NOT TO SCALE



4 SECTION: TREE PLANTING
SCALE: NOT TO SCALE



RIALTO STUDIO

Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

REGISTERED LANDSCAPE ARCHITECT PETER HINTON STATE OF TEXAS

2-28-19

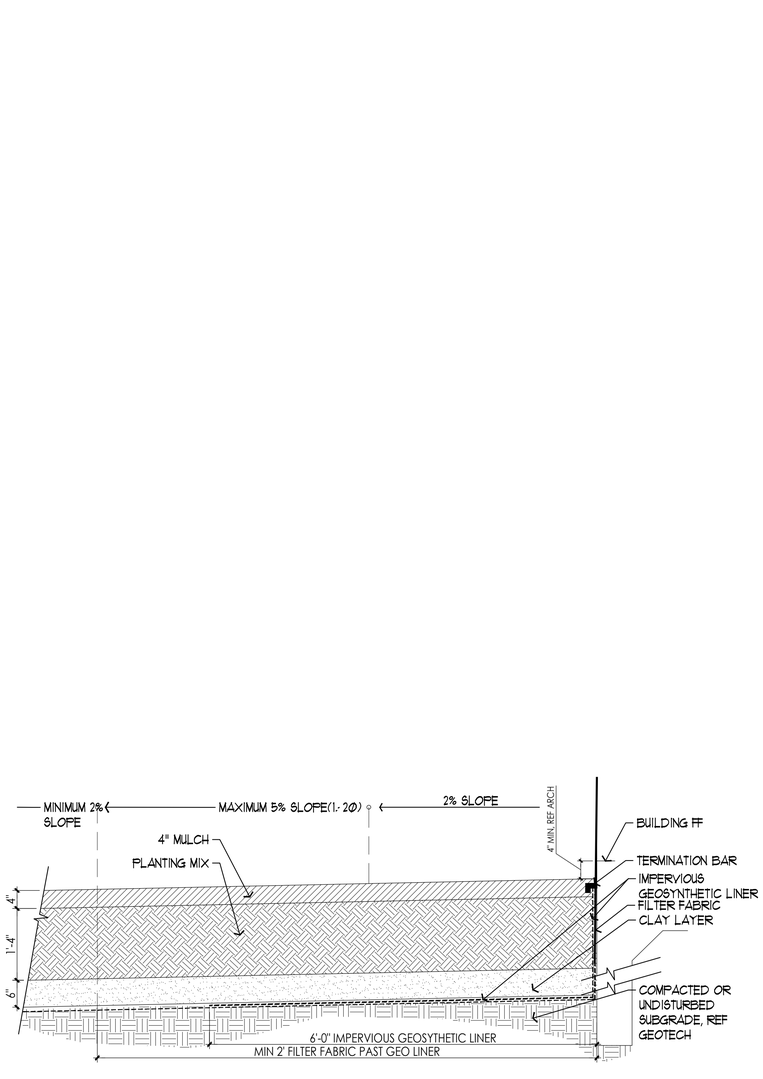
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

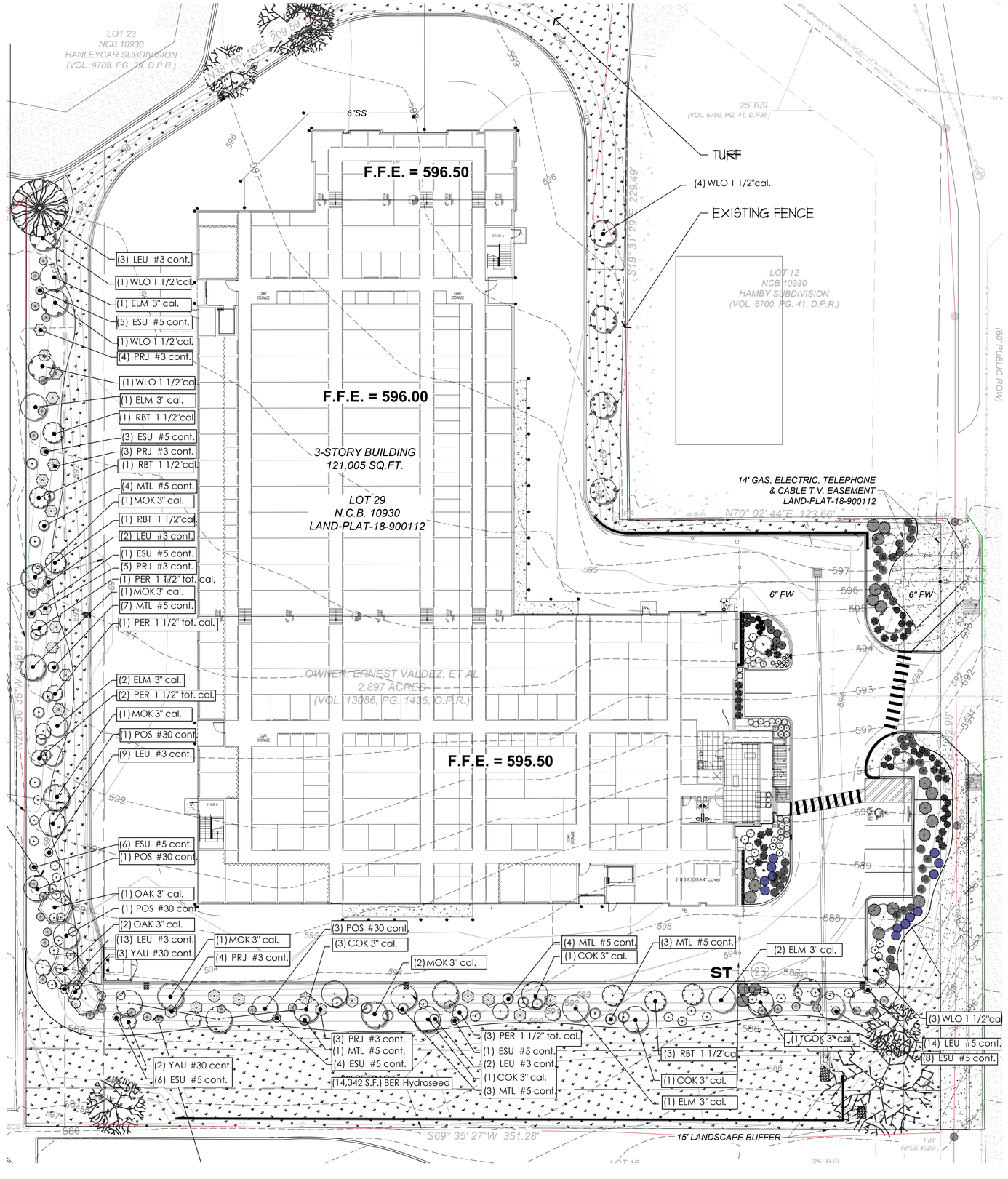
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN :
REVISIONS:

PLANTING PLAN

SHEET NO.
L4.0



2 SECTION: PLANTING AT BUILDING
SCALE: 3/4"= 1'-0"



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

NORTH

RIALTO STUDIO
Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

REGISTERED LANDSCAPE ARCHITECT
PETER HINTON
STATE OF TEXAS
2-28-19

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN :
REVISIONS:

PLANTING PLAN

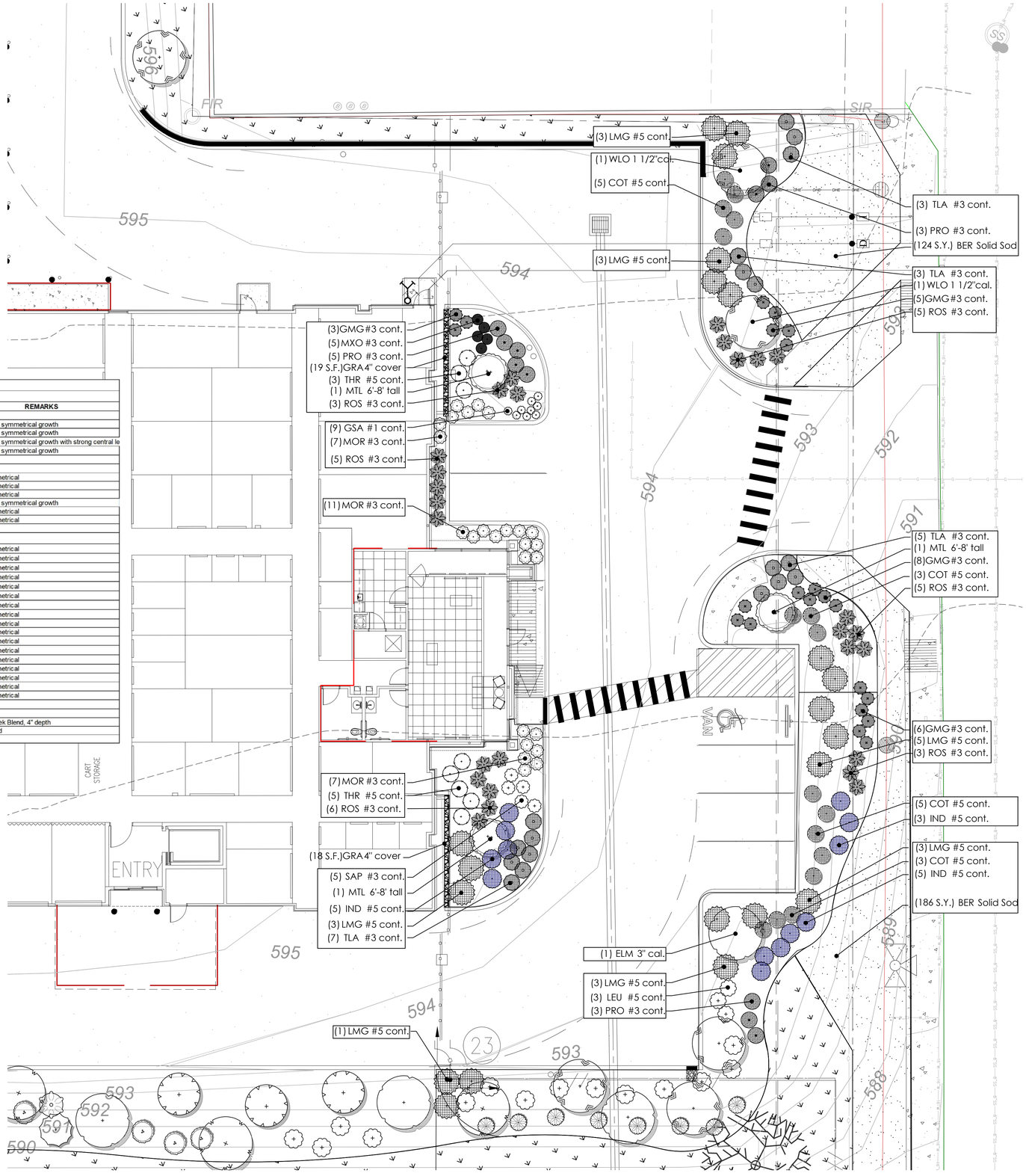
SHEET NO.
L4.1

GENERAL LANDSCAPE NOTES

1. ALL TREES AND PLANTING AREAS TO BE MULCHED TO A DEPTH OF 4 INCHES MULCH. MAINTAIN A 1FT AREA FROM THE BASE OF THE TREE FREE OF MULCH TO ALLOW OXYGEN EXCHANGE.
2. LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY QUESTIONS REGARDING APPLICATION OF PROPOSED PLANT MATERIAL PRIOR TO INSTALLATION.
3. LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL TREES, SHRUBS, AND GROUNDCOVER IN A HEALTHY STATE UNDER THE CONTRACT UNTIL FINAL ACCEPTANCE BY THE OWNER.
4. ALL QUANTITIES SHOWN ON PLANS TO BE VERIFIED BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL LABELED PLANT MATERIAL ON PLANS (NOT TABULATION).
5. ALL PLANTS MUST COMPLY WITH THE AMERICAN STANDARDS FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND MEET OR EXCEED HEIGHT AND SPREAD REQUIREMENTS LISTED ON THE PLANT SCHEDULE.
6. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT EXISTING UTILITES AT ALL TIMES.
7. PLANTS USED FOR PARKING LOT SCREENING SHALL BE PLANTED A MIN. OF 30 INCHES FROM THE CURB AT HEAD IN PARKING SPACE WHERE WHEEL STOPS ARE NOT INSTALLED.

SE MILITARY STORAGE - PLANT SCHEDULE

QTY	KEY	UNIT	COMMON NAME	SCIENTIFIC NAME	SIZE	HEIGHT	SPREAD	SPACING	REMARKS
TREES									
6	MOK	EA	Monterrey Oak	*Quercus polymorpha*	3" caliper	16'	9'		Full canopy, symmetrical growth
7	COK	EA	Chinkapin Oak	*Quercus muehlenbergii*	3" caliper	10'	6	as shown	Full canopy, symmetrical growth
8	ELM	EA	Cedar Elm	*Ulmus crassifolia*	3" caliper	12'	6	as shown	Full canopy, symmetrical growth with strong central le
3	OAK	EA	Live Oak	*Quercus virginiana*	3" caliper	10'	6	as shown	Full canopy, symmetrical growth
SMALL TREES									
7	PER	EA	Texas Persimmon	*Diospyrus texana*	1.5" tot. cal. Min	5'	3'-4'	as shown	Full and symetrical
5	YAU	EA	Yaupon Holly	*Ilex vomitoria*	1.5" tot. cal. Min	5'	3'-4'	as shown	Full and symetrical
6	POS	EA	Possumhaw Holly	*Ilex decidua*	1.5" tot. cal. Min	5'	3'-4'	as shown	Full and symetrical
6	RBT	EA	Redbud (Mexican)	*Cercis mexicana*	1.5" tot. cal. Min	6'-8'	4'		Full canopy, symmetrical growth
3	MTL	EA	Texas Mountain Laurel	*Sophora secundiflora*	2.5" tot. cal	6'-8'	3'-4'	as shown	Full and symetrical
12	WLO	EA	Mexican Wild Olive	*Cordia boissieri*	1.5" tot. cal. Min	6'	3'-4'	as shown	Full and symetrical
SHRUBS									
16	COT	EA	Cotoneaster	*Cotoneaster glaucophyllus*	#5 cont.	36"	24"	24"	Full and symetrical
34	ESU	EA	Evergreen Sumac	*Rhus virens*	#5 cont.	36"	24"	24"	Full and symetrical
22	GMG	EA	Gulf Muhly Grass	*Muhlenbergia capillaris*	#3 cont.	18"	12"	24"	Full and symetrical
9	GSA	EA	Gray Santolina	*Santolina chamaecyparissus*	#1 cont.	18"	9"	as shown	Full and symetrical
13	IND	EA	Indigo Spires	*Salvia 'Indigo Spires'*	#5 cont.	24"	12"	36"	Full and symetrical
29	LEU	EA	Texas Sage	*Leucophyllum frutescens*	#3 cont.	18"	12"	24"	Full and symetrical
17	LEU	EA	Texas Sage	*Leucophyllum frutescens*	#5 cont.	20"-24"	14"-16"	as shown	Full and symetrical
21	LMG	EA	Lindheimer Muhly Grass	*Muhlenbergia lindheimeri*	#5 cont.	30"	24"	24"	Full and symetrical
25	MOR	EA	Moraea Iris	*Moraea iridioides*	#3 cont.	30"	24"	24"	Full and symetrical
22	MTL	EA	Texas Mountain Laurel	*Sophora secundiflora*	#5 cont.	24"	18"	34"	Full and symetrical
5	MXO	EA	Mexican Oregano	*Poliomintha longifolia*	#3 cont.	12"	8"	36"	Full and symetrical
19	PRJ	EA	Primrose Jasmine	*Jasminum mesnyi*	#5 cont.	20"-24"	14"-16"	as shown	Full and symetrical
11	PRO	EA	Trailing rosemary	*Rosmarinus prostrata*	#3 cont.	30"	24"	24"	Full and symetrical
27	ROS	EA	Rosemary	*Rosmarinus officinalis*	#5 cont.	24"	18"	34"	Full and symetrical
5	SAP	EA	Pink Salvia	*Salvia greggii*	#3 cont.	30"	24"	24"	Full and symetrical
8	THR	EA	Thryallis	*Galphimia speciosa*	#5 cont.	30"	24"	24"	Full and symetrical
18	TLA	EA	Trailing New Gold Lantana	*Lantana x 'New Gold'*	#1 cont.	8"	8"-10"	36	Full and symetrical
TURF & GROUNDCOVER									
37	GRA	SF	Hickory Creek Blend Gravel		1-1/2"-3"	4" DEPTH			Hickory Creek Blend, 4" depth
310	BER	SY	TifTuf Bermuda Grass	*Cynodon dactylon'Celebration'*	Solid Sod				Certified Sod
14,342	BER	SF	TifTuf Bermuda Grass	*Cynodon dactylon'Celebration'*	Hydroseed				



0 5ft 10ft 20 ft
SCALE: 1" = 10'-0"

NORTH

RIALTO STUDIO

Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

REGISTERED LANDSCAPE ARCHITECT PETER HINTON STATE OF TEXAS

2-28-19

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829

DATE : 02.28.2019

DRAWN :

REVISIONS:

PLANTING PLAN

SHEET NO.

L4.2

IRRIGATION NOTES

1. Contractor to submit as built drawings of the automatic irrigation system as described on the drawing and within these notes. Illustrate on the drawing location of as built equipment with two triangulating measurements from permanent objects, as follows:
   A. All valves electrical, quick coupling and isolation.
   B. All wire junctions and splice boxes.
   C. All ending locations of extra valve wires and mainline.
   D. Location of irrigation controller and rain and freeze sensor.
   Drawings are to be sealed by a licensed Irrigator with the State of Texas. Submit as built drawings to the Landscape Architect or Owner's representative.
2. All mainline and lateral line piping and control wires under paving shall be installed in separate sleeves. Lateral line sleeves shall be a minimum of twice (2X) the diameter of the pipe to be sleeved. Mainline and control wire sleeves shall be of adequate size to allow for removal and repair. Minimum sleeve size shall be 4" O.D.
3. Contractor to install all backflow prevention devices and all piping between the point of connection and the backflow preventer as per local and governing authorities.
4. Final location of the backflow preventer and automatic controller shall be approved by the owner's authorized representative.
5. 120 VAC electrical power source at controller location shall be provided by others. Controller to be hardwired to a dedicated outlet.
6. All sprinkler heads shall be set perpendicular to finish grade and a minimum of 6" away from walls, rocks, sidewalk, fences, etc. unless otherwise specified.
7. The Irrigation Contractor shall flush and adjust all sprinkler heads and valves for optimum coverage with minimal over spray onto walks, streets, walls, etc.
8. It is the responsibility of the Irrigation Contractor to familiarize himself with all grade differences, location of walls, retaining walls, structures and utilities. The irrigation contractor shall repair or replace all items damaged by his work. He shall coordinate his work with other contractors for the location and installation of pipe sleeves through walls, under roadways and paving, etc.
9. All work shall be installed in accordance with applicable codes and ordinances as per local and governing authorities and the National Electrical Code and it's governing authorities.
10. All irrigation main lines shall be PVC Schedule 40 Solvent - Weld with a min. 12" cover. All lateral lines shall be PVC class 200 solvent weld with 8" min. cover.
11. All control wire shall be #14 AWG solid copper conductor. One (1) tracer wire (green) shall run parallel to the common wire and be joined with waterproof connectors at all branches. Coil a minimum 3 feet of extra tracer wire in the controller housing.
12. Do not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that unknown obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the design. Such obstructions or differences should be brought to the attention of the owner's authorized representative. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.
13. All sprinkler equipment not otherwise detailed or specified shall be installed as per manufacturer's recommendations and specifications.
14. The irrigation contractor shall install serviceable check valves on all heads in areas where post valve shut-off draining of the irrigation head causes flooding or as directed by the owner's authorized representative.
15. The contractor shall be a Registered Licensed Irrigator in the State of Texas. Contractor must conform to all codes as stated in section 34 of the Texas Water Code and TNRCC.
16. All remote control valves, gate valves, and quick couplers shall be installed in an Pentek standard valve box.
17. Waterproof Connectors to be used on all wire connections. On ID-wire, use only 3M-DBY or-DBR connectors. On solenoid wire, use wade connectors.
18. Irrigation Contractor shall procure all permits, licenses, tests and inspections, and pay all charges and fees and give all necessary notices for the completion of work.
19. Refer to specifications for additional detailed information.
20. All valves shall be adjusted to minimize wind drift, atomization (fogging), and to achieve maximum coverage. Adjust the operating pressure of valves at farthest or highest head from valve. Do not adjust output at the nozzle unless absolutely necessary.
21. Contractor shall not disturb roots of existing trees, there shall be no machine trenching below the dripline of existing and relocated trees. All trenching within driplines shall be performed by hand with care taken to avoid roots.
22. Extreme care shall be exercised in excavating and working near utilities. Contractor shall verify the location and condition of all utilities and be responsible for damage to any utilities.
23. Contractor shall clearly mark all exposed excavations, materials and equipment. Cover or barricade trenches when the contractor is not on the site. Take all necessary safety precautions to protect and prevent injury to any persons on the site.
24. Prior to project turn over the Irrigation Contractor will be required to conduct a final walk thru with the Owner or their representatives. The walk thru is to establish 100% completion of the irrigation installation and function according to specifications.If three malfunctions or installation discrepancies occur the walk thru will be ceased and rescheduled for a later date after repairs have been made at the Contractors liability.
25. The irrigation design does not provide full 100% coverage of the site. See plans and specifications for areas to be irrigated. Contractor is responsible for 100% coverage on all irrigated areas.
26. The irrigation contractor is required by law to notify Texas One Call (800-245-4545) 72 hours prior to any excavation.
27. The drawings are generally diagrammatic and represent the intent of the work to be installed. For clarity purposes some irrigation lines may be shown in hardscape areas without access sleeves. These lines shall be installed in a common trench or at the back of curb in landscape areas.
28. All work called for on the drawings by notes or details shall be furnished and installed whether or not specifically mentioned in the specifications.
29. The Contractor shall verify the on-site static pressure by submitting a letter certifying that on-site pressure exceeds design pressure by 10%. If on-site pressure does not exceed design pressure by 10%, contact the Owner's representative for resolution. If construction work is started prior to receiving certification letter, the Contractor assumes all costs for changes required to meet on-site pressure.

PRESSURE LOSS: FARTHEST ZONE

ZONE 9: SHRUB DRIP (10.2 GPM)

3/4" WATER SERVICE AND METER	3.8
3/4" DOUBLE CHECK	6.0
1" MASTER VALVE	3.0
1.25" MAINLINE (SCH 40 PVC x 720')	4.9
ELEVATION LOSS	0.0
1" DRIP ZONE KIT & TUBING	42.0
TOTAL PSI LOSS	59.7
TOTAL DESIGN PRESSURE REQUIRED	66.0

PRESSURE LOSS: CRITICAL ZONE

ZONE 8: TREE BUBBLER ZONE (12.0 GPM)

3/4" WATER SERVICE AND METER	5.3
3/4" DOUBLE CHECK	6.0
1" MASTER VALVE	3.0
1.25" MAINLINE (SCH 40 PVC x 700')	6.7
ELEVATION LOSS	0.0
1" CONTROL VALVE	3.0
TURF ROTATOR HEAD	30.0
LATERAL LINE LOSS (PVC CLASS 200 & 315)	1.2
TOTAL PSI LOSS	55.2
TOTAL DESIGN PRESSURE REQUIRED	61.0

INSTALLATION NOTES

1. Symbols denote head type - nozzle is called out at the symbol.
2. Unlabeled pipe is .5" for tree bubbler and spray laterals, .75" for drip laterals.
3. Sleeves to be twice the total diameter of the pipes within.
4. Install wiring in a separate sleeve within mainline sleeve, size as necessary.
5. Pipes are sized to minimize excessive pressure loss within individual zones - install as shown.
6. Installer is to adjust all heads for 100% coverage of the landscaped areas with minimum overspray on hardscapes. Some overspray on gravel mulch is acceptable in order to achieve head to head coverage and adequately cover irregular turf edges.

ZONE PERFORMANCE DATA (RUN TIMES @ 80% E.T.)

NO. OF ZONES	APPLICATION	VALVE SIZE		AVE. PREC. RATE		MINUTES FOR 1"
1-3	TURF ROTATOR	1"		0.65	IN./HR	276
4-7	TREE BUBBLER	1"		1.00	IN./HR	240
8-16	SHRUB DRIP	1"		0.53	IN./HR	1017
NOTE: This is intended to serve as a guide only. Contractor should evaluate actual water needs and schedule each zone to ensure proper plant growth and development.						1533
						25 Hr 33 Min

ENDORSEMENT

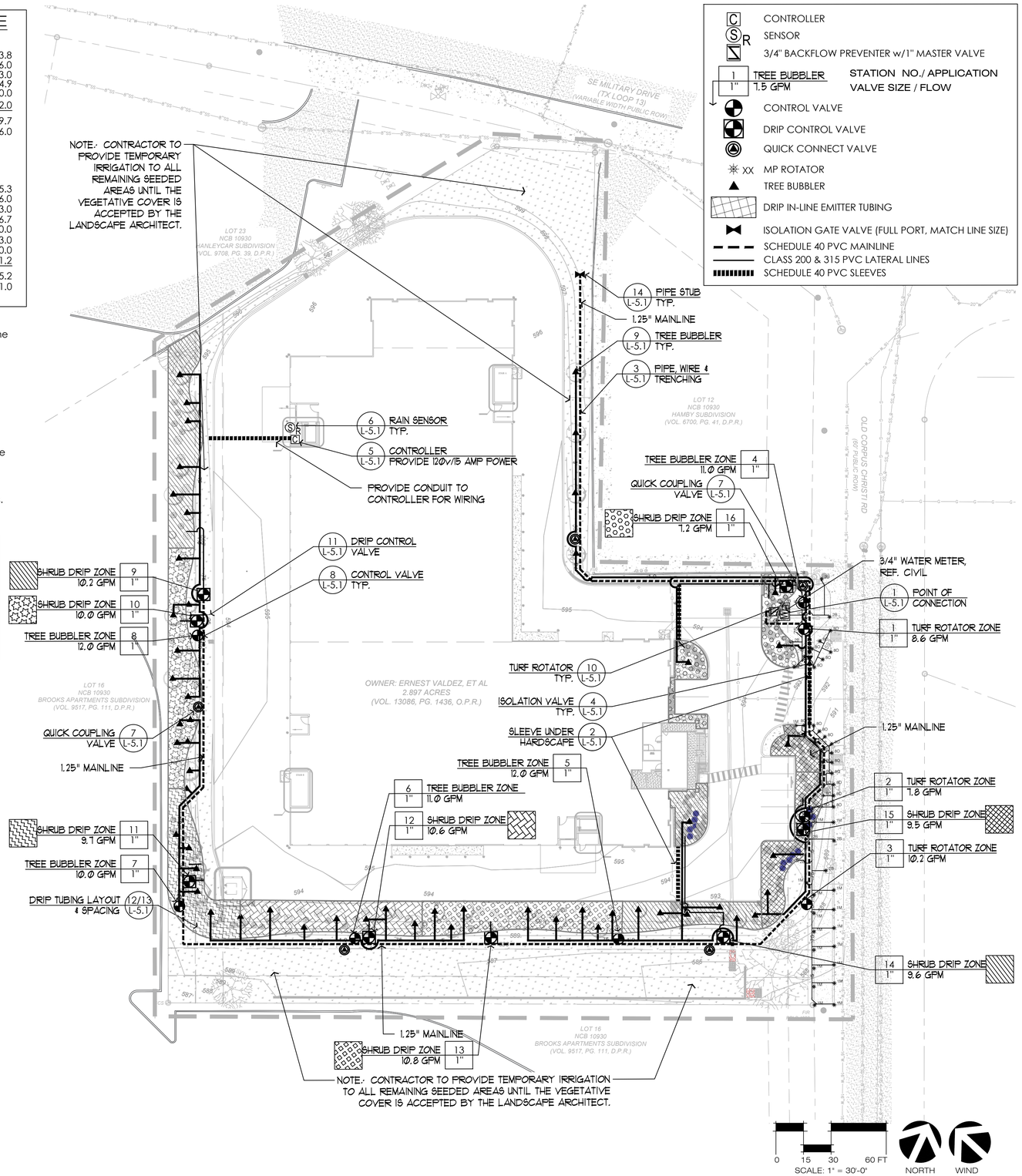
This irrigation plan conforms to the irrigation design equipment standards set out in 35-510(j) and 35-511(c)(6) of the City of San Antonio Unified Development Code and also complies with the requirements of chapter 344, 344.72-344.77 of the Texas Administrative Code.

The irrigation system does not provide 100% coverage of the site, refer plans and/or specifications for area(s) to be covered. The drawings may be diagrammatic in nature for clarity. Some piping or components may be shown larger than scale or appear to be in hardscape areas. The installer should take this into consideration and interpret the design to provide full coverage of the areas shown with all piping in sleeves, common trenches, at the back of curbs or in other planted areas. The installer is responsible for providing all work contained in the drawings, notes, specifications, and details. The installer is required by law to notify at least two (2) working days prior to any excavation one of the following:

- Lone Star 811 (800-669-8344)
- Texas 811 (800-344-8377)

The installer shall verify that static water supply pressure exceeds the design pressure by a minimum of 10%. If less, notify in writing this office, the owner, or owner's representative for a resolution. Installer shall hold harmless this office, the owner, or owner's representative for failure to make such notification prior to starting construction and thereby accepts all costs and obligations for system supply pressure corrections.

Katherine A. Valadez
Licensed Irrigator #18083
Rialto Studio, Inc., 2425 Broadway, Suite 105
San Antonio, Texas 78215
210-828-1155



LEGEND

- C — CONTROLLER
- S R — SENSOR
- 3/4" BACKFLOW PREVENTER w/1" MASTER VALVE
- 1 / 1" — TREE BUBBLER, 1.5 GPM — STATION NO./ APPLICATION, VALVE SIZE / FLOW
- CONTROL VALVE
- DRIP CONTROL VALVE
- QUICK CONNECT VALVE
- XX — MP ROTATOR
- TREE BUBBLER
- DRIP IN-LINE EMITTER TUBING
- ISOLATION GATE VALVE (FULL PORT, MATCH LINE SIZE)
- SCHEDULE 40 PVC MAINLINE
- CLASS 200 & 315 PVC LATERAL LINES
- SCHEDULE 40 PVC SLEEVES

RIALTO STUDIO
Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

STATE OF TEXAS — KATHERINE A. VALADEZ — 18083 — LICENSED IRRIGATOR
2.28.2019

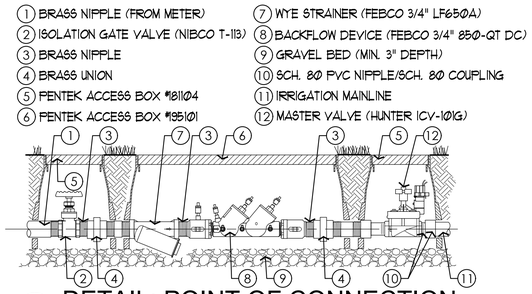
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

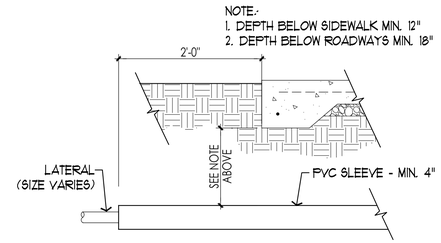
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : KV
REVISIONS:

IRRIGATION PLAN

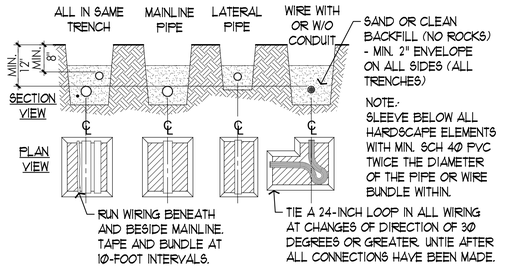
SHEET NO.
L-5.0



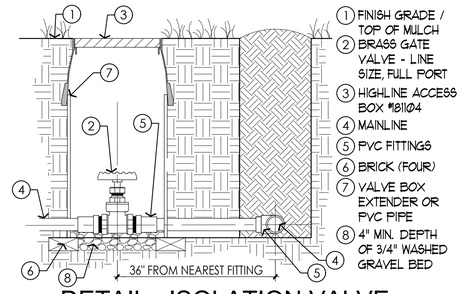
1 DETAIL: POINT OF CONNECTION
N.T.S.



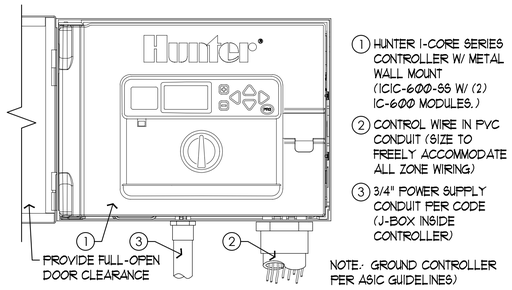
2 DETAIL: SLEEVE UNDER HARDSCAPE
SCALE: 1" = 1'-0"



3 DETAIL: PIPE, WIRE & TRENCHING
SCALE: VARIES



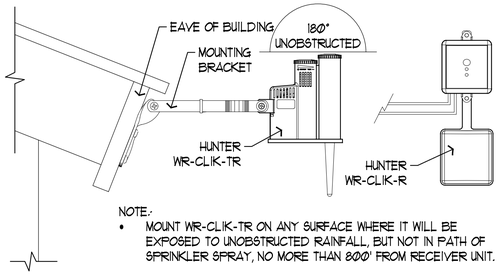
4 DETAIL: ISOLATION VALVE
N.T.S.



1. HUNTER I-CORE SERIES CONTROLLER W/ METAL WALL MOUNT (ICIC-6ØØ-SS W/ (2) IC-6ØØ MODULES.)
2. CONTROL WIRE IN PVC CONDUIT (SIZE TO FREELY ACCOMMODATE ALL ZONE WIRING)
3. 3/4" POWER SUPPLY CONDUIT PER CODE (J-BOX INSIDE CONTROLLER)

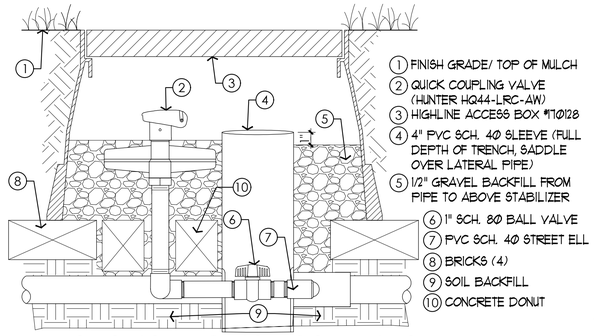
NOTE:- GROUND CONTROLLER PER ASIC GUIDELINES)

5 ELEVATION: CONTROLLER
SCALE: 3"= 1'-0"

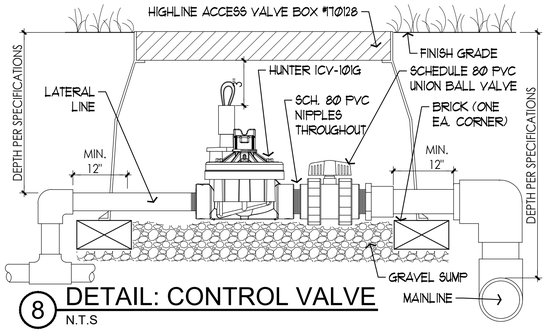


NOTE:-
- MOUNT WR-CLIK-TR ON ANY SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY, NO MORE THAN 8ØØ' FROM RECEIVER UNIT.

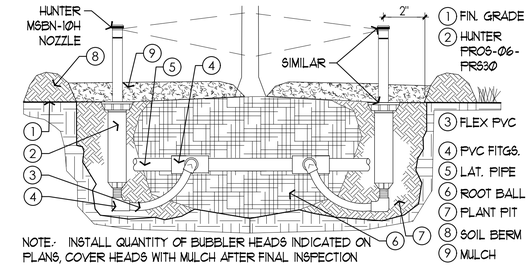
6 DETAIL: RAIN SENSOR
SCALE: 3" = 1'-0"



7 SECTION: QUICK COUPLING VALVE
SCALE: 3" = 1'-0"

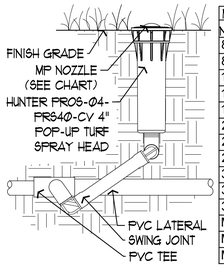


8 DETAIL: CONTROL VALVE
N.T.S



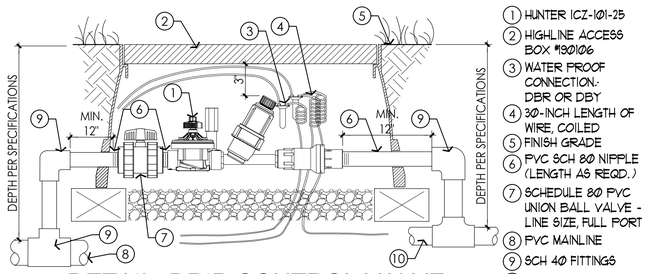
NOTE:- INSTALL QUANTITY OF BUBBLER HEADS INDICATED ON PLANS, COVER HEADS WITH MULCH AFTER FINAL INSPECTION

9 DETAIL: TREE BUBBLER
SCALE: 3" = 1'-0"

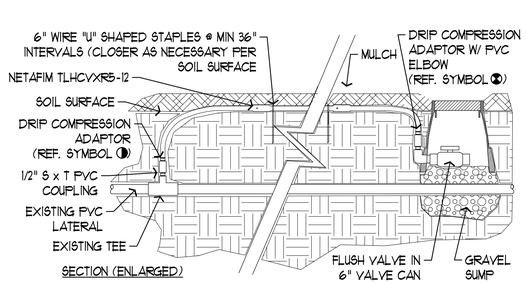


MP ROTATORS		2G
NOZZLE SERIES NUMBER		COLOR CODE
8O	MP8ØØ5R ORANGE NOZZLE 9Ø°-21Ø°	
8G	MP8ØØ5R LIME GREEN NOZZLE 36Ø°	
1M	MP1ØØØ MAROON NOZZLE 9Ø°-21Ø°	
1LB	MP1ØØØ LT. BLUE NOZZLE 21Ø°-27Ø°	
1G	MP1ØØØ GREEN NOZZLE 36Ø°	
2B	MP2ØØØ BLACK NOZZLE 9Ø°-21Ø°	
2G	MP2ØØØ GREEN NOZZLE 21Ø°-27Ø°	
2R	MP2ØØØ RED NOZZLE 36Ø°	
3B	MP3ØØØ BLUE NOZZLE 9Ø°-21Ø°	
3Y	MP3ØØØ YELLOW NOZZLE 21Ø°-27Ø°	
3G	MP3ØØØ GRAY NOZZLE 36Ø°	
MPC	MPCORNER NOZZLE 45°-1Ø5°	
MPSS	MP SIDE STRIP (MPSS53Ø)	
MPLC or MPRC	MP LEFT/RIGHT CORNER STRIP	

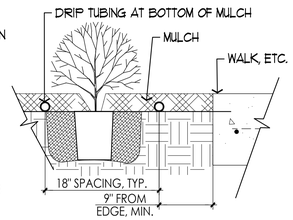
10 DETAIL: TURF ROTATOR
SCALE: 3" = 1'-0"



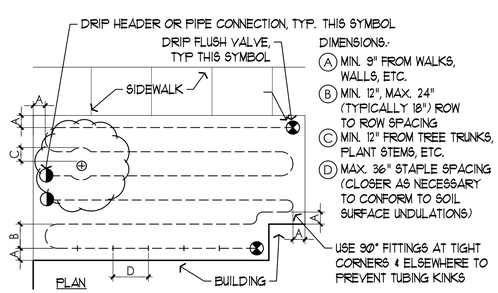
11 DETAIL: DRIP CONTROL VALVE
N.T.S.



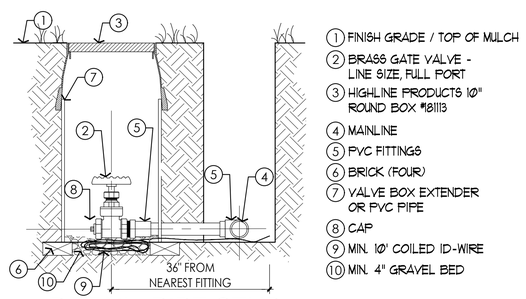
12 DETAIL: DRIP TUBE INSTALLATION
N.T.S.



DRIP AREAS:-	SHRUB
EMITTER SIZE	.53 GPH
EMITTER SPACING	12"
ROW SPACING	18" TYP.
(± 25% FOR EQUAL SPACING) (NETAFIM TLHCVXR5-12)	



13 DETAIL: DRIP TUBE SPACING
N.T.S.



14 DETAIL: PIPE STUB
N.T.S.

RIALTO STUDIO
Rialto Studio, Inc.
Landscape Architecture
2425 Broadway, Suite 105
San Antonio, Texas 78215
p. 210.828.1155
f. 210.828.1399

STATE OF TEXAS
KATHERINE A. VALADEZ
18083
LICENSED LANDSCAPE ARCHITECT
2.28.2019

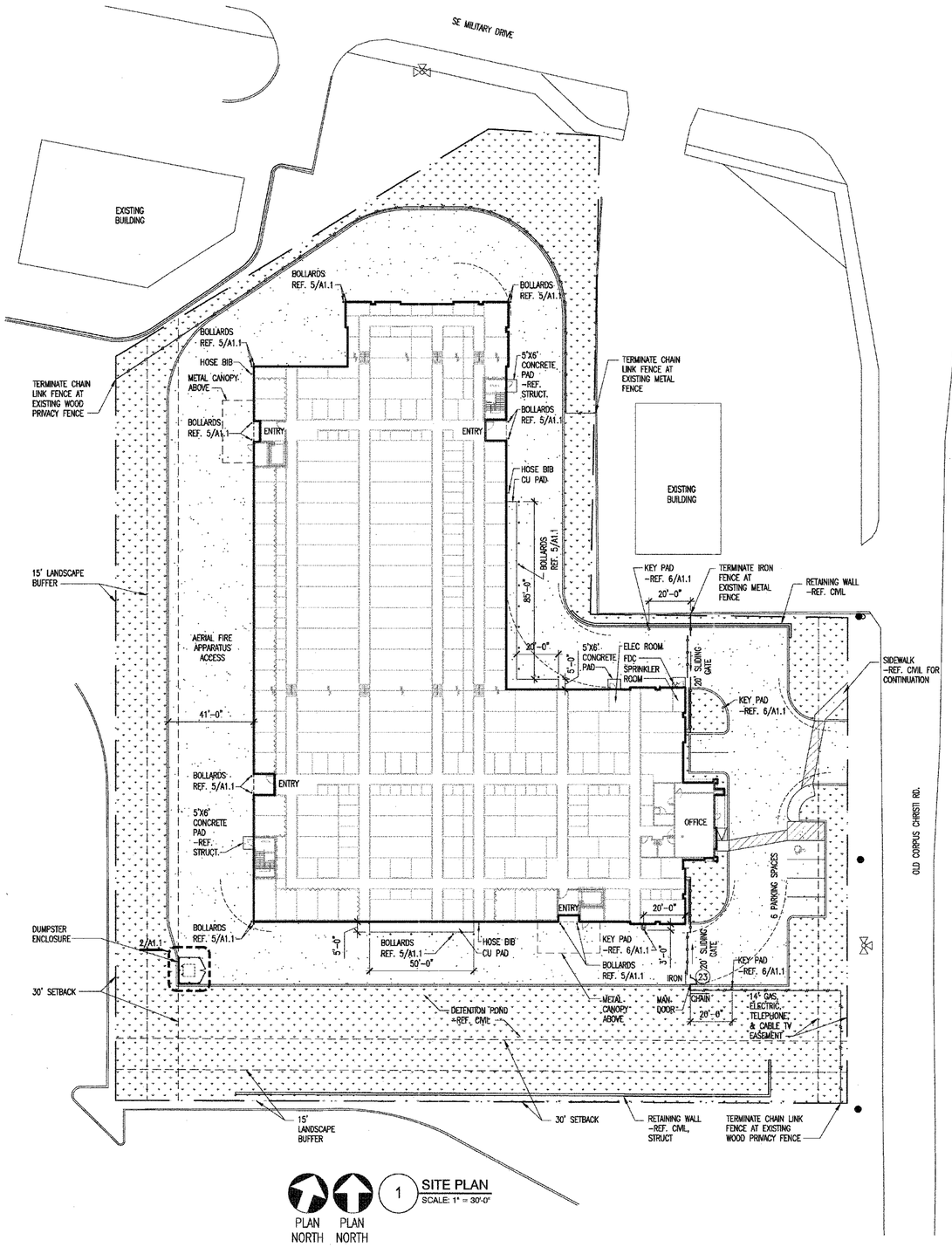
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

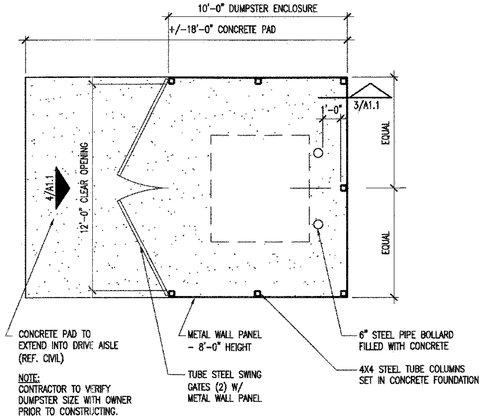
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : KV
REVISIONS:

IRRIGATION DETAILS

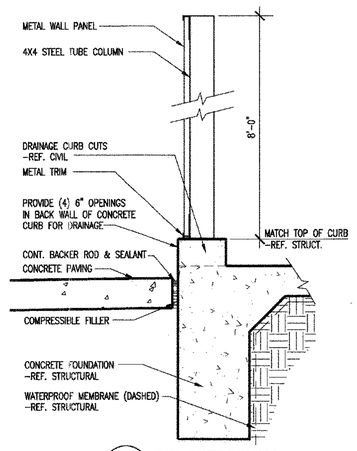
SHEET NO.
L-5.1



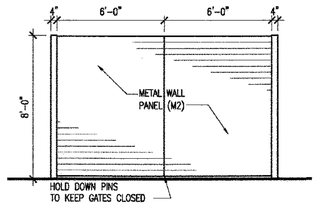
1 SITE PLAN
SCALE: 1" = 30'-0"



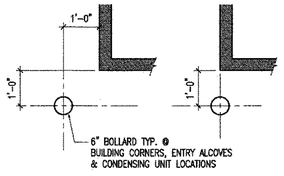
2 DUMPSTER ENCLOSURE
SCALE: 1/4" = 1'-0"



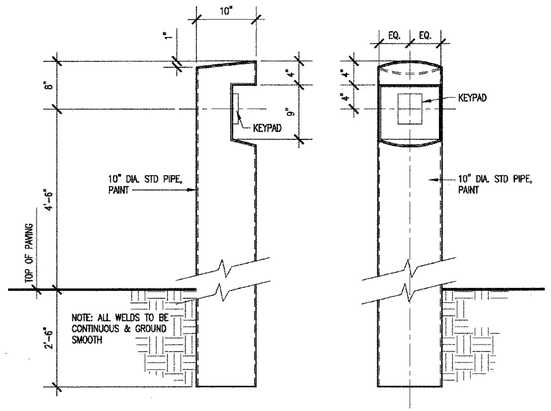
3 DUMPSTER WALL
SCALE: 1" = 1'-0"



4 DUMPSTER GATE ELEVATION
SCALE: 1/4" = 1'0"



5 BOLLARD DETAIL
SCALE: 1/2" = 1'-0"



6 KEYPAD BOLLARD
SCALE: 1" = 1'-0"

SITE PLAN LEGEND

— · —	PROPERTY LINES
- - - - -	SETBACKS / BUFFERS / EASEMENTS
-o-o-o-o-	6'-0" HIGH, ORNAMENTAL IRON FENCE W/ SLIDE GATES -REF. 3/A1.3 & 4/A1.3
-//-//-	6'-0" HIGH, BLACK VINYL CHAIN LINK FENCE
●	6" STEEL PIPE BOLLARD -REF. 5/A1.1
	CONCRETE PAVING -REF. CIVIL DWGS.
	LANDSCAPE AREA -REF LANDSCAPE DRAWINGS
	4" STRIPES PAINTED ON PAVING AT 2'-0" O.C.

SITE PLAN NOTES

1. REFER CIVIL DRAWINGS FOR RECORDED PLAT/SURVEY FOR PROPERTY BOUNDARIES, EASEMENTS, SETBACKS, ETC. REPORT ANY DISCREPANCIES TO ARCHITECT PRIOR TO CONSTRUCTION
2. REFER CIVIL DRAWINGS FOR ALL DRIVE, PARKING, AND CURB LOCATIONS, DETAILS, AND DIMENSIONAL INFORMATION.
3. REFER LANDSCAPE DRAWINGS FOR EXTENTS OF REQUIRED LANDSCAPING.
4. PROVIDE CONCRETE FILLED STEEL TUBE BOLLARD AT BUILDING CORNERS AND BUILDING ENTRIES AT DRIVE AREAS (REF. DETAIL 5/A1.1 FOR LOCATIONS, CIVIL FOR DETAIL).
5. SECURITY CONTRACTOR TO PROVIDE KNOX EMERGENCY KEY LOCK BOX OUTSIDE OF THE BUILDING, NEXT TO THE FIRE SPRINKLER RISER ROOM AS WELL AS THE OUTSIDE OF THE BUILDING NEXT TO THE MAIN ENTRANCE AND GATE.
6. PROVIDE FDC VISIBLE FROM STREET WITH LOCKING CAPS PER IFC 912.3.1.
7. SECURITY CONTRACTOR TO PROVIDE MANUAL FAIL SAFE OPERATION, KEY BOX AND 20'-0" GATE OPENING FOR ELECTRIC GATE PER FIRE MARSHALL REQUIREMENTS.

ARCHCON architecture
12035 GOLIWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT JEFFREY S. DALLENBACH STATE OF TEXAS
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

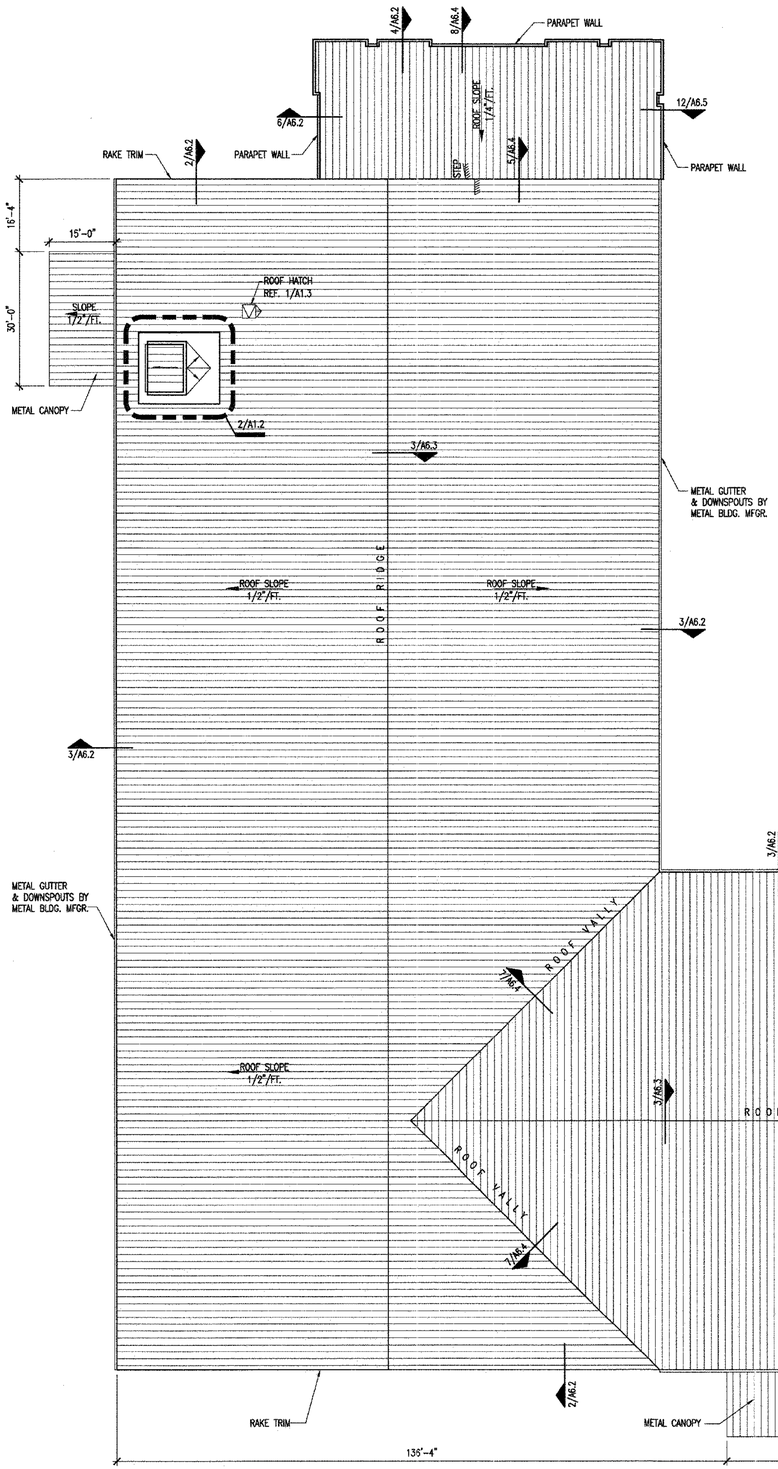
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

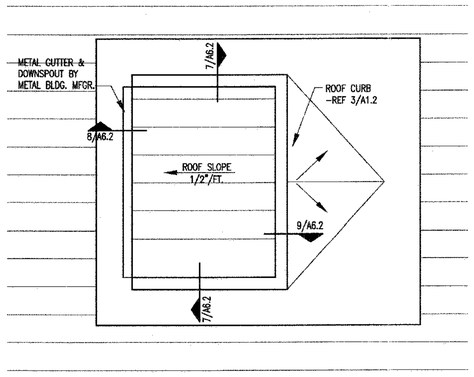
SITE PLAN

SHEET NO.
A1.1



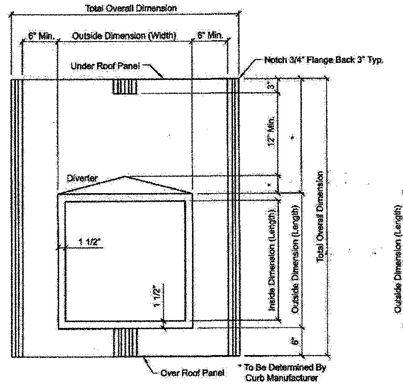
PLAN NORTH

1 ROOF PLAN
SCALE: 1/16"=1'-0"



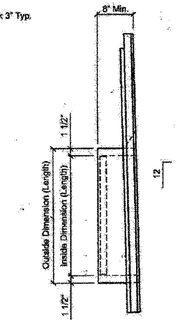
PLAN NORTH

2 ENLARGED ROOF CURB PLAN @ ELEV.
SCALE: 1/4"=1'-0"



Plan View

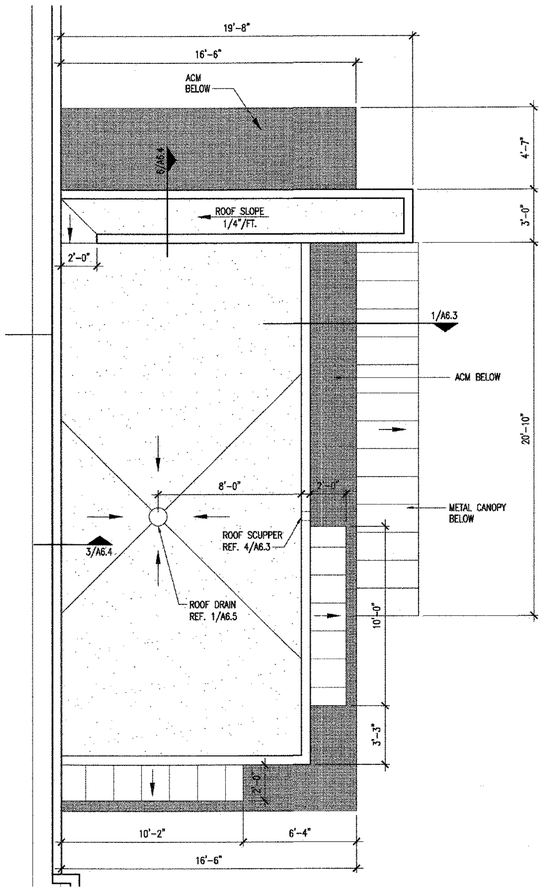
3 ROOF CURB DETAIL
SCALE: NTS



Side View

MBCI ROOF CURB STANDARD REQUIREMENTS:

- .080 ALUMINUM CONSTRUCTION
- CORNERS MITERED AND WELDED WATERTIGHT
- WELDED CAP CELLS AND CLOSURE CAPS (FIXED OR LOOSE)
- INTEGRAL WATER DIVERTER
- 8" MINIMUM CURB HEIGHT
- 1 1/2" THICK FIBERGLASS INSULATION
- UNDER-OVER APPLICATION
- RIB COVERS-FULL LENGTH PLUS 1'-0"
- 20 YEAR MATERIAL AND FABRICATION WARRANTY FROM CURB MANUFACTURER



PLAN NORTH

4 ENLARGED ROOF PLAN
SCALE: 1/4"=1'-0"

ROOF PLAN LEGEND	
	MBCI BATTENLOK ROOF 24 GA.
	TPO ROOF
	ACM PANEL

ROOF PLAN NOTES

1. GENERAL CONTRACTOR/METAL BUILDING MFGR. TO SIZE AND LOCATE REFINISHED METAL GUTTERS & DOWNSPOUTS AS REQUIRED TO MEET LOCAL REQUIREMENTS.
2. ROOF INSULATION
   - REFER TO SHEET A6.1-6.4 FOR GENERAL NOTES FOR ROOF INSULATION VALUES

ARCHCON Architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * DALLENBACH 15128 * JEFFREY S. DALLENBACH
12-28-2018

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

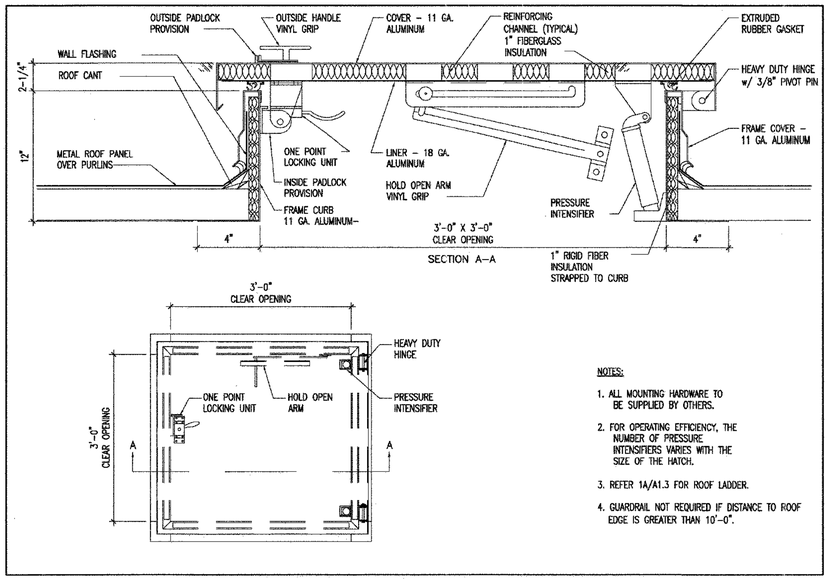
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

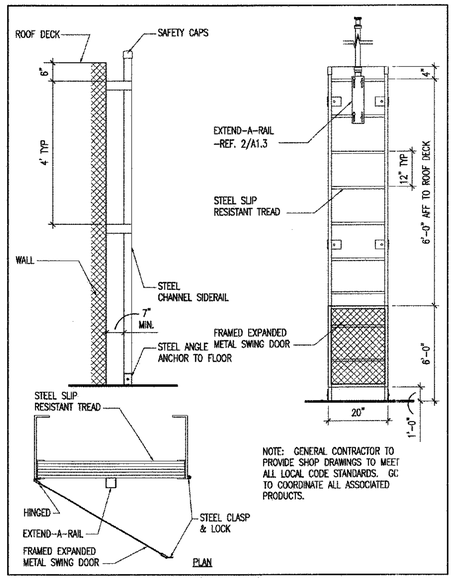
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

ROOF PLAN

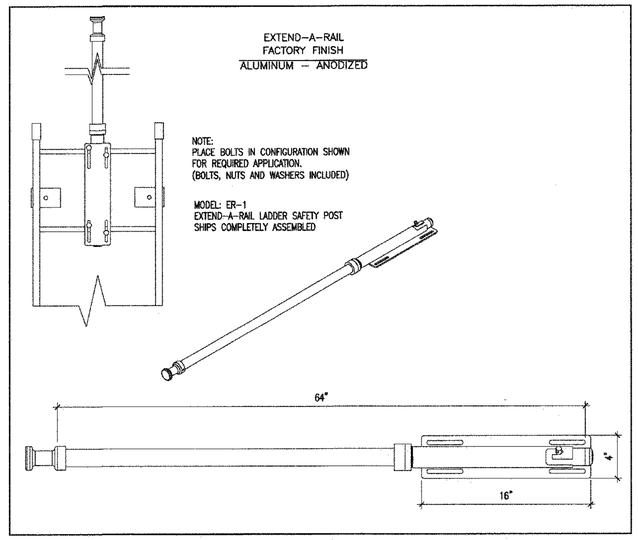
SHEET NO.
A1.2



1 ROOF HATCH DETAIL
SCALE: 1/2"=1'-0"



1A ROOF LADDER DETAIL
SCALE: 1/2"=1'-0"

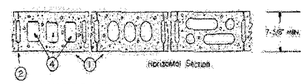


2 EXTEND - A - RAIL DETAIL
SCALE: 1/2"=1'-0"

UL FIRE RATED ASSEMBLIES

CMU WALL UL FIRE DETAIL (STAIR, ELEV., & MACH. RM.)

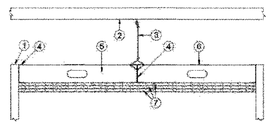
UL# U905 — 1-HOUR FIRE RATING REQUIRED



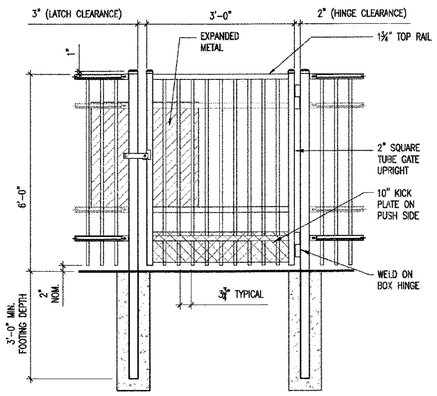
1. CONCRETE BLOCKS
2. MORTAR
3. PORTLAND CEMENT STUCCO OR GYPSUM PLASTER (OPTIONAL)
4. LOOSE MASONRY FILL
5. FOAMED PLASTIC (OPTIONAL)

HORIZONTAL ASSEMBLY UL FIRE DETAIL

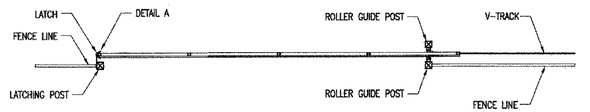
UL# I504 — 1-HOUR FIRE RATING REQUIRED

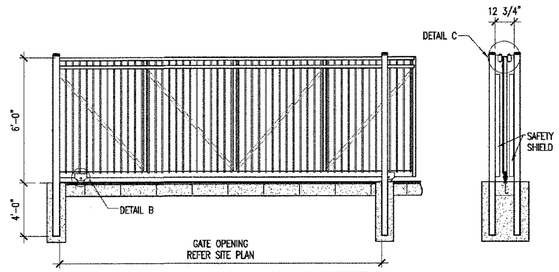


1. SUPPORTING STRUCTURE 1
2. SUPPORTING STRUCTURE 2
3. HANGER WIRE
4. C-CHANNELS
5. STEEL STUDS
6. STEEL STRAP
7. 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD

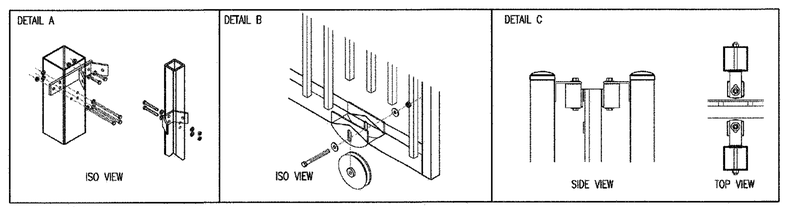


3 IRON MAN GATE ELEVATION
SCALE: 1/2" = 1'-0"





4 IRON FENCE ELEVATION
SCALE: N.T.S.



5 IRON GATE DETAILS
SCALE: N.T.S.

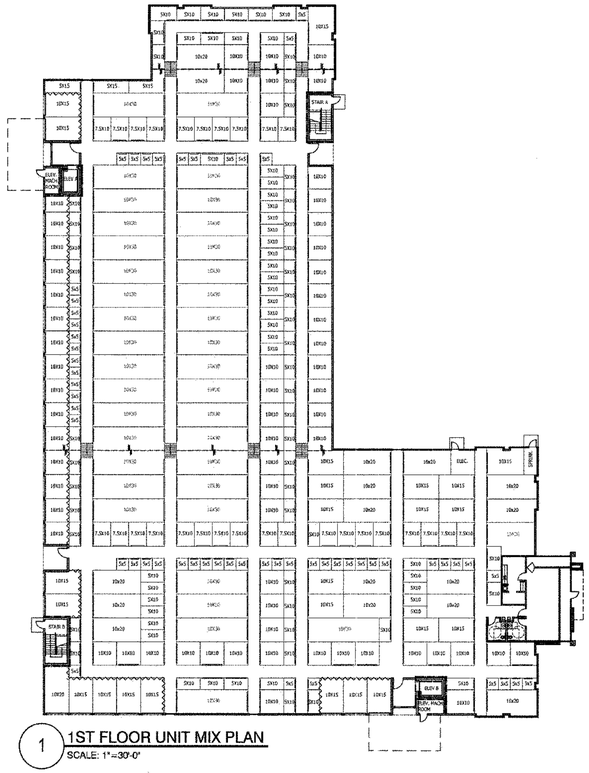
ARCHCON architecture
12035 COLWICK - SUITE 300 SAN ANTONIO, TX 78216
P 210.493.2234
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

SE MILITARY STORAGE
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

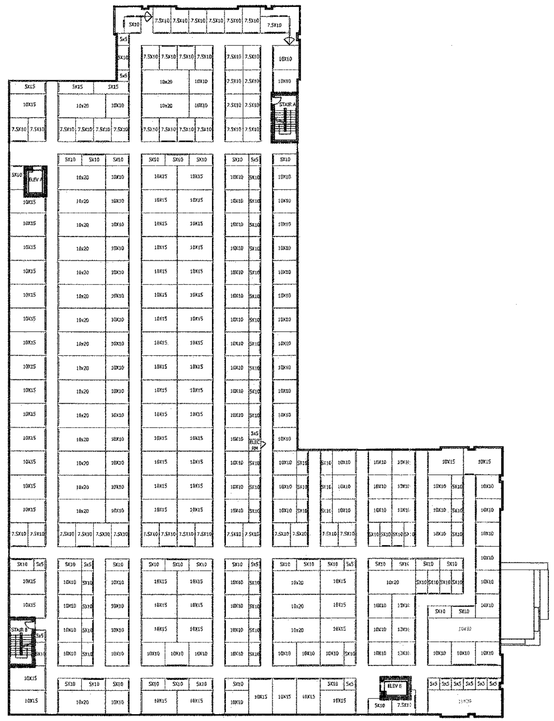
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

ROOF DETAILS

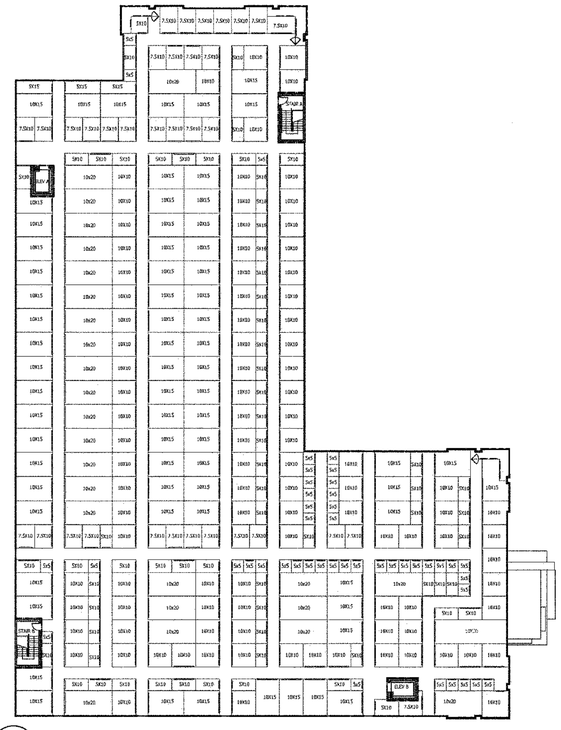
SHEET NO.
A1.3



1 1ST FLOOR UNIT MIX PLAN
SCALE: 1"=30'-0"



2 2ND FLOOR UNIT MIX PLAN
SCALE: 1"=30'-0"



3 3RD FLOOR UNIT MIX PLAN
SCALE: 1"=30'-0"

ARCHCON *architecture*

SE Military Storage
02.22.2019

1ST FLOOR	NON-CLIMATE UNITS		CLIMATIZED UNITS	
Unit Size	Interior	Sq. Ft.	Interior	Sq. Ft.
5 x 5	0	0	55	1375
5 x 10	0	0	84	4200
7.5 x 10	0	0	28	2100
5 x 15	0	0	3	225
10 x 10	15	1500	46	4600
10 x 15	11	1650	13	1950
10 x 20	1	200	16	3200
10 x 30	0	0	38	11400
Total NET	27	3350	283	29050

2ND FLOOR	NON-CLIMATE UNITS		CLIMATIZED UNITS	
Unit Size	Interior	Sq. Ft.	Interior	Sq. Ft.
5 x 5	0	0	16	400
5 x 10	0	0	77	3850
7.5 x 10	0	0	46	3450
5 x 15	0	0	3	225
10 x 10	0	0	97	9700
10 x 15	0	0	66	9900
10 x 20	0	0	23	4600
10 x 30	0	0	2	600
Total NET	0	0	330	32725

3RD FLOOR	NON-CLIMATE UNITS		CLIMATIZED UNITS	
Unit Size	Interior	Sq. Ft.	Interior	Sq. Ft.
5 x 5	0	0	44	1100
5 x 10	0	0	66	3300
7.5 x 10	0	0	34	2550
5 x 15	0	0	3	225
10 x 10	0	0	98	9800
10 x 15	0	0	69	10350
10 x 20	0	0	25	5000
10 x 30	0	0	1	300
Total NET	0	0	340	32625

TOTAL	NON - CLIMATE UNITS		CLIMATIZED UNITS	
Unit Size	Interior	Sq. Ft.	Interior	Sq. Ft.
5 x 5	0	0	115	2875
5 x 10	0	0	227	11350
7.5 x 10	0	0	108	8100
5 x 15	0	0	9	675
10 x 10	15	1500	241	24100
10 x 15	11	1650	148	22200
10 x 20	1	200	64	12800
10 x 30	0	0	41	12300
Total NET	27	3350	953	94400

Totals:	Units	Avg. Sq. Ft.	Units	Avg. Sq. Ft.	TOTAL NET
Building 1	27	124	953	99	97750

AMBIENT			Difference
Unit Size	Bldg.1	Goal	
5 x 5	0	0	0
5 x 10	0	0	0
7.5 x 10	0	0	0
10 x 10	15	0	15
10 x 15	11	0	11
10 x 20	1	0	1
10 x 30	0	0	0
Total NET	27	0	27

CC			Difference
Unit Size	Designed	Goal	
5 x 5	115	141	(26)
5 x 10	227	240	(13)
7.5 x 10	108	120	(12)
5 x 15	9	0	9
10 x 10	241	238	3
10 x 15	148	151	(3)
10 x 20	64	70	(6)
10 x 30	41	50	(9)
Total NET	953	1010	(57)

GROSS BUILDING SF	133,338
NET BUILDING RENTABLE PERCENTAGE	73%

ARCHCON architecture
12035 GOLIWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT JEFFREY S. DALLENBACH STATE OF TEXAS
02.28.19
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

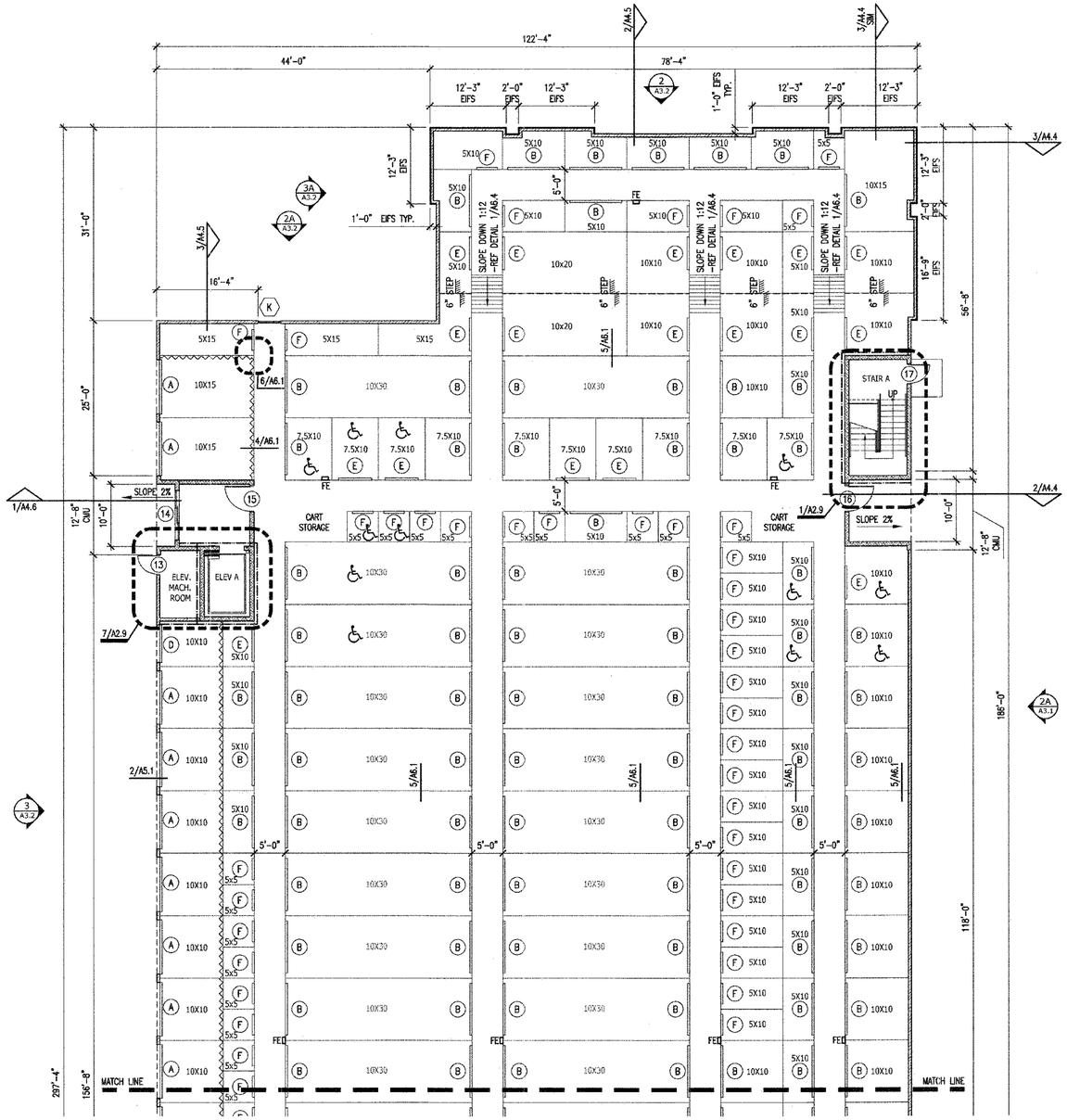
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

UNIT MIX PLANS

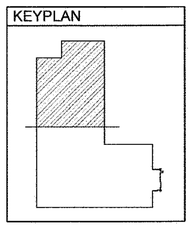
SHEET NO.
A1.4



1 FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

KEYPLAN



FLOOR PLAN LEGEND	
	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. -REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS -REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING -REFER PARTITION TYPES, SHEET A6.1
	1 HOUR FIRE RATED WALL @ STAIRS AND ELEVATOR
	8" CMU WALL - CAVITY FILL INSULATION AT ALL EXTERIOR CLIMATE CONTROLLED WALLS
	LIMESTONE VENEER
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1
	JANUS CORRIDOR CEILING -REF SHEET A6.1 (JANUS SCHEDULE)

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANEL TO BE 24 GA. STANDING SEAM METAL ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/METAL BUILDING MFGR. TO SIZE GUTTERS & DOWNSPOUTS AS REQUIRED TO MEET LOCAL REQUIREMENTS. OVERFLOW CAPABILITY TO BE PROVIDED ON GUTTERS.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. INSULATE UNDERSIDE OF ROOF/FLOOR DECK ABOVE ALL NON-CLIMATE UNITS WITH VINYL FACED BATT INSULATION TO R-19.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2-A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE DIAMOND POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT -REF. SHEET A2.8
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC 831 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.

SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS	
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF-SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF-SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI-BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
403.3 ACCESSIBLE ROUTE	THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) -JANUS TO INSTALL	

ARCHCON architecture
12035 DOLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * JEFFREY S. DALLENBACH * 15128 * STATE OF TEXAS

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829

DATE : 02.28.2019

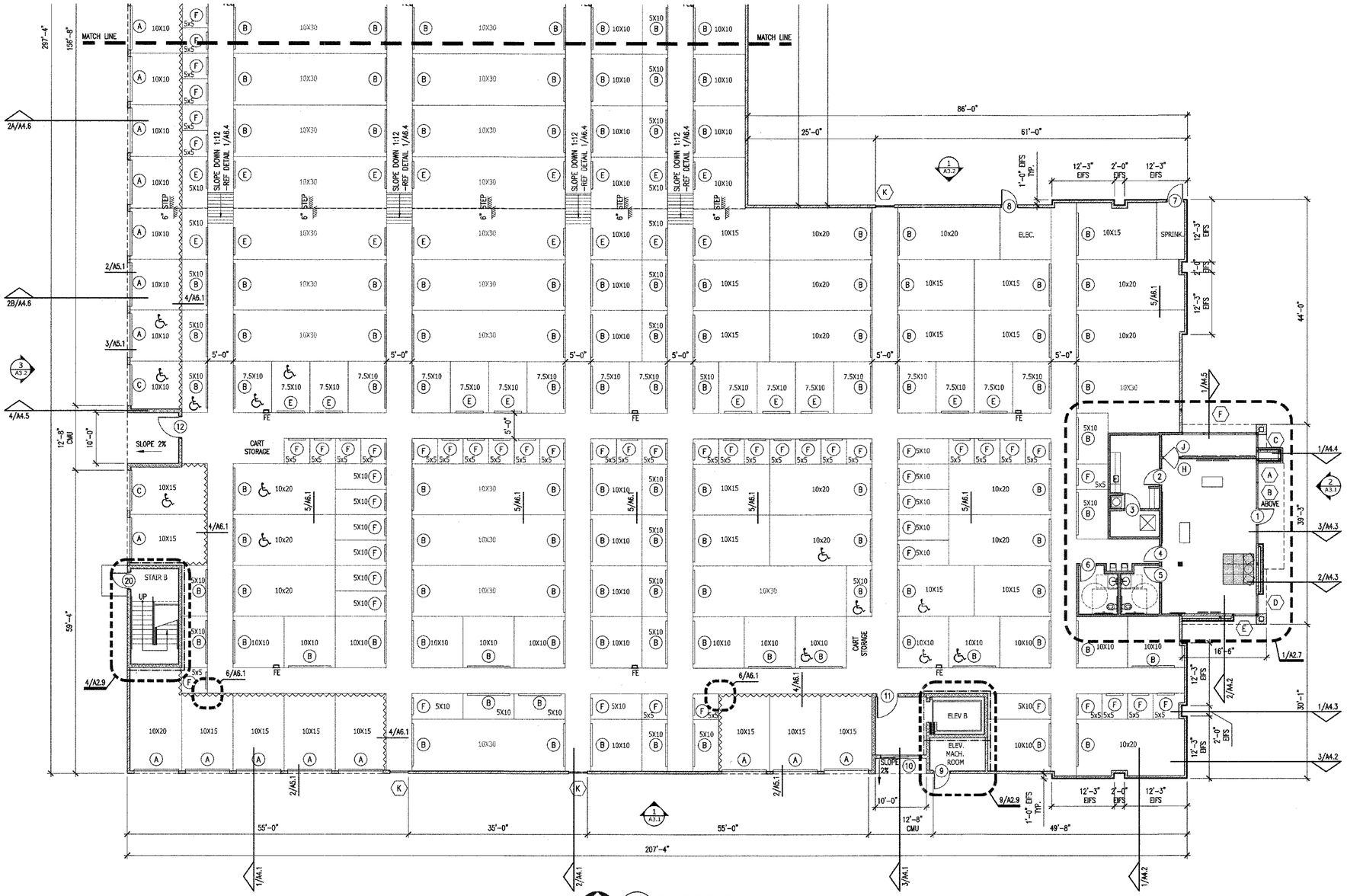
DRAWN : PS/VP

REVISIONS:

1ST FLOOR PLAN

SHEET NO.

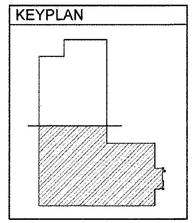
A2.1



1 FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

KEYPLAN



FLOOR PLAN LEGEND	
	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
	1 HOUR FIRE RATED WALL @ STAIRS AND ELEVATOR
	8" CMU WALL – CAVITY FILL INSULATION AT ALL EXTERIOR CLIMATE CONTROLLED WALLS
	LIMESTONE VENEER
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1
	JANUS CORRIDOR CEILING –REF SHEET A6.1 (JANUS SCHEDULE)

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANEL TO BE 24 GA. STANDING SEAM METAL ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/METAL BUILDING MFGR. TO SIZE GUTTERS & DOWNSPOUTS AS REQUIRED TO MEET LOCAL REQUIREMENTS. OVERFLOW CAPABILITY TO BE PROVIDED ON GUTTERS.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. INSULATE UNDERSIDE OF ROOF/FLOOR DECK ABOVE ALL NON-CLIMATE UNITS WITH VINYL FACED BATT INSULATION TO R-19.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2-A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE DIAMOND POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.8
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC 1831 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.

SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS	
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF-SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF-SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI-BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
403.3 ACCESSIBLE ROUTE	THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL	

ARCHCON architecture
12035 GOLIWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

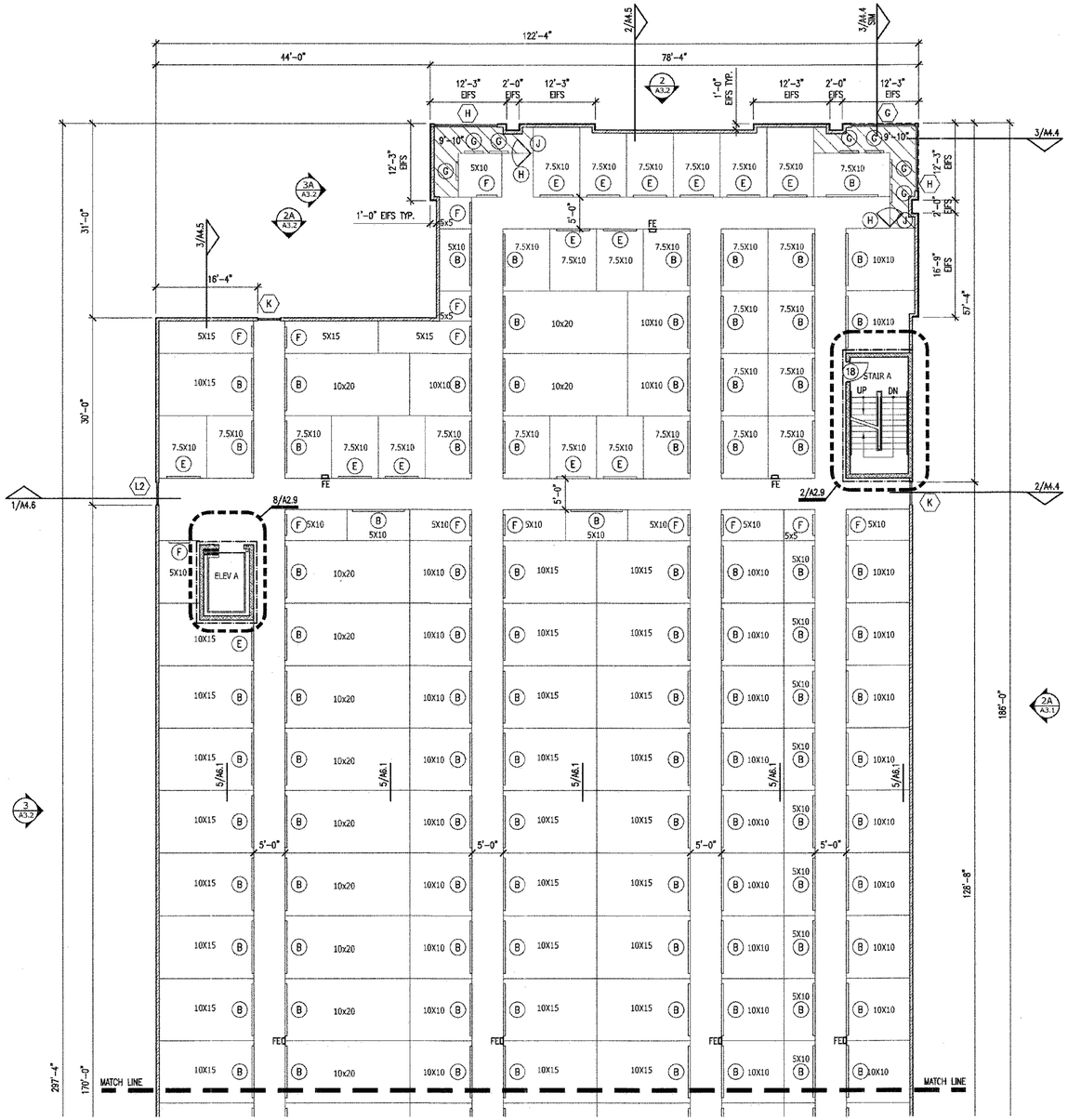
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

1ST FLOOR PLAN

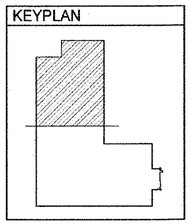
SHEET NO.
A2.2



1 SECOND FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

KEYPLAN



FLOOR PLAN LEGEND

- METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
- EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
- GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
- 1 HOUR FIRE RATED WALL @ STAIRS AND ELEVATOR
- 8" CMU WALL – CAVITY FILL INSULATION AT ALL EXTERIOR CLIMATE CONTROLLED WALLS
- LIMESTONE VENEER
- INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1
- JANUS CORRIDOR CEILING –REF SHEET A6.1 (JANUS SCHEDULE)

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANEL TO BE 24 GA. STANDING SEAM METAL ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/METAL BUILDING MFGR. TO SIZE GUTTERS & DOWNSPOUTS AS REQUIRED TO MEET LOCAL REQUIREMENTS. OVERFLOW CAPABILITY TO BE PROVIDED ON GUTTERS.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. INSULATE UNDERSIDE OF ROOF/FLOOR DECK ABOVE ALL NON-CLIMATE UNITS WITH VINYL FACED BATT INSULATION TO R-19.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2-A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE DIAMOND POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.8
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC 831 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.

	SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF-SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF-SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI-BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
403.3 ACCESSIBLE ROUTE	THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL	

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT JEFFREY S. DALLENBACH 10233-304 STATE OF TEXAS

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829

DATE : 02.28.2019

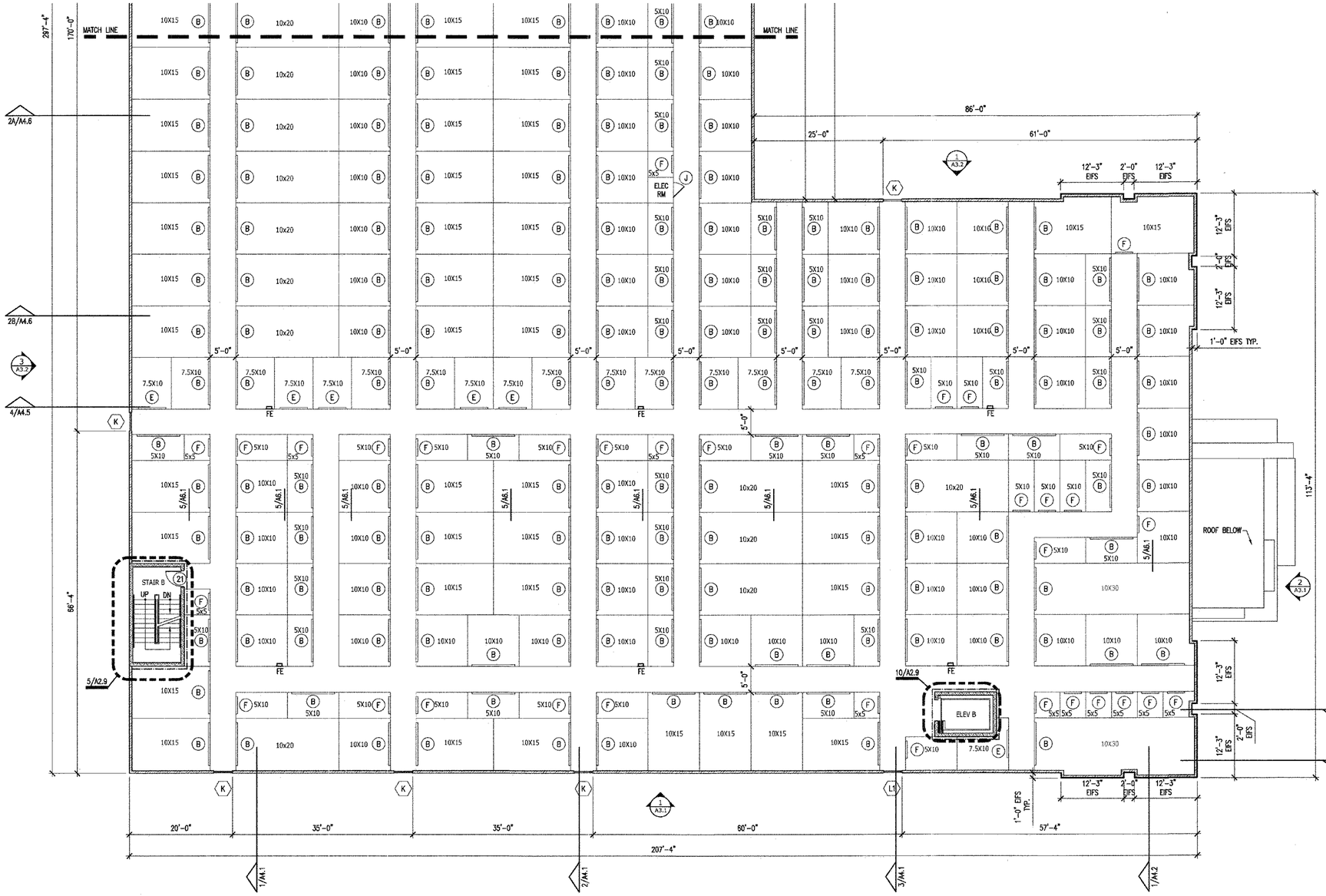
DRAWN : PS/VP

REVISIONS:

2ND FLOOR PLAN

SHEET NO.

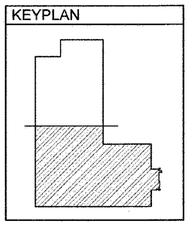
A2.3



1 SECOND FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

KEYPLAN



FLOOR PLAN LEGEND

	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
	1 HOUR FIRE RATED WALL @ STAIRS AND ELEVATOR
	8" CMU WALL – CAVITY FILL INSULATION AT ALL EXTERIOR CLIMATE CONTROLLED WALLS
	LIMESTONE VENEER
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1
	JANUS CORRIDOR CEILING –REF SHEET A6.1 (JANUS SCHEDULE)

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANEL TO BE 24 GA. STANDING SEAM METAL ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/METAL BUILDING MFGR. TO SIZE GUTTERS & DOWNSPOUTS AS REQUIRED TO MEET LOCAL REQUIREMENTS. OVERFLOW CAPABILITY TO BE PROVIDED ON GUTTERS.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. INSULATE UNDERSIDE OF ROOF/FLOOR DECK ABOVE ALL NON-CLIMATE UNITS WITH VINYL FACED BATT INSULATION TO R-19.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2-A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE DIAMOND POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.8
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC #31 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.

SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS	
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF-SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF-SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI-BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
403.3 ACCESSIBLE ROUTE	THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL	

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT JEFFREY S. DALLENBACH 18128 STATE OF TEXAS 02.28.2019

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 18128

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829

DATE : 02.28.2019

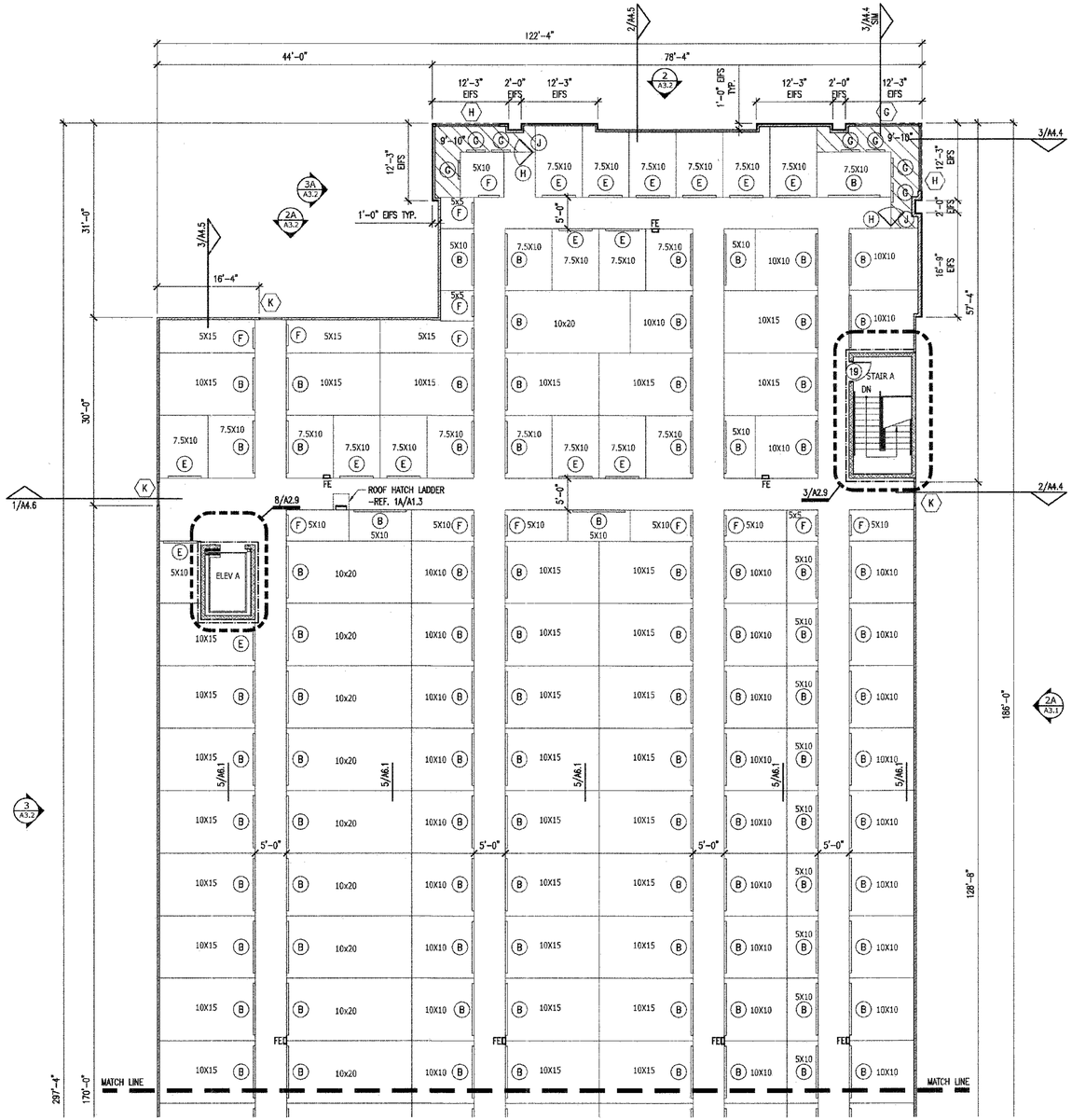
DRAWN : PS/VP

REVISIONS:

2ND FLOOR PLAN

SHEET NO.

A2.4



1 THIRD FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

FLOOR PLAN LEGEND

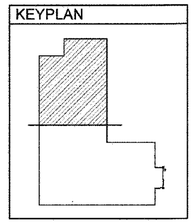
	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
	1 HOUR FIRE RATED WALL @ STAIRS AND ELEVATOR
	8" CMU WALL – CAVITY FILL INSULATION AT ALL EXTERIOR CLIMATE CONTROLLED WALLS
	LIMESTONE VENEER
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1
	JANUS CORRIDOR CEILING –REF SHEET A6.1 (JANUS SCHEDULE)

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANEL TO BE 24 GA. STANDING SEAM METAL ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/METAL BUILDING MFGR. TO SIZE GUTTERS & DOWNSPOUTS AS REQUIRED TO MEET LOCAL REQUIREMENTS. OVERFLOW CAPABILITY TO BE PROVIDED ON GUTTERS.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. INSULATE UNDERSIDE OF ROOF/FLOOR DECK ABOVE ALL NON-CLIMATE UNITS WITH VINYL FACED BATT INSULATION TO R-19.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2-A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE DIAMOND POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.8
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC 931 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.

	SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF-SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF-SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI-BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
403.3 ACCESSIBLE ROUTE	THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL	

KEYPLAN



ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * TEXAS * JEFFREY S. DALLENBACH 18128 * STATE OF TEXAS

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 18128

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829

DATE : 02.28.2019

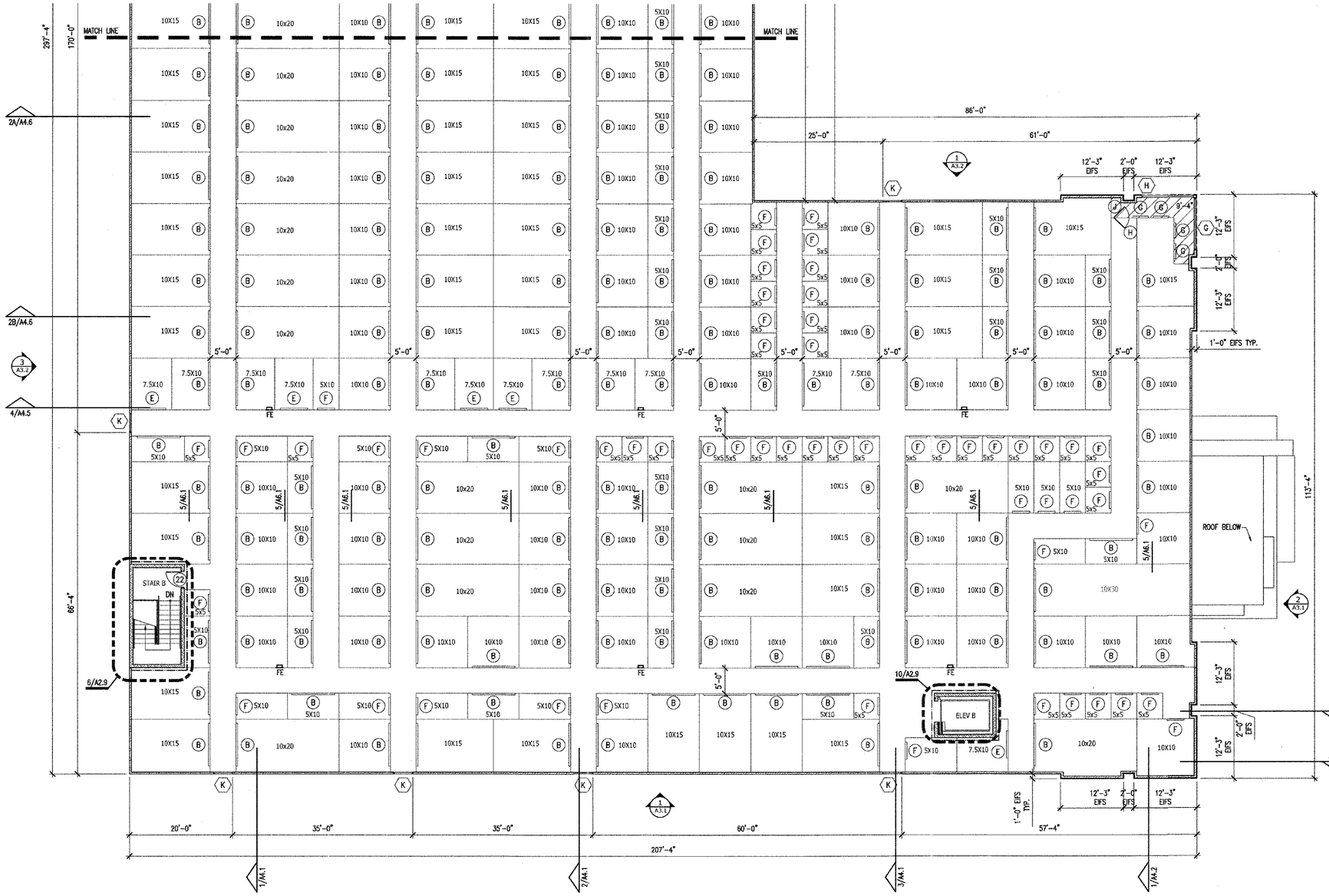
DRAWN : PS/VP

REVISIONS:

3RD FLOOR PLAN

SHEET NO.

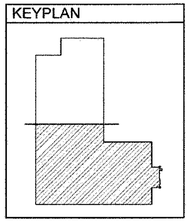
A2.5



1 THIRD FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

KEYPLAN



FLOOR PLAN LEGEND

	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
	1 HOUR FIRE RATED WALL @ STAIRS AND ELEVATOR
	8" CMU WALL – CAVITY FILL INSULATION AT ALL EXTERIOR CLIMATE CONTROLLED WALLS
	LIMESTONE VENEER
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1
	JANUS CORRIDOR CEILING –REF SHEET A6.1 (JANUS SCHEDULE)

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANEL TO BE 24 GA. STANDING SEAM METAL ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/METAL BUILDING MFGR. TO SIZE GUTTERS & DOWNSPOUTS AS REQUIRED TO MEET LOCAL REQUIREMENTS. OVERFLOW CAPABILITY TO BE PROVIDED ON GUTTERS.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. INSULATE UNDERSIDE OF ROOF/FLOOR DECK ABOVE ALL NON–CLIMATE UNITS WITH VINYL FACED BATT INSULATION TO R–19.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2–A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE DIAMOND POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.8
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC B31 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.

	SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF–SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF–SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI–BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
403.3 ACCESSIBLE ROUTE	THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL	

ARCHCON architecture
12035 GOLIWICK · SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH 15128
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

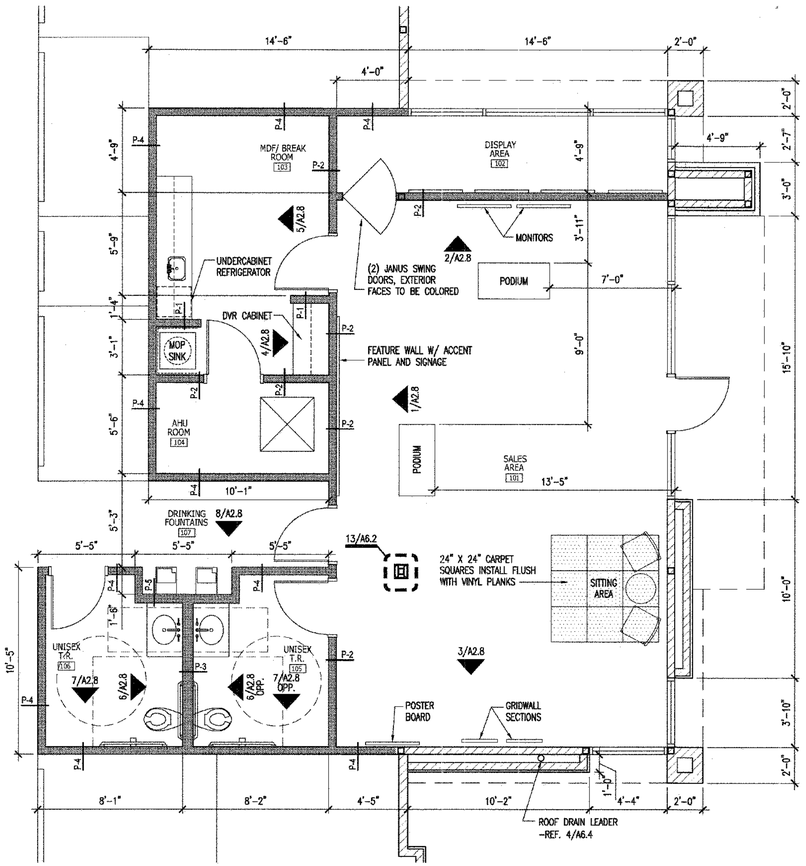
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

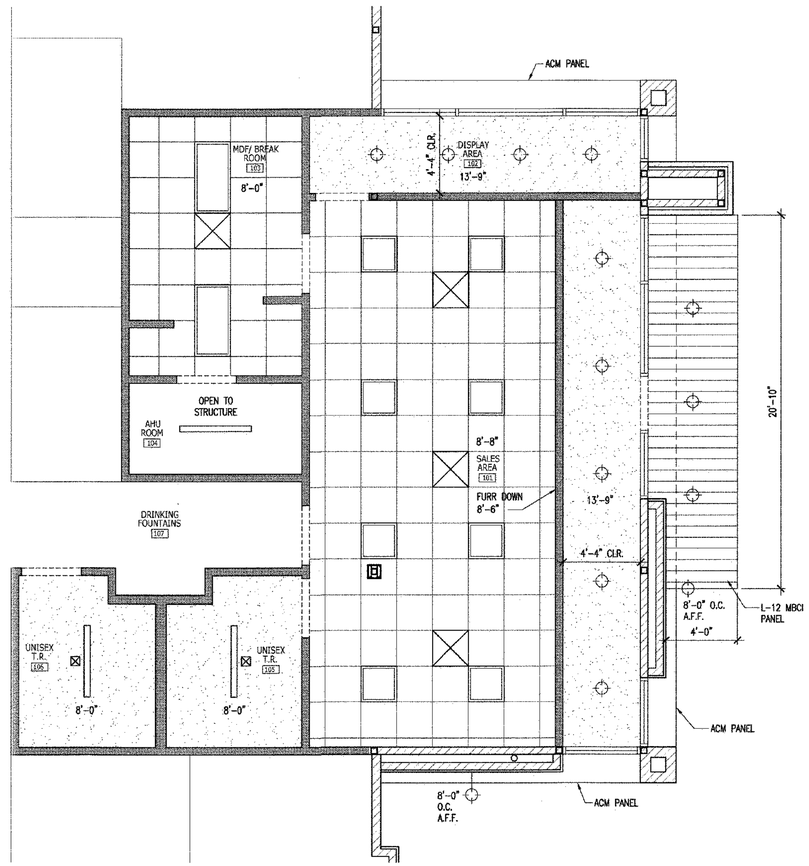
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

3RD FLOOR PLAN

SHEET NO.
A2.6



1 OFFICE FLOOR PLAN
SCALE: 1/4" = 1'-0"



2 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

ENLARGED FLOOR PLAN LEGEND	
	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. -REFER CORRUGATED HALLWAY SYSTEM A6.1
	METAL STUD WALL FRAMING
	INTERIOR METAL STUD WALL FRAMING -REFER PARTITION TYPES SHEET A6.1

GENERAL NOTES

1. REFERENCE SHEET A6.1 FOR PARTITION TYPES (P-#)
2. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT -REF. SHEET A2.8

REFLECTED CEILING PLAN LEGEND					
	SUSPENDED PAINTED GYP. BD. CEILING		2'X2' LAY-IN CEILING		MEP DIFFUSER
	2' X 2' LED LIGHT-LAY-IN		EXTERIOR WALL SCONCE -WALL MOUNT		
	4' FLUORESCENT LIGHT-SURFACE MOUNT		RECESSED LIGHT		

NOTES:
1. REFER MEP FOR FIXTURE SPECIFICATIONS.
2. COORDINATE LIGHT FIXTURES AND MECHANICAL SUPPLY/RETURN PRIOR TO INSTALLATION.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH 15126
JEFFREY S. DALLENBACH AIA
TEXAS REGISTRATION NO. 15126

SE MILITARY STORAGE

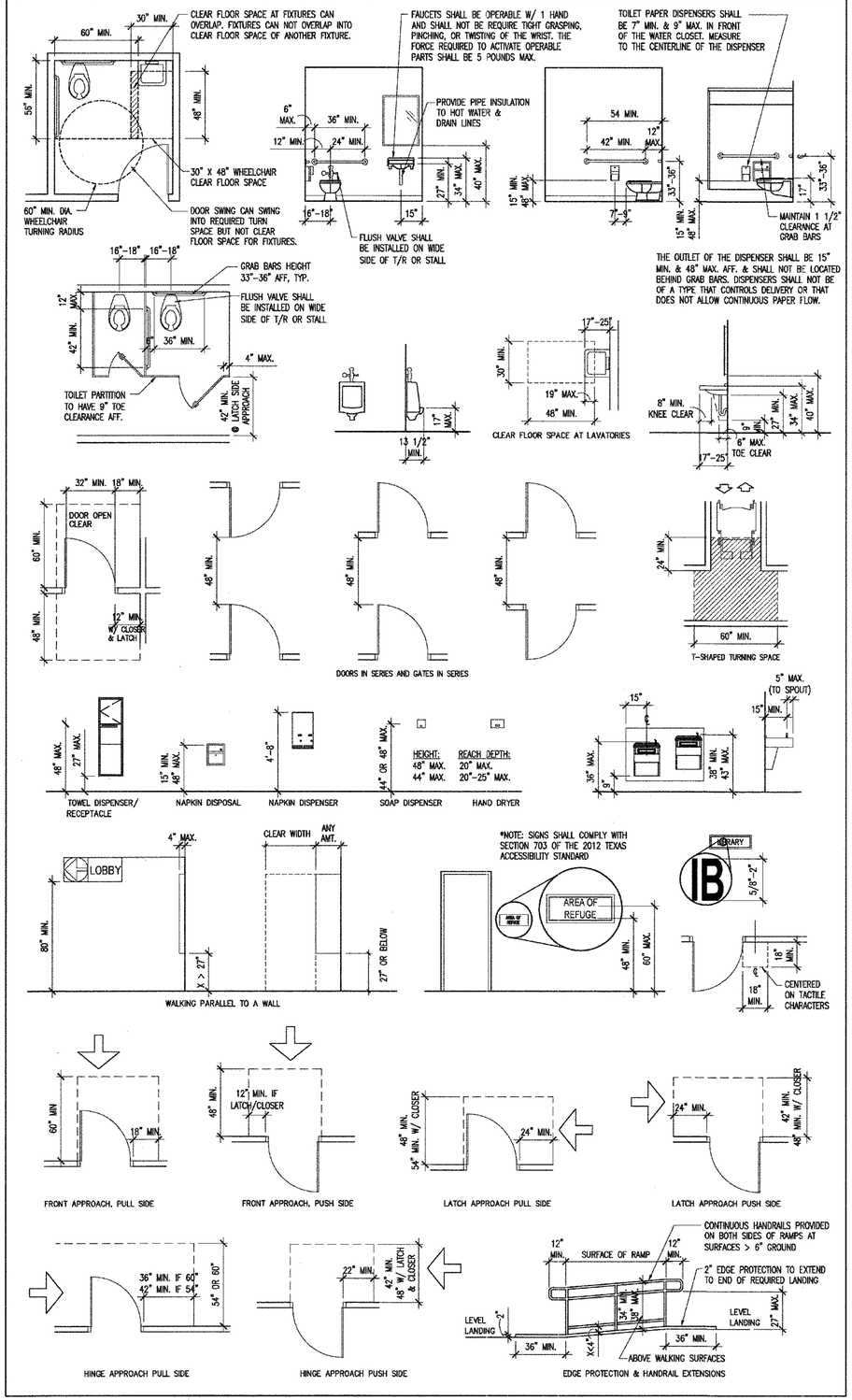
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

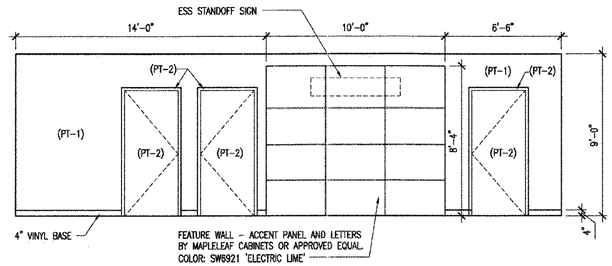
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

OFFICE PLAN & RCP

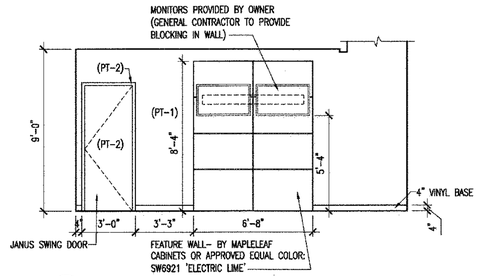
SHEET NO.
A2.7

2012 - TEXAS ACCESSIBILITY STANDARDS

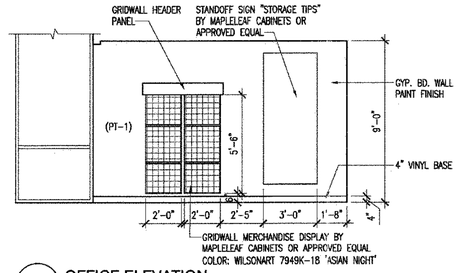




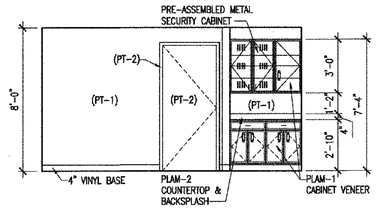
1 OFFICE ELEVATION
SCALE: 1/4" = 1'-0"



2 OFFICE ELEVATION
SCALE: 1/4" = 1'-0"

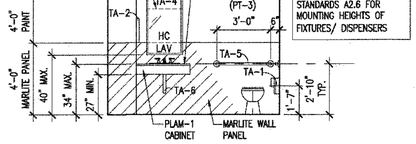


3 OFFICE ELEVATION
SCALE: 1/4" = 1'-0"

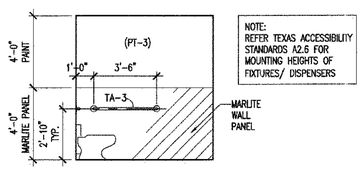


4 MDF/BREAK ROOM ELEVATION
SCALE: 1/4" = 1'-0"

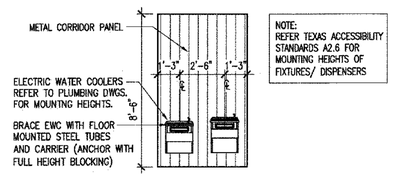
5 MDF/BREAK ROOM ELEVATION
SCALE: 1/4" = 1'-0"



6 TOILET ROOM ELEVATION
SCALE: 1/4" = 1'-0"



7 TOILET ROOM ELEVATION
SCALE: 1/4" = 1'-0"



8 DRINKING FOUNTAIN ELEVATION
SCALE: 1/4" = 1'-0"

TOILET ACCESSORIES		
MARK	ITEM	HEIGHT
TA-1	TOILET TISSUE DISPENSER	19" CL
TA-2	HAND DRYER	48" MAX.
TA-3	42" HORIZONTAL GRAB BAR	34" CL
TA-4	MIRROR	40"
TA-5	36" HORIZONTAL GRAB BAR	34" CL
TA-6	LAVATORY PIPING INSULATION	N/A

NOTES

1. FOR CONTROLS OR REACH, HEIGHT IS MAX.
2. FOR MIRRORS, HEIGHT IS TO BOTTOM OF REFLECTIVE EDGE.
3. FOR GRAB BARS, HEIGHT IS TO CENTER OF HORIZONTAL BAR.
4. ALL DESIGN MUST COMPLY W/ LOCAL AMERICAN'S W/DISABILITIES ACT - REF. SHEET A2.8
5. BLOCKING FOR ACCESSORIES BY GENERAL CONTRACTOR

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT JEFFREY S. DALLENBACH 15128 STATE OF TEXAS
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

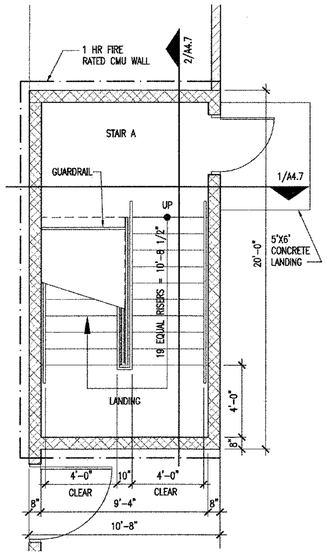
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

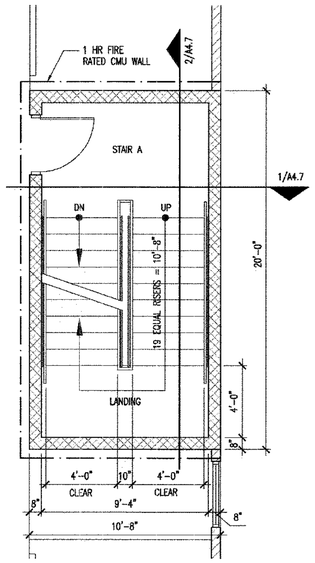
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

ADA & INT. ELEV

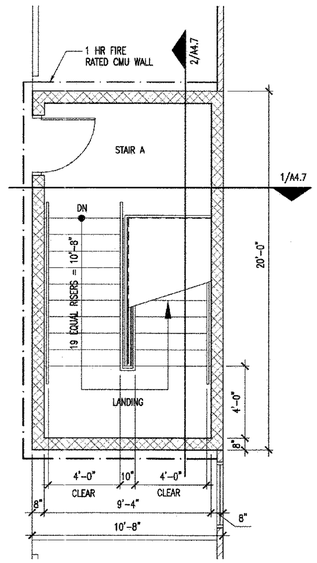
SHEET NO.
A2.8



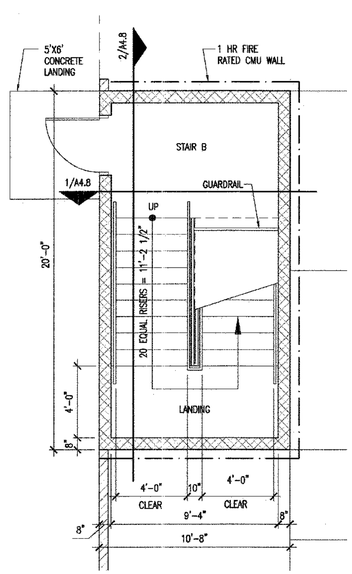
1 1ST FLOOR STAIR A
SCALE: 1/4" = 1'-0"



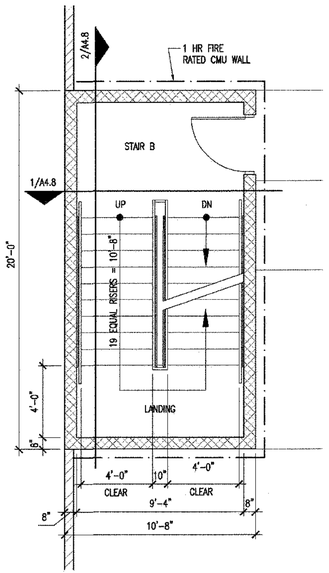
2 2ND FLOOR STAIR A
SCALE: 1/4" = 1'-0"



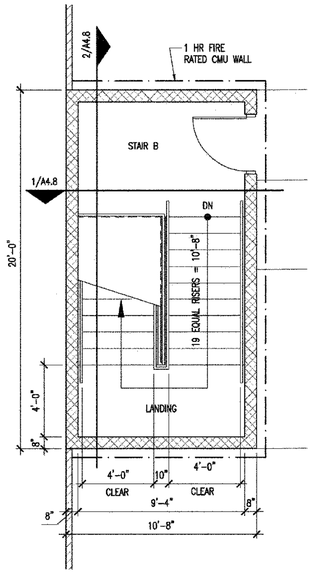
3 3RD FLOOR STAIR A
SCALE: 1/4" = 1'-0"



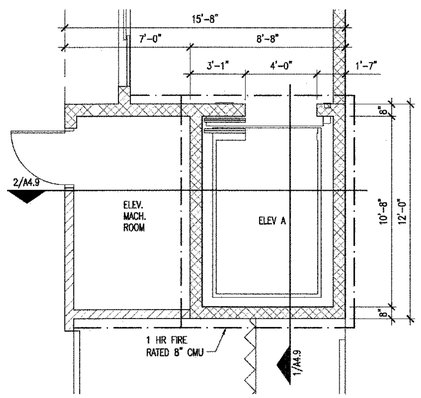
4 1ST FLOOR STAIR B
SCALE: 1/4" = 1'-0"



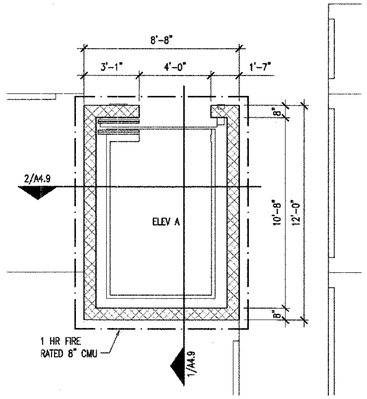
5 2ND FLOOR STAIR B
SCALE: 1/4" = 1'-0"



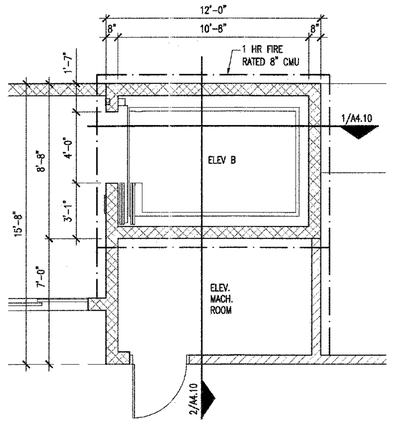
6 3RD FLOOR STAIR B
SCALE: 1/4" = 1'-0"



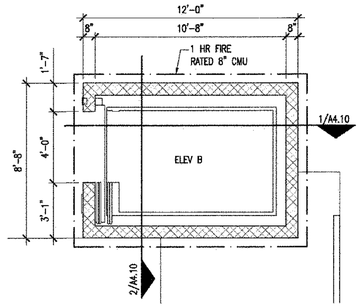
7 1ST FLOOR ELEVATOR A
SCALE: 1/4" = 1'-0"



8 2ND/3RD FLOOR ELEVATOR A
SCALE: 1/4" = 1'-0"



9 1ST FLOOR ELEVATOR B
SCALE: 1/4" = 1'-0"



10 2ND/3RD FLOOR ELEVATOR B
SCALE: 1/4" = 1'-0"

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT STATE OF TEXAS JEFFREY S. DALLENBACH

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

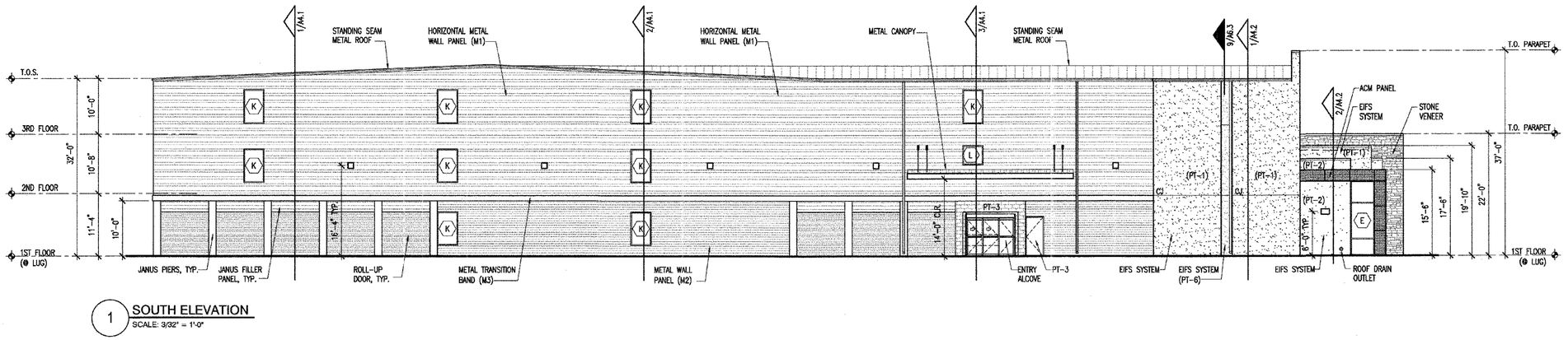
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

ENLARGED PLANS

SHEET NO.
A2.9

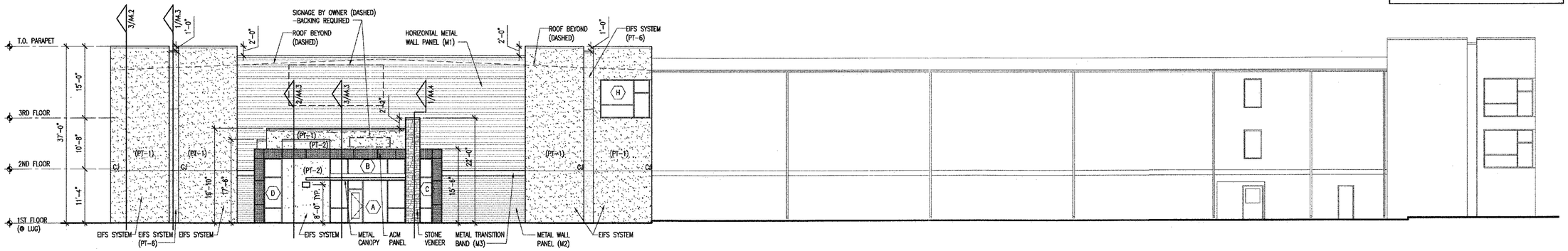


1 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

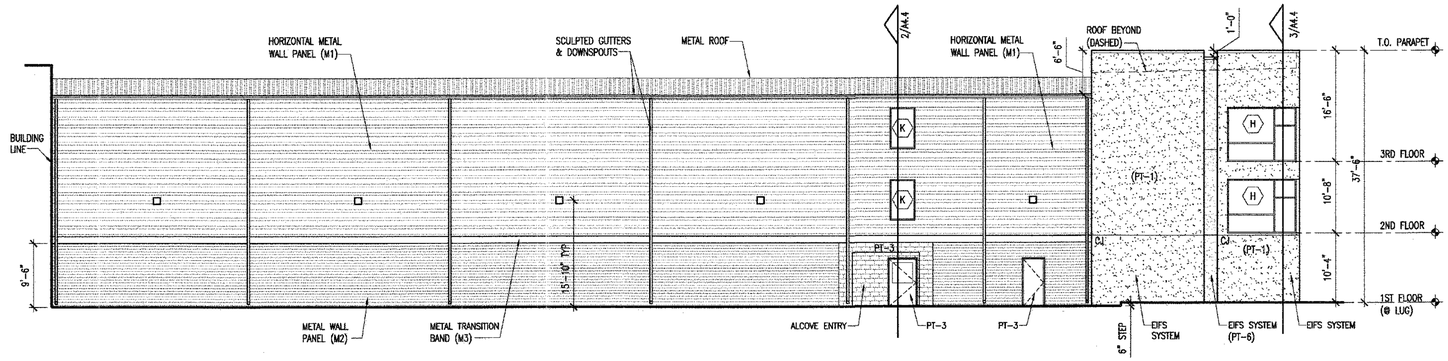
ELEVATION LEGEND	
	SPLIT FACE CMU – PAINT
	STONE VENEER
	HORIZONTAL METAL WALL PANEL (M1)
	HORIZONTAL METAL WALL PANEL (M2)
	METAL TRANSITION BAND (M3)
	EIFS FINISH (PT-1)
	EIFS FINISH (PT-2)
	EIFS FINISH (PT-6)
	ACM – ALUMINUM COMPOSITE MATERIAL PANEL
	STANDING SEAM METAL ROOF
CJ	CONTROL JOINT –REF. 8/A6.3

ELEVATION NOTES

1. METAL COPING, TRIM, AND FLASHING TO MATCH COLOR OF ADJACENT MATERIAL.
2. GUTTERS & DOWNSPOUTS TO BE SIZED AND SPACED BY METAL BUILDING MANUFACTURER.
3. GUTTER OVERFLOW CUTOUTS TO BE PROVIDED BELOW LOWEST POINT OF ROOF/WALL TRANSITION.
4. REFER SHEET A7.1 FOR EXTERIOR PAINT COLORS.
5. BACKING REQUIRED AT ALL BUILDING SIGNS.
6. EXTEND DOWNSPOUTS PAST CU PADS WHERE APPLICABLE.
7. PROVIDE SPLASH BLOCK AT DOWNSPOUTS AT LANDSCAPING.



2 EAST ELEVATION
SCALE: 3/32" = 1'-0"



2A EAST ELEVATION
SCALE: 3/32" = 1'-0"

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

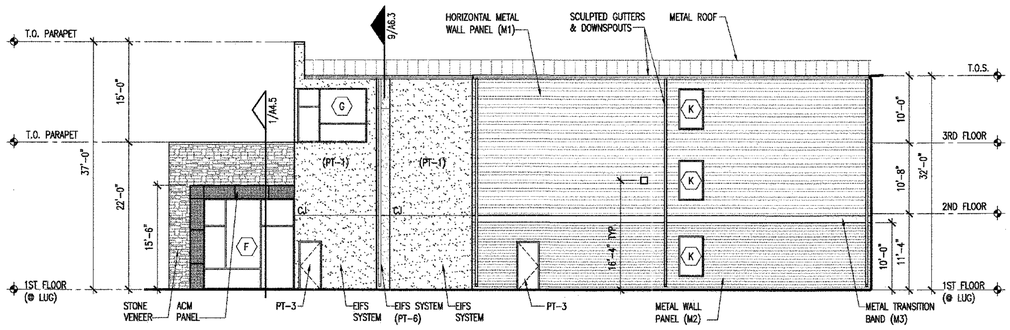
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

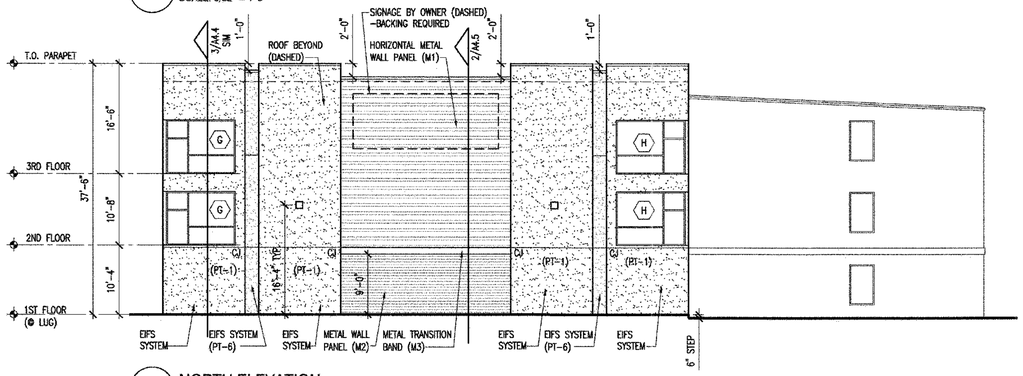
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

BUILDING ELEVATIONS

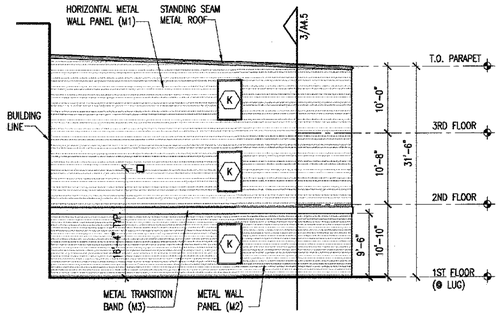
SHEET NO.
A3.1



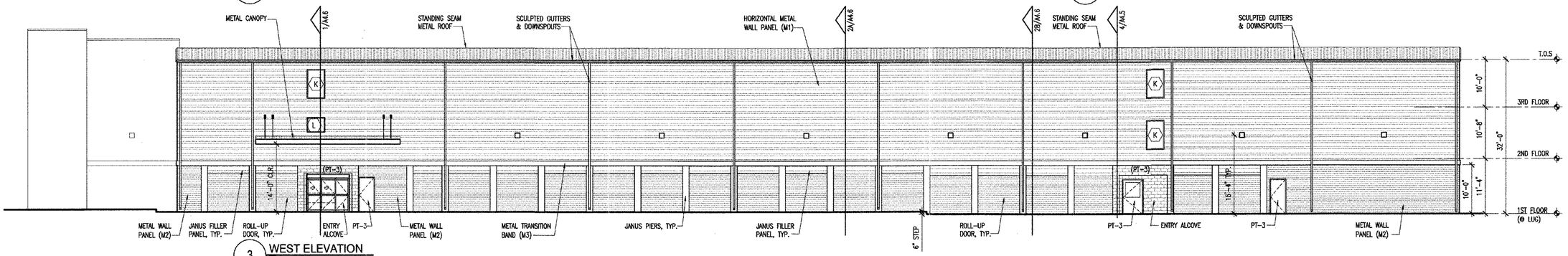
1 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



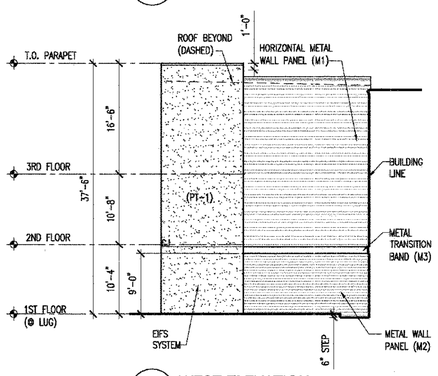
2 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



2A NORTH ELEVATION
SCALE: 3/32" = 1'-0"



3 WEST ELEVATION
SCALE: 3/32" = 1'-0"



3A WEST ELEVATION
SCALE: 3/32" = 1'-0"

ELEVATION LEGEND	
	SPLIT FACE CMU - PAINT
	STONE VENEER
	HORIZONTAL METAL WALL PANEL (M1)
	HORIZONTAL METAL WALL PANEL (M2)
	METAL TRANSITION BAND (M3)
	EIFS FINISH (PT-1)
	EIFS FINISH (PT-2)
	EIFS FINISH (PT-6)
	ACM - ALUMINUM COMPOSITE MATERIAL PANEL
	STANDING SEAM METAL ROOF
CJ	CONTROL JOINT -REF. 8/A6.3

ELEVATION NOTES

1. METAL COPING, TRIM, AND FLASHING TO MATCH COLOR OF ADJACENT MATERIAL.
2. GUTTERS & DOWNSPOUTS TO BE SIZED AND SPACED BY METAL BUILDING MANUFACTURER.
3. GUTTER OVERFLOW CUTOUTS TO BE PROVIDED BELOW LOWEST POINT OF ROOF/WALL TRANSITION.
4. REFER SHEET A7.1 FOR EXTERIOR PAINT COLORS.
5. BACKING REQUIRED AT ALL BUILDING SIGNS.
6. EXTEND DOWNSPOUTS PAST CU PADS WHERE APPLICABLE.
7. PROVIDE SPLASH BLOCK AT DOWNSPOUTS AT LANDSCAPING.

ARCHCON architecture
12035 CULWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH
02.28.2019
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

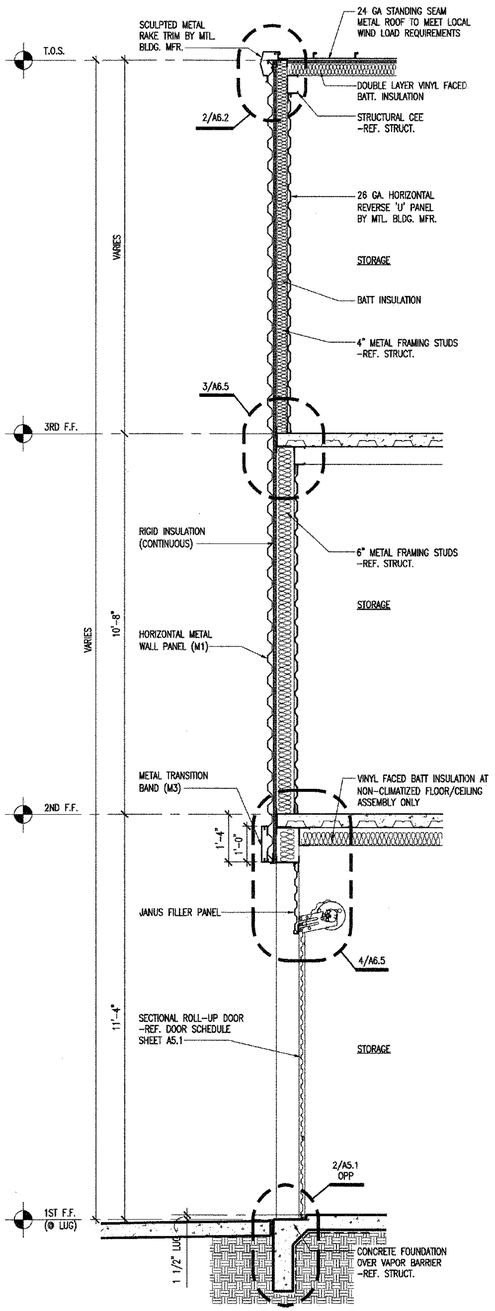
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

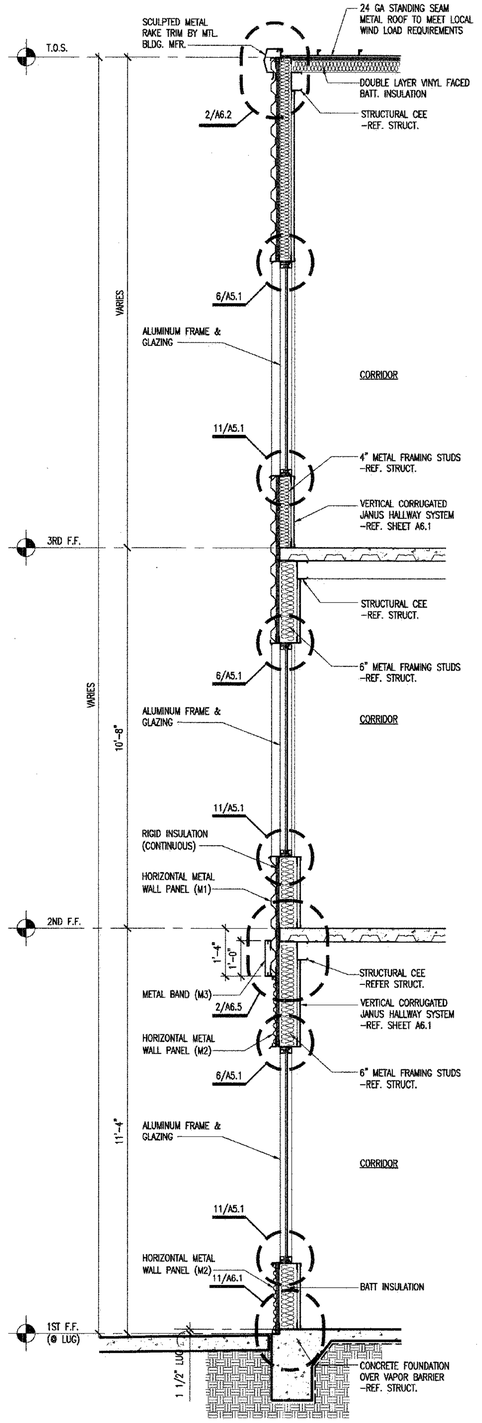
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

BUILDING ELEVATIONS

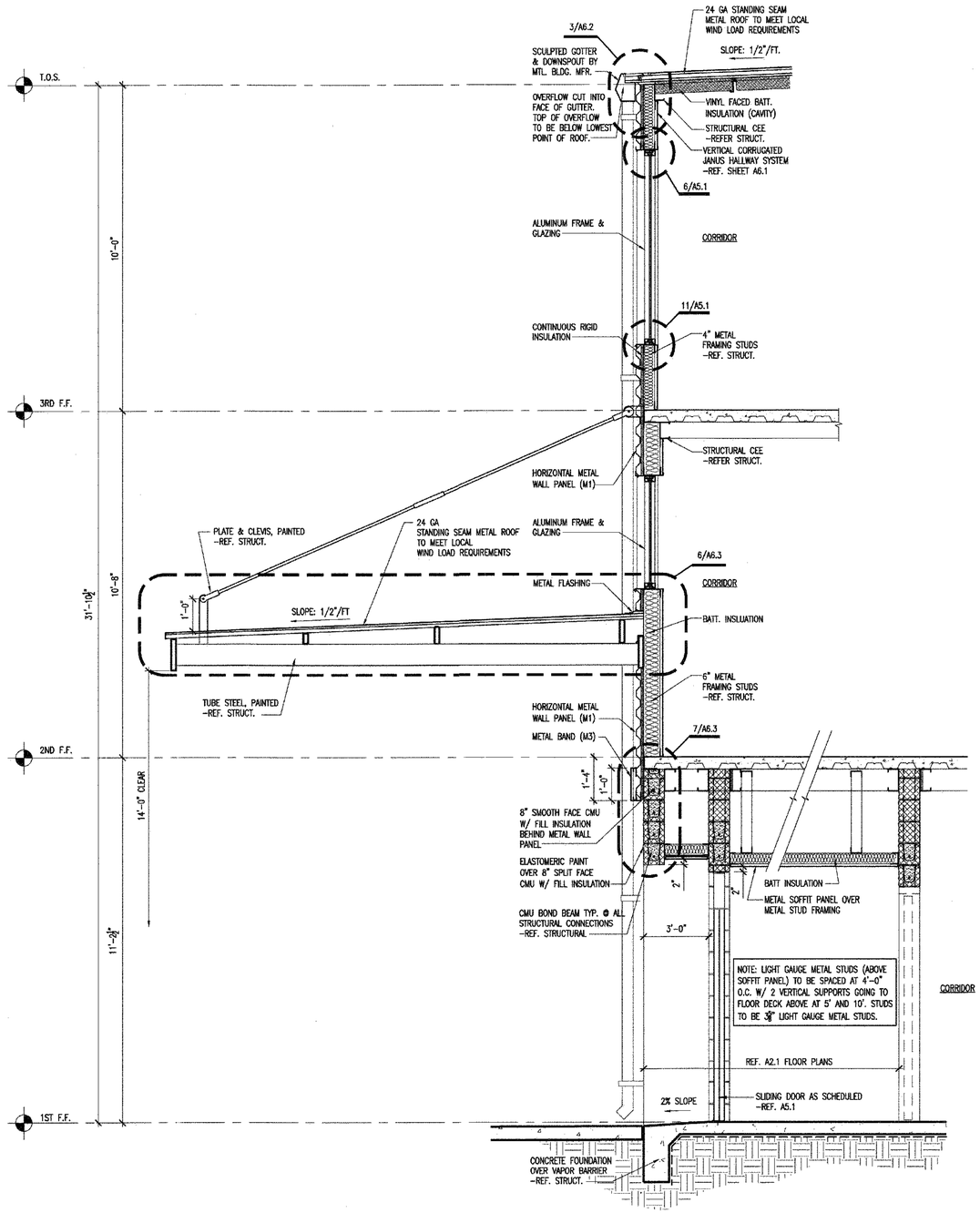
SHEET NO.
A3.2



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



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



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

ARCHCON architecture
12035 DOLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * JEFFREY S. DALLENBACH * STATE OF TEXAS 16128 02.28.2019

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

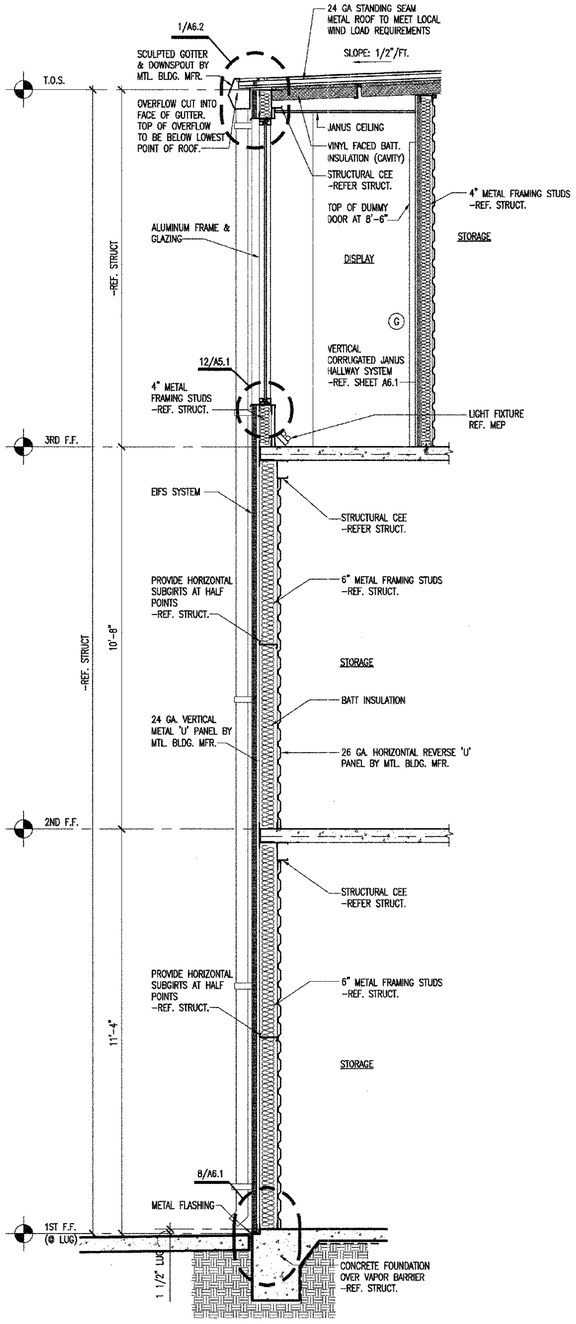
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

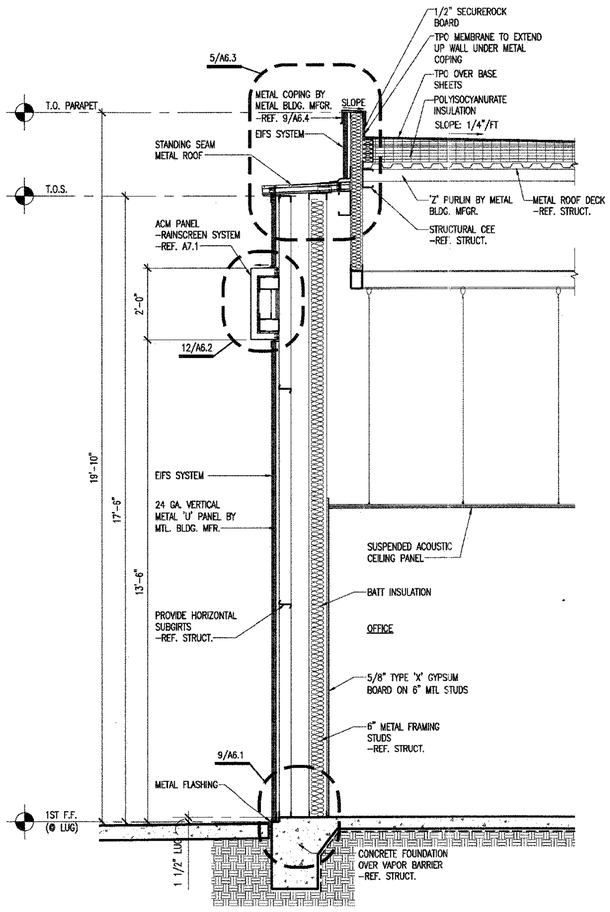
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

WALL SECTIONS

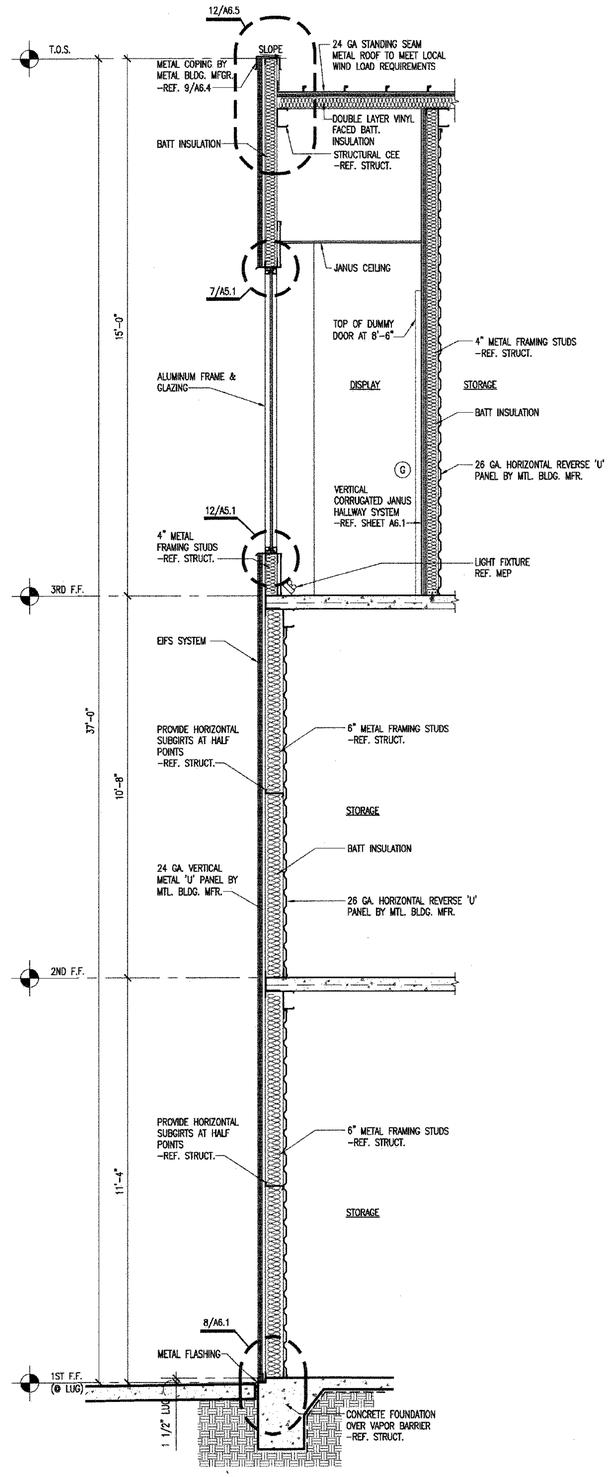
SHEET NO.
A4.1



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



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



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

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH
12.28.2018

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

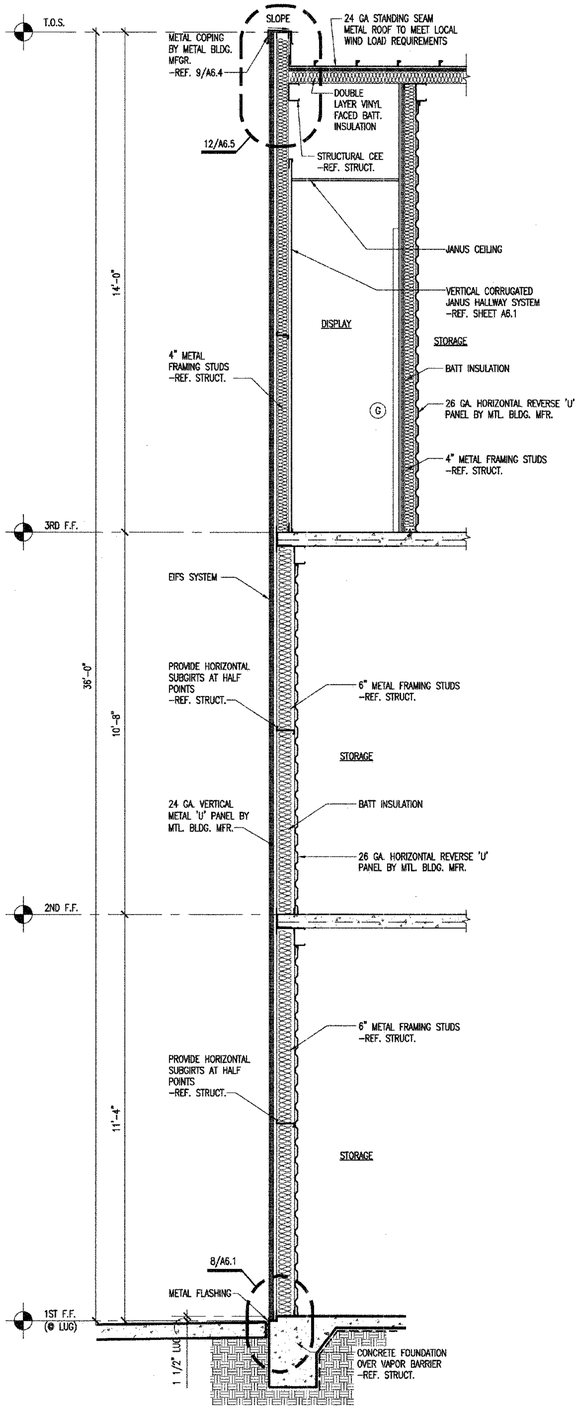
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

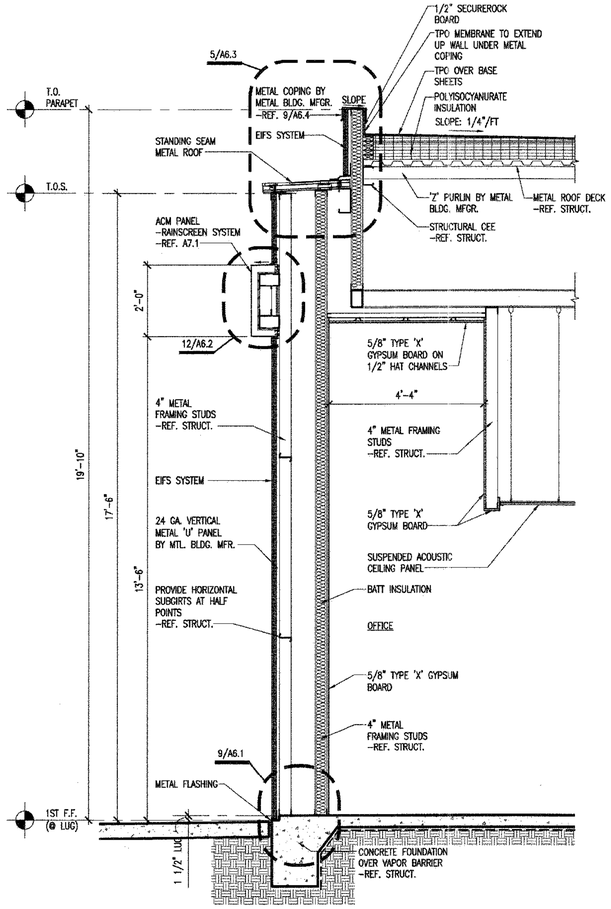
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

WALL SECTIONS

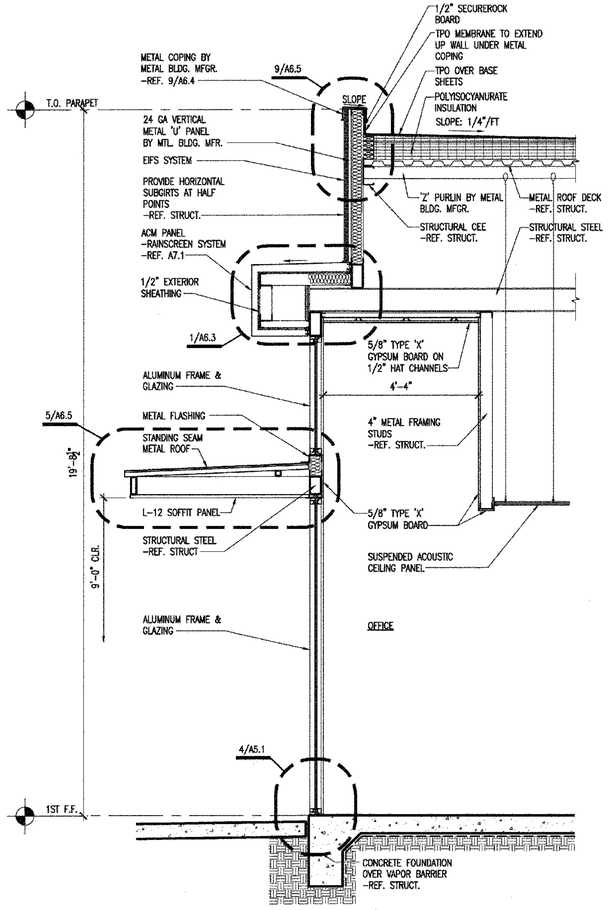
SHEET NO.
A4.2



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



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



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

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * JEFFREY S. DALLENBACH * 15126 * STATE OF TEXAS
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15126

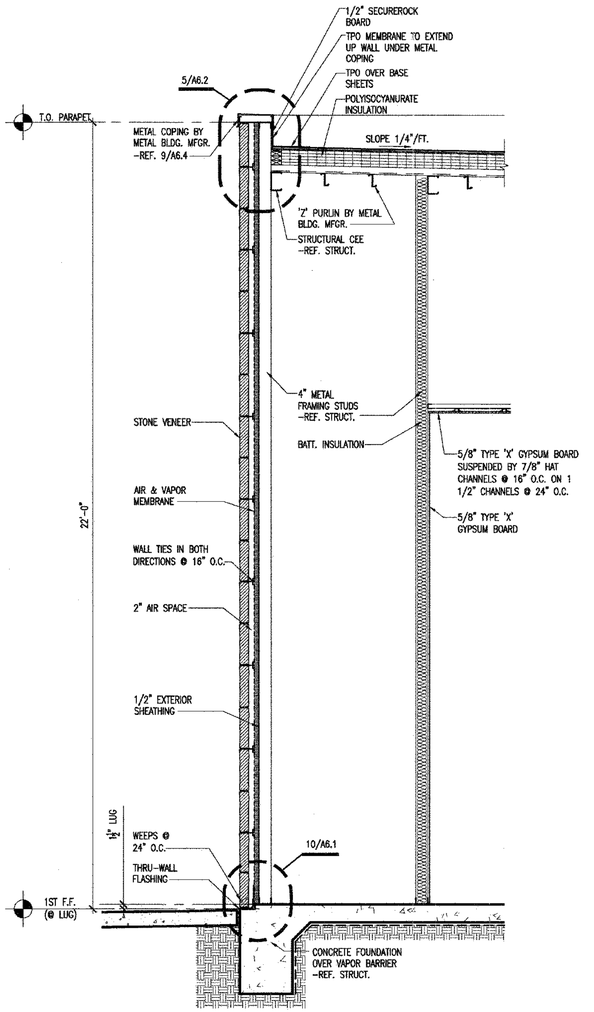
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

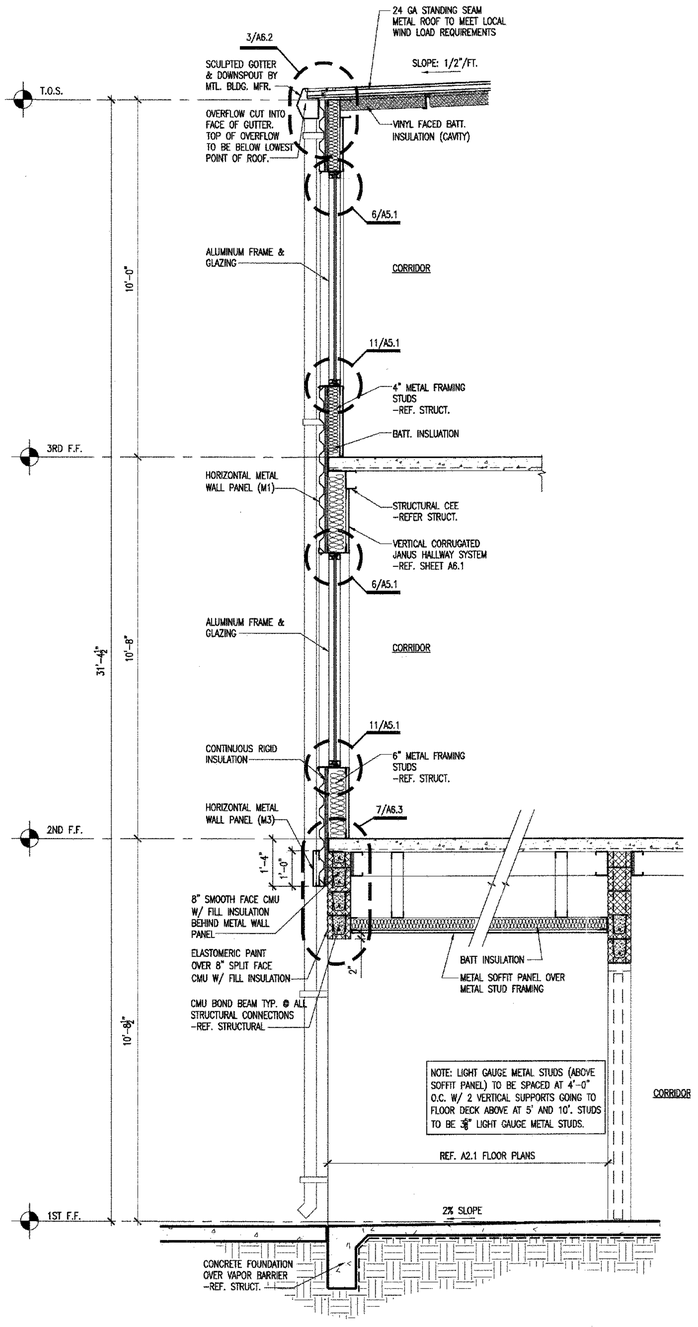
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

WALL SECTIONS

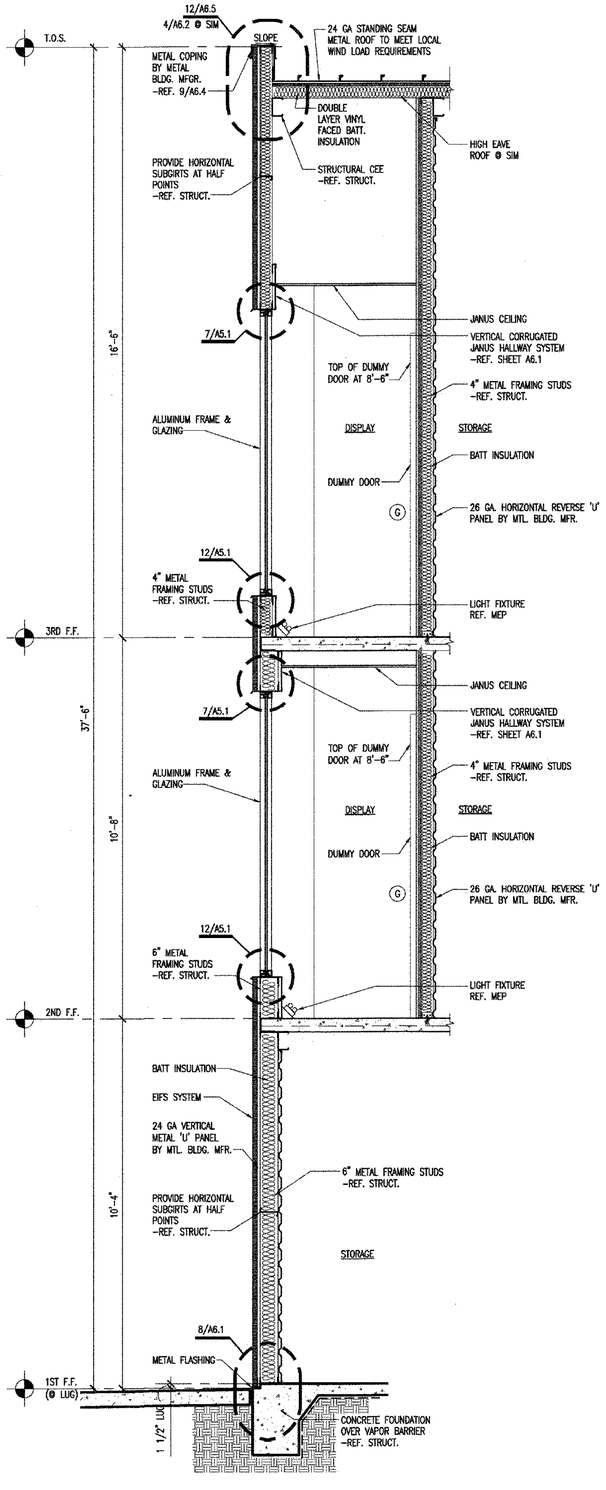
SHEET NO.
A4.3



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



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



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

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

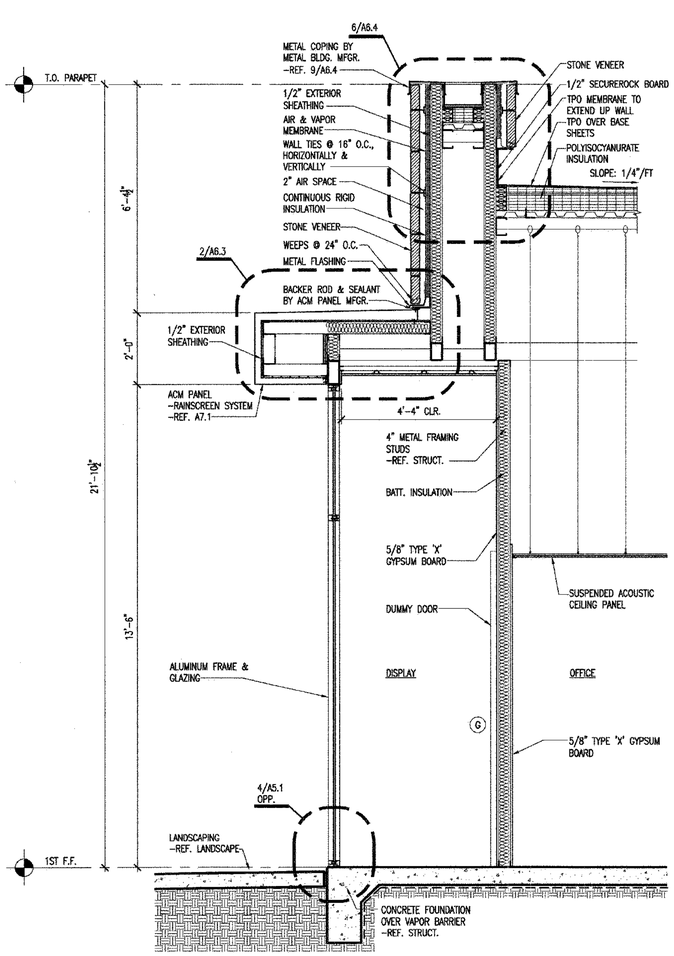
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

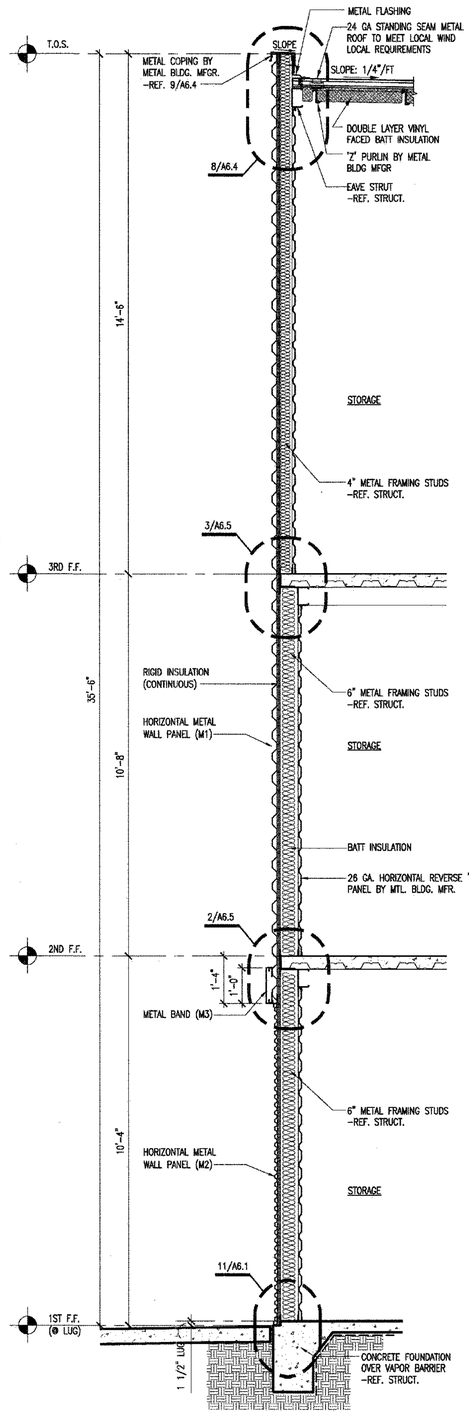
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

WALL SECTIONS

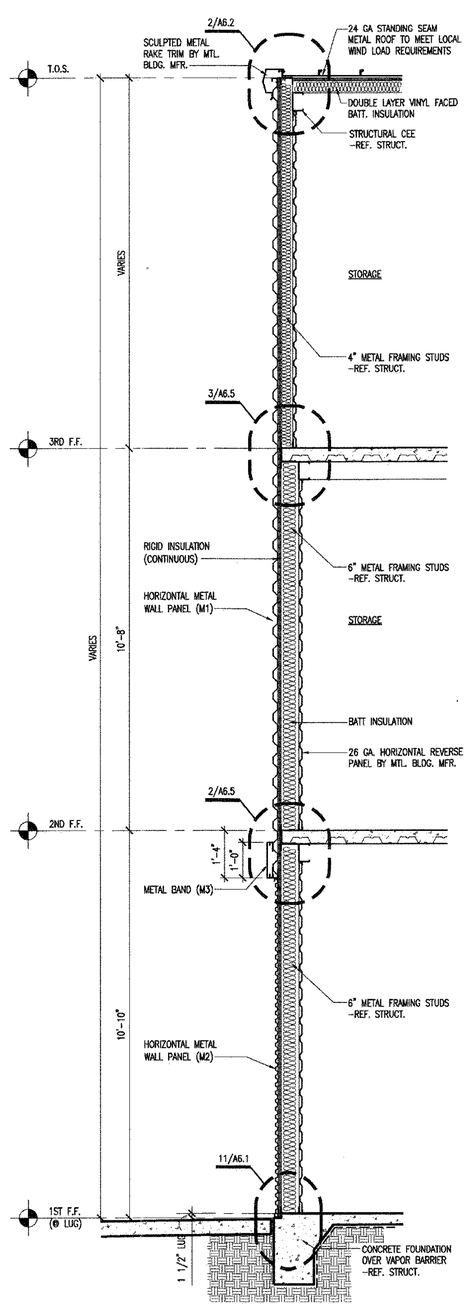
SHEET NO.
A4.4



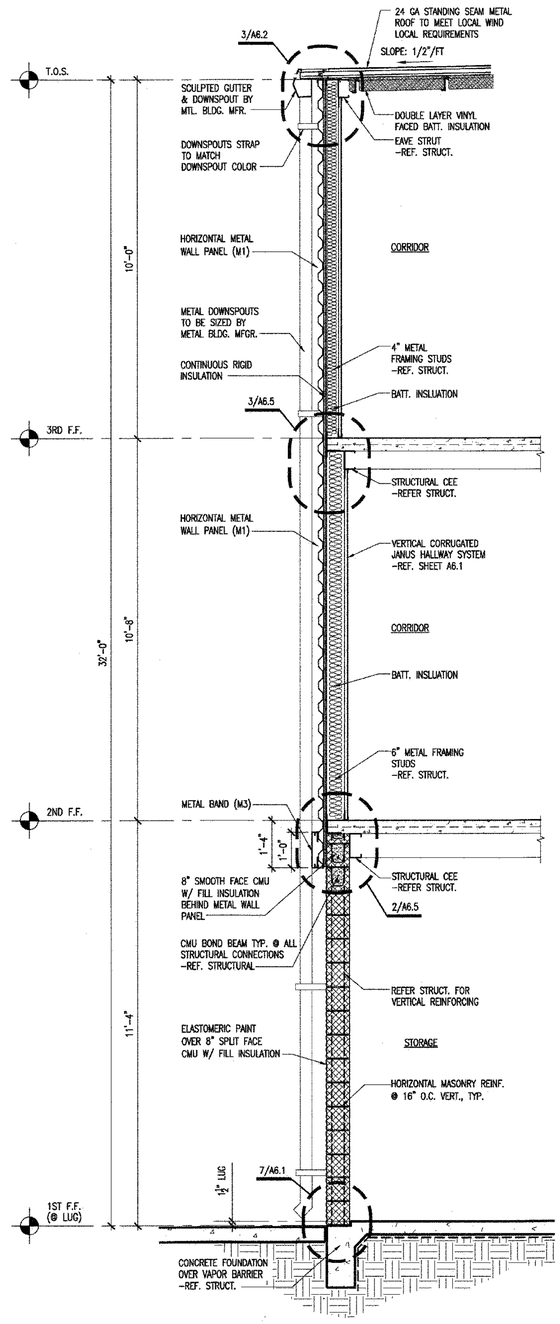
1 WALL SECTION
SCALE: 1/2" = 1'-0"



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



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



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

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH
12-23-2019

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

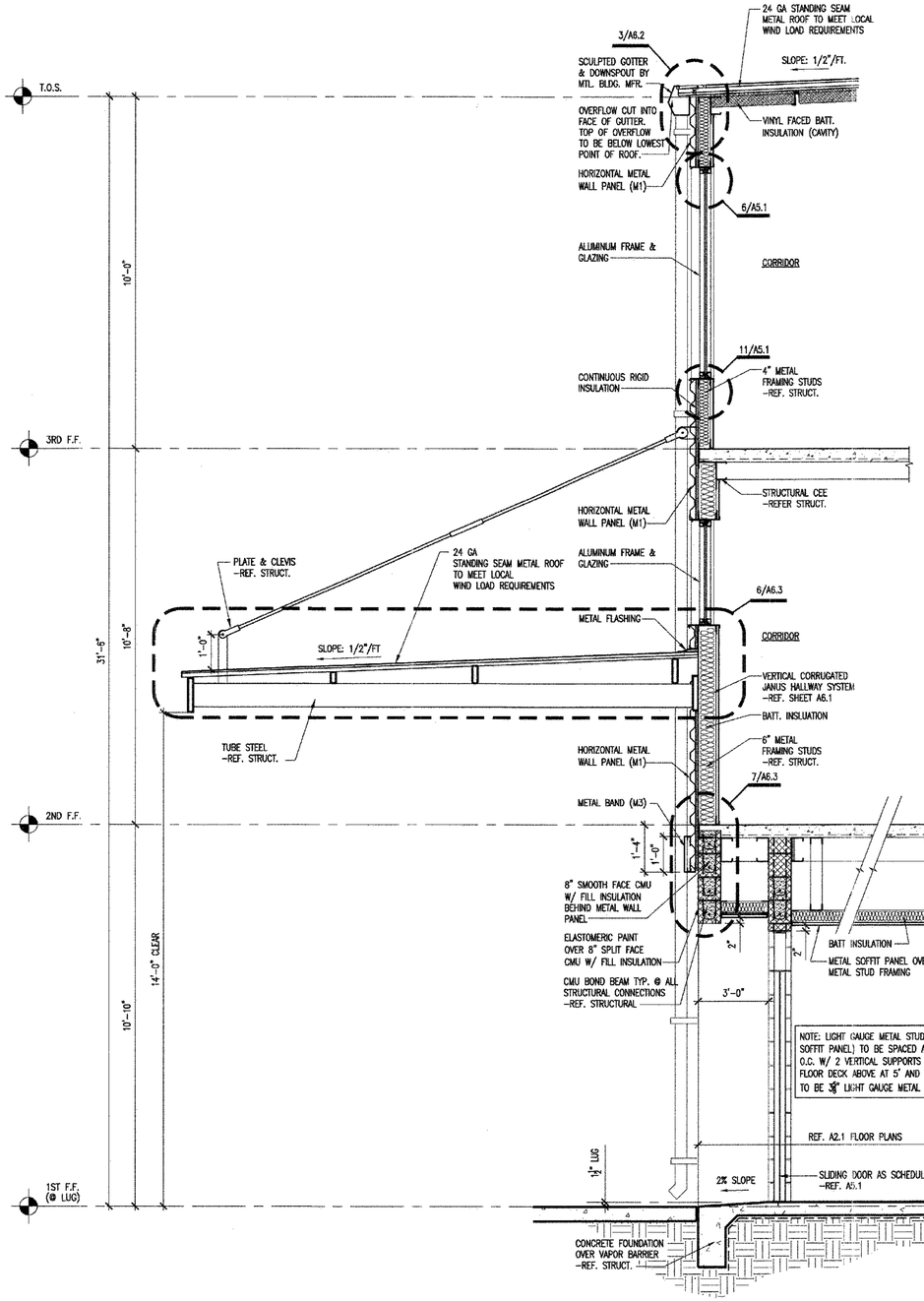
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

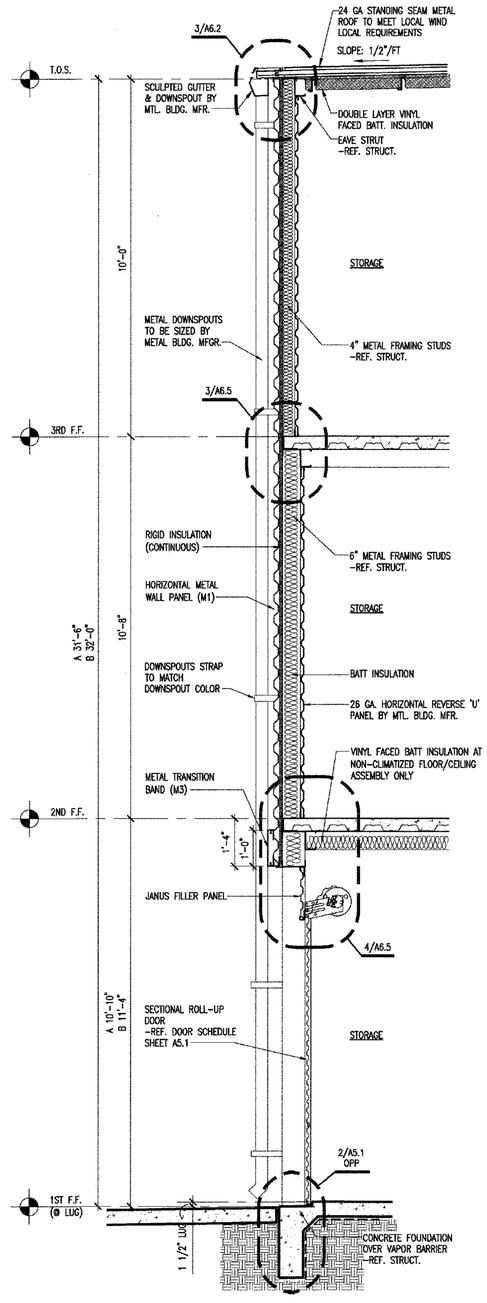
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.5



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



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

ARCHCON architecture
12035 COLWICK · SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * STATE OF TEXAS * 15128 * JEFFREY S. DALLENBACH
02.28.2019

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

SE MILITARY STORAGE

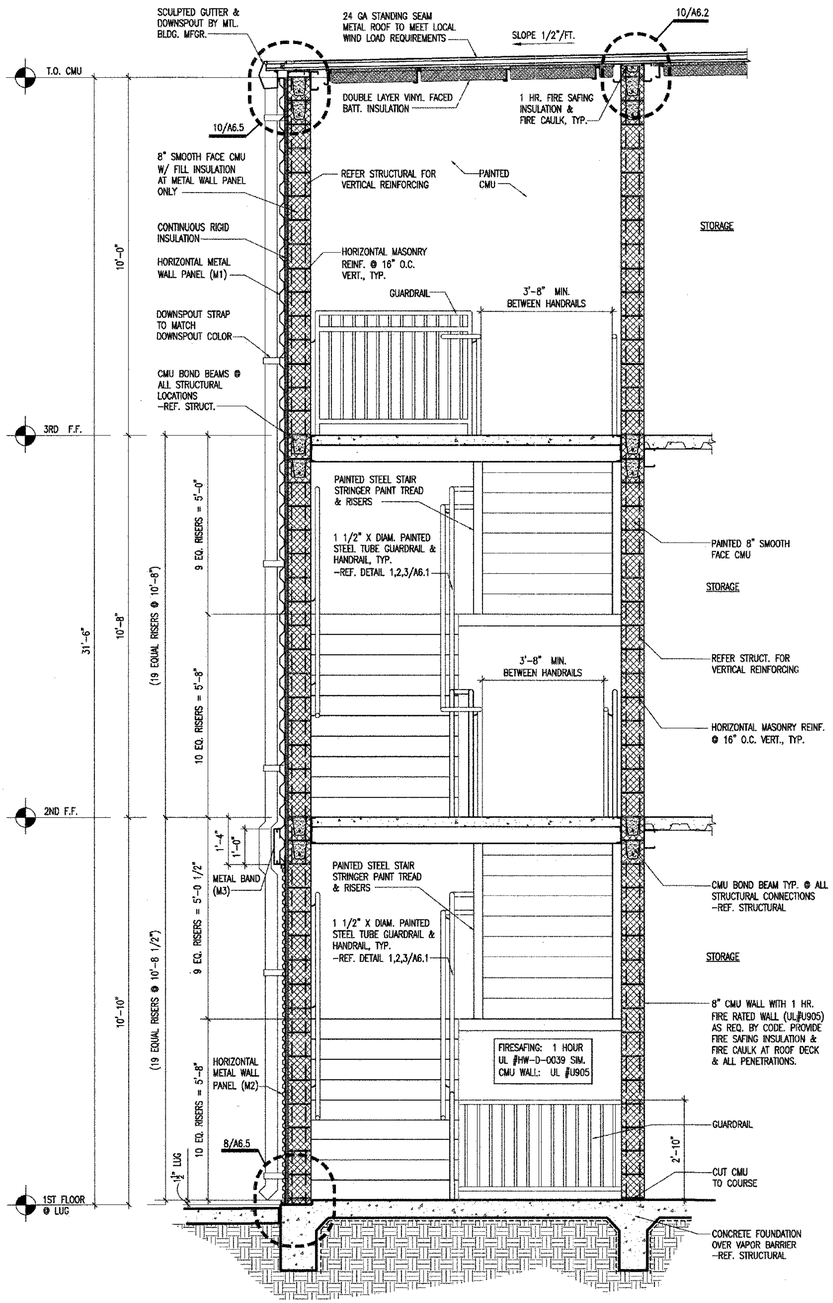
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	PS/VP
REVISIONS:	

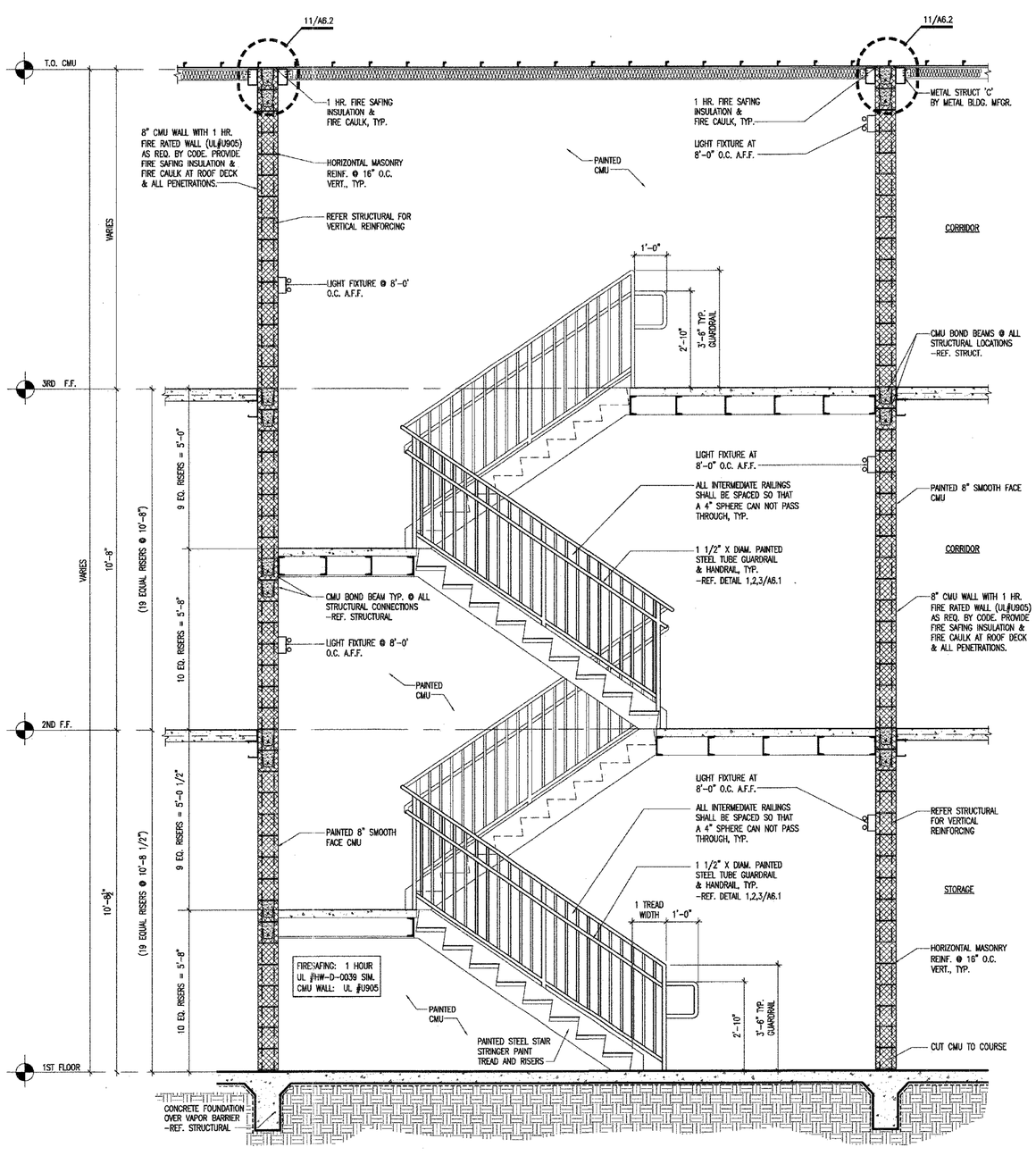
WALL SECTIONS

SHEET NO.

A4.6



1 STAIR A SECTION
SCALE: 1/2" = 1'-0"



2 STAIR A SECTION
SCALE: 1/2" = 1'-0"

ARCHCON architecture
12035 COLWICK · SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT · STATE OF TEXAS · JEFFREY S. DALLENBACH · 16128

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

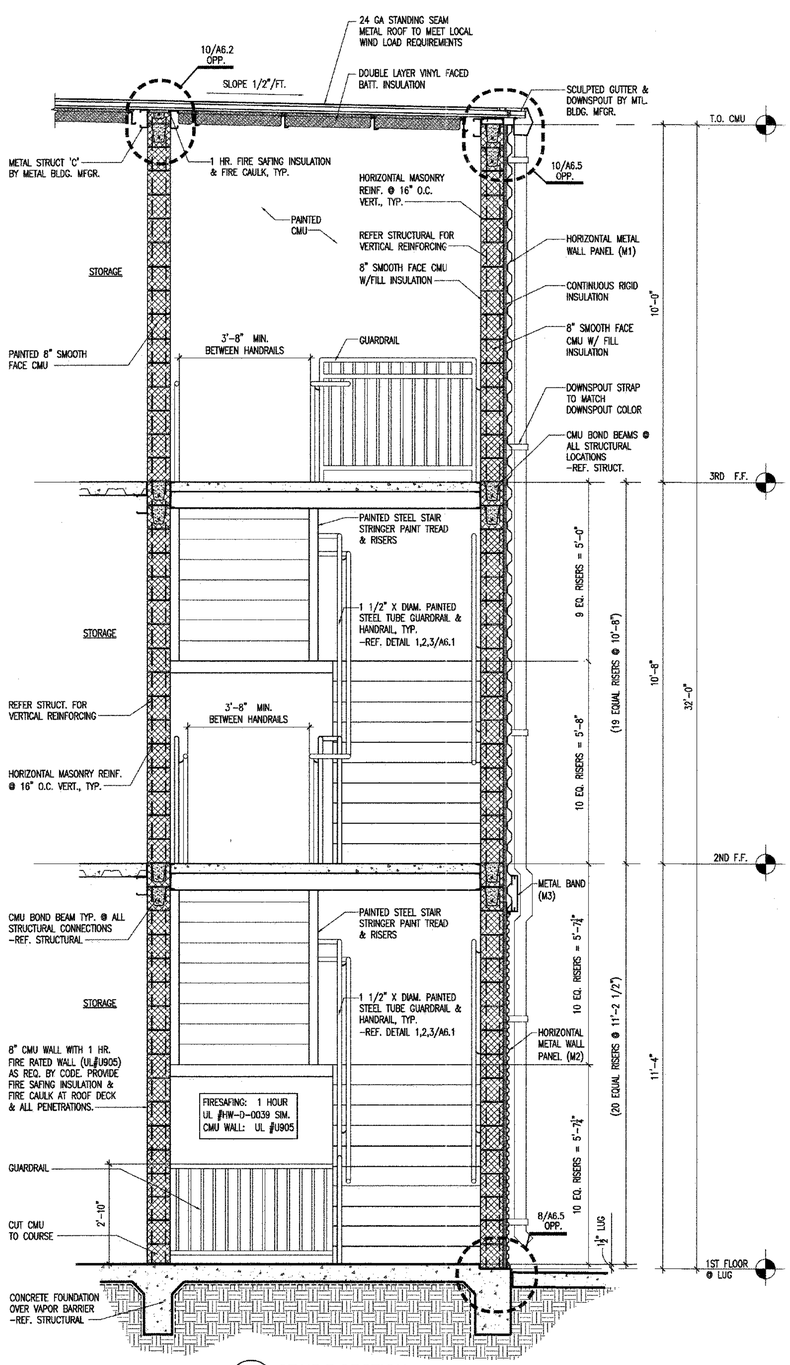
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

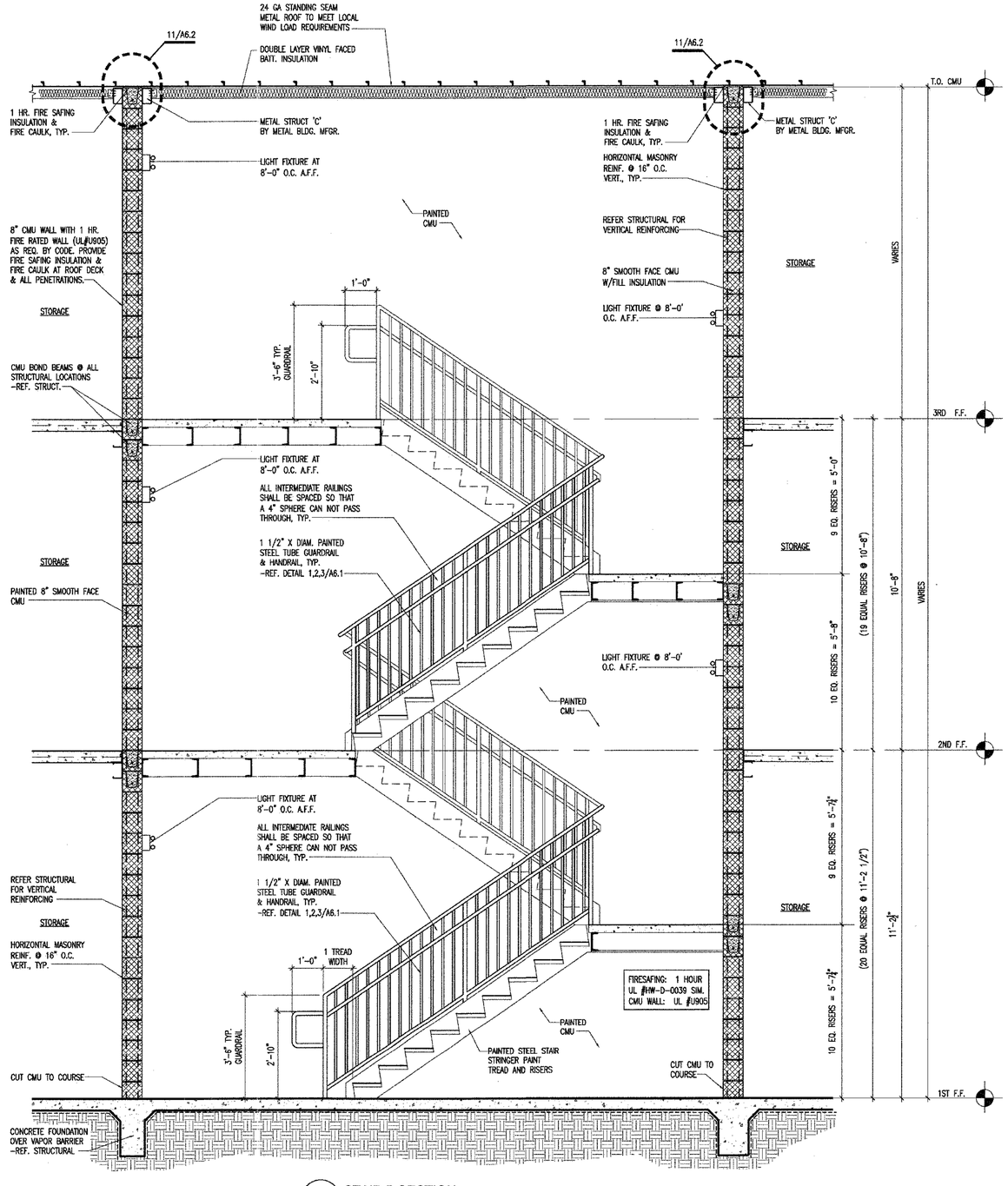
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

STAIR A SECTIONS

SHEET NO.
A4.7



1 STAIR B SECTION
SCALE: 1/2" = 1'-0"



2 STAIR B SECTION
SCALE: 1/2" = 1'-0"

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

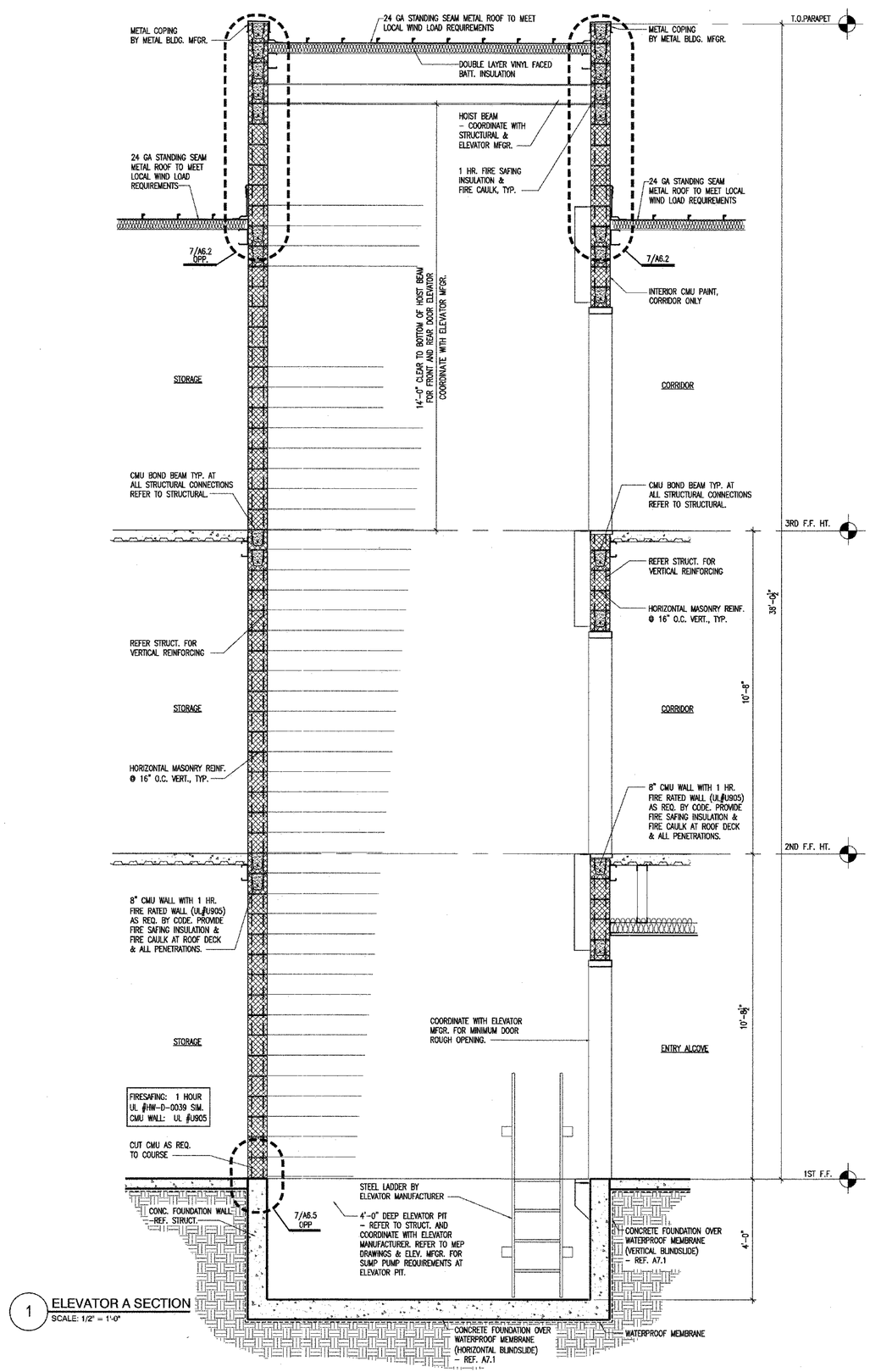
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

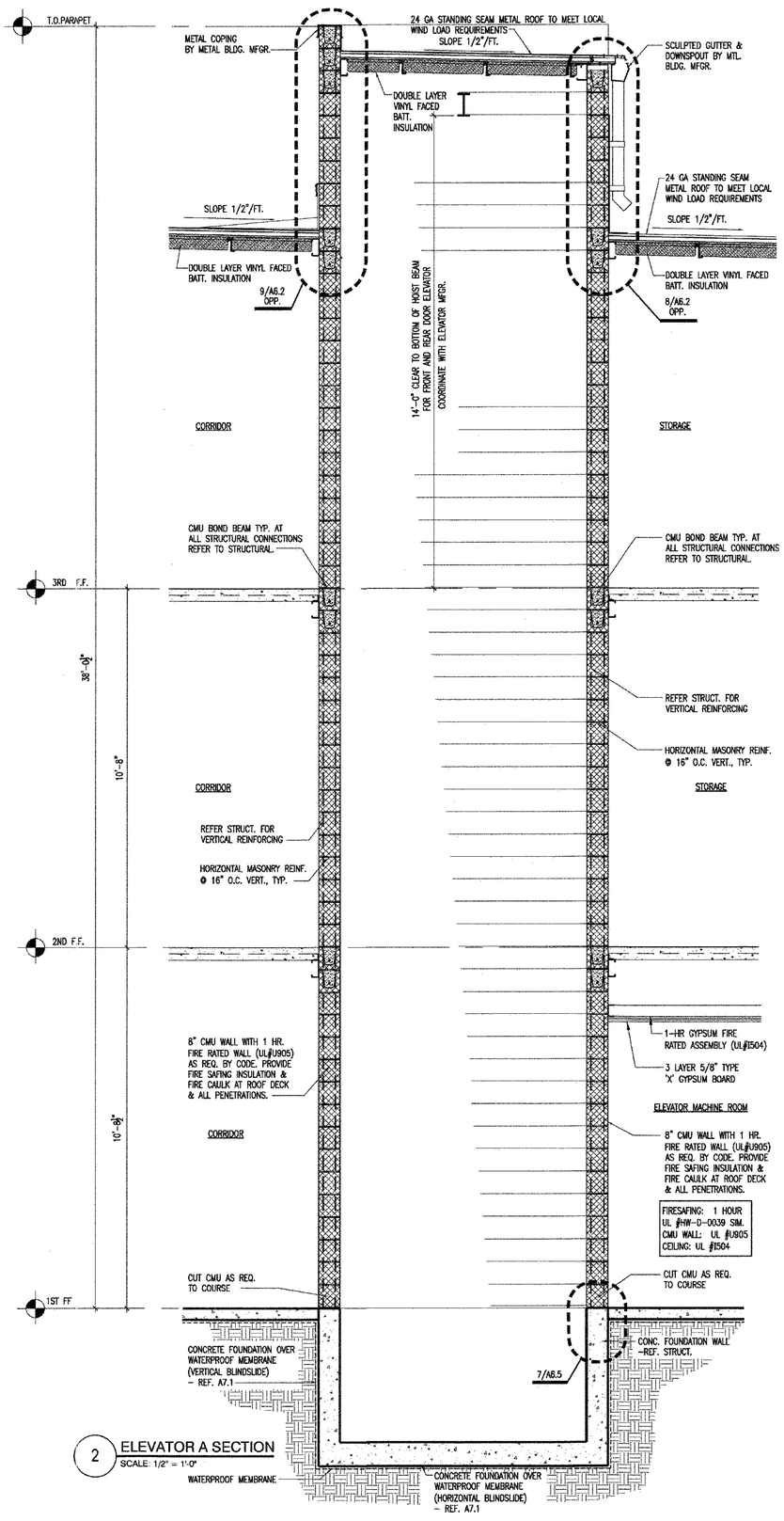
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

STAIR B SECTIONS

SHEET NO.
A4.8



1 ELEVATOR A SECTION
SCALE: 1/2" = 1'-0"



2 ELEVATOR A SECTION
SCALE: 1/2" = 1'-0"

ARCHCON architecture
12035 GOLIWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

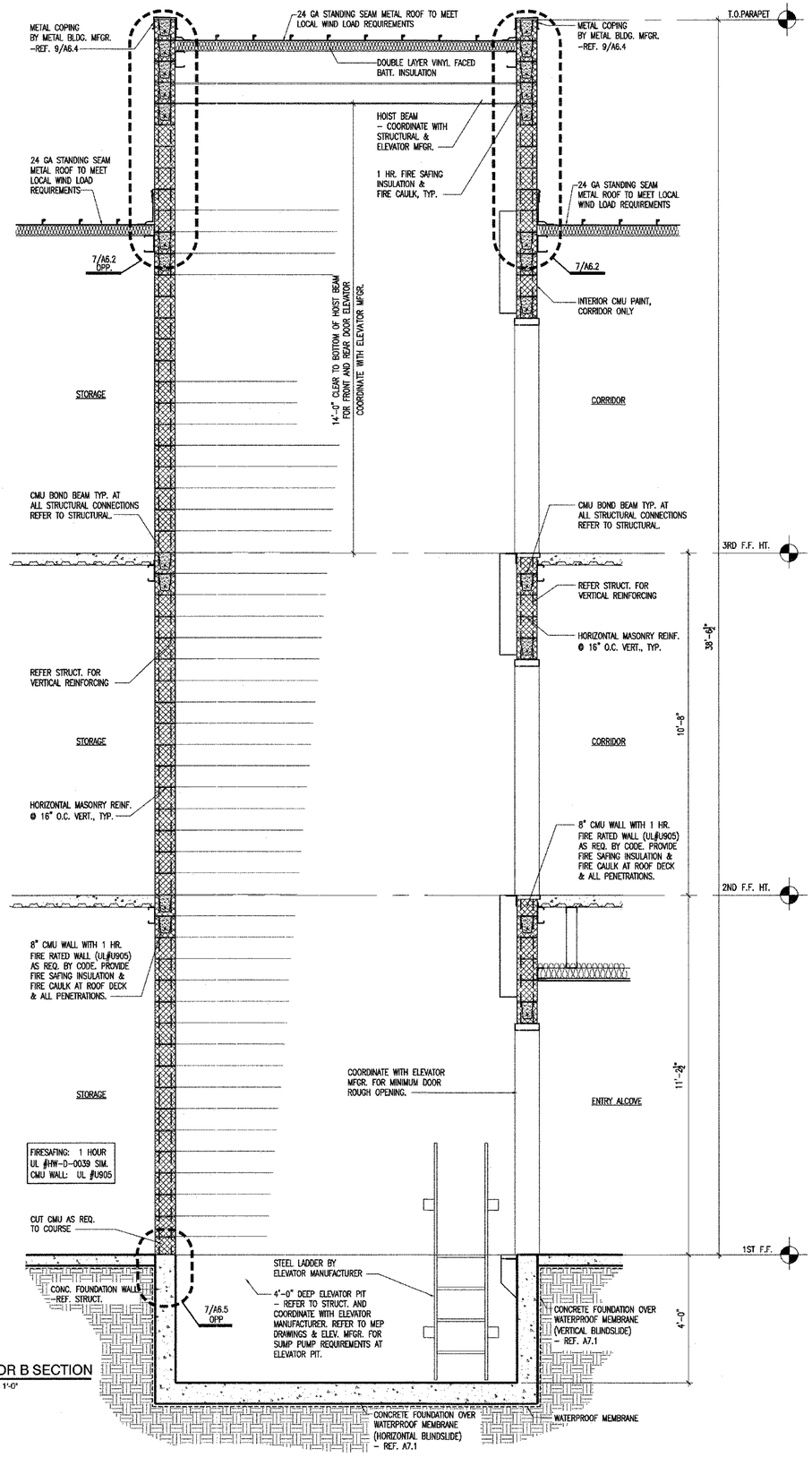
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

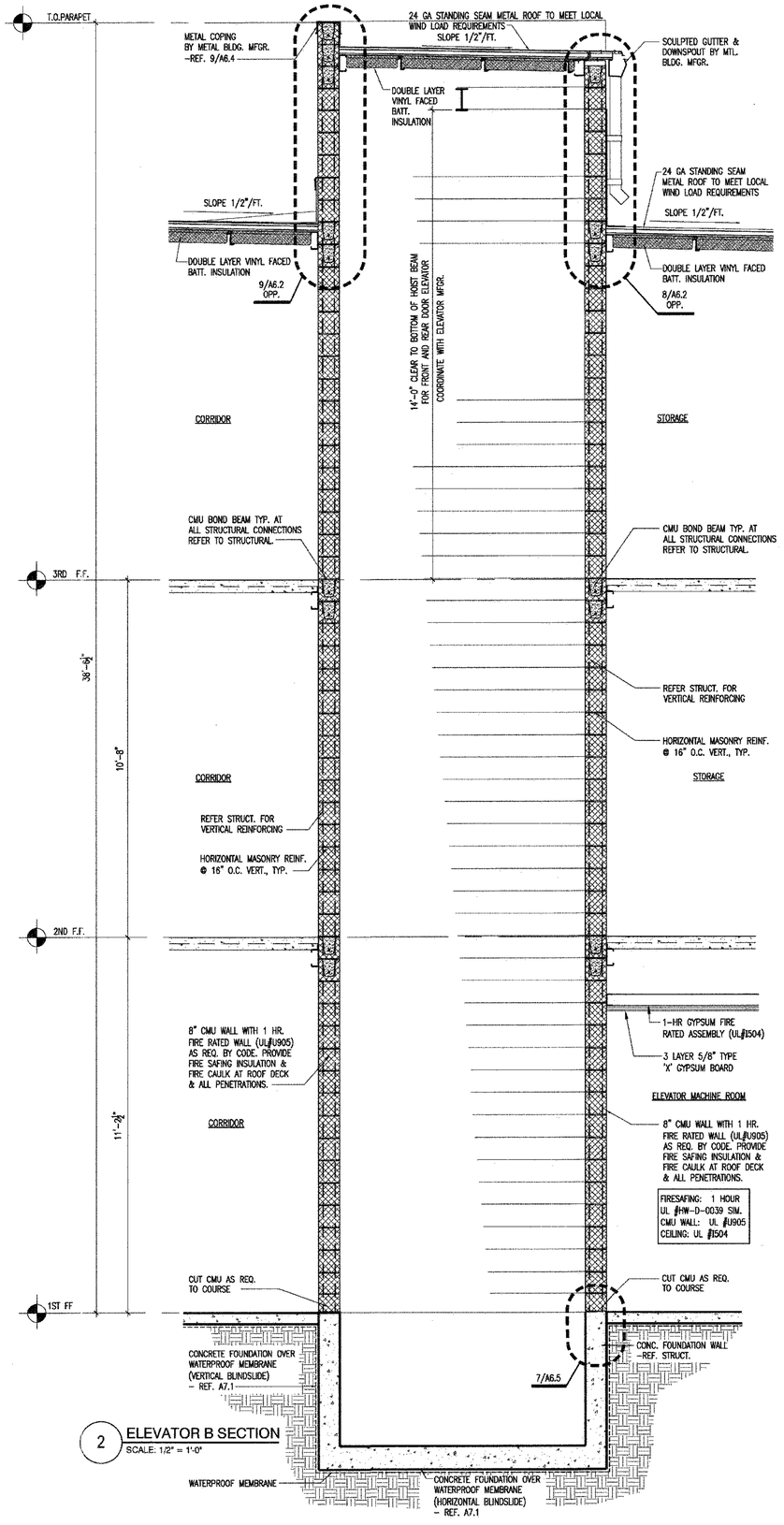
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

ELEV. A SECTIONS

SHEET NO.
A4.9



1 ELEVATOR B SECTION
SCALE: 1/2" = 1'-0"



2 ELEVATOR B SECTION
SCALE: 1/2" = 1'-0"

ARCHCON architecture
12035 GOLIWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * JEFFREY S. DALLENBACH * STATE OF TEXAS * 16128

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

SE MILITARY STORAGE

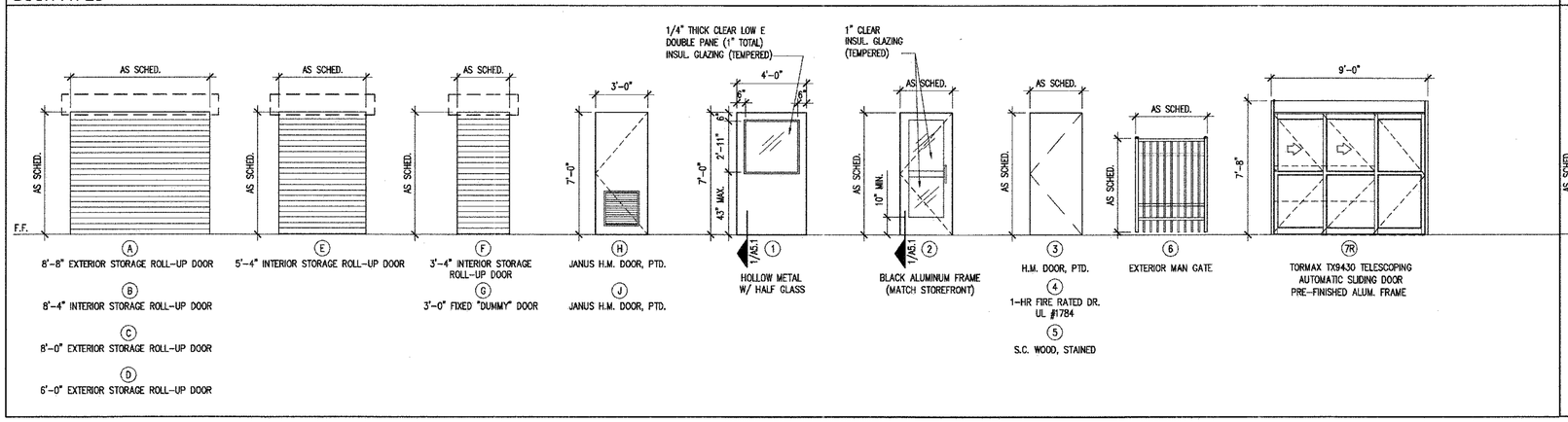
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

ELEV. B SECTIONS

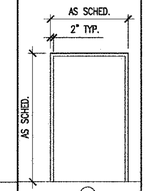
SHEET NO.
A4.10

DOOR TYPES



(A) 8'-8" EXTERIOR STORAGE ROLL-UP DOOR
(B) 8'-4" INTERIOR STORAGE ROLL-UP DOOR
(C) 8'-0" EXTERIOR STORAGE ROLL-UP DOOR
(D) 6'-0" EXTERIOR STORAGE ROLL-UP DOOR
(E) 5'-4" INTERIOR STORAGE ROLL-UP DOOR
(F) 3'-4" INTERIOR STORAGE ROLL-UP DOOR
(G) 3'-0" FIXED "DUMMY" DOOR
(H) JANUS H.M. DOOR, PTD.
(J) JANUS H.M. DOOR, PTD.
HOLLOW METAL W/ HALF GLASS
BLACK ALUMINUM FRAME (MATCH STOREFRONT)
(3) H.M. DOOR, PTD.
(4) 1-HR FIRE RATED DR. UL #1784
(5) S.C. WOOD, STAINED
(6) EXTERIOR MAN GATE
(7R) TORMAX TX9430 TELESCOPING AUTOMATIC SLIDING DOOR PRE-FINISHED ALUM. FRAME

FRAME TYPES



(1) H.M. FRAME, PAINT

DOOR NOTES

1. DOOR HARDWARE TO BE APPROVED BY OWNER BASED ON SUBCONTRACTOR SUBMITTAL.
2. CONTRACTOR TO COORDINATE DOOR HARDWARE AND FRAMES WITH SECURITY EQUIPMENT AND MAGNETIC HOLD OPEN DEVICES.
3. PROVIDE MIN. INTERIOR & EXTERIOR ACCESSIBLE HARDWARE, THRESHOLDS, SIGNAGE, ETC. TO COMPLY W/ ADA ACCESSIBILITY STANDARDS. REFERENCE FLOOR PLANS FOR LOCATIONS.
4. STORAGE ROLL-UP DOORS-PROVIDE ALUM. HANDLES W/ SLIDE BAR LATCH TO FRAME, CONTINUOUS ALUM. BOTTOM PULL BAR, WEATHER SEALS (EXTERIOR) AND REMOVABLE CYLINDER LOCK W/ EMERGENCY OVERRIDE LATCH OPERATOR TO OPERATOR.
5. GLAZING IN ALL EXTERIOR DOORS TO BE INSULATED LOW-E GLAZING W/ 1/4" DOUBLE PANES W/ 1/2" AIR SPACE (1" TOTAL) (TEMPERED).
6. THRESHOLDS ½" LUGS NOT REQUIRED AT ALCOVE ENTRIES.
7. READILY VISIBLE DURABLE SIGN POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" -REF. SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.
8. FIRE RATED DOORS TO BE SELF CLOSING OR AUTOMATIC CLOSING.
9. READILY VISIBLE DURABLE SIGN POSTED ON EGRESS SIDE ADJACENT TO DOOR STATING: "EXIT" IN TACTILE LETTERS & BRAILLE -REF SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.
10. READILY VISIBLE DURABLE SIGN POSTED ON ENTRY SIDE OF DOOR STATING "ROOM NAME" IN TACTILE LETTERS AND BRAILLE - REF. SHEET A2.5 FOR INSTALLATION INSTRUCTIONS.
11. ROLL UP DOORS TO MEET LOCAL WIND LOAD REQUIREMENTS.
12. PROVIDE JBI DOOR LATCH BY JANUS AT ROLL UP DOORS.
13. CONSTRUCTION CORES TO REMAIN - REKEYING/MASTER KEYING BY OWNER
14. PANIC HARDWARE TO ALLOW EASY ACCESS FROM EGRESS SIDE OF EXIT DOORS.
15. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON DOORS SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.

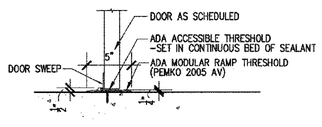
STORAGE DOOR SCHEDULE

MARK	WIDTH	HEIGHT	DOOR TYPE	FRAME TYPE	REMARKS
(A)	8'-8"	8'-0"	EXT. ROLL-UP	-	17
(B)	8'-4	7'-0"	INT. ROLL-UP	-	17
(C)	8'-0"	8'-0"	EXT. ROLL-UP	-	17
(D)	6'-0"	8'-0"	EXT. ROLL-UP	-	17
(E)	5'-4"	7'-0"	INT. ROLL-UP	-	17
(F)	3'-4"	7'-0"	INT. ROLL-UP	-	17
(G)	3'-0"	8'-6"	DUMMY DOOR	-	9,17
(H)	3'-0"	7'-0"	JANUS SWING	-	17,21
(J)	3'-0"	7'-0"	JANUS SWING	-	17

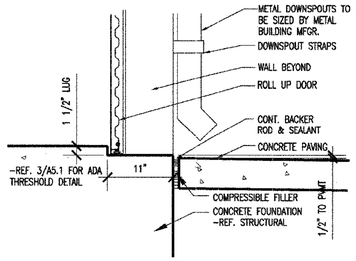
DOOR SCHEDULE

LOCATION	MARK	WIDTH	HEIGHT	DOOR TYPE	FRAME TYPE	REMARKS
ENTRY	(1)	3'-0"	7'-0"	2	STFT	1,2,3,5,11,15,16,17,18,23
MDF/ BREAK ROOM	(2)	3'-0"	7'-0"	5	1	11,15
AHU ROOM	(3)	3'-0"	7'-0"	5	1	7,10,11
OFFICE / STORAGE	(4)	3'-0"	7'-0"	5	1	1,2,5,11,15
UNISEX T.R.	(5)	3'-0"	7'-0"	3	1	11,14,20,24
UNISEX T.R.	(6)	3'-0"	7'-0"	3	1	11,14,20,24
SPRINKLER ROOM	(7)	3'-0"	7'-0"	3	1	3,8,10,11,12,16,20
ELECTRICAL ROOM	(8)	3'-0"	7'-0"	3	1	2,3,8,10,11,12,16,20
ELEV. MACHINE RM	(9)	3'-6"	7'-0"	3	1	2,3,8,10,11,12,16
SLIDING DOOR	(10)	9'-0"	7'-0"	7L	-	3,8,13,26,27,28
ALCOVE ENTRY	(11)	4'-0"	7'-0"	1	1	1,2,3,4,11,12,13,16,19,24
ALCOVE ENTRY	(12)	4'-0"	7'-0"	1	1	1,2,3,4,11,12,13,16,19,24
ELEV. MACHINE RM	(13)	3'-6"	7'-0"	3	1	2,3,8,10,11,12,16
SLIDING DOOR	(14)	9'-0"	7'-0"	7L	-	3,8,13,26,27,28
ALCOVE ENTRY	(15)	4'-0"	7'-0"	1	1	1,2,3,4,11,12,13,16,19,24
ALCOVE ENTRY	(16)	4'-0"	7'-0"	1	1	1,2,3,4,11,12,13,16,19,24
STAIR A - EXIT	(17)	3'-0"	7'-0"	3	1	1,2,3,8,11,12,16,19,24
STAIR A - 2ND FLR	(18)	3'-0"	7'-0"	4	1	1,2,6,11,19,24
STAIR A - 3RD FLR	(19)	3'-0"	7'-0"	4	1	1,2,6,11,19,24
STAIR B - EXIT	(20)	3'-0"	7'-0"	3	1	1,2,3,8,11,12,16,19,24
STAIR B - 2ND FLR	(21)	3'-0"	7'-0"	4	1	1,2,6,11,19,24
STAIR B - 3RD FLR	(22)	3'-0"	7'-0"	4	1	1,2,6,11,19,24
MAN GATE	(23)	3'-0"	6'-0"	6	-	1,2,24,25

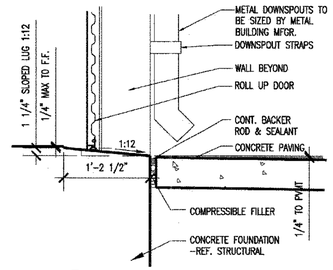
REMARKS:
1: PANIC HARDWARE
2: DOOR CLOSER
3: WEATHER STRIPPING / THRESHOLD -REF. DETAIL 1/A5.1
4: MAGNETIC HOLD OPEN DOORS W/ 15 MINUTE TIMER
5: DEADBOLT
6: FIRE RATED-60 MIN. (REF. NOTE 8)
7: VENTED AT AHU LOCATIONS
8: DRIP FLASHING
9: FIXED "DUMMY DOORS"
10: STORAGE LOCKSET
11: DOOR STOP
12: INSULATED
13: KEY PAD
14: TR LOCKSET
15: OFFICE LOCKSET
16: DOOR SWEEP
17: COLOR: REF. SHEET A7.1
18: DOOR SIGNAGE @ ENTRY (REF. NOTE 7)
19: DOOR SIGNAGE @ EXITS (REF. NOTE 9)
20: DOOR SIGNAGE @ IDENTIFYING ROOMS (REF. NOTE 10)
21: CLASP ON LATCH PUSH SIDE
22: NOT USED
23. MAIL-SLOTS ON DOOR OR ADJACENT WALL
24. KICKPLATE ON PUSH SIDE
25. MAN GATE LOCKSET
26. TORMAX ACCESS CONTROL (PANIC BAR & ELECTRIC LOCK)
27: TORMAX TIMER
28. LEFT HAND OPENING



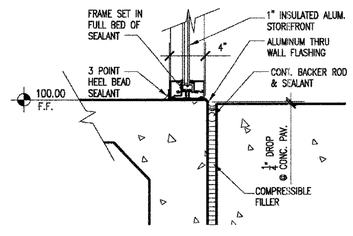
1 THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



2 THRESHOLD DETAIL
SCALE: 1" = 1'-0"

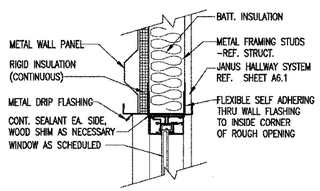


3 THRESHOLD DETAIL (ADA)
SCALE: 1" = 1'-0"

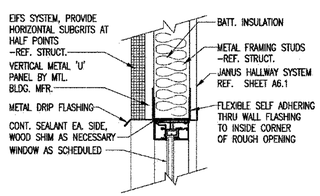


4 STOREFRONT DETAIL
SCALE: 1" = 1'-0"

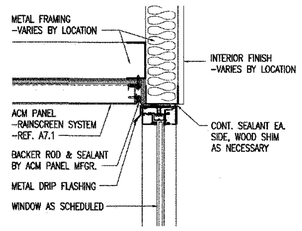
5 NOT USED
SCALE: 1 1/2" = 1'-0"



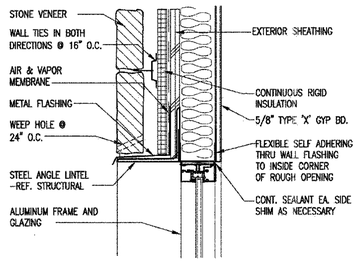
6 HEAD DETAIL (JAMB SIM.)
SCALE: 1 1/2" = 1'-0"



7 HEAD DETAIL (JAMB SIM.)
SCALE: 1 1/2" = 1'-0"

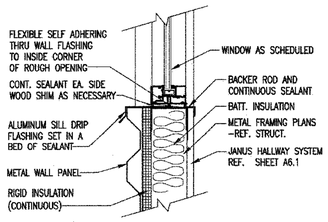


8 HEAD DETAIL (JAMB SIM.)
SCALE: 1 1/2" = 1'-0"

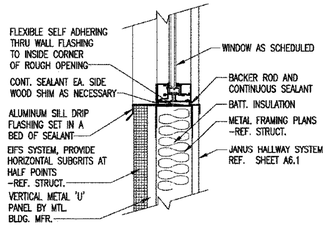


9 HEAD DETAIL (JAMB SIM.)
SCALE: 1 1/2" = 1'-0"

10 NOT USED
SCALE: 1 1/2" = 1'-0"



11 SILL DETAIL
SCALE: 1 1/2" = 1'-0"



12 SILL DETAIL
SCALE: 1 1/2" = 1'-0"

FINISH SCHEDULE

			FLOOR		WALLS				CEILING		KEYED NOTES
			MATERIAL	BASE	NORTH	SOUTH	EAST	WEST	HEIGHT	TYPE	
OFFICE	101	SALES AREA	PC	RUBBER	PT-1	PT-1	PT-1	PT-1	VARIES	GYP./ LAY-IN	2
	102	DISPLAY AREA	PC	RUBBER	PT-1	PT-1	PT-1	PT-1	13'-9"	GYP.	2
	103	MDF / BREAK ROOM	PC	RUBBER	PT-1	PT-1	PT-1	PT-1	8'-0"	LAY-IN	2
	104	AHU ROOM	PC	RUBBER	PT-1	PT-1	PT-1	PT-1	-	ES	
	105	MENS T.R.	PC	-	PT1/MAR	PT1/MAR	PT1/MAR	PT1/MAR	8'-0"	GYP.	1,2
	106	WOMENS T.R.	PC	-	PT1/MAR	PT1/MAR	PT1/MAR	PT1/MAR	8'-0"	GYP.	1,2
	107	DRINKING FOUNTAIN	PC	-	JANUS	JANUS	JANUS	JANUS	-	-	

KEYED NOTES:
1. MARLITE WAINSCOT TO 4'-0" A.F.F.
2. BATT INSULATION ABOVE CEILING.

GENERAL NOTES:
A. GENERAL CONTRACTOR TO SUBMIT ALL FINISH SELECTIONS TO OWNER AND ARCHITECT FOR APPROVAL PRIOR TO ORDERING
B. REF. SHEET A7.1 FOR SPECIFICATIONS.

LEGEND:
ES EXPOSED STRUCTURE
GYP 5/8" TYPE 'X' GYPSUM BOARD
JANUS JANUS WALL SYSTEM
LAY-IN 2x2 LAY-IN ACOUSTICAL CEILING
PC POLISHED CONCRETE
PT-1 INTERIOR OFFICE PAINT
MAR MARLITE WALL PANEL
RUBBER RUBBER WALL BASE

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * JEFFREY S. DALLENBACH * STATE OF TEXAS * 15128

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

SE MILITARY STORAGE

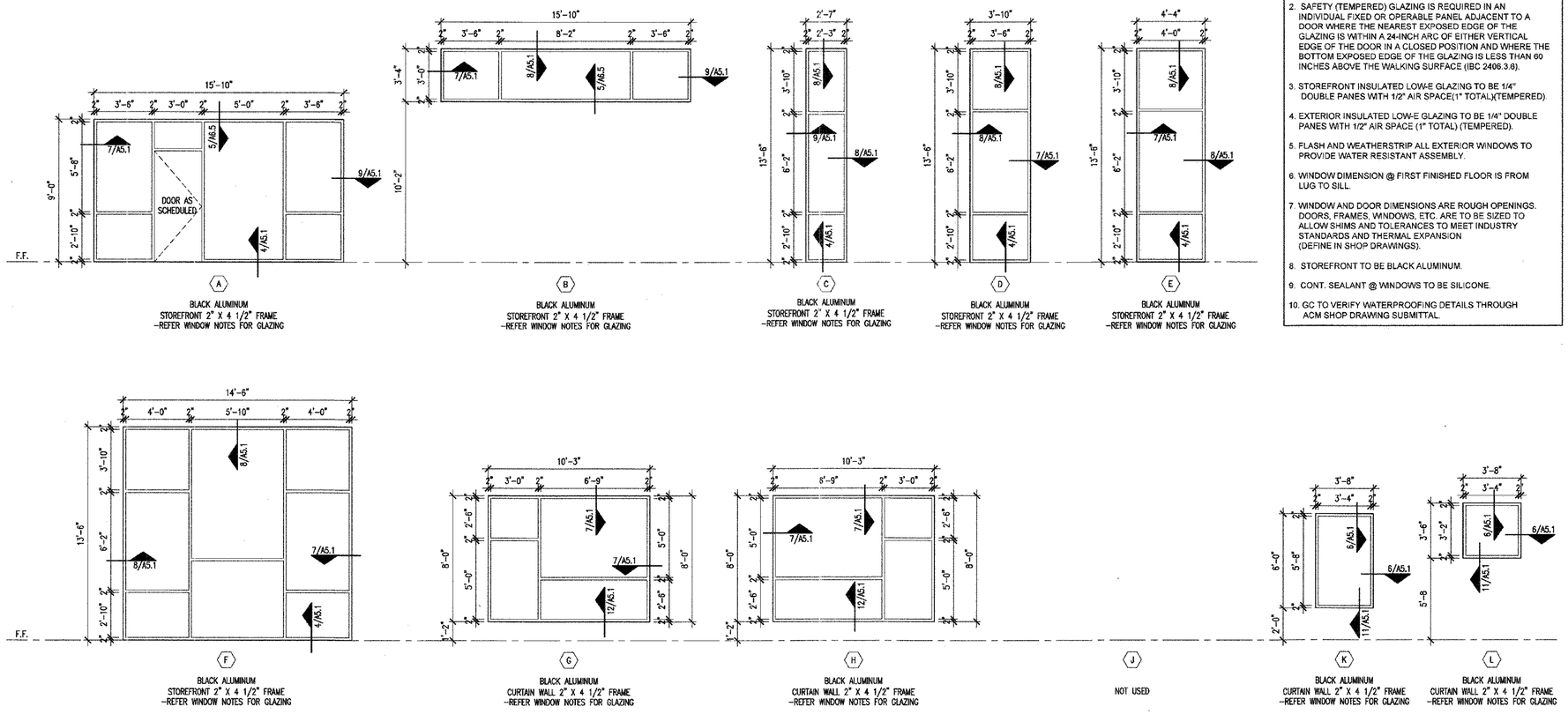
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

WDW/DOOR SCHEDULES

SHEET NO.
A5.1

WINDOW TYPES



WINDOW NOTES

1. VERIFY ALL ROUGH OPENING DIMENSIONS IN RELATION TO STRUCTURAL DRAWINGS. FRAME SIZES TO BE ADJUSTED AS NECESSARY FOR PROPER SHIM, FLASHING, AND THERMAL EXPANSION.
2. SAFETY (TEMPERED) GLAZING IS REQUIRED IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE (IBC 2406.3.6).
3. STOREFRONT INSULATED LOW-E GLAZING TO BE 1/4" DOUBLE PANES WITH 1/2" AIR SPACE(1" TOTAL)(TEMPERED).
4. EXTERIOR INSULATED LOW-E GLAZING TO BE 1/4" DOUBLE PANES WITH 1/2" AIR SPACE (1" TOTAL) (TEMPERED).
5. FLASH AND WEATHERSTRIP ALL EXTERIOR WINDOWS TO PROVIDE WATER RESISTANT ASSEMBLY.
6. WINDOW DIMENSION @ FIRST FINISHED FLOOR IS FROM LUG TO SILL.
7. WINDOW AND DOOR DIMENSIONS ARE ROUGH OPENINGS. DOORS, FRAMES, WINDOWS, ETC. ARE TO BE SIZED TO ALLOW SHIMS AND TOLERANCES TO MEET INDUSTRY STANDARDS AND THERMAL EXPANSION (DEFINE IN SHOP DRAWINGS).
8. STOREFRONT TO BE BLACK ALUMINUM.
9. CONT. SEALANT @ WINDOWS TO BE SIL/CONE.
10. GC TO VERIFY WATERPROOFING DETAILS THROUGH ACM SHOP DRAWING SUBMITTAL.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT JEFFREY S. DALLENBACH 16128 STATE OF TEXAS

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

SE MILITARY STORAGE

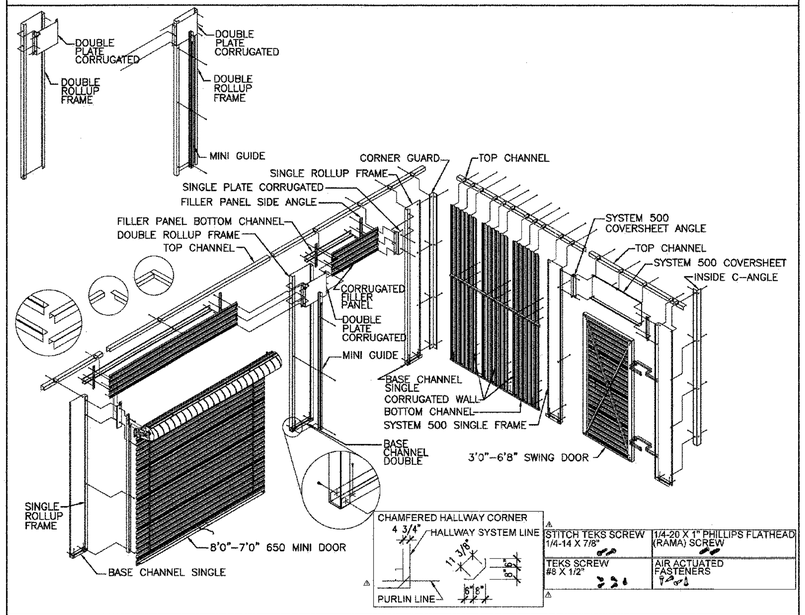
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

WINDOW TYPES

SHEET NO.
A5.2

CORRUGATED HALLWAY SYSTEM

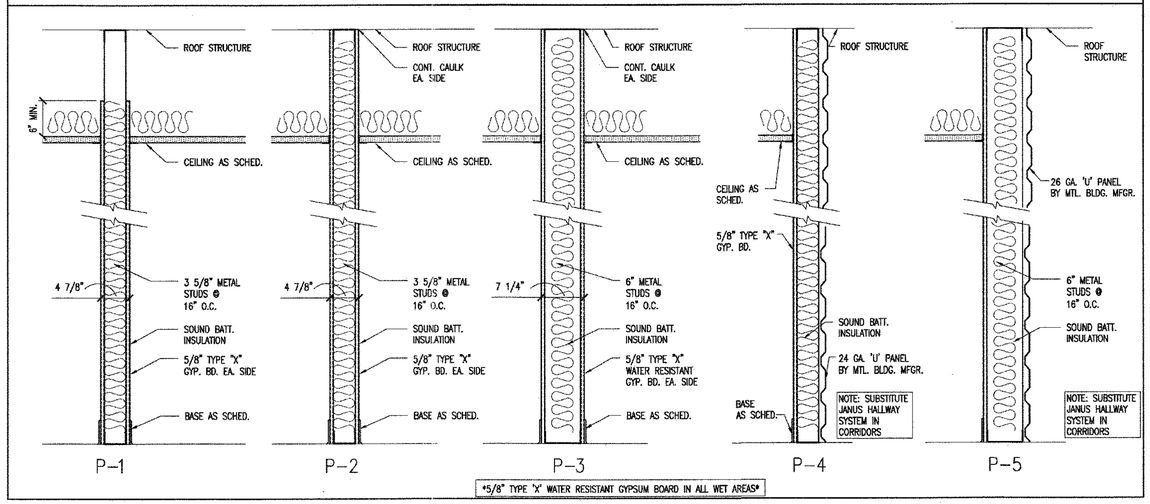


JANUS/STORAGE SCHEDULE

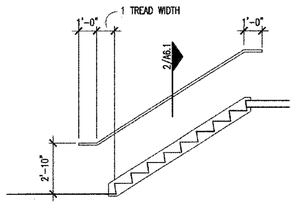
	CORRIDOR FLOOR	JANUS WALLS	COLOR	CORNERS	CMU WALLS	CEILING	CEILING HEIGHT
FIRST FLOOR	POLISHED CONCRETE	CORRUG.	WHITE	CHAMFERED	PAINTED	NONE	-
SECOND FLOOR	POLISHED CONCRETE	CORRUG.	WHITE	CHAMFERED	PAINTED	NONE	-
THIRD FLOOR	POLISHED CONCRETE	CORRUG.	WHITE	CHAMFERED	PAINTED	NONE	-

NOTES:
1. CHAMFERED CORNERS TO HAVE DIAMOND PLATE TO 8'-6" @ F.F.- COLOR: WHITE
2. DOOR COLOR CHOICES ON A7.1
3. REFER FLOOR PLANS FOR CEILING HEIGHTS AT STOREFRONT LOCATIONS.

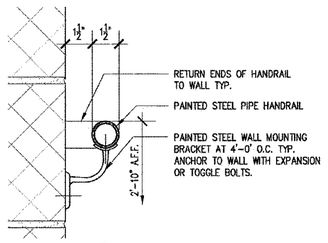
PARTITION TYPES



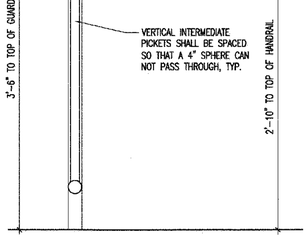
5/8" TYPE "X" WATER RESISTANT GYPSUM BOARD IN ALL WET AREAS



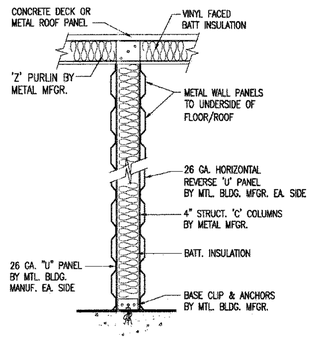
1 STAIR DETAIL
SCALE: 1/4" = 1'-0"



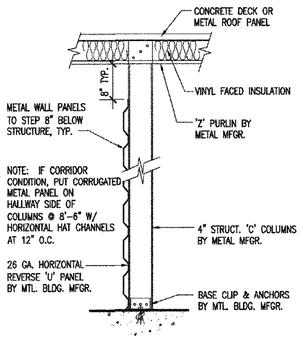
2 HANDRAIL DETAIL
SCALE: 3" = 1'-0"



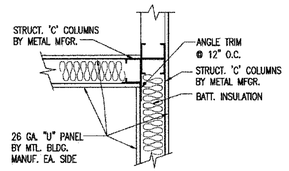
3 HANDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"



4 PARTITION /COL. INSULATION
SCALE: 1" = 1'-0"

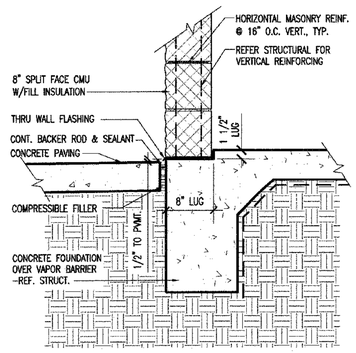


5 PARTITION /COL. CONNECTION
SCALE: 1" = 1'-0"

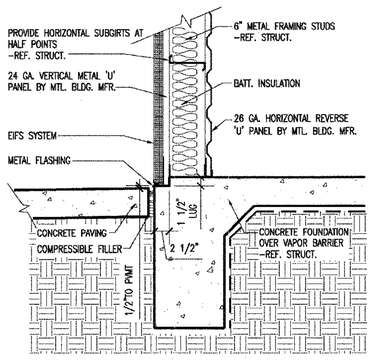


NOTE: ALL HALLWAY SYSTEMS CORNERS TO HAVE CHAMFERED CORNERS. REF. JANUS HALLWAY SYSTEM A6.1.

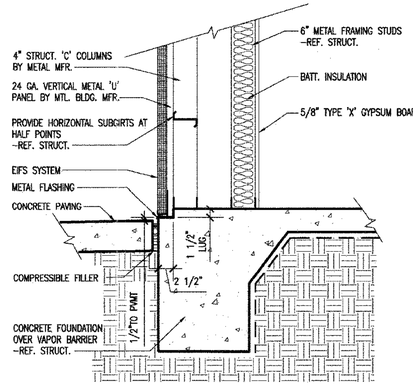
6 PARTITION /COL.INSULATED (PLAN)
SCALE: 1" = 1'-0"



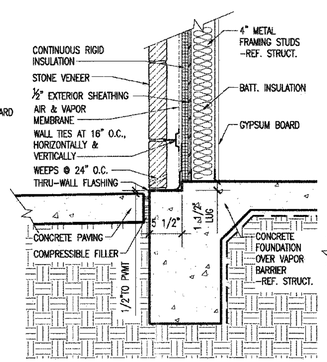
7 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



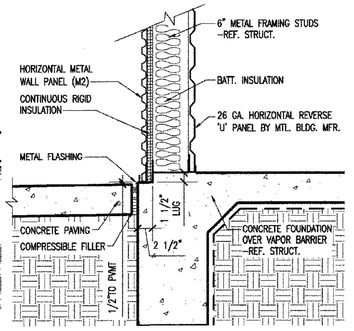
8 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



9 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



10 FOUNDATION DETAIL
SCALE: 1 1/2" = 1'-0"



11 FOUNDATION DETAIL
SCALE: 1 1/2" = 1'-0"

GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.
7. INTERMEDIARY METAL STUDS NOT REQUIRED AT METAL WALL PANEL IF RIGID INSULATION SHEETS MEASURE 5'X10'. INTERMEDIARY STUDS STILL REQUIRED AT MASONRY OVER METAL STUD.

ROOF INSULATION: R-27.3 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

ROOF INSULATION: R-30 @ METAL ROOF

- R-19, 6" BATT INSULATION, PARALLEL WITH PURLIN AND STRAPPING AS NECESSARY.
- R-11, 3½" BATT OVER PURLIN AND STRAPPING AS NECESSARY.
- R-5, THERMAL BLOCKS, COORD. WITH STANDING SEAM METAL ROOF, SIZE ROOF CLIPS TO ACCOMMODATE INSULATION.

WALL INSULATION:

- 8" CMU - FILL CELLS TO R-11 - 1ST FLOOR
- 6" METAL STUDS - R-19 BATT INSULATION IN WALLS - 1ST/2ND FLOOR
- 4" METAL STUDS - R-13 BATT INSULATION IN WALLS - 3RD FLOOR
- R-5 CONTINUOUS INSULATION ON EXTERIOR OF ALL METAL STUD WALLS

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * 10128 * JEFFREY S. DALLENBACH
JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 10128

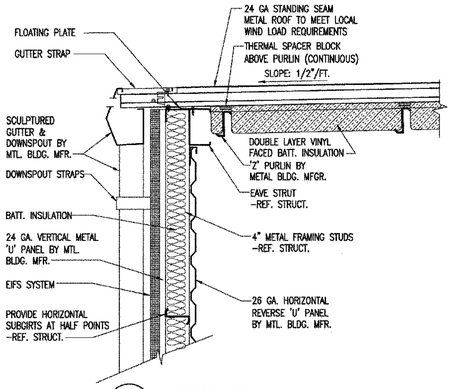
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

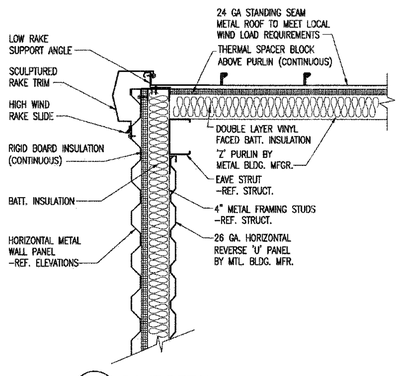
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

BUILDING DETAILS

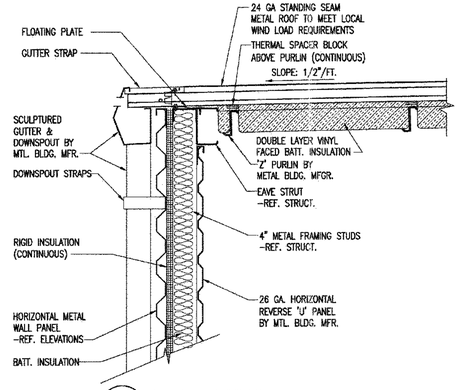
SHEET NO.
A6.1



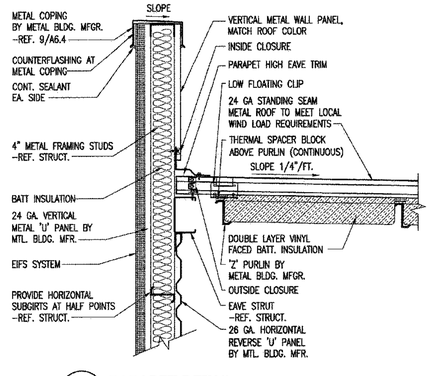
1 GUTTER DETAIL
SCALE: 1" = 1'-0"



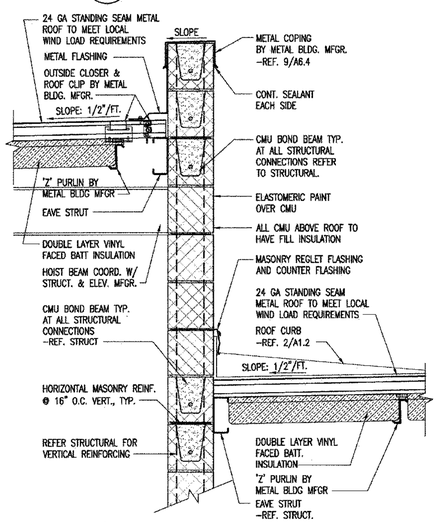
2 RAKE DETAIL
SCALE: 1" = 1'-0"



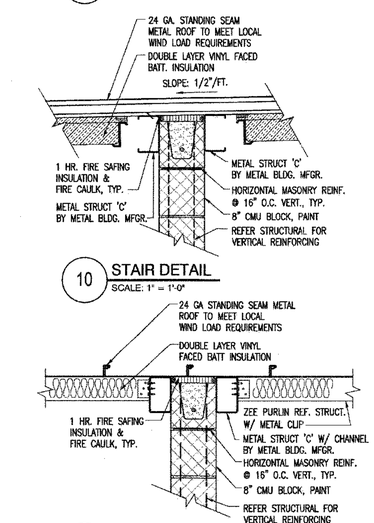
3 GUTTER DETAIL
SCALE: 1" = 1'-0"



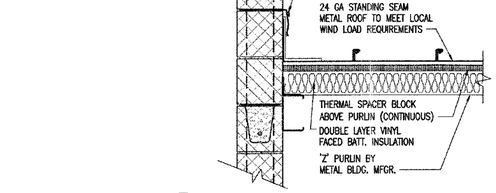
4 PARAPET DETAIL
SCALE: 1" = 1'-0"



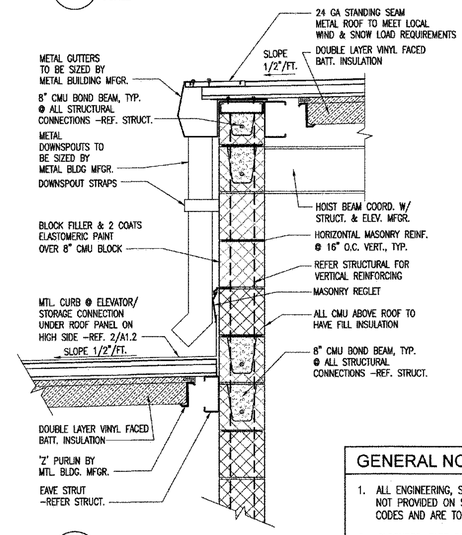
5 STONE PARAPET DETAIL
SCALE: 1" = 1'-0"



6 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"



7 ELEVATOR RAKE DETAIL
SCALE: 1" = 1'-0"

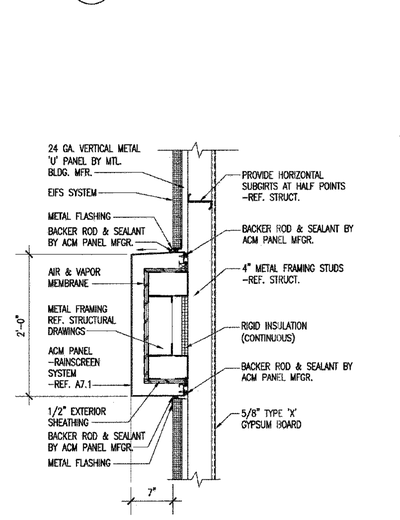


8 ELEVATOR GUTTER DETAIL
SCALE: 1" = 1'-0"

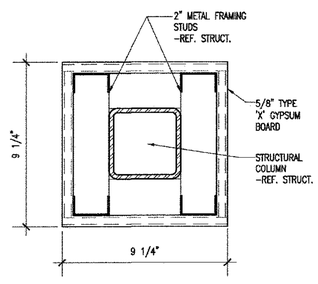
9 ELEVATOR PARAPET DETAIL
SCALE: 1" = 1'-0"

10 STAIR DETAIL
SCALE: 1" = 1'-0"

11 STAIR DETAIL
SCALE: 1" = 1'-0"



12 ACM DETAIL
SCALE: 1" = 1'-0"



13 COLUMN DETAIL (PLAN)
SCALE: 3" = 1'-0"

GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.
7. INTERMEDIARY METAL STUDS NOT REQUIRED AT METAL WALL PANEL IF RIGID INSULATION SHEETS MEASURE 5'X10'. INTERMEDIARY STUDS STILL REQUIRED AT MASONRY OVER METAL STUD.

ROOF INSULATION: R-27.3 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

ROOF INSULATION: R-30 @ METAL ROOF

- R-19, 6" BATT INSULATION, PARALLEL WITH PURLIN AND STRAPPING AS NECESSARY.
- R-11, 3½" BATT OVER PURLIN AND STRAPPING AS NECESSARY.
- R-5, THERMAL BLOCKS, COORD. WITH STANDING SEAM METAL ROOF, SIZE ROOF CLIPS TO ACCOMMODATE INSULATION.

WALL INSULATION:

- 8" CMU – FILL CELLS TO R-11 – 1ST FLOOR
- 6" METAL STUDS – R-19 BATT INSULATION IN WALLS – 1ST/2ND FLOOR
- 4" METAL STUDS – R-13 BATT INSULATION IN WALLS – 3RD FLOOR
- R-5 CONTINUOUS INSULATION ON EXTERIOR OF ALL METAL STUD WALLS

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLERBACH

JEFFREY S. DALLERBACH, AIA
TEXAS REGISTRATION NO. 16128

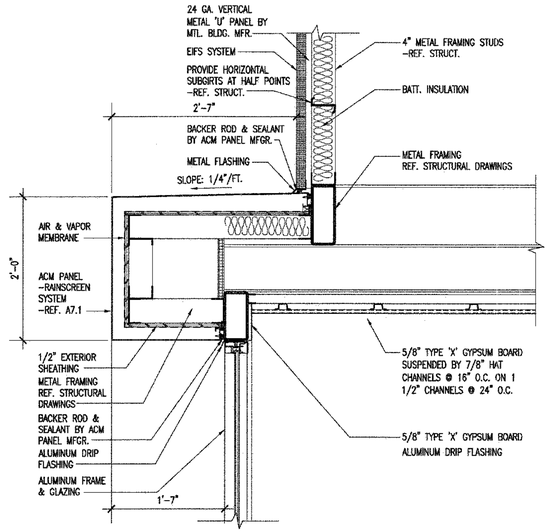
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

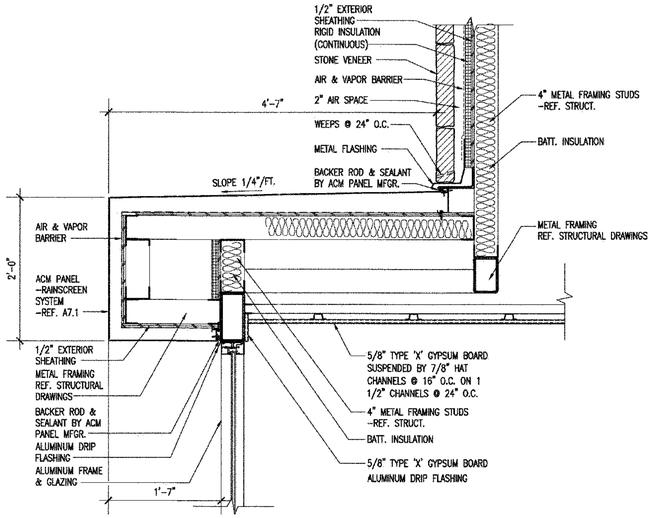
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

BUILDING DETAILS

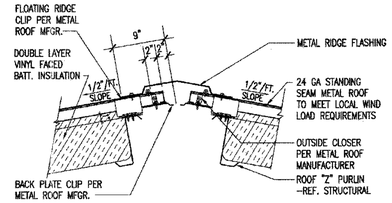
SHEET NO.
A6.2



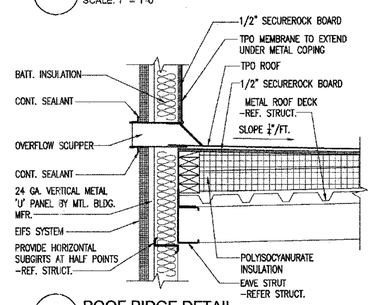
1 ACM DETAIL
SCALE: 1" = 1'-0"



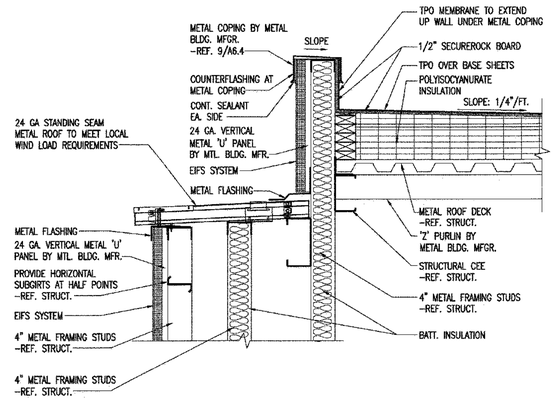
2 ACM DETAIL
SCALE: 1" = 1'-0"



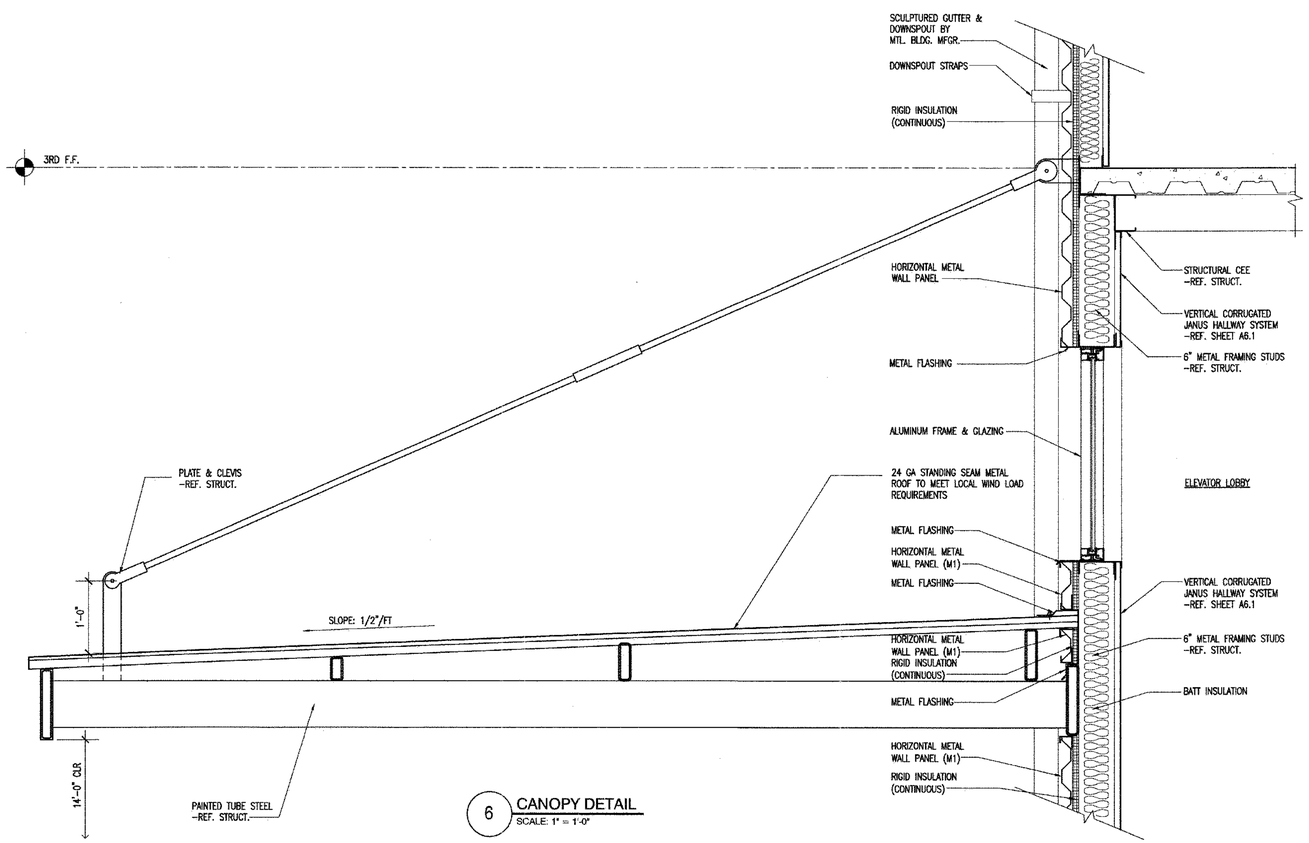
3 ROOF RIDGE DETAIL
SCALE: 1" = 1'-0"



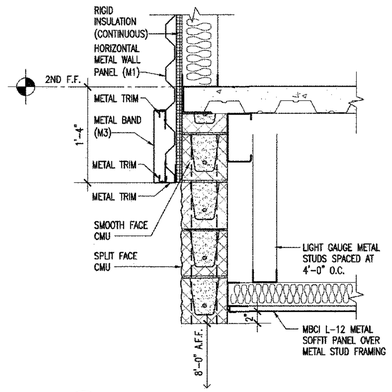
4 ROOF RIDGE DETAIL
SCALE: 1" = 1'-0"



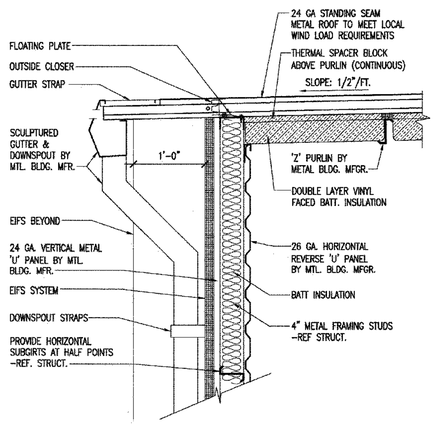
5 PARAPET DETAIL
SCALE: 1" = 1'-0"



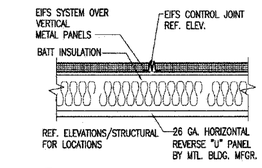
6 CANOPY DETAIL
SCALE: 1" = 1'-0"



7 ALCOVE HEADER DETAIL
SCALE: 1" = 1'-0"



9 GUTTER DETAIL
SCALE: 1" = 1'-0"



8 CONTROL JOINT DETAIL
SCALE: 1" = 1'-0"

GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.
7. INTERMEDIARY METAL STUDS NOT REQUIRED AT METAL WALL PANEL IF RIGID INSULATION SHEETS MEASURE 5'X10'. INTERMEDIARY STUDS STILL REQUIRED AT MASONRY OVER METAL STUD.

ROOF INSULATION: R-27.3 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

ROOF INSULATION: R-30 @ METAL ROOF

- R-19, 6" BATT INSULATION, PARALLEL WITH PURLIN AND STRAPPING AS NECESSARY.
- R-11, 3½" BATT OVER PURLIN AND STRAPPING AS NECESSARY.
- R-5, THERMAL BLOCKS, COORD. WITH STANDING SEAM METAL ROOF, SIZE ROOF CLIPS TO ACCOMMODATE INSULATION.

WALL INSULATION:

- 8" CMU – FILL CELLS TO R-11 – 1ST FLOOR
- 6" METAL STUDS – R-19 BATT INSULATION IN WALLS – 1ST/2ND FLOOR
- 4" METAL STUDS – R-13 BATT INSULATION IN WALLS – 3RD FLOOR
- R-5 CONTINUOUS INSULATION ON EXTERIOR OF ALL METAL STUD WALLS

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

REGISTERED ARCHITECT * JEFFREY S. DALLENBACH * STATE OF TEXAS

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

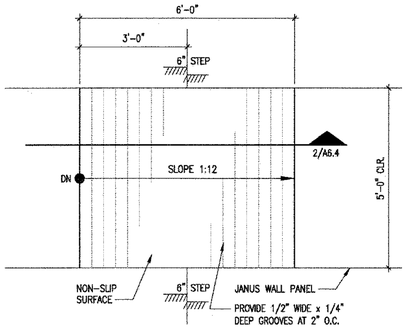
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

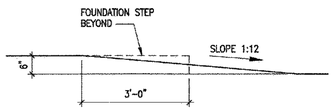
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

BUILDING DETAILS

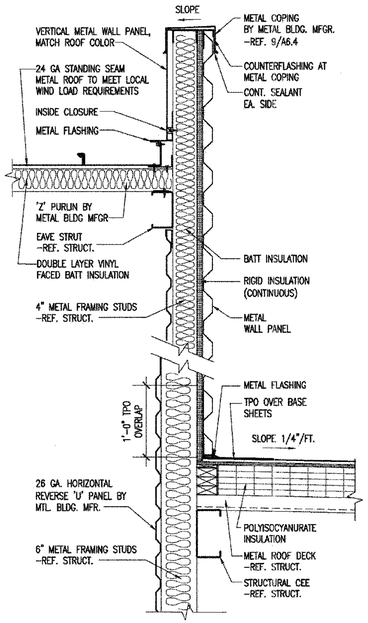
SHEET NO.
A6.3



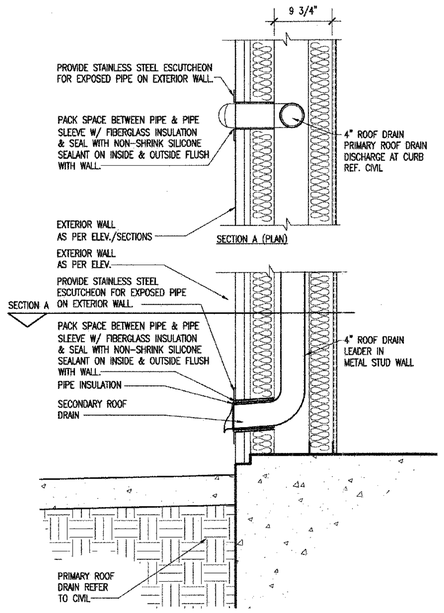
1 RAMP DETAIL
SCALE: 1/2" = 1'-0"



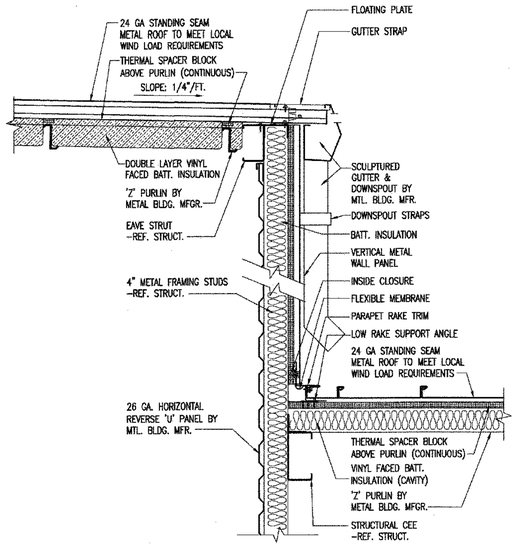
2 RAMP DETAIL
SCALE: 1/2" = 1'-0"



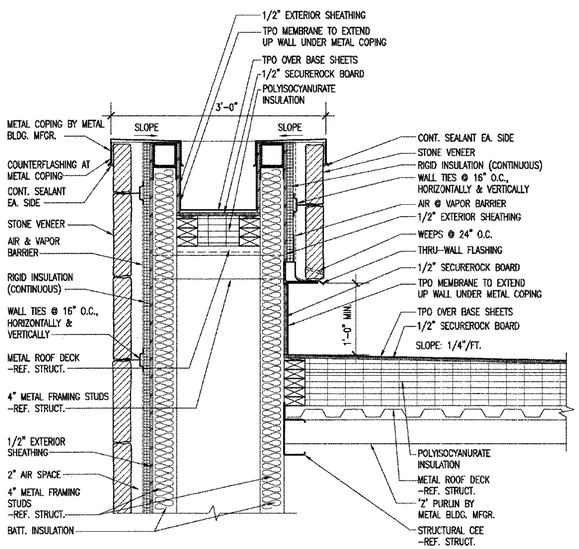
3 ROOF DETAIL
SCALE: 1" = 1'-0"



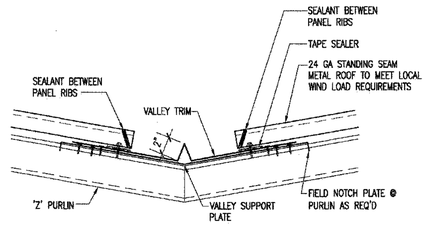
4 ROOF DRAIN DISCHARGE DETAIL
SCALE: NTS



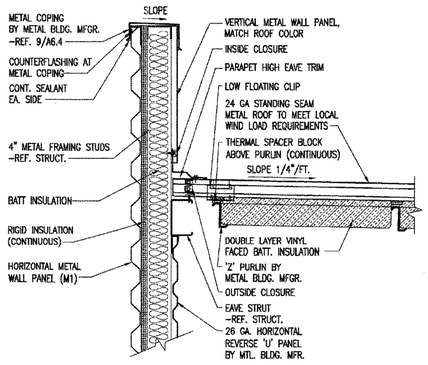
5 ROOF DETAIL
SCALE: 1" = 1'-0"



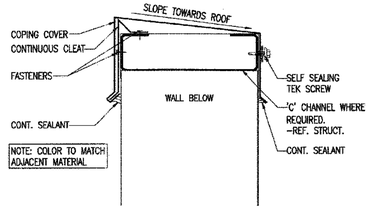
6 STONE DETAIL
SCALE: 1" = 1'-0"



7 ROOF VALLEY DETAIL
SCALE: 1 1/2" = 1'-0"



8 PARAPET DETAIL
SCALE: 1" = 1'-0"



9 METAL COPING DETAIL
SCALE: 3" = 1'-0"

GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.
7. INTERMEDIARY METAL STUDS NOT REQUIRED AT METAL WALL PANEL IF RIGID INSULATION SHEETS MEASURE 5'X10'. INTERMEDIARY STUDS STILL REQUIRED AT MASONRY OVER METAL STUD.

ROOF INSULATION: R-27.3 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

ROOF INSULATION: R-30 @ METAL ROOF

- R-19, 6" BATT INSULATION, PARALLEL WITH PURLIN AND STRAPPING AS NECESSARY.
- R-11, 3½" BATT OVER PURLIN AND STRAPPING AS NECESSARY.
- R-5, THERMAL BLOCKS, COORD. WITH STANDING SEAM METAL ROOF, SIZE ROOF CLIPS TO ACCOMMODATE INSULATION.

WALL INSULATION:

- 8" CMU – FILL CELLS TO R-11 – 1ST FLOOR
- 6" METAL STUDS – R-19 BATT INSULATION IN WALLS – 1ST/2ND FLOOR
- 4" METAL STUDS – R-13 BATT INSULATION IN WALLS – 3RD FLOOR
- R-5 CONTINUOUS INSULATION ON EXTERIOR OF ALL METAL STUD WALLS

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * JEFFREY S. DALLENBACH * STATE OF TEXAS 16128 02.28.2019

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

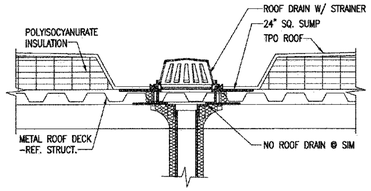
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

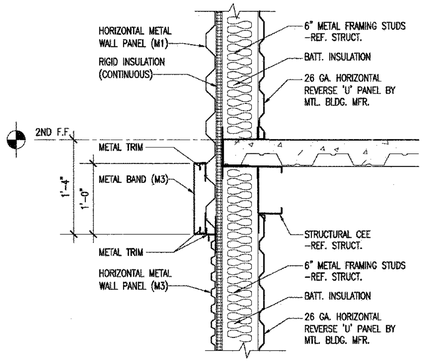
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

BUILDING DETAILS

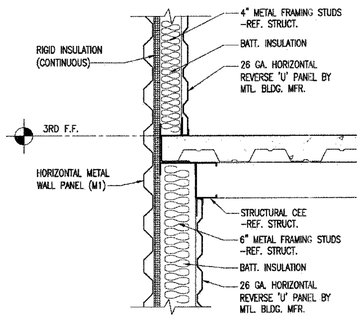
SHEET NO.
A6.4



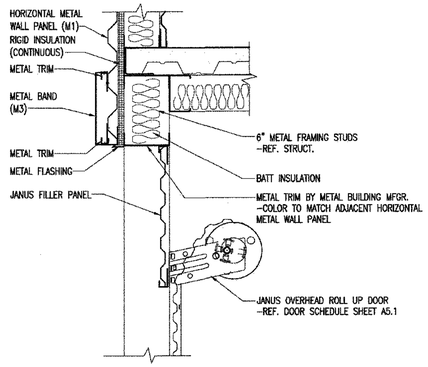
1 ROOF DRAIN DETAIL
SCALE: 1" = 1'-0"



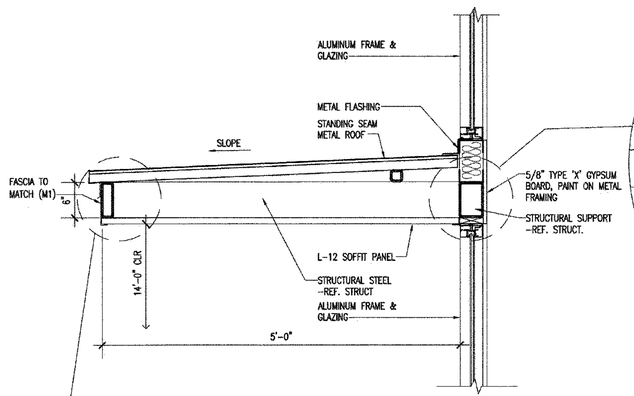
2 METAL BAND DETAIL
SCALE: 1" = 1'-0"



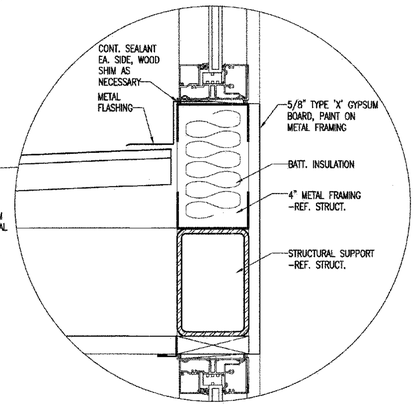
3 METAL WALL PANEL DETAIL
SCALE: 1" = 1'-0"

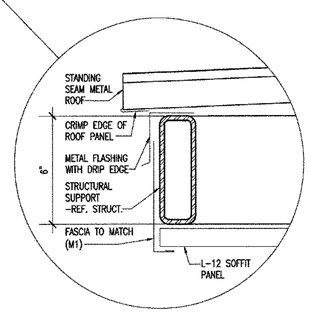


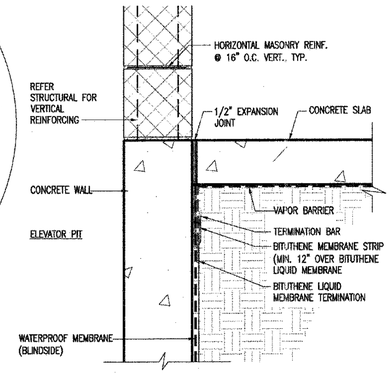
4 ROLL-UP DOOR HEADER
SCALE: 1" = 1'-0"



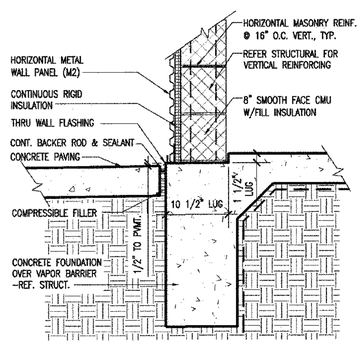
5 CANOPY DETAIL
SCALE: 1" = 1'-0"



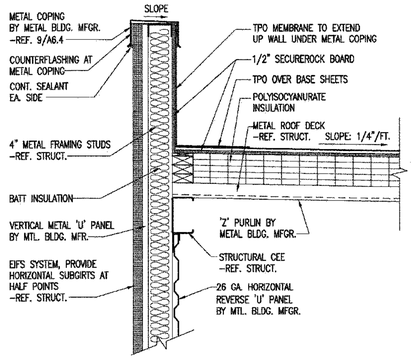




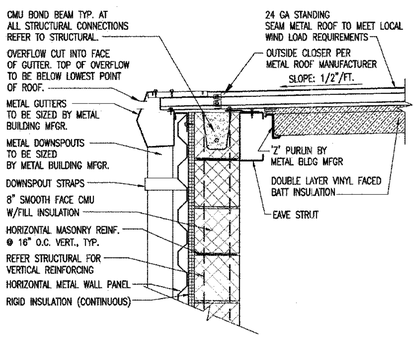
7 WATERPROOFING DETAIL @ ELEVATOR PIT
SCALE: 1 1/2" = 1'-0"



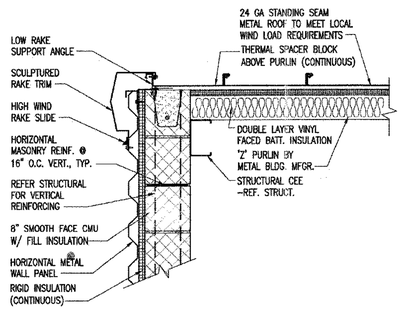
8 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



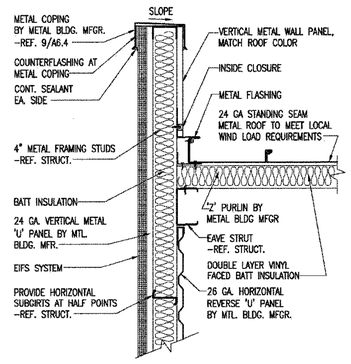
9 PARAPET DETAIL
SCALE: 1" = 1'-0"



10 STAIR GUTTER DETAIL
SCALE: 1" = 1'-0"



11 STAIR RAKE DETAIL
SCALE: 1" = 1'-0"



12 PARAPET DETAIL
SCALE: 1" = 1'-0"

GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.
7. INTERMEDIARY METAL STUDS NOT REQUIRED AT METAL WALL PANEL IF RIGID INSULATION SHEETS MEASURE 5'X10'. INTERMEDIARY STUDS STILL REQUIRED AT MASONRY OVER METAL STUD.

ROOF INSULATION: R-27.3 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

ROOF INSULATION: R-30 @ METAL ROOF

- R-19, 6" BATT INSULATION, PARALLEL WITH PURLIN AND STRAPPING AS NECESSARY.
- R-11, 3½" BATT OVER PURLIN AND STRAPPING AS NECESSARY.
- R-5, THERMAL BLOCKS, COORD. WITH STANDING SEAM METAL ROOF, SIZE ROOF CLIPS TO ACCOMMODATE INSULATION.

WALL INSULATION:

- 8" CMU – FILL CELLS TO R-11 – 1ST FLOOR
- 6" METAL STUDS – R-19 BATT INSULATION IN WALLS – 1ST/2ND FLOOR
- 4" METAL STUDS – R-13 BATT INSULATION IN WALLS – 3RD FLOOR
- R-5 CONTINUOUS INSULATION ON EXTERIOR OF ALL METAL STUD WALLS

ARCHCON architecture
12035 GOLIWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH 12128

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 16128

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : PS/VP
REVISIONS:

BUILDING DETAILS

SHEET NO.
A6.5

EXTERIOR FINISHES

FULL FENCE - IRON	6'-0" HIGH ORNAMENTAL IRON FENCE FENCE TO MATCH AMERISTAR - MONTAGE PLUS.
FULL FENCE - CHAIN LINK	6'-0" HIGH VINYL CHAIN LINK FENCE COLOR: BLACK
ROLLING GATE	GATE TO MATCH AMERISTAR - MONTAGE PLUS. SUBMIT SHOP DRAWINGS 3-RAIL CLASSIC, 6'-0" TALL X 20' OPENING ROLL GATE COLOR: BLACK
MAN GATE	GATE TO MATCH AMERISTAR - MONTAGE PLUS. SUBMIT SHOP DRAWINGS 3-RAIL CLASSIC STEEL PANEL GATE. REF. A5.1 DOOR SCHEDULE FOR HARDWARE COLOR: BLACK
STONE VENEER	AGUADO STONE OKLAHOMA BLUE/SILVER OCEAN MIST TUSCAN CHOP
CMU - SPLIT FACE	SPLIT FACED CMU W/ DRYBLOCK ADMIXTURE SIZE: 8X8X16 INSULATION: FILL CELLS TO R-11 MORTAR: W/ DRYBLOCK ADDITIVE ADMIXTURE COLOR: PT-3
CMU - SMOOTH FACE	SMOOTH FACE CMU W/ DRYBLOCK SIZE: 8X8X16 INSULATION: FILL CELLS TO R-11 MORTAR: W/ DRYBLOCK ADDITIVE
ACM (ALUMINUM COMPOSITE PANEL)	ALPOLIC/PE 4MM COLOR: COLOR TO MATCH PT-5 JOINT SYSTEM: RAINSCREEN NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
METAL WALL PANEL HORIZONTAL ORIENTATION (M1)	MBCI 24 GA. 7.2 WALL PANEL COLOR: SIG. 200 ASH GRAY
METAL WALL PANEL HORIZONTAL ORIENTATION (M2)	MBCI 24 GA. PBD WALL PANEL COLOR: SIG. 200 CHARCOAL GRAY
METAL TRANSITION BAND (M3)	MBCI 22 GA. COLOR: SIG. 200 COAL BLACK
EIFS SYSTEM	PAREX - TEIFS TEIFSFLEX SYSTEM 1 1/2" EPS FOAM OVER VERTICAL METAL 'U' PANEL
EIFS FINISH (PT-1)	SHERWIN WILLIAMS COLOR: TO BE INTEGRAL TO MATCH - PT-1 FINISHED: TEXTURED
EIFS FINISH (PT-2)	SHERWIN WILLIAMS COLOR: TO BE INTEGRAL TO MATCH - PT-2 FINISHED: SMOOTH
EIFS FINISH (PT-6)	SHERWIN WILLIAMS COLOR: TO BE INTEGRAL TO MATCH - PT-6 FINISHED: SMOOTH, HIGH GLOSS
EXTERIOR PAINT - PT-1	SHERWIN WILLIAMS COLOR: SW7017 DORIAN GRAY
EXTERIOR PAINT - PT-2	SHERWIN WILLIAMS COLOR: SW7013 IVORY LACE
EXTERIOR PAINT - PT-3	SHERWIN WILLIAMS COLOR: SW7019 GAUNTLET GRAY
EXTERIOR PAINT - PT-4	SHERWIN WILLIAMS COLOR: SW6990 CAVIAR
EXTERIOR PAINT - PT-5	SHERWIN WILLIAMS COLOR: MATCH ESS GREEN
EXTERIOR PAINT - PT-6	SHERWIN WILLIAMS COLOR: MATCH ESS GREEN, HIGH GLOSS
METAL TRIM, FLASHING, COPINGS	MBCI 24 GA. COLOR: MATCH ADJACENT MATERIAL UNLESS OTHERWISE NOTED
CANOPY STRUCTURE	SHERWIN WILLIAMS COLOR: PT-5
ALUMINUM WINDOW AND STOREFRONT FRAME	COLOR: BLACK ALUMINUM GENERAL CONTRACTOR TO PURCHASE BOTH ALUMINUM WINDOW AND STOREFRONT FROM SAME MANUFACTURER TO MATCH COLOR
GLAZING - CLEAR	SOLARBAN 60 COLOR: CLEAR + CLEAR VISIBILITY: 70%, U-VALUE: .27, SHGC: .39 1/4" GLAZING, 1/2" AIR SPACE, 1/4" GLAZING (1" TOTAL), TEMPERED
EXTERIOR SHEATHING	DENSGLASS GOLD THICKNESS: 1/2"
AIR & VAPOR MEMBRANE	GCP APPLIED TECHNOLOGIES PERM-A-BARRIER WALL MEMBRANE
RIGID BOARD INSULATION	RMAX TSX 8500 SIZE: GC TO PROVIDE 5X10 SHEETS TO COORDINATE WITH STRUCTURE. IF SMALLER SHEETS ARE USED INTERMEDIARY STUDS WILL BE REQUIRED @ 16" O.C. GRADE: COMMERCIAL
ROLL-UP DOORS COMMERCIAL - EXTERIOR	JANUS INTERNATIONAL - CONTINUOUS SHEET ROLLING DOOR MODEL 650 COLOR: SILHOUETTE GRAY INSTALL PER SPECIFICATIONS
EXTERIOR FILLER PANEL	MANUFACTURER: JANUS COLOR: EXR WASABI GREEN
EXTERIOR METAL PIER	MANUFACTURER: JANUS, PAINT GRADE COLOR: PT-3
EXTERIOR DOOR AND FRAME PAINT	SHERWIN WILLIAMS COLOR: PT-3 NOTE: PAINT BOTH SIDES OF EXT. DOOR SAME COLOR
CANOPY TRIM PAINT @ OFFICE	SHERWIN WILLIAMS COLOR: PT-5
METAL SOFFIT PANEL (AT ENTRY ALCOVES)	MBCI 24 GA. L-12 SOFFIT PANEL COLOR: CHARCOAL GRAY
METAL ROOF PANEL @ CANOPIES AND ELEVATOR	MBCI BATTENLOK 24 GA. COLOR: GALVALUME

CONT. EXTERIOR FINISHES

TPO ROOF	JOHNS MANVILLE - MECHANICALLY ATTACHED TPO ROOFING SYSTEM (UL CLASS A) -ROOF DECK (REF. STRUCT.) -COLOR: WHITE -JM ENRGY 3 POLYISOCYANURATE ROOF INSULATION -JM SECUROCK COVER BOARD, MECHANICALLY ATTACHED, ½" THICK -JM TPO .060 MIL (MINIMUM) THICK WHITE REINFORCED TPO MEMBRANE -REFLECTIVITY: 0.77 -EMISSIVITY: 0.87 -20 YEAR MANUFACTURER ROOF WARRANTY AND 2 YEAR INSTALLER WARRANTY -INSTALL PER MANUFACTURER SPECIFICATIONS
METAL ROOF PANEL	MBCI BATTENLOK 24 GA. COLOR: SIG 200 SOLAR WHITE
RAKE TRIM, GUTTERS, DOWNSPOUTS & COPING @MWP	MBCI 24 GA. COLOR: SIG 200: COAL BLACK
ROOF HATCH	PRECISION ROOF HATCH MODEL: PH-A SIZED PER CONSTRUCTION DOCUMENTS INSTALL PER SPECIFICATIONS
ROOF CURB	LM CURBS
EXTEND-A-RAIL	PRECISION ALUMINUM LADDER
ROOF HATCH LADDER	PRECISION FIXED VERTICAL ALUMINUM LADDER MODEL: FL-133 SIZED PER CONSTRUCTION DOCUMENTS INSTALL PER SPECIFICATIONS
WALL INSULATION (CMU) WALL INSULATION (4" STUD) WALL INSULATION (6" STUD) ABOVE CEILING @ OFFICE ROOF INSULATION (TPO) ROOF INSULATION (STANDING SEAM)	FILL TO R-11 R-13 BATT INSULATION AND R-5 RIGID INSULATION R-19 BATT INSULATION AND R-5 RIGID INSULATION ACOUSTICAL BATT INSULATION R-27.3 RIGID INSULATION ENTIRELY ABOVE ROOF DECK (INSULATION AND COVER BOARD) R-19 + R-11 VINYL FACED BATT INSULATION, STRAP AS NECESSARY AND THERMAL BREAKS

INTERIOR FINISHES

RESILIENT FLOORING - OFFICE, BREAK ROOM & TOILET ROOMS	PATCRAFT STYLE: CLICK REFRESH 1600V COLOR: HAZE 00500
MARLITE TOILET ROOMS	MARLITE - 48" WAINSCOT COLOR: 4678 PEWTER MESH CLEAR ALUMINUM / STAINLESS STEEL / TERMINATION CAP '
RUBBER WALL BASE OFFICE & TOILET ROOMS	PATCRAFT COLOR: 'STEEL WOOL' SIZE: 4"
ESS PODIUM	TO MATCH ESS PODIUM MILLWORK AND FINISHES
PLASTIC LAMINATE - BREAK ROOM COUNTERTOP	TO MATCH ESS COUNTERTOPS
PLASTIC LAMINATE - BREAK ROOM CABINETS	TO MATCH ESS CABINETS
SOLID SURFACE RESTROOM COUNTER TOP	HI-MACS COLOR: PANTHEON M322
PAINT - (PT-1).	SHERWIN WILLIAMS COLOR: SW 7049 'NUANCE'
PAINT - (PT-2)	TO MATCH ESS OYSTER WHITE, SEMI-GLOSS
PAINT - (PT-3)	TO MATCH ESS OYSTER WHITE, EGG SHELL
PAINT - INTERIOR WALLS OFFICE	COLOR: PT-1
PAINT - DOOR FRAME OFFICE	COLOR: PT-2
PAINT - INTERIOR DOORS OFFICE	COLOR: PT-2
PAINT - DOORS AND TRIM TOILET ROOM	COLOR: PT-2
PAINT - INTERIOR WALLS TOILET ROOMS	COLOR: PT-3
PAINT - INTERIOR CEILINGS TOILET ROOMS	WHITE - PROMAR 400 - FLAT
ACOUSTIC CEILING TILE	ARMSTRONG 2X2 FINE FISSURED SQUARE LAY-IN COLOR: WHITE (WH), MEDIUM TEXTURE GRID: PRELUDE 15/16 EXPOSED TEE GRID, WHITE

INTERIOR FINISHES - STORAGE

POLISHED CONCRETE	CONSOLIDECK CONCRETE POLISHING SYSTEM W/ 1800 GRIT FINISH MINIMUM W/ BLENDED DENSIFYER, PROSOCO SEALER, AND SPRAY GUARD
ROLL-UP DOORS COMMERCIAL - INTERIOR	JANUS INTERNATIONAL - CONTINUOUS SHEET ROLLING DOOR MODEL 650 COLOR: HIGH GLOSS WHITE INSTALL PER SPECIFICATIONS
DUMMY DOORS VISIBLE BEHIND GLASS	JANUS INTERNATIONAL - CONTINUOUS SHEET ROLLING DOOR MODEL 650 COLOR: EXR WASABI GREEN INSTALL PER SPECIFICATIONS
PAINT INTERIOR CMU AT STORAGE AND STAIR WALLS	SHERWIN WILLIAMS COLOR: WHITE TO MATCH INTERIOR JANUS SYSTEM
INTERIOR PAINT (STAIRS)	SHERWIN WILLIAMS COLOR: SW 7019 'GAUNTLET GRAY'

TOILET ROOM ACCESSORIES

TOILET TISSUE DISPENSER	BOBRICK - SURFACE-MOUNTED MULTI ROLL TOILET TISSUE DISPENSER MODEL: B-4288 CONTURA SERIES FINISH: SATIN-FINISH STAINLESS STEEL
HAND DRYER	XLERATOR HAND DRYER MODEL: XL-BW INCLUDE: ADA COMPLIANT RECESS KIT FINISH: STAINLESS STEEL
42" HORIZONTAL GRAB BARS 36" HORIZONTAL GRAB BARS	BOBRICK- 1/4" DIAMETER W/ SNAP FLANG COVER MODEL: B-5806 FINISH: STAINLESS STEEL
MIRROR	BOBRICK - CHANNEL-FRAME MIRROR MODEL: B-165 2436 SIZE: 24X36 FINISH: STAINLESS STEEL W/ BRIGHT-POLISH FINISH
SOAP DISPENSER	GOJO: ADX-7 DISPENSER MODEL: 8780-06 SIZE: 700ML FINISH: WHITE

ELEVATOR SPECIFICATIONS

ELEVATOR MODEL	ENDURA ABOVE-GROUND, TALL CAB, QTY. 2
RATED CAPACITY	4,500 LBS.
RATED SPEED	110 FT./MIN.
OPERATION SYSTEM	TAC32
TRAVEL	22'-0"
LANDINGS	3 TOTAL
OPENINGS	FRONT: 3
CLEAR CAR INSIDE	5' - 8" WIDE X 7' - 9½" DEEP
CAB HEIGHT	8'-10" NOMINAL, WITH A CEILING HEIGHT OF 8'-3"
HOISTWAY ENTRANCE SIZE:	4'-0" WIDE X 7'-0" HIGH
DOOR TYPE	TWO SPEED SIDE OPENING
POWER CHARACTERISTICS	480 VOLTS, 3 PHASE, 60 HZ.
SEISMIC REQUIREMENTS	ZONE 1
FIXTURE & BUTTON STYLE	VANDAL RESISTANT SIGNAL FIXTURES

GENERAL NOTES:

1. GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL.
2. MANUFACTURER: THYSSENKRUPP ELEVATOR, BASIS OF DESIGN IS THE ENDURA 45 A HOLELESS HYDRAULIC ELEVATOR PRODUCT.
3. WARRANTY/MAINTENANCE: 12 MONTH PERIOD
4. HOISTWAY ENTRANCES: DOORS AND FRAMES ON ALL LANDINGS SHALL BE APPLIED POWDER COAT PAINT. HOISTWAY SILL ASSEMBLIES SHALL BE SELF-SUPPORTING EXTRUDED ALUMINUM.
5. CAR ENCLOSURE: CAB TYPE TKS, REINFORCED COLD-ROLLED STEEL WITH A POWDER COATED FINISH. CEILING SHALL BE SUSPENDED TYPE, FLUORESCENT LIGHTING WITH TRANSLUCENT DIFFUSER MOUNTED IN A POWDER COAT PAINTED METAL FRAME. CAB FRONTS AND RETURN SHALL BE PROVIDED IN A #4 BRUSHED STAINLESS STEEL. CAR DOOR FINISH SHALL BE A #4 BRUSHED STAINLESS STEEL FINISH WITH STAINLESS STEEL KICK PLATES. CAB SILLS SHALL BE EXTRUDED ALUMINUM. HANDRAIL SHALL BE 2" FLAT METAL BAR ON SIDE AND REAR WALLS AND HAVE A #4 STAINLESS STEEL FINISH. BUMPER RAILS SHALL BE 4" FLAT METAL BAR ON SIDE AND REAR WALLS AND HAVE A #4 STAINLESS STEEL FINISH.
6. CAR OPERATING STATION: THE MAIN CAR CONTROL IN EACH CAR SHALL CONTAIN THE DEVICES REQUIRED FOR SPECIFIC OPERATION MOUNTED IN AN INTEGRAL SWING RETURN PANEL REQUIRING NO APPLIED FACEPLATE. SWING RETURN SHALL HAVE A BRUSHED STAINLESS STEEL FINISH. PUSHBUTTONS THAT ILLUMINATE USING LONG LASTING LED'S SHALL BE INCLUDED FOR EACH FLOOR SERVED. AN EMERGENCY COMMUNICATIONS SYSTEM, INTEGRAL PHONE SYSTEM SHALL BE PROVIDED. A COLUMN MOUNTED CAR RIDING LANTERN SHALL BE INSTALLED.
7. CONTROL SYSTEM: AUTOMATIC LIGHT AND FAN SHUT DOWN CONTROL SYSTEM SHALL BE INCLUDED. AN "EMERGENCY BATTERY LOWERING OPERATION" (10DOC) SHALL BE INCLUDED IN THE ELEVATOR OPERATION. THE EMERGENCY BATTERY LOWERING OPERATION SHALL LOWER THE ELEVATOR IN TIME OF POWER LOSS AND OPEN THE CAB DOOR ALLOWING FOR PASSENGERS TO EXIT.
8. HALL STATIONS: PROVIDE BUTTONS WITH BLUE-ILLUMINATING LED HALOS TO INDICATE THAT A CALL HAS BEEN REGISTERED AT THAT FLOOR FOR THE INDICATED DIRECTION. PROVIDE 1 SET OF PUSHBUTTON RISERS WITH FACEPLATES HAVING A #4 BRUSHED STAINLESS STEEL FINISH. PHASE 1 FIREFIGHTER'S SERVICE KEY SWITCH, WITH INSTRUCTIONS, SHALL BE INCORPORATED INTO THE HALL STATION AT THE DESIGNATED LEVEL. SPECIAL EQUIPMENT: CARD READER PROVISIONS SHALL BE INCLUDED IN ALL CONTROLLERS AND SPACE MADE AVAILABLE IN THE ELEVATOR CAB FOR A SURFACE MOUNTED DEVICE.

WATERPROOFING

VAPOR BARRIER (UNDER SLAB)	GCP APPLIED TECHNOLOGIES -FLORPRUFE 120 -10 MIL. - REF. STRUCT.
WATERPROOFING MEMBRANE (UNDER ELEVATOR PIT)	GCP APPLIED TECHNOLOGIES -BLINDSIDE -PREPRUFE 160R (VERTICAL) -PREPRUFE 300 (HORIZONTAL)

SPECIFICATION NOTES

1. GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR SUBMIT EQUIVALENT PRODUCT TO OWNER FOR APPROVAL.
2. GENERAL CONTRACTOR TO PROVIDE 4'X8' MOCK-UP OF ALL EXTERIOR FINISHES FOR OWNER & ARCHITECT'S APPROVAL. GC TO COORDINATE WITH ARCHITECT FOR SPECIFIC SECTIONS. MOCK-UP TO BE COMPLETED PRIOR TO 30% OF PROJECT COMPLETION. MOCK-UP WALL MUST BE APPROVE BY CROSS CREEK RANCH ARCHITECTURAL REVIEW COMMITTEE (ARC) PRIOR TO ANY INSTALLATION. NO EXTERIOR FINISHES TO BE ORDERED OR INSTALLED PRIOR TO MOCK-UP APPROVAL.
3. GENERAL CONTRACTOR TO SUBMIT PAINT SAMPLE FOR OWNER APPROVAL PRIOR TO PAINTING INTERIOR WALLS.

ARCHCON architecture
12035 CIBOLO - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

REGISTERED ARCHITECT * STATE OF TEXAS * JEFFREY S. DALLENBACH 15128

JEFFREY S. DALLENBACH, AIA
TEXAS REGISTRATION NO. 15128

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829

DATE : 02.28.2019

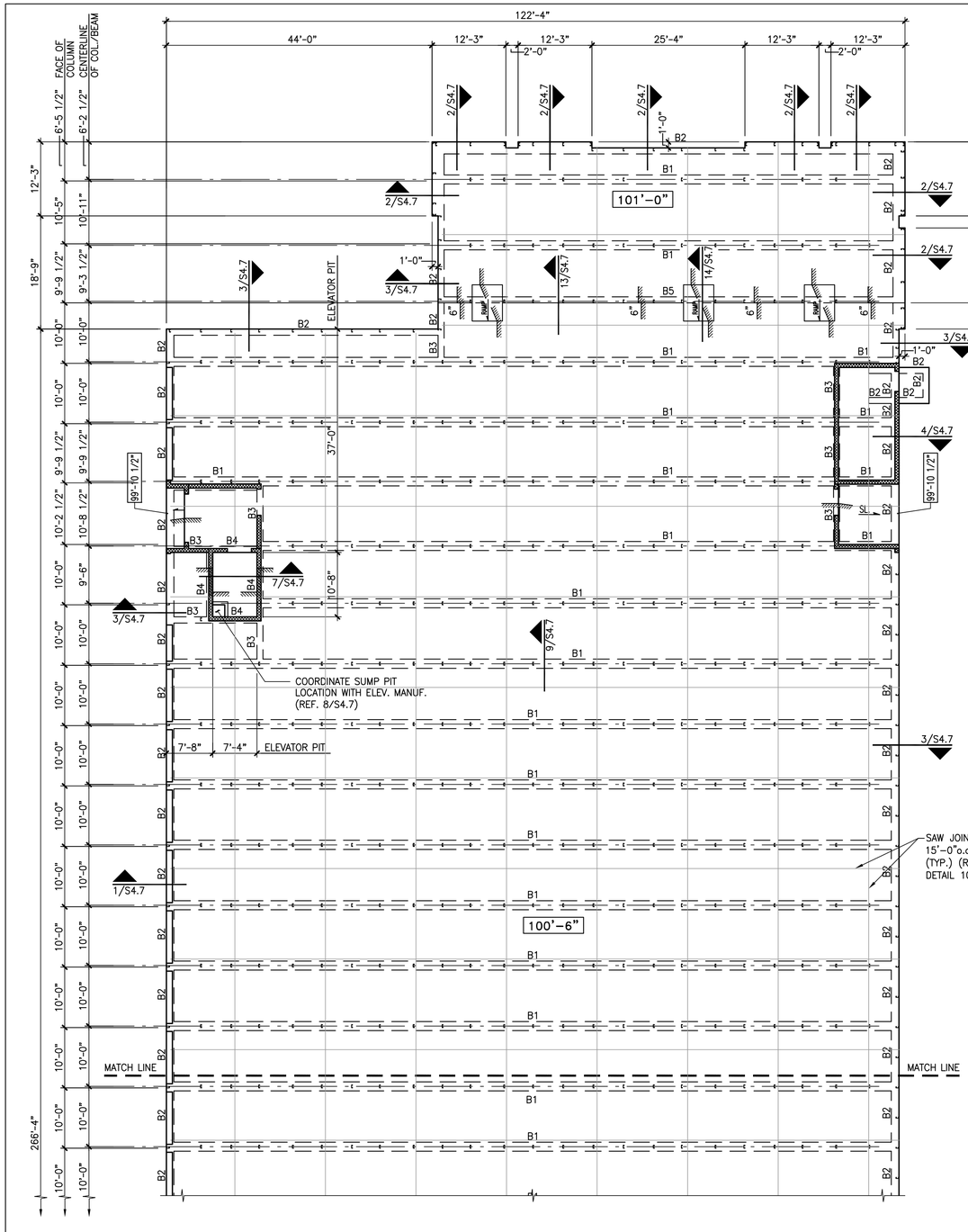
DRAWN : PS/VP

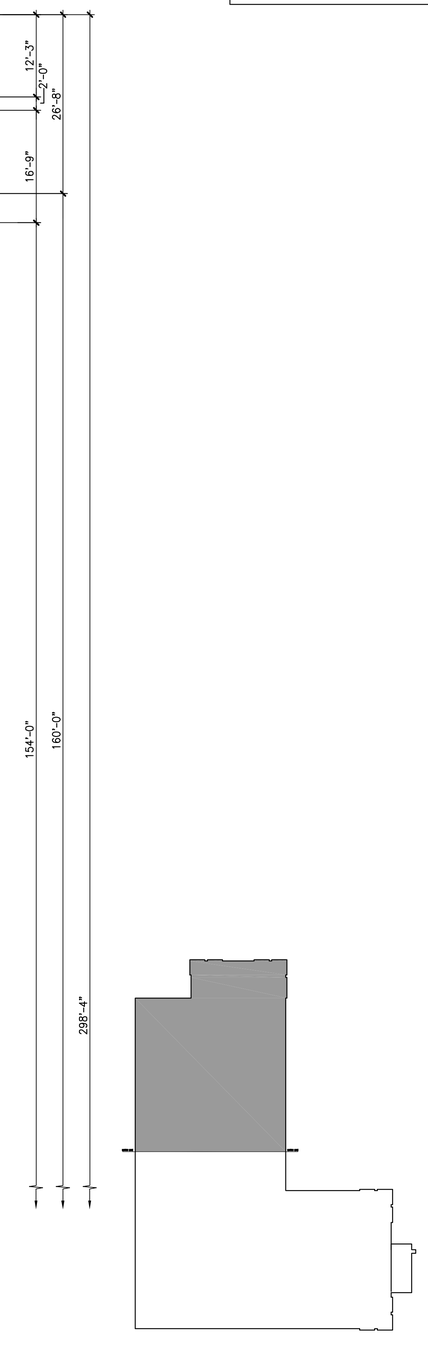
REVISIONS:

BLDG. SPECS.

SHEET NO.

A7.1





KEY PLAN

PLAN NOTES:

1.) COORDINATE LOCATION OF CONSTRUCTION JOINTS SO THAT NO MORE THAN 400 C.Y. IS POURED IN ONE DAY OR 160'-0" IN LENGTH EACH DAY
2.) REFER TO CIVIL DRWGS. FOR ACTUAL ELEVATIONS

PLAN NORTH

PARTIAL FOUNDATION FRAMING PLAN

SCALE:3/32"=1'-0"

MELVIN RAY DANYSH
36299
REGISTERED
PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

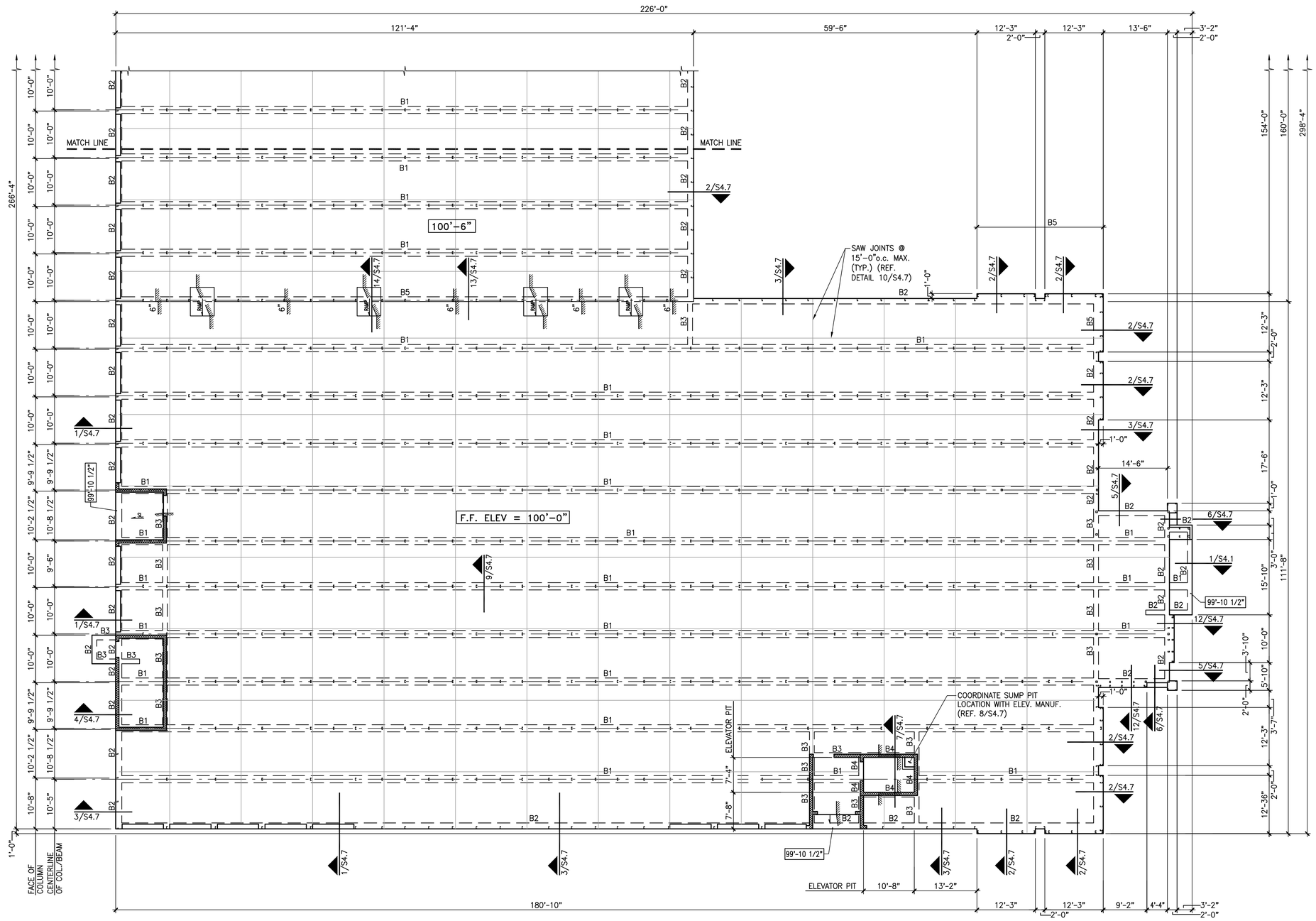
PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

FND. FRMG. PLAN

SHEET NO.

S2.1

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES21-S22



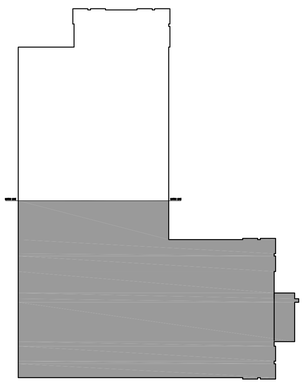
PLAN NOTES:

1.) COORDINATE LOCATION OF CONSTRUCTION JOINTS SO THAT NO MORE THAN 400 C.Y. IS POURED IN ONE DAY OR 160'-0" IN LENGTH EACH DAY
2.) REFER TO CIVIL DRWGS. FOR ACTUAL ELEVATIONS

PLAN NORTH

PARTIAL FOUNDATION FRAMING PLAN

SCALE:3/32"=1'-0"



KEY PLAN

MELVIN RAY DANYSH
36299
REGISTERED PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

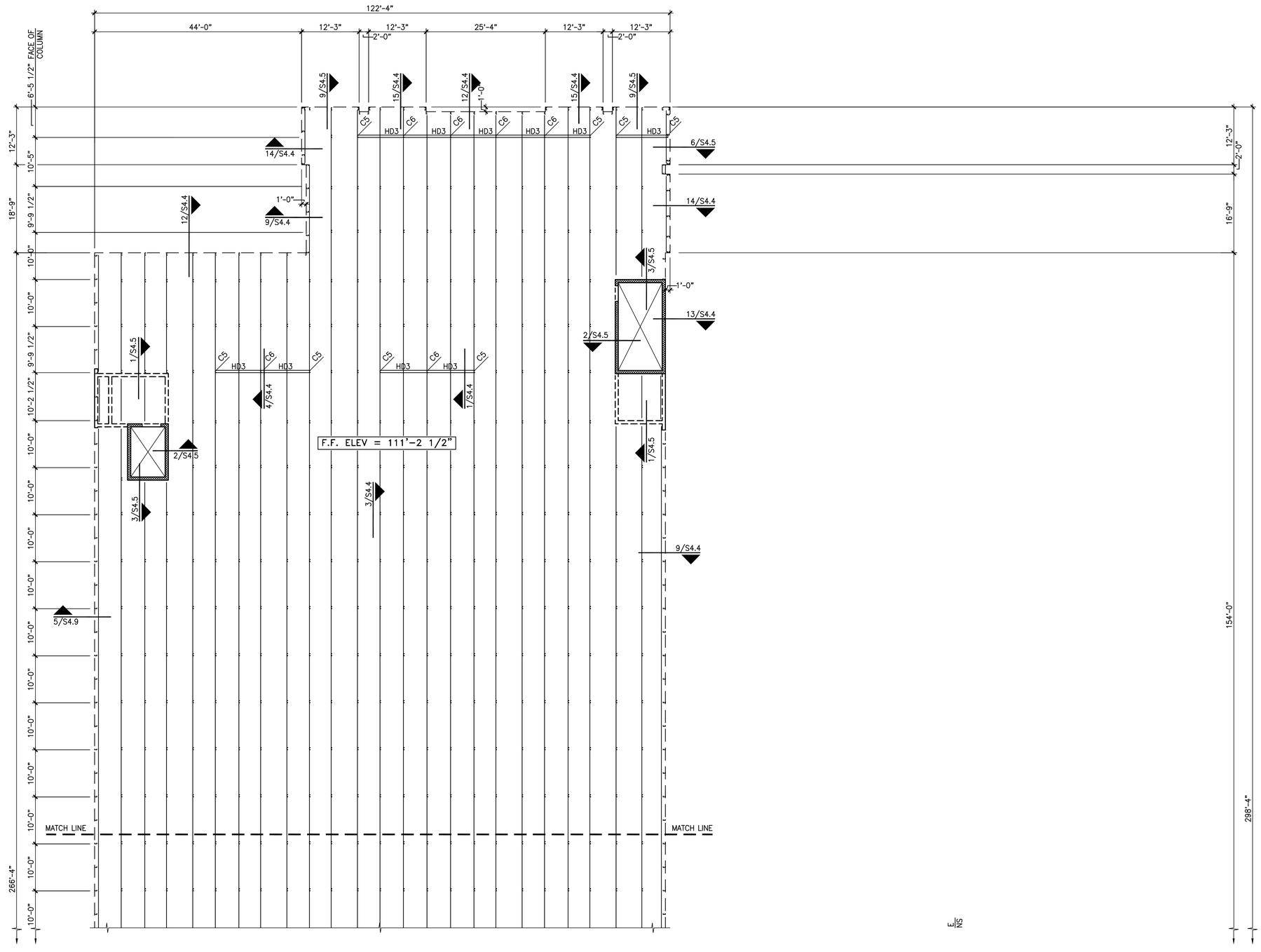
PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

FND. FRMG. PLAN

SHEET NO.

S2.2

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES21-S22



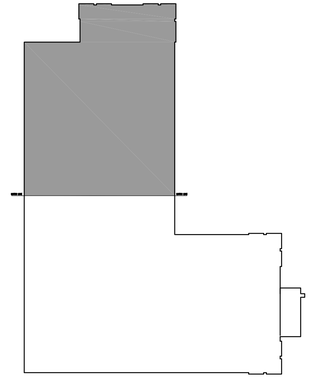
PLAN NOTES:

1.) FRAMING SHOWN IS BELOW 2ND FLOOR
2.) 6x2 1/2x12 GA. CEE COLUMN @ 5'-0"o.c. WITH 1/3 POINTS OF 1/2x16 GA. HORIZONTAL SUB-GIRT ON OPPOSITE OF 26 GA. PARTITION WALL
3.) PURLINS ARE 10x2 1/2x12 GA ZEE PURLINS @ 5'-0"o.c.
4.) BOTTOM CHANNEL TO BE 6 1/8x2x14 GA.
5.) REF. SECTION 9/S4.7 FOR ALTERNATIVE COLUMN BASE CONNECTION. FOR FIELD COLUMN ONLY
6.) HEADERS (HD) AND COLUMNS (C) ARE SCHEDULED REF. 4/S4.9

PLAN NORTH

PARTIAL SECOND FLOOR FRAMING PLAN

SCALE:3/32"=1'-0"



KEY PLAN

MELVIN RAY DANYSH
36299
REGISTERED
PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

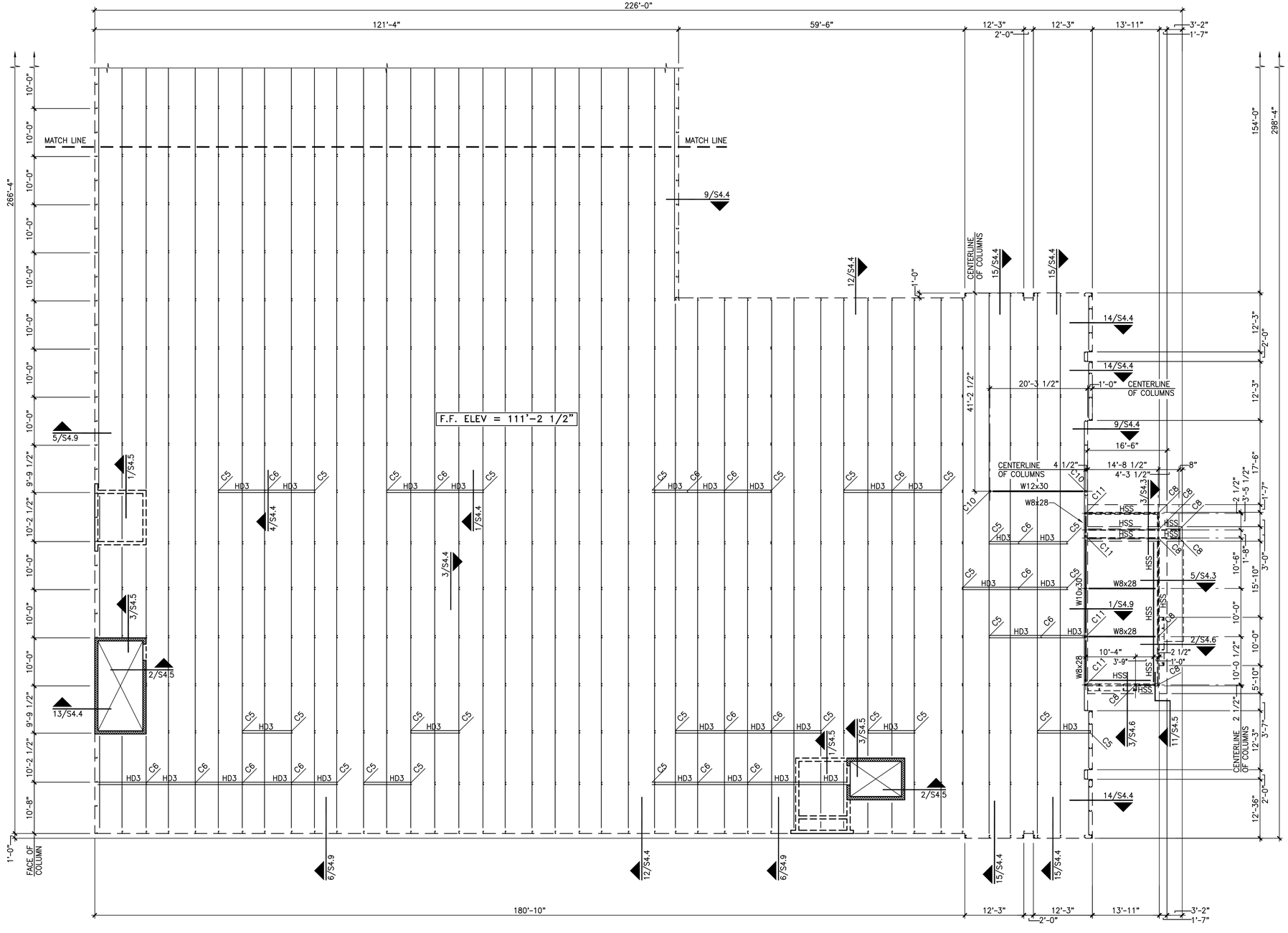
PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

2ND. FLR. FRMG. PLAN

SHEET NO.

S2.3

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES23-S24



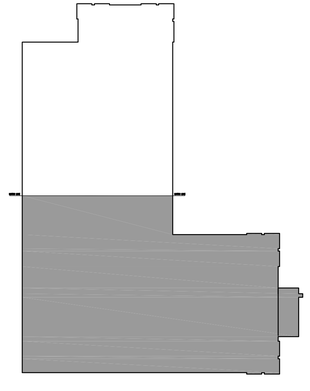
PLAN NOTES:

1.) FRAMING SHOWN IS BELOW 2ND FLOOR
2.) 6x2 1/2x12 GA. CEE COLUMNS @ 5'-0"o.c. WITH 1/3 POINTS OF 1/2x16 GA. HORIZONTAL SUB-GIRT ON OPPOSITE OF 26 GA. PARTITION WALL
3.) PURLINS ARE 10x2 1/2x12 GA ZEE PURLINS @ 5'-0"o.c.
4.) BOTTOM CHANNEL TO BE 6 1/8x2x14 GA.
5.) REF. SECTION 9/S4.7 FOR ALTERNATIVE COLUMN BASE CONNECTION. FOR FIELD COLUMN ONLY
6.) HEADERS (HD) AND COLUMNS (C) ARE SCHEDULED REF. 4/S4.9

PLAN NORTH

PARTIAL SECOND FLOOR FRAMING PLAN

SCALE:3/32"=1'-0"



KEY PLAN

MELVIN RAY DANYSH
36299
REGISTERED PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

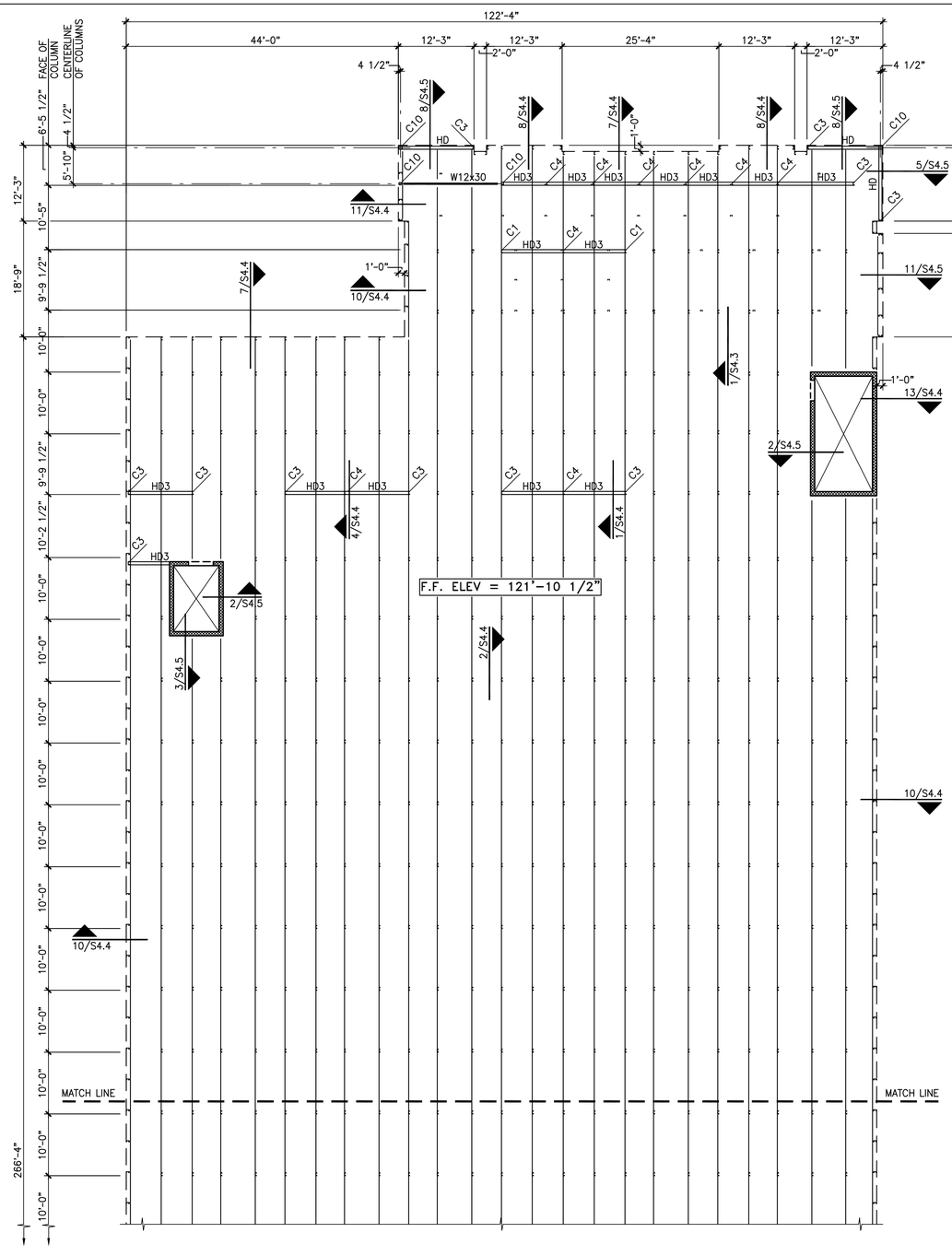
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

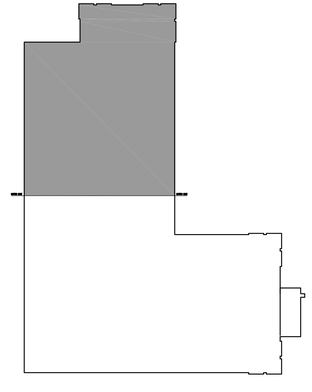
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : C.M.
REVISIONS:

2ND. FLR. FRMG. PLAN

SHEET NO.
S2.4

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES23-24





KEY PLAN

PLAN NOTES:

1.) FRAMING SHOWN IS BELOW 3RD FLOOR
2.) 6x2 1/2x14 GA. CEE COLUMN @ 5'-0"o.c. WITH 1/3 POINTS OF 1/2x16 GA. HORIZONTAL SUB-GIRT ON OPPOSITE OF 26 GA. PARTITION WALL
3.) PURLINS ARE 10x2 1/2x12 GA ZEE PURLINS @ 5'-0"o.c.
4.) BOTTOM CHANNEL TO BE 6 1/8x2x14 GA.
5.) REF. SECTION 6/S4.4 FOR ALTERNATIVE COLUMN BASE CONNECTION. FOR FIELD COLUMN ONLY
6.) HEADERS (HD) AND COLUMNS (C) ARE SCHEDULED REF. 4/S4.9

PLAN NORTH

PARTIAL THIRD FLOOR FRAMING PLAN

SCALE:3/32"=1'-0"

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES25-S26

MELVIN RAY DANYSH
36299
REGISTERED
PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

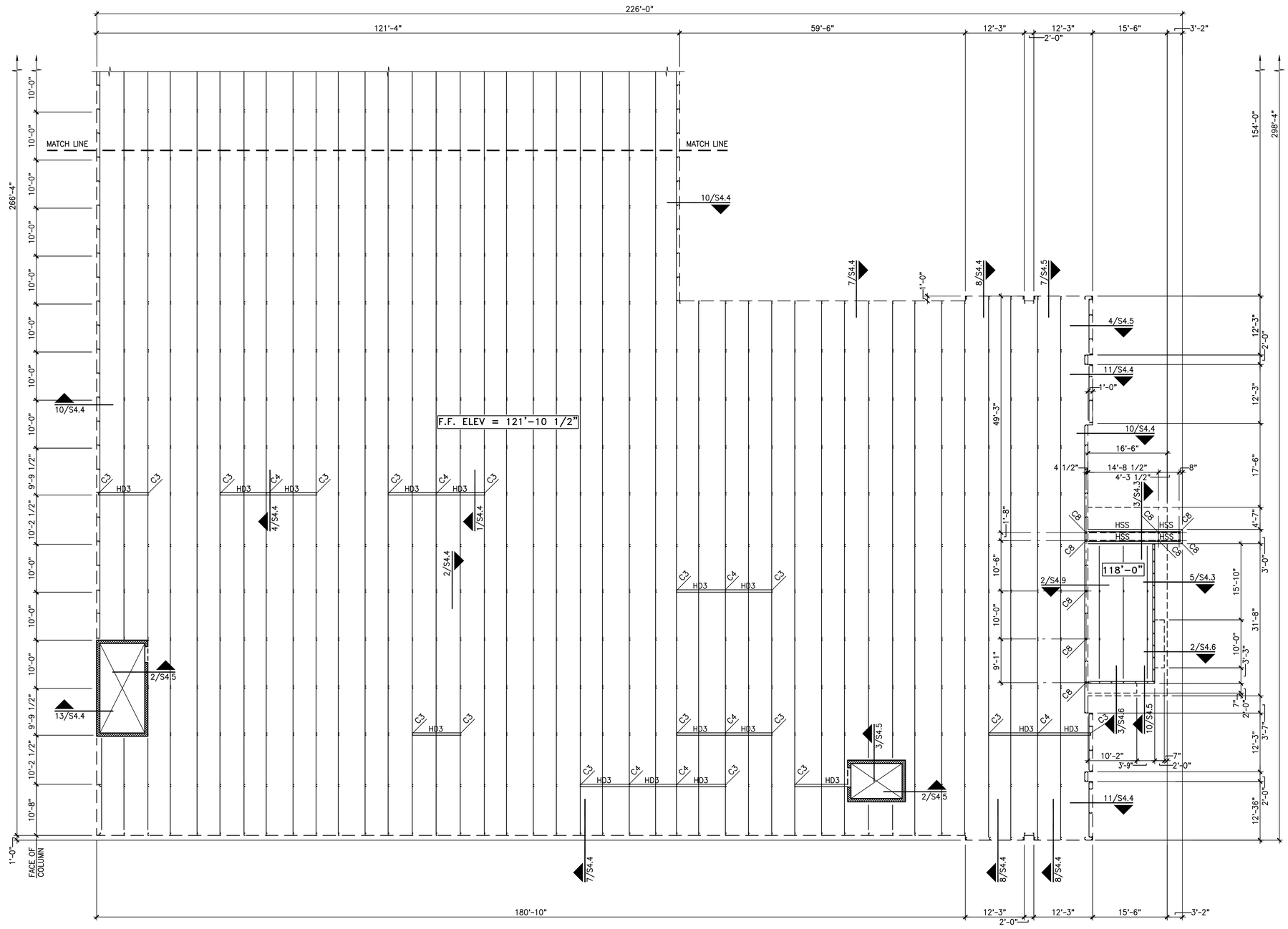
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : C.M.
REVISIONS:

3RD. FLR. FRMG. PLAN

SHEET NO.

S2.5



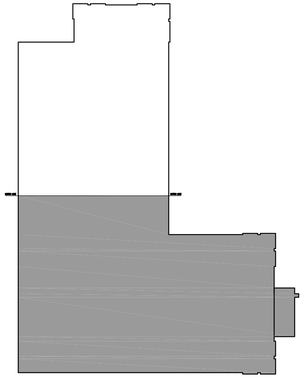
PLAN NOTES:

1.) FRAMING SHOWN IS BELOW 3RD FLOOR
2.) 6x2 1/2x14 GA. CEE COLUMNS @ 5'-0"o.c. WITH 1/3 POINTS OF 1/2x16 GA. HORIZONTAL SUB-GIRT ON OPPOSITE OF 26 GA. PARTITION WALL
3.) PURLINS ARE 10x2 1/2x12 GA ZEE PURLINS @ 5'-0"o.c.
4.) BOTTOM CHANNEL TO BE 6 1/8x2x14 GA.
5.) REF. SECTION 6/S4.4 FOR ALTERNATIVE COLUMN BASE CONNECTION. FOR FIELD COLUMN ONLY
6.) HEADERS (HD) AND COLUMNS (C) ARE SCHEDULED REF. 4/S4.9

PLAN NORTH

PARTIAL THIRD FLOOR FRAMING PLAN

SCALE:3/32"=1'-0"



KEY PLAN

MELVIN RAY DANYSH
36299
REGISTERED PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

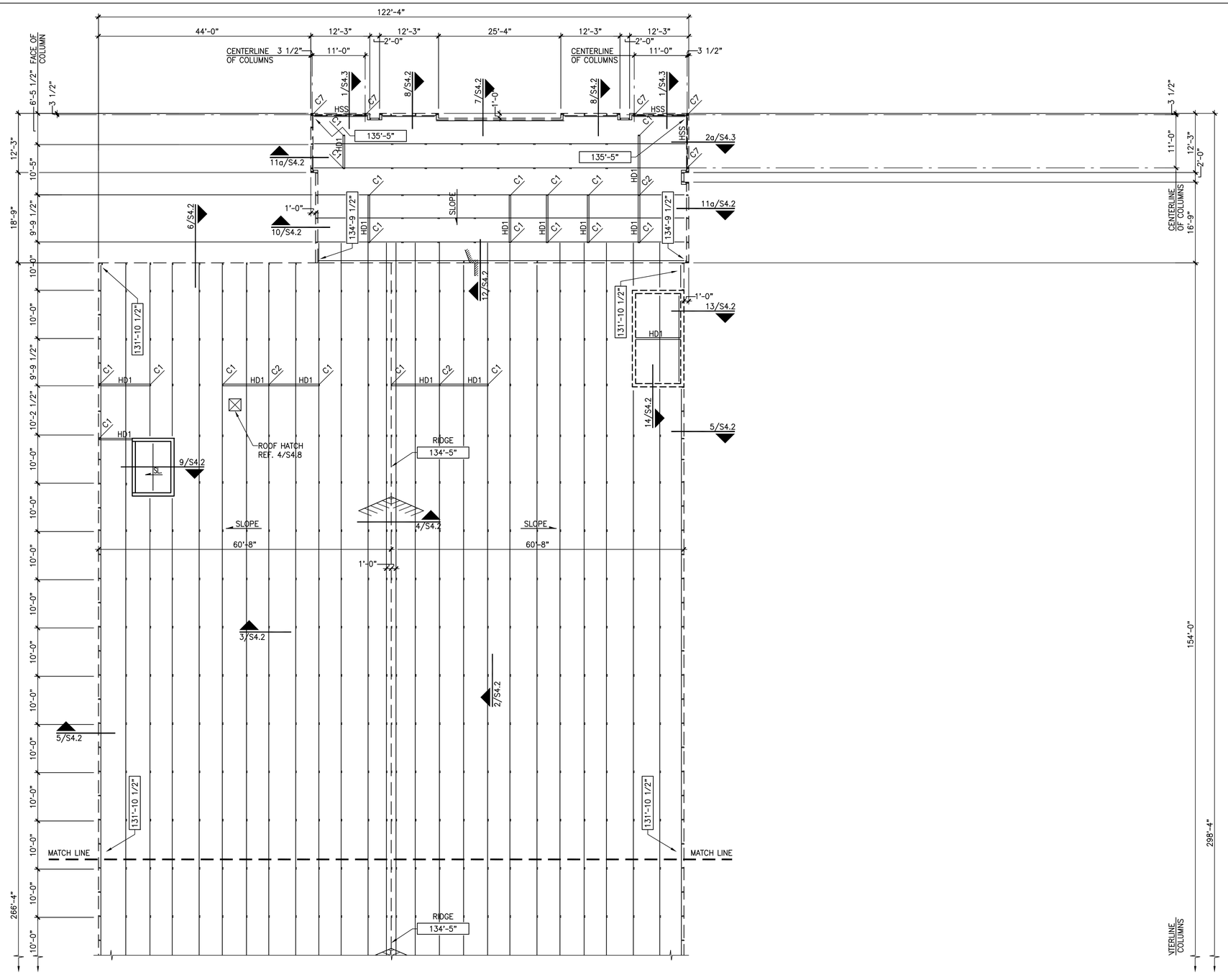
PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

3RD. FLR. FRMG. PLAN

SHEET NO.

S2.6

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES25-S26



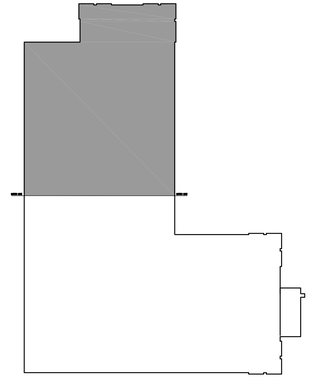
PLAN NOTES:

1.) FRAMING SHOWN IS BELOW ROOF
2.) 4x2x16 GA. CEE COLUMN @ 5'-0"o.c. WITH 26 GA. PARTITION WALL
3.) PURLINS ARE 6x2 1/2x16 GA ZEE PURLINS @ 5'-0"o.c.
4.) BOTTOM CHANNEL TO BE 4 1/8x2x14 GA.
5.) REF. SECTION 5/S4.4 FOR ALTERNATIVE COLUMN BASE CONNECTION. FOR FIELD COLUMN ONLY
6.) HEADERS (HD) AND COLUMNS (C) ARE SCHEDULED REF. 4/S4.9

PLAN NORTH

ROOF FRAMING PLAN

SCALE:3/32"=1'-0"



KEY PLAN

MELVIN RAY DANYSH
36299
REGISTERED
PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

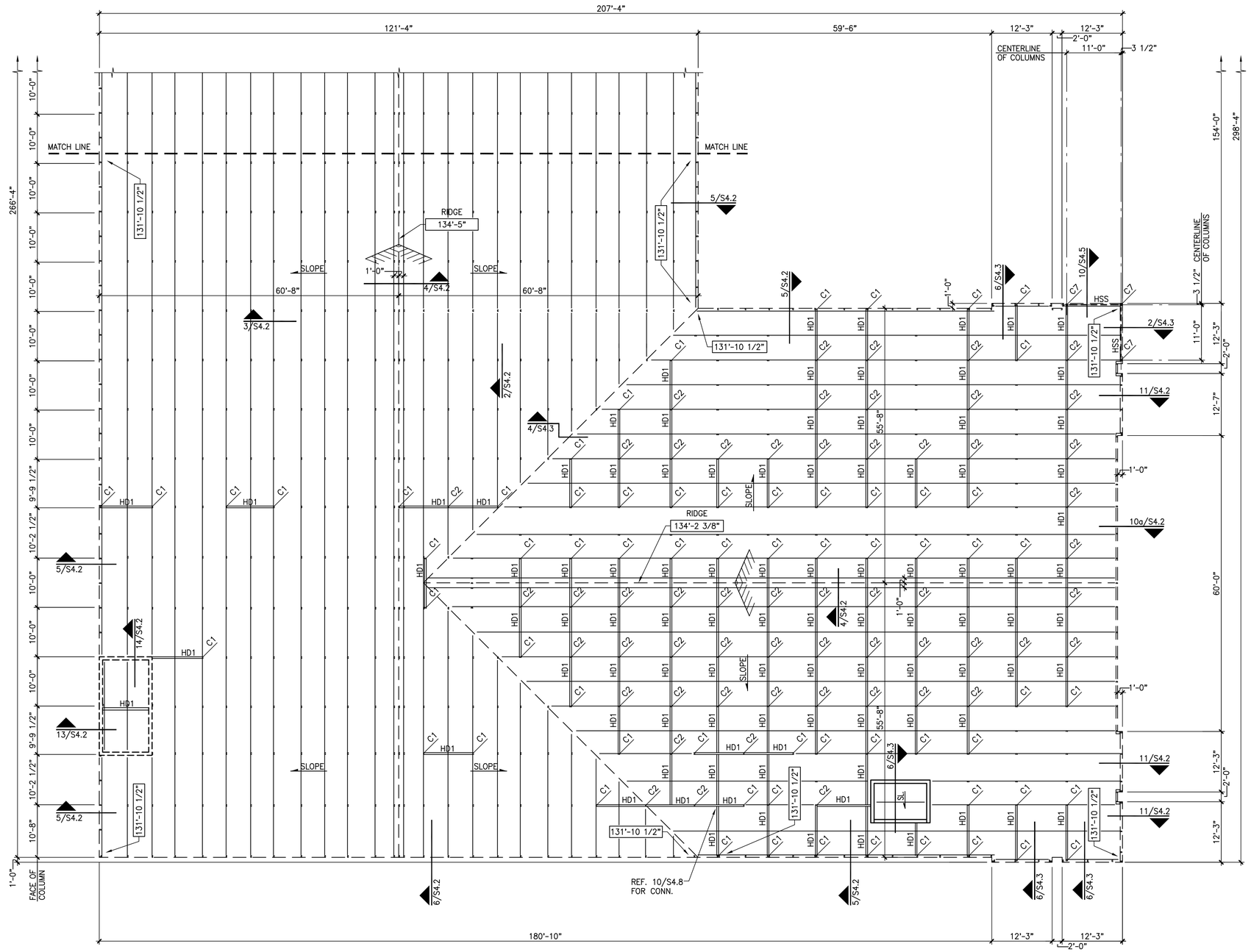
PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : C.M.
REVISIONS:

ROOF FRMG. PLAN

SHEET NO.

S2.7

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES27-S28



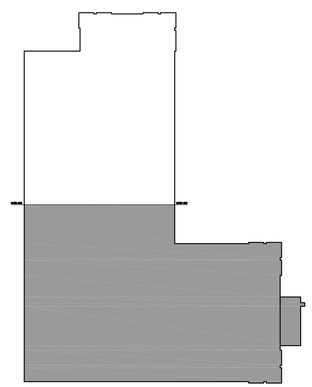
PLAN NOTES:

1.) FRAMING SHOWN IS BELOW ROOF
2.) 4x2x16 GA. CEE COLUMNS @ 5'-0"o.c. WITH 26 GA. PARTITION WALL
3.) PURLINS ARE 6x2 1/2x16 GA ZEE PURLINS @ 5'-0"o.c.
4.) BOTTOM CHANNEL TO BE 4 1/8x2x14 GA.
5.) REF. SECTION 5/S4.4 FOR ALTERNATIVE COLUMN BASE CONNECTION. FOR FIELD COLUMN ONLY
6.) HEADERS (HD) AND COLUMNS (C) ARE SCHEDULED REF. 4/S4.9

PLAN NORTH

ROOF FRAMING PLAN

SCALE:3/32"=1'-0"



KEY PLAN

MELVIN RAY DANYSH
36299
REGISTERED PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

ROOF FRMG. PLAN

SHEET NO.

S2.8

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES27-S28

MASONRY WALL REINFORCEMENT CONT.:

MN-2 BASIC VERTICAL REINFORCEMENT FOR EXTERIOR WALLS SHALL BE #4 @ 32" o.c. (EVERY 4TH VERTICAL CELL). PROVIDE DUR-O-WALL HORIZONTAL REINFORCEMENT EVERY OTHER COURSE (16").

MN-3 PROVIDE GROUTED REINFORCED LINTELS WITH 8" BEARING EACH END OF ALL DOORS, WINDOWS AND OTHER OPENINGS. USE ONE-COURSE LINTELS FOR OPENINGS UP TO 4'-0"; TWO-COURSE LINTELS FOR OPENINGS UP TO 8'-6". THREE-COURSE LINTELS FOR OPENINGS UP TO 14'-0". REINFORCE EACH COURSE WITH 2-#5 CONTINUOUS. REINFORCEMENT IN BOTTOM COURSE SHALL BE NO HIGHER THAN 2" CLEAR FROM BOTTOM OF LINTEL. MAINTAIN 2" BETWEEN THE BARS.

MN-4 CMU SHALL HAVE UNIT STRENGTH OF 1900 PSI WITH A MINIMUM LINEAR SHRINKAGE OF 0.06% CONFORMING TO ASTM C90 GRADE N, TYPE I, AND A MAXIMUM WEIGHT OF 105 PCF (DRY). USE TYPE S MORTAR, PREPARE IN ACCORDANCE WITH ASTM C270 BY PROPORTION. (NO PRISM TESTS REQUIRED BUT RANDOMLY CHECK PROPORTIONS DAILY AND CONFIRM IN WRITING AS PER IBC TABLE 1704.5.1 ITEM 1a). REINFORCED CMU SHALL HAVE A MINIMUM COMPRESSIVE WALL DESIGN STRENGTH OF f'm = 1500 PSI. GROUT FOR FILLED CELLS SHALL BE MADE OF CEMENT, SAND AND PEA GRAVEL IN APPROXIMATE RATIO OF 1:3:2 COMPLYING WITH ASTM C476 AND HAVE 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI WITH A SLUMP OF 8" TO 11".

MN-5 ANCHOR MASONRY TO STRUCTURE AS SHOWN IN DETAILS. SEE SPECIFICATIONS FOR ORDINARY MASONRY ANCHORS.

MN-6 REBAR POSITIONERS SHALL BE USED TO LOCATE BARS IN THE CENTER OF THE CELLS; AT 1 FT. OFF SLAB, 2 FT. FROM TOP, AND AT A MAXIMUM SPACING OF 200 BAR DIAMETERS.

MN-7 EXTERIOR CMU WALLS ARE SUBJECT TO SPECIAL INSPECTIONS AS DEFINED BY TABLE 1.19.2, LEVEL B QUALITY ASSURANCE (TMS 402-11/ACI 530-11/ASCE 5-11). TABLE SHALL BE REVIEWED DURING A PRE-INSTALLATION MEETING WITH CONTRACTOR, SUB-CONTRACTOR, TESTING LABORATORY, ARCHITECT, AND STRUCTURAL ENGINEER OF RECORD. THE SPECIAL INSPECTOR SHALL BE UNDER THE DIRECT SUPERVISION OF AN APPROVED TEXAS REGISTERED PROFESSIONAL STRUCTURAL ENGINEER AND THE FINAL REPORT SHALL BE SIGNED AND SEALED BY THE SUPERVISING P.E.

MN-8 NOTE: TEMPORARY BRACING OF WALLS DURING CONSTRUCTION, PRIOR TO FULL CONNECTION TO FLOORS AND ROOF, ARE THE RESPONSIBILITY OF THE CONTRACTOR.

COLD FORMED METAL FRAMING NOTES:

CM-1 REFER TO SPECIFICATION 05 4000 (COLD-FORMED METAL FRAMING).

CM-2 CERTAIN LIGHT GAGE GALVANIZED STEEL STUDS ARE DESIGNATED WITH CLARK STEEL FRAMING SYSTEMS NOMENCLATURE. USE 50 KSI STEEL. STUDS SUBMITTED FOR APPROVAL SHALL HAVE AT LEAST EQUAL PROPERTIES.

CM-3 LIGHTGAGE METAL STUDS, JOISTS, PURLINS, ETC. SHALL HAVE PROPERTIES AND CAPACITIES COMPUTED IN ACCORDANCE WITH THE 2007 AISI STANDARD FOR COLD-FORMED STEEL FRAMING (AISI S100-07 AND AISI S200-07 AND SUPPLEMENTS), ASD PROVISIONS. DESIGN, MANUFACTURE, ERECTION AND QUALITY CONTROL/QUALITY ASSURANCE SHALL BE IN ACCORDANCE WITH AISI S240 NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL STRUCTURAL FRAMING.

CM-4 SHOP DRAWINGS FOR STUDS ARE TO BE PROVIDED. STUD SIZES, SPACING, AND CONNECTIONS ARE AS SHOWN ON PLANS AND SECTIONS / DETAILS. REFERENCE SPECIFICATION SECTION 05 4000 (COLD-FORMED METAL FRAMING) AND SECTION 01 1411 (SPECIAL INSPECTIONS: IBC CHAPTER 17).

CM-5 TO FACILITATE INSPECTIONS ALL MEMBERS TO BE LABELED IN ACCORDANCE WITH CHAPTER A OF AISI S240 STANDARD.

2018 IBC CHAPTER 17 SPECIAL INSPECTIONS:

SP-1 REFER TO SPECIFICATION SECTION 01 1411 SPECIAL INSPECTIONS IBC CHAPTER 17.

SP-2 THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (RDPIRC) FOR THIS PROJECT IS THE ARCHITECT. SUBMIT ALL SPECIAL INSPECTION REPORTS DIRECTLY TO THE RDPIRC FOR REVIEW. ALSO SUBMIT THE STRUCTURALLY RELATED SPECIAL INSPECTION REPORTS TO THE STRUCTURAL ENGINEER FOR REVIEW.

SP-3 THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TESTING, INSPECTIONS AND NOTIFYING THE ARCHITECT / ENGINEER AND SPECIAL INSPECTORS OF WORK READY FOR INSPECTION. THE GENERAL CONTRACTOR MUST PROVIDE ACCESS TO AND MEANS FOR PROPER INSPECTION OF SUCH WORK.

SP-4 SPECIAL INSPECTIONS REQUIRED FOR THIS PROJECT:

A. SOILS (SLAB-ON-GRADE): IBC 1705.6
B. CONCRETE CONSTRUCTION: IBC 1705.3
C. STRUCTURAL STEEL: IBC 1705.2
D. STEEL FABRICATORS: IBC 1705.2
E. MASONRY CONSTRUCTION
(REFER TO 1704.5; OCCUPANCY CATEGORY III, EMPIRICAL DESIGN)
A. INTERIOR WALLS: NO SPECIAL INSPECTIONS REQUIRED FOR 8" CMU WALLS BRACED VERTICALLY OR HORIZONTALLY AT 24 FT. MAXIMUM.
B. EXTERIOR WALLS: NO SPECIAL INSPECTIONS REQUIRED FOR TYPICAL CMU WALLS BRACED AT 14'-0" OR LESS. REFER TO PLAN NOTES FOR WALLS REQUIRING SPECIAL INSPECTION AND TO MASONRY NOTE MN-7.

SP-5 THE SPECIAL INSPECTIONS FOR THIS PROJECT WILL BE PROVIDED BY FIRM IDENTIFIED BY RDPIRC.

SP-6 THE RDPIRC IS RESPONSIBLE TO PREPARE, SIGN AND SUBMIT THE "FINAL REPORT OF REQUIRED INSPECTIONS" FOR SUBMITTAL TO THE CITY OF SAN ANTONIO AFTER THE GENERAL CONTRACTOR COMPLETES HIS WORK ACCORDING TO THE APPROVED PLANS.

UNDERFLOOR FILL NOTES CONT.:

NOTE: FILL MATERIAL TO MAINTAIN TRENCH PROFILE DURING RAINS. TO PROVIDE A MORE STABLE WORKING SURFACE PLACE A MINIMUM OF 6 INCHES OF TxDOT ITEM 247 (CRUSHED LIMESTONE MATERIAL), TYPE A OR B, GRADE 1, 2, OR 3 MOISTURE CONDITIONED TO BETWEEN -1 AND +3% OF OPTIMUM AND COMPACTED TO 95% OF PROCTOR D698.

UF-10 PERFORM ALL EARTHWORK DESCRIBED ABOVE BEFORE TRENCHING FOR GRADE BEAMS OR MECHANICAL LINES.

UF-11 GEOTECHNICAL ENGINEER SHALL BE ENGAGED TO MONITOR ALL FILL PLACEMENT. TAKE ONE (1) DENSITY TEST OF EACH LIFT OF FILL FOR EACH 5000 SQUARE FEET (MINIMUM OF THREE/LIFT).

UF-12 BACKFILL TOP TWO FEET OF UTILITY TRENCHES OUTSIDE BUILDING LINES WITH EXPANSIVE CLAYS OR FLOWABLE FILL TO SEAL OFF SURFACE WATER INFILTRATION. CONSTRUCT A FULL DEPTH PLUG IN THE TRENCH AT THE EDGE OF THE BUILDING PAD. THE PLUG SHOULD BE TWO FEET THICK; HAVE A PI OF 20 TO 40; MOISTURE CONDITIONED TO BETWEEN PLUS ONE (+1) TO PLUS FIVE (+5) PERCENTAGE POINTS OF OPTIMUM; AND COMPACTED TO 8 INCH MAXIMUM LIFTS TO AT LEAST 95 PERCENT OF ASTM D698 MAXIMUM DENSITY OR ALTERNATELY BE FLOWABLE FILL ALSO KNOWN AS CONTROLLED LOW-STRENGTH MATERIAL (CLSM). MATERIAL MIX IS ADJUSTED TO ACHIEVE PROPER SUSPENSION AND OPTIMUM FLOWABILITY WITH A MIN. DENSITY OF 125 PCF AND A MIN. 28-DAY COMPRESSIVE STRENGTH OF 75 PSI.

UF-13 AFTER FOUNDATION IS PLACED AND CURED, IN ALL AREAS NOT BEING COVERED WITH PAVEMENT OR FLATWORK, REMOVE SELECT FILL TO BOTTOM OF CONCRETE BEAM AND PLACE A CLAY CAP CONSISTING OF A CLEAN CLAY SOIL (NO MORE THAN 5% GRAVEL) WITH A PLASTICITY INDEX OF 35 TO 40. MOISTURE CONDITION THIS CLAY CAP TO BETWEEN OPTIMUM AND PLUS TWO (+2) PERCENT OF THE OPTIMUM MOISTURE CONTENT, AND COMPACT TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698. MAY USE EXCAVATED CLAY AS APPROVED BY GEOTECHNICAL ENGINEER.

STEEL FRAMING NOTES:

SF-1 STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 EXCEPT FOR WIDE FLANGE (W-SHAPES) WHICH MUST CONFORM TO ASTM A992 (Fy=50 KSI). HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B, Fy=46 KSI FOR RECTANGULAR HSS, Fy=42 KSI FOR ROUND HSS. PIPE SHALL CONFORM TO ASTM A53, GRADE B, Fy=35 KSI. CONNECTIONS SHALL CONFORM TO REQUIREMENTS OF AISC (DESIGN IN ACCORDANCE WITH ASD).

SF-2 ROOF DECK IS 1-1/2" - 22 GAUGE, GALVANIZED, TYPE B WIDE RIB DECK COMPLYING WITH STEEL DECK INSTITUTE, WITH MINIMUM I=.183, SN=.192, ATTACH TO SUPPORTING MEMBERS WITH #12 TEK SCREWS THROUGH BOTTOM OF THE RIBS AT EVERY SUPPORT (36/4 PATTERN) IN ACCORDANCE WITH STEEL DECK INSTITUTE'S SPECIFICATIONS. WHERE METAL DECK IS SUPPORTED CONTINUOUSLY AT EDGES, ATTACH DECK TO STEEL SUPPORT AT 12" o.c.

SF-3 ROOF DECK IS A STRUCTURAL PANEL, 24 GA. ULTRADEK, SPANNING 5'-0" TO ZEE PURLINS. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND ATTACHMENT TO RESIST CODE GRAVITY/UPLIFT FORCES.

SF-4 COMPOSITE FLOOR SYSTEM SPANS FIVE FEET (5') TO PURLINS. FLOOR DECKING IS 1-1/2" DEEP 22 GA. (1.5VL22 BY VULCRAFT) WITH 2-1/2" NORMAL WEIGHT CONCRETE TPG. FOR TOTAL DEPTH = 4". REINFORCE CONCRETE WITH 6x6 - W1.4 x W1.4 WELDED WIRE FABRIC.

NOTE: ALTERNATE DECK MANUFACTURER'S PRODUCT MUST PROVIDE LOAD CARRYING CAPACITY EQUAL TO OR EXCEEDING THAT SPECIFIED.

SF-5 WHERE METAL DECK IS SUPPORTED CONTINUOUSLY AT EDGES, CONNECT DECK TO STEEL SUPPORT AT 12" O.C.

SF-6 STRUCTURAL FRAMING CONNECTIONS SHALL BE SEATED COLUMN CAPS, CLIP ANGLES OR WEB PLATES SHOWN ON DETAILS. USE A325 HIGH STRENGTH BOLTS OR WELDS SUFFICIENT TO DEVELOP REACTION CAPACITY SHOWN IN AISC MANUAL (9TH EDITION) AS THE ALLOWABLE UNIFORM LOAD/SPAN DIVIDED BY TWO AS SHOWN IN THE (9TH EDITION) OR THE MAXIMUM TOTAL UNIFORM LOAD/SPAN DIVIDED BY TWO AS SHOWN IN TABLES 3-6 THROUGH 3-9 OF THE 13TH EDITION.

SF-7 DECK SHOP ANGLES, FASCIA ANGLES, HANGERS, CLIPS AND OTHER STRUCTURAL AND MISCELLANEOUS MEMBERS SHALL BE CONNECTED OR JOINED USING 3/16" OR LARGER FILLET OR GROOVE WELDS AS REQUIRED FOR ADEQUATE CONNECTION.

SF-8 STEEL FABRICATOR SHALL PREPARE SHOP DRAWINGS, DIRECTLY SUPERVISED AND SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE STATE OF TEXAS FOR THE FOLLOWING, COMPLYING WITH IBC 2018:

STEEL STAIRS: SECTIONS 1003.4, 1009.7.2, 1009.9.2 AND TABLE 1607.1 ITEM 30.

GUARD AND HANDRAILS: SECTION 1607.8.1.

SF-9 REFER TO SPECIFICATION SECTION 01 1411 (SPECIAL INSPECTIONS: IBC CHAPTER 17).

MASONRY WALL REINFORCEMENT:

MN-1 PROVIDE GROUTED REINFORCED VERTICAL CELLS AND HORIZONTAL BOND BEAMS AT WALL TOP EDGES, CORNERS, FREE ENDS, WINDOW AND DOOR JAMBS, LINTELS AND OTHER LOCATIONS WHERE SHOWN ON ARCHITECTURAL AND STRUCTURAL DRAWINGS. REINFORCE EACH GROUTED CELL AND BOND BEAM WITH 1 - #4 BAR (MIN.)X CONTINUOUS. (UNLESS SHOWN OTHERWISE ON SECTIONS.) (REINFORCE LINTELS AS SPECIFIED BELOW.) PROVIDE MATCHING DOWELS IN FOUNDATION FOR VERTICAL REINFORCEMENT. (MIN. 4" EMBEDMENT UNLESS SHOWN OTHERWISE ON SECTIONS). VERTICAL STEEL SHALL OVERLAP DOWELS AND SPLICES A MINIMUM OF 40 BAR DIAMETERS AND SHALL EXTEND A MINIMUM OF 6' INTO BOND BEAM AT TOP OF WALL.

GENERAL NOTES CONT:

GN-12 "HEADED CONCRETE ANCHORS" (HCA) SHALL BE OF 50,000 psi STEEL ROD WITH UPSET ENDS, AUTOMATICALLY ARC WELDED THROUGH CERAMIC FERRULES, "NELSON CONCRETE ANCHORS" OR EQUAL.

GN-13 PROVIDE ADEQUATE AND APPROPRIATE STRUCTURAL STEEL FRAMING FOR THE SUPPORT AND MOUNTING OF MECHANICAL EQUIPMENT RESTING ON, OR SUSPENDED FROM, STEEL SUPERSTRUCTURE.

GN-14 REFER TO SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS. AS A MINIMUM THE FOLLOWING IS REQUIRED:

1. CONCRETE MIX DESIGNS: SECTIONS 01 1411 & 03 3001
2. SHOP DRAWINGS: SECTION 01 3341
*REINFORCING STEEL-SECTION 03 3001 AND MASONRY WALL REINFORCEMENT NOTES
*STRUCTURAL STEEL - SECTION 05 1200
*COLD FORMED METAL FRAMING - SECTION 05 4000
3. SOME STRUCTURAL SYSTEMS ARE DEFINED AS VENDOR-DESIGNED COMPONENTS PER THE STRUCTURAL DOCUMENTS. THESE ELEMENTS OF THE DESIGN ARE DEFERRED SUBMITTAL COMPONENTS AND HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT THE STAMPED COMPONENT SYSTEM DOCUMENTS TO THE BUILDING OFFICIAL FOR APPROVAL.

DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT, WHO SHALL REVIEW THEM FOR GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE CONTRACTOR SHALL SUBMIT THESE REVIEWED DEFERRED SUBMITTAL DOCUMENTS TO THE BUILDING OFFICIAL. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

THE FOLLOWING LIST INCLUDES THE ITEMS THAT ARE DEFINED AS DEFERRED STRUCTURAL SUBMITTAL COMPONENTS. REFER TO THE ARCHITECTURAL, MECHANICAL, AND CIVIL DRAWINGS FOR ADDITIONAL DEFERRED SUBMITTAL COMPONENTS.

DEFERRED STRUCTURAL SUBMITTAL COMPONENTS:
* METAL STAIRS, LANDINGS, AND RAILINGS (REFER TO SF-8).

GN-15 THE STRUCTURAL DRAWINGS FOR THIS PROJECT ARE NOT INTENDED FOR USE AS ERECTION DRAWINGS. THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUB-CONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT AND OBLIGATES HIMSELF TO ANY AND ALL EXPENSES, REAL OR IMPLIED, ARISING FROM SUCH ACCEPTANCE. THE CONTRACTOR SHALL MAINTAIN THESE DRAWINGS AT A CURRENT STATUS, INCLUDING ALL ADDENDA AND REVISIONS.

UNDERFLOOR FILL NOTES:

UF-1 BEFORE ANY CONSTRUCTION IS BEGUN, PERFORM ROUGH GRADING AND CUT SWALES SO THAT GROUNDS WILL DRAIN AWAY FROM THE BUILDING. MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION SO THAT STORM WATER WILL BE CONDUCTED AWAY FROM THE BUILDING. KEEP EXCAVATIONS PUMPED FREE OF STORM WATER AT ALL TIMES.

UF-2 PRECAUTIONS SHALL BE TAKEN TO PROTECT OPEN EXCAVATIONS FROM EXCESSIVE LOSS OR GAIN IN NATURAL MOISTURE LEVEL PRIOR TO PLACEMENT OF BASE MATERIAL. KEEP MOIST DURING DRY WEATHER AND KEEP STORM WATER PUMPED OUT, INCLUDING NIGHTS AND WEEKENDS, DURING RAINS.

UF-3 THE FOLLOWING NOTES ARE A SUMMARY OF RECOMMENDATIONS FOUND IN THE GEOTECHNICAL REPORT PREPARED BY PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI) (REPORT NO. 0312-1721) DATED DECEMBER 5, 2018. THE FOUNDATION DESIGN IS IN ACCORDANCE WITH RECOMMENDATIONS THEREIN FOR LIMITING THE PVR TO APPROXIMATELY ONE INCH (1"). CONTRACTOR TO CONSULT FULL REPORT FOR BORINGS AND DETAILED INSTRUCTIONS.

UF-4 ROOTS OF TREES SHALL BE REMOVED TO THEIR FULL DEPTHS. REMOVE ALL ABANDONED UTILITY LINES. HOLES LEFT BY REMOVALS SHALL BE FILLED WITH SOILS OF GENERALLY THE SAME TYPE, MOISTURE CONTENT, AND DENSITY AS THE SURROUNDING SOIL.

UF-5 IN AN AREA OCCUPIED BY THE BUILDING PLUS 6 FEET OR ABUTTING FLATWORK REMOVE A MINIMUM OF 5 FEET OF THE EXISTING SOIL INCLUDING FILLS, ALL ORGANIC MATERIALS, ROOTS, CONCRETE, ETC. EXCAVATION DEPTH TO ACCOMMODATE A MINIMUM OF 5 FEET OF SELECT FILL.

UF-6 THE LIMITS OF SUBEXCAVATION SHALL EXTEND A MINIMUM OF SIX FEET BEYOND THE HORIZONTAL LIMITS OF THE FOUNDATION MEASURED AT THE BASE OF THE SUBEXCAVATION PRIOR TO SLOPING.

UF-7 AFTER STRIPPING AND GRUBBING, PROOF-ROLL EXPOSED SUBGRADE WITH A 20-TON ROLLER OR FULLY LOADED DUMP TRUCK. SOFT, DRY, WET AND LOW-DENSITY SOIL TO BE REMOVED OR COMPACTED IN PLACE UNDER DIRECTION OF GEOTECHNICAL ENGINEER.

UF-8 SCARIFY SUBGRADE TO A DEPTH OF 9 INCHES (9"), MOISTURE CONDITION BETWEEN 0 AND +4% OF OPTIMUM AND COMPACT TO 95% STANDARD PROCTOR DENSITY, ASTM 698.

UF-9 SELECT STRUCTURAL FILL TO CONSIST OF PIT-RUN MATERIAL FREE OF ORGANICS, TRASH, AND OTHER DELETERIOUS MATERIAL; WITH A LIQUID LIMIT LESS THAN 40% AND A PLASTICITY INDEX (PI) BETWEEN 7 AND 20. THE MINIMUM PERCENT PASSING NO. 200 SIEVE IS 35%, WITH A MAXIMUM PARTICLE SIZE LESS THAN 3". GEOTECHNICAL ENGINEER SHALL TEST AND PROVIDE APPROVAL OF PIT-RUN MATERIAL PRIOR TO ARRIVAL ON-SITE AT A MINIMUM OF ONE PER DAY.

WITHIN 48 HOURS OF SUBGRADE PREPARATION: PLACE STRUCTURAL FILL IN MAXIMUM LOOSE LIFTS OF 8" AND COMPACT TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY TEST METHOD D698. MOISTURE CONTENT TO BE BETWEEN -1% AND +3% OF OPTIMUM MOISTURE CONTENT.

GENERAL NOTES:

GN-1 THIS STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC) (2018), AS ADOPTED BY THE CITY OF SAN ANTONIO, AND APPLICABLE INDUSTRY STANDARDS (AISC, ACI, ETC.).

GN-2 THE DESIGN GRAVITY LOADS ARE:

SUPERIMPOSED COLLATERAL DEAD LOADS
ROOF INCLUDING SPRINKLER, INSULATION & ROOFING ..... 15 PSF

LIVE LOADS
ROOF ..... 20 PSF
FLOOR ..... 125 PSF
MECHANICAL EQUIPMENT ..... AS INDICATED ON PLANS
NOTE: NO LIVE REDUCTIONS WERE TAKEN

NET UPLIFT TO BE DETERMINED USING A SUSTAINED DEAD LOAD OF 6 PSF AND ASCE 7-10 TABLE 30.7-2.

WIND LOAD: (ASCE 7-16 & IBC 2018)
RISK CATEGORY (TABLE 1604.5-IBC) - II
EXPOSURE (SECT. 1609.4.3-IBC) - B
ULTIMATE DESIGN WIND SPEED (FIG. 1609.3(1)-IBC)
Vult=120 MPH
NOMINAL DESIGN WIND SPEED (TABLE 1609.3.1-IBC)
Vasd=93 MPH

GROUND SNOW LOAD ..... 5 PSF

SEISMIC: SPECIFIC SITE CLASS D; Ss= 0.051g; S1= 0.022g; Sds= 0.055g; Sd1= 0.035g; SEISMIC DESIGN CATEGORY A.

GN-3 INSPECTIONS AND QUALITY CONTROL SHALL COMPLY WITH ASTM STANDARD E329 AND THE INTERNATIONAL BUILDING CODE (IBC). TESTING/INSPECTIONS SHALL BE PROVIDED BY AN APPROVED TESTING LABORATORY. THE STRUCTURAL ENGINEER OF RECORD OR HIS AUTHORIZED REPRESENTATIVE WILL MAKE PERIODIC VISITS TO THE JOBSITE TO ASCERTAIN THE WORK IS GENERALLY IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. SPECIFIC VISITS TO INCLUDE REVIEW OF REINFORCING STEEL PRIOR TO PLACING CONCRETE; WALL FRAMING PRIOR TO SHEATHING AND REVIEW OF ROOF DECK INSTALLATION PRIOR TO INSTALLATION/ROOFING PLACEMENT.

GN-4 CONCRETE SHALL BE LABORATORY DESIGNED, TO DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH AS GIVEN BELOW:

BEAMS AND SLABS-ON-GRADE ..... 3,000 PSI
CONCRETE ON COMPOSITE METAL DECK ..... 3,000 PSI

1. FLY ASH WILL BE PERMITTED UP TO 20% PORTLAND CEMENT REPLACEMENT.
2. CONCRETE TO HAVE MINIMUM OF 5 SACKS OF CEMENT/CY; MAX. SLUMP=5"; AGGREGATE=1-1/2". FOR BEAMS AND SLABS-ON-GRADE, 3/4" FOR CONCRETE ON METAL DECK.
3. THE USE OF ADMIXTURES SHALL BE COORDINATED BETWEEN BATCH PLANT AND THE CONCRETE CONTRACTOR TO ADJUST FOR PLANT CONDITIONS, AND JOBSITE CONDITIONS INCLUDING SIZE OF POUR, TRAVEL TIME BETWEEN BATCH PLANT AND JOBSITE, AND TIME ESTIMATED FOR COMPLETING POUR AND CURING.
4. TESTING LAB. TO TAKE A SET OF FOUR (4) CYLINDERS FOR EVERY 75 YARDS OF CONCRETE, OR FRACTION THEREOF, AND PERFORM COMPRESSION TESTS IN ACCORDANCE WITH ACI-318 AND ACI 311.5R; TWO (2) BREAKS AT 7 DAYS AND TWO (2) BREAKS AT 28 DAYS.
5. ALL CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING FOR AT LEAST THE FIRST SEVEN DAYS AFTER PLACEMENT. USE A WATER-BASED ACRYLIC MEMBRANE CURING COMPOUND (MAX. VOC=3 LB./GAL.) ASTM CBA TYPE F, CLASS.

GN-5 REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:

A185 (FLAT SHEETS) ..... WELDED WIRE FABRIC
A615-GR 60 ..... ALL OTHER REINFORCING
ASTM A108-60T ..... HEADED CONCRETE ANCHORS
ASTM A496 ..... DEFORMED BAR ANCHORS

GN-6 DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL BE IN ACCORDANCE WITH LATEST ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315).

GN-7 BAR LAPS AND SPLICES SHALL BE A LENGTH EQUAL TO AT LEAST 40-BAR DIAMETERS. PROVIDE "CORNER BARS" AT CORNERS AND INTERSECTIONS (REF. NOTE FN-5). SPIRALS SHALL BE LAPPED 1-1/2 TURNS. WELDED WIRE MESH SHALL BE LAPPED 8" MINIMUM AT SPLICE POINTS, OR 1-1/2 MESHES, WHICHEVER IS GREATEST.

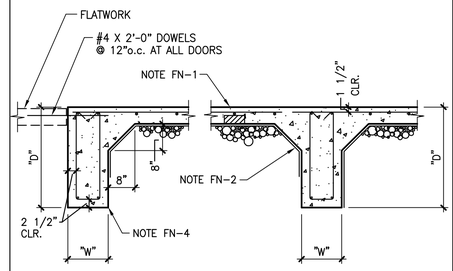
GN-8 MECHANICAL AND ELECTRICAL CONDUITS IN SLABS SHALL RUN UNDER THE TOP LAYER OF SLAB REINFORCING. PROVIDE A MINIMUM OF 1-1/2" CLEAR BETWEEN CONDUITS AND BETWEEN CONDUIT AND PARALLEL REINFORCING. DO NOT "BUNDLE" CONDUITS. INDIVIDUAL CONDUITS IN SLAB SHALL NOT EXCEED 1" DIAMETER. GROUPS OF CONDUITS OR CONDUITS LARGER THAN 1" DIAMETER WILL REQUIRE SLAB TO BE THICKENED TO MAINTAIN FULL SCHEDULED THICKNESS.

GN-9 REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR DIMENSIONS, LOCATIONS AND SIZE OF FLOOR DEPRESSIONS, FLOOR AND WALL OPENINGS, SLEEVES, REGLETS, INSERTS, ANCHOR AND BOLTS REQUIRED BY THE VARIOUS TRADES.

GN-10 THE CONTRACTOR AND FABRICATOR SHALL VERIFY ALL QUANTITIES, DIMENSIONS AND CONDITIONS AND NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

GN-11 CONTRACTOR SHALL PROVIDE NECESSARY CONSTRUCTION JOINTS IN MONOLITHIC CONCRETE FRAMING SO THAT NOT MORE THAN 400 CUBIC YARDS IS POURED IN ONE DAY. LOCATION OF CONSTRUCTION JOINTS MUST HAVE PRIOR APPROVAL OF STRUCTURAL ENGINEER AND SHALL GENERALLY BE LOCATED AT OR NEAR MID-POINTS OF SPANS OF SLABS, BEAMS AND WALLS. ALL CONTINUOUS REINFORCING SHALL BE CARRIED THROUGH THE JOINT. SEE DETAILS FOR CONTINUOUS KEY BETWEEN ADJACENT POURS.

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228



1 SECTION N.T.S.

2 SECTION N.T.S.

GRADE BEAM SCHEDULE

MK	W X D	MAIN REINFORCING	TIES
B1	24 X 24	4-#6 X CONT. TOP & BOTTOM	#3 @ 24"o.c.
B2	12 X 30	2-#7 X CONT. TOP & BOTTOM	#3 @ 24"o.c.
B3	12 X 24	2-#7 X CONT. TOP & BOTTOM	#3 @ 24"o.c.
B4	12 X 60	2-#7 X CONT. TOP & BOTTOM	#3 @ 24"o.c.
B5	12 X 36	2-#7 X CONT. TOP & BOTTOM	#3 @ 24"o.c.

FOUNDATION NOTES: (MILD-REINFORCED)

FN-1 5" CONCRETE SLAB. REINFORCED W/#4 @ 12" o.c. EACH WAY IN TOP. SUPPORT AT 4'-0" o.c. EACH WAY WITH CONCRETE BLOCKS. SUPPORT BOTTOM BEAM REINFORCEMENT AT 4'-0" INTERVALS.

FN-2 VAPOR RETARDER (UNDER SLAB) SHALL CONFORM TO ASTM E1745, CLASS C, WATER VAPOR PERMEANCE = 0.04 PERMS, 10 MIL.

FN-3 SCHEDULED BEAM DEPTHS ARE MINIMUM. ON PERIMETER, INCREASE SCHEDULED BEAM DEPTH AS REQUIRED FOR SOFFIT TO BEAR 24" MINIMUM BELOW FINISH GRADE.

FN-4 GRADE BEAMS AND SLAB TURNDOWNS SHALL BE FORMED BY WALLS AND SOFFIT OF CAREFULLY SHAPED TRENCH. USE A SMOOTH-MOUTHED BUCKET. IF A TOOTHED BUCKET IS USED, EXCAVATION SHALL BE STOPPED 6" ABOVE FINAL GRADE AND THE REMAINING EXCAVATION ACCOMPLISHED WITH A SMOOTH-MOUTHED BUCKET OR BY HAND LABOR TO REMOVE ALL LOOSE SOILS DISTURBED BY THE BUCKET TEETH. WOODFORM EXPOSED FACES TO A DEPTH OF 8" BELOW FINISHED GRADE.

FN-5 AT ALL BEAM CORNERS & T-INTERSECTIONS, PROVIDE 4 - #7 X 6'-0" CORNER BARS (2-TOP AND 2-BOTTOM).

FN-6 TRENCHES SHALL BE VERIFIED FOR SIZE TO MAINTAIN CLEARANCES AROUND REINFORCEMENT PRIOR TO PLACING REINFORCEMENT.

FN-7 WHERE BEAM DEPTH EXCEED 36", ADD #4 @ 12" o.c. IN EACH FACE OF BEAM.

FN-8 KEEP ALL EXCAVATIONS ALONG AND WITHIN FIVE FEET (5') OF PERIMETER FREE OF STANDING WATER. PUMP OUT, INCLUDING NIGHTS AND WEEKENDS, DURING RAINS. WITHIN 48 HOURS OF STRIPPING FORMS PLACE BACKFILL AGAINST PERIMETER BEAMS AS DESCRIBED IN UF-13.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

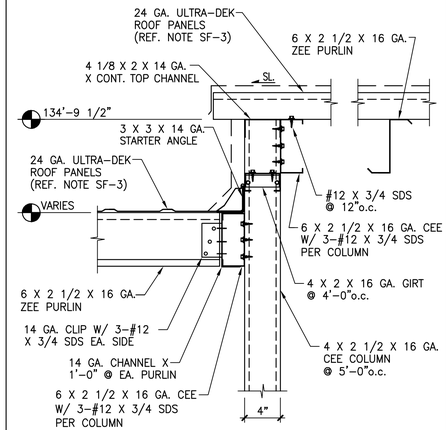
SE MILITARY STORAGE
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE: 02.28.2019
DRAWN: C.M.
REVISIONS:

NOTES & DETAILS

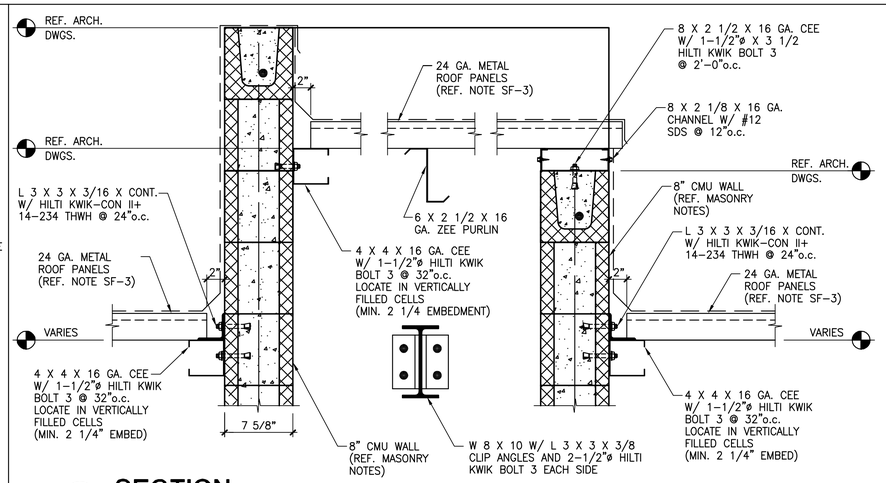
SHEET NO.
S4.1

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES41



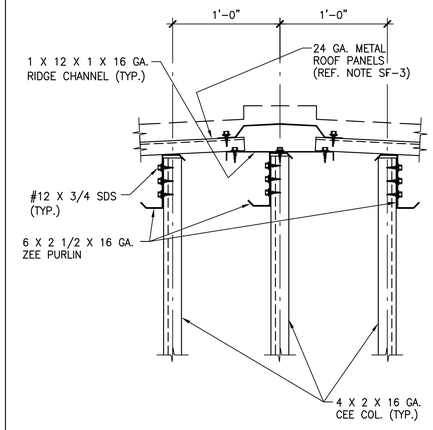
12 SECTION

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



9 SECTION

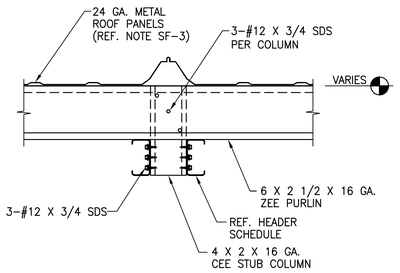
SCALE: 1 1/2" = 1'-0"



4 SECTION

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

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228



1 SECTION

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

13 SECTION

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

10 SECTION

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

7 SECTION

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

5 SECTION

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

2 SECTION

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

14 SECTION

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

11 SECTION

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

8 SECTION

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

6 SECTION

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

3 SECTION

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

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES42

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

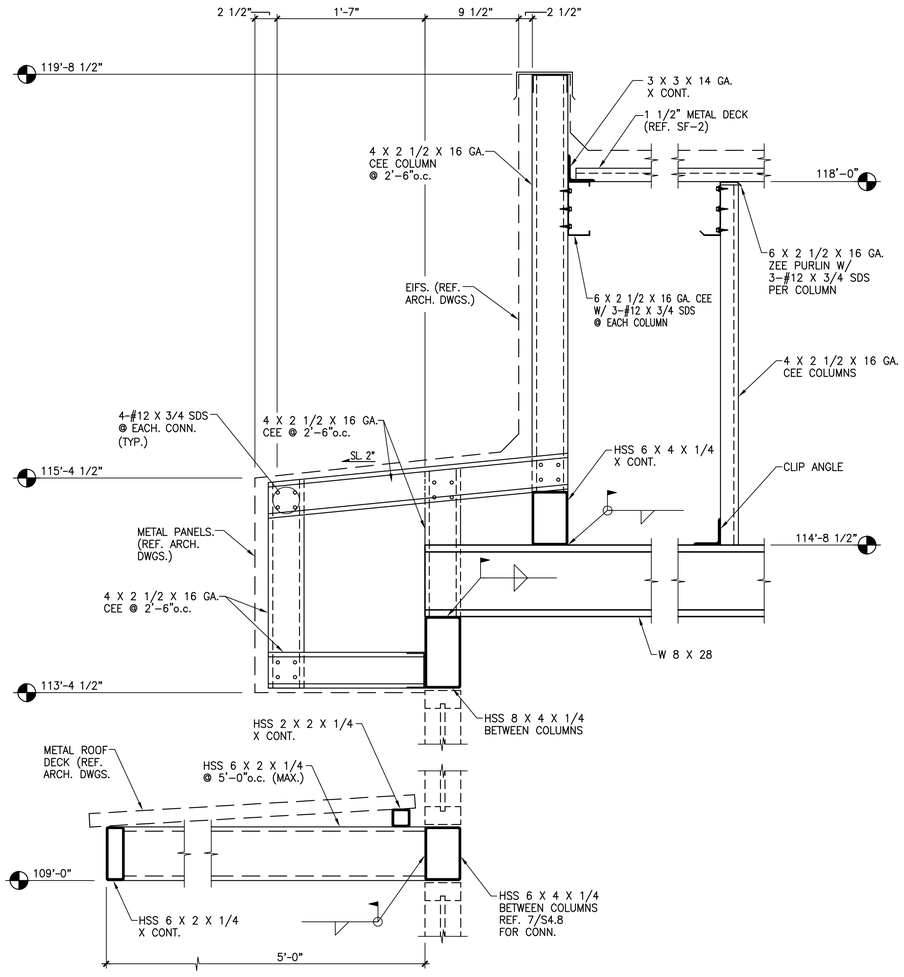
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

SECTIONS & DETAILS

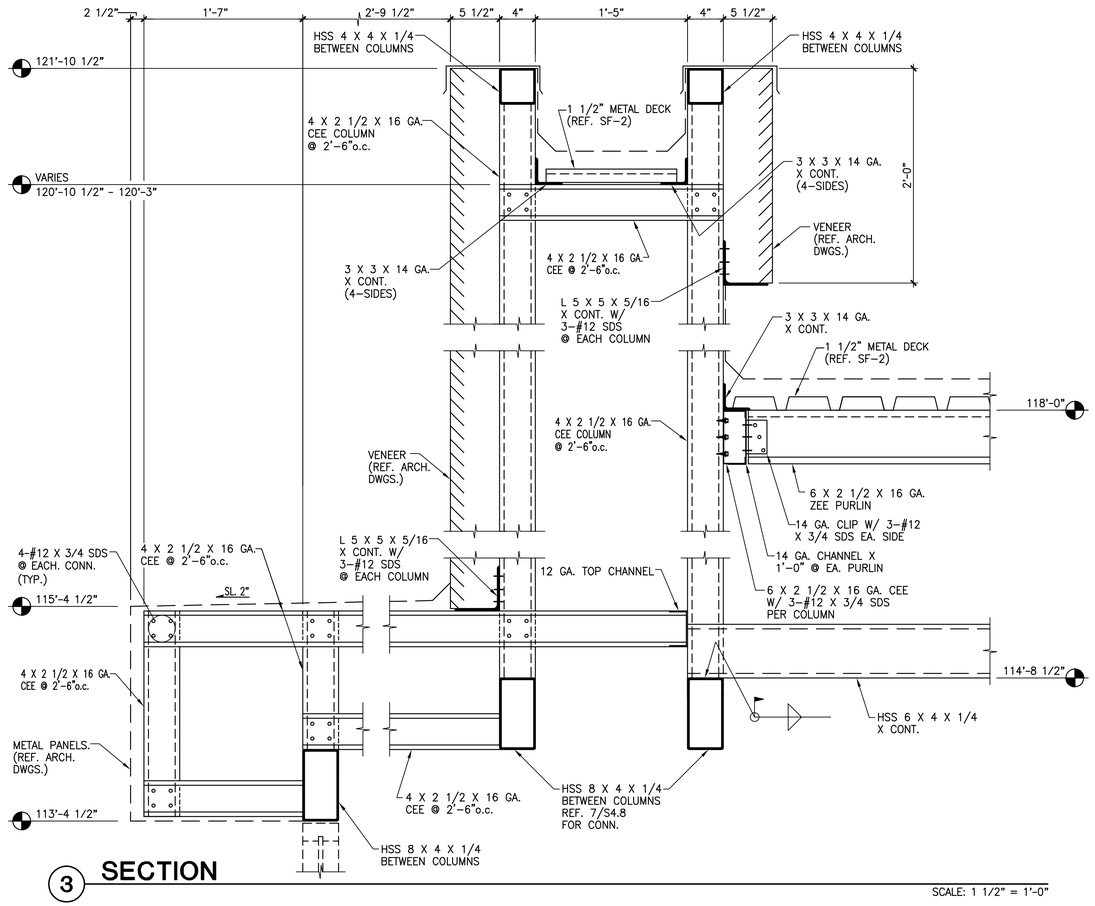
SHEET NO.

S4.2



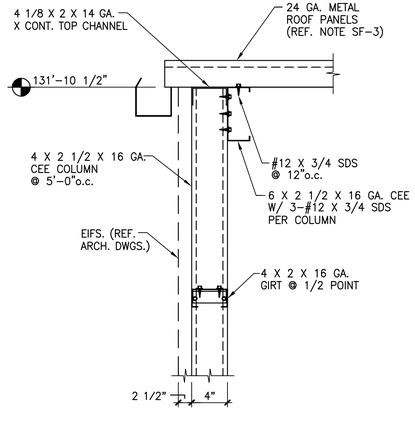
5 SECTION

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



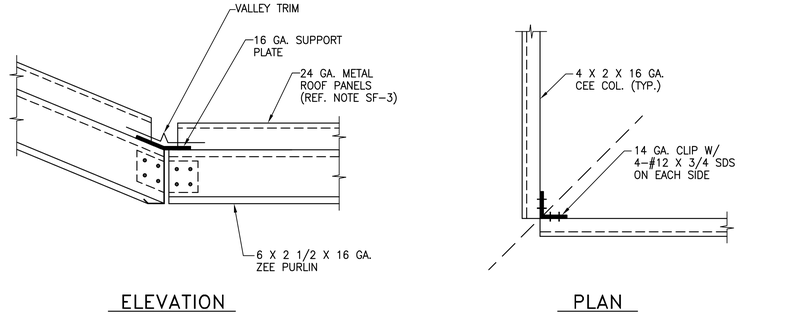
3 SECTION

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



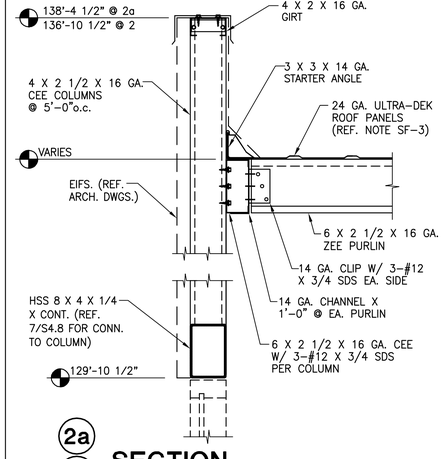
6 SECTION

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



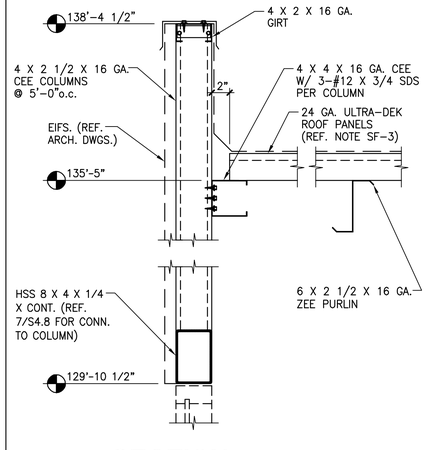
4 SECTION

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



2a 2 SECTION

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



1 SECTION

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

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES43

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228

MELVIN RAY DANYSH
36299
REGISTERED
PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

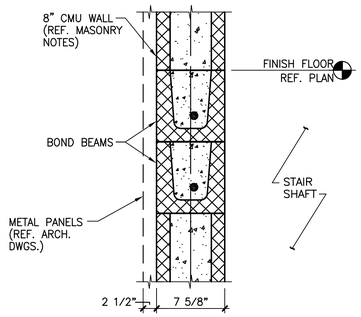
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

SECTIONS & DETAILS

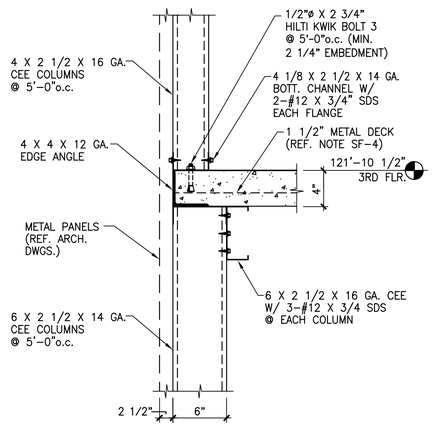
SHEET NO.

S4.3



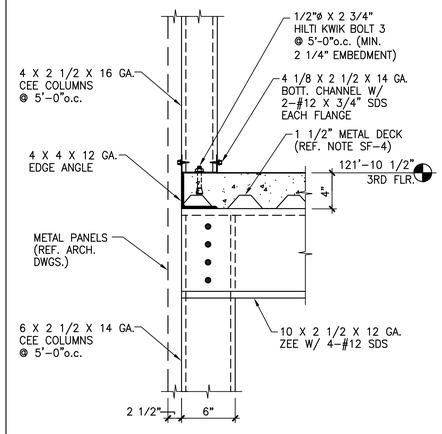
13 SECTION

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



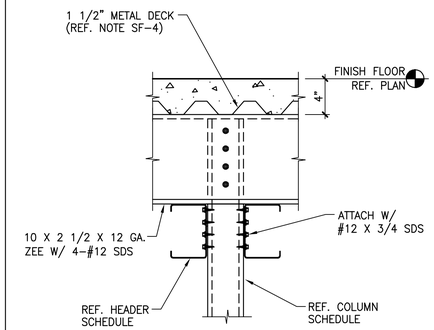
10 SECTION

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



7 SECTION

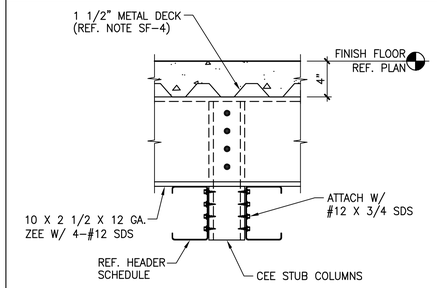
SCALE: 1 1/2" = 1'-0"



4 SECTION

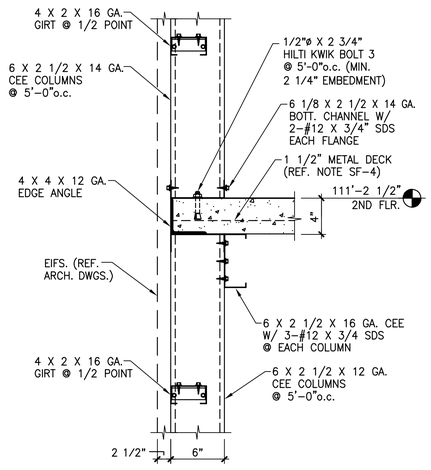
SCALE: 1 1/2" = 1'-0"

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228



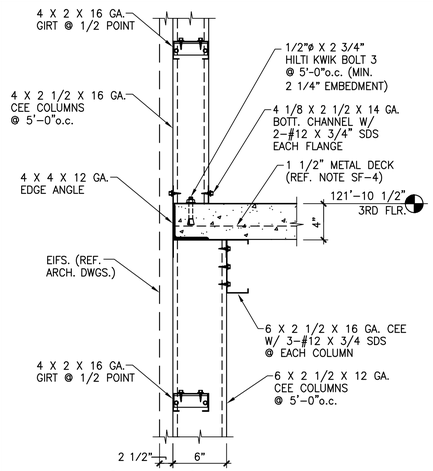
1 SECTION

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



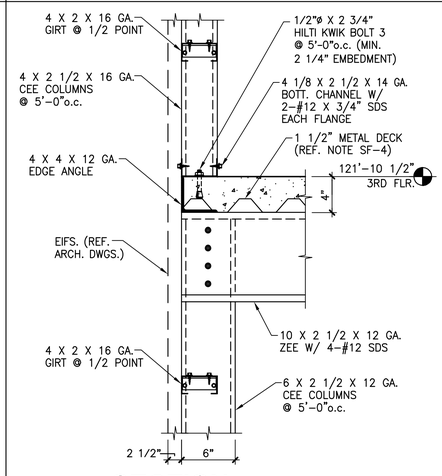
14 SECTION

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



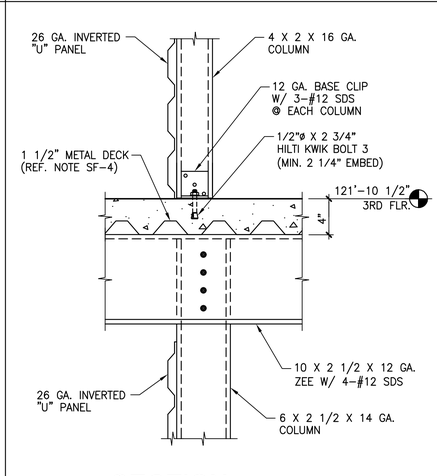
11 SECTION

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



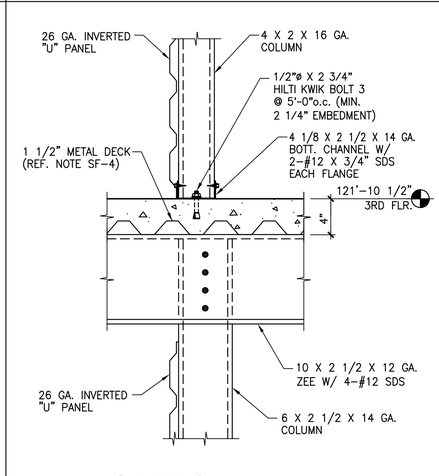
8 SECTION

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



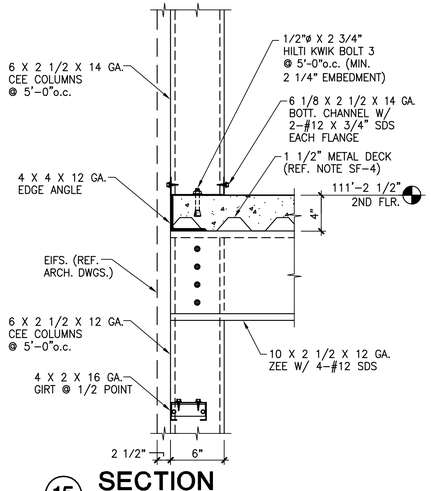
5 SECTION

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



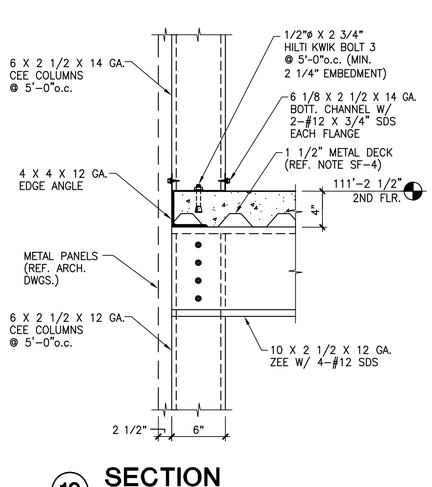
2 SECTION

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



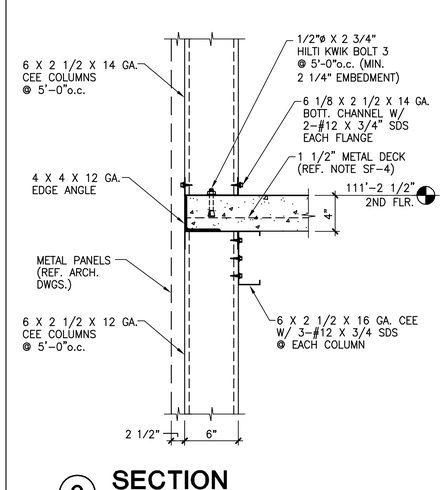
15 SECTION

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



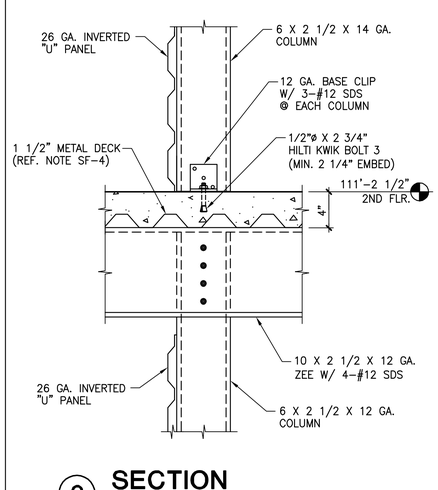
12 SECTION

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



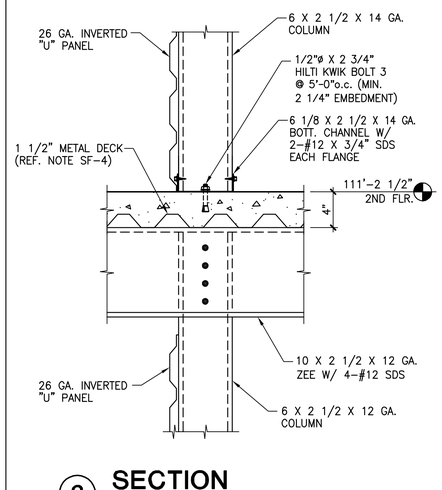
9 SECTION

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



6 SECTION

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



3 SECTION

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

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES44

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

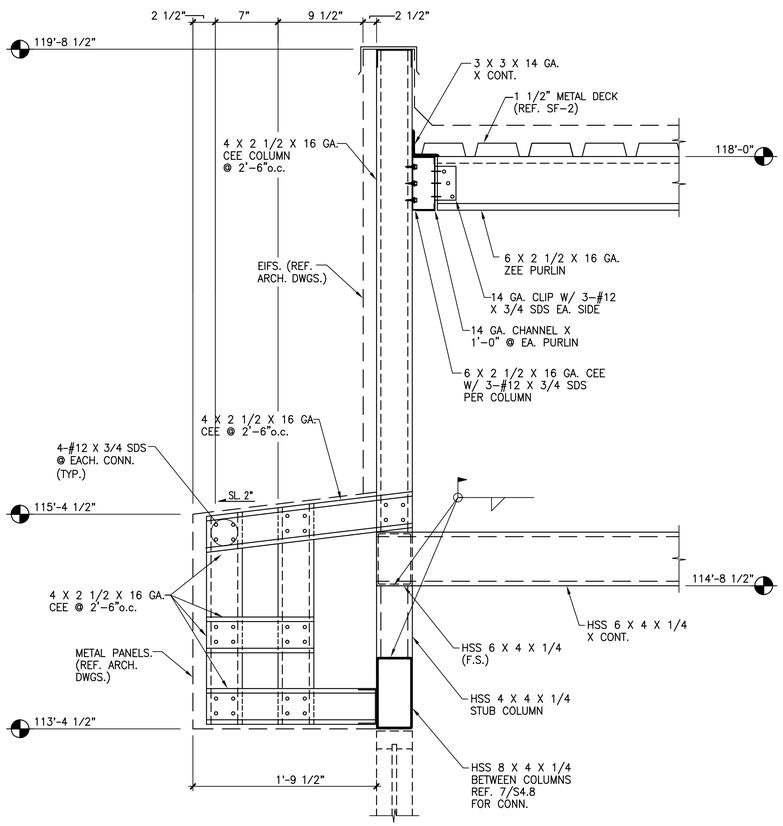
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

SECTIONS & DETAILS

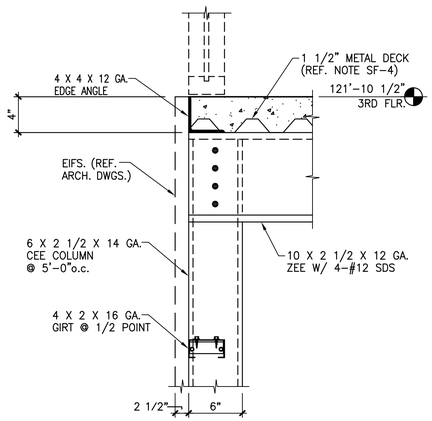
SHEET NO.

S4.4



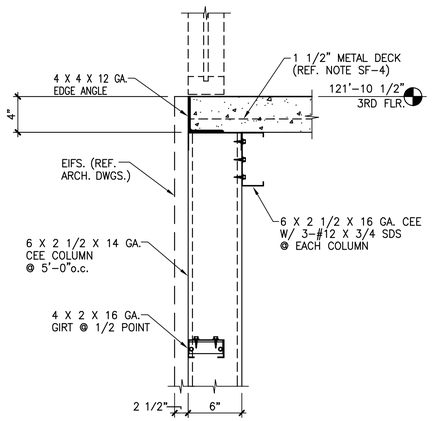
11 SECTION

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



7 SECTION

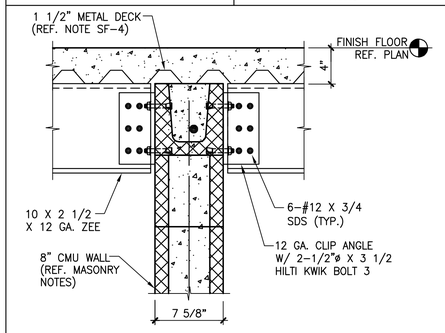
SCALE: 1 1/2" = 1'-0"



4 SECTION

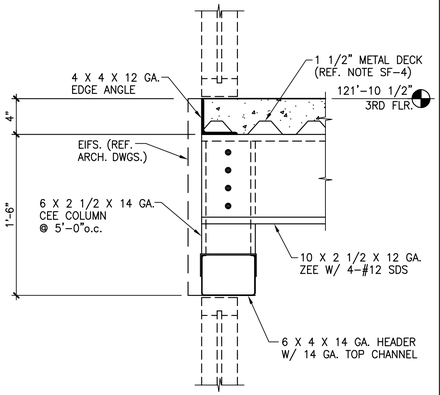
SCALE: 1 1/2" = 1'-0"

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228



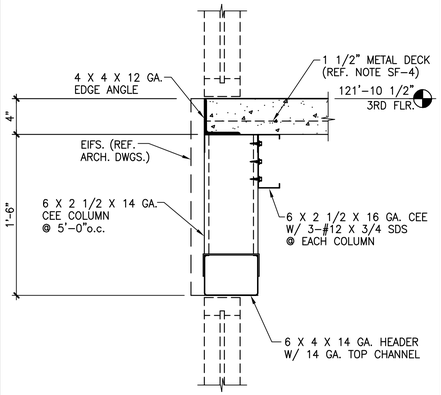
1 SECTION

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



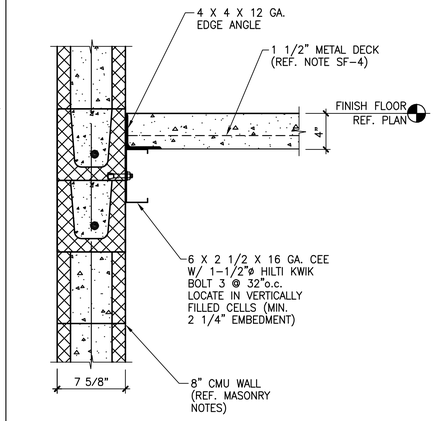
8 SECTION

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



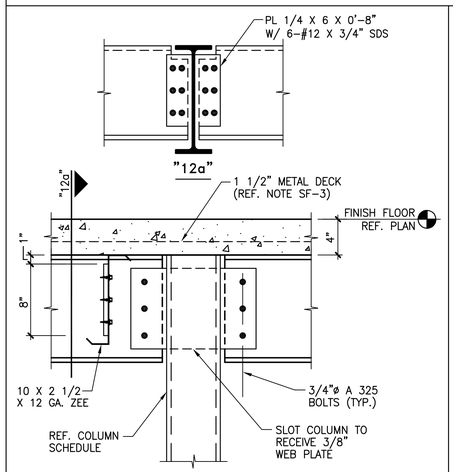
5 SECTION

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



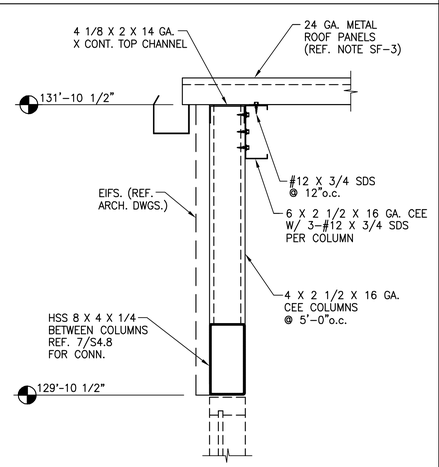
2 SECTION

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



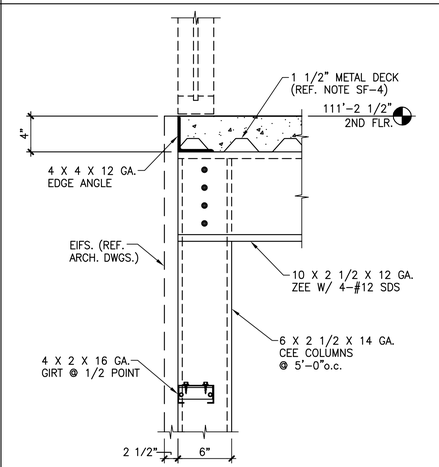
12 SECTION

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



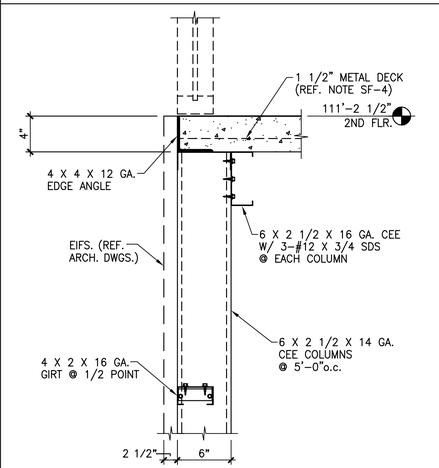
10 SECTION

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



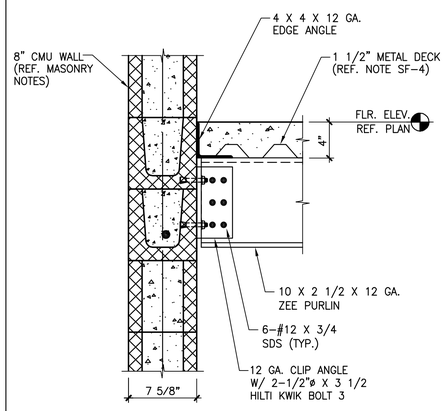
9 SECTION

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



6 SECTION

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



3 SECTION

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

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES45

ARCHCON
architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

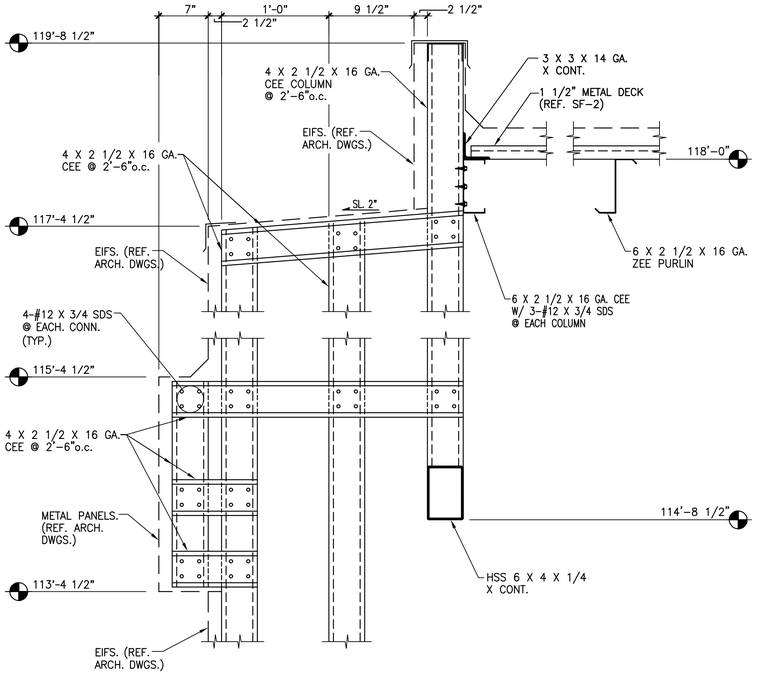
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

SECTIONS & DETAILS

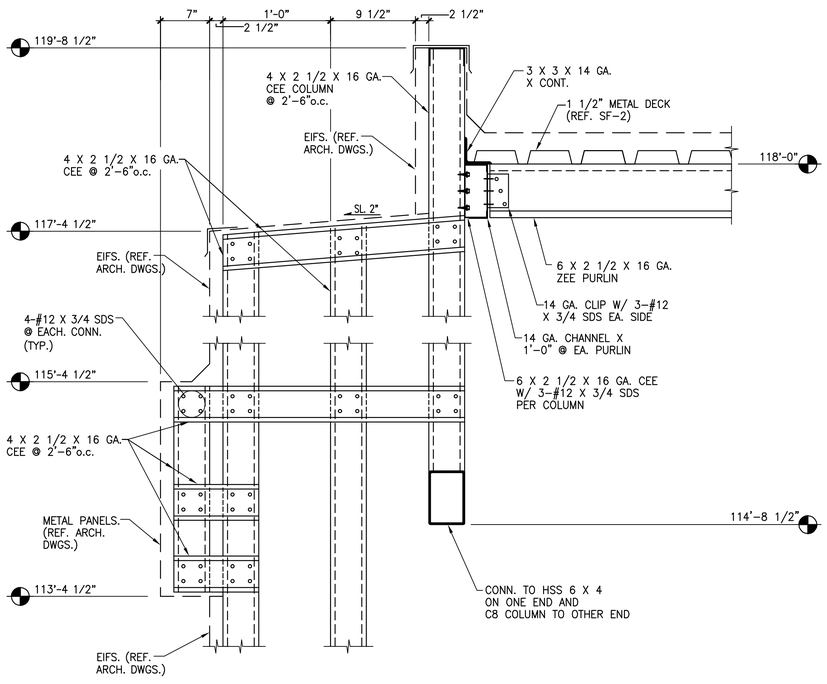
SHEET NO.

S4.5



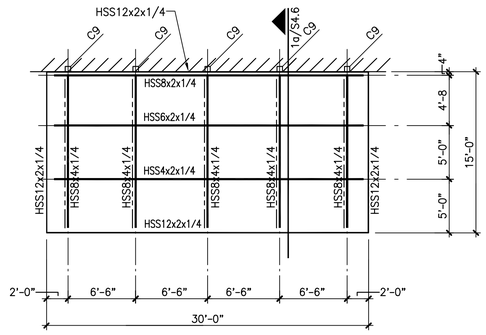
2 SECTION

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

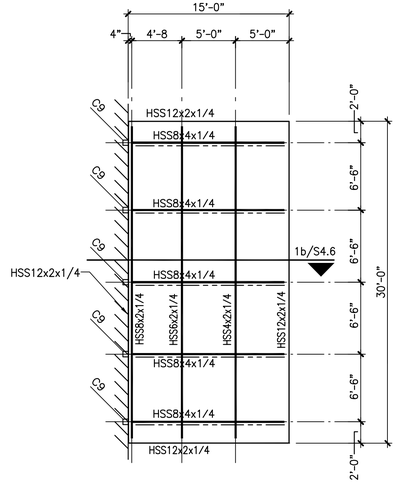


3 SECTION

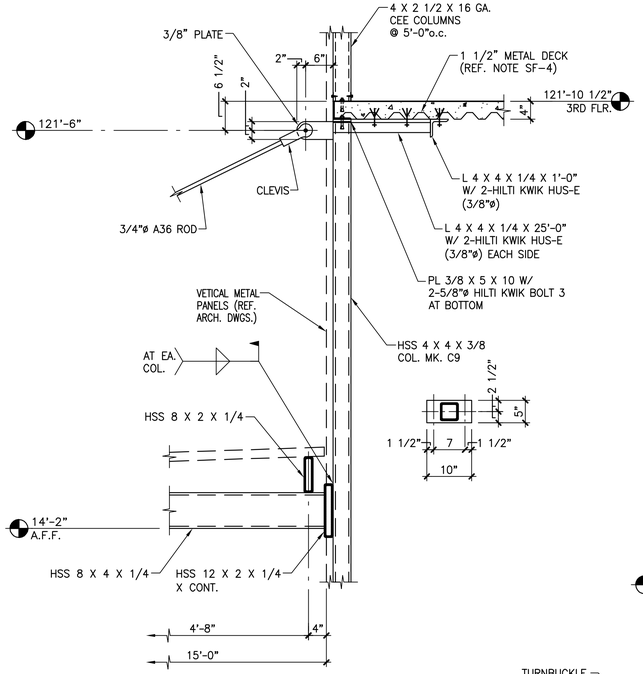
SCALE: 1 1/2" = 1'-0"



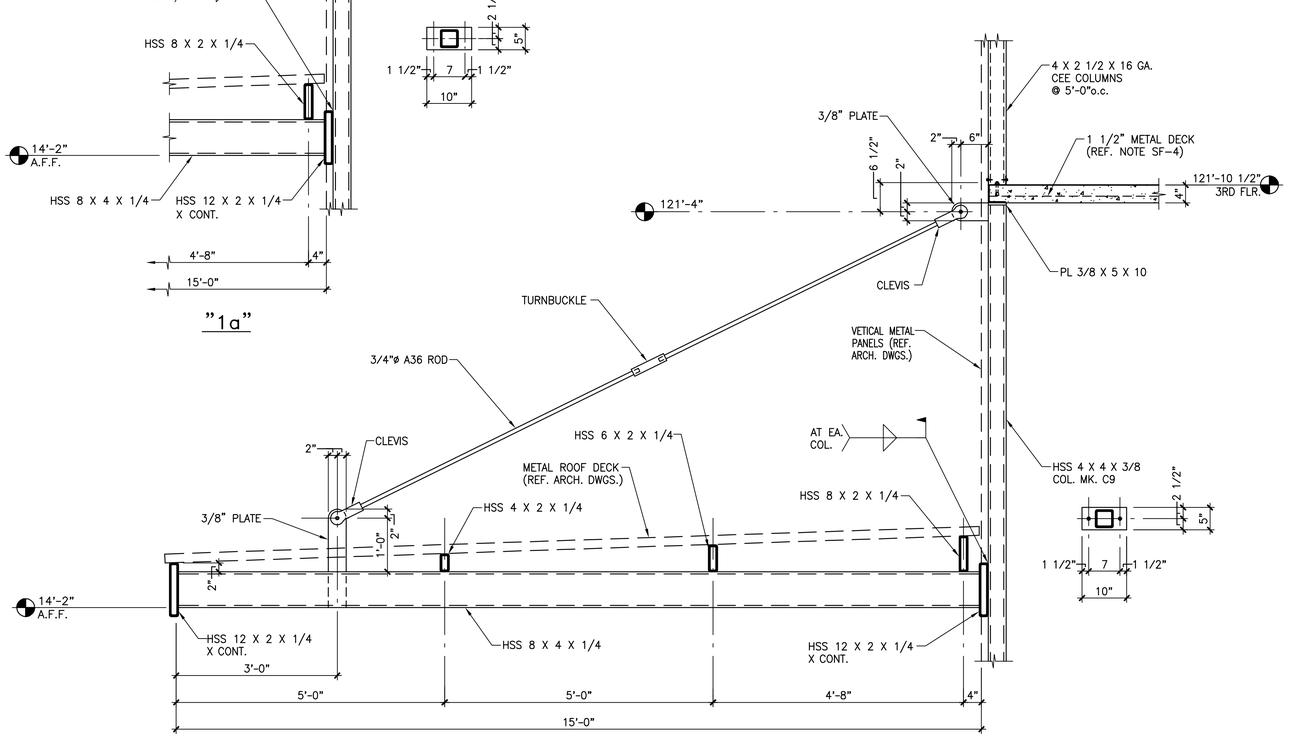
PLAN



PLAN



"1a"



"1b"

1 SECTION

SCALE: 3/4" = 1'-0"

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228

MELVIN RAY DANYSH
36299
REGISTERED
PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

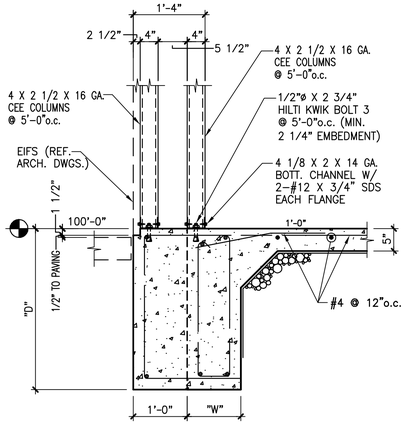
PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

SECTIONS & DETAILS

SHEET NO.

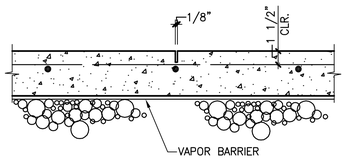
S4.6

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES46



12 **SECTION**

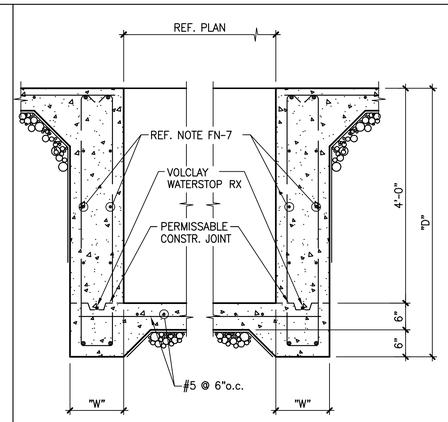
SCALE: 3/4" = 1'-0"



NOTE:
SAW CUT CONTINUOUS JOINTS IN SLAB 1/8" WIDE AND 1 1/4" DEEP WITHIN 24 HOURS AFTER FINISHING, FILL WITH SILICONE SEALANT, SEE PLANS FOR LOCATIONS.

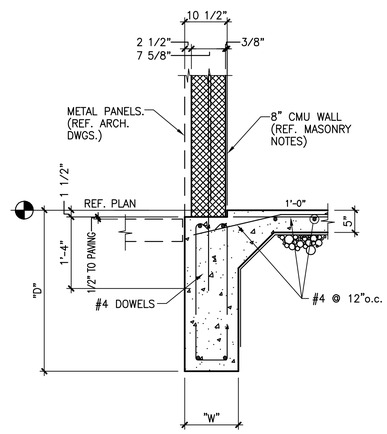
10 **DETAIL** TYPICAL SAW JOINT

N.T.S.



7 **SECTION**

SCALE: 3/4" = 1'-0"

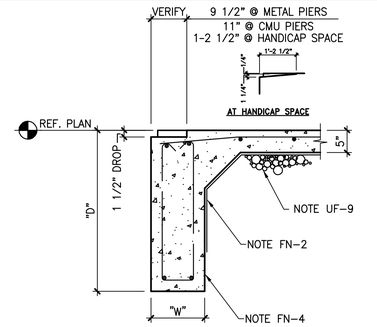


4 **SECTION**

SCALE: 3/4" = 1'-0"

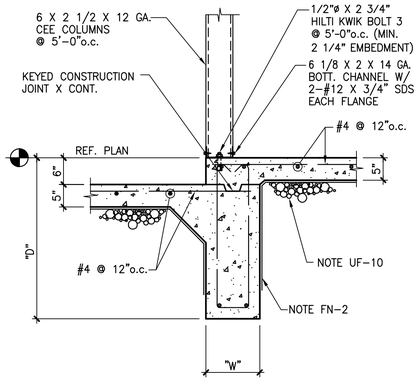
DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228

MELVIN RAY DANYSH
36299
REGISTERED PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228



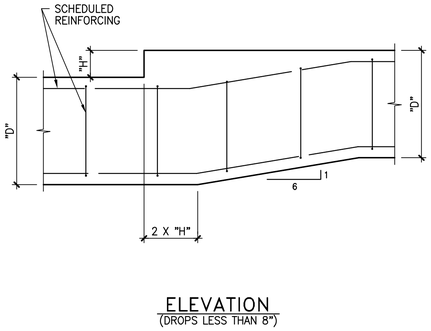
1 **SECTION**

SCALE: 3/4" = 1'-0"



13 **SECTION**

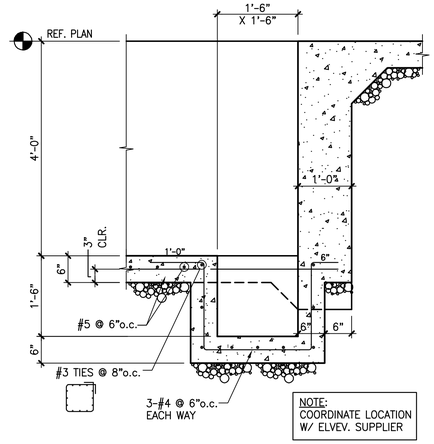
SCALE: 3/4" = 1'-0"



ELEVATION
(DROPS LESS THAN 8")

11 **DETAIL** TYPICAL BEAM TRANSITION AT FLOOR DROP

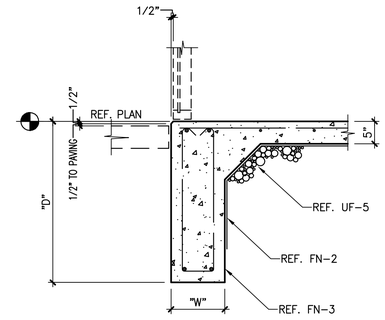
N.T.S.



NOTE:
COORDINATE LOCATION W/ ELVEV. SUPPLIER

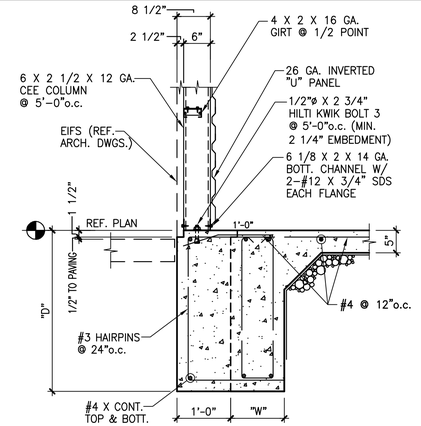
8 **DETAIL** SUMP PIT REINF.

N.T.S.



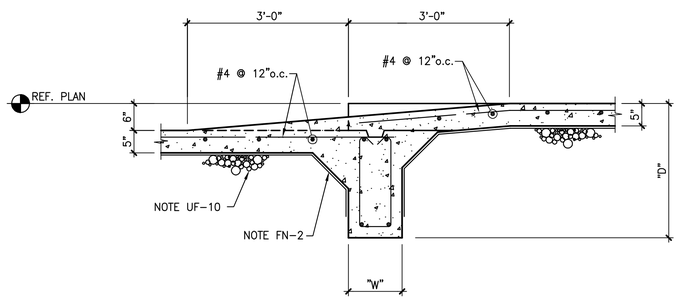
5 **SECTION**

SCALE: 3/4" = 1'-0"



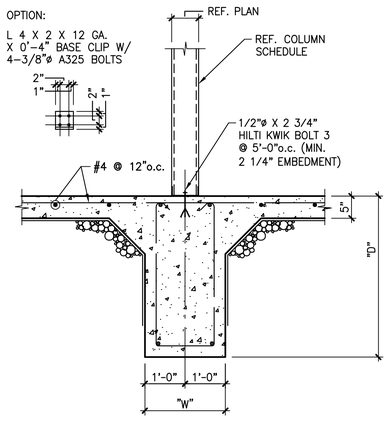
2 **SECTION**

SCALE: 3/4" = 1'-0"



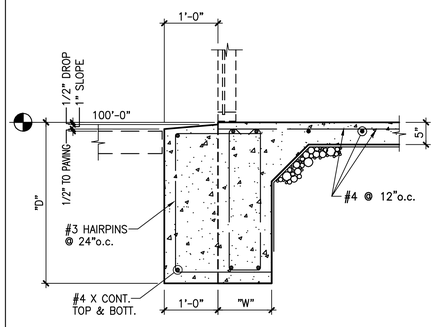
14 **SECTION**

SCALE: 3/4" = 1'-0"



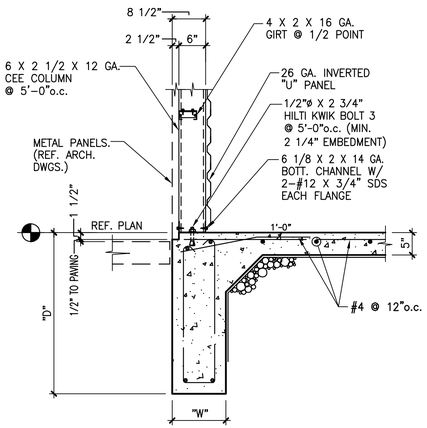
9 **SECTION**

SCALE: 3/4" = 1'-0"



6 **SECTION**

SCALE: 3/4" = 1'-0"



3 **SECTION**

SCALE: 3/4" = 1'-0"

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES47

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

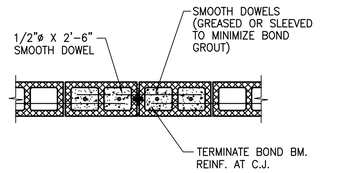
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	C.M.
REVISIONS:	

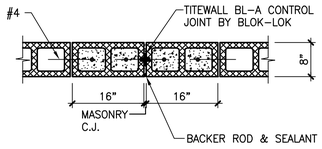
SECTIONS & DETAILS

SHEET NO.

S4.7

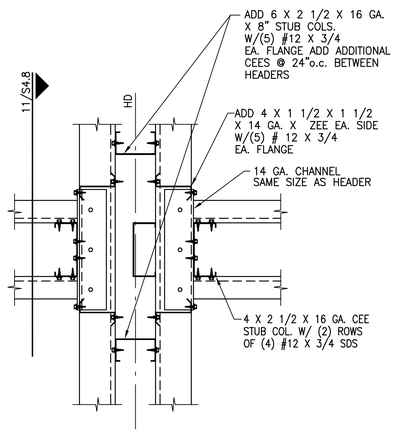


AT BOND BEAM



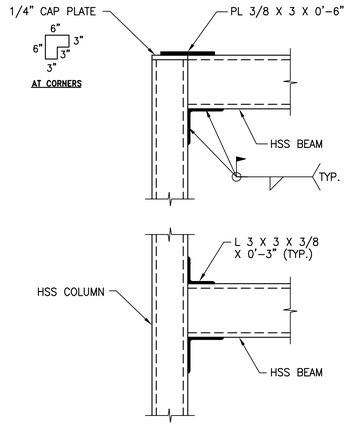
PLAN

13 **DETAIL** TYPICAL CMU CONTROL JOINT
N.T.S.

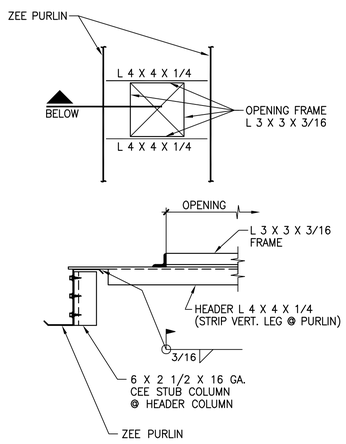


PLAN

10 **DETAIL** HEADER TO HEADER CONN.
N.T.S.

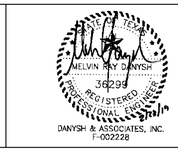


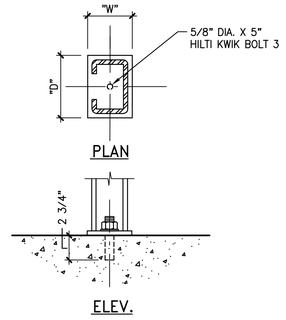
7 **DETAIL**
N.T.S.



4 **DETAIL** ROOF HATCH OPENING
N.T.S.

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228





1 **DETAIL**
N.T.S.

ELEVATION

14 **DETAIL** TYPICAL JAMB
N.T.S.

ELEVATION

11 **SECTION**
N.T.S.

MK	SIZE	CONNECTION
HD1	6" CEE	4-#12 SDS
HD2	8" CEE	6-#12 SDS
HD3	10" CEE	8-#12 SDS

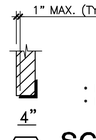
8 **DETAIL** HEADER CONNECTION
N.T.S.

STEEL LINTEL SCHEDULE

SIZE (MIN.-NOTE 4)	CLEAR OPNG. GREATER THAN	CLEAR OPNG. UP TO	REMARKS
L 4 X 4 X 3/8	-	8'-0"	MIN. OF 8" BEARING @ EA. END
L 6 X 4 X 3/8	8'-0"	11'-0"	MIN. OF 8" BEARING @ EA. END
L 7 X 4 X 3/8	11'-0"	12'-0"	MIN. OF 8" BEARING @ EA. END
L 8 X 4 X 1/2	12'-0"	14'-0"	MIN. OF 8" BEARING @ EA. END

NOTES:

1. PROVIDE ONE MEMBER FOR EACH 4" (NOMINAL) WIDTH OF MASONRY
2. INSTALL ALL LOOSE LINTELS WITH LONG LEG VERT.
3. PROVIDE SHORING UNDER LINTELS OVER 8'-0" LONG UNTIL GROUT HAS SET 72 HOURS
4. ANGLE SIZE IS MIN. COORDINATE REQUIRED HORIZ. LEG DIMENSION W/ ARCH. DRAWINGS.



TYPICAL LINTEL DETAIL

- FOR SUPPORT OF MASONRY WEIGHT ONLY.
- DEFLECTION < L/600.

5 **SCHEDULE**
N.T.S.

PLAN

2 **DETAIL**
N.T.S.

ELEVATION

15 **DETAIL** CONTROL JOINT AT COLUMN
N.T.S.

12 **DETAIL**
N.T.S.

9 **DETAIL**
N.T.S.

6 **DETAIL**
N.T.S.

PLAN

3 **DETAIL**
N.T.S.

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES48

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

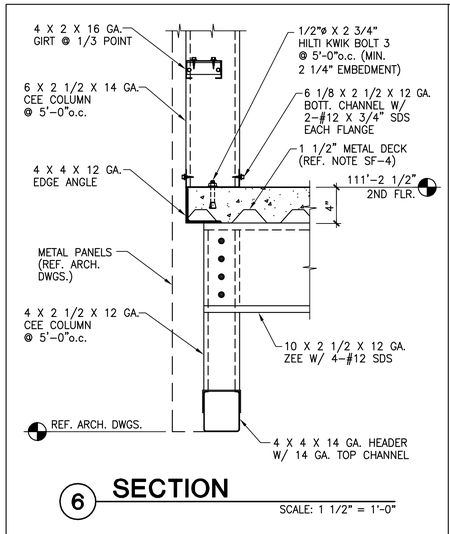
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : C.M.
REVISIONS:

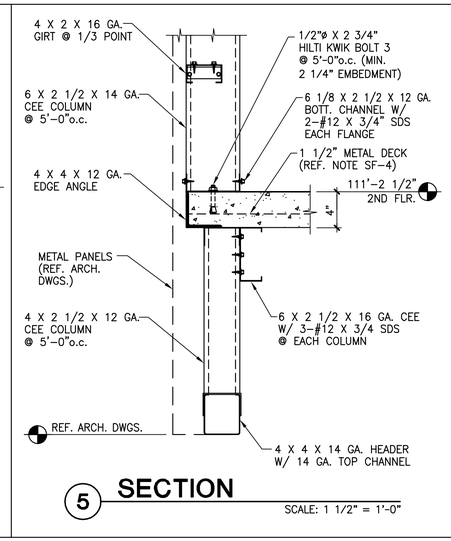
SECTIONS & DETAILS

SHEET NO.
S4.8



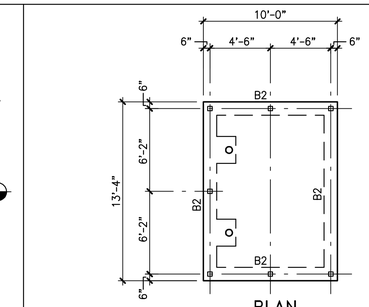
6 SECTION

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



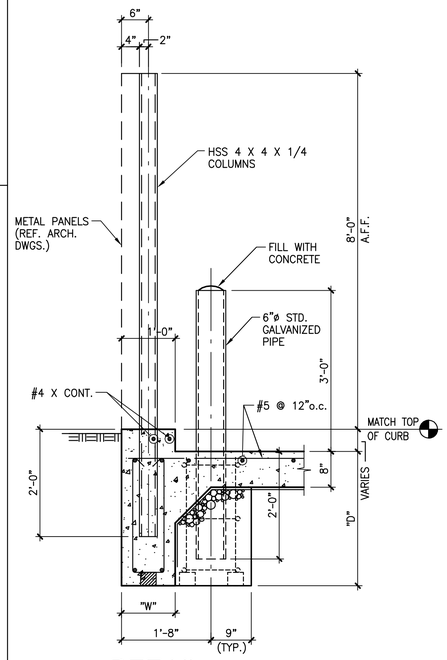
5 SECTION

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



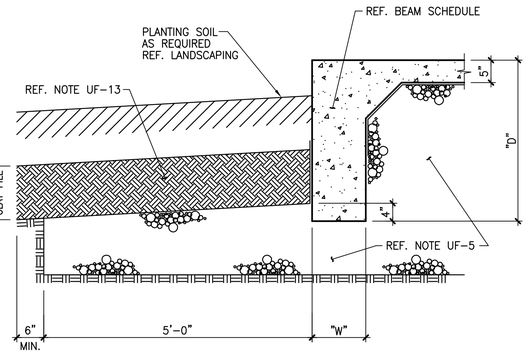
PLAN

NOTE: VERIFY SIZE PRIOR TO CONSTRUCTION



3 DETAIL DUMPSTER ENCLOSURE

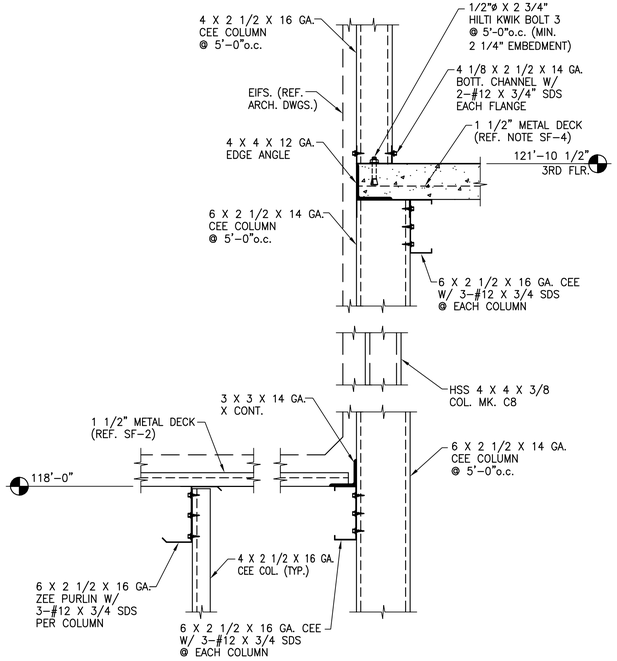
N.T.S.



NOTE:
IF TREES ARE SCHEDULED TO BE PLANTED WITHIN 15 FT. OF THE BLDG. REF. LANDSCAPING L4.1 FOR PLANTING REQUIREMENTS

7 SECTION

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



2 SECTION

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

HEADER SCHEDULE

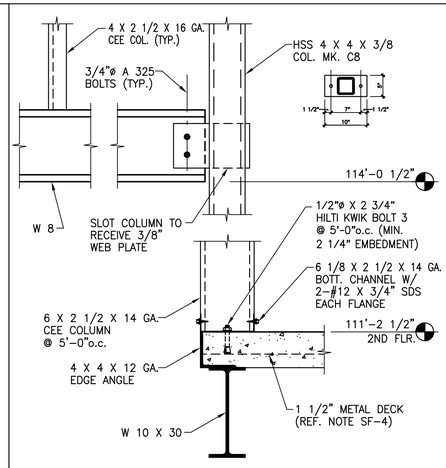
MK	SIZE	REMARKS
HD1	6 X 2 1/2 X 16 GA. DBL CEE	8/S4.8
HD2	8 X 2 1/2 X 16 GA. DBL CEE	8/S4.8
HD3	10 X 2 1/2 X 16 GA. DBL CEE	8/S4.8

COLUMN SCHEDULE

MK	SECTION	TOP CONN.	BASE PLATE W x D x t	BASE PLATE ANCHORS	BASE PLATE SECT.	REMARKS
C1	4 X 2 1/2 X 16 GA. CEE					
C2	DBL 4 X 2 X 16 GA. CEE					
C3	6 X 2 1/2 X 1 GA. CEE		4 X 7 X 1/4	1-5/8"ø KWIK BOLT 3	1/S4.8	
C4	DBL 6 X 2 1/2 X 14 GA. CEE		6 X 7 X 1/4	2-5/8"ø KWIK BOLT 3	2/S4.8	
C5	DBL 6 X 2 1/2 X 14 GA. CEE		6 X 7 X 1/4	2-5/8"ø KWIK BOLT 3	2/S4.8	
C6	DBL 6 X 2 1/2 X 12 GA. CEE		6 X 7 X 1/4	2-5/8"ø KWIK BOLT 3	2/S4.8	
C7	HSS 4 X 4 X 1/4	7/S4.8	8 X 5 X 1/4	2-5/8"ø KWIK BOLT 3	3/S4.8	TOP OF COLUMN = TOP OF WALL
C8	HSS 4 X 4 X 3/8	7/S4.8	8 X 5 X 1/4	2-5/8"ø KWIK BOLT 3	3/S4.8	TOP OF COLUMN = TOP OF WALL
C9	HSS 4 X 4 X 3/8	1/S4.6	10 X 5 X 3/8	2-5/8"ø KWIK BOLT 3	1/S4.6	
C10	HSS 6 X 6 X 1/4	7/S4.8	9 X 9 X 3/8	2-5/8"ø KWIK BOLT 3	3/S4.8	TOP OF COLUMN = TOP OF WALL
C11	HSS 4 X 4 X 3/8	12/S4.5	8 X 5 X 1/4	2-5/8"ø KWIK BOLT 3	3/S4.8	

4 SCHEDULE

N.T.S.



1 SECTION

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

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228

MELVIN RAY DANYSH
36299
REGISTERED
PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829

DATE : 02.28.2019

DRAWN : C.M.

REVISIONS:

SECTIONS & DETAILS

SHEET NO.

S4.9

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES49

2. Existing Mix Designs: The laboratory may submit data of previously prepared "standard" mix designs provided:
   a. The laboratory prepared the mix design in strict accordance with the provisions of this section of the project specifications.
   b. The mix design shall have been prepared within the preceding six months. Documentation shall not reference any specific construction project.
   c. The laboratory shall submit written certification that the materials used in the submitted mix designs are currently stocked at the batching plant.

A. Steel Reinforcement Shop Drawings: Details of fabrication, bending, and placement, prepared according to ACI 315, "Details and Detailing of Concrete Reinforcement." Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.

D. Formwork Shop Drawings: Design and engineering of formwork are Contractor's responsibility.

E. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirement indicated, based on comprehensive testing of current materials.

F. Material Certificates: Signed by manufacturers certifying that each of the following items (if used) complies with requirements:
1. Cementitious materials and aggregates.
2. Form materials and form-release agents.
3. Steel reinforcement and reinforcement accessories.
4. Admixtures.
5. Curing materials.
6. Bonding agents.
7. Adhesives.
8. Repair materials.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

C. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C94 requirements for production facilities and equipment. Manufacturer must be certified according to the National Ready Mixed Concrete Associations Certification of Ready Mixed Concrete Production Facilities.

D. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1.77 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.
Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification rogram.

E. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.

F. ACI Publications: Comply with the following, unless more stringent provisions are indicated:
1. ACI 301, "Specification for Structural Concrete."
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle steel reinforcement to prevent bending and damage.

1.7 FORM-FACING MATERIALS

A. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

B. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch (19 by 19 mm), minimum.

C. Form-Release Agent: commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
Formulate form-release agent with rust inhibitor for steel form-facing materials.

1.8 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615/A 615M, Grade 60 (Grade 420), deformed.

B. Plain-Steel Wire: ASTM A 82, as drawn.

C. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.

1.9 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type I or Type III.

B. Fly Ash: ASTM C 618, Class C (maximum of 20% cement replacement).

C. Normal-Weight Aggregate: ASTM C 33, uniformly graded, with maximum aggregate size of 1 1/2".

D. Water: Potable and complying with ASTM C 94.

1.10 ADMIXTURES

A. The use of admixtures shall be coordinated between the batch plant and the concrete contractor to adjust for conditions in the batch plant. atmospheric conditions, and jobsite conditions including size of pour, travel time between batch plant and jobsite, and time estimated for completing pour and curing.

B. The specific effects produced by chemical admixtures may vary with the properties and proportions of the other ingredients of the concrete including the cement, pozzolan, aggregates, air-entraining admixture, and the mixture proportions, batching sequence, and other physical conditions proposed for the specific work.

C. Admixtures to conform to ASTM standards and include:
Air entrainment (ASTM C260)
Accelerators (ASTM C 494, Type C)
Retarders (ASTM C 494, Type B)
Water-reducing and retarding admixture (ASTM C 494, Type D)
Water-reducing and accelerating admixture (ASTM C 494,Type E)
Water-reducing, high range admixtures (ASTM C 494, Type F)
Water-reducing, high range , and retarding (ASTM C 494, Type G)

1.11 RELATED MATERIALS

A. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

B. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene

1.12 CONCRETE MIXES

A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mix or field test databases, as follows:
1. Proportion normal-weight concrete according to ACI 211.1 and ACI 301.

B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the laboratory trial mix basis. Use a qualified independent testing agency to verify field test data and that existing ingredients in plant are same as in the test sample.

C. Proportion normal-weight concrete mix as follows:
1. Compressive Strength (28 Days): 3000 psi.
2. Maximum Slump: 5 inches.
3. Maximum Slump for Concrete Containing High-Range Water-Reducing Admixture: 8 inches after admixture is added to concrete with 2 to 4 inch slump.
4. Minimum of 5 sacks of cement per cubic yard of concrete.

D. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
1. Fly Ash: 20 percent.
2. Combined Fly Ash and Pozzolan: 20 percent.

E. Limit Water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

F. Admixtures: Use admixtures according to manufacturers' written instructions.
1. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

1.13 CURING MATERIAL

A. For all slabs except those on which additional concrete or other toppings are to be bonded, use a water-based acrylic membrane curing compound that has a maximum volatile organic compound (VOC) rating of 350 g/L (3 lbs/gal.) complying with ASTM C309, Type I, Class B. Available products include VOCOMP-20 (W. R. Meadows, Inc.), MasterKure 100W (Master Builders, Inc.), Dress and Seal WB (L & M Construction Chemicals, Inc.), or approved equal.

B. For slabs having bonded toppings, use "Sisalkraft" paper as manufactured by the American Sisalkraft Company.

1.14 FABRICATING REINFORCEMENT
Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice".

1.15 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.

PART 3 - PROCEDURAL REQUIREMENTS

3.1 SHOP DRAWINGS

A. Refer to section 01 3300 for specific requirements for number of copies to be submitted, time for review, etc. All submittals must come by way of the general contractor through the architect. Certain submittals, identified in specific sections of the specifications, generally regarding pre-engineered elements, will require a specialty engineer's seal and signature.

3.2 FIELD OBSERVATIONS

A. Structural engineer shall be notified at least 24 hours in advance of any concrete pour or other action that will cover up structural elements that have not been reviewed by the structural engineer. Refer to individual sections for specific stages of construction which require observation.

3.3 ENGINEER'S ACTIONS

A. Shop Drawings
1. The structural engineer will review shop drawings for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

2. The structural engineer-of-record shall review the submittals and return them to the architect with one of the following statements checked off on the stamp:

o NO EXCEPTION TAKEN
o MAKE CORRECTIONS NOTED
o REVISE AND RESUBMIT
o RETURN ONE CORRECTED COPY FOR FILE

Review is only for general conformance with design concept of project and general compliance with the Contract Documents. Contractor is responsible for confirming and correlating dimensions at job site: for information which pertains to fabrication processes or construction techniques: and for coordination of work of all trades. Review of shop drawings shall not relieve Contractor, any Subcontractor, and/or Material Supplier or responsibility for deviation from requirements of Contract Documents nor for errors or omissions in shop drawings.

DANYSH & ASSOCIATES DATE _____

BY _____

"NO exceptions Taken" informs the Architect that the structural engineer takes no exception to the submittal being approved as per and in accordance with AIA Document 201, section 4.2.7. "Make Corrections Noted" informs the Architect that the structural engineer has made corrections on the submittals but otherwise takes no exception to the submittal being approved as per and in accordance with AIA Document 201, section 4.2.7.
"Revise and Resubmit" indicates important items must be corrected and resubmitted. Marks on the submittal may not necessarily cover all of the defects of the submittal. This action constitutes the structural engineer's concern and his recommendation to the Architect that the submittal be reviewed and resubmitted as per and in accordance with AIA Document 201, section 4.2.7.
"Return One Corrected Copy For File" informs the Architect that the submittal may be approved as per AIA Document 201, section 4.2.7, but a corrected copy showing that corrections have been acknowledged must be returned for the structural engineer's file.

B. Shop drawings with specialty engineer's seal and signature
1. Certain shop drawings may be identified in specific sections of the specifications pertaining to pre-engineered structural elements specified by the structural engineer-of-record and designed by specialty engineers. The structural engineer shall verify that submittals have received prior approvals as required by the contract documents. Submittals shall bear the signature and professional seal of the specialty engineer responsible for the design as required by the contract documents. The structural engineer shall review the submittal for type, position, and connection to other elements within the primary structural system, and for criteria and loads used for their design. Action on these submittals will be the same as for other shop drawings.

3.4 SITE VISITS

A. Contact EOR for coordination of site visits. Visits may be limited to specific phases of construction and may be assigned to a registered engineer associated with the testing laboratory.

B. The structural engineer-of-record ("SER") will make site visits at intervals appropriate to the stage of construction and as defined by the contract to visually observe the quality and the progress of the construction work relative to the primary structural system. The general contractor is responsible to notify the SER when structural elements are ready for review and prior to their being covered up. Failure to do so may result in key observations not being made, preventing the engineer from recommending acceptance of the work. A written report will be made of each visit listing discrepancies, if any, and describing what was observed. One copy will be given to contractor's representative at the jobsite, and one copy will be mailed to the Architect. If a follow-up visit is necessary it will be so noted on the report.

C. The SER shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work for This Part of the Project, since these are solely the Contractor's responsibility under the Contract for Construction. The SER shall not be responsible for the Contractor's or a Subcontractor's schedule or failure to carry out the Work in accordance with the Contract Documents. The SER shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, their agents or employees or other persons performing portions of the Work.

END OF SECTION 01 3341

SECTION 02 3200

SUBSURFACE AND SOIL CONDITIONS

PART 1 - GENERAL

1.1 SCOPE

A. The Owner has employed an independent Geotechnical Consultant and Testing Laboratory to perform a soil and foundation investigation for the site of this Project. The report of their findings may be examined at the offices of the Architect.

1.2 USE OF DATA

A. The information and recommendations contained in the soils report were obtained by the Owner only for the use of the Architect and the Structural Engineer in the design and preparation of the Contract Documents for this Project.
B. The soils report IS NOT a part of the Contract Documents. The report is available for examination by bidders, but is not a warranty of subsurface conditions at the site.
C. In accordance with the Instructions to Bidders, bidders are encouraged to visit the site and acquaint themselves with all existing conditions prior to bidding. Bidders may, at their own expense, perform their own subsurface investigations; however, all such investigations must be performed under time schedules and arrangements approved in advance by the Architect.

1.3 TESTING AND INSPECTIONS
A. Refer to Section 31 2316, Structural Earthwork for Building Foundations.

END OF SECTION 02 3200

SECTION 03 3001

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section specifies cast-in-place concrete, including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes.
B. Related Sections include the following:
1. Structural Engineer: Shop Drawings/Field Visits — Section 01 3341
2. Special Inspections: IBC Chapter 17 — Section 01 1411

1.3 DEFINITIONS
A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and silica fume.

1.4 SUBMITTALS
A. Product Data: For each type of manufactured material and product indicated.
B. Design Mixes: Independent Laboratory to submit mix designs. Include alternate mix design when characteristics of material, project conditions, weather, test results, or other circumstances warrant adjustments.
1. Using the proposed mix design, the laboratory shall make one set of four test cylinders for each type of concrete. The results of two 7-day compression tests shall be submitted with proposed mix design prior to placement of concrete on the job. Subsequently, results of two 28-day compression test shall be submitted and the strength shall be at least 25% greater than the specified minimum strength for concrete placed on the job.

2.3b STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	FREQUENCY	REFERENCED STANDARD
1. Material Verification of cold-formed steel deck:		IBC 1705..2.2
a. Identification markings to conform to ASTM standards specified in the approved construction documents	periodic	Applicable ASTM stds.
b, Manufacturer's certified test reports	periodic	
2. Inspection of welding:		
a. Cold-formed steel deck:		
1) Floor and roof deck welds	periodic	AWS D1.3
b. Reinforcing Steel:		
1) Verification of weldability of reinforcing steel other than A 706	periodic	AWS D1.4
2) Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement	continuous	ACI 318: Section 3.5.2 Job Specification 03 2000
3. Shear reinforcement	continuous	
4. Other Reinforcing Steel	periodic	

2.3c STEEL FABRICATORS
As per IBC Section 1705. 2 Steel Construction:
"Special inspection of the steel fabrication process shall not be required where the fabricator does not perform any welding, thermal cutting or heating operations of any kind as part of the fabrication process. In such cases, the fabricator shall be required to submit a detailed procedure for material control that demonstrates the fabricator's ability to maintain suitable records and procedures such that, at any time, during the fabrication process, the material specification, and grade for the main stress-carrying elements are capable of being determined. Mill test reports shall be identifiable to the main stress-carrying elements when required by the approved construction documents."

Note IBC 1704.2.5.1, 1704.2.5.2 prescribe procedures for Fabricator approval. Note, in particular, 1704.2.5.2: "At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building official stating that the work was performed in accordance with the approved construction documents."

2.4 MASONRY CONSTRUCTION
Reference IBC 1705.4 Masonry Construction
"Masonry construction shall be inspected and verified in accordance with TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6 quality assurance program requirements."

REQUIRED	FREQUENCY	DESCRIPTION	IBC SECTION & REFERENCE
Empirically designed masonry, glass unit masonry, and masonry veneer in non-essential facilities.	Special Inspections Not Required Per 1704.5.1		IBC 1704.5
LEVEL A QUALITY ASSURANCE (Table 1.19.1)			
Level A Inspection: (1)		Engineered masonry in non-essential facilities and empirically designed masonry in essential facilities.	IBC 1704.5.1 IBC 1704.5.2
1 As Masonry construction begins, the following shall be verified to ensure compliance.	Periodic	a. Proportions of site-prepared Mortar	
	Periodic	b. Construction of mortar joints	
	Periodic	c. Location of reinforcement and connecters.	
The inspection program shall verify:	Periodic	a. Size and location of structural elements.	
	Periodic	b. Type size and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.	
	Periodic	c. Specified size, grade and type of reinforcement.	
	Continuous	d. Welding of reinforcing bars.	
	Periodic	e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).	

Notes: (1) Qualification based on ASTM C1093

PART 3 - QUALIFICATIONS/DEFINITIONS

3.1 Inspector Qualifications: Qualifications given above are the recommendations of the local members of the Texas Council of Engineering Laboratories. It is also recommended that the Special Inspectors should be employed by an agency accredited by any nationally recognized accrediting body: AASHTO, A2LA, NVLAP, ICC, etc.

3.2 These inspections do not relive engineer from structural observations as may be required by IBC 2009, Section 1709, and/or contractual requirements of architect/client, (i.e. C141).

3.3 Definitions/Terms: Periodic vs Continuous Inspections - Reference IBC Section 1702
ADSC The International Association of Foundation Drilling
ASNT American Society for Nondestructive Testing
ASTM American Society for Testing Materials
AWS American Welding Society
CWI Certified Welding
CRSI Concrete Reinforcing Steel Institute
Testing and inspection directed by ASTM E329 guidelines.

END OF SECTION 01 1411

SECTION 01 3341

STRUCTURAL ENGINEER: SHOP DRAWINGS/FIELD VISITS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract apply to work of this section.
1.2 SCOPE
A. This section defines and clarifies specific items that are peculiar to the structural engineer's responsibilities.

PART 2 - GENERAL DEFINITIONS

2.1 STRUCTURAL ENGINEER OF RECORD
A. The engineer responsible for the design of the primary structural system and whose seal/signature appears on the contract structural drawings. Responsibility for any secondary structural and non-structural systems not shown on the structural drawings rests with the prime professional, the architect.

2.2 SPECIALTY ENGINEER
A. The engineer who is lawfully eligible to seal plans and designs for pre-engineered elements on systems which become part of the overall building.

2.3 SUBMITTALS
A. Items identified in the contract documents to be submitted by the contractor. Refer to individual sections of the specifications for specific items to be submitted.

2.4 FIELD OBSERVATIONS
A. Visits to the jobsite by the structural engineer-of-record or his authorized representative to ascertain whether the work is generally in accordance with the structural contract documents. These observations are not exhaustive nor continuous.

2.2 CONCRETE CONSTRUCTION

REQUIRED	FREQUENCY	DESCRIPTION	IBC SECTION & REFERENCE
CONCRETE CONSTRUCTION			
1. Reinforcing Steel (1)	Periodic	Provide periodic inspection of reinforcing sizes, spacing grade of rebar; and placement at the following frequency: Columns: 10% Beams: 30% Joist: 10% Other members: randomly @ 20%	IBC 1705.3; ACI 318: Ch. 3.5, 7.1 – 7.7; General Notes; Sections 03 1000, 03 2000 and 03 3000 of the job specifications
2. Reinforcing Steel (2) welding.		No field welding permitted	AWS d1.4 ACI 318: 3.5.2
3. Bolts to be installed in concrete prior to & during placement of concrete where allowable loads have been increased. (3)	Not Applicable		
4. Verify use of concrete mix design. (4)	Periodic	Each Concrete Pour	ACI318 – Ch. 4, 5.2 – 5.4
5. Sampling of fresh (4) concrete.	Each Concrete Pour	a. All concrete testing is to be made after water, if any, is added at site. b. Provide a set of (4) four cylinders to be taken for every 75 cubic yards of concrete, or fraction thereof, by testing lab. c. Monitor slump and air content of concrete and notify delivery driver if slump deviates more than plus or minus 1 inch from recommended value. Contact supplier for further directions.	ACI318 – Ch. 5.6, 5.8
6. Placement of (4) concrete & shotcrete	Continuous		ACI318 – Ch. 5.9, 5.10
7. Maintenance of specified curing temperature & techniques. (4)	Periodic	Each Concrete Pour	ACI318 – Ch. 5.11, 5.13
8 Removal of shores and forms from beams and structural slabs.	Periodic	Verify in-situ concrete strength prior to removal.	ACI 318: Ch. 6.2; Concrete Joist General Notes

Notes: (1) Qualifications based on ASTM E329k
(2) Certified Welding Inspector (CWI) of Associate CWI
(3) Technician trained in field of work and has at least one year of experience
(4) Qualification based ASTM C1077
(5) Qualification based on ASTM E329

2.3a STEEL CONSTRUCTION

REQUIRED	FREQUENCY	DESCRIPTION	IBC SECTION & REFERENCE
STEEL CONSTRUCTION			IBC 1705.2
1. Material verification of high strength bolts, nuts and washers (1)	Periodic	a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Structural Steel Notes; Quality Assurance Inspection Reqs. of AISC 360
	Periodic	b. Manufacturer's certificate of compliance required.	Applicable ASTM material specifications; AISC 335, Section A3.4 AISC LRFD, Section A3.3
2. High-strength bolting: (1)	Periodic	a. Bearing-type connections	Structural Steel General Notes
	Continuous or Periodic	b. Slip-critical connections	AISC LRFD Section M2.5
3. Material verification of structural steel: (1)	Periodic	a. Identification markings to conform to ASTM standards specified in the approved construction documents.	Structural Steel Notes
	Periodic	b. Manufacturer's certified mill test reports.	ASTM A6 OR A568
4. Material verification of weld filler materials:(1)	Periodic	a. Identification markings to conform to AWS specification specified in the approved construcment documents.	Structural Steel General Notes
	Periodic	b. Manufacturer's certificate of compliance.	AISC, ASD, Section A3.6; AISC LRFD, Section A3.5
5. Welding: (2) a. Structural Steel:	Continuous	1. Complete & partial penetration groove welds.	Structural Steel General Notes
(3)	Continuous	2. Multipass fillet welds.	AWS D1.1
	Continuous	3. Single-pass fillet welds > 5/16"	AWS D1.1
(3)	Periodic	4. Single-pass fillet welds 5/16"	AWS d1.1
(3)	Periodic	5. Floor and deck welds.	AWS D1.3
b.Reinforcing Steel: (4)	Periodic		
6. Steel frame joint details: Compliance with approved construction documents: (5)	Periodic	a. Details such as bracing & stiffening.	Structural Drawings
	Periodic	b. Member Locations	
	Periodic	c. Application of joint detail at each connection.	

Notes: (1) Qualifications: CWI/Associate/Technical Graduate, AWS or CRSI
(2) Qualifications: CWI/ASNT
(3) Qualifications: CWI/ASNT
(4) Qualifications: CWI/Associate/Technician trained in field of work and has at least one year of experience.
(5) Qualifications: Complex joint details; Associate CWI
Relatively simple details; Technician trained in field of work and has at least one year of experience.

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228

MELVIN RAY DANYSH 36299 REGISTERED PROFESSIONAL ENGINEER
DANYSH & ASSOCIATES, INC.
F-002228

SECTION 01 1411
SPECIAL INSPECTIONS: IBC CHAPTER 17

PART 1 - GENERAL

1.1 SCOPE
The 2018 International Building Code (IBC), Chapter 17, "Structural Tests and Special Inspections" requires materials of construction and tests to conform to applicable standards listed therein. This section determines which inspections are required, frequency, and qualification required of the inspector.

1.2 RELATED WORK SPECIFIED ELSEWHERE
Section 01 3341: Structural Engineer: Shop Drawings/Field Visits
Section 31 2316: Structural Earthwork for Building Foundation
Section 03 3001: Cast-In-Place Concrete
Section 05 1200: Structural Steel
Section 05 3600: Composite Steel Deck

1.3 GENERAL
Section 1704: ".....the owner or the Registered Design Professional in Responsible Charge (RDPIRC) acting as the owner's agent shall employ one or more special inspectors during construction on the types of work listed under Section 1704."

1.4 APPROVED LIST
The firm intended to be retained for conducting such inspections shall be designated by the Registered Design Professional in Responsible Charge (RDPIRC), the Architect.

PART 2 - SPECIAL INSPECTIONS

2.1 SOILS (SLAB-ON-GRADE)

REQUIRED	FREQUENCY	DESCRIPTION	IBC SECTION & REFERENCE
1. SOILS (SLAB-ON-GRADE)		Site Preparation	IBC 1705.6
a. Sub-grade (1)	Periodic	Visual Observation At the contractor's expense, instrument readings shall be taken by a licensed surveyor to show final subgrade elevations and slopes.	Geotechnical Report; Under Floor Fill Notes.
b. Excavation	Periodic	Verify excavations are extended to proper depth and have reached proper material	
i. Proofrolling (2)	Continuous	Visual Observation Proofroll: a Geotechnical Engineer shall monitor Proofrolling. The Geotechnical Engineer shall approve the type of proofrolling equipment and procedures.	Geotechnical Report; Under Floor Fill Notes.
ii. Moisture (2) Conditioning & Recompaction	Continuous or Periodic	Provide (1) one density test for each 2000 sq. ft. Refer to Notes on Building Pad for Testing Specifications.	Geotechnical Report; Under Floor Fill Notes.
b. Chemical (2) Injection	Continuous	Quality controlled testing and evaluation prior and subsequent to injection shall be performed by the Geotechnical Engineer to determine the effectiveness of the chemical injection process. The Geotechnical Engineer or his representative shall monitor the injection process to verify area coverage, injection depth and to review and monitor the swell test results.	Geotechnical Report; Under Floor Fill Notes.
c. During Fill (2) Placement:	Continuous or Periodic	Visual Observation: Arrange for testing lab to sample material. The testing lab shall visually monitor pit run materials with additional samples tested each day, or more often if material appears to vary.	IBC 1704.7.2 Geotechnical Report; Under Floor Fill Notes.
d. Evaluation (2) in place Density of Fill	Continuous or Periodic	Provide one (1) density test for each 2000 sq. ft. Refer to notes on Under floor Fill Notes for Testing Specifications.	IBC 1704.7.3 Geotechnical Report; Under Floor Fill Notes.
e. Trench (2) Backfilling	Continuous or Periodic	Trench Backfilling: Trench backfilling with clay cap and placing of clay plug shall be monitored by Geo-technical engineer with a written report sent to the Structural Engineer.	

Notes: (1) Qualifications based on ASTM D3740: Licensed Surveyor
(2) Qualifications based on ASTM D3740

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

SE MILITARY STORAGE
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : C.M.
REVISIONS:

SPECIFICATIONS

SHEET NO.
S5.1

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES51

SECTION 05 3100

METAL DECKING

PART 1 – GENERAL

1.1 WORK INCLUDED
A. Steel roof deck complete with cover plates, cell closures and flashings and acoustical closures.

1.2 REFERENCE STANDARDS
A. ASTM A-36 - Structural Steel
B. Steel Deck Institute - "Basic Design Specifications".
C. ASTM A-611 - Grade "C" and ASTM A-653 carbon steel sheet.
D. AISI - Specification for the Design of Cold-Formed Steel Structural Members.
E. AWS D1.1 "Structural Welding Code- Steel"
F. AWS D1.3 "Structural Welding Code- Sheet Steel."

1.3 SHOP DRAWINGS
A. Submit shop drawings in accordance with Section 01 3300.
B. The Contractor shall obtain completely detailed shop drawings showing type of deck section employed in each area of roof, how they are adapted to special conditions, method of welding deck to supporting members method of reinforcing deck at openings, and location and type of all accessories which are part of the deck proper. The Contractor shall carefully check these drawings, then submit them to the Architect/Engineer. The Architect/Engineer may conduct limited spot checks aimed solely at determining general comprehension of the design intent, then return them to the Contractor. The Contractor shall then carefully recheck the shop drawings and approve them prior to fabrication.
C. The Architect/Engineer's spot check does not relieve the Contractor from correcting, at his own expense, any items that may thereafter be found not to comply with the plans and specifications.

1.4 QUALITY ASSURANCE
A. Installer Qualifications: Engage an experienced Installer who has completed steel deck similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
B. Testing Agency Qualifications: To qualify for acceptance, an independent testing agency must demonstrate to Architect's satisfaction, based on evaluation of agency-submitted criteria conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.
C. Welding Standards: Comply with applicable provisions of AWS D1.1 "Structural Welding Code-- Steel" and AWS D1.3 "Structural Welding Code--Sheet Steel." Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.

PART 2 – PRODUCTS

2.1 PRODUCTS
A. Acceptable Manufacturers
1. Design based on published tables from Vulcraft Division of Nucor. Substitutions: Items of same function and performance are acceptable if product data is submitted and approved.
B. Materials and Components
1. Refer to plan notes for deck finish; painted or galvanized.
2. Steel for painted deck: ASTM A-611, Grade C, Fy=33,000 psi.
3. Steel for galvanized deck: ASTM A-446, Fy=33,000 psi
4. Bearing Plates and Angles: of ASTM A-36 type steel.
5. Anchor Bolts and Required Nuts and Washers: High strength type recommended for structural steel joints; ASTM A-325.

C. Galvanizing Repair Paint
1. High zinc-dust content paint for repair of damaged galvanized surfaces complying with Military Specifications MIL-P-21035 (Ships)

D. Welds and Mechanical Fasteners:
1. Mechanical Fasteners (Powder Actuated and Screw Fasteners)
a. Material: AISI 1070 modified
b. Hardness: Minimum Rockwell Hardness C 54.5
c. Hilti or approved equal
d. Sidelap Connectors
e. Hilti, Inc. Elco Textron, or approved equal

2. Applicable AWS D1.1 type required for materials being welded.

E. Decking and Related Accessories
1. Roof Decking: Minimum 22 gauge sheet steel; 36 inch wide sheet; double span; manufactured by Vulcraft or equal. Refer to plan for specific section properties required.
F. Fabrication
1. Fabricate metal decking as recommended by the Steel Deck Institute. Fabricate to accommodate maximum working stress of 20,000 psi and maximum deflection of 1/360 of span.
G. Shop Finish
1. Steel shall be thoroughly cleaned in a chemical bath, followed by a rinse, phosphatized, rinsed, dried and properly prepared for painting. After phosphatizing, the surface shall be roller coat painted to insure an even protective covering with a gray flexible primer which when oven cured, shall have a moderate reflectance value.
2. Galvanized steel deck shall be structural Grade C standard black gage coated before fabrication in continuous strip by the Cook-Norteman process. Coating shall conform to ASTM A-525 Class G90 or QQ-S-775 Class d or ASTM G-01.

PART 3 – DELIVERY, STORAGE AND HANDLING

3.1 PRODUCTS
A. Steel Roof Deck:
1. Do not rack, bend or mar steel roof deck sheets.
2. Store steel roof deck sheets and accessories above ground and protected from free weathering with one end elevated.
3. Cover and ventilate unpainted or uncoated steel roof deck sheets until final installation.
4. Architecturally exposed steel roof deck sheets shall be appropriately packaged or protected to prevent damage during delivery, storage and handling.

B. Welding Electrodes and Mechanical Fasteners
1. Store welding electrodes, mechanical fasteners and powder-actuated cartridges in original packages in a cool, dry location until final installation.
2. Comply with all project and national safety regulations regarding handling of welding equipment and powder-actuated fastening systems.

C. Sidelap Connectors:
Store sidelap connectors in original packages in a cool, dry location until final installation.

3.2 INSTALLATION
A. Erect metal decking as recommend by the SDI. Properly align and level on structural supports. Deck sheets shall extend over three or more spans, where possible. End laps of sheets shall be a minimum of 2" and shall occur over supports.
B. Allow minimum 1-1/2 inch bearing when supported by structural steel and minimum 4 inch bearing when supported by masonry.
C. Deck shall be anchored by welding directly through the bottom of the ribs to all structural supports. Welds to supports shall be made at the side ribs and at the center of each sheet and at other ribs so that the spacing between welds across the width of each sheet does not exceed 12 inches. Arc spot puddle welds shall be 5/8 inch minimum visible diameter. Exception, use 3/8" x 1-1/4" arc seam welds with "F" deck or "A" deck. When deck spans exceed 5'-0", side laps of adjacent units shall be fastened together at midspan by tack welding, sheet metal screws, or bottom punching. At free edges of deck (entire perimeter of decked area) weld to supports at 12" on center.
D. Refer to Plans for specific instructions on weld patterns necessary for diaphragm action.
E. Exercise care to avoid overloading the supporting structural elements when placing bundles of steel deck or other construction loads on the framing. Do not use deck units for storage or working platforms until permanently fastened in position.
F. Damaged or bent sections, or sections which do not properly mesh together at the side laps, shall not be used.
G. Sloping roofs having a slope of 1/4" per foot or more shall be erected beginning at the low side so that laps are made "shingle" fashion.
H. Minor openings, not shown on the plans or detailed on the shop drawings, shall be neatly cut and trimmed in the field; and shall be reinforced as required to maintain the strength and continuity of the deck.
I. Reinforce openings 6 inches to 18 inches in size with 2 inch x 2 inch x 1/4 inch steel angles. Place angles perpendicular to flutes, extended minimum two flutes each side of openings and weld to deck.
J. Reinforce openings over 18 inches in size in accordance with structural framing details indicated on drawings.
K. Install minimum 6 inch wide cover plates where deck changes direction. Spot weld in place at maximum 12 inches on center.
L. Install closure strips and angles flashings as required to close openings between deck and walls, columns and openings.
M. At hip-and-valley framing, provide continuous plates ¼"x6" bent to the roof planes at ridges and valleys for support.

3.3 TOUCH-UP PAINTING
A. After decking installation, wire brush, clean and paint scarred areas, welds and rust spots on top and bottom surfaces of decking units and supporting steel members.
B. Touch-up galvanized surfaces with galvanizing repair paint applied in accordance with manufacturer's instructions.
C. Touch-up painted surfaces with same type of shop paint used on adjacent surfaces.

3.4 ACCEPTANCE
A. Testing Agency: A qualified independent testing agency employed and paid by Owner will perform field quality-control testing.
Field welds will be subject to inspection.
B. Contractor shall notify the structural engineer when steel deck installation is complete to permit observation prior to placement of insulation or roofing substrate.

END OF SECTION 05 3100

PART 2 - PRODUCTS

2.1 WIDE FLANGE W-SHAPES
A. W-Shapes shall meet the requirements of ASTM A992(A572) high-strength, low alloy structural steel with minimum yield stress of 50 KSI.

2.2 STRUCTURAL STEEL AND PLATES
A. Steel shapes and plates shall meet the requirements of ASTM A-36, Fy=36,000 PSI.

2.3 RECTANGULAR TUBING

A. Rectangular Hollow Structural Sections (HSS) shall meet the requirements of ASTM A-500, Grade B, Fy=46,000 PSI.

2.4 CIRCULAR STEEL PIPE

A. Steel pipe shall meet the requirements of ASTM A-53, Type E or S, Grade B (Fy=35,000 PSI).

B. Round Hollow Structural Sections (HSS) shall conform to ASTM A500, Grade B (Fy=42,000 PSI).

2.5 BOLTS AND NUTS
A. HIGH STRENGTH BOLTS
1. Use high strength bearing type bolts conforming to ASTM A-325 for all bolted connections unless otherwise indicated on the Drawings.
2. Make bolt holes 1/16 inch larger than nominal bolt diameter.
3. All bolts shall have threads excluded from the shear plane.

2.6 HEADED CONCRETE ANCHORS
A. ASTM A496, Installation AWS 01.1.

2.7 PRIMER PAINT
A. All primer paint for structural steel shall be lead-and chromate-free and shall be compatible with the finish coatings described in other sections of these Specifications, and shall be Sherwin-Williams "Kromik", Pittsburgh "Ironhide", Negley "Zinc Chromate Rust-Inhibitive Paint", or equal.

2.8 NON-SHRINK GROUT
A. The grout shall be non-shrink in the plastic state and show no expansion after set as tested under ASTM C-191. The effective bearing area shall be no less than 95%. The grout must not contain any water reducers, fluidifiers, accelerators or other chemicals which cause drying shrinkage, reference ASTM C-596.

2.9 DECK SUPPORT
A. All edges of floor and roof deck must be continuously supported by steel members. Where deck changes direction 90 degrees, provide a continuous angle 3x2-1/2x3/16 (L.L.H.) across the ends of the seated joists. Where deck miters in a horizontal plane, provide a continuous 1/4x6 plate support.

2.10 MECHANICAL EQUIPMENT SUPPORT
A. Provide adequate and appropriate structural steel framing, approved by engineer, to support and mount all mechanical equipment resting on structural steel framing including roof top units. Loads shall be transmitted directly to steel beams, joists, etc., which shall be modified or strengthened to properly support such loading.

2.11 OTHER MATERIALS
A. All other materials, not specifically described, but required for a complete and proper installation of structural steel, shall be new, free from rust, first quality of their respective kinds, and subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS
A. INSPECTION
1. Prior to installation of the work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that it is possible for the structural steel to be fabricated and erected in strict accordance with the original design, the approved Shop Drawings, and the referenced standards.
3. After the contractor has properly completed the structural steel framing and verified the final conditions of installation, the structural engineer shall be notified to permit observation of the completed work.

3.2 DISCREPANCIES
A. In the event of discrepancy, immediately notify the Architect/ Engineer.
B. Do not proceed with fabrication or installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.3 FABRICATION AND ERECTION

A. General
1. Fabricate all structural steel in strict accordance with the approved Shop Drawings and the referenced standards.
B. Shop Cleaning and Priming
1. Shop paint all structural steel one coat of primer, with the exception of:
a. Steel to be encased in concrete.
b. Surfaces to be field welded with full penetration groove welds or fillet welds larger than 3/16" size.
c. Surfaces at welds smaller than (b) may be prepared by abrasive paint removal in the field. Touch-up with same paint as used for original shop primer coat.
C. Connections
1. If beam reactions or connection details are not shown on plans, the connections to be made shall be sufficient to support half the total uniform load capacity tabulated in the table for "Uniform Load Constants" as shown in the AISC Manual for the given shape, span and steel specifications for the beam in question.
2. Beam connections, unless noted otherwise, shall conform to the provisions of "Framed Beam Connections" as shown in AISC Manual.
3. All bolts shall be tightened to the snug-tight condition as defined in AISC Specification on Structural Joints.
4. Connections of members into sides of pipes and tubes, unless noted otherwise, shall be made with plates passing through the pipe or tube as shown in the AISC Manual, Part 4, "Suggested Details-Miscellaneous".
5. Erection bolts used in weld construction shall be tightened and left in place.
6. Provide holes for securing nailers and/or other work to structural steel, and for passage of other work through structural steel. Provide threaded studs welded to framing, and other specialty items as shown to receive other work.
7. Field correcting or altering by "torching", or otherwise, will not be permitted unless prior approval is obtained from the Engineer. This applies to fabrication errors as well as work to accommodate other trades. Any errors which prevent the prior assembly of parts as detailed shall be reported to the fabricator for correction.
8. Splices will be permitted only when indicated. Splices may be omitted and beams furnished continuous in long lengths if desired.
9. The procedure and sequence of all shop and field welding shall be such as will avoid distortion of members and connections.
10. Erect structural steel accurately to lines and levels. Members shall be in final position before permanent connections are made.
11. Provide temporary bracing for accurate plumbing and to resist all wind and construction loads, using cable and/or angle "X" bracing in sufficient quantity to completely brace and stabilize the structure throughout the entire construction period. Erection equipment, shoring, scaffolding, etc., shall be suitable and safe for workmen, and shall be maintained in a safe and stable condition.
D. Anchorage
1. Furnish anchor bolts, plates, and other connectors required for securing structural steel to foundations and other in-place work. Anchor bars welded to embedded plates, unless noted otherwise, shall be A-36 smooth round bars shop welded to the plate in a manner such that the full tensile strength of the bar will be developed without failure of the weld or surrounding heat affecting metal.
2. Headed Concrete Anchors (ex:Nelson Studs) shall be used where indicated and shall be applied in full compliance with the Manufacturer's instructions.
3. Grout shall completely fill space under base plates.
E. Exposed Steel Members
1. Exposed Steel members shall be specially selected for uniformity of texture, straightness, and freedom from kinks, twist, warp, pits, and scale. Connections shall be accurately aligned, have close tolerances and neat smooth finishes. Appearance is fully as important as strength and will constitute grounds for rejection even after members are in final position. Refer to Section 10, "Architecturally Exposed Structural Steel" (AESS) of the "Code of Standard Practice for Steel Buildings and Bridges" (adapted 9/1/86).

END OF SECTION 05 1200

5. Compression Test Specimens: ASTM C 31/C 31M; cast and laboratory cure one set of four standard cylinder specimens for each composite sample.
a. Cast and field cure one set of four standard cylinder specimens for each composite sample.
6. Compressive-Strength Tests: ASTM C 39; test two laboratory-cured specimens at 7 days and two at 28 days.
a. Test two field-cured specimens at 7 days and two at 28 days.
compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.
D. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
E. Strength of each concrete mix will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
F. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7 and 28 day tests.
G. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
H. Additional Tasks: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strength, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by Architect.

END OF SECTION 03301

SECTION 05 1200

STRUCTURAL STEEL

PART 1 - GENERAL

1.1 SCOPE
A. Structural steel required for this work is indicated on the Drawings and includes, but is not limited to the following:
1. Columns and Beams.

1.2 RELATED WORK SPECIFIED ELSEWHERE
A. Special Inspections: IBC Chapter 17 Section 01 1411
B. Cast-In-Place Concrete Section 03 3001

1.3 QUALITY ASSURANCE
A. Qualifications of Suppliers and Personnel
1. The steel fabricator shall have not less than five years continuous experience in the fabrication of structural steel.
2. The steel erector shall have not less than five years continuous experience in the erection of structural steel.
B. Welder's Qualifications
1. Welds shall be made only by welders and welding operators who have been qualified within the preceding 12 months by tests as prescribed in the "Code for Welding in Building Construction" of the American Welding Society, to perform the type of work required. All welders working on the project shall be assigned an identifying symbol or mark. Each welder will be required to mark his symbol on each weldment completed for identification. The Contractor shall maintain a record of welders employed, date of qualification and symbol or identification mark assigned to each. Testing laboratory shall visually inspect all welds, for size and quality, providing written confirmation of conformance.
2. Full penetration shop or field welds shall be inspected by non-destructive testing methods and the results shall be submitted in writing to the Structural Engineer. Acceptable methods are as follows:
a. Liquid Penetrant Inspection: ASTM E-165.
b. Magnetic Particle Inspection: ASTM E-109; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.
c. Radiographic Inspection: ASTM E-94 and ASTM E-142; minimum quality level "2-2T".
d. Ultrasonic Inspection: ASTM E-164.
3. When requested by Engineer, supplier of structural steel shall furnish evidence that all materials delivered to the project meet the requirements of the specifications.
C. Bolting
1. Testing laboratory shall inspect all bolted connections using larger than 2 inch diameter bolts.
2. Verify the bolt type for conformance with specifications, check the surfaces being bolted together. Verify the output capacity of the bolt tightening equipment for all bolts including anchor bolts, for bolts larger than the 2 inch diameter. Tightening the bolts shall be the turn-of-the-nut method, the minimum fastener tension requirements of the American Institute of Steel Construction (AISC) Specification for Structural Joints. Make spot checks with calibrated torque wrench to verify bolt tightness. As a minimum, test 10 percent of the bolts, minimum of two in each connection in the field.

D. Codes and Standards
1. In addition to complying with all pertinent codes and regulations, structural steel shall comply with the following:
a. Unless noted otherwise, shall meet the requirements of the "Manual of Steel Construction, Specification 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.

b. "Code for Welding in Building Construction" of the American Welding Society.
c. "Specifications for Architecturally Exposed Structural Steel" of the American Institute of Steel Construction.
E. Conflicting Requirements
1. In the event of conflict between pertinent codes and regulations and the requirements of the referenced standards or these Specifications, the provisions of the more stringent shall govern.

1.4 SUBMITTALS
A. Submit Shop Drawings in Accordance with "General Notes" and Section 01 3341.
B. Shop Drawings
1. The Contractor shall obtain completely detailed shop drawings showing anchorage placing plans, member placing and erection plans, all member sizes, location, bridging, bracing, connections, methods of assembly, etc. The Contractor shall carefully check these drawings, then submit them to the Architects. The Architect/Engineer may conduct limited spot checks aimed solely at determining general comprehension of the design intent, then return them to the Contractor. The Contractor shall then carefully recheck the shop drawings and approve them prior to fabrication. The structural construction documents shall not be copied by the fabricator for use as erection drawings.
2. The contractor/fabricator shall check and verify the overall assembly of structural framing elements, including connection details, to ensure that proper erection is feasible. Adequate clearance shall be provided at connections to ensure correct fitting of connected elements, taking into account mill tolerance, weld clearance, etc.
3. The Architect's spot check shall not relieve the Contractor from correcting, at his own expense, any items that may thereafter be found not to comply with the plans and specifications.
4. Show all shop and erection details including cuts, copes, connections, holes for threaded fasteners, rivets, and welds.
5. Show all welds, both shop and field, by the currently recommended symbols of the American Welding Society.
C. Proof of qualification
1. Within five days after award of Contract, submit to the Architect satisfactory evidence that the steel fabricator and steel erector are qualified for the work in accordance with the requirements of this section of these Specifications.

1.5 PRODUCT HANDLING
A. Protection
1. Use all means necessary to protect structural steel before, during, and after installation and to protect the installed work and materials of all other trades.
B. Replacements
1. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect/Engineer and at no additional cost to the Owner.

2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

2.8 FINISHING FORMED SURFACES
A. Rough-Formed Finish: As-cast texture imparted by form-facing material with tie holes and defective areas repaired and patched. Remove fins and other projections exceeding ACI 347R limits for class of surface specified.
B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch (3 mm) in height.
1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, or painting.
2. Do not apply rubbed finish to smooth-formed finish.
C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

2.9 MISCELLANEOUS CONCRETE ITEMS
A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete Work.
B. Steel Pan Stairs: Provide concrete fill for steel pan stair treads, landings, and associated items. Cast-in inserts and accessories as shown on Drawings. Screed, tamp, and trowel finish concrete surfaces.

2.10 CONCRETE PROTECTION AND CURING
A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with recommendations in ACI 305R for hot-weather protection during curing.
B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing by one or a combination of the following methods:
C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floor and slabs, concrete floor toppings, and other surfaces, by one or a combination of the following methods:
1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
a. Water
b. Continuous water-fog spray
2. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacture's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
3. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

2.11 CONCRETE SURFACE REPAIRS
A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.
B. Patching Mortar: Mix Dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 (1.2 mm) sieve, using only enough water for handling and placing.
C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13mm) in any dimension in solid concrete but not less than 1 inch (25 mm) in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.
D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
1. Repair finished surfaces containing defects. Surface defects include spall, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.
3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to receive floor coverings with a repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
5. Repair defective areas, except random cracks and single hole 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least 3/4 inch (19 mm) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mix as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
6. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched are continuously moist for at least 72 hours.
E. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.
F. Repair materials and installation not specified above may be used, subject to Architect's approval.

2.12 FIELD QUALITY CONTROL
A. Testing Agency: Engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement according to requirement specified in this Article. Coordinate with Section 01 1410 Special Inspections.
B. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement. Sampling and testing for quality control may include those specified in this Article.
C. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. Testing Frequency: Obtain at least one composite sample for each 80 cu. yd. (76 cu. m.) Or fraction thereof of each concrete mix placed each day. When more than 80 cu. yds. is being continuously placed, the interval between test samples will be at least 50 cu. yds.
a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mix, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
2. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day=s pour of each concrete mix. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231; pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day=s pour of each concrete mix.
4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 degrees F (4.4 degrees C) and below and when 80 degrees F (27 degrees C) and above, and one test for each composite sample.

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228

DANYSH & ASSOCIATES, INC.
F-002228

SECTION 03 3001 - CONTINUED

CAST-IN-PLACE CONCRETE

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.
1. For mixer capacity for 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least one and one-half minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

1.16 ADHESIVE ANCHORING SYSTEM
A. Adhesive for anchoring dowels and reinforcing steel shall have been tested and qualified in accordance with ICC-ES AC58.
B. Pre-Approved Adhesives Include:
1. Simpson Strong-Tie "Acrylic-Tie" (ICC-ES ESR-5791).
2. Hilti Hit-Hy 150 Max.
3. Hilti Hit-Hy 200 Safe Set Adhesive Anchoring System.
C. Installation shall be in accordance with manufacturer's instructions including but not limited to hole diameter, screen tubes, etc.

PART 2 - EXECUTION

2.1 FORMWORK
A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.
B. Construct formwork so concrete members and structures are of size, shape, alignment, elevations, and position indicated, within tolerance limits of ACI 117.
C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
1. Class B, 1/4 inch (6mm).
D. Construct forms tight enough to prevent loss of concrete mortar.
E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.
1. Do not use rust-stained steel form-facing material.
F. Chamfer exterior corners and edges of permanently exposed concrete.
G. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
H. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood sawdust, dirt, and other debris just before placing concrete.
I. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
J. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

2.2 EMBEDDED ITEMS
Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use Setting Drawings, templates, diagrams, instruction, and directions furnished with items to be embedded.
Install embedded plates, accurately located, to elevations required.

2.3 REMOVING AND REUSING FORMS
A. General: Formwork, for sides of beams, and similar parts of the Work, that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete provided concrete is hard enough to not be damaged by form-removal operations and provided curing and protection operations are maintained.
B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

2.4 STEEL REINFORCEMENT
A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.
C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
Shop or field weld reinforcement according to AWS D1.4, where indicated.
D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

2.6 JOINTS
General: Construct joints true to line with faces perpendicular to surface plane of concrete.

2.7 CONCRETE PLACEMENT
A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
B. Do not add water to concrete during delivery, at Project site, or during placement, unless approved by Architect.
C. Before placing concrete, water may be added at Project site, subject to limitations of ACI 301.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mix.
D. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.
E. Deposit concrete in forms in horizontal layers no deeper than 24 inches (600 mm) and in a manner to avoid inclined construction joints. Place each layer while preceding layer is still plastic, to avoid cold joints.
1. Consolidate placed concrete with mechanical vibrating equipment. Use equipment and procedures for consolidating concrete recommended by ACI 309R.
2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the vibrator. Place vibrators to rapidly penetrate placed layer and at least 6 inches (150 mm) into proceeding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix constituents to segregate.
F. Cold-Water Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. When air temperature has fallen to or is expected to fall below 40 degrees F (4.4 degrees C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature placement.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.
G. Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows, when hot-weather conditions exist:
1. Cool ingredients before mixing to maintain concrete temperature below 90 degrees F (32 degrees C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

SE MILITARY STORAGE
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : C.M.
REVISIONS:

SPECIFICATIONS

SHEET NO.
S5.2

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES52

SECTION 31 2316

STRUCTURAL EARTHWORK FOR BUILDING FOUNDATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the contract, including General and Supplementary Conditions, apply to work of this section.

1.2 RELATED WORK DESCRIBED ELSEWHERE
A. Geotechnical Quality Control & Testing Section 01 1420

1.3 DESCRIPTION OF WORK
A. Extent
1. Extent of earthwork in this section is limited to the requirements of construction of structural building foundation.
B. Excavation for Mechanical/Electrical Work
1. Excavation and backfill required in conjunction with underground mechanical and electrical utilities, and buried mechanical and electrical utilities, and buried mechanical and electrical appurtenances is not included as work in this section, but is specified elsewhere.
C. Definitions
1. "Excavation" consists of removal of material encountered to subgrade elevations indicated and subsequent disposal of material removed.
2. "Building" shall include any attached walkway or other foundations shown on the structural foundation drawings.

1.4 QUALITY ASSURANCE
A. Special Inspections as required and specified by the International Building Code Chapter 17 will be conducted at Owner's expense. A commercial construction testing laboratory will perform soil testing and inspection services for quality control during earthwork operations. The testing laboratory shall be designated by the RDPIRC representing the Owner.

1.5 SUBMITTALS
A. Test Reports-Excavating
1. Submit following reports directly to Architect/Engineer from the testing services, with copy to Contractor:
a. Verification of specified depth of excavation.
b. Field density test reports, as follows:
1) One optimum moisture-maximum density curve for each type of soil encountered.
2) Report of actual unconfined compressive strength and/or results of bearing tests of each strata tested.

PART 2 - PRODUCTS

2.1 SELECT STRUCTURAL FILL
Refer to "Underfloor Fill Notes" on plans.

2.2 READY MIXED FLOWABLE FILL (RFF)

Flowable fill, also known as Controlled Low-Strength Material (CLSM), is to be used as fill where shown on the plans. It is unreinforced.

A. MATERIALS

(a) Cement – ASTM C 150
(b) Fly Ash – ASTM C 618, Class C or Class F
(c) Water – ASTM C94
(d) Fine Aggregate – natural or manufactured sand, or a combination thereof, free from injurious amounts of salt, alkali, organic matter, etc.

Sieve Size	%Passing
¾ Inch	100
No. 200	0 -10

B. MIX DESIGN

The following is a typical trial mix. Adjust proportions to achieve proper suspension and optimum flowability with a minimum density of 125pcf and a minimum 28 day compressive strength of 75psi. Use admixtures as necessary.

Cement	100 lbs
Fly Ash	250 lbs
Fine Aggregates	2800 lbs
Water (approx.)	500 lbs. (60 gals.)

PART 3 - EXECUTION

3.1 EXCAVATION
A. Excavation is Unclassified
1. Excavation is unclassified, and includes excavation to subgrade elevations indicated, regardless of character of materials and obstructions encountered. Refer to plan notes.
B. Unauthorized Excavation
1. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Architect/Engineer. Unauthorized excavation, as well as remedial work directed by Architect, shall be at Contractor's expense.
2. Perform all earthwork described above before trenching for grade beams or mechanical lines.
C. Excavation
1. Refer to 'Underfloor Fill Notes" on plans.

3.2 DE-WATERING
A. Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.
B. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability or subgrades and foundation. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other de-watering system components necessary to convey water away from excavations.
C. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or run-off areas. Do not use trench excavations as temporary drainage ditches.

3.3 PROOF ROLLING
A. Refer to 'Underfloor Fill Notes" on plans.

3.4 COMPACTION
A. Refer to 'Underfloor Fill Notes" on plans.

3.5 FIELD QUALITY CONTROL
A. Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed.
B. Perform field density tests in accordance with Texas Department of Transportation (TxDot) Specification TEX-113-E.

3.6 TESTING OF SUBGRADE AND COMPACTED FILL
A. Make at least one field density test of subgrade for every 5000 square feet of building slab, but in no case less than 3 tests. In each compacted fill layer, make one field density test for every 5000 square feet of overlaying building slab area, but in no case less than 3 tests.
B. If, in opinion of the testing laboratory and/or the Architect/Engineer, based on testing service reports and inspection, subgrade or fills which have been placed are below specified density, the contractor shall perform additional compaction and testing at no additional expense.

3.7 MAINTENANCE
A. Protect newly graded areas from traffic and erosion.
B. Keep area free of trash and debris.

3.8 RECONDITIONING COMPACTED AREAS
A. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, re-shape, and compact to required density prior to further construction.

3.9 DISPOSAL OF EXCESS AND WASTE MATERIALS
A. Remove waste materials, including unacceptable excavated material, trash and debris, and dispose of it off Owner's property.

END OF SECTION 31 2316

SECTION 07 2620

VAPOR BARRIER

PART 1 - GENERAL

1.1 SECTION INCLUDES
A. Installation of a vapor barrier under concrete slab.
B. This vapor barrier shall be used in lieu of any vapor barrier of lesser thickness under the slab.

1.2 RELATED SECTIONS
A. Structural Earthwork for Building Foundation Section 31 2316
B. Cast-in-Place Concrete Section 03 3001

1.3 REFERENCES
A. ASTM E 1643-11- Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
B. ASTM E-1745 -11 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs: Exceeds Class A.
C. ASTM E-96 - Standard Test Methods for Water Vapor Transmission of Materials
D. GRI-GS-1-86 - Puncture Resistance
E. ASTM D 1709 - Standard Test Methods for Puncture Resistance.
F. ASTM D 638 - Standard Test Methods for Tensile Properties of Plastic; 1996
G. ASTM D 1790 - Standard Test Methods for Low Temperature Brittleness
H. ACI 02.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials

1.4 SUBMITTALS
A. See Section 01 3300 - Submittals, for submittal procedures.
B. Product Data: Provide manufacturer's printed product literature and description, including tests and standards that have been performed on the vapor barrier material.
C. Samples: Submit two, 82 x 11 inch in size, illustrating the vapor barrier and two (2) 82 inch long sample strips of the joint tape.
D. One each of all accessories that will be used in the installation.
E. Verification by Independent testing labs indicating that materials comply with specified requirements.
F. Certificates: Certify that products of this section meet or exceed specified requirements.
G. Manufacturer's Instructions: Indicate complete installation instruction.

1.5 QUALITY ASSURANCE
A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
B. Installer Qualifications: Company specializing in performing the work of this section with minimum five years of experience.

1.6 DELIVERY, STORAGE, AND PROTECTION
A. Deliver Vapor Barrier to project site in manufacturers original container/packaging.

1.7 PROJECT CONDITIONS
A. Coordinate Vapor Barrier installation with size, location and installation of service utilities.
B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

PART 2 – PRODUCTS

2.1 MANUFACTURER
A. Stego Industries, L.L.C., Mercer Island, WA, tel. (206) 232-8457, toll free (877) 464-7834
B. Reef Industries (800) 231-6074
C. Raven Industries (Sioux Falls, S. D. (800) 635-3456.)

2.2 MATERIALS
A. Vapor Barrier
1. Extruded polyolefin membrane with thickness matching that specified on the plan notes.
2. Material manufactured with ISO certified virgin resins.
B. Substitutions: See Section 01631 - Product Substitutions
1. Sheet polyethylene is not an acceptable substitution.

2.3 ACCESSORIES
A. Tape:
1. High Density Polyethylene Tape with pressure sensitive adhesive: Minimum width 4".
2. Pipe Boot:
a. Construct pipe boots from vapor barrier material and pressure sensitive tape per manufacturer's instructions.

2.4 CE QUALITY CONTROL AND TESTS
A. Reference Standards:
1. Water Vapor Retarders Used in Contact with Earth under Concrete Slabs: Exceeds Class A According to ASTM E 1745.
2. Water Vapor Transmission Rates: 0.006 gr./ft2/hr. according to ASTM E 96.
3. Permeance Rating Result: 0.01 gr./ft2/hr. according to ASTM E96
4. Puncture Resistance Result: 204.0-lbs/sq. ft. according to GRI-GS-1-86.
5. Puncture Resistance Result: 1972.5 grams according to ASTM D 1709.
6. Tensile Strength Result: 54.2 lbs./MD and 55.5lbs./CMD according to ASTM D 638.
7. Low Temperature Brittleness: Pass according to ASTM D1790.

PART 3 – EXECUTION

3.1 EXAMINATION
A. Verify that conditions are acceptable for the placement of the vapor barrier.

3.2 PREPARATION
A. Ensure that subsoil is approved by Structural Engineer.
1. Vapor Barrier may be installed over an aggregate, sand or tamped earth base.

3.3 INSTALLATION
A. Install Vapor barrier per manufacturer's instructions, illustrations and ASTM E1643-94- Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth Concrete Slabs.
1. Level and tamp or roll granular base.
2. Place Vapor Barrier with the longest dimension parallel with the direction of the pour.
3. Lap Vapor Barrier over footings and seal to foundation walls. Seal all penetrations.
4. Lap joints 6 inches and seal with the recommended pressure sensitive tape.
5. Seal pipe penetrations with pipe boot made from Vapor Barrier and tape.
6. Protect Vapor Barrier from damage during installation of reinforcing steel.
7. Repair damaged areas by cutting patches of vapor barrier, overlapping damaged area 6 inches and taping all four sides with pressure sensitive tape.

3.4 INTERFACE WITH OTHER WORK
A. Coordinate work of all other trades related to the slab base and utility services.

3.5 CLEANING, AND PROTECTION
A. Clean all contaminants from surface.
B. Protect installed vapor barrier from subsequent damaging construction operations.
C. Do not permit vehicular/heavy equipment traffic over unprotected vapor barrier.

END OF SECTION 07 2620

2.3 FABRICATION
A. General
Framing components may be prefabricated into panels prior to erection. Fabricate panels plumb, square, true to line and braced against racking with joints welded. Perform lifting of prefabricated panels in a manner to prevent damage or distortion. Fabricate panels in jig templates to hold members in proper alignment and position and to assure consistent component placement.

B. ANCHORS, CLIPS, AND FASTENERS
1. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123/A 123M.
2. Anchor Bolts: ASTM F 1554, Grade 36, threaded carbon-steel hex-headed bolts and carbon-steel nuts; and flat, hardened-steel washers; zinc coated by hot-dip process according to ASTM A 153/A 153M, Class C
3. Expansion Anchors: Fabricated from corrosion-resistant materials, with allowable load or strength design capacities calculated according to ICC-ES AC193 and ACI 318 greater than or equal to the design load, as determined by testing per ASTM E 488 conducted by a qualified testing agency.
4. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with allowable load capacities calculated according to ICC-ES AC70, greater than or equal to the design load, as determined by testing per ASTM E 1190 conducted by a qualified testing agency.
5. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.
6. Attach components by welding, bolting, or screw fasteners, as required by structural design criteria specified herein.
7. Wire tying of framing components is not permitted.

C. Fabrication Tolerances
Fabricate panels to a maximum allowable tolerance variation from plumb, level, and true to line of 1/8" in 10'-0".

PART 3 - EXECUTION

3.1 PREPARATION AND INSTALLATION
A. Pre-Installation Conference
Prior to start of installation of metal framing systems, meet at project site with installers of other work including door and window frames and mechanical and electrical work. Review areas of potential interference and conflicts, and coordinate layout and support provisions for interfacing work.

B. Installation
1. Manufacturer's Instructions
Install metal framing systems in accordance with manufacturer's printed or written instructions and recommendations, unless otherwise indicated. Refer to ASTM C1007 for storage and installation.

2. Runner Tracks
a. Install continuous tracks sized to match studs. Align tracks accurately to layout at base and tops of studs. Secure tracks as shown on drawings. Provide fasteners at corners and ends of tracks.

b. Install load bearing shims or grout between the underside of load-bearing wall bottom track and the top of foundation wall or slab at locations with a gap larger than 1/4 inch to ensure a uniform bearing surface on supporting concrete or masonry construction.

c. Install sealer gaskets at the underside of wall bottom track or rim track and at the top of foundation wall or slab at stud or joist locations.

3. Installation of Wall Stud System
a. Secure studs to top and bottom runner tracks by either welding or screw fastening at both inside and outside flanges.
b. Where indicated and at conditions where back-up curtain wall bypasses structure, attach vertical metal framing components to structure with curtain wall clips. Attach clips to steel structural components by welding.
c. Frame wall openings larger than 2'-0" square with double stud at each jamb of frame except where more than 2 are shown or indicated in manufacturer's instructions. Install runner tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with stud shoes or by welding, and space jack studs same as full-height studs of wall. Secure stud system wall opening frame in manner indicated.
d. Frame both sides of expansion and control joints, with separate studs; do not bridge the joint with components of stud system.
e. Install horizontal stiffeners in stud system, spaced (vertical distance) at not more than 4'-6" O.C. Weld or through bolt at each intersection.

4. Erection Tolerances
a. Bolt or weld wall panels (at both horizontal and vertical junctures) to produce flush, even, true to line joints.
b. Step in face and jog in alignment between panels not to exceed 1/16".
c. Fasten surface of any framing or furring members shall not vary more than 1/16" from plane of faces of adjacent furring or framing members, nor vary cumulatively across the plane of the surface more than 1/8" in 10'-0".

5. Field Touch-up
a. Touch-up shop-applied protective coatings damaged during handling and installation. Use specified galvanizing repair paint for galvanized surfaces.

END OF SECTION 05 4000

SECTION 05 4000

COLD-FORMED STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SCOPE
A. This section shall include all materials, equipment and labor necessary for the design and installation of cold-formed structural metal framing in accordance with this specification and the contract drawings and may include, but is not limited to, studs, joists, braces, struts, track and bridging.
B. The framing members covered in this section apply only to components which function as structural elements and which resist wind and gravity loads as follows:
1. Exterior and Interior wall studs.
2. Parapet framing.
3. Fascia framing.

1.2 RELATED WORK
A. Structural Steel Section 05 1200
B. Composite Steel Deck Section 05 3600

1.3 REFERENCE STANDARDS
A. American Society for Testing and Materials (ASTM), Standard Specifications and Methods of Testing.
B. American Iron and Steel Institute, (AISI) Specification for the Design of Light Gage Cold-Formed Steel Structural Members and Light Gage Steel Design Manual.
C. American Welding Society (AWS), Code for Arc and Gas Welding in Building Construction and Recommend Practice for the Spot Welding of Low Carbon Steel.
D. American Institute of Steel Construction (AISC), Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.

1.4 SUBMITTALS
A. Product Data
Submit manufacturer's product information and installation instructions for each item of cold-formed metal framing and accessories.
B. Certification
Submit a copy of the manufacturer's test report or a statement by the supplier accompanied by a copy of the test results, stating that materials and fabrication comply with the provisions of this specification. Each certification so furnished shall be signed by an authorized agent of the supplier or manufacturer.

1.5 DESIGN CRITERIA
A. Design Loads
Design loads shall be as indicated on plans. Comply with the latest edition of the Building Code, but in no case shall design wind load be less than 20 pounds per square foot. Deflections shall not exceed L/360, with no allowance for contribution of sheathing materials. Limit deflection to L/600 for studs backing up masonry.
B. Design
Member sizes, gauges and spacing shown on the drawings. Submit field erection details.
C. Shop Drawings
1. Submit shop drawings showing type, size and spacing of members, connections and joining of components.
2. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work if undefined on Structural Drawings.
D. Erection Drawings
1. Submit field erection drawings showing the specific location of each member detailed, along with spacing, bridging, bracing, field connection details and method of assembly.
2. Allowance shall be made for vertical deflection of the primary structural frame by means of connection devices, such as curtain wall clips, bypass clips, or slip-joints, at laterally loaded walls.

a. Single Deflection Track: Manufacturer's single, deep-leg, U-shaped steel track; unpunched, with unstiffened flanges, of web depth to contain studs while allowing free vertical movement, with flanges designed to support horizontal loads and transfer them to the primary structure.

b. Double Deflection Tracks: Manufacturer's double, deep-leg, U-shaped steel tracks, consisting of nested inner and outer tracks; unpunched, with unstiffened flanges.

c. Drift Clips: Manufacturer's standard bypass or head clips, capable of isolating wall stud from upward and downward vertical displacement and lateral drift of primary structure through positive mechanical attachment to stud web and structure.

1.6 QUALITY ASSURANCE
A. Component Design
Calculate structural properties of studs in accordance with American Iron and Steel Institute (AISI) "Specification for Design of Cold-Formed Steel Structural Members".
B. WELDING
Use qualified welders and comply with American Welding Society (AWS) D1.3, "Structural Welding Code - Sheet Steel". Members with welded connections shall be 18 gauge or heavier.

1.7 DELIVERY, STORAGE AND HANDLING
A. Protect metal framing units from rusting and damage. Deliver to project site in manufacturer's unopened containers or bundles, fully identified with name, brand, type and grade. Store off ground in a dry ventilated space or protect with breathable waterproof tarpaulins.

PART 2 - PRODUCTS

2.1 MANUFACTURERS
Light gage metal studs, joists, purlins, etc. shall have properties and capacities computed in accordance with the 2007 AISI Standard for Cold-Formed Steel Framing (AISI S100-07 and AISI S200- 07 and supplements), ASD provisions. Manufacturer shall be a member of the Light Gauge Structural Institute (LSGI). Identify LGSI and non-LGSI Cold-Formed Sections using l651 inspection stickers to identify LGSI Sections. All non-LGSI product to be pre-approved upon submission of section properties and load capacities equaling or surpassing specified product.

2.2 METAL FRAMING
A. System Componenets
1. With each type of metal framing required, provide manufacturer's standard steel runners (tracks), blocking, bridging, lintels, clip angles, shoes, reinforcements, fasteners, and accessories as recommended by manufacturer for applications indicated, as needed to provide a complete metal framing system.
B. Materials and Finishes
1. All structural members shall be designed in accordance with American Iron and Steel Institute North American "Specification for design of Cold-Formed Steel Structural Members," [NASPEC) 2001 w/2004 supplement.
2. All structural members shall be formed from corrosion-resistant steel, corresponding to the requirements of ASTM C955, A653 and A1003.
3. Provide galvanized finish to metal framing components complying with ASTM A924 for minimum G90 coating.
a. Properties
1) The physical and structural properties listed by Clark Dietrich Building Systems were used as the minimum for all framing members. Specifically, the following minimum properties, calculated in accordance with the latest A.I.S.I. Specification shall be provided: Ix (in.^{4}), SX (in. ;), Area (in.5), Rx (in.), Fy (KSI), Resisting Moment (in.-lb.).
b. Substitutions
1) Any substitutions must be approved in writing ten (10) day prior to bid date, by the Architect and/or Engineer of record.
c. Galvanizing Repair Paint
1) High zinc dust content paint for repair of galvanized surfaces damaged by welding, complying with M.I. Spec. MIL-P-21035.

4. Cement Grout: Portland cement, ASTM C 150, Type I; and clean, natural sand, ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.

5. Nonmetallic, Nonshrink Grout: Premixed, nonmetallic, noncorrosive, nonstaining grout containing selected silica sands, portland cement, shrinkage-compensating agents, and plasticizing and water-reducing agents, complying with ASTM C 1107/C 1107M, with fluid consistency and 30-minute working time.

6. Shims: Load bearing, high-density multimonomer plastic, and nonleaching; or of cold-formed steel of same grade and coating as framing members supported by shims.

7. Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to match width of bottom track or rim track members.

DANYSH & ASSOCIATES
STRUCTURAL ENGINEERS
F-002228

DANYSH & ASSOCIATES, INC.
F-002228

SECTION 05 3600

COMPOSITE STEEL DECK

PART 1 - GENERAL

1.1 SCOPE

This section shall include all materials, equipment, and labor necessary for the installation of com steel floor deck in accordance with this specification and the contract drawings.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Cast-In-Place Concrete Section 03 3001
B. Structural Steel Section 05 1200

1.3 REFERENCE STANDARDS

A. ASTM A-36 - Structural Steel
B. Steel Deck Institute - "Basic Design Specifications"
C. American Institute of Steel Construction (A.I.S.C.) "Composite Beams or Girders with Formec Deck"
D. ASTM A-525 Class G60 or G90
E. ASTM A-611 or A-446
F. AISI "Specification for the Design of Cold-Formed Steel Structural Members"

1.4 SHOP DRAWINGS

A The Contractor shall obtain completely detailed shop drawings showing type and gauge o section employed in each area, how they are adapted to special conditions, method of weldin to supporting members, method of reinforcing deck at openings, and location and type accessories including flashings which are part of the deck proper. Deck placement sh compatible with shear connectors to provide minimum shear values as per AISC 1.11.5 Contractor shall carefully check and coordinate these drawings, then submit them to the Arc The Architect may conduct limited spot checks aimed solely at determining general compreh of the design intent, then return them to the contractor. The Contractor shall then carefully re the shop drawings and approve them prior to fabrication.

B. The Architect's spot check does not relieve the Contractor from correcting, at his own expens items that may thereafter be found not to comply with the plans and specifications.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS:

Vulcraft, Metal Deck Group, or equal.

2.2 MATERIALS AND COMPONENTS:

The steel deck units shall be manufactured from steel conforming to ASTM designation A-611 Grade or E, or A-446 A, B, C, D, or E; or equal having a minimum yield strength of 33,000 pounds per squar The unit design stress shall not exceed the yield strength multiplied by 0.60, with a maximum of 36,0 Minimum thickness of material supplied shall be within 5% of design thickness.

2.3 FINISH

The steel shall be thoroughly cleaned, phosphatized, roller-coated on the exposed side only with a fi primer and oven-cured until dry.

2.4 ACCESSORIES

Provide cell closures, "Z" closures, column closures, screed angles and girder fillers as required to openings between deck and walls, columns, and openings.

2.5 DESIGN

The type and design thickness of the floor form units shall be as shown on the contract dra Composite floor slabs shall be capable of supporting the loads shown on the contract dra Intermediate shoring of deck to support wet concrete and construction loads is not required u otherwise noted on plans.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Erect composite deck as recommended by the SDI, and as shown on the manufacturer's la strict accordance with instructions therein. Properly align and level on structural supports. form unit shall span three or more supports whenever practical.

B. Minimum bearing of the deck shall be 1-1/2 inches unless otherwise shown. Composite floo shall be anchored to supporting members with nominal 5/8 inch puddle welds at all edge ribs sufficient number to provide a maximum average spacing of 12 inches. The maximum sp between adjacent points of attachment shall not exceed 18 inches. Welded studs may re puddle welds. Any fastener found to be defective shall be replaced prior to placement of cor Side laps shall be fastened by welding or mechanical means at 3 feet on center betwee supports.

C. Floor openings that are designed and detailed on the structural drawings shall be cut by the erector. All holes or openings required in the deck and not shown on the structural drawing be approved by the Structural Engineer.

D. Exercise care to avoid overloading the supporting structural elements when placing bundles deck or other construction loads on the framing. Do not use deck units for storage or w platforms until permanently fastened in position.

E. Damaged or bent sections, or sections which do not properly mesh together at the side laps not be used.

3.2 RELATED WORK (BY OTHERS)

A. Temperature and shrinkage reinforcement in the form of welded wire fabric of type and size on the contract drawings shall be placed above the mid-depth of the slab and at least 3/ below the surface. Refer to Section 03 3001 " Cast-In-Place Concrete ".

B. Concrete with admixtures containing chloride salts shall not be used with floor form units. F concreting, the surface of the floor forms shall be cleaned of all debris, grease, oil and all deleterious substances. Concrete shall provide a minimum ultimate compressive strength of psi and shall have a slump from 4" to 5" insuring sufficient moisture to allow optimum bonding concrete to the surface of the floor form units and to minimize shrinkage. Refer to Section 03 "Cast-In-Place Concrete".

END OF SECTION 05315

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

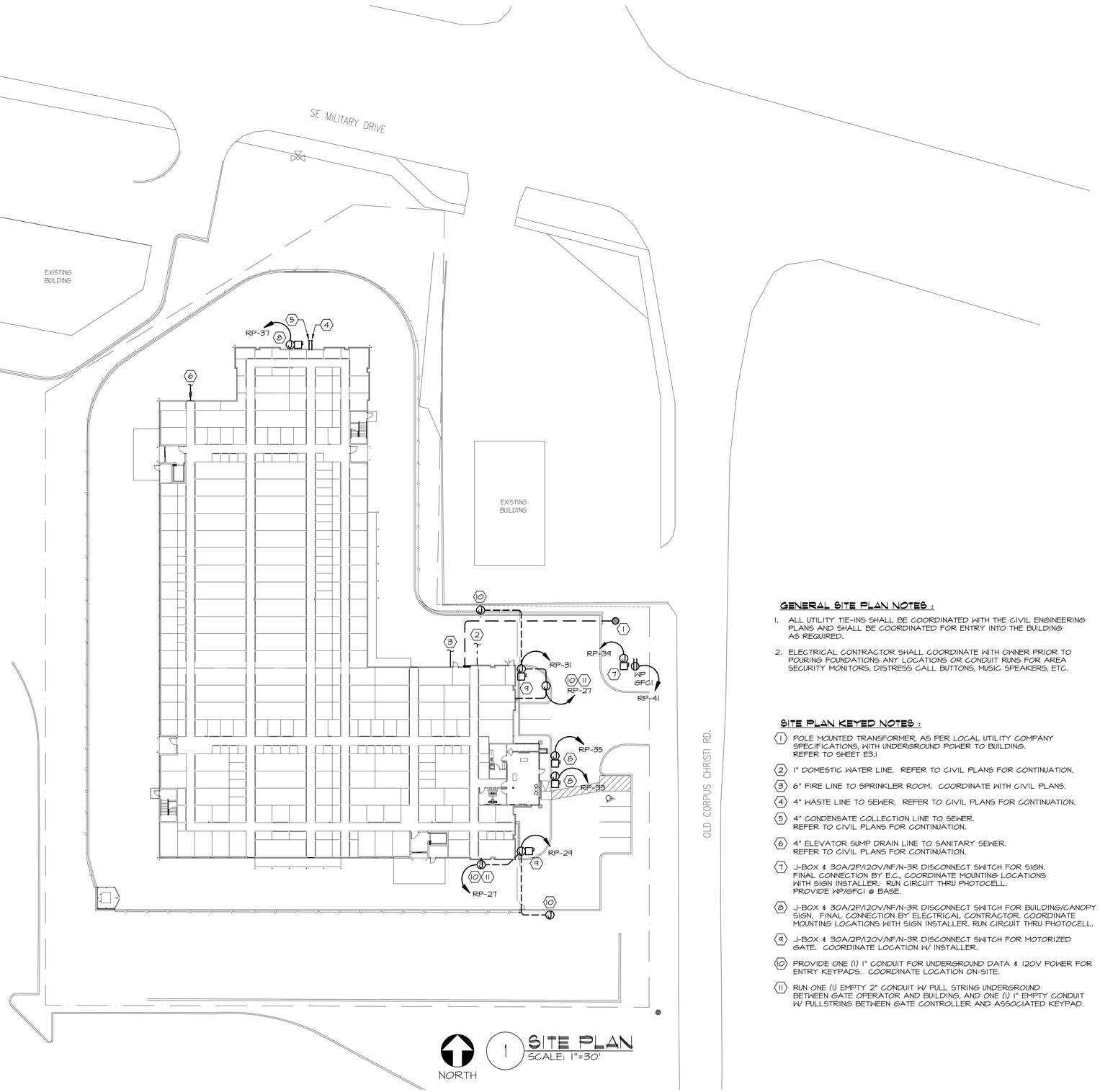
SE MILITARY STORAGE
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : C.M.
REVISIONS:

SPECIFICATIONS

SHEET NO.
S5.3

D&A PROJECT NO.: 255-120-00
D&A FILE NO.: SEMILITARYSTORAGES53



1 SITE PLAN
SCALE: 1"=30'

GENERAL SITE PLAN NOTES :

1. ALL UTILITY TIE-INS SHALL BE COORDINATED WITH THE CIVIL ENGINEERING PLANS AND SHALL BE COORDINATED FOR ENTRY INTO THE BUILDING AS REQUIRED.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO POURING FOUNDATIONS ANY LOCATIONS OR CONDUIT RUNS FOR AREA SECURITY MONITORS, DISTRESS CALL BUTTONS, MUSIC SPEAKERS, ETC.

SITE PLAN KEYED NOTES :

(1) POLE MOUNTED TRANSFORMER, AS PER LOCAL UTILITY COMPANY SPECIFICATIONS, WITH UNDERGROUND POWER TO BUILDING. REFER TO SHEET E3.1

(2) 1" DOMESTIC WATER LINE. REFER TO CIVIL PLANS FOR CONTINUATION.

(3) 6" FIRE LINE TO SPRINKLER ROOM. COORDINATE WITH CIVIL PLANS.

(4) 4" WASTE LINE TO SEWER. REFER TO CIVIL PLANS FOR CONTINUATION.

(5) 4" CONDENSATE COLLECTION LINE TO SEWER. REFER TO CIVIL PLANS FOR CONTINUATION.

(6) 4" ELEVATOR SUMP DRAIN LINE TO SANITARY SEWER. REFER TO CIVIL PLANS FOR CONTINUATION.

(7) J-BOX & 30A/2P/120V/NF/N-3R DISCONNECT SWITCH FOR SIGN. FINAL CONNECTION BY E.C., COORDINATE MOUNTING LOCATIONS WITH SIGN INSTALLER. RUN CIRCUIT THRU PHOTOCELL. PROVIDE WP/GFCI @ BASE.

(8) J-BOX & 30A/2P/120V/NF/N-3R DISCONNECT SWITCH FOR BUILDING/CANOPY SIGN. FINAL CONNECTION BY ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATIONS WITH SIGN INSTALLER. RUN CIRCUIT THRU PHOTOCELL.

(9) J-BOX & 30A/2P/120V/NF/N-3R DISCONNECT SWITCH FOR MOTORIZED GATE. COORDINATE LOCATION W/ INSTALLER.

(10) PROVIDE ONE (1) 1" CONDUIT FOR UNDERGROUND DATA & 120V POWER FOR ENTRY KEYPADS. COORDINATE LOCATION ON-SITE.

(11) RUN ONE (1) EMPTY 2" CONDUIT W/ PULL STRING UNDERGROUND BETWEEN GATE OPERATOR AND BUILDING, AND ONE (1) 1" EMPTY CONDUIT W/ PULLSTRING BETWEEN GATE CONTROLLER AND ASSOCIATED KEYPAD.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

SITE PLAN

SHEET NO.

MEP1

FIRE RESISTANCE DIRECTORY (BXRH)

THROUGH-PENETRATION FIRESTOP SYSTEMS (XHEZ)—*Continued*

System No. C-AJ-1014

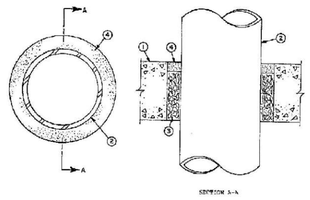
(Formerly System No. 133)

F Rating—2 Hr

T Rating—0 Hr

L Rating At Ambient—Less Than 1 CFM/sq ft (See Item 4)

L Rating At 400 F—Less Than 1 CFM/sq ft (See Item 4)



1. **Floor or Wall Assembly**—Min 3-1/4 in. thick reinforced lightweight or normal weight (100-150 pcf) **concrete**. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of circular opening is 6 in.

   See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants**—One metallic pipe or conduit to be centered within the firestop system. A nom annular space of 3/4 in. is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:

   A. **Steel Pipe**—Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

   B. **Conduit**—Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

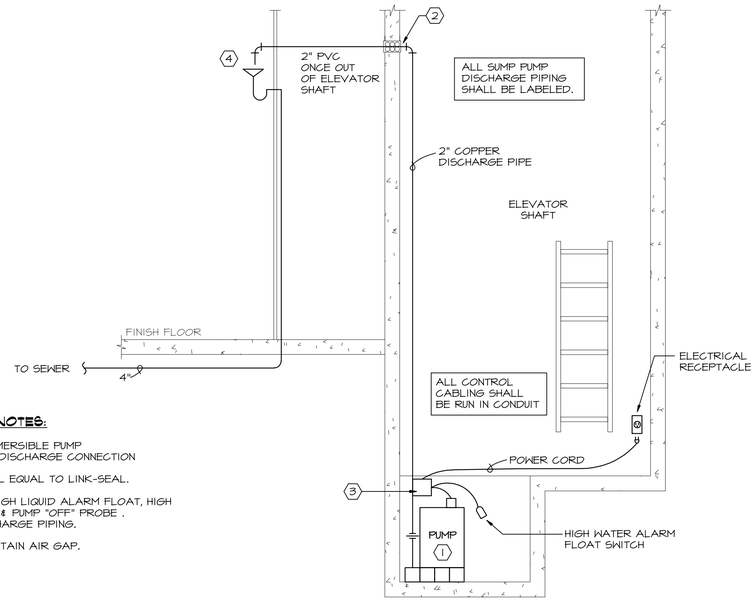
3. **Packing Material**—Min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as require to accommodate the required thickness of fill material. Min thickness of packing material in floors and walls to be 2-3/4 in. and 2-1/4 in., respectively.

4. **Fill, Void or Cavity Material*—Sealant**—Min 1/2 in. thickness of fill material applied within annulus, flush with top surface of floor or with both surfaces of wall. As an alternate, the permanent fanning material (Item 3) may be omitted if the fill material thickness is increased to a min 1-1/2 in.

   Minnesota Mining & Mfg. Co.—Types FB-2000, FB-2000+, FB-2003 (floors only). (Note: L Ratings apply only when FB-2000+ is used.)

*Bearing the UL Classification Marking

2 UL FIRE PENETRATION DETAIL
NOT TO SCALE



ELEVATOR PUMP KEYED NOTES:

1. LIBERTY PUMPS #ELV280, SUBMERSIBLE PUMP 50 GPM, 1/2 HP, 115VOLT, 1-1/2" DISCHARGE CONNECTION
2. PROVIDE WEATHERPROOF SEAL EQUAL TO LINK-SEAL.
3. PRESET LEVEL HOLDER WITH HIGH LIQUID ALARM FLOAT, HIGH LEVEL PROBE, AND PUMP "ON" & PUMP "OFF" PROBE . CLAMP DEVICE TO PUMP DISCHARGE PIPING.
4. HUB DRAIN N CORRIDOR. MAINTAIN AIR GAP.

SEQUENCE OF OPERATION:

1. WATER ENTERS SUMP.
2. FLOAT SWITCH INITIATES SUMP, PUMP, AND ALARM AT MANAGER'S OFFICE
3. WATER DISCHARGES THROUGH NORMALLY OPEN SOLENOID VALVE (A) TO HUB DRAIN AND SANITARY SEWER.
4. WHEN WATER CONTINUES TO RISE, HIGH WATER ALARM FLOAT SWITCH SOUNDS ALARM AT MANAGER'S OFFICE.

1 ELEVATOR SUMP PUMP SYSTEM DETAIL
NOT TO SCALE

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

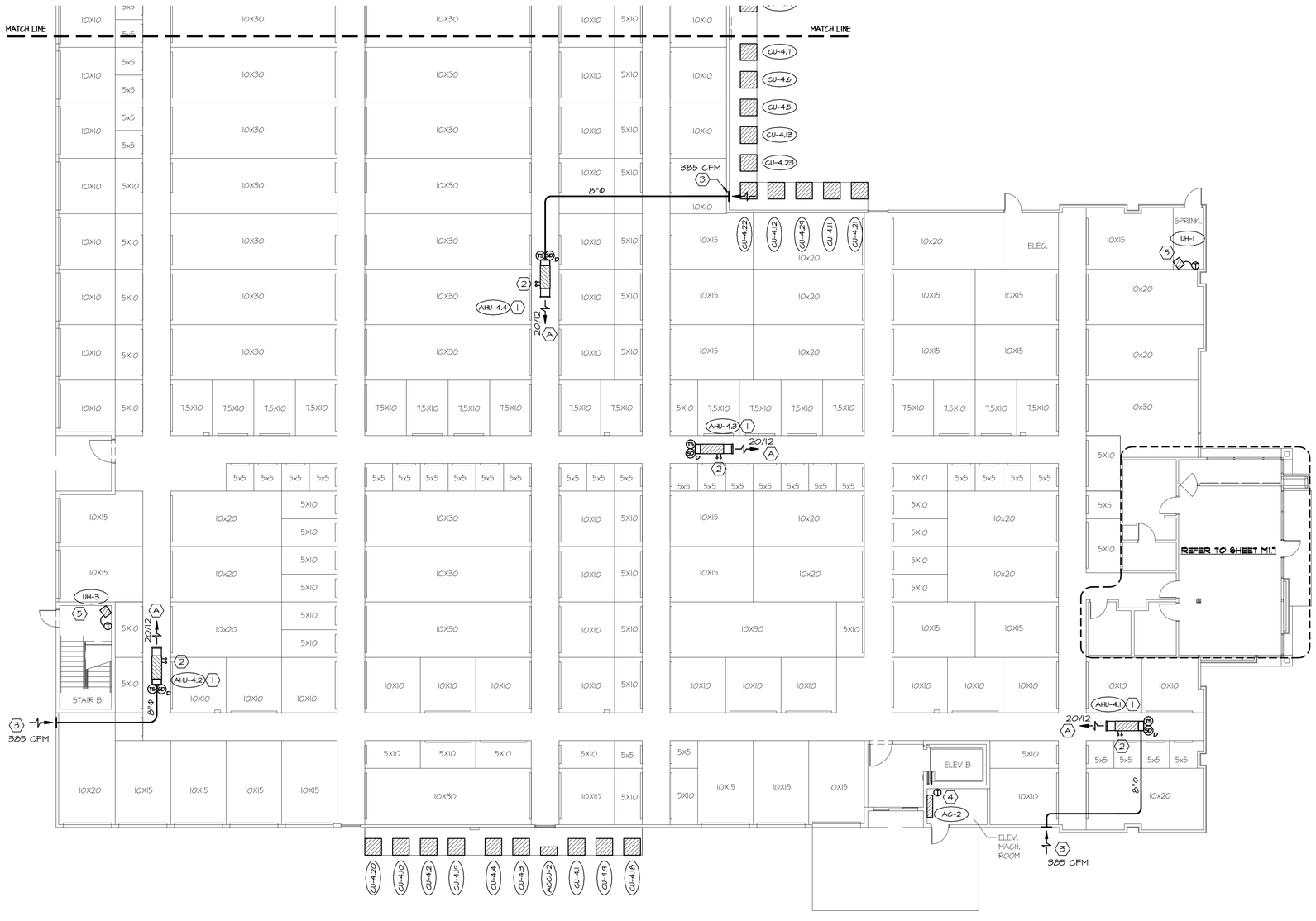
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.26.2019
DRAWN :	RSW
REVISIONS:	

MEP DETAILS

SHEET NO.

MEP2



1 1ST FLOOR - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-5 @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED ON FIRST FLOOR. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT, PROVIDE A MANUAL BALANCING DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.
4. MOUNT DUCT FREE A/C UNIT HIGH ON WALL. MOUNT THERMOSTAT @48" A.F.F. COORDINATE UNIT LOCATION WITH EQUIPMENT IN ROOM. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE.
5. MOUNT UNIT HEATER HIGH IN CORNER, COORDINATE LOCATION ON-SITE. THERMOSTAT SET TO MAINTAIN 45 DEGREES F. MINIMUM.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

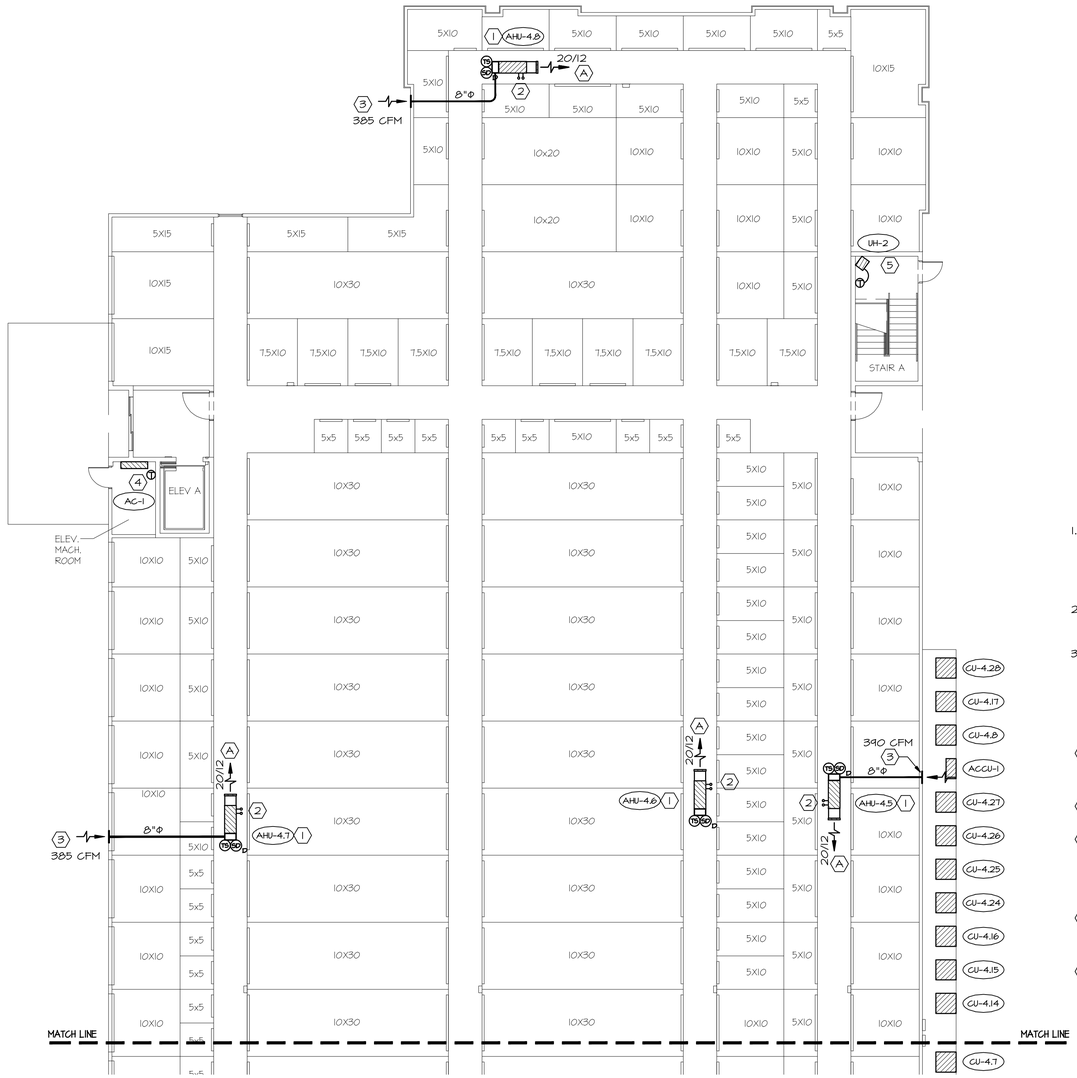
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

1ST FLOOR MECHANICAL

SHEET NO.

M1.1



1 1ST FLOOR - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED ON FIRST FLOOR. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.
4. MOUNT DUCT FREE A/C UNIT HIGH ON WALL. MOUNT THERMOSTAT @48" A.F.F. COORDINATE UNIT LOCATION WITH EQUIPMENT IN ROOM. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE.
5. MOUNT UNIT HEATER HIGH IN CORNER, COORDINATE LOCATION ON-SITE. THERMOSTAT SET TO MAINTAIN 45 DEGREES F. MINIMUM.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

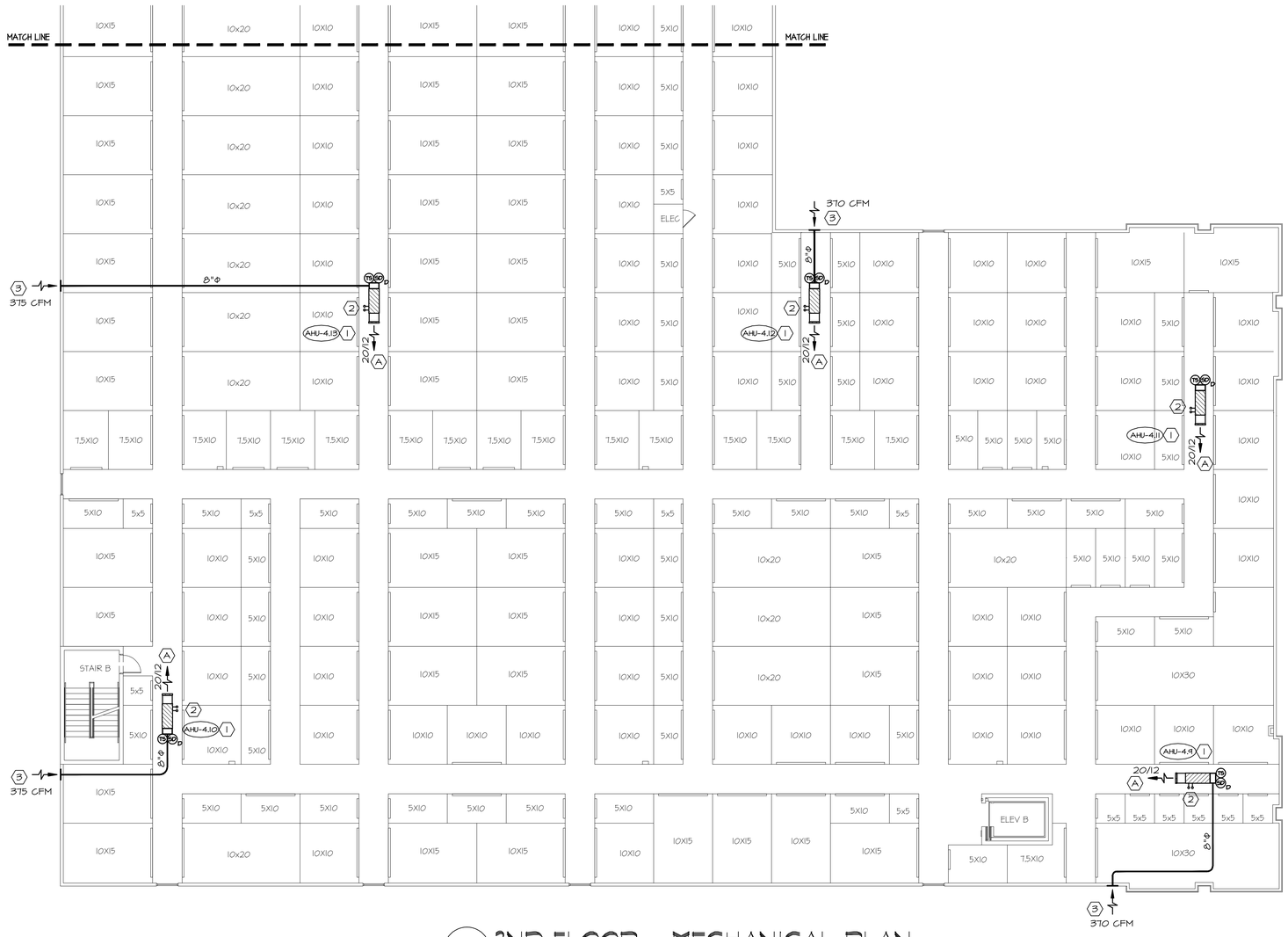
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

1ST FLOOR MECHANICAL

SHEET NO.
M1.2



1 2ND FLOOR - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-5 @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED ON FIRST FLOOR. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

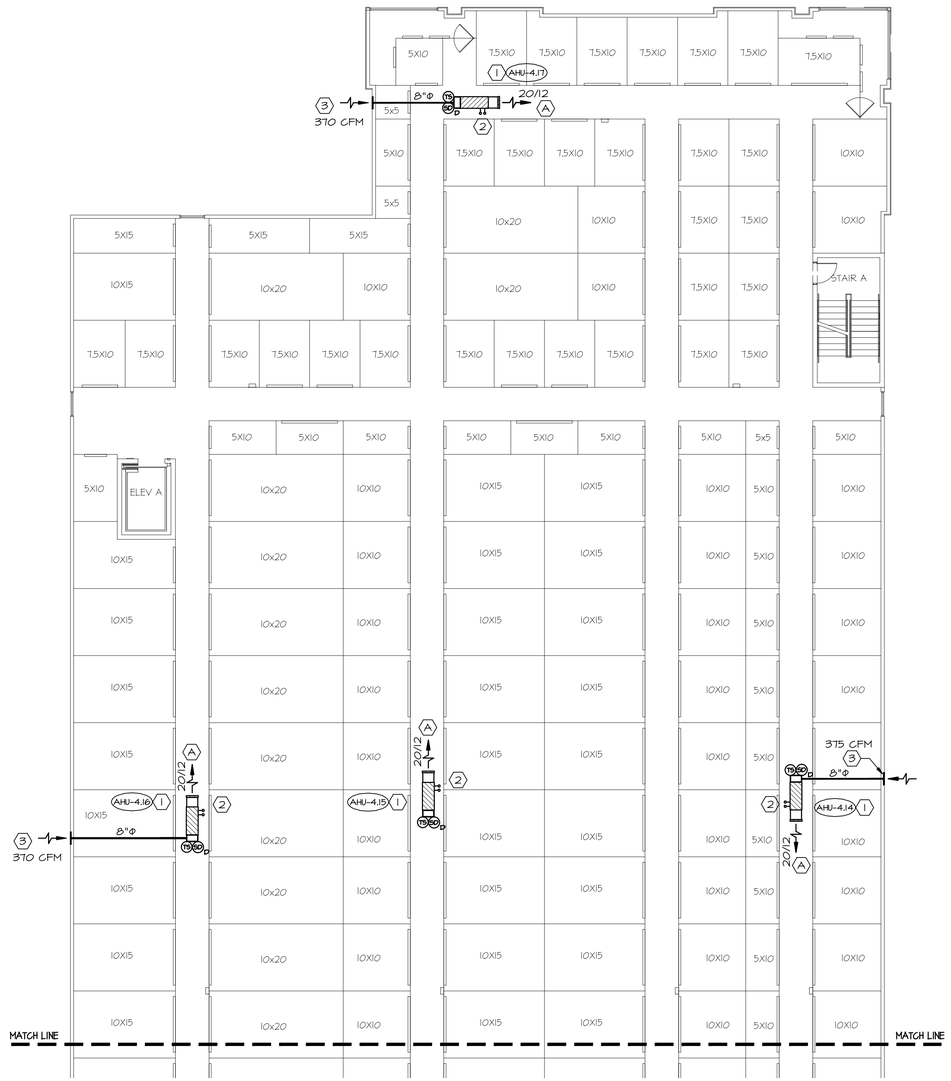
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

2ND FLOOR MECHANICAL

SHEET NO.

M1.3



1 2ND FLOOR - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED ON FIRST FLOOR. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

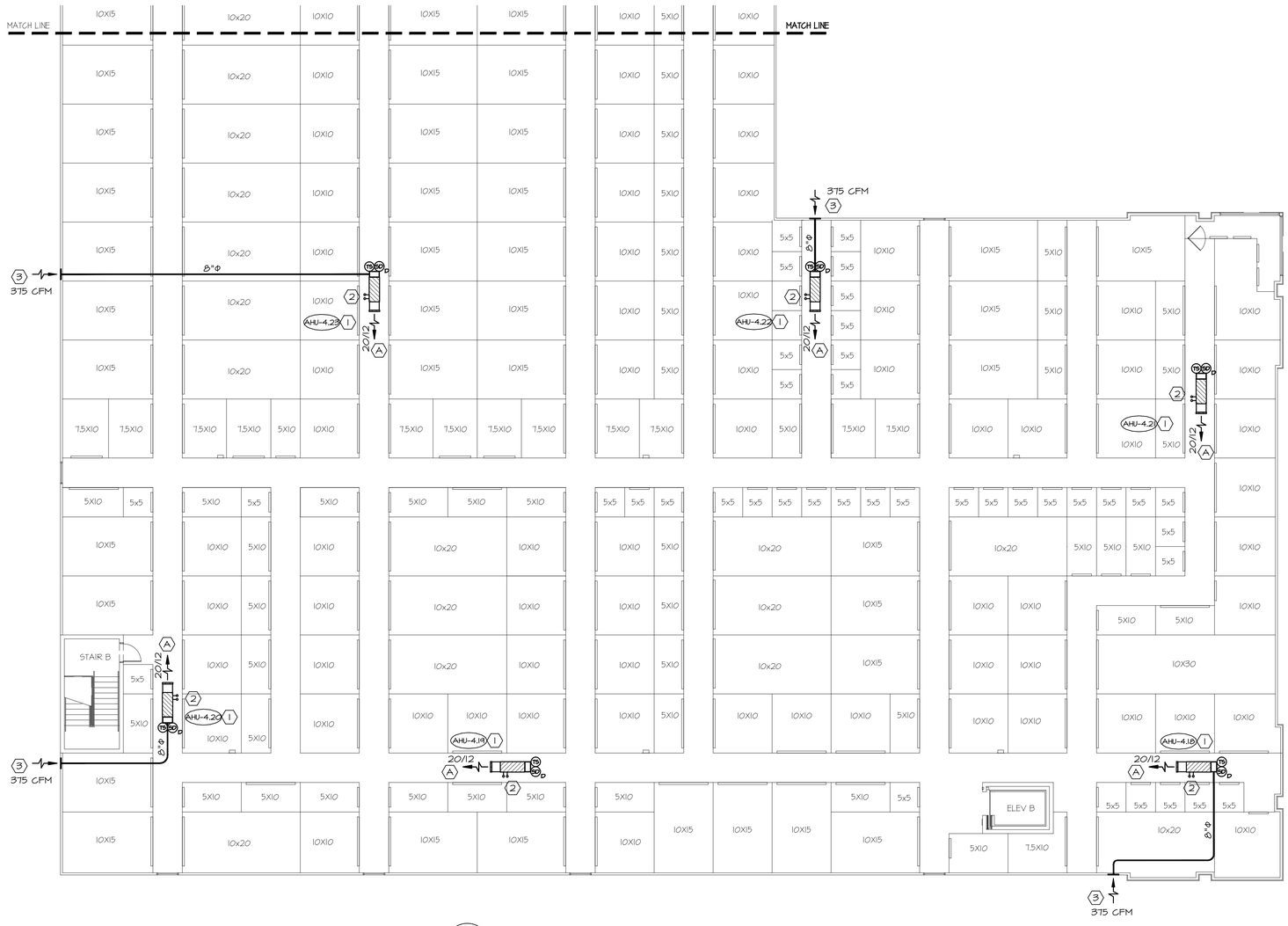
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.26.2019
DRAWN :	RSW
REVISIONS:	

2ND FLOOR MECHANICAL

SHEET NO.

M1.4



1 3RD FLOOR - MECHANICAL PLAN

SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EAGH AIR HANDLING UNIT TO HUB DRAIN LOCATED ON FIRST FLOOR. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

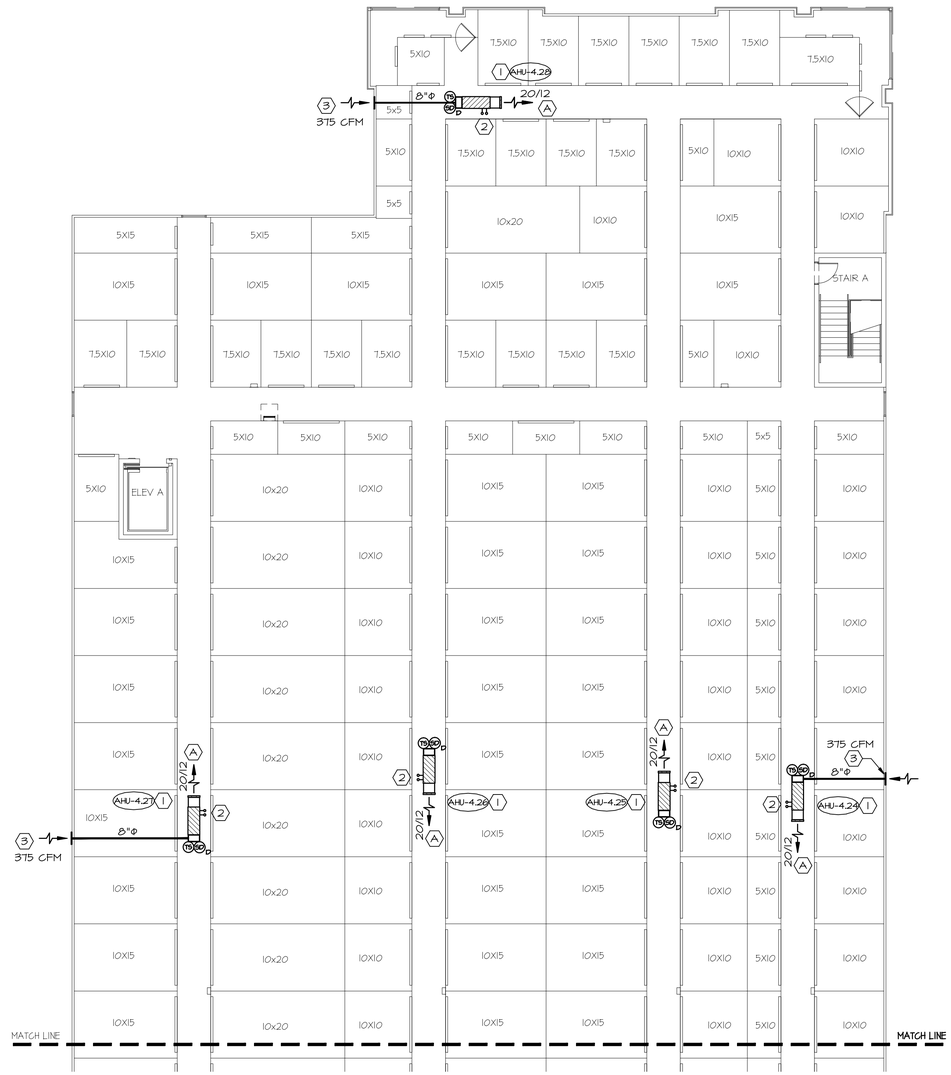
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

3RD FLOOR MECHANICAL

SHEET NO.

M1.5



1 **3RD FLOOR - MECHANICAL PLAN**
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED ON FIRST FLOOR. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

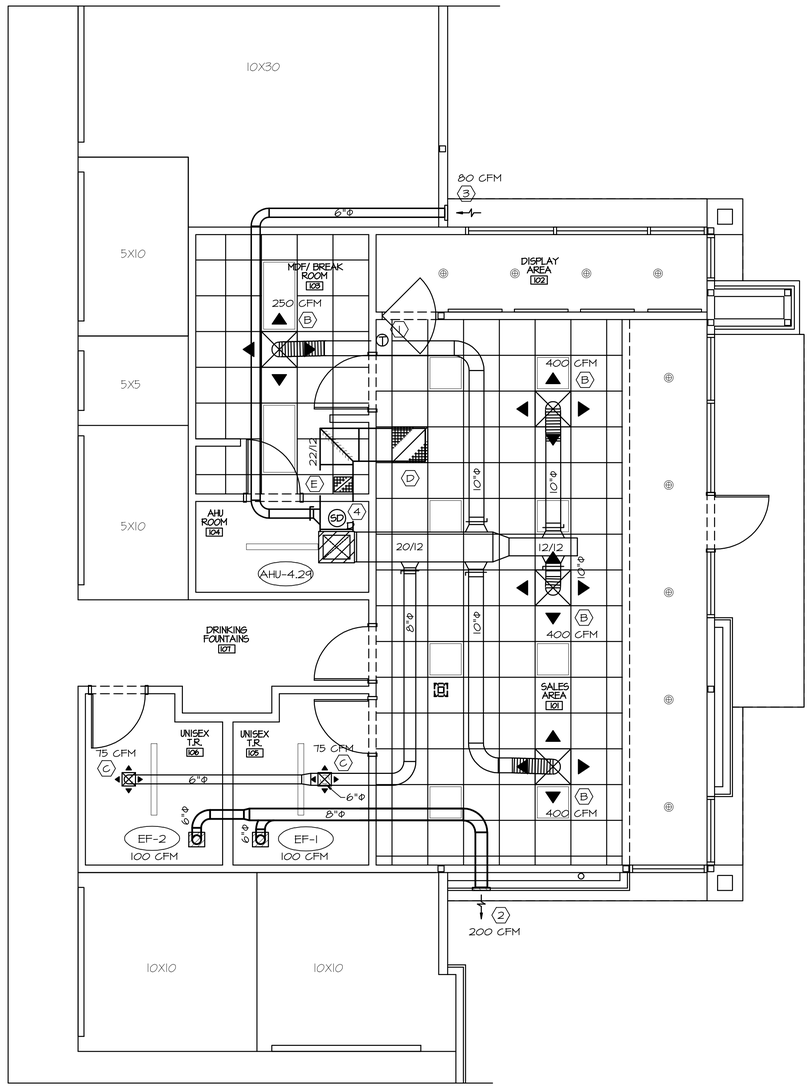
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

3RD FLOOR MECHANICAL

SHEET NO.

M1.6



1 OFFICE MECHANICAL PLAN
SCALE: 1/4"=1'-0"

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM AIR HANDLING UNIT TO FLOOR SINK IN AHU CLOSET. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.
4. EXPOSED DUCTWORK SHALL BE PAINTED TO MATCH CEILING STRUCTURE. COORDINATE WITH ARCHITECTURAL PLANS.

MECHANICAL KEYED NOTES :

(1) COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. MOUNT @48" A.F.F.

(2) 12/12 EXHAUST LOUVER. LOUVER SHALL BE WEATHERPROOOF, PAINTED TO MATCH ADJACENT SURFACE & PROVIDE WITH INSECT SCREEN.

(3) 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT WALL. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

(4) PROVIDE SMOKE DETECTOR IN RETURN AIR DUCT.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

OFFICE MECHANICAL

SHEET NO.
M1.7

OFFICE COOLING LOAD CALCULATIONS

LOAD	CALCULATION	SENSIBLE	LATENT
ROOF:	-0- S.F. (0.045)(58) =	-0- BTUH	-0- BTUH
WALLS:	514 S.F. (0.064)(24) =	790 BTUH	-0- BTUH
GLASS:	544 S.F. (0.82)(24) =	10706 BTUH	-0- BTUH
PEOPLE:	5 (250/200) =	1250 BTUH	1000 BTUH
LIGHTS:	921 W (3.413) =	4557 BTUH	-0- BTUH
EQUIPMENT:	3000 W (3.413) =	10239 BTUH	-0- BTUH
OUTSIDE AIR	80 CFM (1.04)(24) =	1997 BTUH	
	80 CFM (0.68)(42) =		2285 BTUH
	SUBTOTALS =	34539 BTUH	3285 BTUH
	TOTAL COOLING LOAD =	37824 BTUH	

OFFICE HEATING LOAD CALCULATIONS

LOAD	CALCULATION	SENSIBLE
ROOF:	-0- S.F. (0.045)(60) =	-0- BTUH
WALLS:	514 S.F. (0.064)(60) =	1974 BTUH
GLASS:	544 S.F. (0.82)(60) =	26765 BTUH
OUTSIDE AIR	80 CFM (60) =	4800 BTUH
	SUBTOTALS =	33539 BTUH

OFFICE OUTSIDE AIR CALCULATIONS

AS PER INTERNATIONAL MECHANICAL CODE

Vbz=RpxPz+RaxAz
Vbz=(5)(5)+(0.06)(856)
Vbz=76

SCHEDULED OUTSIDE AIR = 80 CFM

STORAGE OUTSIDE AIR CALCULATIONS

AS PER INTERNATIONAL MECHANICAL CODE
Vbz=RpxPz+RaxAz

1st FLOOR STORAGE
Vbz=(-)(-)+(0.06)(38536)
Vbz=2312

SCHEDULED OUTSIDE AIR = 2315 CFM

2nd FLOOR STORAGE
Vbz=(-)(-)+(0.06)(43314)
Vbz=2599

SCHEDULED OUTSIDE AIR = 2600 CFM

3rd FLOOR STORAGE
Vbz=(-)(-)+(0.06)(43456)
Vbz=2607

SCHEDULED OUTSIDE AIR = 2625 CFM

CONDENSING UNIT SCHEDULE

MARK	CU-4.1 thru 4.29
TYPE	AIR COOLED
MIN. CAPACITY (MBTUH)	48
VOLTS/PHASE	480/3
MIN. CIRCUIT AMPACITY	9
MAX. OVERCURRENT PROTECTION	15
AIR COOLED CONDENSER	
AMBIENT TEMP. (F°)	95
MANUFACTURER	RHEEM
MODEL	RA1448ADINB
SEER	14.0
OPERATING WEIGHT	221
NOTES	1

NOTE :
1. ALL REFRIGERANT LINES SHALL BE SIZED AS PER MANUFACTURER'S RECOMMENDATIONS.

FAN SCHEDULE

MARK	EF-1 & EF-2
SERVICE	EXHAUST
CONTROL	SWITCH
TYPE	CEILING MOUNTED
AIR FLOW (CFM)	100
TOTAL S. P. (IN. W.G.)	0.50
SOUND CRITERIA (SONES)	3.4
DRIVE TYPE	DIRECT
FAN SPEED (RPM)	1100
MOTOR SIZE (WATTS)	100
VOLTS - PHASE	120/1
MANUFACTURER	COOK
MODEL	GC-144
APPROX WEIGHT (LBS)	15
NOTES:	1,2,3

NOTES:
1. PROVIDE UNIT W/ GRAVITY BACKDRAFT DAMPER.
2. UNIT TO BE PROVIDED WITH FACTORY "PREWIRED" APPROVED MOTOR DISCONNECT DEVICES & MOTOR OVERLOAD PROTECTION.
3. UNIT CONTROLLED WITH LIGHTS IN ROOM.

AIR HANDLING UNIT SCHEDULE

MARK	AHU-4.1 thru 4.28	AHU-4.29
TYPE	HORIZONTAL	VERTICAL
SUPPLY AIR FLOW (CFM)	1600	1600
EXT. STATIC PRESS. (IN.WG.)	0.48	0.48
DRIVE TYPE	DIRECT	DIRECT
FAN SPEED (RPM)	LOW	LOW
MOTOR SIZE (HP)	3/4	3/4
COOLING COIL		
TYPE	DX	DX
MIN. SENSIBLE CAPACITY (MBH)	34	34
MIN. TOTAL CAPACITY (MBH)	46	46
ENT. DRY BULB TEMP. (F)	80	80
ENT. WET BULB TEMP. (F)	67	67
MINIMUM ROWS	-	-
MAXIMUM FINS PER INCH	-	-
HEATING COIL		
ELECTRIC HEAT INPUT (KW)	9.6	14.4
NO. OF STAGES	1	1
VOLTS - PHASE	480/3	480/3
MINIMUM CIRCUIT AMPS	18	25
MAX. OVERCURRENT PROTECTION	20	25
HTR. MODEL NO.	RXBH-24A10D	RXBH-24A15D
MANUFACTURER	RHEEM	RHEEM
MODEL	RHIP4824STANDA	RHIP4824STANDA
OPERATING WEIGHT	143	143
NOTES	1,2	1,2

NOTE:
1. FURNISH FULLY AUTOMATIC THERMOSTAT WITH AUTO-CHANGEOVER.
2. PROVIDE SINGLE POINT ELECTRICAL CONNECTION.

MECHANICAL/SERVICE WATER SYSTEMS FUNCTIONAL TESTING/COMMISSIONING

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE MECHANICAL AND SERVICE WATER SYSTEMS AND CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, LIST OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF OF THE TESTS TO BE PERFORMED. ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBTAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL MECHANICAL SYSTEMS AND WATER SYSTEMS INSTALLED AND ARE FUNCTIONAL.
2. PERFORM A SYSTEM AND BALANCING IN ALL MECHANICAL SYSTEMS.
3. TEST ALL AIR DEVICES, SUPPLY AND RETURN DUCT AIR FLOWS, FAN MOTORS AMPS.
4. ENSURE THERMOSTATS, TEMPERATURE SENSORS, ECONOMIZERS, SERVICE WATER HEATING CONTROL SYSTEMS ARE CALIBRATED AND FUNCTIONAL AND OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. ENSURE AIR OUTLETS AND ZONE TERMINAL DEVICES ARE EQUIPPED WITH MEANS OF AIR BALANCING IN ACCORDANCE WITH CHAPTER 6 OF THE IMC CODE AND COMPLY WITH 2015 IECC SECTION C408 SYSTEM COMMISSIONING.
6. EQUIPMENT SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS.

ELEVATOR AC (Typical of 2)

AC-1 / ACCU-1
AC-2 / ACCU-2

MITSUBISHI ELECTRIC DUCT FREE SPLIT SYSTEM; 30,000 BTUH, SEER = 16.0
INDOOR UNIT #MSY-D30NA-8; 1 AMP
OUTDOOR UNIT #MUY-D30NA-1;
(21A MCA) 25A/208V/1Φ

SPRINKLER ROOM UNIT HEATER

UH-1 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE SPRINKLER ROOM CONNECTED TO A THERMOSTAT IN THE ROOM. UNIT HEATER SHALL BE A DAYTON #3UG73 (GRAINGER #3UG73) W/ 3.2 KW ELECTRIC HEAT @14.9 AMPS/208V/1Φ.

UH-2 / UH-3 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE STAIRWELL CONNECTED TO A LOCKABLE THERMOSTAT. UNIT HEATER SHALL BE A DAYTON #3UG73 (GRAINGER #3UG73) W/ 3.2 KW ELECTRIC HEAT @14.9 AMPS/208V/1Φ.

AIR DEVICE SCHEDULE

(A) THE SUPPLY AIR DIFFUSER AT THE END OF THE DUCT SHALL BE A 20"x12" TITUS #50F W/ 1"x1"x1" CUBE CORE (NOT 1/2").

(B) 24" X 24" 4-WAY LAY-IN SUPPLY AIR DIFFUSER W/ ROUND NECK AND OPPOSED BLADE DAMPER. TITUS MODEL #TMS, FRAME TYPE 3.

(C) 6" X 6" 4-WAY SUPPLY AIR DIFFUSER W/ ROUND NECK AND OPPOSED BLADE DAMPER. TITUS MODEL #TDC, FRAME TYPE 1, PATTERN #A4.

(D) 24" X 24" LAY-IN RETURN AIR GRILLE 1" x 1" x 1" CUBE CORE CONSTRUCTION TITUS MODEL #50F, FRAME TYPE 3.

(E) 10" X 10" RETURN AIR GRILLE 1" x 1" x 1" CUBE CORE CONSTRUCTION TITUS MODEL #50F, FRAME TYPE 1.

ARCHCON architecture
12035 CODWICK · SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

HVAC SCHEDULES

SHEET NO.
M2.1

GENERAL
A. THE GENERAL CONDITIONS OF THE GENERAL SPECIFICATIONS, ALONG WITH ALL APPLICABLE INSTRUCTIONS TO BIDDERS SHALL FORM A PART OF THIS SECTION OF THE SPECIFICATIONS.

B. REFERENCE IS MADE TO REQUISITES FOR BIDDERS AND CONTRACTORS UNDER OTHER SECTIONS OF THESE SPECIFICATIONS, WHICH SHALL BE CONSIDERED BINDING, UNLESS OTHERWISE NOTED UNDER THIS SECTION.

SCOPE
EACH CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE CONSTRUCTION DETAILS BEFORE SUBMITTING HIS BIS AS NO ALLOWANCES WILL BE MADE BECAUSE OF THE CONTRACTOR'S UNFAMILIARITY WITH THESE DETAILS. ALL PERFORMANCE OF CONSTRUCTION SHALL BE AS REQUIRED BY THE PACE OF THE GENERAL CONSTRUCTION.

INSPECTION OF SITE
ALL PROPOSALS SHALL PRECLUDE THAT CONTRACTOR IS FAMILIAR WITH JOBSITE CONDITIONS AND UTILITY LOCATIONS AND THE LACK OF SPECIFIC INFORMATION ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY.

PERMITS
ALL PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE SUBCONTRACTOR INVOLVED.

CODE REQUIREMENTS
ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS, DRAWINGS OR AS DIRECTED BY THE OWNER, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, OR REGULATIONS OF THE GOVERNING BODIES, WHETHER SO SHOWN OR NOT, AND ALL MODIFICATIONS REQUIRED BY SUCH AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ANY ADDITIONAL COST TO THE OWNER.

MATERIALS AND WORKMANSHIP
A. ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURERS, AND UNLESS OTHERWISE SPECIFIED SHALL BE NEW AND FREE FROM ANY DEFECTS. ALL LIKE MATERIALS USED SHALL BE OF THE SAME MANUFACTURE AND QUALITY UNLESS OTHERWISE SPECIFIED.

B. ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY COMPETENT WORKMEN AND EXECUTED IN A NEAT AND WORKMANLIKE MANNER. WORK SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION, AND ON COMPLETION, THE INSTALLATION SHALL BE THOROUGHLY CLEANED AND ALL DEBRIS PRESENT AS A RESULT OF THIS CONTRACT SHALL BE REMOVED FROM THE PREMISES.

CODES AND REGULATIONS
EACH SUBCONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK AS DRAWN OR SPECIFIED. IF A SUBCONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT A VARIANCE, HE SHALL PROMPTLY NOTIFY THE GENERAL CONTRACTOR AND THE OWNER IN WRITING. IF ANY SUBCONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO LAWS, ORDINANCES, RULES AND REGULATIONS AND WITHOUT GIVING SUCH NOTICE, THE SUBCONTRACTOR SHALL BEAR ALL COSTS ARISING THEREFROM.

PROTECTION OF WORK AND PROPERTY
A. EACH SUBCONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL HIS WORK FROM DAMAGE AND SHALL PROTECT THE TENANT'S PROPERTY FROM INJURY OR LOSS ARISING FROM HIS WORK. HE SHALL MAKE GOOD ANY SUCH DAMAGE, INJURY, OR LOSS, EXCEPT SUCH AS MAY BE DIRECTLY DUE TO CAUSES BEYOND HIS CONTROL AND NOT TO HIS FAULT OR NEGLIGENCE. HE SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS WELL.

B. EACH SUBCONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF THEIR EMPLOYEES ON THE WORK AND SHALL COMPLY WITH ALL PROVISIONS OF FEDERAL, STATE AND LOCAL BUILDING CODES AND SAFETY LAWS TO PREVENT ACCIDENTS OR INJURY TO PERSONA ON OR ADJACENT TO THE PREMISES WHERE THE WORK IS BEING PERFORMED. EACH SUBCONTRACTOR SHALL MAINTAIN ALL INSURANCE REQUIRED TO PROTECT HIMSELF, TENANT AND TENANT FOR THE DURATION OF THE WORK AGAINST PROPERTY DAMAGE AND PUBLIC LIABILITY.

CHANGES IN THE WORK
THE TENANT, WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO OR DEDUCTING FROM THE WORK, THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY.

COOPERATION
ALL WORK UNDER THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN CONJUNCTION WITH OTHER CONTRACTORS AND TRADES OF THIS PROJECT IN A MANNER WHICH WILL ALLOW EACH CONTRACTOR AND TRADE ADEQUATE TIME AT THE PROPER STAGE OF CONSTRUCTION TO FULFILL HIS CONTRACTS. REFERENCE SHALL BE MADE TO THE TENANT FOR INSTRUCTIONS SHOULD ANY QUESTIONS ARISE BETWEEN TRADES AS TO THE PLACING OF LINES, DUCTS, CONDUITS, FIXTURES, OR EQUIPMENT, OR SHOULD IT APPEAR DESIRABLE TO REMOVE ANY GENERAL CONSTRUCTION WHICH WOULD AFFECT THE APPEARANCE OF STRENGTH OF THE STRUCTURE.

SUBSTITUTION OF MATERIALS
MANUFACTURER'S NAMES ARE LISTED HEREIN TO ESTABLISH A STANDARD. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE ACCEPTABLE, IF IN THE OPINION OF THE TENANT, THE SUBSTITUTE MATERIAL IS OF A QUALITY AS GOOD OR BETTER THAN THE MATERIAL SPECIFIED, AND WILL SERVE WITH EQUAL EFFICIENCY AND DEPENDABILITY, THE PURPOSE FOR WHICH THE ITEMS SPECIFIED WERE INTENDED.

SHOP DRAWINGS
SHOP DRAWINGS AND CATALOGUE DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS, AND SUCH OTHER ILLUSTRATIVE MATERIAL AS MAY BE CONSIDERED NECESSARY BY THE TENANT, SHALL BE SUBMITTED BY THIS CONTRACTOR IN ADEQUATE TIME TO PREVENT DELAY AND CHANGES DURING CONSTRUCTION.

DRAWINGS AND SPECIFICATIONS
A. THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, DUCTS, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM.

B. SHOULD ANY CHANGES BE DEEMED NECESSARY BY THE CONTRACTOR IN ITEMS SHOWN ON CONTRACT DRAWINGS, THE SHOP DRAWINGS, DESCRIPTIONS, AND THE REASON FOR THE PROPOSED CHANGES SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.

RESPONSIBILITY
A. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE SATISFACTORY AND COMPLETE EXECUTION OF ALL WORK INCLUDED IN HIS CONTRACT. HE SHALL PRODUCE COMPLETE FINISHED OPERATING SYSTEMS AND PROVIDE ALL INCIDENTAL ITEMS REQUIRED AS PART OF HIS WORK, REGARDLESS OF WHETHER SUCH ITEM IS PARTICULARLY SPECIFIED OR INDICATED.

B. CONTRACTOR SHALL SUPPLY TO ARCHITECT AND OWNER A CERTIFIED BALANCE REPORT AT COMPLETION OF PROJECT.

HEATING, VENTILATING AND AIR CONDITIONING
GENERAL
A. THE WORK COVERED BY THIS SECTION OF THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RESPECTIVE DRAWINGS, INFORMATION, OR INSTRUCTIONS TO BIDDERS, AND THE GENERAL CONDITIONS, ADDENDA, OR DIRECTIVES WHICH MAY BE ISSUED BY THE OWNER, HEREWITH, OR OTHERWISE, SHALL BE COMPLIED WITH IN EVERY RESPECT.

B. THE LISTING HEREIN OF AN ARTICLE OR MATERIAL, OPERATION OR METHOD, REQUIRES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL EACH ITEM LISTED, UNLESS SPECIFICALLY NOTED TO THE CONTRARY. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED OR LISTED ACCORDING TO THE CONDITIONS STATED.

EXAMINATION OF SITE
ALL CONTRACTORS SUBMITTING PROPOSALS FOR THIS WORK SHALL FIRST EXAMINE THE SITE AND ALL CONDITIONS THEREON AND/OR THEREIN. ALL PROPOSALS SHALL TAKE INTO CONSIDERATION ALL SUCH CONDITIONS AS MAY AFFECT THE WORK UNDER THIS CONTRACT.

SCOPE
FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR A COMPLETE FULLY OPERATIVE HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM EXCEPT AS SPECIFICALLY EXCLUDED BY THE DRAWINGS, AND/OR TENANT'S DIRECTIONS.

EQUIPMENT
A. AIR CONDITIONING UNITS - UNITS SHALL BE FACTORY ASSEMBLED AND PRE-TESTED INCLUDING FANS, MOTORS, COILS, FILTERS, VARIABLES PITCH DRIVES, ETC. ALL UNITS SHALL BE EQUIPPED WITH AN ECONOMIZER PACKAGE AND RELIEF DAMPER. UNITS SHALL HAVE NET CAPACITY RATINGS DETERMINED AT THE SPECIFIED DESIGN CONDITIONS. THESE NET CAPACITY RATINGS SHALL BE DETERMINED BY DEDUCTING FOR MOTOR HEAT. THE AIR CONDITIONING UNITS SUPPLIED SHALL HAVE A TOTAL SYSTEM ENERGY RATIO (EER) AS PER CITY CODE. THIS EER SHALL BE DETERMINED BY DIVIDING THE NET CAPACITY AS DEFINED ABOVE BY THE TOTAL INPUT WATTAGE. THE TOTAL INPUT WATTAGE IS TO INCLUDE THE WATTAGE OF ALL FAN MOTORS AND ASSOCIATED EQUIPMENT. CONTRACTOR WILL FURNISH VIBRATION ISOLATION AS REQUIRED AND RECOMMENDED BY EQUIPMENT MANUFACTURER.

B. AIR COOLED CONDENSING UNITS - UNITS SHALL BE FACTORY ASSEMBLED AND PRE-TESTED, AND WILL INCLUDE HEAVY GALVANIZED STEEL HOUSING FINISHED WITH BAKED ENAMEL, AIR COOLED CONDENSERS WITH COPPER TUBES AND ALUMINUM FINS, CONTROL PANEL, COMPRESSOR HIGH AND LOW PRESSURE CUTOUTS, MUFFLERS, CRANKCASE HEATERS, LIQUID RECEIVE, ETC. COMPRESSORS SHALL BE OF THE HERMETICALLY SEALED OR SEMI-HERMETICALLY SEALED TYPE. (LOW AMBIENT CONTROL STD.)

C. CENTRAL STATION AIR HANDLING EQUIPMENT - (IF SCHEDULED ON DRAWINGS) SHALL BE LOW TO MEDIUM PRESSURE SINGLE ZONE DRAW-THRU UNITS EQUAL TO TRANE OR CARRIER. THEY SHALL BE COMPLETE WITH COOLING AND/OR HEATING COILS AND ACCESSORIES AS SPECIFIED ON THE PLANS.

RELIEF AIR FANS
1. GRAVITY RELIEF - EQUAL TO BREIDERT TYPE "RLQ" WITH INTEGRAL BACKDRAFT DAMPER AND INSECT SCREEN.

2. POWER RELIEF - EQUAL TO BREIDERT TYPE "LO-SET" SET WITH MOTORIZED DAMPER AND INTEGRAL BACKDRAFT DAMPER AND INSECT SCREEN.

D. ELECTRIC STRIP HEATER - EACH STRIP HEATER SHALL BE CONSTRUCTED TO SLIP INTO THE DUCT THROUGH A RECTANGULAR OPENING IN THE SIDE. EACH STRIP HEATER SHALL BE FURNISHED COMPLETE WITH BUILT-IN MAGNETIC CONTACTORS, AIR FLOW SWITCH, AND FACTORY PREWIRED TO TERMINAL STRIPS FOR LINE AND CONTROL CONNECTIONS IN THE FIELD. A THERMAL CUTOUT SHALL BE FURNISHED WITH EACH STRIP HEATER TO PROTECT THE HEATER AGAINST AIR FAILURE. THE COMPLETE HEATING UNIT SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC. COILS SHALL BE ARRANGED FOR MINIMUM TWO-STAGE CONTROL 10KW AND ABOVE.

E. FILTERS - FILTERS SHALL BE OF THE THROW AWAY TYPE WHEREVER POSSIBLE. IF FILTERS ARE OF NECESSITY THE PERMANENT TYPE, THEN THEY MUST BE OF THE CLEANABLE, HIGH VELOCITY TYPE AND SHALL BE AMERICAN AIR FILTERS, AIR MAYS, EVANS, OR APPROVED EQUAL. FILTERS SHALL BE OF THE OPTIMUM THICKNESS AND DESIGN FACE VELOCITY SHALL NOT EXCEED 550 FPM. INSTALLATION OF THE AIR CONDITIONING UNIT SHALL BE SUCH SO AS TO NOT IMPEDE ACCESS TO THE FILTERS. IF THE FILTERS ARE IN FRAME HOLDERS, THEN SUCH HOLDERS SHALL BE PROVIDED WITH A LEFT HANDLE.

G. ALL SINGLE STAGE UNITS WILL BE EQUIPPED WITH MULTI-STAT THERMOSTAT. A DUAL STAGE UNIT WILL BE EQUIPPED WITH A DAY/NIGHT THERMOSTAT ARRANGEMENT.
DESIGN AND STANDARD CONDITIONS FOR THERMOSTAT OPERATION WILL BE AS FOLLOWS:

COOLING: 75 F MINIMUM OCCUPIED COOLING TEMPERATURE
85 F COOLING NIGHT SETBACK.

HEATING: 72 F MAXIMUM OCCUPIED HEATING TEMPERATURE
55 F HEATING NIGHT SETBACK.

DUCTWORK
A. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME GRADE SHEET STEEL OF THE FOLLOWING GAUGES:

DUCT SIZE	GAUGE
12" AND LESS	NO. 26 U.S. GAUGE
13" TO 30"	NO. 24 U.S. GAUGE
31" TO 54"	NO. 22 U.S. GAUGE
55" TO 84"	NO. 20 U.S. GAUGE
85" AND OVER	NO. 18 U.S. GAUGE

B. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED AS FOLLOWS:

SIZE	METHOD
17" AND LESS	"S" AND DRIVE CLEATS
18" TO 30"	"L" STANDING SEAMS ON 3'-0" CENTERS
31" TO 54"	1-1/4" STANDING SEAMS ON 3'-0" CENTERS

ROUND DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME GRADE SHEET STEEL OF THE FOLLOWING GAUGES:

DUCT SIZE (DIAMETER)	DUCTS	FITTINGS
8" AND LESS	24	22
9" TO 18"	22	20
19" TO 30"	20	18

ALL 90 DEGREE ELBOWS FOR ROUND DUCTWORK SHALL BE FIVE (5) PIECE. ALL LONGITUDINAL SEAMS SHALL BE FORMED BY PITTSBURGH LOCKS. JOINTS SHALL BE SNAGGED WITH ONE-HALF INCH (1/2") OVERLAP.

C. ALL SUPPLY AIR DUCTS (HEATING AND COOLING) AND RETURN AIR DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED STEEL WITH MINIMUM 1-1/2" THICK ACOUSTICAL AND THERMAL INSULATION WITH AN R-VALUE OF 6.0 ALL EXHAUST AND RELIEF AIR DUCTS SHALL BE GALVANIZED STEEL.

D. CONTRACTOR WILL INSTALL INSECT SCREENS ON ALL DUCT OPENINGS WHICH LEAD TO OR ARE OUTDOORS. INSECT SCREENS SHALL BE 10 GAUGE, ONE-HALF INCH (1/2") MESH IN REMOVABLE GALVANIZED STEEL FRAMES.

E. ALL DUCTWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS GUIDE (2013 ASHRAE 90.1) AND FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST METHODS RECOMMENDED IN THE SHEETMETAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) LOW VELOCITY DUCT MANUAL, LATEST EDITION.

HANGERS AND SUPPORTS
A. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND LESS SHALL BE SUPPORTED BY MEANS OF BAND IRON HANGERS OF NO. 18 U.S. GAUGE ATTACHED TO THE DUCT BY MEANS OF RIVETS, SCREWS, OR CLAMPS, AND FASTENED TO STRUCTURE ABOVE BY TOGGLE BOLTS OR OTHER MEANS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS. VERTICAL DUCTS SHALL BE SUPPORTED WITH 1/4" x 1-1/4" x 1-1/4" ANGLES WHERE THEY PASS THROUGH THE FLOOR LINES.

B. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND MORE SHALL BE SUPPORTED BY MEANS OF ANGLE IRON TRAPEZE HANGERS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS.

FLASHING
A. CONTRACTOR WILL PROVIDE WATER TIGHT 24 GA. SHEET METAL FLASHINGS AT ALL EXTERIOR WALLS AND ROOF PENETRATIONS.

B. ALL CUTTING OF ROOF OPENINGS, SUPPORTS FOR ROOF OPENINGS, PITCH PANS, ROOF CURBS, FLASHINGS, COUNTER FLASHINGS, REPAIR TO ROOF, ETC. ASSOCIATED WITH HVAC SUBCONTRACTOR SHALL BE THE RESPONSIBILITY AND PART OF THE CONTRACT HVAC SUBCONTRACTOR. HE SHALL EMPLOY THE OWNER'S ROOFERS FOR THIS WORK SO AS TO MAINTAIN THE ROOF BOND.

DAMPERS
A. SPLITTER DAMPERS SHALL BE FABRICATED OF SHEET STEEL NOT LESS THAN NO. 16 U.S. GAUGE WITH THE LEADING EDGE HEMMED. EACH DAMPER SHALL BE LARGE ENOUGH TO COVER THE SMALLER OF THE TWO OPENINGS IT CONTROLS. DAMPERS SHALL BE CONTROLLED AS FOLLOWS:

EXPOSED OR ACCESSIBLE DUCTWORK - LOCKING QUADRANTS EQUAL TO YOUNG REGULATOR NO. 1 WITH DAMPER ROD END BEARINGS ON OPPOSITE END.

CONCEALED DUCTWORK - LOCKING QUADRANT EQUAL TO YOUNG REGULATOR NO. 315 (CHROMIUM PLATED WITH DAMPER ROD END BEARINGS ON BOTH ENDS).

B. VOLUME DAMPERS SHALL BE OF THE OPPOSED INTERLOCKING TYPE AS MANUFACTURED BY AMERICAN FOUNDRY AND FURNACES CO. (AFFCO) OR EQUAL. BLADES SHALL BE OF NO. 16 GAUGE SHEET METAL AND SHALL NOT EXCEED 48" IN LENGTH OR 12" IN WIDTH. BLADES SHALL BE ON ONE-HALF INCH (1/2") DIAMETER RUSTPROOF AXLE. BEARINGS SHALL BE OF THE SELF-LUBRICATING FERRULE TYPE.

C. JOB FABRICATED TURNING VANES SHALL BE ACCEPTABLE IN SQUARE ELBOWS. PROVIDE AND INSTALL BARBER-COLMAN AIRTURNS OR EQUAL. TURNING VANES SHALL BE OF THE SAME GAUGE METAL AS THE DUCT IN WHICH THEY ARE INSTALLED. RADIUS ELBOWS SHALL HAVE A CENTER-LINE RADIUS OF ONE AND ONE-HALF (1-1/2) TIMES THE DUCT WIDTH.

FIBROUS GLASS DUCT SYSTEMS OPTION
AT HIS OPTION, THE CONTRACTOR MAY FURNISH OWENS-CORNING BOOFR OR BOOFRK OR EQUAL FOR ALL SUPPLY AND RETURN DUCTWORK WHERE THE AIR VELOCITY IS UNDER 2400 FPM, STATIC PRESSURE IS 2" OR LESS AND THE AIR TEMPERATURE IS 250 F OR LESS. SYSTEM SHALL BE FABRICATED, REINFORCED AND INSTALLED ACCORDING TO THE "SMACNA" PUBLICATION - FIBROUS GLASS DUCT CONSTRUCTION STANDARDS, FOURTH EDITION, 1975.

ALL JOINTS ARE TO BE SEALED WITH 2-1/2" "SMACNA" APPROVED PRESSURE SENSITIVE ALUMINUM TAPE MEETING AFTS 100-73 STANDARDS AND THE REQUIREMENTS OF U.L. 181. APPLICATION SHALL BE IN ACCORDANCE WITH AFTS 101-73. (REFER TO MANUFACTURER'S INSTRUCTION SHEET FOR SPECIFIC DETAILS FOR U.L. 181 REQUIREMENTS.) RECOMMEND FASSON 0805. DO NOT APPLY AT TEMPERATURE BELOW 32 F.

DUCTWORK - EXCEPTIONS
DUCTWORK FOR EXHAUSTING AIR OR OUTSIDE SUPPLY AIR SHALL BE ALL METAL AND CONSTRUCTED ACCORDING TO RECOMMENDED PRACTICES AS FOUND IN THE LATEST ISSUE OF ASHRAE.

SUPPORT OF DUCT SYSTEM
DUCTWORK SHALL BE SUPPORTED AT ALL TURNS AND TRANSITIONS AND NOT MORE THAN 8' O.C. FOR STRAIGHT DUCTS UP TO 35" TO 54" MAXIMUM DIMENSION, 6' O.C. AND DUCTS OVER 60: MAXIMUM DIMENSION, 4' O.C.

HANGER DESIGN SHALL BE AS DESCRIBED IN THE LATEST EDITION OF THE "SMACNA" MANUAL. REINFORCEMENT MEMBERS MAY BE USED TO SUPPORT THE DUCT SYSTEM PROVIDED DETAILS OUTLINED IN THE AFOREMENTIONED DOCUMENTS ARE ADHERED TO.

REINFORCEMENT
ALL DUCTS REQUIRING REINFORCEMENT SHALL BE REINFORCED ACCORDING TO THE LATEST EDITION OF "SMACNA" MANUAL.

MATERIALS FOR REINFORCEMENT MEMBERS SHALL BE GALVANIZED STEEL. ALL SCREWS AND WASHERS SHALL BE PLATED OR GALVANIZED.

ACCESSORY ITEMS
ALL MANUAL DAMPERS, FIRE DAMPERS, TURNING VANES, REGISTER CONNECTIONS, ACCESS DOORS OR OTHER ASSOCIATED ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE LATEST PUBLICATION OF "SMACNA" MANUAL.

PIPING
A. PIPING AND FITTINGS SHALL BE OF THE WEIGHTS AND TYPES SHOWN ON THE DRAWINGS. SIZES SHOWN ON THE DRAWINGS ARE NOMINAL PIPE SIZES.

B. ALL PIPING SHALL BE INSTALLED PARALLEL TO, OR AT RIGHT ANGLES WITH THE BUILDING WALLS AND PARTITIONS AND SHALL BE INSTALLED WITH THE PROPER PITCH.

C. ALL PIPING SHALL BE UPENDED AND POUNDED TO REMOVE ANY FOREIGN MATTER PRESENT AND SHALL BE SWABBED IF NECESSARY.

PLUMBING
MATERIALS
A. SANITARY SEWER - CAST IRON OR SCH. 40 PVC MAY BE USED UNLESS OWNER OR CITY REQUIREMENTS DIFFER. VENTS SHALL BE SCH. 40 PVC UNLESS OWNER OR CITY REQUIREMENTS REQUIRE CAST IRON. 40

B. DOMESTIC WATER AND HOT WATER PIPING SHALL BE COPPER TYPE "L" INSULATED WITH ARMAFLEX OR EQUIVALENT INSULATING TO A THICKNESS OF 1".

C. GAS PIPING SHALL BE BLACK STEEL SCHEDULED 40 WITH SCREWED FITTINGS.

D. CHILLED WATER SUPPLY AND RETURN PIPING SHALL BE GALVANIZED STEEL PIPE (STANDARD WALL) OR TYPE "M" HARD COPPER TUBING. ALL PIPING SHALL BE INSULATED WITH 1" THICK OWENS CORNING FIBERGLASS 25 AS.J/SSL OR EQUAL.

HANGERS AND SUPPORTS
HORIZONTAL PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 10'-0" WITH SHIVEL SPLIT PIPE HANGERS EQUAL TO CRANE NO. 194F OR GRINNELL NO. 104. VERTICAL PIPING SHALL BE SUPPORTED BY MEANS OF WROUGHT IRON CLAMPS SUSPENDED FROM THE UNDERSIDE OF STRUCTURE WITH HANGER RODS.

CLEANOUTS
CLEANOUTS SHALL BE AS MANUFACTURED BY JOSAM, ZURN MFG. CO, OR EQUAL AND SHALL BE INSTALLED AT ALL BENDS, ANGLES, AND ENDS OF ALL WASTE AND SEWER LINES, AS CALLED FOR ON THE DRAWINGS, AND AS REQUIRED BY LOCAL CODES. ALL CLEANOUTS SHALL BE BROUGHT TO GRADE, AND IN ALL CASES, SHALL BE PROVIDED WITH SUFFICIENT SPACE FOR RODDING.

VALVES
ALL VALVES SHALL BE BRASS AND MANUFACTURED BY CRANE, NIBCO, STOCKHAM, LUNKENHEIMER, NORDSTROM, GRINNELL OR EQUAL.

SPRINKLER SYSTEM

A. SHOP DRAWINGS - THE SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER'S INSURANCE CARRIER & TO THE APPROPRIATE RATING BUREAU FOR THEIR APPROVAL. A COPY OF THE APPROVAL LETTER FROM THE RATING BUREAU SHALL BE FORWARDED TO THE OWNER.

B. SPRINKLER HEADS - SHOW WINDOWS - HIGH TEMPERATURE, CHROME PLATED, COMPLETELY RECESSED TYPE. SALES AREA - CHROME PLATED, SEMI-RECESSED TYPE. STORAGE, TOILET AND WORK AREAS WITH CEILINGS - BRASS, PENDANT TYPE. STORAGE AND WORK AREAS WITHOUT CEILINGS - BRASS UPRIGHT TYPE. (REFER TO DWG. M.1)

ROUGH-INS
FOR SECOND LEVEL LOCATIONS, THE GENERAL CONTRACTOR SHALL RUN ALL LINES REQUIRED FOR PLUMBING ROUGH-INS TIGHT AGAINST THE UNDERSIDE OF THE SECOND FLOOR LEVEL. THE SECOND FLOOR STRUCTURAL SLAB SHALL BE CORED AS REQUIRED TO INSTALL THESE ITEMS AT THE LOCATIONS SHOWN ON THE PLANS.

TESTING AND ADJUSTING
CONTRACTOR WILL DEMONSTRATE OPERATION OF SYSTEM TO FULL SATISFACTION OF OWNER, WILL BALANCE AIR FLOW IN ACCORDANCE WITH AIR QUANTITIES ON DRAWINGS AND WILL RECORD VOLUME READINGS IN ACCORDANCE WITH ASHRAE AND PROVIDE SAME TO OWNER. GAS PIPING SHALL WITHSTAND AIR PRESSURE TESTING PER UNIFORM PLUMBING CODE.

GUARANTEE
ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTANCE BY OWNER SHALL BE A CONDITION OF THIS CONTRACT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE OWNER.

MECHANICAL
TEMPORARY SERVICES
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPECIFIC ITEMS OF TEMPORARY SERVICES:
A. TELEPHONE - THE GENERAL CONTRACTOR SHALL INSTALL A JOB SITE TELEPHONE AND NOTIFY OWNER & ARCHITECT OF THE TELEPHONE NUMBER AND THE NAME OF THE SUPERINTENDENT.

B. TEMPORARY WATER - WATER REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR. WATER USED FOR HUMAN CONSUMPTION SHALL CONFORM TO REQUIREMENTS OF STATE AND LOCAL AUTHORITIES FOR POTABLE WATER.

C. TEMPORARY ELECTRICITY - TEMPORARY ELECTRIC SERVICE REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE FURNISHED AND PAID FOR BY THE CONTRACTOR WHO SHALL FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY OVERHEAD CONSTRUCTION, METERS, DROPS, AND OTHER WIRING AND FITTINGS FOR BOTH LIGHT AND POWER AT LOCATIONS REQUIRED IN THE WORK AND SHALL BEAR THE COST OF MAKING THE SERVICE CONNECTIONS. BEFORE FINAL ACCEPTANCE, TEMPORARY ELECTRICAL SERVICE FACILITIES INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND THE SERVICE CONNECTIONS SEVERED IN ACCEPTABLE MANNER.

D. TEMPORARY HEAT - WHEN REQUIRED FOR PROPER INSTALLATION OR PROTECTION OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY HEATING UNITS AS APPROVED BY THE OWNER OR LOCAL AUTHORITY.

NOTE FOR GENERAL CONTRACTOR
IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE USE OF APPLICABLE NOTES AND SPECIFICATIONS LISTED ON THIS SHEET AS THEY MAY PERTAIN TO THE SPECIFIC JOB.

WATER HAMMER ARRESTORS

A. INSTALL STAINLESS STEEL BELLOWS TYPE WATER HAMMER ARRESTORS ON WATER LINES CONNECTED TO FLUSH VALVES AND TO GROUPS OF FIXTURES. PROVIDE ACCESS DOORS AT ALL WATER HAMMER ARRESTOR LOCATIONS, SIMILAR TO WADE. SELECTION OF WATER HAMMER ARRESTORS SHALL BE PER PLUMBING AND DRAINAGE INSTITUTE RATING FOR FIXTURE UNIT CAPACITY SERVED. REFER TO PLUMBING RISERS OR PLANS FOR LOCATION AND SIZE.

WATER PIPING

A. PROVIDE WATER CUT-OFF GATE VALVE AND A WALL HYDRANT DRAIN ON WATER SUPPLY LINE WHERE IT ENTERS BUILDING. PROVIDE CUT-OFF GATE VALVES TO ZONE BUILDING AS REQUIRED AND AS INDICATED ON DRAWINGS.

B. PROVIDE WATER HAMMER ARRESTORS WHERE INDICATED ON DRAWINGS.

C. NOTIFY ENGINEER ONE WEEK PRIOR TO STERILIZATION OF DOMESTIC WATER PIPING SYSTEM SO THAT PROCEDURE MAY BE WITNESSED.

D. BEFORE STERILIZING, THOROUGHLY FLUSH ALL DOMESTIC WATER LINES.

E. DISINFECT LINES WITH FLUID CHLORINE OR HYPOCHLORITE. INTRODUCE SUFFICIENT CHLORINE TO PROVIDE AN INITIAL CONCENTRATION OF 50 P.P.M. DISINFECT FOR 24 HOUR PERIOD, OPENING AND CLOSING VALVES IN SYSTEM AT VARIOUS POINTS DURING DISINFECTION. FOLLOWING CHLORINATION, THOROUGHLY FLUSH COMPLETE SYSTEM UNTIL REPLACEMENT WATER IS COMPARABLE IN QUALITY TO WATER FROM THE WATER SUPPLY SYSTEM. SUBMIT CERTIFICATION THAT SPECIFICATION AND ALL ORDINANCES AND REGULATIONS HAVE BEEN COMPLIED WITH.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

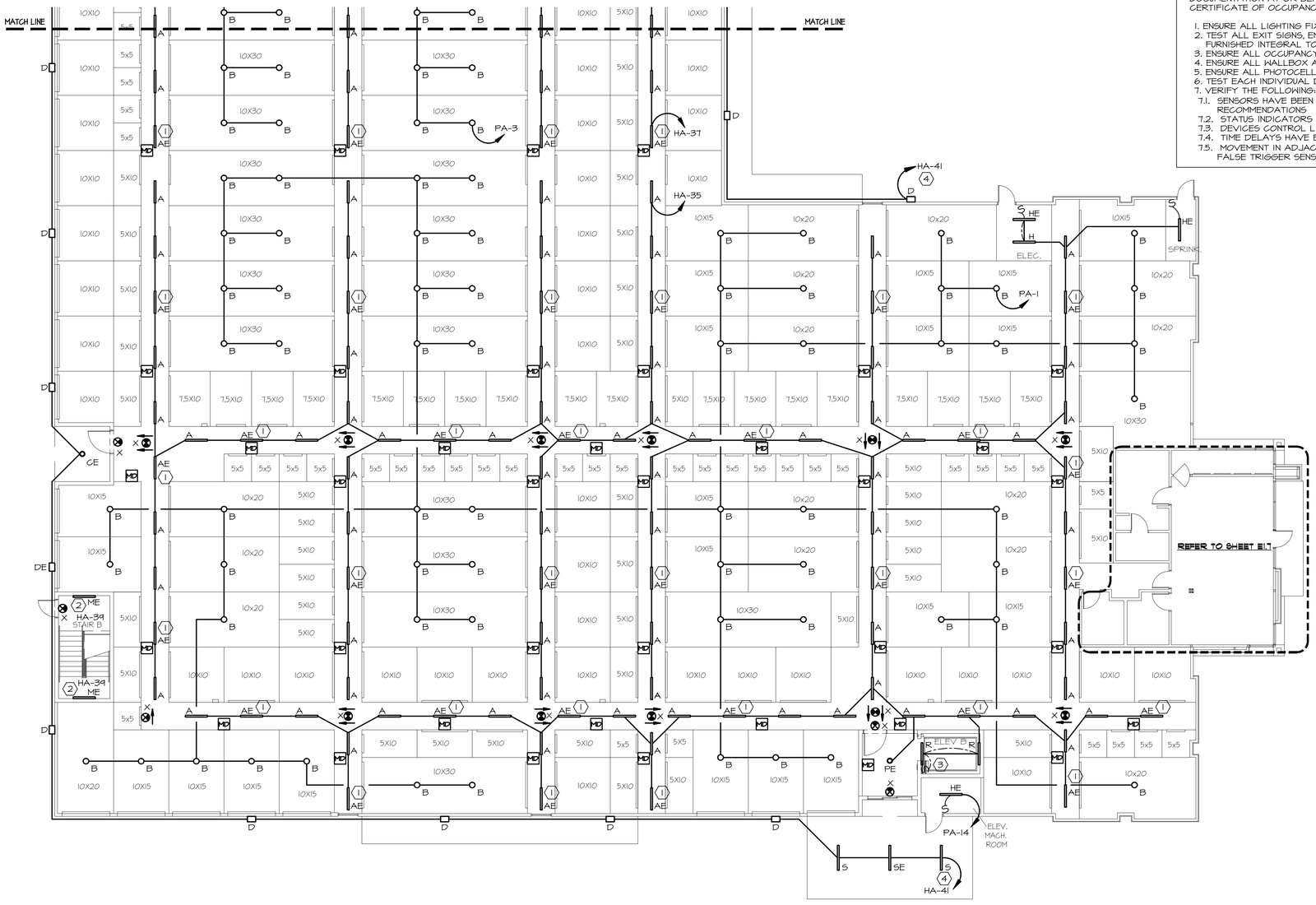
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.26.2019
DRAWN : RSW
REVISIONS:

MECHANICAL SPECIFICATIONS

SHEET NO.
M3.1



1 1ST FLOOR - LIGHTING PLAN
SCALE: 3/32"=1'-0"

LIGHTING FUNCTIONAL TESTING/COMMISSIONING PLAN

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE LIGHTING CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBATAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL LIGHTING FIXTURES HAVE LAMPS INSTALLED AND ARE FUNCTIONAL.
2. TEST ALL EXIT SIGNS, EMERGENCY LIGHTING FIXTURES, AND EMERGENCY BALLASTS FURNISHED INTEGRAL TO FIXTURES.
3. ENSURE ALL OCCUPANCY SENSORS HAVE BEEN INSTALLED AND ARE OPERATIONAL.
4. ENSURE ALL WALLBOX AND SCENE CONTROLLERS ARE INSTALLED AND OPERATIONAL.
5. ENSURE ALL PHOTOCELLS ARE INSTALLED AND OPERATIONAL.
6. TEST EACH INDIVIDUAL DEVICE FOR OCCUPANCY SENSOR TYPES.
7. VERIFY THE FOLLOWING:
   - 7.1. SENSORS HAVE BEEN LOCATED AND AIMED PER THE MANUFACTURER'S RECOMMENDATIONS
   - 7.2. STATUS INDICATORS ON DEVICES ARE OPERATIONAL AND CORRECT.
   - 7.3. DEVICES CONTROL LIGHTING FIXTURES AS INDICATED ON DRAWINGS.
   - 7.4. TIME DELAYS HAVE BEEN SET AS INDICATED ON THE DRAWINGS.
   - 7.5. MOVEMENT IN ADJACENT AREAS AND/OR CYCLING OF HVAC SYSTEMS DOES NOT FALSE TRIGGER SENSORS

NOTE: MD
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

GENERAL LIGHTING NOTES :

1. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
2. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

1. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
2. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
3. LIGHT MOUNTED IN ELEVATOR PIT. LOCATE SWITCH @ ACCESS TO PIT. COORDINATE ON-SITE.
4. RUN CIRCUIT SWITCHLEG THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE. COORDINATE EXTERIOR LIGHTING WITH ARCHITECTURAL PLANS/ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS.

ARCHCON architecture
12035 CDLWICK · SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

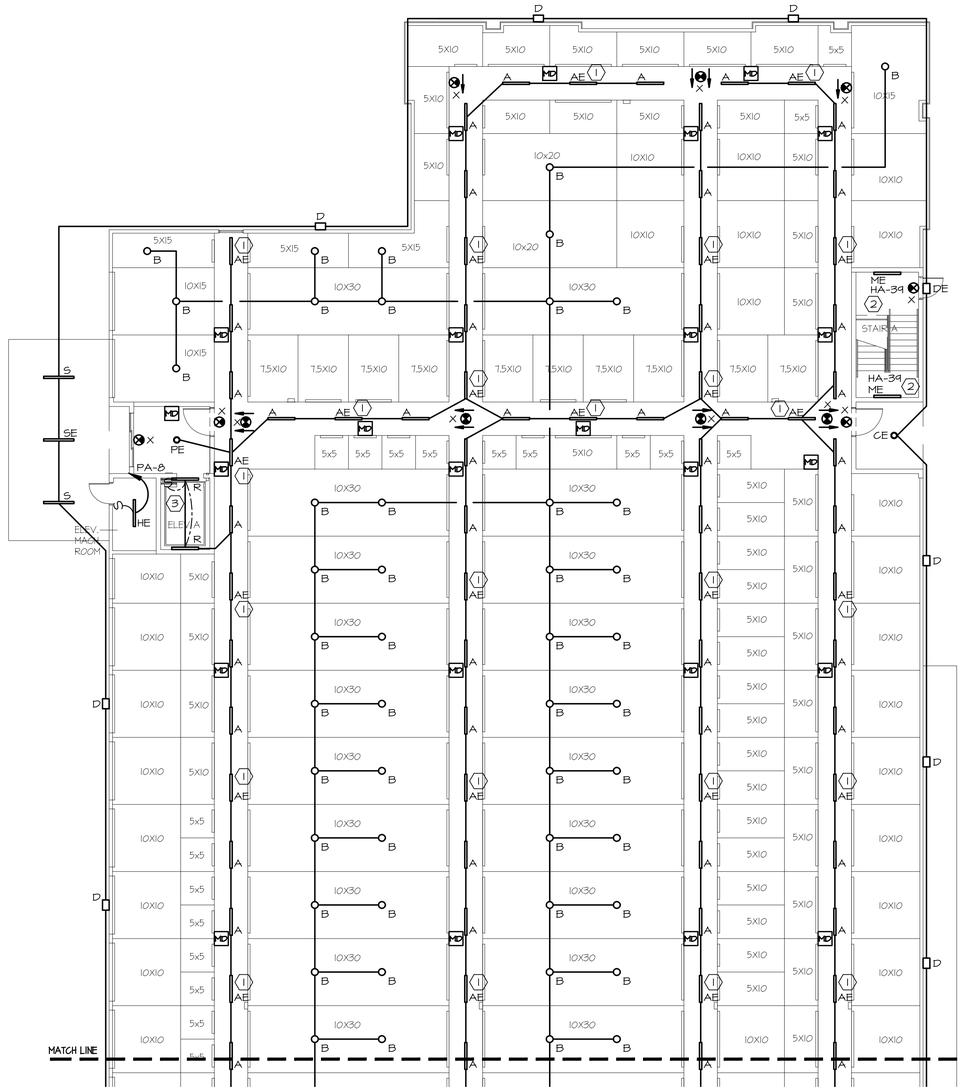
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

1ST FLOOR LIGHTING

SHEET NO.

E1.1



1 1ST FLOOR - LIGHTING PLAN
SCALE: 3-32"=1'-0"

NOTE : MD
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

GENERAL LIGHTING NOTES :

1. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
2. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

(1) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
(2) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
(3) LIGHT MOUNTED IN ELEVATOR PIT. LOCATE SWITCH @ ACCESS TO PIT. COORDINATE ON-SITE.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

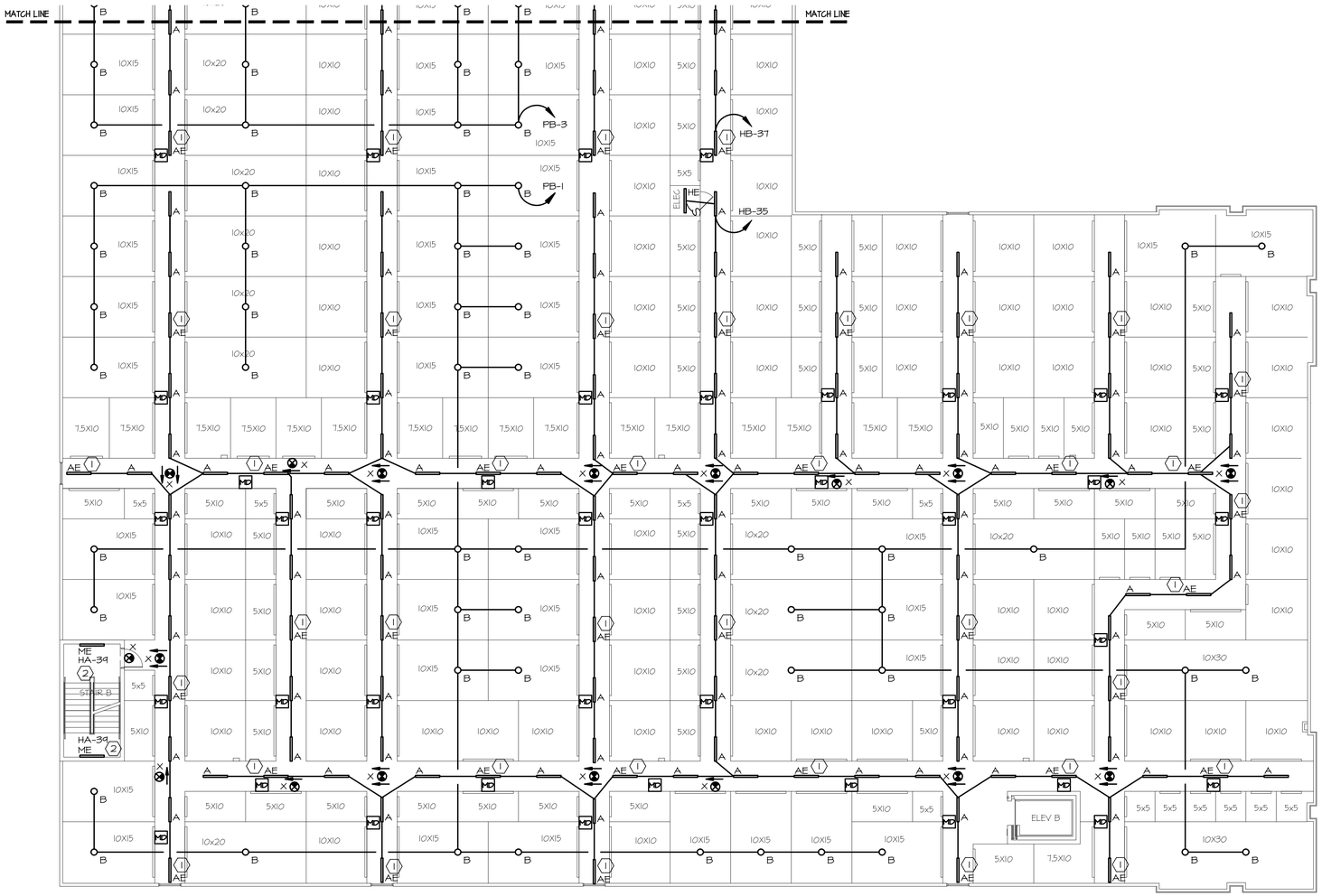
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

1ST FLOOR LIGHTING

SHEET NO.
E1.2



1 2ND FLOOR - LIGHTING PLAN
SCALE: 3/32"=1'-0"

NOTE : MD
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

GENERAL LIGHTING NOTES :

1. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
2. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

1. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
2. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
3. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURE ON FLOOR BELOW WINDOW.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

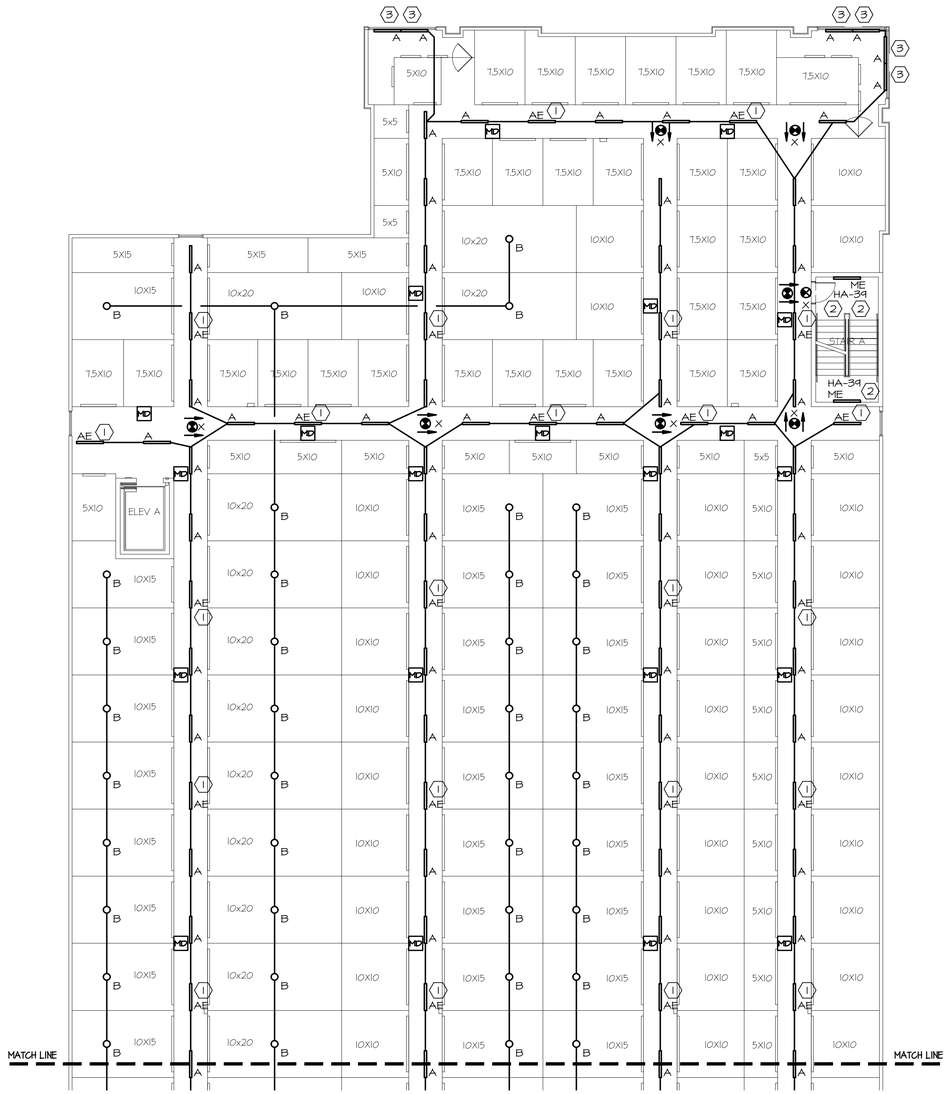
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

2ND FLOOR LIGHTING

SHEET NO.
E1.3



1 2ND FLOOR - LIGHTING PLAN
SCALE: 3/32"=1'-0"

NOTE : MD
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

GENERAL LIGHTING NOTES :

1. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
2. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

1. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
2. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
3. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURE ON FLOOR BELOW WINDOW.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

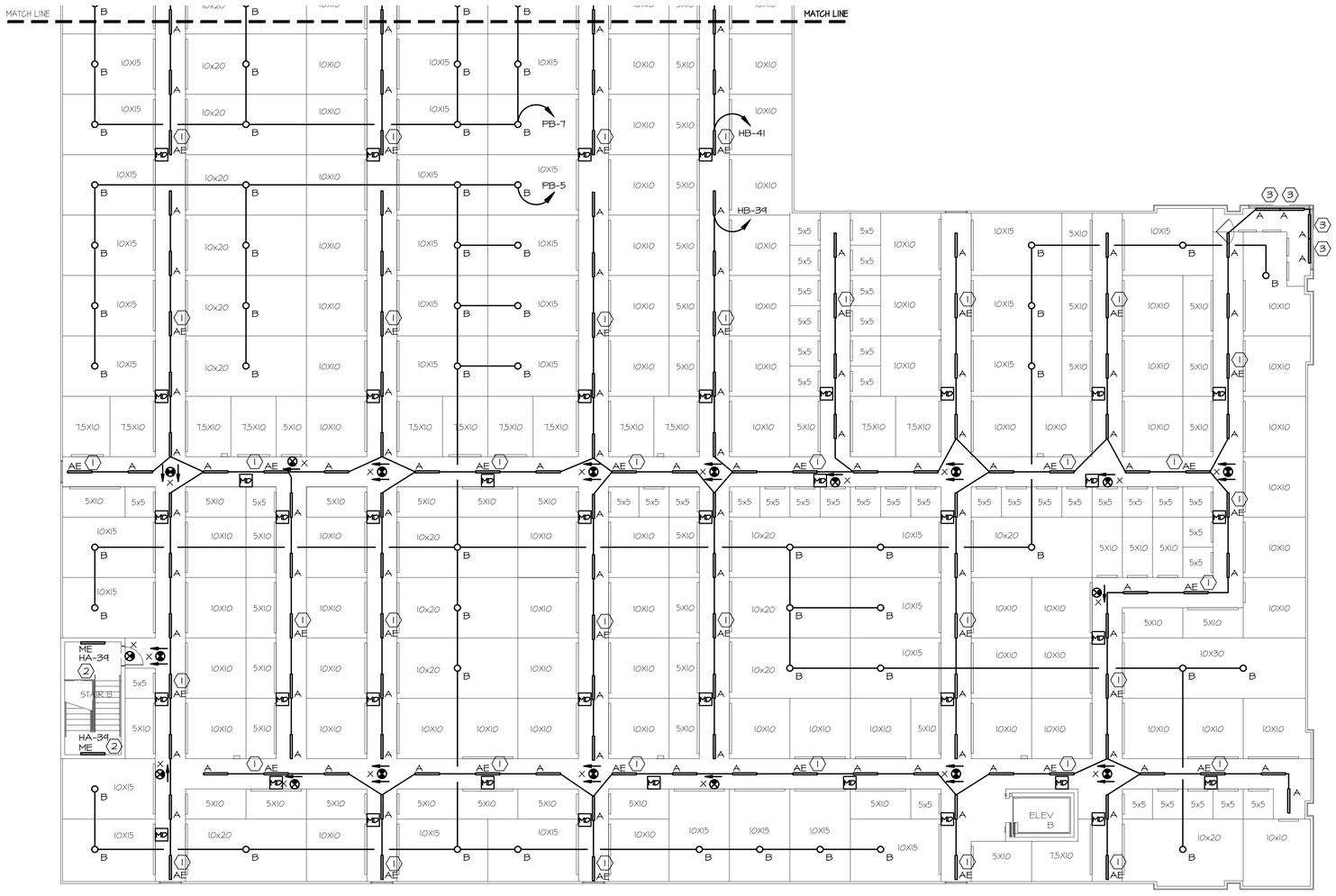
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

2ND FLOOR LIGHTING

SHEET NO.
E1.4



1 3RD FLOOR - LIGHTING PLAN

SCALE: 3/32"=1'-0"

NOTE : MD
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

GENERAL LIGHTING NOTES :

1. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
2. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

1. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
2. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
3. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURE ON FLOOR BELOW WINDOW.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

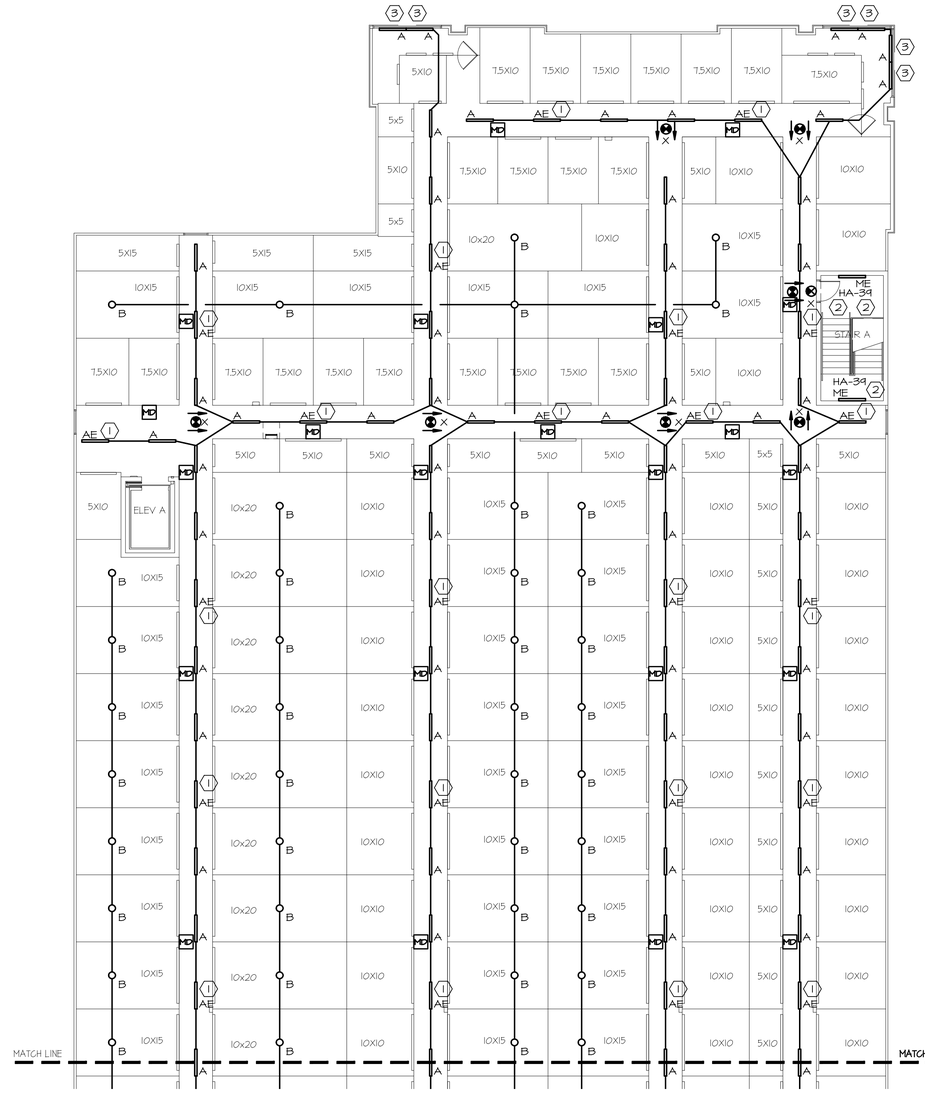
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.26.2019
DRAWN : RSW
REVISIONS:

3RD FLOOR LIGHTING

SHEET NO.
E1.5



1 3RD FLOOR - LIGHTING PLAN
SCALE: 3/32"=1'-0"

NOTE : MD
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

GENERAL LIGHTING NOTES :

1. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
2. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

1. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
2. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
3. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURE ON FLOOR BELOW WINDOW.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

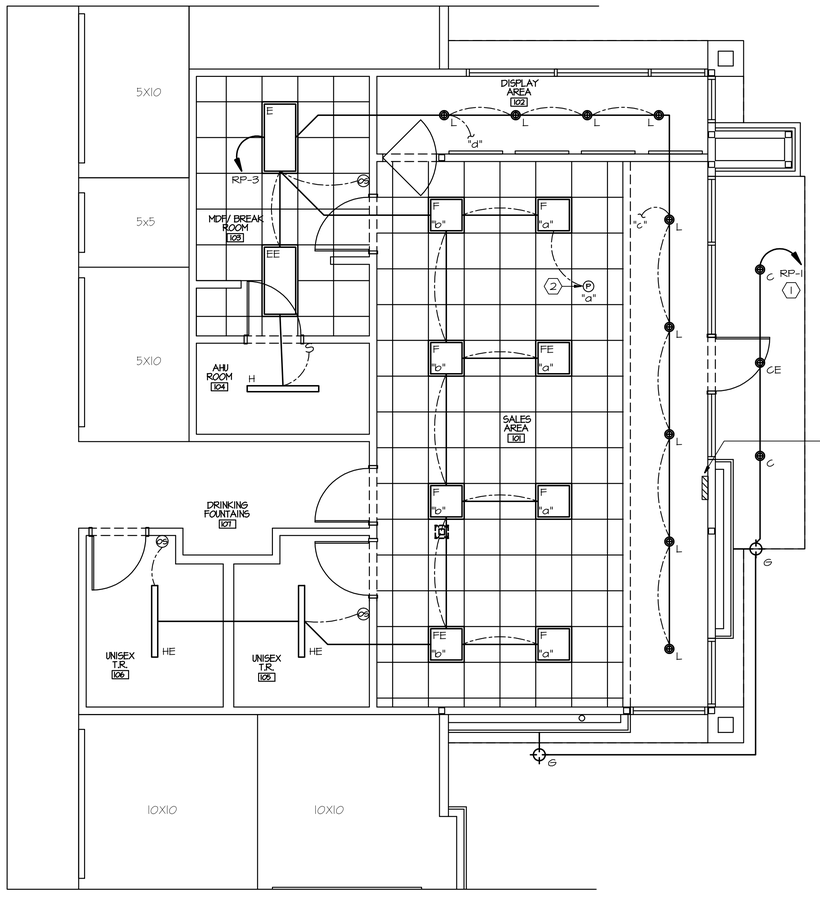
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

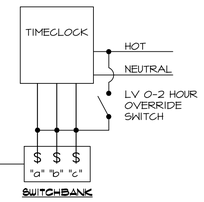
PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

3RD FLOOR LIGHTING

SHEET NO.
E1.6



1 OFFICE - LIGHTING PLAN
SCALE: 1/4"=1'-0"



LIGHTING CONTROL NOTES :

AUTOMATIC TIME SWITCH CONTROLS SHALL BE INSTALLED TO CONTROL LIGHTING IN ALL AREAS OF THE BUILDING.

1. AUTOMATIC TIME SWITCHES SHALL HAVE A MINIMUM 7 DAY CLOCK, AND
2. BE CAPABLE OF BEING SET FOR 7 DIFFERENT DAY TYPES PER WEEK, AND
3. INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE, WHICH TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS AND THEN RESUMES NORMALLY SCHEDULED OPERATIONS.
4. AUTOMATIC TIME SWITCHES SHALL ALSO HAVE PROGRAM BACK-UP CAPABILITIES, WHICH PREVENT THE LOSS OF PROGRAM AND TIME SETTINGS FOR AT LEAST 10 HOURS, IF POWER IS INTERRUPTED.

INCLUDE AN OVERRIDE SWITCH THAT COMPLIES WITH THE FOLLOWING:

1. THE OVERRIDE SWITCH SHALL BE A MANUAL CONTROL
2. THE OVERRIDE SWITCH, WHEN INITIATED, SHALL PERMIT THE CONTROLLED LIGHTING TO REMAIN ON FOR NOT MORE THAN 2 HOURS

GENERAL LIGHTING NOTES :

1. ALL WALL SWITCHES SHALL BE FLUSH MOUNTED.
2. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

1. RUN CIRCUIT SWITCHLES THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE.
2. LITHONIA #GMRB-PC-ADC CEILING MOUNTED AUTOMATIC PHOTOCELL, WITH MANUAL OVERRIDE.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

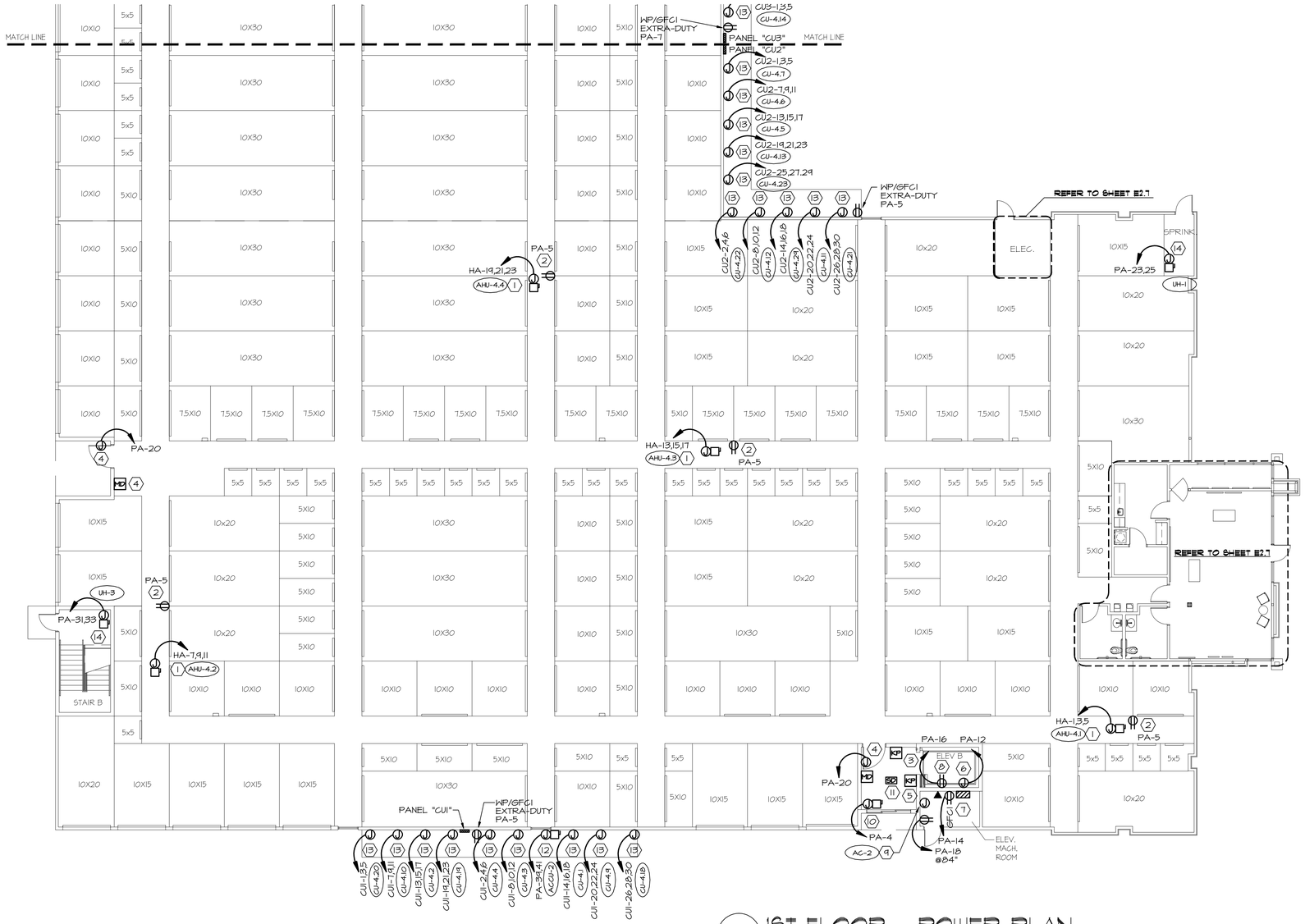
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

OFFICE LIGHTING

SHEET NO.
E1.7



1 1ST FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

ELEVATOR GENERAL NOTES :

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 7'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

POWER KEYED NOTES :

1. J-BOX & 30A/3P/480V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. SECURITY KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY INSTALLER. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
4. E.C PROVIDED/INSTALLED J-BOX FOR MAGNETIC DOOR HOLD OPEN ACTIVATED WITH MOTION SENSOR AT ENTRY. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT W/ OWNER. MOTION SENSOR SHALL REMAIN SEPARATE OF LIGHTING MOTION SENSORS. E.C. TO PROVIDE ALTRONIX #AL125UL POWER SUPPLY/CONVERTER CABINET IN MAIN ELECTRICAL ROOM.
5. ELEVATOR KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY CONTRACTOR. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
6. PROVIDE A DEDICATED BRANCH CIRCUIT FOR THE ELEVATOR CAR LIGHTING. FIELD COORDINATE LOCATION W/ ELEVATOR EQUIPMENT SUPPLIER.
7. 100A/3P/480V/N-1 FUSED 100A ENCLOSED DISCONNECT PROVIDED WITH SHUNT TRIP AS PER ELEVATOR CODE. **CONTRACTOR SHALL VERIFY W/ ELEVATOR INSTALLER PRIOR TO ORDERING ANY GEAR.**
8. DEDICATED DUPLEX RECEPTACLE FOR SUMP PUMP. REFER TO DETAIL 1/MEP2.
9. J-BOX FOR CONNECTION TO AC UNIT, POWERED THRU CONDENSING UNIT.
10. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR DOOR MOTOR. PROVIDE ACCESS PANEL IN CEILING.
11. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
12. J-BOX & 60A/2P/208V/FUSED 40A/N-3R DISCONNECT SWITCH FOR CONDENSING UNIT.
13. J-BOX FOR CONNECTION TO CONDENSING UNIT. DISCONNECT MEANS IN PANELBOARD WITHIN 50 FEET.
14. J-BOX & 30A/2P/208V/FUSED 25A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.

ARCHCON architecture
12035 COLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

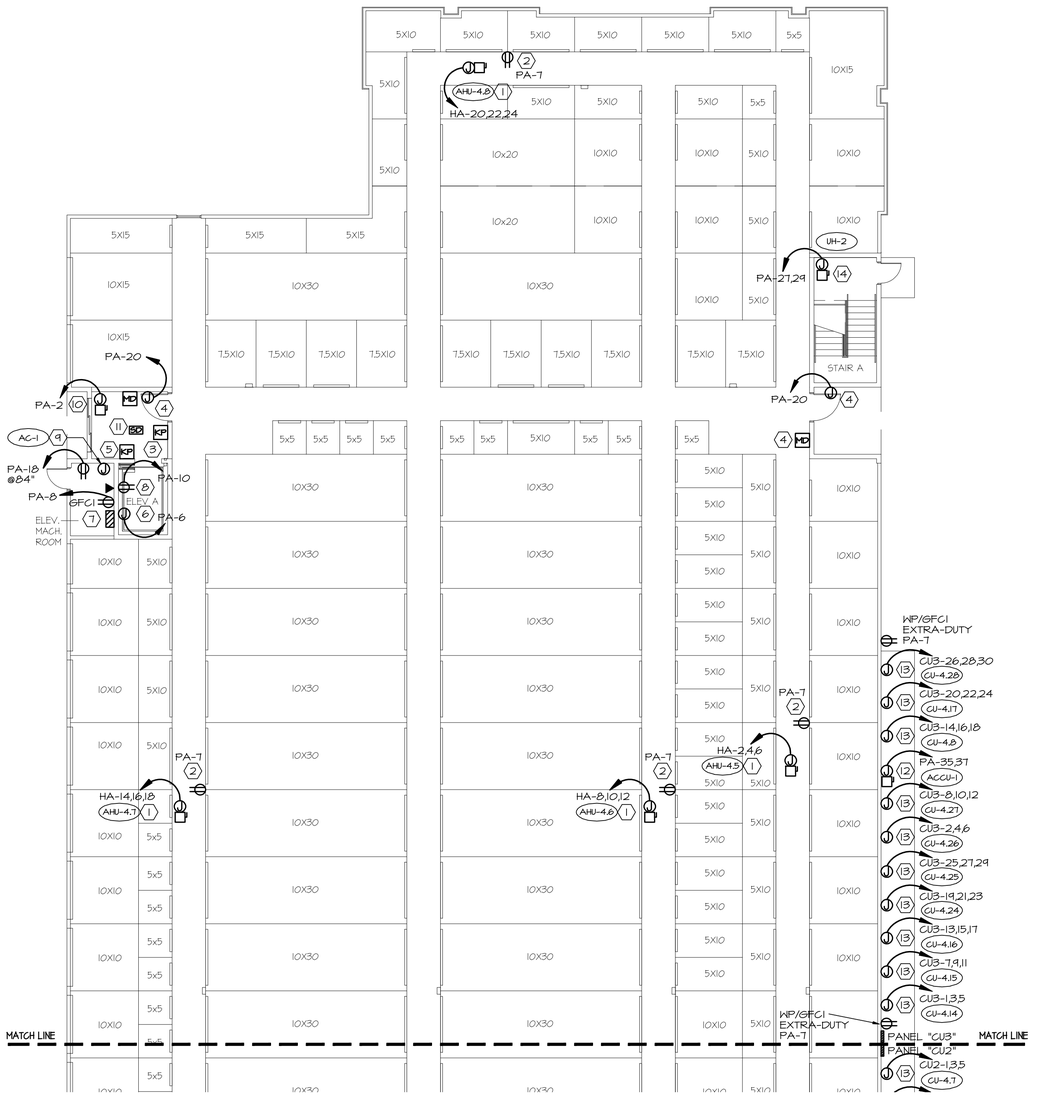
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

1ST FLOOR POWER

SHEET NO.
E2.1



1 1ST FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

ELEVATOR GENERAL NOTES :

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 7'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

POWER KEYED NOTES :

1. J-BOX & 30A/3P/480V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. SECURITY KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY INSTALLER. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
4. E.C PROVIDED/INSTALLED J-BOX FOR MAGNETIC DOOR HOLD OPEN ACTIVATED WITH MOTION SENSOR AT ENTRY. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT W/ OWNER. MOTION SENSOR SHALL REMAIN SEPARATE OF LIGHTING MOTION SENSORS. E.C. TO PROVIDE ALTRONIX #AL125UL POWER SUPPLY/CONVERTER CABINET IN MAIN ELECTRICAL ROOM.
5. ELEVATOR KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY CONTRACTOR. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
6. PROVIDE A DEDICATED BRANCH CIRCUIT FOR THE ELEVATOR CAR LIGHTING. FIELD COORDINATE LOCATION W/ ELEVATOR EQUIPMENT SUPPLIER.
7. 100A/3P/480V/N-1 FUSED 100A ENCLOSED DISCONNECT PROVIDED WITH SHUNT TRIP AS PER ELEVATOR CODE. **CONTRACTOR SHALL VERIFY W/ ELEVATOR INSTALLER PRIOR TO ORDERING ANY GEAR.**
8. DEDICATED DUPLEX RECEPTACLE FOR SUMP PUMP. REFER TO DETAIL 1/MEP2.
9. J-BOX FOR CONNECTION TO AC UNIT, POWERED THRU CONDENSING UNIT.
10. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR DOOR MOTOR. PROVIDE ACCESS PANEL IN CEILING.
11. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
12. J-BOX & 60A/2P/208V/FUSED 40A/N-3R DISCONNECT SWITCH FOR CONDENSING UNIT.
13. J-BOX FOR CONNECTION TO CONDENSING UNIT. DISCONNECT MEANS IN PANELBOARD WITHIN 50 FEET.
14. J-BOX & 30A/2P/208V/FUSED 25A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

1ST FLOOR POWER

SHEET NO.
E2.2

1 2ND FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

POWER KEYED NOTES :

1. J-BOX & 30A/3P/480V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

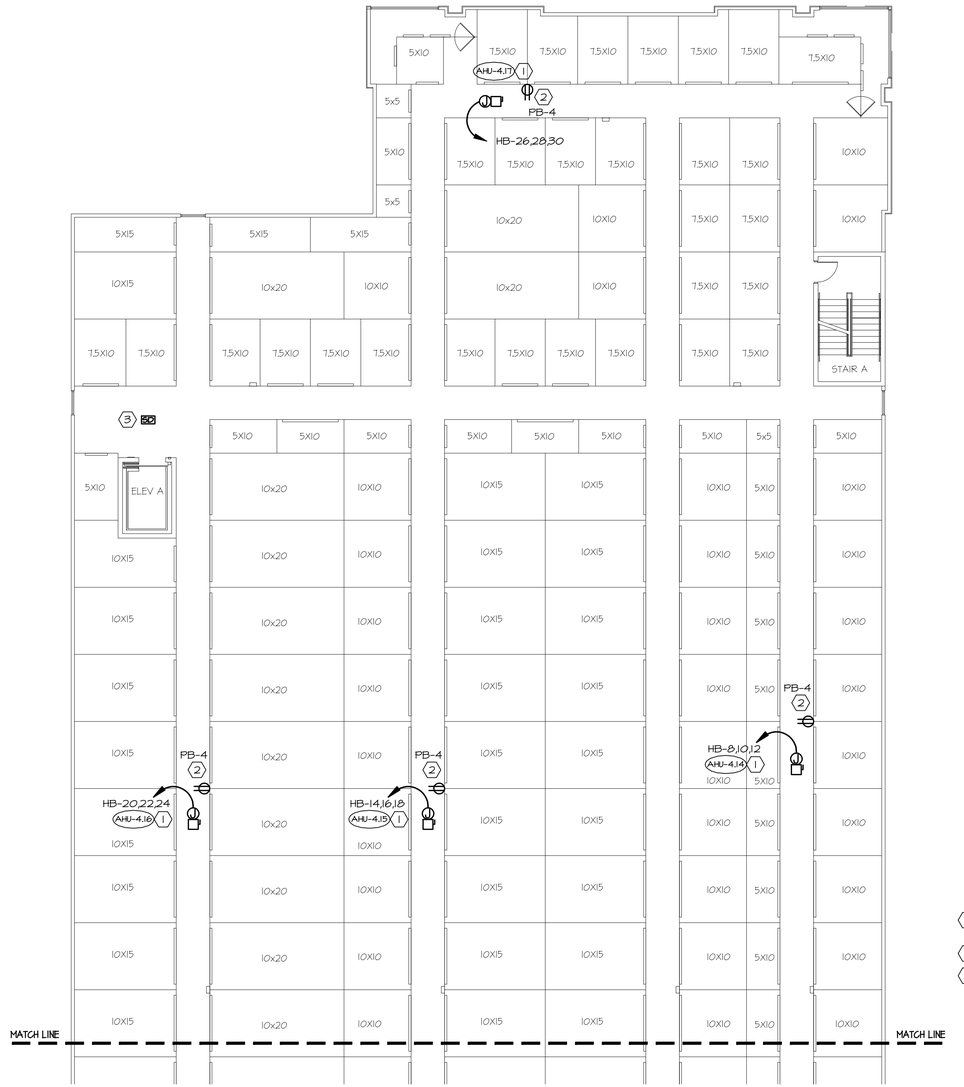
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

2ND FLOOR POWER

SHEET NO.
E2.3



1 2ND FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

POWER KEYED NOTES :

1. J-BOX & 30A/3P/480V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.26.2019
DRAWN : RSW
REVISIONS:

2ND FLOOR POWER

SHEET NO.
E2.4

1 3RD FLOOR - POWER PLAN

SCALE: 3/32"=1'-0"

POWER KEYED NOTES :

1. J-BOX & 30A/3P/480V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

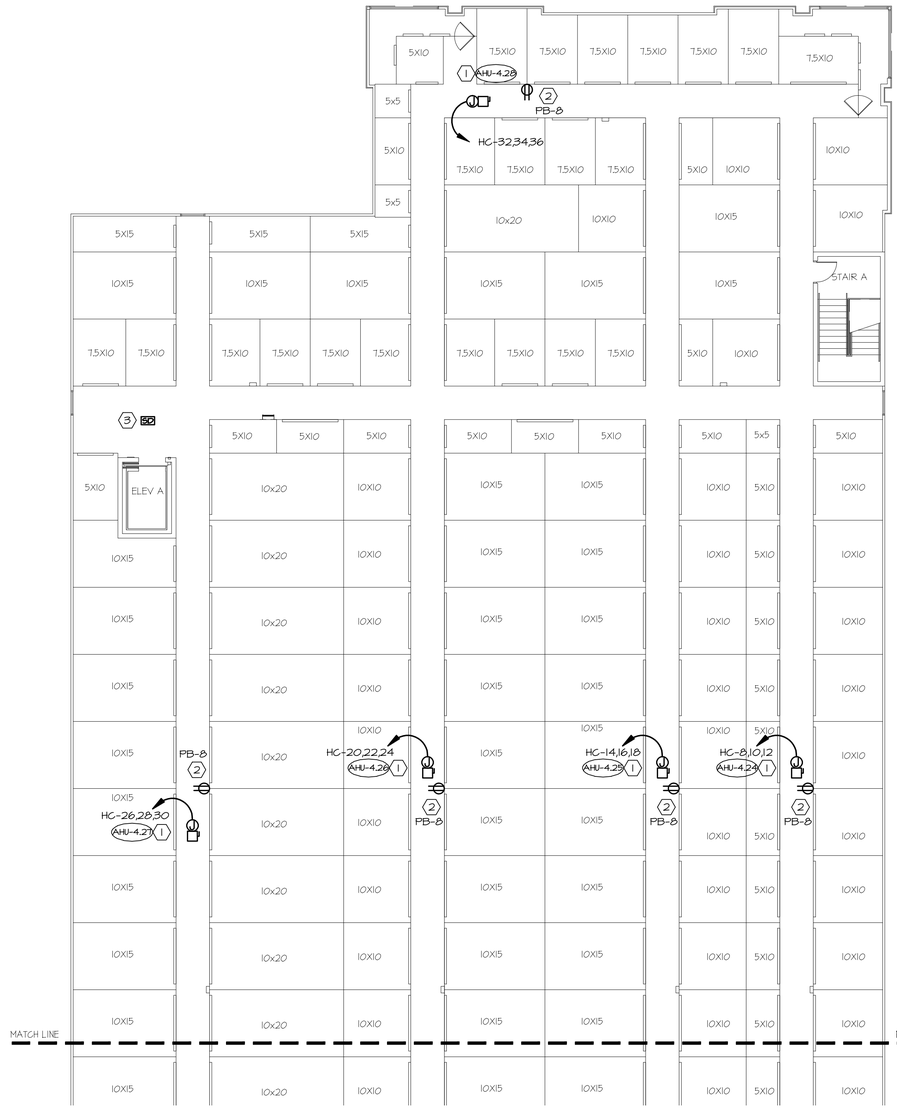
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.26.2019
DRAWN : RSW
REVISIONS:

3RD FLOOR POWER

SHEET NO.
E2.5



1 3RD FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

POWER KEYED NOTES :

1. J-BOX & 30A/3P/480V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

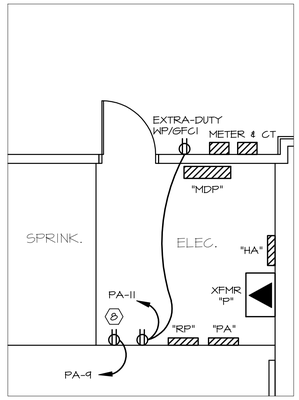
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

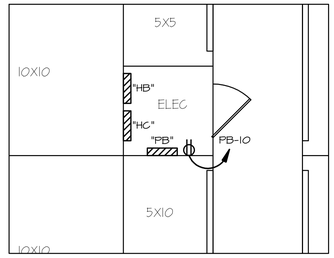
PROJECT NO. 1829
DATE : 02.26.2019
DRAWN : RSW
REVISIONS:

3RD FLOOR POWER

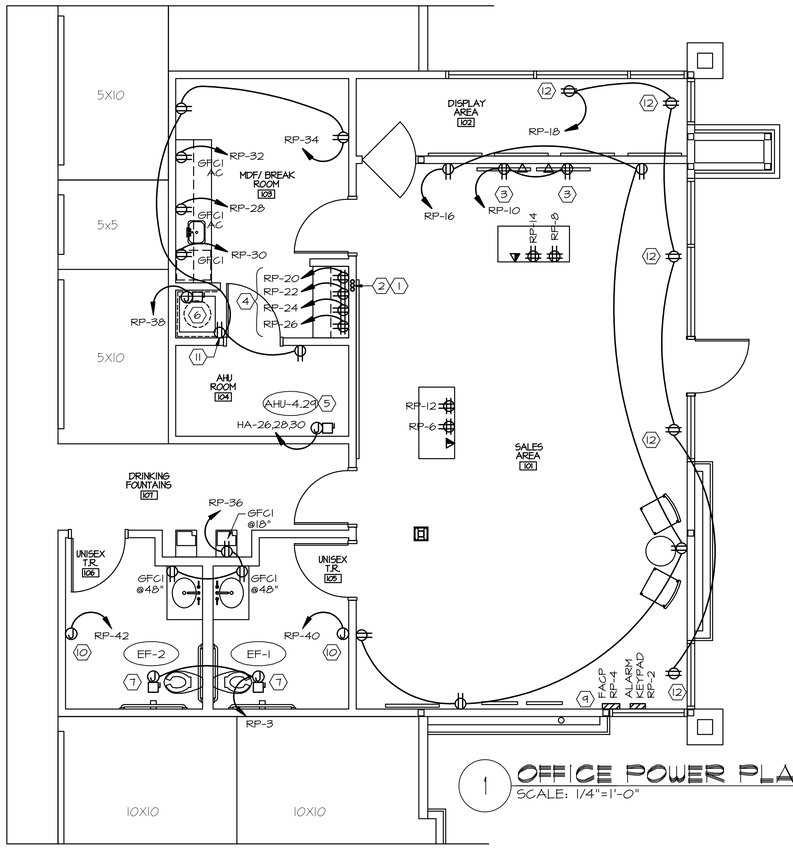
SHEET NO.
E2.6



2 1ST FLOOR ELECTRICAL ROOM
SCALE: 1/4"=1'-0"



3 2ND FLOOR ELECTRICAL ROOM
SCALE: 1/4"=1'-0"



1 OFFICE POWER PLAN
SCALE: 1/4"=1'-0"

POWER KEYED NOTES :

1. PROVIDE (2) 2" CONDUITS TO CABINETRY REAR WALL OF MDF/BREAK ROOM FOR SECURITY/TV/DATA. COORDINATE W/ SECURITY CONTRACTOR & GENERAL CONTRACTOR.
2. PROVIDE NECESSARY CONDUIT FROM CABINETRY TO OPERATOR GATES. COORDINATE WITH SECURITY CONTRACTOR & GENERAL CONTRACTOR.
3. DUPLEX OUTLETS AND CATV OUTLETS FOR TV MONITORS. MOUNT BEHINED MONITOR, 73" AFF. GC TO COORDINATE HEIGHTS/ LOCATIONS/QUANTITIES WITH OWNER AND MANAGEMENT COMPANIES.
4. OUTLETS TO BE MOUNTED IN MDF CABINET. COORDINATE WITH INSTALLER.
5. J-BOX & 30A/3P/480V/FUSED 25A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
6. J-BOX & 30A/2P/120V/NF/N-1 DISCONNECT SWITCH FOR WATER HEATER.
7. J-BOX & 30A/2P/120V/NF/N-1 DISCONNECT SWITCH FOR EXHAUST FAN.
8. DEDICATED DUPLEX RECEPTACLE FOR TELEPHONE BOARD.
9. THE LOCATION OF THE HVAC DUCT DETECTORS MUST BE CLEARLY INDICATED AT THE FIRE ALARM PANEL.
10. J-BOX FOR CONNECTION TO HAND DRYER. COORDINATE WITH INSTALLER.
11. RECEPTACLE ABOVE CEILING FOR CIRCULATING PUMP.
12. DUPLEX RECEPTACLE FLUSH MOUNTED IN CEILING.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

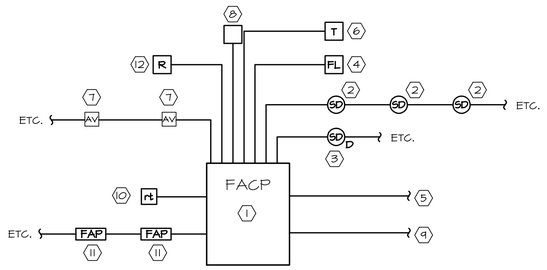
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

OFFICE POWER

SHEET NO.
E2.7



2 TYPICAL FIRE ALARM CONTROL DIAGRAM
NO SCALE

FIRE ALARM KEYED NOTES:

1. FIRE ALARM CONTROL PANEL WITH 24-HOUR BATTERY BACKUP
2. AREA SMOKE DETECTORS
3. DUCT SMOKE DETECTORS
4. SPRINKLER FLOW DETECTOR
5. WIRE TO RELAY TO SHUT DOWN HVAC UNITS
6. SPRINKLER FLOW DETECTOR TAMPER SWITCH
7. AUDIO/VISUAL ALARM DEVICES
8. ADDRESSABLE INTERFACE DEVICE (MONITOR ZAM) INSTALLED IN JUNCTION BOX
9. 120V POWER SUPPLY
10. REMOTE TEST & ALARM STATION
11. MANUAL FIRE ALARM PULL
12. RELAY FOR CONNETION OF DOOR HOLDER POWER SUPPLY.

FIRE ALARM NOTES

THE COMPLETE FIRE ALARM SYSTEM SHALL BE DESIGNED BY THE FIRE ALARM SUB-CONTRACTOR AND SUBMITTED TO THE OWNER, ARCHITECT & ENGINEER FOR REVIEW. THE BID SHALL BE HANDLED BY AN ALLOWANCE.

ALL THE ITEMS SHOWN HERE & ON THE ELECTRICAL POWER SHEETS ARE FOR REFERENCE ONLY. THE FIRE ALARM CONTRACTOR SHALL PREPARE A SET OF DOCUMENTS FOR REVIEW BY THE CITY, OWNER'S INSURANCE CARRIER, ETC. AND SHALL COMPLY WITH NFPA-72, ADA 702.

REFER TO THE MECHANICAL SHEETS FOR DUCT DETECTOR LOCATIONS.

DUCT DETECTORS MUST ACTIVATE AS A GENERAL ALARM AND NOT A SUPERVISORY/TROUBLE SIGNAL

ELECTRICAL SYMBOLS LEGEND

- 120V DUPLEX RECEPTACLE - 16" A.F.F. AC = ABOVE COUNTER
- 120V QUAD RECEPTACLE - 16" A.F.F.
- TELEPHONE RECEPTACLE - 16" A.F.F.
- PHONE/DATA RECEPTACLE - 16" A.F.F.
- CABLE T.V. ANTENNA OUTLET
- FLOOR MOUNTED DUPLEX RECEPTACLE
- DH MAGNETIC DOOR HOLD W/ 15 MINUTE TIMER
- KP KEYPAD
- FP FIRE ALARM MANUAL PULL STATION
- AV AUDIO/VISUAL DEVICE @ 84"A.F.F.
- V VISUAL DEVICE @ 84"A.F.F.
- S WALL SWITCH - 48" A.F.F.
- S_3 THREE-WAY WALL SWITCH - 48" A.F.F.
- S_T WALL SWITCH W/ 15 MIN. TIMER - 48" A.F.F.
- DISCONNECT SWITCH
- J JUNCTION BOX
- F-1 HOMERUN W/ CIRCUIT CALLOUT
- ELECTRICAL PANELBOARD
- CD CO2 DETECTOR - CEILING MOUNTED
- SD SMOKE DETECTOR - CEILING MOUNTED
- SD_D DUCT SMOKE DETECTOR.
- T THERMOSTAT - 48" A.F.F.

LOAD ANALYSIS MDP

LOAD	CONNECTED	FACTOR	DEMAND
SIGNAGE	4.8 KVA	1.25	6.00 KVA
LIGHTING-120V	0.99 KVA	1.25	1.24 KVA
LIGHTING-TIMER-120V	2.76 KVA	1.00	2.76 KVA
LIGHTING-277V	20.57 KVA	1.25	25.71 KVA
CONV. OUTLETS	10.0 KVA	1.00	10.00 KVA
CONV. OUTLETS	19.69 KVA	0.50	9.85 KVA
AIR COND-480V	217.5 KVA	0.33	71.78 KVA
HEATING	439.95 KVA	0.33	145.18 KVA
AIR COND-208V	8.74 KVA	1.00	8.74 KVA
MOTOR	0.60 KVA	1.25	0.75 KVA
MOTORS	2.84 KVA	1.00	2.84 KVA
WATER HEATERS	1.5 KVA	1.25	1.88 KVA
ELEVATORS-480V	90.0 KVA	0.95	85.50 KVA
		TOTAL DEMAND=	372.23 KVA

372,230 VA @ 480V/3Φ = 448 A.

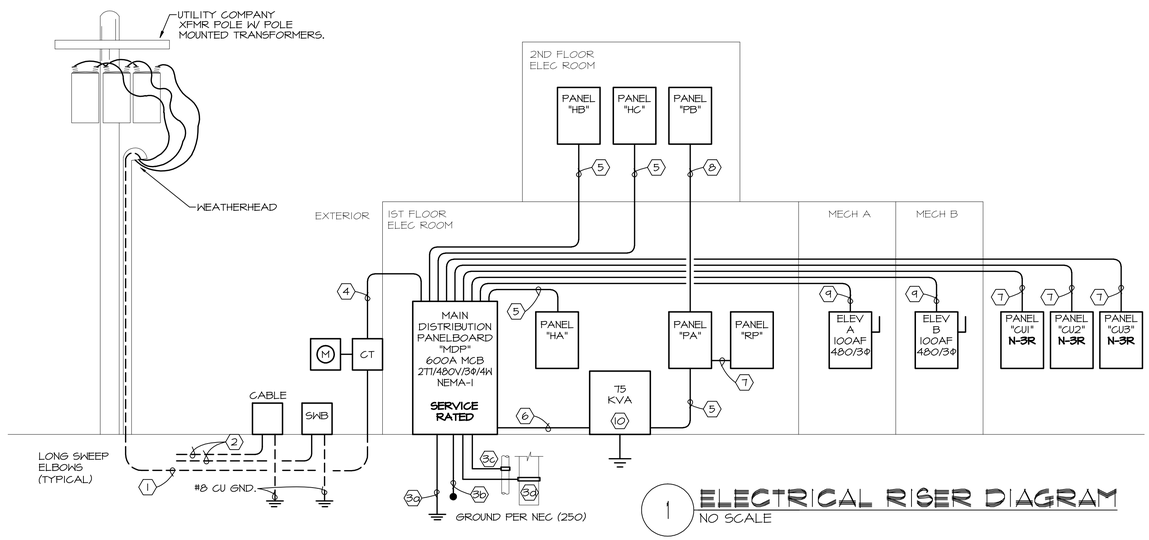
LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	MOUNTING	VOLTAGE	DESCRIPTION/ CATALOG NO.
A	30W LED	SURFACE	MVOLT	4' LED STRIP LSI #5DL4-LED-40L-FL-UNV-DIMI-40-80CRI
AE	30W LED	SURFACE	MVOLT	4' LED STRIP W/ 90 MIN. EMERGENCY BATTERY BACKUP LSI #5DL4-LED-40L-FL-UNV-DIMI-40-80CRI-EMIO
B	9W LED	SURFACE	120	LIGHT FIXTURE W/ OCCUPANCY SENSOR LEVITON #9864-LED
C	24W LED	RECESSED	MVOLT	LED EXTERIOR RECESSED DOWNLIGHT LITHONIA #LDN6-35/20-L06AR-LD-MVOLT-EZ10
CE	24W LED	RECESSED	MVOLT	LED EXTERIOR RECESSED DOWNLIGHT W/ 90 MIN. EMERGENCY BATTERY BACKUP LITHONIA #LDN6-35/20-L06AR-LD-MVOLT-EZ10-EL
D	73W LED	WALL	MVOLT	LED EXTERIOR WALL-PACK LITHONIA #DSXW1-LED-20C-1000-40K-T2M-MVOLT-DDBTXD
DE	73W LED	WALL	MVOLT	EXTERIOR WALL-PACK W/90 MIN BATTERY BACKUP LITHONIA #DSXW1-LED-20C-1000-40K-T2M-MVOLT-ELCW-DDBTXD
E	51W LED	LAY-IN	MVOLT	2'X4' LED TROFFER US LED #FTRI-24-40-80-UNV2
EE	51W LED	LAY-IN	MVOLT	2'X4' LED TROFFER W/ 90 MIN. EMERGENCY BATTERY BACKUP US LED #FTRI-24-40-80-UNV2 IOTA #IIS-25-I, BATTERY BACKUP
F	42W LED	LAY-IN	MVOLT	2'X2' LED TROFFER US LED #FTRI-22-40-80-UNV2
FE	42W LED	LAY-IN	MVOLT	2'X2' LED TROFFER W/ 90 MIN. EMERGENCY BATTERY BACKUP US LED #FTRI-22-40-80-UNV2 IOTA #IIS-25-I, BATTERY BACKUP
G	8W LED	WALL	120	EXTERIOR SCONCE MODERN FORMS #WS-W2312-WT
H	30W LED	SURFACE	MVOLT	4' LED FIXTURE LSI #5DL4-LED-40L-FL-UNV-DIMI-40-80CRI
HE	30W LED	SURFACE	MVOLT	4' LED FIXTURE W/ 90 MIN. EMERGENCY BATTERY BACKUP LSI #5DL4-LED-40L-FL-UNV-DIMI-40-80CRI-EMIO
L	13W LED	RECESSED	MVOLT	LED RECESSED DOWNLIGHT LITHONIA #LDN6-40/10-L06AR-LD-MVOLT-EZ10
ME	39W LED	SURFACE	MVOLT	4' LED WALL MOUNTED FIXTURE W/ 90 MIN. EMERGENCY BATTERY BACKUP LSI #5DL4-LED-50L-FL-UNV-DIMI-40-80CRI-EMIO
PE	35W LED	RECESSED	MVOLT	RECESSED DOWNLIGHT W/ 90 MIN. EMERGENCY BATTERY BACKUP LITHONIA #LDN6-35/30-L06AR-LD-MVOLT-EZ10-EL
R	44W LED	SURFACE	MVOLT	4.5' LED FIXTURE LITHONIA #VAP-4000LM-FST-MD-MVOLT-GZ10-40K-80CRI
S	56W LED	SURFACE	MVOLT	4.5' LED FIXTURE LITHONIA #VAP-6000LM-FST-MD-MVOLT-GZ10-40K-80CRI
SE	56W LED	SURFACE	MVOLT	4.5' LED FIXTURE W/ 90 MIN. EMERGENCY BATTERY BACKUP LITHONIA #VAP-6000LM-FST-MD-MVOLT-GZ10-40K-80CRI-BSL520
X	LED	UNIVERSAL	120/277	EXIT LIGHT W/ 90 MIN. BACKUP BATTERY LITHONIA #EXR-LED-EL-M6 CONTRACTOR SHALL COORDINATE # OF SIDES, MOUNTING & DIRECTIONAL ARROWS W/ PLAN & LOCAL INSPECTOR, COORDINATE PRIOR TO INSTALLATION.

NOTES:
1. ALL LIGHT FIXTURES SHALL BE SUBMITTED & APPROVED BY THE OWNER PRIOR TO THE ORDER OR INSTALLATION OF ANY FIXTURE.

ELECTRICAL RISER KEYED NOTES :

1. UNDERGROUND SERVICE LATERAL FROM POLE MOUNTED TRANSFORMERS. INSTALLED PER CPS STANDARDS. LONG SWEEP RADIUS ELBOWS ONLY.
2. 2" CONDUIT FOR TELEPHONE & CABLE SERVICE. COORDINATE SERVICE FROM STREET TO BUILDING WITH LOCAL PROVIDER.
3a. #6 CU. GND. TO 3/4"x 8'-0" DRIVEN GROUND ROD. INSTALL PER NEC 250.
3b. #4 GND. TO FOUNDATION REBAR. INSTALL PER NEC 250.
3c. #2/0 GND. TO COLD WATER PIPE. INSTALL PER NEC 250.
3d. #2/0 CU. GND. TO BUILDING STEEL. INSTALL PER NEC 250.
4. (2-SETS) 3 #350 KCMIL THW (H), 1 #350 KCMIL THW (N)., 1 #2/0 GND., 3-1/2" C.
5. 4 #3/0 THW, #6 GND., 2" C.
6. 3 #1 THW, 1 #6 GND., 1-1/2" C.
7. 4 #2 THW, #8 GND., 2" C.
8. 4 #6 THW, #10 GND., 1-1/2" C.
9. 3 #2 THW, #8 GND., 2" C.
10. 75 KVA DRY TYPE TRANSFORMER 480 V. "DELTA" PRIMARY 120/ 208 V. "WYE" SECONDARY MOUNT ON FLOOR. #4 CU. GND. TO BUILDING STEEL SQUARE D #EE75T3H



1 ELECTRICAL RISER DIAGRAM
NO SCALE

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

ELECTRICAL RISER

SHEET NO.
E3.1

PANELBOARD "MDP"

277/480 VOLT / 3 PHASE / 4 WIRE — 600A MAIN BREAKER — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 65,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#3/0	1	PANEL "HA"	200	44338	*			22500	100	PANEL "CU1"	2	#2
#3/0	3	"		47318		*		22500		"	4	#2
#3/0	5	"	3	51769			*	22500	3	"	6	#2
#3/0	7	PANEL "HB"	200	47640	*			25000	100	PANEL "CU2"	8	#2
#3/0	9	"		48600		*		25000		"	10	#2
#3/0	11	"	3	51180			*	25000	3	"	12	#2
#3/0	13	PANEL "HC"	200	54890	*			25000	100	PANEL "CU3"	14	#2
#3/0	15	"		54890		*		25000		"	16	#2
#3/0	17	"	3	54890			*	25000	3	"	18	#2
#1	19	TRANSFORMER "P"	120	16834	*			–	–	–	20	–
#1	21	"		17296		*		–	–	–	22	–
#1	23	"	3	17742			*	–	–	–	24	–
–	25	–		–	–	–		–	–	–	26	–
–	27	–		–	–	–		–	–	–	28	–
–	29	–		–	–	–		–	–	–	30	–
–	31	–		–	–	–		15000	100	ELEVATOR "A"	32	#2
–	33	–		–	–	–		15000		"	34	#2
–	35	–		–	–	–		15000	3	"	36	#2
–	37	–		–	–	–		15000	100	ELEVATOR "B"	38	#2
–	39	–		–	–	–		15000		"	40	#2
–	41	–		–	–	–		15000	3	"	42	#2
		VA LOAD PER PHASE		271418		271654		278001		CONNECTED LOAD = 819.94 KVA DEMAND LOAD = 319.73 KVA		457 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "CU1"

277/480 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — **NEMA-3R** — 65,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#12	1	CU-4.20	15	2500	*			2500	15	CU-4.4	2	#12
#12	3	"		2500		*		2500		"	4	#12
#12	5	"	3	2500			*	2500	3	"	6	#12
#12	7	CU-4.10	15	2500	*			2500	15	CU-4.3	8	#12
#12	9	"		2500		*		2500		"	10	#12
#12	11	"	3	2500			*	2500	3	"	12	#12
#12	13	CU-4.2	15	2500	*			2500	15	CU-4.1	14	#12
#12	15	"		2500		*		2500		"	16	#12
#12	17	"	3	2500			*	2500	3	"	18	#12
#12	19	CU-4.19	15	2500	*			2500	15	CU-4.9	20	#12
#12	21	"		2500		*		2500		"	22	#12
#12	23	"	3	2500			*	2500	3	"	24	#12
–	25	–		–	–	–		2500	15	CU-4.18	26	#12
–	27	–		–	–	–		2500		"	28	#12
–	29	–		–	–	–		2500	3	"	30	#12
		VA LOAD PER PHASE		22500		22500		22500		CONNECTED LOAD = 67.5 KVA DEMAND LOAD = 67.5 KVA		82 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "CU2"

277/480 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — **NEMA-3R** — 65,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#12	1	CU-4.7	15	2500	*			2500	15	CU-4.22	2	#12
#12	3	"		2500		*		2500		"	4	#12
#12	5	"	3	2500			*	2500	3	"	6	#12
#12	7	CU-4.6	15	2500	*			2500	15	CU-4.12	8	#12
#12	9	"		2500		*		2500		"	10	#12
#12	11	"	3	2500			*	2500	3	"	12	#12
#12	13	CU-4.5	15	2500	*			2500	15	CU-4.24	14	#12
#12	15	"		2500		*		2500		"	16	#12
#12	17	"	3	2500			*	2500	3	"	18	#12
#12	19	CU-4.13	15	2500	*			2500	15	CU-4.11	20	#12
#12	21	"		2500		*		2500		"	22	#12
#12	23	"	3	2500			*	2500	3	"	24	#12
#12	25	CU-4.23	15	2500	*			2500	15	CU-4.21	26	#12
#12	27	"		2500		*		2500		"	28	#12
#12	29	"	3	2500			*	2500	3	"	30	#12
		VA LOAD PER PHASE		25000		25000		25000		CONNECTED LOAD = 75.0 KVA DEMAND LOAD = 75.0 KVA		91 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "CU3"

277/480 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — **NEMA-3R** — 65,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#12	1	CU-4.14	15	2500	*			2500	15	CU-4.26	2	#12
#12	3	"		2500		*		2500		"	4	#12
#12	5	"	3	2500			*	2500	3	"	6	#12
#12	7	CU-4.15	15	2500	*			2500	15	CU-4.27	8	#12
#12	9	"		2500		*		2500		"	10	#12
#12	11	"	3	2500			*	2500	3	"	12	#12
#12	13	CU-4.16	15	2500	*			2500	15	CU-4.8	14	#12
#12	15	"		2500		*		2500		"	16	#12
#12	17	"	3	2500			*	2500	3	"	18	#12
#12	19	CU-4.24	15	2500	*			2500	15	CU-4.17	20	#12
#12	21	"		2500		*		2500		"	22	#12
#12	23	"	3	2500			*	2500	3	"	24	#12
#12	25	CU-4.25	15	2500	*			2500	15	CU-4.28	26	#12
#12	27	"		2500		*		2500		"	28	#12
#12	29	"	3	2500			*	2500	3	"	30	#12
		VA LOAD PER PHASE		25000		25000		25000		CONNECTED LOAD = 75.0 KVA DEMAND LOAD = 75.0 KVA		91 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "HA"

277/480 VOLT / 3 PHASE / 4 WIRE — 200A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 65,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#12	1	AHU-4.1	20	4490	*			4490	20	AHU-4.5	2	#10
#12	3	"		4490		*		4490		"	4	#10
#12	5	"	3	4490			*	4490	3	"	6	#10
#10	7	AHU-4.2	20	4490	*			4490	20	AHU-4.6	8	#10
#10	9	"		4490		*		4490		"	10	#10
#10	11	"	3	4490			*	4490	3	"	12	#10
#12	13	AHU-4.3	20	4490	*			4490	20	AHU-4.7	14	#8
#12	15	"		4490		*		4490		"	16	#8
#12	17	"	3	4490			*	4490	3	"	18	#8
#12	19	AHU-4.4	20	4490	*			4490	20	AHU-4.8	20	#8
#12	21	"		4490		*		4490		"	22	#8
#12	23	"	3	4490			*	4490	3	"	24	#8
–	25	–		–	–	–		6830	25	AHU-4.29	26	#12
–	27	–		–	–	–		6830		"	28	#12
–	29	–		–	–	–		6830	3	"	30	#12
–	31	–		–	–	–		–	–	–	32	–
–	33	–		–	–	–		–	–	–	34	–
#12	35	LIGHTING - HALL 1ST	20	3148			*	–	–	–	36	–
#12	37	LIGHTING - HALL 1ST	20	2488	*			–	–	–	38	–
#12	39	LIGHTING - STAIRS	20	468		*		–	–	–	40	–
#12	41	LIGHTING EXTERIOR	20	1771			*	–	–	–	42	–
		VA LOAD PER PHASE		44338		47318		51769		CONNECTED LOAD = 148.43 KVA DEMAND LOAD = 150.39 KVA		181 AMPS

(3) RUN CIRCUIT THRU PHOTOCELL

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.
2. LABEL INDIVIDUAL CIRCUITS WITH EXIT & EMERGENCY LIGHTING.

PANELBOARD "HB"

277/480 VOLT / 3 PHASE / 4 WIRE — 200A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 65,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#10	1	AHU-4.9	20	4490	*			4490	20	AHU-4.13	2	#12
#10	3	"		4490		*		4490		"	4	#12
#10	5	"	3	4490			*	4490	3	"	6	#12
#10	7	AHU-4.10	20	4490	*			4490	20	AHU-4.14	8	#12
#10	9	"		4490		*		4490		"	10	#12
#10	11	"	3	4490			*	4490	3	"	12	#12
#12	13	AHU-4.11	20	4490	*			4490	20	AHU-4.15	14	#12
#12	15	"		4490		*		4490		"	16	#12
#12	17	"	3	4490			*	4490	3	"	18	#12
#12	19	AHU-4.12	20	4490	*			4490	20	AHU-4.16	20	#12
#12	21	"		4490		*		4490		"	22	#12
#12	23	"	3	4490			*	4490	3	"	24	#12
–	25	–		–	–	–		4490	20	AHU-4.17	26	#10
–	27	–		–	–	–		4490		"	28	#10
–	29	–		–	–	–		4490	3	"	30	#10
–	31	–		–	–	–		–	–	–	32	–
–	33	–		–	–	–		–	–	–	34	–
#12	35	LIGHTING - HALL 2ND	20	3540			*	–	–	–	36	–
#12	37	LIGHTING - HALL 2ND	20	2730	*			–	–	–	38	–
#12	39	LIGHTING - HALL 3RD	20	3640		*		–	–	–	40	–
#12	41	LIGHTING - HALL 3RD	20	2730			*	–	–	–	42	–
		VA LOAD PER PHASE		41640		48600		51180		CONNECTED LOAD = 147.42 KVA DEMAND LOAD = 150.59 KVA		182 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.
2. LABEL INDIVIDUAL CIRCUITS WITH EXIT & EMERGENCY LIGHTING.

PANELBOARD "HC"

277/480 VOLT / 3 PHASE / 4 WIRE — 200A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 65,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#10	1	AHU-4.18	20	4490	*			4490	20	AHU-4.23	2	#12
#10	3	"		4490		*		4490		"	4	#12
#10	5	"	3	4490			*	4490	3	"	6	#12
#12	7	AHU-4.19	20	4490	*			4490	20	AHU-4.24	8	#12
#12	9	"		4490		*		4490		"	10	#12
#12	11	"	3	4490			*	4490	3	"	12	#12
#10	13	AHU-4.20	20	4490	*			4490	20	AHU-4.25	14	#12
#10	15	"		4490		*		4490		"	16	#12
#10	17	"	3	4490			*	4490	3	"	18	#12
#12	19	AHU-4.21	20	4490	*			4490	20	AHU-4.26	20	#12
#12	21	"		4490		*		4490		"	22	#12
#12	23	"	3	4490			*	4490	3	"	24	#12
#12	25	AHU-4.22	20	4490	*			4490	20	AHU-4.27	26	#12
#12	27	"		4490		*		4490		"	28	#12
#12	29	"	3	4490			*	4490	3	"	30	#12
–	31	–		–	–	–		4490	20	AHU-4.28	32	#10
–	33	–		–	–	–		4490		"	34	#10
–	35	–		–	–	–		4490	3	"	36	#10
–	37	–		–	–	–		–	–	–	38	–
–	39	–		–	–	–		–	–	–	40	–
–	41	–		–	–	–		–	–	–	42	–
		VA LOAD PER PHASE		54890		54890		54890		CONNECTED LOAD = 164.67 KVA DEMAND LOAD = 164.67 KVA		199 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "PA"

120/208 VOLT / 3 PHASE / 4 WIRE — 200A MAIN BREAKER — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 22,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#12	1	LIGHTING - STORAGE 1ST	20	561	*			600	20	AUTOMATIC DOOR MOTOR	2	#12
#12	3	LIGHTING - STORAGE 1ST	20	504		*		600	20	AUTOMATIC DOOR MOTOR	4	#12
#12	5	OUTLETS - HALL 1ST	20	1080			*	100	20	ELEVATOR CAR LIGHTS	6	#12
#12	7	OUTLETS - HALL 1ST	20	1080	*			210	20	ELEVATOR RM.-OUTLET/LT	8	#12
#12	9	TELEPHONE BOARD	20	180		*		400	20	ELEVATOR SUMP PUMP	10	#12
#12	11	OUTLETS-ELEC ROOM	20	360			*	100	20	ELEVATOR CAR LIGHTS	12	#12
–	13	–	–	–	*			210	20	ELEVATOR RM.-OUTLET/LT	14	#12
–	15	–	–	–		*		400	20	ELEVATOR SUMP PUMP	16	#12
–	17	–	–	–			*	200	20	CONDENSATE PUMPS	18	#12
–	19	–	–	–	*			200	20	DOOR HOLDS	20	#12
–	21	–	–	–		*		–	–	–	22	–
#10	23	UNIT HEATER-1	25	1600			*	–	–	–	24	–
#10	25	"	2	1600	*			–	–	–	26	–
#8	27	UNIT HEATER-2	25	1600		*		–	–	–	28	–
#6	29	"	2	1600			*	–	–	–	30	–
#8	31	UNIT HEATER-3	25	1600	*			5928	100	PANEL "RP"	32	#2
#8	33	"	2	1600		*		8505		"	34	#2
#10	35	ACCU-1	25	2184			*	6890	3	"	36	#2
#10	37	"	2	2184	*			2655	50	PANEL "PB"	38	#6
#8	39	ACCU-2	25	2184		*		1323		"	40	#6
#8	41	"	2	2184			*	1444	3	"	42	#6
		VA LOAD PER PHASE		16834		17296		17742		CONNECTED LOAD = 51.92 KVA DEMAND LOAD = 51.56 KVA		144 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "PB"

120/208 VOLT / 3 PHASE / 4 WIRE — 100A LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 22,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
#12	1	LIGHTING - STORAGE 2ND	20	414	*			900	20	OUTLETS - HALL 2ND	2	#12
#12	3	LIGHTING - STORAGE 2ND	20	423		*		720	20	OUTLETS - HALL 2ND	4	#12
#12	5	LIGHTING - STORAGE 3RD	20	414			*	1080	20	OUTLETS - HALL 3RD	6	#12
#12	7	LIGHTING - STORAGE 3RD	20	441	*			900	20	OUTLETS - HALL 3RD	8	#12
–	9	–	–	–		*		180	20	OUTLET-ELEC ROOM	10	#12
–	11	–	–	–			*	–	–	–	12	–
–	13	–	–	–	*			–	–	–	14	–
–	15	–	–	–		*		–	–	–	16	–
–	17	–	–	–			*	–	–	–	18	–
–	19	–	–	–	*			–	–	–	20	–
–	21	–	–	–		*		–	–	–	22	–
–	23	–	–	–			*	–	–	–	24	–
–	25	–	–	–	*			–	–	–	26	–
–	27	–	–	–		*		–	–	–	28	–
–	29	–	–	–			*	–	–	–	30	–
		VA LOAD PER PHASE		2655		1323		1444		CONNECTED LOAD = 5.47 KVA DEMAND LOAD = 5.47 KVA		16 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "RP"

120/208 VOLT / 3 PHASE / 4 WIRE — 100A LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 22,000 A.I.C. RATING

wire	ckt	DESCRIPTION	C.B.	VA LOAD	ΦA	ΦB	ΦC	VA LOAD	C.B.	DESCRIPTION	ckt	wire
(3) #12	1	EXTERIOR LIGHTS	20	88	*			100	20	ALARM	2	#12 (1)(2)
#12	3	RETAIL/TR LIGHTS/FANS	20	885		*		100	20	FACP	4	#12 (1)(2)
–	5	–	–	–			*	360	20	OUTLETS-POS	6	#12 (1)(2)
–	7	–	–	–	*			360	20	OUTLETS-POS	8	#12 (1)(2)
–	9	–	–	–		*		360	20	OUTLETS-MONITORS	10	#12
–	11	–	–	–			*	360	20	OUTLETS-COUNTER	12	#12
–	13	–	–	–	*			360	20	OUTLETS-COUNTER	14	#12
–	15	–	–	–		*		1080	20	OUTLETS-SALES	16	#12
–	17	–	–	–			*	900	20	OUTLETS-CEILING	18	#12
–	19	–	–	–	*			360	20	MDF-OUTLET	20	#12 (1)(2)
–	21	–	–	–		*		360	20	MDF-OUTLET	22	#12 (1)(2)
–	23	–	–	–			*	360	20	MDF-OUTLET	24	#12 (1)(2)
–	25	–	–	–	*			360	20	MDF-OUTLET	26	#12 (1)(2)
#12	27	GATE KEYPADS	20	200		*		1000	20	OUTLET-MICROWAVE	28	#12
#10	29	GATE MOTOR	20	600			*	800	20	OUTLET-REFRIGERATOR	30	#12
#10	31	GATE MOTOR	20	600	*			1000	20	OUTLET-COFFEE	32	#12
(3) #10	33	BUILDING SIGN	20	1200		*		720	20	OUTLETS-BREAK/MDF	34	#12
(3) #10	35	BUILDING SIGN	20	1200			*	730	20	OUTLETS-TOILET/DF	36	#12
(3) #10	37	BUILDING SIGN	20	1200	*			1500	20	WATER HEATER	38	#12
(3) #10	39	MONUMENT SIGN	20	1200		*		1400	20	HAND DRYER	40	#12
#12	41	OUTLET-SIGN	20	180			*	1400	20	HAND DRYER	42	#12
		VA LOAD PER PHASE		5928		8505		6890		CONNECTED LOAD = 21.32 KVA DEMAND LOAD = 21.81 KVA		61 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.
2. LABEL INDIVIDUAL CIRCUITS WITH EXIT & EMERGENCY LIGHTING.

PANEL KEYED NOTES:

(1) LOCK-ON BREAKER
(2) DEDICATED CIRCUIT W/ SEPARATE GROUND
(3) RUN CIRCUIT THRU PHOTOCELL

ARCHCON architecture
12035 CODWICK, SUITE 200 SAN ANTONIO, TX 78216
P 210.493.2234

RSW CONSULTANTS
FIRM REG #8236
STATE OF TEXAS — ROBERT W. STANLEY — 67589 — REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.26.2019
DRAWN : RSW
REVISIONS:

ELECTRICAL SCHEDULES

SHEET NO.
E3.2

GENERAL ELECTRICAL NOTES: (AS APPLICABLE)

G1. COMPLETE SYSTEMS: PROVIDE LABOR, MATERIALS, EQUIPMENT, AND TRANSPORTATION TO RECEIVE, INSTALL, ADJUST, AND PUT INTO OPERATION COMPLETE ELECTRICAL SYSTEMS IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. PROVIDE PRODUCTS NOT MENTIONED BUT OBVIOUSLY NECESSARY AND INCIDENTAL TO THE COMPLETION OF THIS WORK.

G2. SCOPE: WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: MECHANICAL WORK AS REQUIRED FOR COORDINATION, POWER DISTRIBUTION, FIRE ALARM SYSTEM, AND INSTALLATION OF MATERIALS.

G3. UTILITIES: COORDINATE WITH ALL UTILITY SERVICES. NOTIFY UTILITIES OF COMMENCEMENT OF WORK. MAKE ALL ARRANGEMENTS FOR TEMPORARY SERVICES. PROVIDE ALL WORK AND MATERIALS NECESSARY TO COMPLY WITH ALL UTILITY REGULATIONS AND REQUIREMENTS.

G4. PERMITS: OBTAIN ALL NECESSARY PERMITS TO BEGIN AND CONTINUE WITH WORK. PAY ALL ASSOCIATED FEES FOR PERMITS AND OTHER MUNICIPAL AND GOVERNING REQUIREMENTS.

G5. EXPERIENCE: ALL WORK DONE SHALL BE PERFORMED BY QUALIFIED ELECTRICIANS, UNDER THE SUPERVISION AND DIRECTION OF A SUPERINTENDENT HAVING SUCCESSFUL EXPERIENCE INSTALLING AND SUPERVISING EQUIPMENT AND SYSTEMS OF SIMILAR TYPE AND SIZE AS INDICATED BY CONTRACT DOCUMENTS.

G6. REGULATIONS: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT RULES, REGULATIONS, AND INDUSTRY STANDARDS OF THE N.E.C., UL, IPCEA, NEMA, NFPA, OSHA, NATIONAL ELECTRICAL SAFETY CODE, AND ANY LOCAL CODES, LAWS, ADA OR ORDINANCES.

IN THE EVENT THAT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

G7. COSTS AND CONDITIONS: EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SURVEY THE PROJECT AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND SCOPE OF WORK. ALL COSTS SUBMITTED SHALL BE BASED ON A THOROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED. ANY ADDITIONAL COSTS DUE TO FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

G8. SPECIFICATIONS: BECOME FAMILIAR WITH ALL SPECIFICATIONS, DESIGN CRITERIA, AND EQUIPMENT REQUIREMENTS PRIOR TO ANY EQUIPMENT PURCHASE OR INSTALLATION. REFERENCE SPECIFICATIONS FOR DEVICES, MATERIALS AND WORKMANSHIP REQUIREMENTS. ADDITIONAL REQUIREMENTS ARE GIVEN IN THESE NOTES AND THE DRAWINGS. THERE SHALL BE NO DEVIATION FROM SPECIFICATIONS WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

G9. COORDINATION: COORDINATE WORK WITH ALL OTHER TRADES. GIVE SPECIAL CONSIDERATION TO COORDINATING INSTALLATION OF LIGHTING, SPRINKLER PIPING, AND DUCTWORK. COORDINATE WALL OUTLET LOCATIONS WITH MILLWORK. COORDINATE WALL SWITCHES WITH DOOR SWINGS. VERIFY EXACT LOCATION, COLOR AND FINISH OF OUTLETS AND DEVICES WITH INTERIOR DESIGNER, ARCHITECT, OR DESIGNATED TENANT REPRESENTATIVE PRIOR TO INSTALLATION.

G10. PRODUCTS: ALL PRODUCTS SHALL BE NEW, SPECIFICATION GRADE. PRODUCTS OF A SIMILAR NATURE SHALL BE OF THE SAME TYPE AND MANUFACTURER. PROVIDE THE STANDARD PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SPECIFIED PRODUCTS, UNLESS OTHERWISE REQUIRED BY DRAWINGS. ALL PRODUCTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NATIONALLY RECOGNIZED AND ACCEPTED STANDARDS AND PROCEDURES.

G11. COMPATIBILITY: ALL NEW ELECTRICAL DISTRIBUTION EQUIPMENT SHALL MATCH AND BE COMPATIBLE WITH EXISTING EQUIPMENT, BY MANUFACTURER TYPE, APPLICATION, AND SHORT CIRCUIT RATING.

G12. IDENTIFICATION: ALL ELECTRICAL DISTRIBUTION EQUIPMENT, TRANSFORMERS, PANELBOARDS AND OTHER ENCLOSED EQUIPMENT SHALL BE IDENTIFIED AS INDICATED IN THE CONTRACT DOCUMENTS. SAID IDENTIFICATION SHALL CONSIST OF PERMANENTLY ATTACHED ENGRAVED LAMINATED PLASTIC NAMEPLATES. EACH BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICE SHALL BE IDENTIFIED BY CIRCUIT NUMBER AND SCHEDULED INSIDE PANEL DOOR. EACH BRANCH CIRCUIT SPLICE OR TERMINATION SHALL BE IDENTIFIED BY PANEL AND CIRCUIT DESIGNATION SHOWN ON THE JUNCTION OR OUTLET BOX, OR UPON INDIVIDUAL WIRES IN CASES WHERE MORE THAN ONE OF EACH PHASE CONDUCTOR OCCUR.

G13. WIRING: ALL CONDUCTORS CARRYING GREATER THAN 50 VOLTS SHALL BE MINIMUM #12 AWG, SOLID, CU, SOFT DRAWN OF 98% CONDUCTIVITY, UNLESS NOTED OTHERWISE.

INSULATION: PROVIDE TYPE THW, THWN, THHN, OR XHHW TYPE INSULATIONS. COORDINATE INSULATION TYPES WITH CONDITIONS, NEC REQUIREMENTS, AND CONDUIT FILL REQUIREMENTS. ALL WIRING SIZES ARE BASED ON 60° C OR 75° C INSULATION, ACCORDING TO CURRENT RATING, REGARDLESS OF ACTUAL INSULATION USED. TYPE "AC" OR "MC" CABLE IS ACCEPTABLE ONLY WITH TYPE THHN INSULATION.

HOME RUNS: PROVIDE MINIMUM # 10 AWG WIRING ON ALL HOMERUNS GREATER THAN 100 FEET.

NEUTRALS: SIZE ALL NEUTRALS FULL UNLESS SPECIFICALLY REDUCED ON PLANS. PROVIDE OVERSIZED NEUTRALS FOR FEEDERS AND SEPARATE NEUTRALS FOR BRANCH CIRCUITS SERVING DIGITAL COMPUTER EQUIPMENT.

COLORS:

PHASE:	208V WYE	240V DELTA	480V
A	BLACK	BLACK	BROWN
B	RED	ORANGE (HIGH LEG)	ORANGE
C	BLUE	BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE W/ COLORED STRIP
GROUND	GREEN	GREEN	GREEN

G14. GROUNDING: ALL CIRCUITS SHALL BE RUN WITH A #12 AWG INSULATED GREEN COPPER GROUND WIRE, UNLESS OTHERWISE NOTED. USE OF CONDUIT AS A GROUND IS UNACCEPTABLE.

AT SERVICE: PROVIDE BONDING JUMPER BETWEEN GROUND BUS AND NEUTRAL BUS. PROVIDE GROUNDING ELECTRODE CONDUCTORS AND GROUNDING ELECTRODES PER NEC.

G15. CONDUIT: ALL WIRING SHALL BE IN CONDUIT, MINIMUM 1/2" (E.M.T. IS ACCEPTABLE WITH COMPRESSION FITTINGS ONLY). FLEXIBLE METAL CONDUIT IS ACCEPTABLE ONLY WITH SEPARATE INSULATED GROUND WIRE, AND ONLY FOR SWITCH DROPS OR LIGHTING FIXTURE WHIPS. ENT, ALUMINUM CONDUIT, NM ("ROMEX"), NMC, AND SNM ARE NOT ACCEPTABLE.

RIGID CONDUIT: CONDUIT OVER 2" IN DIAMETER; OR EXPOSED TO WEATHER; OR EXPOSED TO POTENTIAL DAMAGE; OR USED FOR SERVICE ENTRANCE SHALL BE GALVANIZED RIGID STEEL TYPE.

PVC CONDUIT: PVC CONDUIT, MINIMUM SCHEDULE 40, IS ACCEPTABLE ONLY FOR USE BELOW GRADE, AND ONLY WHEN INSTALLED WITH WIDE RADIUS RIGID STEEL TURNS.

ROUTING: CONDUIT ROUTING SHOWN IS SYMBOLIC AND DIAGRAMMATIC INSTALL CONDUIT TO FIT ACTUAL FIELD CONDITIONS.

BELOW GRADE: COVER METALLIC CONDUIT BELOW GRADE WITH ASPHALTUM OR BITUMASTIC TAPE. SEAL JOINTS AGAINST WATER.

G16. CONDUIT FITTINGS: ALL FITTING SHALL BE COMPRESSION OR THREADED TYPE. USE OF SET SCREW FITTINGS IS NOT ACCEPTABLE.

G17. CIRCUIT BREAKERS: ALL BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICES SHALL BE 20 AMPERE INVERSE TIME TYPE CIRCUIT BREAKERS UNLESS NOTED OTHERWISE. 120/240 VOLT CIRCUIT BREAKERS SHALL BE RATED AT 10,000 AIC MINIMUM. MULTI- POLE BREAKERS SHALL BE INTEGRAL UNITS. USE OF HANDLE TIES IS NOT ACCEPTABLE.

G18. FUSES: ALL FUSES 600 AMPERES OR LESS SHALL BE UL LISTED, CLASS RK1 OR J, LOW-PEAK, DUAL ELEMENT, TIME DELAY, 600 VOLT. ACCEPTABLE MANUFACTURERS: BUSSMAN, GOULD SHAWMUT.

G19. PENETRATIONS: ALL PENETRATIONS THROUGH FIRE-RATED SLABS AND PARTITIONS SHALL BE FIRE PROOFED TO THE SAME OR GREATER RATING THAN THAT OF THE SLAB OR PARTITION. WHERE CONFLICTS OCCUR, NOTIFY ARCHITECT OR INTERIOR DESIGNER.

G20. ALTERNATES & SUBSTITUTIONS: SUBMIT FOR APPROVAL ALTERNATES OF ALL ITEMS SPECIFIED ON THESE DRAWINGS. THE CONTRACTOR SHALL BEAR THE BURDEN OF SHOWING PROOF THAT ALTERNATES REQUESTED FOR SUBSTITUTION PERFORM IN AN EQUAL OR SUPERIOR MANNER TO THE SPECIFIED ITEM. INFORMATION SUBMITTED FOR ENGINEER'S CONSIDERATION SHOULD INCLUDE PERFORMANCE CHARACTERISTICS, ILLUSTRATION OF FIELD APPLICATION, AND COMPARISON OF THE SPECIFIED ITEM TO THE INTENDED ALTERNATE.

"ALTERNATE" REFERS TO A LUMINAIRE, FIXTURE, DEVICE, EQUIPMENT ITEM, OR MANUFACTURER OTHER THAN THAT SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS.

G21. SHOP DRAWINGS & SUBMITTALS: SUBMIT MANUFACTURERS' STANDARD PRODUCT INFORMATION, PERFORMANCE SPECIFICATIONS, PHYSICAL DIMENSIONS, AND OTHER INFORMATION NECESSARY FOR ENGINEER TO INSURE COMPLIANCE WITH SPECIFICATIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING AND INSTALLING ANY EQUIPMENT.

G22. PROJECT RECORD DOCUMENTS: UPON COMPLETION OF WORK, PREPARE LIGHTING AND POWER PROJECT RECORD DOCUMENTS ("AS-BUILTS") ON A SUITABLY REPRODUCIBLE MEDIUM (MYLAR OR VELLUM). PRESENT COMPLETED DRAWINGS TO TENANT, AND TWO SETS OF PRINTS TO INTERIOR DESIGNER OR ARCHITECT. "AS-BUILT" DRAWINGS SHALL INCLUDE ALL BRANCH CIRCUIT WORK, ANY PANELBOARD INFORMATION AVAILABLE, FINAL SWITCHING, ETC.

G23. WARRANTY. WARRANT ALL MATERIALS, EQUIPMENT AND INSTALLATION FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY TENANT.

TEMPORARY SERVICES
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPECIFIC ITEMS OF TEMPORARY SERVICES:

A. TELEPHONE - THE GENERAL CONTRACTOR SHALL INSTALL A JOB SITE TELEPHONE AND NOTIFY ARCHITECT & OWNER OF THE TELEPHONE NUMBER AND THE NAME OF THE SUPERINTENDENT.

B. TEMPORARY WATER - WATER REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR. WATER USED FOR HUMAN CONSUMPTION SHALL CONFORM TO REQUIREMENTS OF STATE AND LOCAL AUTHORITIES FOR POTABLE WATER.

C. TEMPORARY ELECTRICITY - TEMPORARY ELECTRIC SERVICE REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE FURNISHED AND PAID FOR BY THE CONTRACTOR WHO SHALL FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY OVERHEAD CONSTRUCTION, METERS, DROPS, AND OTHER WIRING AND FITTINGS FOR BOTH LIGHT AND POWER AT LOCATIONS REQUIRED IN THE WORK AND SHALL BEAR THE COST OF MAKING THE SERVICE CONNECTIONS. BEFORE FINAL ACCEPTANCE, TEMPORARY ELECTRICAL SERVICE FACILITIES INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND THE SERVICE CONNECTIONS SEVERED IN ACCEPTABLE MANNER.

D. TEMPORARY HEAT - WHEN REQUIRED FOR PROPER INSTALLATION OR PROTECTION OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY HEATING UNITS AS APPROVED BY THE OWNER OR LOCAL AUTHORITY.

PANELBOARDS: (AS APPLICABLE)

THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ELECTRICAL DRAWINGS FOR SPECIFIC PANELBOARD REQUIREMENTS. THE PANEL BOARD SCHEDULE SPECIFY VOLTAGE CHARACTERISTICS, MAINS, LUG SIZE, LOCATION AND NUMBER, BRANCH CIRCUIT SIZE NUMBER AND LOCATION. ALSO MOUNTING METHOD AND TRIM.

APPROVED MANUFACTURERS ARE SQUARE "D", WESTINGHOUSE, GENERAL ELECTRIC, OR EQUAL.

THE ABOVE EQUIPMENT SHALL BE FACTORY ASSEMBLED UNIT ONLY NOT ASSEMBLY OF MISCELLANEOUS PARTS.

PANELBOARD ENCLOSURE SHALL BE CODE GAUGE GALVANIZED SHEET STEEL WITH CORNERS LAPPED AND RIVETED OR FORMED THE ENCLOSURE SHALL BE PAINTED AS SPECIFIED HEREIN.

PANELBOARD TRIM SHALL BE FOR SURFACE OR RECESSED MOUNTING MOUNTING AS INDICATED BY THE PANEL SCHEMATICS. TRIM SHALL BE FULL FINISH SHEET STEEL FASTENED TO CABINET (ENCLOSED) BY APPROVED ADJUSTABLE CLAMPS.

PANELBOARD HINGES SHALL BE SEMI-CONCEALED FIVE KNUCKLE STEEL WITH NONFERROUS PINS, 180 DEGREE OPENING, AND LOCATE NOT MORE THAN 4" FROM TOP AND BOTTOM NOR GREATER THAN 26" ON CENTER.

PANELBOARD HARDWARE SHALL BE CHROME PLATED FLUSH TYPE COMBINATION LOCK AND CATCH WITH TWO KEYS. DOORS OVER 43" HIGH SHALL HAVE CHROME PLATED VAULT HANDLE. BUILT-IN LOCK AND 3 POINT CATCH FASTENING DOOR AT TOP, CENTER AND BOTTOM

PANELBOARD DIRECTORY HOLDER SHALL BE A METAL FRAME WITH NON-BREAKER TRANSPARENT COVER AND TYPE WRITTEN LIST OF CIRCUITS SHOWING POINTS SUPPLIED.

PANELBOARD NAME PLATES SHALL BE LAMINATED MICARTA, AND FURNISHED ON EACH PANEL TO INDICATE THE PANEL, AND PANEL VOLTAGE VOLTAGE.

PANELBOARD MOUNTING HEIGHT SHALL BE 6'-6" MAXIMUM FROM FINISHED FLOOR TO CENTER LINE OF TOP SWITCH OR CIRCUIT BREAKER UNLESS INDICATED OTHERWISE.

CIRCUIT BREAKERS QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC WITH NON-WELDING TYPE CONTACTS. BREAKERS SHALL BE BOLTED TO THE PANEL BUS, UNLESS NOTED OTHERWISE. BREAKERS SHALL BE TRIP SET TO 20 AMPS.

TWO AND THREE POLE CIRCUIT BREAKERS TO BE COMMON TRIP.

LIGHTING CIRCUIT BREAKER TO BE "SWD" RATED.

GROUNDING AND BONDING: (AS APPLICABLE)

FURNISH AND INSTALL A COMPLETE WIRED GROUNDING SYSTEM MINIMUM #12 AWG, GREEN. CONDUIT GROUNDS ARE NOT ACCEPTABLE

WHERE REQUIRED, EMT CONNECTORS OR FLEXIBLE CONDUIT FITTINGS SHALL BE BONDED USING A CONDUIT LOCKNUT. T & B SERIES #108, OR EQUAL, UL LISTED.

GROUND TERMINAL RODS SHALL BE NOT LESS THAN 1/2" DIAMETER AND 8 FEET LONG SHALL BE MADE OF COPPER CLAD STEEL.

CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL ENCLOSURES AND NON-CURRENT CARRYING METALS TO BE GROUNDED ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM USE BONDING JUMPERS WITH APPROVED CLAMPS.

ALL NEW RECEPTACLES SHALL BE BONDED TO A GROUND CONDUCTOR USING A #12 AWG. MINIMUM BONDING JUMPER BETWEEN RECEPTACLE TERMINAL AND GROUND CONDUCTOR. METAL-TO-METAL CONTACT ACCEPTABLE FOR OTHER SURFACES BOXES OR FLUSH TYPE BOXES, BOXES OR FLUSH TYPE BOXES.

MOTOR AND EQUIPMENT TERMINAL BOXES SHALL BE GROUNDED BY THE USE OF A MANUFACTURER-SUPPLIED GROUND LUG OR BY DRILLING AND TAPPING A HOLE FOR A GROUND SCREW. REMOVE PAINT PRIOR

LIGHTING FIXTURES SHALL BE GROUNDED BY THE USE OF A PIGTAIL FASTENED ON BARE METAL THAT IS FREE OF PAINT.

GENERAL LIGHTING NOTES: (AS APPLICABLE)

L1. FIXTURE TYPES: REFERENCE LIGHTING FIXTURE SCHEDULE AND REFLECTED CEILING PLAN FOR COMPLETE DESCRIPTION OF EACH FIXTURE TYPE. LIGHT FIXTURES ARE IDENTIFIED BY LETTERS AND SYMBOLS.

L2. SWITCH LOCATIONS: TYPICAL SWITCHING SHALL BE AS SHOWN.

L3. EXIT SIGNS: FURNISH EXIT SIGNS WITH INTEGRAL 90 MINUTE NICKEL-CADMIUM BATTERY BASED EMERGENCY POWER SOURCE.

L4. EMERGENCY LIGHTING: SUPPLY EMERGENCY FIXTURES WITH INTEGRAL 90 MINUTE BATTERY

L5. FIXTURE LOCATIONS: REFERENCE REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF LIGHT FIXTURES. COORDINATE INSTALLATION IN FIELD WITH TENANT AND ENGINEER. COORDINATE AIMING OF ADJUSTABLE FIXTURES IN FIELD WITH TENANT

L6. INSTALLATION: WIRE FROM JUNCTION BOXES TO FIXTURES OR SWITCHES AS INDICATED. ADDITIONAL JUNCTION BOXES MAY BE REQUIRED BEYOND THOSE SHOWN.

L7. SUPPORT ALL FIXTURES ACROSS CEILING TEES OR FROM STRUCTURE ABOVE. IN NO CASE SHALL CEILING TILES OR PLASTER CEILING SUPPORT ANY FIXTURE.

GENERAL POWER NOTES: (AS APPLICABLE)

P1. GENERAL: VERIFY EXACT LOCATION OF OUTLETS AND DEVICES WITH TENANT PRIOR TO INSTALLATION. PROVIDE OUTLET BOXES, DEVICES, COVER PLATES, AND FLANGES AS REQUIRED.

P2. COORDINATION: MOUNT ALL OUTLETS AT 18" A.F.F. UNLESS NOTED OTHERWISE. REFERENCE ARCHITECT'S DRAWINGS, PLANS & ELEVATIONS FOR ALL HEIGHTS, DIMENSIONS, AND CONFIGURATIONS OF DEVICES NOT INDICATED ON THESE DRAWINGS. REFERENCE SAME DRAWINGS FOR EQUIPMENT NOT IDENTIFIED.

P3. CONVENIENCE OUTLETS: ALL CONVENIENCE OUTLETS SHOWN SHALL BE NEMA TYPE 5-20R, SPECIFICATION GRADE (HUBBELL #5352) DUPLEX RECEPTACLES WITH COVER PLATES TO MATCH EXISTING. VERIFY COLOR WITH ARCHITECT.

ACCEPTABLE MANUFACTURERS:

HUBBELL
LEVITON
PASS & SEYMOUR

FLOOR SERVICE BOXES: PROVIDE STEEL CITY CONCEALED SERVICE FLOOR BOXES CONFIGURED AS INDICATED ON PLAN. PROVIDE POWER, COMMUNICATIONS, DATA & SECURITY WHERE SHOWN. PROVIDE #6AB CAST PRESET FOR WORK IN CONCRETE.

P4. IG & GFCI RECEPTACLES: ALL ISOLATED GROUND DEVICES (IG) AND GROUND FAULT INTERRUPT (GFCI) DEVICES SHALL BE RATED 20 AMPERES AND SHALL HAVE AN DEDICATED INSULATED GREEN GROUND WIRE. THE GROUND WIRE SHALL BE RUN CONTINUOUS AND UNSPLICED BETWEEN DEVICE AND PANEL GROUND BUS.

ISOLATED GROUND RECEPTACLES SHALL BE UL LISTED 20 AMPERE (HUBBELL #IG-5352).

GROUND FAULT RECEPTACLES SHALL BE UL LISTED, RATED 20 AMPERES (HUBBELL #GF-5362).

P5. TIME CLOCKS: PROVIDE INTERMATIC 24-HOUR, 7-DAY TIME CLOCK TO CONTROL SIGNS, LIGHTING, AND OTHER CYCLIC LOADS IDENTIFIED BY TENANT'S REPRESENTATIVE. PROVIDE CONTACTORS AS REQUIRED. VERIFY EXACT LOCATION AND WIRING REQUIREMENTS. TIMECLOCK TO REMAIN "ON" BETWEEN THE HOURS OF DUSK TO 12:00 AM MINIMUM.

P6. INSTALLATION: DROP FROM JUNCTION BOXES TO DEVICES AS INDICATED ADDITIONAL JUNCTION BOXES MAY BE REQUIRED BEYOND THOSE SHOWN

P7. EQUIPMENT EXPOSED TO WEATHER SHALL BE WEATHERPROOF.

POWER RISER GENERAL NOTES:

P1. ELECTRICAL CONTRACTOR SHALL COLOR CODE FEEDER CONDUCTORS AT THE METER CENTER TO DESIGNATE PHASE NEUTRAL & GROUND.

P2. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT K.A.I.C. RATINGS OF THE LANDLORD'S DISTRIBUTION EQUIPMENT. PROVIDE SERIES RATED EQUIPMENT.

P3. ELECTRICAL CONTRACTOR SHALL BALANCE ALL PANELS AND ELECTRICAL EQUIPMENT TO 10% (+/-) BETWEEN PHASES: A/B, B/C, A/C REGARDLESS OF CIRCUITING INDICATED.

P4. PROPER CLEARANCE MUST BE MAINTAINED ABOUT ELECTRICAL EQUIPMENT PER N.E.C. FIELD VERIFY EXACT MOUNTING SPACE AVAILABLE IN THE ELECTRICAL ROOM PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT.

P5. CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS.

P6. PANELBOARD(S) TO BE EQUIPPED WITH BOLT-ON BREAKERS.

SPECIAL SYSTEMS NOTES: (AS APPLICABLE)

S1. TELEPHONE SYSTEM: PROVIDE BACKBOARDS, CONDUITS, AND PULL STRINGS. COORDINATE WORK WITH TELEPHONE COMPANY AND TELEPHONE CONTRACTOR. COORDINATE CONDUIT ROUTING WITH FIELD CONDITIONS. PROVIDE CONDUIT FOR TRUNKS. PROVIDE CONDUIT FOR RUNS EXPOSED TO WEATHER OR DAMAGE. VERIFY NUMBER OF INCOMING LINES WITH OWNER.

S2. TELEPHONE/DATA RECEPTACLES: FURNISH AND INSTALL PULL STRINGS FROM OUTLETS TO 6" ABOVE CEILING. VERIFY EXACT REQUIREMENTS WITH TELEPHONE EQUIPMENT SUPPLIER AND INSTALLER. FURNISH AND INSTALL MATERIALS NOT PROVIDED BY TELEPHONE CONTRACTOR.

S3. FIRE ALARM: VERIFY FIRE ALARM REQUIREMENTS IN FIELD WITH LOCAL AUTHORITY HAVING JURISDICTION. FURNISH AND INSTALL NEW INITIATION AND ANNUNCIATION DEVICES. PROVIDE WIRE AND CONDUIT FOR TYING NEW FIRE ALARM INITIATING AND SIGNALING DEVICES TO NEAREST AVAILABLE FIRE ALARM INITIATING ZONE.
MEET ALL ADA REQUIREMENTS.

ARCHCON architecture
12035 CULWICK · SUITE 200 · SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

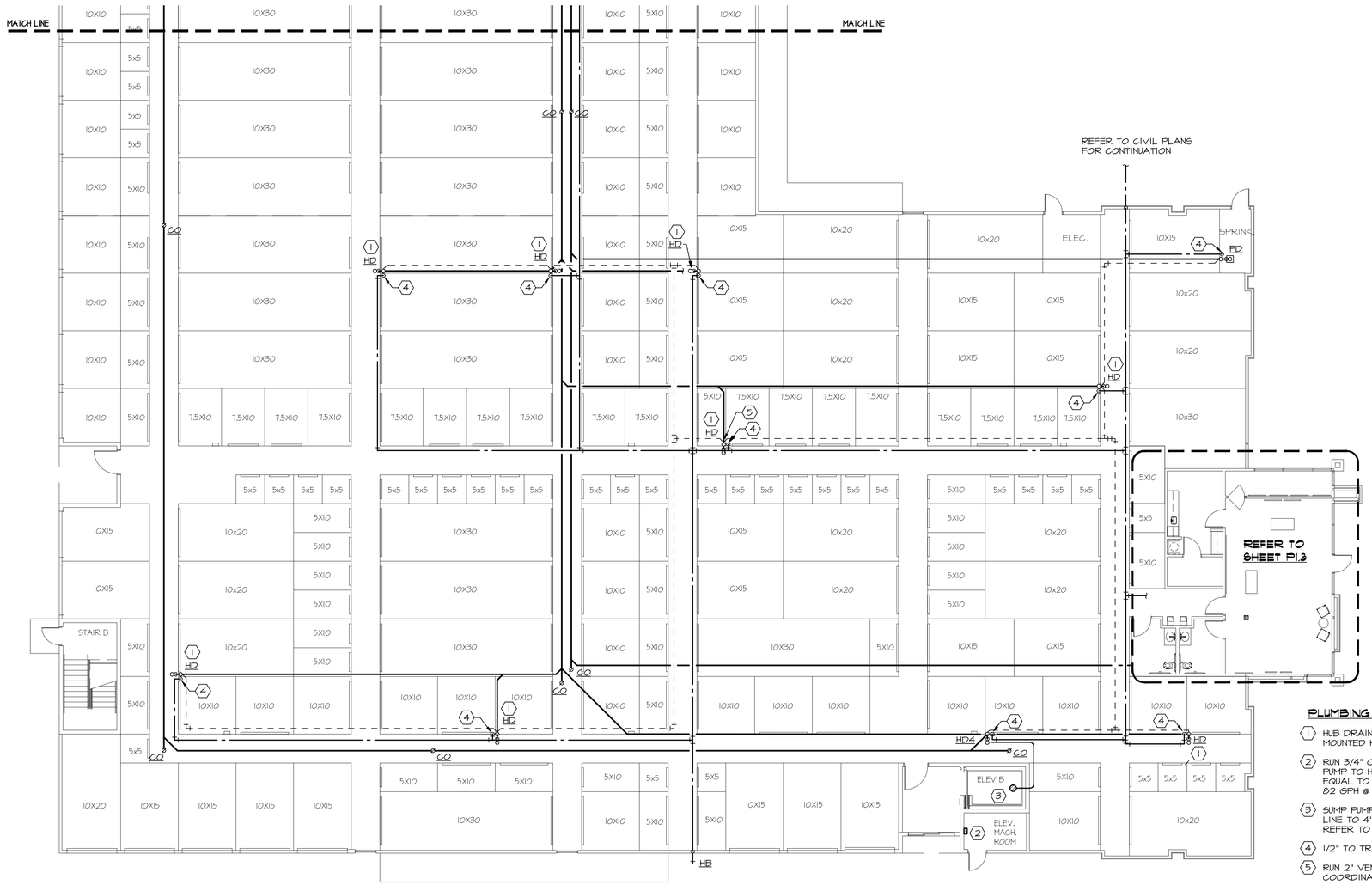
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

ELECTRICAL SPECIFICATIONS

SHEET NO.
E4.1



1 1ST FLOOR - PLUMBING PLAN
SCALE: 3/32"=1'-0"

PLUMBING KEYED NOTES:

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 3/4" CONDENSATE LINE FROM CONDENSATE PUMP TO HUB DRAIN. EQUAL TO DAYTON #3HGE6; .82 GPH @ 5' HEAD, .51 GPH @ 15' HEAD
3. SUMP PUMP FOR ELEVATOR SHAFT. RUN 2" DRAIN LINE TO 4' HUB DRAIN. TYPICAL FOR ALL ELEVATORS. REFER TO DETAIL 1/MEP2.
4. 1/2" TO TRAP PRIMER.
5. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOORS.

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

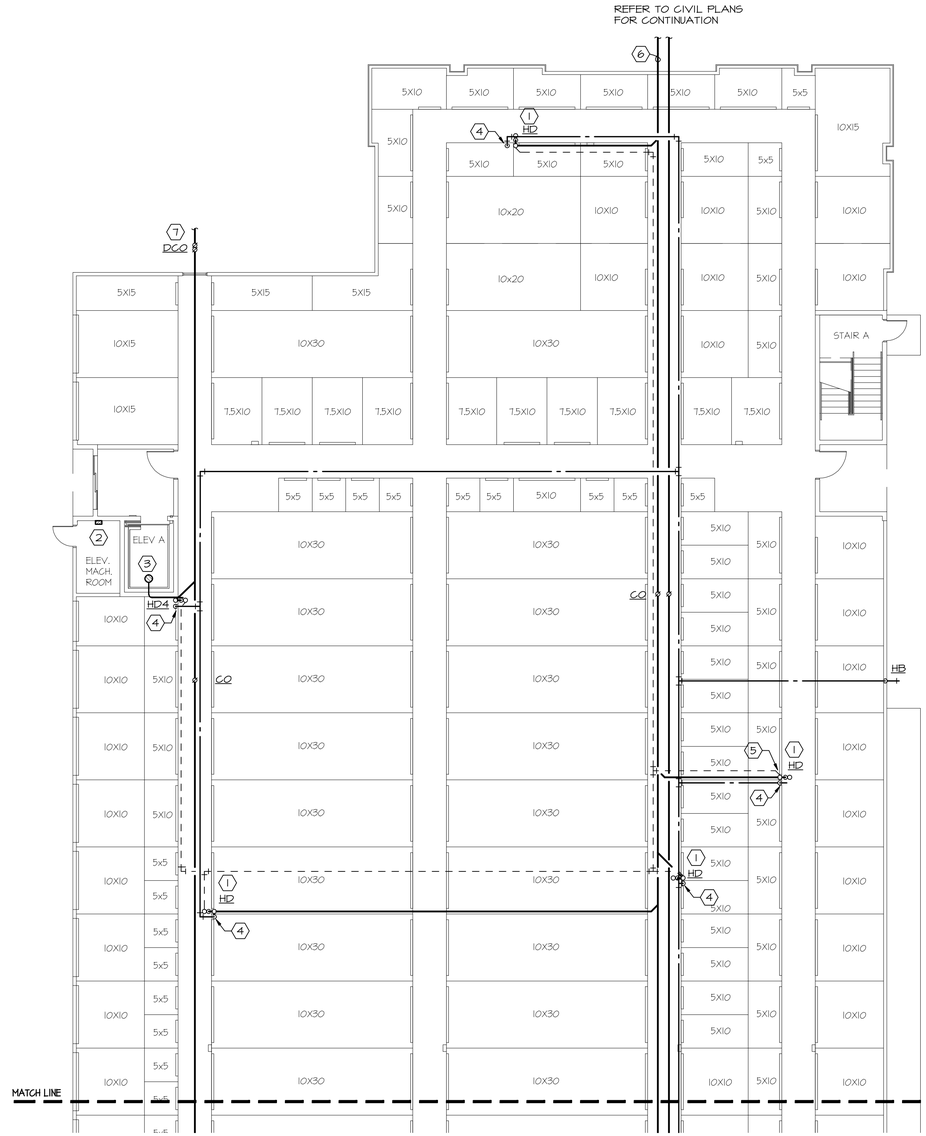
SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.26.2019
DRAWN : RSW
REVISIONS:

1ST FLOOR PLUMBING

SHEET NO.
P1.1



1 1ST FLOOR - PLUMBING PLAN
SCALE: 3/32"=1'-0"

PLUMBING KEYED NOTES:

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 3/4" CONDENSATE LINE FROM CONDENSATE PUMP TO HUB DRAIN. EQUAL TO DAYTON #3H956; 82 GPH @ 5' HEAD, 51 GPH @ 15' HEAD
3. SUMP PUMP FOR ELEVATOR SHAFT. RUN 2" DRAIN LINE TO 4' HUB DRAIN. TYPICAL FOR ALL ELEVATORS. REFER TO DETAIL 1/MEP2.
4. 1/2" TO TRAP PRIMER.
5. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOORS.
6. CONDENSATE COLLECTION LINE TO SANITARY. REFER TO CIVIL PLAN FOR CONTINUATION LINE TO 4' HUB DRAIN. TYPICAL FOR ALL ELEVATORS.
7. CONNECT ELEVATOR SUMP DISCHARGE TO SANTARY SEWER. PROVIDE SAMPLE PORT IN ACCESSIBLE LOCATION.

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

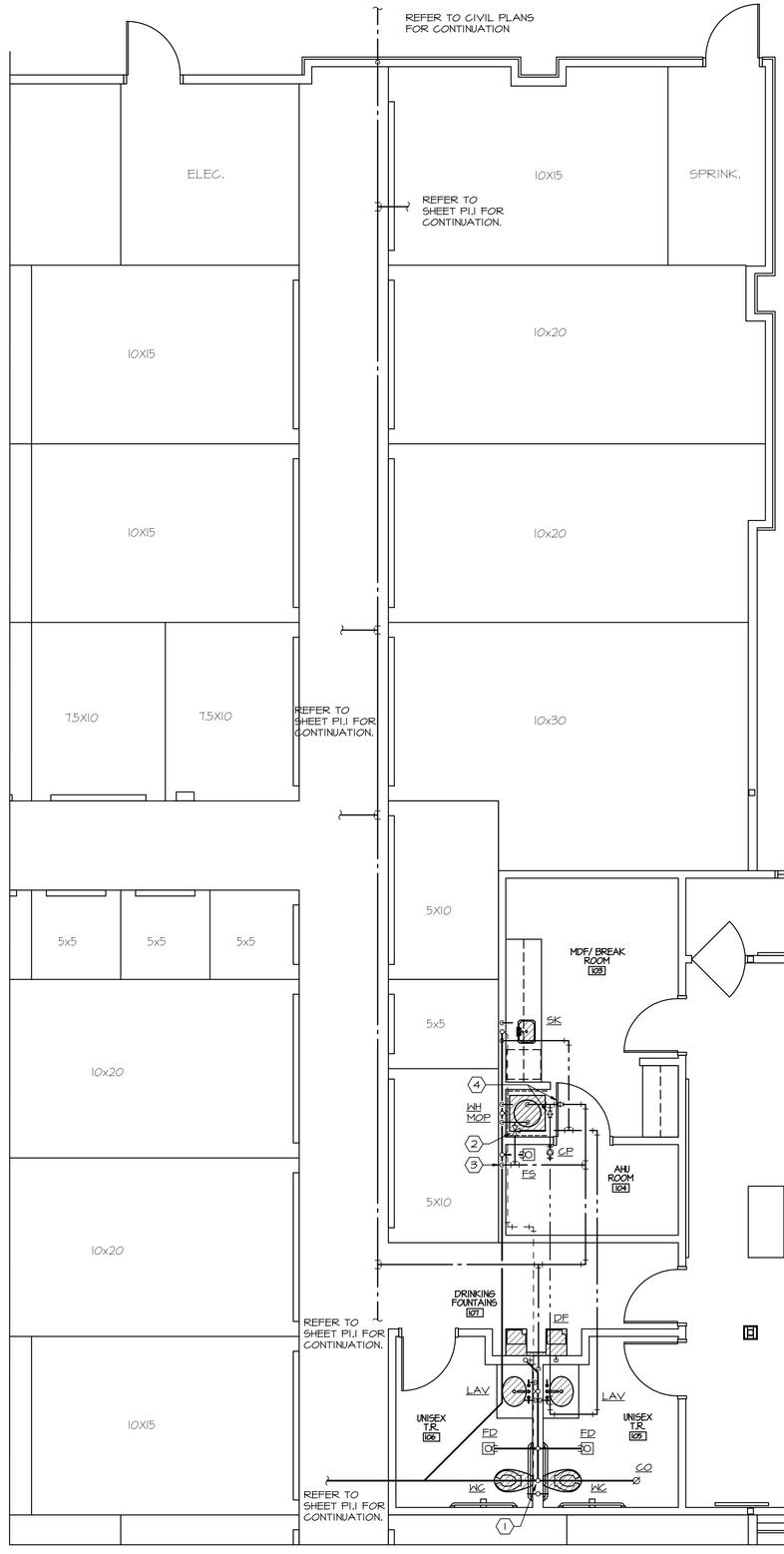
7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

1ST FLOOR PLUMBING

SHEET NO.

P1.2



GENERAL PLUMBING NOTES :

1. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

PLUMBING KEYED NOTES:

1. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOORS.
2. PROVIDE & INSTALL 3/4" ANTI-SCALDING THERMOSTATIC MIXING VALVE ON HOT WATER LINE. SET TO 110° MAX. MUST CONFORM TO ASSE 1070.
3. 1/2" TO TRAP PRIMER.
4. HOT WATER RETURN BALANCING VALVE ABOVE CEILING. PROVIDE APPROVED ACCESS PANEL IF CEILING IS HARD LID.

1 OFFICE PLUMBING PLAN
SCALE: 1/4"=1'-0"

ARCHCON architecture
12035 CODWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

OFFICE PLUMBING

SHEET NO.

P1.3

WATER METER FIXTURE CALCULATIONS

FIXTURE	F.U. FIXTURE	# OF FIXTURES	TOTAL F.U.
WATER CLOSET	5.0	2	10.0
LAVATORY	1.5	2	3.0
DRINKING FOUNTAIN	.25	1	0.25
BREAK SINK	1.5	1	1.5
MOP SINK	2.25	1	2.25

TOTAL WATER FIXTURE UNITS = 17.00 F.U.

BASED ON PREDOMINANTLY FLUSH TANKS
THE WATER DEMAND ESTIMATE = 12.2 GPM

WATER SIZE REQUIRED = 1"

DRAINAGE FIXTURE CALCULATIONS

FIXTURE	F.U. FIXTURE	# OF FIXTURES	TOTAL F.U.
WATER CLOSET	4.0	2	8.0
LAVATORY	1.0	2	2.0
DRINKING FOUNTAIN	0.5	1	0.5
BREAK SINK	2.0	1	2.0
MOP SINK	3.0	1	3.0
FLOOR DRAIN	2.0	2	4.0
FLOOR SINK	2.0	3	6.0
HUB DRAIN	2.0	12	24.0

TOTAL WASTE FIXTURE UNITS = 49.50 F.U.

RECOMMENDED PIPE SIZE REQUIRED @ 0.125/FT SLOPE = 4"

SERVICE WATER SYSTEMS FUNCTIONAL TESTING/COMMISSIONING PLAN

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE SERVICE WATER SYSTEMS AND CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, LIST OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF OF THE TESTS TO BE PERFORMED. ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBTAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL WATER SYSTEMS INSTALLED AND ARE FUNCTIONAL.

2. ENSURE SERVICE WATER HEATING CONTROL SYSTEMS ARE CALIBRATED AND FUNCTIONAL AND OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

3. EQUIPMENT SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS.

PIPING MATERIAL SCHEDULE

TYPE	MATERIALS
WATER LINES	COPPER TYPE "L" OR CROSS-LINKED POLYETHYLENE (PEX) W/ 1" THICK ARMAFLEX OR EQUIVALENT INSULATION
WASTE LINE	ABS SCHEDULE 40 OR CAST IRON
VENT LINE	ABS SCHEDULE 40 OR COPPER PIPING
CONDENSATE	PVC SCHEDULE 40

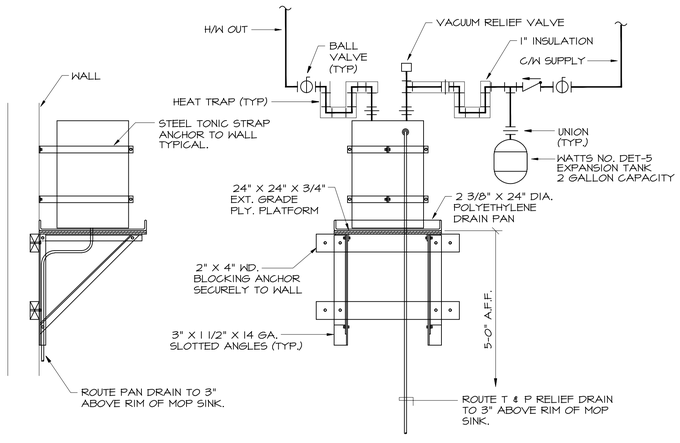
PIPING LEGEND

SYMBOL	TYPE
——— - ———	COLD WATER
——— - - ———	HOT WATER
——— - - - ———	HOT WATER RETURN
———————	WASTE LINE
— — — — — — — — —	VENT LINE

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	CW	HW	W	V	REMARKS
WC	WATER CLOSET (HANDICAP)	1/2"	-	4"	2"	a. KOHLER #K-3609 WATER CLOSET; WHITE CHINA; FLOOR MOUNTED 1.28 GAL. PER FLUSH. b. MCGUIRE #2166LK 1/2" ANGLE SUPPLIES. c. CHURCH #245C WHITE, OPEN FRONT SEAT.
LAV	LAVATORY (HANDICAP)	1/2"	1/2"	2"	1-1/2"	a. KOHLER #K-2602-5U; UNDERMOUNT, STAINLESS STEEL, 18"x 13" BOWL. b. DELTA FAUCET #561LF-SSLPU 0.5 GPM; SINGLE LEVER HANDLE c. CHROME PLATED GRID STRAINER. d. 17 GA., 1 1/2" P-TRAP. e. 1/2"x 3/8" STOPS & SUPPLIES; CHROME PLATED. f. TRUEBRO #102 P-TRAP AND SUPPLY PIPING INSULATION KIT.
FD	FLOOR DRAIN	1/2"	-	3"	2"	a. WADE # 1100STD 6" DIA. CAST IRON FLOOR DRAIN PROVIDE 1/2" TRAP PRIMER
FS	FLOOR SINK	1/2"	-	3"	2"	a. WADE # 9113-EF6; 8x8x6 CAST IRON FLOOR SINK W/ 6"Φ FUNNEL, ALUMINUM DOME STRAINER AND NICKEL BRONZE HINGED TOP. PROVIDE 1/2" TRAP PRIMER.
DF	WATER COOLER	1/2"	-	2"	1-1/2"	a. ELKAY #EZSTL8C; WALL MOUNT, BARRIER-FREE ACCESS, ADA COMPLIANT
MOP	SERVICE SINK	1/2"	1/2"	3"	1-1/2"	a. WILLIAMS #SBC-1700 "CORLON" 24"x24"x12" W/ STAINLESS STEEL CAP b. WILLIAMS #T-10-VB; SINK FITTING W/ VACUUM BREAKER, 3/4" HOSE THREADED OUTLET; PAIL HOOK W/ WALL SUPPORT c. PROVIDE STAINLESS STEEL BACK PANEL.
SK	SINK	1/2"	1/2"	2"	1-1/2"	a. ELKAY #LRAD1720SS; SINGLE BOWL; 18 GAUGE; DROP-IN 14"x14" BOWL b. DELTA FAUCET #28T161LF, LEVER HANDLES, 1.8 GPM; 5" SWING SPOUT. c. 3" PERFORATED GRID STRAINER; ELKAY #LK-8.. d. 1/2"x3/8" STOPS AND SUPPLIES; CHROME PLATED. ELKAY #2165 LK.
HD	HUB DRAIN	-	-	3"	2"	a. PROVIDE 3" PVC HUB DRAIN HIGH IN CORRIDOR.
HD4	HUB DRAIN	-	-	4"	2"	a. PROVIDE 4" PVC HUB DRAIN HIGH IN CORRIDOR.
HB	HOSE BIBB	3/4"	-	-	-	a. ZURN #1300; ENCASED, ANTI-SIPHON W/ NON-FREEZE TYPE INTEGRAL BACKFLOW PREVENTER
CP	CIRCULATING PUMP	3/4"	3/4"	-	-	a. GRUNDFOS #UP 15-10 BT; 0-8.2 GPM, 115V, 25W, 1/25 HP
CO	CLEANOUT	-	-	4"	-	a. WADE # 6000, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH TEE-WYE FITTING.
DCO	HEAVY-DUTY DOUBLE CLEANOUT SAMPLE PORT	-	-	4"	-	a. WADE # 6000Z, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH SINGLE RISER

NOTES
1. ALL FIXTURES SHALL HAVE AN INDIVIDUAL SHUTOFF VALVE.
2. ALL FIXTURES SHALL BE PROVIDED W/ A SHOKTROL.
3. INSTALL A METER AND/ OR BACKFLOW PREVENTOR AS PER LOCAL CODE.



1 WATER HEATER DETAIL
NO SCALE

WATER HEATER SCHEDULE

MARK	RECOVERY		STORAGE	LINING	MAXIMUM INPUT	REMARKS
	GPH	RISE°F	GALLONS		BTUH	
W.H.	14	60	20	GLASS	1.5 KW @ 120V/1Φ	STATE #PCE-20-10M5A

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO. 1829
DATE : 02.28.2019
DRAWN : RSW
REVISIONS:

PLUMBING SCHEDULES

SHEET NO.
P2.1

1 WASTE & VENT RISER
NO SCALE

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

WASTE & VENT RISER

SHEET NO.

P2.2

1 HOT & COLD WATER RISER
NO SCALE

ARCHCON architecture
12035 CDLWICK - SUITE 200 SAN ANTONIO, TX 78216
P 210.493. 2234

RSW CONSULTANTS
FIRM REG #8236

STATE OF TEXAS
ROBERT W. STANLEY
67589
REGISTERED PROFESSIONAL ENGINEER

SE MILITARY STORAGE

7519 OLD CORPUS CHRISTI ROAD
SAN ANTONIO, TX 78223

PROJECT NO.	1829
DATE :	02.28.2019
DRAWN :	RSW
REVISIONS:	

HOT & COLD RISER

SHEET NO.

P2.3