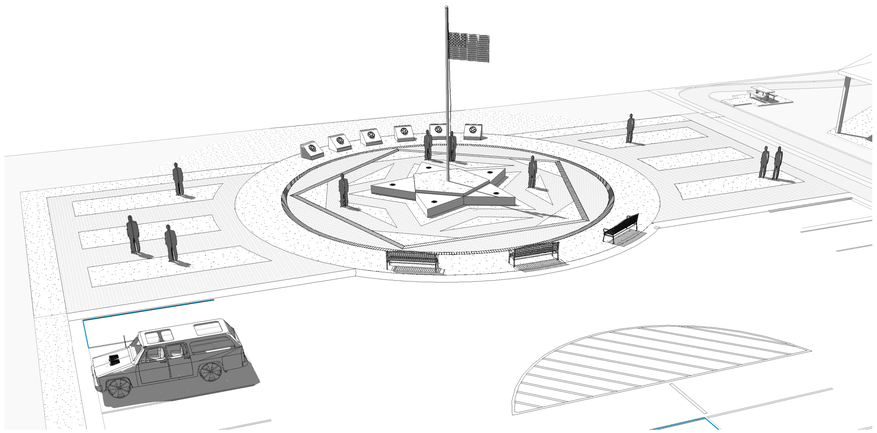
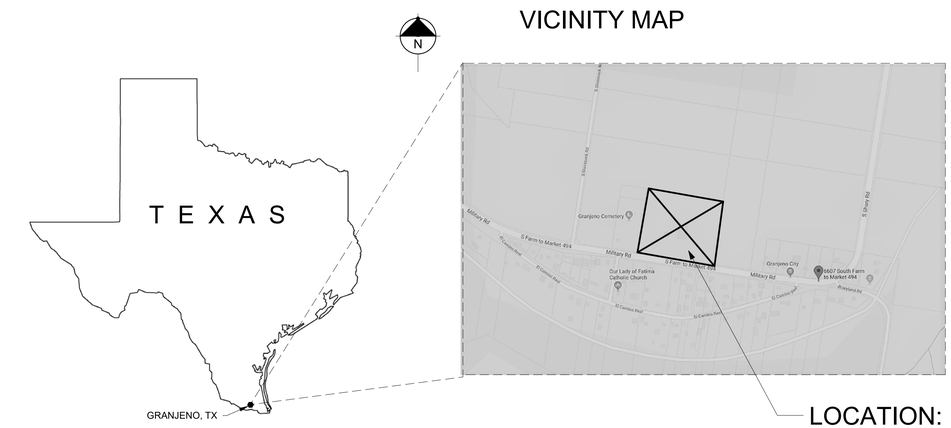
CITY OF GRANJENO

2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III

BID NO: 5017-30-0306-5000-3000-UCP-GVG





VICINITY MAP

LOCATION:
CITY OF GRANJENO PARK
PHASE III 6607 S. FM494,
GRANJENO, TEXAS

ARCHITECT:

ARKIIFORM
ARCHITECTURE + MANAGEMENT

810 N Alton Blvd
Alton, TX 78573
956.239.2438 956.221.2400
www.arkiiform.com

CIVIL & STRUCTURAL ENGINEER:

HINOJOSA
ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION , TEXAS
(956) 581-0143 FAX:(956) 581-2071
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER F908 EXPIRATION DATE 09/30/2019

108 W 18TH STREET
MISSION, TX 78572
956.581.0143

MEP ENGINEER:

SIGMA HN
ENGINEERS, PLLC

701 S 15TH STREET
McALLEN, TX 78501
956.332.3206

PROJECT INFORMATION

LOCATION: **6607 S FM 494, GRANJENO, TX**
ARCHITECT: ARKIIFORM LLC, 810 N Alton Blvd, Alton, TX 78573 www.arkiiform.com
CIVIL ENGINEER: HINOJOSA ENGINEERING INC, 108 W. 18TH STREET MISSION, TX 7857 www.hengineering.com
STRUCTRUAL ENGINEER: HINOJOSA ENGINEERING INC, 108 W. 18TH STREET, MISSION, TX 78572
MEP ENGINEER: SIGMA HN ENGINEERS, PLLC, 701 S. 15TH STREET, McALLEN, TX 78501

PROJECT DESCRIPTION

GRANJENO MUNICIPAL PARK PHASE III IMPROVEMENTS AND VETERANS MEMORIAL

APPLICABLE CODES

2015 - INTERNATIONAL BUILDING CODE
2014 - NATIONAL ELECTRICAL CODE
2012 - TDLR ARCHITECTURAL BARRIERS CODE

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REGISTERED ARCHITECT
JOSE C GARCIA III
22658
STATE OF TEXAS

JOSE C GARCIA III, RA, AIA
ARKIIFORM LLC
SIGNED: 10/01/18
EXPIRES: 6/5/19

CITY OF GRANJENO - 2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III

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CHECKED BY: CG3
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COVER SHEET

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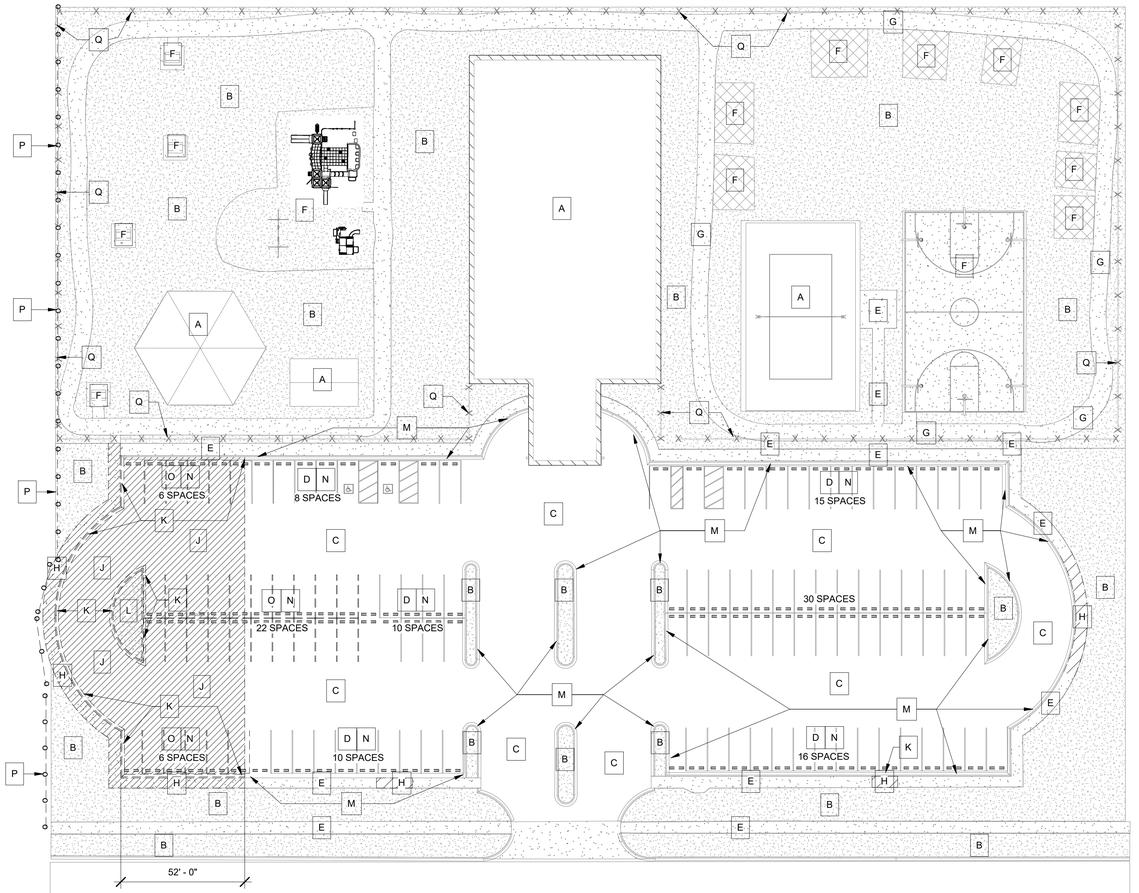

1 SITE PLAN EXISTING DEMOLITION
1" = 30'-0"

N

DEMOLITION NOTES

1. CONTRACTOR TO COORDINATE INTERRUPTION OF UTILITY SERVICES TO THE EXISTING BUILDING(S) OR EXISTING AREAS WITH CONSTRUCTION MANAGER AND OWNER PRIOR TO DEMOLITION

2. CONTRACTOR TO FAMILIARIZE AND REVIEW ALL EXISTING CONDITIONS AND COORDIANTE A DEMOLITION PLAN WITH CONSTRUCTION MANAGER AND OWNER PRIOR TO START OF DEMOLITION

3. ALL EXISTING COMPONENTS, MATERIAL, OR ITEMS ADJACENT OR NEXT TO ITEMS TO BE DEMOLISHED OR DISTURBED FOR NEW CONSTRUCTION SHALL BE PROTECTED AND PATCH/REPAIRED TO EXISTING CONDITION IF DAMAGED.

DEMOLITION LEGEND

A	EXISTING STRUCTURE TO REMAIN (NO SCOPE)
B	EXISTING LANDSCAPE AREA TO REMAIN
C	EXISTING PARKING AREA TO REMAIN, PREPARE FOR NEW WORK, REFER TO CIVIL
D	EXISTING PARKING SPACES TO REMAIN, REFER TO CIVIL FOR OVERLAY AND ADDITIONAL INSTRUCTIONS
E	EXISTING CONCRETE WALK TO REMAIN, REFER TO CIVIL FOR OVERLAY & ADDITIONAL INSTRUCTIONS
F	EXISTING PLAY/SEATING AREA TO REMAIN (NO SCOPE), WORK AT THESE AREAS BY OTHERS (EXERPLAY, INC)
G	EXISTING WALKING TRAIL TO REMAIN, NO SCOPE
H	EXISTING CONCRETE WALK TO BE DEMOLISHED AND REMOVED, REFER TO CIVIL FOR AREAS OF DEMO AND REPAIR
J	EXISTING ASPHALT PAVEMENT TO BE DEMOLISHED AND REMOVED
K	EXISTING CONCRETE CURB TO BE DEMOLISHED AND REMOVED
L	EXISTING LANDSCAPE AREA TO BE DEMOLISHED AND REMOVED
M	EXISTING CONCRETE CURB TO REMAIN, REFER TO CIVIL FOR AREAS TO BE REPAIRED
N	EXISTING WHEEL STOPS TO BE DEMOLISHED AND REMOVED
O	EXISTING PARKING SPACES TO BE REMOVED AND DELETED
P	EXISTING FENCE TO BE DEMOLISHED AND REMOVED, INCLUDING CONCRETE FOOTINGS, GROUND TO BE FILLED IN AND LEVELED
Q	EXISTING FENCE TO REMAIN, NO SCOPE

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EXISTING SITE PLAN & SITE DEMOLITION

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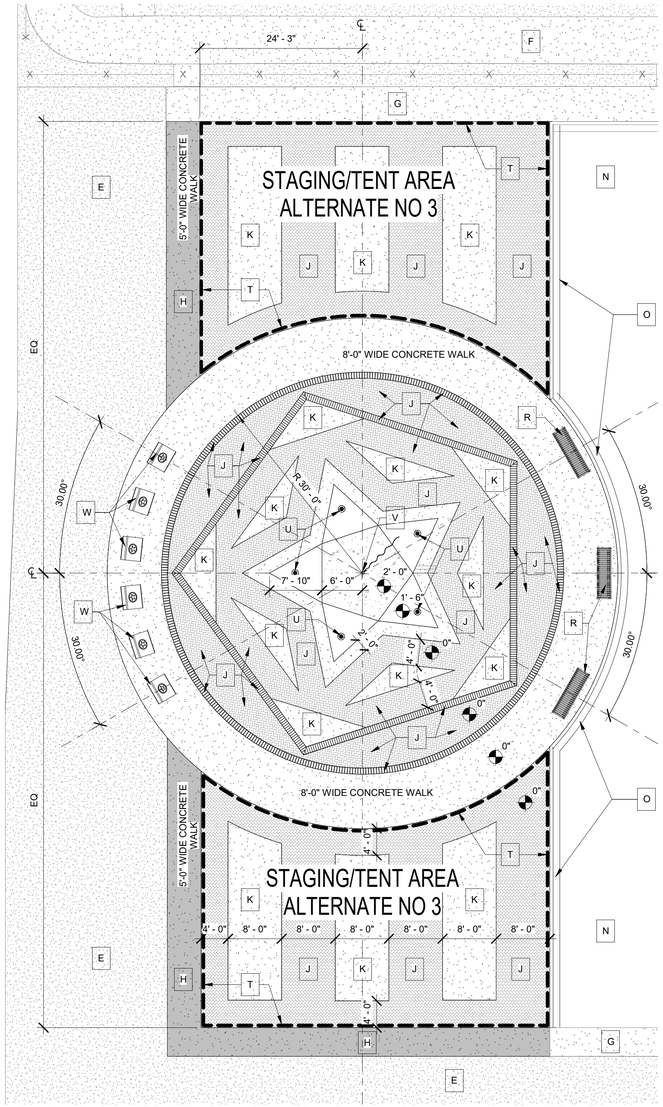
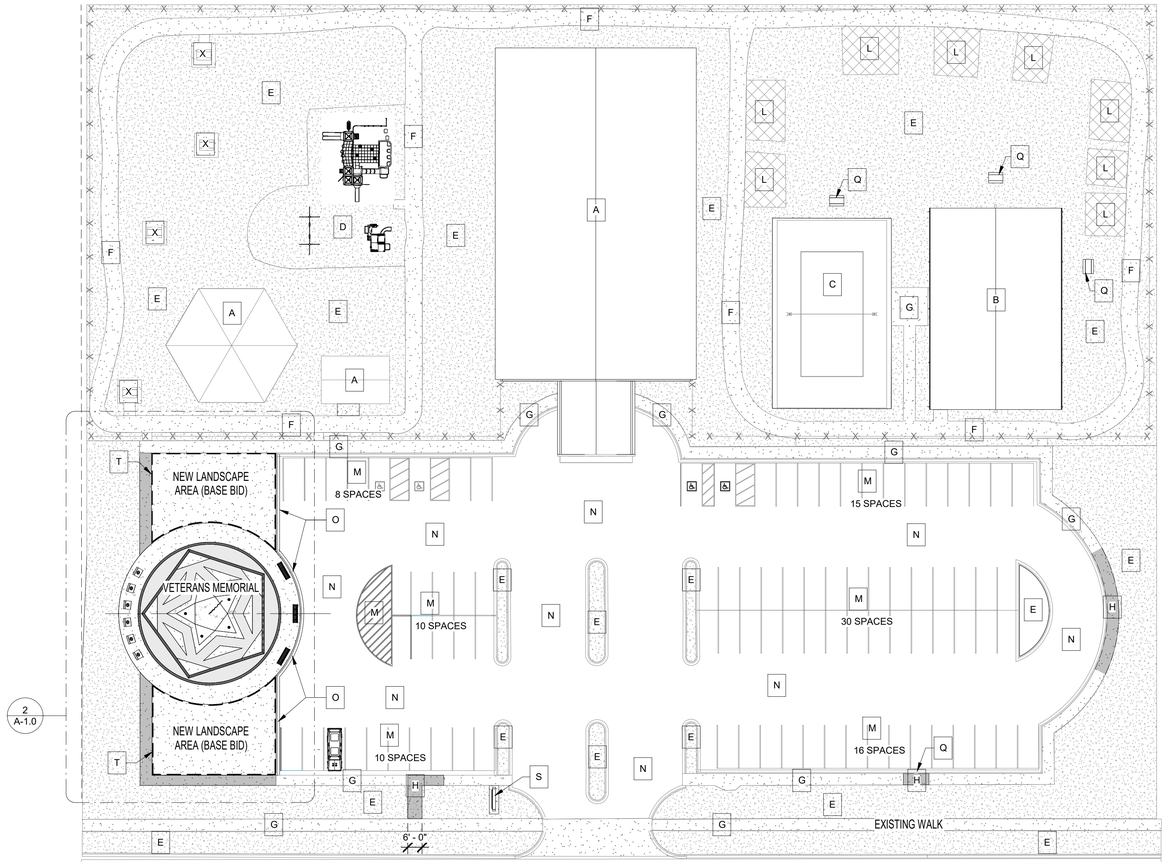


ENLARGED VETERANS MEMORIAL SITE PLAN
3/32" = 1'-0"



NOTE:
AT NEW LANDSCAPE AREA (BASE BID), PROVIDE LANDSCAPE SUITABLE SELECT FILL TO RAISE GRADE TO 1" FROM TOP OF CURB, REFER TO CIVIL FOR GRADING AND DRAINAGE

1 NEW SITEPLAN
1" = 30'-0"

ALTERNATE SCHEDULE

ADD ALTERNATE NO. 1: NEW PARK BENCHES AT VETERANS MEMORIAL

1. PROVIDE 3 PARK BENCHES, ANCHORED TO CONCRETE AS PER MANUFACTURER RECOMENDATIONS
2. BASIS OF DESIGN (OR EQUAL): HORIZONTAL STRAP CASINO BENCH, B6WBHORZCASINO BY SITE AMENITIES, 1050 COLUMBIA DRIVE CARROLTON GEORGIA 30117, 866.586.7794, srpsiteamenities.com

ADD ALTERNATE NO. 2: NEW ENTRY MONUMENT SIGN

1. PROVIDE NEW ENTRY MONUMENT SIGN, BASIS OF DESIGN: CORNERSTONE MONUMENT SIGN, MODEL 51, DOUBLE SIDED, CHANGEABLE INSERT LETTERS FOR 4 LINES OF 4", TRACKING, VANDAL COVER(S) WITH NO PROPS, 668 BLACK CHANGEABLE COPY LETTERS, STEWERT 3" AND 4" LETTER STORAGE CASE, CABINET: ADOBE (PRIMARY), ANTIQUE IVORY (SECONDARY), SELF-INSTALL KIT FOR LOCAL CONTRACTOR
2. PROVIDE ELECTRICAL WIRE AND CONDUIT RUNS FROM EXTERIOR GRADE SITE PANEL FOR TWO GROUND MOUNTED LIGHTS (ONE LIGHT FIXTURE FOR EACH SIDE), REFER TO ELECTRICAL FOR MORE NOTES AND INSTRUCTIONS

ADD ALTERNATE NO. 3: STAGING/TENT AREAS AT VETERANS MEMORIAL

1. ADD CONCRETE PAVERS AND CONCRETE ACCENT AREAS AT BOTH THE NORTH AND SOUTH SIDE OF THE VETERANS MEMORIAL CIRCLE. REFER TO ENLARGED NEW SITE PLAN 2/A1.0

ADD ALTERNATE NO. 4: LIGHTS AT VETERANS MEMORIAL

1. PROVIDE ELECTRICAL WIRE, CONDUIT, AND LIGHT FIXTURES, REFER TO ELECTRICAL FOR ADDITIONAL NOTES AND SPECIFICATIONS

NEW SITE PLAN LEGEND

- A — EXISTING BUILDING TO REMAIN (NO SCOPE)
- B — NEW METAL BUILDING SYSTEM, REFER TO SHEET A-1.1 FOR DETAILS AND INSTRUCTIONS
- C — EXISTING PLAY AREA TO REMAIN (NO SCOPE)
- D — EXISTING AREA TO REMAIN, (NO SCOPE), WORK AT THIS AREA BY OTHERS TO INCLUDE NEW CONCRETE CURB, POURED-IN-PLACE, AND PLAYGROUND EQUIPMENT (EXERPLAY, INC), LISTED HERE FOR COORDINATION WITH CONTRACTOR
- E — EXISTING LANDSCAPE AREA TO REMAIN (NO SCOPE)
- F — EXISTING WALKING TRAIL TO REMAIN, NO SCOPE
- G — EXISTING CONCRETE WALK TO REMAIN (NO SCOPE)
- H — NEW CONCRETE WALK, MATCH EXISTING
- J — NEW CLAY PAVERS, BASIS OF DESIGN (OR EQUAL): ACME BRICK CLAY PAVERS, BROWNWOOD MILL 7879?7, 90 DEGREE HERRINGBONE PATTERN, REFER TO CIVIL FOR ADDITIONAL NOTES ON SUB BASE FOR PAVERS
- K — NEW CONCRETE ACCENT AREA
- L — NEW CONCRETE CURB AND POURED-IN-PLACE PATCH BY OTHERS (EXERPLAY, INC), LISTED HERE FOR COORDINATION WITH CONTRACTOR, EXISTING EXCERCISE EQUIPMENT TO REMAIN (NO SCOPE)
- M — NEW PARKING SPACE STRIPING
- N — EXISTING DRIVE AND PARKING AREA, REFER TO CIVIL FOR OVERLAY & ADDITIONAL INSTRUCTIONS
- O — NEW CONCRETE CURB
- P — NOT USED
- Q — NEW PICNIC TABLE BY OTHERS, (EXERPLAY INC), (NO SCOPE)
- R — **ALTERNATE NO 1:** PRE-FINISHED PARK BENCHES, REFER TO ALTERNATE SCHEDULE
- S — **ALTERNATE NO 2:** NEW ENTRY MONUMENT SIGN, REFER TO ALTERNATE SCHEDULE
- T — **ALTERNATE NO 3:** STAGING/TENT AREA WITH CONCRETE PAVERS AND CONCRETE ACCENTS, REFER TO ALTERNATE SCHEDULE
- U — **ALTERNATE NO 4:** LIGHT FIXTURES, FLUSH WITH CONCRETE SURFACE, REFER TO ELECTRICAL FOR ADDITIONAL NOTES AND SPECIFICATIONS, REFER TO ALTERNATE SCHEDULE
- V — FLAG POLE: ARCHITECTURAL SERIES 30 FT, SATIN FINISH FLAG POLE, ULTIMATE DESIGN WIND SPEED RATING 128 MPH MIN., CAST ALUMINUM REVOLVING TRUCK, EXTERNAL HALYARD, HALYARD COVER, 2 SETS OF SWIVEL SNAPS WITH COVERS, CAST ALUMINUM CLEATS WITH COVER BOX, PROVIDE SECOND CLEAT AND HALYARD, ALUMINUM FINISH COLLAR, 6" GOLD ALUMINUM BALL TOPPER WITH 1/2" SPINDLE THREADING, PROVIDE ALL ACCESSORIES FOR FULL AND COMPLETE INSTALLATION AND USE, BASIS OF DESIGN (OR EQUAL): EDER BRAND EC30 AND ACCESSORIES, INCLUDING CONCRETE FOUNDATION
  FLAG ALLOWANCE: $250.00
- W — ARCHITECTRUAL FINISH CONCRETE PLAQUE PEDESTAL, REFER TO 4/A-1.1 FOR DETAILS AND SPECIFICATIONS
- X — EXISTING SEATING AREA TO REMAIN (NO SCOPE), WORK AT THIS AREA BY OTHERS TO INCLUDE NEW 12'x12' METAL SHADE STRUCTURE (EXERPLAY INC) LISTED HERE FOR COORDINATION WITH CONTRACTOR

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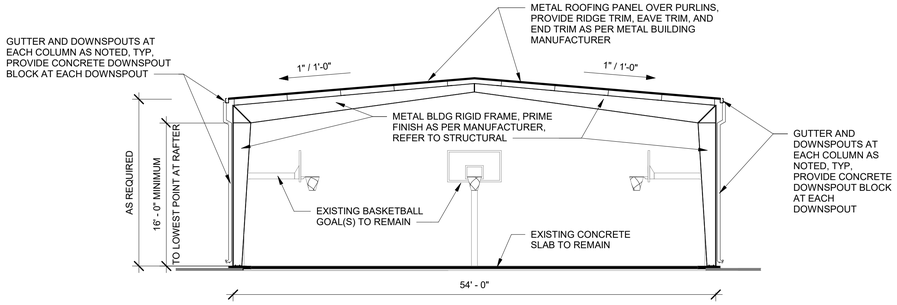
NEW SITE PLAN

A-1.0



ROOFING NOTE:
PROVIDE UL 90 RATED, 36" PBR PANEL, 26 GAUGE, GALVALUME PLUS, WITH RIDGE CAP AND FLASHING, SCULPTURED RAKE, EAVE TRIM, 4" SCULPTURED EAVE GUTTER, 4" DOWNSPOUTS WITH KICK OUT AT EACH COLUMN, FIELD APPLIED TAPE SEALANT AT PANEL SIDELAPS AND ENDLAPS, FASTENERS AND FASTENER SPACING AS RECOMMENDED BY MANUFACTURER AND ENGINEER OF RECORD, BASIS OF DESIGN (OR EQUAL): MBCI PBR PANEL, COLOR AS PER MANUFACTURER STANDARD COLORS, TO BE SELECTED BY ARCHITECT

② BUILDING SECTION AT METAL BUILDING
1/8" = 1'-0"

ALLOWANCE SCHEDULE

ALLOWANCE NO. 1: CONTINGENCY ALLOWANCE

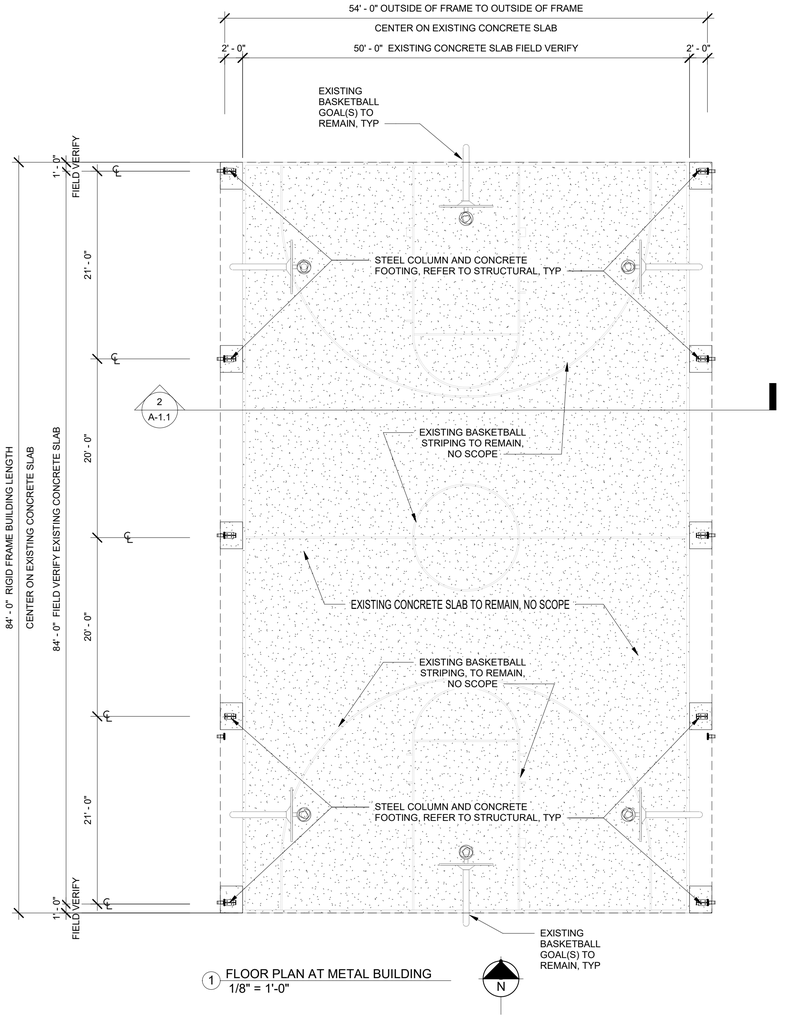
1. USE OF CONTINGENCY ALLOWANCE ONLY AS DIRECTED BY ARCHITECT OR ENGINEER FOR OWNER'S PURPOSES AN ONLY BY CHANGE ORDER THAT INDICATE AMOUNTS TO BE CHARGED TO THE ALLOWANCE
2 CONTRACTOR'S OVERHEAD, PROFIT, AND RELATED COSTS FOR PRODUCTS AND EQUIPMENT ORDERED BY OWNER UNDER THE CONTIGENCY ALLOWANCE ARE INCLUDED IN THE ALLOWANCE AND ARE NOT PART OF THE CONTRACT SUM. THESE COSTS INCLUDE DELIVERY, INSTALLATION, INSURANCE, EQUIPMENT RENTAL AND SIMIALR COSTS.
3. CHANGE ORDERS AUTHORIZING USE OF FUNDS FROM THE CONTINGENCY ALLOWANCE WILL INCLUDE CONTRACTOR'S RELATED COSTS AND REASONABLE OVERHEAD AND PROFIT MARGINS
4. AT PROJECT CLOSE-OUT, CREDIT UNUSED AMOUNTS REMAINING IN THE CONTINGENCY ALLOWANCE TO OWNER BY CHANGE ORDER

ALLOWANCE NO. 2: UNITED STATES FLAG

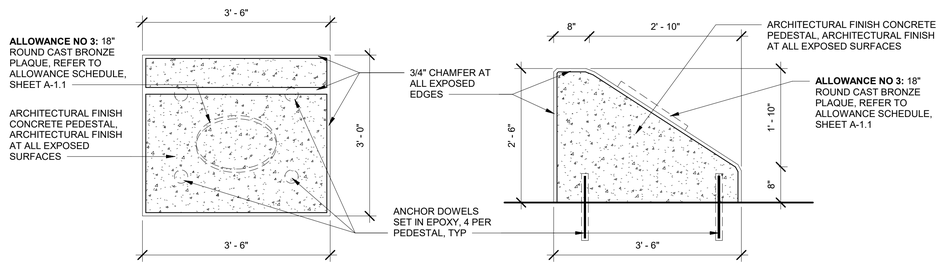
1. PROVIDE ONE (1) UNITED STATES FLAG, HEAVYWEIGHT 2-PLY POLYESTER WEAVE, EXTERIOR GRADE, UV RESISTANT, EMBROIDERED STARS, BRASS GROMMETS, SEWN STRIPES

ALLOWANCE NO. 3: CAST BRONZE MILITARY EMBLEM PLAQUE(S)

1. PROVIDE SIX (6), 18" ROUND CAST BRONZE MILITARY EMBLEM PLAQUE(S)
2. EACH PLAQUE SHALL REPRESENT ONE OF THE SIX UNITED STATES MILITARY DEPARTMENTS UNIFORMED SERVICES: UNITED STATES ARMY, UNITED STATES MARINE CORPS, UNITED STATES NAVY, UNITED STATES AIR FORCE, UNITED STATES NATIONAL GUARD, & UNITED STATES COAST GUARD
3. CAST BRONZE PLAQUES SHALL BE MOUNTED TO CONCRETE PEDESTALS, MECHANICALLY FASTENED AND ADHERED TO CONCRETE SURFACE



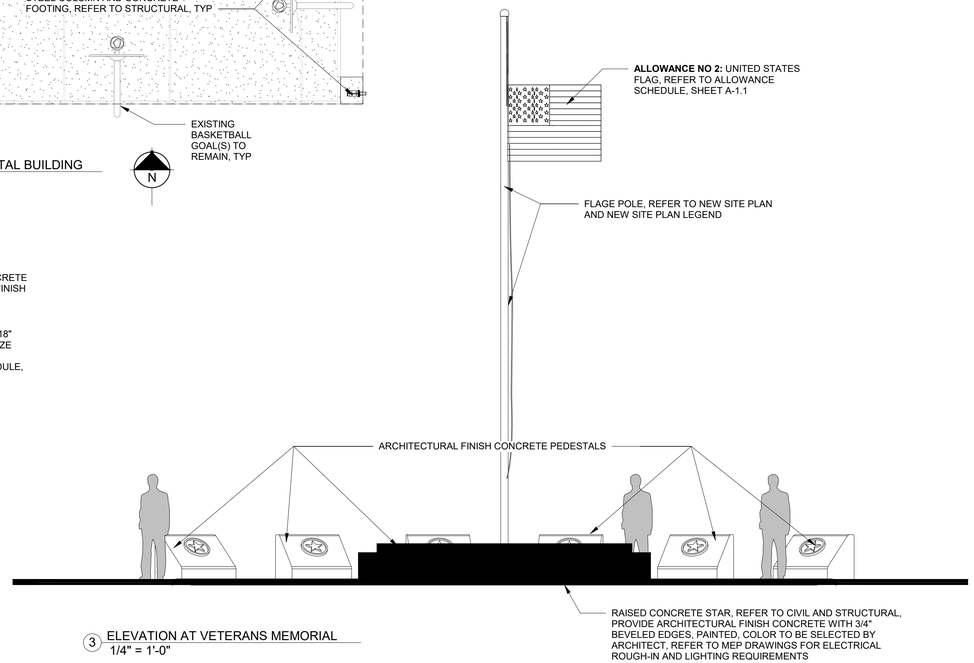
① FLOOR PLAN AT METAL BUILDING
1/8" = 1'-0"



PLAN VIEW

SIDE VIEW

④ PLAQUE PEDESTAL DETAILS
3/4" = 1'-0"



③ ELEVATION AT VETERANS MEMORIAL
1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. THE CONTRACTOR SHALL CAREFULLY REVIEW THE DRAWINGS, SPECIFICATIONS, DIMENSIONS AND SITE CONDITIONS PRIOR TO BEGINNING ANY WORK AND REPORT ANY INCONSISTENCIES OR DISCREPANCIES TO THE ARCHITECT IMMEDIATELY FOR RESOLUTION DURING THE Q&A PERIOD OF THE BID PHASE, AND AT THE LATEST BEFORE BEGINNING CONSTRUCTION.

2. THE DRAWINGS AND SPECIFICATIONS ARE CORRELATIVE AND HAVE EQUAL AUTHORITY AND PRIORITY. BASE DISAGREEMENTS IN THEMSELVES OR IN EACH OTHER ON THE MOST EXPENSIVE COMBINATION OF QUANTITY AND QUALITY OF WORK INDICATED.

3. ITEMS SPECIFICALLY MENTIONED IN THE SPECIFICATONS BUT NOT SHOWN ON THE DRAWINGS OR ITEMS SHOWN ON THE DRAWINGS BUT NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS SHALL BE PROVIDED AS IF THEY WERE BOTH SPECIFIED AND SHOWN IN THE DRAWINGS.

4. ALL MINOR DETAILS OF WORK WHICH ARE NOT SPECIFICALLY SHOWN ON THE DRAWINGS, AS WELL AS SUCH ITEMS WHICH ARE NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS, BUT ARE NECESSARY FOR THE PROPER COMPLETION OF THE WORK, SHALL BE CONSIDERED AS INCIDENTAL AND AS BEING PART OF AND INCLUDED WITH THE WORK FOR WHICH PRICES ARE GIVEN IN THE PROPOSAL AND NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE PERFORMANCE THEREOF.

5. ALL FLOOR PLAN DIMENSIONS ARE TO FINISH FACE OF WALL, UNLESS OTHERWISE NOTED. DO NOT SCALE DRAWINGS. WHERE DIMENSIONS ARE NOTED "AS CLEAR" DIMENSION SHALL BE FROM FINISH TO FINISH.

6. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.

7. OPEN EXTERIOR JOINTS AROUND DOOR AND WINDOW FRAMES, BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF, BETWEEN WALL PANELS, AT WALL AND ROOF PENETRATIONS AND ANY OTHER BUILDING ENVELOPE PENETRATION SHALL BE SEALED, CAULKED AND/OR WEATHER-STRIPPED TO PREVENT OR LIMIT AIR, MOISTURE AND VAPOR PENETRATION. USE ONLY SPECIFIED MANUFACTURER APPROVED MATERIALS AS DIRECTED BY MATERIAL MANUFACTURERS.

8. EFFECTIVELY ISOLATE ALL DISSIMILAR METALS/ MATERIALS TO PREVENT CORROSION BY ELECTROLYTIC ACTION OR OTHER CAUSES AS RECOMMENDED BY THE RESPECTIVE PRODUCT MANUFACTURER OR SUPPLIER.

9. PROPERLY TERMINATE ALL MATERIALS WITH APPROPRIATE TRIM, FLASHING, SEALANT, EXPANSION CONTROL, ETC. AS INDICATED ON DRAWINGS OR AS REQUIRED FOR PROPER INSTALLATION AS ACCEPTED BY STANDARD BUILDING PRACTICE.

10. COORDINATE HOUSEKEEPING PAD DIMENSIONS AND LOCATIONS WITH EQUIPMENT TO BE INSTALLED. ALL HOUSEKEEPING PADS SHALL BE A MINIMUM OF 4" TALL REINF. W/ #3 BARS AT 15" O.C.B.W. AND PROVIDE 1" (45- DEGREE) CHAMFERED EDGES UNLESS NOTED OTHERWISE.

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FLOOR PLAN AT RIGID FRAME BLDG & DETAILS

A-1.1

SITE PLAN NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY, COUNTY, STATE, FEDERAL AND OSHA REGULATIONS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, RAMPS, SIDEWALKS, EXIT PORCHES, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS, AND TOTAL NUMBER, LOCATION, AND SIZE OF DOWNSPOUTS.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4. ALL ISLANDS WITH CURB & GUTTER SHALL BE LANDSCAPED. THOSE ISLANDS ARE TO HAVE 18" CURB & GUTTER. ALL REMAINING ISLANDS ARE TO BE STRIPPED AS SHOWN.
5. ALL DIMENSIONS AND RADII ARE TO THE BACK OF CURB, CENTER OF STRIPE OR OBJECT, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS THAT ARE TO BE ABANDONED, REMOVED OR RELOCATED, SHALL BE DONE IN A PROPER MANNER OFFSITE, AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REGULATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
8. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED "THE CITY STANDARD SITE WORK SPECIFICATIONS".
9. CONTRACTOR SHALL MATCH EXISTING CURB & GUTTER IN GRADE, SIZE, TYPE AND ALIGNMENT WHERE APPLICABLE.
10. CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REPLACEMENT OF PROPERTY CORNERS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO DAMAGE OR ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS BUT NOT LIMITED TO: DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS. NO ADDITIONS, DELETIONS OR MODIFICATIONS TO THE WORK SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

CIVIL OBSERVATIONS

1. JOB SITE OBSERVATIONS BY THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE INTENT.
2. SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT.
3. SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR FOR ITEMS NOT INSTALLED OR IMPROPERLY INSTALLED BY THE CONTRACTOR OR HIS SUBCONTRACTORS.
4. NOTIFY ENGINEER 48 HOURS IN ADVANCED WHEN A CIVIL OBSERVATION IS REQUIRED.

UTILITY PLAN NOTES

1. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINES.
3. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED) , THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE, MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50). CONTRACTOR SHALL BE RESPONSIBLE FOR ADDING 45° BENDS WHERE NECESSARY TO ROUTE PROPOSED WATER LINES AROUND PROPOSED STORM SEWER.
4. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE CITY UTILITY DEPARTMENT AS TO LOCATION AND SCHEDULING OF TIE-INS/CONNECTIONS PRIOR TO EXISTING UTILITIES.
5. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
6. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO BACKFILLING.
7. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3,000 P.S.I.
8. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
9. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
10. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
11. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURE. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS OUTLINED BY OSHA
12. CONTRACTOR SHALL REFER TO ARCHITECTS PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE: SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE.
13. ALL STEEL ENCASEMENT PIPE SHALL HAVE A WALL THICKNESS OF 0.25 INCHES.
14. ALL SANITARY SEWER AND WATER LINES SHALL COMPLY WITH THE REQUIREMENTS AS SPECIFIED IN THE SITE WORK SPECIFICATIONS.
15. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING, TO CENTERLINE OR MANHOLE, FACE OF BUILDING, OR BACK OF CURB UNLESS OTHERWISE NOTED.
16. IN THE EVENT OF DAMAGE TO UNDERGROUND FACILITIES, WHETHER SHOWN OR NOT SHOWN IN THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO PLACE THE FACILITIES BACK IN SERVICE AT NO INCREASE IN THE CONTRACTOR'S PRICE, AND SUCH REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE COMPANY OR AGENCY SERVING THE FACILITY.
17. THE CONTRACTOR SHALL EXERCISE EXTRA CARE TO PREVENT DAMAGE TO ALL OTHER STRUCTURES IN THE AREA INCLUDING BUILDINGS, FENCES, ROADS, PIPELINES, UTILITIES, ETC., WHETHER PUBLICLY OR PRIVATELY OWNED.
18. UNTIL ACCEPTANCE BY THE ENGINEER OF ANY PART OR ALL OF THE CONSTRUCTION, AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS, IT SHALL BE UNDER THE CHARGE AND CARE OF THE CONTRACTOR, AND CONTRACTOR SHALL TAKE EVERY NECESSARY PRECAUTION AGAINST INJURY OR DAMAGE TO ANY PART OF THE WORK. THE CONTRACTOR SHALL REBUILD REPAIRS, RESTORE AND MAKE GOOD.
19. COORDINATE ALL UTILITY WORK WITH PLUMBING PLANS BEFORE COMMENCING ANY UTILITY WORK. REFER TO PLUMBING PLANS FOR CONTINUATION.
20. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY FOR ANY CONSTRUCTION DONE ON PUBLIC R.O.W. AND SHALL INCLUDE TRAFFIC CONTROL AS REQUIRED.
21. NOTICE TO CONTRACTOR: TEXAS ONE CALL SYSTEM AS REQUIRED BY THE "TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT" TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE SYSTEM.
22. CONTRACTOR SHOULD VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT HIMSELF/HERSELF WITH THE EXISTING CONDITIONS THERE AND SHOULD FULLY INFORM HIMSELF/HERSELF AS TO THE FACILITIES INVOLVED, THE DIFFICULTIES AND RESTRICTIONS ATTENDING THE PERFORMANCE OF THE CONTRACT.
23. CONTRACTORS SHALL IDENTIFY ALL UNDERGROUND LINES BEFORE COMMENCING WORK. CONTRACTOR SHALL ADJUST ANY ELECTRICAL LINES THAT CONFLICT WITH CONSTRUCTION OF THESE IMPROVEMENTS.
24. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CONSTRUCTION PERMITS AS NEEDED FROM CITY AND/OR OTHER LOCAL AUTHORITIES. CONTRACTOR SHALL PAY ALL PERMIT FEES ASSOCIATED WITH OBTAINING PERMITS.
25. CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON THE GROUND. ANY DISCREPANCY BETWEEN CONTRACTOR'S MEASUREMENTS AND CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND CONTRACTOR SHALL CEASE WORK UNTIL DISCREPANCY IS RESOLVED.

UTILITY PLAN DETAIL NOTES

GENERAL NOTES FOR WATER CONSTRUCTION:

1. DISINFECTION OF NEW WATER LINE MAINS SHALL BE IN CONFORMANCE WITH AWWA C601 & C6051. ALL NEW WATER MAINS SHALL BE DISINFECTED BEFORE THEY ARE PLACED IN THE SERVICE. ALL WATER MAINS TAKEN OUT OF SERVICE FOR INSPECTING, REPAIRING OR OTHER ACTIVITY WHICH MIGHT LEAD TO CONTAMINATION OF THE WATER SHALL BE DISINFECTED BEFORE THEY ARE RETURNING TO SERVICE.
2. ALL WATER LINE PIPE FURNISHED SHALL MEET THE REQUIREMENTS OF AWWA C900. LATEST REVISION. HYDROSTATIC TEST SPEC. SHALL BE 150 P.S.I. FOR 8 HOURS OR 180 P.S.I. FOR 4 HOURS.
3. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND THRUST PRESSURE. NO SEPARATE PAY.
4. WATER LINE TRENCHES INSIDE STREET RIGHT OF WAY SHALL HAVE SAND BEDDING TO THE SPRING-LINE OF THE PIPE AND THEN BACKFILLED WITH SELECT FILL IN MAX 8" LIFTS AND COMPACTED TO A MINIMUM OF 95% STD. DENSITY, AT +/-3% OF OPTIMUM MOISTURE CONTENT.
5. MAINTAIN A MINIMUM OF 18 INCHES VERTICAL CLEARANCE BETWEEN WATER LINES AND ALL OTHER UTILITIES.
6. UNLESS OTHERWISE APPROVED, ALL WATER MAINS SHALL BE PLACED A MINIMUM DEPTH OF 4' - 6' BELOW TOP OF PROPOSED STREET CURBS OR 48" OF COVER ABOVE PIPE LOCATED IN THE RIGHT OF WAY OR EASEMENTS.
7. ALL CONCRETE BLOCKING SHALL CONSIST OF 3,000 - P.S.I. CONCRETE.
8. ALL WORK AND MATERIAL SHALL BE SUBJECT TO CITY ENGINEERS APPROVAL DURING CONSTRUCTION AND UPON COMPLETION.
9. ALL WATER SERVICE LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING REGULATIONS.
10. TRACER WIRE SHALL BE INSTALLED ON ALL PUBLIC WATER LINES.

MANHOLE TESTING:

1. MANHOLES SHALL BE TESTED FOR LEAKAGE SEPARATELY AND INDEPENDENTLY OF THE OF THE WASTEWATER LINES BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING OR OTHER METHODS ACCEPTABLE TO THE COMMISSION. IF A MANHOLE FAILS A LEAK TEST, THE MANHOLE MUST BE MADE WATER TIGHT AND RETESTED. THE MAXIMUM LEAK FOR HYDROSTATIC TESTING SHALL BE 0.025 GALLONS PER FOOT DIAMETER PER FOOT ON MANHOLE DEPTH PER HOUR.

SEWER PIPE TESTING:

1. EXFILTRATION TEST SHALL BE PERFORMED ON ALL SEWER PIPE USING LOW PRESSURE AIR TEST. THE PROCEDURE FOR THE LOW PRESSURE AIR TEST SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM C-924, ASTM F-1417, OR OTHER APPROPRIATE PROCEDURES.

DEFLECTION TESTING:

1. DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPES. FOR PIPE WITH INSIDE DIAMETERS LESS THAN 27 INCHES, A RIGID MANDREL SHALL BE USED TO MEASURE DEFLECTION. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.

GENERAL NOTES FOR SEWER CONNECTION:

1. THE TOP ELEVATION OF MANHOLES AND CLEANOUTS CONSTRUCTED IN PAVED AREAS SHALL MATCH FINISHED PAVEMENT GRADE. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN GRASSED AREAS SHALL BE 6 INCHES ABOVE FINISHED GRADE (UNLESS NOTED OTHERWISE).
2. SEWER PIPE DIAMETER AND MATERIAL SHALL BE AS INDICATED ON PLANS AND SPECIFICATIONS.
3. IN THE EVENT THAT PLANS OR STANDARD DETAILS CONFLICT WITH THE CITY PLUMBING ORDINANCES, CITY ORDINANCES SHALL CONTROL AND BE ADHERE TO IN ALL CASES.
4. CONTRACTOR MUST BE LICENSED AND BONDED BY THE CITY.
5. PIPE SHALL BE BURIED A MINIMUM OF 4'.
6. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE.
7. REPAIR OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL MAKE EVERY EFFORT POSSIBLE TO MINIMIZE THE DISTURBANCE OF ALL EXISTING SHRUBS, LAWNS, AND OTHER LANDSCAPING FEATURES AND SHALL COORDINATE REMOVAL OF TREES WITH OWNERS OR ENGINEER.
9. PLUGS BETWEEN THE EXISTING AND PROPOSED SYSTEM SHALL BE REMOVED ONLY WHEN THE PROPOSED SANITARY SEWERS HAVE BEEN COMPLETED, TESTED AND ACCEPTED. NO PLUG SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER
10. SEWER SERVICE SHALL BE MAINTAINED TO ALL RESIDENCES AT ALL TIMES. IF FOR ANY REASON, THE CONTRACTOR NEEDS TO INTERRUPT SERVICE, HE SHALL FIRST OBTAIN APPROVAL FROM ENGINEER.
11. ALL CUT & PLUG OF SEWER LINES SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. NO SEPARATE PAY WILL BE ALLOWED.
12. WHENEVER SANITARY SEWER CROSSES WITHIN 10 FEET ABOVE OR BELOW A WATER LINE THE SANITARY SEWER SHALL BE CONSTRUCTED OF D.I.,CLASS 50, PRESSURE PIPE OR AWWA C900 PVC FOR A MINIMUM DISTANCE OF 10 FEET ON EITHER SIDE OF THE WATER LINE.
13. ALL SANITARY SEWER MAINS SHALL BE SDR-26 PVC WITH 4" MINIMUM BURY, PIPE PER THE CITY REQUIREMENTS.
14. P.V.C. PIPE SHALL HAVE BELL AND SPIGOT JOINTS. NO CHEMICALLY WELDED JOINTS SHALL BE PERMITTED.
15. GRADES FOR SEWER MAINS MAY BE VARIED FROM ELEVATIONS INDICATED ON THE PLANS ONLY ON THE DIRECTION AND APPROVAL OF THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, AND BY THE CITY.
16. ALL UTILITIES MAY BE OPEN - CUT UNLESS SPECIFICALLY NOTED OTHERWISE. REPAIR OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE LINED.

STORM SEWER PLAN NOTES

STORM SEWER NOTES:

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT SIZE, NUMBER AND LOCATION OF ALL ROOF DRAINS.
2. IF THE CONTRACTOR RELOCATES BENCHMARK WITH NEW BENCHMARK, IT SHALL BE LOCATED WITHIN A TOLERANCE OF 0.10'.
3. CONTRACTOR SHALL COMPLY WITH ALL GOVERNING CODES AND BE CONSTRUCTED TO SAME.
4. SEE SPECIFICATIONS FOR BACKFILLING AND COMPACTION REQUIREMENTS OF STORM SEWER TRENCHES.
5. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED WITH NON-SHIRNK GROUT TO ASSURE A WATERTIGHT FIT.
6. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING LIDS. MANHOLES IN UNPAVED AREAS SHALL HAVE 6 INCHES ABOVE FINISHED GRADE. LIDS SHALL BE LABELED "STORM SEWER".
7. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS OUTLINED IN THE T.P.D.E.S. PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING SWPPP AND REQUIRED PERMITS.
8. CONTRACTOR SHALL UTILIZE PREFABRICATED BENDS, FIELD FABRICATED BENDS OR RADIUS PIPE TO ACCOUNT FOR DEFLECTIONS IN STORM SEWER PIPE WHERE SHOWN HEREON.
9. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
10. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED TO REMOVE ALL SILT AND DEBRIS.
11. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
12. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.
13. REINFORCED CONCRETE PIPE SHALL BE CLIII RUBBER GASKET.

GRADING PLAN NOTES

GENERAL GRADING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT OF WAY.
2. ALL CUT OR FILL SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE SMOOTH FIT AND CONTINUOUS GRADE.
4. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOR ALL NATURAL AND PAVED AREAS.
5. ALL UN-SURFACED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3:1 OR STEEPER.
6. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
7. STRIP THE TOP 6 INCHES OF TOPSOIL AND VEGETATION FROM PROPOSED PAVING AND SIDEWALKS. STRIPPED TOPSOIL MAY BE STOCKPILED AND USED FOR FILL IN LANDSCAPE AND LAWN AREAS PROVIDED IT IS FREE OF ROCKS AND TRASH.
8. FILL BELOW PROPOSED PAVEMENT AREAS MAY BE SELECT FILL WITH PLASTICITY INDEX RANGING FROM 5 - 17%.
9. ALL SIDEWALKS SHALL HAVE A MINIMUM SLOPE OF ¼" PER FOOT. ELEVATIONS OF TOP OF CURB NEAR BUILDING ASSUME ¼" PER FOOT SLOPE ACROSS COVERED ENTRY AND SIDEWALK.
10. EXPANSION JOINTS TO BE PLACED WHERE BUILDING FOUNDATION MEET CONCRETE PAVEMENT OR SIDEWALK.
11. ALL REQUIRED SELECT FILL TO BE PLACED IN 6 INCH LIFTS WITH COMPACTION TO 95% PROCTOR.
12. ALL CURB AND GUTTER TO BE BACKFILLED AND STABILIZED AS REQUIRED.
13. ALL GRADING TO BE ESTABLISHED TO PROVIDE SURFACE TO DRAINAGE.
14. ALL OBSTRUCTIONS BUILDINGS, POLES, WIRES, SLABS, FENCING OR GUARD RAILS CONFLICTING WITH THE PROPOSED IMPROVEMENTS ARE TO BE REMOVED, RELOCATED AND/OR DISPOSED OF BY THE CONTRACTOR AS PER ENGINEERS WRITTEN INSTRUCTIONS.
15. HANDICAP SIGNAGE TO CONFORM WITH FEDERAL REGULATIONS (A.D.S.).
16. CONTRACTOR TO INCLUDE ALL SIGNS AND STRIPING FOR PARKING LOTS, STREETS & ROADWAYS
17. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION STAKING ON (ON-SITE) IMPROVEMENTS.
18. CONTRACTOR TO GRADE SWALES AS REQUIRED FROM SIDEWALK DRAINAGE OPENINGS, FIRE LANES, CULVERTS AND CURB SLOTS TO INLETS.
19. CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL THROUGHOUT THE DURATION OF THE CONSTRUCTION.

DATE: 10-01-2018

SCALE:

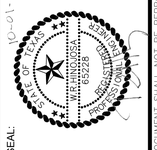
REVISIONS:

TITLE:

CITY OF GRANJENO - 2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III

6607 S. FM 494, GRANJENO, TEXAS

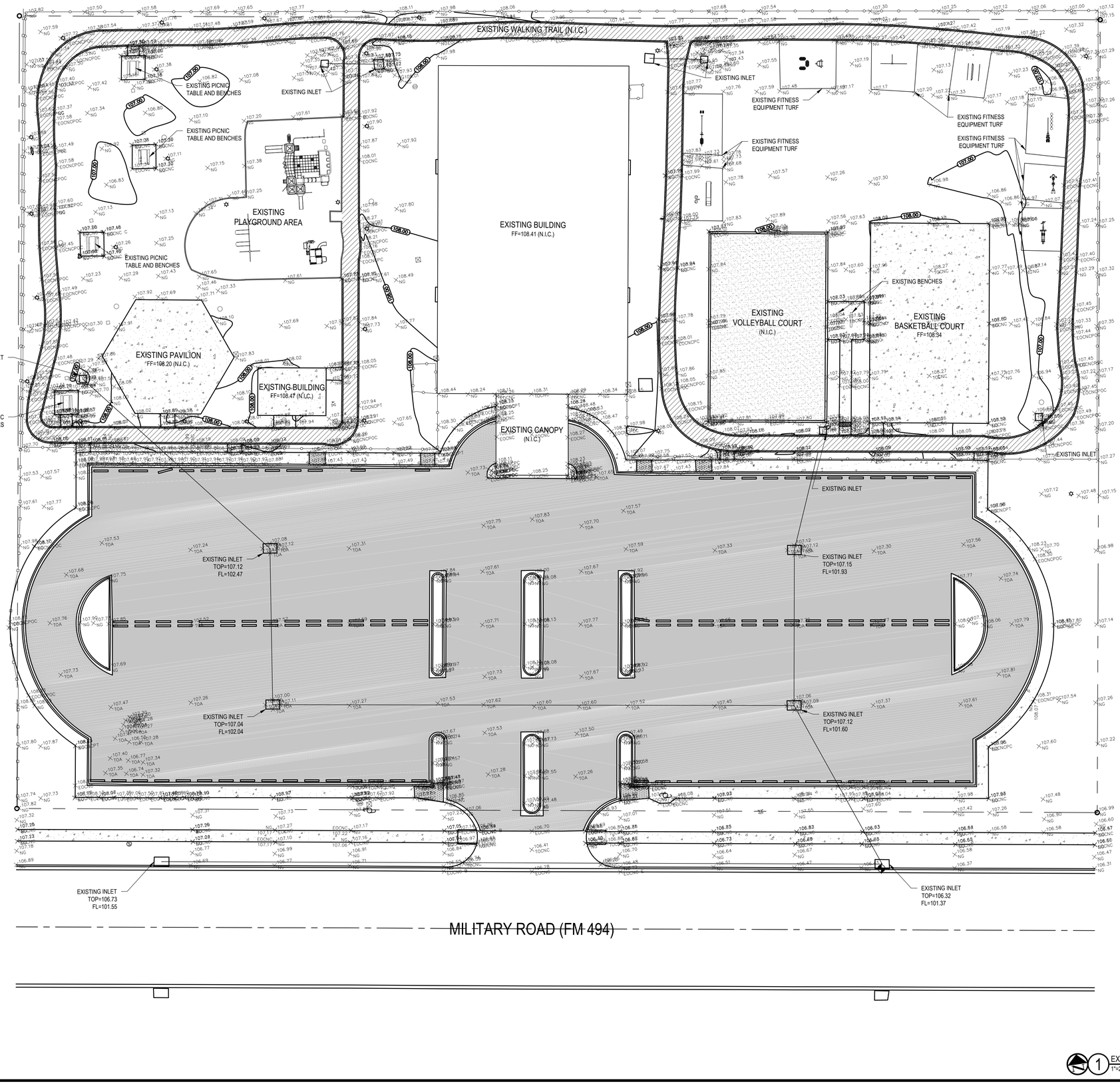
SEAL:



HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 357-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-808 EXPIRATION DATE: 08/30/2019

ENGINEER:	RH
DESIGNER:	AT, CT
SURVEYOR:	
DRAWN BY:	MR
JOB NO.	18-120
BOOK NO.:	

C1



1 EXISTING CONDITION LAYOUT
1"=20'

LEGEND:

- BM: SQUARE CUT TOP OF CURB INLET ON MILITARY ROAD ELEVATION 106.37
- 1/2" IRON ROD FOUND
- POWER POLE
- LIGHT POLE
- SIGN
- CLEAN OUT
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- ELECTRICAL BOX
- SANITARY SEWER MANHOLE
- EXISTING CONCRETE
- EXISTING SAND AREA
- EXISTING RAMP
- EXISTING GRANITE WALKING TRAIL
- EXISTING ASPHALT
- EXISTING CHAINLINK FENCE

DATE: 10-01-2018

SCALE:

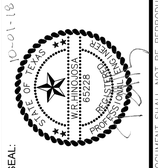
REVISIONS:

TITLE:

CITY OF GRANJENO - 2017
PARK, RECREATIONAL
FACILITY IMPROVEMENTS PHASE III

6607 S. FM 494, GRANJENO, TEXAS

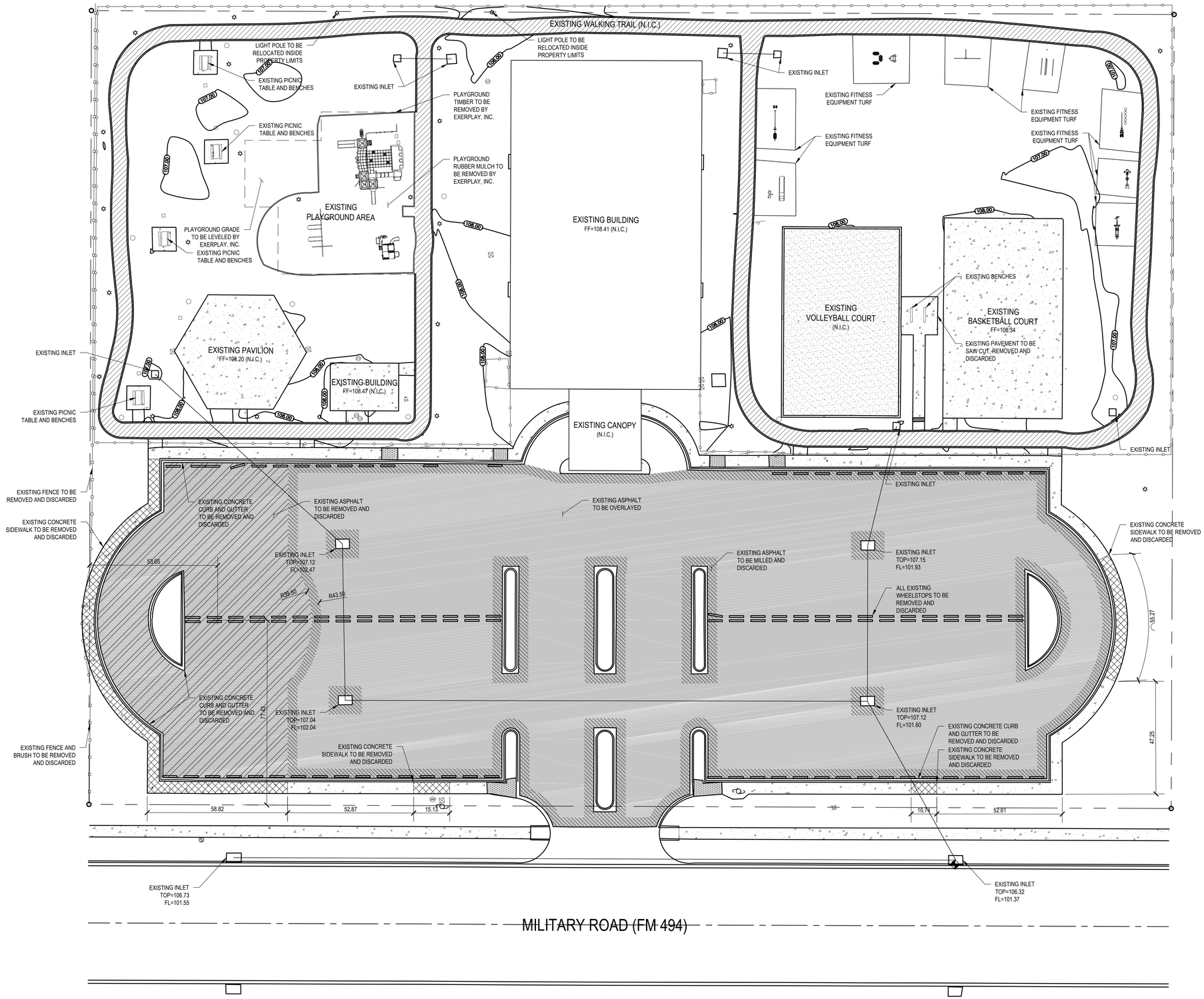
SEAL:



HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 16TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908
EXPIRATION DATE: 09/30/2019

ENGINEER:	RH
DESIGNER:	AT, CT
SURVEYOR:	
DRAWN BY:	MR
JOB NO.	18-120
BOOK NO.:	

C2



1 DEMOLITION SITE PLAN
1"=20'

LEGEND:

- BM: SQUARE CUT TOP OF CURB INLET ON MILITARY ROAD ELEVATION 106.37
- 1/2" IRON ROD FOUND
- POWER POLE
- LIGHT POLE
- SIGN
- CLEAN OUT
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- ELECTRICAL BOX
- SANITARY SEWER MANHOLE
- EXISTING CONCRETE
- EXISTING CONCRETE TO BE REMOVED DISCARDED
- EXISTING SAND AREA
- EXISTING RAMP
- EXISTING GRANITE WALKING TRAIL
- EXISTING ASPHALT TO BE OVERLAYED
- EXISTING ASPHALT TO BE REMOVED AND DISCARDED
- EXISTING ASPHALT TO BE MILLED
- EXISTING CHAINLINK FENCE TO REMAIN
- EXISTING CHAINLINK FENCE TO BE REMOVED AND DISCARDED

DATE: 10-01-2018

SCALE:

REVISIONS:

TITLE:

CITY OF GRANJENO - 2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III

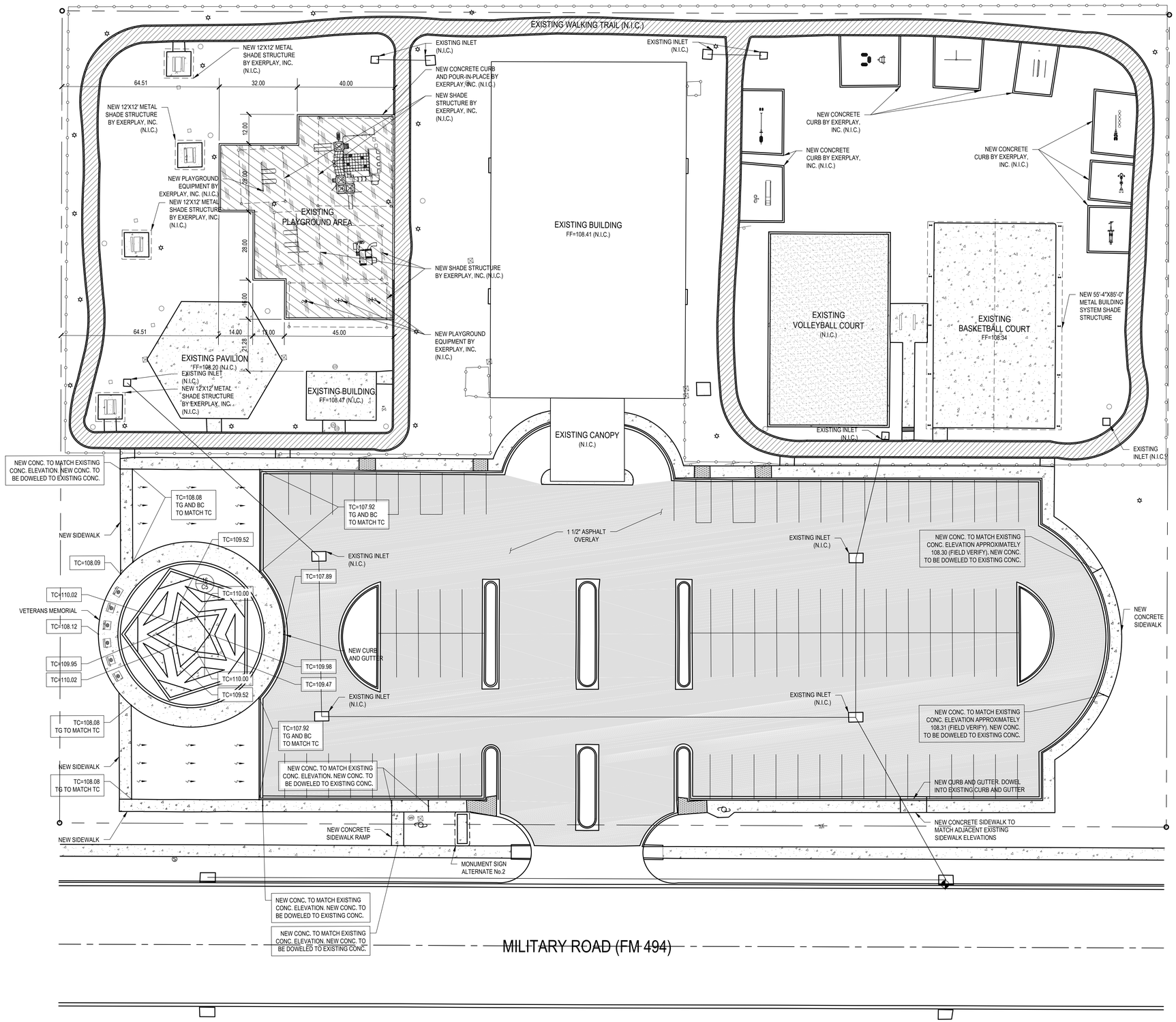
6607 S. FM 494, GRANJENO, TEXAS

SEAL: STATE OF TEXAS · WILLIAM R. HINOJOSA · 65228 · LICENSED PROFESSIONAL ENGINEER · 10-01-18

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEnginc@aol.com
REGISTRATION NUMBER: F-698 EXPIRATION DATE: 08/30/2019

ENGINEER:	RH
DESIGNER:	AT, CT
SURVEYOR:	
DRAWN BY:	MR
JOB NO.	18-120
BOOK NO.:	

C3



1 NEW SITE PLAN LAYOUT - BASE BID
1"=20'

LEGEND:

- BC BACK OF CURB
- TC TOP OF CONCRETE
- TG TOP OF GRADE
- BM: SQUARE CUT TOP OF CURB INLET ON MILITARY ROAD ELEVATION 106.37
- 1/2" IRON ROD FOUND
- POWER POLE
- LIGHT POLE
- SIGN
- CO CLEAN OUT
- WM WATER METER
- WV WATER VALVE
- FIRE HYDRANT
- ELECTRICAL BOX
- S SANITARY SEWER MANHOLE
- EXISTING CONCRETE
- EXISTING SAND AREA
- EXISTING RAMP
- EXISTING GRANITE WALKING TRAIL
- EXISTING ASPHALT
- NEW SIDEWALK
- NEW POURED-IN-PLACE SURFACING BY EXERPLAY, INC. (N.I.C.)
- PROPOSED FLOW ROUTE
- EXISTING CHAINLINK FENCE

DATE: 10-01-2018

SCALE:

REVISIONS:

TITLE:

CITY OF GRANJENO - 2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III

6607 S. FM 494, GRANJENO, TEXAS

SEAL: STATE OF TEXAS WILLIAM R. HINOJOSA 65228 LICENSED PROFESSIONAL ENGINEER 10-01-18

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
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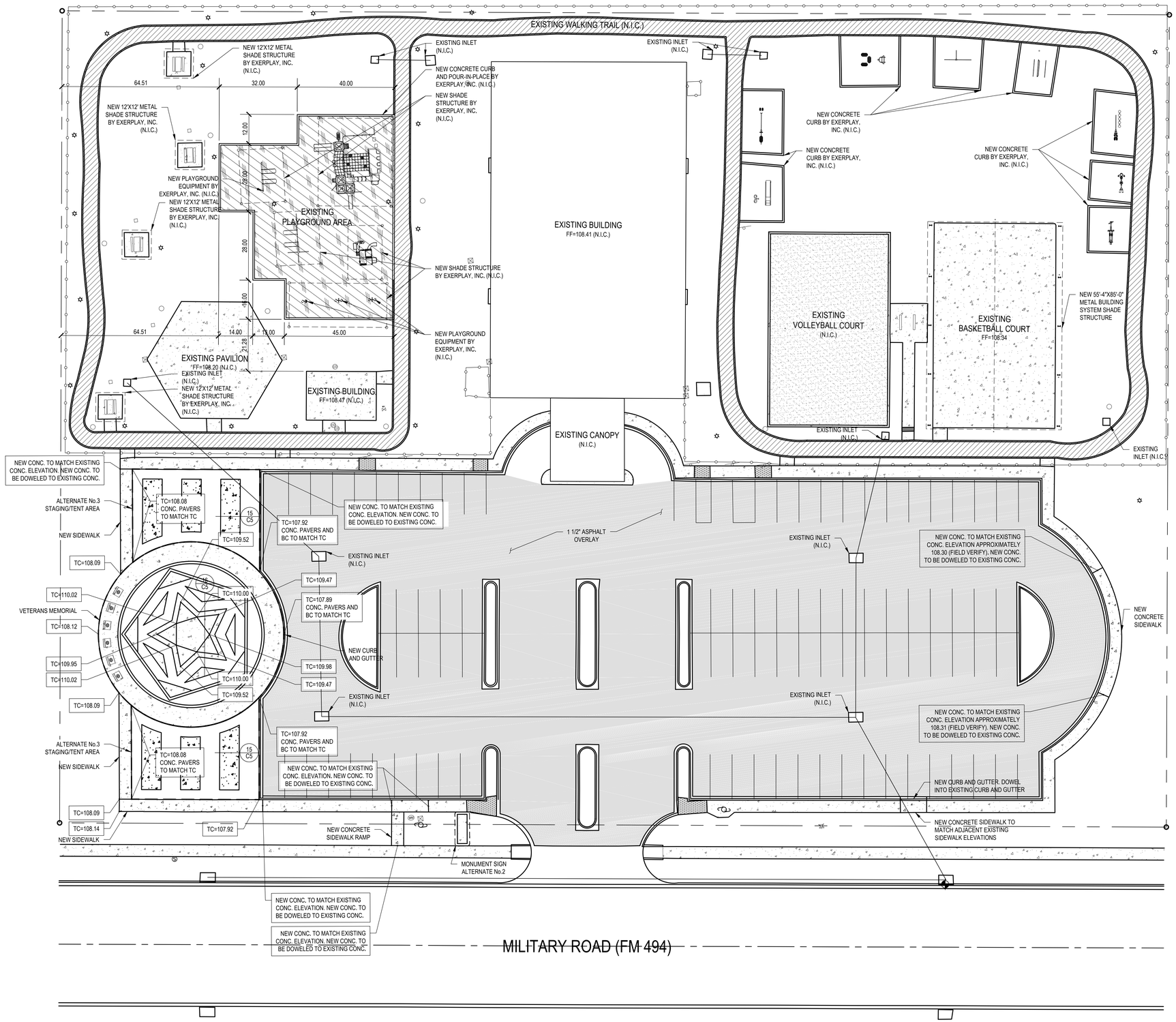
E-MAIL: HinojosaEnginc@aol.com
REGISTRATION NUMBER: F-998 EXPIRATION DATE: 08/30/2019

ENGINEER:	RH
DESIGNER:	AT, CT
SURVEYOR:	
DRAWN BY:	MR
JOB NO.	18-120
BOOK NO.:	

C4



1 NEW SITE PLAN LAYOUT- ALTERNATE No.3
1"=20'

LEGEND:

- BC BACK OF CURB
- TC TOP OF CONCRETE
- TG TOP OF GRADE
- BM: SQUARE CUT TOP OF CURB INLET ON MILITARY ROAD ELEVATION 106.37
- 1/2" IRON ROD FOUND
- POWER POLE
- LIGHT POLE
- SIGN
- CO CLEAN OUT
- WM WATER METER
- WV WATER VALVE
- FIRE HYDRANT
- ELECTRICAL BOX
- S SANITARY SEWER MANHOLE
- EXISTING CONCRETE
- EXISTING SAND AREA
- EXISTING RAMP
- EXISTING GRANITE WALKING TRAIL
- EXISTING ASPHALT
- NEW SIDEWALK
- NEW POURED-IN-PLACE SURFACING BY EXERPLAY, INC. (N.I.C.)
- EXISTING CHAINLINK FENCE

DATE: 10-01-2018

SCALE:

REVISIONS:

TITLE:

CITY OF GRANJENO - 2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III

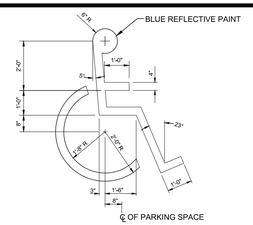
6607 S. FM 494, GRANJENO, TEXAS

SEAL: STATE OF TEXAS WILLIAM R. HINOJOSA 65228 LICENSED PROFESSIONAL ENGINEER 10-01-18

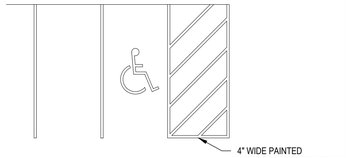
HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 381-0143 FAX: (956) 381-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-998 EXPIRATION DATE: 08/30/2019

ENGINEER:	RH
DESIGNER:	AT, CT
SURVEYOR:	
DRAWN BY:	MR
JOB NO.	18-120
BOOK NO.:	

C4A



HANDICAP DETAIL

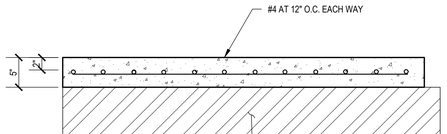


HANDICAP PARKING SPACE

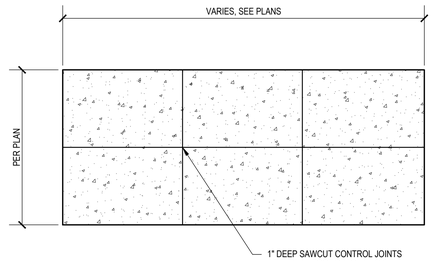
ACCESSIBLE PARKING AREA GENERAL NOTES:

1. ALL PARKING SPACE LIMIT LINES SHALL BE 4" SOLID WHITE LINES.
2. AISLE MARKINGS SHOWN ARE EXAMPLES ONLY. OTHER METHODS TO INDICATE A NO PARKING AREA ARE ACCEPTABLE. AISLE MARKINGS SHALL BE WHITE.
3. DIMENSIONS OF LIMIT LINES, AISLE MARKINGS, AND SYMBOL (WITH OR WITHOUT BACKGROUND) MAY VARY + 10%.
4. PAVEMENT MARKING SYMBOLS (WITH BACKGROUND):
   a) ARE REQUIRED UNLESS STATED ELSEWHERE IN THE PLANS.
   b) SHOULD BE PLACED TOWARD THE FAR END OF THE PARKING SPACES SO AS TO BE VISIBLE TO MOTORISTS IN THE TRAVEL LANE
   c) MAY BE PAINTED OR PREFABRICATED MATERIAL.
   d) SHALL BE 30" X 30" MINIMUM.
5. WITH APPROVAL OF THE ENGINEER, PREFABRICATED PAVEMENT MARKING SYMBOLS WITH BACKGROUND OF OTHER DIMENSIONS EXCEEDING THE 30" X 30" MINIMUM MAY BE USED. ALTERNATIVE DESIGNS SHALL INCLUDE A PROPORTION SIZED SYMBOL OF ACCESSIBILITY, AND SHALL CONFORM TO THE ILLUSTRATED COLORS FOR BACKGROUND, SYMBOL AND BORDER.
6. AN R7-8 SIGN:
   a) SHALL BE REQUIRED FOR EACH ACCESSIBLE PARKING SPACE.
   b) SHALL NOT BE PLACED BETWEEN TWO ACCESSIBLE PARKING SPACES.
   c) SHALL NOT BE PLACED IN A LOCATION THAT RESTRICTS MOVEMENT OF WHEELCHAIRS WITHIN THE ADJACENT SIDEWALK.
   d) SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET. IF MOUNTED TO WALL OR LOCATED SO AS NOT TO BE NEAR PEDESTRIAN TRAFFIC MINIMUM MOUNTING HEIGHT MAY BE 7 FEET.
7. POST MOUNTED SIGNS SHOULD BE PLACED APPROXIMATELY 1 FOOT (OR GREATER) BEHIND THE CURB TO PREVENT DAMAGE FROM VEHICLE OVERHANG.
8. SIGNS MAY BE MOUNTED DIRECTLY TO AN ADJACENT WALL OF A BUILDING WHEN POST MOUNTING IS IMPRACTICAL.

14 HANDICAP PARKING

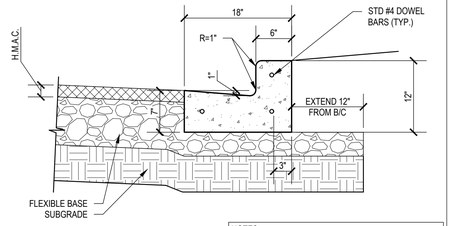


14 CONCRETE PAVEMENT



NOTES:

1. ALL CONC. SHALL BE MIN. 3,000 PSI CONCRETE.
2. WHEN ADJACENT TO EXISTING OR PROPOSED SIDEWALK, CONCRETE PAVEMENT SHALL BE DOWELED INTO SIDEWALK. CONTRACTOR SHALL PLACE EXPANSION JOINT BETWEEN CONCRETE PAVEMENT AND SIDEWALK.
3. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
4. CONCRETE SHALL BE ALLOWED TO CURE FOR A MIN. OF 7 DAYS BEFORE OPENING THE PAVEMENT TO ANY LOADING.

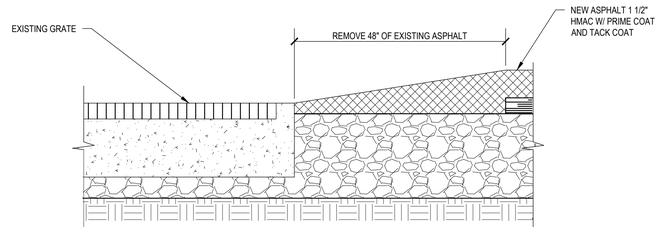


NOTES:

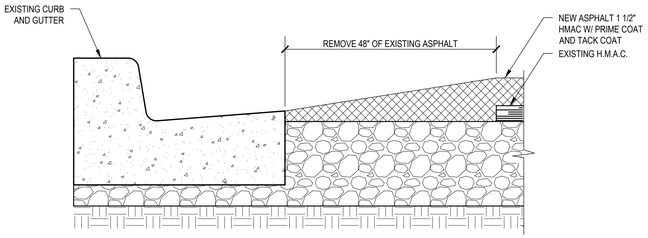
1. 1/2" PREFORMED EXPANSION JOINT SHALL BE PLACED AT 50'-0" CENTERS. DUMMY JOINTS SHALL BE PLACED AT 10'-0" SPACING, CENTERED FROM EACH EXPANSION JOINT.
2. TACK COAT SHALL BE APPLIED TO ANY SURFACE OF CONCRETE IN CONTACT WITH ASPHALT.
3. 3000 PSI CONCRETE SHALL BE USED.

9 TYPICAL CONCRETE CURB AND GUTTER

10 NOT USED

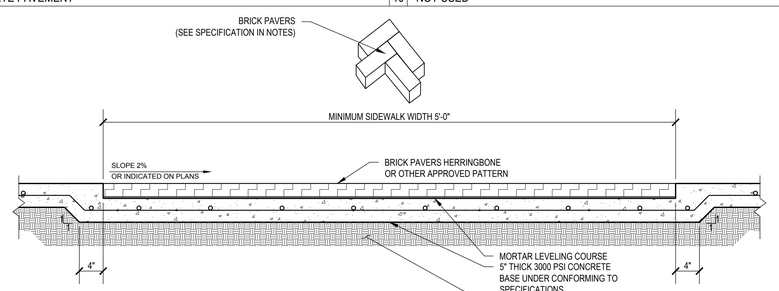


5 TYPICAL ASPHALT H.M.A.C. AT GRATE INLET

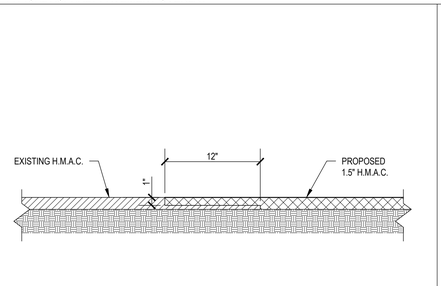


6 TYPICAL ASPHALT PAVEMENT OVERLAY

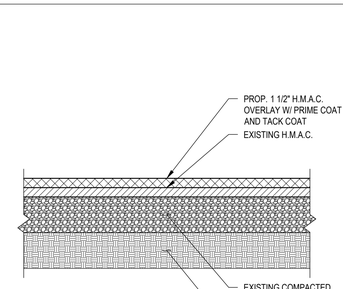
19 NOT USED



15 TYPICAL BRICK PAVER WALK

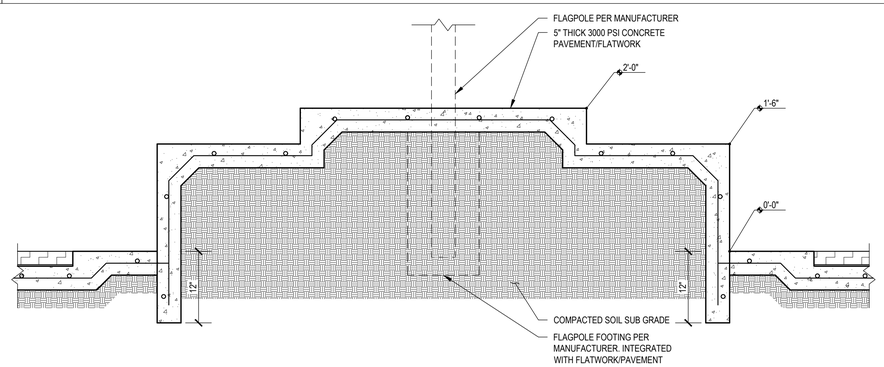


7 TYPICAL MILL SECTION AT EXISTING H.M.A.C. TO NEW H.M.A.C.

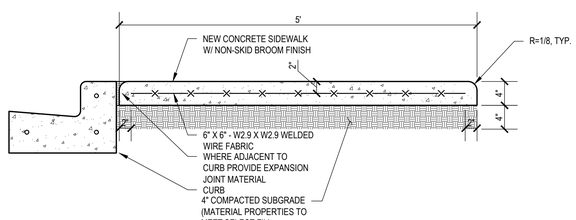


3 TYPICAL ASPHALT OVERLAY SECTION

20 NOT USED



16 SECTION AT MEMORIAL



NOTES:

1. EXPANSION JOINTS AT 20' O.C. TYP. W/ ASPHALTIC MATERIAL (1/2") 1/4" "DUMMY JOINTS" (CONTROL JOINTS) AT 5'-0" O.C.

8 TYPICAL CONCRETE SIDEWALK

DATE: 10-01-2018

SCALE:

REVISIONS:

TITLE:

CITY OF GRANJENO - 2017
PARK, RECREATIONAL
FACILITY IMPROVEMENTS PHASE III

6607 S. FM 494, GRANJENO, TEXAS

SEAL:

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 381-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEnginc@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 08/30/2019

ENGINEER:	RH
DESIGNER:	AT, CT
SURVEYOR:	
DRAWN BY:	MR
JOB NO.	18-120
BOOK NO.:	

C5

GENERAL NOTES

1. THIS CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING SAFETY NETS, SUPPORT AND BRACING FOR CRANES, POLES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INCLUDE INSPECTION OF THE ABOVE AND BELOW ITEMS.
2. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
4. IN CASE OF CONFLICT; NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS. IN CASE OF A CONFLICT ON THE SAME ITEM, THE MORE STRINGENT OR MORE EXPENSIVE ITEM GOVERNS.
5. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.
6. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN THEIR RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT ON THE DRAWINGS IN THEIR TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.
7. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.
8. THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING CONSTRUCTION.
9. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
10. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER.
11. ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES, ADDITIONAL COSTS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY IMPACT.
12. THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.
13. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.
14. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROJECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL TAKE ALL THE NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURES ADJACENT, NEAR, OR WITHIN THE AREA OF CONSTRUCTION.
15. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

DESIGN CRITERIA

A. DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED UPON THE FOLLOWING CRITERIA:		
CODE: . . . . 2012 IBC, ASCE/SEI 7-10		
A. CONCRETE: . . . . ACI 318-11		
B. COLD-FORMED STEEL: . . . . AISI S100-12		
C. MASONRY: . . . . TMS 402-11/ACI 530-11/ASCE5-11		
D. STEEL: . . . . AISC 325-11(14TH EDITION) ANSI/AISC 360-10 (JUNE 22, 2010)		
E. WOOD: . . . . 2012 NDS		
B. **METAL BUILDING SYSTEM**		
ROOF DEAD LOAD	SELF WEIGHT	
COLLATERAL LOAD	10 PSF	
ROOF LIVE LOAD	20 PSF	
BUILDING DRIFT		
WITH METAL SIDING	H/ 240	
WITH CMU WALLS	H/ 600	
GIRT DEFLECTION		
WITH METAL SIDING	H/ 240	
WITH CMU WALLS	H/ 600	
C. **LATERAL LOADS**		
1. WIND LOAD ULTIMATE DESIGN WIND SPEED, V_{ult} . . . . 128 MPH NOMINAL DESIGN WIND SPEED, V_{asd} . . . . 104 MPH RISK CATEGORY . . . . II EXPOSURE CATEGORY . . . . C REFERENCE METAL BUILDING SYSTEM DRAWINGS FOR ADDITION INFORMATION.		
2. SEISMIC LOAD REFERENCE METAL BUILDING SYSTEM DRAWINGS FOR ADDITION INFORMATION.		
3. FLOOD LOAD STRUCTURE IS LOCATED IN ZONE C. DESIGN FLOOD EVALUATION (DFE) LESS THEN 1'-0"		
D. **GEOTECHNICAL INFORMATION**		
1. GEOTECHNICAL REPORT THE OWNER OF THIS PROJECT HAS DECLINED TO FURNISH A GEOTECHNICAL INVESTIGATION REPORT THEREFORE THE FOUNDATION DESIGN WAS BASED UPON AVERAGE SOIL CONDITIONS IN HIDALGO COUNTY, TEXAS. IF HIGHLY EXPANSIVE OR MODERATELY SOILS OR SOFT SOILS ARE ENCOUNTERED, DIFFERENTIAL FOUNDATION MOVEMENTS CAN BE EXPECTED. ALTHOUGH WE ATTEMPT TO MAKE ASSUMPTIONS THAT WILL NOT IMPAIR STRUCTURAL INTEGRITY OF THE PROJECT, WE DO NOT HAVE THE EXPERTISE OR BENEFIT OF LABORATORY INVESTIGATIONS OF A GEOTECHNICAL ENGINEER, THEREFORE THIS FIRM CANNOT ASSUME RESPONSIBILITY FOR THE PERFORMANCE OF THE DESIGN FOUNDATION SHOULD ACTUAL SURFACE OR SUBSURFACE SOIL CONDITIONS VARY FROM THOSE ASSUMED.		
2. EMBEDDED POLES FOUNDATION THE FOUNDATION DESIGN IS BASED UPON SECTION 1807.3.2.1 IBC 2012 EDITION (EQUATION 18-1). THE DESIGN CRITERIA SELECTED ASSUMES SITE CLASS D MATERIAL OR BETTER, SOIL BEARING CAPACITY OF 1500 P.S.F., AND A PASSIVE SOIL PRESSURE OF 100 P.S.F. PER FOOT OF DEPTH.		
3. DEEP FOUNDATION		
BASED ON FINISH FLOOR ELEVATION		108.34 FT AMSL
MAXIMUM ALLOWABLE END-BEARING PRESSURE		
ELEVATION= 108.34 TO 98.34 AMSL		0 KSF
ELEVATION= 93.34 AMSL		2.3 KSF
MAXIMUM ALLOWABLE SIDE SHEAR RESISTANCE:		
ELEVATION= 108.34 TO 98.34 AMSL		0 KSF
ELEVATION= 98.34 TO 93.34 AMSL		0.25 KSF
4. CONSTRUCTION DEWATERING THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND DESIGNING THE DEWATERING SYSTEM REQUIRED FOR THE PROJECT EXCAVATION. THE CONTRACTOR SHALL SUBMIT THE DESIGN OF THE DEWATERING SYSTEM TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO COMMENCING EXCAVATION.		

SHOP DRAWINGS AND SUBMITTALS

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

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

CAST-IN-PLACE CONCRETE

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, ACI #301-96, OR LATEST EDITION. DRILLED PIERS SHALL COMPLY WITH ACE 336.1-98 AND ACI 336.3R-93.
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, AND ALL ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE". ACI #315 LATEST EDITION.
4. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:

LOCATION:	STRENGTH AT 28 DAYS:	MAXIMUM SLUMP:	MAXIMUM AGGREGATE:
PIERS	3000 PSI	5"	1 1/2"

5. PORTLAND CEMENT SHALL CONFORM TO A.S.T.M. C150-97A, TYPE I OR II. STRUCTURAL CONCRETE AGGREGATE SHALL CONFORM TO ASTM C 33-97, STANDARD WEIGHT.
6. ALL CONCRETE SHALL CONTAIN "POZZOLITH" ADMIX AS PER MANUFACTURER'S SPECIFICATIONS, IN ACCORDANCE WITH ASTM C494. NO CALCIUM CHLORIDE AS CEMENT REPLACEMENT WILL BE PERMITTED IN CONCRETE.
7. REQUIREMENTS FOR COLD AND HOT WEATHER SHALL BE PER IBC SECTIONS 1905.12 AND 1905.13 .
8. CONCRETE COVER FOR REINFORCING AS FOLLOWS: A. DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND: 3" ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
9. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. WHEN AIR TEMPERATURE IS BETWEEN 85° AND 90° F, REDUCE MIXING AND DELIVERY TIME FROM 90 MINUTES TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90° F, REDUCE MIXING AND DELIVERY TIME TO 6O MINUTES.

SPECIAL NOTES TO OWNER

1. UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.
2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.
3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.01 INCH MAY NEED TO BE PRESSURE EPOXIED.
4. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

STRUCTURAL OBSERVATIONS

1. JOB SITE OBSERVATIONS BY THE PROFESSIONAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE INTENT.
2. SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT.
3. SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR FOR ITEMS NOT INSTALLED OR IMPROPERLY INSTALLED BY THE CONTRACTOR OR HIS/HER SUBCONTRACTORS.
4. NOTIFY ENGINEER 48 HOURS IN ADVANCE WHEN A STRUCTURAL OBSERVATION IS REQUIRED.
5.

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

METAL BUILDING SYSTEM (M.B.S.)

1. PRE-MANUFACTURED METAL BUILDING SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND HAVING THREE (3) OR MORE YEARS EXPERIENCE IN THE DESIGN OF THE TYPE OF THE BUILDING INDICATED ON THE CONTRACT DOCUMENTS.
2. THE METAL BUILDING AND COMPONENTS SHALL BE DESIGNED TO CARRY ITS OWN WEIGHT PLUS ALL SUPERIMPOSED DEAD AND LIVE LOADS INCLUDING WIND LOADS FROM ALL DIRECTIONS AND INCLUDING ALL MECHANICAL, ELECTRICAL AND ARCHITECTURAL LOADS. VERIFY ALL LOADS WITH MECHANICAL, ELECTRICAL AND ARCHITECTURAL PLANS.
3. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO DESIGN, FABRICATION OR ERECTION OF PRE-MANUFACTURED BUILDINGS.
4. PRE-MANUFACTURED BUILDING FRAMES AND THE CONNECTION OF FRAME TO THE FOUNDATION IS TO BE DESIGNED BY OTHERS AND IS NOT THE RESPONSIBILITY OF HINOJOSA ENGINEERING, INC. (H.E.) CONTRACTOR SHALL COORDINATE THE CONNECTION OF THE BUILDING FRAME WITH THE SUPPLIER PRIOR TO CONSTRUCTION.
5. THIS FOUNDATION HAS BEEN DESIGNED USING ASSUMED REACTIONS FROM THE PRE-MANUFACTURED BUILDING COMPONENTS AND IS FOR BID PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT BASE CONNECTION DETIALS (SIZE AND THICKNESS BASE PLATE AND DIAMETER AND LENGTH ANCHOR BOLTS) AND REACTIONS OF THE BUILDING FRAMES TO THE ENGINEER PRIOR TO CONSTRUCTION SO THE DESIGN ASSUMPTIONS CAN BE VERIFIED. DEPTH OF ANCHOR BOLTS SHALL BE SUFFICIENT TO PREVENT CONICAL SHEAR OF THE CONCRETE FOUNDATION.
6. PRE-MANUFACTURED METAL BUILDING ANCHOR BOLTS SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND HAVING THREE (3) OR MORE YEARS EXPERIENCE IN THE DESIGN OF THE TYPE OF THE BUILDING INDICATED ON THE CONTRACT DOCUMENTS.
7. METAL BUILDING SUPPLIER SHALL PROVIDE AND SUBMIT FOR REVIEW ALL DESIGN CALCULATIONS AND DRAWINGS. ALLOW TWO (2) WEEKS FOR REVEIW OF SHOP DRAWINGS.
8. ANY ADDITIONAL COST OF FOUNDATION WORK REQUIRED BY REVISIONS OF THE FOUNDATION DESIGN AFTER PRE-MANUFACTURED BUILDING REACTIONS ARE SUBMITTED SHALL BE BY THE CONTRACTOR.
9. METAL ROOF DOES NOT PROVIDE LATERAL BRACING FOR THE PURLINS, BRIDGING SHALL BE DESIGNED AND SUPPLIED BY THE PURLIN MANUFACTURER.
10. REFER TO MECHANICAL DRAWINGS FOR ROOF SUPPORTED HVAC UNITS AND PROVIDE SUPPORT FOR ADDITIONAL LOADS AS REQUIRED.
11. MAXIMUM PURLIN SPACING SHALL BE 5'-0" O.C. WITH A MAXIMUM ALLOWABLE TOTAL DEFLECTION OF L/240.
12. PRE-MANUFACTURED BUILDING MANUFACTURER SHALL PROVIDE ADDITIONAL FRAMING REQUIRED TO SUPPORT THE WEIGHT OF MECH'L UNITS AND PROVIDE PROPER SERVICEABILITY OF SUSPENDED MECHANICAL UNITS, MECHANICAL DUCTWORK, LIGHT FIXTURES, AND ALL OTHER SUSPENDED ITEMS AND ITEMS SUPPORTED ON TOP OF ROOF.
13. DETAILS SHALL BE INCLUDED WHICH CLEARLY DETAIL RIGID FRAME BASE, HAUNCH, RIDGE PLATE CONNECTIONS AND OTHER MEMBER-TO-MEMBER CONNECTIONS.
14. WIND LOAD DESIGN SHALL INDICATE METHOD OF TRANSFERRING FORCES TO:
    A. END WALL WIND LOAD TO SIDE WALL FOUNDATIONS.
    B. AT END BAY SIDE WALL WIND LOAD TO END WALL FOUNDATIONS, CALCULATIONS SHALL SHOW HOW WIND LOAD IS TRANSFERRED TO EAVE STRUT.
15. PORTAL MOMENT FRAMES SHALL BE USED TO RESIST HORIZONTAL WIND FORCES. DESIGN OF ALL CONNECTIONS SHALL BE CLEARLY INDICATED.
16. DESIGN OF HORIZONTAL CROSS-BRACING IN PLANE OF ROOF FRAMING SHALL BE COMPLETE AND SHALL INDICATE METHOD OF TRANSFERRING TRIBUTARY WIND LOAD TO RIGID FRAMES OR THE SIDE WALL PORTAL FRAMES.
17. ALL COLUMN BASE PLATES SHALL BE SET AND GROUTED UNDER FOR FULL CONTACT BEARING.
18. ALL BASES FOR THE COLUMNS SHALL BE "PINNED" AND NOT ASSUMED AS FIXED. NO MOMENT FORCES SHALL BE TRANSFERRED INTO THE BUILDING FOUNDATION.
19. PROVIDE BUILDING CROSS SECTIONS AND ELEVATIONS WHICH CLEARLY SHOW THE PRIMARY STRUCTURAL RIGID MOMENT FRAME, PORTAL MOMENT FRAME, END WALL POST AND BEAMS, INTERIOR COLUMNS, AND OTHER STRUCTURAL MEMBERS THAT ARE TO BE USED ON THE SUBMITTED BUILDING. SIZE OF ALL STANDARD AISC MEMBERS AND OF ALL WEB AND FLANGE SECTIONS USED IN BUILT UP MEMBER SHALL BE NOTED AS WELL AS BOLTS AND WELDING.
20. DESIGN AND MEMBERS FOR FRAMED OPENINGS SHALL BE PROVIDED AS PART OF THE METAL BUILDING DESIGN.
21. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. (INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO). SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED.
22. ALL LATERAL SUPPORT BEAMS SHALL BE DESIGNED BY METAL BUILDING SYSTEM SUPPLIER.
23. DEFLECTION CRITERIA:
    a. GIRTS SUPPORTING METAL STUD WALLS L/600
    b. GIRTS SUPPORTING CMU WALLS L/600
    c. HORIZONTAL DEFLECTION OF FRAME L/480
    d. VERTICAL DEFLECTION OF FRAME L/360
    e. LATERAL SUPPORT BEAMS FOR METAL STUD WALLS L/600
    f. LATERAL SUPPORT BEAMS FOR CMU WALLS L/600

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1. GRADE 40 - #3 AND SMALLER, GRADE 60 - #4 AND LARGER
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED.
3. VERTICAL REINFORCEMENT SHALL BE TIED AND FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 48 INCHES O.C.
4. WELDED STEEL WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185
5. LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES SHALL BE NOT LESS THAN 12 INCHES.
6. WALLS, PILASTERS, COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTERS, OR COLUMNS.
7. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), EXCEPT AT SLABS; THE REINFORCING SHALL BE SUPPORTED BY CHAIRS SPACED AT 36 INCHES O.C. FOR #3 REBARS AND 48 INCHES ON CENTER FOR LARGER REBARS. CHAIRS FOR SLAB ON GRADE SHALL BE CONCRETE BLOCKS.
8. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
9. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT.
10. PROVIDE CORNER BARS TOP AND BOTTOM AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL LAP BEAM REINFORCEMENTS.
11. BARS DETAILED AS CONTINUOUS SHALL BE LAPPED AT SPLICES.
12. EXTEND THE SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS.
13. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 2". THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL.
14. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB THICKNESS AREA. AREA. ALL CONDUIT NO GREATER THAN 1" DIAMETER MAY BE PLACED IN CENTER OF SLAB. NO CONDUITS OR PLUMBING LINES GREATER THAN 1 INCH ALLOWED IN THE SLAB.
15. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
16. WELDING OF REINFORCING STEEL IS NOT PERMITTED.
17. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
18. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

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

BAR SPLICE LAP LENGTH IN CONCRETE

BAR SIZE	f'c = 2000 PSI	f'c = 3000 PSI	f'c = 4000 PSI	f'c = 5000 PSI
#3	22	22	22	22
#4	29	29	29	29
#5	40	40	40	40
#6	57	57	57	57
#7	77	63	54	54
#8	100	82	71	71

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

19. CONCRETE COVER FOR REINFORCING AS FOLLOWS:

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

STRUCTURAL STEEL

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

MATERIAL	DESIGNATION	STRENGTH
ANCHOR RODS	F1554	Fy=36 ksi
PLATES	A36	Fy=36 ksi
ANGLES	A36	Fy=36 ksi
CHANNELS	A36	Fy=36 ksi
WIDE FLANGE SHAPES	A992	Fy=50 ksi
STEEL PIPE	A53 GRADE B	Fy=35 ksi
SQUARE & RECT. STEEL TUBES (HSS)	A500 GRADE B	Fy=46 ksi
ROUND TUBES (HSS)	500 GRADE B	Fy=42 ksi

3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
4. WELDING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AS PUBLISHED BY THE AMERICAN WELDING SOCIETY, EXCEPT THAT ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ANSI/AWS D1.1-04
5. CONNECTION DESIGN: DELEGATED DESIGN
    A. ALL DETAILED AND/OR SCHEDULED CONNECTIONS ARE TO BE CONSIDERED CONCEPTUAL AND SHALL BE DESIGNED BY THE STEEL FABRICATOR WITH SIGNED AND SEALED CALCULATIONS BY A TEXAS LICENSED PROFESSIONAL ENGINEER.
    B. ANY CONNECTIONS NOT DETAILED OR SCHEDULED OR ALTERED FOR FABRICATION PURPOSES SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR AND SHALL BE MARKED FOR THE ENGINEER'S VERIFICATION.
    C. CONNECTIONS SHALL BE DESIGNED ACCORDING TO THE REACTIONS INDICATED ON THE STRUCTURAL DRAWINGS. ALL REACTIONS SHOWN ARE BASED ON SERVICE LOADS AND ARE INTENDED FOR USE WITH THE ALLOWABLE STRENGTH DESIGN (ASD) METHOD UNLESS NOTED OTHERWISE. IF NO REACTIONS SHOWN, DESIGN BEAM CONNECTIONS TO SUPPORT AT LEAST 50% OF THE MAXIMUM TOTAL UNIFORM LOAD CAPACITY SHOWN IN TABLE 3-6 OF THE AISC MANUAL.
    D. THE CONCEPTUAL CONNECTION DETAILS SHOWN INDICATE THE CONNECTION TYPE REQUIRED AND MAY NOT FULLY REFLECT THE FINAL COMPLEXITY OR SCOPE OF THE CONNECTION.
    E. ADDITIONAL CONNECTION ELEMENTS MAY BE REQUIRED IN THE FINAL DESIGN SUCH AS: STIFFENER PLATES, DOUBLER PLATES, SHIMS, AND/OR OTHER CONNECTION MATERIAL.
    F. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE NOTED ON PLANS.
6. SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL ITEMS NOT INDICATED ON STRUCTURAL DRAWINGS. STEEL ITEMS SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGN BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LOADING.
7. ALL WELDED CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, U.N.O.
8. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION w/ WASHERS ASTM F436, U.N.O. ON DESIGN DRAWINGS. SPECIAL INSPECTION REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563
9. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES, UNLESS OTHERWISE NOTED ON PLANS.
10. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. (INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO). SEE ARCHITECTURAL PLANS IF STRICTER REQUIREMENTS ARE REQUIRED.
11. ALL EXPOSED STEEL SHALL FOLLOW SECTION 10 OF THE CODE OF STANDARD PRACTICE OF AISC SECTION 10 OF THE CODE ADDRESSES ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)
12. CONNECTIONS SHALL BE PER HOLLOW STRUCTURAL SECTIONS, CONNECTION MANUAL BY AISC
13. WHERE STEEL MEMBER PASS THROUGH CMU WALLS, PROVIDE HALF INCH GAP BETWEEN THE CMU AND THE STEEL MEMBER. PROVIDE ELASTOMERIC MATERIAL BETWEEN THE THE STEEL MEMBER AND CMU WALL. PROVIDE FIRE PROOF ELASTORMERIC MATERIAL WHERE REQUIRED.
14. ALL BEAMS NOT SHOWN SHALL BE W18x35. ALL COLUMNS NOT SHOWN SHALL BE HSS 5X5x1/4.
15. STEEL FABRICATOR SHOP SHALL BE AISC CERTIFIED.
16. HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED. UNLESS NOTED OTHERWISE, HOLES SHALL BE STANDARD SIZE 1/16 INCH LARGER THAN THE BOLT, UNLESS NOTED OTHERWISE.
17. ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. PRIMER SHALL NOT BE APPLIED TO THE IMMEDIATE AREA OF STEEL INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS
18. HIGH STRENGTH BOLTS INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR. FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    A. THE INSPECTOR SHALL VERIFY THE MILL CERTIFICATES FOR MATERIAL.
    B. THE INSPECTOR SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    C. THE INSPECTOR SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES, TOOL CALIBRATIONS, WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
    D. FOR SNUG-TIGHT CONNECTIONS, THE INSPECTOR SHALL VERIFY THAT THE PLIES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT WITH EACH OTHER.
    E. FOR SLIP-TIGHT CONNECTIONS, THE INSPECTOR SHALL VERIFY THE PRETENSION METHOD SELECTED BY THE CONTRACTOR HAS INDUCED THE REQUIRED MINIMUM TENSION IN THE BOLT IN ACCORDANCE TO THE AISC SPECIFICATION TABLE J3.1.
    F. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO SCHEDULED INSPECTION AND TO THE ARCHITECT AND ENGINEER.
19. WELDING IN THE FIELD SHALL BE CONTINUOUSLY INSPECTED, BY A SPECIAL INSPECTOR FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
    A. THE INSPECTOR SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
    B. THE INSPECTOR SHALL VERIFY THE WELDER'S QUALIFICATIONS.
    C. THE INSPECTOR SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES AND WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
    D. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO SCHEDULED INSPECTION AND TO THE ARCHITECT AND ENGINEER.
20. ALL NON SHRINK GROUT FOR LEVELING OF BASE PLATES SHALL HAVE A MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. GROUT SHALL COMPLY WITH CORPS OF ENGINEERS SPECIFICATION CRD-C 621.

STRAIGHT SHAFT PIERS

1. CONCRETE PIERS SHALL BE PER SCHEDULE OR DETAIL. THE ACTUAL ELEVATION SHALL BE DETERMINED IN THE FIELD BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF TEXAS WITH EXPERIENCE IN THIS AREA.
2. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL AND SHALL CONFORM TO ASTM A-615, GRADE 60.
3. ALL REINFORCING STEEL SHALL BE CONTINUOUS WITH SPLICES LAPPED 75 BAR DIAMETERS.
4. CENTER PIER UNDER COLUMN OR WALL UNLESS DIMENSIONED OTHERWISE.
5. PIERS SHAFT SHALL BE DRILLED PLUMB ALONG ITS TOTAL LENGTH (1" PER 10'-0" MAXIMUM TOLERANCE)
6. BOTTOM OF PIER TO BE CLEAN AND FREE OF ALL LOOSE MATERIALS AND WATER.
7. CENTER STEEL CAGE IN SHAFT WITH A MINIMUM 3 LEVELS OF CONCRETE BLOCK SPACERS (8 FT. MAXIMUM SPACING) AT A MINIMUM OF 3 EVENLY ON 3" CONCRETE SEAT BLOCK.
8. DO NOT RAISE CAGE OFF OF FOOTING BOTTOM DURING CONCRETE PLACEMENT.
9. CONCRETE AND REINFORCING IN SHAFTS SHALL BE PLACED THE SAME DAY AS DRILLING.
10. PIERS SHALL BE FOUNDED IN UNDISTURBED NATURAL SOIL.
11. CONTRACTOR SHALL COORDINATE WITH GEOTECHNICAL ENGINEER FOR VERIFICATION OF PIERS BEARING STRATUM AT TIME OF DRILLING.
12. PROVIDE INSPECTING ENGINEER WITH AN ELECTRIC LIGHT AND PLUMB-BOB TO OBSERVE ALL DRILLED PIERS.
13. ALL DRILLED FOOTINGS SHALL BE FREE OF WATER PRIOR TO PLACING OF CONCRETE.
14. PIER HOLES SHALL NOT BE LEFT OPEN OVERNIGHT (NO EXCEPTIONS).
15. PROVIDE STEEL CASING, AS REQUIRED, TO PREVENT CAVE-IN AND SEAL OFF SUBSURFACE WATER.
16. STEEL CASING SHALL BE REMOVED DURING POURING SEQUENCE.
17. CONTRACTOR SHALL INCLUDE IN BID DOCUMENTS THE COSTS FOR CASING IF REQUIRED (TO BE DETERMINED ON JOB SITE BY GEOTECHNICAL ENGINEER) AND UNIT COSTS FOR GREATER AND LESSER DEPTH OF DRILLING.
18. REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR CONCRETE PLACEMENT FOR THE PIER.
19. CONCRETE SHALL BE PLACED THROUGH A SUITABLE TUBE OR TREMIE TO PREVENT SEGREGATION OF MATERIALS.

DATE: 10-01-2018

SCALE:

REVISIONS:

TITLE:
CITY OF GRANJENO - 2017
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6607 S. FM 494, GRANJENO, TEXAS

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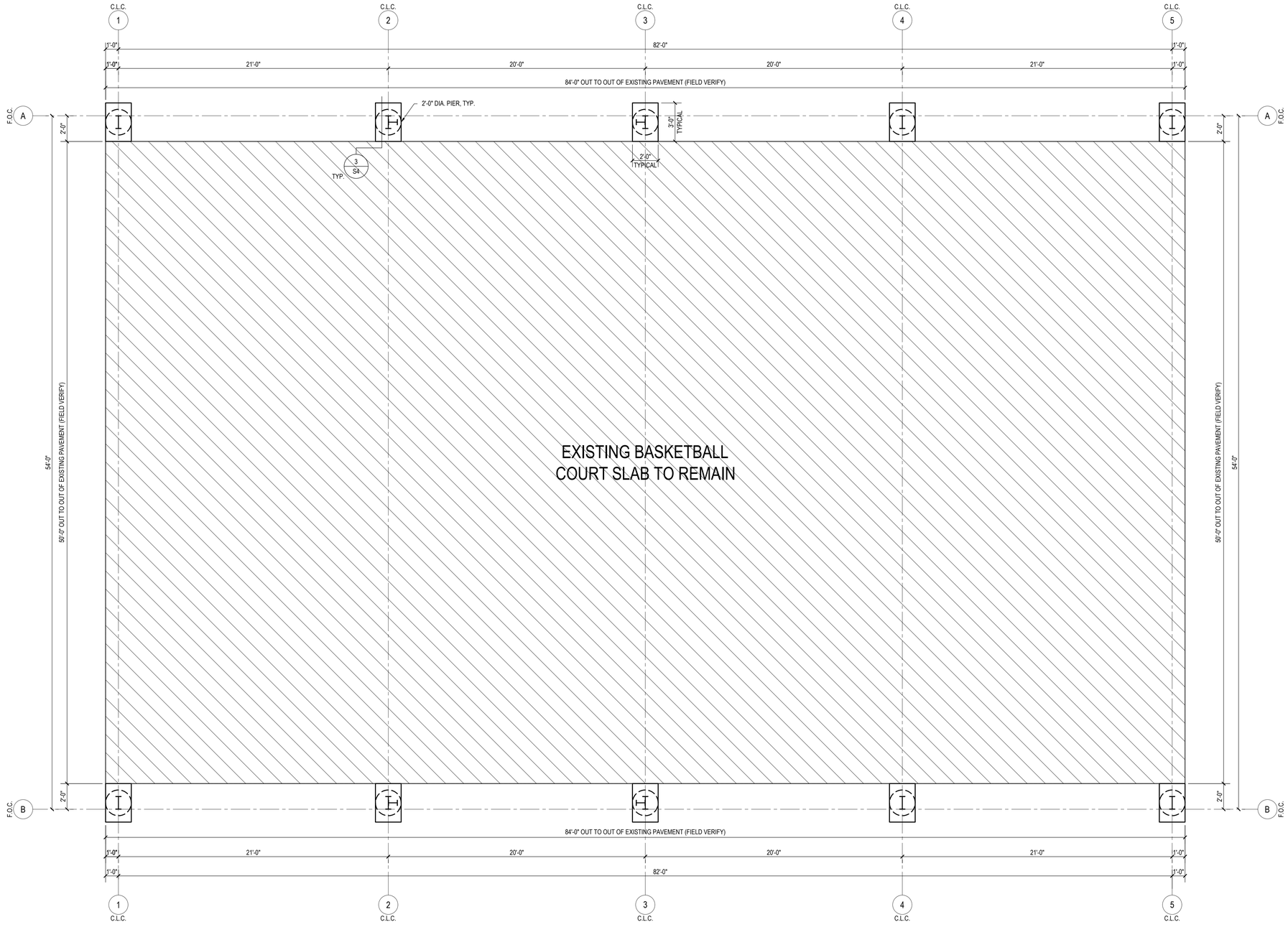
SEAL:
STATE OF TEXAS
W.R.HINOJOSA
65228
REGISTERED PROFESSIONAL ENGINEER
10-01-18

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEngInc@aol.com
REGISTRATION NUMBER: F-908
EXPIRATION DATE: 09/30/2019

ENGINEER: RH
DESIGNER: AT, CT
SURVEYOR:
DRAWN BY: MR
JOB NO. 18-120
BOOK NO.:

S1



1 FOUNDATION PLAN
1/4"=1'-0"

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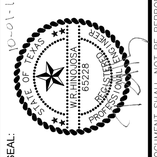

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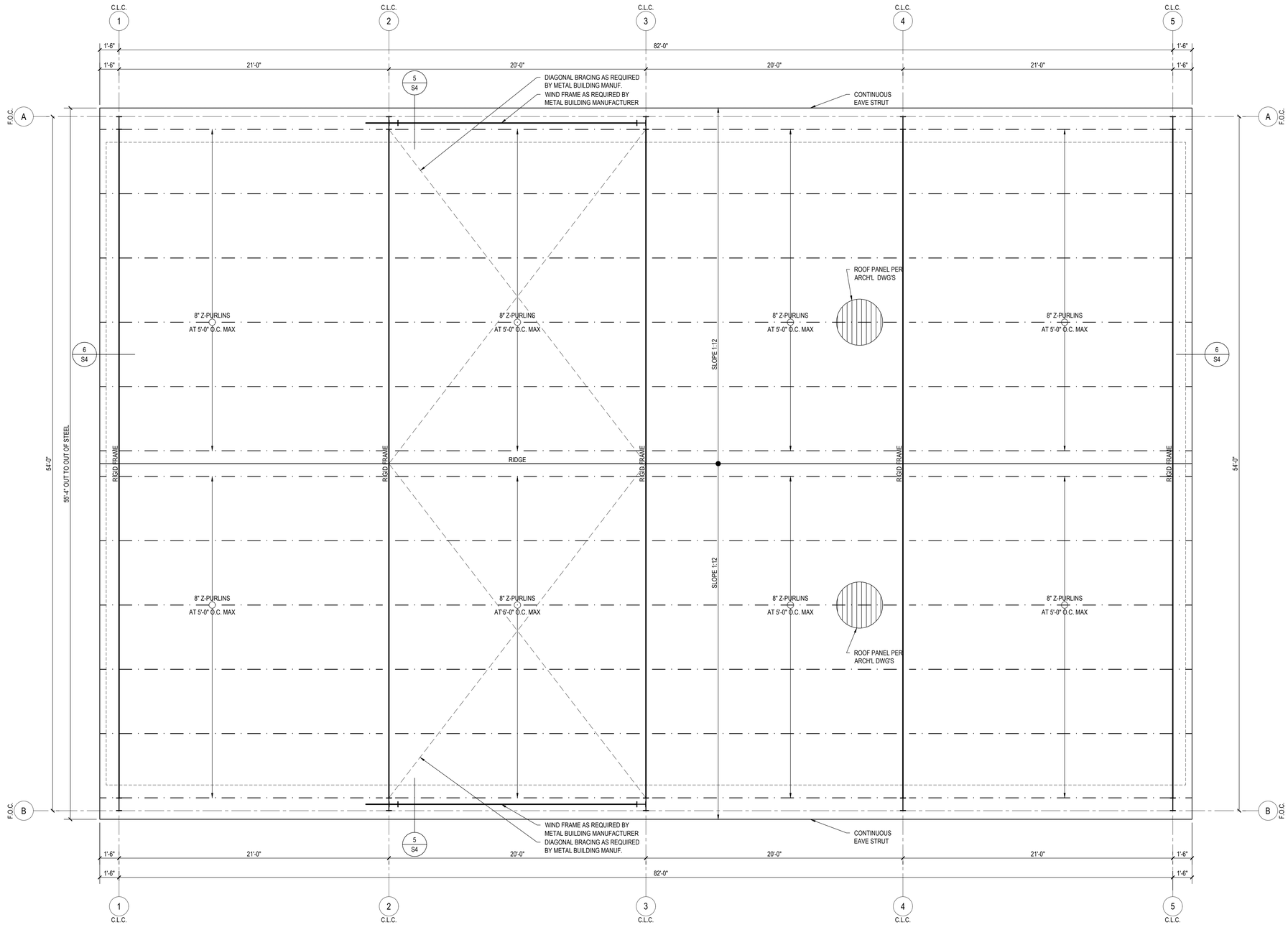
S2



1 FRAMING PLAN
1/4"=1'-0"

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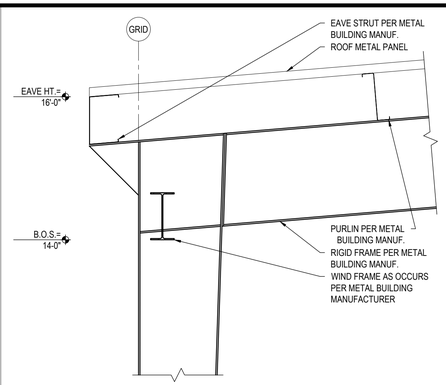
S3

17 NOT USED

13 NOT USED

9 NOT USED

5 RIGID FRAME SECTION

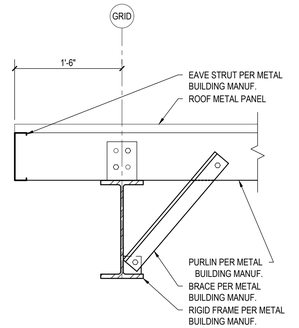


18 NOT USED

14 NOT USED

10 NOT USED

6 RIGID FRAME SECTION

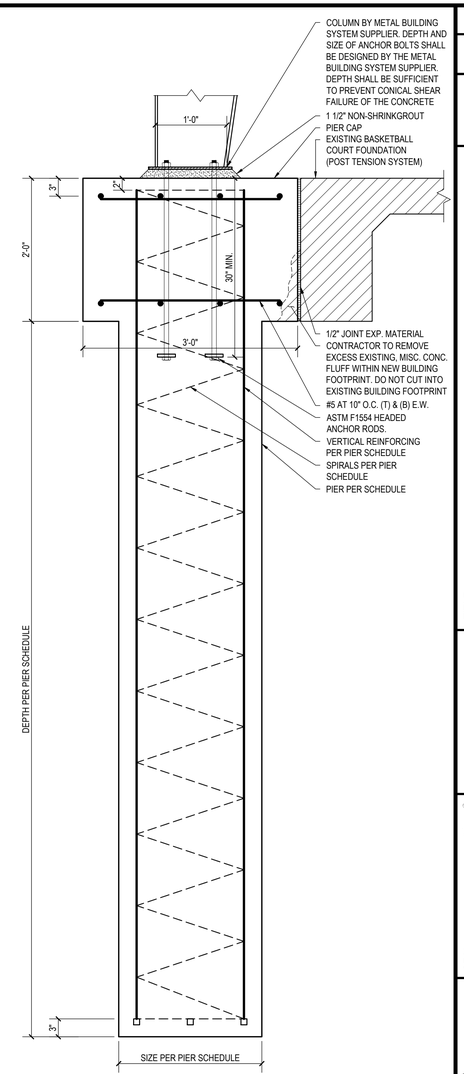


19 NOT USED

15 NOT USED

11 NOT USED

3 PIER SECTION DETAIL



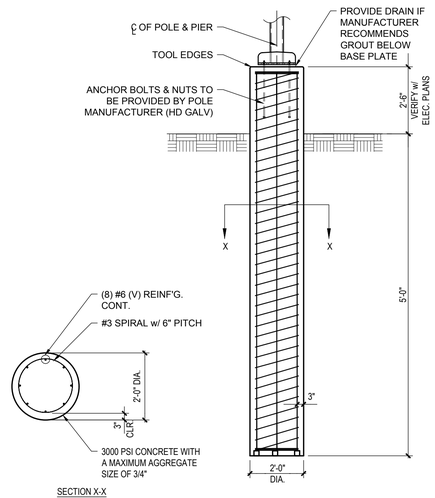
PIER SCHEDULE					
DEPTH BELOW GRADE	DIA.	VERT. REINF.		SPIRAL	
		NO.	SIZE	SIZE	PITCH
15'-0"	24"	7	8	3/8"	6"

20 NOT USED

16 NOT USED

12 NOT USED

8 1BT3 LIGHT POLE FOOTING



4 NOT USED

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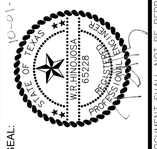

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S4

DIVISION 26: ELECTRICAL SPECIFICATIONS

GENERAL CONDITIONS:

A. THE REQUIREMENTS AS SET FORTH UNDER GENERAL CONDITIONS, INSTRUCTIONS TO BIDDERS AND GENERAL REQUIREMENTS ARE A PART OF THIS CONTRACT.
B. BIDS SHALL BE BASED ON A COMPLETE/FULL SET OF DRAWINGS.
C. CONTRACTOR MUST READ THE ENTIRE SPECIFICATIONS COVERING OTHER BRANCHES OF WORK AND IS RESPONSIBLE FOR COORDINATION OF THE WORK WITH WORK PERFORMED BY OTHER TRADES.

SCOPE OF WORK:

A. PROVIDE ALL LABOR, MATERIALS, TESTING, EQUIPMENT, INCIDENTALS AND TOOLS TO PERFORM WORK SHOWN, NOTED OR SCHEDULED FOR A COMPLETE AND FINISHED INSTALLATION AND OPERABLE SYSTEM.
B. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND AS SUCH APPEAR ON THE UNDERWRITERS LABORATORIES LIST OF APPROVED ITEMS AND SHALL BE SIZED IN CONFORMITY WITH REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND OTHER APPLICABLE CODES, WHICHEVER ARE MORE STRINGENT.
C. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES.
D. INCLUDE ANY LABOR AND MATERIALS NOT SPECIFICALLY MENTIONED, BUT NECESSARY TO PROVIDE COMPLETE AND FULLY OPERATIVE SYSTEMS.

PERMITS:

A. SECURE AND PAY FOR ALL REQUIRED PERMITS, FEES, ASSESSMENTS AND INSPECTION CERTIFICATES THAT RELATE TO THE WORK.
B. PROVIDE APPROVED CERTIFICATE OF FINAL INSPECTION, AND PROVIDE TO OWNER AT COMPLETION OF PROJECT.

DRAWINGS AND SPECIFICATIONS:

A. PLANS ARE DIAGRAMMATIC, NOT SHOWING EVERY ITEM IN EXACT LOCATION OR DETAIL. MEASUREMENTS AND LOCATIONS MUST BE FIELD VERIFIED AND COORDINATED WITH ARCHITECTURAL, PLUMBING, HVAC, FIRE PROTECTION, STRUCTURAL AND OTHER WORK.

CONDUITS:

A. CONDUIT SHALL BE STANDARD STEEL RIGID, IMC OR EMT (THIN WALL) ACCORDING TO LOCAL CODE AND LANDLORD REQUIREMENTS. CONDUIT SHALL BE CONCEALED IN FINISHED AREAS, EXCEPT AS OTHERWISE APPROVED BY OWNER. EMT CONNECTIONS SHALL BE COMPRESSION OR SET SCREW TYPE.
B. FLEXIBLE METAL CONDUIT SHALL BE USED FOR FINAL CONNECTIONS TO LUMINAIRES, MOTORS AND VIBRATING EQUIPMENT ONLY; AND WHERE SO USED TO BE GROUNDED WITH A SEPARATE FULL SIZED GREEN GROUNDING CONDUCTOR. FINAL FLEXIBLE METAL CONDUIT CONNECTIONS SHALL BE LIMITED TO 5'-0" IN LENGTH. (ARRANGE CIRCUITS TO AVOID THE USE OF JUNCTION BOXES ABOVE DRYWALL CEILING AREAS. JUNCTION BOXES LOCATED ABOVE LAY IN CEILINGS ARE ACCEPTABLE).
   1. MINIMUM SIZES OF CONDUITS SHALL BE 3/4" FOR STANDARD CONDUIT, AND 1/2" FOR FLEXIBLE METAL CONDUIT (1/2" STANDARD CONDUIT MAY BE USED AS SPECIFIED ABOVE, IF ACCEPTABLE WITH LOCAL CODES. COORDINATE WITH INSPECTION AGENCIES PRIOR TO INSTALLATION). ELECTRIC METALLIC TUBING (EMT) SHALL BE GALVANIZED OR ELECTRO-GALVANIZED. FITTINGS SHALL BE SET SCREW OR COMPRESSION TYPE, FITTING SHALL BE AS MANUFACTURED BY REGEL, STEEL CITY, RACO, T & B, EFCOR OR EQUAL. EMT SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS RUN ABOVE SUSPENDED CEILINGS OR CONCEALED IN INTERIOR PARTITIONS.
   2. PAINT CONDUITS, ETC., TO MATCH SURROUNDING SURFACES WHERE EXPOSED TO PUBLIC VIEW.
C. THE USE OF NM, ROMEX, OR BX IS NOT PERMITTED.
D. MAXIMUM CONDUIT HANGER SPACING SHALL BE 8'-0" FOR 3/4" THRU 1 1/4" AND 10'-0" FOR 1-1/2" THRU 4" CONDUITS. DO NOT SUPPORT CONDUIT FROM CEILING SYSTEM.
E. PROVIDE NYLON PULL STRING IN ALL EMPTY CONDUITS.
F. SECURE ALL CONDUITS TO THE BUILDING STRUCTURE IN A RIGID AND SECURE MANNER, USING FASTENERS SUCH AS "CADDY CLIPS" OR EQUAL.
G. FLASH AND COUNTER FLASH ALL CONDUITS WHICH PENETRATE THE ROOF OR USE PITCH POCKETS. PENETRATIONS SHALL BE COMPLETELY WEATHERPROOF. ALL CONDUIT SYSTEMS EXPOSED TO WEATHER SHALL BE WEATHERPROOF.
H. SLAB OPENINGS FOR CONDUITS IN WET AREAS MUST BE SLEEVED 2" ABOVE FLOOR AND SEALED TO PROPER FLOOR WATERPROOFING SYSTEM PER B-2. X-RAY SLAB PRIOR TO CORE DRILLING.

WIRE:

A. WIRE SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT INSULATION. MINIMUM WIRE SIZE SHALL BE #12 AWG, ALL WIRE AND CABLE SHALL BE NEW AND SHALL BE BROUGHT TO THE SITE IN UNBROKEN PACKAGES. ALL WIRING OF ANY TYPE SHALL BE IN CONDUIT. WHERE ALLOWED BY LOCAL CODES, TYPE MC CABLE IS ALLOWED. NO STRANDED WIRE ALLOWED FOR #10 AND #12 AWG SIZES. (INCREASE CONDUCTOR BY ONE SIZE FOR EVERY 150' INCREMENT OF DISTANCE FROM THE PANEL BOARD FOR ALL 120 VOLT CIRCUITS.)
   1. GENERAL WIRING SHALL BE COPPER THWN OR THHN.
B. WIRE CONNECTORS SHALL BE EQUAL TO SCOTCHLOCK FOR #8 AND SMALLER, AND EQUAL TO T & B "LOCK-TITE" FOR #6 AND LARGER.
C. ALL WIRING SHALL BE COLOR CODED AS FOLLOWS

208/120 VOLT SYSTEM
NEUTRAL - WHITE
PHASE A OR L1-BLACK
PHASE B OR L2-RED
PHASE C OR L3-BLUE
GROUND-GREEN

LIGHTING:

A. LUMINAIRES SHALL BE PROVIDED AS SCHEDULED ON THE LUMINAIRE SCHEDULE. FLUORESCENT LAMPS SHALL HAVE HPF BALLASTS WITH EFFICIENCY FACTORS IN ACCORDANCE WITH "NATIONAL APPLIANCE ENERGY CONSERVATION ACT OF 1987, AMENDMENTS OF 1988."
B. LUMINAIRES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE VIA ALL THREAD AND UNISTRUT, NOT SUPPORTED BY CEILING SYSTEM.

GROUNDING SYSTEM:

A. PROVIDE A COMPLETE WIRED GROUNDING SYSTEM FOR ELECTRICAL EQUIPMENT AND CIRCUITS AS SHOWN ON THE DRAWINGS AND DESCRIBED GENERALLY BELOW.
B. ALL GROUNDING CONDUCTORS SHALL BE GREEN, WHERE EXPOSED IN PANEL, SWITCHBOARD, OUTLET, BOXES, ETC.
C. ALL ENCLOSURES AND NON-CURRENT CARRYING METALS SHALL BE GROUNDED. ALL METAL CONDUIT SYSTEMS SHALL BE GROUNDED. ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS.
D. RUN A SEPARATE GROUNDING CONDUCTOR IN EACH CONDUIT, #12 MINIMUM. FOR PANEL FEEDERS BOND THE GROUNDING CONDUCTOR TO THE CONDUIT, WHERE ENTERING AND LEAVING THE CONDUIT. ALL GROUND CLAMPS SHALL BE PENN-UNION OR EQUAL, SIMILAR TO "GPL" TYPE. CONDUIT GROUND BUSHINGS SHALL BE THOMAS & BETTS OR EQUAL, SIMILAR TO #3800 SERIES WITH NYLON INSULATED THROAT.
E. ALL DEVICES SHALL BE BONDED TO THE CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES. ALL JUNCTION BOXES, OUTLET BOXES AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM. ALL FLEXIBLE CONDUIT SHALL BE JUMPERED WITH A GROUNDING CONDUCTOR.

WIRING DEVICES:

A. DEVICES AND COVERPLATES
   1. RECEPTACLES SHALL BE 20 AMP, 3-WIRE GROUNDING TYPE EQUAL TO HUBBELL 5362.
   2. SWITCHES SHALL BE 20 AMP SPECIFICATION GRADE, RATED AT 120 VOLT.
   3. SPECIAL DEVICES SHALL BE A SPECIFICATION GRADE.
   4. ALL DEVICES & COVER PLATES SHALL BE WHITE IN COLOR.
   5. EQUAL ALTERNATES = ARROW-HART, GENERAL ELECTRIC, BRYANT, PASS & SEYMOUR, OR SIERRA.

PANELBOARDS AND SAFETY SWITCHES:

A. PROVIDE BRANCH CIRCUIT PANEL BOARDS WHICH SHALL BE OF THE BOLTED CIRCUIT BREAKER TYPE WITH SOLID COPPER BUSSING FULL SIZED NEUTRAL, 100% GROUND BUSSING, OVERALL HINGED/LOCKABLE DOOR, AND TYPE-WRITTEN DIRECTORY INSIDE DOOR. ALL SERVICE ENTRANCE EQUIPMENT SHALL BEAR THE MANUFACTURER'S LABEL WHICH SHALL STATE THAT THE EQUIPMENT IS RATED FOR SERVICE ENTRANCE APPLICATION IN ACCORDANCE WITH N.E.C. #230-70. LOAD BALANCE ALL ELECTRICAL PHASES AT PANELS AND SWITCHBOARDS. TWO AND THREE POLE BREAKERS SHALL BE COMMON TRIP TYPE. WHEN USED AS SWITCHES IN 120V LIGHTING CIRCUITS, FURNISH TYPE "SWD" BREAKERS IN ACCORDANCE WITH N.E.C. #240-83B. SQUARE D OR EQUAL BY CUTLER-HAMMER, WESTINGHOUSE, OR GENERAL ELECTRIC (OR APPROVED EQUAL).
B. PROVIDE SAFETY AND DISCONNECT SWITCHES, FUSED OR NON-FUSED, AS INDICATED ON DRAWINGS AND AS REQUIRED BY CODE (FUSES AS MANUFACTURED BY BUSSMAN, CHASE SHAWMUT, WESTINGHOUSE, ECONOMY FUSE CO., OR LITTLE FUSE CO. ARE ACCEPTABLE). SWITCHES SHALL BE HEAVY DUTY, QUICK MAKE/QUICK BREAK TYPE, FUSIBLE OR NON-FUSIBLE, WEATHERPROOF AS INDICATED ON THE DRAWINGS, OR AS REQUIRED BY LOCAL CODES. LOAD AND HORSEPOWER RATED SWITCHES AS MANUFACTURED BY SQUARE D, CUTLER HAMMER, WESTINGHOUSE, OR GENERAL ELECTRIC (OR APPROVED EQUAL).
C. ALL HVAC EQUIPMENT SHALL BE PROVIDED WITH INTEGRAL SAFETY SWITCH AND CONVENIENCE OUTLET. VERIFY ALL MINIMUM CIRCUIT AMPACITIES AND MINIMUM OVERCURRENT PROTECTION WITH EQUIPMENT PROVIDED PRIOR TO INSTALLING FEEDERS TO EQUIPMENT.

BOXES:

A. OUTLET BOXES AND COVERS SHALL BE GALVANIZED, ONE PIECE PRESSED STEEL KNOCKOUT.
B. JUNCTION, PULL BOXES AND COVERS SHALL BE GALVANIZED STEEL, CODE GAUGE SIZE.
C. INSTALL BOXES RIGIDLY ON BUILDING STRUCTURE AND SUPPORT INDEPENDENTLY OF CONDUIT SYSTEM. ALSO PROVIDE SUITABLE/PROPER BOX EXTENSIONS TO EXTEND BOXES TO FINISHED FACES OF WALLS ETC. ALL OUTLET BOXES TO HAVE SUITABLE BLOCKING BEHIND THEM TO MINIMIZE THE DEFLECTION THAT OCCURS WHEN PLUGGING/UNPLUGGING INTO THESE DEVICES.

SERVICES:

A. PROVIDE TEMPORARY SERVICE, LIGHTING, POWER AND WIRING AS REQUIRED TO FACILITATE APPLICABLE TEMPORARY NEEDS. ANY TEMPORARY WIRING, FUSES, ETC., SHALL BE REMOVED UPON COMPLETION OF THE PROJECT. PROVIDE GROUND FAULT PROTECTION AS REQUIRED BY NEC AND LOCAL CODES.
B. PROVIDE ELECTRICAL SERVICE AS SHOWN ON THE DRAWINGS, FIELD VERIFY ALL UTILITY REQUIREMENTS PRIOR TO BID. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE UTILITY COMPANY SHALL BE PROVIDED BY THE CONTRACTOR. CLOSELY COORDINATE ENTIRE INSTALLATION WITH UTILITY COMPANY AS REQUIRED. PROVIDE EQUIPMENT THAT IS COMPATIBLE WITH AVAILABLE FAULT CURRENT LEVELS.
C. PROVIDE PROVISIONS FOR NEW TELEPHONE SERVICE AS REQUIRED, AND AS INDICATED ON THE DRAWINGS.
D. CONDUIT SYSTEM FOR TELEPHONE DISTRIBUTION WITHIN BUILDING SHALL BE PROVIDED AS REQUIRED FOR A COMPLETE TELEPHONE SYSTEM. OUTLET BOXES SHALL BE 4" SQUARE MINIMUM WITH SINGLE DEVICE COVER AND TELEPHONE PLATE.

INSTALLATION:

A. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS CHANNELS, RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK AND SHALL BE FASTENED TO BUILDING STEEL, CONCRETE OR MASONRY, BUT NOT TO PIPING OR DUCTWORK. EXPOSED CONDUITS SHALL BE IN STRAIGHT LINES PARALLEL WITH OR AT RIGHT ANGLES TO COLUMN LINES OR BEAMS AND SEPARATED AT LEAST 3 INCHES FROM WATER LINES WHEREVER THEY RUN ALONGSIDE OR ACROSS SUCH LINES.
B. SLEEVES SHALL EXTEND AT LEAST TWO (2") INCHES ABOVE FINISHED FLOOR AND SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL BY HILTI AFTER CONDUIT/CABLES INSTALLATION SO AS TO RETAIN THE FIRE RATING.
C. PANEL BOARDS, DISCONNECT/SAFTEY SWITCHES SHALL BE PROVIDED WITH ENGRAVED NAMEPLATE, APPROXIMATELY 1" X 2" IN SIZE AND BE FASTENED WITH POP RIVETS OR SCREWS.
D. THE LOCATION OF OUTLETS AND EQUIPMENT SHOWN ON THE DRAWINGS ARE APPROXIMATE AND THE OWNER REPRESENTATIVE SHALL HAVE THE RIGHT TO RELOCATE ANY OUTLETS OR FIXTURES BEFORE THEY ARE INSTALLED WITHOUT ADDITIONAL COST.
E. CONTRACTOR SHALL RECORD ALL FIELD CHANGES IN THE WORK AS THE JOB PROGRESSES, AND TURN THIS "AS BUILT" INFORMATION OVER TO THE OWNER AT THE COMPLETION OF THE PROJECT.
F. CONTRACTOR SHALL PROTECT ALL EQUIPMENT AGAINST DAMAGE FROM LEAKS, ABUSE, ETC., AND PAY COST OF REPAIR OR REPLACEMENT OF EQUIPMENT MADE NECESSARY BY FAILURE TO PROVIDE SUITABLE SAFEGUARDS OR PROTECTION.
G. PROVIDE ALL FINAL ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM. AFTER ALL EQUIPMENT HAS BEEN INSPECTED AND APPROVED, THOROUGHLY CLEAN ALL EQUIPMENT PROVIDED UNDER THIS WORK JUST PRIOR TO COMPLETION OF PROJECT.

GUARANTEE:

A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT CONTRACTOR'S EXPENSE.
B. FOR THE SAME PERIOD, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

FINALLY:

A. IT IS THE INTENT THAT THE FOREGOING WORK SHALL BE COMPLETE IN EVERY RESPECT AND THAT ANY MATERIAL OR WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT NECESSARY TO FULLY COMPLETE THE WORK SHALL BE FURNISHED.

TABLE OF CONTENTS

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

DATE: 10-01-2018
SCALE:
REVISIONS:

TITLE:
CITY OF GRANJENO - 2017
PARK, RECREATIONAL
FACILITY IMPROVEMENTS PHASE III
6607 S. FM 494, GRANJENO, TEXAS

STATE OF TEXAS
JOSE ANTONIO NICANOR
108783
LICENSED
PROFESSIONAL ENGINEER
10-01-2018

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
CIVIL ENGINEERING
108 W. 18TH ST. MISSION, TEXAS
(956) 581-0143 FAX: (956) 581-2074
E-MAIL: HinojosaEng1@aol.com
REGISTRATION NUMBER: F-908 EXPIRATION DATE: 10/31/2019

ENGINEER:	JAN
DESIGNER:	JAN
SURVEYOR:	
DRAWN BY:	CC
JOB NO.	18033
BOOK NO.:	

E-0.0

EXISTING PANELBOARD "P"

VOLTAGE: 208Y/120 VOLT 3 PHASE 4 WIRE — LOCATION: EXTERIOR/INSIDE COMMERCIAL PEDESTAL

200A MAIN BREAKER — MOUNTING: FREE STANDING, PAD MOUNTED

BUSES: MAIN - 250A; NEUTRAL - 100%; EQUIPMENT GROUND ; INTEGRAL SURGE PROTECTION DEVICE TYPE C — Isc = 10,000 A RMS SYM AVAILABLE

VA:L	VA:R	VA:O	LOAD	BKR	CKT	PH	CKT	BKR	LOAD	VA:L	VA:R	VA:O
245	0		NORTH & WEST SIDE TRAIL LIGHTING	20/2	1	A	2	20/2	SPARE	0	0	
245	0		"	-	3	B	4	-	"	0	0	
175	0		WEST SIDE PICNIC/ PLAYGROUND LIGHTING	20/2	5	C	6	20/2	SPARE	0	0	
168	0		"	-	7	A	8	-	"	0	0	
315	0		SOUTH & WEST SIDE TRAIL LIGHTING	20/2	9	B	10	20/2	SECURITY LIGHTING	1200	0	
315	0		"	-	11	C	12	-	"	1200	0	
152	0		MAIN ENTRANCE BOLLARDS	20/2	13	A	14	20/2	BASKETBALL COURT LIGHTING	1312	0	
152	0		"	-	15	B	16	-	"	1312	0	
0	0		RESTROOM WATER HEATER	30/2	17	C	18	20/2	SPARE	0	0	
0	0		"	-	19	A	20	-	"	0	0	
0	0	4992	PAVILLION POWER PEDESTAL	60/2	21	B	22	20/2	PARKING LOT LIGHTING & SIGN LIGHTING	1491	0	
0	0	4992	"	-	23	C	24	-	"	1491	0	
0	0	4992	PAVILLION POWER PEDESTAL	60/2	25	A	26	20/1	RR HAND DRYER	0	0	1200
0	0	4992	"	-	27	B	28	20/1	RR HAND DRYER	0	0	1200
798	0	2880	RESTROOM LIGHTING	20/1	29	C	30	20/1	LC-1 COIL VOLTAGE	0	0	

NOTES: SHADED CELL INDICATE EXISTING CIRCUITS

VA:L (LIGHTING)	10571	CONNECTED	13214	DEMAND
VA:R (RECEPTACLES)	0	CONNECTED	0	DEMAND
VA:O (OTHER)	25248	CONNECTED	25248	DEMAND
VA: TOTAL	35819	CONNECTED	38462	DEMAND
AMPS: TOTAL	99	CONNECTED	107	DEMAND

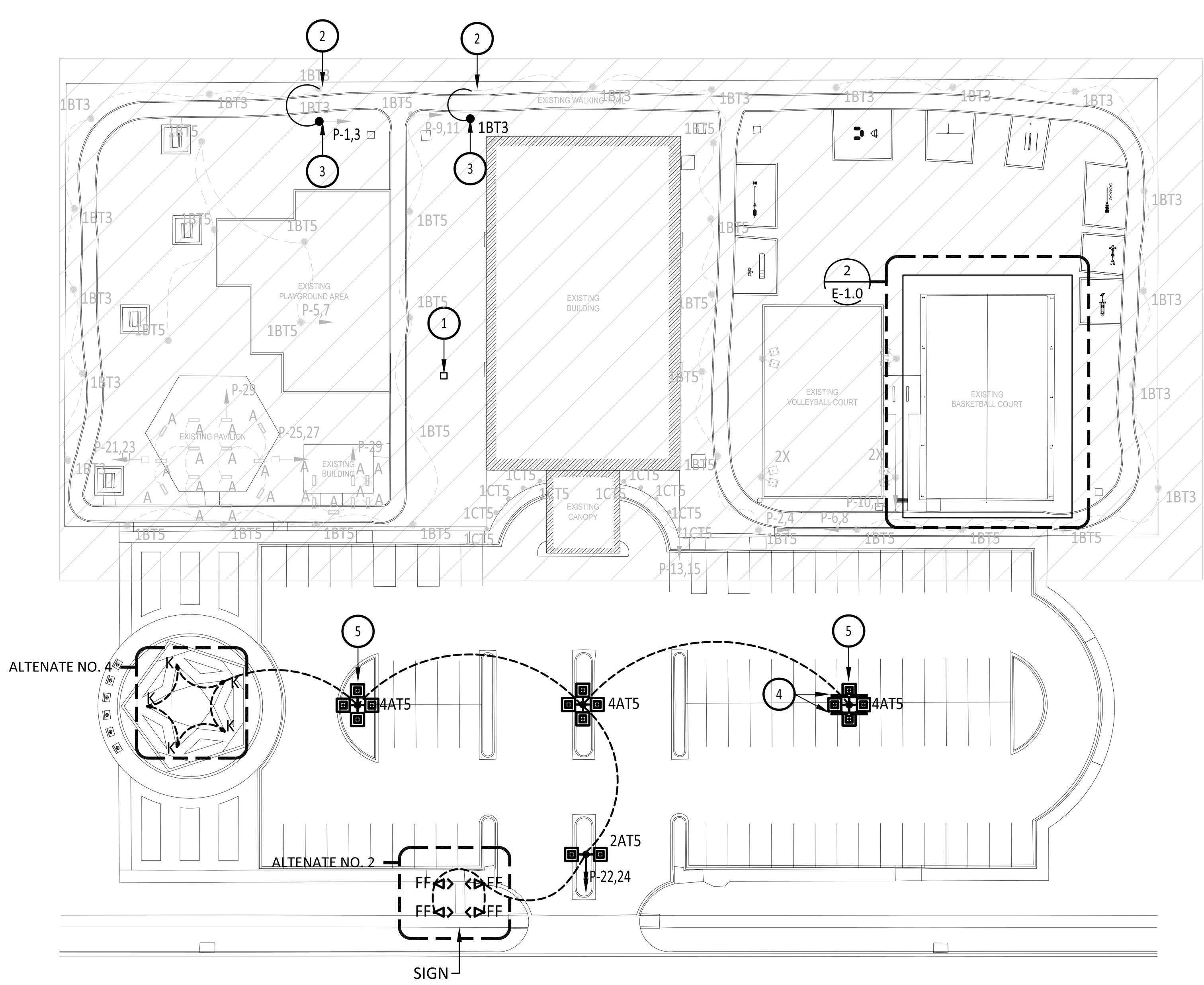
L	R	O		TOTAL			
1877	0	6192	VA CONNECTED TO A PHASE	8069	VA =	67	AMPS CONNECTED TO A PHASE @ 120 VOLTS
4715	0	11184	VA CONNECTED TO B PHASE	15899	VA =	132	AMPS CONNECTED TO B PHASE @ 120 VOLTS
3979	0	7872	VA CONNECTED TO C PHASE	11851	VA =	99	AMPS CONNECTED TO C PHASE @ 120 VOLTS
10571	0	25248	TOTAL	35819	VA		

LIGHTING FIXTURE SCHEDULE

TYPE	MANUF.	MODEL NUMBER	LAMPS	VA	VOLTAGE	DESCRIPTION
2AT5	LSI INDUSTRIES INC.	QTY. (2)-SLM-LED-24SL-SIL-FT & LSI #SLM-LED-24L-SIL-2-BKA-QQNM FURNISH WITH METALLIC FINISH AND MOUNTING BRACKET FURNISH WITH CONCRETE, DIRECT BURIED POLE BALWIN 40' -TENON 401002	148.5W-LED 4000K 25126 LUMENS	189	208	OUTDOOR LED AREA LIGHTING
4AT5	LSI INDUSTRIES INC.	QTY. (4)-SLM-LED-24SL-SIL-FT & LSI #SLM-LED-24L-SIL-2-BKA-QQNM FURNISH WITH METALLIC FINISH AND MOUNTING BRACKET FURNISH WITH CONCRETE, DIRECT BURIED POLE BALWIN 40' -TENON 401002	148.5W-LED 4000K 25126 LUMENS	189	208	OUTDOOR LED AREA LIGHTING
D	LSI	EGW-4-S-LED-XHO-NW-CL-EGWVB	164W-LED 4000K	168	208	14"X48" LED ENCLOSED GASKETED LED LIGHT FIXTURE
FF	HE WILLIAMS	VF1-L35/750-MF-SR-DBZ-WG-208	36W-LED 3500K	36	208	LED FLOOD LIGHT FIXTURE
K	LSI	XIG-B-LED-19-350-NW-UE-SP10-NB-SST-RGB	22W-LED 4000K	22	208	INGRADE LED LIGHT FIXTURE

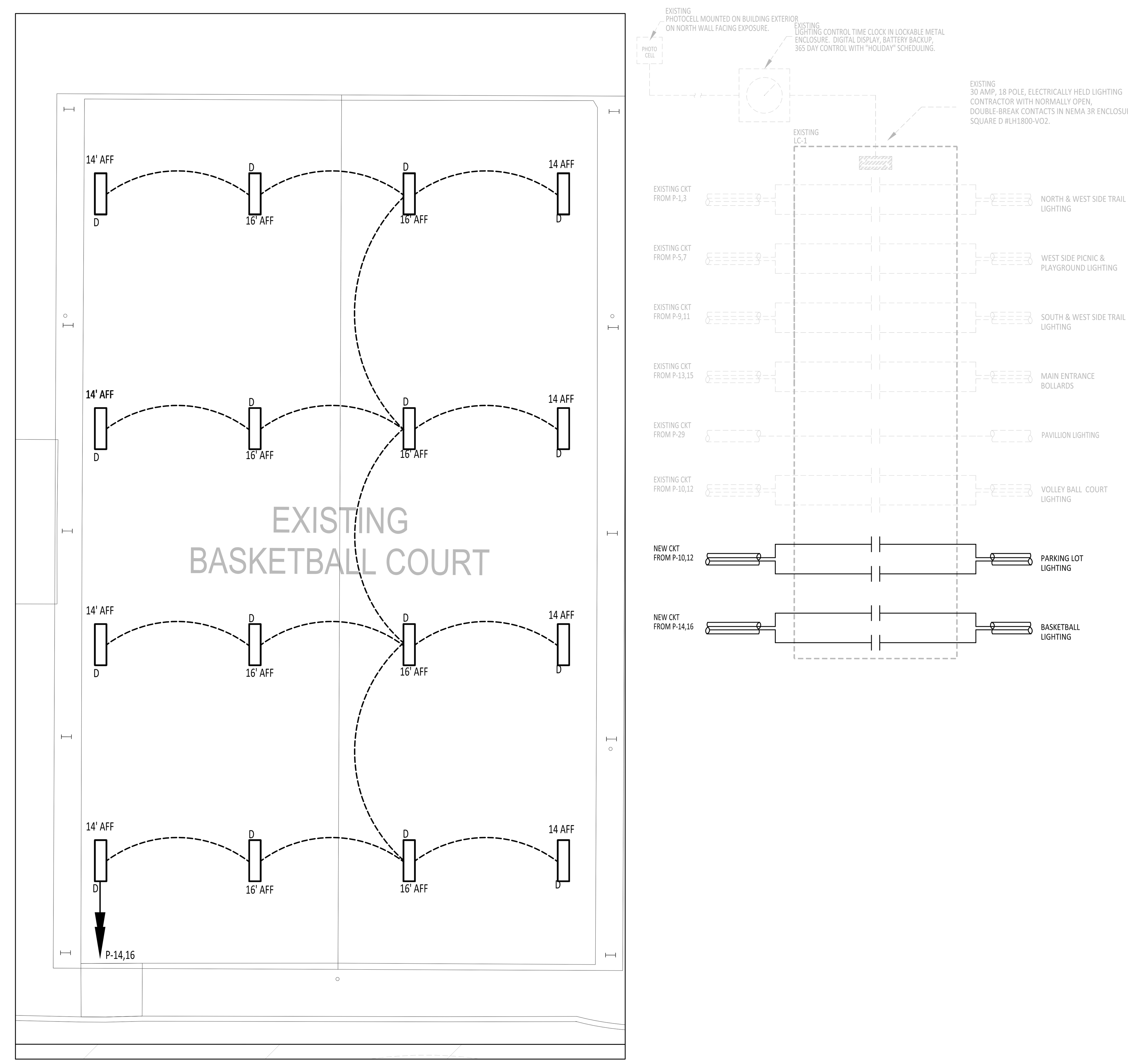
3 LIGHT FIXTURE & ELECTRICAL PANEL SCHEDULE

SCALE: N.T.S



1 ELECTRICAL SITE PLAN

SCALE: 1" = 50'-0"



2 ELECTRICAL SITE PLAN (BASKETBALL LIGHTING ENLARGEMENT)

SCALE: 1" = 100'-0"

GENERAL ELECTRICAL SITE NOTES:

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

B. ALL SITE LIGHTING SHALL BE CONTROLLED THROUGH THE LIGHTING CONTACTORS AND PHOTOCELL.

C. CONTRACTOR SHALL BORE UNDER EXISTING ASPHALT TO INSTALL BRANCH LIGHTING CIRCUITS.

D. ALL SITE LIGHTING BRANCH CIRCUITS SHALL CONSIST OF 2#8, 1#10G, 3/4-INCH CONDUIT.

E. CONTRACTOR SHALL FURNISH AND INSTALL INLINE FUSES AT EACH POLE.

F. CONTRACTOR SHALL INCLUDE IN HID BID TO OWNER MATERIAL AND LABOR TO HAND DIG UNDER EXISTING SIDE WALKS.

G. CONTRACTOR SHALL REFER TO DETAILS FOR INSTALLATIONS REQUIREMENTS FOR ALL LIGHT FIXTURES AND ELECTRICAL EQUIPMENT.

KEY NOTES:

1. APPROXIMATE LOCATION OF EXISTING COMMERCIAL PEDESTAL WITH INTEGRAL UTILITY METER AND DISTRIBUTION PANEL.
2. APPROXIMATE LOCATION OF EXISTING 12-FOOT LIGHT POLE TO BE RELOCATED. CONTRACTOR SHALL INCLUDE IN HIS BID TO OWNER MATERIAL AND LABOR REQUIRED TO REMOVE EXISTING CONCRETE PIER, EXTEND BRANCH CIRCUIT TO THE NEW LIGHT POLE.
3. NEW LOCATION OF RELOCATED 12-FOOT LIGHT POLE. FURNISH AND INSTALL NEW CONCRETE PIER. REFER TO STRUCTURAL PLANS FOR PIER REQUIREMENTS.
4. FURNISH AND INSTALL CAR STOPS AT FOUR OF THE PARKING SLOTS ADJACENT TO THE LIGHT POLE TO PROTECT LIGHT POLE. CAR STOPS SHALL BE SECURELY FASTENED TO THE ASPHALT.
5. FINISHED BACK FILL AROUND THE LIGHT POLE SHALL BE MADE OF CONCRETE MATERIAL WITH 3000 PSI, IN A 2'LENGHT X 2'WIDE'X 8"DEPTH WITH CONTROL JOINTS.

LEGEND:

EXISTING PHASE II

NEW

SIGMA HN ENGINEERS, PLLC

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

DATE: 10-01-2018

SCALE:

REVISIONS:

TITLE: CITY OF GRANJENO - 2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III
6607 S. FM 494, GRANJENO, TEXAS

DOCUMENT WAS AUTHORIZED BY W.R. HINOJOSA PE 65228. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

STATE OF TEXAS — JOSE ANTONIO NICANOR — 108783 — LICENSED PROFESSIONAL ENGINEER — 10-01-2018

HINOJOSA ENGINEERING, INC.
STRUCTURAL ENGINEERING
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108 W. 18TH ST. MISSION, TEXAS
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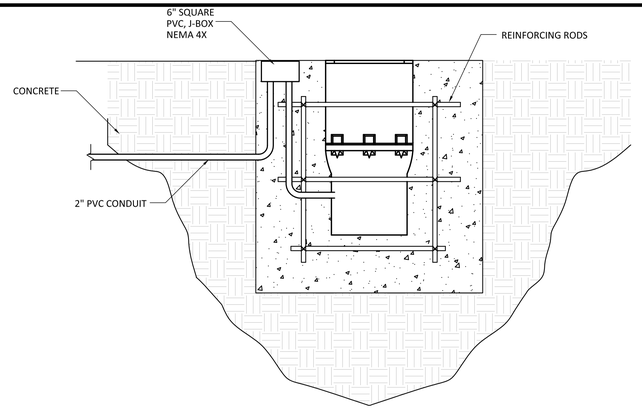
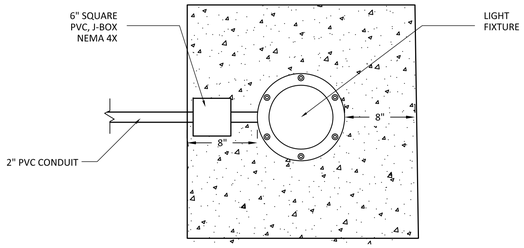
E-MAIL: HinojosaEnginc@aol.com
EXPIRATION DATE: 09/30/2019
REGISTRATION NUMBER: F-908

ENGINEER:	JAN
DESIGNER:	JAN
SURVEYOR:	
DRAWN BY:	CC
JOB NO.	18033
BOOK NO.:	

E-1.0



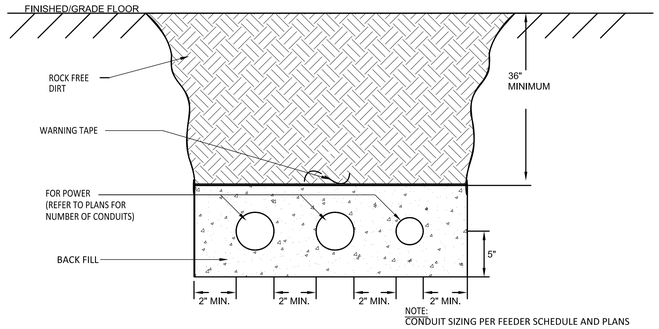
SECTION VIEW



PLAN VIEW

1 IN-GRADE LUMINAIRE TYPE INSTALLATION DETAIL

SCALE: N.T.S.



NOTE:
CONDUIT SIZING PER FEEDER SCHEDULE AND PLANS

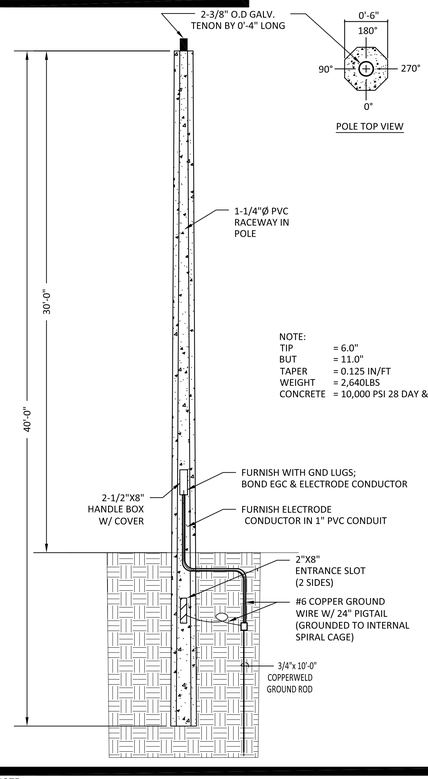
2 TYPICAL BRANCH CIRCUIT DUCTBANK DETAIL

SCALE: N.T.S.

BALDWIN LIGHTING INC.

40-FT AREA LIGHTING OCTAGONAL TENON POLE
MODEL# 617129

NOTE:
TOTAL LENGTH OF POLE SHALL BE USED FOR ESTIMATING PURPOSES. TOTAL BURIAL DEPTH OF POLE SHALL BE ADJUSTED BASED ON GEOTECH REPORT AND STRUCTURAL ENGINEER'S RECOMMENDATIONS.



NOTE:
FOR ESTIMATING PURPOSE. BACKFILL IN THE ANNULAR SPACE AROUND COLUMNS SHALL BE ADJUSTED CONTINGENT UPON GEOTECH REPORT RECOMMENDATIONS. PROVIDE LINE ITEM PER CUBIC YARD IN PROPOSAL.

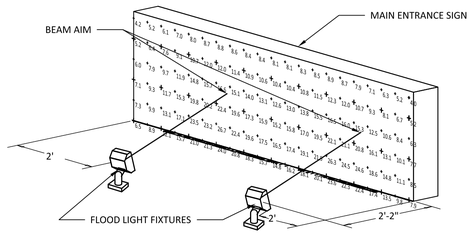
IBC SECTION 1805.7.3 BACKFILL

THE BACKFILL IN THE ANNULAR SPACE AROUND COLUMNS NOT EMBEDDED ON POURED FOOTINGS SHALL BE AS FOLLOWS:

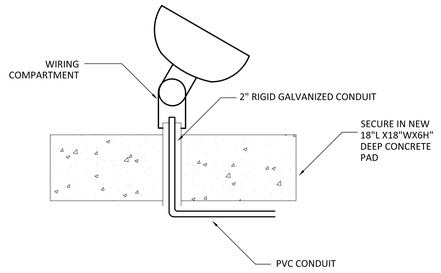
1. BACKFILL SHALL BE OF CONCRETE WITH AN ULTIMATE STRENGTH OF 2,000 PSI AT 28 DAYS. THE HOLE SHALL NOT BE LESS THAN 4 INCHES LARGER THAN THE DIAMETER OF THE COLUMN AT ITS BOTTOM OR 4 INCHES THAN THE DIAGONAL DIMENSION OF A SQUARE OR RECTANGULAR COLUMN.
2. BACKFILL SHALL BE OF CLEAN SAND. THE SAND SHALL BE THOROUGHLY COMPACTED BE TAMPING IN LAYERS NOT MORE THAN 8 INCHES IN DEPTH.
3. BACKFILL SHALL NOT BE OF CONTROLLED LOW-STRENGHT MATERIAL (CLSM).

3 30-FOOT PRE-STRESSED CONCRETE POLE

SCALE: N.T.S



ISOMETRIC VIEW



SECTION VIEW

4 FLOOD LIGHT FIXTURE INSTALLATION DETAIL

SCALE: N.T.S.

ELECTRICAL GENERAL LEGEND

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

SYMBOL	DESCRIPTION	MNTG. HT. UNO (SEE NOTE 1)
	POLE MOUNTED FIXTURE	SEE FIX. SCH.
~	SINGLE LINE CONTINUATION	-
←———	CIRCUIT HOME RUN TO PANELBOARD (2 #12, 1 #12G, 3/4"C. 20A/1P CB UNO)	-
X,X,X	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS	-
X/X/X	MULTI-POLE DEVICE CIRCUIT NUMBERS	-
■	COMMERCIAL PEDESTAL PANEL	-

GENERAL ABBREVIATIONS

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

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

5 ELECTRICAL GENERAL LEGEND AND ABBREVIATIONS

SCALE: N.T.S.

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

DATE: 10-01-2018

SCALE:

REVISIONS:

TITLE:

CITY OF GRANJENO - 2017 PARK, RECREATIONAL FACILITY IMPROVEMENTS PHASE III

6607 S. FM 494, GRANJENO, TEXAS

STATE OF TEXAS
JOSE ANTONIO NICANOR
108783
LICENSED
PROFESSIONAL ENGINEER
10-01-2018

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ENGINEER: JAN
DESIGNER: JAN
SURVEYOR:
DRAWN BY: CC
JOB NO. 18033
BOOK NO.:

E-2.0