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GENERAL	
CS	COVER SHEET
ADA1	ACCESSIBILITY STANDARDS
ADA2	ACCESSIBILITY STANDARDS
ADA3	ACCESSIBILITY STANDARDS
G1.01	GENERAL NOTES
CIVIL	
C1.01	GENERAL CONST. NOTES
C2.01	SOIL EROSION & SEDIMENT CONTR.
C2.02	SOIL EROSION & SEDIMENT CONTR.
C3.01	PROP. UTILITY PLAN
C3.02	PROP. FIRE PROTECTION PLAN
C4.01	PROP. SITE UTILITY PLAN
C4.02	WATER DETAILS
C4.03	WASTEWATER DETAILS
C5.01	PROP. GRADING PLAN
C5.02	IMPERVIOUS COVER PLAN
C5.03	SITE DETAILS
LANDSCAPE	
L1	PLAN, MATERIAL SCHEDULE
L2	LANDSCAPE DETAILS
L3	SPECIFICATIONS
L4	SPECIFICATIONS
IR1	IRRIGATION PLAN
IR2	IRRIGATION SCHEDULE
STRUCTURAL	
\$1.01	GENERAL FOUNDATION NOTES
\$1.02	FOUNDATION PLAN
\$1.03	ROOF FRAMING PLAN
\$1.04	FOUNDATION SECTIONS & DETAILS
\$1.05	WALL SECTIONS
\$1.06	STRUCTURAL SECTIONS & DETAILS
\$1.07	SPECIFICATIONS 1 OF 5
\$1.08	SPECIFICATIONS 2 OF 5
\$1.09	SPECIFICATIONS 3 OF 5
\$1.10	SPECIFICATIONS 4 OF 5
\$1.11	SPECIFICATIONS 5 OF 5

SHEET INDEX

ARCHITECTURE	
A\$1.01	SITE PLAN
A\$1.02	DETAILS
A1.01	LIFE SAFETY PLAN
A1.02	DIMENSION CONTROL PLAN
A1.03	ANNOTATED FLOOR PLAN
A1.04	REFLECTED CEILING PLAN
A1.05	FINISH PLAN & PAINT
A1.06	F.F.E. PLAN
A1.07	SIGNAGE PLAN
A1.08	ROOF PLAN
A1.09	ENLARGED PLANS
A2.01	EXTERIOR ELEVATIONS
A2.02	EXTERIOR ELEVATIONS
A3.01	BUILDING SECTIONS
A3.02	BUILDING SECTIONS
A4.01	WALL SECTIONS
A4.02	WALL SECTIONS
A5.01	DETAILS
A6.01	INTERIOR ELEVATIONS
A6.02	INTERIOR ELEVATIONS
A7.01	SCHEDULES
A7.02	HEAD JAMB SILL DETAILS
A8.01	MILLWORK DETAILS
ELECTRICAL	
B1.0	COVER SHEET
E0.0	GENERAL NOTES
E0.1	SITE PLAN - ELEC
E1.0	LIGHTING – ELEC
E2.0	POWER - ELEC
E3.0	SCHEDULES/DETAILS - ELEC
E3.1	SCHEDULES/DETAILS - ELEC
MECHANICAL	
M0.0	GENERAL NOTES - MECH
M1.0	SUPPLY - MECH
M2.0	RETURN – MECH
M3.0	SCHEDULES/DETAILS - MECH
PLUMBING	
P0.0	GENERAL NOTES - PLUMB
P1.0	WASTE/VENT - PLUMB
P2.0	DOM/HOT WATER - PLUMB
P3.0	RISER – PLUMB
P4.0	SCHEDULES/DETAILS - PLUMB

OWNER

LUIS KHIT 401 N. BRYAN RD. MISSION, TX 78572 (956) 583-4300





STHE FOLLOWING SECTION OF DETAILS PROVIDES INFORMATION ON REQUIREMENTS FOR DISABLED ACCESSIBILITY. THE [→] REQUIREMENTS COMBINE MINIMUM REQUIREMENTS OF STATE AND FEDERAL AGENCIES. THE PURPOSE OF THIS SECTION IS TO SHELP AVOID INSTALLATION OF MATERIALS ON CONSTRUCTION PROJECTS THAT WOULD LIMIT ACCESSIBILITY. THE SCOPE \hat{e} of this section is limited and the individuals working on the project should familiarize themselves with TEXAS ACCESSIBILITY STANDARD (TAS) AND AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) FOR ADDITIONAL INFORMATION AND REQUIREMENTS. COPIES OF THESE DOCUMENTS MAY BE OBTAINED BY CONTACTING THE FOLLOWING:

TAS:		ADAAG:
	TEXAS DEPT. OF LICENSING & REGULATION	SOUTHWEST DISABILITY AND BUSINESS
	P.O. BOX 12157	TECHNICAL ASSISTANCE CENTER FOR REGION VI.
	AUSTIN, TEXAS 78711	2323 S. SHEPERD, SUITE 1000
	(800) 803-9202	HOUSTON, TEXAS 77019
	TDD (800) 735-2989	ADA HOTLINE: (800) 949-4232
	WWW.LICENSE.STATE.TX.US	TDD: (713) 520-5136 (713) 520-0232
		EAV. (713) E20 E70E

FAX: (/15) 520-5/85 IN THE EVENT THE INFORMATION ON THE PLAN SHEETS DOES NOT MEET THE MINIMUM REQUIREMENTS OF THE SECTION, THEN THE INFORMATION SHALL BE PRESENTED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO CONSTRUCTION OF SPECIFIC AREA OF WORK

ELIMINATION OF ARCHITECTURAL BARRIERS UNIFORM FEDERAL ACCESSIBILITY STANDARDS (ADA)

IN ACCORDANCE WITH ACCESSIBILITY REQUIREMENTS, THE FOLLOWING STANDARDS SHALL BE INCLUDED WHEN BIDDING ON PROJECTS INVOLVING RENOVATION OF OR NEW FACILITIES FOR PUBLIC ACCOMMODATION OR COMMERCIAL FACILITIES. ANY ITEMS NOT CONFORMING TO THESE OR ANY OTHER STANDARDS, CODES, OR ORDINANCES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT FOR HIS INTERPRETATION. IN THE EVENT THE INFORMATION LISTED IN THIS DOCUMENT conflicts with any portion of the work described in the Contract Documents, the contractor shall notify the ARCHITECT, IN WRITING, OF HIS NEED FOR A SOLUTION TO RESOLVE THE CONFLICT. <u>The mounting heights indicated</u> ARE FOR ITEMS THAT REQUIRE ACCESSIBILITY BY DISABLED INDIVIDUALS. WHERE TWO OR MORE ITEMS ARE GROUPED IN ONE AREA (MIRRORS, SINKS, TOILETS, DRINKING FOUNTAINS, URINALS, SHELVES, TELEPHONES, ETC.) NOT ALL ITEMS IN THE AREA HAVE TO BE MOUNTED AT HANDICAP HEIGHT. CONTRACTOR TO COORDINATE THESE INSTALLATION HEIGHTS WITH OTHER MATERIALS FOR NEAT, TRIMMED OUT AND FINISHED APPEARANCE. ITEMS FOR DISABLED INDIVIDUAL USE SHALL BE MOUNTED AT HEIGHT INDICATED FOR AGE LEVEL AS NOTED. CHAPTER 1: APPLICATION AND ADMINISTRATION

TAS SECTION 104 - CONVENTIONS

A. ALL DIMENSIONS ARE SUBJECT TO CONVENTIONAL INDUSTRY TOLERANCES EXCEPT WHERE THE REQUIREMENT IS STATED AS A RANGE WITH SPECIFIC MINIMUM AND MAXIMUM POINTS.

B. UNLESS SPECIFICALLY STATED OTHERWISE, FIGURES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ER 2: SCOPING REQUIREMENTS

TAS SECTION 201.1 - SCOPE

A. ALL AREAS OF NEWLY DESIGNED AND NEWLY CONSTRUCTED BUILDINGS AND FACILITIES AN ALTERED PORTIONS OF EXISTING BUILDINGS AND FACILITIES SHALL COMPLY WITH THESE REQUIREMENTS

TAS SECTION 202 - EXISTING BUILDINGS AND FACILITIE A. EACH ADDITION TO AN EXISTING BUILDING OR FACILITY SHALL COMPLY WITH THE REQUIREMENTS FOR NEW CONSTRUCTION. EACH ADDITION THAT AFFECTS OR COULD EFFECT THE USABILITY OF OR ACCESS TO AN AREA CONTAINING A

PRIMARY FUNCTION SHALL COMPLY WITH 202.4 B. WHERE EXISTING ELEMENTS, SPACES, OR COMMON USE AREAS ARE ALTERED, EACH ALTERED ELEMENT, SPACE, OR

COMMON USE AREA SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF CHAPTER 2. C. AN ALTERATION THAT DECREASES THE ACCESSIBILITY OF A BUILDING OR FACILITY BELOW THE REQUIREMENTS FOR NEW CONSTRUCTION AT THE TIME OF THE ALTERATION IS PROHIBITED.

D. AN ALTERATION OF AN EXISTING ELEMENT, SPACE, OR AREA OF A BUILDING OR FACILITY SHALL NOT IMPOSE A REQUIREMENT FOR ACCESSIBILITY GREATER THAN REQUIRED FOR NEW CONSTRUCTION.

E. Alterations that affect the usability or access to an area containing a primary function shall be MADE SO AS TO ENSURE USAGE BY INDIVIDUALS W/ DISABILITIES TAS SECTION 204 - PROTRUDING OBJECTS

A. WITHIN AREAS OF ACCESSIBLE ELEMENTS, ACCESSIBLE ROUTES, AND IN ACCESSIBLE ROOM AND SPACES SHALL COMPLY WITH 309

B. WITHIN AREAS OF SPORTS ACTIVITY, PROTRUDING OBJECTS ON CIRCULATION PATHS SHALL NOT BE REQUIRED TO COMPLY WITH 307.

B. WITHIN PLAY AREAS, PROTRUDING OBJECTS ON CIRCULATION PATHS SHALL NOT BE REQUIRED TO COMPLY WITH 307 PROVIDED THAT GROUND LEVEL ACCESSIBLE ROUTES PROVIDE VERTICAL CLEARANCE IN COMPLIANCE WITH 1008.2. TAS SECTION 205 - OPERABLE PARTS

A. OPERABLE PARTS ON ACCESSIBLE ELEMENTS, ACCESSIBLE ROUTES, AND IN ACCESSIBLE ROOMS AND SPACES SHALL COMPLY W/309.

B. OPERABLE PARTS INTENDED FOR USE ONLY BY SERVICE OR MAINTENANCE PERSONNEL SHALL NOT BE REQUIRED TO COMPLY WITH 309.

ELECTRICAL OR COMMUNICATION RECEPTACLES SERVING A DEDICATED USE SHALL NOT BE REQUIRED TO COMPLY WITH

TAS SECTION 206 - ACCESSIBLE ROUTES

A. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES; PUBLIC STREETS AND SIDEWALKS; AND PUBLIC TRANSPORTATION STOPS TO THE ACCESSIBLE BUILDING OR FACILITY ENTRANCE THEY SERVE

B. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE. C. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT EACH STORY AND MEZZANINE IN MULTI-STORY BUILDINGS AND

FACILITIES. D. IN RESTAURANTS AND CAFETERIAS, AN ACCESSIBLE ROUTE SHALL BE PROVIDED TO ALL DINING AREAS, INCLUDING

RAISED OR SUNKEN DINING AREAS, AND OUTDOOR DINING AREAS, E. WHERE A CIRCULATION PATH DIRECTLY CONNECTS A PERFORMANCE AREA TO AN ASSEMBLY AREA. AN ACCESSIBLE ROUTE SHALL DIRECTLY CONNECT THE ASSEMBLY SEATING AREA WITH THE PERFORMANCE AREA. AN ACCESSIBLE ROUTE SHALL

BE PROVIDED FROM PERFORMANCE AREAS TO ANCILLARY AREAS OR FACILITIES USED BY PERFORMERS TAS SECTION 207 - ACCESSIBLE MEANS OF EGRESS

A. MEANS OF EGRESS SHALL COMPLY WITH SECTION 1003.2.13 OF THE INTERNATIONAL BUILDING CODE (2000 EDITION AND 2001 SUPPLEMENT) OR SECTION 1007 OF THE INTERNATIONAL BUILDING CODE (2003 EDITION.) B. STANDBY POWER SHALL BE PROVIDED FOR PLATFORM LIFTS PERMITTED BY SECTION 1003.2.13.4 OF THE INTERNATIONAL BUILDING CODE (2000 EDITION AND 2001 SUPPLEMENT) OR SECTION 1007.5 OF THE INTERNATIONAL BUILDING

CODE (2003 EDITION) TO SERVE AS A PART OF AN ACCESSIBLE MEANS OF EGRESS. TAS SECTION 208 - PARKING SPACES

A. PARKING SPACES SHALL COMPLY WITH 502 AND SHALL BE PROVIDED IN ACCORDANCE WITH TABLE 208.2 EXCEPT REQUIRED BY 208.2.1, 208.2.2, AND 208.2.3. WHERE MORE THAN ONE PARKING FACILITY IS PROVIDED ON A SITE, THE NUMBER OF ACCESSIBLE SPACES PROVIDED ON THE SITE SHALL BE CALCULATED ACCORDING TO THE NUMBER OF SPACES REQUIRED FOR EACH PARKING FACILITY.

TABLE 208.2 PARKING SPACES

TOTAL PARKING IN LOT	REQUIRED MIN. NUMBER OF ACCESSIBLE SPACES	TOTAL PARKING IN LOT	REQUIRED MIN. NUMBER OF ACCESSIBLE SPACES
1 TO 25	1	201 TO 300	77
26 TO 50	2	301 TO 400	8
51 TO 75	3	401 TO 500	9
76 TO 100	4	501 TO 1000	2 PERCENT OF TOTAL
101 T0 150	5	1000 AND	20, PLUS 1 FOR EACH 100,
151 TO 200	6	OVER	OR FRACTION THEREOF, OVER 1000

TAS SECTION 208.2.4 - VAN PARKING SPACES

A. FOR EVERY SIX OR FRACTION OF SIX PARKING SPACES REQUIRED BY 208.2 TO COMPLY W/ 502, AT LEAST ONE SHALL BE A VAN PARKING SPACE COMPLYING W/ 502

TAS SECTION 208.3 - LOCATION

A. PARKING SPACES COMPLYING WITH 502 THAT SERVE A PARTICULAR BUILDING OR FACILITY SHALL BE LOCATED ON THE SHORTEST POSSIBLE ACCESSIBLE ROUTE FROM PARKING LOT TO AN ENTRANCE. WHERE PARKING SERVES MORE THAN ONE ACCESSIBLE ENTRANCE, PARKING SPACES COMPLYING WITH 502 SHALL BE DISPERSED AND LOCATED AT THE SHORTEST ACCESSIBLE ROUTE TO THE ACCESSIBLE ENTRANCES.

TAS SECTION 209 - PASSENGER LOADING ZONES AND BUS STOPS

A. PASSENGER LOADING ZONES, EXCEPT THOSE REQUIRED TO COMPLY WITH 209.2.2 AND 209.2.3, SHALL PROVIDE AT LEAST ONE PASSENGER LOADING ZONE COMPLYING WITH 503 IN EVERY CONTINUOUS 100 LINEAR FEET (30M) OF LOADING ZONE SPACE, OR FRACTION THEREOF.

B. IN BUS LOADING ZONES RESTRICTED TO USE BY DESIGNATED OR SPECIFIED PUBLIC TRANSPORTATION VEHICLES, EACH BUS BAY. BUS STOP. OR OTHER AREA DESIGNATED FOR LIFT OR RAMP DEPLOYMENT SHALL COMPLY WITH 810.2 TAS SECTION 210 - STAIRWAYS

A. Interior and exterior stairs that are part of a means of egress shall comply with 504. Although HANDRAILS ON STAIRS THAT ARE NOT PART OF A MEANS OF EGRESS, STATE OR LOCAL BUILDING CODES MAY REQUIRE HANDRAILS OR GUARDS

TAS SECTION 211 - DRINKING FOUNTAINS

A. No fewer than two drinking fountains shall be provided.

B. More than the minimum number of drinking fountains specified in 211.2 are PROVIDED, 50 PERCENT OF THE TOTAL NUMBER OF DRINKING FOUNTAINS PROVIDED SHALL COMPLY with 602.1 through 602.6, and 50 percent of the total number of drinking fountains PROVIDED SHALL COMPLY WITH 602.7

TAS SECTION 212 - KITCHENS, KITCHENETTES, AND SINKS

A. KITCHENS AND KITCHENETTES SHALL COMPLY WITH 804.

B. WHERE SINKS ARE PROVIDED, AT LEAST 5 PERCENT, BUT NO FEWER THAN ONE, OF EACH TYPE PROVIDED IN EACH ACCESSIBLE ROOM OR SPACE SHALL COMPLY W/ 606. TAS SECTION 213 - TOILET FACILITIES AND BATHING FACILITIES

A. WHERE TOILET FACILITIES AND BATHING FACILITIES ARE PROVIDED, THEY SHALL COMPLY WITH 213. TOILET FACILITIES AND BATHING FACILITIES SHALL BE PROVIDED ON A STORY

CONNECTED BY AN ACCESSIBLE ROUTE TO AN ACCESSIBLE ENTRANCE. B. TOILET RESTROOMS AND BATHING ROOMS SHALL COMPLY WITH 603.

C. WHERE MULTIPLE SINGLE USER TOILET ROOMS ARE CLUSTERED AT A SINGLE LOCATION, NO MORE THAN 50% OF THE SINGLE USER TOILET ROOMS FOR EACH USE AT EACH CLUSTER SHALL BE REQUIRED TO COMPLY WITH 603

D. UNISEX TOILET ROOMS AND UNISEX BATHING ROOMS SHALL CONTAIN NOT MORE THAN ONE LAVATORY, AND TWO WATER CLOSETS WITHOUT URINALS OR ONE WATER CLOSET AND ONE URINAL. UNISEX BATHING ROOMS CONTAIN ONE SHOWER OR ONE SHOWER AND ONE BATHTUB, ONE LAVATORY, AND ONE WATER CLOSET. DOORS TO UNISEX RESTROOMS AND BATHING ROOMS SHALL HAVE PRIVACY LATCHES.

TAS SECTION 214 - WASHING MACHINES AND CLOTHES DRYERS

A. WHERE THREE OR FEWER WASHING MACHINES ARE PROVIDED, AT LEAST ONE SHALL COMPLY WITH 611. WHERE MORE THAN THREE WASHING MACHINES ARE PROVIDED, COMPLY WITH 611.

B. WHERE THREE OR FEWER CLOTHES DRYERS ARE PROVIDED, AT LEAST ONE SHALL COMPLY WITH 611.WHERE MORE THAN THREE CLOTHES DRYERS ARE PROVIDED, AT LEAST TWO SHALL COMPLY WITH 611.

TAS SECTION 215 - FIRE ALARM SYSTEMS

A. ALARMS IN PUBLIC USE AREAS AND COMMON USE AREAS SHALL COMPLY WITH 702. B. WHERE EMPLOYEE WORK AREAS HAVE AUDIBLE ALARM COVERAGE, THE WIRING SYSTEM SHALL BE designed so that the visible alarms complying with 702 can be integrated into the alarm

SYSTEM. <u>TAS SECTION 216 - SIGNS</u>

A. SIGNS SHALL COMPLY WITH 703. BUILDING DIRECTORIES, MENUS, SEAT AND ROW DESIGNATIONS IN ASSEMBLY AREAS, OCCUPANT NAMES, BUILDING ADDRESSES,AND COMPANY NAMES AND LOGOS SHALL NOT BE REQUIRED TO COMPLY W/ 216.

B. SIGNS REQUIRED BY SECTION 1003.2.13.5.4 OF THE INTERNATIONAL BUILDING CODE (2000 EDITION) OR SECTION 1007.6.4 OF THE INTERNATIONAL BUILDING CODE (2003 EDITION) TO PROVIDE INSTRUCTIONS IN AREAS OF REFUGE SHALL COMPLY WITH 703.5

C. DIRECTIONAL SIGNS REQUIRED BY SECTION 1003.2.13.6 OF THE INTERNATIONAL BUILDING CODE (2000 EDITION) OR SECTION 707.7 OF THE INTERNATIONAL BUILDING CODE (2003 EDITION) TO PROVIDE DIRECTIONS TO ACCESSIBLE MEANS OF EGRESS SHALL COMPLY WITH 703.5

D. Where not all entrances comply with 404, entrances complying with 404 shall be IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 703.7.2.1 DIRECTIONAL SIGNS COMPLYING WITH 703.5 THAT INDICATE THE LOCATION OF THE NEAREST ENTRANCE COMPLYING WITH 404 SHALL BE PROVIDED AT ENTRANCES THAT DO NOT COMPLY WITH 404. TAS SECTION 217 - TELEPHONES

A. WHERE PUBLIC TELEPHONE ARE PROVIDED, WHEELCHAIR ACCESSIBLE TELEPHONES COMPLYING WITH 704.2 SHALL BE PROVIDED

CHAPTER 2: SCOPING REQUIREMENTS (CONTINUED)

TAS SECTION 219 - ASSISTIVE LISTENING SYSTEMS

A. Each assembly area where audible communication is integral to the use of the SPACE, AN ASSISTIVE LISTENING SYSTEM SHALL BE PROVIDED.

B. WHERE ALL SEATS IN AN ASSEMBLY AREA ARE SERVED BY AN INTRODUCTION LOOP ASSISTIVE LEARNING SYSTEM, THE MINIMUM NUMBER OF RECEIVERS REQUIRED BY TABLE 219.3 TO BE HEARING-AID COMPATIBLE SHALL NOT BE REQUIRED TO BE PROVIDED

TAS SECTION 220 - AUTOMATIC TELLER MACHINES AND FARE MACHINES

A. WHERE AUTOMATIC TELLER MACHINES OR SELF-SERVICE FARE VENDING. COLLECTION. OR ADJUSTMENT MACHINES ARE PROVIDED, AT LEAST ONE OF EACH TYPE PROVIDED AT EACH LOCATION SHALL COMPLY WITH 707. WHERE BINS ARE PROVIDED FOR ENVELOPES, WASTE PAPER, OR OTHER PURPOSES, AT LEAST ONE OF EACH SHALL COMPLY WITH 811. TAS SECTION 221 - ASSEMBLY AREAS

A. ASSEMBLY AREAS SHALL PROVIDE WHEELCHAIR SPACES, COMPANION SEATS, AND DESIGNATED AISLE SEATS COMPLYING WITH 221 AND 802.

B. WHEELCHAIR SPACES COMPLYING WITH 802.1 SHALL BE PROVIDED IN ACCORDANCE WITH TABLE 221.2.1.1.

C. WHEELCHAIR SPACES SHALL BE AN INTEGRAL PART OF THE SEATING PLAN. D. WHEELCHAIR SPACES SHALL PROVIDE LINES OF SIGHT COMPLYING WITH 802.2. IN PROVIDING

LINES OF SIGHT, WHEELCHAIR SPACES SHALL BE DISPERSED. WHEELCHAIR SPACES SHALL PROVIDE SPECTATORS WITH CHOICES OF SEATING LOCATIONS OR VIEWING ANGLES EQUAL TO OR BETTER THAN SEATING LOCATIONS AND VIEWING ANGLES OF OTHER SPECTATORS.

E. ATLEAST 5% OF THE TOTAL NUMBER OF AISLE SEATS PROVIDED SHALL COMPLY WITH 802.4 AND SHALL BE THE AISLE SEATS LOCATED CLOSEST TO THE ACCESSIBLE ROUTES.

Table 221.2.1 Number of Wheelchair Spaces in Assembly Areas				
NUMBER OF SEATS	REQUIRED MIN. NUMBER OF WHEELCHAIR SPACES	NUMBER OF SEATS	REQUIRED MIN OF WHEELCHAI	
4 TO 25	11	301 TO 500	6	
26 TO 50	2	501 TO 5000	6, plus 1 for or fraction between 501 th	
			36, PLUS 1 FOF	
151 TO 300	5	5001 AND OVER	OR FRACTION THEF 500	

TAS SECTION 222 - DRESSING, FITTING, AND LOCKER ROOMS

A. WHERE DRESSING ROOMS, FITTING ROOMS, OR LOCKER ROOMS ARE PROVIDED, AT LEAST 5%, BUT NO FEWER THAN ONE, OF EACH TYPE OF USE IN EACH CLUSTER PROVIDED SHALL COMPLY WITH 803. B. WHERE COAT HOOKS OR SHELVES ARE PROVIDED IN DRESSING FITTING OR LOCKER ROOMS W/O INDIVIDUAL COMPARTMENTS, AT LEAST ONE OF EACH TYPE SHALL COMPLY WITH 803.5. WHERE COAT HOOKS OR SHELVES ARE PROVIDED IN INDIVIDUAL COMPARTMENTS AT LEAST ONE OF EACH TYPE SHALL BE PROVIDED IN ACCORDANCE WITH 223.

TAS SECTION 223 - MEDICAL CARE AND LONG-TERM CARE FACILITIES

A. IN LICENSED MEDICAL CARE FACILITIES AND LICENSED LONG-TERM CARE FACILITIES WHERE THE PERIOD OF STAY EXCEEDS TWENTY-FOUR HOURS, PATIENT OR RESIDENT SLEEPING ROOMS SHALL BE PROVIDED IN ACCORDANCE WITH 223. TOILET ROOMS PART OF CRITICAL OR INTENSIVE CARE PATIENT SLEEPING ROOMS SHALL NOT BE REQUIRED TO COMPLY WITH 603.

TAS SECTION 224 - TRANSIENT LODGING FACILITIES AND GUEST ROOMS

A. TRANSIENT LODGING FACILITIES SHALL PROVIDE GUEST ROOMS IN ACCORDANCE WITH 224. PLACES OF LODGING AND HOUSING AT A PLACE OF EDUCATION SHALL COMPLY WITH THE PROVISIONS APPLICABLE TO TRANSIENT LODGING, INCLUDING, BUT NOT LIMITED TO, THE REQUIREMENTS FOR TRANSIENT LODGING GUEST ROOMS IN SECTIONS 224 AND 806.

B. ENTRANCES, DOORS, AND DOORWAYS PROVIDING USER PASSAGE INTO AND WITHIN THE GUEST ROOMS THAT ARE NOT REQUIRED TO PROVIDE MOBILITY FEATURES COMPLYING WITH 806.2 SHALL COMPLY with 404.2.3.

C. IN GUEST ROOMS HAVING MORE THAN 25 BEDS, 5% MINIMUM OF THE BEDS SHALL HAVE CLEAR FLOOR SPACE COMPLYING WITH 806.2.3 <u>TAS SECTION 225 - STORAGE</u>

A. WHERE STORAGE IS PROVIDED, AT LEAST ONE OF EACH TYPE SHALL COMPLY WITH 811. B. WHERE LOCKERS ARE PROVIDED, AT LEAST 5%, BUT NO FEWER THAN ONE OF EACH TYPE, SHALL COMPLY WITH 811

TAS SECTION 226 - DINING SURFACES AND WORK SURFACES

A. WHERE DINING SURFACES ARE PROVIDED FOR THE CONSUMPTION OF FOOD OR DRINK, AT LEAST 5% OF THE SEATING SPACES AND STANDING SPACES AT THE DINING SURFACES SHALL COMPLY WITH 902. IN ADDITION, WHERE WORK SURFACES ARE PROVIDED FOR USE BY OTHER THAN EMPLOYEES, AT LEAST 5% SHALL COMPLY WITH 902.



AN ALCOVE, PARALLEL APPROACH

TAS SECTION 306.3 - KNEE CLEARANCE

A. SPACE UNDER AN ELEMENT 9"-27" ABOVE THE FINISH FLOOR SHALL BE CONSIDERED KNEE CLEARANCE. B. KNEE CLEARANCE SHALL EXTEND 25" MAXIMUM UNDER AN ELEMENT AT 9" ABOVE THE FINISH FLOOR.

C. Where knee clearance is required under an element as part of a clear floor space, the knee CLEARANCE SHALL BE 11" DEEP MIN. AT 9" ABOVE THE FINISH FLOOR OR GROUND, AND 8" DEEP MIN. AT 27" ABOVE FINISH FLOOR OR GROUND

REDUCE AT A RATE OF 1" IN DEPTH FOR EACH 6" IN HEIGHT. E. KNEE CLEARANCE SHALL BE 30" WIDE MINIMUM.

TAS SECTION 307 - PROTRUDING OBJECTS

A. OBJECTS PROJECTING FROM WALLS W/ LEADING EDGES MORE THAN 27" AND NOT MORE THAN 80" ABOVE THE FINISH FLOOR SHALL

PROTRUDE NO MORE THAN 4" HORIZONTALLY INTO CIRCULATION PATH.

B. FREE-STANDING OBJECTS MOUNTED ON POSTS OR PYLONS SHALL OVERHANG CIRCULATION PATHS 12" MAX WHEN LOCATED 27"-80" ABOVE

THE FINISH FLOOR OR GROUND. WHERE A SIGN OR OTHER OBSTRUCTION IS MOUNTED BETWEEN POSTS OR PYLONS AND THE CLEAR DISTANCE BETWEEN THI POSTS OR PYLONS IS GREATER THAN 12", THE LOWEST EDGE OF SUCH SIGN

OR OBSTRUCTION SHALL BE 27"-80" ABOVE THE FINISH FLOOR C. VERTICAL CLEARANCE SHALL BE 80" HIGH MINIMUM.GUARDRAILS

OR OTHER BARRIERS SHALL BE PROVIDED WHERE THE VERTICAL

CLEARANCE IS LESS THAN 80" HIGH. THE LEADING EDGE OF SUCH GUARDRAIL OR BARRIER SHALL BE LOCATED 27" MAXIMUM ABOVE THE

FINISH FLOOR TAS SECTION 308 - REACH RANGES

A. REFER TO "AGE BASED DIMENSIONAL INFORMATION" TABLE FOR CHILDREN'S REACH RANGES. TAS SECTION 308.2 - FORWARD REACH A. Where a forward reach is unobstructed, the high forward reach shall be 48" maximum and the low forward reach shall be 15" minimum above the finish floor or ground. (Fig. 308.2.1) B. Where a high forward reach is over an obstruction, the clear floor space shall extend beneath

THE ELEMENT FOR A DISTANCE NOT LESS THAN THE REQUIRED REACH DEPTH OVER THE OBSTRUCTION. THE HIGH FORWARD reach shall be 48" maximum where the reach depth is 20" maximum. Where the reach depth exceeds 20", the HIGH FORWARD REACH SHALL BE 44" MAXIMUM AND THE REACH DEPTH SHALL BE 25" MAXIMUM. (FIG. 308.2.2) TAS SECTION 308.3 - SIDE REACH

A. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48" MAXIMUM AND THE LOW SIDE REACH SHALL BE 15" MINIMUM ABOVE THE FINISH FLOOR OR GROUND. (FIG. 308.2.1)

1. AN OBSTRUCTION SHALL BE PERMITTED BETWEEN THE CLEAR FLOOR OR GROUND SPACE AND THE ELEMENT WHERE THE DEPTH OF THE OBSTRUCTION IS 10" MAXIMUM.

B. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34" MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24" MAXIMUM. THE HIGH SIDE REACH SHALL BE 48" MAXIMUM FOR A REACH DEPTH OF 10" maximum. Where the reach depth exceeds 10", the high side reach shall be 46" max. for a reach depth of 24" MAX. (FIG. 308.2.3)

1. The top of washing machines and clothes dryers shall be permitted to be 36" maximum



B. OPERABLE PARTS SHALL BE PLACED WITHIN ONE OR MORE OF THE REACH RANGES

SPECIFIED IN 308. C. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE

TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5

CHAPTER 4: ACCESSIBLE ROUTES

TAS SECTION 402 - ACCESSIBLE ROUTES

A. ACCESSIBLE ROUTES SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING COMPONENTS: WALKING SURFACES WITH A RUNNING SLOPE NOT STEEPER THAN 1:20, DOORWAYS, RAMPS, CURB RAMPS EXCLUDING THE FLARED SIDES, ELEVATORS, AND PLATFORM LIFTS.

TAS SECTION 403 - WALKING SURFACES

A. All surfaces shall comply with 302. Changes in level shall comply with 303. B. THE RUNNING SLOPE SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF THE WALKING SURFACES SHALL

C. THE CLEAR WIDTH OF WALKING SURFACES SHALL BE 36" MINIMUM. 1. The clear width shall be permitted to be reduced to 32" minimum for a length of 24" MAXIMUM PROVIDED THAT REDUCED WIDTH SEGMENTS ARE SEPARATED BY SEGMENTS THAT ARE 48" LONG MINIMUM AND 36"

WIDE MINIMUM. D. Where the accessible route makes a 180° turn around an element less than 48" wide, the clear WIDTH SHALL BE 42"MINIMUM APPROACHING THE TURN, 48" MINIMUM AT THE TURN AND 42" MINIMUM LEAVING THE TURN. E. Where the accessible route makes a 180° turn around an element less than 48" wide and the clear WIDTH AT THE END OF THE TURN IS 60" MINIMUM, THE CLEAR WIDTH MAY BE 36" APPROACHING AND LEAVING THE

F. An accessible route with a clear width less than 60" shall provide passing spaces at intervals of 200' MAXIMUM. PASSING SPACES SHALL EITHER BE 60"x60" OR COMPLY WITH 304.3.2 WHERE THE BASE AND ARMS OF

THE T-SHAPED SPACE EXTEND 48" MINIMUM BEYOND THE INTERSECTION.

TAS SECTION 404 - DOORS, DOORWAYS, AND GATES

A. Doorways shall provide a clear opening of 32" minimum, with the door open 90° . (Fig. 1. CLEAR OPENING SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND OPPOSITE STOP. 2. OPENINGS MORE THAN 24" IN DEPTH SHALL PROVIDE A CLEAR OPENING OF 36" MINIMUM.

3. THERE SHALL BE NO PROJECTIONS INTO THE REQUIRED CLEAR OPENING WIDTH LOWER THAN 34" ABOVE THE FINISH FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34"-80" AFF SHALL NOT EXCEED 4".



(C) FOLDING DOOR FIGURE 404.2.3 CLEAR WIDTH AT DOORWAYS A. FRONT APPROACH PULL SIDE - 60" MIN. WIDTH & 18" MIN. BESIDE STRIKE EDGE . FRONT APPROACH B. HINGE SIDE APPROACH PULL SIDE - 60" MIN. WIDTH, 36" MIN. BESIDE STRIKE EDGE; OR 54" MIN. C. LATCH SIDE APPROACH PULL SIDE - 48" MIN. WIDTH AND 24" MIN. BESIDE STRIKE EDGE (54" MIN.

TAS SECTION 404.2 - MANEUVERING CLEARANCES AT DOORS PUSH SIDE - 48" MIN. WIDTH & 0" BESIDE STRIKE EDGE. (12"@ STRIKE IF DOOR HAS BOTH A CLOSER AND FOLLOWING FEATURES: A LATCH) (FIG. 404.2.4.1 (A)) WIDTH, 42" MIN. BESIDE STRIKE EDGE. HINGE SIDE APPROACH PUSH SIDE - 42" MIN. WIDTH AND 22" MIN. BESIDE HINGE EDGE (48" MIN. WIDTH IF DOOR HAS BOTH A CLOSER AND A LATCH) (FIG. 404.2.4.1 (B)) WIDTH IF DOOR HAS A CLOSER); LATCH SIDE APPROACH PUSH SIDE - 42" MIN. WIDTH AND 24" MIN. BESIDE STRIKE EDGE (48" MIN. WIDTH IF DOOR HAS A CLOSER) (FIG.404.2.4.1 (C))

TAS SECTION 404.2.5 - THRESHOLDS AT DOORWAYS A. Maximum threshold height: 1/2", shall comply with 302 and 303.

D. SPACE EXTENDING GREATER THAN 6" BEYOND THE AVAILABLE KNEE CLEARANCE

AT 9" ABOVE THE FINISH FLOOR OR GROUND SHALL NOT BE CONSIDERED TOE CLEARANCE. E. TOE CLEARANCE SHALL BE 30" WIDE MINIMUM.

. 32" <u>MIN</u>





TAS SECTION 404.2.7 - DOOR AND GATE HARDWARE A. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST to operate. Hardware required for accessible door passage shall be mounted 34"-48" above finished FLOOR OR GROUND.

an open position of 90° , the door will take at least 5 seconds to move the door 12° from the latch.

FRONT APPROACH,

PULL SIDE

HINGE SIDE APPROACHED SWINGING DOORS

<u>TAS SECTION 404.2.9 - DOOR AND GATE</u>

A. THE MAXIMUM FORCE FOR PUSHING OR

PULLING OPEN A DOOR SHALL BE AS FOLLOWS:

1. FIRE DOORS SHALL HAVE THE

MINIMUM OPENING FORCE ALLOWABLE BY THE

B. INTERIOR HINGED : 5.0 LB.

THESE FORCES DO NOT APPLY TO THE FORCE

REQUIRED TO RETRACT LATCH BOLTS OR

THE DOOR IN A CLOSED POSITION.

<u> TAS SECTION 404.2.11 - VISION LIGHTS</u>

MAXIMUM ABOVE THE FLOOR.

SHALL NOT BE STEEPER THAN 1:48

SLOPE SHALL BE USED FOR ANY RAMP.

TO OVERLAP THE REQUIRED LANDING AREA.

TAS SECTION 405.8 - HANDRAILS

MINIMUM

A. DOORS, GATES, AND SIDE LIGHTS ADJACENT TO DOORS OR GATES,

A. RAMP RUNS SHALL HAVE A SLOPE NOT STEEPER THAN 1:12. IN ASSEMBLY

AREAS, AISLE RAMPS ADJACENT TO SEATING AND NOT SERVING ELEMENTS REQUIRE

to be on an accessible route shall not have to comply with 405. Cross ramp

B. THE CLEAR WIDTH OF THE RAMP RUN AND THE CLEAR WIDTH BETWEEN

C. THE RISE FOR ANY RAMP SHALL BE 30" MAXIMUM. THE LEAST POSSIBLE

D. LEVEL LANDINGS REQUIRED AT TOP AND BOTTOM OF EACH RUN, WITH THE

3. At change of direction landing shall be 60" x 60" min.

C. The clear space between the handrail and the wall shall be $1 \ 1/2'$

1. MINIMUM WIDTH: EQUAL TO WIDTH OF RAMP

E. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING,

A. HANDRAILS ARE REQUIRED AT ALL RAMPS WITH > 6" RISE.

MANEUVERING CLEARANCES REQUIRED BY 404.2.4 AND 404.3.2 SHALL BE PERMITTED

CONTAINING ONE OR MORE GLAZING PANELS THAT PERMIT VIEWING THROUGH THE

PANELS SHALL HAVE THE BOTTOM OF AT LEAST ONE GLAZED PANEL LOCATED 43"

TAS SECTION 405 - RAMPS (SEE TABLE 405.2 FOR EXISTING CONDITIONS)

HANDRAILS WHERE HANDRAILS ARE PROVIDED SHALL BE 36" MIN.

2. Length: Minimum 60" clear

B. HEIGHT: 34"-38" ABOVE RAMP SURFACE

NOTE: $Y = 54 \Box$

IN MINIMUM

IF DOOR

HAS A CLOSER

DISENGAGE OTHER DEVICES THAT MAY HOLD

C. SLIDING OR FOLDING : 5.0 LB.

A. EXTERIOR HINGED DOORS:

HINGE APPROACH, PULL SIDE

x = 42 in minimum if y = 54 in

NOTE: x = 36 in minimum if y = 60 in;

APPROPRIATE ADMINISTRATIVE AUTHORITY.

OTHER DOORS

NO REQUIREMENT.

OPENING FORCE





TAS SECTION 404.2.8.1 - DOOR CLOSERS AND GATE CLOSERS A. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM

18" MIN .

NOTE: x = 12 in if door has both

NOTE: y = 48 in

IF DOOR HAS BOTH A

CLOSER AND A

MINIMUM

LATCH

A CLOSER AND A LATCH

FRONT APPROACH.

HAS A CLOSER

, NOTE: y = 48 in minimum if door

(A) PUSH SIDE

FRONT APPROACHES SWING DOORS

HINGE

APPROACH,

PUSH SIDE



- AT LEAST AS

WIDE AS

SLOPE

<u>Figure 406.4</u>

60" MIN

LANDINGS AT THE TOP OF CURB RAMPS

RAMP & SIDES SHALL HAVE DETECTABLE WARNINGS AND

SHALL HAVE A LIGHT REFLECTIVE VALUE THAT

SIGNIFICANTLY CONTRASTS WITH THE ADJOINING

CURB RAMP

FLARED

SIDES,

SLOPE

1:10 MAX

<u> TAS SECTION 406.4 - LANDINGS</u>

A. Landings shall be provided at the tops of curb ramps.the landing clear length shall be 36" minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing. (Fig. 406.4)

SLOPE -

<u>Standard Curb Ramp</u>

PEDESTRIAN ROUTES

TAS SECTIONS 406.5 - LOCATION A. CURB RAMPS AND THE FLARED SIDES OF CURB RAMS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, EXCLUDING ANY FLARED SIDES.

TAS SECTION 406.6 - DIAGONAL CURB RAMPS A. IF DIAGONAL CURB RAMPS HAVE RETURNED CURBS OR OTHER WELL-DEFINED EDGES, SUCH EDGES SHALL BE PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW. THE BOTTOM OF DIAGONAL CURB RAMPS SHALL HAVE 48" MINIMUM CLEAR SPACE. IF DIAGONAL CURB RAMPS ARE PROVIDED AT MARKED CROSSINGS, THE 48" CLEAR SPACE SHALL BE WITHIN THE MARKINGS. DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE AT LEAST A 24" LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF

THE CURB RAMP AND WITHIN THE MARKED CROSSING. TAS SECTION 4.7.11 - ISLANDS

A. ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48" LONG BY 36" WIDE MIN. BETWEEN THE CURB RAMPS IN THE PART OF THE ISLAND

INTERSECTED BY THE CROSSINGS. EACH MIN. 48" X 36" AREA SHALL BE ORIENTED SO

THAT THE 48" MIN. LENGTH IS IN THE DIRECTION OF THE RUNNING SLOPE OF THE CURB RAMP IT SERVES.

TAS SECTION 405.9 - EDGE PROTECTION

A. RAMPS AND LANDINGS WITH DROP OFFS IN EXCESS OF 1/2" SHALL HAVE CURBS, WALLS, RAILINGS, OR PROJECTING SURFACES THAT PREVENT SLIPPING OFF THE RAMP.

B. A CURB OR BARRIER SHALL BE PROVIDED THAT PREVENTS THE PASSAGE OF A 4" DIAMETER SPHERE, WHERE ANY PORTION

OF THE SPHERE IS WITHIN 4" OF THE FINISH FLOOR OR GROUND SURFACE. C. THE EXTENDED FLOOR OR GROUND SURFACE OF THE RAMP RUN OR LANDING SHALL EXTEND 12" MINIMUM BEYOND THE INSIDE FACE OF A HANDRAIL COMPLYING WITH 505. (SEE FIGURE 405.9.1)

<u>CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS</u>

TAS SECTION 502 - PARKING SPACES (REFERENCE FIGURE 502.3)

A. Accessible car parking spaces shall be at least 96" minimum wide and van accessible parking shall be 132" MINIMUM WIDE.

1. VAN PARKING SPACES MAY BE 96" WIDE MINIMUM WHERE THERE IS AN ACCESS AISLE 96" WIDE MINIMUM. -2. Access atsies serving car and van parking shall be a minimum 60" wide and shall adjoin an

ACCESSIBLE ROUTE. 3. Access aisles should be marked to discourage people from parking in them and extend the full

LENGTH OF THE PARKING SPACE B. SURFACE SLOPE SHALL NOT EXCEED 1:48 IN ALL DIRECTIONS (NOTE: NO BUILT UP CURB RAMP MAY BE LOCATED IN AN ACCESSIBLE PARKING ACCESS AISLE.)

C. Access aisles shall not overlap the vehicular way.

VEHICULAR ROUTE FROM AN ENTRANCE TO THE PASSENGER LOADING ZONE

AND FROM THE PASSENGER LOADING ZONE TO A VEHICULAR EXIT SHALL

PROVIDE A VERTICAL CLEARANCE OF 144" MIN

D. ACCESS AISLES SHALL BE PERMITTED TO BE PLACED ON EITHER SIDE OF THE PARKING SPACE EXCEPT FOR ANGLED VAN PARKING SPACES, WHICH SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACE.



STAIR NOSINGS <u>Figure 504.5</u> TAS SECTION 505 - HANDRAILS (REFERENCE FIGURES 505.10.1, 505.10.2, 3) A. HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS AND RAMPS. NON-CONTINUOUS STAIR HANDRAILS SHALL EXTEND 12" BEYOND THE TOP RISER AND THE WIDTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT THE TOP, THE EXTENSION SHALL BE PARALLEL TO THE FLOOR. AT THE BOTTOM, THE handrail shall continue to slope for a distance of one tread width. Non continuous ramp HANDRAILS SHALL EXTEND 12" MINIMUM BEYOND THE TOP & BOTTOM OF RAMP RUNS. B. HEIGHT: 34"-38", MEASURED FROM THE STAIR NOSING. C. Clearance between handrail and adjacent surfaces shall be $1 \ 1/2$ " minimum. D. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS

¥-

ANGLED RISER

1/2" MAX 🦴

CURVED NOSING



<u>Figure 505.10.1</u> TOP AND BOTTOM HANDRAII EXTENSION AT RAMP

CHAPTER 6: PLUMBING ELEMENTS AND FACILITIES

<u>TAS SECTION 602 - DRINKING FOUNTAINS</u>

A. DRINKING FOUNTAINS SHALL COMPLY WITH 307 (PROTRUDING OBJECTS) AND 602. B. UNITS SHALL HAVE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH AND CENTERED Knee and toe clearances must comply with 306. Operable parts shall comply with 309. (Fig. 602.5) ON THE UNIT. TAS SECTION 602.4 - SPOUT HEIGHT (REFERENCE FIGURE 602.4 FOR ACCESSIBLE UNIT)

A. Accessible spouts shall be a maximum 36" above the finish floor or ground. TAS SECTION 602.5 - SPOUT LOCATION (REFERENCE FIGURE 602.5) A. THE SPOUT SHALL BE LOCATED 15" MIN. FROM THE VERTICAL SUPPORT AND 5" MAX. FROM THE FRONT EDGE OF THE UNIT,

INCLUDING BUMPERS B. THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4" HIGH AND SHALL BE LOCATED 5" MAXIMUM FROM THE FRONT OF THE

UNIT.

C. Where spouts are located less than 3" from the front of the unit, the water stream shall be 30 degrees maximum. WHERE THE SPOUT IS LOCATED BETWEEN 3"-5" MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAX.

TAS SECTION 602.7 - DRINKING FOUNTAINS FOR STANDING PERSONS A. Spout outlets of drinking fountains for standing persons shall be 38" min. & 43" max. above the finish floor or



TAS SECTION 603 - TOILET AND BATHING ROOMS

A. TURNING SPACE COMPLYING WITH 304 SHALL BE PROVIDED WITHIN THE ROOM. (60" DIAMETER OR T-SHAPED SPACE PER

304.3.2) B. REQUIRED CLEAR FLOOR SPACES. CLEARANCE AT FIXTURES. AND TURNING SPACE SHALL BE PERMITTED TO OVERLAP. C. DOOR SWINGS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE. DOORS CAN SWING INTO THE REQUIRED TURNING SPACE.

TAS SECTION 603.3 - MIRRORS

A. MIRRORS LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED SO THE BOTTOM EDGE OF THE REFLECTING SURFACE IS 40" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. MIRRORS NOT INSTALLED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE 35" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. TAS SECTION 603.4 - COAT HOOKS AND SHELVES

A. COAT HOOKS SHALL BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN 308.

SHELVES SHALL BE LOCATED 40"-48" ABOVE THE FINISH FLOOR. TAS SECTION 604 - WATER CLOSETS AND TOILET COMPARTMENTS

A. THE WATER CLOSET SHALL BE POSITIONED WITH A WALL OR PARTITION TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 16" MINIMUM AND 18" MAXIMUM FROM THE SIDE WALL OR PARTITION, EXCEPT IN AN AMBULATORY ACCESSIBLE TOILET COMPARTMENT WHERE THE CENTERLINE OF THE WATER CLOSET MAY BE 17" MINIMUM AND 19" MAXIMUM FROM THE SIDE WALL OR PARTITION. WATER CLOSETS SHALL BE ARRANGED FOR A LEFT-HAND OR RIGHT-HAND APPROACH. (FIG. 604.3.1, 604.8.2) TAS SECTION 604.3 - CLEARANCE

A. CLEARANCES AROUND WATER CLOSETS AND IN TOILET COMPARTMENTS SHALL COMPLY WITH FIGURE 604.3.1

1. MINIMUM TREAD DEPTH SHALL BE 11", MEASURED FROM RISER TO RISER (NOT INCLUDING NOSING)



BEVELED NOSING

E. HANDRAILS ARE REQUIRED ON RAMP RUNS GREATER THAN 6" IN RISE. _____1 1/2" MIN





SPOUT LOCATION



<u>Closets</u>

TAS SECTION 604.3.2 - OVERLAP

A. THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, DISPENSERS, SANITARY NAPKIN DISPOSAL UNITS, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AND clearances required at other fixtures, and the turning space. No other fixtures or obstructions shall be located within THE REQUIRED WATER CLOSET CLEARANCE

TAS SECTION 604.4 - SEATS (REFERENCE FIGURE 604.4)

A. The seat height of a water closet above finish floor shall be 17"-19" maximum measured to the top of seat. 1. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION

TAS SECTION 604.5 - GRAB BARS (REFERENCE FIGURES 604.4, 604.5.2) A. GRAB BARS SHALL COMPLY WITH 609 AND BE PROVIDED ON THE SIDE WALL CLOSEST TO THE WATER CLOSET AND ON THE REAR WALL.

1.GRAB BARS SHALL NOT BE REQUIRED IN A TOILET ROOM FOR A SINGLE USE OCCUPANT ACCESSED ONLY THROUGH A PRIVATE OFFICE AND NOT FOR COMMON OR PUBLIC USE PROVIDED THAT REINFORCEMENT HAS BEEN INSTALLED IN WALLS AND LOCATED SO AS TO PERMIT THE INSTALLATION OF GRAB BARS COMPLYING WITH 604.5

B. For water closets not located in toilet stalls, the following grab bars shall be provided, 33"-36" above the FINISH FLOOR

1. SIDE WALL: 42" LONG MINIMUM, LOCATED 12" MAXIMUM FROM BACK WALL. 2. Rear wall: 36" long minimum & extend from the centerline of the water closet 12" minimum on one side &

24" MINIMUM ON THE OTHER SIDE.

REFER TO 609 GRAB BARS FOR SIZE AND STRUCTURAL ELEMENTS

TAS SECTION 604.6 - FLUSH CONTROLS (REFERENCE FIGURE 604.5.2) A. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309. Flush CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET EXCEPT IN AMBULATORY ACCESSIBLE COMPARTMENTS COMPLYING with 604.8.2.

TAS SECTION 604.7 - DISPENSERS (REFERENCE FIGURE 604.4)

A. Toilet paper dispensers shall comply with 309.4 and shall be 7" minimum and 9" maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15" minimum and 48" maximum the finish floor and shall not be located behind grab bars. Dispensers that control delivery or do not PERMIT CONTINUOUS PAPER FLOW SHALL NOT BE USED.



A. Wheelchair accessible toilet compartments shall meet the requirements of 604.8.1 and 604.8.3 Compartments CONTAINING MORE THAN ONE PLUMBING FIXTURE SHALL COMPLY WITH 603. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.2 & 604.8.3.

TAS SECTION 604.8.1 - WHEELCHAIR ACCESSIBLE COMPARTMENTS

A. WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.1 B. WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL BE 60" WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 56" DEEP MINIMUM FOR WALL HUNG WATER CLOSETS AND 59" DEEP MINIMUM FOR FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. WHEELCHAIR ACCESSIBLE COMPARTMENTS FOR CHILDREN'S USE SHALL BE 60" WIDE MINIMUM MEASURED PERPENDICULAR TO THE WALL AND 59" DEEP MINIMUM FOR WALL HUNG & FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL.



WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT DOORS AMBULATORY ACCESSIBLE TOILET COMPARTMENTS CLEARANCES INDICATED ARE MINIMUM REQUIREMENTS FOR ACCESSIBILITY.REFER TO TOILET ROOMS AND LAVATORY DETAILS FOR

MOUNTING HEIGHTS.

CHAPTER 6: PLUMBING ELEMENTS AND FACILITIES (CONTINUED)

TAS SECTION 604.8.1.2 - DOORS (REFERENCE FIGURES 604.8.1.2, 604.8.2) A. TOILET COMPARTMENTS DOORS, INCLUDING DOOR HARDWARE, SHALL COMPLY WITH 404 EXCEPT THAT IF THE APPROACH

IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42" MINIMUM. DOORS SHALL BE LOCATED IN THE FRONT PARTITION OR IN THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE FRONT PARTITION, THE DOOR OPENING SHALL BE 4" MAXIMUM FROM THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE SIDE WALL OR PARTITION, THE DOOR OPENING SHALL BE 4" MAXIMUM FROM THE FRONT PARTITION. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL COMPLYING WITH 404.2.7 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA.

B. COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR RIGHT-HAND APPROACH TO THE WATER CLOSET. TAS SECTION 604.8.1.4 - TOE CLEARANCE

A. THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9" MINIMUM ABOVE FINISH FLOOR AND 6" DEEP MINIMUM BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION support members. Compartments for children's use shall provide 12" minimum toe clearance above finish floor. TAS SECTION 604.8.2 - AMBULATORY ACCESSIBLE COMPARTMENTS

A. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH FIGURE 604.8.2

B. Ambulatory accessible compartments shall have a depth of 60" minimum and a width of 35"-37" maximum. C. Grab bars in ambulatory accessible compartments shall comply with 609. A side-wall grab bar that is 42" LONG MINIMUM. LOCATED 12" MAX. FROM THE REAR WALL AND EXTENDING 54" MIN. FROM THE REAR WALL SHALL BE LOCATED ON BOTH SIDES OF COMPARTMENT.

D. COAT HOOKS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. SHELVES SHALL BE LOCATED 40"-48" MAXIMUM ABOVE THE FINISH FLOOR.

TAS SECTION 605 - URINALS

A. URINALS SHALL BE STALL-TYPE OR WALL-HUNG WITH THE RIM 17" maximum above the finish floor or ground. URINALS SHALL BE 13 1/2" deep minimum measured from the outer face of the urinal rim to the back side of THE FIXTURE. (FIG. 605.2)

B. A CLEAR FLOOR SPACE COMPLYING WITH 305 (30" MIN. WIDE BY 48" MIN. DEEP) POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED.



FIGURE 605.2 HEIGHT AND DEPTH OF URINALS

TAS SECTION 606 - LAVATORIES AND SINKS A. A CLEAR FLOOR SPACE COMPLYING WITH 305 (30" MIN. WIDE BY 48" MIN. DEEP) POSITIONED FOR A FORWARD APPROACH, AND KNEE AND TOE CLEARANCES COMPLYING WITH 306 SHALL BE PROVIDED.

TAS SECTION 703 - SIGNS

TAS SECTION 703.4.2 - LOCATION

CLOSED POSITION AND 45 DEGREES OPEN POSITION.

TAS SECTION 703.5 - VISUAL CHARACTERS

ON A DARK BACKGROUND OR VICE VERSA

<u>TAS SECTION 703.6 - PICTOGRAMS</u>

ON A DARK BACKGROUND OR VICE VERSA.

BOTH.

HEIGHT

GROUND.

BACKGROUNI

48" MIN

れば ナーーーーー

SEL FLOOR

<u>Lavatory Detail</u>

COMPARTMENTS, THRESHOLDS 1/2" HIGH SHALL BE BEVELED,

🖌 / CONTROL WALL

GRAB BAR

SHOWER SEAT DETAIL

15" MAX

CONTROL

SIDE WALL

SHOWER CONTROL DETAIL

CLEAR

SPACE

19" MAX—

17" MIN

A. WHERE BOTH VISUAL AND TACTILE CHARACTERS ARE REQUIRED, EITHER ONE

B. CHARACTERS SHALL BE UPPERCASE AND RAISED 1/32" MINIMUM ABOVE THEIR

C. CHARACTERS SHALL BE SANS SERIF. CHARACTERS SHALL NOT BE ITALIC,

SIGN WITH BOTH VISUAL AND TACTILE CHARACTERS, OR TWO SEPARATE SIGNS, ONE

WITH VISUAL, AND ONE WITH TACTILE CHARACTERS, SHALLBE PROVIDED

OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF ANY OTHER UNUSUAL FORM.

CHARACTER SHALL BE 5/8"-2"MAXIMUM BASED ON THE LETTER "I."

703.3.1. BRAILLE SHALL BE LOCATED BELOW THE ENTIRE TEXT.

LETTER "O" IS 55-110 PERCENT OF THE HEIGHT OF THE UPPERCASE LETTER "I."

D. CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE

E. BRAILLE SHALL BE CONTRACTED (GRADE 2) & SHALL COMPLY W/ TABLE

FINISH FLOOR MEASURED FROM THE BASELINE OF THE LOWEST CHARACTER AND 60"

MAXIMUM ABOVE FINISH FLOOR MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE

A. WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE

DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE PLACED ON THE INACTIVE

PLACED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT

LEAF. IF THE DOUBLE DOOR HAS TWO ACTIVE LEAFS, THE TACTILE SIGN SHALL BE

THE LATCH SIDE OF THE DOOR OR THE RIGHT SIDE OF THE DOUBLE DOORS, SIGNS

SHALL BE LOCATED ON THE ADJACENT WALL. SIGNS CONTAINING TACTILE LETTERS

SHALL BE LOCATED SO THAT A MINIMUM CLEAR SPACE OF 18"X18," CENTERED ON THE

TACTILE LETTERS IS PROVIDED, BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE

A. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH.

CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS

B. CHARACTERS SHALL BE UPPERCASE OR LOWERCASE OR A COMBINATION OF

C. CHARACTERS SHALL BE CONVENTIONAL IN FORM. CHARACTERS SHALL NOT BE

D. CHARACTER HEIGHT SHALL COMPLY WITH TABLE 703.5.5 VISUAL CHARACTER

E. VISUAL CHARACTERS SHALL BE 40" MAXIMUM ABOVE THE FINISH FLOOR OR

A. Pictograms shall have a field height of 6" minimum. Characters and

PERMIT SET

No.

DESCRIPTION

06.05.23

КНІ

CHIROPRACTIC

WELLNESS

6151 E. POST ROAD,

KYLE, TX 78640

ACCESSIBILITY

STANDARDS

2022-008

06/05/23

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DATE

ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF ANY OTHER UNUSUAL FORM.

CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE

B. PICTOGRAMS AND THEIR FIELD SHALL HAVE A NON-GLARE FINISH.

PICTOGRAMS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS

LETTER "O" IS 55-110% OF THE HEIGHT OF THE UPPERCASE LETTER "I."

BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD.

LOCATED ALONGSIDE THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT

F. TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48" MINIMUM ABOVE THE

1. SOAP AND TOWEL DISPENSERS MUST ALSO BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN 308. Locate soap and towel dispensers so they are easy to use by a person at the accessible lavatory.

B. Lavatories & sinks shall be installed w/ the front of the higher rim or counter surface 34"MAX. ABOVE THE FINISH FLOOR OR GROUND. C. CONTROLS FOR FAUCETS SHALL COMPLY WITH 309. HAND-OPERATED METERING FAUCETS SHALL REMAIN FOR CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE 10 SECONDS MINIMUM.

CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS

D. WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE

<u>م</u> م

36" CLEAR

BACK

CLEAR FLOOR SPACE

SHOWER STALL DETAIL

SHOWER SEAT DETAIL

<u>Figure 608.2.1.</u>

TRANSFER TYPE SHOWER COMPARMENT SIZE AND CLEARANCE

48" MIN

22"-23" MAX

15"-16" MAX

8" MIN+

17" MIN - 25" MAX

TAS SECTION 607 - BATHTUBS A. CLEARANCE IN FRONT OF BATHTUBS SHALL EXTEND THE LENGTH OF THE BATHTUB AND SHALL BE 30 inches wide minimum. A lavatory complying with 606 shall be permitted at the control end of the clearance. Where a permanent seat is provided at the head end of the bathtub, the clearance shall EXTEND 12" MINIMUM BEYOND THE WALL AT THE HEAD END OF THE BATHTUB B. A PERMANENT SEAT AT THE HEAD END OF THE BATHTUB OR A REMOVABLE IN-TUB SEAT SHALL BE PROVIDED. SEATS SHALL COMPLY WITH 610. C. GRAB BARS FOR BATHTUBS SHALL COMPLY WITH 609 AND SHALL BE PROVIDED IN ACCORDANCE WITH FIGURES 607.4.1

<u>TAS SECTION 608 - SHOWER COMPARTMENTS</u> A. Shower stalls shall be 36" x 36" clear inside dimension at transfer type shower COMPARTMENTS AND HAVE A 36" MINIMUM WIDE BY 48" MINIMUM LONG CLEARANCE MEASURED FROM THE

B. A FOLDING OR NON-FOLDING SEAT SHALL BE PROVIDED IN TRANSFER TYPE SHOWER COMPARTMENTS. WITH 308. IN TRANSFER TYPE SHOWER

control wall. Roll-in type shower compartments shall be 30" minimum wide by 60" minimum long and shall have a 30" min wide x 60" min long entry on the face of the shower compartment. Alternate ROLL-IN SHOWER TYPE COMPARTMENTS SHALL BE 36" MINIMUM WIDE AND 60" MINIMUM DEEP CLEAR INSIDE DIMENSIONS WITH A 36" WIDE MINIMUM ENTRY PROVIDED AT ONE END OF THE LONG SIDE OF THE COMPARTMENT. TAS SECTION 608.3.1 - TRANSFER TYPE SHOWER COMPARTMENT A. IN TRANSFER TYPE COMPARTMENTS, GRAB BARS SHALL BE PROVIDED ACROSS THE CONTROL WALL AND BACK WALL TO A POINT 18" FROM THE CONTROL WALL.

C. CONTROLS, FAUCETS, AND SHOWER SPRAY UNITS SHALL COMPLY WITH 309.4 TAS SECTION 608.7 - THRESHOLDS A. Thresholds in roll-in type shower compartments shall be 1/2" high maximum in accordance ROUNDED, OR VERTICAL

A. GRAB BARS WITH CIRCULAR CROSS SECTIONS SHALL HAVE AN OUTSIDE DIAMETER OF $1 \, 1/4$ " MINIMUM AND 2" MAXIMUM. GRAB BARS WITH NON-CIRCULAR CROSS SECTIONS SHALL HAVE A CROSS-SECTION DIMENSION OF 2" MAXIMUM AND A PERIMETER DIMENSION OF 4" MINIMUM AND 4.8" MAXIMUM. B. The space between the wall and grab bar shall be $1 \ 1/2$ ". The space between the grab bar and projecting objects below shall be $1 \; 1/2$ " minimum. The space between the grab bar and PROJECTING OBJECTS ABOVE SHALL BE 12" MINIMUM. C. GRAB BARS SHALL BE INSTALLED IN A HORIZONTAL POSITION, 33" MINIMUM AND 36" MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE TOP OF THE GRIPPING SURFACE. REFER TO CHART FOR CHILDREN ACCESSIBLE HEIGHTS FOR EXCEPTIONS. D. ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHEN A HORIZONTAL OR VERTICAL FORCE OF 250 POUNDS IS APPLIED AT ANY POINT OF THE GRAB BAR OR ANY OF ITS COMPONENTS. TAS SECTION 610.2 - BATHTUB SEATS A. SEAT SHALL BE ABLE TO STAND VERTICAL AND HORIZONTAL FORCES OF 250 POUNDS AND SHALL HAVE THE FOLLOWING FEATURES: 1. SHALL BE 17"-19" ABOVE FINISH FLOOR

TAS SECTION 609 - GRAB BARS

2 1/2" MAX +

2. REMOVABLE SEATS SHALL BE 15"-16" DEEP AND CAPABLE OF SECURE PLACEMENT. 3. Permanent seats shall be 15" deep minimum & extend from the back wall to or beyond THE OUTER EDGE OF BATHTUB.

A. Seats shall be L-shaped with the rear edge 2 1/2" max. from the wall and 15"-16" MAX.IMUM FROM THE SEAT WALL. THE REAR EDGE OF THE "L" PORTION SHALL BE $1 \ 1/2$ " MAX. FROM THE WALL AND THE FRONT EDGE SHALL BE 14"-15" FROM THE WALL. THE END OF THE "L" SHALL BE 22"-23" FROM THE MAIN SEAT WALL. SEATS SHALL HAVE BE ABLE TO STAND VERTICAL AND HORIZONTAL FORCES OF

250 LBS. 1. SHALL BE 17"-19" ABOVE FINISH FLOOR 2. WHERE A SEAT IS PROVIDED IN A ROLL IN TYPE SHOWER IT MUST BE THE FOLD-UP TYPE

TAS SECTION 611 - WASHING MACHINES AND CLOTHES DRYERS A. TOP LOADING MACHINES SHALL HAVE THE DOOR TO THE LAUNDRY COMPARTMENT LOCATED 36" TAS SECTION 702 - FIRE ALARM SYSTEMS

A. FIRE ALARM SYSTEMS SHALL HAVE PERMANENTLY INSTALLED AUDIBLE AND VISUAL ALARMS COMPLYING WITH NFPA 72 (1999 OR 2002 ADDITION) EXCEPT THAT THE MAXIMUM ALLOWABLE SOUND LEVEL OF AUDIBLE NOTIFICATION APPLIANCES COMPLYING WITH SECTION 4-3.2.1 OF NFPA 72 (1999 ADDITION) SHALL HAVE A SOUND LEVEL NO MORE THAN 110DB AT THE MAXIMUM HEARING DISTANCE FROM THE AUDIBLE AUDIENCES

TAS SECTION 610.3 - SHOWER SEATS

MAXIMUM ABOVE THE FINISH FLOOR. FRONT LOADING MACHINES SHALL HAVE THE BOTTOM OF THE OPENING TO THE LAUNDRY COMPARTMENT LOCATED 15"-36" ABOVE THE FINISH FLOOR. CHAPTER 7: COMMUNICATION ELEMENTS AND FEATURES



TAS SECTION 704.2 - WHEELCHAIR ACCESSIBLE TELEPHONES

A. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED. THE CLEAR FLOOR OR GROUND SPACE SHALL NOT BE OBSTRUCTED BY BASES, ENCLOSURES, OR SEATS. B. PARALLEL APPROACH - THE DISTANCE FROM THE EDGE OF THE TELEPHONE ENCLOSURE TO THE FACE OF THE TELEPHONE UNIT SHALL BE 10" MAXIMUM. (FIG. 704.2.1.1) C. Forward Approach - The distance from the front edge of a counter within the TELEPHONE ENCLOSURE TO THE FACE OF THE TELEPHONE UNIT SHALL BE 20" MAXIMUM. (FIG.

704.2.1.2) D. THE CORD FROM THE TELEPHONE TO THE HANDSET SHALL BE 29" MINIMUM LONG. <u> TAS SECTION 704.3 - VOLUME CONTROL TELEPHONES</u>

A. Volume control must provide a gain adjustable to 20 dB minimum. For INCREMENTAL VOLUME CONTROL, PROVIDE AT LEAST INTERMEDIATE STEP OF 12 DB OF GAIN MINIMUM. AN AUTOMATIC RESET SHALL BE PROVIDED.



TAS SECTION 705 - DETECTABLE WARNINGS

A. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A BASE DIAMETER OF .9"-1.4" MAXIMUM, A TOP DIAMETER OF 50-65% OF THE BASE

DIAMETER, AND A HEIGHT OF .2" B. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING

SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON LIGHT C. Platform boarding edges shall be 24" wide and shall extend the full length

OF THE PUBLIC USE AREAS OF THE PLATFORM.

TAS SECTION 706 - ASSISTIVE LISTENING SYSTEMS A. RECEIVERS REQUIRED FOR USE W/ AN ASSISTIVE LISTENING SYSTEM SHALL INCLUDE A 1/8" STANDARD MONO JACK.

B. RECEIVERS REQUIRED TO BE HEARING-AID COMPATIBLE SHALL INTERFACE WITH TELECOLIS IN HEARING AIDS THROUGH THE PROVISION OF NECKLOOPS.

C. ASSISTIVE LISTENING SYSTEMS SHALL BE CAPABLE OF PROVIDING A SOUND pressure level of 110-118 dB w/ a dynamic range on the volume control of 50dB.

D. THE SIGNAL-TO-NOISE RATIO FOR INTERNALLY GENERATED NOISE IN ASSISTIVE LISTENING SYSTEMS SHALL BE 18 DB MINIMUM. PEEK CLIPPING SHALL NOT EXCEED 18 DB OF

CLIPPING RELATIVE TO THE PEAKS OF SPEECH.

CHAPTER 8: SPECIAL ROOMS, SPACES, AND ELEMENTS

TAS SECTION 802.1 - WHEELCHAIR SPACES A. THE FLOOR OR GROUND SURFACE OF WHEELCHAIR SPACES SHALL COMPLY W/ 302.

CHANGES IN LEVEL ARE NOT PERMITTED. B. A SINGLE WHEELCHAIR SPACE SHALL BE 36" WIDE MINIMUM.

C. WHERE A WHEELCHAIR SPACE CAN BE ENTERED FROM THE FRONT OR REAR, THE

WHEELCHAIR SPACE SHALL BE 48" DEEP MINIMUM. WHERE A WHEELCHAIR SPACE CAN BE ENTERED ONLY FROM THE SIDE, THE WHEELCHAIR SPACE SHALL BE 60" DEEP MINIMUM. D. WHEELCHAIR SPACES SHALL ADJOIN ACCESSIBLE ROUTES. ACCESSIBLE ROUTES SHALL NOT OVERLAP WHEELCHAIR SPACES.

E. LINES OF SIGHT TO THE SCREEN, PERFORMANCE AREA, OR PLAYING FIELD FOR SPECTATORS SHALL COMPLY WITH 802.2 (HAVE LINE OF SIGHT OVER HEADS OF SPECTATORS, DEPENDENT ON SPECTATORS POSITION)

TAS SECTION 802.3 - COMPANION SEATS

A. COMPANION SEATS SHOULD BE POSITIONED TO HAVE SHOULDER ALIGNMENT WITH ADJACENT WHEELCHAIR SPACES. THE SHOULDER ALIGNMENT POINT SHALL BE measured 36" from the front of the wheelchair space. The floor surface should BE THE SAME FOR THE WHEELCHAIR SPACE AND COMPANION SPACE.

B. COMPANION SEATS SHOULD BE EQUAL IN SIZE, QUALITY, COMFORT, & AMENITIES OF IMMEDIATE SEATING.

TAS SECTION 802.4 - AISLE SEATS

A. Each designated aisle seat shall be identified by a sign or marker. Where ARMRESTS ARE PROVIDED ON OTHER SEATING IN THE IMMEDIATE AREA, FOLDING OR RETRACTABLE ARMRESTS MUST BE PROVIDED ON THE AISLE SIDE OF THE SEAT. TAS SECTION 803 - DRESSING, FITTING, AND LOCKER ROOMS

A. TURNING SPACE COMPLYING WITH 304 SHALL BE PROVIDED WITHIN THE ROOM. B. DOORS SHALL NOT SWING INTO THE ROOM UNLESS A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305.3 IS PROVIDED BEYOND THE ARC OF THE SWING.

C. A BENCH THAT IS 42" LONG MINIMUM X 20"-24" DEEP SET AT A HEIGHT OF 17"-19" SHALL BE PROVIDED WITHIN THE ROOM.

D. COAT HOOKS SHALL BE LOCATED WITHIN REACH RANGES SPECIFIED IN 308. SHELVES SHALL BE 40"-48" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. TAS SECTION 804 - KITCHENS AND KITCHENETTES

A. IN A PASS THROUGH KITCHENS WHERE COUNTERS OR APPLIANCES ARE ON OPPOSING SIDES, THERE MUST BE A 40" MINIMUM CLEARANCE BETWEEN OPPOSING SIDES AND AN ENTRANCE FROM EACH SIDE.

B. IN A U-SHAPED KITCHEN ENCLOSED ON 3 CONTINUOUS SIDES, CLEARANCE BETWEEN ALL OPPOSING SIDES MUST BE 60" MINIMUM.

C. KITCHEN WORK SURFACE SHALL BE 34" ABOVE FINISH FLOOR OR GROUND.

CHAPTER 9: BUILT-IN ELEMENTS

TAS SECTION 902 - DINING SURFACES AND WORK SURFACES

A. A CLEAR FLOOR SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH SHALL BE PROVIDED. KNEE AND TOE CLEARANCE MUST COMPLY WITH 306. B. TOPS OF DINING SURFACES & WORK SURFACES SHALL BE 28"-34" MAXIMUM ABOVE THE

FINISH FLOOR OR GROUND. TAS SECTION 902.4 - DINING SURFACES AND WORK SURFACES FOR CHILDREN'S USE A. A CLEAR FLOOR SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH

SHALL BE PROVIDED. KNEE AND TOE CLEARANCE MUST COMPLY WITH 306, EXCEPT THE KNEE CLEARANCE SHALL BE 24" MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

B. Tops of dining surfaces & work surfaces shall be 26"-30" maximum above the FINISH FLOOR OR GROUND.

<u> TAS SECTION 903 - BENCHES</u>

A. CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED AND SHALL BE POSITIONED AT THE END OF THE BENCH SEAT AND PARALLEL TO THE SHORT AXIS OF THE BENCH.

B. Benches shall have seats 42" minimum long and 20"-24" maximum deep.

C. BENCH SHALL PROVIDE BACK SUPPORT OR BE AFFIXED TO A WALL.

D. TOP OF BENCH SEAT SHALL BE 17"-19" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. E. Allowable stresses shall not be exceeded for materials used when a vertical

OR HORIZONTAL FORCE OF 250 POUNDS IS APPLIED AT ANY POINT ON THE SEAT OR ITS COMPONENTS.

TAS SECTION 904 - SALES AND SERVICE COUNTERS

A. Parallel Approach - A portion of the counter surface that is 36" long minimum AND 36" HIGH MAXIMUM SHALL BE PROVIDED. A CLEAR FLOOR SPACE COMPLYING WITH 305 SHALL BE POSITIONED FOR A PARALLEL OR APPROACH ADJACENT TO THE 36" HIGH MINIMUM LENGTH OF THE COUNTER

B. Forward Approach - A portion of the counter surface that is 30" long minimum and 36" high maximum shall be provided. Knee and toe spaces complying with 306 shall BE PROVIDED UNDER THE COUNTER. A CLEAR FLOOR SPACE COMPLYING WITH 305 SHALL BE POSITIONED FOR A PARALLEL OR APPROACH ADJACENT TO THE 36" HIGH MINIMUM LENGTH OF THE COUNTER.

C. The accessible portion of the countertop shall extend the same depth as the SALES/SERVICE COUNTER.

		AGE BASED DIMENSION	<u>AL INFORM</u>
		ADULT (AGE 12 +)	AGE
	HANDRAILS	34" MIN - 38" MAX	SECOND. Clearanc
	REACH RANGE -FORWARD OR SIDE	15" MIN - 48" MAX	16" MIN
	WC CENTERLINE TO WALL	16" - 18"	15
ILET	WC CENTERLINE TO WALL (AMBULATORY)	17" - 19"	
WC/T0	WC TOP OF SEAT	17" - 19"	15
	GRAB BARS (TO TOP)	33" - 36"	25
	DISPENSER HEIGHT	15" - 48"	17
	LAV. MIN. KNEE CLEAR.	27" FORWARD Approach only	24" Appro
	LAV. MAX RIM/COUNTERTOP	34"	
RRORS	LAV. MAX TO FAUCETS FROM FRONT	24"	
LAV/MIR	MIRRORS ABOVE LAV., MAX TO BOTTOM OF REFLECTIVE SURFACE	40"	
	MIRRORS NOT ABOVE LAV., MAX TO BOTTOM OF REFLECTIVE SURFACE	35"	
	MIN TOP OF MIRROR	74"	
NKING TAINS	MAX TO LOW SPOUT	36"	30" (S BE 3 1/2
DRIN FOUNT	MAX TO HIGH/STANDARD PERSON SPOUT	38" - 43"	

**NOTE: " — " INDICATES NO EXCEPTIONS MADE FOR THAT ITEM PER TAS 2012 STANDARDS

<u>ATION TABLE FOR CHILDREN</u>

9-12 AGE 5-8 AGE 3-4 TAS SECTION IDARY HANDRAIL AT 28" MAX WITH MIN 9" NCE BETWEEN UPPER HANDRAIL RECOMMENDED 505.4 20" MIN - 36" MAX IN - 44" MAX | 18" MIN - 40" MAX 308.2 5" - 18" 12" - 15" 604.9 12" _____ 604.2 5" - 17" 12" - 15" 604.9 11" - 12" 5" - 27" 604.9 20" - 25" 18" - 20" 7" - 19" 604.9 14" - 17" 14" FORWARD 24" FORWARD PARALLEL 606.2.4 ROACH ONLY APPROACH ONLY APPROACH ALLOWED 31" 31" 606.2.4 ____ _____ 308.1 603.3 ____ _____ 603.3 _____ 603.3 ____ ____ (SPOUT MUST 30" (SPOUT MUST 30" (SPOUT MUST 602.2 (2" FM. FRONT) | BE 3 1/2" FM. FRONT) BE 3 1/2" FM. FRONT) 602.7 _____ _____

TAS SECTION 407 - ELEVATORS

A. ELEVATORS SHALL COMPLY WITH ASME A17.1. THEY SHALL BE PASSENGER ELEVATORS AS CLASSIFIED BY ASME A17.1 ELEVATOR OPERATION SHALL BE AUTOMATIC. TAS SECTION 407.2 - ELEVATOR LANDING REQUIREMENTS

A. CALL BUTTONS SHALL BE RAISED OR FLUSH AND LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308, MEASURED TO THE CENTERLINE OF THE HIGHEST OPERABLE POINT.

1. Call buttons shall be 3/4" minimum in the smallest DIMENSION.

2. A CLEAR FLOOR SPACE COMPLYING WITH 305 SHALL BE PROVIDED AT THE

CONTROLS. 3. THE CALL BUTTON THAT DESIGNATES THE UP DIRECTION SHALL BE LOCATED ABOVE THE CALL BUTTON THAT DESIGNATES THE DOWN DIRECTION. 4. CALL BUTTONS SHALL HAVE VISIBLE SIGNALS TO INDICATE WHEN

EACH CALL IS REGISTERED AND WHEN EACH CALL IS ANSWERED. B. KEYPADS SHALL BE IN A STANDARD TELEPHONE KEYPAD ARRANGEMENT. C. VISIBLE AND AUDIBLE SIGNALS SHALL BE PROVIDED AT EACH HOISTWAY

ENTRANCE TO INDICATE WHICH CAR IS ANSWERING A CALL AND THE CAR'S DIRECTION OF TRAVEL. WHERE IN-CAR SIGNALS ARE PROVIDED, THEY SHALL BE VISIBLE FROM THE FLOOR AREA ADJACENT TO THE HALL CALL BUTTONS. 1. VISIBLE SIGNAL FEATURES SHALL BE CENTERED 72"

MINIMUM ABOVE THE FINISH FLOOR OR GROUND. THE VISIBLE SIGNAL ELEMENTS SHALL BE 2 1/2" MIN. MEASURED ALONG THE VERTICAL CENTERLINE OF THE ELEMENT. SIGNALS SHALL BE VISIBLE FROM THE FLOOR AREA

ADJACENT TO THE HALL CALL BUTTON. Audible signals shall sound once for the up DIRECTION AND TWICE FOR THE DOWN DIRECTION, OR SHALL HAVE VERBAL

ANNUNCIATORS THAT INDICATE THE DIRECTION OF ELEVATOR CAR TRAVEL. AUDIBLE SIGNALS SHALL HAVE A FREQUENCY OF 1500Hz MAX. VERBAL ANNUNCIATORS SHALL HAVE A FREQUENCY OF 300 HZ MIN - 3000 HZ MAX. D. FLOOR DESIGNATION SHALL BE PROVIDED ON BOTH JAMBS OF ELEVATOR

HOISTWAY ENTRANCES. FLOOR DESIGNATIONS SHALL BE PROVIDED IN BOTH TACTILE CHARACTERS AND BRAILLE. TACTILE CHARACTERS SHALL BE 2" HIGH MINIMUM. A TACTILE STAR SHALL BE PROVIDED ON BOTH JAMBS AT THE MAIN ENTRY LEVEL. TAS SECTION 407.3 - ELEVATOR DOOR REQUIREMENTS A. ELEVATOR DOORS SHALL BE HORIZONTAL SLIDING TYPE. CAR GATES ARE

PROHIBITED. B. ELEVATOR DOORS SHALL BE PROVIDED WITH A REOPENING DEVICE THAT SHALL

STOP AND OPEN A DOOR AND HOISTWAY DOOR AUTOMATICALLY IF THE DOOR BECOMES OBSTRUCTED BY AN OBJECT OR PERSON. 1. THE DEVICE SHALL BE ACTIVATED BY SENSING AN OBSTRUCTION

PASSING THROUGH THE OPENING AT 5" NOMINAL AND 29" NOMINAL ABOVE THE FINISH FLOOR. 2. THE DEVICE SHALL NOT REQUIRE PHYSICAL CONTACT TO BE

ACTIVATED, ALTHOUGH CONTACT IS PERMITTED TO OCCUR BEFORE THE DOOR REVERSES. DOOR REOPENING DEVICES SHALL REMAIN EFFECTIVE FOR 20 SECONDS MINIMUM.

3. ELEVATOR DOORS SHALL REMAIN FULLY OPEN IN RESPONSE TO A CAR CALL FOR 3 SECONDS MINIMUM. <u>TAS SECTION 410 - PLATFORM LIFTS</u>

A. PLATFORM LIFTS SHALL COMPLY WITH ASME A18.1 (1999 EDITION OR 2003 EDITION). PLATFORM LIFTS SHALL NOT BE ATTENDANT-OPERATED AND SHALL PROVIDE UNASSISTED ENTRY AND EXIT FROM LIFT.

B. THE CLEARANCE BETWEEN THE PLATFORM SILL AND THE EDGE OF ANY RUNWAY LANDING SHALL BE 1" MAXIMUM. C. PLATFORM LIFTS SHALL HAVE LOW-ENERGY POWER-OPERATED DOORS OR GATES

COMPLYING W/ 404.3. DOORS SHALL REMAIN OPEN FOR 20 seconds min. End doors and gates shall provide a clear width 32" min. SIDE DOORS AND GATES SHALL PROVIDE A CLEAR 42" WIDTH MIN.

NOTE: REQUIRES A VARIANCE FROM THE T.D.L.R. TO USE IN LIEU OF AN ELEVATOR



GENERAL NOTES

1. THE CONTRACTOR SHALL PROTECT AREA AND NEW OR EXISTING MATERIALS AND FINISHES FROM DAMAGE, WHICH MAY OCCUR FROM CONSTRUCTION, TRANSPORT, DUST, WATER, ETC. AND SHALL PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC., AS REQUIRED, TO PROTECT THE ^S PUBLIC/ADJACENT AREAS DURING THE PERIOD OF CONSTRUCTION.

2. DAMAGE TO NEW AND EXISTING MATERIALS, FINISHES, STRUCTURES AND EQUIPMENT SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT THE EXPENSE OF THE GENERAL CONTRACTOR.

3. MATERIALS SPECIFIED BY THEIR BRAND NAMES ARE TO ESTABLISH STANDARD OF QUALITY AND PERFORMANCE. ANY REQUEST FOR SUBSTITUTION SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW FOR EQUAL QUALITY AND PERFORMANCE AND SHALL NOT BE PURCHASED OR INSTALLED WITHOUT HIS WRITTEN APPROVAL.

4. WORK LISTED, SHOWN OR IMPLIED ON ANY CONSTRUCTION DOCUMENTS SHALL BE SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR, EXCEPT WHERE OTHERWISE NOTED. THE GENERAL CONTRACTOR SHALL CLOSELY COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS OR VENDORS TO ASSURE THAT ALL SCHEDULES ARE MET AND THAT ALL WORK IS DONE IN CONFORMANCE TO MANUFACTURER 'S REQUIREMENTS.

5. THE CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DOCUMENTS ON THE JOB SITE DURNING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES AND SHALL PROVIDE ALL SUBCONTRACTORS WITH CURRENT CONSTRUCTION DOCUMENTS AS REQUIRED.

6. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A REGULAR BASIS AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING TO PREVENT ANY DIR, DEBRIS, OR DUST FROM AFFECTING, IN ANY WAY, FINISHED AREAS IN OR OUTSIDE JOBSITE. THE BUILDING REFUSE FACILITIES SHALL NOT BE USED FOR THIS PURPOSE.

7. CONTRACTOR SHALL COORDINATE ALL WORK WITH MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER SUB-TRADES AND REPORT TO ARCHITECT ANY DISCREPANCIES FOR CORRECTION OR ADJUSTMENT. NO ALLOWANCE WILL BE MADE FOR INCREASED COST INCURRED DUE TO LACK OF PROPER COORDINATION.

8. THE CONTRACTOR, OR SUBCONTRACTORS, SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, AND LICENSES REQUIRED FOR PROPER COMPLETION OF THE WORK. THE CONTRACTOR SHALL REQUEST ALL INSPECTIONS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES AND COORDINATE HIS WORK WITH SUCH.

9. THE GENERAL CONTRACTOR SHALL SUBMIT ONE (1) COPY OF ALL MANUFACTURER 'S WARRANTIES AND OPERATIONS/MAINTENANCE INSTRUCTIONS TO THE OWNER.

10. FIELD VERIFY EXISTING CONDITIONS PRIOR TO STARTING THE WORK. SHOULD THE CONTRACTOR FIND, AFTER THE VISIT TO THE SITE OR DURING CONSTRUCTION, ANY DISCREPANCIES, OMMISSIONS, AMBIGUITIES, OR CONFLICTS IN OR AMONG THE DRAWINGS, OR BE IN DOUBT AS TO THEIR MEANING, HE/SHE SHOULD IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING BEFORE PROCEEDING.

11. GROUNDS/BLOCKING MAY NOT BE WHOLLY SHOWN ON DRAWINGS AND GOOD CONSTRUCTION PRACTICE SHALL GOVERN/DETERMINE SAID USE WHEN A QUESTION ARISES.

12. THE GENERAL CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO ALL LOCATIONS OF DRY WALL PARTITION COSTRUCTION THAT ABUTT OR RECEIVE MILLWORK OR CABINETRY.

13. ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY LESS THAN 8 INCHES FROM THE GROUND SHALL BE PRESSURE TREATED OR REDWOOD.

14. ISOLATE DISSIMILAR METALS SO THEY ARE NOT IN CONTACT WITH EACH OTHER TO PREVENT/AVOID ELECTROLYTIC REACTION.

15. CONTRACTOR SHALL COMPLY WITH CURRENT APPLICABLE LOCAL ORDINANCES FOR UTILITY SERVICES.

16. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES. WHERE ENCOUNTERED, CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS FOR SUPPORT, SHORE-UP, REROUTE OR UTILITY DISCONNECTIONS AS REQUIRED BY APPLICABLE LOCAL OR PRIVATE UTILITY COMPANIES.

17. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL AND PLUMBING ROUGH-IN

THE CONTRACTOR SHALL COORDINATE HIS WORK W/ THAT OF THEIR SEPARATE CON- TRACTORS @ BUILDING PENETRATIONS SUCH AS WINDOW DOORS, VENTS, LOUVERS, ETC.

19. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION AND REQUIRED CLEAR- ANCES OF THE EQUIPMENT, NOT STRUCTURAL MEMBER SHALL BE OMITTED, NOTCHED OUT, BLOCKED OUT, OR RELOCATED W/OUT PRIOR APPROVAL BY THE ARCHITECT OR ENGINEER

20. WINDOWS & DOOR LITES W/IN 40 " OF THE LOCKING DEVICE SHALL BE FULLY TEMPERED.

21. THE ELECTRIC SUBCONTRACTOR SHALL FURNISH AND INSTALL EXIT LIGHTS IN ACCORDANCE WITH THE PREVAILING BUILDING AND FIRE CODES.

22. ALL PRODUCTS AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER 'S INSTRUCTIONS/SPECIFICATIONS UNLESS SPECIFIED OTHERWISE.

23. MATERIALS, EQUIPMENT, AND CRAFTSMANSHIP OF ALL TRADES SHALL CONFORM TO RECOGNIZED ASTM OF QUALITY APPROPRIATE TO GRADE OF SAID MATERIALS, EQUIPMENT, AND CRAFTSMANSHIP.

24. MATERIALS AND EQUIPMENT SHALL BE NEW, SOUND, OF HIGH QUALITY, AND SUITABLE FOR APPLICATIONS SPECIFIED.

25. MATERIALS SHALL BE POSITIONED IN AN ORDERLY MANNER AND SHALL BE ALIGNED W/ THE BUILDING STRUCTURE. VERTICAL MEMBERS/SURFACES SHALL BE PLUMB. HORIZONTAL MEMBERS/SURFACES SHALL BE LEVEL AND ALL SURFACES TRUE TO PLANES SPECIFIED.

26. CRAFTSMANSHIP SHALL BE NEAT, CLEAN, AND TRUE TO LINE AND DIMENSION. FINISH MATERIALS SHALL BE FREE OF TOOL MARKS, FLAWS AND BLEMISHES, JOINERY AND CONNECTIONS SHALL BE ACCURATE, CLOSE/TIGHT FITTING AND WELL CRAFTED. TOLERANCES RECOGNIZED BY NATIONAL TRADE ASSOCIATIONS WILL BE THE MINIMUM ACCEPTABLE STANDARD FOR RESPECTIVE TRADE WORK.

27. CEILING PLANE SHALL BE LEVEL AND TRUE AND IN ALIGNMENT WITH ALL LIGHTING, SPRINKLER, HVAC, AND OTHER ELEMENTS INCORPORATED THEREIN.

28. MECHANICAL, HVAC, AND PLUMBING ELEMENTS SHALL AT NO TIME COME IN CONTACT WITH CEILING CONSTRUCTION EXCEPT AS NECESSARY PENETRATIONS MAY REQUIRE.

29. MATERIALS, EQUIPMENT, AND/OR CONTRUCTIVE SERVICES NOT INDICATED IN DRAWINGS OR SPECIFIED HEREIN, BUT REQUIRED FOR SUCCESSFUL AND EFFICIENT COMPLETION OF THE INSTALLATION SHALL BE CONSIDERED IMPLIED IN THE DOCUMENTS. CONTENTS AND SAID MATERIAL, EQUIPMENT, AND/OR CONSTRUCTIVE SERVICES SHALL BE FURNISHED AND INSTALLED AT NO ADDITIONAL COST TO THE OWNER

30. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS OR LEVEL OF CRAFTSMANSHIP, SUCH STANDARDS SHALL BE MAINTAINED PER THE LATEST ADDITION AND/OR ADDENDUM

31. ANY OMISSIONS OR CONFLICTS WITHIN THE DRAWINGS, NOTES, OR DETAILS SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

32. WHERE SPECIFIC INSTRUCTIONS REQUIRE THAT A PARTICULAR PRODUCT OR MATERIAL BE INSTALLED BY MANUFACTURER OR PER MANUFACTURER 'S INSTRUCTIONS, IT SHALL BE THE CONTRACTOR 'S RESPONSIBILITY TO ENSURE THAT ANY SUBCONTRACTORS ARE APPROVED APPLICATORS & THAT INSTALLERS FOLLOW MANUFACTURER'S INSTRUCTIONS.

33. DETAILS SHOWN SHALL BE INCORPORATED INTO CONSTRUCTION AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT/IDENTIFIED OR NOT.

34. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION THROUGHOUT, UNLESS DETAILED OTHERWISE ON DRAWINGS.

35. SHOP DRAWINGS: CONTRACTOR SHALL FURNISH SHOP DRAWINGS FOR ALL SHOP FABRICATED ITEM WHERE CUSTOMARILY REQUIRED. SUBMIT FOUR (4) SETS OF SHOP DRAWINGS FOR REVIEW. THE CONTR SHALL BE RESPONSIBLE FOR CHECKING THE SHOP DRAWINGS FOR ACCURACY, COORDINATION WITH OTHER AND COMPLIANCE WITH THE CONTRACT DOCUMENTS BEFORE BEING SUBMITTED FOR APPROVAL. ARCHI-ENGINEER'S APPROVAL OF SHOP DRAWINGS SHALL CONSTITUTE REVIEW AND APPROVAL OF THE GENERAL ARRANGEMENT OF COMPONENTS TO COMPLY WITH THE GEN- ERAL INTENT OF THE CONSTRUCTION DOCUMEN IF SUCH ITEMS ARE NOT SHOWN ON THE SHOP DRAWINGS. THE CONTRACTOR SHALL CHECK ALL DIMENSI CONDI- TIONS TO INSURE A PROPER FIT UNDER FIELD CONDITIONS AND SHALL MAKE ADJUSTMENTS AS TO MAKE PARTS ALIGN. ALL REVISIONS TO SHOP DRAWINGS AFTER THE FIRST SUBMISSION MUST BE IDENTIFIED ON SUBSEQUENT SUBMISSIONS.

36. A MINIMUM QUANTITY OF TWO (2) 1 '-O" x 1'-O" FINISH SAMPLES OF ALL SPECIFIED FINI CURRENT STOCK CUTTINGS OF ALL SPECIFIED WALL-COVERINGS SHALL BE PROVIDED FOR APPROVAL PRIME ORDERING.

37. PAINT FOR WALL FINISHES SHALL BE PROVIDED AS THREE (3) COAT EGGSHELL LATEX ENAMEL INSTALLATION: ONE (1) PRIME COAT AND TWO (2) FINISH COATS. COLORS AS SPECIFIED. METAL EL AND DOOR FRAMES SHALL HAVE A THREE (3) COAT SEMI-GLOSS ALKYD ENAMEL FINISH.

 THE GENERAL CONTRACTOR SHALL ASSURE THAT NOT ELECTRIC RECEPTACLE OR TELECOMMUNICAT OUTLET COVERPLATES HAVE BEEN INSTALLED PRIOR TO COMPLE- TION OF APPLICATION OF ANY WALL MATERIALS. ANY SUCH COVERPLATES OR SUR- FACE HARDWARE, ETC. IN PLACE SHALL BE REMOVED PR WALL FINISH APPLICATION.

39. THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN COMPLETE PROTECTION FOR ALL NEW FLOOR FINISHES (INCLUDING CARPET) UNTIL ALL CONSTRUCTION WORK IS COMPLETE. PROTECTION SH REMOVED ONLY IMMEDIATELY PRIOR TO JOB COMPLETION.

40. NO WORK IS TO COMMENCE UNTIL PLANS HAVE BEEN APPROVED BY THE DEPARTMENT OF BUILDIN PERMIT TO BUILD HAS BEEN OBTAINED BY THE GENERAL CONTRACTOR.

41. PRIOR TO THE START OF CONSTRUCTION, THE GENERAL CONTRACTOR SHALL COORDI- NATE SCHE MEETING WITH HIS PROJECT PERSONNEL, THE OWNER, ARCHITECT, AND OTHERS FOR REVIEW OF PROJEC DESIGN, INTENT, CONSTRUCTION QUALITY EXPECTED, AND FINAL DISCUSSION OF DRAWINGS/DETAILS/Q

42. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE CODES OF THE LOCAL JURISDICTION

43. THE GENERAL CONTRACTOR AND ALL VENDORS/SUBCONTRACTORS ARE RESPONSIBLE FOR FIELD VERIFICATION OF DIMENSIONS, QUANTITIES, ETC. OF THEIR RESPECTIVE WORK.

44. DO NOT SCALE DRAWINGS. WHERE DIMENSIONS BETWEEN SMALL SCALE AND DETAIL DRAWINGS DETAIL DIMENSIONS SHALL GOVERN. FIELD VERIFY ALL DIMENSIONS, NOTIFY ARCHITECT OF ANY DISCREPANCIES.

45. IF SPACE IS AVAILABLE, THE OWNER MAY PERMIT THE CONTRACTOR TO STORE SOME MATERIALS SITE IN AN AREA APPROVED BY THE OWNER - PROVIDED THAT THE CONTRACTOR ACCEPTS FULL RESPON FOR ANY AND ALL STORED MATERIALS.

46. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA DOCUMENT A-201, THE LATES EDITION, SHALL BE MADE A PART OF THESE DRAWINGS.

47. THE GENERAL CONTRACTOR SHALL CARRY WORKMEN 'S COMPENSATION AND LIABILITY INSURANCE ALL CONSTRUCTION OPERATIONS TO BE PERFORMED.

48. DRAWINGS AND SPECIFICATIONS AS INSRUMENTS OF SERVICE REMAIN THE PROPERTY OF ARCHIT ARE PROTECTED UNDER COMMON LAW COPYRIGHT PROVISIONS. THEY ARE NOT TO BE REUSED EXCEPT BY AGREEMENT AND WITH THE AGREED COMPENSATION TO THE ARCHITECT. IF REUSED, WITHOUT PERMISSI ARCHITECT SHALL BE INDEMNIFIED AND HELD HARMLESS FROM ALL LIABILITY, LEGAL EXPOSURE, CLAI DAMAGES, LOSSES & EXPENSES. DRAWINGS SHALL NOT BE USED FOR ISSUANCE OF A BUILDING PERMIT SIGNED AND SEALED BY THE ARCHITECT. DRAWINGS SHALL NOT BE USED FOR MULTIPLE OR PROTOTYPE DEVELOPMENT WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT.

49. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL GUARANTEE ALL WORK FOR A PERI YEAR FROM DATE OF FINAL COMPLETION/RECEIPT OF FINAL PAYMENT. SHOULD DEFECTS DEVELOP WITH GUARANTEE PERIOD DUE TO FAULTS IN MATERIALS AND/OR LABOR, THE CONTRACTOR SHALL MAKE REPAI COMPLETE ALL NECESSARY WORKS AS SOON AS POSSIBLE. SPECIFIC MATERIAL AND/OR MATERIAL ASS SUPPLIED BY INDEPENDENT MANUFACTURERS SHALL BE GUARANTEED AS FOLLOWS: (1) IF MANUFACTURE FABRICATOR'S GUARANTEES / WARRANTIES EXCEED THE ONE YEAR STIPULATED PERIOD OF GUARANTEE WARRANTY. THE SUCH GUARANTEES / WARRANTIES SHALL BE BINDING FOR THE DURATION STIPULATED OF THE ONE YEAR STIPULATED PERIOD. (2) IF MANUFACTURER 'S / FABRICATOR'S GUARANTEES / ARE LESS THAN THE ONE YEAR STIPULATED PERIOD OF GUARANTEE / WARRANTY, THEN THE CONTRACTOR ASSOCIATED SUB-CONTRACTORS SHALL ASSUME THE GUARANTEES / WARRANTIES FOR MATERILS AND MAT ASSEMBLIES TO THE ONE YEAR STIPULATED PERIOD.

DIVISION 1 GENERAL REQUIREMENTS

SECTION 00700 GENERAL CONDITIONS

1. QUALITY ASSURANCE

A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS THAT HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACT INSTRUCTIONS.

2. INSTALLATION

- A. INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS APPROVED SUBMITTALS. INSTALL MATERIALS AND SYSTEMS IN PROPER RELATION WITH ADJACENT CONS
- COORDINATE WITH WORK OF OTHER SECTIONS. B. TEST FOR PROPER OPERATION. CLEAN OUT SYSTEM AND PROTECT WORK FROM DAMAGE.

C. RESTORE DAMAGED FINISH. CLEAN AND PROTECT WORK FROM DAMAGE.

SECTION 00800 SUPPLEMENTARY CONDITIONS

1. DOCUMENT PRECEDENCE: THESE CONDITIONS SUPPLEMENT AND SUPERSEDE PORTION OF THE GENE CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, WHICH IS INCLUDED BY REFERENCE ABOVE.

2. CONTRACT DOCUMENTS

A. PRECEDENCE OF THE CONTRACT DOCUMENTS: THE MOST RECENTLY ISSUED DOCUMENT TAKES PRECEDENCE OVER PREVIOUS ISSUES OF THE SAME DOCUMENT. THE ORDER OF PRECEDENCE IS AS FOLL THE HIGHEST AUTHORITY LISTED AS "1" - 1. THE AGREEMENT; 2. ADDENDA; 3. SUPPLEMENTARY CONDITIONS; 4. GENERAL CONDITIONS; 5. SPECIFICATIONS AND DRAWINGS

3. RELATION OF SPECIFICATIONS AND DRAWINGS:

A. THE PARTS OF THE CONTRACT DOCUMENTS ARE EQUAL AUTHORITY AND PRIORITY. SHOULD DISAGREE IN THEMSELVES, OR WITH EACH OTHER, PRICING OF THE WORK SHALL BE BASED ON THE MOS EXPENSIVE COMBINATION OF QUALITY AND QUANTITY OF WORK INDICATED. THE ARCHITECT WILL MAKE DETERMINATION OF THE APPROPRIATE METHOD OF PERFORMING THE WORK IN THE EVENT OF THE ABOVE-DISAGREEMENTS.

- B. FIGURES TAKE PRECEDENCE OVER SCALE MEASUREMENTS. LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALLER SCALE DETAILS.
- D. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE IN REGARD TO DIMENSIONS, WHEN IN CONFL ELECTRICAL, MECHANICAL, AND STRUCTURAL DRAWINGS, EXCEPT FOR THE SIZE OF THE STRUCTURAL ME

E. SPECIFICALLY TITLED DRAWINGS AND SECTIONS OF THE SPECIFICATIONS TAKE PRECEDEN INDICATION OF THE ITEM IN A COLLATERAL WAY. F. EXISTING CONDITIONS TAKE PRECEDENCE OVER DRAWINGS AND SPECIFICATIONS FOR DIME

4. ENUMERATION OF ITEMS: LISTS OF "WORK INCLUDED" AND "WORK EXCLUDED" ARE NOT INTENDED ENUMERATE EACH AND EVERY ITEM OF WORK OR APPURTENANCES REQUIRED, AND MUST BE USED IN CONJ WITH OTHER PORTIONS OF THE CONTRACT DOCS.

5. CURRENT EDITION: WHEN THE WORK IS GOVERNED BY REFERENCE TO STANDARDS, BUILDING COD MANUFACTURER'S INSTRUCTIONS OR OTHER REFERENCE DOCUMENTS, THE CURRENT EDITIONS SHALL APPL OR NOT PROPER EDITION IS SPECIFIED. WHEN A NEWER EDITION BECOMES EFFECTIVE DURING THE EX OF A CONTRACT, THE EDITION THAT WAS CURRENT AT THE TIME THE CONTRACT WAS MADE SHALL APPLY THE ARCHITECT PROPERLY AUTHORIZES A CHANGE. IF CHANGES MUST BE MADE BECAUSE OF GOVERNME AUTHORITIES, THE CONTRACT WILL BE APPROPRIATELY MODIFIED WITH ADJUSTMENTS IN THE CONTRACT

MSAND RACTOR RTRADES, TECT'SOR	6. OPTIONAL MATERIALS, BRANDS AND PROCESSES: WHEN MORE THAN ONE IS SPECIFIED FOR A PARTICULAR ITEM OF THE WORK, THE CHOICE SHALL BE CONTRACTOR'S. THE ARCHITECT'S SELECTION OF COLOR AND PATTERN WILL BE MADE FROM THE RANGE AVAILABLE WITHIN THE OPTION SELECTED BY THE CONTRACTOR, UNLESS THE ITEM IS SPECIFIED TO MATCH A SPECIFIC COLOR OR SAMPLE FURNISHED BY THE	<u>SECTION 10400 QUALITY REQUIREMENTS</u> 1. JOIN MATERIALS TO UNIFORM, ACCURATE FIT SO THEY MEET WITH NEAT STR SMEARS OR OVERLAPS.
NTS, EVEN IONS AND REQUIRED	ARCHITECT. 7. ALTERNATE MATERIALS: WHEN ONE PARTICULAR BRAND OR MANUFACTURER IS CALLED OUT, GENERAL CONTRACTOR MAY PROPOSE AN ALTERNATE BRAND FOR ARCHITECT & OWNER APPROVAL. ALL BRAND NAMES SHALL RE CONSIDERED AS A BASIS OF DESIGN	2. INSTALL EXPOSED MATERIALS APPROPRIATELY LEVEL, PLUMB, AND AT ACCUR ADJOINING MATERIALS.
ISHES AND	8. REFERENCE STANDARDS: REFERENCE STANDARDS AND GUARANTEES THAT ARE MADE A PART OF THE REQUIREMENTS APPLY IN FULL, EXCEPT FOR THE FOLLOWING PORTIONS: A. LESS STRINGENT REQUIREMENTS THAN THOSE GIVEN IN THE CONTRACT DOCS.	4. FOLLOW SUPPLIER'S INSTRUCTIONS. WHEN SUCH INSTRUCTIONS ARE IN CONF CONTRACT DOCUMENTS. NOTIFY THE ARCHITECT FOR CLARIFICATION BEFORE PROCE
PAINT.	B. EXCLUSIONS, LIMITATIONS OR WAIVERS THAT ARE INCONSISTENT WITH THE CONTRACT DOCUMENTS.	THE MANUFACTURER'S INSTRUCTIONS ON THE JOB AND MAKE AVAILABLE TO THE ARC 5. REPAIR OR REPLACE DAMAGED PORTIONS OF THE BUILDING CONTENTS, UNDEF
LEMENTS TIONS FINISH	9. INDEMNIFICATION: THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND THE ARCHITECT AND THEIR AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING FROM THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, DAMAGE, LOSS, OR EXPENSE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE, OR DEATH OR TO INJURY TO OR	DAMAGES RESULT FROM FAULTY MATERIAL OR NEGLIGENT WORKMANSHIP. 6. WARRANT THAT MODIFICATIONS OR SUBSTITUTIONS SUGGESTED BY THE CONTF SATISFACTORY RESULTS AND THAT THEY WILL BE EQUAL OR SUPERIOR TO THE SPEC UNLESS SHORTCOMINGS ARE SPECIFICALLY LISTED IN THE REQUEST FOR MODIFICAT
RIOR TO	DESTRUCTION OF TANGIBLE PROPERTY, (OTHER THAN THE WORK ITSELF) INCLUDING THE LOSS OF USE RESULTING THERE FROM, AND IS CAUSED IN WHOLE OR IN PART BY A NEGLIGENT ACT OR OMISSION OF THE CONTRACTOR, AND SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY.	SUBSTITUTIONS. 7. ARCHITECT: THE ARCHITECT'S PRESENCE AT THE PROJECT SITE DOES NOT I APPROVAL OF THE WORK. THE CONTRACTOR SHALL CALL SPECIFIC ITEMS TO THE A
HALL BE	SECTION 01100 PROCEDURES. CONTROLS. PAYMENTS	IN WRITING IF HE WISHES TO KNOW THE ARCHITECT'S OPINION.
NGS AND	1. PROVIDE COORDINATION OF WORK A. SUPERVISORY PERSONNEL	1. THE CONTRACTORS WILL ESTABLISH LAY DOWN AREAS ON SITE FOR CONSTRUC
EDULING OF	B. PRECONSTRUCTION CONFERENCE C. BI-WEEKLY MEETINGS (DISTRIBUTE MINUTES)	OWNER SHALL APPROVE THE LOCATION OF THESE AREAS.
CT SCOPE, QUESTIONS.	D. OTHER MEETINGS	2. EQUIPMENT OWNED BY PUBLIC UTILITIES REMAINS THE PROPERTY OF THOSE WITH AND PROVIDE REASONABLE ACCESS TO THE UTILITY COMPANIES FOR THE REMO
Ν.	2. SUBMIT BI-WEEKLY AND SPECIAL REPORTS	SUCH EQUIPMENT.
	3. SUBMII PRUGRESS SCHEDULE, BAR-CHARI IYPE, AND UPDATED MUNIHLY	3. PROVIDE TEMPORARY SERVICES AND UTILITIES: WATER (POTABLE AND NON-F SEDIMENT, POWER, METERING, TELEPHONE, ETC.
DIFFFR	5. SUBMIT SCHEDULE OF VALUES	4. PROVIDE CONSTRUCTION FACILITIES: CONSTRUCTION EQUIPMENT, DEWATERIN
J 111 L K,	6. SUBMIT SCHEDULE OF REQUIRED TESTS (PAYMENT AND RESPONSIBILITY)	5. PROVIDE SECURITY AND PROTECTION REQUIREMENTS: FIRE EXTINGUISHERS,
S ON THE	7. PERFORM SURVEYS: LAYING OUT WORK AND VERIFYING LOCATIONS DURING CONSTRUCTION	FENCE, BARRICADES, WARNING SIGNS, LIGHTS, BUILDING ENCLOSURE AND LOCK-UP PROTECTION, PEST CONTROL, ETC.
NSIBILITY	8. SUBMIT RECORD DRAWINGS AND SPECIFICATIONS (TO BE MAINTAINED BY CONTRACTOR AS WORK	6. PROVIDE PERSONNEL SUPPORT FACILITIES: CONTRACTOR'S FIELD OFFICE, S
\$ T	PROGRESSES)	DRINKING WATER, PROJECT IDENTIFICATION SIGN, CLEANING AND TRASH REMOVAL,
	9. SUBMIT PAYMENT REQUEST PROCEDURES	7. PROVIDE FOR TEMPORARY TRASH DUMPSTER SERVICE AND LEGAL DISPOSAL OF BASIS. KEEP THE SITE CLEANED AND A SAFE WORKING CONDITION ON A REGULAR
E TO COVER	10. PERFORM QUALITY CONTROL DURING INSTALLATION	8. PROVIDE FOR A FINAL CLEANING PRIOR TO OCCUPANCY BY THE SPACE. THE
TECT AND V WRITTEN	SECTION UTSUE ADMINISTRATIVE REQUIREMENTS	INTERIORS AND EXTERIORS, CLEANING RESTROOMS, ETC.
ION, THE IMS.	OR A SPECIFIED AREA OF THE PROJECT, REGARDLESS OF WHETHER THE CONTRACT TIME HAS EXPIRED. IN SUCH AN EVENT. THE OWNER SHALL PAY AN APPROPRIATE SHARE OF THE UTILITIES. INSURANCE AND OTHER	SECTION10600 PRODUCT REQUIREMENTS
T UNLESS E	EXPENSES CAUSES BY EARLY OCCUPANCY.	 MATERIALS SHALL HAVE THE FOLLOWING CHARACTERISTICS: A. NEW AND HIGH QUALITY SUITED TO THE USE INTENDED, EXCEPT WHEN
	2. KEEP COMPLETE DOCUMENTS ON THE JOB, INCLUDING ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, AND CONDITIONS OF THE CONTRACT, ADDENDA, CHANGE ORDERS, SHOP DRAWINGS, AND OTHER DOCUMENTS	AS "USED". B. SUITABLE FOR THE FUNCTION INTENDED.
IOD OF ONE HING THE	ISSUED DURING THE COURSE OF THE WORK. KEEP THESE DOCUMENTS IN GOOD CONDITION AND MAKE THEM AVAILABLE TO THE ARCHITECT. NOTE ALL MODIFICATIONS TO THE CONTRACT ON THE APPROPRIATE DOCUMENT	C. CORRESPONDING IN QUALITY TO RELATED MATERIALS IN THE ABSENCE SPECIFICATION.
IRS AND EMBLIES ER 'S / /	FOR RECORD DRAWINGS. 3. SECURE REQUIRED INSPECTION CERTIFICATES, AND TRANSMIT THEM TO THE OWNER AND THE ARCHITECT.	D. OF GOOD APPEARANCE WHERE EXPOSED TO VIEW. E. OF ONE MANUFACTURER OR SOURCE FOR THE SAME SPECIFIC PURPOSES F. PLAINLY MARKED AND DELIVERED TO THE SITE IN THEIR ORIGINAL U WHEN THE NATURE OF THE MATERIALS IS SUITABLE FOR CONTAINERS.
IN EXCESS WARRANTIES R AND ERIAL	4. FURNISH WRITTEN WARRANTIES USING THE FORM DIRECTED BY THE OWNER AND THE ARCHITECT. A. THE OWNER MAY MAKE EMERGENCY REPAIRS TO THE WORK DURING THE WARRANTY PERIOD, TO PREVENT FURTHER DAMAGES.	2. APPROVAL OF MATERIALS, SUPPLIERS, PROCESSES, OR SUBCONTRACTORS: T APPROVAL OR REVIEW OF ANY PORTIONS OF THE WORK DOES NOT IMPLY A WAIVER (REQUIREMENT.
	B. THE CONTRACTOR SHALL PAY FOR SUCH REPAIRS WHEN NECESSITATED BY DEFECTS IN THE CONTRACTOR'S WORK.	SECTION 10700 EXECUTION REQUIREMENTS
	5. MAKE PROPER SUBSTITUTIONS WITHIN 15 DAYS AFTER THE AWARD OF THE CONTRACT, EXCEPT WHEN CIRCUMSTANCES OCCUR BEYOND THE CONTRACTOR'S CONTROL. SUBMIT REQUESTS FOR SUBSTITUTIONS IN WRITING, GIVING SUFFICIENT INFORMATION AND SAMPLES FOR EVALUATION WITH THE DIFFERENCES IN COST,	1. COMMENCE THE WORK WHEN AN OWNER AUTHORIZED WRITTEN WORK ORDER OR U BEEN ISSUED WITH INSTRUCTIONS TO PROCEED, PROVIDED OTHER REQUIREMENTS H/
	IF ANY. SUBSTITUTIONS MUST BE APPROVED IN WRITING BEFORE THEY MAY BE USED. COURDINATE WITH SECTION 01350 SUBMITTALS, PRODUCTS, AND SUBSTITUTIONS.	2. PROVIDE SAFE, REASONABLE CONVENIENT ACCESS FACILITIES TO THE WORK ARCHITECT, AND GOVERNMENTAL INSPECTORS.
TURER'S	6. MISCELLANEOUS PROVISIONS A. NOT-IN-CONTRACT WORK: PROVIDE UTILITIES, PLACEMENT, AND CONNECTION OF ITEMS NOTED "NOT-IN-CONTRACT" WHEN SHOWN OR NOTED. B. LARGE SAMPLES OR COMPLETE UNITS SAMPLES: WILL BE REQUIRED ONLY WHEN CALLED FOR IN	3. THE CONTRACTOR SHALL FURNISH BENCHMARKS AS REQUIRED. THE CONTRACT RESPONSIBLE FOR ALL LAYOUTS RELATED TO HIS WORK INCLUDING PROPERTY & BUI SHALL REPORT ANY DISCREPANCY TO THE OWNER IMMEDIATELY.
AND STRUCTION.	THE SPECIFICATIONS. C. APPROVAL OF MATERIALS, SUPPLIERS, PROCESSES, OR SUBCONTRACTORS: THE ARCHITECT'S APPROVAL OR REVIEW OF ANY PORTIONS OF THE WORK DOES NOT IMPLY A WAIVER OF ANY CONTRACT	4. ITEMS TO BE TESTED AT OWNER'S DISCRETION: CONCRETE, EARTH FILL UN PAVEMENT, STEEL WELDS AND BOLTING, ROOF AND OTHER ITEMS AT OWNER OR ARCH
	REQUIREMENT.	5. TESTING LABORATORY SERVICES A. OWNER WILL SELECT INDEPENDENT TESTING LABORATORY TO INSPECT AND WORK
ERAL	- 1. COMPLY WITH PROJECT FORMAT FOR SUBMITTALS. CONTRACTOR SHALL MAINTAIN A DETAILED AND ACCURATE SHOP DRAWING AND PRODUCT SUBMITTAL CONTROL SYSTEM FOR THE PROJECT. THE SYSTEM SHALL BE	B. OWNER PAYS FOR SERVICES, PROVIDED MATERIAL TESTED MEETS SPE REQUIREMENT. CONTRACTOR WILL PAY FOR INITIAL TESTS OF MATERIALS NOT MEE ALL SUBSEQUENT TESTS INCLUDING FINAL TEST INDICATING COMPLIANCE.
S	OWNER'S MEETINGS. THE SCHEDULE RESPONSIBILITY IS THAT OF THE CONTRACTOR AND NEGLIGENCE IN COORDINATING THE SHOP DRAWING PROCESS DOES NOT RELIEVE THE CONTRACTOR FROM THE CONTRACTUAL OBLIGATION OF SUBSTANTIAL COMPLETION.	INDICATING THE DATE, TIME, AND NAME OF EACH TESTING LABORATORY REPRESENT SITE. THE OWNER AND/OR ARCHITECT WILL USE THIS LOG TO VERIFY TIME ELAPS THE TESTING LABORATORY'S REPRESENTATIVES AND WILL CHECK IT AGAINST INVOL
LOWS, WITH	2. PROVIDE TYPES OF SUBMITTAL LISTED IN INDIVIDUAL SECTIONS AND NUMBER OF COPIES REQUIRED. A. Shop drawings, reviewed and annotated by the contractor (3 sets of prints);	LABORATORY. 6. HALT THE WORK , WHEN NOTIFIED OF A PROPOSED CHANGE OR IF UNSATISFA
D THEY	B. PRODUCT DATA (3 COPIES); C. SAMPLES (2, PLUS EXTRA SAMPLES AS REQUIRED TO INDICATE RANGE OF COLOR, FINISH, AND TEXTURE TO BE EXPECTED;	ANTICIPATED. PROCEED ONLY AFTER RECEIVING ADDITIONAL INSTRUCTIONS FROM 7. ARRANGE TO ACCOMMODATE NOT IN CONTRACT WORK. WHEN INFORMATION IS
ST E	D. MOCK-UPS (AS REQUIRED BY INDIVIDUAL SECTIONS); E. INSPECTION AND TEST REPORTS (3 COPIES);	FURTHER INFORMATION BEFORE PROCEEDING.
-MENTIONED	F. WARRANTIES (3 COPIES); G. CLOSEOUT SUBMITTALS (3 COPIES); H. PROJECT PHOTOGRAPHS: RECORD THE PROGRESS ON A REGULAR BASIS WITH DIGITAL PHOTOS, AT BEGINNING AND END OF CONSTRUCTION. COMPTLE A DIGITAL ALBUM WITH DATES WHEN THE PHOTOS WERE	8. NOTIFY THE OWNER OF POSSIBLE DAMAGE CLAIMS IMMEDIATELY UPON KNOWLE CLAIMS THAT MIGHT CAUSE A REDUCTION BELOW 75% OF THE AGGREGATE LIMITS OF SECTION 10800 PROJECT CLOSEOUT
LICT WITH EMBERS.	TAKEN ON A CD AND GIVE TO OWNER WITH THE CLOSEOUT DOCUMENTS.	1. PROVIDE PREREQUISITES TO SUBSTANTIAL COMPLETION: PUNCH LIST, SUPPO
NUE UVER ENSIONS.	 PROVIDE REQUIRED RESUBMITIALS; PROVIDE DISTRIBUTION OF APPROVED COPIES SAMPLES AND SHOP DRAWING SHALL BE PREPARED SPECIFICALLY FOR THIS PROJECT. SHOP DRAWINGS 	WARRANIIES, LEKIIFILAIIUNS, ULLUPANLY PERMII, SIART-UP, AND TESTING OF I CHANGEOVER OF LOCKS, ETC.
D TO	SHALL INCLUDE DIMENSIONS AND DETAILS, INCLUDING ADJACENT CONSTRUCTION.	2. PROVIDE PREREQUISITES TO FINAL ACCEPTANCE: FINAL PAYMENT REQUEST V AFFIDAVITS, COMPLETED PUNCH LIST, ETC.
DES,	 PROVIDE WARKANILES AS SPECIFIED; WARKANILES SHALL NULLIMIT LENGTH OF TIME FOR REMEDY OF DAMAGES OWNER MAY HAVE LEGAL STATUTE. MANUFACTURER AND CONTRACTOR SHALL SIGN WARRANTIES PROVIDE PRODUCTS SELECTED OR APPROVED EQUAL. PRODUCTS SUBMITTED FOR SUBSTITUTION SHALL BE SUBMITTED WITH ACCOUNTED FOR SUBSTITUTION SHALL BE 	 PROVIDE RECORD DOCUMENT SUBMITTALS: A. ONE BLUE LINE SET OF CONST. DOCS. SHOWING RECORD OF AS BUILT B. ONE SET OF ALL SITE PLANS SHOWING THE LOCATIONS OF ALL THE UNFORMATION. DEMOTION OF ALL STREEMED AND ADDRESS
LY WHETHER XECUTION Y UNLESS NTAL	SUBMITTED WITH ACCEPTABLE DOCUMENTATION, AND INCLUDE COSTS OF SUBSTITUTION INCLUDING RELATED WORK.	INFORMATION IDENTIFIED BY DIMENSIONS C. ONE CD OF CONSTRUCTION PROGRESS PHOTOS
NTAL T SUM.	7. SUDSTITUTIONS SHALL BE SUBMITTED PRIOR TO AWARD OF CONTRACT, UNLESS OTHERWISE ACCEPTABLE.	4. FRUVIDE CLUSEUUI FRUCEDURES: IURNUVER IU UWNER'S PERSONNEL, FINAL UP, REMOVAL OF TEMPORARY FACILITIES, ETC.

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CITY OF KYLE GENERAL CONSTRUCTION NOTES Revised November 23, 2022	
1. ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE FOLLOWING REGULATIONS AND SPECIFICATIONS. THE FIRST LISTED WILL HAVE PRIORITY OVER THOSE LISTED BELOW:	EROSION AND SEDIMENTATION CONTROL
PERMITS ISSUED FOR PROJECT BY ANY REGULATORY AGENCIES. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY REGULATIONS.	1. AFTER THE PRECONSTRUCTION MEETING IS HELD, THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND I CONSTRUCTION AREA PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
	2. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS, AND AFTER SIGNIFICANT RAINI FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE AT AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES
2. PNOK TO THE BEGINNING OF CONSTRUCTION, THE DEVELOPER STALE ARGANGE A PRE-CONSTRUCTION CONFERENCE. PRE-CONSTRUCTION OF AND THE PW OFFICE, 512-262-3024 AND HELD AT THE PW FACILITY LOCATED AT 520 E RR150, KYLE, TEXAS.REPRESENTATIVES FROM THE FOLLOWING ORGANIZATIONS SHALL BE INVITED: CITY OF KYLE STAFF INCLUDING THE DIRECTOR OF PUBLIC WORKS, CITY ENGINEER AND THE PUBLIC WORKS INSPECTOR. CONTRACTOR. DESIGN ENGINEER	3. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRA ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. / DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
ELECTRIC, GAS, PHONE AND CABLE UTILITY REPRESENTATIVES, IF APPROPRIATE.	4. FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE CITY INSPECTOR DURING THE CONTROL INADEQUACIES.
3. PRIOR TO THE BEGINNING OF CONSTRUCTION, ALL FLAN REVIEW AND CONSTRUCTION INSPECTION FEES SHALL BE FAID TO THE CITY OF RTLE AND THE FOLLOWING FERMITS SHALL BE IN PLACE, IF NECESSARY:	 PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW: A MINIMUM OF FOUR (4) INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK), AND BETWEEN THE (
TEXAS DEPARTMENT OF TRANSPORTATION, ENTRY ONTO A HIGHWAY. U.S. CORPS OF ENGINEERS, SECTION 404, FOR CONSTRUCTION IN FLOOD PLAIN. COMPLIANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) CONSTRUCTION GENERAL PERMIT (TXR150000). TEXAS DEPARTMENT OF LICENSING AND REGULATION FOR ACCESSIBILITY. TEXAS DEPARTMENT OF LICENSING AND REGULATION FOR ACCESSIBILITY.	 B. TRASH, WOOD, BRUSH, STUMPS, ROCKS OVER 1½ INCHES IN SIZE AND OTHER OBJECTIONABLE MATERIAL ENCOUNTERED SHALL E DIRECTED BY THE ENGINEER OR INSPECTOR PRIOR TO BEGINNING OF WORK REQUIRED BY THIS ITEM. GRASS AND OTHER HERBACEOU CLUMPS SHALL BE BROKEN UP.
4. BENCHMARKS FOR THIS PROJECT ARE DESCRIBED AS FOLLOWS: SQUARE IN THE NORTHEAST END OF CONCRETE SIDEWALK, ±9.4' SOUTHWEST OF SUBJECT SITE'S	C. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS BROADCAST SEEDING:
	(I) FROM OCTOBER TO FEBRUARY, SEEDING SHALL BE WITH ONE (1) POUND PER 1,000 SQUARE FEET OF UNHULLED BERMUDA OR TH WINTER RYE.
5. THE STREET PAVEMENT THICKNESS IS BASED ON A REPORT BY DATED, 20 WHICH RECOMMENDS THE FOLLOWING STREET SECTIONS.	(II) FROM MARCH TO SEPTEMBER, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF ONE (1) POUND PER 1,000 SQUARE FEET
STREET STREET LIME STABILIZATION BASE HOT MIX CLASSIFICATION WIDTH OF SUBGRADE THICKNESS ASPHALT	FERTILIZER, IF USED, SHALL BE SLOW RELEASE GRANULAR OR PALETTE TYPE, AND SHALL HAVE AN ANALYSIS OF 15-15-15, A (1) POUND PER 1,000 SQUARE FEET, ONCE AT THE TIME OF PLANTING, AND AGAIN ONCE DURING THE TIME OF ESTABLISHMENT. MULCH TYPE USED SHALL BE STRAW OR HAY APPLIED AT A RATE OF 45 POUNDS PER 1,000 SQUARE FEET.
	HYDRAULIC SEEDING:
6. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION.	WINTER RYE. (II) FROM MARCH TO SEPTEMBER, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF ONE (1) POUND PER 1,000 SQUARE FEET
7. THE CONTRACTOR SHALL GIVE THE CITY OF KYLE (PHONE NO. 512-262-3024), 48 HOURS NOTICE PRIOR TO CONNECTING TO ANY EXISTING CITY UTILITY LINE.	FERTILIZER, IF USED, SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1.5 POUNDS PE
8. SIDEWALKS FRONTING PUBLIC RIGHT-OF-WAY LAND OR INCLUDING ALL SIDEWALK RAMPS REQUIRED BY CITY ORDINANCE SHOWN ON THESE PLANS SHALL BE CONSTRUCTED WITH THIS PROJECT.	MULCH TYPE SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1,000 SQUARE FEET, WITH A SOIL TAI SQUARE FEET.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WARNING AND SAFETY SIGNS, BARRICADES AND TRAFFIC CONTROL DURING CONSTRUCTION. ALL ROAD SIGNAGE SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.	D. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIEN THE IRRIGATION SHALL OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO (2) MONTHS. RAINFALL OCCURRENCES OF ½ INCH OR MO SCHEDULE FOR TEN (10) DAYS.
 CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE CITY OF KYLE FOR THE USE OF ALL WATER FOR CONSTRUCTION. ALL FILL OR CUT ON LOTS WHICH IS GREATER THAN TWELVE (12) INCHES SHALL BE SHOWN ON THE PLANS AND SHALL CONFORM TO THE FOLLOWING: 	E. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 INCH HIGH WITH 85% COVERAGE, PROVIDED NO FEET EXIST.
FILL MATERIAL SHALL NOT CONTAIN ANY ROCKS HAVING A MAXIMUM DIMENSION GREATER THAN SIX (6) INCHES.	F. A SOIL RETENTION BLANKET SHALL BE PLACED ON ALL SLOPES EQUAL TO OR GREATER THAN 3:1. ALL SOIL RETENTION BLA APPROVED PRODUCTS LIST OR APPROVED BY THE CITY.
FILL MATERIAL SHALL HAVE AT LEAST FIFTY PERCENT (50%) PASSING THE NO. 4 SIEVE. FILL MATERIAL SHALL BE REASONABLY FREE OF ROOTS, TRASH, CONCRETE RUBBLE AND OTHER ORGANIC MATERIAL.	DEVELOPER INFORMATION: OWNER:
COMPACTION SHALL BE TO NINETY-FIVE PERCENT (95%) OF MAXIMUM LABORATORY DENSITY DETERMINED IN ACCORDANCE WITH THE ASTM D 698. THE MATERIAL SHALL BE WITHIN THREE (3) PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT DURING COMPACTION.	ADDRESS:
PLACEMENT SHALL BE IN LIFTS NOT EXCEEDING EIGHT (8) INCHES AFTER COMPACTION. EACH COMPACTED LIFT SHOULD BE INSPECTED AND/OR TESTED FOR DENSITY COMPLIANCE BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING THE NEXT LIFT. THE FILL AREA SHOULD EXTEND AT LEAST 24 INCHES (36 INCHES ON FILLS OVER SIX (6)	PHONE:
FEET IN HEIGHT) BEYOND THE BACK OF CURB OR FOUNDATION LINE BEFORE SLOPING DOWNWARD ON NOT MORE THAN THREE (3) TO ONE (1) SLOPE TO NATURAL SOIL. BACKSLOPES SHALL BE WELL COMPACTED. MAXIMUM FILL HEIGHTS SHOULD NOT EXCEED TEN (10) FEET WITHOUT ENGINEERING CONSULTATION.	REPRESENTATIVE:
12. CONTRACTOR SHALL GIVE CITY INSPECTOR 36 HOURS NOTICE OF THE NEED FOR MATERIALS TESTING. ALL TESTING WILL BE ARRANGED AND PAID FOR BY THE CONTRACTOR. THE CITY SHALL RECEIVE A COPY OF TEST RESULTS.	NAME: BRIAN M. COPE, P.E.
13. CONTRACTOR OR THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND CUT SHEETS FOR PIPE LINES LAID ON GRADE AND ROAD CONSTRUCTION. CUT SHEETS SHALL BE DELIVERED TO THE CITY INSPECTOR 36 HOURS PRIOR TO CONSTRUCTION.	ADDRESS: <u>8611 BOTTS. LANE</u> SAN ANTONIO, TX. 78217
14. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND STABLE OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR.	PHONE: (210) 828-7070 CITY OF KYLE:
IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES 4 FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.	DIRECTOR OF PUBLIC WORKS: HARPER WILDER (512) 262-3024 ext. 4002
15. NO TREES OVER 6 INCHES IN DIAMETER SHALL BE REMOVED UNLESS DESIGNATED TO BE REMOVED ON THE APPROVED PLANS. ALL TREE LIMBS REMOVED OR TRIMMED SHALL BE VERTICALLY CUT AND DRESSED.	CITY ENGINEER: LEON BARBA, P.E. (512) 262-3958
16. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO PROPERTY OWNED BY THE DEVELOPER OR PUBLIC RIGHT-OF-WAY AND EASEMENT UNLESS WRITTEN PERMISSION IS OBTAINED BY THE CONTRACTOR FROM THE PROPERTY OWNER AFFECTED.	
17. THE CITY OF KYLE DOES NOT ALLOW ANY BLASTING WITHIN THE CITY LIMITS.	
TYPICAL SEQUENCE OF CONSTRUCTION	
 HOLD PRE-CONSTRUCTION CONFERENCE. NO CLEARING OR ROUGH GRADING MAY BE DONE UNTIL THE APPROVED EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE. 	
3. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND STABILIZATION CONSTRUCTION ENTRANCE, IF REQUIRED, IN THE APPROVED PLANS.	GRADING NOTES:
 ROUGH GRADE STREETS. INSTALL ALL UTILITIES IN RIGHTS-OF-WAY. 	MANUAL, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS.
 RE-GRADE AND COMPACT SUBGRADE. MEET WITH CITY INSPECTOR AND/DESIGN ENGINEER TO DETERMINE AREAS OF DIFFERING STREET SECTION THICKNESS OR SUBGRADE PREPARATION IF CALLED FOR IN THE GEOTECHNICAL REPORT. INSURE ALL UNDERGROUND UTILITY CROSSINGS ARE IN PLACE INCLUDING SLEEVES FOR DRY UTILITIES AND INSTALL FIRST COURSE OF BASE. 	 THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTIN CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICT RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF C UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE.
8. INSTALL CURBS, RIP-RAP AND MISCELLANEOUS CONCRETE.	3. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND CITY) AS REQUIRED TO PREVENT SILT
9. INSTALL SECOND COURSE OF BASE.	FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDE CONSERVATION, AND SILTATION REQUIREMENTS. CONTRACTOR SHALL REMOVE ALL TEMPORARY E COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS.
11. FINAL GRADE ANY DITCHES AND PARKWAYS.	EROSION.
12. REVEGETATE ALL DISTURBED AREAS. DISPOSE OF SPOIL IN AN APPROVED MANNER.	4. BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS ESTABLISHED BY THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SURVEYING FOR L RELATED TO EARTHWORK.
14. AFTER ACCEPTANCE OF CONSTRUCTION, TEMPORARY EROSION CONTROLS MAY BE REMOVED.	5. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL E AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAVEM
MINIMUM CRITERIA FOR ACCEPTANCE	SHALL BE MADE BY THE CONTRACTOR. THE OWNER SHALL APPROVE THE LABORATORY NOMINATED TO IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THA
 ALL CONSTRUCTION IS COMPLETE INCLUDING DRY UTILITIES AND RESTORATION TO THE CRITERIA. ALL CITY OF KYLE FEES PAID AND MAINTENANCE BOND POSTED 	MEET THE REQUIREMENTS OF THE CITY'S SPECIFICATION AND THESE PLANS.
3. ALL RECORDS OF CONSTRUCTION TESTING AND RECORD DRAWINGS SHOWING ANY CHANGES DURING CONSTRUCTION PROVIDED TO THE CITY OF KYLE.	7. PROPOSED CONTOURS ARE APPROXIMATE ONLY. PROPOSED SPOT ELEVATIONS AND DESIGNATED GRADIE
4. ALL STREET LIGHTING, SIGNS AND PAVEMENT MARKINGS SHALL BE IN PLACE.	8. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHAL
WATER AND WASTEWATER NOTES	WATER, OR BY OTHER MEANS APPROVED BY THE CITY AND ENGINEER, AT NO ADDITIONAL COST TO THE
2. PIPE MATERIAL FOR GRAVITY SEWER SHALL BE SDR-26 PVC IF LOCATED GREATER THAN 9 FEET FROM A WATERLINE, OTHERWISE SHALL BE PRESSURE RATED PIPE.	RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF SITE BY THE GRADING CO
3. BEDDING FOR FLEXIBLE GRAVITY PIPE (I.E. SDR-26 PVC) SHALL CONFORM TO ASTM 2321 CLASS 1 MATERIAL, I.E., 3/4" - 1" CLEAN ANGULAR CRUSHED ROCK.	INFORMATION.
 CONTRACTOR SHALL DISINFECT AND PRESSURE TEST ALL WATER LINES AND PERFORM LEAK AND DEFLECTION TESTS ON GRAVITY WASTEWATER LINES AT HIS EXPENSE. 	11. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDI GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED PRIOR TO PLACEMENT
 THE CITY INSPECTOR SHALL BE NOTIFIED 36 HOURS PRIOR TO ALL UTILITY LINE TESTING. CONTRACTOR, WITH CITY STAFF PRESENT, IS RESPONSIBLE FOR SAMPLING. CITY STAFF WILL TRANSPORT BACTERIOLOGICAL TEST SAMPLES TO THE STATE DEPARTMENT OF HEALTH. ALL TEST RESULTS, WHETHER PASSING OR FAILING, SHALL BE PROVIDED TO THE CONTRACTOR. MANDREL DEFLECTION TESTING SHALL NOT BE CONDUCTED UNTIL THE PIPES HAVE BEEN BACKFILLED FOR 30 DAYS. EIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION OF ADDROVED FOLIAL 	12. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TES FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUC CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVEREI
 THE CONTRACTOR SHALL SUBMIT TO THE DESIGN ENGINEER, DESCRIPTIVE INFORMATION FOR MATERIALS TO BE USED ON THE PROJECT FOR REVIEW. A COPY OF THE ACCEPTED MATERIAL SHALL ALSO BE PROVIDED TO THE CITY OF KYLE TEN DAYS PRIOR TO THE INSTALL ATION OF UTILITIES. 	13. RETAINING WALLS SHOWN FOR GRADING INTENT ONLY AND NOT TO BE USED FOR CONSTRUCTION OF
9. PRESSURE TAPS SHALL BE IN ACCORDANCE WITH THE CITY OF KYLE. THE CONTRACTOR SHALL DO ALL EXCAVATION ETC., AND SHALL FURNISH, INSTALL AND AIR TEST THE SIDE EVEN AND VALUE A CITY OF KYLE INSPECTOR MUST BE DESENT WHEN TAP IS MADE. 1975 TAPS WILL NOT BE DEDINITED WITHOUT SPICE APPROVAL OF THE	STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEERING REPORT (AND ADDENDA THERETO) FOR I PLACEMENT METHODS.
DIRECTOR OF PUBLIC WORKS. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES TWENTY-FOUR (24) HOURS PRIOR TO MAKING THE WET TAP.	14. GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY AD
11. 200 PSI, BLACK, POLYETHYLENE TUBING SHALL BE USED ON WATER SERVICES.	15. NO TREE SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE OWNER OR ON TREES SHALL BE PRESERVED WHENEVER POSSIBLE.
12. ALL MANHOLES SHALL BE INTERNALLY COATED TO CITY OF AUSTIN SPECIFICATIONS, INCLUDING THE TIE-IN MANHOLE, UNLESS WAIVED BY THE DIRECTOR OF PUBLIC WORKS.	16. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL POINTS PRIOR TO COMMENCING C ENGINEER OF ANY DISCREPANCIES REFORE CONSTRUCTION COMMENCES

13. ALL PUBLIC MANHOLE COVERS WITHIN THE CITY LIMITS OF KYLE SHALL HAVE THE CITY OF KYLE LOGO.

14 ALL GATE VALVE OPERATING NUT OR VALVE EXTENTION NEEDS TO BE 24" TO FINAL GRADE

18. REFER TO EROSION CONTROL PLAN FOR EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION.

19. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.

SEDIMENTATION CONTROL

RECONSTRUCTION MEETING IS HELD, THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND FENCING FOR AREAS OUTSIDE OF THE EA PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).

TOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS, AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE ERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED IULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.

AL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, IMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE PROVED SPOIL DISPOSAL SITES.

INS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE CITY INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT ACIES.

FOUR (4) INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK), AND BETWEEN THE CURB AND RIGHT-OF-WAY.

, BRUSH, STUMPS, ROCKS OVER 1½ INCHES IN SIZE AND OTHER OBJECTIONABLE MATERIAL ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF AS NGINEER OR INSPECTOR PRIOR TO BEGINNING OF WORK REQUIRED BY THIS ITEM. GRASS AND OTHER HERBACEOUS PLANT MATERIALS MAY REMAIN. LARGE BROKEN UP.

ER TO FEBRUARY, SEEDING SHALL BE WITH ONE (1) POUND PER 1,000 SQUARE FEET OF UNHULLED BERMUDA OR THREE (3) POUNDS PER 1,000 SQUARE FEET OF

ZER, IF USED, SHALL BE SLOW RELEASE GRANULAR OR PALETTE TYPE, AND SHALL HAVE AN ANALYSIS OF 15-15-15, AND SHALL BE APPLIED AT THE RATE OF ONE 0 SQUARE FEET, ONCE AT THE TIME OF PLANTING, AND AGAIN ONCE DURING THE TIME OF ESTABLISHMENT

ER TO FEBRUARY, SEEDING SHALL BE WITH ONE (1) POUND PER 1,000 SQUARE FEET OF UNHULLED BERMUDA, OR THREE (3) POUNDS PER 1,000 SQUARE FEET OF

TO SEPTEMBER, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF ONE (1) POUND PER 1,000 SQUARE FEET.

ZER, IF USED, SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1.5 POUNDS PER 1,000 SQUARE FEET. TYPE SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1,000 SQUARE FEET, WITH A SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1,000

AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK TO A DEPTH OF SIX (6) INCHES. ALL OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO (2) MONTHS. RAINFALL OCCURRENCES OF ½ INCH OR MORE SHALL POSTPONE THE WATERING

N SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 INCH HIGH WITH 85% COVERAGE. PROVIDED NO BARE SPOTS LARGER THAN 20 SQUARE

RETENTION BLANKET SHALL BE PLACED ON ALL SLOPES EQUAL TO OR GREATER THAN 3:1. ALL SOIL RETENTION BLANKETS MUST BE LISTED ON THE TXDOT CTS LIST OR APPROVED BY THE CITY.

JCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY OF KYLE DRAINAGE AND EROSION CONTROL DESIGN COMMONLY ACCEPTED CONSTRUCTION STANDARDS.

CTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING DAMAGED, THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE.

TOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT OTHER METHODS APPROVED BY THE ENGINEER AND CITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM O ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, AND SILTATION REQUIREMENTS. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT

EARTHWORK IS DONE. THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF PAVEMENT AND OTHER ITEMS BY THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SURVEYING FOR LINE AND GRADE CONTROL POINTS FARTHWORK.

MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAVEMENT OF SUCH TESTING SERVICES DE BY THE CONTRACTOR. THE OWNER SHALL APPROVE THE LABORATORY NOMINATED TO DO THE TESTING OF MATERIALS. THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES QUIREMENTS OF THE CITY'S SPECIFICATION AND THESE PLANS.

RWISE NOTED, PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN PAVED AREAS REFLECT TOP OF PAVEMENT SURFACE. DNTOURS ARE APPROXIMATE ONLY. PROPOSED SPOT ELEVATIONS AND DESIGNATED GRADIENT ARE TO BE USED IN CASE OF

TOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING OTHER MEANS APPROVED BY THE CITY AND ENGINEER, AT NO ADDITIONAL COST TO THE OWNER. ION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSUABLE EXCAVATED MATERIAL AND ALL WASTE

ROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF SITE BY THE GRADING CONTRACTOR AT HIS EXPENSE. STRUCTURAL DRAWINGS AND SPECIFICATIONS AND GEOTECHNICAL REPORT FOR BUILDING PAD AND PAVING SUBGRADE

CTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER ACEMENT.

MENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORM RUNOFF. SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.

LLS SHOWN FOR GRADING INTENT ONLY AND NOT TO BE USED FOR CONSTRUCTION OF RETAINING WALLS OR PLACEMENT ILL. TW/BW ELEVATIONS ARE APPROXIMATE TOP-OF-GRADE ELEVATIONS ONLY. SEE RETAINING WALL DESIGN PLANS BY ENGINEER AND GEOTECHNICAL ENGINEERING REPORT (AND ADDENDA THERETO) FOR DETAILED WALL DESIGN AND FILL IETHODS.

TRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS. ALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE OWNER OR OWNER'S REPRESENTATIVE. EXISTING BE PRESERVED WHENEVER POSSIBLE.

SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL POINTS PRIOR TO COMMENCING CONSTRUCTION AND SHALL NOTIFY ANY DISCREPANCIES BEFORE CONSTRUCTION COMMENCES. 17. REFER TO DIMENSION CONTROL & SITE PLAN FOR HORIZONTAL DIMENSIONS.

COPE ENGINEERING GENERAL NOTES

- SAFETY CODES AND INSPECTION REQUIREMENTS.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
- 4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN NEAT AND ACCURATE CONSTRUCTION RECORD PLANS.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEYING.

- EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005

CITY OF KYLE PUBLIC SE	RVICE
KYLE (WATER & SEWER)	
SOUTHWESTERN BELL	
SPRINT COMMUNICATIONS	
PEDERNALES ELECTRIC	



9. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH UTILITY COMPANIES FOR THE RELOCATION OF ANY EXISTING UTILITIES.

- 10. CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES.
- CONSTRUCTION
- CONSTRUCTION ACTIVITIES AT NO COST TO THE OWNER.

EQUIVALENT MATERIAL BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

- OCCUR ONCE A WEEK.
- 16. WATER SHALL NOT BE PERMITTED IN OPEN TRENCHES DURING CONSTRUCTION.
- 17. CONTRACTOR SHALL CONTACT THE CITY ENGINEERING DEPARTMENT'S INSPECTOR ASSIGNED TO THIS PROJECT AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
- 18. CONTRACTOR IS RESPONSIBLE FOR GRASSING DISTURBED AREAS FROM BACK OF CURB TO THE RIGHT-OF-WAY AND AREAS OTHERWISE SPECIFIED ON THE PLANS.
- ENFORCEMENT.
- MEETING, OR PRIOR TO BEGINNING CONSTRUCTION OF THESE IMPROVEMENTS.
- 21. DURING CONSTRUCTION, ALL MATERIAL TESTING SHALL BE COORDINATED WITH THE CITY OF KYLE CONSTRUCTION INSPECTOR.
- 22. CONTRACTOR SHALL CONTACT THE CITY BUILDING OFFICIAL TO LEARN OF ANY UNUSUAL CONSTRUCTION COMPACTION REQUIREMENTS THE CITY MAY REQUIRE.
- REQUIREMENTS PRIOR TO ANY PAVING ACTIVITIES.
- 24. ALL APPURTENANCES INSTALLED IN PAVEMENT AREAS SHALL BE ADJUSTED AS REQUIRED TO BE FLUSH WITH FINISHED PAVEMENT.
- 26. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR COMPLETING AND IMPLEMENTING TRAFFIC CONTROL PLAN.
- PHASES UNLESS NOTED OTHERWISE.
- 28. CONTRACTOR STAGING AREA TO BE AGREED UPON BY OWNER PRIOR TO BEGINNING CONSTRUCTION. 29. THE CONSTRUCTION CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, SEQUENCE, PROCEDURES, TECHNIQUES OR SCHEDULING ALL BY O.S.H.A. OR ANY OTHER REGULATORY AGENCY.

PAVING NOTES:

- CONSTRUCTION STANDARDS.
- SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE.
- FROSION.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
- THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE CITY'S SPECIFICATION AND THESE PLANS.
- 6. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- STRIPPING WITHIN PARKING LOT AND AROUND BUILDING AS SHOWN ON THE PLANS. 8. REFER TO GEOTECHNICAL REPORT FOR PAVING JOINT LAYOUT NOTES.
- 9. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT OF 1990.
- 10. UNLESS THE PLANS SPECIFICALLY DICTATE TO THE CONTRARY, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE ORIENTED SO THEY ARE READILY VISIBLE TO THE
- 11. CONTRACTOR IS RESPONSIBLE FOR INSTALLING NECESSARY CONDUIT FOR LIGHTING, IRRIGATION, ETC. PRIOR TO PLACEMENT OF PAVEMENT. ALL CONSTRUCTION
- DOCUMENTS (CIVIL, MEP, LANDSCAPE, AND ARCHITECT) SHALL BE CONSULTED.
- ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR A.D.A. AND T.A.S. COMPLIANCE ISSUES.

13. REFER TO GEOTECHNICAL REPORT FOR SOIL COMPACTION SPECIFICATIONS.

THE ENGINEER OF RECORD.

CALL AT LEAST 48 HOURS BEFORE DIGGING ONE-CALL SYSTEM OF TEXAS 1-800-344-8377 1-800-545-6005

NOTIFIED OF ANY ACCIDENT CAUSED BY AN EXCAVATOR.

LOCAL UTILITY AGENCIES: KYLE UTILITIES SPECTRUM CABLE SOUTHWESTERN BELL SPRINT COMMUNICATIONS PEDERNALES ELECTRIC



DIG TESS



8. THE LOCATION AND DEPTHS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE

7. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING STRUCTURES, UTILITIES, AND SERVICES PRIOR TO EXCAVATION AND CONSTRUCTION.

6. ALL EXISTING TRAFFIC AND STREET SIGNS DISTURBED SHALL BE REINSTALLED WHERE APPLICABLE BY THE CONTRACTOR.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OFFSITE OF ANY EXISTING PAVING AND STRUCTURAL REMOVED.

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THESE PLANS AND THE CITY OF KYLE STANDARD SPECIFICATIONS AND REGULATIONS. AS WELL AS ALL APPLICABLE



FACILITY SHALL BE SUBJECT TO A FINE, IMPRISONMENT, OR BOTH. THE LAW ALSO STATES THAT OSHA MAY BE NOTIFIED OF ANY ACCIDENT CAUSED BY AN EXCAVATOR. LOCAL UTILITY AGENCIES: KYLE UTILITIES WATER, SEWER 512-262-3024

FIRST USING AN AVAILABLE ONE-CALL NOTIFICATION SYSTEM TO DETERMINE LOCATIONS OF UNDERGROUND FACILITIES: OR WITHOUT HEEDING LOCATION INFORMATION OR MARKINGS AND SUBSEQUENTLY DAMAGES AN UNDERGROUND

UTILITY OWNER FOR FIELD VERIFICATION AND IS RESPONSIBLE FOR ANY DAMAGES TO AND FOR MAINTENANCE AND PROTECTIONS OF ALL EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH EACH UTILITY OWNER 72 HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL CALL A UTILITY LOCATOR FOR GENERAL UTILITY LOCATIONS



SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTORS 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.

opinion of the Owner's Representative and the Construction Inspector, the Barricades and stops do not conform to established standards or are incorrectly placed or are insufficient in quantity to protect the general public, the Construction Inspector shall have the option to stop operations until such time as the conditions are corrected.

SOIL STABILIZATION PRACTICES:

<u>X</u> PERMANENT PLANTING, SODDING, OR SEEDING

<u>X</u> PRESERVATIVE OF NATURAL RESOURCES

DIVERSION, INTERCEPTOR, OR PERIMETER DIKES _____ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES DIVERSION DIKE AND SWALE COMBINATIONS

ROCK BEDDING AT CONSTRUCTION EXIT _____ TIMBER MATTING AT CONSTRUCTION EXIT

STORM INLET SEDIMENT TRAP

SEQUENCE OF CONSTRUCTION SCHEDULE:

4. INSTALL UNDERGROUND UTILITIES

7. FINAL GRADING AND STABILIZATION

1. INSTALL SILT FENCE & CURB INLET PROTECTION

8. WHEN ALL CONSTRUCTION IS COMPLETE AND THE SITE

ALL TEMPORARY EROSION CONTROL MEASURES AND STABILIZE AREAS DISTURBED BY THEIR REMOVAL.

IS STABILIZED AND APPROVED BY THE PROJECT ENGINEER AND CITY OF NEW BRAUNFELS, REMOVE

PER TPDES REQUIREMENTS, DISTURBED

ACTIVITIES HAVE CEASED (TEMPORARILY

OR PERMANENTLY) SHALL BE STABILIZED

DOES NOT CONSTITUTE AS STABILIZATION

BARE SOILS SHOULD BE SEEDED OR OTHERWISE STABILIZED

WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED

THE SITE DUE TO THE FAILURE OF SEDIMENT AND EROSION

CONTROLS SHOULD BE REMOVED AS SOON AS POSSIBLE TO

OBTAINED FROM ADJACENT LANDOWNERS PRIOR TO OFFSITE

FOR MORE THAN 21 DAYS. SEDIMENT THAT HAS ESCAPED

WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR

MINIMIZE OFFSITE IMPACTS. PERMISSION SHOULD BE

AREAS ON WHICH CONSTRUCTION

WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING

_____ STONE OUTLET STRUCTURES

_____ VELOCITY CONTROL DEVICES

×

BRIAN M. COPE

93735

EERIN

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PERMIT SET

No.

DESCRIPTION

КНІТ

CHIROPRACTIC

WELLNESS

KYLE, TX

2022-008

PLAN

SOIL EROSION &

SEDIMENT CONTROL

06/05/23

DATE

SAM GARCIA ARCHITECT

1200 Auburn Ave., Suite

info@samgarciaarchitect.com

McAllen, TX 78504

(956) 631 - 8327

- _____ HYDROMULCHING _____ TEMPORARY SEEDING

_____ BUFFER ZONES

STRUCTURAL PRACTICES:

X SILT FENCES _____ HAY BALES

X ROCK BERMS

PIPE SLOPE DRAINS

PAVED FLUMES

_____ CHANNEL LINERS

_____ SEDIMENT TRAPS

_____ SEDIMENT BASINS

_____ STORM SEWERS

_____ CURBS AND GUTTERS

2. CLEAR AND GRUB SITE

3. PRELIMINARY GRADING

5. BUILDING CONSTRUCTION

6. PAVEMENT CONSTRUCTION

SOIL STABILIZATION NOTE:

SEDIMENT REMOVAL.

OTHER:

OTHER:

- _____ MULCHING

______ SOIL RETENTION BLANKET





<u>CONSTRUCTION EXIT - TYPE 1</u>

NOTE	S:
1.	USE OPEN GRADED ROCK 3 CONDITIONS. USE OPEN GRA WHERE HIGH VELOCITIES OR
2.	THE ROCK BERM SHALL BE HAVING MAXIMUM 1" OPENIN ROCK BERMS IN CHANNEL A THE SUBSTRATE A MINIMUM WITH MAXIMUM SPACING APA
3.	THE ROCK BERM SHALL BE
4.	THE BERM SHOULD BE REP FUNCTION AS INTENDED DUE WASHOUT, CONSTRUCTION TF
5.	WHEN SILT REACHES A DEP BERM OR 6", WHICHEVER IS DISPOSE OF ON AN APPROV CREATE A SILTATION PROBLE
5.	REPAIR ANY LOOSE WIRE SH
6.	THE BERM SHOULD BE RES
7.	THE ROCK BERM SHOULD B ARE STABILIZED AND ACCUM
8.	WHEN THE SILT IS COMPLET SILT SHALL BE REMOVED AN

3" TO 5" DIAMETER FOR STREAM FLOW RADED ROCK 5" TO 8" DIAMETER FOR AREAS OR LARGER VOLUMES OF FLOW ARE EXPECTED.

SECURED WITH A WOVEN WIRE SHEATHING NG AND MINIMUM WIRE DIAMETER OF 20 GAUGE. APPLICATIONS SHALL BE ANCHORED FIRMLY INTO I OF 6" WITH T-POSTS OR #5 OR #6 REBAR, PART 48" ON CENTER.

INSPECTED WEEKLY AND AFTER EACH RAINFALL. PLACED WHEN THE STRUCTURE CEASES TO IE TO SILT ACCUMULATION AMONG THE ROCKS, TRAFFIC DAMAGE, ETC.

PTH EQUAL TO ONE-THIRD THE HEIGHT OF THE LESS, THE SILT SHALL BE REMOVED AND VED SITE AND IN A MANNER THAT WILL NOT

HEATHING. SHAPED AS NEEDED DURING INSPECTION. BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS MULATED SILT REMOVED.

TELY STABILIZED, THE BERM AND ACCUMULATED ND DISPOSED OF IN AN APPROVED MANNER.

1.24 ACRES (54,015 SQ.FT.) LOT 5 - IH 35 CORRIDOR CORNER CITY OF KYLE, TEXAS HAYS COUNTY, TEXAS

PROJECT BENCHMARK: SQUARE IN THE NORTHEAST END OF CONCRETE SIDEWALK , ±9.4' SOUTHWEST OF SUBJECT SITE'S SOUTHWEST PROPERTY CORNER ELEVATION = 662.26' NAVD88

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<u>LOCAL UTILITY AGENCIES:</u> KYLE UTILITIES	WATER, SEWER	512-262-3024	

	PROPERTY LINE
—— EX-SS ——	EXISTING SANITARY SEWER
EX-WL	EXISTING WATER LINE
0.H.U.	EXISTING OVERHEAD UTILITIES
63	EXISTING SAN. SEWER MANHOLE
	EXISTING FIRE HYDRANT

06/05/23

DATE

GRAPHIC SCALE 20'

PROPERTY DESCRIPTION 1.24 ACRES (54,015 SQ.FT.) LOT 5 – IH 35 CORRIDOR CORNER CITY OF KYLE, TEXAS HAYS COUNTY, TEXAS

FIRE PREVENTION NOTES

1. THE CONTRACTOR SHALL PROVIDE COMPACTED FLEXIBLE BASE PAVEMENT PRIOR TO CONSTRUCTION OF COMBUSTIBLE MATERIALS AS AN "ALL WEATHER DRIVING SURFACE."

2. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE 4 1/2 INCH OPENING AT LEAST EIGHTEEN (18) INCHES ABOVE FINISHED GRADE. THE 4 ½ INCH OPENING MUST FACE THE DRIVEWAY OR STREET WITH 3' - 6" SETBACK FROM CURBLINE(S). NO OBSERVATION IS ALLOWED WITHIN THREE (3) FEET OF ANY HYDRANT AND THE 4 ¹/₂ INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET (USE NST THREADS).

3. DESIGNATE NO PARKING - FIRE LANE WITH CURB PAINTED RED AND WHITE STENCIL IN "FIRE ZONE / TOW AWAY ZONE" IN LETTERING 3 INCHES IN HEIGHT IN PROXIMITY TO COMMERCIAL, INDUSTRIAL AND PUBLIC STRUCTURES.

PROPOSED FIRE LANE

HOSE LAY LIMIT

END OF HOSE LAY

EXISTING FIRE HYDRANT

	2	20'	4
(GRAPHIC	SCALE 20'	

1.24 ACRES (54,015 SQ.FT.) LOT 5 – IH 35 CORRIDOR CORNER CITY OF KYLE, TEXAS HAYS COUNTY, TEXAS

PROJECT BENCHMARK: SQUARE IN THE NORTHEAST END OF CONCRETE SIDEWALK , ±9.4' SOUTHWEST OF SUBJECT SITE'S SOUTHWEST PROPERTY CORNER ELEVATION = 662.26' NAVD88

GENERAL NOTES:

- 1. REFER TO BUILDING PLUMBING PLANS FOR CONTINUATION OF WATER AND SEWER SERVICES.
- 2. SERVICE ALIGNMENT SHOWN ON THIS PLAN ARE TENTATIVE AND SUBJECT TO COORDINATION WITH AND APPROVAL BY THE UTILITY COMPANIES.
- 3. SEE WATER AND SEWER DETAILS ON SHEET C4.02 & C4.03
- 4. DIMENSIONS ARE TO CENTER OF PIPE, UNLESS OTHERWISE NOTED.
- 5. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO DRIVEWAYS.
- 6. NO VALVES, HYDRANTS, CLEANOUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- 7. REFER TO GENERAL CONSTRUCTION NOTES SHEET C1.01 FOR WATER & SEWER NOTES

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NOTES:

DIMENSIONS.

HANDICAP SPACES.

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FLOW DIRECTION	660.50
FINISH FLOOR ELEVATION	660
TOP OF CURB	HP
SIDEWALK	659
FLOW LINE	
BOTTOM OF WALL	

-1999-1

FFE

LEGEND

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	PROP. IMPERVIOUS COVER		

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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 AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTORS 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.

<u>CALL AT LEAST 48</u>	HOURS BEFORE DIGC	SING	
AS OF OCT 1, 1998, IT IS TE	EXAS STATE LAW THAT YOU CO	NTACT A ONE-CALL SYSTEM BEF	ORE EXCAVATING
ONE-CALL SYSTEM OF TEXAS 1-800-545-6005	DIG TESS 1-800-344-8377	LONE STAR NOTIFICATION 1-800-669-8344	TEXAS ONE-CALL 1-800-245-4545
A FEDERAL LAW NOW IN EFFE FIRST USING AN AVAILABLE ON OR WITHOUT HEEDING LOCATIC FACILITY SHALL BE SUBJECT T NOTIFIED OF ANY ACCIDENT C	CT ALSO STATES THAT ANY PE NE-CALL NOTIFICATION SYSTEM ON INFORMATION OR MARKINGS TO A FINE, IMPRISONMENT, OR AUSED BY AN EXCAVATOR.	ERSON WHO ENGAGES IN EXCAVA TO DETERMINE LOCATIONS OF L AND SUBSEQUENTLY DAMAGES / BOTH. THE LAW ALSO STATES T	TION ACTIVITIES WITHOUT JNDERGROUND FACILITIES: AN UNDERGROUND HAT OSHA MAY BE
<u>LOCAL UTILITY AGENCIES:</u> KYLE UTILITIES	WATER, SEWER	512-262-3024	

WATER, SEWER 512-262-3024

SITE INFORMATION

<u>GENERAL SITE DATA</u> ZONING	R/S
LAND USE	RETAIL & SERVICE DISTRICT
SITE AREA	1.24-ACRES
BUILDING AREA	PROP. BUILDING = $5,580$ S.F.
BUILDING HEIGHT	SINGLE STORY, 24'-0"

POST-DEVELOPMENT IMPERVIOUS COVER SUMMARY TABLE				
DESCRIPTION	SQ.FT.	SQ.FT./ACRE	ACRES	
PROP. BUILDING IMPER. COVER	5,580	/ 43,560	0.128	
PROP. SIDEWALKS/DRIVEWAY IMPER. COVER	25,642	/ 43,560	0.589	
TOTAL POST-DEVELOPMENT IMPER. COVER	31,222	/ 43,560	0.717	

PLAT ALLOWABLE VS. POST-DEVELOPMENT IMPERVIOUS COVER SUMMARY TABLE											
DESCRIPTION	SQ.FT.	SQ.FT./ACRE	ACRES	% IMPERVIOUS COVER (1.24 ACRE SITE)							
PROP. SITE IMPER. COVER	31,222	/ 43,560	0.717	58%							
ALLOWABLE IMPER. COVER PER PLAT	40,511	/ 43,560	0.930	75%							
EXCEED ALLOWABLE IMPERVIOUS COVER?	NO		NO	NO							

SCALE 1" = 20'

KHIT CHIROPRACTIC-KYLE LOCATION

6121 POST RD. KYLE, TX. 78640 LANDSCAPE & IRRIGATION DRAWING INDEX

LANDSCAPE PLAN, THREE TABLE ORDINANCE AND MATERIAL SCHEDULE

IRRIGATION PLAN & DETAILS IRRIGATION SCHEDULE & NOTES

2. THE LOCATION OF ALL TREES, BOULDERS, SHRUBS AND EDGING SHALL BE STAKED OR MARKED IN THE FIELD BY THE CONTRACTOR FOR LANDSCAPE ARCHITECT

3. SOD ENTIRE PROJECT LIMITS AND ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES. DO NOT SOD LANDSCAPE BEDS OR IMPERVIOUS SURFACES.

4. THE CONTRACTOR SHALL REMOVE 12" OF EXISTING SOIL IN ALL LANDSCAPE BEDS AND REPLACE WITH 9" OF PLANTING MIX AND 3" OF MULCH.

6. ALL EXISTING AND PROPOSED UTILITIES ARE SHOWN SCHEMATICALLY AND ARE FOR THE CONTRACTORS REFERENCE. THE CONTRACTOR SHALL VERIFY THE

7. IF ANY FIELD CONDITIONS VARY FROM THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING UPON DISCOVERY.

9. THE QUANTITIES INDICATED ON THE LANDSCAPE MATERIAL SCHEDULE & PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THESE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS

10. ALL IMPROVEMENTS SHALL BE CONSTRUCTED TO COMPLY WITH THE TEXAS ACCESSIBILITY STANDARDS AND THE ARCHITECTURAL BARRIERS ACT OF 1968.

11. ALL PRESERVED TREES SHALL BE TRIMMED BY A CERTIFIED ARBORIST UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT. THIS SHALL BE DONE ONCE CONTRACTOR MOBILIZES AND BEFORE TREE PROTECTIONS ARE PUT INTO PLACE. MAINTAIN MINIMUM 14'-17' OVERHEAD CLEARANCE FOR EMERGENCY VEHICLES. NO

12. IT IS THE CLIENT'S RESPONSIBILITY TO SUBMIT AND OBTAIN THE REVIEW AND APPROVAL FROM THE LOCAL GOVERNMENT AGENCY THAT HAS JURISDICTION OVER

CITY OF KYLE LANDSCAPE ORDINANCE COMPLIANCE WORKSHEET

			VALUE
		53,800	SF
10%	=	5380	SF
42%	=	22,503	SF
D LANDSCAPE AREA VISIBILE FROM THE STREET	=	1883	SF
ED LANDSCAPE AREA VISIBLE FROM THE STREET	=	7108	SF
ALIPER THREE PER 1,000 SF (5380 SF ÷ 1,000 SF)	=	6	TREES
CREDIT FOR PRESERVED TREES	=	0	TREES
ED NUMBER OF TREES AFTER CREDIT IS APPLIED	=	6	TREES
TOTAL NUMBER OF PROPOSED TREES	=	8	TREES
HRUBS PER 1,000 SF (5380 SF ÷ 1,000 SF) (6 X 3)	=	18	SHRUBS
TOTAL NUMBER OF PROPOSED SHRUBS	=	127	SHRUBS

LANDSCAPE MATERIAL SCHEDULE		
COMMON NAME	APPROXIMATE QTY.	COMMENTS
RED YUCCA	42	3 GALLON
NATCHEZ CRAPE MYRTLE	4	3" CAL., 10' HT, 30 GALLON
GREEN CLOUD TEXAS SAGE	127	3 GALLON
MONTERREY OAK	4	3" CAL., 10' HT, 45 GALLON
INDIAN HAWTHORNE	92	3 GALLON
ТҮРЕ	APPROXIMATE QTY.	COMMENTS
COMMON BERMUDA	12,246 SF	
RIO ROCK (SITE ONE LANDSCAPE SUPPLY STONE CENTER) NEW BRAUNFELS TX.	2,031 SF	2" - 6", NO CALICHE, 3" LAYER INSTALLED ON A LAYER OF LANDSCAPE FABRIC
ALUMINUM	365 LF	4" ALUMINUM, BLACK FINISH EDGING

ALL LANDSCAPE MATERIAL SHALL BE APPROVED PRIOR TO DELIVERY TO THE SITE, AND SHALL BE MATCHING IN LANDSCAPE ARCHITECT APPROVED SIZE, SHAPE, AND QUALITY.

Т	REE TABLE		
	NORTHING	EASTING	STATUS
"X8")	13896964.7'	2323577.6'	REMOVE-UNPROTECTED WITHIN AREA NEEDED FOR SITE ACCESS
	13896970.2'	2323569.7'	REMOVE-UNPROTECTED WITHIN AREA NEEDED FOR SITE ACCESS
E SURVEYOR	13896957.6'	2323569.8'	REMOVE-UNPROTECTED
	13896949.4'	2323563.4'	REMOVE-UNPROTECTED WITHIN 10' OF THE BUILDING FOOTPRINT
	13896956.9'	2323560.3'	REMOVE-UNPROTECTED
	13896954.8'	2323557.0'	REMOVE-UNPROTECTED
	13896951.6'	2323555.6'	REMOVE-UNPROTECTED

9" WILLOW

10" WILLOW

380

381

4100 N. 22nd Street McAllen, TX. 78504 (956) 540-7850

1777 NE Loop, Suite 600 San Antonio, TX 78217 (210) 820-2677

PROJECT:

KHIT CHIROPRACTIC-**KYLE LOCATION** 6121 POST RD, KYLE TX, 78640

DATE	DESCRIPTION
06-05-2023	100% ISSUED FOR CONSTRUCTION
SHEET III	LE:
	SAFE FLAN, INCE
TABLE,	ORDINANCE AND
	IAL SUI EDULE

These Drawings and Specifications are to be an instrument of service and shall remain the property of the Landscape Architect. They are not to be used on other projects or extensions to this project except by agreement in writing with the Landscape Architect. The Landscape Architect is not responsible for construction means, methods, sequences or procedures or for safety precautions and programs in connection with the project.

DATE	DESCRIPTION
06-05-2023	100% ISSUED FOR CONSTRUC
	LC.

ENLARGEMENT AND LANDSCAPE DETAILS

These Drawings and Specifications are to be an instrument of service and shall remain the property of the Landscape Architect. They are not to be used on other projects or extensions to this project except by agreement in writing with the Landscape Architect. The Landscape Architect is not responsible for construction means, methods, sequences or procedures or for safety properties and exception with the project except with the project. precautions and programs in connection with the project.

Section 328400 POTABLE LANDSCAPE IRRIGATION SYSTEM

PART 1 - PRODUCTS

- 1.1 GENERAL
 - A. Unless otherwise noted on the Drawings, all materials shall be new and unused. The irrigation equipment catalog numbers used for reference in these Specifications are to establish minimum quality standards and may be substituted with an "approved equal" as outlined in Paragraph 1.06 of this section, unless specifically requested by the Owner.
- 1.2 POLYVINYL CHLORIDE PIPE (PVC PIPE)
- PVC pipe manufactured in accordance with ASTM Standards noted herein. A. Marking and Identification: PVC pipe shall be continuously and permanently marked with the following information: Manufacturer's name, size, type of pipe, and material,
- PVC number, Product Standard number, and the NSF (National Sanitation Foundation) Seal. B. PVC pipe fittings: Shall be of the same material as the PVC pipe specified and compatible with PVC pipe furnished. Solvent weld type shall be for Schedule 40.
- C. PVC Pipe: Lateral line pipe shall be Class 200 solvent weld, SDR_21, PS 22_70 for all sizes 3/4" 2". Mainline pipe shall schd.40 PVC, unless otherwise noted on the Drawings.
- D. Flexible PVC Risers (Nipples): All flexible PVC nipples shall be made from virgin PVC material, and shall comply with ASTM D2287, shall be tested at 200 P.S.I. static pressure for 2 hours and have a quick burst rating of a minimum 400 P.S.I. Flexible PVC pipe nipples shall be factory assembled only.
- E. Unless otherwise noted on the Drawings, no pipe smaller than ³/₄" shall be used. 1.3 SWING JOINTS
- Swing joints shall be O-ring seal type. Use Lasco, KBI or approved equal.
- 1.4 WIRE AND SPLICES
 - A. All electrical, control and ground wire shall be of size as indicated on the Drawings or in these Specifications. All wiring to be used for connecting the automatic remote control valve to the automatic controllers shall be Type "UF" 600 volt, solid copper, single conductor wire with PVC insulation and bear UL approval for direct
 - underground burial feeder cable. B. Verification of wire types and installation procedures shall be checked to conform to local codes.
 - C. Wire connectors shall be King low voltage connectors, tan color.
 - D. Two-wire No. 14 UF Direct Burial Cable
 - 1. Conductor: Soft-annelaed copper conforming to UL std. 719, Parts 18-22. 2. Insulation: Polyvinylchloride, 60 degree C rated, conforming to UL std. 719, Parts 23-25.
 - 3. Manufacturer's Identification: Surface embossed with manufacturer's name, voltage rating, size and type of designation.
 - 4. Underwriter's Laboratories Approval: All cable shall be tested physically and electrically in accordance with UL std. 719, and shall bear UL labels.
 - E. No. 10/2 UF Direct Burial Cable:
 - 1. Conductors: The conductors shall consist of solid, soft-annealed copper
 - 2. Insulation: Over each conductor, there shall be extruded a polyvinylcholoride
 - compound, UL rated for 60 degrees CENTIGRADE.
 - 3. Color Coding: In conformance with the National Electrical Code.
 - a. Assembly: Flat, parallel configuration.
 - 4. Overall Sheath: A polyvinylchloride sheath compound conforming to UL 719, for "UF" cable shall be applied overall.
 - F. Ground: The ground conductor shall consist of solid, uncoated soft-annealed No. 6 copper wire.
- 1.5 MANUAL/ISOLATION VALVES
 - A. All isolation valves 2-1/2 inches and larger shall be resilient wedge gate valve as manufactured by Matco-Norca series 10RT. All isolation valves smaller than 2-1/2" shall be Speers PVC, double union ball valves or approved equal. All valves must be certified for a working pressure of 125 PSI with a hyrdrostatic shell test of 200 PSI and a hydrostatic seal test of 150 PSI. Both ends must be screw type for use with PVC pipe.
- B. All isolation valves shall be housed in an appropriately sized valve box.
- 1.6 RAINBIRD ELECTRICAL REMOTE CONTROL VALVES
 - A. All electric valves shall be "normally closed", solenoid operated, 24 volt A.C., 60 Hz., Globe-Angle or Globe type valve installed in the angle or globe configuration.
 - B. Valves shall be Hunter, Pressure Regulating (XPR), Series, unless otherwise indicated on the Drawings.
 - C. A flow stem adjustment shall be included in each valve.
- 1.7 RAINBIRD VALVE BOXES ARMOR
 - A. All electrical valves shall be placed below grade within 10" round valve boxes. Valve boxes shall be ARMOR No.181104 with matching green bolt down or locking cover marked "Irrigation Control Valve," or approved equal.
 - B. All isolation shut-off valves shall be installed in suitable valve access boxes or proper size) as required for easy access to the valve. Valve boxes shall be Armor model No. 181104 (minimum size), with matching green bolt down or locking cover marked "Irrigation Control Valve," or approved equal.
 - C. A valve box shall be provided for all valves.
 - D. Boxes shall be suitable in size and configuration for the operability and adjustment of the valve.
 - E. Extension sections will be used as appropriate to the depth of piping.
- F. All valve box covers shall bolt down or have locking mechanisms and shall be colored
- 1.8 RAINBIRD POP UP SPRAY, MICRO SPRAY, ROTOR AND BUBBLER HEADS
 - A. Pop-up spray, rotor and bubbler heads are specified on the Drawings.
 - B. One adjustable bubbler head shall be provided per each tree location as shown on the Drawings.
 - C. Spray heads shall have a minimum 4" pop_up or 12" pop-up as designated on the Drawings. The sprinkler body and all related parts shall be plastic cycolac or polycarbonate. They shall have a spring retraction for positive return action of the pop_up nozzle. The spring for retraction and the adjustable nozzle screw shall be made of corrosion resistant materials.
 - D. All heads are to be operated and site adjusted to match precipitation rate of all heads in the zone with proper nozzle selection and arc adjustments.
 - E. MICRO-SPRAYS -The nozzle shall be constructed of corrosion and UV-resistant plastic. The nozzle shall have a pop-up stem that when under water pressure, pops up an additional inch. It shall also have a stainless steel retraction spring to retract the stem when water pressure is released. The stem shall have an integral elastomeric flow bushing for maintaining a constant flow rate over the operating pressure range of 25 to 60 PSI (1.7 to 4.1 bars; 172 to 413 kPa). The nozzle shall be protected from debris by a stainless steel screen that is integral to the pop-up stem. The nozzle shall have standard female threads that are compatible with the threaded riser on Hunter spray heads as well as some other manufacturer's spray heads. The nozzle shall carry a two-year, exchange warranty (not prorated). Must be installed in Institutional spray body.
- 1.9 RAINBIRD DRIP IRRIGATION (FOR POTABLE IRRIGATION ONLY)
 - A. The dripperline shall be XFS-09-12 non-potable as manufactured by Rain Bird Irrigation, Inc. Dripper flow rate and spacing shall be as indicated on the Drawings. B. Soil Staples (TLS6): All on-surface/under mulch Techline CV/Techline Techlite
 - installations shall be held in place with Techline Soil Staples spaced evenly every 3' to 5' on center, and with two staples on each change of direction.

- position that an automatic flush valve would be positioned. D. Pressure Regulator: A pressure regulator shall be installed at each zone valve or on the main line to ensure operating pressures do not exceed system requirements. The pressure regulator shall be a Netafim Pressure Regulator.
- E. Disc Filter: A disc filter shall be installed at each zone valve or on the main line to ensure proper filtration. The filter shall be a Netafim Disc Filter. Model number and mesh as indicated on the Drawings.
- 1.10 RAINBIRD ELECTRIC CONTROLLER A. The electric irrigation controller shall be a Controller type controller capable of operating the number of stations as indicated on the Drawings. The system is designed to operate multiple valves at a time, unless otherwise noted. The controller will be specified on the
 - Drawings.
 - noted on the Drawings.
- C. Provide an automatic rain/freeze shutoff with controller. D. All local and applicable codes shall take precedence in the furnishing and/or connecting
- of the 120 volt electrical service to the controller. E. Adequate coverage and protect of the 24 volt service wires leading from the controllers shall be installed from the bottom of the controllers to at least six (6) inches below ground level or to floor level.
- 1.11 BACKFLOW PREVENTER
- - manufacturer's recommendations.
- C. Backflow preventer housing shall be called for on the Drawings.

1.12 GLUE

- A. All glue used shall be Red Christie Hot Glue.
- **PART 2 EXECUTION**
- 2.1 INSTALLATION, GENERAL A. Design Pressure: This irrigation system has been designed to operate with a minimum static inlet water pressure as indicated on the Drawings. The Contractor shall take a pressure reading prior to beginning construction. If the pressure reading is 5% less than
- above, the Contractor shall notify the Landscape Architect.
- B. Contractor Responsibility: The Contractor shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in equipment usage, area dimensions or water pressure exist that might not have been considered in the design. Any deviation between the Contract Documents and field conditions shall be brought to the attention of the Engineer/Architect in writing. In the event this notification is not performed, the Contractor shall assume full
- responsibility for any revision necessary. C. Staking: Before installation is started, place a stake or flag where each sprinkler is to be located, in accordance with the Drawings. Staking shall be approved by the Landscape Architect before proceeding.
- D. Piping Layout: Piping layout is diagrammatic. Route piping around existing trees and root zones in such a manner as to avoid damage to plantings. Where access is restricted, bore under large existing trees to avoid damage and exposure of the root system. Do not dig within the ball of newly planted trees or shrubs.
- E. In areas where trees are present, trenches will be adjusted on site to provide a minimum clearance of four times the trunk diameter of the tree (at its base) between any tree and any trench.
- F. All material and equipment shall be delivered to the Worksite in unbroken reels, cartons or other packaging to demonstrate that such material is new and of a quality and grade in keeping with the intent of these Specifications. G. Refer to the Drawings for drip installation details.
- 2.2 EXCAVATION AND TRENCHING
- 2009 B. The Contractor shall perform all excavation to the depth indicated in these Specifications and Contract drawings. The banks of trenches shall be kept as nearly vertical as practicable. Trenches shall be wide enough to allow a minimum of 4" between parallel pipelines or electrical wiring. Where rock excavation is required, or where stones or rubbles is encountered in the bottom of the trench that would create a concentrated pressure on the pipe, the rock, stones, or rubble shall be removed to a depth of six (6) inches minimum below the trench depth indicated. The over depth rock excavation and all excess trench excavation shall be backfilled with loose, moist earth or sand, thoroughly tamped. Whenever wet or otherwise unstable soil that is incapable of properly supporting the pipe is encountered in the trench bottom, such shall be removed to a depth and length required, and the trench backfilled to trench bottom grade as hereinafter specified, with course sand, fine gravel or other suitable material.
- C. Bottom of trench grade shall be continued past ground surface deviations to avoid air pockets and low collection points in the line. The minimum cover specifications shall govern regardless of variations in ground surface profile and the occasional deeper excavation required at banks and other field conditions. Excavation shall be such that a uniform trench grade variation will occur in all cases where variations are necessary. D. Trench excavation shall comprise the satisfactory removal and disposition of all materials, and shall include all shoring and sheeting required to protect the excavation and to
- safeguard employees
- E. During excavation, material suitable for backfilling shall be stockpiled in an orderly manner a sufficient distance back from edge of trenches to avoid overloading and prevent slides or cave ins. Material unsuitable for backfilling shall be wasted as directed by the Landscape Architect. When excavated material is of a rocky nature and the topsoil or any other layer of excavated material is suitable for pipe bedding and backfill in the vicinity of the pipe, such material shall be separately stockpiled for use in such bedding and pipe backfill operations, unless satisfactory imported material is used.
- F. All excavations and backfill shall be unclassified and covered in the basic bid. No additional compensation will be allowed for rock or rubble encountered.
- G. Restore all surfaces, existing underground installations, etc., damaged or cut as a result of the excavations to their original conditions in a manner acceptable to the Engineer/Architect.
- 2.3 PIPE INSTALLATION
 - A. Sprinkler Mains: Sprinkler mains are that portion of piping from water source to electric valves. This portion of piping is subject to surges since it is a closed portion of the sprinkler system. Sprinkler mains shall be installed in a trench with a minimum of 18 inches of cover.
 - B. Lateral Piping: Lateral piping is that portion of piping from electrical valve to sprinkler heads. This portion of piping is not subject to surges since it is an "open end" portion of the sprinkler system. Lateral piping shall be installed in a trench with a minimum of 18 inches of cover.
 - C. Remove lumber, rubbish, and rocks from trenches. Provide firm, uniform bearing for entire length of each pipeline to prevent uneven settlement. Wedging or blocking of pipe will not be permitted. Remove foreign matter or dirt from inside of pipe before welding, and keep piping clean during and after laying pipe.
 - D. PVC pipe shall not be installed where there is water in the trench, nor shall PVC pipe be laid when temperature is 40 deg. F or below or when rain is imminent. PVC pipe will expand and contract as the temperature changes. Therefore, pipe shall be snaked from side to side of trench bottom to allow for expansion and contraction.
- E. PVC pipe shall be cut with a hand saw or hack saw with the assistance of a square and sawing vice, or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.
- F. All PVC pipe shall be installed with pipe markings facing the top of the trench. G. Thrust blocks shall be installed as indicated on the Drawings.

C. Line Flushing Valves: All Techline/Techlite systems shall be installed with Netafim Automatic Line Flushing Valves as indicated on drawings. Techline CV zones do not require an automatic line flushing valve but must have a manual flushing port(s) in the

- B. Power source shall be standard 120 volt 60 Cycle AC. Output for operation of companion solenoid actuated valves shall be 24 volts 60 Cycle AC., unless otherwise
- A. A backflow prevention device shall be located and sized as shown on the Drawings. B. This assembly shall be installed in a box and conform to the City Plumbing Codes and

A. All backfill operations shall conform to Title 30, TAC, Chapter 344.62, effective Jan. 1,

- 2.4 PVC PIPE AND FITTING ASSEMBLY
 - A. Make solvent_welded joints following standards noted herein. Thoroughly clean pipe and fittings of dirt, dust, and moisture with an approved colored PVC primer before applying solvent.
 - B. All plastic to plastic joints shall be solvent-weld joints or slip seal joints. Only the solvent recommended by the pipe manufacturer shall be used. All plastic pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.
 - C. Solvent weld joints shall be made in the following manner:
 - 1. Thoroughly clean the mating pipe and fittings with approved cleaner and a clean drv cloth
 - 2. Apply a uniform coat of solvent to the outside of the pipe with a non-synthetic bristle brush or applicator.
 - 3. Apply solvent to inside of the fitting in a similar manner.
 - 4. Re-apply a light coat of solvent to the pipe and quickly insert it into the fitting.
 - 5. Give the pipe or fitting a guarter turn to ensure even distribution of the solvent and make sure that the pipe is inserted to the full depth of the fitting socket. 6. Hold in position for 15 seconds.
 - 7. Wipe of excess solvent that appears at the outer shoulder of the fitting. Cure 24 hours before charging system with water.
 - D. PVC to Metal Connection: Work metal connections first. Use a non hardening pipe dope such as Permatex No. 2 or "Teflon" tape on threaded PVC to metal joints. Use only light
 - wrench pressure. All plastic to metal joints shall be made with plastic male adapters. E. Threaded PVC Connections: Where required, use threaded PVC adapters into which pipe may be welded.
- 2.5 CONTROL WIRE INSTALLATION
 - A. All electric control cables shall be of size as shown on the Drawings and/or as specified and shall be installed in the piping trenches wherever possible.
 - B. Install wire in the pipe trench as detailed on the Drawings. C. Wire shall be placed in the trench as loose as possible and with as much slack as possible to allow for expansion and contraction of the wire. Where it is necessary to run wire in a separate trench, the wire shall have at least twelve (12) inches of cover.
 - D. All wire connections at remote control valves, either direct buried or in boxes, and at all splices shall be left with sufficient slack so that in case of repair, the splice may be brought to the surface without disconnecting the wires. Slack shall be coiled in approximately 1" wraps.
 - E. Each remote control valve or group of remote control valves, which are to be connected to one station of a controller, shall have wire sizes as shown in the wiring diagrams on the Drawings or as specified. All remote control valves, what are to be connected to the same controller, shall be connected to a common ground wire system entirely independent of the common ground wire system of all other controllers. Only those remote control valves which are being controlled by one specific controller, shall be connected to that controller's common ground wire system.
 - F. All control wire less than 500 feet in length shall be continuous without splices or joints from the controller to the valves. Connections to the electric valves shall be made within 18 inches of the valve using connectors specified in Paragraph 2.4 of this section, unless otherwise approved by the Engineer/Architect in writing.
 - G. The Contractor shall obtain the Engineer/Architect's approval for wire routing when installed in a separate ditch. Control wires may be installed in a common ditch with piping; however, wires must be installed underneath mainline piping.
 - H. All wire passing under existing or future paving, sidewalk, construction, etc., shall be encased in 1" minimum PVC Schedule 40 conduit extending at least twelve (12) inches beyond edges of paving, sidewalks, or construction.
- 2.6 POP UP SPRAY, MICRO-SPRAY, ROTORY AND BUBBLER HEADS
- A. Provide heads and nozzles as specified and install in locations as shown on the Contract Drawings.
- B. All heads of a particular type and for a particular function in the system shall be of the same manufacturer and shall be marked with the manufacturer's name and identification, in such a position that they can be identified without being removed from the system. All sprinkler heads and quick coupling valves shall be set perpendicular to finished grades unless otherwise indicated on the Drawings.
- C. Pop_up spray and micro-spray heads shall be installed on a swing joint pipe connector as detailed. Rotary heads shall be installed on a double swing joint connected to the lateral pipe. Bubbler shall be a tree well flexible riser-bubbler head on a flex pipe. Provide wire staple to secure the bubbler to the top of the root ball. Keep heads a minimum of 4 inches from paved surfaces.
- D. Heads shall be installed with underside of flange flush with the finished grade.
- E. Contractor will be required to adjust heads as necessary after establishment of grass or other plant material.
- 2.7 MANUAL VALVES
 - A. Manual valves shall be sized and located where shown on the Drawings.
 - B. Valve boxes shall be adjusted to be flush with finished grade.
 - C. Valve boxes shall be properly supported and of sufficient construction that tractors, mowers or other equipment crossing over the boxes will not push boxes down and damage the pipe, valve, or box.
- 2.8 VALVE AND VALVE BOX PLACEMENT
 - A. A ball valve shall precede each valve to provide shut off for repair of valves B. All manual, electric, and quick coupling valves shall be in boxes as specified in Paragraph 2.6 of this section, and shall be set with a minimum of six (6) inches of space between their top surface and the bottom of the valve box. The base of the box shall be filled with pea gravel per manufacturer's installation instructions.
 - C. Valves shall be fully opened and fully closed to ensure that all parts are in operating
 - D. Valve boxes shall be set plumb, vertical, and concentric with the valve stem.
 - E. Any valve box which has moved from this required position so as to prevent the use of the operating wheel of the valve shall be reset by the Contractor at his own expense.
- 2.9 ELECTRIC CONTROLLER
 - A. Electric controller shall be located as shown on the Drawings and shall be capable of operating the number of stations indicated.
 - B. The system is designed to operate multiple sections at a time, unless otherwise noted on the Drawings in strict accordance with the manufacturer's published installation instructions.
- 2.10 ELECTRIC REMOTE CONTROL VALVES
 - A. Remote control valves shall be located and sized as shown on the Drawings. All electrical connections shall be made when the weather is dry with connection kits as specified in Paragraph 2.4 of this section in strict accordance with manufacturer's recommended procedures. All remote control valves shall be installed in a horizontal position, in accordance to the manufacturer's published installation instructions.
 - B. It shall be the responsibility of the Contractor to furnish and install the proper size wire on each of the low voltage circuits from the master control center to the various electric remote control valves.
 - C. Consideration shall be given to each circuit for allowance of voltage drop and economy consistent with accepted practices of electrical installation. Under no circumstances shall the voltage of any branch circuit be reduced more than proper due to length of run exceeding the maximum allowable for the wire size used. "Up-sizing" wire to compensate for voltage drop shall be at the Contractor's expense, whether or not indicated on the Drawings.

2.11 BACKFILL AND COMPACTION

- A. After system is operating and required tests and inspections have been made, the trenches shall be carefully backfilled with the excavated materials approved for backfilling. consisting of earth, loam, sandy clay, sand, gravel, soft shale, or other approved materials, free from large clods of earth or stone. Rock, broken concrete, or pavement, and large boulders shall not be used as backfill material. The backfill shall be thoroughly compacted and made flush with the adjacent soil level.
- B. Compact trenches in areas to be planted by thoroughly flooding the backfill with water. Compact all other areas by flooding or hand tamping. The jetting process may be used in areas when flooding.
- C. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to a minimum of 90% density.
- D. Any trenches improperly backfilled, or where settlement occurs, shall be reopened to the depth required for compaction, then refilled and compacted with the surface restored to the required grade and left in a completed surface condition as described above.
- E. Specifically tamp backfill under heads and around the flange of heads in a one (1) foot radius by a suitable means after trench backfill has dried from flooding to prevent heads loosening in the ground.
- 2.12 FINAL ADJUSTMENT
 - A. After installation has been completed, make final adjustment of sprinkler system prior to Engineer/Architect's final inspection.
 - B. Completely flush system to remove debris from lines by removing nozzle from heads on ends of lines and turning on system.
 - C. Check sprinklers for proper operation and proper alignment for direction of throw. D. Check each new section for operating pressure and balance to other sections by use of flow adjustment on top of each valve.
 - E. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arc or angle of spray should be other than as shown on the Drawings. In this case, change nozzles to provide correct coverage and furnish as-built data to Engineer/Architect with each change.
 - F. After system is thoroughly flushed and ready for operation, each section of sprinklers shall be adjusted to control pressure at heads. Use the following method, one section at a time:
 - 1. Remove last head on section and install a temporary riser above grade. Install tee with pressure gauge attached on top of riser and re_install head with nipple onto
 - 2. Correct operating pressure at last head of each section as follows: Spray Heads 20_25 psi; rotor heads - 30 to 40 psi (and as recommended by the manufacturer). 3. After replacing head, at grade, tamp thoroughly around head.
 - G. Prior to final inspection, cycle the system through three (3) complete watering schedules of not less than twenty (20) minutes each for sprinklers and three (3) hours each for drip to assure proper function of sprinklers, valves and controller.

2.13 CLEAN UP

- A. The Site shall be thoroughly cleaned of all waste materials and all unused or salvaged materials, equipment, tools, etc.
- B. After completion of the work, areas disturbed shall be leveled and the Site shall be raked clean and left in an orderly condition.
- 2.14 TEMPORARY IRRIGATION FOR GRASS ESTABLISHMENT

If the permanent irrigation system is inoperable the Contractor shall provide temporary irrigation for all new turf areas. Temporary irrigation may include equipment securely staked above grade. It shall be the Contractor's responsibility to provide complete, consistent temporary coverage in order to establish a viable, mowable stand of grass. Any above grade equipment shall be removed by the Contractor upon acceptance of the turf by the Engineer/Architect.

PART 1 - GENERAL

- 1.1 DESCRIPTION OF WORK AND RELATED DOCUMENTS
 - A. Furnish all work and materials, appliances, tools, equipment, facilities, transportation and services required and incidental thereto, as shown on drawings and/or specified herein including but not limited to; seed bed preparation, fertilization, installation and uniform establishment of hydromulch and sod materials, subsequent maintenance requirements.
 - B. Related Work Specified Elsewhere:
 - 1. Plants: Section 329300 C. It is the responsibility of the Contractor to establish a dense, top quality lawn of permanent grasses as specified. Any part of the area that fails to show a uniform
 - germination shall be reseeded/resodded and such reseeding/resodding shall continue until a dense lawn area is established. The Contractor shall provide all maintenance of the lawn areas as described below until Final Acceptance.
- 1.2 QUALITY ASSURANCE
 - A. Work in this Section is to be performed by a single firm specializing in commercial landscape work of similar size and quality with a minimum of five (5) years experience. The Landscape Architect shall review qualifications and approve subcontractor prior to commencing work.
 - B. All chemical applications shall be performed in accordance with current county, state, and federal laws, utilizing approved materials and methods of application. These applications shall be performed under the supervision of a Licensed Certified Applicator.
 - C. All seed must meet the requirements of the U.S. Department of Agriculture Rules & Regulations as set forth in the Federal Seed Act and the Texas Seed Law.
 - D. All sod must be laid within forty-eight hours of cutting and immediately upon arrival to the project site. Stack sod roots to roots and protect from damage by exposure to environmental conditions. If laying of sod is delayed more than four hours after arrival to the site it must be stored under shade and kept moist. Do not tear, stretch or drop sod. Do not allow soil to break free of turf roots.
 - E. Suspend all work in this Section if conditions of drought, excessive moisture, high winds or extreme or prolonged cold exist.
- 1.3 WARRANTY AND MAINTENANCE
 - A. The Contractor shall maintain all plant material described in this Section from the date of installation and continue ninety (90) days after written approval of substantial completion is received from the Landscape Architect.
 - B. If a uniform lawn has not been established after ninety (90) days the Contractor shall take additional actions to meet the turf establishment requirement of these Contract Documents. The Contractor shall provide a written statement to the Landscape Architect detailing a course of action to establish a lawn.
 - C. Maintenance period work shall include the following tasks completed weekly:
 - 1. Provide insect and disease control to maintain health of plants. 2. Dispose of all maintenance debris/clippings off-site. Owner's dumpsters shall not be used for disposal.
 - 3. Keep all site areas tidy and free of grass clippings, mulch or other foreign materials.
 - 4. Reapply hydromulch or resod as necessary to achieve uniform coverage.
 - 5. Mow turf areas to maintain a 2" maximum height. However, not more than 1/3 of the rass leaf shall be removed at any one cutting and cutting shall not be fewer than ten (10) days apart.
 - 6. Trim/edge all turf areas that abut edging, plant beds, pavement, etc.
 - 7. Fertilize as indicated in this Section
 - 8. Assure adequate watering by utilizing irrigation system, if any. Monitor and adjust the irrigation system as needed.
 - 9. Hand water all turf if irrigation system is not functional or does not exist

4100 N. 22nd Street McAllen, TX. 78504 (956) 540-7850

1777 NE Loop, Suite 600 San Antonio, TX 78217 (210) 820-2677

06-05-23

PROJECT:

KHIT CHIROPRACTIC-**KYLE LOCATION** 6121 POST RD, KYLE TX, 78640

DATE	DESCRIPTION
06-05-2023	100% ISSUED FOR CONSTRUCT
	
	LL.

SPECIFICATIONS

These Drawings and Specifications are to be an instrument of service and shall remain the property of the Landscape Architect. They are not to be used on other projects or extensions to this project except by agreement in writing with the Landscape Architect. The Landscape Architect is not responsible for construction means, methods, sequences or procedures or for safety precautions and programs in connection with the project

1.4 SUBMITTALS

- A. The Contractor shall submit manufacturer's specifications for fertilizers, soil amendments and seed mixtures/percentages. Also include sod inspection certificates from the Texas Department of Agriculture and one sod delivery ticket per truckload. Sod delivery tickets shall indicate sod species, nursery certification and the date and time of cutting.
- B. The submittal shall include the manufacturer's name, model number, and manufacturer's installation recommendation, if applicable, for each proposed item.
- C. No partial submittal will be accepted and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed except by written consent of the Landscape Architect.
- D. Approval of the submittals are required prior to delivery of any materials to the job site. E. Shop drawings shall include dimensions, elevations, construction details, arrangements, and capacity of equipment, as well as manufacturer's installation recommendations.
- 1.5 APPROVAL OF PLANT MATERIAL
- A. All plant material shall be approved by the Landscape Architect prior to installation. At no time shall any approval impair the right of further inspection and rejection during the progress of the work or contract life for failure to conform to the listed size and condition requirements or latent defects, diseases or injuries. Rejected plant materials shall be promptly removed from the site by the Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Topsoil shall be in accordance to Section 329300.
- B. Sod shall be premium #1 certified sod, grown in a sod nursery on clayey soil, at least one year old, with a heavy top, strong well-knit root system and free of weeds and disease. Refer to drawings for type of sod required.
- C. Seed shall be fresh, clean, new crop seed. Apply uniformly at the following rates for type f acad and planting date

or seed and planting date:		
TYPE	APPLICATION RATE POUND S/AC	SEEDING DATE
HULLED COMMON BERMUDA GRASS 98 / 88 UNHULLED COMMON BERMUDA GRASS 98 / 88	40 40	JANUARY 1 TO MARCH 31
HULLED COMMON BERMUDA GRASS 98 / 88	40	APRIL 1 TO SEPTEMBER 30
HULLED COMMON BERMUDA GRASS 98 / 88 UNHULLED COMMON BERMUDA GRASS 98 / 88 ANNUAL RYE GRASS (GULF)	40 40 30	OCTOBER 1 TO DECEMBER 31

- D. Fertilizer shall be water soluble with an analysis of 12 percent Nitrogen, 4 percent Phosphoric Acid and 8 percent Potash. The fertilizer shall be delivered to the site in fully labeled containers. Fertilizer shall be kept dry prior to being used.
- E. Mulch shall be virgin wood cellulose fiber made from whole wood chips. Within the fiber mulch material, at least 20 percent of the fibers will be 10.7 mm in length and .27 mm in diameter. Rate of application shall be 2000 pounds per acre. Mulch shall have a non-toxic green dye to guide in application. Hay or straw shall not be used.
- F. Tackifier shall be equal to Terra Tack. The tackifier shall be applied at a rate of 40 pounds per acre. Terra Type III, or approved equal, shall be used on slopes exceeding 10% and Terra Type I, or approved equal, shall be used in all other areas. G. Wetting agent shall be potable water.
- H. Herbicide shall have an active ingredient of 41% gylphosate. The Contractor shall follow all manufacturer's warnings and application instructions.

PART 3 - INSTALLATION

3.1 EXAMINATION

- A. Examine the areas and conditions under which work of this Section will be performed. Notify the Landscape Architect of unsatisfactory conditions. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected and the Landscape Architect has provided written acceptance. Beginning work indicates acceptance of the site as satisfactory by the installer.
- 3.2 PREPARATION
 - A. Site Preparation: Compacted or unsuitable soils and sub-soils from construction activities must be ripped and tilled until a loose, friable and free-draining condition is met. All existing weeds, grass, stabilized sub-base material, rubble, excavated soil and other material shall be removed from the site and disposed of by the contractor prior to starting any new landscape work. All stones over one (1) inch in any dimension in the top two (2) inches of soil shall be removed. Soil conditions around entire site must be approved by the Landscape Architect prior to rough and finish grading operations. The Contractor shall not install any fill or topsoil in turf areas prior to site condition approval by the Landscape Architect.
 - B. Turf Area Preparation: Grade areas to finish grades, filling as needed or removing surplus material. Float all turf areas to a smooth, uniform grade as indicated in the Contract Documents. Add compost and incorporate as stated on Plans. All turf areas shall slope to drain away from structures and planting beds. Areas where no grades are shown shall have a smooth and continual grade between fixed elements and elevations shown. The Contractor shall ensure proper drainage around all structures and adjust grades as necessary or as directed by the Landscape Architect. Lightly compact all turf areas with weighted roller to assure future settling will not occur.
 - C. Turf Areas and Herbicide Application: All turf areas shall be free of weeds, grass, insects, or any other deleterious material prior to bed preparation. Contractor shall herbicide all turf areas at least two times prior to installation of any new material (topsoil or seed/sod). The Contractor shall wait seven (7) days from last herbicide application before proceeding with hydromulch or sod material installation.

3.3 INSTALLATION - HYDROMULCH

- A. Prior to commencement of seeding operations, the Contractor shall protect all stationary items from overspray. Any overspray shall be immediately removed from
- any stationary object while still wet. B. The Contractor shall obtain approval of hydromulch area from Landscape Architect prior to application. Immediately after approval begin hydromulch application to reduce potential for erosion and excessive weed growth.
- C. Turf areas shall be seeded with an approved mechanical hydromulcher. Hydraulic equipment used for the application of fertilizer, seed and slurry of prepared wood fiber mulch shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend and homogeneously mix a slurry containing up to forty (40) pounds of fiber plus a combined total of seventy (70) pounds of fertilizer solids for each 100 gallons of water. The discharge line shall be equipped with a set of hydraulic spray nozzles which provide even distribution of the slurry on the area to be seeded. The slurry tank shall have a minimum capacity of eight hundred (800) gallons. The Landscape Architect may authorize equipment with a smaller tank capacity. Apply a visibly uniform coat of slurry mixture to the prepared seed bed.
- D. Keep hydromulched areas moist during germination period. Adjust watering schedule as needed or as directed by the Landscape Architect.
- E. After first cutting water hydromulched areas twice the first week to a minimum depth of six (6) inches with a fine spray and once per week thereafter as necessary to supplement natural rain to the equivalent of one (1) inch or to a six (6) inch depth
- F. Water for watering purposes shall be provided by the Owner at no cost to the Contractor. The Contractor shall provide equipment needed to connect to source, transport and distribute water.
- G. After germination period all areas that fail to show a uniform stand of grass shall be re-hydromulched and shall be done repeatedly until a uniform stand of grass has been has been approved by the Landscape Architect.
- 3.4 INSTALLATION SOD
 - A. The Contractor shall obtain approval of sod area from Landscape Architect prior to installation. Immediately after approval begin sod installation to reduce potential for erosion and excessive weed growth.
 - B. Always lay sod perpendicular to the slope and abut tightly together. Stagger strips of sod so that transverse joints are offset a minimum of eight (8) inches.

- sufficiently set sod roots into underlying soil.

- 3.5 CLEANING AND PROTECTION
- to the Owner.
- Contractor at no cost to the Owner.

PART 4 - METHOD OF MEASUREMENT

MEASUREMENT

Turfgrass as described in this section will be paid for on a lump sum basis wherein no measurement will be made.

PART 5 - BASIS OF PAYMENT

PAYMENT:

END OF SECTION 329200.

PART 1 - GENERAL

- 1.1 DESCRIPTION OF WORK AND RELATED DOCUMENTS
- B. Related Work Specified Elsewhere:
- 1. Turf and Grasses: 329200 1.2 QUALITY ASSURANCE
- included in this section:
 - 1. "Hortus Third." 1976.
- commencing work.
- 1.3 WARRANTY AND MAINTENANCE

- maintain health of plants.

- 4. Adjust or replace staking as required.
- used for disposal.

- materials.
- 1.4 SUBMITTALS
- accordance with Section 01300.
- 1.5 PROTECTION OF ITEMS TO REMAIN
- Landscape Architect.
- construction fencing installed at the tree's dripline.
 - Contractor.
 - incorporated item.

C. Roll all sod with a weighted roller weighing approximately three hundred (300) lbs. to

D. Water the sod with an irrigation system only. Monitor the health of the sod material and adjust water needs accordingly or as directed by Landscape Architect.

E. Sodded areas shall have fertilizer applied in two (2) applications with a thorough watering immediately following each application. The first application shall be one (1) week before the sod install at the rate of 35 pounds per 1,000 square feet harrowed into the top two (2) inches of seed bed. The second application shall be done at the rate of 25 pounds per 1,000 square feet, immediately following the second mowing.

A. The Contractor shall perform all necessary cleaning and removal of excess soil, debris, equipment, etc., during installation and upon completion of the work. The Contractor shall immediately repair any damage resulting from turf establishment operations without cost

B. The Contractor shall protect turf areas from damage, theft, erosion, washout, settlement or other causes until final acceptance. The above damages shall be repaired by the

A. Turfgrass will be paid for at the Contract lump sum, which price will be full compensation f or furnishing and installing equipment; shop drawings; providing all submittals and warranties; furnishing all labor, materials, tools, equipment; and incidentals necessary to complete the work as described in this section and related other sections of these Contract Documents, as well as maintenance until final acceptance.

SECTION 329300

PLANTS

A. Furnish all work and materials, appliances, tools, equipment, facilities, transportation and services required and incidental thereto, as shown on the Drawings and/or specified herein including but not limited to; the procurement and transportation of living plants, the excavation and preparation of all planting beds and planting of all materials, mulching, watering, protection, maintenance guarantee period, bed edging, planting soil/mixes, fertilizer, mulch, trees, palms, shrubs, groundcovers, plant material replacements for all Contractor supplied plant materials, miscellaneous landscape materials.

A. The following Codes, Regulations, Reference Standards, and Specifications apply to work

2. Texas Association of Nurserymen, Grades and Standards for Nursery Stock 3. "American Standard for Nurserv Stock." ANSI Z60.1-1900.

4. National Arborist Association Standards

5. "Plants of Deep South Texas - A Field Guide to the Woody and Flowering Species" B. Landscape work to be performed by a single firm specializing in commercial landscape work of similar size and quality with a minimum of five (5) years experience. The Landscape Architect shall review qualifications and approve subcontractor prior to

A. The Contractor shall warranty groundcover/shrubs for three months and trees/palms for one year after final acceptance. If plant material is deemed dead or unrecoverable by the Landscape Architect the Contractor will be notified in writing as such. The Contractor shall remove and replace the plant material within two weeks of the notification.

B. The Contractor shall maintain all plant material described in this Section for ninety days after written approval of substantial completion is received from the Landscape Architect. C. Maintenance period work shall include the following tasks completed weekly:

1. Remove and replace dead plant material. Prune plants to remove dead wood and to

2. Maintain all mulched areas at a 3 in. depth. Remove weeds and grass from shrub and ground cover areas and from watering basins.

3. Provide insect and disease control to maintain health of plants.

5. Dispose of all maintenance debris/clippings off-site. Owner's dumpsters shall not be

6. Keep all paved areas clear and free of grass clippings, mulch or other foreign

7. Remove staking materials at end of maintenance period and deliver to Owner.

A. The Contractor shall submit manufacturer's specifications for fertilizers, soil amendments, seed mixtures/percentages; all sources for plant materials; a one foot section of edging (as specified on the Drawings); and one pound bag samples each of topsoil, mulch and compost. The submittal shall include the manufacturer's name, model number, and manufacturer's installation recommendation, if applicable, for each proposed item in

B. No partial submittal will be accepted and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed except by written consent of the Landscape Architect.

C. Approval of the submittals are required prior to delivery of any materials to the job site. D. Shop drawings shall include dimensions, elevations, construction details, arrangements, and capacity of equipment, as well as manufacturer's installation recommendations.

A. Prior to commencing work the Contractor shall furnish and install orange construction fencing as indicated on the Drawings. Fencing shall be 60" in height, continuous and staked as needed to provide a stable and secure barrier around plant material. No work under this contract may begin until this fencing is in place and approved in writing by the

B. Trees that are to remain on site but be transplanted to a new location shall have orange

C. No trucks, machinery, stockpiled or staged material shall be placed or driven within the drip line of any plant material unless that drip line extends over an imperviously surfaced area. The Landscape Architect will determine if plant replacement or other repair is needed to restore the affected area to pre-construction conditions at the sole cost to the

D. The Contractor shall adjust depth of earthwork and loaming when working immediately adjacent to any of the aforementioned features in order to prevent disturbing tree roots, undermining walks and pavements, and damage in general to any existing or newly

E. Where excavating, fill or grading is required within the branch spread of trees that are to remain, the work shall be performed as follows:

- 1. TRENCHING: When trenching occurs around trees to remain, the tree roots shall not be cut but the trench shall be tunneled under or around the roots by careful hand digging and without injury to the roots.
- 2. RAISING GRADES: When the existing grade at a tree is below the new finished grade, and fill not exceeding 16 inches (16") is required, clean, washed gravel graded from one to two inches (1" - 2") in size shall be placed directly around the tree trunk. The gravel shall extend out from trunk on all sides a minimum of 18 inches (18") and finish approximately two inches (2") above the finished grade at tree. Install gravel before any earth fill is placed. New earth fill shall not be left in contact with the trunks of any trees requiring fill. Where fill exceeding 16 inches (16") is required, a dry laid tree well shall be constructed around the trunk of the tree. The tree well shall extend out from the trunk on all sides a minimum of three feet (3') and to three inches (3") above finish grade. Coarse grade rock shall be placed directly around the tree well extending out to the drip line of the tree. Clean, washed gravel graded from one to two inches (1" - 2") in size shall be placed directly over the coarse rock to a depth of three inches (3"). Approved backfill material shall be placed directly over the washed gravel to desired finished grade.
- 3. LOWERING GRADES: Existing trees in areas where the now finished grade is to be lowered shall have regrading work done by hand to elevation as indicated. Roots as required shall be cut cleanly three inches (3") below finished grade and scars covered with tree paint.
- 4. Trees that are to remain that are located more than six inches (6") above proposed grades shall stand on broad rounded mounds and be graded smoothly into the lower level. Trees located more than 16 inches (16") above proposed grades shall have a retaining structure as detailed on the Drawings, constructed a minimum of five feet (5') from the trunk. Exposed or broken roots shall be cut clean and covered with
- 1.6 APPROVAL OF PLANT MATERIAL

A. All plant material shall be approved by the Landscape Architect prior to installation. At no time shall any approval impair the right of further inspection and rejection during the progress of the work or contract life for failure to conform to the listed size and condition requirements or latent defects, diseases or injuries. Rejected plant materials shall be promptly removed from the site by the Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Plant materials shall conform to the following requirements:

- 1. Plants shall be true to name. The standard names are those adopted by the American Joint Committee on Horticultural Nomenclature. No substitution of species or varieties shall be accepted without the written consent of the Landscape Architect.
- 2. Plants shall have a normal habit of growth and shall be typical of their species unless the general shape and overall character of a particular plant is specifically noted in the Plant List on the Contract Documents.
- 3. Plants shall be certified healthy, freshly dug, vigorous and free from defects, decay, disfiguring roots, sun scale injuries, abrasions of the bark, plant diseases insect pests, eggs, or larvae.
- 4. All plants shall have been grown under climatic conditions similar to those in the locality of the project for at lease two (2) years and shall have normal healthy root systems, having been subjected to proper transplanting.
- 5. Plants shall not be pruned prior to delivery.
- 6. Balled and burlapped ("B & B") plants shall have firm, natural balls of soil of a diameter to conform to the above standards, but large enough to encompass sufficient fibrous feeding roots to insure full recovery and development of the plants. Plants grown in sand are not acceptable.
- 7. All precautions, which are customary in good nursery practice, shall be taken to insure the arrival of the plant material in good condition for successful growth. Plant material which arrives to the construction site poorly packed, with roots in a
- dry condition and/or leaves in a dehydrated condition will not be accepted 8. All plants shall be freshly dug. All plants shall be typical of their species or variety and shall have a normal habit of growth unless otherwise specified. Trees shall have straight trunks and all old abrasions and cuts shall be completely calloused
- 9. Plants shall have a well-developed fibrous root system.
- 10. Measurement: Trees and shrubs shall be measured when their branches are in normal position. Height and spread dimensions specified refer to the main body of the plant, and not from branch or root tip to tip. Caliper of trees shall be taken 6' above tree root flare.
- 11. Palms: All new palms shall be field dug or containerized material in specified sizes shown on the Contract Documents. All palms shall have good form (straight trunks) consistent of its species, free of scares/abrasions/burn marks and disease and insects, with large healthy root systems. Rootballs sizes for B&B material must meet the following minimum specifications:
 - a. Sabal Palms 12" greater than trunk O.D., 24" height
 - b. Washingtonia Palms 8" greater than trunk O.D., 24" height c. Chinese Fan, Mediterranean Fan Palms, Others - 30" diameter, 30" height

B. Fertilizer: 13-13-13 Osmocote slow release fertilizer granules or approved equal. C. Planting tablets: Agriform (20-10-15) 21 gram slow release fertilizer tablets or approved

- equal. D. Compost: Premium grade compost
- E. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay or impurities, plants, weeds and roots; minimum pH value of 5.4 and maximum 7.0; organic matter to exceed 1.5%, magnesium to exceed 100 units; phosphorus to exceed 150 units; potassium to exceed 120 units; soluble salts/conductivity not to exceed 900 ppm/0.9 mmhos/cm in soil. F. Wood Mulch: Double Shredded Cedar.
- G. Staking material:
- 1. Commercial grade rubber chain-locks. 2. Commercial grade T-Posts, 1.25 ga., 8' Ht., black (do not drive through rootball). Include plastic cap on all T-posts, cap color to match T-Post color.
- H. Edging:
- 1 .4"x36" commercial grade aluminum edging. All edging that terminates at a walkway shall have the top edge rounded.
- I. Planting Mix: 75 percent sandy-loam topsoil; 25 percent premium compost; (3:1 ratio by volume); and specified fertilizer or planting tablets. Provide a mix with a uniform texture without lumps and containing no stones, sticks, roots or other foreign material.

PART 3 - INSTALLATION

3.1 EXAMINATION

A. Examine the areas and conditions under which work of this Section will be performed. Notify the Landscape Architect of unsatisfactory conditions. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected and the Landscape Architect has provided written acceptance. Beginning work indicates acceptance of the site as satisfactory by the installer.

- 3.2 EXECUTION
 - A. Site Preparation: Compacted or unsuitable soils and sub-soils from construction activities must be ripped and tilled until a loose, friable and free-draining condition is met. All existing weeds, grass, stabilized sub-base material, rubble, excavated soil and other material shall be removed from the site and disposed of by the contractor prior to starting any new landscape work. Soil conditions around entire site must be approved by Landscape Architect prior to rough and finish grading operations. The Contractor shall not install any fill or topsoil in landscape areas prior to site condition approval by Landscape Architect.
 - B. Bed Preparation and Herbicide Application: All planting areas shall be free of weeds, grass, insects, or any other deleterious material prior to bed preparation. Contractor shall herbicide all planting areas with 'RoundUp' or approved equal at least two times prior to installation of any new plants. Pre-emergent herbicide shall be applied after planting and before placement of mulch.

- C. Planting Beds Adjacent to buildings and inside parking lot landscape islands: Excavate 12" of existing soil within planting beds and replace with 8" of planting mix. Final grades within all planting beds shall be 3" below adjacent curbs to allow for mulch. Contractor to ensure positive drainage throughout all landscape areas. Adjust grades as necessary to direct water away from planting beds. Report any discrepancies on all drainage issues in writing to the Landscape Architect. The Landscape Architect shall approve planting bed grades prior to planting operations.
- D. Edging: Edging shall be installed as shown on the Drawings. Edging shall allow for drainage points to ensure free drainage away from all structures and walkways. Edging shall be set flush with adjacent paving, sidewalks or driveways.
- E. Turf Areas: Scarify, float and fine grade all areas to receive sod or hydromulch for approval by Landscape Architect prior to placement of sod or application of hydromulch. Supply additional topsoil as necessary to fill any/all low areas and ensure positive drainage away from planting beds.
- F. Berms and Mounding: Supply topsoil and construct berms as indicated on the Drawings. G. Berms shall have a maximum slope of 1:4. Landscape Architect to approve berming and
- mounding prior to planting operations. Berms shall be compacted in 6" lifts.
- H. Planting Operations: 1. Installation:
 - a. Excavate planting pit to depth and width indicated on Contract Documents.
 - b. Set root ball on puddle/settled bottom of planting pit. Remove burlap, rope, wire, and all other wrapping material from top of ball. Completely remove any binding rope which is not biodegradable.
 - c. Fill planting pit 2/3 full with planting mix, soak with water and allow to settle, and add fertilizer tablets as detailed. Finish filling pit with planting mix and tamp lightly. Do not place fertilizer tablets at bottom of planting pit.
 - d. Construct a watering basin as detailed on the Drawings and described below. Water-in to completely saturate the root ball and planting mix. Add planting mix where any settling or air pockets occur and saturate with water.
 - e. Stake all trees/palms immediately after planting as detailed. Staking to be maintained throughout the maintenance period.
 - f. Palms: New Washingtonia palms shall be cleaned (skinned) completely of their leafstem bases and fibers to a height 4 feet below the crown. Sabal palms shall be planted with their leafstem bases remaining but cleaned and trimmed evenly. All palms shall be planted with several petioles or fronds tied up straight with natural twine. Remaining fronds shall be trimmed or 'hurricane cut' to lighten wind load on terminal bud. Contractor is responsible for removing or cutting the twine supporting the fronds as directed by the Landscape Architect.
- I. Watering Basins: Watering basins for all trees/palms shall be constructed in a ring shape around each tree or palm trunk. This earthen berm shall be constructed 6" in height and 36" in diameter so as to hold water and allow infiltration around root ball. A minimum of 4 inches of cypress mulch shall be placed within the watering basin. Watering basins must be maintained and kept free of weeds during the entire maintenance period. No mulch shall come in contact with the tree trunk.
- J. Pruning Operations:
- 1. After planting, the branches of deciduous stock shall be pruned to balance the loss of roots while retaining the natural form of the plant type according to best horticultural practice.
- 2. Trees shall be pruned by removing all dead wood, all surplus, badly formed and interfering limbs. In general, 1/5 of the branches shall be removed but the proportion shall, in all cases, be subject to the approval of the Landscape Architect. Broken, damaged and unsymmetrical branches shall be removed or cut back to ensure healthy and symmetrical growth of new wood. In the case of multiple leaders, the one which will best promote the symmetry of the trees shall be preserved and the remainder shall be removed or cut back so that they will not compete with the selected leader. Surrounding top branches shall be cut back to conform to the leader trimming. Branches to be cut back shall be cut off at the point beyond a lateral shoot or bud a distance of not less than 1/2 the diameter of the supporting branch. The cut shall be made on an angle slopping in the direction of the lateral shoot and in no case shall stubs be left. All cut surfaces over one inch in diameter shall be painted with tree wound dressing.
- K. During excavation, material suitable for backfilling shall be stockpiled in an orderly manner a sufficient distance back from edge of trenches to avoid overloading and prevent slides or cave_ins. Material unsuitable for backfilling shall be wasted as directed by the Landscape Architect. When excavated material is of a rocky nature and the topsoil or any other layer of excavated material is suitable for pipe bedding and backfill in the vicinity of the pipe, such material shall be separately stockpiled for use in such bedding and pipe backfill operations, unless satisfactory imported material is used.
- L. All excavations and backfill shall be unclassified and covered in the base bid. No additional compensation will be allowed for rock encountered.
- M. Restore all surfaces, existing underground installations, etc., damaged or cut as a result of the excavations to their original conditions in a manner acceptable to the Landscape Architect.
- 3.3 CLEANING AND PROTECTION
- A. The Contractor shall perform all necessary cleaning and removal of excess soil, debris, equipment, etc., during installation and upon completion of the work. The Contractor shall immediately repair any damage resulting from planting operations without cost to the Owner. B. The Contractor shall protect landscape plants from damage or theft until final acceptance.

PART 4 - METHOD OF MEASUREMENT MEASUREMENT:

Landscape Planting as described in this section will be paid for on a lump sum basis wherein no measurement will be made.

PART 5 - BASIS OF PAYMENT PAYMENT:

A. Landscape Planting will be paid for at the Contract lump sum, which price will be full compensation for furnishing and installing equipment; shop drawings; providing all submittals and warranties; furnishing all labor, materials, tools, equipment; and incidentals necessary to complete the work as described in this section and related other sections of these Contract Documents, as well as maintenance until final acceptance.

END OF SECTION 329300

4100 N. 22nd Street McAllen, TX. 78504 (956) 540-7850

1777 NE Loop, Suite 600 San Antonio, TX 78217 (210) 820-2677

PROJECT:

KHIT CHIROPRACTIC-**KYLE LOCATION** 6121 POST RD, KYLE TX, 78640

DATE	DESCRIPTION	
06-05-2023	100% ISSUED FOR CONSTRUC	стіс
SHEET TIT	LE:	

SPECIFICATIONS

These Drawings and Specifications are to be an instrument of service and shall remain the property of the Landscape Architect. They are not to be used on other projects or extensions to this project except by agreement in writing with the Landscape Architect. The Landscape Architect is not responsible for construction means, methods, sequences or procedures or for safety precautions and programs in connection with the project

⁽³⁾ PVC SCH 40 SLEEVE PIPE SIZED TWICE THE SIZE OF ⊕½" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050

PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4"

RAIN BIRD XF SERIES DRIPLINE (TYPICAL)

PVC DRIP MANIFOLD FROM RAIN BIRD CONTROL ZONE
 VALVE KIT (SIZED TO MEET LATERAL FLOW

 $\mathbf{\Lambda}$ ROBERT DURAN date:⁰⁶⁻⁰⁵⁻²⁰²³

PROJECT:

KHIT CHIROPRACTIC-**KYLE LOCATION** 6121 POST RD, KYLE TX, 78640

DATE	DESCRIPTION
06-05-2023	100% ISSUED FOR CONSTRU

IRRIGATION PLAN & DETAILS

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PROJECT NUMBER: 23-12 C.R. SHEET NUMBER:

IR1

SYMBOL		ΩΤΥ	ARC	PSI	GPM	RADIUS
		4		30		5'v15'
· · · · · · · · · · · · · · · · · · ·			103	30	0.00	513
	Hunter PROS-04 RCS-515	2	RCS	30	0.65	5'x15'
<u>(</u>	Hunter PROS-04 SS-530	17	SST	30	1.3	5'x30'
<u></u>	Hunter PROS-04 SS-918	2	180	30	1.72	9'x18'
B	Hunter PROS-04 15F	8	360	30	3.75	15'
8	Hunter PROS-04 08A	12	Adj	30	≤ 1.76	8'
	Hunter PROS-04 10A	25	Adj	30	≤ 2.02	10'
15	Hunter PROS-04 15A	23	Adj	30	≤ 3.71	15'
	Hunter PROS-04-MSBN 20F	8	360	30	2	2'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY				
	Hunter ICZ-101-25 1" Drip Control Zone Kit. 1in. ICV Globe Valve with 1in. HY100 filter system. Pressure Regulation: 25psi. Flow Range: 2 GPM to 20 GPM. 150 mesh stainless steel screen.	6				
	Area to Receive Dripline Rain Bird XFS-09-12 XFS Sub-Surface Pressure Compensating Dripline w/Copper Shield Technology. 0.9 GPH emitters at 12" O.C. Laterals spaced at 12" apart, with emitters offset for triangular pattern. UV Resistant. Specify XF insert fittings.	6,576 l.f.				
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY				
•	Hunter PGV-101G 1" 1in. Plastic Electric Remote Control Valve, for Residential/Light Commercial Use. Female NPT Inlet/Outlet. Globe Configuration, With Flow Control.	7				
	Shut Off Valve	1				
BF	Febco 765 1" Pressure Vacuum Breaker, brass with ball valve SOV. Install 12in. above highest downstream outlet and the highest point in the downstream piping.	1				
С	Hunter PC-400 w/ (01) PCM-300 & (01) PCM-900 Light Commercial & Residential Controller, 16-station expanded module controller, 120 VAC, Outdoor model	1				
RS	Hunter MINI-CLIK Rain Sensor, mount as noted	1				
Μ	Water Meter 1"	1				
	Irrigation Lateral Line: PVC Class 200 SDR 21 3/4"	2,035 l.f.				
	Irrigation Lateral Line: PVC Class 200 SDR 21 1"	783.4 l.f.				
	Irrigation Lateral Line: PVC Class 200 SDR 21 1 1/4"	196.5 l.f.				
	Irrigation Mainline: PVC Schedule 40 1 1/2"	474.9 l.f.				
	Pipe Sleeve: PVC Schedule 40 4"	251.3 l.f.				
V.	alve Callout					

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE 3/4"	PIPE 1"	PIPE 1 1/4"	WIRE	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PRECIP
1	Hunter ICZ-101-25	1"	Area for Dripline	10.59	705.9 l.f.	148.6	8.2		302.7	20	0.92	15.9	36.9	2.46 in/h
2	Hunter ICZ-101-25	1"	Area for Dripline	16.71	1,114 l.f.	91.6		32.2	298.3	20	3.18	27.5	50.6	1.71 in/h
3	Hunter PGV-101G	1"	Turf Spray	20.1	13	141.4	45.7	6.3	290.7	30	3.87	3.33	37.2	0.92 in/h
4	Hunter PGV-101G	1"	Turf Spray	22.5	6	52.0	23.0	12.5	279.2	30	1.42	4	35.4	0.76 in/h
5	Hunter ICZ-101-25	1"	Area for Dripline	23.39	1,559 l.f.	140.8	75.9	65.1	274.7	20	3.38	36	59.4	2.2 in/h
6	Hunter ICZ-101-25	1"	Area for Dripline	14.75	983.1 l.f.	93.2	32.2		268.2	20	2.91	22.6	45.5	1.76 in/h
7	Hunter PGV-101G	1"	Turf Spray	23.86	13	117.3	79.5	39.3	263.2	30	4.7	4.38	39.1	0.84 in/h
8	Hunter PGV-101G	1"	Turf Spray	20.32	19	87.6	114.0	22.6	248.2	30	5.14	3.39	38.5	1.56 in/h
9	Hunter ICZ-101-25	1"	Area for Dripline	13.53	903.2 l.f.	273.6	4.6		169.3	20	1.42	20.7	42.1	2.1 in/h
10	Hunter PGV-101G	1"	Bubbler	16	8	323.6	168.5	1.9	62.9	30	4.72	1.94	36.7	27.23 in/h
Unknown	Hunter ICZ-101-25	1"	Area for Dripline	15.33	1,022 l.f.	186.5	159.5	3.2		20	3.47	23.9	47.3	2.25 in/h
Unknown	Hunter PGV-101G	1"	Turf Spray	18.95	19	180.2	65.8	9.4		30	4.41	2.94	37.4	1.34 in/h
Unknown	Hunter PGV-101G	1"	Turf Spray	19.59	20	198.5	6.6	4.0		30	1.95	3.16	35.1	1.07 in/h
	Common Wire								474.9					

NOTES

- 1.- ALL IRRIGATION WORK TO BE PERFORMED BY A TEXAS LICENSED IRRIGATOR.
- OPERATORS.
- SPACING MAY NOT BE EXCEEDED WITHOUT AUTHORIZATION FROM THE OWNER.
- CURBS. BUILDINGS. ETC. WHEN INSTALLING SPRINKLER HEADS
- WITH PVC CAPS. DO NOT PENETRATE STRUCTURES WITHOUT PRIOR APPROVAL
- 6.- AFTER INSTALLATION, SYSTEM MUST BE BALANCED BY ADJUSTING PRESSURE REGULATOR CONTROLS ON VALVES.
- OPERATE PROPERLY. IRRIGATION CONTRACTOR SHALL NOTIFY THE OWNER OF SITE PROBLEMS THAT MAY ALTER THE EFFECTIVENESS OF THE SYSTEM.
- LANDSCAPE IRRIGATION SYSTEM.
- 9.- THE CONTRACTOR SHALL PREPARE "AS-BUILT" DRAWINGS IN AN AUTOCAD FORMAT THE AUTOCAD DRAWINGS SHALL BE DELIVERED ON DISC TO THE OWNERS **REPRESENTATIVE FOR REVIEW AND APPROVAL**
- BOXES.
- 11.- NO PIPE CROSSES ARE PERMITTED.
- 12.- HAND DIG TRENCHES WITHIN THE DRIP LINE OF EXISTING TREES
- ADJACENT PIPE.
- 14.- ALL PIPING TO BE LAID WITH LETTERING UP.
- 15.- ALL 3/4" 2" LATERAL PIPING SHALL BE CLASS 200 SOLVENT WELD PVC. AND APPROVED BY THE OWNER PRIOR TO BACKFILL.
- 17.- ALL VALVE WIRING SHALL BE #14 UF.
- 18.- PROVIDE PRESSURE GAUGE ON INLET AND OUTLET.
- 19.- PROVIDE QUICK COUPLERS AS INDICATED.
- IRRIGATED.
- BEFORE COMMENCING WORK.
- 23.- THE CONTRACTOR SHALL PROVIDE TWO QUICK COUPLER KEYS TO MATCH QUICK COUPLER SPECIFIED.
- COMMENCING WORK.
- 25.- ALL MATERIAL SHOULD BE CONSIDERED OR APPROVED EQUAL.
- 26.- OWNEER/OPERATOR TO FOLLOW MANUFACTURER'S WINTERIZATION METHODS.

2.- INSTALL ALL VALVES IN AN ARMOR VALVE BOX WITH COVER OR EQUAL. VALVE SHOULD BE CENTERED IN BOX TO FACILITATE ACCESS TO SOLENOID ASSEMBLY AND MANUAL

3.- PIPE AS SHOWN IS DIAGRAMMATIC BUT SHOULD BE REASONABLY FOLLOWED. LOCATION OF SPRINKLER HEADS SHALL BE ESTABLISHED BY THE CONTRACTOR BUT DESIGN 4.- ALLOW A MINIMUM OF 6" CLEARANCE FROM ANY STRUCTURE, INCLUDING SIDEWALKS, 5.- ALL SLEEVES SHALL BE SCH. 40 PVC, SHALL EXTEND 12" BEYOND EDGE OF PAVEMENT OR STRUCTURE, SHALL BE PLACED 24" BELOW TOP OF PAVEMENT AND SHALL BE CAPPED LOCATION OF SLEEVES TO BE MARKED IN PAVEMENT WITH AN "S" CONCRETE STAMP.

7.- SYSTEM SHALL REQUIRE A MINIMUM OF 50 LBS. STATIC PRESSURE FOR SYSTEM TO PRESSURE DEFICIENCIES OR IF THE PRIMARY WATER SUPPLY LINES ARE SMALLER THAN 4" AND/OR LONGER THAN 120' FROM THE SOURCE. NOTIFY THE OWNER OF ANY OTHER 8.- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SPECIFICATIONS FOR THE

WHICH SHALL SHOW LOCATIONS OF MAIN LINES, VALVES, CONTROLLERS AND SLEEVES.

10.- ALL SPLICES ARE TO BE CAPPED WITH TAN KING LOW VOLTAGE CONNECTORS. NO FIELD SPLICES WILL BE PERMITTED. WHERE SPLICES ARE NECESSARY ALL MUST BE IN VALVE

13.- ALL MAIN & LATERAL LINES SHALL BE SET AT A MINIMUM DEPTH OF 18" TO THE TOP OF THE PIPE. ALL LATERAL LINES SHALL BE SET AT A MINIMUM DEPTH OF 18" TO THE TOP OF THE PIPE. ALL ELECTRIC VALVES SHALL BE SET TO A DEPTH OF 18" TO THE TOP OF

16.- PROVIDE THRUST BLOCKS AS PER DETAILS . ALL THRUST BLOCKING SHALL BE INSPECTED

20.- DO NOT LOCATE VALVE BOXES IN MULTI-USE ATHLETIC FIELD AREAS. ALL PIPES GOING TO AND FROM RP AND PUMP SHALL BE SCH. 80 PVC PIPE. WRAP PIPE WITH 1/8"x2" INSULATION TAPE #4217-W3 BY NU-CALGON WHOLESALE INC. ST. LOUIS. MO. 63146. 21.- ALL SPRINKLER HEADS SHALL BE SET LEVEL TO FINISH GRADES, PLACED VERTICAL IN THE GROUND, ADJUSTED TO COVER HEAD TO HEAD WITH MINIMAL SPRAY IN AREAS NOT

22.- TEN (10) DAYS PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE WATER STATIC PRESSURE. CONFIRM WITH OWNER THE WATER STATIC PRESSURE

24.- THE CONTRACTOR SHALL OBTAIN THE PROPER PERMIT FOR IRRIGATION WORK PRIOR TO

4100 N. 22nd Street McAllen, TX. 78504 (956) 540-7850

1777 NE Loop, Suite 600 San Antonio, TX 78217 (210) 820-2677

PROJECT:

KHIT CHIROPRACTIC-**KYLE LOCATION** 6121 POST RD, KYLE TX, 78640

DATE	DESCRIPTION
06-05-2023	100% ISSUED FOR CONSTRUC
SHEET TIT	ïLE:

IRRIGATION **SCHEDULE & NOTES**

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<u>2018</u>	IBC CHAPTER 17 SPECIAL INSPECTIONS
SP-1	REFER TO SPECIFICATION SECTION 01411 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. SUILS (SLAB-UN-GRADE) B. CUNCRETE CUNSTRUCTION C. STRUCTURAL STEEL D. STEEL FABRICATORS
SP-5	THE SPECIAL INSPECTIONS FOR THIS PROJECT WILL BE PROVIDED BY A FIRM DESIGNATED BY THE ARCHITECT.
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.

	1			
E <u>L</u> 1	FRAMING NOTES	<u>GENERAL NOTES CONT.</u> GN-15 CONTRACTOR SHALL NOTIFY F. D. R. 24 HOURS IN	<u>GENERA</u> GN-1	AL NOTES: THIS STRUCTURE IS DESIGNED IN ACCOUNTS
1	FOR WIDE FLANGE (W-SHAPES) WHICH MUST CONFORM TO ASTM A992 (Fy=50 KSI), HOLLOW STRUCTURAL SECTIONS	ADVANCE OF ANY CONCRETE POUR OR OTHER NEEDED SITE CONSULTATION.		INTERNATIONAL BUILDING CODE (ADOPTED AND AMENDED BY THE CITY OF APPLICABLE INDUSTRY STANDARDS
	KSI FOR RECTANGULAR HSS, Fy=42 KSI FOR ROUND HSS. PIPE SHALL CONFORM TO ASTM A53, GRADE B, Fy=35	GN-16 THE STRUCTURAL DRAWINGS FOR THIS PROJECT ARE NOT INTENDED FOR USE AS ERECTION DRAWINGS. THE USE DE REPRODUCTIONS DE THESE CONTRACT DRAWINGS BY	GN-2	ETC.).
-	AISC (DESIGN IN ACCORDANCE WITH ASD).	ANY CONTRACTOR, SUB-CONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAVINGS SIGNIFIES HIS		SUPERIMPOSED DEAD LOADS
2	JOIST INSTITUTE SPECIFICATIONS.	ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY AND ALL		
3	JOIST MANUFACTURER SHALL REVIEW FRAMING DETAILS TO INSURE THAT THE LATEST REQUIREMENTS OF OSHA ARE MET. THIS MAY REQUIRE COORDINATION WITH	ACCEPTANCE. THE CONTRACTOR SHALL MAINTAIN THESE DRAWINGS AT A CURRENT STATUS, INCLUDING ALL		HVAC
	STEEL FABRICATOR FOR LOCATION OF BOLT HOLES AND ERECTION PROCEDURES. GENERAL CONTRACTOR TO VERIFY COORDINATION.			
4	TYPICAL ROOF DECK IS 1-1/2″ - 22 GAUGE, PAINTED, TYPE F INTERMEDIATE RIB DECK COMPLYING WITH STEEL	UF-1 BEFORE ANY CONSTRUCTION IS BEGUN, PERFORM ROUGH		MECHANICAL EQUIPMENT AS IND GROUND SNOW LOAD
	DECK INSTITUTE, WITH MINIMUM I = .120, SN = .120, ATTACH TO SUPPORTING MEMBERS BY PLUG WELDING DIRECTLY THROUGH BOTTOM OF THE RIBS AT EVERY	AWAY FROM THE BUILDING: MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION SO THAT STORM WATER		WIND LOAD IS BASED ON BASIC WIND MPH, EXPOSURE B, AND AN IMPORTANCE
	SUPPORT. WELD EACH SHEET AT BOTH SIDES AND AT OTHER RIBS SO THAT SPACING BETWEEN WELDS ACROSS THE WIDTH OF EACH SHEET DOES NOT EXCEED 18",	EXCAVATIONS PUMPED FREE OF STORM WATER AT ALL TIMES.		PER IBC DF 1.00, NET UPLIFT = 7 PSF. SEISMIC: SITE CLASS D; Ss=0.100g;
	IN ACCORDANCE WITH STEEL DECK INSTITUTE'S SPECIFICATIONS.	UF-2 PRECAUTIONS SHALL BE TAKEN TO PROTECT OPEN EXCA- VATIONS FROM EXCESSIVE LOSS OR GAIN IN NATURAL	GN-3	CONCRETE SHALL BE LABORATORY DESIG MINIMUM 28-DAY COMPRESSIVE STRE
5	STEEL DECK SHALL SPAN A MINIMUM OF THREE SPANS CONTINUOUS. DECK SHALL BE CONNECTED TO STEEL SUPPORTS BY WELDING AS RECOMMENDED BY THE	MUISTURE LEVEL PRIDR TO PLACEMENT OF BASE MATERIAL. KEEP MOIST DURING DRY WEATHER AND KEEP STORM WATER PUMPED OUT, INCLUDING NIGHTS AND		BELOW. REFER TO SPECIFICATIONS FOR CEMENTS, ADMIXTURES, ETC.
	MANUFACTURER TO PROVIDE LATERAL SUPPORT TO STEEL SUPPORTS AND TO PROVIDE DIAPHRAGM ACTION. DECK DAMAGED BY BURNING OF HOLES. OVER-WELDING. AND/OR	WEEKENDS, DURING RAINS. UF-3 IN THE AREA DCCUPIED BY THE BUILDING, ASSUMING	2 2 2 2 2 2	DRILLED FOOTINGS BEAMS AND SLABS-ON-GRADE JOB CAST WALLS
6	CONSTRUCTION LOADING SHALL BE REPLACED. WHERE METAL DECK IS SUPPORTED CONTINUOUSLY AT	GRADES IN THE BUILDING AREA. TO EL. (SEE CIVIL) EXCAVATION SHOULD RESULT IN A MINIMUM.	2	NDTE: FLY ASH WILL BE PERMIT PORTLAND CEMENT REPLACEMEN
7	EDGES, WELD DECK TO STEEL SUPPORT AT 12" D.C. TYPICAL STEEL JOIST SEAT ANCHORAGE: FIELD WELD	OF FIVE FEET OF COMPACTED SELECT FILL BENEATH THE FLOOR SLAB. TESTING LABORATORY SHALL VERIEY IN WRITING THAT DEPTH OF FILL COMPLIES WITH THIS	GN-4	REINFORCING STEEL SHALL BE FROM SHALL CONFORM TO THE FO
	EACH SEAT WITH TWO 1" LONG BY 1/8" WELDS FOR K- SERIES.	NOTE.		SPECIFICATIONS: A615-GR 40 (PLAIN)
8	STRUCTURAL FRAMING CONNECTIONS SHALL BE SEATED COLUMN CAPS, CLIP ANGLES OR WEB PLATES AS SHOWN ON DETAILS. USE A325 HIGH STRENGTH BOLTS OR WELDS	UF-4 EXPOSED SUBGRADE SHOULD BE PROOF ROLLED, UNDER DIRECTION OF GEOTECHNICAL ENGINEER, TO LOCATE AND DENSIFY ANY WEAK, COMPRESSIBLE ZONES. MAKE A		A185 (FLAT SHEETS DNLY) WEL A615-GR 60 ALL DT ASTM A108-60T HEADED C
	SUFFICIENT TO DEVELOP REACTION CAPACITY SHOWN IN AISC MANUAL (9TH EDITION) AS THE ALLOWABLE UNIFORM LOAD/SPAN DIVIDED BY TWO AS SHOWN IN THE	DR SIMILAR HEAVILY LOADED PIECE OF CONSTRUCTION EQUIPMENT WEIGHING AT LEAST 20 TONS, WEAK OR SOFT	GN-5	ASTM A496 DEFOR DETAILING OF CONCRETE REINFORCE
	(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 (ASD).	WITH COMPACTED SELECT FILL, REFER TO PAGE 8 OF REPORT (UF-12).		ACCESSORIES SHALL BE IN ACCORDAN ACI MANUAL OF STANDARD PRACTICE REINFORCED CONCRETE STRUCTURES
9	DECK STOP ANGLES, FASCIA ANGLES, HANGERS, CLIPS AND OTHER STRUCTURAL AND MISCELLANEOUS MEMBERS	UF-5 SCARIFY SUBGRADE TO A MINIMUM OF 6". MOISTURE CONDITION TO BETWEEN OPTIMUM AND PLUS FOUR		SUPPORTS SHALL HAVE PLASTIC COATED DIP GALVANIZED AFTER FABRICATIO CONSTRUCTION USE CONCRETE BRICKS.
	SHALL BE CONNECTED OR JOINED USING 3/16' OR LARGER FILLET OR GROOVE WELDS AS REQUIRED FOR ADEQUATE CONNECTION.	A DRY DENSITY OF AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY PER ASTM D698	GN-6	BAR LAPS AND SPLICES SHALL BE A AT LEAST 40-BAR DIAMETERS. PRD
10	WHERE DPENINGS THROUGH ROOF ARE REQUIRED, FRAME AS DETAILED.	UF-6 WITHIN THE BUILDING LINES, AND BEGINNING AT THE		BARS AT CORNERS. WELDED WIR LAPPED 8' MINIMUM AT SPLICE PO MESHES, WHICHEVER IS GREATEST.
11	WHERE BRACING ANGLES ARE SHOWN BETWEEN END OF JOIST BOTTOM CHORD AND SUPPORTING BEAM OR GIRDER,	INCHES OF UNDERSIDE OF THE SLAB WITH SIX INCHES OF UNDERSIDE OF THE SLAB WITH SELECT STRUCTURAL FILL PLACED IN 8" HORIZONTAL LIFTS	GN-7	MECHANICAL AND ELECTRICAL CONDUITS RUN UNDER THE TOP LAYER OF SL
	MAKE THESE CONNECTIONS AFTER ALL DEAD LOAD ON JOISTS IS IN PLACE. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL FINAL CONNECTIONS ARE	AND CUMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR (ASTM D698) AT A MOISTURE CONTENT BETWEEN (-) 2		PROVIDE A MINIMUM OF 1-1/2" C CONDUITS AND BETWEEN CONDUIT REINFORCING. DO NOT "BUNDLE" CONDU
12	COMPLETED. JOIST BRACES (AT EACH COLUMN) OCCUR AT OR NEAR	UF-7 STRUCTURAL (SELECT) FILL MATERIALS FOR USE UNDER		CONDUITS IN SLAB SHALL NOT EXCE GROUPS OF CONDUITS OR CONDUITS DIAMETER WILL REQUIRE SLAB TO B
	EVERY INTERIOR COLUMN AT THREE JOISTS THAT ARE CLOSEST TO THE COLUMN CENTERLINE. SEE PLAN AND DETAILS.	BUILDING SLAB SHALL HAVE A LIQUID LIMIT LESS THAN 20 AND A PLASTICITY INDEX OF BETWEEN 7 AND 20. THE FILL SHALL CONTAIN NO PARTICLES GREATER	GN-8	MAINTAIN FULL SCHEDULED THICKNESS. REFER TO ARCHITECTURAL, MEC
13	PROVIDE ADEQUATE AND APPROPRIATE STRUCTURAL STEEL FRAMING APPROVED BY THE ENGINEER, FOR THE SUPPORT	U. S. STANDARD SIEVE NO. 4 SHALL BE BETWEEN 40 AND 80 PERCENT; PERCENT PASSING NO. 40 SHOULD BE		ELECTRICAL DRAWINGS FOR DIMENSIONS SIZES OF FLOOR DEPRESSIONS, F SLEEVES, INSERTS, ANCHORS AND BO
	AND MOUNTING OF MECHANICAL EQUIPMENT RESTING ON, OR SUSPENDED FROM, STEEL JOISTS. MAXIMUM WEIGHT TO BE HUNG OFF JOISTS BETWEEN "PANEL POINTS" (THE	SIEVE NO. 200 SHOULD BE LESS THAN 20 PERCENT. ACCEPTABLE ARE SOILS CONFORMING TO TEXAS HIGHWAY	GN-9	THE VARIOUS TRADES. THE CONTRACTOR AND FABRICATOR S
	JUNCTURES OF CHORDS AND DIAGONAL WEB MEMBERS) IS 50 LBS. LOADS IN EXCESS OF 50 LBS. REQUIRE JOISTS TO BE MODIFIED OR STRENGTHENED TO CARRY SUCH	DR "C", GRADES 1, 2, DR 3. SUBMIT WRITTEN CERTIFICATION DF COMPLIANCE WITH TXDOT		QUANTITIES, DIMENSIONS AND CONDIT ARCHITECT/ENGINEER OF ANY DISCR PROCEEDING WITH THE WORK.
	LOADS.	SAMPLES, CONSULT W/GEDTECHNICAL ENGINEER FOR ALTERNATE FILL MATERIALS, LAST LIFT (6') SHALL	GN-10	CONTRACTOR SHALL PROVIDE NECESSA JOINTS IN MONOLITHIC CONCRETE FRAM
		BE TXDUT TIEM 247 TYPE "A" UR "B", GRADE I UR 2 BASE.		MORE THAN 400 CUBIC YARDS IS POURE LOCATION OF CONSTRUCTION JOINTS APPROVAL OF STRUCTURAL ENGIN
	COLUMN SCHEDULE	UF-8 PERFURM ALL EARTHWURK DESCRIBED ABOVE BEFURE TRENCHING FOR GRADE BEAMS OR MECHANICAL LINES.		GENERALLY BE LOCATED AT OR NEA SPANS OF SLABS AND BEAMS. REINFORCING SHALL BE CARRIED THR
SE(TION TOP BASE PLATE REMARKS	DENSITY TESTS OF RECOMPACTED SCARIFIED MATERIAL AND DENSITY TESTS OF EACH LIFT OF FILL, AT THE		SEE DETAILS FOR CONTINUOUS KEY B POURS.
SS	4x4x1/4 11/6.5 6x6x1/2 4-3/4"ø X 1'-4" HCA 12/6.5	THEREOF.	GN-11	HEADED CONCRETE ANCHORS' (HCA) 50,000 ps: STEEL ROD WITH AUTOMATICALLY ARC WELDED TH
SS	5x5x1/4 11/6.5 8x8x1/2 4-3/4 9 A 12/6.5	CONNECTIONS MADE, WITHIN THE INSIDE FACE OF WALL PANELS AND THE CONSTRUCTION JOINT OF THE SLAB		FERRULES, "NELSON CONCRETE ANCH "DEFORMED ANCHOR STUDS" (DAS) SHA PSI STEEL CONFORMING TO ASTM A496,
		UNDERSIDE OF THE SLAB WITH CONTROLLED LOW STRENGTH MATERIAL, 'FLOWABLE FILL' AS DEFINED IN		ARC WELDED THROUGH FERRULES, "NELS WIRE ANCHORS", OR EQUAL.
		UF-11 BACKFILL TOP TWO FEET OF UTILITY TRENCHES OUTSIDE BUILDING LINES WITH ON-SITE CLAYS OR	GN-12	UTILITIES PENETRATING BUILDING SHA USING SLEEVE JOINTS, BENDS, LOOPS, MOVEMENTS DUE TO PVR OF UNDERLYING
		READY MIXED FLOWABLE FILL TO SEAL OFF SURFACE WATER INFILTRATION.	GN-13	REFER TO SPECIFICATIONS F REQUIREMENTS, AS A MINIMUM TH
\D-		UF-12 SUBSURFACE SOILS INVESTIGATIONS PREPARED BY ROCK ENGINEERING, PROJECT #G222937 JANUARY 27 TH , 2023		1. CONCRETE MIX DESIGNS: SECTION
- <u>1</u>	FLOOR SLAB IS 5" THICK WITH #4 @ 12" o. c. EACH			 SHUP DRAWINGS (REF. TO SPECIFI * JOB CAST CONCRETE WALL PANEL * REINFORCING STEEL PLACEMENT
.2	BRICKS SPACED AT 4'-O" O, C, EACH WAY.	C COPYRIGHT 2011 - ALL RIGHTS RESERVED These drawings, as instruments of professional service,		* STRUCTURAL STEEL: 03300 AND * STRUCTURAL STEEL: 05100 * METAL DECK: 05300
C	A, MAXIMUM WVTR 0, 008, MINIMUM 15 MILS THICK,	are the property of Cope Engineering, Inc. for use solely with respect to this Project and shall not be reproduced for other purposes. The Professional Engineer whose seal appears on the		* UPEN WEB STEEL JUISTS: 0521 3. VAPOR BARRIER: 07260
-3	SAW CUT CONTINUOUS JOINTS IN SLAB (DETAILS 10/6, 4	structural construction documents is the project Structural Engineer-of-Record (SER) who bears legal responsibility for the performance of the structural framing relation to the public besith structural	GN-14	PERIODIC SITE OBSERVATIONS BY T RECORD ARE NOT SUBSTITUTES
	HOURS AFTER FINISHING. FILL WITH SILICONE SEALANT. SEE PLAN FOR LOCATION.	welfare. No other party, whether or not a Professional Engineer, may complete, correct, revise, delete or add to these construction documents or perform inspections		ARE SOLELY FOR DETERMINING IF WOR IN GENERAL CONFORMANCE WITH
		of the work without the written permission of the SER.		UNIKALI DUCUMENIS,
	·			

SF-1 STRUCTURAL STEEL SHALL CONFORM	M TO ASTM A36 EXCEPT	GN-15	CONTRACTOR SHALL NOTIFY E.D.R. 24 HOURS IN	GN-1	THIS STRUCTURE IS DESIGNED IN A
FOR WIDE FLANGE (W-SHAPES) WHI ASTM A992 (Fy=50 KSI). HOLLOW (HSS) SHALL CONFORM TO ASTM AS	STRUCTURAL SECTIONS 500, GRADE B, FY=46	GN-16	ADVANCE OF ANY CONCRETE POUR OR OTHER NEEDED SITE CONSULTATION.		INTERNATIONAL BUILDING CODE ADOPTED AND AMENDED BY THE CITY APPLICABLE INDUSTRY STANDAL
KSIFUR RECTANGULAR HSS, FY=42 PIPE SHALL CONFORM TO ASTM KSI. CONNECTIONS SHALL CONFORM AISC (DESIGN IN ACCORDANCE WIT	ASI FUR RUUND HSS. A53, GRADE B, Fy=35 M TO REQUIREMENTS OF TH ASD).		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	GN-2	THE DESIGN GRAVITY LOADS ARE: SUPERIMPOSED DEAD LOADS
SF-2 STEEL JOISTS AND BRIDGING SHAL JOIST INSTITUTE SPECIFICATIONS	LL CONFORM TO STEEL S.		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		ROOF ROOFING RIGID INSULATION FIRE SPRINKLER SYSTEM
TO INSURE THAT THE LATEST F ARE MET. THIS MAY REQUIRE STEEL FABRICATOR FOR LOCATIE	REQUIREMENTS OF OSHA E COORDINATION WITH ON OF BOLT HOLES AND		ACCEPTANCE. THE CONTRACTOR SHALL MAINTAIN THESE DRAWINGS AT A CURRENT STATUS, INCLUDING ALL ADDENDA AND REVISIONS.		HVAC CEILING MISC
VERIFY COORDINATION.	- 22 GAUGE, PAINTED,		LOOR FILL NOTES: BEFORE ANY CONSTRUCTION IS BEGUN, PERFORM ROUGH		LIVE LOADS ROOF (TYPICAL) AS MECHANICAL EQUIPMENT AS
TYPE F INTERMEDIATE RIB DECK O DECK INSTITUTE, WITH MINIMUM I ATTACH TO SUPPORTING MEMBEF DIRECTLY THROUGH BOTTOM OF SUPPORT. WELD EACH SHEET / OTHER RIBS SO THAT SPACING BE	COMPLYING WITH STEEL I = .120, SN = .120, RS BY PLUG WELDING THE RIBS AT EVERY AT BOTH SIDES AND AT ETWEEN WELDS ACROSS	01 1	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		WIND LOAD IS BASED ON BASIC MPH, EXPOSURE B, AND AN IMPORTA PER IBC OF 1.00. NET UPLIFT = 7 PSF
THE WIDTH OF EACH SHEET DE IN ACCORDANCE WITH STEEL SPECIFICATIONS.	DES NOT EXCEED 18", L DECK INSTITUTE'S	UF-2	PRECAUTIONS SHALL BE TAKEN TO PROTECT OPEN EXCA- VATIONS FROM EXCESSIVE LOSS OR GAIN IN NATURAL	GN-3	CONCRETE SHALL BE LABORATORY DE MINIMUM 28-DAY COMPRESSIVE S
SF-5 STEEL DECK SHALL SPAN A MIN CONTINUOUS, DECK SHALL BE SUPPORTS BY WELDING AS F	NIMUM OF THREE SPANS CONNECTED TO STEEL RECOMMENDED BY THE PAL SUPPORT TO STEEL		MDISTURE LEVEL PRIDR TO PLACEMENT OF BASE MATERIAL. KEEP MDIST DURING DRY WEATHER AND KEEP STORM WATER PUMPED DUT, INCLUDING NIGHTS AND WEEKENDS, DURING RAINS.		BELOW. REFER TO SPECIFICATIONS CEMENTS, ADMIXTURES, ETC. DRILLED FOOTINGS
SUPPORTS AND TO PROVIDE DIA DAMAGED BY BURNING OF HOLES, (CONSTRUCTION LOADING SHALL BE	APHRAGM ACTION. DECK DVER-WELDING, AND/OR REPLACED.	UF-3	IN THE AREA OCCUPIED BY THE BUILDING, ASSUMING FINISH FLOOR AT (SEE CIVIL), CUT AND BALANCE GRADES IN THE BUILDING AREA TO FL (SEE CIVIL)		BEAMS AND SLABS-DN-GRADE
SF-6 WHERE METAL DECK IS SUPPORT EDGES, WELD DECK TO STEEL SUPP	TED CONTINUOUSLY AT PORT AT 12″ D.C.		EXCAVATION SHOULD RESULT IN A MINIMUM. OF FIVE FEET OF COMPACTED SELECT FILL BENEATH THE FLOOR SLAB. TESTING LABORATORY SHALL VERIEY IN	GN-4	REINFORCING STEEL SHALL BE F
SF-7 TYPICAL STEEL JOIST SEAT AND EACH SEAT WITH TWO 1" LONG B SERIES.	CHORAGE: FIELD WELD BY 1/8" WELDS FOR K-		WRITING THAT DEPTH OF FILL COMPLIES WITH THIS NOTE.		SHALL CUNFORM TO THE SPECIFICATIONS: A615-GR 40 (PLAIN)
SF-8 STRUCTURAL FRAMING CONNECTION COLUMN CAPS, CLIP ANGLES OR ON DETAILS USE A325 HIGH STRE SUFFICIENT TO DEVELOP REACTION	NS SHALL BE SEATED WEB PLATES AS SHOWN ENGTH BOLTS OR WELDS ON CAPACITY SHOWN IN	UF -4	DIRECTION OF GEOTECHNICAL ENGINEER, TO LOCATE AND DENSIFY ANY WEAK, COMPRESSIBLE ZONES. MAKE A MINIMUM OF 5 PASSES OF A FULLY-LOADED DUMP TRUCK		A185 (FLAT SHEETS DNLY) A615-GR 60 ALL ASTM A108-60T HEADE ASTM A496 DE
AISC MANUAL (9TH EDITION) UNIFORM LOAD/SPAN DIVIDED BY 1 (9TH EDITION) OR THE MAXI LOAD/SPAN DIVIDED BY TWO AS THROUGH 3-9 OF THE 13TH EDITII	AS THE ALLOWABLE TWO AS SHOWN IN THE IMUM TOTAL UNIFORM SHOWN IN TABLES 3-6 ON (ASD).		OR SIMILAR HEAVILY LOADED PIECE OF CONSTRUCTION EQUIPMENT WEIGHING AT LEAST 20 TONS. WEAK OR SOFT AREAS IDENTIFIED SHALL BE REMOVED AND REPLACED WITH COMPACTED SELECT FILL. REFER TO PAGE 8 OF REPORT (UF-12).	GN-5	DETAILING OF CONCRETE REINFO ACCESSORIES SHALL BE IN ACCOR ACI MANUAL OF STANDARD PRACTI REINFORCED CONCRETE STRUCTURE SUPPORTS SHALL HAVE PLASTIC COA
SF-9 DECK STOP ANGLES, FASCIA AND AND OTHER STRUCTURAL AND MI SHALL BE CONNECTED OR JOIN	GLES, HANGERS, CLIPS ISCELLANEOUS MEMBERS NED USING 3/16' OR	UF-5	SCARIFY SUBGRADE TO A MINIMUM OF 6'. MOISTURE CONDITION TO BETWEEN OPTIMUM AND PLUS FOUR PERCENT (+4) OF OPTIMUM MOISTURE, AND COMPACT TO A DRY DENSITY OF AT LEAST 95% OF THE STANDARD	GN-6	DIP GALVANIZED AFTER FABRICA CONSTRUCTION USE CONCRETE BRICK
ADEQUATE CONNECTION.	ARE REQUIRED, FRAME	115-6	PROCTOR MAXIMUM DRY DENSITY PER ASTM D698 REQUIREMENTS.		AT LEAST 40-BAR DIAMETERS. BARS AT CORNERS. WELDED LAPPED 8' MINIMUM AT SPLICE
AS DETAILED. SF-11 WHERE BRACING ANGLES ARE SHI JOIST BOTTOM CHORD AND SUPPOR	OWN BETWEEN END OF TING BEAM OR GIRDER,	01 0	LOW END, BUILD UP TO THE ELEVATION WITHIN SIX INCHES OF UNDERSIDE OF THE SLAB WITH SELECT STRUCTURAL FILL PLACED IN 8" HORIZONTAL LIFTS	GN-7	MECHANICAL AND ELECTRICAL CONDU RUN UNDER THE TOP LAYER OF
MAKE THESE CONNECTIONS AFTER JOISTS IS IN PLACE. TEMPOR REMAIN IN PLACE UNTIL FING COMPLETED.	R ALL DEAD LOAD ON RARY BRACING SHALL AL CONNECTIONS ARE	115-7	AND COMPACTED TO A MINIMOM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR (ASTM D698) AT A MOISTURE CONTENT BETWEEN (-) 2 AND (+) 3 PERCENT OF OPTIMUM WATER CONTENT.		PROVIDE A MINIMUM OF 1-1/2" CONDUITS AND BETWEEN CONDU REINFORCING, DO NOT "BUNDLE" CO CONDUITS IN SLAB SHALL NOT E GROUPS OF CONDUITS OR CONDUIT
SF-12 JOIST BRACES (AT EACH COLUMN EVERY INTERIOR COLUMN AT THE CLOSEST TO THE COLUMN CENTERI DETAILS.	N> DCCUR AT DR NEAR REE JDISTS THAT ARE LINE. SEE PLAN AND	01 /	BUILDING SLAB SHALL HAVE A LIQUID LIMIT LESS THAN 20 AND A PLASTICITY INDEX OF BETWEEN 7 AND 20. THE FILL SHALL CONTAIN NO PARTICLES GREATER	GN-8	MAINTAIN FULL SCHEDULED THICKNE REFER TO ARCHITECTURAL,
SF-13 PROVIDE ADEQUATE AND APPROPRIA FRAMING APPROVED BY THE ENGINE AND MOUNTING OF MECHANICAL E	ATE STRUCTURAL STEEL EER, FOR THE SUPPORT QUIPMENT RESTING ON,		U. S. STANDARD SIEVE NO. 4 SHALL BE BETWEEN 40 AND 80 PERCENT; PERCENT PASSING NO. 40 SHOULD BE BETWEEN 10 AND 50 PERCENT; AND PERCENT PASSING		ELECTRICAL DRAWINGS FOR DIMENSI SIZES OF FLOOR DEPRESSIONS, SLEEVES, INSERTS, ANCHORS AND THE VARIOUS TRADES.
DR SUSPENDED FROM, STEEL JOIST TO BE HUNG DFF JOISTS BETWEEN JUNCTURES DF CHORDS AND DIAGO 50 LBS. LOADS IN EXCESS DF 50 TO BE MODIFIED DR STRENGTO	TS. MAXIMUM WEIGHT 'PANEL POINTS' (THE ONAL WEB MEMBERS) IS LBS. REQUIRE JOISTS HENED TO CARRY SUCH		SIEVE ND. 200 SHOULD BE LESS THAN 20 PERCENT. ACCEPTABLE ARE SDILS CONFORMING TO TEXAS HIGHWAY DEPT. SPECIFICATIONS, ITEMS 248, TYPE "A", "B", OR "C", GRADES 1, 2, OR 3. SUBMIT WRITTEN CERTIFICATION OF COMPLIANCE WITH TXDOT	GN-9	THE CONTRACTOR AND FABRICATE QUANTITIES, DIMENSIONS AND CON ARCHITECT/ENGINEER OF ANY DI PROCEEDING WITH THE WORK.
			SAMPLES. CONSULT W/GEDTECHNICAL ENGINEER FOR ALTERNATE FILL MATERIALS. LAST LIFT (6') SHALL BE TXDOT ITEM 247 TYPE 'A' OR 'B', GRADE 1 OR 2	GN-10	CONTRACTOR SHALL PROVIDE NECE JOINTS IN MONOLITHIC CONCRETE F MORE THAN 400 CUBIC YARDS IS PO
COLUMN SCHEDI		UF-8	PERFORM ALL EARTHWORK DESCRIBED ABOVE BEFORE TRENCHING FOR GRADE BEAMS OR MECHANICAL LINES.		APPROVAL OF CONSTRUCTION JOIN APPROVAL OF STRUCTURAL EN GENERALLY BE LOCATED AT OR SPANS OF SLABS AND BEAMS.
SECTION TOP BASE PLATI	E REMARKS	UF-9	EMPLOY AN INDEPENDENT TESTING LABORATORY TO TAKE DENSITY TESTS OF RECOMPACTED SCARIFIED MATERIAL AND DENSITY TESTS OF EACH LIFT OF FILL, AT THE		REINFORCING SHALL BE CARRIED SEE DETAILS FOR CONTINUOUS KE POURS.
HSS 4x4x1/4 11/6.5 6x6x1/2 4-3/4"Ø X 1'-4" HCA HSS 5x5x1/4 11/6.5 8x8x1/2 4-3/4"Ø X	12/6.5	UF-10	RATE OF ONE PER 5,000 SQUARE FEET OR FRACTION THEREOF. AFTER WALL PANELS HAVE BEEN ERECTED AND ALL	GN-11	"HEADED CONCRETE ANCHORS" (H 50,000 ps; STEEL ROD WI AUTOMATICALLY ARC WELDED FERRULES, "NELSON CONCRETE #
1'-4" HCA			CONNECTIONS MADE, WITHIN THE INSIDE FACE OF WALL PANELS AND THE CONSTRUCTION JOINT OF THE SLAB (POUR STRIP) BUILD UP TO THE ELEVATION OF THE UNDERSIDE OF THE SLAB WITH CONTROLLED LOW		"DEFORMED ANCHOR STUDS" (DAS) PSI STEEL CONFORMING TO ASTM A4 ARC WELDED THROUGH FERRULES, "N
		UF-11	STRENGTH MATERIAL, 'FLOWABLE FILL' AS DEFINED IN ACI 229R AND 2004 T×DOT ITEM 401. BACKFILL TOP TWO FEET OF UTILITY TRENCHES	GN-12	UTILITIES PENETRATING BUILDING USING SLEEVE JOINTS, BENDS, LOO
			DUTSIDE BUILDING LINES WITH DN-SITE CLAYS DR READY MIXED FLOWABLE FILL TO SEAL DFF SURFACE WATER INFILTRATION.	GN-13	REFER TO SPECIFICATIONS REQUIREMENTS, AS A MINIMUM
SLAB-ON-GRADE NOTES:		UF-12	SUBSURFACE SEILS INVESTIGATIENS PREPARED BY ROCK ENGINEERING, PROJECT #G222937 JANUARY 27 TH , 2023		REQUIRED: 1. CONCRETE MIX DESIGNS: SECT 2. SHOP DRAWINGS (REF. TO SPEC
SG-1 FLOOR SLAB IS 5" THICK WIT WAY IN TOP OF SLABS. SUF BRICKS SPACED AT 4'-0" o.c. E	TH #4 @ 12″ o.c. EACH PPORT REBARS ON HALF EACH WAY.	nan an	C COPYRIGHT 2011 - ALL RIGHTS RESERVED		 * JDB CAST CONCRETE WALL PA * REINFORCING STEEL PLACEME INCLUDING PIERS: 03300 A * STRUCTURAL STEEL: 05100
SG-2 VAPOR BARRIER SHALL COMPLY A, MAXIMUM WVTR 0.008, MINIML	WITH ASTM 1745 CLASS JM 15 MILS THICK.	Ti ai Sc rc	hese drawings, as instruments of professional service, re the property of Cope Engineering, Inc. for use olely with respect to this Project and shall not be eproduced for other purposes.		* METAL DECK: 05300 * DPEN WEB STEEL JDISTS: 0 3. VAPOR BARRIER: 07260
REFERENCE SPECIFICATIONS, SEC SG-3 SAW CUT CONTINUOUS JOINTS IN AND 11/6.4> 1/8' WIDE AND 1 HOURS AFTER FINISHING.	CTION 07260. SLAB (DETAILS 10/6.4 1-1/4' DEEP WITHIN 24 FILL WITH SILICONE	Ti S S Fi W	he Professional Engineer whose seal appears on the tructural construction documents is the project tructural Engineer-of-Record (SER) who bears legal esponsibility for the performance of the structural raming relating to the public health, safety and elfare. No other party, whether or not a Professional palmeer, may complete connect paylog delate or odd	GN-14	REFER TO NOTES FOR 'SPEC PERIODIC SITE OBSERVATIONS E RECORD ARE NOT SUBSTITUTE INSPECTIONS. 'THE SITE OBSERVAT ARE SOLELY FOR DETERMINING IF
SEALANT. SEE PLAN FOR LOCATIO	, NL	ti	o these construction documents or perform inspections f the work without the written permission of the SER.		IN GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS.

COLUMN SCHEDULE						
MM	SECTION	TOP	BA	SE PLATE	2	
MIN	SECTION	CONN.	WxDxt	ANCHORS	SECT.	R
C1	HSS 4x4x1/4	11/6.5	6x6x1/2	4-3/4"ø X 1'-4" HCA	12/6.5	
C2	HSS 5x5x1/4	11/6.5	8x8x1/2	4-3/4"ø X 1'-4" HCA	12/6.5	

G-1	FLOOR SLAB IS 5" THICK WITH #4 @ 12" WAY IN TOP OF SLABS. SUPPORT REB BRICKS SPACED AT 4'-O" o.c. EACH WAY.
G-2	VAPOR BARRIER SHALL COMPLY WITH ASTM A, MAXIMUM WVTR 0.008, MINIMUM 15 MILS

ACCORDANCE WITH THE E (2012 IBC), AS TY DF CONVERSE, AND MARDS (AISC, ACI,	g, PLLC
6 PSF 3 PSF 3 PSF 3 PSF 4 PSF 3 PSF 3 PSF 1 PSF	ngineerin
VIND SPEED OF 105 SF.	Metting E 455 Brooks Lane Poteet, TX 78065 830.570.5835 TBPE Firm #F-10
00g; S1=0.025g DESIGNED TO DEVELOP STRENGTHS AS GIVEN NS FOR AGGREGATES,	S
ERMITTED UP TO 20% CEMENT. FROM NEW BILLET AND FOLLOWING ASTM	JOHN E. ME B6327 5-24-20
WELDED WIRE FABRIC WELDED WIRE FABRIC LL OTHER REINFORCING DED CONCRETE ANCHORS DEFORMED BAR ANCHORS	
FORCEMENT BARS AND ORDANCE WITH LATEST TICE FOR DETAILING RES (ACI 315). BAR DATED LEGS OR BE HOT CATION. FOR ON-GRADE CKS.	Si t 8
BE A LENGTH EQUAL TO PROVIDE CONTINUOUS D WIRE MESH SHALL BE CE POINTS, OR 1-1/2 DUITS IN SLABS SHALL OF SLAB REINFORCING,	NEERING MENTAL ENGINEER SAN ANTONIO, TEXAS 782 KAS REGISTRATION # F-1607
2" CLEAR BETWEEN DUIT AND PARALLEL CONDUITS. INDIVIDUAL EXCEED 1" DIAMETER. ITS LARGER THAN 1" TO BE THICKENED TO NESS.	COPE ENG INC INC INC INC ENG ENG ENG ENG ENG ENG ENG ENG ENG ENG
MECHANICAL, AND SIDNS, LOCATIONS AND , FLOOR OPENINGS, D BOLTS REQUIRED BY TOR SHALL VERIFY ALL ONDITIONS AND NOTIFY	CIVIL SET 06/05/23
DISCREPANCIES BEFORE CESSARY CONSTRUCTION FRAMING SO THAT NOT POURED IN ONE DAY. INTS MUST HAVE PRIOR ENGINEER AND SHALL R NEAR MID-POINTS OF ALL CONTINUOUS D THROUGH THE JOINT. KEY BETWEEN ADJACENT	No. DESCRIPTION DATE
(HCA) SHALL BE DF WITH UPSET ENDS, THRDUGH CERAMIC ANCHDRS' DR EQUAL. SHALL BE DF 80,000 A496, AUTDMATICALLY NELSON D2L DEFORMED	McAllen, TX 78504 (956) 631 - 8327 info@samgarciaarchitect.com
G SHALL BE FLEXIBLE, DDPS, ETC. TD PERMIT LYING SDILS.	
FOR SUBMITTAL M THE FOLLOWING IS CTION 03300 ECIFICATION SECTION PANELS: 03410 MENT AND CUT SHEETS, AND 03410	WELLNESS
05210	KYLE, TX 응 2022-008 음 GENERAL 호
ECIAL INSPECTIONS." BY THE ENGINEER-OF- TES FOR "SPECIAL ATIONS BY THE E.O.R. WORK IS PROCEEDING TH THE STRUCTURAL	FOUNDATION NOTES
	copyright

FOUNDATION LAYOUT- KHIT CHIROPRACTIC WELLNESS

BEAM WIDTH (MINIMUM)	EXT. BEAM DEPTH	EXT.BM. DEPTH IN GRADE	INT. BEAM DEPTH	EXT. BEAM BARS T & B	INT. BEAM BARS T & B	STIRRUP EXT. BEAM	STIRRUP INT. BEAM	PAD BARS	SLAB THICKNESS
24"EXT. 24"INT.	36"MIN.	12" MIN.	36" MIN.	3-#8 BTM 3-#8 TOP	2-#6 BTM 2-#6 TOP	#3 @24"0.C.	#3 @24"0.C.	#4 @12"0.C.	5"

SCALE:	3/16"=1'	

BUILDER/CONTRACTOR TO VERIFY ALL DIMENSIONS, DROP AREAS, FLOOR PENETRATIONS, AND BLOCK-OUT LOCATIONS ON SITE.

SCALE: 3/16"=1'

SCALE: 3/16"=1'

ENTRY ACCENT FRAMING DETAIL

	wW16"×40				
		600T150-54 BOTTOM TR	4 ACK		
-		600T200-68 RAFTERS @ 24" O.C.	*		600T200-68 BOTTOM TRACK
					600T150-54 TOP TRACK W10"x26 T.O.J.=15'-3"

NOTE: ALL CONCRETE 3000 PSI (28 DAY)

RETAINING WALL HEIGHT (A)	DISTANCE (B)	<u>(C)</u>	<u>(D)</u>
1' - 2'	1'-0"	0'-8"	0'-0"
2' - 3'	2'-0"	1'-0"	0'-8"
3' - 4'	2'-6"	1'-6"	1'-0"

TYP. EXT.)RNER BEAM

WIDE EXT. BEAM

-600T150-54

-T.O.J.=13'-7"

In accordance with the Instructions to Bidders, bidders are encouraged to visit the site and acquaint themselves with all existing conditions prior to biddina. 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.

TESTING AND INSPECTIONS

Refer to Section 02224. Structural Earthwork for Building Foundations

END OF SECTION 02010

1.1	REL	ED DOCUMENTS						
	Draw Supp work	igs and general provisions of the contract, including General and mentary Conditions and Division–1 Specification sections, apply t of this section.	o					
1.2	DES	RIPTION OF WORK						
	Α.	EXTENT						
		Extent of earthwork in this section is limited to the requirements of construction of structural building foundation.						
	в.	DEFINITIONS						
		 "Excavation" consists of removal of material encountered to subgrade elevations indicated and subsequent disposal of material removed. 	D					
		"Building" shall include any attached walkway or other foundations shown on the structural foundation drawings.						
1.3	QUA	TY ASSURANCE						
	Spec conc labo cont desig	I Inspections as required and specified by IBC Chapter 17 will be cted at Owner's expense. A commercial construction testing tory will perform soil testing and inspection service for quality I during earthwork operations. The designated labratory shall be lated by the RDPIRC.)					
1.4	SUB	ITTALS						
	TEST	REPORTS-EXCAVATING						
Submit following reports directly to Architect/Engineer from the test services, with copy to Contractor:								
	(a) Verification of specified depth of excavation.							
	(ь)	Field density test reports, as follows:						
		One optimum moisture-maximum density curve for each ty soil encountered.	pe of					
PAR	т 2 -	RODUCTS						
2.1	SEL	T STRUCTURAL FILL						
PAR	тз-	XECUTION						
3.1	EXC	ATION						
	Α.	EXCAVATION IS UNCLASSIFIED						
		Excavation is unclassified, and includes excavation to subgrade elevations indicated, regardless of character of materials and obstructions encountered. Refer to plan notes.						
	в.	UNAUTHORIZED EXCAVATION						
		 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. 	t					
		 Perform all earthwork described above before trenching for grade beams or mechanical lines. 						
	c.	EXCAVATION						
3.2	FIEL	QUALITY CONTROL						
	Α.	Allow testing service to inspect and approve subgrades and fill ayers before further construction work is performed.						
	в	Perform field density tests in accordance with ASTM D-698						

3.3 TESTING OF SUBGRADE AND COMPACTED FILL

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.

- 3.4 MAINTENANCE
 - Protect newly graded areas from traffic and erosion.
 - B. Keep area free of trash and debris.
- 3.5 RECONDITIONING COMPACTED AREAS

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.

3.6 DISPOSAL OF EXCESS AND WASTE MATERIALS

Remove waste materials, including unacceptable excavated material, trash and debris, and dispose of it off Owner's property.

END OF SECTION 02224

PERSONNEL TESTING LABORATORY

- under his direct supervision.
- involved.

RESPONSIBILITY OF TESTING LABORATORY:

- the Testing Laboratory shall:
- Attend preconstruction meeting.
- project.

- or ambiguous.
- for required categories of Inspection.
- 7. the Owner.

LIMITATIONS OF AUTHORITY OF TESTING LABORATORY:

- Laboratory is not authorized to:
- Documents:
- Approve or accept any portion of the Work; Perform any duties of the Contractor.

RESPONSIBILITY OF THE CONTRACTOR:

- and which require testing.

SPECIFIC TESTS, INSPECTIONS AND METHODS REQUIRED:

sheet 6.1 of drawings.

PART 1 - GENERAL

GENERAL

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.

USE OF DATA

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.

conditions at the site.

1. The Testing Laboratory shall assign qualified personnel to the project. Services and tests requiring engineering duties shall be performed by a licensed Professional Engineer or personnel

2. Submit the name of the licensed Professional Engineer who has responsible charge of the firm's services on the project along with his resume that illustrates experience in performing and managing quality assurance activities for the scope of work

3. Services and tests that will be provided by non-engineering personnel shall be performed by personnel that have appropriate certification from either The National Institute for the Certifications of Engineering Technicians (NICET) for concrete, masonry and steel testing and monitoring, American Concrete Institute (ACI) for concrete and masonry testing and monitoring or American Welding Society (AWS) for steel testing and monitoring.

4. Submit certificates or written evidence of their qualifications to the Architect/Engineer prior to initialing work.

In addition to the responsibilities and duties according to ASTM 329,

2. Promptly and verbally notify by phone call the Structural Engineer immediately from the jobsite when test results (not limited to irregularities or deficiencies) are known and prior to delayina the

Promptly notify the Architect/Engineer responsible for the design of materials not meeting specified requirements so that the Work can be rejected by the party with authority to reject the Work.

4. Promptly submit written report of each test and inspection with a copy directly to the Structural Engineer.

5. Recommend and perform additional inspections, sampling, and testing of materials and methods of construction to the Architect/Engineer in writing if specified requirements by Architect/Engineer appear insufficient,

Submit results of Special Inspections as defined in IBC 2018, section 1704 to the Registered Design Professional in Responsible Charge (RDPIRC), the Architect, who will compile a final report to the City of Converse building official documenting all of the required special inspections. Refer to sheet 6.1, "2018 IBC Chapter 17 Special Inspections"

Perform additional tests as required by Architect/Engineer or

Release, revoke, alter or enlarge on requirements of Contract

1. Cooperate with testing personnel, provide access to Work and to manufacturer's operations and provide adequate facilities as required for storage and curing of test samples.

2. Secure and/or deliver to the testing agency adequate quantities of representational samples of materials proposed to be used

3. Provide copies of product's test reports as required.

4. Furnish one complete set of project plans and specifications to the Testing Laboratory to facilitate inspections and testing and to provide direction on the storage and curing of test samples.

5. Assist testing agency in obtaining and handling samples at the Project site or at the source of the product to be tested.

6. Notify testing agency sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of

Refer to IBC 2018, SPECIAL INSPECTIONS, Chapter 17 and notes on

END OF SECTION 01410

SECTION 02010 - SUBSURFACE AND SOIL CONDITIONS

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

"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

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

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.

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 01341

SECTION 01410 - STRUCTURAL QUALITY CONTROL AND TESTING

PART 1 - GENERAL

SCOPE

Inspection and testing of materials, composites and construction practices shall be conducted to determine whether or not their characteristics and auglities as used in the construction comply with the construction documents. Inspection and testing shall be according to American Society for Testing Materials (ASTM) Standard E 329, latest edition requirements. 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.

RELATED WORK SPECIFIED ELSEWHERE

Conditions of the Contract: Inspections and testing required by laws, ordinances, rules, regulations, order of approvals of public authorities.

Refer to IBC 2018, SPECIAL INSPECTIONS, Chapter 17. Requirements for SPECIAL INSPECTION govern. Refer to notes on plans for further instructions.

Each specification section listed, laboratory tests required, and standards for

Section 01341:	Structural Engineer: Shop Drawings/Field Visits.
Section 02224:	Structural Earthwork for building Foundations
Section 03200:	Concrete Reinforcement.
Section 03300:	Cast-in-Place Concrete.
Section 05100:	Structural Steel.

QUALITY ASSURANCE

In addition to the requirements according to ASTM E329, the Testing Laboratory and its personnel shall meet the following qualifications:

TESTING LABORATORY QUALIFICATIONS:

- The Testing Laboratory office performing the service(s) shall subscribe (or show that application has been made and is scheduled for an audit of the tests that will be required for the project) to an independent audit by a national agency such as American Association of State Highway and Transportation Officials (AASHTO) and/or American Association for Laboratory Accreditation (AALA) that routinely monitors, assesses, and certifies the professional and technical activities of testing laboratories. Provide the Architect/ Engineer a copy of the Laboratory's certification for the specific services and tests certified to perform under its audit prior to the Laboratory initiating work on the project.
- 2. The Testing Laboratory shall show evidence that it participates in reference laboratory testing programs for the testing services that it is offering for the project. The reference programs may include national, state or regional reference laboratories but shall extend beyond the limits of in-house or inter-office testing within the same company. Acceptable reference laboratories include AASHTO Materials Reference Laboratory (AMRL), Cement and Concrete Reference Laboratory (CCRL) or other organizations with an established charter and being recognized in the industry as an institution that promotes education and improved materials science.

SECTION 01341 - STRUCTURAL ENGINEER: SHOP DRAWINGS/FIELD VISITS PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract apply to work of this section. Refer to Architect for items not covered herein.

1.2 SCOPE

This section defines and clarifies specific items of the Contract that are peculiar to the structural engineer's responsibilities. Refer to Architect of this specification for specifics on shop drawing, product data, and samples submitted.

- PART 2 GENERAL DEFINITIONS
- 2.1 STRUCTURAL ENGINEER OF RECORD

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

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

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

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.

- PART 3 PROCEDURAL REQUIREMENTS
- 3.1 SHOP DRAWINGS

Refer to Architect 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

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

As per article 4.2.7 of the General Conditions, 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.

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:

- NO EXCEPTION TAKEN
- MAKE CORRECTIONS NOTED REVISE AND RESUBMIT
- 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 ofContract Documents nor for errors or omissions in shop drawinas.

COPE ENGINEERING, INC.

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"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 427

Metting Engineering, PLLC	5-24-2023 5-24-2023
FNCINERRIC	CIVIL • MUNCIPAL • ENVIRONMENTAL ENGINEERS 8611 BOTTS LANE (210) 828-7070 TEXAS REGISTRATION # F-16078
1 PERMIT SET No. DESCRIF	06/05/23 PTION DATE SAM GARCIA ARCHITECT 1200 Auburn Ave., Suite 280
KH CHIROP WELL	McAllen, TX 78504 (956) 631 - 8327 info@samgarciaarchitect.com
SPECIFICA 1 OF 5	ATIONS

SECTION 03200 - CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.1 SCOPE

Furnish and install all reinforcement and associated items required and/or indicated on the Drawings for all cast-in-place concrete.

- 1.2 QUALITY ASSURANCE
 - A. QUALIFICATIONS OF WORKMEN

Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the best methods for their installation and who shall direct all work performed under this section.

- B. CODES AND STANDARDS
 - 1. In addition to complying with all pertinent codes and regulations, concrete reinforcement, unless otherwise noted, shall meet requirements of ACI 301 "Specifications for Structural Concrete for Buildings" and/or ACI 318 "Building Code Requirements for Reinforced Concrete", whichever is more stringent.
 - 2. Where provisions of pertinent codes and standards conflict with this Specification, the more stringent provisions shall
 - Refer to IBC 2018, Chapter 17, Special Inspections.
- 1.3 SUBMITTALS
- A. SHOP DRAWINGS
 - 1. The Contractor shall obtain completely detailed shop drawings showing placement plans, bar bending lists, etc. Include the specific location and size of all accessories, chairs and bar supports. 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.
 - The Engineer'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.
- B. CERTIFICATES

When requested by the Engineer, supplier of reinforcing steel and other embedded materials shall furnish certified evidence that all materials delivered to the project meet the requirements of this Section of the Specification.

- 1.4 PRODUCT HANDLING
- A. PROTECTION
 - 1. Use all means necessary to protect concrete reinforcement before, during, and after installation and to protect the installed work and materials of all other trades.
 - 2. Store in a manner to prevent excessive rusting and fouling with dirt, grease and other bond-breaking coatings.
 - 3. Use all necessary precautions to maintain identification after the bundles are broken
 - 4. Concrete reinforcement included in other sections of these specifications that is not specifically described shall meet the requirements of this section.
 - Mechanical and electrical equipment, ducts and conduit: Provide adequate reinforcing as approved by Engineer for all required mechanical equipment and all required openings through beams.
- PART 2 PRODUCTS
- 2.1 MATERIALS
 - A. ALL REINFORCING

Unless noted otherwise on plans, shall comply with ASTM A-615, Grade 60, except beam stirrups may be Grade 40.

- B. WIRE MESH
- Shall comply with ASTM A-185, flat sheets only.
- C. METAL ACCESSORIES
 - 1. According to latest revision of "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI-SP66).
 - 2. Accessories fabricated completely from plastic will not be permitted.
 - 3. In the event steel other than of domestic manufacture is contemplated to be used, furnish to Engineer laboratory tests made by a U.S. Testing Laboratory approved by the Engineer certifying that said steel meets all requirements.
- PART 3 EXECUTION
- 3.1 FABRICATION
 - A. Reinforcing shall be fabricated in accordance with "Manual of Standard Building Code Requirements for Reinforced Concrete" (ACI 318), latest edition. The Contractor shall be responsible for obtaining properly fabricated reinforcing and placing it properly.
 - Reinforcing steel, at the time concrete is placed, shall be free from rust, scale, dried concrete, or other coatings that will destroy or reduce bond.
- C. Reinforcing steel shall be accurately bent and placed in position, securely tied or supported to prevent movement during placing of concrete. Field bends will not be permitted without prior approval from Engineer. Spacer bars, supports and accessories are not scheduled but are to be furnished and placed as described under MATERIALS paragraph in this Section. Raising of reinforcement (including welded wire fabric) during the pour will not be permitted
- 3.2 BEAM INTERSECTIONS

Unless shown otherwise on plans, at corners, angle bends and at junction with other beams, provide four #7x6"-0" "corner bars" (3 ft. each leg), 2 top and 2 bottom. For deep beams with scheduled intermediate bars, provide matching 80 diameter "corner bars" of same size. At "T" intersection, place all "corner bars" so that one leg is in outside face of outside beam.

END OF SECTION 03200

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	B.	Form	ng reinforci	ig, r
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		Side	forms of be	ams

tor shall provide complete inspection ncluding a 100 watt lamp and tension cord of sufficient length to ng to bottom of each footing hole.

ervices shall include preices as defined in 3.1 D and E as well of concrete as per Section 03300. es should be reported to structural ior to pour.

g surface at the bottom of bell shall virgin earth free of all loose soil ted reamed earth, or mud. Compliance on must be visually, or otherwise the surface. The contractor shall methods, procedures or equipment is perform these requirements to the Geotechnical Engineer.

DITIONS.

OF SECTION 02362

FORMWORK

concrete indicated on the Drawings and subsequently

WORKMEN

one person who shall be present at all times during this portion of the Work, who shall be thoroughly type of materials being installed, the referenced e requirements of this Work, and who shall direct ed under this Section.

DARDS

to complying with all pertinent codes and comply with ACI 301 "Specifications for Concrete for Buildings" and for ACI 318 "Building rements for Reinforced Concrete"; whichever is more

sions of pertinent codes and standards conflict uirements of this Section of these Specifications, ringent provisions shall govern.

cessary to protect formwork materials before, installation and to protect work and materials of

amage, immediately make all repairs to the approval nd Architect and at no additional cost to the

ng all requirements described in FORM CONSTRUCTION

ACES

etter, plywood.

noisture resistant fir form plywood. Surface must be ly free from scratches, indentations, unsound oples, etching, prominent grain, depressions, "Exposed surfaces" include concrete surfaces which or dash coated.

k, including the design, construction, upkeep, oval, is the Contractor's responsibility. The formwork that is safe and properly designed for concrete placement, type of vibration and ch he will employ.

labs shall not exceed 1" diameter. Groups of rger than 1" diameter will require slab to be ull scheduled thickness.

e of all perimeter beams, slabs, turndowns, and any posed to view with wood forming to a depth of 12" de unless shown otherwise on plans, and remove all ior to backfilling. Form masonry lugs, floor drops ndicated on plans.

Il extend half way down sides of beams but not its; prevent "bunching up" around reinforcing and at ns by neatly folding and tacking against beam sides.

required in Cast-In-Place Concrete for transfer of orces through the joint.

nonstaining form oil for exposed surfaces. Before g, remove surplus oil.

sed surfaces may be thoroughly wetted with water in ediately before placing concrete.

Side forms of beams, may be removed after cumulatively curing at not less than 50 degrees F (10 degrees C) for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.

END OF SECTION 03100

E. FOOTING LOG

The Geotechnical Engineer shall keep accurate log of all footing depths. Cost adjustment will be made on difference in actual depth vs. basic bid depth with each footing considered individually. Unit prices for greater or lesser depth shall be as stated in Čontractor's proposal.

3.2 EXCAVATION

A. EXCAVATE ACCURATELY

Excavate accurately on designated centers. Drill plumb within 2" variation for every ten feet of depth. Transfer center of shaft at ground surface accurately to bottom of footing with plumb-bob and mark location.

SHAFTS В.

> Drill accurately to scheduled diameter. "Mushrooming or enlargement of shaft near the surface due to "in-out" auger action shall be carefully monitored and held to a minimum. Appreciable enlargement of shaft will necessitate the installation of round fiberform for the entire depth of such enlargement and the cost of material and labor for this operation shall be borne by the Contractor. Further, at the time such enlargement is first noticed, corrective measures shall be taken to determine the reason, and no additional footings may be drilled until it is clearly established that the cause is known and will be corrected on all remaining footings. Where the nature of soil strata is such as to cause excessive fall-out or pockets in the shaft wall, the Engineer may direct the Contractor to install thin wall fiber forms in those areas and the expense shall be borne by the Owner.

C. WATER AT BEARING LEVEL

Provide pumps as required to remove bulk of the water. then hand bail to permit placement of concrete in the dry.

D. FORMS

> Form upper part of shafts with thin wall fiber forms, Sonotube or equal, to depths below and above working grade as indicated on plans. Refer to "Excavation" on page 2 for additional forming requirements.

E. FOOTING CONSTRUCTION JOINT

Where working grade is 24" or more below footing cutoff, a construction joint shall be made at or near working grade. Continue upper part of shaft with scheduled shaft diameter and reinforcement; form with fiberform.

F. CASING

If water-bearing stratum is encountered, set steel casing in shaft to seal off water so that base may be excavated, reinforcing placed, and concrete poured entirely in the dry. Casing may be pulled after placing concrete, but only in manner and sequence approved by Engineer. Allowance for casing is as stated in Contractor's proposal.

- G. PLACING CONCRETE
 - 1. Placing of concrete shall not begin until the excavation and reinforcing placement has been completed, inspected and approved. Concrete shall be placed within the shaft excavation as soon as practical after drilling and cleaning out has been completed. In no case shall the time lapse exceed eight hours before placement of concrete. No pier shall be started that cannot be completed before the end of that work day. No holes shall be left open overnight.

2. Provide adequate chutes, tremies and other means of conveying concrete into place. Use chutes, tremies or bottom discharge hoppers for placing concrete.

- 3. Place concrete immediately after mixing, and in no case more than 60 minutes after water has been added. Continue depositing of concrete until the completion of the pier to the top of shaft and in no case suspend the placement of concrete, once started, for more than 30 minutes.
- 4. The top three feet of the concrete in the shaft shall be thoroughly vibrated in 12" layers and excess water removed.
- 3.3 REINFORCEMENT PLACEMENT
 - A. LENGTH OF FOOTING REINFORCEMENT

Extend from bottom of footing to top of plinth or to beams or wall soffit. Never raise above bottom of footing. Forty diameter splices required where steel has been cut too short. Secure Engineer's approval prior to making any splice. Provide side and bottom spacer blocks to accurately maintain proper concrete cover as shown on drawings. The contractor shall determine proper depth to bearing stratum by selectively constructing a few representative footings before fabrication continues.

- B. INSPECTION AND APPROVAL
 - 1. The Contractor shall provide the Architect/Engineer a schedule for pier drilling operations so the Engineer may monitor geotechnical engineer's procedures prior to drilling. It shall be the Contractor's responsibility to insure that the pier excavation has been inspected and approved by the Geotechnical Engineer prior to concreting.
 - 2. The Geotechnical Engineer shall determine when the footing excavation has reached the proper stratum and shall certify in writing that the bearing surface as constructed is capable of supporting the load specified in the Soils Report and/or shown on the footing schedule.

SECTION 02362 - DRILLED FOOTINGS

PART I - GENERAL

1.1 SCOPE

The extent of drilled footings is shown on the Drawings, including locations, diameter of piers, top elevations, and details of construction.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A.	Subsurface Conditions	Section 02010
В.	Concrete Formwork	Section 03100
C.	Concrete Reinforcement	Section 03200
D.	Cast-in-place Concrete	Section 03300
E.	Special Inspections: IBC Chapter 17	Section 01411

- 1.3 QUALITY ASSURANCE
 - A. SUPERVISION

The General Contractor shall supervise all footing operations and must be present on the job at all times when the foundation subcontractor is working. He shall assist in inspection of footings and measure footing depths in the presence of the Engineer.

B. CODES AND STANDARDS

Perform drilled footing work in compliance with the applicable requirements of governing authorities having iurisdiction, including provisions for adequate protection to persons and property.

1.4 SITE CONDITIONS

A. SUBSURFACE CONDITIONS

Are defined under Section 02010 of these Specifications. The data indicated therein is not intended as representations or warranties of the continuity of such conditions. It is expressly understood that the Owner will not be responsible for interpretations or conclusions drawn there from by the Contractor and are not guaranteed to represent all conditions that may be encountered.

B. ADDITIONAL TEST BORING

Additional test borings and other exploratory operations may be made by the Contractor at no additional cost to the Owner, provided such operations are acceptable to the Architect/Engineer.

1.5 BASE BID AND ADJUSTMENTS

CONTRACT PRICE Contract price shall be based on base bid depth of piers shown on the Drawings. Do not include the cost of casings in the base price for piers. If casings are used, the Contract shall be adjusted based on the unit price.

B. UNIT PRICE

Unit prices shall be as follows:

Unit prices per linear foot for piers greater or lesser than base bid depth. Unit prices per linear foot for casina.

> Unit prices shall include all labor and materials including overhead and fees for drilled concrete piers. Adjustments to the Contract shall be based on total linear feet greater than or less than the sum of the base depths of each pier size. Additional penetration in the bearing stratum greater than the specified penetration shall not be included in determination of increases or decreases of pier lengths related to adjustments in the Contract unless specified by Geotechnical Engineer and approved by Structural Engineer at time of drilling in writing.

PART 2 - PRODUCTS

- 2.1 PRODUCTS
 - A. Concrete: Specified under Section 03300.
 - B. Concrete Formwork: Specified under Section 03100.
 - Reinforcing Steel: Specified under Section 03200.
 - D. Formwork: Thin wall fiber forms equal to Sonotube.
- PART 3 EXECUTION
- 3.1 GENERAL
 - A. DRILLING EQUIPMENT

The Contractor shall employ suitable drilling equipment to penetrate to the depth and stratum selected for bearing. This may necessitate the use of heavy crawler rig or power kelly.

B. OPEN HOLES

Take every precaution to reduce the hazard of open holes. Cover during non-working hours with 2" plywood, 36" square. Mound 6" of dirt over plywood. Keep unauthorized persons, especially minors, at a safe distance during working hours.

C. FOOTING DEPTHS

Footing depths shown on drawings are for estimating purposes only. Actual depth for each footing shall be approved by the Geotechnical Engineer.

D. FOOTING INSPECTION

The contractor shall employ and pay for the services of the Geotechnical Engineer to perform the designated duties described herein. Definition of footing for inspection scope includes all concrete, reinforcement, dowels, and embedments placed and cast from bottom of footing to construction joint; typically the top of plinth, or bottom of beam or wall.

B. TRANSIT-MIX DELIVERY SLIPS

- Keep a record at the job site showing time and place of each pour of concrete together with transit-mix delivery slip certifying contents of the pour.
- Make the record available to the Architect/Engineer for his inspection upon request.

Upon completion of this portion of the Work, deliver the record and the delivery slips to the Architect.

1.4 PRODUCT HANDLING

A. PROTECTION

Use all means necessary to protect cast-in-place concrete materials before, during, and after installation and to protect the installed work and materials of all other trades.

B. REPLACEMENTS

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.

PART 2 - PRODUCTS

2.1 MATERIALS

When requested by Engineer, supplier of concrete materials shall furnish certified evidence that all materials delivered to the project meet the requirements of specifications.

2.2 PORTLAND CEMENT

Comply with ASTM C-150, type 1 or type 3.

2.3 FLY ASH

Fly ash may be used as a pozzolan to replace a portion of the Portland Cement in a concrete mix, subject to the approval of the Structural Engineer. Fly ash, when used, shall conform to ASTM C-618, Type C. Concrete mixes using fly ash shall be proportioned to account for the properties of the specific fly ash used and to account for the specific properties of the fly ash concrete thus resulting. The ratio of the amount of the fly ash to the total amount of fly ash and cement in the mix shall not exceed 20 percent.

2.4 CONCRETE AGGREGATES

Comply with ASTM C-33. Maximum aggregate size is 1-1/2".

2.5 WATER

Clean and free from injurious amount of organic substances.

2.6 CURING MATERIAL

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.

For slabs having bonded toppings, use "Sisalkraft" paper as manufactured by the American Sisalkraft Company.

2.7 MIXING CONCRETE

Concrete shall be mixed and delivered in accordance with "Standard Specifications for Ready-Mixed Concrete", ASTM C-94.

2.8 CONCRETE

- A. PROPORTIONS
 - 1. Proportions shall be as established by the Testing Laboratory for the various strengths noted on the structural plans. Use the following cement content minimums:

B. 28 day strength Specified Sacks of Cement/ Cu.yd. of Concrete

- 1. 2500 psi, reg.wt., with admixture 4-1/2
- 2. 3000 psi, reg.wt., with admixture 5
- 3. 4000 psi, reg.wt., with admixture 5-1/2
- C. CONCRETE SLUMP

Concrete shall be mixed and delivered in accordance with "Standard Specifications for Ready-Mixed Concrete", ASTM C-94. Maximum slump: 5 inches.

PART 3 - EXECUTION

3.1 PLACING CONCRETE

- A. Unless otherwise noted, concrete shall be mixed and placed in accordance with ACI "Standard Building Code Requirements for reinforced Concrete" (ACI 318), latest edition.
- B. Before batching concrete for placement in a given section, the following items shall be completed:
 - All reinforcing, base plates, dowels, etc., shall be completely and securely tied in place for the entire section to be concreted. Anchor bolts and embedded items requiring accurate location shall be positioned and leveled by the use of templates and instruments, and securely held in place so that no movement occurs during the placement of concrete.
 - All forming, bulkheads, construction joints, keyways, sleeves inserts, plates etc., and embedded work of other trades shall be complete for the entire section to be concreted.
- All materials and equipment for curing and protecting concrete shall be at the job site.
- 4. Runways shall be provided for wheeled equipment to protect reinforcing steel. Runways and equipment used in mixing, conveying, lifting and depositing the concrete shall be in good condition, adequate to support all construction loads and suitable and safe for the workmen.
- 5. Water and debris shall be removed from space to be occupied by concrete.
- See CONCRETE FORMWORK Section for wetting of forms immediately before placing concrete.

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Cast-in-place concrete required for this work is indicated on the Drawings and includes but is not limited to:
 - 1. Slabs on grade.
 - 2. Exterior flatwork.

1.2 QUALITY ASSURANCE

A. QUALIFICATIONS OF WORKMEN

Provide at least one person who shall be present at all times during execution of this portion of the work who shall be thoroughly familiar and experienced in placing the types of concrete specified and who shall direct all work performed under this Section. For finishing of exposed surfaces of the concrete, use only thoroughly trained and experienced journeyman concrete finishers.

B. CODES AND STANDARDS

In addition to complying with all pertinent codes and regulations, complying with all the requirements of ACI 301, "Specifications for Structural Concrete for Buildings" and/or ACI 318, "Building Code Requirements for Reinforced Concrete". Refer to ACI 302 "Guide for Concrete Floor and Slab Construction." Refer to IBC 2009, Chapter 17, Special Inspections.

C. EMBEDMENTS

Metal sleeves, anchors, and all embedments; furnish and locate by respective trade or by General Contractor. Secure approval of Engineer for installation of sleeves and conduits in structural members.

D. FINISHES

Refer to architectural drawings for all floor finishes, location and dimensions of slab drops and depressions, floor checks, and special architectural concrete treatment.

E. CONCRETE QUALITY

The Contractor shall be responsible for all aspects of concrete production, including maintenance and control of the quality of the concrete through batching, mixing, placing and curing of the concrete. He shall take whatever measures he deems necessary to accomplish this. To assure the Owner of the quality of the work, an independent testing laboratory shall be employed to perform certain services as described below. The performance of these services does not relieve the Contractor of his responsibility.

F. CONCRETE MIX DESIGN

Design the mix proportions for each type of concrete to be used on the project based on aggregate size and cement proportions specified in Part 2 – Products. Laboratory shall go to the designated concrete supplier's batching plant and obtain samples of ingredients which shall be used in determination of compliance with ASTM C-33 and in the preparation of confirmatory test specimens.

G. CONFIRMATORY TEST SPECIMENS

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 the proposed mix design prior to placement of concrete on the job. Subsequently, results of two 28-day compression tests shall be submitted and the strength shall be at least 25% greater than the specified minimum strength for concrete placed on the job.

- H. EXISTING MIX DESIGNS
 - . The laboratory may submit data of previously prepared "standard" mix designs provided:
 - a. The mix design was prepared by the laboratory 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.
- I. CONCRETE TESTING
 - Concrete tests shall be performed by a commercial testing laboratory approved by the Structural Engineer. All charges for services as set out below shall be paid by the General Contractor.
 - 2. The Laboratory shall take samples and perform slump and compression tests in accordance with ASTM C-39 on concrete placed each day at the rate of one set of four cylinders for each 80 cu. yds. or fraction thereof. When more than 80 cu. yds. is being continuously placed, the interval between test samples shall be at least 50 cu. yds. so as to be representative of the whole day's pour. Samples shall be taken at the point of deposit in the field and all cylinders shall be accurately marked and referenced to show date, time and exact location in the structure from which they came. Make 7-day test on two cylinders and 28-day test on two cylinders. Reports of tests shall be promptly sent as follows: two to the Architect (RDPIRC), one to the Engineer, and one to the Contractor.
- J. BELOW STRENGTH CONCRETE

If the 28-day cylinder strengths fall below the specified strength, the concrete represented by such test cylinders shall be considered unacceptable and subject to removal. Consideration will be given to the acceptance of such concrete if it can be demonstrated to the satisfaction of the Engineer that the cylinder tests do not accurately represent the strength of the concrete in place, or that the structure is fully capable of carrying the loads for which it was designed. This data may be obtained by a series of non-destructive tests and core tests in accordance with ASTM C-42 of the concrete in place, and/or by load testing in accordance with applicable codes. All costs in connection with this additional testing and/or removal and replacement of defective concrete shall be paid by the Contractor.

A. MATERIALS LIST

Within 30 days after award of Contract, and before any concrete is delivered to the job site, submit to the Architect in accordance with Section 01300 of these Specifications a complete list of all materials proposed to be furnished and installed under this portion of the Work, showing manufacturer's name and catalog number of all items such as admixture and membrane, and the name and address of transit-mix concrete supplier.

PART 2 - PRODUCTS

2.1 PRODUCTS

A. STRUCTURAL STEEL AND PLATES

Steel shapes and plates shall meet the requirements of ASTM A-36, Fy=36,000 PSI, except for wide flange (W-Shapes) which must conform to ASTM A992 (Fy = 50 KSI).

- B. RECTANGULAR TUBING Rectangular tubing Hollow Structural Sections (HSS) shall meet the requirements of ASTM A-500, Grade B, Fy=46,000 PSI.
- C. BOLTS AND NUTS
 - High strength bolts: Use high strength bearing type bolts conforming to ASTM A-325 for all bolted connections unless otherwise indicated on the Drawings.
 - Make bolt holes 1/16 inch larger than nominal bolt diameter.
 - All bolts shall have threads excluded from the shear plane.
- D. HEADED CONCRETE ANCHORS
- ASTM A496, Installation AWS 01.1.
- E. PRIMER PAINT

All primer paint for structural steel 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.

F. MECHANICAL EQUIPMENT SUPPORT

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.

G. OTHER MATERIALS

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 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.
- 3.2 FABRICATION AND ERECTION

A. GENERAL

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

Beam connections, unless noted otherwise. shall conform to the provisions of "Framed Beam Connections" as shown in AISC Manual. All bolts shall be tightened to the snug-tight condition as defined in AISC Specification on Structural Joints.

- 2. Erection bolts used in welded construction shall be tightened and left in place.
- 3. 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.

4. 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.

- Splices will be permitted only when indicated. Splices may be 5. omitted and beams furnished continuous in long lengths if desired.
- 6. The procedure and sequence of all shop and field welding shall be such as will avoid distortion of members and connections.
- 7. Erect structural steel accurately to lines and levels. Members shall be in final position before permanent connections are made.
- 8. 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.
- E. ANCHORAGE

Nelson Stud Anchors shall be used where indicated and shall be applied in full compliance with the Manufacturer's instructions.

END OF SECTION 05100

SECTION 05100 - STRUCTURAL STEEL PART 1 - GENERAL 1.1 SCOPE

Structural steel required for this work is indicated on the Drawings and includes, but is not limited to the following: Columns and Beams.

- 1.2 QUALITY ASSURANCE

WELDER'S QUALIFICATIONS В.

identification mark assigned to each.

2. 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. CODES AND STANDARDS

1. In addition to complying with all pertinent codes and regulations, structural steel shall comply with the followina:

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th

"Code for Welding in Building Construction" of h the American Welding Society.

2. Refer to IBC 2009, Chapter 17, Special Inspections.

D. CONFLICTING REQUIREMENTS

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.

1.3 SUBMITTALS

A. SHOP DRAWINGS

- 5.
- B. PROOF OF QUALIFICATION

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
 - materials of all other trades.
 - REPLACEMENTS В.

at no additional cost to the Owner.

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.

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

nless noted otherwise, shall meet the equirements of the "Manual of Steel onstruction, Specification for the Design, abrication and Erection of Structural Steel for uildings" as amended to date and the "Code of tandard Practice" latest edition as adopted by ne American Institute of Steel Construction.

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.

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.

Show all welds, both shop and field, by the currently recommended symbols of the American Welding Society.

Use all means necessary to protect structural steel before, during, and after installation and to protect the installed work and

In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect/Engineer and

2.15 CURING

Protect surfaces against frost and rapid drying and keep moist for minimum of 6 days after placing. During this period maintain concrete temperature of 70 F. for at least 3 days or above 50 F. for at least 5 days.

2.16 REMOVAL

Do not lift panels from forms until they have gained a compressive strength of 3,000 psi minimum. Remove traces of form liner from exposed surfaces. Lift panels using bolted inserts and approved method.

2.17 WALL PANEL FINISHES

Surface shall be finished as specified below. Refer to Architectural Drawings for locations of each type.

2.18 SEALANT SURFACES

Edge surfaces which will be in contact with sealant shall be smooth. Exercise care in finishing panels so as to maintain smooth edges.

- 2.19 FINISHES
 - A. Refer to architectural drawings for surface finishes and treatment such as reveals and form lines.
 - B. Concealed surfaces shall consist of a smooth, hardwood float finish free of blemishes and surface irregularities.
 - C. Panels shall be stripped and cleaned of all foreign materials.
 - D. All irregularities including those caused by lifting hardware shall be grouted smooth to match wall finishes.
 - E. Panels shall have 3/4" chamfer at all panel joints, door openings, and fixed glass windows where detailed. Reveals and corners: Refer to plans.
- 2.20 TOLERANCES

panel.

- A. Concrete wall panels shall meet the following tolerances:
- B. Squareness: Not more than 1/8" in six feet out of
- C. Warpage: Shall not exceed 1/8" per six feet of
- D. Anchor and Insert Location: Shall be + 3/8" from centerline of location shown on Drawings.
- E. Blockout and Reinforcing: Shall be + 1/4" of location shown on Drawings.
- F. All panels are detailed as viewed from inside building and are to be cast with interior face up.
- 2.21 CURING
 - A. Curing of units shall be undertaken with the utmost care so as to prevent shrinkage, warpage, and/or loss of ultimate strength.
 - B. Panels shall be kept at a minimum of 60 F. after casting and under moist condition until ready for erection.
 - C. Wall panels shall not be erected until they have reached the design for lifting.
- 2.22 NON-BONDING COMPOUND

Type: Separating compound to allow tilt up panels to be formed and poured on the floor slab without damaging the slab.

- 2.23 ACCEPTABLE MANUFACTURERS
 - A. Dayton Superior Conspec
 - B. Burke Concrete Accessories
 - C. Thompson's Waterseal
- PART 3 EXECUTION
- 3.1 WALL PANEL INSTALLATION
 - A. Erect panels and fasten to structure using proper anchors and inserts in accordance with details or approved drawings.
 - B. Accurately position and plumb panels before welding or bolting connection plates. Required welding shall be performed by welders qualified in accordance with the requirements of the American Welding Society. Lifting and erection shall be accomplished in a neat workmanlike manner to prevent cracking, chipping, spalling, breaking, or otherwise damaging panels.
- 3.2 PATCHING

Patching of minor defects will be permitted. Damaged areas shall be cleaned and patched with a mixture of cement, sand and bonding agent, so as to match color of surrounding area. After curing, finish and texture patches to match adjacent surfaces.

3.3 CLEANING

Where required to clean down concrete panels using a stiff fiber brush, clear water and mild soap. Rinse with water after soaping. Use of acid is strictly prohibited.

END OF SECTION 03410

PART 2 - PRODUCTS

2.1 MATERIALS

Portland Cement: ASTM C-150, Type I or III.

- 2.2 AGGREGATES A. Coarse - ASTM C-33
 - B. Fine ASTM C-33
- 2.3 WATER
- Potable 2.4 REINFORCING
 - A. Steel Bars ASTM A-615, Grade 60 domestic
 - B. Wire Mesh ASTM A-185
- 2.5 ANCHORS
 - Steel plates, rods, channels, and angles ASTM A-36. Painted after fabrication as specified.
- 2.6 LIFTING INSERTS
 - A. Number of inserts as required on shop drawings.
 - B. Minimum 4 per panel galvanized, Burke Concrete Accessories Co., Type B-125 Shear 12,000#, minimum capacity tension 8500#. 3 to 1 safety factor.
- 2.7 FORMS

Accurate molds constructed of metal or wood. Materials shall be of quality strength, to withstand high frequency vibration without distortion and support loads of wet concrete. Materials shall be new with smooth surfaces.

2.8 CURING PAPER

Orange Label Sisal Kraft Paper, or Burkekraft Curing Paper.

2.9 RETARDER (if required)

Sonotex Surface Retarder as made by Sonneborn or approved equal.

2.10 BOND BREAKER

Burke Bond Breaker #200, or equal. It will be Contractor's responsibility to see that the bond breaker he uses is compatible with all surfaces, requiring paint finishes.

- A. Use a Bond Breaker that is water based, V.O.C. compliant, and compliant with ASTM C-309, Type 1, Class A & B. Agent shall be free of oils, waxes, paraffins or other materials that can affect bonding of subsequent finishes or natural appearances of the finished concrete. (example: Dayton Superior Conspec Tilt-EEZ WB).
- B. Bond Breaker that is used shall be of such nature that will not bleed through paint. If bleed occurs it will be necessary to reseal and repaint, at Contractor's expense. See Painting Section.
- 2.11 PANEL MIXES
 - STRUCTURAL WALL PANEL MIX
 - A. Cement Gray Portland
 - B. Aggregate-Gravel or crushed stone
- C. Minimum compression strength 4,000 psi @ 28 days.
- 2.12 FABRICATIONS

FORMS

Design, layout and engineering of formwork shall be the responsibility of Contractor or Fabricator. Forms shall be built to conform to shapes, lines and dimensions of detailed wall panels. Forms shall be set to line and grade, and so braced to withstand placing and vibration. Forms shall be sufficiently tight and assembled so as to prevent bulging and leaking. Form joints in exposed surfaces shall be taped with 1/16" double coated foam pressure sensitive tape #4-16 by 3M. Securely fasten form lines in place, as required to produce finished profiles and surfaces detailed. Coat contact surfaces of forms and form liners with form release agent prior to placing reinforcement.

- 2.13 REINFORCEMENT
 - A. Panels shall be reinforced as detailed and described on structural drawings.
 - B. Provide four (4) #4 bars X 3'-0" (two each way) over each lifting insert.
 - C. Fabricate all dowels to fit casting bed and bend into proper position after erection.
 - D. Provide bar chairs @ 5'-0" on centers each way to support reinforcing and wire into place.
- 2.14 PLACING CONCRETE

Place concrete with a maximum slump of 4", in uniform layers and continuously vibrate. Back or top of panels shall be aiven a steel trowel finish. Place back-up concrete just as soon as possible after placing mix.

- 2.2 MATERIALS
 - A. Vapor Barrier Refer to plans for vapor barrier thickness. 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: High Density Polyethylene Tape with pressure sensitive adhesive. Minimum width 4".
 - B. Pipe Boot: Construct pipe boots from vapor barrier material and pressure sensitive tape per manufacturer's instructions.
- 2.4 SOURCE QUALITY CONTROL AND TESTS
 - A. Reference Standards:
 - Water Vapor Retarders Used in Contact with Earth under Concrete Slabs: Exceeds Class A According to ASTM E 1745.
 - 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
 - F96
 - 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
 - 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

Verify that conditions are acceptable for the placement of the vapor barrier.

3.2 PREPARATION

Ensure that subsoil is approved by Structural Engineer. Vapor Barrier may be installed over an aggregate, sand or tamped earth base.

3.3 INSTALLATION

Install Vapor barrier per manufacturer's instructions, illustrations and ASTM E 1643-94-Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth Under 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 joint's 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 and utilities.
- 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

Coordinate work of all other trades related to the slab base and utility services.

- 3.5 CLEANING, AND PROTECTION
 - Clean all contaniments from surface.
 - Protect installed vapor barrier from subsequent damaging construction operations.
 - Do not permit vehicular/heavy equipment traffic over unprotected C. vapor barrier.

END OF SECTION 07260

3.2 TOUCH-UP PAINTING

- units and supporting steel members.
- adjacent surfaces.
- together at the side laps, shall not be used.
- the deck.
- to deck.
- structural framing details indicated on drawings.

SECTION 07260- VAPOR BARRIER PART 1 - GENERAL 1.1 SECTION INCLUDES A. Installation of a vapor barrier under concrete slab. lesser thickness under the slab. 1.2 RELATED SECTIONS A. Structural Earthwork for Building Foundation Section 02224 B. Concrete Forms and A C. Concrete Reinforcemen D. Cast-in-Place Concrete 1.3 REFERENCES R ASTM E-1745 - Standard Specification for Water Vapor Retarders ASTM E-96 - Standard Test Methods for Water Vapor Transmission of C Materials; 1995. 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 ASTM D 1790 - Standard Test Methods for Low Temperature G. Brittleness 1.4 SUBMITTALS A. See Section 01300 - Submittals, for submittal proceedures. B Product Data: Provide manufactureres printed product literature performed on the vapor barrier material. Samples: Submit two, 8 1/2 x 11 inch in size, illustrating the vapor C. One each of all accessories that will be used in the installation. D. comply with specified requirements. F. specified requirements. Manufacturer's Instructions: Indicate complete installation instruction. 1.5 QUALITY ASSURANCE A. Manufacturer Qualifications: Company specializing in manufacturing of documented experience. Installer Qualifications: Company specializing in performing the 1.6 DELIVERY, STORAGE, AND PROTECTION Deliver Vapor Barrier to project site in manufacturers original container/packaging. 1.7 PROJECT CONDITIONS Coordinate Vapor Barrier installation with size. location and Α. installation of service utilities. Sequence installation to ensure utility connections are achieved n 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) 223-4333.

A. After decking installation, wire brush, clean and paint scarred areas, welds and rust spots on top and bottom surfaces of decking

B. Touch-up painted surfaces with same type of shop paint used on

C. Damaged or bent sections, or sections which do not properly mesh

D. 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

E. 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

F. Reinforce openings over 18 inches in size in accordance with

END OF SECTION 05300

This vapor barrier shall be used in lieu of any vapor barrier of

ccessories	Section	03100	
t	Section	03200	
e	Section	03300	D

A. ASTM E 1643-94 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs.

Used in Contact with Earth Under Concrete Slabs: Exceeds Class A.

and description, including tests and standards that have been

barrier and two (2) 8 1/2 inch long sample strips of the joint tape.

Verification by Independent testing labs indicating that materials

Certificates: Certify that products of this section meet or exceed

products specified in this section, with not less than three years

work of this section with minimum five years of experience.

B. Reef Industries (800) 231-6074

C. Raven Industries (Sioux Falls, S.D. (800)635-3456).

- 3.6 BRIDGING
- A. Bridging size, type, and spacing shall be in accordance with Steel Joist Institute specifications, unless noted otherwise.
- B. Install bridging promptly after placing joists, before the application of any loads.

C. Provide bottom chord bridging as required for uplift due to wind forces.

END OF SECTION 05210

SECTION 05300 - METAL DECKING

PART 1 - GENERAL

1.1 WORK INCLUDED

Steel roof deck complete with cover plates, cell closures and flashings and acoustical closures.

- 1.2 REFERENCE STANDARDS
- A. ASTM A-36 Structural Steel

Structural Members.

- B. Steel Deck Institute "Basic Design Specifications"
- C. ASTM A-611 Grade "C" and ASTM A-446 carbon steel sheet.
- D. AISI Specification for the Design of Cold-Formed Steel
- 1.3 SHOP DRAWINGS
 - A. 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.
- B. 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.
- PART 2 PRODUCTS
- 2.1 PRODUCTS
 - A. ACCEPTABLE MANUFACTURERS

Wheeling Corrugating Company or 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. Steel for painted deck: ASTM A-611, Grade C, Fy=33,000 psi.
- 2. Bearing Plates and Angles: of ASTM A-36 type steel.
- 3. Anchor Bolts and Required Nuts and Washers: High strength type recommended for structural steel joints; ASTM A-325.
- C. WELDING MATERIALS

Applicable AWS D1.1 type required for materials being welded.

D. DECKING AND RELATED ACCESSORIES

Roof Decking: Minimum 22 gauge sheet steel; 30 inch wide sheet; double span; manufactured by Wheeling or Vulcraft. Refer to plan for specific section properties required.

E. FABRICATION

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.

F. SHOP FINISH

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.

- PART 3 EXECUTION
- 3.1 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 18 inches. Welds shall be not less than 5/8" diameter fusion welds, and shall be made by competent, experienced welders. At free edges of deck (entire perimeter of decked area) weld to supports at 12" on center. Refer to Steel Framing Note SF-4 for sidelap attachment requirements.
 - D. Contractor shall notify the structural engineer when steel deck installation is complete to permit observation prior to placement of insulation or roofing substrate.

SECTION 05210 - OPEN WEB STEEL JOISTS

- PART 1 GENERAL
- 1.1 SCOPE

Refer to Drawings for the extent of work included under this Section.

- 1.2 QUALITY ASSURANCE
 - A. All materials, design, welding, anchorage, bridging, handling, erection, and shop painting shall meet the requirements of the "Recommended Code of Standard Practice for Steel Joists and Joist Girders" as adopted by the Steel Joist Institute, latest revision; with exceptions, alternatives and specific applications as noted on the plans and as herein specified.
 - B. The Manufacturer shall be a member of the Steel Joist Institute and publish a brochure of his products, including load tables and instructions regarding proper use of products.
- 1.3 SUBMITTALS
 - A. The Contractor shall obtain completely detailed shop drawings showing anchorage details, placing and erection plans, all member sizes, location, bridging, bracing, connections, method of assembly, etc. The Contractor shall carefully check these drawings, then submit them to the Architect. The Architect 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.
 - B. 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.
- 1.4 CERTIFICATION

The products specified in this section shall be designed by a Professional Engineer ("Specialty Engineer") registered to practice in this state. Preparation of shop drawings and/or erection drawings shall be performed under the supervision of the Specialty Engineer. Upon delivery of the products to the jobsite, the product supplier shall submit for record written confirmation, sealed by the Specialty Engineer, that these requirements have been met and shall list design loads and engineering criteria employed. Note joists designated on plans must be verified as adeauate to withstand net uplift forces as given in General Notes.

- 1.5 PRODUCT HANDLING
- A. PROTECTION

Use all means necessary to protect steel joists before, during, and after installation and to protect the installed work and materials of all other trades.

B. REPLACEMENTS

In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

- PART 2 PRODUCTS
- 2.1 STEEL

Used in manufacture of joists shall meet the requirements of the applicable Steel Joist Institute specifications.

2.2 PAINT

All steel joists and accessories shall receive one shop coat of paint meeting the requirements of the Steel Joist Institute specifications. Where joists are exposed to view, the shop coat shall be Zinc Chromate or Red Oxide.

2.3 EXTENDED ENDS

Provide ceiling extensions in all areas having suspended ceilings and where indicated on architectural plans.

3.1 ERECTION

Carefully place joists at designated locations and weld joist seats to steel beams.

3.2 SPECIAL JOIST CONNECTION

PART 3 - EXECUTION

- A. At all columns not framed by beams in at least two directions, the joist closest to the column centerline shall be field bolted to provide lateral stability during construction prior to welding.
- B. Do not begin placement of joists until support members are in place and secured.
- C. When in final position, joist upper and lower chords shall be in vertical alignment, and joist shall be straight from seat to seat.
- D. No field cutting or altering of joists will be permitted, unless prior approval is obtained from the Engineer. Joists improperly fabricated shall be reported to the Manufacturer for correction.
- 3.3 FIELD WELDING

For connections of bridging, bracing, accessories, work of other trades, etc., shall be carefully done and shall not damage the joists.

3.4 MECHANICAL EQUIPMENT SUPPORT

Provide adequate and appropriate structural steel framing, approved by the engineer, for the support and mounting of mechanical equipment resting on. or suspended from, steel joists. No concentrated loads, hangers, etc. shall be attached to the top or bottom chord of joist except at "panel points" (the junctures of chords and diagonal web members.) Joists shall be modified or strengthened to carry such loads.

3.5 PROVIDE ANY TEMPORARY BRACING

Provide any temporary bracing that may be required to resist all wind and construction loads. Erection equipment, methods employed, shoring scaffolding, etc., shall be suitable and safe for workmen, and shall be maintained in a safe and stable condition.

PERMIT SET

No.

DESCRIPTION

06/05/23

DATE

STRUCTURAL STEEL CANE

HOLDING PIN. 1/4" DIA

ROD WELDED TO ANGLE

— STEEL DECK 16 GA. Galvanized Ribbed

— STRUCTURAL STEEL

2" X 2" X 1/4" ANGLE

STEEL DECK

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<u>SHEET KEYNOTES</u>

PROJECT CODE REVIEW & DESCRIPTION

KHIT CHIROPRACTIC WELLNESS WILL CONSIST OF A NEW BUILDING WITH TWO SUITES, INCLUDING AN EMPTY COMMERCIAL SUITE TO BE FINISHED OUT BY FUTURE TENANT. THE PROJECT WILL CONSIST OF 1) NO DEMOLITION WORK AT EXISTING PROPERTY, 2) CONSTRUCTION OF NEW FACILITY FROM THE GROUND UP.

TOTAL NEW CONSTRUCTION IS 5,580 GROSS SQUARE FEET.

CODE ANALYSIS

APPLICABLE BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE *CODE ANALYSIS SEPARATED PER MAJOR BUILDING COMPONENT

1. USE AND OCCUPANCY CLASSIFICATION

A. SECTION 304.1 - BUSINESSS GROUP B

2. GENERAL BUILDING HEIGHTS AND AREAS

A. TABLE 504.3 - ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE I. OCCUPANCY CLASSIFICATION: B, SPRINKLERED II. CONSTRUCTION TYPE: TYPE II-B III. ALLOWABLE HEIGHT: 75 FEET (BUILDING COMPLIES)

B. TABLE 506.2 - ALLOWABLE AREA FACTOR IN SQUARE FEET I. OCCUPANCY CLASSIFICATION: B, SINGLE STORY SPRINKLERED II. CONSTRUCTION TYPE: TYPE II-B III. ALLOWABLE AREA: 92,000 SQUARE FEET

3. TYPE OF CONSTRUCTION

A. SECTION 602 AND TABLE 601: CONSTRUCTION CLASSIFICATION = TYPE II-B 4. MEANS OF EGRESS

4. MEANJ UF EUREJJ

A. TABLE 1004.1.2 - MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT I. BUSINESS AREAS = 150 GROSS 3,094 SQUARE FEET / 150 = 21 OCCUPANTS

B. SECTION 1005 - MEANS OF EGRESS SIZING
I. 1005.3.2 OTHER EGRESS COMPONENTS (DOORS), WIDTH FACTOR = 0.15 INCHES PER OCCUPANT.
21 OCCUPANTS X 0.15 = 3.1 INCHES

* THEREFORE A SINGLE 3'-O" WIDE DOOR SHALL SUFFICE, HOWEVER, 4 DOORS ARE PROVIDED.

5. PLUMBING SYSTEMS

A. TABLE 2902.1 - MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES (B - BUSINESS

CLASSIFICATION) FOR 31 MEN & 31 WOMEN I. WATER CLOSETS: 1 PER 25 FOR THE FIRST 50, 1 PER 50 FOR THE REMAINDER EXCEEDING 50: 1 MALE / 1 FEMALE II. LAVATORIES: 1 PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING

 $\frac{1}{3/16"} = 1' - 0"$

80: 1 MALE / 1 FEMALE

III. DRINKING FOUNTAINS: 1 PER 100: 1 REQUIRED IV. SERVICE SINK: 1 REQUIRED <u>legend</u>

EXIT SIGN, REFER MEP DRAWINGS FOR SPECIFICATIONS

FE FIRE EXTINGUISHER

━ ━1-HR━ ━ 1 HOUR RATING, WALLS TO DECK

BUILDING AREA TABLE			
AREA NAME	USABLE AREA		
SUITE B	1,855 SF		
SUITE A	3,479 SF		
MECH	246 SF		
GROSS TOTAL:	5,580 SF		

ROOM AREA SCHEDULE			
ROOM NUMBER	ROOM NAME	AREA	
101	LOBBY	464 SF	
102	CORRIDOR	116 SF	
103	CORRIDOR	49 SF	
104	X - RAY	133 SF	
105	OFFICE	79 SF	
106	WAITING AND VITALS	153 SF	
107	WC	19 SF	
108	RECEPTION	231 SF	
109	REHAB	604 SF	
110	EXAM 1	107 SF	
111	THERAPHY 1	98 SF	
112	THERAPHY 2	98 SF	
113	THERAPHY 4	98 SF	
114	THERAPHY 3	98 SF	
115	THERAPHY 5	97 SF	
116	CORRIDOR	133 SF	
117	IT	11 SF	
118	UTILITY	17 SF	
119	BREAKROOM	185 SF	
120	MEN	55 SF	
121	WOMEN	58 SF	
122	OFFICE	126 SF	
123	STORAGE	13 SF	
124	RESTROOM	51 SF	
125	ELECTRICAL	87 SF	
126	RISER	110 SF	
NET TOTAL:		3,289 SF	







 $\frac{1}{3/16"} = 1' - 0"$

SHEET PLAN KEYNOTES

- 1. EMPTY SHELL SPACE, TO BE FINISHED BY FUTURE TENANT
- 2. UNOCCUPIED PLENUM SPACE
- 3. LOUVERS BY MEP DRAWINGS 4. ALUMINUM DOWNSPOUTS

<u>WALL TYPES</u>

໌ 7

- (A)

 $\left(\mathbf{B} \right)$

С

—(D)

E

G

1 A2.02

(202)

- 3 5/8" METAL STUD CORE SOUND BATT INSULATION 5/8" GYPSUM BOARD (EACH SIDE)
- THE RECEIPTION 5/8" GYPSUM BOARD (EACH SIDE) 6" METAL STUD CORE В SOUND BATT INSULATION 5/8" GYPSUM BOARD (EACH SIDE)
- 3 5/8" METAL STUD CORE
 - SOUND BATT INSULATION 5/8" GYPSUM BOARD LEAD LINED 5/8" GYPSUM BOARD
- 1-HR FIRE WALL FLOOR TO DECK PARTITION

5/8" FIRECORE TYPE 'X' GYPSUM BOARD 6" METAL STUD CORE SOUND BATT INSULATION

5/8" FIRECORE TYPE 'X' GYPSUM BOARD

<u>GENERAL NOTES</u>

1. THESE DRAWINGS ARE INTENDED TO ILLUSTRATE THE LOCATIONS OF ALL NEW CONSTRUCTION, BUT ARE NOT TO BE SCALED. THE DIMENSIONS SHALL SUPERSEDE THE SCALE.

2. THE GENERAL CONTRACTOR IS REQUIRED TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ALL INFORMATION IN REGARDS TO THE EXISTING FIELD CONDITIONS, MATERIALS, AND METHODS OF CONSTRUCTION, DIMENSIONS, AND/OR DEFLECTIONS SHALL BE OBSERVED, NOTED, AND VERIFIED BY THE GENERAL CONTRACTOR

PRIOR TO ANY CONSTRUCTION OR FABRICATION. ANY AND ALL INFORMATION GATHERED THAT IS IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH ANY RELATED WORK.

3. FINISH FLOOR ELEVATIONS ARE 100'-O" AND ARE TO TOP OF CONCRETE UNLESS OTHERWISE NOTED OR SPECIFIED.

4. PROVIDE A 4" JAMB AT ALL DOORS LOCATED ON WALLS TYP., U.N.O.

5. PAINT, CAULK AND SEAL AT ALL DISSIMILAR WALL MATERIALS INTERSECTIONS.

6. ALL ANGLES ARE 0, 45, OR 90 DEGREES UNLESS OTHERWISE SPECIFIED. ALL EXPOSED WALL CORNERS SHALL HAVE BULLNOSE EDGES AT CMU WALLS OR DRYWALLS TYP.

7. WHERE MATERIALS ARE APPLIED TO OR ARE IN DIRECT CONTACT WITH WORK INSTALLED BY ANOTHER SUBCONTRACTOR, COMMENCEMENT OF WORK IMPLIES ACCEPTANCE OF THE SUBSTRATE AS SUITABLE FOR THE APPLICATION INTENDED.

8. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR THE DETAILED DESIGN OF STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.

9. ALL CONSTRUCTION AND EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.

10. DIMENSIONS AT EXTERIOR OF BUILDING ARE TO EDGE OF SLAB. INTERIOR DIMENSIONS ARE TO FACE OF METAL STUDS.

11. GENERAL CONTRACTOR WILL PROVIDE DUMPSTER FOR CONSTRUCTION DEBRIS. LOCATE PER OWNER'S DIRECTION.





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<u>RCP KEYNOTES</u>

- 1. ACT TILE AS SPECFIFIED 2. GYPSUM BOARD CEILING AS SPECIFIED
- 3. LINEAR RECESSED LIGHT FIXTURE REFER MEP DRAWINGS
- 4. LINEAR AIR DEVICES, REFER MEP DRAWINGS 5. EXPOSED STEEL JOIST REFER STRUCTURAL DRAWINGS

 $\frac{1}{3/16"} = 1' - 0"$







 $\frac{1}{3/16"} = 1' - 0"$





MODEL METO2 STEEL 179

- <u>FLOOR TRANSITION</u> • JOHNSITE METAL EDGE
- FIELD COLOR DUSTBLU SW 9161
- GOLD GLITZ 9108CS <u>MILLWORK FINISHES</u>
- SOLID SURFACE WILSONART
- <u>COUNTER SURFACE SELECTION</u>
- DOORS AND TRIM DUSTBLU SW 9161
- FIELD COLOR GHOSTED SW 9545
- <u>PAINT SELECTION LEGEND</u>
- JOHNSONITE 262 DRIZZLE CG
- <u>BASE MATERIAL LEGEND</u>
- TILE & GROUT COLOR : WHITE
- CERAMIC TILE SAN GIORGIO MARBLE ART 1.5IN HEXAGON CERAMIC MOSAIC 12x12
- BEACH 51960
- ARMSTRONG EXCELON SDT TILE
- SDT TILE 12" X 12"
- RATIONAL
- PATCRAFT LOGIC 10460 METHOD 00500
- SHADY GROVE V3 05012 • CARPET TILE 24" X 24" (1/4 TURN)
- PATCRAFT TIMBER GROVE II
- RESILIENT PLANK 5.96" X 48"
- FLOOR FINISH SCHEDULE

- STATIC CONTROL FLOORING
- CERAMIC TILE
- RESILIENT PLANK
- CARPET TILE
- <u>FLOOR FINISH LEGEND</u>

1. PROVIDE FLOOR TRANSITIONS EDGE

2. POLISH CONCRETE FINISH

BETWEEN CARPET AND RESILIENT PLANK













FURNITURE & EQUIPMENT GENERAL NOTES

- 1. ALL APPLIANCES PROVIDED BY OWNER, INSTALLED BY G.C.
- 2. FURNITURE SHOWN IS FOR COORDINATION ONLY.
- 3. FURNITURE IS NOT IN CONTRACT OF CONSTRUCTION.

4. CONTRACTOR TO PROVIDE CLEAR THERMOSTAT GUARDS WITH MATCHING KEYS AT ALL LOACTIONS, COORDINATE WITH MEP DRAWINGS.

5.DATA LOCATIONS SHOWN ARE FOR COORDINATION, REFER MEP DRAWINGS.

*O.F.O.I. = OWNER FURNISHED OWNER INSTALLED *O.F.C.I. = OWNER FURNISHED CONTRACTOR INSTALLED *C.F.C.I. = CONTRACTOR FURNISHED CONTRACTOR INSTALLED





- 1. X-RAY "ON" WARNING LIGHT
- 2. J-BOX (A) 8"X8" MOUNTED 1' A.F.F. • 2" CONDUIT TO J-BOX (B)
- 3. CIRCUITE BREAKER, 2" CONDUIT TO J-BOX (B)
- 4. PANIC BUTTON, SHUNT TRIP BREAKER 5. J-BOX (B) 8"X8" MOUNTED 1' A.F.F
- 3/4" CONDUIT TO J-BOX (E) 2" CONDUIT TO J-BOX (A)
- 2" CONDUIT TO CIRCUIT BREAKER 6. J-BOX (E) 2"X4"
- 3/4" CONDUIT TO J-BOX (B)
- 7. POWER OUTLETS
- 8. CAT-6 NETWORK
- 9. TO BUILDING SERVICE PANEL, REFER MEP DRAWINGS
- 10. SOLID SURFACE COUNTER, PROVIDE 2" GROMMET AS INDICATED

FURNITURE & EQUI	PMENT LIST
ITEM	QUANTITY
3 TIER LOCKERS	6
ADJUSTABLE BENCH	2
DINING TABLE SET	1
DOMESTIC DRYER	1
DOMESTIC REF	1
DOMESTIC WASHER	1
ELLIPTICAL MACHINE	1
EXAM TABLE	11
EXECUTIVE CHAIR	1
EXERCISE BALL	1
EXERCISE BIKE	1
GENERIC ADMIN CHAIR	6
GENERIC OFFICE COPIER	1
MAGAZINE TABLE	2
MICROWAVE	1
MOBILE STAND (VITALS)	1
MOBILE TABLE	1
SCALE	1
THERAPHY CHAIR	2
VIBRATION PLATFORM	2
WAITING CHAIR	52





















ENLARGED FLOOR PLAN 3/8" = 1' - 0"

⊥







PERMIT SET 06/05/23 DESCRIPTION DATE No. <u>06.05.23</u> SAM GARCIA ARCHITEC 1200 Auburn Ave SUITE 280 Image: Suite 280 MCALLEN, TX 78504 Image: Suite 280 (956) 631 - 8327 Image: Suite 280 INFO@SAMGARCIAARCHITECT.COM KHIT CHIROPRACTIC WELLNESS 6151 E. POST ROAD, KYLE, TX 78640 06.05.23 E 2022-008 ENLARGED PLANS $A \perp$

- 1. DOOR AS SCHEDULED
- 2. WALL BASE AS SCHEDULED 3. GYPSUM BOARD FINISH AS SCHEDULED
- 4. 36" GRAB BAR (TA-6)
- 5. 42" GRAB BAR (TA-5)
- 6. SINGLE ROBE HOOK (TA-8)
- 7. MIRROR (TA-7)
- 8. SOAP DISPENSER (TA-2)
- 9. PAPER TOWEL DISPENSER (TA-3)
- 10. LAVATORY REFER MEP DRAWINGS 11. TOILET PAPER DISPENSER (TA-1)
- 12. SANITARY NAPKIN DISPOSAL (TA-4)
- 13. STAINLESS STEEL WALL SHELF (TA-10)
- 14. SHOWER HEAD AND CONTROLS REFER MEP
- 15. WALL TILE, AS SCHEDULED
- 16. PREFABRICATED SHOWER CURB AS SPECIFIED 17. PREFABRICATED SHOWER BENCH (2'X2') AS
- SPECIFIED
- 18. BONDED WATERPROOFING AND VAPOR-
- RETARDANT MEMBRANE SYSTEM
- 19. PREFABRICATED SHOWER NICHE (12X20) 20. RONDEC BULLNOSE EDGE-PROTECTION TRIM,
- AS SPECIFIED (SATIN ALUMINUM)
- 21. POINT DRAIN WITH INTEGRATED BONDING
- FLANGE AS SPECIFIED (TA-13) 22. SHOWER ROD AND ACCESSORIES (TA-11)
- 23. VANITY LIGHT REFER MEP DRAWINGS
- 24. TOWEL BAR (TA-12)

	TOILET ACCESSORIES SCHEDULE										
TYPE MARK	BASIS OF DESIGN	NOTES									
TA-1	BOBRICK MODEL NO. 2721	CF/CI									
T A - 2	BOBRICK MODEL NO. B-4112	CF/CI									
TA-3	BOBRICK MODEL NO. B-2620	CF/CI									
T A - 4	BOBRICK MODEL NO. B-270	CF/CI									
TA-5	BOBRICK SERIES NO. B-6800	CF/CI									
TA-6	BOBRICK SERIES NO. B-6800	CF/CI									
TA-7	BOBRICK MODEL NO. B-290-1836	CF/CI									
T A - 8	BOBRICK MODEL NO. B-6717	CF/CI									
T A - 9	BOBRICK MODEL NO. B-239 X 34	CF/CI									
TA-10	BOBRICK MODEL NO. B-298-24	CF/CI									
TA-11	BOBRICK MODEL	CF/CI									
	NO. B-6047 X 60										
	NO. B-204-1 NO. B-204-2										
TA-12	BOBRICK MODEL NO. B-6737 X 24	CF/CI									
TA-13	4" KERDI-DRAIN BRUSHED NICKEL	CF/CI									
	FLORAL DESIGN										
ALL ACCESSOR	IES TO BE STAINLESS STELL WITH SATIN	FINISH									
**NOTES: OF/C	**NOTES: OF/CI: OWNER FURNISHED-CONTRACTOR INSTALLED										
0F/0	OF/OI: OWNER FURNISHED-OWNER INSTALLED										
CF/C	I: CONTRACTOR FURNISHED-CONTRACTOR IN	STALLED									







- 1. PREFINISHED METAL COPING 2. STUCCO MOLDING
- 3. SIDEWALK REFER CIVIL DRAWINGS
- 4. ALUMINUM STOREFRONT
- 5. LIGHT FIXTURE REFER MEP DRAWINGS
- 6. STUCCO SYSTEM AS SPECIFIED
- 7. SIGNAGE ALUMINUM LETTERS 8. ALUMINUM DOWNSPOUT
- 9. ALUMINUM GUTTER
- 10. DOOR AS SCHEDULED
- 11. CONTROL JOINT 12. RTU REFER MEP DRAWINGS





- PREFINISHED METAL COPING
 CDX PLYWOOD SHEATHING
- Z.CDX PLYWOOD SHEATHING3.CEILING AS SCHEDULED
- 4. STUCCO SYSTEM WITH 2" OF C.I
- SIGNAGE ALUMINUM LETTERS
 ALUMINUM GUTTER DOWNSPOUT
- 7. ALUMINUM GUTTER
- 8. RTU REFER MEP DRAWINGS
- 9. DOOR AS SCHEDULED 10. ADHERED TPO ROOFING
- 11. METAL DECKING REFER STRUCTURAL DRAWINGS
- 12. ALUMINUM LOUVER
- STUCCO SOFFIT
 ALUMINUM STOREFRONT
- 15. LIGHT FIXTURE REFER MEP
- DRAWINGS
- 16. STRUCTURAL C-STUD FRAMING AT 16" O.C.
- 17. COUNTERFLASHING AS SPECIFIED 18. ROOF ACCESS LADDER AS SPECIFIED





















- <u>16' - 6"</u> Low parapet

- 1. PREFINISHED METAL COPING 2. CDX PLYWOOD SHEATHING 3. CEILING AS SCHEDULED 4. STUCCO SYSTEM WITH 2" OF C.I. 5. SIGNAGE ALUMINUM LETTERS
- 6. ALUMINUM GUTTER DOWNSPOUT 7. ALUMINUM GUTTER
- 8. RTU REFER MEP DRAWINGS
- 9. DOOR AS SCHEDULED
- 10. ADHERED TPO ROOFING 11. METAL DECKING REFER
- STRUCTURAL DRAWINGS 12. ALUMINUM LOUVER
- 13. STUCCO SOFFIT
- 14. ALUMINUM STOREFRONT 15. LIGHT FIXTURE REFER MEP
- DRAWINGS 16. STRUCTURAL C-STUD FRAMING AT 16" O.C.
- 0'-0" FIN. FLR





24' - 0" HIGH PARAPET

- 1. PREFINISHED METAL COPING 2. SHEATHING AS SPECIFIED
- 3. CEILING AS SCHEDULED
- 4. STUCCO SYSTEM WITH 2" OF C.I.
- 5. SIGNAGE ALUMINUM LETTERS 6. ALUMINUM GUTTER DOWNSPOUT
- 7. ALUMINUM GUTTER
- 8. RTU REFER MEP DRAWINGS
- 9. DOOR AS SCHEDULED 10. ADHERED TPO ROOFING
- 11. METAL DECKING REFER STRUCTURAL DRAWINGS
- 12. ALUMINUM LOUVER 13. STUCCO SOFFIT
- 14. ALUMINUM STOREFRONT
- 15. METAL STUD FRAMING AT 16" O.C. 16. LIGHT FIXTURE REFER MEP DRAWINGS
- 17. SOFFIT VENT AS SPECIFIED
- 18. GYPSUM BOARD AS SCHEDULED
- 19. FLOOR FINISH AS SCHEDULED 20. COUNTERFLASHING AS SPECIFIED
- 21. DRIP EDGE AS SPECIFIED





2023





- 1. PREFINISHED METAL COPING
- 2. CDX PLYWOOD SHEATHING
- STUCCO SYSTEM WITH 2" OF C.I.
 ALUMINUM GUTTER

- ALDWINGH GUTTER
 DOOR AS SCHEDULED
 ADHERED TPO ROOFING
 METAL DECKING REFER STRUCTURAL DRAWINGS
 STUCCO SOFFIT
- 9. METAL STUD FRAMING AT 16" O.C. 10. LIGHT FIXTURE REFER MEP DRAWINGS
- 11. SOFFIT VENT AS SPECIFIED





















- 1. GYPSUM BOARD FINISH AS SCHEDULED
- 2. DOOR AS SCHEDULED 3. ALUMINUM SLIDING WINDOW REFER TYPE SCHEDULE
- 4. HAND SINK REFER MEP DRAWINGS
- WALL BASE AS SCHEDULED 5.
- 6. PAINTED BASE CABINET
- 7. SOAP DISPENSER (TA-2)
- 8. PAPER TOWEL DISPENSER (TA-3) 9. SOLID SURFACE COUNTER & BACKSPLASH
- 10. PAINTED WALL CABINET
- 11. PROVIDE 2" GROMMETS
- 12. KNEE SPACE
- 13. MOP & BROOM HOLDER 14. PLUMBING FIXTURE REFER MEP DRAWINGS
- 15. STAINLESS STEEL SPLASH PROTECTION
- 16. MOP SINK REFER MEP DRAWINGS
- 17. STAINLESS STEEL WALL SHELF (TA-10)
- 18. DRYERBOX AS SPECIFIED
- 19. ELECTRICAL OUTLETS REFER MEP DRAWINGS 20. 24"H X 24" WIDE WORK STATION BRACKETS BY A&M HARDWARE, INC













PERMIT SET

No.

DESCRIPTION

06/05/23

DATE

11. UNDERCOUNTER REFRIGERATOR REFER FFE PLANS

- 7. SOAP DISPENSER (TA-2)

10. PAINTED WALL CABINET

- 6. PAINTED BASE CABINET
- 5. WALL BASE AS SCHEDULED
- 4. HAND SINK REFER MEP DRAWINGS
- 2. DOOR AS SCHEDULED 3. ALUMINUM SLIDING WINDOW REFER TYPE SCHEDULE

1. GYPSUM BOARD FINISH AS SCHEDULED

				ROOM	FINISH S	CHEDULE				
					WAL	LS		CEIL	ING	
ROOM NO.	ROOM NAME	FLOOR	BASE	NORTH	EAST	SOUTH	WEST	MATERIAL	HEIGHT	NOTES
101	LOBBY	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
102	CORRIDOR	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
103	CORRIDOR	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
104	X - RAY	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	PROVIDE LEAD LINED GYPSUM BOARD North & East Walls only
105	OFFICE	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
106	WAITING AND VITALS	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	9'-0"	
107	WC	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	9'-0"	
108	RECEPTION	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
109	REHAB	VINYL/CARPET	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	9'-0"	
110	EXAM 1	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
111	THERAPHY 1	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
112	THERAPHY 2	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
113	THERAPHY 4	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
114	THERAPHY 3	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
115	THERAPHY 5	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
116	CORRIDOR	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	10'-0"	
117	IT	STATIC CONTROL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	9'-0"	
118	UTILITY	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	9'-0"	
119	BREAKROOM	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	ACT	10'-0"	
120	MEN	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	10'-0"	
121	WOMEN	VINYL	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	10'-0"	
122	OFFICE	CARPET	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	10'-0"	
123	STORAGE	CARPET	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	9'-0"	
124	RESTROOM	TILE	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	GYPSUM	10'-0"	
125	ELECTRICAL	POLISHED CONCRETE	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	EXPOSED		
126	RISER	POLISHED CONCRETE	RUBBER BASE	PAINT	PAINT	PAINT	PAINT	EXPOSED		

WINDOW SCHEDULE											
TYPE MARK	HEIGHT	WIDTH	HEAD	JAMB	SILL	COMMENTS					
1	5' - 1"	4'-0"				SLIDING GLASS					
2	3' - 0"	2'-0"	3/A7.02	1/A7.02	2/A7.02	LEAD LINED					

	DOOK JUILDULL															
					DOOR					FRAME				DETAILS		
MARK	TYPE	SINGLE OR PAIR	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	HARDWARE Set	ТҮРЕ	MATERIAL	FINISH	FIRE RATED	HEAD	JAMB	SILL	COMMENTS
101A	A	PAIR	6' - 0"	7' - 0"	1 3/4"	GLASS	TEMPERED	002	1	ALUMINUM	ANODIZED	N/A	13/A7.02	10/A7.02	12/47.02	
101B	С	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	E201C	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	PROVIDE ELECTRIFIED STRIKE
104	B1	SINGLE	3' - 0"	7'-0"	1 3/4"	HOLLOW METAL	PAINT	L403	2.1	H.M.	PAINTED	N/A	9/A7.02	7/A7.02	8/A7.02	LEAD LINED DOOR AND FRAME
105	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	103	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
107	С	SINGLE	2'-0"	8' - 0"	1 3/8"	SOLID WOOD	PAINTED	303\$	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
108	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	103	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
110	C	SINGLE	3' - 0"	8' - 0"	1 3/8"	SOLID WOOD	PAINTED	403	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
111	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	403	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
112	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	403	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
113	C	SINGLE	3'-0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	403	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
114	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	403	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
115	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	403	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
116	B	SINGLE	3'-0"	7'-0"	1 3/4"	G.H.M.	PAINTED	205	2	G.H.M.	PAINTED	N/A	16/a7.02	14/a7.02	15/a7.02	
117	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	2035	N/A	WOOD	PAINT	N/A	6/A7.02	4/A7.02	5/A7.02	
118	D	BIFOLD	5'-0"	8'-0"	1 1/2"	SOLID WOOD	PAINTED	001	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
119	C	SINGLE	3' - 0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	403	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
120	C	SINGLE	3'-0"	8'-0"	1 3/8"	SOLID WOOD	PAINTED	301	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
121	C	SINGLE	3'-0"	8' - 0"	1 3/8"	SOLID WOOD	PAINTED	301	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
122	B	SINGLE	3'-0"	7'-0"	1 3/4"	G.H.M.	PAINTED	105	2	G.H.M.	PAINTED	N/A	16/a7.02	14/a7.02	15/a7.02	
123	D	BIFOLD	5'-0"	8' - 0"	1 1/2"	SOLID WOOD	PAINTED	001	N/A	WOOD	PAINTED	N/A	6/A7.02	4/A7.02	5/A7.02	
124	C	SINGLE	2'-6"	8' - 0"	1 3/8"	SOLID WOOD	PAINTED	303	N/A	WOOD	PAINT		6/A7.02	4/A7.02	5/A7.02	
125	B	SINGLE	3'-0"	7'-0"	1 3/4"	G.H.M.	PAINTED	205	2	G.H.M.	PAINTED	N/A	16/a7.02	14/a7.02	15/a7.02	
126	B	SINGLE	3' - 0"	7'-0"	1 3/4"	G.H.M.	PAINTED	205	2	G.H.M.	PAINTED	N/A	16/A7.02	14/a7.02	15/a7.02	
201	A	PAIR	6'-0"	7'-0"	1 3/4"	GLASS	TEMPERED	002	1	ALUMINUM	ANODIZED	N/A	13/a7.02	10/A7.02	12/A7.02	
202	B	SINGLE	3'-0"	7'-0"	1 3/4"	G.H.M.	PAINTED	205	2	G.H.M.	PAINTED	N/A	16/A7.02	14/A7.02	15/a7.02	









DOOR SCHEDULE



B

B1/





PER











<u>GLAZING TYPES - EXTERIOR</u>

TYPE 2 1" INSULATED GLAZING WITH LOW-E COATING, TEMPERED OUTDOOR LITE - GUARDIAN SUNGUARD SNR 43 ON CLEAR RADIANT LOW-E #2 INDOOR LITE - CLEAR

<u>GLAZING TYPES - INTERIOR</u> TYPE 1A 1/4" SAFETY GLAZING CLEAR FULLY TEMPERED

- TYPE 2A 1/4" LEAD LINED SAFETY GLAZING CLEAR FULLY TEMPERED









$\frac{\textbf{MILLWORK SECTION}}{1" = 1' - 0"}$





(PAINTED AS SCHEDULED) - 3/4" PAINT GRADE PLYWOOD (PAINTED AS SCHEDULED)



— BULLNOSE AT

PAINT GRADE

SCHEDULED)

ALL EDGES



__1' - 0"

e.

+

5

3/4" x 1 1/2" TRIM

(PAINTED AS SCHEDULED)

── 3/4" PAINT GRADE PLYWOOD

(PAINTED AS SCHEDULED)

K & V #255 STANDARDS 1'-6"

1 X 4 WOOD NAILERS (PAINTED).

2'-0"

/- STANDARD EDGE TYPICAL

- GROMMET PER PLAN

- SOLID SURFACE ON

3/4" PLYWOOD OVER

1X2 WOOD FRAME

└─ 1/2" DIA. EXP.

BOLTS @ 24" O.C.

LONG & #256 BRACKETS.

— 1/4" PLYWOOD BACKING OVER

BULLNOSE AT

- 1X1 TRIM PIECE

ALL EDGES

____1' - 0"_____ 3/4" x 1 1/2" TRIM (PAINTED AS SCHEDULED) - 3/4" PAINT GRADE PLYWOOD (PAINTED AS SCHEDULED) ---- PAINT GRADE PLYWOOD (PAINTED AS SCHEDULED) — K & V ∦255 STANDARDS 1'-6" LONG & #256 BRACKETS. — 1/4" PLYWOOD BACKING OVER 1 X 4 WOOD NAILERS (PAINTED). 2' - 0" /- STANDARD EDGE TYPICAL – BULLNOSE AT - SOLID SURFACE ON 3/4" PLYWOOD OVER ALL EDGES 1X2 WOOD FRAME +







PLYWOOD (PAINTED AS SCHEDULED)

— PAINT GRADE







 $6 \qquad \begin{array}{r} \text{MILLWORK SECTIONS} \\ 1" = 1' - 0" \end{array}$





FONT: ADA HELVETICA REGULAR COLOR: DESIGNER WHITE 0101 ACCENT: DESIGNER WHITE 0101 BACK-PLATE: BRUSHED

2

SILVER 5E025

FACE PLATE: BRUSHED NICKEL 5E026

FONT: ADA HELVETICA REGULAR COLOR: DESIGNER WHITE 0101 ACCENT: DESIGNER WHITE 0101 BACK-PLATE: BRUSHED SILVER 5E025

FACE PLATE: BRUSHED NICKEL 5E026

FONT: ADA HELVETICA REGULAR COLOR: DESIGNER WHITE 0101

FACE PLATE: BRUSHED

NICKEL 5E026

ACCENT: DESIGNER WHITE 0101 RIGID VINYL

BACK-PLATE: BRUSHED SILVER 5E025

SIGNAGE TYPE LEGEND 6" = 1'-0"

SIGN TYPE L1











<u>SHEET KEYNOTES</u>

1. TYPE 1 (MALE RR) 2. TYPE 2 (FEMALE RR) 3. TYPE 3 MULTI LINE

<u>GENERAL NOTE</u> SELECTED VENDOR FOR INTERIOR &

EXTERIOR SIGNAGE AS FOLLOWS: IDECAL SIGN BUILDERS 600 N CONWAY AVE

ATTENTION: ROGER AREVALO PHONE # : 956-580-0800

MISSION TX 78572











KHIT CHIROPRACTIC WELLNESS

	SHEET INDEX											
NUMBER	NAME	DESIGNED BY										
3 1.0	Cover Sheet	A&G Engineering										
E 0.0	General Notes - Elec	E Garcia										
E 0.1	Site Plan - Elec	E Garcia										
E 1.0	Lighting - Elec	E Garcia										
E 2.0	Power - Elec	E Garcia										
E 3.0	Schedules/Details - Elec	E Garcia										
E 3.1	Schedules/Details - Elec	E Garcia										
0.0 N	General Notes - Mech	A Peralez										
VI 1.0	Supply - Mech	A Peralez										
M 2.0	Return - Mech	A Peralez										
VI 3.0	Schedules/Details - Mech	A Peralez										
D.0 C	General Notes - Plumb	O Rodriguez										
P 1.0	Waste/Vent - Plumb	Q Rodriguez										
P 2.0	Dom/Hot Water - Plumb	O Rodriguez										
o 3.0	Riser - Plumb	O Rodriguez										

Schedules/Details - Plumb

P 4.0

O Rodriguez

ISSUE FOR PERMIT 01 JUN 2023 DATE DESCRIPTION X uis Eduardo Madr 114403 01 JUN 2023 A&G Engineering MEP Design 1004 W Frontage Rd Alamo, TX 78516 (956) 787 - FIRE info@AandGMEP.com КНІТ CHIROPRACTIC WELLNESS 6151 E. POST RD. KYLE TX, 78640 01 JUN 2023 음 22 02 10 **Cover Sheet B** 1

GENERAL NOTES - ELECTRICAL

- CONTRACTOR REQUIREMENTS: ALL WORK UNDER THIS CONTRACT SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH A.1. FEDERAL, STATE, AND LOCAL CODES. WHERE THESE PLANS AND SPECIFICATIONS ARE IN CONFLICT WITH SUCH CODES, THE CODES SHALL GOVERN. BIDS SUBMITTED BY CONTRACT SHALL INCLUDE WORK REQUIRED TO COMPLY WITH ALL SUCH CODES. ANY ITEMS REQUIRED AND/OR MISSED IN THESE BASIS OF DESIGN DOCUMENT, SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR AT CONTRACTORS EXPENSE AND ZERO EXPENSE TO THE OWNER AND/OR DESIGN TEAM. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION
- CONTRACTOR SHALL STUDY DOCUMENTS, FULLY UNDERSTAND AND ACCEPT THE BASIS OF DESIGN A.2. AND SCOPE OF WORK. SUBMISSION OF BID INDICATES CONTRACTOR'S COMPLETE APPROVAL AND ACCEPTANCE OF CONSTRUCTION DOCUMENTS.
- CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKERS, WHO ARE TRAINED, LICENSED A.3. AND EXPERIENCED IN COMMERCIAL ELECTRICAL, AND WHO ARE FAMILIAR WITH THE CONSTRUCTION DOCUMENTS AND METHODS OF PERFORMING THE WORK REQUIRED.EACH WORKDAY WILL BE FROM 8:00 AM UNTIL 5:00 PM. ANY DEVIATIONS MUST BE REQUESTED IN WRITING A MIN OF 24 HOURS PRIOR TO DATE OF DEVIATION
- A.4. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE JOBSITE PRIOR TO THE COMPLETION OF EACH WORKDAY, ALL WORK AREAS SHOULD BE BROOM CLEANED, AND EQUIPMENT WIPED CLEAN PRIOR TO FINISHING PROJECT AND PRIOR TO SUBMISSION OF FINAL PAYMENT APPLICATION. A.5. CONTRACTOR SHALL PROVIDE A MINIMUM 1 YR. WARRANTY ON ALL LABOR AND MATERIALS
- INSTALLED. CONTRACTOR SHALL MAKE ALL WARRANTY REPAIRS OR REPLACEMENTS IN A TIMELY MANNER, AT NO ADDITIONAL COST TO THE OWNER. BASIS OF DESIGN:
- ALL CONSTRUCTION DOCUMENTS PROVIDED BY OWNER, INCLUDING ENGINEERING DRAWINGS, NOTES, B.1 SCHEDULES, DETAILS, CALCULATIONS AND SPECIFICATIONS, EQUIPMENT MANUFACTURER'S DRAWINGS AND SPECIFICATIONS, FORM THE BASIS OF DESIGN.
- THE BASIS OF DESIGN WILL BE USED FOR ALL INSPECTIONS, TESTING AND ACCEPTANCE OF THE B.2. WORK PERFORMED BY THE CONTRACTOR TO VERIFY SUCCESSFUL COMPLETION OF SCOPE OF WORK. THESE DRAWINGS ARE INTENDED TO GENERALLY SHOW THE EXISTING BUILDING ELECTRICAL AND B.3. LIGHTING SYSTEMS MODIFICATIONS REQUIRED FOR THIS PROJECT. INFORMATION PROVIDED INCLUDES LOCATION, QUANTITY, TYPE, SIZE, CAPACITY, AND FUNCTION OF SPECIFIC COMPONENTS OF THE NEW AND MODIFIED ELECTRICAL AND LIGHTING SYSTEMS THAT ARE TO BE PROVIDED BY THE CONTRACTOR
- ALL WIRE AND CONDUIT SHALL BE SIZED BY A LICENSED ELECTRICAL CONTRACTOR AND SHALL B.4. ACCOUNT FOR VOLTAGE DROP OF LESS THAN 3%. ALL ELECTRICAL CIRCUITS ON PLAN ARE IDENTIFIED AT HOMERUN BY PANEL AND CIRCUIT NUMBERS
- INCIDENTAL MODIFICATIONS OR DEMOLITION OF EXISTING ELECTRICAL SYSTEMS AND COMPONENTS AS REQUIRED FOR INSTALLATION OF NEW WORK IS INCLUDED AS PART OF THE PROJECT, WHETHER SHOWN ON PLANS OR NOT. CONTRACTOR SHALL FIELD VERIFY ALL REQUIREMENTS PRIOR TO BIDDING PROJECT. AN REQUIRED ITEMS REQUIRED, REGARDLESS IF ON PLANS, SHALL BE INSTALLED BY CONTRACTOR. ALL SUCH INSTALLTION SHALL BE INSTALLED AT CONTRACTORS EXPENSE.
- CEILING TILE AND GRID REMOVAL, MODIFICATION, AND REINSTALLATION AS REQUIRED FOR WORK B.6. SHOWN IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED WORK ACCESS ABOVE ALL LAY--IN CEILINGS.
- B.7. RELOCATION OF EXISTING BUILDING SYSTEMS AND EQUIPMENT, SUCH AS DUCT WORK, FIRE SPRINKLER PIPING AND HEADS, SMOKE DETECTORS, PLUMBING, ETC., AS REQUIRED FOR INSTALLATION OF NEW WORK IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES.
- THE EXISTING BUILDING ELECTRICAL SYSTEMS ARE INTENDED TO BE REUSED AS SHOWN ON PLANS B.8. OR AS INSTALLED IF NOT SHOWN. ALL EXISTING ELECTRICAL AND LIGHTING SYSTEMS ON PLANS ARE FOR REFERENCE ONLY AND MAY BE DIFFERENT IN THE FIELD. CONTRACTOR SHALL FIELD SURVEY, TEST AND INSPECT ALL EXISTING ELECTRICAL AND LIGHTING SYSTEMS PRIOR TO BIDDING TO ENSURE HE UNDERSTANDS AND ACCEPTS ALL EXISTING CONDITIONS.
- THE EXISTING ELECTRICAL LOADS AND PANEL SCHEDULES SHOWN ON PLANS ARE FOR REFERENCE ONLY TO ASSIST WITH NEW LOAD BALANCING BY THE ELECTRICAL CONTRACTOR. CONTRACTOR SHALL FIELD VERIFY ALL ACTUAL LOADS PRIOR TO FINAL LOAD BALANCING AND BREAKER SPACE SELECTION FOR ALL NEW CIRCUITS.

SCOPE OF WORK

- FURNISH ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO C.1. PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL MAKE ALL INSTALLATIONS ACCORDING TO MANUFACTURERS INSTRUCTIONS AND SPECIFICATIONS, IN ADDITION TO THOSE SHOWN ON PLANS.
- INSTALL COMPLETER AND OPERABLE ELECTRICAL SYSTEMS AS DESCRIBED BY THE CONSTRUCTION C.2. DOCUMENTS. INCIDENTAL ITEMS NOT SPECIFIED, BUT WHICH ARE ESSENTIAL FOR THE PROPER OPERATION OF SPECIFIED SYSTEMS AND EQUIPMENT, ARE CONSIDERED INCLUDED IN THE SCOPE OF WORK AND SHALL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

CODE COMPLIANCE ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCALLY ADOPTED BUILDINGS CODES D.1. AS LISTED ON THE DRAWINGS, AND ACCORDING TO THE LOCAL AUTHORITY HAVING JURISDICTION

D.2. THE BASIS OF DESIGN IS INTENDED TO COMPLY WITH ALL LOCAL CODES ENFORCED BUY THE AHJ OVER THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS MADE BY THE AHJ, WHETHER SPECIFICALLY SHOWN ON PLANS OR NOT.

DISCREPANCIES:

IN THE CASE OF A DISCREPANCY BETWEEN DRAWINGS, SPECIFICATIONS, OR MANUFACTURERS F 1 REQUIREMENTS, THE MOST STRINGENT SHALL APPLY AND BE COMPLIED WITH BY THE CONTRACTOR. IN THE CASE OF A DISCREPANCY BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS OR E.2. MANUFACTURERS REQUIREMENTS. THE AHJ SHALL DETERMINE WHICH SHOULD BE COMPLIED WITH BY THE CONTRACTOR.

JOBSITE CONDITIONS:

- CONTRACTOR SHALL EXAMINE THE JOBSITE PRIOR TO BIDDING AND FULLY UNDERSTAND THE F.1. CONDITIONS UNDER WHICH THE WORK OS TO BE PERFORMED BY SUBMITTING FOR WORK CONTRACTOR ACCEPTS ALL JOB CONDITIONS AS-IS.
- F.2. CONTRACTOR SHALL LOCATE THE EXISTING ELECTRIC UTILITY POINT OF SERVICE PRIOR TO STARTING ANY OTHER WORK. SERVICE CONNECTION SHOWN ON THE PLANS ARE PRELIMINARY ONLY AND SHALL BE VERIFIED BY ELECTRICAL CONTRACTOR.

PERMITS AND FEES:

CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS, LICENSES, AND CERTIFICATIONS REQUIRED G.1. BY THE AHJ AND PAY FOR ALL PERMITTING FEES AT ZERO ADDITIONAL CHARGE TO THE OWNER. G.2. CONTRACTOR SHALL INCLUDE ANY/ALL FEES ON CONTRACTUAL BID REGARDLESS IF KNOWN OR

UNKNOWN DURING BIDDING.

CONSTRUCTION DRAWINGS:

DRAWINGS ARE GENERAL SCHEMATIC IN NATURE. ELECTRICAL EQUIPMENT AND LIGHTING SHOWN H 1 ON DRAWINGS IS UNDERSTOOD TO BE THE GENERAL ARRANGEMENT ONLY, TO BE FIELD ADJUSTED AS REQUIRED.

ITEMS WITH SPECIFIC LOCATION AND OR SIZES WILL BE DIMENSIONED ON THE PLANS. H.2 DRAWINGS DO NOT SHOW EVERY DETAIL OR ITEM REQUIRED FOR EQUIPMENT INSTALLATIONS. H.3. REFER TO ALL EQUIPMENT MANUFACTURERS INSTRUCTIONS FOR ADDITIONAL; REQUIRED PARTS AND ACCESSORIES NEEDED FOR COMPLETE INSTALLATIONS.

COORDINATION WITH OTHER TRADES: CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCES, PROPERLY 1.1. SEQUENCE INSTALLATIONS, AND PROVIDE MANUFACTURERS REQUIRED SERVICE CLEARANCES. WHERE REQUIRED, CONTRACTOR SHALL MAKE THE REQUIRED ADJUSTMENTS TO EQUIPMENT LOCATIONS AND INSTALLATION SCHEDULE.

- ALL ELECTRICAL CONNECTIONS TO OWNER FURNISHED HVAC EQUIPMENT SHALL BE PROVIDED BY 1.2. ELECTRICAL CONTRACTOR, INCLUDING STARTERS, SPEED CONTROLLERS, DISCONNECTS, ENCLOSURES AND LABELS AS NEEDED. OBTAIN FINAL ELECTRICAL SERVICE REQUIREMENTS FROM OWNER'S SUPPLIER.
- IF APPLICABLE, ALL ELECTRICAL CONNECTIONS TO OWNER FURNISHED KITCHEN EQUIPMENT 1.3. SHOWN ON PLANS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR, INCLUDING DISCONNECTS, ENCLOSURES AND LABELS. OBTAIN FINAL ELECTRICAL SERVICE REQUIREMENTS FROM KITCHEN EQUIPMENT SUPPLIER
- COORDINATE WITH ROOFING CONTRACTOR TO SEAL ALL CONDUIT PENETRATIONS THROUGH ROOF 1.4 AS REQUIRED, PER ARCHITECTURAL ROOFING SPECIFICATIONS. PROVIDE ALL WEATHERPROOFING REQUIRED.
- IF REQUIRED, COORDINATE WITH OWNER'S FOR ALARM, SECURITY, COMMUNICATIONS OR OTHER 1.5. MEDIA COMPANY, TO INSTALL BACK BOXES, CONDUIT AND PULL STRING AS SHOWN ON PLANS FOR CABLE INSTALLATIONS BY OTHERS. VERIFY ROUGH-IN, ROUTING AND CONDUIT SIZES WITH EQUIPMENT PROVIDERS PRIOR TO INSTALLATIONS.
- CEILING TILE AND GRID REMOVAL. MODIFICATION AND REINSTALLATIONS AS REQUIRED FOR WORK 1.6. SHOWN IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES.

CONTRACTOR FURNISHED EQUIPMENT & MATERIALS:

- SHALL BE NEW, MANUFACTURED AND CERTIFIED TO COMPLY WITH THE BASIS OF DESIGN, FREE OF J.1. DEFECT AND COVERED UNDER A MINIMUM OF 1-YEAR FACTORY WARRANTY, UNLESS SPECIFIED DIFFERENTLY ELSEWHERE.
- SHALL BE AS SPECIFIED IN CONSTRUCTION DOCUMENTS, OR AS ACCEPTABLE SUBSTITUTIONS OF J.2. EQUAL ITEM. ALL SUBSTITUTIONS MUST BE 'APPROVED' THROUGH THE COMMISSIONING PROCESS TO BE ACCEPTABLE.

- DELIVERY, STORAGE AND PROTECTION: K.1. REPLACEMENTS AT NO ADDITIONAL COST TO THE OWNER.
- PROTECTION, ACCESS AND SECURITY OF MATERIALS STORED ONSITE.
- LOCATION CORRECTIONS REQUIRED: (ONLY IF CA SERVICES WERE SELECTED)
- CONTRACTOR SHALL STOP ALL WORK AND NOTIFY THE ENGINEER IMMEDIATELY.
- COMPLY WITH THE CONTRACT DOCUMENTS.

M. CONDUITS AND SUPPORTS: M.1.

- BUILDINGS LINES. M.2.
- EQUIPMENT CONNECTIONS:
- CONDUITS. PROPERLY SECURE SUPPORTS TO FLOORS OR WALLS.
- DETERMINE REQUIRED CLEARANCES AND SERVICE WORK AREAS.
- LABELS ON UNIT DISCONNECT SWITCHES. UNIT MARK SHOWN ON PLANS IS PRELIMINARY. LIGHTING INSTALLATIONS:
- WORK. HEIGHTS SHOWN ON SCHEDULE ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY CONTRACTOR

LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO STARTING WORK. 0.3. ALL LIGHTING CONTROL CABLES SHALL BE PLENUM RATED AND RUN EXPOSED TIGHT AGAINST

- WRAP SUPPORTS TO HOLD TIGHT AGAINST STRUCTURE.
- APPROXIMATE O.5.
- APPROVED LOCATION. WHEN ABOVE CEILING, PROVIDE PERMANENT MARKER FOR LOCATING CONTROLLER FROM THE GROUND.

COMMISSIONING PLAN - ELECTRICAL:

COMMISSIONING AGENT: Α. DIRECTED TO THEM.

SUBMITTALS B.1.

- PROVIDE SUBMITTALS FOR THE FOLLOWING MAJOR COMPONENTS AND EQUIPMENT PRIOR TO ORDERING
- C. FIELD INSPECTIONS: MINIMUM, FIELD INSPECTIONS SHALL INCLUDE:
- C.1.1. LIGHTING SYSTEMS STARTUP AND TESTING. C.1.2. FINAL LOCATIONS OF RECEPTACLE AND DATA BOXES.

STARTUP AND TESTING: D.

- D.1. ENSURE LIGHT FIXTURES ARE INSTALLED AND OPERATIONAL D.2. OPERATIONAL TESTING OF EMERGENCY LIGHTING SYSTEM'S REQUIRED BY NFPA 101, ANNUAL ESTING PROCEDURE. D.3.
- REQUIRED FOR PROPER OPERATION, PER MANUFACTURER'S INSTRUCTIONS. D.4.
- INSTRUCTIONS.
- INSTRUCTIONS. D.6.

- O&M DOCUMENTATION: E. BINDER SHOULD INCLUDE THE FOLLOWING ITEMS:
- THAN DESIGN DRAWINGS. E.0.2. EQUIPMENT MANUFACTURER'S INSTALLATION, OPERATION MAINTENANCE MANUALS. E.0.3. COMPLETED MANUFACTURER'S EQUIPMENT STARTUP SHEETS. E.0.4. EQUIPMENT PROGRAMMED SCHEDULES AND SET-POINTS DETERMINED AT STARTUP.

E.0.5. EQUIPMENT WARRANTIES TRAINING: F.

BASIS FOR INSTRUCTION.

G. ELEC. COMMISIONING REPORT: AT OR BEFORE TIME OF COMPLETION.

- G1.0 MAKE SURE ALL LIGHTING FIXTURES HAVE LAMPS INSTALLED AND ARE FUNCTIONAL.
- G2.0 TEST ALL EXIT SIGNS AND EMERGENCY LIGHTING.
- G3.0 MAKE SURE ALL OCCUPANCY SENSORS ARE INSTALLED AND WORKING.
- G4.0 MAKE SURE WALLBOX AND SCENE CONTROLLERS ARE INSTALLED AND WORKING.
- G5.0 TEST 10% OF DEVICES FOR OCCUPANCY SENSOR TYPES: WALLBOX TYPE WSD-PDT
- G6.0 VERIFY THE FOLLOWING:
- -SENSORS HAVE BEEN LOCATED AND AIMED PER MANUFACTURER'S REQUIREMENTS. -STATUS INDICATORS ON DEVICES ARE OPERATIONAL AND CORRECT.

CONTRACTOR SHALL FURNISH DELIVERY OF ALL REQUIRED MATERIALS AND EQUIPMENT TO BE INSTALLED. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS UNDAMAGED AT THE TIME OF DELIVERY FROM THE FACTORY. DAMAGED ITEMS SHALL BE RETURNED TO THE FACTORY FOR

K.2. CONTRACTOR SHALL COORDINATE WITH OWNER TO OBTAIN ACCEPTABLE JOBSITE STORAGE LOCATION FOR MATERIALS. CONTRACTOR SHALL COMPLY WITH OWNER REQUIREMENTS FOR K.3. CONTRACTOR SHALL TAKE ALL REQUIRED PRECAUTIONS TO PROPERLY PROTECT ALL STORED MATERIALS FROM WEATHER, DAMAGE, THEFT OR ANY OTHER HAZARD PRESENT AT THE STORAGE

L.1. IF CONTRACTOR IDENTIFIES ANY ACTUAL SITUATION OR SITE CONDITION THAT WILL PROHIBIT OR NEGATIVELY IMPACT THE INSTALLATION OR PERFORMANCE OF THE SYSTEMS AS DESIGNED,

L.2. IF CONTRACTOR PERFORMS WORK, AND OR INSTALLS ANY EQUIPMENT THAT IS FOUND TO BE DEFECTIVE, OR OUT OF COMPLIANCE WITH BASIS OF DESIGN OR CODE, CONTRACTOR SHALL REPLACE THE DEFECTIVE WORK AT NO ADDITIONAL COST TO THE OWNER. ALL NEW WORK SHALL

L.3. IF CONTRACTOR DAMAGES ADJACENT PROPERTY WHILE PERFORMING SCOPE OF WORK, HE SHALL MAKE PROMPT REPAIR AT CONTRACTORS EXPENSE, PRIOR TO COMPLETING PROJECT.

HOLD ALL CONDUITS TIGHT AGAINST STRUCTURE TO AVOID DAMAGE AND INTERFERENCE FORM OTHER TRADES. RUN ALL CONDUITS IN A NEAT AND WORKMAN LIKE MANNER PARALLEL TO

PROVIDE ALL REQUIRED CONDUIT HANGERS AND SUPPORTS WITH PROPER SPACING PER CODE REQUIREMENTS. GROUP PARALLEL RUNS OF CONDUIT TOGETHER ON COMMON HANGERS

N.1. INSTALL ALL UNIT MOUNTED SWITCHES AND EQUIPMENT IN A MANNER THAT DOES NOT COVER UP MANUFACTURER'S EQUIPMENT LABELS OR BLOCK ACCESS TO REMOVABLE SERVICE PANELS. N.2. WHERE REQUIRED FOR EQUIPMENT SERVICE CONNECTIONS, PROVIDE STEEL CHANNEL SUPPORT STANDS FOR MOUNTING OF UNIT DISCONNECT SWITCHES, STARTERS, SPEED CONTROLLERS AND

N.3. ENSURE THAT SERVICE CLEARANCES ARE NOT BLOCKED BY ROUTING OF CONDUIT OR SUPPORT STRUCTURES AT ALL EQUIPMENT SERVICE CONNECTIONS. COORDINATE WITH HVAC CONTRACTOR TO N.4. VERIFY WITH OWNER EQUIPMENT IDENTIFICATION MARKS, PRIOR TO ORDERING AND INSTALLING

0.1. COORDINATE MOUNTING HEIGHT OF ALL LIGHT FIXTURES WITH ARCH PLANS, PRIOR TO STARTING

0.2. ALL LIGHTING SWITCHES SHALL BE INSTALLED ON THE STRIKE SIDE OF DOOR. VERIFY ALL SWITCH

BUILDING STRUCTURE IN MANNER TO KEEP IT FROM DAMAGE BY OTHER TRADES. PROVIDE TIE-

COORDINATE LIGHTING CONTROL DEVICE LOCATIONS WITH MANUFACTURER'S REQUIREMENTS, INCLUDING SENSORS, SWITCHES AND CONTROLLERS. LOCATIONS SHOWN ON PLANS ARE

INSTALL ALL LIGHTING CONTROLLERS IN ACCESSIBLE LOCATION ABOVE CEILING OR OTHER

0.6. PROGRAM LIGHTING CONTROLLERS WITH OWNER FURNISHED OCCUPANCY SCHEDULES FOR GANG ON/OFF CONTROL OF ALL INTERIOR LIGHTING. SETUP ALL CONTROLLERS AND DEVICES AS REQUIRED TO PERFORM SEQUENCE OF OPERATIONS ON LIGHTING CONTROLLER SCHEDULE.

THE OWNER'S PROJECT MANAGER OR OTHER PERSON DESIGNATED SHALL FUNCTION AS THE 'COMMISSIONING AGENT' (CA) FOR THE PROJECT. THE CA SHALL INITIATE, DIRECT AND SUPERVISE ALL PHASES OF COMMISSIONING PLAN SPECIFIED BELOW. AGENT SHALL BE RESPONSIBLE TO ENSURE THAT COMMISSIONING PLAN IS FULLY IMPLEMENTED AND DOCUMENTED. OWNER HAS NOT CHOOSEN A&G ENGINEERING AS THIER COMMISSIONING AGENT AND QUESTIONS SHALL NOT BE

PROVIDE CA WITH MANUFACTURER'S SUBMITTAL DATA ON NEW EQUIPMENT TO BE FURNISHED AND OBTAIN OFFICIAL APPROVAL PRIOR TO ORDERING. PRE-CONSTRUCTION SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, SHOP DRAWINGS AND INSTALLATIONS MANUAL

B.1.1. ELECTRICAL PANELS, LIGHT FIXTURES, LIGHTING CONTROLS, RECEPTACLES, RECEPTACLE COVER PLATES, ELECTRIC HEATERS, ELECTRIC WATER HEATERS, CEILING FANS, FLOOR DEVICES, ETC

C.1. WHERE REQUIRED BY CA. CONTRACTOR SHALL COORDINATE FIELD INSPECTIONS OF CRITICAL CONSTRUCTION DETAILS FOR APPROVAL. PRIOR TO PROCEEDING WITH ADDITIONAL WORK, AT A

TEST ALL INDOOR AND OUTDOOR LIGHTING CONTROLS AFTER INSTALLATION. PROVIDE NAME AND SIGNATURE OF PERSON(S) COMPLETING THE TESTING, DATE PERFORMED, INITIAL AND FINAL SETTINGS OF CONTROLS ADJUSTMENTS AND THE RESULTING OPERATIONAL PERFORMANCE.

VERIFY OPERATION OF ALL WALL MOUNTED OCCUPANCY LIGHT SWITCHES AND ADJUSTMENTS

VERIFY OPERATION OF ALL CEILING MOUNTED OCCUPANCY SENSORS IN EACH ZONE SHOWN ON PLANS. ADJUST SET-POINTS AS REQUIRED FOR PROPER OPERATION, PER MANUFACTURER'S

D.5. VERIFY OPERATION OF ALL CEILING MOUNTED DAYLIGHTING SENSORS IN EACH ZONE SHOWN ON PLANS. ADJUST SET-POINTS AS REQUIRED FOR PROPER OPERATION, PER MANUFACTURER'S

VERIFY OPERATION OF OUTSIDE LIGHTING TIME CLOCK AND PHOTOCELL CONTROLS. ADJUST SET-POINTS ON TIME CLOCK TO ENABLE OUTDOOR LIGHTING CIRCUIT INDEPENDENT OF SEASONAL CHANGES. VERIFY PHOTOCELL WILL BRING ON/OFF THE OUTDOOR LIGHTING WHEN TIMER HAS ENABLED CIRCUITS. PERFORM ALL TESTING PER MANUFACTURER'S INSTRUCTIONS.

PROVIDE THE CA AND OWNER W/A MINIMUM OF 2 SETS OF BINDERS FOR THE PROJECT. EACH

E.0.1. AS--BUILT DRAWING MARKUPS SHOWING MODIFICATIONS WHERE INSTALLATIONS ARE DIFFERENT

PROVIDE A MINIMUM OF 2 HOURS ON--SITE TRAINING FOR OWNER'S OPERATIONAL STAFF UPON COMPLETION OF ALL STARTUP WORK. TRAINING SHALL COVER OPERATIONS AND MAINTENANCE ON ALL NEW LIGHTING AND ELECTRICAL SYSTEMS INSTALLED BY CONTRACTOR, INCLUDING LIGHTING CONTROLS. TRAINING SHALL UTILIZE MANUFACTURER'S OPERATIONS AND MAINTENANCE MANUALS AS

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISION THE LIGHTING CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENATION DEALING THE TASKS BELOW. SUBMIT DOCUMENATION

-MOVEMENT IN ADJACENT AREA AND/OR CYCLING OF HVAC SYSTEMS NOT FALSE TRIGGER SENSORS.

EQUIPMENT & MATERIALS - ELECTRICAL

- CONDUIT A.1. EMT, PVC AND RIGID GALVANIZED STEEL ARE ACCEPTABLE AS ALLOWED BY THE NEC. ELBOWS AND BENDS FOR ALL CONDUIT SYSTEMS SHALL USE THE SAME MATERIAL AS THE CONDUIT WITH WHICH THEY ARE INSTALLED.
- PROVIDE FLEXIBLE CONDUIT CONNECTIONS AT ALL EQUIPMENT TERMINATIONS. A 2 INSTALL A GALVANIZED IRON OR PVC SLEEVE FOR THE CONDUIT PASSING THROUGH CONCRETE OR A.3.

MASONRY CONSTRUCTION. EMT: UTILIZE WHERE INSTALLING ELECTRICAL IN EXPOSED LOCATIONS IN MECHANICAL ROOMS, A.4. SERVICE UTILITY AND OTHER WORK AREAS NOT OPEN TO PUBLIC. IN HIGH CEILING OR HIGH BAY AREAS, USE EMT CONDUIT FOR WIRING UP TO MINIMUM 10' ABOVE FLOOR BEFORE SWITCHING TO MC CABLE

- A.5. PVC: UTILIZE FOR INSTALLING ELECTRICAL IN UNDERGROUND EXTERIOR LOCATIONS WHERE ALLOWED AND NOT SUBJECT TOP DAMAGE. PROVIDE WITH RIGID STEEL FOR ALL BENDS AND ASSOCIATED FITTINGS. WHERE EXPOSED RISING OUT OF EXCAVATION TRENCH PROVIDE SCHEDULE 80 PVC PIPE AND FITTINGS.
- A.6. RIGID STEEL: UTILIZE FOR INSTALLING ELECTRICAL IN ALL HIGH ABUSE AREAS INDOORS AND OUTDOORS.
- WIRE AND CABLE COPPER CONDUCTORS FOR ALL WIRING SHOWN ON DRAWINGS. MINIMUM 90°F RATED INSULATION B.1. FOR ALL CONDUCTORS USED, SUCH AS THHN, THHW, THW OR EQUAL. ALUMINUM CONDUCTORS OF EQUIVALENT AMPACITY CAN BE SUBSTITUTED FOR SIZES #6 AND ABOVE.
- B.2. MC CABLE: METAL CLAD CABLE WITH COPPER CONDUCTORS, RATED FOR WET OR DRY LOCATIONS, 90C TEMPERATURE RATING, WITH GREEN INSULATED GROUNDING CONDUCTOR. ALL CONDUCTORS CABLED TOGETHER WITH SEPARATOR TAPE, INTERLOCKED ALUMINUM ARMOR, FLAME RETARDANT BLACK PVC JACKET OVER THE ARMOR.
- B.2.1. UTILIZE IN PLACE OF EMT CONDUIT AND WIRE WHERE ALLOWED FOR CONCEALED WIRING INSTALLATIONS, INSIDE WALLS OR OTHER BUILDING FRAMING, AND IN ATTIC AND CEILING PLENUM SPACES. INSTALL PER NEC REQUIREMENTS AND MANUFACTURERS INSTRUCTIONS WITH FACTORY FITTINGS AND CONNECTIONS.
- B.2.2. UTILIZE IN PLACE OF RIGID OR PVC CONDUIT AND WIRE FOR UNDERGROUND OUTDOOR INSTALLATIONS WHERE ALLOWED AND POTENTIAL FOR DAMAGE IS MINIMAL.
- C. RECEPTACLES AND COVER PLATES: C.1. INDOORS:
- C.1.1. DUPLEX RECEPTACLES :120V, DUPLEX, IVORY COLOR, SMOOTH NYLON FACE, DUPLEX, BACK AND SIDE WIRED, 15A 125V, NEMA 5-15R, AS MANUFACTURED BY HUBBELL MODEL #BR151 OR EQUAL. PROVIDE WITH MATCHING COVER PLATE.
- C.1.2. GFI RECEPTACLES: 120V, DUPLEX, IVORY COLOR, SMOOTH NYLON FACE, TEST BUTTON, LED INDICATOR LIGHT, BACK AND SIDE WIRED, 15 A 125V, NEMA 5-15R, AS MANUFACTURED BY HUBBELL MODEL #GF15IL OR EQUAL. PROVIDE WITH MATCHING COVER PLATE.
- C.1.3. 240V RECEPTACLES: 240V, MULTI-POLE WITH GROUND, COORDINATE FINAL NEMA TYPE AND AMPERAGE RATING WITH EQUIPMENT SUBMITTALS, SINGLE OR DUPLEX, AS MANUFACTURED BY HUBBELL OR EQUAL. PROVIDE WITH MATCHING COVER PLATE. C.2. OUTDOORS:
- C.2.1. GFI RECEPTACLES: 120V, WEATHER RESISTANT, DUPLEX, IVORY COLOR, SMOOTH NYLON FACE, TEST BUTTON, LED INDICATOR LIGHT, BACK AND SIDE WIRED, 15A 125V, NEMA 5-15R, AS MANUFACTURED BY HUBBELL MODEL #GF15LWR OR EQUAL. INSTALL IN WEATHERPROOF BOX WITH MATCHING GASKETED COVER PLATE.
- WALL SWITCHES AND COVER PLATES:
- MOTOR RATED SWITCH: 1P/20A, SUITABLE FOR USAGE AS MANUAL TOGGLE CONTROLLER FOR D.1. FRACTIONAL HP MOTORS, AS MANUFACTURED BY HUBBELL, CIRCUIT-LOOK MODEL #HBL7832D OR EQUAL. PROVIDE SUITABLE NEMA RATED BOX AND COVER PLATE AS REQUIRED.
- DISCONNECT SWITCHES: E.1. SQUARE D, HEAVY DUTY SAFETY SWITCH, OR EQUAL. QUICK-MAKE, QUICK-BREAK OPERATING MECHANISM, FUSIBLE OR NON-FUSIBLE, COLOR-CODED "ON"-"OFF" INDICATOR HANDLE, COVER PADLOCK HASP AND HANDLE LOCK "OFF" PROVISION FOR MULTIPLE PADLOCKS, 200,00 RMS SYMMETRICAL AMPERES SCCR. PROVIDE NEMA 1 OR 3R ENCLOSURE AS REQUIRED. PROVIDE CLASS R, L OR J FUSES AND SPRING REINFORCED PLATED COPPER FUSE CLIPS WHERE SPECIFIED.
- LABELS: F.1. PROVIDE EQUIPMENT LABELS FOR ALL DISCONNECT SWITCHES, PANEL-BOARDS AND ENCLOSURES. LABELS SHALL BE PERMANENTLY FASTENED TO EXTERIOR OF ENCLOSURE IN VISIBLE LOCATION, AND SHALL MATCH EQUIPMENT IDENTIFICATION MARKS SHOWN ON PLANS.
- INTERIOR LABELS SHALL BE BLACK PLASTIC WITH WHITE LETTERS, MINIMUM 3/4" HIGH. F.3. EXTERIOR LABELS SHALL BE METALLIC, SUITABLE FOR EXTERIOR LOCATIONS WITH BLACK LETTERS MINIMUM 3/4" TALL.
- ELECTRICAL PANELS: G.1. PANELS SHALL BE AS MANUFACTURED BY SQUARE D, OR EQUAL. PROVIDE SUBMITTALS FROM VENDOR PRIOR TO ORDERING PANELS AND BREAKERS. VERIFY PANELS MEET THE FAULT CURRENT RMS VALUES AS SHOWN ON THE PLANS.

BUSSED GUTTERS:

- H 1 SURFACE MOUNT, NEMA 3R STEEL ENCLOSURE, REMOVABLE FRONT COVER(S) WITH FACTORY HANDLES, ALUMINUM BUSSING, UL1773 LISTED, AS MANUFACTURED BY EATON B-LINE #R1060HEE OR APPROVED EQUAL. MUST COMPLY WITH REQUIREMENTS OF LOCAL UTILITY SPECIFICATIONS AS DISTRIBUTION POINT FOR MULTIPLE METER APPLICATIONS. PROVIDE SINGLE LENGTHS OR MULTIPLE SECTIONS AS REQUIRED BUY TOTAL SERVICE LENGTH ON PLANS.
- INDOOR LIGHTING CONTROLS: LIGHTING MASTER INTERFACE: PROVIDES 'GATEWAY' TO ETHERNET NETWORK, PROGRAMMING AND 1.1. CONTROL OF UP TO 100 DIRECTLY CONNECTED DEVICES, INCLUDES 120V POWER SUPPLY, CAT5 NETWORK CONNECTIONS AND STEEL NEMA 1 ENCLOSURE, AS MANUFACTURED BY TOUCHE
- LIGHTING CONTROL, MODEL #MSTR-DVOLT-S2 OR EQUAL LIGHTING RELAY MODULE: CONSISTS OF (2) INDEPENDENT LATCHING, MECHANICALLY HELD, SINGLE 1.2. POLE RELAYS, EACH RATED AT 20A/120V, (3) CAT5 INPUT PORTS FOR DAISY CHAIN OF UP TO (8) AMBIENT/OCCUPANCY SENSORS, (2) CAT 5 INPUT PORTS FOR SWITCHES OR DRY CONTACT DEVICES, (2) 0-10V DIMMING OUTPUT CHANNELS, AS MANUFACTURED BY TOUVHE LIGHTING
- CONTROL, MODEL #LRM-2P-120-0/10DIM OR EQUAL. AMBIENT/ OCCUPANCY SENSOR: CEILING MOUNTED, INTEGRATED OCCUPANCY DETECTION AND 1.3. AMBIENT LIGHT CONTROL ON SINGLE SENSOR, AUTO- ADDRESSING AND SUTO-CONFIGURING, CAT5 CONNECTION PORTS, AUTOMATIC CALIBRATION, SOFTWARE CONFIGURATION THROUGH LIGHTNING MASTER INTERFACE, SURFACE OR FLUSH MOUNTING OPTIONS. AS MANUFACTURED BY TOUCHE LIGHTING CONTROL, MODEL #SMAOS-P, OR EQUAL. SELECT PROPER COVERAGE PATTERN FOR EACH SPECIFIC INSTALLATION SHOWN ON PLANS AS FOLLOWS:
- I.3.1. AISLES AND CORRIDORS: #SMAOS-P-A 1.3.2. 360 COVERAGE, BELOW 20' CEILING HEIGHT: #SMAOS-P-360L
- I.3.3. 360 COVERAGE, ABOVE 20' CEILING HEIGHT: #SMAOS-P-360H LOW-VOLTASGE LIGHT SWITCH: MOMENTARY CONTACT SWITCH THAT PROVIDES DIGITAL INPUT TO 1.4. CONTROLLER WHEN PRESSED, CUSTOM CONFIGURABLE THROUGH SOFTWARE AT THE LIGHTING MASTER INTERFACE, CAN BE PROGRAMMED TO FUNCTION AS ON/OFF ONLY, BI-LEVEL WITH DIMMING FIXTURES, ON/OFF WITH MANUAL OVERRIDE, AND 3-WAY SWITCH, AS MANUFACTURED BY TOUCHE LIGHTING CONTROL, MODEL #SW-SF, OR EQUAL. PROVIDE WITH MATCHING DECORATIVE COVER PLATE.
- ROOM CONTROLLERS: PROVIDE INTELLIGENT LIGHTING CONTROL ROOM CONTROLLERS TO ACHIEVE ZONING AS INDICATED J.1. ON PLANS.WHEN POWER PACKS ARE PROVIDED, CONTRACTOR MUST PROVIDE 0-10V DIMMING WIRES FROM POWER PACK TO FIXTURE FOR CONTROL.
- MOTION SENSORS: K.1. PROVIDE COMPLETE MOTION SENSOR COVERAGE FOR ENTIRE BUILDING, EXCEPT ELECTRIC ROOMS, AND AS WHEN NOTED EXCEPTION SHOWN ON PLANS. PROVIDE DUAL TECHNOLOGY MOTION SENSORS IN EVERY ROOM AS REQUIRED BY IECC 2021. ASSUME CEILING MOUNT UNLESS WALL MOUNT SHOWN.
- VACANCY SENSORS PROVIDE COMPLETE DUAL TECHNOLOGY VACANCY SENSOR COVERAGE PER IECC 2021 IN ALL AREAS L.1. EXCEPT EMERGENCY EGRESS CORRIDORS AND PATHWAYS. SHOP DRAWING REQUIRED.
- Μ. OCCUPANCY SENSORS: M.1. PROVIDE COMPLETE DUAL TECHNOLOGY OCCUPANCY SENSOR COVERAGE PER IECC 2021 IN ALL EMERGENCY EGRESS CORRIDORS AND PATWHAYS. SHOP DRAWING REQUIRED.
- CONTROL STATION: ALL ROOMS SHALL HAVE A CONTROL STATION FOR CONTROL OF LIGHTS IN ROOM. IF NO CONTROL N 1 STATION IS SHOWN, ASSUME A TWO ZONE CONTROLLER FOR ROOMS LARGER THAN 9' X 9' AND A WALL MOUNT DUAL TECHNOLOGY CONTROLLER FOR ROOMS SMALLER THAN 9' X 9'.

DESIGN WITHOUT CONSTRUCTION ADMINISTRATION:

IT IS UNDERSTOOD AND AGREED THAT THE ARCHITECT/ENGINEER'S SCOPE DOES NOT INCLUDE PROJECT OBSERVATION OR REVIEW OF THE CONTRACTOR'S PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES. THE OWNER AGREES TO PROVIDE CONSTRUCTION ADMINISTRATION AND ASSUMES ANY AND ALL POTENTIAL LIABILITY ARISING FROM SUCH ADMINISTRATION. THE OWNER ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE CONTRACT DOCUMENTS AND FOR CONSTRUCTION OBSERVATION AND THE OWNERS WAIVES ANY CLAIMS AGAINST THE ARCHITECT/ENGINEER THAT MAY BE IN ANY WAY CONNECTED THERETO. THE ARCHITECT/ENGINEER SHALL NOT RESPOND TO ANY AND ALL QUESTIONS DIRECTED TO THE INTERPRETATION OF THE CONTRACT DOCUMENTS OR IN RESPONSE TO ISSUES ENCOUNTERED BY AND AS RELAYED BY THE CONTRACTOR IN THE FIELD. ANY AND ALL QUESTIONS SHALL BE SUBMITTED DURING THE BIDDING PHASE.

SYMBOL LEGEND - ELECTRICAL:

ISOLATED GROUND

KILOVOLT AMP

KILOWATT

JUNCTION BOX (J-BOX)

LIGHTING CONTACTOR

MINIMUM CIRCUIT AMPACITY

KVA -

KW -

-

JB

LC

MCA

	2' X 4' TROFFER LIGHT				
	2' X 4' TROFFER EMERGENCY LIGHT				
	2' X 2' TROFFER LIGHT				
	2' X 2' TROFFER EMERGENCY LIGHT				
	2" PENDANT				
	4" PENDANT				
	6" ROUND RECESSED DOWNLIGHT				
	6" ROUND RECESSED EMERGENCY DOWNLIG	HT			
	4' STRIPLIGHT BASIC LIGHTING				
	4' STRIPLIGHT BASIC EMERGENCY LIGHTING				
EXIT	EXIT/EMERGENCY LED LIGHTS. SHALL NOT BE	CONNECTED TO) SWITCH LEG.		
I	1'X4' SURFACE, LOW PROFILE				
	STRIP LED LIGHT.				
	LIGHT TRACK KIT.				
	ARCHITECTURAL WALL PACK				
•	2 MAX SMITCH 120V/20A WALL MOUNTED. (MOUNTED				
- 3	3-WAY SWITCH 120V/20A WALL MOUNTED. (MC				
. 4	4-WAY SWITCH 1200/20A WALL MOUNTED. (MC				
D	DATA/TELEPHONE WALL MOUNTED DEVICE. FA	ASTENED TO ST	RUCTURE WITHIN 8" OF		
/	ELECTRICAL PANEL BOARD (REFER TO SCHE	DULE).			
	ELECTRICAL DISCONNECT (REFER TO SCHED	, ULE).			
-	DUPLEX RECEPTACLE GENERAL 120V/20A (MC	, OUNTED AT 18" AF	FF).		
 ~	TELEVISION DUPLEX RECEPTACIE 120V/20A (I	MOUNTED AT 72"	AFF).		
~	QUAD RECEPTACI E 120V/20A (MOUNTED 18" A	AFF)			
	GROUND FAULT DUPLEX RECEPTACLE 120V/2	0A (MOUNTED 18	" AFF)		
GFCI	GROUND FAULT QUAD RECEPTACLE 1201/20A	MOUNTED 18" A	AFF)		
II GFCI	GROUND FAULT WEATHER RESISTANT RECER				
WP					
AUP -					
					04 1111 0000
	COMPLIANT SYSTEM.	JA SIZE FOR A OF	PERABLE AND	No. DESCRIPTION	DATE
1	HOMERUN CIRCUIT BREAKER SINGLE POLE.			STATISTICS OF THE	
Ċ	HOMERUN CIRCUIT BREAKER TWO POLE.				
-	HOMERUN CIRCUIT BREAKER THREE POLE.			Luis Eduarda Madriad	
UE	ELECTRICAL UTILITY.			문대's Eddar do Haar Igat	_//
—UTC	TELEPHONE & CABLE UTILITY.			CENSED SSICENSED	
				01 JUN 2	2023
					A&G Engineering MEP Desigr 1004 W Frontage Ro Alamo, TX 78510 (956) 787 - FIRE info@AandGMEP.com
ABBREVIA	ATIONS:				
A -	AMPERES; AMPS (CURRENT)	MCB - MED -	MAIN CIRCUIT BREAKER MEDIUM	KH1	ГТ
AC - AFF -	ABOVE COUNTER ABOVE FINISHED FLOOR	MFG - MLO -	MANUFACTURER MAIN LUGS ONLY		
AFG - AHJ -	ABOVE FINISH GRADE AUTHORITY HAVING JURISDICTION	MOCP - NEC -	MAX OVER-CURRENT PROTECTION	CUTDODD	
BC -	BELOW COUNTER	NFDS - NO -	NON-FUSED DISCONNECT SWITCH NUMBER		10110
C - CA -	COMDUTI COMMISSIONING AGENT	OH - P -	OVERHEAD PHASE OR POLE	WELLN	ГСС
CB - CONC -	CONCRETE	PC - PM -	PHOTOCELL PROJECT MANAGER		C 9 9
DEG -	DEGREE	T - UG -	TELEPHONE		
DEI - DIM -	DETAIL DIMMABLE	V -	VOLTS VOLTAMPS		
EXIST - GFCI -	EXISTING GRD FAULT CIRCUIT INTERRUPTING	W -		6151 E. POS	T RD.
GND - IECC -	GROUND INT ENERGY CONSERVATION CODE	XFMR -		KYLE TX, 7	8640
IG -	ISOLATED GROUND	-	DEGINEE OFFOIDO	ZZ UZ IU	UT JUN 2023

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°K -

1Ø -

DEGREE FAHRENHEIT

DEGREE KELVIN

SINGLE PHASE

THREE PHASE



General Notes - Elec



- A. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES PRIOR TO BIDDING.
- B. ALL LIGHT FIXTURE SUBSTITUTION SHALL BE APPROVED BY OWNER AND MUST BE EQUAL OR BETTER QUALITY THAN FIXTURES APPROVED.
- C. EQUIPMENT GROUNDING CONDUCTORS SHALL NOT BE TERMINATED OR ROUTED THROUGH METER SOCKET. GROUNDING SHALL BE ESTABLISHED PER 2017 NEC 250.24(A)(1)
- D. CONTRACTOR SHALL PROVIDE AND INSTALL HAPCO "RTA25D7B4-BM" ALUMINUM POLE FOR ALL POLE LIGHTS SHOW ON PLANS. NO SUBSTITUTIONS SHALL BE ALLOWED.

KEYED NOTES:

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- CONTROL LIGHTING CIRCUIT VIA A 7-DAY, 24-HOUR, PROGRAMMABLE, ASTRONOMICAL, DIGITAL, TIME CLOCK/PHOTO CELL COMBINATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY DISTANCES TO ELECTRICAL PANEL BOARD FOR WIRE AND CONDUIT.
- 2. PROPOSED UTILITY COMPANY PAD MOUNTED TRANSFORMER. COORDINATE EXACT LOCATION AND PRIMARY RACEWAY ROUTING WITH POWER COMPANY ENGINEERING DEPARTMENT.
- 3. SECONDARY FEEDERS ROUTED TO ELECTRICAL SERVICE. REFER TO ELECTRICAL RISER DIAGRAM FOR FEEDER SIZES/QUANTITIES.
- 4. PROVIDE AND INSTALL ONE (1) UNDERGROUND CONDUIT PIPE FOR TELEPHONE / TELEVISION SERVICE. REFER TO CIVIL DRAWINGS FOR EXACT POINT OF CONNECTION.





THE CONTRACTOR SHALL: A. COMPARE LIGHT FIXTURE PLACEMENT ON ARCHITECTURAL AND MEP PLANS. ANY DEVIATIONS FROM THE TWO SHALL BE REPORTED TO OWNER PRIOR TO BIDDING.

Β.

- NOT DEVIATE FROM FIXTURE SCHEDULE UNLESS APPROVED BY OWNER.
- C. ENSURE ALL EMERGENCY LIGHT FIXTURES ARE PURCHASED WITH OPTIONAL FACTORY-INSTALLED BACKUP BATTERY PACK IN COMPLIANCE WITH *NFPA 101 LIFE SAFETY CODE* SECTION 7.9.2.1. IF FIXTURE DOES NOT COME WITH THAT OPTION, THEN CONTRACTOR SHALL PROVIDE ONE (1) "*LVS LED-BP-SLIM-18W*" AND BE INSTALLED IN COOL DRY LOCATION.
- D. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN (RCP) FOR EXACT LOCATION OF LIGHT FIXTURES. FURNISH FIXTURES WITH TRIM COMPATIBLE WITH THE TYPE OF CEILING AS INDICATED ON THE RCP.
- E. CONNECT EXIT/EMERCENCY LIGHTS AND EMERGENCY BALLASTS IN EMERGENCY LIGHTS IN EACH SPACE TO UNSWITCHED HOT LEG OF LOCAL LIGHTING CIRCUIT.
- F. COORDINATE PLACEMENT OF FIXTURES WITH ACTUAL INSTALLATION OF MECHANICAL EQUIPMENT AND DUCTWORK.
- G. WHERE DUAL LEVEL SWITCHING IS INDICATED IN A SPACE WITH 3-LAMP FLUORESCENT FIXTURES, PROVIDE BALLASTS IN ALL FIXTURES AND WIRING TO ALLOW FOR SWITCHING OF MIDDLE LAMPS INDEPENDENTLY OF OUTER LAMPS.
- H. ENSURE SWITCH LEGS ARE NOT SHOWN WHERE DIGITAL SWITCHES ARE USED TO CONTROL LIGHTS.
- I. INCLUDE IN HIS BID TO OWNER THE COST OF ALL CONTROL PANELS, DEVICES, NETWORK CABLING AND LOW OR LINE VOLTAGE WIRING FOR A COMPLETE LIGHTING CONTROL SYSTEM AS SPECIFIED. REFER TO MANUFACTURERS WIRING DIAGRAMS AND INSTALLATION MANUALS PRIOR TO BID.
- J. ENSURE LIGHTING CONTROL SYSTEM IS DESIGNED TO MEET CURRENT VERSION OF INTERNATIONAL ENERGY CONSERVATION CODE . ALL LIGHT SWITCHES SHALL OPERATE AS BOTH MANUAL AND AUTOMATIC LINE VOLTAGE SWITCHES OR AS MOMENTARY DIGITAL SWITCHES IN CONJUNCTION WITH RELAY CONTROL PANELS, UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL GENERAL LEGEND.
- K. REFER TO LIGHTING CONTROL RELAY SCHEDULE FOR CIRCUITING OF LIGHT SWITCHES AND LIGHT FIXTURES THROUGH RELAYS IN LIGHTING RELAY PANELS.
 L. ENSURE ALL LIGHTING CONTROL SYSTEM
- CONTROL ALL LIGHTING CONTROL SYSTEM
 "CONTROL" AND "POWER" WIRING IS INSTALLED
 IN CONDUIT.
- M. COORDINATE LOCATION OF LIGHTS WITH DIFFUSERS AND GRILLS.
- N. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET.
 O. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 227
- VOLT BRANCH CIRCUITS USE #10 AWG CONDUCTORS FOR 20 AMPERE, 227 VOLT BRANCH CIRCUITS LONGER THAN 200 FEET.

KEYED NOTES:

- 1. PROVIDE AND INSTALL TIME SWITCH CONTROL. COORDINATE EXACT LOCATION WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- 2. PROVIDE AND INSTALL OCCUPANCY SENSOR CONTROL WITH MANUAL SWITCH LIKE "DOUGLAS DIVERSA WOSSDU1-P-VW. COORDINATE EXACT LOCATION WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- 3. CONTROL LIGHTING CIRCUIT VIA A 7-DAY, 24-HOUR, PROGRAMMABLE, ASTRONOMICAL, DIGITAL, TIME CLOCK/PHOTO CELL COMBINATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY DISTANCES TO ELECTRICAL PANEL BOARD FOR WIRE AND CONDUIT.





THE CONTRACTOR SHALL:

- ENSURE ALL 120VAC, 1-PHASE, 20A RECEPTACLES ARE INSTALLED WITH AFCI CIRCUIT BREAKERS.
- B. PROVIDE A 120VAC DEDICATED CIRUCIT AND INSTALL SMOKE DETECTORS AS REQUIRED BY *NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE*. ENSURE TO GET APPROVAL FROM THE AHJ PRIOR TO BIDDING.
- C. ENSURE EQUIPMENT GROUNDING CONDUCTORS ARE NOT ROUTED NOR TERMINATE THROUGH THE METER SOCKET. GROUNDING SHALL BE ESTABLISHED PER MOST CURRENT VERSION OF THE NFPA 70 NATIONAL ELECTRIC CODE ARTICLE 250.24(A)(1).
- D. ENSURE ALL REQUIRED TAMPER-RESISTANT RECEPTACLES ARE INSTALLED AS PER MOST CURRENT VERSION OF THE NFPA 70 NATIONAL ELECTRIC CODE ARTICLE 406.12.
- ELECTRIC CODE ARTICLE 406.12. E. PROVIDE AND INSTALL DUCT MOUNTED SMOKE DETECTORS WITHIN THE RETURN DUCT FOR ANY SYSTEM RETURNING 2,000CFM OR MORE AND A SUPPLY DUCT DETECTOR FOR ANY SYSTEM SUPPLYING 15,000 CFM OR MORE.
- F. ENSURE ALL DUCT MOUNTED SMOKE DETECTORS ARE PROVIDED WITH A REMOTE ALARM INDICATOR AND ARE LABELED TO INDICATE THE UNIT THEY SERVE. AN EXCEPTION TO THIS REQUIREMENT IS WHERE THE SPECIFIC IN-DUCT SMOKE DETECTOR IS ADDRESSABLE AND IT'S LOCATION IS INDICATED AT THE FACP.
- G. ENSURE ALL FIRE ALARM DEDICATED BRANCH CIRCUITS ARE MECHANICALLY PROTECTED, HAVE A RED MARKING, ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND BE IDENTIFIED, IN
- RED, AS "FIRE ALARM CIRCUIT". H. ENSURE SMOKE DETECTORS ARE INSTALLED FURTHER THAN 3 FEET FROM ANY AIR SUPPLY OR RETURN GRILL.
- I. ENSURE AUXILIARY RELAYS, TO INITATE CONTROL OF FIRE SAFETY FUNCTIONS, ARE LOCATED WITHIN 3 FEET OF THE CONTROLLED
- CIRCUIT OR DEVICE.J. ENSURE ALL CONDUIT AND CONDUIT STUBS ARE 1" (UON ON DRAWINGS).
- K. ENSURE THAT ALL ELECTRICAL CONDUIT IS SECURELY FASTENED IN PLACE BY AN APPROVED MEANS PER NFPA 70, NATIONAL ELECTRICAL CODE 2020, ARTICLE 348.
- L. ENSURE ONE (1) 120VAC DEDICATED BRANCH CIRCUIT IS INSTALLED FOR THE FIRE ALARM CONTROL PANEL. CIRCUIT SHALL BE TERMINATED WITH 3' OF FLEX CABLE. M. ENSURE THE FIRE ALARM PANEL IS INSTALLED
- M. ENSURE THE FIRE ALARM PANEL IS INSTALLED BY A TEXAS LICENSED FIRE ALARM COMPANY.
 N. ENSURE THAT ALL ELECTRICAL PANELS HAVE A DEDICATED WORKING SPACE PER *NFPA 70*,
- O. ENSURE ALL PATIENT CARE SPACES & FIXED
 ENSURE ALL PATIENT CARE SPACES & FIXED
- EQUIPMENT, INCLUDING BUT NOT LIMITED TO EXAM ROOMS, THERAPY AREAS, MRI MACHINES, ETC, HAVE REDUNDANT GROUNDING IN ACCORDANCE WITH *NFPA 70 NEC; ARTICLE* 517.13 (A) AND 517.13 (B) AND FOLLOW THE GROUNDING SIZING IN ACCORDANCE WITH *NEC ARTICLE 250.122*.
- P. USE #10 AWG CONDCUTORS FOR 20 AMP 120V BRANCH CIRCUITS LONGER THAN 100 FEET.
- Q. FURNISH AND INSTALL TV OUTLET AND TV RECEPTACLES IN SEPERATE BACKBOX WALL
- R. ENSURE ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL HAVE SOUND
- RETARDING/ABSORUNING FIRE STOP MATERIAL S. REFER TO ARCHITECTURAL MILLWORK AND ELEVATION PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL WIRING DEVICES.
- T. COORDINATE ROUGH-IN LOCATIONS OF ALL DEVICES WITH ARCHITECTURAL ELEVATIONS DETAILS AND PLANS.





3 X-RAY AREA DETAIL 2 NOT TO SCALE

KEYED NOTES:

- 1. ELECTRICAL PANEL BOARD. REFER TO ELECTRICAL SCHEDULES FOR FURTHER INFORMATION.
- 2. 2'X2'X3/4" PLYWOOD TELEPHONE BOARD MOUNTED ON WALL. PROVIDE ONE (1) #6 GROUND CONDUCTOR AT BOARD FROM PANEL GROUND BUSS. NOTE: ROUTE TWO (2) CONDUITS WITH PULL STRING, STUB 1'-0" ABOVE FINISHED FLOOR FOR TELEPHONE / TELEVISION SERVICE.
- 3. PROVIDE AND INSTALL AN ELECTRICAL PANEL BOARD, 225A MAIN LUGS, 200A MAIN BREAKER, NEMA-1, 42 SPACES.
- 4. X-RAY "ON" WARNING LIGHT.
- 5. J-BOX (A) 8"X8" MOUNTED 1' A.F.F. (2" CONDUIT TO j-BOX (B)).
- 6. CIRCUIT BREAKER, 2" CONDUIT TO J-BOX (B).
- 7. PANIC BUTTON, SHUNT TRIP BREAKER.
- 8. J-BOX (B) 8"X8" MOUNTED 1' A.F.F. (3/4" CONDUIT TO J-BOX (E), 2" CONDUIT TO J-BOX (A), 2" CONDUIT TO CIRCUIT BREAKER.
- 9. J-BOX (E) 2"X4" (3/4" CONDUIT TO J-BOX (B)).
- 10. POWER OUTLETS.
- 11. CAT-6 NETWORK.
- 12. TO BUILDING SERVICE PANEL.
- 13. SOLID SURFACE COUNTER, PROVIDE 2" GROMMET AS INDICATED.
- 14. ACCORDING TO 2020 NFPA 70 NATIONAL ELECTRIC CODE ARTICLE 210.63, PROVIDE AND INSTALL ONE (1) GFCI, WEATHERPROOF RECEPTACLE FOR EVERY HVAC EQUIPMENT INSTALLED.
- 15. PROVIDE AND INSTALL A WEATHERPROOF JUNCTION BOX TO SERVE EXTERIOR SIGN. ROUTE LIGHTING CIRCUIT VIA A 7-DAY, 24-HOUR, PROGRAMMABLE, ASTRONOMICAL, DIGITAL, TIME CLOCK/PHOTO CELL COMBINATION.
- 16. CONTRACTOR SHALL PROVIDE ONE 120V/1 J-BOX
 WITH 3' OF SPARE FLEX CABLE FOR FUTURE FIRE
 ALARM PANEL. FIRE ALARM SYSTEM SHALL BE
 DESIGNED BY A LICENSED FIRE ALARM
 CONTRACTOR.
- 17. CONTRACTOR SHALL PROVIDE ONE 208V/1 J-BOX FOR FUTURE UNIT HEATER. UNIT HEATER SHALL BE PROVIDED BY MECHANCIAL CONTRACTOR.



Branch Panel: A Location: Supply From: Mounting: Recessed Enclosure: Type 1

Volts: 120/208 Wye Phases: 3 Wires: 4

A.I.C. Rating: See notes 1 Mains Type: Mains Rating: 400 A MCB Rating: 300 A

Notes:

CKT		Tuin	Delee		•		в		C		Trin	Circuit Descrip
			Poles	0057	A 0050		D I					
AT	PANEL B	100 A	3	8057	2250	0470	0050			2	30 A	
A3						8172	2250	0505	0500			
A5								6535	2500	2	30 A	EQ: Dryer
A7	REC: Refrigerator	20 A	1	500 VA	2500							
A9	REC: Break room counter	20 A	1			1000	2000			2	30 A	EQ: X-Ray
A11	REC: hvac maintenance	20 A	1					180 VA	2000			
A13	REC: Gym area	20 A	1	720 VA	750 VA					2	20 A	EQ: Riser room
A15	EQ: Return circulating pump	20 A	1			200 VA	750 VA					
A17	REC: Riser room	20 A	1					1000				
A19	REC: Microwave	20 A	1	1000								
A21	REC: Restroom	20 A	1			360 VA						
A23	REC: Washer	20 A	1					500 VA				
A25	REC: hvac maintenance	20 A	1	180 VA								
A27												
A29									1250	2	15 A	HVAC: CU-1
A31					1250							
A33							1903			2	20 A	HVAC: CU-2
A35									1903			
A37	HVAC: RTU-1	45 A	3	5398	7797					3	70 A	HVAC: RTU-2
A39						5398	7797					
A41	-							5398	7797			
		Tot	al Load:	3099	9 VA	29825 VA		29063 VA				
		Tota	I Amps:	25	9 A	25	0 A	24	2 A	-		
1-												

Legend:

Notes:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel	Γot
Water Heater	4500 VA	100.00%	4500 VA		
HVAC	45891 VA	100.00%	45891 VA	Total Conn. Load:	898
Equipments	24360 VA	65.00%	15834 VA	Total Est. Demand:	80
Receptacle	12520 VA	89.94%	11260 VA	Total Conn.:	249
Lighting	2684 VA	100.00%	2684 VA	Total Est. Demand:	222

Electrical contractor shall submit over current protective device short circuit study prior to approval of the distribution equipment submittals.
 Estimated loads were conservative estimates at time of design, contractor shall contact A&G Engineering should actual conntected loads be higher.

LIGHTING SCHEDULE

	GENERAL			SPECI	FICATION	S							
QTY	DESCRIPTION	MAKE/MODEL	LAMP	VOLTAGE	WATTS	MOUNTING							
7	2' X 4' VOLUMETRIC RECESSED LIGHTING	SIGNIFY: 2FGXG48L840-4-RS-UNV-DIM	LED	120 V	36 VA	RECESSED							
13	2' X 4' VOLUMETRIC RECESSED LIGHTING EMERGENCY BATTERY PACK	SIGNIFY: 2FGXG48L840-4-RS-UNV-DIM-BSL10LST	LED	120 V	36 VA	RECESSED							
26	6" RECESSED DOWNLIGHT	SIGNIFY: #6RN / Z6RDL20840WOCDZ10U	LED	120 V	21 VA	RECESSED							
6	6" RECESSED DOWNLIGHT EMERGENCY BATTERY PACK	SIGNIFY: #6RNEM6 / Z6RDL20840WOCDZ10U	LED	120 V	21 VA	RECESSED							
5	SIGNIFY 101L WALL PACK, 11237 LUMENS.	SIGNIFY: 101L-32L-1000-NW-G2-4-UNV-XX	LED	120 V	107 VA	WALL MOUNTED							
2	SIGNIFY ECOFORM AREA 48L BLC, 14544 LUMENS	ECF-S-48L-1A-NW-G2-AR-BLC-UNV-XX	LED	120 V	157 VA	POLE							
13	AC ZOLO 7, WASHER/GRAZER, DRY RATED, WET RATED, HIGH PURITY TEMPERED GLASS.	KELVIX: Z7AC-4-9-W-Z-40-50-L3-WH	LED	120 V	27 VA	WALL MOUNTED							
3	EMERGENCY EXIT 1W (2) LED LAMPS FURNISHED	SIGNIFY: #VLTCR3R	LED	120 V	3 VA	WALL MOUNTED							
4	4' STRIPLIGHT BASIC LIGHTING	SIGNIFY: FSSEZ440L840-UNV-DIM	LED	120 V	40 VA	SURFACE							
1	10 FEET RECESSED LIGHT.	3R-10-MD-40-UNV-T1-WH	LED	120 V	60 VA	RECESSED							
2	10 FEET RECESSED LIGHT, BATTERY PACK INCLUDED.	3R-10-MD-40-UNV-T1-WH-EM	LED	120 V	60 VA	RECESSED							
2	24" BRUSHED NICKEL STANDARD, CONTEMPORARY WALL SCONCE LIGHT	BROWNLEE: 5165-24-WH-H16-35K	LED	120 V	16 VA	WALL MOUNTED							
	QTY 7 13 26 6 5 2 13 3 4 1 2 2 2 2	GENERALQTYDESCRIPTION72' X 4' VOLUMETRIC RECESSED LIGHTING132' X 4' VOLUMETRIC RECESSED LIGHTING EMERGENCY BATTERY PACK266" RECESSED DOWNLIGHT66" RECESSED DOWNLIGHT EMERGENCY BATTERY PACK5SIGNIFY 101L WALL PACK, 11237 LUMENS.2SIGNIFY ECOFORM AREA 48L BLC, 14544 LUMENS13AC ZOLO 7, WASHER/GRAZER, DRY RATED, WET RATED, HIGH PURITY TEMPERED GLASS.3EMERGENCY EXIT 1W (2) LED LAMPS FURNISHED44' STRIPLIGHT BASIC LIGHTING 1 10 FEET RECESSED LIGHT.224" BRUSHED NICKEL STANDARD, CONTEMPORARY WALL SCONCE LIGHT	GENERALQTYDESCRIPTIONMAKE/MODEL72' X 4' VOLUMETRIC RECESSED LIGHTINGSIGNIFY: 2FGXG48L840-4-RS-UNV-DIM132' X 4' VOLUMETRIC RECESSED LIGHTING EMERGENCY BATTERY PACKSIGNIFY: 2FGXG48L840-4-RS-UNV-DIM-BSL10LST266" RECESSED DOWNLIGHTSIGNIFY: #6RN / Z6RDL20840WOCDZ10U66" RECESSED DOWNLIGHT EMERGENCY BATTERY PACKSIGNIFY: #6RNEM6 / Z6RDL20840WOCDZ10U5SIGNIFY 101L WALL PACK, 11237 LUMENS.SIGNIFY: 101L-32L-1000-NW-G2-4-UNV-XX2SIGNIFY ECOFORM AREA 48L BLC, 14544 LUMENSECF-S-48L-1A-NW-G2-AR-BLC-UNV-XX13AC ZOLO 7, WASHER/GRAZER, DRY RATED, WET RATED, HIGH PURITY TEMPERED GLASS.KELVIX: Z7AC-4-9-W-Z-40-50-L3-WH3EMERGENCY EXIT 1W (2) LED LAMPS FURNISHEDSIGNIFY: #VLTCR3R44' STRIPLIGHT BASIC LIGHTINGSIGNIFY: FSSEZ440L840-UNV-DIM110 FEET RECESSED LIGHT. PACK INCLUDED.3R-10-MD-40-UNV-T1-WH224" BRUSHED NICKEL STANDARD, CONTEMPORARY WALL SCONCE LIGHTBROWNLEE: 5165-24-WH-H16-35K	GENERALQTYDESCRIPTIONMAKE/MODELLAMP72' X 4' VOLUMETRIC RECESSED LIGHTINGSIGNIFY: 2FGXG48L840-4-RS-UNV-DIMLED132' X 4' VOLUMETRIC RECESSED LIGHTING EMERGENCY BATTERY PACKSIGNIFY: 2FGXG48L840-4-RS-UNV-DIM-BSL10LSTLED266" RECESSED DOWNLIGHTSIGNIFY: #6RN / Z6RDL20840WOCDZ10ULED66" RECESSED DOWNLIGHT EMERGENCY BATTERY PACKSIGNIFY: #6RN / Z6RDL20840WOCDZ10ULED5SIGNIFY 101L WALL PACK, 11237 LUMENS.SIGNIFY: 101L-32L-1000-NW-G2-4-UNV-XXLED2SIGNIFY ECOFORM AREA 48L BLC, 14544 LUMENSECF-S-48L-1A-NW-G2-AR-BLC-UNV-XXLED13AC ZOLO 7, WASHER/GRAZER, DRY RATED, WET RATED, HIGH PURITY TEMPERED GLASS.KELVIX: Z7AC-4-9-W-Z-40-50-L3-WHLED3EMERGENCY EXIT 1W (2) LED LAMPS FURNISHEDSIGNIFY: #VLTCR3RLED44' STRIPLIGHT BASIC LIGHTINGSIGNIFY: FSSEZ440L840-UNV-DIMLED110 FEET RECESSED LIGHT.3R-10-MD-40-UNV-T1-WHLED224" BRUSHED NICKEL STANDARD, CONTEMPORARY WALL SCONCE LIGHTBROWNLEE: 5165-24-WH-H16-35KLED	GENERALSPECIAQTYDESCRIPTIONMAKE/MODELLAMPVOLTAGE72' X 4' VOLUMETRIC RECESSED LIGHTING EMERGENCY BATTERY PACKSIGNIFY: 2FGXG48L840-4-RS-UNV-DIMLED120 V132' X 4' VOLUMETRIC RECESSED LIGHTING EMERGENCY BATTERY PACKSIGNIFY: 2FGXG48L840-4-RS-UNV-DIM-BSL10LSTLED120 V266" RECESSED DOWNLIGHTSIGNIFY: #6RN / Z6RDL20840WOCDZ10ULED120 V66" RECESSED DOWNLIGHTSIGNIFY: #6RN / Z6RDL20840WOCDZ10ULED120 V5SIGNIFY 101L WALL PACK, 11237 LUMENS.SIGNIFY: 101L-32L-1000-NW-G2-4-UNV-XXLED120 V2SIGNIFY ECOFORM AREA 48L BLC, 14544 LUMENSECF-S-48L-1A-NW-G2-AR-BLC-UNV-XXLED120 V13AC ZOLO 7, WASHER/GRAZER, DRY RATED, WET RATED, HIGH PURITY TEMPERED GLASS.KELVIX: Z7AC-4-9-W-Z-40-50-L3-WHLED120 V3EMERGENCY EXIT 1W (2) LED LAMPS FURNISHEDSIGNIFY: #VLTCR3RLED120 V44' STRIPLIGHT BASIC LIGHTINGSIGNIFY: FSSEZ440L840-UNV-DIMLED120 V110 FEET RECESSED LIGHT.3R-10-MD-40-UNV-T1-WHLED120 V224" BRUSHED NICKEL STANDARD, CONTEMPORARY WALL SCONCE LIGHTBROWNLEE: 5165-24-WH-H16-35KLED120 V	Contract ControlQTYDESCRIPTIONMAKE/MODELLAMPVOLTAGEWATTS72' X 4' VOLUMETRIC RECESSED LIGHTINGSIGNIFY: 2FGXG48L840-4-RS-UNV-DIMLED120 V36 VA132' X 4' VOLUMETRIC RECESSED LIGHTINGSIGNIFY:2FGXG48L840-4-RS-UNV-DIM-BSL10LSTLED120 V36 VA266'' RECESSED DOWNLIGHTSIGNIFY: #6RN / 26RDL20840WOCDZ10ULED120 V21 VA66'' RECESSED DOWNLIGHTSIGNIFY: #6RN / 26RDL20840WOCDZ10ULED120 V21 VA5SIGNIFY 101L WALL PACK, 11237 LUMENS.SIGNIFY: 101L-32L-1000-NW-G2-4-UNV-XXLED120 V107 VA2SIGNIFY ECOFORM AREA 48L BLC, 14544 LUMENSECF-S-48L-1A-NW-G2-AR-BLC-UNV-XXLED120 V107 VA13AC ZOLO 7, WASHER/GRAZER, DRY RATED, WET RATED, HIGH PURITY TEMPERED GLASS.KELVIX: Z7AC-4-9-W-Z-40-50-L3-WHLED120 V27 VA3EMERGENCY EXIT 1W (2) LED LAMPS FURNISHEDSIGNIFY: #VLTCR3RLED120 V3 VA44' STRIPLIGHT BASIC LIGHTINGSIGNIFY: FSEZ440L840-UNV-DIMLED120 V40 VA110 FEET RECESSED LIGHT.3R-10-MD-40-UNV-T1-WHLED120 V60 VA224'' BRUSHED NICKEL STANDARD, CONTEMPORARY WALL SCONCE LIGHTBROWNLEE: 5165-24-WH-H16-35KLED120 V16 VA							

Grand total: 84

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ntion	СКТ
ption	A2
	A4
	A6
	A8
	A10
	A12
	A14
	A16
	A18
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	A22
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	A26
	A28
	A30
	A32
	A34
	A36
	A38
	A40
	A42
ls	
86 VA	
00 VA	
A	
A	

Branch Panel: B

Location: Supply From: A

Mounting: Recessed Enclosure: Type 1

								1				1		
скт	Circuit Description	Trip	Poles		Δ		в		с	Poles	Trip	Circuit De	escription	ск
B1	LTS: Interior area	20 A	1	694 VA	720 VA					1	20 A	REC: Exam room	<u> </u>	B2
B3	LTS: Interior area	20 A	1			768 VA	900 VA			1	20 A	REC: Office		B4
B5	LTS: Wall packs	20 A	1					535 VA	720 VA	1	20 A	REC: X-Ray room		B6
B7	LTS: Decorative front lights	20 A	1	428 VA	900 VA				-	1	20 A	REC: Lobby area		B8
B9	LTS: Pole lights	20 A	1			314 VA	720 VA			1	20 A	REC: Exam room		B10
B11	REC: Exam room	20 A	1					720 VA	720 VA	1	20 A	REC: Break room		B12
B13	REC: Exam room	20 A	1	720 VA	720 VA					1	20 A	REC: Exam room		B14
B15	REC: Exam room	20 A	1			720 VA	540 VA			1	20 A	REC: Test area		B16
B17	REC: Reception	20 A	1					720 VA	720 VA	1	20 A	REC: Reception		B18
B19	REC: Reception	20 A	1	720 VA	720 VA					1	20 A	REC: Reception		B20
B21	EQ: Break area	20 A	1			1000	180 VA			1	20 A	REC: Private restroom		B22
B23	EQ: Break area	20 A	1					1000	360 VA	1	20 A	REC: X-Ray room		B24
B25	EQ: Break area	20 A	1	1000	360 VA					1	20 A	REC: Telephone system		B26
B27	REC: I.T. room	20 A	1			1000	1000			1	20 A	REC: I.T. room		B28
B29	REC: Office	20 A	1					540 VA	500 VA	1	20 A	REC: Printer		B30
B31	REC: Electric water cooler	20 A	1	1000	720 VA					1	20 A	REC: Gym area		B32
B33	REC: Gym area	20 A	1			900 VA	200 VA			1	20 A	EQ: Exterior sign		B34
B35														B36
B37														B38
B39														B40
B41	-													B42
	4	Tot	al Load:	865	7 VA	817	2 VA	653	5 VA		1			
		Tota	Amps:	74	4 A	70	D A C	54	4 A	1				
Legend	1:													
Load C	lassification	Con	nected	Load	De	mand Fa	ctor	Estin	nated De	mand		Panel	Totals	
Equipm	ients		10660 V	A		65.00%)		6929 VA	1				
Recept	acle		10080 V	A		99.60%)		10040 V	Ą		Total Conn. Load:	23361 VA	
Lighting	 g		2684 VA	۱		100.00%	6		2684 VA	۱		Total Est. Demand:	19592 VA	
	·											Total Conn ·	65 A	

Notes:

СКТ	Circuit Description	Trip	Poles	4	λ		3	(c	Poles	Trip	Circuit De	escription	СК
B1	LTS: Interior area	20 A	1	694 VA	720 VA					1	20 A	REC: Exam room		B2
B3	LTS: Interior area	20 A	1			768 VA	900 VA			1	20 A	REC: Office		B4
B5	LTS: Wall packs	20 A	1					535 VA	720 VA	1	20 A	REC: X-Ray room		B6
B7	LTS: Decorative front lights	20 A	1	428 VA	900 VA					1	20 A	REC: Lobby area		B8
B9	LTS: Pole lights	20 A	1			314 VA	720 VA			1	20 A	REC: Exam room		B10
B11	REC: Exam room	20 A	1					720 VA	720 VA	1	20 A	REC: Break room		B12
B13	REC: Exam room	20 A	1	720 VA	720 VA					1	20 A	REC: Exam room		B14
B15	REC: Exam room	20 A	1			720 VA	540 VA			1	20 A	REC: Test area		B16
B17	REC: Reception	20 A	1					720 VA	720 VA	1	20 A	REC: Reception		B18
B19	REC: Reception	20 A	1	720 VA	720 VA					1	20 A	REC: Reception		B20
B21	EQ: Break area	20 A	1			1000	180 VA			1	20 A	REC: Private restroom		B22
B23	EQ: Break area	20 A	1					1000	360 VA	1	20 A	REC: X-Ray room		B24
B25	EQ: Break area	20 A	1	1000	360 VA					1	20 A	REC: Telephone system		B26
B27	REC: I.T. room	20 A	1			1000	1000			1	20 A	REC: I.T. room		B28
B29	REC: Office	20 A	1					540 VA	500 VA	1	20 A	REC: Printer		B30
B31	REC: Electric water cooler	20 A	1	1000	720 VA					1	20 A	REC: Gym area		B32
B33	REC: Gym area	20 A	1			900 VA	200 VA			1	20 A	EQ: Exterior sign		B34
B35														B36
B37														B38
B39														B40
B41														B42
		Tota	al Load:	8657	7 VA	817	2 VA	653	5 VA					
		Tota	Amps:	74	A	70) A	54	I A]				
Legend	:							1						
Load C	lassification	Con	nected L	oad	Der	nand Fa	ctor	Estin	nated De	mand		Panel	Totals	
Equipm	ents		10660 VA	4		65.00%			6929 VA					
Receptacle			10080 VA	4		99.60%			10040 VA	4		Total Conn. Load:	23361 VA	
Lighting			2684 VA			100.00%)		2684 VA			Total Est. Demand:	19592 VA	
												Total Conn.:	65 A	
												Total Est Demand	51 A	

Electrical contractor shall submit over current protective device short circuit study prior to approval of the distribution equipment submittals.
 Estimated loads were conservative estimates at time of design, contractor shall contact A&G Engineering should actual conntected loads be higher.

LOAD ANALYSIS INDIVIDUAL SUITE	
UITE NAME: WHITE BOX	SUITE AREA: 1,726 SF
ONNECTED LOAD CALCULATION:	
ENERAL LIGHTING:	1,726 SF X 3 VA/SF= 5,178 VA
UTSIDE SIGN CIRCUIT:	1,200 VA
ECEPTACLES (ESTIMATING 40 RECEPTACLES X 180 WATTS):	7,200 VA
/ATER HEATER	4,500 VA
QUIPMENT	8,000 VA
VAC UNIT (PROPOSED 10 TONS, 30KW HEATING, 208V, 3-PHASE):	31,666 VA
OTAL:	57,744 VA
ESIGN LOAD CALCULATION:	
ENERAL LIGHTING:	5,178 VA X 1.25= 6,473 VA
UTSIDE SIGN CIRCUIT:	1,200 VA X 1.25= 1,500 VA
ECEPTACLES:	7,200 VA X 1.0/0.5= 7,200 VA
/ATER HEATER	4,500 VA X 1.0= 4,500 VA
QUIPMENT	8,000 VA X 1.0= 8,000 VA
VAC UNIT:	31,666 VA X 1.25= 39,583 VA
OTAL:	67,255 VA
ALCULATED LOAD FOR SERVICE SIZE:	
67,255 VA 8Ø X 208V = 186.9 AMPS	

SELECTED SERVICE: -MAIN FUSE: 200 AMPS.

Volts: 120/208 Wye Phases: 3 Wires: 4

A.I.C. Rating: See notes 1 & 2 Mains Type: Mains Rating: 125 A MCB Rating: -----







- PROPOSED UTILITY

DIP POLE

9 9









4 ELECTRICAL RISER DIAGRAM NOT TO SCALE

/ 1-#2 GROUND COPPER



GENERAL NOTES:

- ALL LIGHT FIXTURE SUBSTITUTION SHALL BE Α. APPROVED BY OWNER AND MUST BE EQUAL OR BETTER QUALITY THAN APPROVED FIXTURES.
- ALL 120 VOLTS, 1-PHASE, 20 AMPS RECEPTACLES В. INSTALLED SHALL BE AFCI CIRCUIT BREAKER TYPE.
- PROVIDE A 120V DEDICATED CIRCUIT FOR WIRED C. SMOKE DETECTORS. CONTRACTOR SHALL PLACE SMOKE DETECTORS AS REQUIRED BY IFC AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- EQUIPMENT GROUNDING CONDUCTORS SHALL D. NOT BE TERMINATED OR ROUTED THROUGH METER SOCKET. GROUNDING SHALL BE ESTABLISHED PER 2017 NEC 250.24(A)(1)

KEYED NOTES:

1.

- PROPOSED POWER COMPANY PAD MOUNT TRANSFORMER ON CONCRETE PAD. CONTRACTOR SHALL COORDINATE CONFIGURATION WITH UTILITY COMPANY AND ENSURE INSTALLATION.
- CONTRACTOR SHALL PROVIDE AND INSTALL 2. GROUNDING ROD PER NOTED NEC.
- CONTRACTOR SHALL PROVIDE AND INSTALL AN 3. ELECTRIC METER. ELECTRICAL CONTRACTOR SHALL COORDINATE METER SOCKET CONFIGURATION WITH LOCAL UTILITY COMPANY.
- 4. CONTRACTOR SHALL PROVIDE AND INSTALL 400A, 208V, 3-PHASE, 300A FUSED, NEMA-3R, MAIN DISCONNECT SWITCH TO SERVE WIRING LUGS INSIDE WIREWAY. NOTE: UTILITY COMPANY SHALL PROVIDE VANDAL RESISTANT SEAL ON DISCONNECT AND CONTRACTOR SHALL ENSURE INSTALLATION.
- CONTRACTOR SHALL REVIEW ELECTRICAL PANEL 5. BOARD AND REFER TO PANEL SCHEDULES FOR FURTHER INFORMATION.
- CONTRACTOR SHALL PROVIDE AND INSTALL 4-#1 6. COPPER, 1-#8 GROUND COPPER, IN 1-1/2" CONDUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL TWO 7. (2) SETS EACH WITH: 4-#2/0 COPPER, 1-#4 GROUND COPPER, IN 2" CONDUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL TWO 8. (2) SETS EACH WITH: 4-#2/0 COPPER, IN 2" CONDUIT.
- 9. CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) SETS EACH WITH: 4-#2/0 COPPER, IN 4" CONDUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL 1-# 10. 1/0 GROUND COPPER, IN 3/4" CONDUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL 11. 200A, 208V, 3-PHASE, 200A FUSED, NEMA-3R, MAIN DISCONNECT SWITCH TO SERVE WIRING LUGS INSIDE WIREWAY. NOTE: UTILITY COMPANY SHALL PROVIDE VANDAL RESISTANT SEAL ON DISCONNECT AND CONTRACTOR SHALL ENSURE INSTALLATION.
- 12. PROVIDE AND INSTALL AN ELECTRICAL PANEL BOARD, 225A MAIN LUGS, 200A MAIN BREAKER, NEMA-1, 42 SPACES.
- 13. CONTRACTOR SHALL PROVIDE AND INSTALL 4-# 4/0 COPPER, 1-#6 GROUND COPPER, IN 2-1/2" CONDUIT.
- 14. CONTRACTOR SHALL PROVIDE AND INSTALL 4-# 4/0 COPPER, IN 2-1/2" CONDUIT.
- 15. CONTRACTOR SHALL PROVIDE AND INSTALL 4-# 4/0 COPPER, IN 4" CONDUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL 1-#2 16. GROUND COPPER, IN 3/4" CONDUIT.

1ST. FLOOR

ROOF

CEILING



GENERAL NOTES - MECHANICAL (HVAC):

HVAC CONTRACTOR REQUIREMENTS:

FEDERAL, STATE, AND LOCAL CODES. WHERE THESE PLANS AND SPECIFICATIONS ARE IN CONFLICT N.2. WITH SUCH CODES, THE CODES SHALL GOVERN. BIDS SUBMITTED BY CONTRACT SHALL INCLUDE WORK REQUIRED TO COMPLY WITH ALL SUCH CODES. ANY ITEMS REQUIRED AND/OR MISSED IN THESE BASIS OF DESIGN DOCUMENT, SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR AT CONTRACTORS EXPENSE AND ZERO EXPENSE TO THE OWNER AND/OR DESIGN TEAM. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION CONTRACTOR SHALL STUDY CONTRACT DOCUMENTS, FULLY UNDERSTAND AND ACCEPT THE A.2. BASIS OF DESIGN AND SCOPE OF WORK. SUBMISSION OF BID INDICATES CONTRACTOR'S COMPLETE APPROVAL AND ACCEPTANCE OF CONSTRUCTION DOCUMENTS. Ο. CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN, TRAINED, LICENSED AND EXPERIENCED IN COMMERCIAL HVAC WORK, AND WHO ARE FAMILIAR WITH THE CONSTRUCTION DOCUMENTS AND METHODS OF PERFORMING THE WORK REQUIRED. A.4. CONTRACTOR SHALL PROVIDE A MINIMUM 1 YR. WARRANTY ON ALL LABOR AND MATERIALS INSTALLED. CONTRACTOR SHALL MAKE ALL WARRANTY REPAIRS OR REPLACEMENTS IN A TIMELY ADDITIONAL COST TO THE OWNER. MANNER, AT NO BASIS OF DESIGN: B.1. ALL CONSTRUCTION DOCUMENTS PROVIDED BY OWNER, INCLUDING ENGINEERING DRAWINGS,

ALL WORK UNDER THIS CONTRACT SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH

NOTES, SCHEDULES, DETAILS, CALCULATIONS AND SPECIFICATIONS PROVIDED, ALONG WITH EQUIPMENT MANUFACTURER'S DRAWINGS AND SPECIFICATIONS, FORM THE BASIS OF DESIGN. THE BASIS OF DESIGN WILL BE USED FOR ALL INSPECTIONS, TESTING AND ACCEPTANCE OF THE WORK PERFORMED BY THE CONTRACTOR TO VERIFY SUCCESSFUL COMPLETION OF SCOPE OF WORK.

SCOPE OF WORK

- FURNISH ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO C.1. PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL MAKE ALL INSTALLATIONS ACCORDING TO THOSE SHOWN ON PLANS.
- INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS DESCRIBED BY THE CONSTRUCTION C.2. DOCUMENTS, INCIDENTAL ITEMS NOT SPECIFIED, BUT WHICH ARE ESSENTIAL FOR THE PROPER OPERATION OF SPECIFIED SYSTEMS AND EQUIPMENT, ARE INCLUDED IN THE SCOPE OF WORK AND SHALL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST. COMPLY WITH COMMISSIONING PLAN SHOWN ON DRAWINGS AND AS IMPLEMENTED BY OWNER'S C.3.
- DESIGNATED 'COMMISSIONING AUTHORITY' (CA). C.4. PROVIDE STRUCTURAL ENGINEERING DESIGN, DRAWINGS AND MODIFICATIONS FOR INSTALLATION OF HVAC EQUIPMENT OVER 200 LBS., UTILIZING THE BUILDING STRUCTURE OR FOUNDATION FOR SUPPORT, UNLESS PROVIDED BY OWNER OR ARCHITECT.

CODE OF COMPLIANCE:

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCALLY ADOPTED MECHANICAL FUEL GAS AND PLUMBING CODES, ACCORDING TO THE LOCAL AUTHORITY HAVING JURISDICTION
- THE BASIS OF DESIGN IS INTENDED TO COMPLY WITH ALL LOCAL CODES ENFORCED BY THE AHJ OVER THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS MADE BY THE AHJ, WHETHER SPECIFICALLY SHOWN ON PLANS OR NOT.
- DISCREPANCIES: IN THE CASE OF A DISCREPANCY BETWEEN DRAWINGS, SPECIFICATIONS OR MANUFACTURE'S REQUIREMENTS, THE MOST STRINGENT SHALL APPLY AND BE COMPLIED WITH BY THE
- CONTRACTOR IN THE CASE OF A DISCREPANCY BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS OR E.2. MANUFACTURERS REQUIREMENTS, THE AHJ SHALL DETERMINE WHICH SHOUD BE COMPLIED WITH BY THE CONTRACTOR.

JOBSITE CONDITIONS:

- CONTRACTOR SHALL EXAMINE THE JOBSITE PRIOR TO BIDDING AND FULLY UNDERSTAND THE F.1. CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, BY SUBMITTING BID FOR WORK CONTRACTOR ACCEPTS ALL JOB CONDITIONS AS-IS.
- F.2. CONTRACTOR SHALL LOCATE AND INSPECT ANY EXISTING HVAC EQUIPMENT TO BE REUSED AND OR MODIFIED, PRIOR TO BIDDING WORK. DIMENSIONAL AND PERFORMANCE DATA FOR EXISTING EQUIPMENT SHOWN ON THE PLANS ARE ESTIMATES ONLY AND NOT EXACT. FIELD VERIFY ROOF STRUCTURE AND TRUSS SPACING PRIOR TO STARTING WORK. CONTRACTOR F.3.
- SHALL EMPLOYEE A STRUCTURAL ENGINEER FOR ANY ROOF MOUTED EUQIPMENT ABOVE 100 LBS. PERMITS AND FEES:
- CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS: LICENSES, AND CERTIFICATIONS REQUIRED BY THE AHJ AND PAY FOR ALL PERMITTING FEES.
- CONSTRUCTION DRAWINGS. H.1. DRAWINGS ARE GENERALLY SCHEMING IN NATURE. DUCTWORK, PIPING, CONTROLS AND EQUIPMENT SHOWN ON DRAWINGS IS UNDERSTOOD TO BE THE GENERAL ARRANGEMENT ONLY, TO BE FIELD ADJUSTED AS REQUIRED.
- ITEMS WITH SPECIFIC LOCATIONS AND OR SIZES WILL BE DIMENSIONED ON THE PLANS. DRAWINGS DO NOT SHOW EVERY DETAIL OR ITEM REQUIRED FOR EQUIPMENT INSTALLATIONS. H 3 REFER TO ALL EQUIPMENT MANUFACTURERS INSTRUCTIONS FOR ADDITIONAL REQUIRED PARTS AND ACCESSORIES NEEDED FOR COMPLETE INSTALLATIONS.
- FOR ALL STRUCTURAL ENGINEERING REQUIRED, UTILIZE ACTUAL EQUIPMENT WEIGHTS FROM H.4. EQUIPMENT SUPPLIERS FOR STRUCTURAL DESIGN. EQUIPMENT WEIGHTS SHOWN ON SCHEDULES ARE PRELIMINARY.
- H.5. OBTAIN FINAL SUBMITTALS ON ALL OWNER FURNISHED COMMERCIAL KITCHEN FANS, HOODS AND REFRIGERATION EQUIPMENT TO BE INSTALLED BY HVAC CONTRACTOR, AS SHOWN ON PLANS, PRIOR TO STARTING WORK. EQUIPMENT DATA SHOWN AND SCHEDULED ON PLANS IS PRELIMINARY H.6.
- ADJUST DUCTWORK SIZES AND PROVIDE OFFSETS AS NEEDED TO PASS DUCTWORK BETWEEN ROOF TRUSSES OR THROUGH WALL FRAMING WHERE REQUIRE. SIZES AND TRANSITIONS SHOWN ON PLANS ARE PRELIMINARY ONLY. FINAL COORDINATION AND DETAILING OF DUCTWORK SHALL BE PROVIDED BY HVAC CONTRACTOR.

COORDINATION WITH OTHER TRADES:

- CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCES, PROPERLY 1.1. SEQUENCE INSTALLATION, AND PROVIDE MANUFACTURERS REQUIRED SERVICE CLEARANCES. WHERE REQUIRED, CONTRACTOR SHALL MAKE THE REQUIRED ADJUSTMENTS
- 1.2. ALL FUEL GAS CONNECTION TO HVAC EQUIPMENT, INCLUDING SERVICE VALVES, REGULATORS, FLEXIBLE COUPLINGS, AND OTHER FITTINGS SHALL BE PROVIDED BY PLUMBING CONTRACTOR AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE THE ACTUAL FUEL GAS PIPING REQUIREMENTS TO PLUMBING CONTRACTOR. ALL ELECTRICAL CONNECTIONS TO HVAC EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL 1.3.
- CONTRACTOR, INCLUDING STARTERS, SPEED CONTROLLERS, DISCONNECTS, ENCLOSURES AND LABELS. PROVIDE ELECTRICAL CONTRACTOR THE ACTUAL SERVICE REQUIREMENTS FOR ALL HVAC EQUIPMENT. COORDINATE WITH ROOFING CONTRACTOR TO SEAL ALL ROOF CURBS AND PIPING 1.4.
- PENETRATIONS THROUGH ROOF PER ARCHITECTURAL ROOFING SPECIFICATIONS. PROVIDE ALL REQUIRED WEATHERPROOFING.
- COORDINATE WITH FIRE ALARM CONTRACTOR TO CONNECT DUCT MOUNTED SMOKE 1.5. DETECTORS TO FIRE ALARM SYSTEM, IF REQUIRED. PROVIDE ALL REQUIRED FAN SAFETY INTERLOCKS PER CONTROL DRAWINGS.

CONTRACTOR FURNISHED EQUIPMENT & MATERIALS: SHALL BE NEW, MANUFACTURED AND CERTIFIED TO COMPLY WITH THE BASIS OF DESIGN, FREE OF J.1. DEFECT AND COVERED UNDER A MINIMUM 1-YEAR FACTORY WARRANTY, UNLESS SPECIFIED

- DIFFERENTLY ELSEWHERE SHALL BE AS SPECIFIED IN CONSTRUCTION DOCUMENTS, OR AS ACCEPTABLE SUBSTITUTION OF J.2. EQUAL ITEM. ALL SUBSTITUTIONS MOST BE 'APPROVED' THROUGH THE COMMISSIONING PROCESS TO BE ACCEPTABLE.
- SHALL BE COMMERCIAL GRADE EQUIPMENT AND MATERIALS, UNLESS OTHERWISE INDICATED IN J.3. CONSTRUCTION DOCUMENTS.
- Κ. DELIVERY, STORAGE AND PROTECTION: CONTRACTOR SHALL FURNISH DELIVERY OF ALL REQUIRED MATERIALS AND EQUIPMENT TO BE K.1 INSTALLED. CONTRACTOR SHALL VERIFY ALL EQUIPMENT IS UNDAMAGED AT THE TIME OF DELIVERY FROM THE FACTORY. DAMAGED ITEMS SHOULD BE RETURNED TO THE FACTORY FOR REPLACEMENTS AT NO ADDITIONAL COST TO THE OWNER.
- WHERE REQUIRED, CONTRACTOR SHALL PROVIDE CRANE AND OR ALL RIGGING EQUIPMENT K.2. NEEDED TO INSTALL HVAC EQUIPMENT IN PLACE AS SHOWN ON PLANS. K.3. CONTRACTOR SHALL COORDINATE WITH OWNER TO OBTAIN ACCEPTABLE JOBSITE STORAGE
- LOCATION FOR MATERIALS. CONTRACTOR SHALL COMPLY WITH OWNER REQUIREMENTS FOR PROTECTIONS, ACCESS AND SECURITY OF MATERIALS STORED ONSITE
- CONTRACTOR SHALL TAKE ALL REQUIRED PRECAUTION TO PROPERLY, PROTECT ALL STORED MATERIALS FORM WEATHER, DAMAGE, THEFT OR ANY OTHER HAZARD PRESENT AT THE STORAGE LOCATION.
- JOBSITE CLEANUP: REMOVE ALL CONSTRUCTIONS DEBRIS FROM THE JOBSITE AS REQUIRED AND PRIOR TO COMPLETION OF ALL WORK. ALL WORK AREAS SHOULD BE BROOK CLEANED, AND EQUIPMENT WIPED CLEAN PRIOR TO FINISHING PROJECT.
- SPARE PARTS: Μ. PRIOR TO COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE OWNER WITH ALL SPARE PARTS PROVIDED FORM FACTORY WITH ANY EQUIPMENT PURCHASED FOR THE PROJECT.

CORRECTIONS REQUIRED:

- CONTRACTOR SHOULD STOP ALL WORK AND NOTIFY THE ENGINEER IMMEDIATELY DEFECTIVE, OR OUT OF COMPLIANCE WITH BASIS OF DESIGN, MANUFACTURERS INSTRUCTIONS, OR CODE REQUIREMENTS, CONTRACTOR SHALL REPLACE THE DEFECTIVE WORK AT NO
- DOCUMENTS. N.3. IF CONTRACTOR DAMAGES ADJACENT PROPERTY WHILE PERFORMING SCOPE OF WORK, HE PAYMENT
- CONTROL PANEL AND CONTROL WIRING.
- EQUIPMENT ICE MACHINE AIR COOLED CONDENSER ON ROOF.
- MAY BE REQUIRED.
- WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, EVENTS, ETC.
- Q. SUPPLY MECHANICAL EQUIPMENT.
- BY HIM.
- CONDENSATE DRAINAGE FROM ROOF TOP HVAC UNITS SHALL BE TRAPPED.
- U. MACHINERY.
- ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
- MECHANICAL CONTRACTORS SHALL COORDINATE ALL DUCTS AND DIFFUSER LOCATIONS WITH W. LIGHTING LAYOUTS AS REQUIRED.
- Υ. ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.
- Ζ. IDENTIFICATION, MOUNT 42" AFF.
- RESPONSIBLE FOR ARRANGING FACTORY AUTHORIZED START-UP AND ADJUSTMENT ON THE ICE MACHINES.
- AB. MECHANICAL CONTRACTOR TO INSULATE BACKSIDE OF ALL DIFFUSERS
- AC. TRANSITION ALL DUCTS AS REQUIRED TO ATTACH TO EQUIPMENT.
- AD. OFFSET RETURN AIR DUCTS FOR ROOF TOP AC UNITS TO AVOID FRAMING AS REQUIRED.
- AE. ALL DAMAGED COIL FINS SHALL BE COMBED STRAIGHT PRIOR TO OWNER HANDOVER.
- AF. RESUBMISSION OF SIGNED AND SEALED DRAWINGS.

AG. EXHAUST HOOD NOTES

- MECHANICAL CONTRACTOR. CLOSURE STRIP.
- AG.3. EXHAUST FANS AND CURBS EXCEPT RESTROOM EXHAUST FAN AND CUBS. AH. THE MECHANICAL CONTRACTOR SHALL RECEIVE THE ABOVE EQUIPMENT, UNCRATE, BE
- LOSS OR DAMAGE TO THE ABOVE EQUIPMENT ONCE RECEIVED ON THE JOB. EXHAUST HOODS PROVIDED WILL MEET OR EXCEED THE FOLLOWING REQUIREMENTS: AI.
- NSF # 1362 BEAR THE NSF SEAL OF APPROVAL AK. AL. - U.L. CLASSIFICATION # 24N1 AM - MEET OR EXCEED NFPA # 96, (AHJ ADOPTED EDITION) & IMC
- AO. - IF REQUIREMENTS ARE NOT MEET, SEEK OWNER APPROVAL. AP.
- INSTALLATION.
- EXTINGUISHING SYSTEM. COMPLETE EXTINGUISHING BY HOOD MANUFACTURER.
- LOCAL AUTHORITIES.
- AS. EXHAUST HOOD DUCT NOTES AS.1. ALL FLYER EXHAUST COLLARS AND EXHAUST DUCTWORKS ARE SIZED TO MAINTAIN NOTED PENETRATIONS SEALED LIQUID TIGHT.
- OF EACH VERTICAL RISER.
- AS.5. ALL GREASE EXHAUST DUCTS SHALL HAVE LONG RADIUS ELBOWS. WITH 1" MINERAL WOOD AND WIRE MESH SECURED TO COMBUSTIBLES WITH 1" NON

IF CONTRACTOR IDENTIFIES ANY ACTUAL SITUATION OR SITE CONDITION THAT WILL PROHIBIT OR NEGATIVELY IMPACT THE INSTALLATION OR PERFORMANCE OF THE SYSTEMS AS DESIGNED, IF CONTRACTOR PERFORMS WORK, AND OR INSTALLS ANY EQUIPMENT THAT IS FOUND TO BE

ADDITIONAL COST TO THE OWNER. ALL NEW WORK SHALL COMPLY WITH THE CONTRACT

SHALL MAKE PROMPT REPAIR OF ALL DAMAGE AT OWN EXPENSE, PRIOR TO REQUESTING FINAL

SCOPE: PROVIDING ALL LABOR, MATERIAL, AND EQUIPMENT IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWING TO PROVIDE A COMPLETE AND PROPERLY OPERATING HEATING, VENTILATING, AIR CONDITIONING, AND REFRIGERATION SYSTEMS FOR THE BUILDING. WORK UNDER THIS SECTION INCLUDES, BUT IS NOT NECESSARILY LIMITED TO: 0.1. FURNISH AND INSTALL THE FOLLOWING: ROOFTOP UNITS AND CURBS OR DX SPLIT SYSTEMS DUCT INSULATION AND DUCT WORK FOR FOR HVAC SYSTEMS DIFFUSERS, GRILLES, AND PLENUM BOXES

0.2. INSTALL THE FOLLOWING: - EXHAUST FANS, HOODS, AND DUCTS FOR VENTILATION OF COOKING

0.3. GENERAL REQUIREMENTS: COORDINATION: COORDINATE WORK WITH OTHERS TRADES. LOCATIONS SHOWN ARE APPROXIMATE. REFER TO THE ARCHITECTURAL PLANS FOR EXACT MEASUREMENTS IN THE PLACEMENT OF EQUIPMENT, FIXTURES, OUTLETS, ETC. WHERE THE LOCATIONS ARE NOT CLEAR, OBTAIN THE EXACT LOCATION FROM OWNER AND FIELD VERIFY. THE PLANS DO NOT GIVE EXACT DETAILS AS TO ELEVATIONS AND LOCATION OF VARIOUS PIPES, FITTINGS, DUCTS, CONDUIT, ETC., AND DO NOT SHOW ALL OFFSETS AND OTHER INSTALLATION DETAILS WHICH

MECHANICAL CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, AS SHOWN ON THESE DRAWINGS,

ALL ROOF MOUNTED EQUIPMENT AND PENETRATIONS SHALL BE FLASHED A MINIMUM OF 12" ABOVE THE ROOF. PROVIDE AMPLE CURBS OF PIPE SEALS FOR ELECTRICAL CONDUITS WHICH

R. ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM ANY EXHAUST FAN OR PLUMBING

THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR EQUIPMENT FOR ADMINISTERING ALL WARRANTIES ON EQUIPMENT WHICH HE INSTALLS. THIS INCLUDES ALL CONDENSERS, REFRIGERANT LINES, AND OTHERS ITEMS FURNISHED BY OTHERS AS WELL AS THOSE FURNISHED

PROVIDE VIBRATIONS ISOLATION DEVICES AND FLEXIBLE CONNECTIONS TO ALL MOVING

THE CONTRACTOR SHALL PROVIDE COMPLETE INFORMATION TO THE OTHER CONTRACTORS AND TRADES AS REQUIRED FOR COMPLETION AND COORDINATION OF THE COMPLETE PROJECT.

THE CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES. ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL OPENINGS IN FOUNDATIONS, FLOORS, WALLS AND ROOFS SHALL BE DESIGNED INTO THE STRUCTURE INITIALLY BY THE USE OF SLEEVES, CURBS,

THERMOSTATS SHALL BE LOCATED GENERALLY AS SHOWN BUT THEIR EXACT LOCATION SHALL BE FIELD COORDINATED TO AVOID INTERFERENCE WITH WALL MOUNTED ITEMS. ONCE FIELD

AA. THE GENERAL CONTRACTOR SHALL PERFORM AND BE RESPONSIBLE FOR ALL REFRIGERATION WORK REQUIRED FOR THE ICE MACHINES. ALL THIS WORK SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTACT THE EQUIPMENT SUPPLIERS TO OBTAIN ALL NECESSARY INFORMATION TO PERFORM THE REFRIGERATION WORK. G.C. SHALL ALSO BE

"RE-ENGINEERING", "VALUE ENGINEERING" OR ANY DEVIATIONS FROM THE SHOWN DESIGN AND REQUIRED HVAC EQUIPMENT MUST BE REQUESTED AND APPROVED PRIOR TO BIDDING. UNAUTHORIZED SUBSTITUTIONS OR ALTERATIONS WILL VOID THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER & ARCHITECT OF RECORD AND LEAVE VIOLATORS RESPONSIBLE FOR

AG.1. THE FOLLOWING EQUIPMENT SHALL BE SUPPLIED BY OWNER AND INSTALLED BY THE

AG.2. STAINLESS STEEL HOODS AS SPECIFIED PRE PIPED FOR FIRE PROTECTION SYSTEM, AND CEILING

RESPONSIBLE FOR REPORTING DAMAGE RECEIVED DURING SHIPMENT. AND BE RESPONSIBLE FOR

THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO OBTAINING A SET OF SHOP DRAWINGS FROM THE HOOD MANUFACTURER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE HOOD MANUFACTURER OF ANY LOCAL CODES WHICH WILL AFFECT THE HOOD MANUFACTURE OR

AQ. THE HOOD MANUFACTURER WILL PROVIDE PRE-PIPED AUTOMATIC FIRE CONTROL SYSTEMS FOR ANY FRYER HOOD INCLUDING FIRE CONTROL CABINETS - AND FURNISH A 2 POLE MICRO SWITCH FURNISHED FOR EQUIPMENT SHUT OFF TO BE HOOKED UP BY G.C. THE HOOD MANUFACTURER WILL BE RESPONSIBLE FOR FINAL INSTALLATION AND INSPECTIONS OF THE HOOD FIRE

AR. THE PLUMING CONTRACTOR SHALL INSTALL THE MECHANICAL GAS VALVE IN ACCORDANCE WITH THE PLUMBING DRAWING. THE VALVE WILL BE PROVIDED TO HIM BY THE HOOD SUPPLIER. VERIFY WITH

EXHAUST AIR VELOCITY. ALL GREASE EXHAUST DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NFPA-96. GREASE EXHAUST DUCTWORK SHALL HAVE ALL SEAMS, JOINTS AND

AS.2. ALL HORIZONTAL RUNS OF GREASE DUCT, EXHAUST OR CONDENSATE SHALL SLOPE BACK TOWARD THE HOOD, GRILLE OR DRAIN AT A SLOPE OF 1" PER FOOT. PROVIDE A RESIDUE TRAP AT THE BASE

AS.3. THE MECHANICAL CONTRACTOR IS TO PROVIDE CLEANOUTS, IN GREASE EXHAUST DUCTWORK AT A MINIMUM OF 10" INTERVALS, AT EACH CHANGE OF DIRECTION AND AT EACH RESIDUE TRAP. AS.4. THE DISCHARGE OF THE GREASE EXHAUST FAN SHALL BE UPWARD AND A MINIMUM OF 40" ABOVE THE HOOD SURFACE AND A MINIMUM OF 10" FROM ANY OUTSIDE AIR INTAKE.

AS.6. GREASE EXHAUST DUCT SHALL BE CARBON STEEL 16 GAUGE WELDED DUCTS PER NFPA-96 PROTECTED WITH THE FOLLOWING: 1" AIR SPACE FROM DUCT TO 22 GA SHEET METAL COVERED COMBUSTIBLE SPACERS TO REDUCE CLEARANCE TO COMBUSTIBLE TO 3" PER NFPA 96 A-1-3.2.

EQUIPMENT & MATERIAL - MECHANICAL (HVAC):

AT. DUCTWORK SYSTEMS: ROUND DUCT: GALVANIZED STEEL, MINIMUM 1" PRESSURE RATED OR AS SHOWN ON PLANS, FACTORY MADE ELBOWS AND FITTINGS OR QUALITY GAUGE, AND SLIP JOINT CONNECTIONS. AT.1.1. CONCEALED: SNAP-LOCK TYPE LONGITUDINAL SEAM, STANDING GAUGES AND SIZED FOR 1" PRESSURE RATING, OR AS SHOWN ON PLANS. ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATION SEALED WITH METALLIC DUCT TAPE OR MASTIC. ANY INTERIOR DUCTWORK DOWNSTREAM OF EXHAUST FANS SHALL HAVE HARD CAST MASTIC SEALER ON ALL JOINTS AND SEAMS AT.1.2. EXPOSED: SPIRAL ROUND TYPE, STANDARD GAUGES AND SIZES FOR 1" PRESSURE RATING OR AS SHOWN ON PLANS. ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH CLEAR SILICONE.INSTALL IN NEAT AND ORDERLY MANNER WITH FINISHED APPEARANCES, INCLUDING ALL HANGERS AND SUPPORTS. CLEAN ALL EXTERIOR SURFACES FOR PAINTING AFTER INSTALLATION.

AT.2. RECTANGULAR DUCT: GALVANIZED STEEL, MINIMUM 1" PRESSURE RATED OR AS SHOWN ON PLANS, MINIMUM GAUGE, JOINTS AND REINFORCEMENT PER LATEST VERSION OF "SMACNA HVAC DUCT CONSTRUCTION STANDARDS". ANY INTERIOR DUCTWORK DOWNSTREAM OF EXHAUST FANS SHALL HAVE HARD CAST MASTIC SEALER ON ALL JOINTS AND SEAMS. AT.2.1. CONCEALED: ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH METALLIC

DUCT TAPE OR MASTIC. SUPPLY AND RETURN DUCTWORK IN UNCONDITIONED SPACES SHALL HAVE MINIMUM R-6 EXTERNAL DUCT WRAP INSULATION AFTER SEALING. AT.2.2. EXPOSED ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH CLEAR SILICON CAULKING. EXTERIOR DUCT INSTALLATIONS SHALL HAVE WELDED OR FLANGED AND GASKETED JOINTS. MINIMUM R-6 INTERNAL, FOIL-FACED DUCT LINER FOR FINISHED AREAS, MINIMUM R-6 EXTERIOR DUCT INSULATION BOARD FOR MECHANICAL ROOMS, AND R-6 DUCT WRAP FOR ALL

OTHER UNCONDITIONED AREAS WHERE EXPOSED. AT.3. FLEX DUCT: HEAVY SPRING STEEL WIRE HELIX, PERMANENTLY BONDED INNER FILM LINER AND FIBERGLASS SCRIM, FIBERGLASS BLANKET INSULATION AND POLYETHYLENE OUTER JACKET, AS MANUFACTURED BY THERMAFLEX, TYPE G-KM OR EQUAL. PROVIDE 2 TIE WRAPS AT EACH CONNECTION TO STEEL DUCTWORK, DEVICES OR EQUIPMENT.

AT.4. FLEX CONNECTION: 3" GALVANIZED STEEL EDGES WITH 3" FLEXIBLE VINYL STRIP IN MIDDLE, MINIMUM 2" PRESSURE RATED, AS MANUFACTURED BY DUCTMATE OR EQUAL.

AT.5. PLENUMS: GALVANIZED STEEL, MINIMUM STEEL GAUGE, JOINTS AND REINFORCEMENT PER LATEST VERSION OF "SMACNA HVAC DUCT CONSTRUCTION STANDARDS"

AT.5.1. ALL TRANSVERSE JOINTS AND DUCT WALL PENETRATIONS SEALED WITH METALLIC DUCT TAPE OR MASTIC.

AT.5.2. FAN INLET OR DISCHARGE: PROVIDE ALL PLENUMS WITH MINIMUM 2" INTERIOR. FOIL-FACED DUCT LINER FOR NOISE REDUCTION. PROVIDE MINIMUM 12" SQ. DUCT ACCESS FOR DOOR FOR INTERNAL SERVICE AND CLEANING, AS SHOWN ON PLANS.

AT.5.3. ROOF HOODS OR WALL LOUVERS: PROVIDE ALL PLENUMS WITH MINIMUM 1" EXTERIOR DUCT INSULATION BOARD IN MECHANICAL ROOMS, AND 1" DUCT WRAP WHERE CONCEALED. PROVIDE MINIMUM 12: SQ. DUCT ACCESS DOOR FOR INTERNAL SERVICE AND CLEANING, OR AS SHOWN ON PI ANS

AT.6. INSULATION: SUPPLY, RETURN AND OUTSIDE AIR VENTILATION DUCTWORK INSTALLED IN UNCONDITIONED SPACES SHALL HAVE MINIMUM R-8 EXTERNAL DUCT WRAP INSULATION AFTER SEALING. SEE DUCT WRAP SPECIFICATIONS.

AT.6.1. PROVIDE INTERNAL DUCT LINER FOR RECTANGULAR DUCTWORK OR PLENUMS INSTALLED IN EXPOSED FINISHED AREAS.

AT.6.2. PROVIDE EXTERNAL DUCT INSULATION BOARD FOR RECTANGULAR DUCTWORK OR PLENUMS INSTALLED IN MECHANICAL SPACES. SEE DUCT INSULATION BOARD SPECIFICATIONS. AT.7. DUCT LINER: OWENS CORNING, SERIES 703 OR EQUAL. FIBERGLASS INSULATION FORMED INTO

RIGID BOARD, BONDED TO FOIL-REINFORCED KRAFT VAPOR RETARDING FACING, MINIMUM R-8 RATING FOR INTERIOR INSTALLATIONS, AND R-8 FOR EXTERIOR INSTALLATIONS. AT.8. DUCT WRAP: PROVIDE DUCT WRAP ON ALL SUPPLY AND RETURN DUCTWORK INSTALLED IN

CONCEALED, UNCONDITIONED SPACES.OWENS CORNING, ALL SERVICE DUCT WRAP, OR EQUAL FIBERGLASS BLANKET, FACTORY LAMINATED TO FRK VAPOR RETARDING FACING, MINIMUM R-8 RATING FOR INTERIOR INSTALLATIONS, AND R-8 FOR EXTERIOR INSTALLATIONS. AT.9. DUCT INSULATION BOARD: OWENS CORNING, SERIES 701 FOR CURVED SURFACES AND SERIES 7056

FOR FLAT SURFACES, OR EQUAL. FIBERGLASS INSULATION FORMED INTO RIGID BOARD, BONDED TO FOIL-REINFORCED KRAFT VAPOR RETARDING FACING, MINIMUM R-8 RATING FOR INTERIOR INSTALLATIONS, AND R-8 FOR EXTERIOR INSTALLATIONS. AT.10. DUCT ACCESS DOOR: NAILOR INDUSTRIES, 08SCL SERIES, OR EQUAL. RATED FOR MEDIUM AND LOW

PRESSURES, SMACNA CONSTRUCTIONS SPECIFICATIONS, GALVANIZED STEEL CONSTRUCTION, REMOVABLE DOOR WITH 1" INTERNAL FOIL-FACED INSULATION, KNOCK-OVER TABS PROGRESSIVE CAMLOCK OPERATION

AT.11. MANUAL BALANCING DAMPERS: PROVIDE MANUAL BALANCING DAMPERS WHERE SHOWN ON PLANS AND AS NEEDED FOR PROPER DISTRIBUTION OF AIRFLOWS. BALANCING DAMPERS SHALL BE SEPARATE FROM THE GRILLES AND DIFFUSES AND INSTALLED A MINIMUM OF 5 DUCT DIAMETERS UPSTREAM OR DOWNSTREAM TO REDUCE AIR NOISE.

AT.11.1.ROUND DAMPERS:20 GAGE, GALVANIZED STEEL, 3/8" SQUARE AXLE SHAFT EXTENDING BEYOND FRAME THROUGH FACTORY MOUNTED LOCKING HAND QUADRANT. MOLDED SYNTHETIC BEARINGS, MILL GALVANIZED FINISH, AS MANUFACTURED BY RUSKIN, MODEL MDRS25 PR APPROVED EQUAL. AT.11.2.RECTANGULAR DAMPERS: 22 GAGE, GALVANIZED STEEL ORT SMANCA STANDARD, WHICHEVER IS GREATER, SQUARE AXLE SHAFT EXTENDING BEYOND FRAME THROUGH FACTORY MOUNTED

LOCKING HAND QUADRANT. MOLDED SYNTHETIC BEARINGS, MILL GALVANIZED FINISH, AS MANUFACTURED BY RUSKIN, MODEL MD25 OR APPROVED EQUAL. AT.12. MOTORIZED BACKDRAFT DAMPERS: GALVANIZED STEEL FRAME, ALUMINUM BLADES WITH SEALS, SIR LEAKAGE OF 4 CFM/SQFT OR LESS AT 1"WC PRESSURE DIFFERENTIAL, RATED FOR VELOCITIES

UP TO 2500 FPM AND PRESSURES UP TO 2" WC, AS MANUFACTURED BY GREENHECK, OR EQUAL. PROVIDE WITH CLASS I DAMPER MOTOR ON ALL AIR INTAKE AND EXHAUST OPENINGS FOR HOODS AND FANS.

AT.13. GRILLES AND DIFFUSERS: AS SCHEDULED OR EQUAL. PROVIDE WITH ALL REQUIRED FACTORY ACCESSORIES NEEDED FOR COMPLETE INSTALLATION.

AT.13.1.WHERE REQUIRED, PROVIDE FACTORY MOUNTING FRAME FOR INSTALLATION INTO SHEETROCK CEILINGS. AT.13.2.FOR SPIRAL DUCT MOUNTED SIDEWALL GRILLES, PROVIDE FACTORY SCOOP FOR BALANCING.

AT.14. WALL LOUVERS: AS SCHEDULED OR EQUAL. FIELD VERIFY FRAME SIZE AND TYPE WITH ACTUAL WALL SECTION PRIOR TO ORDERING. PROVIDE WITH BAROMETRIC OR MOTORIZED BACKDRAFT DAMPERS AS NOTED ON PLANS. AT.15. ROOF HOODS: AS SCHEDULED OR EQUAL. PROVIDE WITH

AT.16. FACTORY CURBS AND BAROMETRIC OR MOTORIZED BACKDRAFT DAMPERS AS NOTED ON PLANS. ROOFTOP UNITS: RTU PERFORMANCE, MAKE AND MODEL NUMBERS AS SCHEDULED. MAKE BA.

MODIFICATIONS OR ADJUSTMENTS AS REQUIRED TO OPERATE EXISTING RTUS PER CONTROL DETAILS ON PLANS AND CONTRACTOR TO ASSUME ALL LIABLITY ON EXISTING UNITS.

EXHAUST FAN: PERFORMANCE, MAKE AND MODEL NUMBER AS SCHEDULED, OR APPROVED EQUAL. BB. PROVIDE WITH FACTORY CURB, CLASS I MOTORIZED BACKDRAFT DAMPERS, DISCONNECT SWITCH AND ECM MOTOR IF FRACTIONAL HP.

CONTROL SYSTEMS: PROVIDE A COMPLETE SYSTEM OF CONTROLS TO PROPERLY OPERATE ALL HVAC SYSTEMS SHOWN ON PLANS. PLANS SHOW ONLY THE ANTICIPATED MAJOR COMPONENTS OF CONTROL SYSTEM, S AND SEQUENCE OF OPERATIONS ONLY. THEY DO NOT SHOWN EVERY SINGLE COMPONENT OF THE SYSTEM OR WIRING AND INSTALLATION DETAILS. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL ITEMS AS NEEDED TO MEET THE PERFORMANCE SEQUENCES SHOWN ON PLANS.

CONTROL WIRING BC.1.

BC.1.1. ALL CONTROL WIRING SHALL BE AS SPECIFIED BY CONTROL EQUIPMENT MANUFACTURER. THE NUMBER OF CONDUCTORS AND GAUGE SHALL MEET THEIR REQUIREMENTS. AS WELL AS THE METHOD OF INSTALLATION.

BC.1.2. ALL CONTROL WIRING EXPOSED IN MECHANICAL ROOMS SHALL BE INSTALLED IN EMT CONDUIT. BC.1.3. WIRING INSTALLED IN CEILING PLENUMS AND INSIDE WALLS SHALL BE PLENUM RATED AND RUN EXPOSED UNLESS OTHERWISE REQUIRED BY THE LOCAL AUTHORITY.

BC.2. THERMOSTATS: AS MANUFACTURED BY HONEYWELL OR EQUAL, DESIGNED TO OPERATE THE TYPE OF COOLING OR HEATING UNIT TO BE CONNECTED, WITH NUMBER OF COOLING AND HEATING STAGES EQUAL TO THOSE OF THE UNIT SERVED. ALL THERMOSTATS SHALL INCLUDE CAPABILITIES AS REQUIRED BY STATED IECC, INCLUDING 7-DAY SCHEDULED TEMPERATURE SETBACK WITH OPTIMAL START AND MANUAL OVERRIDE OF UP TO 2 HRS.

BC.2.1. MULTI-STAGE UNITS: PROVIDE SEPARATE CONTROL WIRE FOR EACH STAGE OF HEAT AND COOLING FOR ALL MULTI-STAGE UNITS. DO NOT JUMPER WIRE STAGES TOGETHER TO MAKE THEM RUN SIMULTANEOUSLY.

BC.2.2. REMOTE SENSORS: WHERE SHOWN ON PLANS PROVIDE A REMOTE TEMPERATURE SENSOR COMPATIBLE WITH THERMOSTAT CONTROLLING UNIT. CONNECT TO THERMOSTAT PER MANUFACTURER'S INSTRUCTIONS. ADJUST THERMOSTAT PER MANUFACTURER'S INSTRUCTIONS TO UTILIZE REMOTE SENSOR FOR UNIT CONTROL AFTER INSTALLATION.

BD. INTERLOCKS BACKDRAFT DAMPERS: FOR ALL BACKDRAFT DAMPERS SERVING EXHAUST AND OUTSIDE AIR BD.1. OPENING ON THE PLANS, INTERLOCK CLASS I MOTORIZED DAMPERS TO CLOSE WHEN SYSTEMS ARE NOT IN OPERATION.

BD.2. EXHAUST FANS: INTERLOCK EXHAUST FANS TO OPERATE SIMULTANEOUSLY WITH HVAC UNITS AS NOTED ON PLANS, USING AUXILIARY CONTACTS OR RELAYS IN UNIT STARTERS. PROVIDE ALL REQUIRED CONDUIT, WIRING AND CONTROL COMPONENTS NEEDED TO PROVIDE THE AUTOMATIC SIMULTANFOUS OPERATION

BD.3. TESTING OF THE INTERLOCKS SHALL BE A PART OF THE STARTUP PROCESS FOR HVAC EQUIPMENT AND SHALL BE DOCUMENTED ON STARTUP SHEETS, PROVIDED TO THE PM.

SMOKE DETECTORS: PROVIDE A RETURN DUCT MOUNTED SMOKE DETECTOR FOR ALL HVAC UNITS WITH GREATER THAN BE 1 2,000 CFM OF AIRFLOW. HVAC UNITS WITH GREATER THAN 15,000 CFM OF AIRFLOW SHALL ALSO HAVE SMOKE DETECTOR INSTALLED IN SUPPLY DUCTWORK AS SPECIFIED IN NFPA 90A. DETECTORS SHALL BE WIRED TO SHUT DOWN THE UNIT UPON ACTIVATION, AND INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL.

BF.3.

BG.8.

BH. BH.1.

BI.1.

BI.3.

BI.4.

BE.2. WHERE AN APPROVED FIRE ALARM SYSTEM IS INSTALLED IN THE BUILDING, THE DUCT SMOKE DUCTWORK AS SPECIFIED IN NFPA 90A. DETECTORS SHALL BE WIRED TO SHUT DOWN THE UNIT UPON ACTIVATION, AND INITIATE A VISIBLE AND AUDIBLE SUPERVISORY

BE.3. WHERE AN APPROVED FIRE ALARM SYSTEM IS INSTALLED IN THE BUILDING, THE DUCT SMOKE DETECTORS SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM AND INITIATE EITHER AN ALARM SIGNAL AT THE PROTECTED PREMISES, A SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION, OR BE MONITORED BY A SUPERVISING STATION.

HVAC DRAWINGS: BF.1. THESE DRAWINGS ARE INTENDED TO GENERALLY SHOW THE EXISTING BUILDING AND HVAC SYSTEMS MODIFICATIONS REQUIRED FOR THIS PROJECT. INFORMATION PROVIDED INCLUDES LOCATION, QUANTITY, TYPE, SIZE, CAPACITY AND FUNCTION OF SPECIFIC COMPONENTS OF THE NEW AND MODIFIED HVAC SYSTEMS TO BE PROVIDED BY THE CONTRACTOR

BF.2. SEE DIFFUSER AND GRILLE SCHUEDULE FOR ALL BRANCH DUCT SIZES NOT SHOWN ON PLAN FOR CLARITY, ALL BRANCH DUCTS AND CONNECTING FLEX DUCTS SHALL EQUAL DIFFUSER OR GRILLE COLLAR SIZE AS SCHEDULE.

ADJUST DUCT SIZES SHOWN ON PLANS AS NEEDED FOR OFFSETS AND INTEREFRENCES IDENTIFIED IN THE FIELD AND OR CREATED BY OTHER TRADES. MAINTAIN DUCT CROSS SECTIONAL AREA THROUGH OFFSETS, ELBOWS AND TRANSITIONS.

BF.4. INCIDENTAL MODIFICATION OR DEMOLITION OF EXISTING HVAC SYSTEMS AND COMPONENTS AS REQUIRED FOR INSTALLATION OF NEW WORK IS INCLUDED AS PART OF THE PROJECT. WHETHER SHOWN ON PLANS OR NOT. CONTRACTOR SHALL FIELD VERIFY ALL REQUIREMENTS PRIOR TO BIDDING PROJECT.

CEILING TILE AND GRID REMOVAL MODIFICATION AND REINSTALLATION AS REQUIRED FOR WORK SHOWN IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE HVAC CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED WORK ACCESS ABOVE ALL LAY-IN CEILINGS.

RELOCATION OF EXISTING BUILDING SYSTEMS AND EQUIPMENT SUCH AS LIGHT FIXTURES, FIRE SPRINKLER PIPING AND HEADS, SMOKE DETECTORS, ELECTORS, ELECTRICAL CONDUITS, PLUMBING, ETC., AS REQUIRED FOR INSTALLATION OF NEW WORK IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE HVAC CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES.

BG.7. THE EXISTING BUILDING HVAC SYSTEMS ARE INTENDED TO BE REUSED AS SHOWN ON PLANS OR AS INSTALLED IF NOT SHOWN ON PLANS. ALL EXISTING HVAC SYSTEMS AND PERFORMANCE DATA SHOWN ON PLANS IS FOR REFERENCE ONLY AND MAY BE DIFFERENT IN THE FIELD. CONTRACTOR SHALL FIELD SURVEY, TEST AND INSPECT ALL EXISTING HVAC SYSTEMS PRIOR TO BUILDING TO ENSURE HE UNDERSTANDS AND ACCEPTS ALL EXISTING CONDITIONS.

THE EXISTING HVAC SYSTEMS AIRFLOWS SHOWN ON PLANS ARE FOR REFERENCE ONLY TO ASSIST WITH COMFORT BALANCING TO BE PROVIDED BY THE HVAC CONTRACTOR AND SPECIFIED BY THE OWNER.

CUTTING AND PATCHING:

WHERE CUTTING AND PATCHING ARE REQUIRED TO INSTALL HVAC SYSTEMS CONTRACTOR SHALL PROVIDE WORK AS NEEDED. AFTER INSTALLATION, PATCH ALL OPENING TO MATCH ADJUSTMENT FINISHED SURFACES. FINISHED PAINTING TO BE PROVIDED BY OTHERS.

DUCTWORK, PIPING AND SUPPORTS:

LOCATE ALL BALANCING DAMPERS IN ACCESSIBLE LOCATIONS, WHERE INSTALLED ABOVE SHEETROCK CEILING, COORDINATE WITH OTHER TRADES TO PROVIDE ACCESS HATCH FOR BALANCING

HOLD ALL DUCTWORK AND PIPING TIGHT AGAINST STRUCTURES, RUN IN A NEAT AND WORKMAN LIKE MANAGER PARALLEL TO BUILDING LINES WHEREVER POSSIBLE. PROVIDE ALL REQUIRED DUCT AND PIPE HANGERS AND SUPPORTS WITH PROPER SPACING PER CODE REQUIREMENTS

GROUP PARALLEL RUNS OF DUCTWORK AND PIPING TOGETHER ON COMMON HANGERS AND SUPPORTS TO MINIMIZE SPACE WHEREVER POSSIBLE. ALL SUPPLY AND RETURN DUCTWORK CONCEALED ABOVE CEILINGS SHALL BE INSULATED AFTER INSTALLATION AND SEALING. SEE SPECS FOR INSULATION REQUIREMENTS.

DESIGN WITHOUT CONSTRUCTION ADMINISTRATION:

IT IS UNDERSTOOD AND AGREED THAT THE ARCHITECT/ENGINEER'S SCOPE DOES NOT INCLUDE PROJECT OBSERVATION OR REVIEW OF THE CONTRACTOR'S PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES. THE OWNER AGREES TO PROVIDE CONSTRUCTION ADMINISTRATION AND ASSUMES ANY AND ALL POTENTIAL LIABILITY ARISING FROM SUCH ADMINISTRATION. THE OWNER ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE CONTRACT DOCUMENTS AND FOR CONSTRUCTION OBSERVATION AND THE OWNERS WAIVES ANY CLAIMS AGAINST THE ARCHITECT/ENGINEER THAT MAY BE IN ANY WAY CONNECTED THERETO. THE ARCHITECT/ENGINEER WILL NOT RESPOND TO ANY QUESTIONS DIRECTED TO THE INTERPRETATION OF THE CONTRACT DOCUMENTS OR IN RESPONSE TO ISSUES ENCOUNTERED BY AND AS RELAYED BY THE CONTRACTOR IN THE FIELD.

S.	
ND BRANCH DUCT W/ BALANCING DAMPER	
T/INTERNAL DIMENSIONS (WIDHT/DEPTH).	No. DESCRIPTION DATE
ANGULAR DUCT TRANSITION.	E OF TOWN
ND FLEX DUCT.	
D LEVEL SENSOR.	Luis Eduardo Madrinal
KE DETECTOR.	P: 114403
PERATURE SENSOR.	UNAL UNAL UNAL UNAL UNAL UNAL UNAL UNAL
- KILOWATT - LOUVER	A&G Engineering MEP Design 1004 W Frontage Rd Alamo, TX 78516 (956) 787 - FIRE info@AandGMEP.com
- LEAVING AIR TEMPERATURE - POUNDS - LEAVING - MAKEUP AIR UNIT - 1000 BTU PER HOUR - MINIMUM CIRCUIT AMPACITY	кніт
- MANUFACTURER - MINIMUM P - MAXIMUM OVERCURRENT - NOISE CRITERIA	CHIROPRACTIC
- NUMBER - OUTSIDE AIR D - OVERCURRENT PROTECTION DEVICE - PRESSURE DROP - PHASE	WELLNESS
 PLACES PROJECT MANAGER POUNDS PER SQUARE INCH 	
- SUPPLY AIR - SUPPLY AIR - SEASONAL ENERGY EFFICIENCY RATIO	6151 E. POST RD. KYLE TX. 78640
- SENSIBLE - STATIC PRESSURE	22 02 10 01 JUN 2023
- SQUARE FEET - TEMPERATURE - TOTAL - TYPICAL	General Notes - Mech
- VELOCITY - WET BULB TEMPERATURE - WATER GAUGE	ΜΛΛ

SYMBOL LEGEND - MECHANICAL:

RTU (ROOF TOP UNIT).

- CU (COMPRESSOR UNIT)
- COMPRESSOR.
- PTAC.

ABBREVIATIONS:

AFF	- ABOVE FINISHED FLOOR
AHJ	- AUTHORITY HAVING JURISDICTION
ARCH	- ARCHITECTURAL
BAL	- BALANCE
BTU	- BRITISH THERMAL UNIT
CA	- COMMISSIONING AGENT
CAP	- CAPACITY
CFM	- CUBIC FEET PER MINUTE
CLG	- COOLING
CO	- COMPANY
DB	- DRY BULB
DIA	- DIAMETER
DMPR	- DAMPER
DN	- DOWN
DX	
EA	
EAI	
EEK	
ELECI	
⊂∧⊺ ∘⊏	
HTC	
HVAC	- HEATING VENTILATION AND AIR
H7	- HERTZ
IFCC	- INTL ENERGY CONSERVATION CODE
IN	- INCHES
IMC	- INTERNATIONAL MECHANICAL CODE

EXHAUST FAN.

- 🛅 ROUN
- E RECTA

- KW
- LAT
- LBS LVG
- MAU
- MBH
- MCA MFG
- MIN
- MOCF
- NC
- NO
- OA OCPD
- PD
- PH PLCS
- PM
- PSIG RA
- SA
- SEER
- SENS SP
- SQFT
- TEMP TOT
- TYP
- VEL WB
- WG

- AHU (AIR HANDLING UNIT).
- 2'x2' SUPPLY AIR DIFFUSER.
- 1'x1' SUPPLY DIFFUSER.
- 12"x6" SUPPLY DIFFUSER.
- 2'x2' RETURN/TRANSFER AIR DEVICE
- AL150 CFM'
- SMOK O TEMF

- 🔘 LIQUI
- ROUN



- A. HVAC UNIT FAN SHALL BE PLACED IN "AUTO" RUN POSITION, NOT "CONTINUOUS RUN" POSITION.
- B. THERMOSTAT SHALL NOT BE SET BELOW 72 deg. F FOR COOLING.
- C. SYSTEM SHALL NOT BE OPERATED UNTIL BUILDING INTERIOR IS "FINISHED OUT". FIRST WEEK OF OPERATION, TEMPERATURE SHALL NOT BE SET BELOW 78 deg. F, SECOND WEEK: 76 deg. F, THIRD WEEK: 74 deg F, BUILDING MUST BE SLOWLY BROUGHT TO OPERATING TEMPERATURE TO PREVENT THE FORMATION OF MOISTURE ON THE WALLS, CEILING, ETC.
- D. CONTRACTOR SHALL PROVIDE A UNIT HEATER WITHIN THE RISER ROOM. THE UNIT HEATER WIRING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. UNIT HEATER SHALL PROVIDE SUFFICENT HEAT TO PREVENT FIRE SPRINKLER SYSTEM FROM FREEZING.





KEYED NOTES:

- 1. CONTROLS FOR A/C UNIT WILL BE BY MEANS OF A 24 VOLT 7-DAY PROGRAMMABLE THERMOSTAT WITH HEAT-OFF-COOL AND FAN ON-AUTO CAPABILITIES SHOWN ON A DIGITAL DISPLAY. MOUNT THERMOSTAT AT 48" ABOVE FINISHED FLOOR. PROVIDE WITH KEYED CLEAR PLASTIC COVER.
- WEATHERPROOF METAL WALL CAP FOR EXHAUST SYSTEM. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO INSTALLATION. 2.
- 3. PROVIDE EXTERIOR DRYER WALL VENT METAL COVER. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO ANY WORK.
- WEATHERPROOF METAL LOUVER IN WALL FOR MAKE UP AIR SYSTEM. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO INSTALLATION. 4.

NATURAL VENTILATION CALCULATIONS:

"CLOSED ATTIC SPACE":

-Required area for natural ventilation: Area= 358sf x 0.04= 14.4 SF

-Proposed area: Louver 1: 3'x3'= 9 SF Louver 2: 3'x3'= 9 SF

Total= 18 SF



2 ROOF PLAN 1/16" = 1'-0"



										P	ACKAG	GED D	K ROC	FTOP	UNIT S	CHED	ULE												
			BASIS OF	DESIGN							SUPPLY FA	N				DX COIL				ELECT	RIC HEAT		VEI	NTILATION A	ND FILTER		1	OWER	
MARK	MANUF.	MODEL	LXWXH	WEIGHT	SOUND	AMBIENT	IEER /	EER			FAN		MOTOR	TOTAL	SENSIBLE	EAT	LAT	MIN	EAT(°F)	LAT(°F)	HEAT	STAGES	OUTSIDE	FILTER	DEPTH	EFF,	VOLTAGE	MCA	МОСР
			(IN)	(LB)	(DB)	TEMP.	(SEER)		TYPE	DRIVE	AIRFLOW	E.S.P.	POWER	CAPACITY	CAPACITY	DB/WB	DB/WB	COOLING	DB	DB	(KW)		AIRFLOW	TYPE	(IN)	(%)			
						(°F)					(CFM)	(IN H20)	(HP)	(BTU/HR)	(BTU/HR)	(°F)	(°F)	STAGES					(CFM)						
RTU-1 (4 TON)	LENNOX	KCB048	84X47X37	591	75	98	(14)	11.5	ODP	BELT	1400	0.8	1	45,567	33,635	78/65	55.3/53.8	1	67	92.4	15.0	1	200	MERV 4	2	30	208/3/60	45	45
RTU-2 (6 TON)	LENNOX	KCB074	84X47X44	697	79	98	12.9	11.2	ODP	BELT	2100	0.8	1	66,942	52,498	78/65	54.4/54	1	67	92.4	22.5	1	300	MERV 4	2	30	208/3/60	65	70

				AIR D	DEVICE SC	HEDUL	E			
DESIGNATION	SIZE	MOUNTING	THROW	NECK TYPE	CONSTRUCTION	OBD	MAX NC	FINSH	MANUFACTURER	MODEL
A	24" X 24"	RECESSED	4-WAY	ROUND	ALUMINUM	YES	30	#26 WHITE	TITUS	TMS
В	12" X 12"	RECESSED	4-WAY	ROUND	ALUMINUM	YES	30	#26 WHITE	TITUS	TMS
С	60" X 2"	RECESSED	1-WAY	ROUND	ALUMINUM	YES	30	#26 WHITE	TITUS	FT-20
D	24" X 24"	RECESSED	RETURN	ROUND	ALUMINUM	YES	30	#26 WHITE	TITUS	50F
	LEGEND: DESIGNATION	CFM B 150 8"Ø NECK SI	ZE			<u>NOTES:</u> 1. SI 2. CO 3. NE	ZE SHALL INCL OORDINATE AII ECK SIZE PER I	UDE MODULE W R DEVICE TYPE \ NECK / BRANCH	ITH FULL FACE. WITH ARCHITECTUR DUCT SIZE CHART.	AL CEILINGS.



EXHAUST FAN SCHEDULE

DESIGNATION	EF-1, 2, 3, 4
EXHAUST CFM	70
MOTOR HP.	50 WATTS
FAN RPM	900
MOUNTING LOCATION	CEILING
VOLTAGE/PHASE	120V/1-PHASE
MANUFACTURER	CAPTIVE AIRE
MODEL	CFA-D70-CA
REMARKS	ALL

REMARKS:

1. PROVIDE TIME DELAYED SHUTOFF.

2. PROVIDE WITH FAN SPEED CONTROLLER. 3. PROVIDE WITH BACK DRAFT DAMPER.

4. INTERLOCK WITH LIGHTS.

LOUVER SCHEDULE

MARK	L-1
MAKEUP AIR AREA	9 SF
MOUNTING LOCATION	WALL
WIDTH	3 FEET
HEIGHT	3 FEET
FREE AREA (%)	0.47
AIR VELOCITY (FT/MIN)	439
LOUVER PD (IN. WC.)	0.11

REMARKS:

FULLY PROTECTED GALVANIZED BIRD SCREEN. 2. CONTINUOSLY SLOT DRAINAGE SYSTEM.

3. 26 GAUGE SHEET METAL.

MINISPLIT	SCHEDUI	E
INDOOR UNIT MARK	MINISPLIT 1	MINISPLIT 2
INDOOR UNIT TON	3/4 TON	1.5 TON
MAX SUPPLY CFM	417	713
MINIMUM O/A (CFM)	N/A	N/A
ENTERING AIR (DB/WB)	80/67	80/67
TOTAL COOLING CAP. (BTUH)	9000	18000
SENSIBLE COOLING CAP. (BTUH)	8170	14480
HEATING CAPACITY (BTUH)	10000	21600
VOLTAGE/PHASE	208-230/1	208-230/1
MCA	N/A	N/A
MAX. FUSE SIZE	N/A	N/A
MANUFACTURER	DAIKIN	DAIKIN
MODEL NO.	FTX09NMVJU	FTX18NMVJU
WEIGHT (LBS)	18	27
CONDENSING UNIT MARK	CU-1	CU-2
VOLTAGE/PHASE	208-230/1	208-230/1
MCA	12.1	18.3
MAX. FUSE SIZE (AMPS)	15	20
AMB. AIR TEMP. (CLG°F/HTG°F)	95/47	95/47
REFRIGERANT	R-410A	R-410A
COOLING AMBIENT RANGE (STD)	- 4°F - 115°F	- 4°F - 115°F
HEATING MODE OPER. RANGE	5°F - 64°F	5°F - 65°F
MANUFACTURER	DAIKIN	DAIKIN
MODEL NO.	RX09NMVJU	RX18NMVJU
WEIGHT (LBS)	55	97
SEER	19	18
HTG EFF. (HSPF)	9	9
MAX EQUIV. LINE LENGTH (FT)	65	98
MAX. VERTICAL RISE (FT)	49	65



GENERAL NOTES - PLUMBING

A. A.1.	PLUMBING CONDITIONS FOR PLUMBING WORK: ALL WORK UNDER THIS CONTRACT SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH FEDERAL, STATE, AND LOCAL CODES. WHERE THESE PLANS AND SPECIFICATIONS ARE IN CONFLICT WITH SUCH
	CODES, THE CODES SHALL GOVERN. BIDS SUBMITTED BY CONTRACT SHALL INCLUDE WORK REQUIRED TO COMPLY WITH ALL SUCH CODES. ANY ITEMS REQUIRED AND/OR MISSED IN THESE BASIS OF DESIGN DOCUMENT, SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR AT CONTRACTORS EXPENSE AND ZERO EXPENSE TO THE OWNER AND/OR DESIGN TEAM. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION
A.2.	CONTRACTOR SHALL STUDY CONTACT DOCUMENTS, FULLY UNDERSTAND AND ACCEPT THE BASIS OF DESIGN AND SCOPE OF WORK. SUBMISSION OF BID INDICATES CONTRACTOR'S COMPLETE APPROVAL
A.3.	CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN, TRAINED LICENSED AND EXPERIENCED IN COMMERCIAL PLUMBING, AND WHO ARE FAMILIAR WITH THE CONSTRUCTION
A.4.	DOCUMENTS AND METHODS OF PERFORMING THE WORK REQUIRED. CONTRACTOR SHALL PROVIDE A MINIMUM ONE (1) YEAR WARRANTY ON ALL LABOR AND MATERIALS INSTALLED. CONTRACTOR SHALL MAKE ALL WARRANTIED REPAIRS OR REPLACEMENT WITHIN SEVEN (7) CALENDAR DAYS, AT NO ADDITIONAL COST TO THE OWNER.
В. В.1.	BASIS OF DESIGN: ALL CONSTRUCTION DOCUMENTS PROVIDED BY OWNER, INCLUDING ENGINEERING DRAWINGS, NOTES, SCHEDULE, DETAILS, CALCULATIONS AND SPECIFICATIONS PROVIDED, ALONG WITH EQUIPMENT MANUFACTURER'S DRAWINGS AND SPECIFICATIONS, FROM THE BASIS OF DESIGN AND GENERALLY SCHEMATIC IN NATURE, PIPING, FIXTURES AND EQUIPMENT SHOWN ON DRAWINGS IS UNDERSTOOD TO BE THE GENERAL ARRANGEMENT ONLY, TO BE FIELD ADJUSTED AS REQUIRED.
B.2.	DRAWINGS DO NOT SHOW EVERY DETAIL OR ITEM REQUIRED FOR FIXTURE AND EQUIPMENT INSTALLATIONS. REFER TO ALL EQUIPMENT MANUFACTURER'S INSTRUCTIONS FOR ADDITIONAL REQUIRED PARTS AND ACCESSORIES NEEDED FOR COMPLETE INSTALLATIONS.
B.3. B.4.	INVERT ELEVATIONS (IE) OF SANITARY DRAIN PIPING, SHOWN ON PLANS, IS ESTIMATED MINIMUM DEPTH BELOW FINISHED FLOOR ONLY, COORDINATE W/CIVIL FOR ADDITIONAL INFORMATION NOT SHOWN. THESE DRAWINGS ARE INTENDED TO GENERALLY SHOW THE EXISTING BUILDING AND PLUMBING SYSTEMS MODIFICATION REQUIRED FOR THIS PROJECT. INFORMATION PROVIDED INCLUDES LOCATION, QUANTITY, TYPE, SIZE, CAPACITY AND FUNCTION OF SPECIFIC COMPONENTS OF THE NEW/MODIFIED PLUMBING SYSTEMS TO BE PROVIDED BY CONTRACTOR.
B.5. B.6.	FOR CLARITY, SEE PLUMBING FIXTURE AND DRAIN SCHEDULES FOR ALL PIPING CONNECTIONS SIZES NOT SHOWN ON PLANS. INCIDENTAL MODIFICATIONS FOR DEMOLITION OF EXISTING PLUMBING SYSTEMS AND COMPONENTS AS REQUIRED FOR INSTALLATION OF NEW WORK IS INCLUDED AS PART OF THE PROJECT, WEATHER SHOWN ON PLANS OR NOT. CONTRACTOR SHALL FIELD VERIFY ALL REQUIREMENTS PRIOR TO BIDDING PROJECT
B.7.	CEILING TILE AND GRID REMOVAL, MODIFICATIONS AND REINSTALLATION AS REQUIRED FOR WORK SHOWN SHALL BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE PLUMBING CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED WORK ACCESS ABOVE ALL LAY-IN CEILINGS.
B.8.	RELOCATION OF EXISTING BUILDING SYSTEMS AND EQUIPMENT, SUCH AS LIGHT FIXTURES, FIRE SPRINKLER PIPING AND HEADS, SMOKE DETECTORS, ELECTRICAL CONDUITS, DUCTWORK, ETC., AS REQUIRED BY FOR INSTALLATION OF NEW WORK IS TO BE PROVIDED BY OTHERS AND IS NOT CONSIDERED PART OF THE PLUMBING CONTRACTOR'S SCOPE OF WORK. COORDINATE WITH OWNER TO PROVIDE THE REQUIRED INTERFERENCE REMOVAL OF OTHER TRADES
B.9.	THE EXISTING BUILDING PLUMING SYSTEMS ARE INTENDED TO BE REUSED AS SHOWN ON PLANS OR AS INSTALLED IF NOT SHOWN ON PLANS. ALL EXISTING PLUMBING SYSTEMS AND EQUIPMENT SHOWN ON PLANS IS FOR REFERENCE ONLY AND MAY BE DIFFERENT IN THE FIELD. CONTRACTOR SHALL FIELD SURVEY, TEST AND INSPECT ALL EXISTING PLUMBING SYSTEMS PRIOR TO BIDDING TO
B.10.	THE EXISTING GAS EQUIPMENT LOADS SHOWN ON PLANS ARE FOR REFERENCE ONLY TO ASSIST WITH MODIFICATIONS TO BE PROVIDED BY THE PLUMBING CONTRACTOR AND GAS UTILITY COMPANY. FIELD VERIFY ALL ACTUAL GAS LOADS PRIOR TO COORDINATING MODIFICATIONS WITH GAS UTILITY. GAS DESIGN, SIZING, LAYOUT, AND MODIFICATIONS ESTIMATES SHOWN ON PLANS ARE STRICTLY PRELIMINARY.
C. C.1.	SCOPE OF WORK: FURNISH ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL MAKE ALL INSTALLATIONS ACCORDING TO MANUFACTURE'S INSTRUCTIONS AND SPECIFICATION, IN ADDITION TO THOSE SHOWN ON PLANS.
C.2.	INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS DESCRIBED BY THE BASIS OF DESIGN DOCUMENTS. INCIDENTALS ITEMS NOT SPECIFIED, BUT WHICH ARE ESSENTIAL FOR THE PROPER OPERATION OF SPECIFIED SYSTEMS AND EQUIPMENT, ARE INCLUDED IN THE SCOPE OF WORK AND SHALL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST
C.3. C.4.	COMPLY WITH COMMISSIONING PLAN SHOWN ON DRAWINGS AND AS IMPLEMENTED BY OWNER'S DESIGNATED 'COMMISSIONING AGENT/AUTHORITY' (CA). PROVIDE STRUCTURAL ENGINEERING DESIGN, DRAWINGS AND MODIFICATIONS FOR INSTALLATION OF PLUMBING EQUIPMENT OVER 100 LBS., UTILIZING THE BUILDING STRUCTURE OR FOUNDATION FOR SUPPORT, UNLESS PROVIDED IN ADVANCE BY OWNER
D. D.1. D.2.	CODE COMPLIANCE: ALL WORK SHALL BE PREPARED IN ACCORDANCE WITH ALL LOCALLY ADOPTED MECHANICAL FUEL GAS AND PLUMBING CODES, ACCORDING TO THE LOCAL AUTHORITY HAVING JURISDICTION(AHJ). THE BASIS OF DESIGN IS INTENDED TO COMPLY WORTH ALL LOCAL CODES ENFORCED BY THE AHJ OVER THOSE PROJECTS. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS MADE BY THE AHJ, WHETHER SPECIFICALLY SHOWN ON PLANS OR NOT.
E. E.1. E.2.	DISCREPANCIES: IN THE CASE OF A DISCREPANCY BETWEEN DRAWINGS, SPECIFICATIONS OR MANUFACTURER'S REQUIREMENTS. THE MOST STRINGENT SHALL APPLY AND BE COMPLIED WITH BY THE CONTRACTOR. IN THE CASE IF A DISCREPANCY BETWEEN CODES AND THE CONSTRUCTION DOCUMENTS OR MANUFACTURER'S REQUIREMENTS, THE AHJ SHALL DETERMINE WHICH SHOULD BE COMPLIED WITH BY THE CONTRACTOR
F. F.1. F.2.	JOBSITE CONDITIONS: CONTRACTOR SHALL EXAMINE THE JOBSITE PRIOR TO BIDDING AND FULLY UNDERSTAND THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. BY SUBMITTING A BID FOR WORK, CONTRACTOR ACCEPTS ALL JOB CONDITIONS AS-IS WITHOUT EXTRA COMPENSATION. CONTRACTOR SHALL LOCATE AND UNCOVER THE EXISTING UTILITY SERVICES, INCLUDING GAS, WATER AND SEWER PIPING, TO DETERMINE EXISTING SIZE AND DEPTH OF EACH PRIOR TO STARTING WORK. SERVICE CONNECTIONS SHOWN ON THE PLANS ARE PRELIMINARY ONLY.
G. G.1.	PERMITS AND FEES: CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS, LICENSES, AND CERTIFICATIONS REQUIRED BY THE AHJ AND PAY FOR ALL PERMITTING FEES.
H. H.1.	COORDINATION WITH OTHER TRADES: CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCES, PROPERLY SEQUENCE INSTALLATIONS, AND PROVIDE MANUFACTURER'S REQUIRED SERVICE CLEARANCES. WHERE REQUIRED, CONTRACTOR SHALL MAKE THE ADJUSTMENTS TO PLUMBING SYSTEMS AND OR
H.2.	INSTALLATION SCHEDULE. ALL FUEL GAS CONNECTIONS TO HVAC EQUIPMENT, INCLUDING SERVICE VALVES REGULATORS, FLEXIBLE COUPLINGS, AND OTHER FITTINGS SHALL BE PROVIDED BY PLUMBING CONTRACTOR AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS, OBTAIN COMPLETE AND FINAL FUEL DIDING REQUIREMENTS EROM EQUIPMENT SUPPLIER
H.3. H.4.	ALL ELECTRICAL CONNECTIONS TO PLUMBING FIXTURES AND EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR, INCLUDING DISCONNECTS, ENCLOSURES REQUIREMENTS FOR EQUIPMENT FURNISHED. COORDINATE WITH ROOFING CONTRACTOR TO SEAL ALL PIPING PENETRATION THROUGH ROOF PER
l. l.1.	ARCHITECTURAL ROOFING SPECIFICATIONS, PROVIDE ALL WEATHERPROOFING REQUIRED. UTILITY CONNECTIONS: COORDINATE WITH UTILITY TO DETERMINE ACTUAL REQUIREMENTS FOR NEW SERVICE CONNECTION SAND METERING . INSTALL ALL UTILITY CONNECTIONS AS REQUIRED BY UTILITY SPECIFICATIONS. BAX ALL UTILITY DEOLUBED FEES FOR SERVICE CONNECTIONS OR MODIFICATIONS SHOWN ON PLANS
J. J.1.	CONTRACTOR FURNISHED EQUIPMENT & MATERIALS: SHALL BE NEW, MANUFACTURED CERTIFIED TO COMPLY WITH THE BASIS OF DESIGN, FREE OF DEFECT AND COVERED UNDER A MINIMUM 1-YEAR FACTORY WARRANTY, UNI ESS SPECIFIED
J.2.	DIFFERENTLY ELSEWHERE. SHALL BE AS SPECIFIED IN CONSTRUCTION DOCUMENTS OR AS ACCEPTABLE SUBSTITUTION OF EQUAL ITEM. ALL SUBSTITUTIONS MUST BE APPROVED THROUGH THE COMMISSIONING PROCESS TO BE
J.3.	ACCEPTABLE. SHALL BE COMMERCIAL GRADE EQUIPMENT AND MATERIALS, UNLESS OTHERWISE INDICATED IN CONSTRUCTION DOCUMENTS.
K. K.1. K.2.	CUTTING AND PATCHING: WHERE CUTTING AND PATCHING ARE REQUIRED TO INSTALL PLUMBING SYSTEMS, CONTRACTOR SHALL PROVIDE THE CUTTING SERVICE AND DO SO AS TO MINIMIZE THE AMOUNT OF OPENING. AFTER PLUMING SYSTEMS HAVE BEEN INSTALLED, PATCH ALL OPENINGS TO MATCH ADJACENT FINISHED SURFACES. FINISHED TEXTURING AND PAINTING TO BE PROVIDED BY OTHERS BUT AT THE PLUMBING
L. L.1.	CONTRACTORS EXPENSES. PIPING AND SUPPORTS: OPEN PIPING SYSTEMS, INCLUDING FLOOR DRAINS. FLOOR SINKS. HUB DRAINS. ETC SHALL BF

CAPPED OR PLUGGED DURING ALL CONSTRUCTION TO PREVENT DAMAGE AND THE ENTRANCE OF FOREIGN MATERIALS. REMOVE ALL PROTECTIVE COVERINGS UPON COMPLETION OF ALL WORK.

L.3. L.4. SUPPORTS TO MINIMIZE SPACE WHEREVER POSSIBLE. 15 L.6. EQUIPMENT INSTALLATIONS: M.1 FLOORS OR WALLS. M.3. ARRESTORS MAY NOT BE SHOWN ON PLANS. M.4. PRIMERS MAY NOT BE SHOWN ON PLANS. RATTLING ARE NOT ACCEPTABLE. EXCAVATIONS: N. N.1. EXPENSE

L.2.

DELIVERY, STORAGE AND PROTECTION: 0.1. CONTRACTOR SHALL FURNISH DELIVERY OF ALL REQUIRED MATERIALS AND EQUIPMENT TO BE INSTALLED. CONTRACTORS SHALL VERIFY ALL EQUIPMENT IS UNDAMAGED AT THE TIME OF DELIVERY FORM THE FACTORY. DAMAGED ITEMS SHOULD BE RETURNED TO THE FACTORY FOR REPLACEMENTS AT NO ADDITIONAL COST TO THE OWNER. WHERE REQUIRED, CONTRACTOR SHALL PROVIDE CRANE AND OR ALL RIGGING EQUIPMENT NEEDED O.2. TO INSTALL PLUMBING EQUIPMENT IN PLACE AS SHOWN ON PLANS. CONTRACTOR SHALL COORDINATE WITH OWNER TO OBTAIN ACCEPTABLE JOBSITE STORAGE LOCATION FOR MATERIALS . CONTRACTOR SHALL COMPLY WITH OWNER REQUIREMENTS FOR PROTECTION, ACCESS AND SECURITY OF MATERIALS STORED ONSITE. CONTRACTOR SHALL TAKE ALL REQUIRED PRECAUTIONS TO PROPERL; Y PROTECT ALL STORED MATERIALS FORM WEATHER, DAMAGE, THEFT OR ANY OTHER HAZARD PRESENT AT THE STORAGE LOCATION. SPARE PARTS:

	<u> MISSIONING PLAN - PLUMBING:</u>
A.	COMMISSIONING AGENT THE OWNER'S PROJECT MAN COMMISSIONING AGENT (CA
В. В.1.	SUBMITTALS IN ORDER TO OBTAIN OFFICI

- FIELD INSPECTIONS:
- C.1. FOR APPROVAL, PRIOR TO PROCEEDING WITH ADDITIONAL WORK. AT A MINIMUM, FIELD INSPECTIONS SHALL INCLUDE: C.1.1. PIPING SYSTEM STARTUP AND TESTING, EQUIPMENT STARTUP AND TESTING, OPERATIONS AND MAINTENANCE TRAINING
- STARTUP AND TESTING: PRESSURE TEST THE WASTE/VENT PIPING SYSTEMS BY PLUGGING BUILDING MAIN DRAIN CONNECTION D 1 TO SEWER, AND FILLING ENTIRE SYSTEM FULL OF WATER FROM LOWEST POINT TO HIGHEST POINT. PRESSURE TEST THE POTABLE WATER SYSTEMS TO MINIMUM OF 60 PSIG, USING POTABLE WATER D.2. OR AIR, FOR A MINIMUM OF 60 MINUTES WITHOUT LEAKS. FLUSH TO REMOVE DEBRIS AND PROVIDE DISINFECTION AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. D.3. FOLLOW ALL EQUIPMENT MANUFACTURERS;S INSTALLATION INSTRUCTIONS TO PROVIDE COMPLETE STARTUP AND TESTING OF NEW PLUMBING EQUIPMENT. MAKE MODIFICATION ADJUSTMENTS AS REQUIRED TO MEET PERFORMANCE SPECIFICATIONS ON PLANS. PROVIDE THE CA WITH COMPLETED

FOR THE FOLLOWING: **O&M DOCUMENTATION:** E.1

E.1.1. AS-BUILD DRAWING MARKUPS SHOWING MODIFICATIONS WHERE INSTALLATIONS ARE DIFFERENT THAN DESIGN DRAWINGS. E.1.2. EQUIPMENT MANUFACTURES' INSTALLATION, OPERATION MAINTENANCE MANUALS. E.1.3. COMPLETED MANUFACTURE'S EQUIPMENT STARTUP SHEETS. E.1.4. EQUIPMENT SET-POINTS DETERMINED AT STARTUP. E.1.5. EQUIPMENT WARRANTIES

TRAINING:

EQUIPMENT & MATERIALS - PLUMBING

N. N.1.	NATURAL GAS EQUIPMENT GAS PIPING: BLACK STEEL, SCREWED OR WELDED JOINTS AND FITTI TAPE ON ALL MALE THREA
-	NATURAL GAS.
.2.	GAS COCK: FLAT TEE HEAD MANUFACTURED BY A.Y. M
.3.	VENT PIPING: SHALL BE AS
	AS FOLLOW/S:
.3.1.	TYPE B, HEAVY-GAUGE, DO ALUMINUM INNER WALL, UL
.3.2.	ACCESSORIES SHALL BE B
	PROVIDE FACTORY WALL C
	REQUIRED FOR
	PROPER DRAINAGE, PROV
3.	DOMESTIC WATER PIPING :
8.1.	WATER SERVICE PIPING (O
	NSF 61 STANDARDS, OF TH
3.1.1.	MAXIMUM OF 8% LEAD CON

- COORDINATE WITH HVAC CONTRACTOR TO MAINTAIN A MINIMUM OF TEN (10) FEET OF SEPARATION BETWEEN ALL VENT STACKS TERMINATIONS AND ALL OUTDOOR AIR INTAKES. HOLD ALL PIPING TIGHT AGAINST STRUCTURE TO AVOID DAMAGE AND INTERFERENCE FROM OTHER TRADES. RUN ALL PIPING IN A NEAT AND WORKMAN LIKE MANNER PARALLEL TO BUILDING LINES. PROVIDE ALL REQUIRED PIPING HANGERS AND SUPPORTS WITH PROPER SPACING PER CODE REQUIREMENTS. GROUP PARALLEL RUNS OF PIPING TOGETHER ON COMMON HANGERS AND
- MAINTAIN MINIMUM 1/4" PER FOOT SLOPE TOWARDS DRAIN FOR BOTH WASTE AND VENT PIPING. ROUT ALL DRAIN PIPING AS NEEDED TO MINIMIZE REQUIRED DEPTH OF BUILDING SEWER. DRAIN PIPING ROUTING SHOWN ON PLANS IS SCHEMATIC LAYOUT, PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL ROUTING PER CODE AND AS TO MINIMIZE COST TO OWNER. PROVIDE INSULATION FOR ALL PLUMBING SYSTEMS AND EQUIPMENT AS REQUIRED FOR PREVENTION
- OF HEAT LOSS AND/OR FREEZING, REGARDLESS IF SHOWN ON PLANS OR NOT.
- WHERE REQUIRED FOR EQUIPMENT PIPING CONNECTIONS, PROVIDE STEEL CHANNEL SUPPORTS STANDS FOR MOUNTING OF PIPING, VALVES, AND FITTINGS. PROPERLY SECURE SUPPORTS TO
- M.2. ENSURE THAT SERVICE CLEARANCES ARE NOT BLOCKED BY ROUTING OF PIPING OR SUPPORT STRUCTURES AT ALL EQUIPMENT CONNECTIONS. COORDINATE WITH HVAC CONTRACTOR AND OR EQUIPMENT PROVIDE TO DETERMINE REQUIRED CLEARANCES AND SERVICE WORK AREAS. PROVIDE WATER HAMMER ARRESTERS ON HOT AND COLD-WATER SUPPLY PIPING FOR ALL WASHING MACHINES, DISHWASHERS, FLUSH VALVES, AND ANY OTHER EQUIPMENT WITH QUICK CLOSING VALVES, AND WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION. FOR CLARITY,
 - PROVIDE TRAP PRIMERS AND WATER SUPPLY PIPING ON ALL FLOOR DRAINS. FOR CLARITY, TRAP INSTALL PUMP AND OTHER VIBRATING EQUIPMENT IN A MANNER THAT MINIMIZES NOISE LEVELS. MAKE
 - ALL POSSIBLE ADJUSTMENTS TO REDUCE NOISE TO ACCEPTABLE LEVELS. SQUEAKS, SQUEALING AND
 - IT IS THE PLUMBING CONTRACTORS JOB TO CALL FOR A DIG TESS.
 - PERFORM EXCAVATIONS CAUTIOUSLY TO AVOID DISRUPTION OR DAMAGE TO UNDERGROUND UTILITIES. HAVE ALL UNDERGROUND UTILITIES LOCATED AND MARKED, PRIOR TO DIGGING. UTILIZE HAND DIGGING WHEN NEAR BURIED PIPING, CABLES, GAS LINES, ETC. ANY AND ALL DAMAGE TO UNDERGROUND UTILITIES WILL BE REPAIRED BY OTHERS BUT AT THE PLUMBING CONTRACTORS
 - E.C.COMBINE UNDERGROUND PIPING INTO COMMON TRENCHES WHERE POSSIBLE TO MINIMIZE TRENCHING. PIPE ROUTING SHOWN ON PLANS IS PRELIMINARY. SEE CIVIL ENGINEERING PLANS FOR FINAL ROUTING, EQUIPMENT AND UTILITY CONNECTION LOCATIONS.
 - PRIOR TO COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE OWNER WITH ALL SPARE PARTS PROVIDED FROM FACTORY WITH ANY EQUIPMENT PURCHASED FOR THE PROJECT.

- MANAGER OR OTHER PERSON DESIGNATED SHALL FUNCTION AS THE (CA) FOR THE PROJECT.
- FICIAL APPROVAL PRIOR TO ORDERING OF EQUIPMENT, CONTRACTOR SHALL PROVIDE THE CA WITH MANUFACTURE'S SUBMITTAL DATA ON ALL NEW EQUIPMENT TO BE FURNISHED. PRE-CONSTRUCTION SUBMITTALS SHALL INCLUDE MANUFACTURER'S SPECIFICATIONS, SHOP DRAWINGS AND INSTALLATION MANUALS. PROVIDE SUBMITTALS FOR THE FOLLOWING MAJOR
- COMPONENTS AND EQUIPMENT PRIOR TO ORDERING B.1.1. PLUMBING FIXTURES, PLUMBING FIXTURE ACCESSORIES, FAUCETS, VALVES, ETC, WATER HEATERS, HOT WATER CIRCULATION PUMPS. PIPING (HOT, DOMESTIC, AND NATURAL GAS)
 - WHERE REQUIRED BY CA, COORDINATE FIELD INSPECTIONS OF CRITICAL CONSTRUCTION DETAILS
- MANUFACTURE'S STARTUP SHEETS AS RECORD OF SUCCESSFUL INSTALLATION. PROVIDE STARTUP D.3.1. NATURAL GAS FIRED WATER HEATERS, CIRCULATION PUMPS, NATURAL GAS FIRED DRIERS

 - PROVIDE THE CA WITH A MINIMUM OF TWO (2) SETS OF BINDERS FOR THE PROJECT. EACH BINDER SHOULD INCLUDE THE FOLLOWING ITEMS:
 - PROVIDE A MINIMUM OF ONE (1) TRAINING SESSION OF NO LESS THAN TWO (2) HOURS OF ON-SITE TRAINING FOR OWNER'S OPERATIONAL STAFF UPON COMPLETION OF ALL STARTUP WORK. TRAINING SHALL COVER OPERATIONS AND MAINTENANCE ON ALL NEW PLUMBING SYSTEMS AND EQUIPMENT INSTALLED BY CONTRACTOR. TRAINING SHALL UTILIZE MANUFACTURER'S OPERATIONS AND MAINTENANCE MANUALS AS BASIS FOR INSTRUCTION.

- ., CONFIRMING TO ASTM A 53 OR ASTM A 106. SCHEDULE 40 WITH
- TINGS OF SAME MATERIAL AS PIPING. SCREWED FITTINGS SHALL USE JOINT EADS WELDED JOINTS SHALL USE AND APPROVED METAL FILLER MATERIAL FOR
- AD GAS PLUG VALVE, BRONZE BODY, RATED TO 2 PSIG, FNPT THREADED, AS MCDONALD OR EQUALS. SELECT VALVE SUITABLE FOR LOCATION WHERE
- AS SPECIFIED BY GAS FIRED EQUIPMENT MANUFACTURER'S INSTRUCTIONS
- DOUBLE WALL, AIR-INSULATED PIPE, GALVANIZED STEEL OUTER WALL, UL LISTED, AS MANUFACTURED BY AMERIVENT, OR EQUAL. FITTINGS AND BY SAME MANUFACTURER AS VENT PIPING. G AND FITTINGS, AS REQUIRED BY MANUFACTURER'S INSTRUCTIONS. CAP AT TERMINATION. PROVIDE CONDENSATE DRAIN PIPING AND FITTINGS DRAIN LOCATIONS, PER MANUFACTURE'S INSTRUCTIONS. WHERE
- VIDE FACTORY CONDENSATE DRAIN PUMP AND CONDENSATE NEUTRALIZER.
- (OUTSIDE BUILDING): MINIMUM 160 PSI PRESSURE RATED, CONFORMING TO THE FOLLOWING APPROVED TYPES: DINTS AND FITTINGS OF SAME MATERIAL. SOLDER JOINTS SHALL HAVE A ONTENT.

- B.1.2. GALVANIZED STEEL PIPING, JOINTS AND FITTINGS. B.1.3. PVC PLASTIC PIPE AND FITTINGS WITH SLIP OR SCREWED JOINTS AND FITTINGS OF SAM
- MATERIAL B.1.4. POLYETHYLENE (PE) PLASTIC TUBING, JOINTS, AND FITTINGS
- B.1.5. POLYPROPYLTNE(PP) PLASTIC PIPE OR TUBING, JOINTS AND FITTINGS. B.2. WATER DISTRIBUTION PIPING (INSIDE BUILDING): MINIMUM 100 PSI PRESSURE RATED.
- CONFORMING TO NSF 61 STANDARDS OF THE FOLLOWING APPROVED TYPES: B.2.1. TYPE L OR M COPPER, WITH JOINTS AND FITTINGS OF SAME MATERIAL. SOLDER JOINTS MADE WITH LEAD FREE FLUX AND SOLDER.
- B.2.2. GALVANIZED STEEL PIPING, JOINTS AND FITTINGS. B.2.3. CPVC PLASTIC PIPE AND FITTINGS WITH SLIP OR SCREWED JOINTS AND FITTINGS OF S MATERIAI
- B.2.4. PEX PLASTIC TUBING AND FITTINGS.
- SANITARY WASTE AND VENT PIPING: CAN UTILIZE ANY OF THE FOLLOWING PIPING MATE C. TYPES DEPENDING UPON THE APPLICATION: C.1. BUILDING DRAINAGE (INSIDE BUILDING):
- C.1.1. SCHEDULE 40 ABS PLASTIC PIPE AND FITTINGS
- C.1.2. CAST IRON PIPE AND FITTINGS C.1.3. SCHEDULE 40 PVC PLASTIC PIPING AND FITTINGS
- C.2. BUILDING SEWER(OUTUSIDE BUILDING):
- C.2.1. SCHEDULE 40 ABS PLASTIC PIPE AND FITTINGS C.2.2. CAST IRON PIPE AND FITTINGS
- C.2.3. SCHEDULE 40 PVC PLASTIC PIPING AND FITTINGS
- D. PIPING INSULATION:
- D.1. MATERIALS: PIPING INSULATION MATERIALS SHALL BE ONE OF THE FOLLOWING TYPES: D.1.1. POLYETHYLENE FOAM, SELF-SEALING TYPE D.1.2. RUBBER, SELF-SEALING TYPE\MOLDED FIBERGLASS WITH ALL SERVICE JACKET
- D.2. DOMESTIC HW PIPING: PROVIDE PIPING INSULATION ON ALL DOMESTIC HOT WATER PIPING, AS WELL AS ALL DO WATER PIPING INSTALLED IN EXTERIOR WALLS, ATTICS OR UNCONDITIONED SPACES. IN SHALL BE MINIMUM R-4 RATED, WITH MINIMUM 1" THICKNESS ON HW PIPING UP THRU 1-MINIMUM 1.5" ON PIPING OVER 1-1/4". D.3. LAVATORIES:
- INSULATE ALL EXPOSED DRAIN AND WATER PIPING UNDER LAVATORIES WITH FACTORY AS MANUFACTURED BY TRUEBRU LAVGUARD, MODEL #102 OR EQUAL.
- E. PLUMBING FIXTURES AND ACCESSORIES: AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL. FURNISH AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ALL REQUIRED FITTINGS AND ACCESSORIE COMPLETE AND FUNCTIONING FIXTURE, WHETHER SPECIFIED ON PLANS OR NOT.
- E.1. POINT OF USE MIXING VALVES: HERMOSTATIC TEMPERATURE LIMITING DEVICE USED TO SUPPLY SINGLE OUTLET. AS MANUFACTURED BY LEONARD MODEL #170A-LF, OR EQUAL. ADJUST AS NEEDED TO MAI MAXIMUM WATER TEMPERATURE AT OUTLET BELOW 120-F. E.2. WATER HEATERS:
- TYPE, STORAGE CAPACITY (IF NOT TANKLESS), AND PERFORMANCE AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS. PRO REQUIRED VALVES AND FITTINGS AS SHOWN ON THE PLANS, INCLUDING THE FOLLOWIN ACCESSORIES:
- E.3. EXPANSION TANK: ANTI-MICROBIAL LINER, WATER DIFFUSER, PRE-CHARGED TO MATCH WATER SERVICE F DEEP DRAWN STEEL DOMES, THICK RUBBER DIAPHRAGM, STAINLESS STEEL SYSTEM CONNECTION NSF61 APPROVED. AS MANUFACTURED BY AMITROL, MODEL THERM-X-TH EQUAL. SIZING SHALL BE PROVIDED BY VENDOR BASED ON WATER HEATER CAPACITY. E.4. VACUUM BREAKER:
- LOW PROFILE, ALL BRASS BODY, PROTECTIVE CAP, AS MANUFACTURED BY WATTS MOD M1 OR EQUAL. LINE SIZED FOR COLD WATER INLET PIPING. E.5. <u>T&P RELIEF VALVE:</u>
- TEMPERATURE AND PRESSURE RELIEF VALVE, LEAD-FREE COPPER ALLOY BODY WITH INLET AND NPT FEMALE OUTLET CONNECTIONS. UNIQUE THERMOSTAT WITH SPECIAL T BONDED COATING, AND A TEST LEVER. TEMPERATURE RELIEF:210°F, PRESSURE RELIEF 75PSI TO 150PSI, AS MANUFACTURED BY WATTS, SERIES LF100XL. E.6. <u>HW RECIRCULATION PUMP</u>:
- IN-LINE CENTRIFUGAL PUMP, ELECTRONIC CONTROLS CAPABLE OF STARTING/STOPPIN PUMP AS THE DEMAND FOR HOT WATER COMES AND GOES, AND STOPPING PUMP WITH MINUTES OF END OF HEATING CYCLE. INCLUDE ALL FACTORY REMOTE TEMPERATURE AND ACCESSORIES REQUIRED TO COMPLY WITH IECC (AHJ APPROVED YEAR). HOSE BIBS:
- E.7.1. OUTDOOF
- SHALL BE WOODFORD MODEL 67, CHROME FINISH, FREEZEPROOF TYPE, AUTOMATIC DRAINING WITH BACK FLOW PREVENTER AND KEYED OPERATION, OR APPROVED EQUAL. CONTRACTOR SHALL VERIFY WALL THICKNESS PRIOR TO ORDERING HOSE BIBS. E.7.2. INDOOR:
- SHALL BE WOODFORD MODEL 24P-1/2, CHROME FINISH, ANTI-SIPHON VACUUM BREAKER, OPTIONAL TEE KEY, OR APPROVED EQUAL. E.8. FLOOR DRAINS:
- AS SCHEDULED ON DRAWINGS OR MANUFACTURER RECOMMENDED EQUAL. VERIFY SCHEDULED SELECTIONS WITH DRAIN MANUFACTURER FOR EXPECTED USE AND LOCATION AND PROVIDE MANUFACTURER SPECIFIED DRAINS, ALONG WITH RECOMMENDED ACCESSORIES. TRAP PRIMERS E.9.
- PROVIDE ALL FLOOR DRAINS WITH TRAP PRIMERS OR AS NOTED ON PLANS. AUTOMATIC VALVE, BRONZE BODY, 1/2" NPT THREADED CONNECTIONS, AS MANUFACTURED BY JAY R. SMITH, FIGURE 2699 OR EQUAL
- E.10. CLEANOUTS: PROVIDE WHERE SHOWN ON PLANS AND AS REQUIRED BY LOCAL PLUMBING CODES. CLEANOUTS SHALL BE SUITABLE FOR CONDITIONS WHERE INSTALLED AS FOLLOWS:
- E.10.1. FLOORS, FINISHED: CAST IRON WITH NICKEL BRONZE, ADJUSTABLE TOP, AS MANUFACTURED BY J.R. SMITH, MODEL # 4020 OR EQUAL.
- E.10.2. FLOORS.UNFINISHED: CAST IRON WITH NON-TILT TRACTOR COVER, ADJUSTABLE TOP, AS MANUFACTURED BY J.R.SMITH, MODEL #4237 OR EQUAL.
- E.10.3. WALL: CAST IRON CLEAN-OUT TEE, STAINLESS STEEL ROUND COVER AND SCREW, IRON PLUG WITH SEAL, AS MANUFACTURED BY J.R. SMITH, MODEL#4520S OR EQUAL.
- E.10.4. GRADE: HEAVY DUTY CAST IRON COVER, FLANGED FOR USE IN POURED CONCRETE, SUITABLE FOR USE IN ASPHALT PAVING OR EARTH, CAST IRON BODY WITH ADJUSTABLE TOP, AS MANUFACTURED BY J.R. SMITH, MODEL #4250 OR EQUAL.
- E.10.5. 2-WAY(DOUBLE): GRADE CLEAN-OUT WITH 2-WAY CLEAN-OUT TEE FITTING IN SEWER LINE, JUST OUTSIDE BUILDINGS WALL OR AS SHOWN ON PLANS.
- E.11. BACK-FLOW PREVENTER: REDUCED PRESSURE TYPE, DUAL CHECK VALVES WITH INTERMEDIATE RELIEF VALVE, TEE HANDLE SHUTOFF VALVES, AS MANUFACTURED BY WATTS, SERIES 009 OR EQUAL.
- E.12. BALL VALVES: LINE SIZED, FULLY PORTED, BRASS BODY.
- E.13. WATER HAMMER ARRESTERS: PROVIDE SHOCK ABSORBER ON DOMESTIC WATER AND HOT WATER SUPPLY LINES FOR ALL FAST ACUATING DEVICES, INCLUDING BUT NOT LIMITED TO WASHING MACHINES, DISHWASHERS AND OTHER EQUIPMENT WITH AUTOMATIC VALVES, AS MANUFACTURED BY WATTS. MODEL #15M2 OR EQUAL. SELECT AND INSTALL PER MANUFACTURERS INSTRUCTIONS. E.14. ELECTRIC WATER COOLER:
- SELF-CONTAINEED, HEAVY DUTY, VANDAL RESISTANT WATER COOLER, FRONT PUSHBUTTON ACTIVATION, INTERNAL BASIN DRAIN, WALL MOUNTED, AS MANUFACTURED BY ELKAY #LVRCHDTL8SC OR APPROVED EQUAL. SEE SCHEDULES FOR PERFORMANCE REQUIREMENTS. REFRIGERATION SYSTEM INCLUDES RECIPROCATING TYPE COMPRESSOR WITH R134 REFRIGERANT. COPPER TUBING AND STAINLESS-STEEL TANK, EPS FOAM INSULATION, CONDENSER FAN AND ADJUSTABLE THERMOSTATIC CONTROLS. E.15. <u>SAMPLE WELL:</u>
- FACTORY MADE. BELOW GRADE INSTALLATION. CONCRETE CONSTRUCTION WITH STEEL RISER COVER. PEDESTRIAN RATED LOADING ON COVER, AS MANUFACTURED BY PARK ENVIRONMENTAL. MODEL #SWBP OR EQUAL. COORDINATE FINAL SELECTION. INCLUDING REQUIRED ACCESSORIES AND DESIGN.

DESIGN WITHOUT CONSTRUCTION ADMINISTRATION:

IT IS UNDERSTOOD AND AGREED THAT THE ARCHITECT/ENGINEER'S SCOPE DOES NOT INCLUDE PROJECT OBSERVATION OR REVIEW OF THE CONTRACTOR'S PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES. THE OWNER AGREES TO PROVIDE CONSTRUCTION ADMINISTRATION AND ASSUMES ANY AND ALL POTENTIAL LIABILITY ARISING FROM SUCH ADMINISTRATION. THE OWNER ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE CONTRACT DOCUMENTS AND FOR CONSTRUCTION OBSERVATION AND THE OWNERS WAIVES ANY CLAIMS AGAINST THE ARCHITECT/ENGINEER THAT MAY BE IN ANY WAY CONNECTED THERETO. THE ARCHITECT/ENGINEER WILL NOT RESPOND TO ANY QUESTIONS DIRECTED TO THE INTERPRETATION OF THE CONTRACT DOCUMENTS OR IN RESPONSE TO ISSUES ENCOUNTERED BY AND AS RELAYED BY THE CONTRACTOR IN THE FIELD.

	SYMBOL LEGEND - PLUMBING:				
VIE		NEW SANITARY DRAIN PIPING, UNDERGROUND OR UNDER FLOOR.			
	VENT	NEW SANITARY VENT PIPING			
SHALL BE		NEW DOMESTIC CW PIPING, ABOVE CEILING OR IN WALLS.			
		NEW DOMESTIC HW PIPING, ABOVE CEILING OR IN WALLS.			
SAME	<u> </u>	NEW DOMESTIC HW RE-CIRCULATION PIPING.			
	NG	NEW NATURAL GAS PIPING, CONCEALED ABOVE CEILING OR IN WALLS, OR EXPOSED IN MECH SPACES, OUTDOORS OR ROOF.			
ERIAL	GW	NEW GREASE WASTE PIPING, ABOVE CEILING OR IN WALLS.			
	02	NEW OXYGEN PIPING, ABOVE CEILING OR IN WALLS.			
	N2O-	NEW MED GAS PIPING, ABOVE CEILING OR IN WALLS.			
	AIR	NEW AIR PIPING, ABOVE CEILING OR IN WALLS.			
	UNG-	NATURAL GAS UTILITY.			
		POINT OF CONNECTION TO EXISTING WATER PIPING.			
	— _	PIPE ELBOW, 90 DEG TURNED DOWN.			
OMESTIC NSULATION -1/4" AND	— _	PIPE ELBOW, 90 DEG TURNED UP.			
	+	PIPE TEE, BRANCH TURNED DOWN.			
	+ _	PIPE TEE, BRANCH TURNED UP.			
COVERS	I	VENT STACK CONNECTION TO WASTE LINE BELOW.			
	<u> </u>	WASTE STACK THROUGH FLOOR.			
	—	CLEANOUT, FLOOR OR GRADE, WITH PROPER COVER.			
LO FUR A	— _	WALL CLEANOUT PLUG AND COVER.			
		HOSE BIB, FREEZEPROOF WITH VACUUM BREAKER, SEE SPECS.			
INTAIN		GATE VALVE, LINE SIZED.			
۱	- ! .	BALL VALVE, LINE SIZED.			
NG	— - -	GAS COCK, LINE SIZED.			
	₩ BP/	CHECK VALVE OR BACKFLOW PREVENTOR AS NOTED.			
POL OR	ب ۲	PRESSURE REGULATOR VALVE, GAS OR WATER.			
ROL, UR	— <u> </u>	BALANCING VALVE OR CIRCUIT SETTER.			
DEL #N36-	;	PIPE UNION COUPLING.			
		PIPE FLEXIBLE COUPLING.			
HERMO-		HW RECIRCULATION PUMP, SEE SCHEDULE.			
F RANGE:	[_	NEW PLUMBING FIXTURE, MARK SHOWN, SEE SCHEDULE.			
	\bigcirc	NEW FLOOR DRAIN, MARK SHOWN, SEE SCHEDULE.			
SENSORS		FLOOR SINK.			

TEMPERING VALVE





6/1/2023 1:56<u>:03</u>

GENERAL NOTES:

- A. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES AND SLOPE PRIOR TO BIDDING.
- B. PROVIDE AND INSTALL YARD/GROUND CLEANOUTS A MAXIMUM OF 100'-0" ON CENTER.
- C. PRIMARY A/C CONDENSATE LINE SHALL BE CONNECTED DIRECTLY FROM THE HVAC EQUIPMENT AND DISCHARGE IN GROUP TO THE 2" HUB DRAIN/CONDENSATE RECEPTOR.
- D. SECONDARY A/C CONDENSATE LINE SHALL BE CONNECTED FROM EACH SAFETY DRAIN PAN AND DISCHARGE INDIVIDUALLY TO A VISIBLE HEIGHT BELOW CEILING IN THE NEAREST SINK, LAVATORY OR MOP SINK.

KEYED NOTES:

- 1. CONTRACTOR SHALL CONNECT NEW SEWER LINE TO EXTERIOR SANITARY LINE. PLUMBING CONTRACTOR SHALL RUN LINE UPTO 5' AWAY FROM EXTERIOR WALL AND UTLITY CONTRACTOR SHALL RUN REMAINING EXTERIOR LINE. REFER TO CIVIL DRAWINGS FOR EXACT POINT OF CONNECTION PRIOR TO ANY BIDDING OF WORK.
- 2. 2" HUB DRAIN LOCATED UNDER WATER HEATER PAN. COORDINATE HEIGHT AND LOCATION REQUIREMENTS WITH PLUMBING CONTRACTOR.
- 3. DRAIN PIPING VERTICALLY INSIDE WALL FROM ROOFTOP UNIT(S) TO CONDENSATE RECEPTOR. COORDINATE EXACT LOCATION OF CONDENSATE RECEPTOR WITH PLUMBING CONTRACTOR.
- 4. CONTRACTOR SHALL ENSURE THAT A 4" CAPPED STUB-OUT WASTE LINE IS INSTALLED FOR FUTURE USE. STUB-OUT SHALL BE WITHIN ANY FOUNDATION LEAVE OUT.





6/1/2023 1:56<u>:04</u>

1 <u>DOM/HOT WATER PLAN</u> 1/4" = 1'-0"

GENERAL NOTES:

- A. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES PRIOR TO BIDDING.
- B. THE CONTRACTOR SHALL PROVIDE AND INSTALL A WATER HAMMER ARRESTOR #WADE4481 TO ALL HIGH FLOW DEVICES, WHERE QUICK-CLOSING VALVES ARE UTILIZED. WATER HAMMER ARESTORS SHALL CONFORM TO ASSE 1010 OR PDI-WH 201 & UPC SECTION 609.10. (AIR CHAMBERS NOT ALLOWED).
- C. CONTRACTOR SHALL PROVIDE AND INSTALL A BACKFLOW PREVENTOR VALVE IN THE SAME VAULT AS THE WATER METER. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF WATER METER PRIOR TO INSTALLATION.

KEYED NOTES:

- 1. THE CONTRACTOR SHALL CONNECT NEW WATER LINE TO EXISTING DOMESTIC WATER LINE BELOW SLAB. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF WATER METER PRIOR TO ANY WORK.
- 2. PROVIDE AND INSTALL A RETURN CIRCULATING PUMP. REFER TO PLUMBING FIXTURE SCHEDULE IN SHEET P4.0 FOR FURTHER INFORMATION.
- 3. 1-1/2" CAPPED DOMESTIC WATER LINE ABOVE CEILING HEIGHT FOR FUTURE USE.











WASTE GENERAL NOTES:

- A. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES AND SLOPE PRIOR TO BIDDING.
- PROVIDE AND INSTALL YARD/GROUND CLEANOUTS A MAXIMUM OF 100'-0" ON CENTER. В.
- PRIMARY A/C CONDENSATE LINE SHALL BE CONNECTED DIRECTLY FROM THE HVAC C. EQUIPMENT AND DISCHARGE IN GROUP TO THE 2" HUB DRAIN/CONDENSATE RECEPTOR.
- D. SECONDARY A/C CONDENSATE LINE SHALL BE CONNECTED FROM EACH SAFETY DRAIN PAN AND DISCHARGE INDIVIDUALLY TO A VISIBLE HEIGHT BELOW CEILING IN THE NEAREST SINK, LAVATORY OR MOP SINK.

WASTE KEYED NOTES:

- CONNECT NEW SEWER LINE TO EXISTING 1. SANITARY PIPE BELOW SLAB. REFER TO CIVIL DRAWINGS FOR EXACT POINT OF CONNECTION PRIOR TO ANY WORK.
- 2. 2" HUB DRAIN LOCATED UNDER WATER HEATER PAN. COORDINATE HEIGHT AND LOCATION REQUIREMENTS WITH PLUMBING CONTRACTOR.
- DRAIN PIPING VERTICALLY INSIDE WALL FROM 3. ROOFTOP UNIT(S) TO CONDENSATE RECEPTOR. COORDINATE EXACT LOCATION OF CONDENSATE RECEPTOR WITH PLUMBING CONTRACTOR.

WATER GENERAL NOTES:

- A. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES PRIOR TO BIDDING.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL A WATER HAMMER ARRESTOR #WADE4481 TO Β. ALL HIGH FLOW DEVICES, WHERE QUICK-CLOSING VALVES ARE UTILIZED. WATER HAMMER ARESTORS SHALL CONFORM TO ASSE 1010 OR PDI-WH 201 & UPC SECTION 609.10. (AIR CHAMBERS NOT ALLOWED).
- CONTRACTOR SHALL PROVIDE AND INSTALL A BACKFLOW PREVENTOR VALVE IN THE SAME C. VAULT AS THE WATER METER. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF WATER METER PRIOR TO INSTALLATION.

WATER KEYED NOTES:

- THE CONTRACTOR SHALL CONNECT NEW WATER LINE TO EXISTING DOMESTIC WATER LINE BELOW SLAB. REFER TO CIVIL DRAWINGS FOR EXACT 1. LOCATION OF WATER METER PRIOR TO ANY WORK.
- PROVIDE AND INSTALL A RETURN CIRCULATING PUMP. REFER TO PLUMBING FIXTURE SCHEDULE 2. IN SHEET P4.0 FOR FURTHER INFORMATION.



WATER	SUPPLY	FIXTURE	UNITS	(2021	IPC-Table	E103.	.3(2))
	JULL	INTOKL		12021		LIUJ	,3(2))

	WSF	U PER D	EVICE		TOTAL WSFU		
DEVICE	COLD	НОТ	TOTAL	QTY	COLD	НОТ	TOTAL
BATHTUB (PRIVATE)	1.0	1.0	1.4	0	0.00	0.00	0.00
BATHTUB (PUBLIC)	3.0	3.0	4.0	0	0.00	0.00	0.00
LAVATORY (PRIVATE)	0.5	0.5	0.7	5	2.50	2.50	3.50
LAVATORY (PUBLIC)	1.5	1.5	2.0	0	0.00	0.00	0.00
WATER CLOSET (PRIVATE FLUSH TANK)	2.2	0.0	2.2	0	0.00	0.00	0.00
WATER CLOSET (PRIVATE FLUSH VALVE)	6.0	0.0	6.0	4	24.00	0.00	24.00
WATER CLOSET (PUBLIC FLUSH TANK)	5.0	0.0	5.0	0	0.00	0.00	0.00
WATER CLOSET (PUBLIC FLUSH VALVE)	10.0	0.0	10.0	0	0.00	0.00	0.00
WATER CLOSET (PUB./PRIV. FLUSHOMETER)	2.0	0.0	2.0	0	0.00	0.00	0.00
SHOWER HEAD (PUBLIC)	3.0	3.0	4.0	0	0.00	0.00	0.00
SHOWER HEAD (PRIVATE)	1.0	1.0	1.4	1	1.00	1.00	1.40
SINK (PRIVATE)	1.0	1.0	1.4	2	2.00	2.00	2.80
KITCHEN SINK (HOTEL/RESTAURANT)	3.0	3.0	4.0	0	0.00	0.00	0.00
SERVICE SINK	2.25	2.25	3.0	1	2.25	2.25	3.00
WATER HEATER	0.00	2.0	2.0	1	0.00	2.00	2.00
BIDET	1.5	1.5	2.0	0	0.00	0.00	0.00
URINAL (1" FLUSHOMETER)	10.0	0.0	10.0	0	0.00	0.00	0.00
URINAL (3/4" FLUSHOMETER)	5.0	0.0	5.0	0	0.00	0.00	0.00
COMBINATION FIXTURE	2.25	2.25	3.0	0	0.00	0.00	0.00
WASHING MACHINE (8 LBS PUBLIC)	2.25	2.25	3.0	0	0.00	0.00	0.00
WASHING MACHINE (8 LBS PRIVATE)	1.0	1.0	1.4	0	0.00	0.00	0.00
WASHING MACHINE (15 LBS PUBLIC)	3.0	3.0	4.0	0	0.00	0.00	0.00
HOSE BIB	2.5	0.0	2.5	0	0.00	0.00	0.00
DRINKING FOUNTAIN	0.25	0.0	0.25	1	0.25	0.00	0.25
DISHWASHING MACHINE	0.0	1.4	1.4	0	0.00	0.00	0.00
ICE MACHINE	8.0	0.0	8.0	0	0.00	0.00	0.00
TOTAL (W	/SFU)				32.0	9.8	37.0
TOTAL(GPM) (Ta	ble E1	03.3(3	3)			44.8	





		CENEDAL							
LABEL QTY		DESCRIPTION	MAKE	MODEL	DW	HW	WASTE	VENT	
EWC-1A	1	BI-LEVEL WATER COOLER	ELKAY	LVRCTL8WSK	0' - 0 1/2"		0' - 2"	0' - 2	
FCO	3	CLEANOUT	ZURN	Z1400-HD			0' - 4"		
FD	1	FLOOR DRAIN	PER ARCH	PER ARCH			0' - 2"	0' - 2	
HB	3	HOSE BIBB	WOODFORD	B65	0' - 0 3/4"				
L-1	2	LAVATORY	KOHLER	K-2006	0' - 0 3/4"	0' - 0 3/4"	0' - 2"	0' - 2	
L-1A	2	LAVATORY (HANDICAPPED)	KOHLER	K-2006	0' - 0 3/4"	0' - 0 3/4"	0' - 2"	0' - 2	
L-2	1	LAVATORY	BRADLEY	LVLD1-853-3700-BN-NONE-N SD-ANTARCTICA-S-POLY	0' - 0 1/2"	0' - 0 1/2"	0' - 2"	0' - 2	
MS-1	1	MOP SINK	FIAT	TSB-100	0' - 0 3/4"	0' - 0 3/4"	0' - 2"	0' - 2	
RCP	1	RETURN CIRCULATING PUMP	BELL AND GOSSETT	PL-30B	0' - 1"	0' - 1"			
S-1	2	STAINLESS STEEL COUNTERTOP SINK	ELKAY	LRAD-1617-60-3	0' - 0 1/2"	0' - 0 1/2"	0' - 2"	0' - 2	
SH	1	SHOWER	MOEN	T8375NHCBN, 8349EP15CBN	0' - 0 3/4"	0' - 0 3/4"			
WC-1	2	WATER CLOSET	SLOAN	ST-2029	0' - 1"		0' - 4"	0' - 2	
WC-1A	2	WATER CLOSET (HANDICAPPED)	SLOAN	ST-2029	0' - 1"		0' - 4"	0' - 2	
WH-1	1	ELECTRIC WATER HEATER (TANK)	A.O. SMITH	DEL-50					
YCO	4	YARD CLEANOUT	ZURN	Z1402			0' - 4"		

DESCRIPTION/FEATURES

MODEL NUMBER: LVRCTL8WSK. BI-LEVEL COOLER FILTERED RIFRIGRATED. 1.5 GPM. 1-1/2" NOMINAL DRAIN. LEVEL TROL ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY. WITH GAS AND WATERTGITH ABS TAPERED THREAD PLUG, AND ROUND EXTRA HEAVY-DUTY TOP ADJUSTABLE TO FINISHED FLOOR. FLOOR DRAIN BY ARCHITECT. REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION. CONCEALED TYPE WALL HYDRANT COMPLETE BUT NOT LIMITED TO RECESSED WALL BOX WITH LOCKABLE DOOR, LOOSE TEE KEY, VACUUM BREAKER-BACKFLOW PREVENTER, POLISHED BRASS FINISH, AND 3/4" HOSE THREAD NOZZLE OR EQUAL. "KINGSTON", WALL MOUNTED LAVATORY VITREOUS CHINA, 4" FAUCET CENTERS, TWD (2) BLADE HANDLE FAUCET, MOEN MODEL #84629SRN, ANGLE STOPS, FLEXIBLE RISERS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, OFFSET TAILPIECE PROVIDE A.D.A. PROTECTIVE COVERS AT WATER PIPING, VALVES, AND DRAIN. "KINGSTON", WALL MOUNTED LAVATORY VITREOUS CHINA, 4" FAUCET CENTERS, TWO (2) BLADE HANDLE FAUCET, MOEN MODEL #84629SRN, ANGLE STOPS, FLEXIBLE RISERS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, OFFSET TAILPIECE PROVIDE A.D.A. PROTECTIVE COVERS AT WATER PIPING, VALVES, AND DRAIN. VERGE WASH BASIN, LVL SERIES, CRESTI METRO, LINEA ZEN SERIES, 4" CENTERED. 833-3700 VERGE FAUCET, 0.5 GPM, NONE FAUCET ACTIVATION, BN BRUSHED NICKEL, NONE POWER SUPPLY, NSD NO SOAP DISPENSER, ANTARCTICA COLOR, S-POLY P 24"x24"x12", ONE PIECE PRECAST TERRAZZO (3000 PSI COMPRESSIVE STRENGTH), 12" HIGH WITH 2" WIDTH MIN. SHOULDERS WITH STAINLESS STEEL CAPS AND 1/2" PITCH TOWARD INSIDE, DRAIN BODY SHALL BE STAINLESS STEEL CAST INTEGRAL WITH CAULKED LEAD CONNECTION, STAINLESS STEEL THRESHOLD. FURNISH WITH CHROME PLATED WALL FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, WALL FLANGES, PAIL HOOK, 3/4" HOSE THREAD ON SPOUT (FIAT #830-AA), AND 60"x3/4" DIA PLAIN END REINFORCED RUBBER HOSE WITH HOSE BRACKET (FIAT 1832-AD, AND MOP HANGER (FIAT #889-CC). IN LINE CIRCULATOR; 5 GPM AT 5 FT HEAD, 1/12HP, 115V/1.4-F-LAMPS FLANGE CORRECTIONS, ALL BRONZE CONSTRUCTION, FLEX COUPLED, OIL LUBRICATED MOTOR. SINGLE COMPARTMENT STAINLESS STEEL SINK EQUAL TO ELKAY MODEL "LRAD-1716-60-3". SELF RIMMING, 17"X16"X6", 3 HOLES ON 4" CENTERS, 18 GAUGE, UNDERCOATED. COMPLETE WITH KINGSTON WATER FAUCET, 3 HOLES, MODEL

#KB8498NDL, NUVO FUSION 1.8 GPM STANDARD FAUCET, BRUSHED NICKLE FINISH. SINGLE HANDLE POSI-TEMP PRESSURE BALANCED SHOWER TRIM WITH SHOWER HEAD FROM THE CHATEAU COLLECTION (LESS VALVE). 20 GAUGE TYPE 304 STAINLESS STEEL.CLASSIC BRUSHED NICKLE FINISH MODEL NUMBER: ST-2029. FLUSHOMETER MODEL: ROYAL 111. VITREOUS CHINA. BAA COMPLIANT. CUPC GREEN CERTIFIED. CEC COMPLIANT. LEED COMPLIANT. 1.28 GPM. Exposed Water Closet Flushometer, for floor mounted or wall hung top spud bowls. BRUSHED NICKEL FINISH MODEL NUMBER: ST-2029. FLUSHOMETER MODEL: ROYAL 111. VITREOUS CHINA. HANDICAP. ADA. FLOOR MOUNTED. BAA COMPLIANT. CUPC GREEN CERTIFIED. CEC COMPLIANT. LEED COMPLIANT. 1.28 GPM. Exposed Water Closet Flushometer, for floor mounted or wall hung top spud bowls. BRUSHED NICKEL FINISH SMITH MODEL #DEL-50 ELECTRIC RATED AT 208 VOLTS, SINGLE PHASE, 4.5 KW, SINGLE ELEMENT, GLASS LINED AND U.L. LISTED. 50 GALLONS, 3/4" TAPPING FOR RELIEF VALVE INSTALLATION, ANODE ROD FOR CATHODIC PROTECTION, TEMPERATURE AND

INSTALLATION, ANODE ROD FOR CATHODIC PROTECTION, TEMPERATURE AND PRESSURE VALVE, DRAIN PAN, THERMOSTAT SET AT 110 deg WITH TEMPERATURE CUTOFF, AND DRAIN VALVE LOCATED AT FRONT FOR EASE OF SERVICING. TUF-TOP NON-ADJUSTABLE FLOOR CLEANOUT W/ DURA-COATED CAST IRON BODY, W/ GAS & WATERTIGHT ABS TAPERED THREAD PLUG, & ROUND SCORIATED CAST IRON HEAVY-DUTY SECURED COVER & FRAME.

