July 1, 2019 IDEA PUBLIC SCHOOLS – IDEA Elsa Phase II

GOMEZ MENDEZ SAENZ, INC. 1150 PAREDES LINE RD. BROWNSVILLE, TEXAS 78526 (956) 546-0110

# ADDENDUM NO. 1



A. PURPOSE AND INTENT

This addendum is issued for the purpose of modifying the plans and specifications for the IDEA PUBLIC SCHOOLS – IDEA Elsa Phase II

This addendum shall become part of the contract and all CONTRACTORS shall be bound by its content. All aspects of the specifications and drawings not covered herein shall remain the same.

The General Conditions and the Special Conditions of the specifications shall govern all parts of the work and apply in full force to this Addendum.

# B. SCOPE

# I. CLARIFICATIONS:

1. Pre-Proposal conference Agenda and Sign-In Sheet INCLUDED within this addendum.

# **II. SPECIFICATIONS:**

- Section 07520 Modified Bituminous Sheet Roofing Subject to compliance with this section: Polyglass Q – Mapei Group (Polyfresko G SBS FR Type II, Elastoflex SA V Plus FR), shall be an approved manufacturer and product.
- Section 07724 Roof Hatch Subject to compliance with this section: Babcock Davis – Hurricane Roof Hatch BRHHG shall be an approved manufacturer and product.
- Section 10260 Clear Corner Guards
   Subject to compliance with this section: Pawling Pro Tek Model CG-18, shall be an approved manufacturer and product.

# III. PLANS:

- 1. Sheet A1.01 Overall Site Plan
  - a. Key Note 11 REVISE entire note to read as follows: "Practice Soccer field with painted striping and trail chaser plastic whiskers marking all painted strip corners. Provide Soccer Goals as specified.
  - b. Key Note 20 ADD the following to existing text: "Provide 4" painted field stripe connecting all markers for the full length of trail."

c. Key Note 22 – ADD the following to existing text: "Provide trail chaser plastic whiskers marking all painted soccer field stripe corners.

# Structural Addendum Items: See Attached Information (2 Pages) MEP Addendum Items: See Attached Information (14 Pages)

End of Addendum 1



# Pre-Proposal Conference IDEA PUBLIC SCHOOLS – Elsa II and Owassa II

June 26, 2019

- Sign-In Sheet
- Owners Representative and Design Team
  - Owners Representative PMSI
  - Design Team GMS Architects, GRA Engineering, Ethos Engineering, SSP Design, Mariano Garcia Engineering (Elsa), Melden & Hunt (Owassa)

# • Construction Proposal Documents

• Electronic Copies available thru Gomez Mendez Saenz, David Monreal, <u>dmonreal@gmsarchitects.com</u> Must sign electronic file release form.

# • Bidding Questions

- Project questions regarding the project shall be submitted in writing for a formal response via email to: David Monreal, <u>dmonreal@gmsarchitects.com</u> Written questions will be accepted until:
  - IDEA Elsa II 12:00pm (Noon) Monday July 8, 2019.
  - IDEA Owassa II 12:00pm (Noon) Thursday July 11 2019.
- Written question should be clear and concise. Include page number or detail reference.
- Changes to the Bid Documents will only be issued thru an Addendum.
- No Addendums have been issued as of today.

# Bidding Information

- o IDEA Elsa II
  - Sealed Proposals are due no later than 4:00pm, on Wednesday July 10, 2019 @ IDEA Headquarters. Properly identified Proposals will be opened and read aloud.
- o IDEA Owassa II
  - Sealed Proposals are due no later than 4:00pm, on Tuesday July 16, 2019
     @ IDEA Headquarters. Properly identified Proposals will be opened and read aloud.
- A 5% Bid Bond must accompany the proposal. Must be Original.

- Project Allowances are noted in Section 01010 Summary of Work General Requirements.
- o Bid Items
  - There are (5) Alternate for this project. Listed in Section 01010 Summary of Work General Requirements.
- Review Ranking Evaluation and Ranking Criteria.
  - Provide (3) copies of your Proposal
  - Firm Experience/Key Personnel
  - Proposed Subcontractor Team (No later than 48 Hours after bid). Email to David Monreal <u>dmonreal@gmsarchitects.com</u>
  - Other required information (No Point Value)
  - Respond to every question
- Product Substitutions Bidding Requirements
  - Must be submitted (10) days before receipt of bids.
    - Approvals will be issued via Addendum only.
  - Current Specs list a Basis of Design and approved manufactures that Match Phase I products. (Do not deviate from approved manufactures)

# • Project Overview

- Project Estimated Budget is \$4.3 Million
- Project consists of the following:
  - Two Story Classroom Wing Addition
  - Additional Parking Areas and extension of queuing lanes
  - Irrigated Soccer Field
  - Soccer Field Lighting and Bleachers
  - Walkway Canopies
- Building Utilities
  - Extending Service from Phase I building (Electrical, Fire Protection, Domestic Water, Sanitary Sewer and Irrigation)
- Questions?



### IDEA PUBLIC SCHOOLS Pre-Bid Conference – Elsa II and Owassa II June 26, 2019

Name	Company	Phone Number	E-Mail
David Monreal	GMS Architects	956-546-0110	dmonreal@gmsarchitects.com
Ernie Villarreal	PMSI	512-989-7045	evillarreal@pmsitx.com
JOE LINO	RIGNET (DUST.	956-381-6916	RIGNEY CONSTRUCTION REMAIL.Gu
Joseph Aquire Ectast trainte	Centerline Construct	12 256-280-254 milition 956-686	15 Center hacconstruction 956 lyphon. Frances to fullow Con 0-9573 construction com
Ricardo Trus	12 ProTek Communeia	(Construction (	956)241-0640 infor a protek communication construction
DAVID Crow	a Wil-Con	956-981 -9	181 airika C Wil-Con com
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	THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS OR DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL	<u>CO</u>	NCRETE (CONTINUED): STANDARD PROTECTIVE COVER OF REINFORCING BARS UN
	STRUCTURAL PLANS AND DETAILS WITH ARCHITECTURAL & MECHANICAL DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONTRACTOR MEANS AND	/.	WHERE CAST AGAINST DIRT OR FILL
	METHODS OF CONSTRUCTION OR SITE SAFETY. DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CONTROLLING PROVISIONS OF THE 2003 EDITION OF THE		EXPOSED TO EARTH OR WEATHER 2 IN. SLABS AND WALLS 1 IN.
DE	INTERNATIONAL BUILDING CODE (IBC).	8	OTHER $1-1/2$ IN.
<u>DE</u>	SIGN CRITERIA	9.	ALL ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315
	A. GOVERNING BUILDING CODE	10.	SLAB MAT TO BE SUPPORTED BY PLASTIC CHAIRS SPACED
2.	GRAVITY DESIGN	11.	VERTICAL CONSTRUCTION JOINTS IN FLOOR SHALL BE COOR
	ROOF: DEAD_LOAD & ROOFING_SYSTEM		PRIOR TO FORMING SLAB. CRACK CONTROL JOINTS SHALL E THE PLANS. CONTROL JOINTS SHALL BE SAWCUT (IMMEDIAT
	LIVE LOAD		WITH "SOFF-CUT" SYSTEM. JOINTS SHALL BE CLEANED AN TWO (2) DAYS AFTER SAWCUTTING. NO HORIZONTAL JOINTS
	SECOND FLOOR:	12.	INCLUDE IN BID AN ALLOWANCE FOR <b>1.0 TON</b> OF REINFOR
	CORRIDOR		FIELD FOR SPECIAL CONDITIONS AT A COST OF <b>\$2.000.00</b> BE INCLUDED). ANY UNUSED ALLOWANCE WILL BE CREDIT
	CLASSROOMS	17	PROJECT.
	MECHANICAL	13.	CORNERS. CORNER BARS SHALL BE 4'-0" IN LENGTH (2 SHALL MATCH THE SIZE OF THE GRADE BEAM REINFORCING
3.	WIND DESIGN BASED ON:	14.	MAINTAIN A MINIMUM OF ONE AND ONE-HALF $(1-1/2)$ TIME
	A. ASCE 7-05 REQUIREMENTS		SIZE BETWEEN ALL REINFORCING BARS (EXCEPT AT LAPS).
	DESIGN WIND SPEED	15.	UNLESS OTHERWISE NOTED.
	WIND EXPOSURE CATEGORYC IMPORTANCE FACTOR	16.	WHERE CONCRETE IS TO HAVE UNEXPOSED SURFACES, THE LUMBER OR BETTER. WHERE SURFACES ARE EXPOSED, SUC
	INTERNAL PRESSURE COEFFICIENT (GCpi)+/-0.18 Kzt		DASH, THE FORMS SHALL BE COMMERCIAL STANDARD DOUG FORM PLYWOOD; MINIMUM 5-PLY AND AT LEAST 9/16" THI
	Kd0.85		CONCRETE IS EXPOSED, A SMOOTH SURFACE IS REQUIRED, MARKS OR OTHER DEFECTS.
FO	UNDATION DESIGN CRITERIA	17.	EXPOSED SURFACES OF CONCRETE AT THE PERIMETER OF
1.	FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, AND IS BASED ON THE GEOTECHNICAL REPORT PREPARED BY RABA KISTNER, INC, MCALLEN, TEXAS, DATED		FORM MARKS OR OTHER DEFECTS.
	APRIL 19, 2017.	18.	CONSTRUCT FORMS SO THAT JOINTS ARE LEAKPROOF. MAIN PREVENT DEFORMATION UNDER LOAD.
	READE DEAMS, FOUTINGS, AND SLAD.	19.	CONCRETE MAY BE PLACED WITH CHUTES UP TO 25' MAXIN
	REARING CAPACITY (GNADE BEAMS)	20.	CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWI
	SUBSUBEACE WATER WAS ENCOUNTERED AT $13^{2}-1/2^{2}$ et during or after termination of		A. COARSE AGGREGATE SHALL BE GRADED FROM A MAXIM
	DRILLING OPERATIONS (MAY FLUCTUATE WITH SEASON).		B. MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SH
2.	THE GEOTECHNICAL ENGINEER OF RECORD SHALL BE RETAINED TO PERFORM TESTING AND		C. MAXIMUM WATER CEMENT RATIO SHALL BE 7-1/2 GALL
	SPECIFICATIONS AND GENERAL STRUCTURAL NOTES.		WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USE
FOU	JNDATION NOTES		D. MAXIMUM WEIGHT RATIO OF FINE AGGREGATES TO COAF
1.	REMOVE <u>AT LEAST 12" INCHES</u> (TO ELEVATION 61.5 FEET) OF THE EXISTING SITE SOIL, VEGETATION, DEBRIS, ETC., FROM THE PROPOSED BUILDING AREA TO A DISTANCE OF 5'-0" OUTSIDE THE		F. IN NO CASE SHALL CONCRETE BE PUMPED THROUGH A
	WALKS AND CANOPIES). DEPTH OF REMOVAL SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.		G. SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE P
2.	AFTER TOP SOIL HAS BEEN REMOVED, THE SUBGRADE SHALL BE PROOF-ROLLED WITH APPROPRIATE	21.	FLOOR FINISH (TOLERANCES)
	CONSTRUCTION EQUIPMENT WEIGHING AT LEAST 20 TONS UNTIL THE GRADE OFFERS A RELATIVELY UNYIELDING SURFACE. SOFT SOIL AND YIELDING AREAS SHALL BE OVER EXCAVATED AND REPLACED WITH COMPACTED SELECT FUL IN ACCORDANCE WITH THE REQUIREMENTS BELOW		A. STEEL TROWEL FINISH 1/8" IN 10'
3.	PROOFROLLING OPERATIONS AND EXCAVATION/BACKFILL ACTIVITIES SHOULD BE PERFORMED DURING		B. FLOAT FINISH $1/4$ " IN 10'
	A PERIOD OF DRY WEATHER AND OBSERVED BY THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE TO DOCUMENT SUBGRADE CONDITIONS AND PREPARATION. IF SUBGRADE SOILS ARE	22	C. SCRATCH FINISH 1/2" IN 10"
	STABILIZATION PROCEDURES SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED FOR ADDITIONAL RECOMMENDATIONS. IF REQUIRED.		CURING TO BE COORDINATED WITH ENGINEER PRIOR TO CON
4.	SCARIFY, MOISTURE CONDITION, AND COMPACT THE TOP 8" OF THE EXPOSED SUBGRADE TO 98% OF	23.	SHOP DRAWINGS SHALL BE PREPARED FOR ALL REINFORCIN ENGINEER. SUBMITTALS SHALL INCLUDE ELECTRONIC (PDF)
	STANDARD PROCTOR MAXIMUM DRY DENSITY TO WITHIN $\pm 3\%$ of optimum moisture content, in accordance with test method astm D-698 standard proctor. Moisture content shall be as noted immediately prior to placing select full	24.	THE CONTRACTOR SHALL REVIEW AND ANNOTATE SHOP DR
5.	RESTORE GRADE USING SELECT FILL OR RE-COMPACTED ON SITE SOIL MEETING THE REQUIREMENTS		ARCHITECT/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL WORKING DAYS FOR REVIEW OF SHOP DRAWINGS.
	OF SELECT FILL MINIMUM OF 2.3 FT OR AS REQUIRED TO PROVIDE THE SPECIFIED FINISH FLOOR ELEVATION OF 65.3 FT, WHICHEVER IS GREATER, AND PROPER SITE DRAINAGE, COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS BELOW. FINISH FLOOR SHALL BE VERIFIED WITH ARCHITECT	25.	ENGINEER TO BE NOTIFIED 48 HOURS PRIOR TO PLACEMENT CONCRETE TO SCHEDULE REQUIRED OBSERVATIONS.
	AND CIVIL ENGINEER.	Ш	GHT POLE DRILLED PIERS:
6.	SELECT FILL SHALL BE COMPACIED IN THE FIELD IN LIFTS NOT TO EXCEED 8" LOOSE MEASURE (6" COMPACTED LIFT) TO A MINIMUM OF 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY FROM -2% OF OPTIMUM TO +2% ABOVE OPTIMUM MOISTURE CONTENT AS EVALUATED BY ASTM D-698	1.	CONCRETE MIX FOR ALL DRILLED PIERS SHALL BE DESIGN 28-DAY COMPRESSIVE STRENGTH WHEN PLACED WITH A S
	STANDARD PROCTOR.	2.	THE CONTRACTOR SHALL COORDINATE POLE BASE PLATE
7.	SELECT FILL SHALL HAVE A PLASTICITY INDEX (PI) OF 7-18% AND NO CLAY BALLS LARGER THAN 2" IN DIAMETER.		SUPPLIER PRIOR TO PLACING PIERS. CONFLICTS SHALL BE
8.	FOUNDATION CONCRETE SHALL NOT BE PLACED ON SELECT FILL SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR WATER SEEPAGE, IF BEARING SOILS ARE SOFTENED BY WATER INTRUSION, OR BY		SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIAL AND GE INSTALLATION OF STRAIGHT SHAFT DRILLED PIERS, AS SHO
	DESICCATION, THE UNSUITABLE SOILS SHALL BE REMOVED FROM THE FOUNDATION EXCAVATION AND BE REPLACED WITH PROPERLY COMPACTED SELECT FILL PRIOR TO PLACEMENT OF FOUNDATION	4.	IF DIRECTED BY THE ARCHITECT/ENGINEER, PIERS SHALL
	CONCRETE. ALL SOIL REMOVAL AND REPLACEMENT COSTS, INCLUDING ASSOCIATED COSTS TO REMOVE AND REINSTALL REINFORCEMENT AND VAPOR RETARDER MATERIALS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR DEPTH OF SOIL REMOVAL AND RECOMPACTION	5.	PRIOR TO DEVELOPMENT OF THE PIER REINFORCEMENT SU
	REQUIREMENTS SHALL BE COORDINATED WITH THE GEOTECHNICAL ENGINEER.		FOUNDATION CONTRACTOR, DRILLER, AND THE GEOTECHNIC PRE-CONSTRUCTION MEETING TO DISCUSS THE CONTRACTOR
9.	SAMPLES OF PROPOSED SELECT FILL SHALL BE FURNISHED TO THE TESTING LABORATORY 7 DAYS PRIOR TO INSTALLATION TO PERMIT TIME FOR SPECIFICATION COMPLIANCE INSPECTION AND REVIEW	2	PROCEDURES. AT THE MEETING, THE CONTRACTOR NEEDS DETERMINE CURRENT SUBSURFACE WATER LEVELS AND THE DIERS SPECIFIED. THE TEST DIER WILL NEED TO BE INSPEC
10.	LABORATORY MOISTURE-DENSITY CURVES SHALL BE DEVELOPED FOR SUBGRADE AND FILL.	\$	RECORD FOR APPROVAL OF THE PROPOSED INSTALLATION ADDITIONAL RECOMMENDATIONS, AS REQUIRED.
	PROCTOR CURVES AND FIELD DENSITY TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. A MINIMUM OF ONE (1) IN PLACE DENSITY TEST PER 5,000 SQUARE FEET OF SLAB AREA SHALL BE	6.	DRILL PIERS TO THE EXACT SIZE SHOWN. SHAFTS SHALL
	TRANSMITTED TO ENGINEER WITHIN 3 DAYS AFTER TESTS ARE MADE.		MAINTAIN THE PIER CENTERS AND TO CHECK THE PIER PL INSPECTED FOR A MAXIMUM OF ONE INCH (1") OF LOOSE
11.	GRAIN SIZE ANALYSIS AND ATTERBERG LIMITS TESTS SHALL BE PERFORMED DURING FILL PLACEMENT AT A RATE OF ONE TEST PER 2,000 CUBIC YARDS OF FILL BROUGHT TO THE SITE. SAMPLES FOR	6	WATER IMMEDIATELY PRIOR TO PLACING CONCRETE. IF MAC TO ARCHITECT/ENGINEER, HAND CLEANING WILL BE REQUIR
12	TEST SHALL BE TAKEN FROM JOBSITE MATERIALS.	7.	EACH PIER SHAFT AND DRILLING OPERATIONS SHALL BE
	FOUNDATION BEAM DURING OR AFTER CONSTRUCTION. THE SLOPE OF THE GROUND SURFACE AWAY FROM THE STRUCTURE SHOULD BE A MINIMUM OF FIVE (5%) PERCENT FOR A DISTANCE OF AT		NOTED IN THE GEOTECHNICAL REPORT. INSPECTIONS SHALL DEPTH, REINFORCEMENT SIZE, QUANTITIES AND LOCATIONS.
	LEAST TEN (10') FEET. ELEVATION OF GROUND SURFACE ADJACENT TO THE FOUNDATION SHOULD BE AT LEAST 6 INCHES BELOW FINISH FLOOR.		TRANSMITTED TO ENGINEER WITHIN 3 DAYS OF INSPECTION
13.	FINAL DRAINAGE IS VERY IMPORTANT TO THE PERFORMANCE OF THE FOUNDATION. LANDSCAPING, PLUMBING, AND DOWNSPOUT DRAINAGE ARE ALSO VERY IMPORTANT, IT IS VITAL THAT ALL ROOF	> 0. >	CLEANLINESS AND FOR CORRECTNESS OF DIMENSIONS AN
	DRAINAGE BE TRANSPORTED AWAY FROM BUILDINGS SO THAT NO AREAS OF WATER POND AROUND BUILDINGS, WHICH CAN RESULT IN SOIL VOLUME CHANGE UNDER THE FOUNDATION. PLUMBING LEAKS	<b>9</b> .	DUE TO SUBSURFACE STRATIGRAPHY AND WATER LEVELS CANNOT INSTALL THE RECOMMENDED PIER AT THE REQUIR
	CHANGE UNDER THE SLAB. LARGE TREES AND SHRUBS SHOULD NOT BE PLANTED IN THE IMMEDIATE VICINITY OF THE STRUCTURE. SINCE THE ROOT SYSTEMS CAN CAUSE A SUBSTANTIAL REDUCTION IN	10	. DUE TO SUBSURFACE WATER ENCOUNTERED DURING DRILLI
	SOIL VOLUME IN THE VICINITY OF THE TREE DURING DRY PERIODS. BUSHES AND TREES SHOULD BE PLANTED A REASONABLE DISTANCE AWAY FROM THE STRUCTURE SO THAT THEIR CANOPY OR "DRIP	\$	CONTRACTOR SHOULD BE PREPARED TO UTILIZE SLURRY COR SUBSURFACE WATER INFLUX DURING EXCAVATION SHOULD BE USED IN A STATE OF A STATE O
	LINE" DOES NOT EXTEND BEYOND THE PERIMETER OF THE FOUNDATION. WATERING OF VEGETATION SHOULD BE PERFORMED IN A TIMELY AND CONTROLLED MANNER. PROLONGED WATERING SHOULD BE		FOUNDATION CONTRACTOR SHOULD VERIFY THE SUBSURFACE CONTRACTOR SHOULD CONSIDER PERFORMING A "TEST" P
<u>co</u> :	AVOIDED. NCRETE	<b>}</b>	CONSTRUCTABILITY OF DRILLED PIER.
1.	ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE SPECIFICATION,		SHOULD A SLURRY BE USED TO CONTROL THE EXCAVATION SHOULD BE USED JUST PRIOR TO PIER COMPLETION IN OR LOOSE SOILS WHICH MAY HAVE ACCUMULATED IN THE BOT
2.	ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED,		CONCRETE SHOULD BE PLACED IN THE EXCAVATION IMMED CLOSED-END TREMIE SHOULD BE USED TO PLACE THE CO
	MUST FOLLOW THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.		OF THE EXCAVATION IN A CONTROLLED MANNER TO EFFEC CONCRETE PLACEMENT.
3.	CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 PSI AT 28 DAYS.	12	. SHOULD CASINGS BE USED TO CONTROL THE EXCAVATION WITH AMPLE STRENGTH TO WITHSTAND HANDLING STRESSE
4.	A MAXIMUM OF 25% FLYASH MAY BE USED AS A CEMENT SUBSTITUTE AND SHALL CONFORM TO ASTM C618, CLASS C. THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.6 AND SLUMPS SHALL BE	<b>↓</b> 17	AND SHALL BE WATERTIGHT.
	5 INCHES ( $\pm$ 1 INCH). CONCRETE FOR PIERS SHALL BE DESIGNED TO ACHIEVE SPECIFIED STRENGTH WHEN PLACED WITH A SEVEN (7) INCH ( $\pm$ 1) SLUMP. AGGREGATE SHALL BE WELL-GRADED, 1"		CONCRETE TO PREVENT LOOSE EXCAVATED MATERIAL FROM
	MAAIMUM FUR THE SLAB UN GRADE, I MAXIMUM FUR CAST-IN-PLACE BEAMS AND ABOVE GRADE SLABS. COARSE AGGREGATE SHALL MEET ASTM C33, GRADATION #57. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE A	<b>1</b> 4	PLACEMENT OF CONCRETE SHALL BE ACCOMPLISHED AS S COMPLETE, REINFORCING CAGE IS PLACED, INSPECTED AND
	SAMPLE OF FOUR CYLINDERS SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100 YD3 OF CONCRETE. ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND TWO	Ķ	REINFORCING STEEL. PLACEMENT OF CONCRETE SHALL CON INSTITUTE (ACI) 318-05 CODE "BUILDING CODE REQUIREME
5	AT 20 DATS. THE FOURTH CILINDER MAY BE DISPOSED OF AFTER 45 DAYS IF NOT USED.		336.3R-14 ENTITLED "SUGGESTED DESIGN AND CONSTRUCT FOUNDATIONS", U.S. DEPARTMENT OF TRANSPORTATION-FE
J.	CEMENT SHALL NOT BE USED.	ł	PUB. NO. FHWA-IF-99-025 "MANUAL ON DRILLED SHAFTS DESIGN METHODS" AND ADSC: THE INTERNATIONAL ASSOCI
6.	REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60. #3 BARS MAY BE GRADE 40. $\bigwedge$	15	. NO PIER EXCAVATION SHALL BE LEFT OPEN OVERNIGHT WI

- ETE MIX FOR ALL DRILLED PIERS SHALL BE DESIGNED TO ACHIEVE MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH WHEN PLACED WITH A SEVEN (7) INCH  $(\pm 1)$  INCH SLUMP. NTRACTOR SHALL COORDINATE POLE BASE PLATE/ANCHOR BOLT DIMENSIONS WITH POLE
- ALL PIERS AT THE LOCATIONS AND TO THE DEPTHS INDICATED ON THE DRAWINGS. BID NCLUDE ALL LABOR, EQUIPMENT, MATERIAL AND GENERAL CONDITIONS REQUIRED FOR ATION OF STRAIGHT SHAFT DRILLED PIERS, AS SHOWN ON THE DRAWINGS.
- CTED BY THE ARCHITECT/ENGINEER, PIERS SHALL BE ADJUSTED IN THE FIELD AS REQUIRED CAST-IN-PLACE AND POST-INSTALLED ANCHORS SHALL BE PER ANCHOR DIAMETER AND DESIGN REQUIREMENTS. EMBEDMENT DEPTH NOTED ON THE DRAWINGS. POST-INSTALLED ANCHORS SHALL BE UTILIZED ONLY WHERE SPECIFIED. TO DEVELOPMENT OF THE PIER REINFORCEMENT SUBMITTALS, THE GENERAL CONTRACTOR,
- TION CONTRACTOR, DRILLER, AND THE GEOTECHNICAL ENGINEER SHALL HAVE A ALL ANCHORS NOTED BELOW SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S NSTRUCTION MEETING TO DISCUSS THE CONTRACTOR'S PROPOSED PIER INSTALLATION RECOMMENDATIONS. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE JRES. AT THE MEETING. THE CONTRACTOR NEEDS TO PERFORM A "TEST" PIER TO NE CURRENT SUBSURFACE WATER LEVELS AND THE CONSTRUCTABILITY OF THE DRILLED INITIAL TRAINING AND INSTALLATION OF ANCHORS, AND FOR PRODUCT RELATED QUESTIONS AND PECIFIED. THE TEST PIER WILL NEED TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER O AVAILABILITY. FOR APPROVAL OF THE PROPOSED INSTALLATION PROCEDURES AND/OR ISSUANCE OF NAL RECOMMENDATIONS, AS REQUIRED.
- PIERS TO THE EXACT SIZE SHOWN. SHAFTS SHALL BE BORED PLUMB WITH A TOLERANCE INDEPENDENT TESTING LABORATORY PERFORMING QA/QC SERVICES ON PROJECT INCHES. INSTALL OFFSET STAKES ON OPPOSITE SIDES OF THE PIER AND USE TO N THE PIER CENTERS AND TO CHECK THE PIER PLUMBNESS. FOOTING BOTTOMS SHALL BE EXPANSION BOLTS (EB) IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ED FOR A MAXIMUM OF ONE INCH (1") OF LOOSE DIRT AND TWO INCHES (2") OF GROUND ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS: MMEDIATELY PRIOR TO PLACING CONCRETE. IF MACHINE CLEANING IS NOT SATISFACTORY HITECT/ENGINEER, HAND CLEANING WILL BE REQUIRED.
- PIER SHAFT AND DRILLING OPERATIONS SHALL BE INSPECTED BY QUALIFIED GEOTECHNICAL NEL TO ENSURE PROPER BEARING AT SCHEDULED ELEVATION AND TO VERIFY STRATAS N THE GEOTECHNICAL REPORT. INSPECTIONS SHALL ALSO VERIFY PIER SHAFT DIAMETER. REINFORCEMENT SIZE, QUANTITIES AND LOCATIONS. INSPECTION REPORTS SHALL BE TTED TO ENGINEER WITHIN 3 DAYS OF INSPECTION.
- E SUITABLE ACCESS AND LIGHTING FOR INSPECTION OF THE EXCAVATIONS FOR NESS AND FOR CORRECTNESS OF DIMENSIONS AND ALIGNMENT.
- SUBSURFACE STRATIGRAPHY AND WATER LEVELS ENCOUNTERED, IF THE CONTRACTOR INSTALL THE RECOMMENDED PIER AT THE REQUIRED DEPTH, THE ENGINEER MUST BE TED IMMEDIATELY.
- SUBSURFACE WATER ENCOUNTERED DURING DRILLING OPERATIONS, THE FOUNDATION CTOR SHOULD BE PREPARED TO UTILIZE SLURRY OR CASINGS TO CONTROL SLOUGHING SURFACE WATER INFLUX DURING EXCAVATION SHOULD IT OCCUR. CASING SHOULD ONLY IN DRILLED PIERS TERMINATING IN THE CLAYEY SOILS. PRIOR TO EXCAVATION. THE TION CONTRACTOR SHOULD VERIFY THE SUBSURFACE WATER LEVELS. THE FOUNDATION CTOR SHOULD CONSIDER PERFORMING A "TEST" PIER EXCAVATION TO DETERMINE THE JCTABILITY OF DRILLED PIER.
- A SLURRY BE USED TO CONTROL THE EXCAVATION PROCESS A CLEAN-OUT BUCKET BE USED JUST PRIOR TO PIER COMPLETION IN ORDER TO REMOVE ANY CUTTINGS AND SOILS WHICH MAY HAVE ACCUMULATED IN THE BOTTOM OF THE EXCAVATION. STEEL AND E SHOULD BE PLACED IN THE EXCAVATION IMMEDIATELY AFTER PIER COMPLETION. A -END TREMIE SHOULD BE USED TO PLACE THE CONCRETE COMPLETELY TO THE BOTTOM EXCAVATION IN A CONTROLLED MANNER TO EFFECTIVELY DISPLACE THE SLURRY DURING TE PLACEMENT.
- CASINGS BE USED TO CONTROL THE EXCAVATION PROCESS, CASING SHOULD BE METAL IPLE STRENGTH TO WITHSTAND HANDLING STRESSES, CONCRETE AND EARTH PRESSURES, ALL BE WATERTIGHT.
- TIONS SHOULD BE TAKEN DURING THE PLACEMENT OF THE PIER REINFORCEMENT AND TE TO PREVENT LOOSE EXCAVATED MATERIAL FROM FALLING INTO THE EXCAVATION.
- ENT OF CONCRETE SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER EXCAVATION IS TE, REINFORCING CAGE IS PLACED, INSPECTED AND APPROVED. THE CONCRETE SHOULD NOT WED TO RICOCHET OFF THE WALLS OF THE PIER EXCAVATION NOR OFF OF THE CING STEEL. PLACEMENT OF CONCRETE SHALL COMPLY WITH AMERICAN CONCRETE E (ACI) 318-05 CODE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 14 ENTITLED "SUGGESTED DESIGN AND CONSTRUCTION PROCEDURES FOR PIER TIONS", U.S. DEPARTMENT OF TRANSPORTATION-FEDERAL HIGHWAY ADMINISTRATION . FHWA-IF-99-025 "MANUAL ON DRILLED SHAFTS: CONSTRUCTION PROCEDURES AND METHODS" AND ADSC: THE INTERNATIONAL ASSOCIATION OF FOUNDATION DRILLING CTORS PUB. NO. ADSC-TL-4, AUGUST 1999.
- EXCAVATION SHALL BE LEFT OPEN OVERNIGHT WITHOUT CONCRETING.

# GENERAL STRUCTURAL NOTES

<u>STRUCTURAL STEEL</u>

SECTION FOR CLARIFICATION.

MAY BE A36 (Fy = 36 KSI).

- ARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:
- SED TO EARTH OR WEATHER ...... 2 IN. BS AND WALLS ..... 1 IN.  $\dots$  1-1/2 IN. WIRE FABRIC MATS SHALL BE ASTM A185.
- ESSORIES SHALL BE IN ACCORDANCE WITH ACI 315, LATEST EDITION.
- T TO BE SUPPORTED BY PLASTIC CHAIRS SPACED AT 4 FEET ON CENTER EACH WAY (MAX) GES SUPPORTED BY BATTS AT 4 FEET ON CENTER.
- CONSTRUCTION JOINTS IN FLOOR SHALL BE COORDINATED WITH STRUCTURAL ENGINEER FORMING SLAB. CRACK CONTROL JOINTS SHALL BE PROVIDED AT LOCATIONS SHOWN ON NS. CONTROL JOINTS SHALL BE SAWCUT (IMMEDIATELY SUBSEQUENT TO FINISHING SLAB) FF-CUT" SYSTEM. JOINTS SHALL BE CLEANED AND FILLED WITH "SONOLASTIC SL1" WITHIN DAYS AFTER SAWCUTTING. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS
- IN BID AN ALLOWANCE FOR 1.0 TON OF REINFORCING BARS TO BE USED AS DIRECTED DR SPECIAL CONDITIONS AT A COST OF **\$2,000.00 PER TON** (LABOR FOR PLACING SAME ) JDED). ANY UNUSED ALLOWANCE WILL BE CREDITED TO THE OWNER AT THE END OF THE
- 2 TOP & BOTTOM CORNER BARS AT ALL DISCONTINUOUS GRADE BEAMS AND FOUNDATION CORNER BARS SHALL BE 4'-0" IN LENGTH (2'-0" LEGS). SIZE OF THE CORNER BAR ATCH THE SIZE OF THE GRADE BEAM REINFORCING AS SHOWN BY STRUCTURAL DRAWINGS. A MINIMUM OF ONE AND ONE-HALF (1-1/2) TIMES THE MAXIMUM COARSE AGGREGATE
- HEDULED OR DETAILED "CONT" SHALL BE LAPPED 40 BAR DIAMETERS (24 INCHES MINIMUM)
- ONCRETE IS TO HAVE UNEXPOSED SURFACES, THE FORMS MAY BE CONSTRUCTED OF #2 OR BETTER. WHERE SURFACES ARE EXPOSED, SUCH AS FOR FINISH PAINTING OR STUCCO IE FORMS SHALL BE COMMERCIAL STANDARD DOUGLAS FIR, MOISTURE-RESISTANT CONCRETE YWOOD: MINIMUM 5-PLY AND AT LEAST 9/16" THICK. OR FORMS LINED WITH COMMERCIAL D DOUGLAS FIR, CONCRETE FORM EXTERIOR, 3-PLY, NOT LESS THAN 1/4" THICK. WHERE IS EXPOSED, A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB, FORM
- SURFACES OF CONCRETE AT THE PERIMETER OF THE FOUNDATION SHALL BE FORMED WITH LUMBER OR BETTER. A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB,
- CT FORMS SO THAT JOINTS ARE LEAKPROOF. MAINTAIN FORMS SUFFICIENTLY RIGID TO
- E MAY BE PLACED WITH CHUTES UP TO 25' MAXIMUM. SLUMP SHALL NOT EXCEED 6" AT
- TE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS:
- RSE AGGREGATE SHALL BE GRADED FROM A MAXIMUM OF 1" DOWN
- MUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER
- MUM WATER CEMENT RATIO SHALL BE 7-1/2 GALLONS PER SACK OF CEMENT. IF MORE ABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.
- MUM WEIGHT RATIO OF FINE AGGREGATES TO COARSE AGGREGATES SHALL NOT EXCEED 2/3ER TO A.C.I. #301, LATEST EDITION, SECTION 800, FOR OTHER PUMPING REQUIREMENTS.
- O CASE SHALL CONCRETE BE PUMPED THROUGH AN ALUMINUM TUBE.
- MP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.
- E TO BE CURED IN ACCORDANCE WITH ACI RECOMMENDATIONS. PROPOSED METHOD OF O BE COORDINATED WITH ENGINEER PRIOR TO CONCRETE PLACEMENT.
- AWINGS SHALL BE PREPARED FOR ALL REINFORCING STEEL AND SUBMITTED FOR REVIEW E . SUBMITTALS SHALL INCLUDE ELECTRONIC (PDF) COPIES OF EACH DRAWING. ENGINEERING
- S SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS. TRACTOR SHALL REVIEW AND ANNOTATE SHOP DRAWINGS BEFORE SUBMITTING THEM TO THE
- T/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL ALLOW ARCHITECT/ENGINEER 10 DAYS FOR REVIEW OF SHOP DRAWINGS.
- TO BE NOTIFIED 48 HOURS PRIOR TO PLACEMENT OF FOUNDATION AND OF STRUCTURAL
- R PRIOR TO PLACING PIERS. CONFLICTS SHALL BE COORDINATED WITH ENGINEER.

- ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND STEEL JOIST INSTITUTE ALL STEEL BAR JOISTS SHALL BE DESIGNED AND FABRICATED BY A MEMBER OF THE STEEL JOIST
- INSTITUTE. IF REQUESTED BY THE A/E, THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATE OF FABRICATOR'S MEMBERSHIP TO THE STEEL JOIST INSTITUTE AT TIME OF SHOP DRAWING SUBMITTAL. BAR JOISTS SHALL BE BOLTED WHERE COLUMNS ARE FRAMED WITH STRUCTURAL STEEL MEMBERS I ONLY ONE DIRECTION TO PROVIDE LATERAL STABILITY DURING CONSTRUCTION/ERECTION AS REQUIRED BY OSHA.

TOP OF BEAM/PLATE (TOB OR TOP) IS USED INTERCHANGEABLY ON PLANS. REFERENCE APPLICABLE

STRUCTURAL STEEL WIDE FLANGE MEMBERS SHALL CONFORM TO ASTM SPECIFICATION A 572

46 KSI). STEEL PIPE SHALL COMPLY WITH ASTM A53 TYPE E OR S ( $F_{y} = 35$  KSI).

AND/OR ASTM A 992 (Fy = 50 KSI) UNLESS OTHERWISE SHOWN OR NOTED. PLATE AND ANGLES

ALL STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM SPECIFICATION A-500, GRADE B (Fy =

- TOTAL LOAD DEFLECTION OF SPECIAL BAR JOIST SHALL NOT EXCEED L/240.
- JOIST MANUFACTURER SHALL PROVIDE BRIDGING AS REQUIRED TO ADEQUATELY BRACE JOISTS AGAINST LATERAL MOVEMENT AND NET UPLIFT OF 30 PSF. ALL BOLTS SHALL BE 3/4 DIAMETER ASTM A325. WASHERS SHALL BE PROVIDED AT OVERSIZED
- HOLES AND AT SLOTTED CONNECTIONS AT EXPANSION JOINTS. A325 CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE. ANCHOR BOLTS MAY BE ASTM A307 UNLESS NOTED OTHERWISE.
- 10. REFER TO ARCHITECTURAL & MECHANICAL PLANS FOR VERIFICATION OF ALL BOLTS, BLOCKING ANCHORS, ETC., FOR THE ANCHORAGE OF THEIR RESPECTIVE ITEMS.
- 1. ALL BEAMS AND COLUMNS SHALL BE FULL LENGTH WITHOUT SPLICES UNLESS INDICATED ON PLANS OR APPROVED BY THE ENGINEER IN WRITING. 12. ALL SHOP AND FIELD WELDS SHALL BE MADE BY WELDERS WHO HAVE BEEN QUALIFIED AND
- CERTIFIED TO MAKE THE REQUIRED WELDS IN ACCORDANCE WITH THE LATEST AMERICAN WELDING SOCIETY SPECIFICATIONS (A.W.S. D-1.1).
- 3. WELDS SHALL BE MADE WITH COVERED MILD STEEL ELECTRODES COMPLYING WITH AWS D1 CODE AND SERIES E 70XX. 4. ERECTION CONNECTORS SHALL BE PROVIDED IN ORDER TO PROPERLY ALIGN AND BE TRUE AND
- PLUMB WHEN WELDS ARE MADE. 5. ALL COMPLETE PENETRATION WELDS. BOTH SHOP AND FIELD, SHALL BE TESTED BY A QUALIFIED
- TESTING LABORATORY UTILIZING ULTRA SONIC TESTING PROCEDURES IN ACCORDANCE WITH AWSD1.1 ANY WELDS FOUND DEFECTIVE SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER. ALL X-RAYED WELDS SHALL BE GROUND SMOOTH. 5. THE FABRICATOR SHALL SUPPLY BACK-UP PLATES AND EXTENSION TABS FOR ALL COMPLETE
- PENETRATION WELDS. '. INCLUDE IN BID AN ALLOWANCE FOR  ${f 1.0}$  TON OF FABRICATED AND PRIMED STRUCTURAL STEEL TO
- BE USED AS DIRECTED IN THE FIELD FOR SPECIAL CONDITIONS AT A COST OF **<u>\$4.000.00 PER TON</u>** (LABOR FOR ERECTING SAME TO BE INCLUDED). ANY UNUSED ALLOWANCE WILL BE CREDITED TO THE OWNER AT THE END OF THE PROJECT.
- 8. ALL STEEL MEMBERS, INCLUDING BAR JOISTS, UNLESS NOTED OTHERWISE, SHALL BE PAINTED W/ ONE COAT OF SHOP PRIMER. DO NOT PRIME ITEMS TO BE EMBEDDED IN CONCRETE OR FIRE PROOFED W/ SPRAY ON MATERIAL WITHOUT COORDINATION W/ THE ARCHITECT. GALVANIZED DECK SHALL BE CONFORM TO ASTM A525, G60 (MINIMUM).
- 19. REINFORCE STEEL DECK OPENINGS (FLOOR & ROOF) FROM 6" TO 18" WITH 2 x 2 x 1/4 STEEL PLACE ANGLES PERPENDICULAR TO FLUTES, EXTEND MINIMUM OF TWO FLUTES BEYONI EACH SIDE OF OPENING AND WELD DECK AT EACH FLUTE. OPENINGS LARGER THAN 18" SHALL BE REINFORCED WITH 3 x 3 x 1/4 STEEL ANGLES WELDED TO TOP CHORD OF BAR JOISTS UNLESS SHOWN OTHERWISE ON PLANS. WELD DECK TO ANGLE AT 6" O/C AT PERIMETER OF OPFNINGS.
- 20. STEEL LINTELS SUPPORTING BRICK VENEER AT EXTERIOR WALLS SHALL BE ONE HOT-DIPPED GALVANIZED 5 x 5 x 1/4 ANGLE, UNLESS NOTED OTHERWISE.
- . CONTRACTOR SHALL PROVIDE MISCELLANEOUS STEEL AS REQUIRED AT ELEVATOR RAIL SUPPORT POINTS. COORDINATE REQUIREMENTS WITH ELEVATOR MANUFACTURER.
- 2. WELDED HEADED STUDS (WHS) SHALL BE "NELSON ANCHORS", OR EQUAL, Fs = 60 KSI, DIAMETER AND LENGTH AS SHOWN ON PLANS. STUDS TO BE WELDED & SHOP TESTED IN ACCORDANCE W/ THE MANUFACTURER'S RECOMMENDATIONS.
- 23. AFTER ERECTION, PRIME WELDS, ABRASIONS AND SURFACES NOT PRIMED. USE PRIMER CONSISTENT WITH SHOP COAT. GALVANIZED SURFACES (HOT DIPPED OR COLD) SHALL BE CLEANED AND PAINTED WITH "ZRC". ROOF DECK WELDS TO BE CLEANED AND PAINTED PRIOR TO INSTALLING ROOF INSULATION.
- 4. FIELD WELDS AND BOLTED CONNECTIONS SHALL BE VISUALLY INSPECTED BY A QUALIFIED INDEPENDENT INSPECTOR. THE INSPECTOR SHALL PROVIDE A WRITTEN REPORT TO THE STRUCTURAL ENGINEER.
- 5. ELECTRONIC (PDF) SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL STEEL COMPONENTS AND SUBMITTED FOR REVIEW BY ENGINEER. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS.
- 6. THE CONTRACTOR SHALL REVIEW AND ANNOTATE SHOP DRAWINGS BEFORE SUBMITTING THEM TO THE ARCHITECT/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL ALLOW ARCHITECT/ENGINEER 10 WORKING DAYS FOR REVIEW OF SHOP DRAWINGS.
- THE STRUCTURAL ENGINEER SHALL BE NOTIFIED FOR A FRAMING OBSERVATIONS IMMEDIATELY AFTER ROOF DECK IS INSTALLED AND BEFORE INSTALLATION OF THE CEILING.
- <u>FASTENERS</u>
- SPECIAL INSPECTIONS SHALL BE PROVIDED FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT NOTED BELOW. SPECIAL INSPECTIONS SHALL BE PERFORMED BY
- A. KWIK BOLT III (ICC-ES ESR-2302) BY HILTI (CONCRETE)
- B. KWIK BOLT III (ICC-ES-ESR-1385) BY HILTI (MASONRY)
- C. STRONG-BOLT 2 (ICC-ES ESR-3037) BY SIMPSON STRONG-TIE (CONCRETE)
- D. WEDGE-ALL ANCHOR (ICC-ES ESR-1396) BY SIMPSON STRONG-TIE (MASONRY)
- HEAVY DUTY SLEEVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED OR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. EXPANSION BOLTS (EB) SHALL NOT BE SUBSTITUTED FOR SLEEVE ANCHORS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER. ACCEPTABLE PRODUCTS:
- A. HSL-3 (ICC-ES ESR-1545) BY HILTI (CONCRETE)
- SCREW ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
- A. KWIK HUS-EZ (ICC-ES ESR-3027) BY HILTI (CONCRETE)
- B. KWIK HUS-EZ (ICC-ES ESR-3056) BY HILTI (MASONRY)
- C. TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG-TIE (CONCRETE)
- D. TAPCON ANCHORS (ICC-ES ESR-1671) (MASONRY)
- E. POWERS WEDGE BOLT (ICC-ES ESR-1678) (MASONRY)
- UNDERCUT ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
- HDA (ICC-ES ESR-1546) BY HILTI (CONCRETE) TORQ-CUT (ICC-ES ESR-2705) BY SIMPSON STRONG-TIE (CONCRETE)

ARTERIER_CONTINUED;         8. POWCER_ADILATED FASTENDER IN CONCRETE/ANSONETVISTED;         A. X-U (CC-ST ESR-2289) BY HILTI (CONCRETE/ANSONETVISTED);         B. POWCER_ADILATED FASTENCES (CC-SE ESR-2130) BY SWIPSON STECKID TE (CONCRETA/ASSORT);         9. ADVECER_ADILATED FASTENCES (CC-SE ESR-2130) BY SWIPSON STECKID TE (CONCRETA/ASSORT);         9. ADVECER_ADALOSS IN CONCRETE/AUX UPUL LE TESTED AND OULLIED FOR USE IN ACCERDINATE WITH AD 358.4 AND CC-ST AGES AGOSTABLE PRODUCTS;         A. HIT-RE SOU-V3 (CC-SE ESR-2582) BY HILTI (CANCRETE);         B. HIT-HY 7D (CC-SE ESR-2582) BY HILTI (CANCRETE);         D. SET (CC-SE ESR-1272) BY SWIPSON STECKIO-TE (CANCRETE);         D. SET (CC-SE ESR-1272) BY SWIPSON STECKION-TE (CANCRETE);         D. SET (CC-SE ESR-1272) BY SWIPSON STECKIO-TE (CANCRETE);         D. SET (CC-SE ESR-1272) BY SWIPSON STECKION-TE (CANCRETE);	PARTENDES LOOMINUED:         8. POORER ACTUATED FASTENES IN CONCRETE/GAU SHALL BE TESTED AND QUALIFED FOR USE IN ACACCOMMUNE TH ACL 3552 AND ECC-TS A CES A SACEPTABLE PROJUCTS.         A. Y-U (CC-15 ESR-2289) BY HILTI (CONCRETE/GAUSORY/STEL)         B. PONDER ACTUATED FASTENES (CC-15 ESR-2138) BY SWPSON STRONG TE (CONCRETA/ASSORY)         9. ADDERY, ANDERS IN CONCRET/CAU SHALL BE TESTED AND QUALIFED FOR USE IN ACCOMMUNE TH ACI 3554 AND CC-25 A SCR0. SCR0. DUALIFIED FOR USE IN ACCOMMUNE TH ACI 3554 AND FOR CONCRET/CAU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCOMMUNE TH ACI 3554 AND FOR STRONG-TE (CONCRETE)         9. ANDERY, ANDERS IN CONCRET/CAU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCOMMUNE TH ACI 3554 AND FOR ASTA ACIA/STRONG DISTINUTS AND WASHERS SHALL BE GAUVANICED ERMANDON BOLTS/LEUX AND/MST FOR DOLTS. NUTS AND WASHERS SHALL BE GAUVANICED ERMANDON BOLTS/LEUX AND/MST FOR DOLTS. NUTS AND WASHERS SHALL BE GAUVANICED ERMANDON BOLTS/LEUX AND/MST FOR DOLTS. NUTS AND WASHERS SHALL BE GAUVANICED ERMANDON BOLTS/LEUX AND/MST SHALL FOR SK INTED FOR +-DOLTS WINDOT FORM WASHERS AND/M WITS AFFORMATE. BE CAULDATIONS SHALL FOR SK IST 25 SIBETITION AND/MST BE CAULALITY ON STRUCTURE. SHALL FOR SK IST 25 SIBETITION AND/MST BE SHALL HAR A WALL DURING THAT THAT THE CONTRECTORS AND ACIESSING FOR FORMULT SHALL FINAL SHALL FORMED FOR ALL DEV VALUES OF THE SECONDEL FORMULT USE FOR POLITS CONNECTING STRUCTURAL STEEL FORMATION STRUCTURAL STEEL NOTES FOR POLITS CONNECTING STRUCTURAL STEEL CONTRECTORS SHALL HAR THAT WIT HE STRUCTURE ADDRESS FORM LOOK CONTRECTOR TO THE MINIMUM CONTRELE FORMED. TO THE AND/MST BE AND THE START OF VALUES OF THE SECONDER SHALL HAR THAT WIT HE STRUCTURE ADDRESS FORM LOOK OF COLOR-ES OR LANDOC CONTRECTORS SHALL HE OF THE TIME. SCL ADDRESS FORM CONTREL START OF VALUES OF THE SECONDER SHALL HAR THAT WIT HE STRUCTURE ADDRESS FORM CONTRES START OF			
ANSTRUMEN. CONTINUENT:         B. POWDER ACTUATED FASTENERS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFED FOR USE IN ACCORDANCE WITH ALD 352.24 MOI OC-053 (AGE) ACCEPTABLE FOROUTS:         A. X-U (ICC-ES ESR-2269) BY HILT (CONCRETE/MASONRY/SITEL)         B. POWDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TE (CONCRETE/MASONRY)         9. ADMEDIA ENTRATING SICC-ES ESR-2138) BY SIMPSON STRONG TE (CONCRETE/MASONRY)         9. ADMEDIA ENTRATION OF INCLESS ESR-3130 FY SIMPSON STRONG TE (CONCRETE/MASONRY)         9. ALT-RE 500-V3 (ICC-ES ESR-2508) BY SIMPSON STRONG-TE (CONCRETE)         9. STI (ICC-ES ESR-2508) BY SIMPSON STRONG-TE (MASONRY)         10. STI (ICC-ES ESR-2508) BY SIMPSON STRONG-TE (MASONRY)         11. HEADED ANCHORE NOTES TAKIL ASY ADOT ROD. ROTTS. NUTS AND WASHERS SHALL BE ADALVANZED. EXPANSION BGLT5/LEEV ANCHORS SHALL BE SUBSTITUTED FOR J-BOLTS WITHOUT PRODUCT IS MARAD. BY STRUCTURE LENNERE.         11. HEADED ANCHORE RODGE SHALL BE FABRICATED FROM ASTM F1354 MATERIAL, FV-36 KSI         12. SUBSTITUTION REQUESTS FOR PRODUCTS USER ADOVE SHALL BE SUBBTITUTED FOR J-BOLTS WITHOUT PRODUCT IS CARABLE OF ADOVE SHALL BE SUBMITED BY THE CONTRACTOR FOR TOTERED FORMER ADON MIT ACADANDAS THILD SERVICE BASENERT EVALUATION REQUESTS FOR PRODUCTS USER ADOVE SHALL BE CONTRACTOR FOR TOTERED FORMULT IS CARABLE OF ADDVE SHALL BE CONTRACTOR TO THE STRUCTURAL STELL FORMORY TO ADOVE THE SUBJECT FOR SUBSTITUTED REQUEST FOR PRODUCT USING THE APPROPRIATE DOSING FOR COLUMANT FOR THE SUBJECT OF TO THE STRUCTURAL STELL FORMULT SUPERIMINARIZATION SHALL BE CONTRACTOR TO THE STRUCTURAL STELL FORMULT SUPERIMINARIZATION SHALL BE CONTRACTOR TO THE STRUCTURAL STELL FORMULT SUPERIMINARIZATIONE SHALL BE CONTRACTO	<b>PARTNERS CONTINUE:</b> 8. POWER ACTUATED FASTENCES IN CONCRETE/CAU SHALL BE TESTED AND QUALIED FOR USE IN ACCORDANCE WITH ACI 3952 AND IDC-55 ACIES ACCEPTAREL PRODUCTS: A. X-U (ICC-55 ESR-2269) BY HILTI (CONCRETE/MASONRY/STELL) 8. POWER ACTUATED FASTENCES (ICC-55 ESR-2139) BY SIMPSON STRENG TE (CONCRETE/MASONRY) 9. ADDRENK ACQUARES NO CONCRETE/MASONRY/STELL) 8. POWER ACTUATED FASTENCES (ICC-55 ESR-2139) BY SIMPSON STRENG TE (CONCRETE/MASONRY) 9. ADDRENK ACQUARES NO CONCRETE/CUU SHULL BE TESTED AND QUALIED FOR USE IN ACCORDANCE WITH ACI 3920.4 AND ICC-55 ACIES ACIES ACIES ACIES ACIES A. HIT-RE SID-30 (ICC-55 ESR-2362) BY HILTI (MASONRY) C. SET-XP (ICC-15 ESR-2362) BY HILTI (MASONRY) 10. SET (ICC-55 ESR-12782) BY SIMPSON STRENG-TE (CONCRETE) 10. SET (ICC-55 ESR-12782) BY SIMPSON STRENG-TE (CONCRETE) 11. HEARED ANCHOR ROOS SHALL BE FABRICATED FROM ASTM ATS AS SIMPSTUTED FOR J-BOLTS WITHOUT FROM WITHIN AFRONCE ACIES ADONE SHALL BE SUBJITTED BY THE CONTRACTOR 10. THE STRUCTURAL STREL MORE BY STRUCTURAL DENNERE. 11. HEARED ANCHOR ROOS SHALL BE FABRICATED FROM ASTM F1564 MATEMIA, FY=36 KS 12. SUBSTITUTION REQUESTS FOR ROULD'S USET ABOVE SHALL BE SUBJITTED BY THE CONTRACTOR 13. RETERENT STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STELL 20. SUBTODARY SUBJIC SHALL BY STRUCTURAL DENNERE 14. STREL FRANKING (STELL STUCE) 13. RETERENT STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STELL 14. STREL FRANKING (STELL STUCE) 14. STREL FRANKING (STELL STUCE) 15. RETERENT STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STELL 20. STREL STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STELL 20. STREL STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STREL 20. STREL STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STREL 20. STREL			
<ul> <li>POWDER ACTUATED FASTENERS IN CONCENT (JANG) SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACID SCIEND LOCES A COLO. ACCEPTALE PRODUCTS:</li> <li>A. X-U (IOC-ES ESR-2260) BY HILT (CONCRETE/MASORY/STEEL)</li> <li>POWDER ACTUATED FASTENERS (IOC-ES ESR-2130) BY SUPSON STRONG TE (CONCRETE/MASORY)</li> <li>A. HT-RE 500-V3 (IOC-ES ESR-3014) BY HILT (CONCRETE)</li> <li>H. HT-HY 70 (IOC-ES ESR-3014) BY HILT (CONCRETE)</li> <li>H. HT-HY 70 (IOC-ES ESR-3014) BY HILT (CONCRETE)</li> <li>S. HT-HY 70 (IOC-ES ESR-3014) BY HILT (CONCRETE)</li> <li>S. ET (IOC-ES ESR-2508) BY SUPSON STRONG-TE (CONCRETE)</li> <li>S. SET (IOC-ES ESR-3014) BY HILT (CONCRETE)</li> <li>S. SET (IOC-ES ESR-3014) BY HILT (CONCRETE)</li> <li>S. SET (IOC-ES ESR-3014) BY SUPSON STRONG-TE (CONCRETE)</li> <li>S. SET (IOC-ES ESR-3014) BY SUPSON STRONG-TE (MASONRY)</li> <li>S. SET (IOC-ES ESR-3014) STRONG-TE (MASONRY)</li> <li>J. BEATS SHALL BE FABRICATED FROM ASTIM ASQAZO ROD. BOTS, NUTS AND WASHERS SHALL BE CONTRACTS IN A RADIO FASTENTIAL DEVELOPMENTS AND ASHERES SHALL BY EXEMPTION FOR J-POUTS MINOT PROF. MINITERIA APPROVACE OF STRUCTURE CONTRACTS.</li> <li>H. HEADD ANDROR ROS SHALL DE FABRICATED TREM ASTIM ASQAZO ROD. BOTS, NUTS AND WASHERS SHALL BY EXEMPTION FOR J-POUTS MINOT PROF. MINITERIA APPROVACE AS TINCUTURE CONTRACTS.</li> <li>H. HEADD ANDROR ROS SHALL CARON WIT ACLAURATION FOR THAT ASK ISI</li> <li>SUBSTITUTION DEDUCSTS FOR PROPUNTS USED ADOVE STALL DED MARCHALL FY-36 KII</li> <li>SUBSTITUTION DEDUCSTS FOR PROPUNTS USED ADOVE STALL DET MERPERPERPE AS EXALL DE TARGET STALL DEVELOPMENTS.</li> <li>HEADD ANDROR ROS SHALL AND WITH EXALUATION (IOC-ES OR INFO: OT THE STALL APPROVED STALL AND WASHERS SHALL HAVE A VALID CURRENT EVALUATION (IOC-ES OR INFO: OT THE STALL AND WASHERS SHALL HAVE A VALID CURRENT EVALUATION (IOC-ES OR INFO: OT THE STALL AND WASHERS SHALL APPROVED IN THE INFO: OT THE STALL APPROVED STALL STALL AND WASHERS SHALL APPROVED INTO MARCHAL APPROVED INTO MARCHAL APPROVED INTO MARCHAL APPROVED INTO MARCHAL APPROVED INTO</li></ul>	<ul> <li>PONDER ACTUATED FASTENERS IN CONCENT_(AND SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH AG 352.4 AND IGC-55.4 CSR. ACCEPTABLE PRODUCTS.</li> <li>A. X-U (ICC-ES ESR-2283) BY HILT (CONCRETE/AMSONRY/STEL).</li> <li>PONDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TE (CONCRETE/AMSONRY)</li> <li>A. MT-EE SO-0.4 (ICC-ES ESR-2882) BY HILT (CONCRETE).</li> <li>B. HT-HY 70 (ICC-ES ESR-2882) BY HILT (CONCRETE).</li> <li>B. HT-HY 70 (ICC-ES ESR-2882) BY HILT (MASONRY).</li> <li>S. SET (ICC-ES ESR-2882) BY SIMPSON STRONG-TE (CONCRETE).</li> <li>S. ST (ICC-ES ESR-2882) BY SIMPSON STRONG-TE (CONCRETE).</li> <li>S. ST (ICC-ES ESR-2882) BY SIMPSON STRONG-TE (CONCRETE).</li> <li>S. ST (ICC-ES ESR-2882) BY SIMPSON STRONG-TE (MASONRY).</li> <li>I. HEADED ANCHOR ROOS SHALL BE FABRICATED FROM AST AF364 AND FROM STRONG TE SUBSTTUTED FOR J-BOLTS WITHOUT PROVIDED IN THE MAPPROX BY STRONG-TE (MASONRY).</li> <li>I. HEADED ANCHOR ROOS SHALL BE FABRICATED FROM AST AF364 FROM AST AF364 AND FROM THE MASON BOLTS/SIECE AND/GRS SHALL BE SUBSTTUTED FOR J-BOLTS WITHOUT PROVIDED IN THE MAPPROX BY STRONG-TE (MASONRY).</li> <li>I. HEADED ANCHOR ROOS SHALL BE FABRICATED FROM AST AF364 FROM AST</li></ul>	FA	STENERS CONTINUED:	1
<ul> <li>A. X-U (ICC-ES ESR-2289) BY HILT (CONCRETE/MASONRY/STEEL)</li> <li>B. POMOET ACTUATE FASTENES (ICC-ES ESR-2138) BY SIMPSON STRONG THE (CONCRETE/MASONRY)</li> <li>A. MIT-RE SOL-VA (ICC-ES ESR-2882) BY HILT (CONCRETE)</li> <li>B. HIT-YT 70 (ICC-ES ESR-2882) BY HILT (CONCRETE)</li> <li>B. HIT-YT 70 (ICC-ES ESR-2882) BY HILT (CONCRETE)</li> <li>C. SET-YP (ICC-ES ESR-2882) BY HILT (CONCRETE)</li> <li>C. SET (ICC-ES ESR-2882) BY HILT (CONCRETE)</li> <li>D. JEDITS SHALL BE FARRCATED FROM ASTRONG-THE (MASONRY)</li> <li>C. SET-YP (ICC-ES ESR-2882) BY SIMPSON STRONG-THE (MASONRY)</li> <li>D. JEDITS SHALL BE FARRCATED FROM ASTRONG-THE (MASONRY)</li> <li>I. JEJEDTS SHALL BE FARRCATED FROM ASTRONG-THE (MASONRY)</li> <li>I. HEADEI ANGOR ROS SHALL DY EARDON TO THAN AND WASHERS SHALL BE CONTRACTOR TO A PAGE TS MITOTICAL AFFRONG SHALL DY BE SUBSTITUE TO THAN DWASHERS SHALL BE CONTRACTOR TO A PAGE TS MITOTICAL DEVICED AND WASTERS SHALL BE CONTRACTOR TO A PAGE TS MITOTICAL EXAMPLEX.</li> <li>I. HEADEI ANGOR ROS SHALL BY FARRCATED FROM ASTR I FISSE MATERIAL, FY-36 KSI</li> <li>12. SUBSTITUTO THAN CHORES THA DARAGE THA CALCULATIONS THAT ASTR PERPARE TO XEADE BY A SUBSTITUTE TO PROVIDE TS INCOMPAL DY ADDITES THAT ASTR ASTRONG THE AT THE SUBSTITUE TO PROVIDE THAT AFFRONG TO A THE CALCULATIONS THAT ASTR ASTRONG THAT THE SUBSTITUTE TO PROVIDE TS INCOMPANIE AND THE PERPARE TO XEADE BY A SUBSTITUTE TO PROVIDE TS INCOMPANIE AND THE PERPARE TO XEADE BY A SUBSTITUE TO PROVIDE TS INTER AND THE CALCULATIONS THAT ASTRONG THE DESIDENT AND (ICC-ES DR INFO-CS) REPORT.</li> <li>J. REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPRONTS.</li> <li>J. MITCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPRONTS.</li> <li>J. HE GREENAL CONTRACTOR, ENGLET FACUNE THEORY STRUCTURAL STEEL CONTROLOTION THAT AND THE SUBSTITUE TO PROVIDENT AND THE TO THE DISONATION (ICC-ES DR INFO-CONTROLOTION THAT AND THE SUBSTITUE TO AND ACCESSORY INTO A MANONCONTRACTOR STRUCTURAL STEEL TO THE SUBSTITUE TO AND ACCESSORY INT</li></ul>	<ul> <li>A. X-U (ICC-ES ESR-2269) BY HILT (CONCRETE/AMSONRY/STEEL)</li> <li>B. CONCRETE/AMSONRY)</li> <li>A. MT-RE 500-VAS (ICC-ES ESR-2130) BY SUPPON STRONG THE CONCRETE / MAGONANCE WITH AGI SASA AMD ICC-ES ESR-2130) BY SUPPON STRONG THE / AGIONANCE WITH AGI SASA AMD ICC-ES ESR-2130) BY SUPPON STRONG-THE (CONCRETE)</li> <li>B. HT-HY 70 (ICC-ES ESR-2862) BY HILT (CONCRETE)</li> <li>C. SET-XP (ICC-ES ESR-2862) BY HILT (CONCRETE)</li> <li>C. SET-XP (ICC-ES ESR-2862) BY HILT (CONCRETE)</li> <li>J. SET (ICC-ES ESR-2702) BY SUPPON STRONG-THE (ASIGNRY)</li> <li>C. SET-XP (ICC-ES ESR-2702) BY SUPPON STRONG-THE (ASIGNRY)</li> <li>J. J-BOLTS SHALL BE FABRICATED FROM ASIM ASIA/A307 ROL BOLTS, NUTS AMD WASHERS SHALL BE CANNER TO SALLE BY EABISITUE TO THE CONTRACTOR WITHOUT PROV WRITER APPROVAL BY STRUCTURAL ENABLER.</li> <li>H-RADDA ANGOR RODS SHALL BE FABRICATED FROM ASIM FISSE MALTERIA, TY-SE KSI</li> <li>L-RADDA SANGRA RODS SHALL BE CANDUCATIONES SHALL DES AUBSTITUET DU THE CONTRACTOR WRITER APPROVAL BY STRUCTURAL ENABLER.</li> <li>HEADDA ANGOR RODS SHALL BE CANDUCATIONES SHALL DES AUBSTITUET DU THE CONTRACTOR WRITER OF THE STRUCTURAL ENABLE CONTRACTOR AND WASHERS AND ANGOLOGIES USALL BE SUBMITED BY THE CONTRACTOR AND ROUCLES STRUCTURAL ENABLING STRUCTURAL STRUCTU</li></ul>	8.	POWDER ACTUATED FASTENERS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:	
<ul> <li>B. PONDER ACTUATE PASTENERS (ICC-ES ESR-2133) BY SIMPSON STRONG THE (ICONCRETE/MASQIRY)</li> <li>A. HIT-RE 500-V3 (ICC-ES ESR-2013) BY HLIT (CONCRETE)</li> <li>B. HIT-HF 200-V3 (ICC-ES ESR-2013) BY HLIT (CONCRETE)</li> <li>B. HIT-HF 70 (ICC-ES ESR-2023) BY HLIT (CONCRETE)</li> <li>C. SIT-FA (ICC-ES ESR-2023) BY HLIT (ICONCRETE)</li> <li>S. SIT (ICC-ES ESR-2023) BY HLIT (CONCRETE)</li> <li>S. SIT (ICC-ES ESR-2023) BY SIMPSON STRONG-THE (LASONRY)</li> <li>S. SIT (ICC-ES ESR-2023) BY SIMPSON STRONG-THE (LASONRY)</li> <li>J. SET LAY (ICC-ES ESR-2023) BY SIMPSON STRONG-THE (LASONRY)</li> <li>J. SIT (ICC-ES ESR-1772) BY SIMPSON STRONG-THE (LASONRY)</li> <li>J. SIT (ICC-ES ESR-1772) BY SIMPSON STRONG-THE (LASONRY)</li> <li>J. J. SIT (ICC-ES ESR-1772) BY SIMPSON STRONG-THE (LASONRY)</li> <li>J. J. SIT (ICC ESR SIT (ICC ESR ESR-1772) BY SIMPSON STRONG-THE (LASONRY)</li> <li>J. J. SIT (ICC ESR ESR INTERS) SALL DE FABRICATED FROM ASTM FIB54 MATERIAL, FY-36 KSI</li> <li>HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM FIB54 MATERIAL, FY-36 KSI</li> <li>SUBSTITUTIO AUCUISTS FOR DEQUCITS LISTE ABOVE SHALL BE SUBBTITED BY THE CONTRACTOR TO THE STRUCTURAL CANAGE THE AAVAN A VALID CURRENT E HALL THE CONTRACTOR TO THE STRUCTURAL STEEL ADONE SHALL HAVE A VALID CURRENT E HALL THE CONTRACTOR TO THE STRUCTURAL STEEL THE ADONE SHALL HAVE A VALID CURRENT E HALL THE CONTRACTOR STANDARDS. SHALL BERCHT CURRENT SHALL STEEL STRUCTURAL STEEL STRUCTURAL STEEL THE ADONE SHALL HAVE A VALID CURRENT FUNCTIONAL STEEL STRUCTURAL STEEL THE ADONE SHALL HAVE A VALID CURRENT FUNCTIONAL STAND FOR THE CONTRACTOR TO THE DEGUCIT STRUCTURAL STEEL STRUCTURAL STAND FOR STRUCTURAL</li></ul>	<ul> <li>B. PONDER ACTUATED FUSTERERS (ICC-ES ESR-2133) BY SMPSON STRONG TE (OVGRETE/ANGORRY)</li> <li>A. HIT-RE 500-V33 (ICC-ES ESR-3814) BY HLTI (CONCRETE)</li> <li>B. HIT-HY 70 (ICC-ES ESR-2802) BY HLTI (CONCRETE)</li> <li>C. SIT-SF (ICC-ES ESR-2802) BY HLTI (LACONCRETE)</li> <li>C. SIT-SF (ICC-ES ESR-2802) BY HLTI (LACONCRETE)</li> <li>C. SIT-SF (ICC-ES ESR-2802) BY SMPSON STRONG-TE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-2802) BY SMPSON STRONG-TE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-2802) BY SMPSON STRONG-TE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-2802) BY SMPSON STRONG-TE (LASONRY)</li> <li>C. SIT-SF (ICC-ES ESR-2802) BY SMPSON STRONG-TE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-2802) BY SMPSON STRONG-TE (MASONRY)</li> <li>I. HEADD ANGOR ROOD SHALL BE FABRICATED FROM ASTM FISS4 MATERIAL, FYSEK SEI</li> <li>SUBSTITUTION REQUESTS FOR PROQUETS INSTITUTIONAL ENVIREME.</li> <li>I. HEADD ANGOR ROOD SHALL BE FABRICATED FROM ASTM FISS4 MATERIAL, FYSEK SEI</li> <li>SUBSTITUTION REQUESTS FOR PROQUETS INSTIDUTIONAL ENVIREME.</li> <li>I. HEADD ANGOR ROOD SHALL BE CAROLATIONS SHALL DEL BUSINITED BY THE CONTRACTOR MODIFIED PRODUCT USING THE APPROPHATE DESIGN FMOCEUNER MOVOR VALUES OF THE SPECIFIC PRODUCT USING THE APPROPHATE DESIGN FMOCEUNER MOVOR VALUES OF THE SPECIFIC PRODUCT USING THE AND THE SIGNITIAL STELL COMPONENT.</li> <li>I. REFERENCE STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STELL COMPONENTS.</li> <li>I. REFERENCE STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STELL COMPONENTS.</li> <li>I. HE GUERRAMING (STELL STUDD)</li> <li>AL TERMING MODIFIEL FRAMING MOVE TO REVER FUNCTIONER AND ACCOUNTS.</li> <li>AL TERMING MODIFIEL FRAMING MOVE TO REVER FUNCTIONE AND ACCOUNTS.</li> <li>AL TERMING MODIFIEL FRAMING MOVE TO REVER FUNCTIONE AND ACCOUNTS.</li> <li>AL TERMING MODIFIEL FRAMING MOVE TO REVER FUNCTIONE AND ACCOUNTS.</li> <li>AL TERMING MODIFIEL FOR THE DOSTING TO A MANDALE STRU</li></ul>		A. X-U (ICC-ES ESR-2269) BY HILTI (CONCRETE/MASONRY/STEEL)	
<ul> <li>9. ADJESVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH AD 355.4 AND ICCCES ACCEPTABLE PRODUCTS:</li> <li>A. HT-RE 500-V3 (ICC-ES ESR-2508) BY SHURGS STRONG-TIE (CONCRETE)</li> <li>B. HIT-HY 70 (ICC-ES ESR-2508) BY SHURGS STRONG-TIE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-2508) BY SHURGS STRONG-TIE (ASSONNT)</li> <li>10. J-BOLTS SHALL BE FABRICATED FROM ASTM FISH (ASSONNT)</li> <li>11. J-BOLTS SHULD ESPHERICATE) FROM ASTM FISH (ASSONNT)</li> <li>12. J-BOLTS SHULD ESPHERICATE (ASSON STRONG-TIE (ASSONNT) FOR WASHERS SHALL BY THE STRUCTURAL ENGINEER.</li> <li>11. HEADED ANCHOR RODS SHALL BY FABRICATED FROM ASTM FISH MATERIAL, FY-35 KS</li> <li>12. SUBSTITUTION REQUESTS FOR PRODUCTS USTED ABOVE SHALL BE SUBSTITUTE FOR J-BOLTS WITHOUT AND NEED. ESPHERE CONTRACTOR SHALL BE SUBSTITUTE PROTEINAL THAT THE SUBJECT AND WASHERS SHALL BY REGISTREE PROTESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTE DATASTOR SHALL BY A VALID CURRENT EVALUATION (ICC-ES OR INFO/CONS) SUBSTITUTED ANCHORE SHALL BY A VALID CURRENT EVALUATION (ICC-ES OR INFO/CONS) SHALL BY EST ENTRY MORE THE EST ENTRY ADARDED SUBSTITUTED ANCHORE SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR INFO/CONS) SUBSTITUTED ANCHORES SHALL HAVE A VALID CURRENT FOR TO THE START OF THE ISTEM IN THE ALSIL SPECOTION FOR THE LIGHTYTICHT STREET FORMOLING STUD AND ACCESSONES SHALL BOOKER FORM TO THE START OF INFO/CONS STUD AND ACCESSONES STRUCTURAL STREET OT THEORY AND THE LIGHTYTICHT STREET FORMOLING STUD AND ACCESSONES SHALL BUELTS AND ACCESSONES SHALL COMPLY */ ASTM O SOS.</li> <li>13. REFERENCE STRUCTURAL CONTRACTOR PROGRES SHALL BE OTHER THE THE DESCRIPTION FOR THE DESCRIPT</li></ul>	<ul> <li>a. ADESIVE ANCHORS IN CONCRETE/CAU SHALL BE TISTED AND QUALIFED FOR USE IN ACCORDANCE WITH AD 355A AND USE -58 ACCORDANCE ADD CONCRETE)</li> <li>a. HIT-RE 500-V3 (UCC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>b. HIT-HY 70 (UCC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>c. SIT-XP (UCC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>d. SIT (UCC-ES ESR-1772) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>d. SIT (UCC-ES ESR-2508) BY SIMPSON STRONG-TIE (CASONRY)</li> <li>d. SET-XP (UCC-ES ESR-2508) BY SIMPSON STRONG-TIE (LASONRY)</li> <li>d. S-BOLTS SIMIL BE FABRICATED FROM ASTIN ASFADST ADD. BOLTS NUTS AND WASHERS SHALL BE CALVANEZD. EXAMISON BOLTS/JELYL AND/ORS SHALL NOT BE SUBSTITUTED FOR -1-BOLTS WITHOUT FROM WITH AN PROVINCIAL BY STRUCTURAL ENDINEER.</li> <li>11. HEADED ANCHOR ROOS SHALL BE FABRICATED FROM ASTIN AFEAU. AND BE SUBSTITUTED FOR THE CONTRACTOR TO THE STRUCTURAL CONSTRUCTURAL ENDINEER.</li> <li>12. SUBSTITUTION REQUESTS FOR PRODUCTS USTED ABOVE SHALL BE SUBSTITUED BY THE CONTRACTOR TO THE STRUCTURAL CONSTRUCTURAL ENDINEER.</li> <li>13. REFERRE.</li> <li>14. REFERRE.</li> <li>14. REFERRE.</li> <li>14. REFERRE.</li> <li>15. REFERRE.</li> <li>16. REFERRE.</li> <li>16. REFERRE.</li> <li>16. REFERRE.</li> <li>17. THE STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STELL COMPLEXES SHALL FOR THE THE STRUCTURAL STELL STRUCTURAL STELL FORMING GY ALL HAVE A VALID CURRENT FORM TO THE START OF LIGHTWEIGHT STELL. REFERRENT.</li> <li>16. REFERRENT.</li> <li>17. REFERRENT.</li> <li>18. REFERRENT.</li> <li>18. REFERRENT.</li> <li>19. THE CONTRACTOR REFERRENT ADD THE LIGHTWEIGHT STELL COMPLEXEMENTS AND PROCEDURES.</li> <li>14. LI STUDS AND JORDST MARKER SHALL BE OF MAND GY START OF LIGHTWEIGHT STELL STRUCTURAL STRU</li></ul>		B. POWDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TIE (CONCRETE/MASONRY)	
<ul> <li>A. HIT-RE 500-V3 (ICC-ES ESR-3814) BY HLTI (GONGRETE)</li> <li>B. HIT-HY 70 (ICC-ES ESR-2308) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>C. SET-YP (ICC-ES ESR-2308) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>C. SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>I. HEADED AACKOR RODS SHALL BE FARGCARED FROM ASTM FISSE MATERIAL, FY=36 KSI</li> <li>I. HEADED AACKOR RODS SHALL BE FARGCARED FROM ASTM FISSE MATERIAL, FY=36 KSI</li> <li>SISSITUTION REQUESTS FOR PRODUCTS USED ABOXE SHALL BE SIBENTITED BY THE CONTACTOR REGISTERIC PROJECT IS CHARACTOR KICK SHALL DEVALUATIONS SHALL DEVALUATION TO THE STRUTCHARL DANGER ALONG WITH CALULATIONS SHALL DEVALUATION SECULATIONS THAT THAT THE SISSITUTION REQUESTS FOR PROJECT IS CHARACTOR SHALL DEVALUATION STRUCTURAL STREEL COMPONENCE STRUCTURAL STEEL NOTES FOR BOLTS ONNECTING STRUCTURAL STEEL COMPONENCE STRUCTURAL STEEL ROMAN GONE TO THE STATE OF DEVALUATION SIGNAL TO THE STATE OF DEVALUATION SIGNAL DANGER SHALL BE FORMET SIGNAL COMPLEX STRUCTURAL STEEL FRAMMER (STEEL STRUE)</li> <li>I. HE GERERAL CONTRACTOR PROJECT SIGNEROUTS ON PROJECTING STRUCTURAL STEEL COMPONENTS IN PROVINCING STUD MANAFERS SHALL BEFORME PROJECT REQUERNMENTS AND PRODUMES STATE THEY AND THE ALSIN SPECIFICATION FOR THE DESING OF OSIS</li> <li>J. ALL STUDS AND JOST MEMBERS IN GAUGE AND HEAVER SHALL BE FORMED FROM STEEL COMPLEXES STUDIONARCE STUD MANAFERS SHALL COMPLY */ ASIM O SOSI.</li> <li>J. ALL STUDS AND JOST MEMBERS IN GAUGE AND HEAVER SHALL BE FORMED FROM STEEL COMPLEXES.</li> <li>J. ALL STUDS AND JOST MEMBERS IN GAUGE AND HEAVER SHALL BE FORMED FROM STEEL COMPLEXES.</li> <li>J. ALL STUDS AND JOST MEMBERS IN GAUGE AND HEAVER SHALL BE FORMED FROM STEEL STRUCTURAL COMPLY */ ASIM O SOSICONS STUD AND AND AND THE DESING OF CALU</li></ul>	<ul> <li>A. HT-RE 500-V3 (ICC-ES ESR-3284) BY HLTI (MASONRY)</li> <li>S. SET-XP (ICC-ES ESR-2588) BY SUPSON STRONG-TIE (CONCRETE)</li> <li>S. SET (ICC-ES ESR-2588) BY SUPSON STRONG-TIE (CONCRETE)</li> <li>S. SET (ICC-ES ESR-7272) BY SUPSON STRONG-TIE (CONCRETE)</li> <li>J. SET (ICC-ES ESR-7272) BY SUPSON STRONG SALL NOT SET NUTS AND WASHERS SHALL BY STRUCTURAL EXONRES</li> <li>I. HEADED ANCHOR RODS SHALL BY STRUCTURAL EXONRES</li> <li>I. HEADED ANCHOR TODS SHALL BY STRUCTURAL EXONRES</li> <li>I. HEADED ANCHOR TODS SHALL BY ARRICATE FROM ASTM FISS MATERIAL, FY-38 KSI</li> <li>I. SUBSTITUTION REQUESTS FOR PRODUCTS LOTED ADDXE SHALL DE SUBJITTO BY THE CONTRACTOR STRUCTURAL STRUCTURAL CONTRACTOR STRUCTURAL EXONRES</li> <li>I. REFERENCE, STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL</li> <li>COMPONENTS.</li> <li>I. REFERENCE, STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL</li> <li>COMPONENTS.</li> <li>I. HE CEREBRIC CONTRACTOR BEOLETS CONNECTING STRUCTURAL STEEL</li> <li>COMPONENTS.</li> <li>I. STELL FRANKE GYSTEL STUDIENTERDENT AND THE LIGHTERICHT STEEL FRANKE SHALL BEG FOR MOLTS AND AND STEEL ISTED ISTU DATA THE STRUCTURAL BOOKES PRODUCT TO THE START OF LIGHTERICHT STEEL FRANKE STUDIENTS AND PRODUCT SCULARED STAND THE ASSUMPCE STEEL CONTRACTOR BOOKT TO THE STRUCTURAL CONPEXT V/A ASSM CS STUDIENT AND THE LIGHTERICHT STEEL FRANKES STUDIENT AND THE STRUCTURAL CONPEXT V/A ASSM CS STUDIENT AND AND AND THE LIGHTERICHT STEEL FRANKES STUDIENT AND THE LIGHTERICHT STEEL FRANKES STUDIENT AND THE STRUCTURAL DEVENT V/A ASSM CS STRUCTURES STUDIENT AND THE ASSMELL CONTROL V/A ASSM CS STUDIENT AND THE ASSMELL CONTROL V/A ASSM CS STRUCTURES STUDIENT AND THE ASSMELL CONTROL V/A ASSM CS STUDIENT AND THE ASSMELL CONTROL V/A ASSMELL CONTROL V/A AS</li></ul>	9.	ADHESIVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. ACCEPTABLE PRODUCTS:	
<ul> <li>B. HIT-HY 70 (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-772) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-772) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-772) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>D. J-BOLTS SHALL BE FARRICATED FROM ASTM ASG/ASO7 ROD. BOLTS, NUTS AND WASHERS SHALL BE COLUMATED FOR J-BOLTS WITHOUT PROM WEITER JAPROVAL BY SIMUSTURAL ENGINES SHALL NO ES SUBSTITUTE ON J-BOLTS WITHOUT PROM WEITER JAPROVAL BY SIMUSTURAL ENGINES.</li> <li>I. HAZDE ANGKOR RODS SHALL BE FARRICATE D'ROM ASTM TISS' MATERIAL FY-35 KSI</li> <li>12. SUBSTITUTION REQUESTS FOR PRODUCTS INTE DADVE SHALL BE SUBSTITUTE DATE THE SUBSTITUTE DATE THE CANDING SHALL DEWASTRATE THAT THE SUBSTITUTE DATE DATE OF AND ASTM THE STRUCTURAL STELL STATE THAT THE SUBSTITUTE DATE DATE OF AND ASTM THE STRUCTURAL STELL SUBSTITUTE DATE DATE OF AND ASTM THE STRUCTURAL STELL STATE THAT THE STRUCTURAL STELL FORMATION (ICC-ES OR IAMOAC). SUBSTITUTE DATE DATE DATE OF AND ASTM THE STRUCTURAL STELL STELL TRAUMON (STELL STUDE)</li> <li>1. THE GENERAL CONTINUOUS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAMOAC). SUBSTITUTE DATE DATES FOR BOLTS CONNECTING STRUCTURAL STELL COMPONENTS. NO PROCEMENTS AND THE STRUCTURAL STELL CONTENTS AND THE STRUCTURAL STORE PROOF TO THE STATE OF DATES TO THE STRUCTURAL STORE PROOF TO THE STATE OF DATES TO THE STRUCTURAL STORE PROOF TO THE STATE OF DATES TO THE STRUCTURAL STRUCTURAL STORE FORM TO THE STRUCTURAL STORE FORM TO THE STRUCTURAL DATES AND ACCESSORY STALL COMPLY A/ ASTM ASTM ASTM ASTM ASTM ASTM ASTM ASTM</li></ul>	<ul> <li>B. HT-HY 70 (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>C. ST-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>C. ST (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (CONCRETE)</li> <li>C. ST (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY)</li> <li>II HEADED ANALOG PROPONED PROM STALL ASSALL NOT AND CONSTRUCT AND MASHERS SHILL BE FARMATED PROFESSION BOLTS/GETEX AND/ARS SHALL NOT ES SUBSTITUTED FOR J-BOLTS WITHOUT PROF. WHITCH PAPERVAL BY STRUCTURAL ENABLER.</li> <li>II HEADED ANALOG RODS SHALL BE FARMATED FON A STM FISSE MATERIAL, FY-38 KS</li> <li>ISSESTITUTON REQUESTS FOR PRODUCTS LISTED ADOX SHALL DE SUBJITTED BY THE CONTRACTOR REGISTERIO PROFESSIONAL ENABLE OF ADOX SHALL DE SUBJITTED BY THE CONTRACTOR STRUCTURAL ENABLE OF ADOX SHALL DE MASTMETE THAT THE SUBJITTION REQUESTS FOR PRODUCTS LISTED ADOX SHALL DEWINSTRATE THAT THE SUBJITTION REQUESTS FOR PRODUCT SIG CARALL OF A THE CALULATIONS SHALL DEWINSTRATE THAT THE SUBJITTION REQUESTS FOR PRODUCT SIG CARALL OF A THE CALULATION SHALL DEWINSTRATE THAT THE SUBJITTION REQUESTS SHALL DAVER SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IMPMO-ES) SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IMPMO-ES) STRUCTURAL STEEL COMPONENTS.</li> <li>IDETTED FRANK FORTI.</li> <li>IS REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.</li> <li>IDETTED FRANK OF STRUCTURE OF ALL MEMERS AND ACCESSORES SHALL COMPLY */ ASIM C SOC.</li> <li>ALL STUDS AND JOIST MEMBERS IS GAUGE AND HEAVER SHALL BEORMED FROM STEEL COMPRESIONER TO THE STRUCTURAL COMPLY */ ASIM C SOC.</li> <li>ALL STUDS AND JOIST MEMBERS IS GAUGE AND HEAVER SHALL BE FORMED FROM STEEL COMPANY ON THE DESIGN OF COLONES.</li> <li>ALL RANGE CANDUNG THAT AND THE ALSI. "SPECIFICATION FOR THE DESIGN OF COLONES STRUCTURAL COMPLY */ ASIM C SOC STRUCTURAL STUDE THE DESIGN OF COLONES.</li> <li>ALL REAL CONTRACTOR. PRODUCTS INTER PROVINE THE DESIGN OF COLON. FOR STEEL COMPANY ON THE DESIGN OF COLONES. STUDE ADAPTECTION TO THE DESIGN OF COLONES.<td></td><td>A. HIT-RE 500-V3 (ICC-ES ESR-3814) BY HILTI (CONCRETE)</td><td></td></li></ul>		A. HIT-RE 500-V3 (ICC-ES ESR-3814) BY HILTI (CONCRETE)	
C. SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TE (CONCRETE) D. SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TE (CASCARY) 10 J-BOLTS SHALL BE PARRICATED FROM ASTM A36/A307 ROD. GOLTS, NUTS AND WASHERS SHALL BE CALVARED. DEPARATION LOTITS/SELEVE ACHORDS SHALL DET SIMPLETED FOR J-BOLTS WITHOUT FROM WITTEN APPROVAL BY STIMOLOURAL ENABLER. 11 ELABORE ACHORO RODS SHALL BE FARRICATED FROM ASTM FISS4 MATERIAL, FY-36 KSI 12 SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITED BY THE CONTRACTOR REGISTRED PROFEDSIONAL ENGINEER. THE CALCULATIONS SHALL DE MONSTRATE THAT THE BY REGISTRED PROFEDSIONAL ENGINEER. THE CALCULATIONS SHALL DE MONSTRATE THAT THE BY REGISTRED PROFEDSIONAL ENGINEER. THE CALCULATIONS SHALL DE MONSTRATE THAT THE BY REGISTRED PROFEDSIONAL ENGINEER. THE CALCULATIONS SHALL DE MONSTRATE THAT THE BY REGISTRED PROFEDSIONAL ENGINEER. THE CALCULATIONS SHALL DE MONSTRATE THAT THE BY REGISTRED PROFEDSIONAL ENGINEER. THE CALCULATIONS SHALL DE MONSTRATE THAT THE BY REGISTRED PROFEDSIONAL ENGINEER. THE CALCULATION ICCC-ES OR IAMAO-ES) REPORT. 13. REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS. 14. THE GREENAL CONTRACTORL PROMINE SUPERMICTIONAL ADD THE MONTONIC ASTMETE 14. THE GREENAL CONTRACTORL PROMINE SUPERMICTIONAL ADD THE MONTONIC ASTMETE 15. REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL 100HTHERIGIT STEEL FRANNUNG (STEEL STUDE) 1. THE GREENAL CONTRACTORL PROMINE SUPERMICTIONAL ADD THE MONTONIC ASTMETE 15. ALL STUDG AND ACCESSORES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHANN ON 14. THE GREENAL CONTRACTORL PROMINE SUPERMICTIONAL ADD THE MONTONIC ASTMETE 15. ALL STUDG AND ACCESSORES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHANN ON 14. THE GREENAL CONTRACTORL PROMINE ADD THE MONTONIC AST OF THE CONTRACTOR STRUCTURAL 14. BIAMONE CONTRACTORL PROMINE STRUCTURAL SAMPLER SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHALL PROMINES. 24. ALL STUDG AND ACCESSORES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHALL SAMPLES 25. ALL STUD MANUTACT	<ul> <li>C. SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TE (CONCRETE)</li> <li>D. SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TE (CANCOREY)</li> <li>10. J-BCJ TS SHALL BE FABRICATED FROM ASTM A36/A307 ROD. GUTS. NUTS AND WASHERS SHALL BE CALVARED. EPHANSION EDITS/SLEEV ANCHORS SHALL BE CALVARED. FOR J-BOLTS WITHOUT FROM WITTED APPROVAL BY STRUCTURAL ENABLES OF LESS SHALL BE FABRICATED FROM ASTM FISS4 MATERIAL, FY=36 KS</li> <li>11. HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM FISS4 MATERIAL, FY=36 KS</li> <li>12. SUBSTITUTION REQUESTS FOR PRODUCTS LIFED ABOVE SHALL BE SUBMITED BY THE CONTRACTOR TO STRUCTURAL STORE OF ANALYSIS (STRUCTURAL STARE) OF AN ENDINE STRUCTURAL STARE OF ANALYSIS (STRUCTURAL STARE) OF AN ENDINE STRUCTURAL STARE OF ANALYSIS (STRUCTURAL STARE) OF AN ENDINE STRUCTURAL STARE OF ANALYSIS (STRUCTURAL STARE) OF AN ENDINE STRUCTURAL STARE OF ANALYSIS (STRUCTURAL STARE) FRANCING STALE AND AND STRUCTURAL STEEL COMPONENTS.</li> <li>11. REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.</li> <li>11. GUTTMEDITI STEEL FRANING (STEEL STURE)</li> <li>11. HE GRAEBAL CONTRACTOR PRODUCT SUPERINTENDENT AND FRE LICOTTENENT STEEL FRANKING WORK TO REVEAL REAL REVEAL SAND PROCEEDURES.</li> <li>12. ALL STLOS AND ACCESSORIES SHALL BE OF THE TITE, SZE, GAUGE AND BACKING SHOWN ON THE EXAMINASS. STUD MANUFACTUREND OF ALL MEMBERS AND ACCESSORIES SHALL COMPLEX.</li> <li>12. ALL STLOS AND ADOLTS MEMBERS IS GAUGE AND HEAVER SHALL BE FORMED FROM STEEL STRUCTURAL WORK TO THE MEMBERS. THE AND ACCESSORIES SHALL COMPLEX SUPERING AND ACCESSORIES SHALL COMPLEX SUPERING AND ACCESSORIES SHALL COMPLEX SUPERING AND AND AND ACCESSORIES SHALL COMPLEX SUPERING AND AC</li></ul>		B. HIT-HY 70 (ICC-ES ESR-2682) BY HILTI (MASONRY)	
<ul> <li>D. SET ((CC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY)</li> <li>ID. J-BOLTS SHALL BE FABRICATED FROM ASTM AS(ASOT ROD, BOLTS, NUTS AND WASHERS SHALL BE CALVARED. EXPANSION BOLTS/SLEEV EARONGES SHALL DE SUBSTITUTED FOR J-BOLTS WITHOUT FROM WORTS AFF. AND AND AND STRUCTURAL ENGINEER.</li> <li>III. HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM FISSA MATERIAL, FY-36 KSI</li> <li>SUBSTITUTED ENGINEER ALONG WITH CALCULATIONS SHALL BE SUBWITED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS SHALL DE SUBWITED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS SHALL DE DEGINE THAT THE CREATE AND THE STRUCTURAL ENGINEER THAT THE CREATE AND THE STRUCTURAL ENGINEER THAT ARE PROPARED &amp; SEALED BY A REGISTRED THEORESISMAL BOOKERS THAT ARE PROPARED &amp; SEALED BY A REGISTRED THEORESISMAL ENGINEER ALONG WITH CALCULATIONS SHALL DEMONSTRATE THAT THE CREATE AND THE STRUCTURAL AND HEAL PERMONDRATE AND THE STRUCTURAL ENGINEER AND CALCULATIONS SHALL BE OST THE STRUCTURAL MADERS SHALL HAVE A VALID CURRENT FOR THE ORDER OF AND CALCULATIONS SHALL HAVE A VALID CURRENT FOR THAT THE CONTRACTOR THE STRUCTURAL MEDICATE STRUCTURAL STREEL COMPORETS.</li> <li>IDENTIFICATION AND AND THE STRUCTURAL STREEL STRUCTURAL STREEL COMPONENTS AND PROCEDURES.</li> <li>I. THE GENERAL CONTRACTOR, PERINETS SHALL BE O STRUCTURAL ENGINE FROM TO THE STRUCT OF LIGHTWEIGHT STREEL FRAMING WORK TO REVEW PROJECT REQUIREMENTS AND PROCEDURES.</li> <li>ALL STUDS AND AND STRUCTURAL MEDIC THE TYPE, STRUCTURAL MEDICINE AND AND ACCESSORY STRUCTURAL MEDICATION TO THE DIESING OF COLD-FORMES STREEL COMPERTS AND AND ACCESSORY STRUCTURAL COMPLY */ ASTNU C 950.</li> <li>ALL STUDS AND AND FACTUREING OF ALL MEDICERS, AND ACCESSORY TICKS SHALL BE ORDER TO COLD-FORMES STREEL STRUCTURAL MEMBERS', WITH A NINNUM YELD STRENGTH OF SAME AND ACCESSORY STRUCTH OR TO ANY AND AND ACCESSORY TICKS SHALL BE OTHER STRUCTURE. THE STRUCTURAL MEMBERS', WITH A NINNUM YELD STRENGTH OF SAME ASTICURES STRUCTH AC CONTRESCHARES AND AND ACCESSORY TICKS SHALL</li></ul>	<ul> <li>D. SET ((CC-ES ESR-1772) BY SIMPSON STRONG-TE (MASONRY)</li> <li>D. J-BOLTS SHALL BE FABRICATED FROM ASTM ASE/ASO7 ROD. BOLTS, NUTS AND WASHERS SHALL BE CALVMARED. EXPANSION BOLTS/SLEEV ACHORS SHALL NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT FROM WOTTEN APPROVAL BY STRUCTURAL ENGNEER.</li> <li>II. HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM FISSA MATERIAL, FY-36 KS</li> <li>SUBSTITUTION RODERST FOR PRODUCTS USED ABOVE SHALL BE SUBWITED BY THE CONTRACTOR TO THE STRUCTURAL ENGNEER ALONG WITH CALCULATIONS THAT ARE PREPARED &amp; SALED BY A SUBSTITUTE DEVICE AND COME OF THE ONE TRUTH EQUIVALIST DEFORMANCE AND THE STRUCTURAL ENGNEER ALONG WITH CALCULATIONS THAT ARE PREPARED &amp; SALED BY A SUBSTITUTE DEVICORS SHALL BE VARIOUS THE STRUCTURAL STRUE OF AND ADDLE OF THE STRUCTURAL STREEL ADDLE OF AND ADDLE OF THE STRUCTURAL STREEL NOTES FOR BOLTS CONNECTING STRUCTURAL STREEL COMPONENTS.</li> <li>I. REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STREEL COMPONENTS.</li> <li>I. HE OPERAL CONTRACTOR PROJECT SUPERINTENDENT AND THE LIGHTWEIGHT STREEL TRUMING CISTED SHALL GOT THE TYPE STRUCTURAL STREEL FRAMING WORK TO REVER FROME TO THE START OF USESTATION ON THE DERIMAN STALL LET WITH THE STRUCTURAL ROMARDER PROVE TO THE START OF USESTATION OF AND ADDCESSOR SHALL GOT THE STRAT OF USESTATION OF AND ADDCESSOR SHALL BE FORMED FROM STOLES.</li> <li>J. ALL STUDS AND ADDLESS SHALL BE TO THE TYPE, SIZE CAUGE AND SPACING SHOWN ON THE DERIMANT STRUCTURAL ROMARD RADIO COSTAND HAVENDAL THEORY OF A ALL MANADAM YELD STRENDTH OF STALL SECOND STRUCTURAL WOLD OTHERWSE.</li> <li>J. ALL STUDS AND ADDLESS SHALL BE TORMED FROM STELL STRUCTURAL TO THE STRUCTURAL TO THE STRUCTURAL WOLD OTHERWSE.</li> <li>J. ALL STUDS AND ADDLESS SHALL BE TORMED FROM STELL STRUCTURAL MOLESS SPECIFICALLY NOTE OTHERWSE.</li> <li>J. ALL STUDS AND ADD COSTAGE AND HEAVER SHALL BE FORMED FROM STELL STRUCTURAL MOLESS ADD COSTAGE WITH THE THE ADD MANY THED STRUCTURAL TOTAL MANY THE STRUCTURAL TO THE STRUCTURAL TO THE STRUCTURAL TO THE DEADYNCE.</li> <l< td=""><td></td><td>C. SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)</td><td></td></l<></ul>		C. SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)	
10. J-BOLTS SHALL BE FARRICATED FROM ASTM A35/A307 ROD. BOLTS, NUTS AND WASHERS SHALL BE CALVARDE EXPANSION DO TS/SLEEV ANCHORS SHALL BEGALVARD. NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT FROM WATTER APPROVAL BY STRUCTURAL ENGINEER. 11. HEADED ANCHOR ROOS SHALL BE FABRICATED FROM ASTM FISS4 MATERIAL, FV=36 KSI 12. SUBSTITUTION REQUESTS FOR PRODUCTS USED ABOVE SHALL BE SUBSTITUTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE PREPARED & SCALED BY A REGISTERD PROFESSIONAL ENGINEER ALONG WITH CALCULATIONS SHALL DEMONSTRET THAT THE REAL REGISTERD PROFESSIONAL ENGINEER ALONG WITH CALCULATIONS SHALL DEMONSTRET THAT THE REAL REGISTERD PROFESSIONAL ENGINEER ALONG WITH CALCULATIONS SHALL DEMONSTRET THAT THE REAL REGISTERD PROFESSIONAL ENGINEER ALONG WITH CALCULATIONS SHALL BLAY AND/OR STANDAROS. SUBSTITUTE AUGURES SHALL BAY A VALID CURRENT EVALUATION (CC-ES OR IAPMO-ES) REPORT. 13. REFERENCE STRUCTURAL STELL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS. 14. DETEMPTIONAL CONTRACTOR. PRODUCT SUBERINTRINON AND THE JUCHTWEIGHT STREEL FRAMING (STEEL STUDS) 15. THE GRIDERAL CONTRACTOR. PRODUCT SUBERINTRINON AND THE JUCHTWEIGHT STREEL FRAMING WORK TO REVEW FRANCE TREEL GAUGURE PROR TO THE START OF LUCHTWEIGHT STREEL FRAMING WORK TO REVEW FRANCET REQUERTIONS AND PROCEDURES. 2. ALL STUDG AND JOST WEIDERS SHALL EGO THE TYPE STEL STRUCTURAL ENGINEER PROR TO THE START OF LUCHTWEIGHT STREEL STRUCTURAL MEMBERS', WITH A MINMUM YELD STRENGTH OF SO KSI UNLESS STRUCTURAL MEMBERS', WITH A MINMUM YELD STRENGTH OF SO KSI UNLESS STRUCTURAL MEMBERS', WITH A MINMUM YELD STRENGTH OF SO KSI UNLESS STRUCTURAL MEMBERS', WITH A MINMUM YELD STRENGTH OF SO KSI UNLESS STALL ECONTROLOGY AND MONTARY AND ACCESSORY TEMS SHALL BE OF SOMO SO THE STRUCTURAL MEMBERS', WITH A MINMUM YELD STRENGTH OF SO KSI UNLESS STALL STRUCTURAL MEMBERS', WITH A MINMUM YELD STRENGTH OF SO KSI UNLESS STALL BE ORD SOLS OR ATTER STRUCTURAL MEMBERS', WITH A MINMUM YELD STRENGTH OF SO KSI UNLESS STALL STRUCTURAL MEMBERS', WITH A MINMUM YELD ST	10. J=BCLTS SHALL BE FABRICATED FROM ASTM ASY/ASY ROD. BOLTS, MUTS AND WASHERS SHALL BE CALVARGED EXPANSION BOLTS/SLEEV ANCHORS SHALL DE SUBSTITUTED FOR J=BCLTS WITHOUT PRICE WITHOUT PRICE WITHOUT PRICE MOLTS/SLEEV ANCHORS SHALL BE SUBMITTED BY THE CONTRACTOR WITHOUT PRICE WITHOUT PRICE MOLTS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY=36 KSI 11. HEADED ANCHOR ROODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY=36 KSI 22. SUBSTITUTED LINNEERR ALONG WITH CALCULATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURE LONNEERR THE CALULATIONS SHALL DEMONSTRATE FIAT THE CREATED BY A RECEIPTED PRODUCTS USING THE APPROPRIATE DESIGN PROCEDUBE AND/OR STANDAROS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT. 13. REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS. 10. INTEL FRAMING (STEEL STUER) 14. DETUDE DATES FOR BOLTS SUPPORTATIONENT AND THE LIGHTFEIGHT STEEL FRAMING WORK TO REVEW PROCECT REQURRENTS AND PROCEDURES. 24. LETIDS AND AANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY W/ ASTM C650. 24. ALL STUDS AND LACCESSORIES SHALL EO THE THE START OF LIGHTWEIGHT STEEL FRAMING WORK TO REVEW PROCECT REQURRENTS AND PROCEDURES. 24. ALL STUDS AND LACCESSORIES SHALL EO THE THE START OF STOMED FROM STEEL COMPLY W/ ASTM C650. 24. ALL STUDS AND LACCESSORIES SHALL EO THE THE START OF ROM STEEL STRUCTURAL STEEL COMPLY AND ASTM C650. 24. ALL STUDS AND LACCESSORIES SHALL EO COMPLY AND ACCESSORY TENS SHALL EO COMPLY AND ASTM C650. 24. ALL STUD AND LECT MEMBERS, TRACK, BRODONG, AND ACCESSORY TENS SHALL EO COMPLY AND ASTM C650. 24. ALL STUDS AND AND MEMORY FOR THE DURING MEMBERS. 25. ALL FRAMING COMPONENTS OF STANL EF CONCED FROM STEEL STRUCTURAL MEMBERS. WITH A MINIMUM TELD STRUCTURAL MEMBERS. WITH A MINIMUM TELD STRUCTURAL MEMBERS. TRACK BRODONG, AND ACCESSORY TENS SHALL EO CONCEPTIONED THE START ESTIMATION OF STUDE STRUCTURAL MEMBERS. WITH A MINIMUM TELD STRUCTURAL MEMBERS. SHALL EO THE THE STRUCTURAL STRUCTURAL MEMBERS. SHALL EO CONCENTS O		D. SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY)	
<ol> <li>HEADED ANCHOR ROOS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY=36 KSI</li> <li>UBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STUCUTURAL ENDERER ALONG WIT ACCILLATIONS SHALL DEWONSTRATE THAT THE REGISTRED PROFESSIONAL EXAMINES. THE CALCULATIONS SHALL DEWONSTRATE THAT THE STATE AND ADDRESSIONAL EXAMINES. THE CALCULATIONS SHALL DEWONSTRATE THAT THE STATE AND ADDRESSIONAL EXAMINES. THE CALCULATIONS SHALL DESCONFIGURE ADD, OR REGISTRED PROFESSIONAL EXAMINES. THE CALCULATIONS SHALL DESCONFIGURE ADD, OR STANDARDS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPWO-ES) REPORT.</li> <li>REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.</li> <li>INTEGENERAL CONTENTION PROFECT SUBJECT</li> <li>THE GENERAL CONTENTION PROFECT SUBJECT</li> <li>THE STRUCTURAL STELL INTEND THE STRUCTURAL ENGINEER AND ACCESSORES SHALL COMPLY W/ ASIM 0 30.</li> <li>ALL STUDS AND ADJECT MEMBERS 16 GAUGE AND HEAVER SHALL DE STRUCTURE SHALL ECOMPLY W/ ASIM 0 30.</li> <li>ALL STUDS AND DATE MEMBERS 16 GAUGE AND HEAVER SHALL DE STRUCTURE SHALL ECOMPLY W/ ASIM 0 30.</li> <li>ALL STUDS AND ADJECT MEMBERS 16 GAUGE AND HEAVER SHALL DE STRUCTURE FORM STELL CORRESPONDING TO A THE BUSTED IN THE ASIN. "SPECIFICATION FOR THE DESING TO CORRESPONDING TO A THE USTED IN THE ASIN."SPECIFICATION FOR THE DESING TO STRUCTURE AND MACUNE MEMBERS 16 GAUGE AND HEAVER SHALL BE STRUCTURE THE STELL CORRESPONDED TO A THE ASIN SPECIFICATION FOR THE DESING TO CORRESPONDE TO A THE ASIN SPECIFICATION FOR THE DESING TO TH</li></ol>	<ol> <li>HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY-36 KSI</li> <li>JUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR REGISTRED PROFESSIONAL ENGINEER ALONG WIT ACCULATIONS SHALL DECONSTRACT HAT THE REGISTRED PROFESSIONAL ENGINEER ALONG WIT ACCULATIONS SHALL DECONSTRACT HAT THE REGISTRED PROFESSIONAL ENGINEER ALONG WIT ACCULATIONS SHALL DECONSTRACT BY REGISTRED PROFESSIONAL ENGINEER ALONG WIT ACCULATIONS SHALL DECONSTRACT DESIGN PROCEDURE AND/OR STANDARDS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPWO-ES) REPORT.</li> <li>REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.</li> <li>JIEG GENERAL CONTENTION PRODUCT USING THE APPROPRIME DESIGN PROCEDURES.</li> <li>JIEG GENERAL STEEL FRAMMS (STEEL STUDS)</li> <li>THE GENERAL CONTENTION PROFENDING AND THE STRUCTURAL ENGINEER PROCE TO THE STAFT OF TAUMOR COREMAN SHALL MEET WITH THE STRUCTURAL ENGINEER PROCE TO THE STAFT OF THE DRIVENES.</li> <li>JIEG STARD ACCESSORIES SHALL BE OF THE TYPE, SZE, GAUGE AND SPACING SHOWN ON THE DRIVENES STDU MANUFACTURENG OF ALL MEMBERS AND ACCESSORY SHALL COMPLY W/ ASTM C 330.</li> <li>JILL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SZE, GAUGE AND SPACING SHOWN ON THE DRIVENES STDU MANUFACTURENG OF ALL MEMBERS AND ACCESSORY TEME SHALL BE CORRESPONDING TO A TYPE USTED IN THE ALS.I. "SPECIFICATION FOR THE DESION OF CORESSONDING TO A TYPE USTED IN THE ALS.I." SPECIFICATION FOR THE DESION OF CORESSONDING TO A TYPE USTED IN THE ALS.I." SPECIFICATION FOR THE DESION OF DO KS UNLESS SPECIFICATION TOR THE DESIGN OF COLD FORMED SHALL BE FORMED MEMBERS.</li> <li>JILL BRUNG AND UNDER THE MEMBERS, TRACK, BROONG, AND ACCESSORY TEMES SHALL BE FORMED MEMBERS TO THE WEEKERS THE CASC MEETS SHALL BE TO THE THE DESION OF CORESSONDING TO A TYPE USTED IN THE ADSOLUTION FOR THE DESION OF DO KS UNLESS SPECIFICATION TO THE THE DESIGN OF COLD—FORMED SHALL BE FORMED MEMBERS.</li>     ALL IS CAUGE AND MALL BE</ol>	10.	J-BOLTS SHALL BE FABRICATED FROM ASTM A36/A307 ROD. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. EXPANSION BOLTS/SLEEVE ANCHORS SHALL NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER.	
<ol> <li>22. SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBJATTED BY THE CONTRACTOR AND THER ALLON WITH CALCULATIONS SHALL DE SUBJATTED BY THE CONTRACT THAT THE SUBJATTED REPORTED AS A CAPABLE OF A CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTION PRODUCTS IS CAPABLE OF A CHAILANNE SHALL DEMONSTRATE THAT THE SUBSTITUTION PRODUCTS IS CAPABLE OF A CHAILANNE NAME OF CAPABLE OF A CHAILANNE A VALUE DURRENT E SUBJATTED REPORTANCE ON MACORS SHALL BE ALLONG TO SUBJATE DESIGN PROCEDURE, AND YOR SUBJATED AS THE APPROPRIATE OF CAPABLE OF A CHAILANNE A VALUE OWNERNE TEXT OF CAPABLE AS THE STRUCTURAL AND THE LIGHTFEIGHT STEEL FRAMING WORK TO REVEW PROJECT REQUIREMENTS AND PROCEDURES.</li> <li>ALL STUDS AND ACCESSORES SHALL BE OF THE TYPE, SUF_CAUCAT AND THE DESIGN ON ON THE DRAWNING STUD MANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL DESTINATION (COPE OF COLOR-FORMED TRANS STUD MANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY */ ASTM C 955.</li> <li>ALL STUDS AND JOST MEMBERS IS GAUGE AND HEAVER SHALL BE FORMED FROM STEEL CONFIDENTING OF THE DESIGN OF COLOR-FORMED STEEL STUDUTINAL MEMBERS. THAX MINIMUM MELD STRENGTH OF SO KSI UNLESS SPECIFICALLY NOTED OTHERMISE.</li> <li>ALL IS GAUGE AND LIGHTER MEMBERS, TRACK BINGWIG, AND ACCESSORY ITEM SHALL BE FORMED FROM STEEL STEEL STUDUTINAL MEMBERS.</li> <li>ALL FRAMING GORDORIDS SHALL BE CORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM YELD STRENGTH OT SIX SI UNLESS SPECIFICALLY NOTED OTHERMISE.</li> <li>ALL FRAMING CONFORMENTS SHALL BE COLOR OF COLD-FORMED STEEL STUDUTRAL MEMBERS.</li> <li>ALL STUDS MODILOS SHALL BE CORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM YELD STRENGTH OT SIX SI UNLESS SPECIFICALLY NOTED OTHERMISE.</li> <li>ALL AFRANG RODOUCTS SHALL BE CORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MI</li></ol>	12. SUBSTITUTION ECULSTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR 12. SUBSTITUTION ECULSTS FOR PRODUCTS LOSTER ALONG SHALL DEMONSTRATE THAT THE SUBSTITUTION ECULSTS FOR PRODUCTS CONTRALE OF ADMINISTRATE TRANSMERE & STATUDATES SUBSTITUTION PRODUCTS CONTRALE OF ADMINISTRATE TOWATING THE CONTRACTS SUBSTITUTION ACHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT. 13. REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS. LIGHTERIGHT STEEL FRAMING (STEEL STUDS) 1. THE GINNEL, CONTRACTOR, BEORG TOWERS THE STRUCTURAL STEEL COMPONENTS. LIGHTERIGHT STEEL FRAMING (STEEL STUDS) 1. THE GINNEL, CONTRACTOR, BEORG TOWERS STRUCTURAL DONCESS READ FOR IAPMO-ES) REPORT. 3. ALL STUDS AND ACCESSORES SHALL BE OF THE TYPE, SZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS, STUD MANUFACTURENING OF ALL MEMBERS AND ACCESSORES SHALL COMPLY #/ ASTM CSS. SUD MANUFACTURENING OF ALL MEMBERS AND ACCESSORES SHALL COMPLY #/ ASTM CSS. SUD MANUFACTURENING OF ALL MEMBERS THAN AND SPACING SHOWN ON THE DRAWINGS, STUD MANUFACTURENING OF ALL MEMBERS AND ACCESSORES SHALL COMPLY #/ ASTM CSS. SUD MANUFACTURENING OF ALL MEMBERS THAN ACCESSORES SHALL COMPLY #/ ASTM CSS. SUD MANUFACTURENTS OF ALL MEMBERS THACK, BROGING, AND ACCESSORES SHALL BE FORMED FROM STELL STEEL STUDIE DIN THE ALSI. SPECIFICATION FOR THE DESION OF SO KSI UNLESS SPECIFICATION FOR THE DESIDENT THE DISSING OF SOLUTIONAL FOR THE SHALL BE FORMED MEMBERS IS UNACCEPTABLE FOR MEED FROM STEEL STRUCTURAL MEMBERS, WITH A MINIMUM MELD STRUCTURE ON A COESSORY THEMS SHALL BE FORMED FORMALLY NOTED ONE MEMBERS THACK, BROGING, AND ACCESSORY THEMS SHALL BE FORMED MEMBERS IS UNACCEPTABLE. 4. ALL 18 CAUGE AND LIGHTER MEMBERS, THACK, BROGING, AND ACCESSORY THEMS SHALL BE FORMED MEMBERS IS UNACCEPTABLE. 5. ALL FRAMING COMPONENT SOLTAL BEFORE THE DISSING OR SHEARING, TORCH CUTHANISE. 5. ALL FRAMING COMPONENT SOLTAL BE FORMED FROM STEED STOLES SHALL BE FORMED MEMBERS IS UNACCEPTABLE. 6. ALL FRAMING COMPONENT SOLT	11.	HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY=36 KSI	
<ol> <li>REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.</li> <li>ISTEL STEEL FRAMING (STEEL STUDS)</li> <li>THE GENERAL CONTRACTOR, PROJECT SUPERINTERNENT AND THE LIGHTENGET STEEL FRAMING FOREMAL SHALL MEET WITH THE STRUCTURAL PROMEER PRIOR TO THE START OF LIGHTWEIGHT STEEL FRAMING WORK TO REVEW PROJECT REQUIREMENTS AND PROCEDURES.</li> <li>ALL STUDS AND ACCESSORES SHALL BE OF THE TYPE, SZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS, STUD MANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY w/ ASTM C 955.</li> <li>ALL STUDS AND JOST MEMBERS 16 GAUGE AND HEAVER SHALL BE FORMED FROM STEEL CORRESPONDING TO A TYPE USTED IN THE A.IS.I. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM YELD STRUCTING FROM STEEL SECONCEPTORAL DURING THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS,", WITH A MINIMUM YELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIRENTS OF ASTM BB3, GB0.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, GR, AS REQUIRED, FOR AN ANOULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, GR, AS REQUIRED, FOR AN ANOULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE DONE BY SAWING OR SHEARING, TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTAME.</li> <li>WHEN REQUIRED, FOR MEDIONG PUPPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT AUGINAL CONNECTION AND INDEXING BETALLS.</li> <li>MO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARTING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARTINED TO THE TRACK FLANGES AT BOTH SURGURVE AND FRACKSCE.</li> <li>MHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF</li></ol>	<ol> <li>13. PERFENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.</li> <li>I. THE GENERAL CONTRACTOR, PROJECT SUPERINTENDENT AND THE LIGHTWEIGHT STEEL FAMINE OF STEEL FAMING (STEEL STUDE)</li> <li>I. THE GENERAL CONTRACTOR, PROJECT SUPERINTENDENT AND THE LIGHTWEIGHT STEEL FAMINES AND ACCESSORIES SHALL BE OF THE TYPE, SZE, GAUGE AND SPACING SHOWN ON the DTAMING STUD MANUFACTREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY w/ ASTW C 955.</li> <li>ALL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SZE, GAUGE AND SPACING SHOWN ON the DTAMING STUD MANUFACTREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY w/ ASTW C 955.</li> <li>ALL STUDS AND JOST MEMBERS 16 GAUGE AND HEAVER SHALL BE FORMED FROM STEEL CORRESPONDING 10 A THE USED IN THE ALSJ. "SPECIFICATION FOR THE DESION COLE-FORMED STEEL STUDG WARMERS", WITH A MINIMUM HELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY MODIO THEIMERS.</li> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEM SHALL BE FORMED FROM STEEL "SPECIFICATION FOR THE DESION OF COLD-FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM HELD STRENCTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL FRAMING COMPONENTS SHALL BE CONED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, GGO.</li> <li>ALL FRAMING COMPONENTS SHALL BE COLT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS IS UNACCEPTABLE.</li> <li>MEEN REQUIRED, FOR AN ANGUAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE COLT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS IS UNACCEPTABLE.</li> <li>MEEN REQUIRED, FOR MIN AND MOLENTING DETAILS.</li> <li>MO SPLUCES IN STUDS, JOISTS OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT FORME MEMBERS IS UNACCEPTABLE.</li> <li>MEEN REQUIRED FOR MEMBERS SUCH A STRUSSES, POSTS, HEADERS AND JAMES, THE TRACK MUST BE INSTALLED AS A SINGLE PECE; NO SPLUCING IS PERMITTED.</li> <li>MEENE SPLUCING OF WALL TRACK IS MECESSARY BETWEEN STUDS. A</li></ol>	12.	SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARDS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT.	
LIGHTWEIGHT STEEL FRAMING (STEEL STUDS)         1. THE GENERAL CONTRACTOR, PROJECT SUPERINTENDENT AND THE LIGHTWEIGHT STEEL FRAMME CONTROL MAL MEET WITH THE STRUCTURAL ENGINEER PRIOR TO THE START OF LIGHTWEIGHT STEEL FRAMME WORK TO REVEW PROJECT RECUIREMENTS AND PROCEDURES.         2. ALL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND PROCEDURES.         3. ALL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND PROCEDURES.         4. ALL STUDS AND JOIST MEMBERS 16 GAUGE AND HEAVIER SHALL BE FORMED FROM STEEL COMPLY W/ ASTM 0 955.         5. ALL STUDS AND JOIST MEMBERS 16 GAUGE AND HEAVIER SHALL BE FORMED FROM STEEL STUDCTURAL MEMBERS', WITH A MINIMUM YELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.         4. ALL 18 CAUGE AND LUTTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL "SPECIFICALTY NOTED OTHERWISE.         5. ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM YELD STEENCITY OF ASTM 653, GEO.         6. ALL FRAMING CONFORMTS SHALL BE COTISQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.         7. ALL FIELD CUTTING OF STUDS MUST BE DUTS BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORWED ROMECETION AND INDEXING DETAILS.         8. WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PURCH OUT AUTONG OF STUDS. MUST BE DUTS BY ASHING MEMBERS MAY BE MADE WITHOUT PRIOR ENGNERING REMEDIAG FAMING AND FIELD CUTTING STUDS TO CANTY ON THE TACK.         9. NO SPLICES IN STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING OR OPHIC FORM STUDS ON CARTY MET TACK.         9.	LIGHTTEIGHT STEEL FRANING (STEEL STUDE)         1. THE GENERAL CONTRACTOR, PEOLECT SUPERINTENDENT AND THE LIGHTTEIGHT STEEL FRANKE OF CONTRACTOR, PEOLECT REQUIREMENTS AND PROCEDURES.         2. ALL STUD CORMAN STALL MEET WITH THE STRUCTURAL ENDINEER FRIGHT TO THE START OF LIGHTWEIGHT STEEL FRANKE ORSENES SHALL BE OF THE TYPE, SZE, GAUGE AND SPACING SHOWN ON THE DESIGN OF A TYPE USTED IN THE ALSI. "SPECIFICATION FOR THE DESIGN OF CORRESPONDING TO A TYPE USTED IN THE ALSI. "SPECIFICATION FOR THE DESIGN OF CORRESPONDING TO A TYPE USTED IN THE ALSI. "SPECIFICATION FOR THE DESIGN OF COLO_FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM MED STRUCTURAL STRUCTURAL MEMBERS", WITH A MINIMUM MED STRUCTURAL MEMBERS, "WITH A MINIMUM PLOT STRUCTURAL STRUCTURAL MEMBERS", WITH A MINIMUM PLOT STRUCTURAL STRUCTURAL MEMBERS," WITH A MINIMUM PLOT STRUCTURAL STRUCTURAL STRUCTURAL MEMBERS, "WITH A MINIMUM PLOT STRUCTURAL COARDERS STRUCTURAL STRUCTURAL MEMBERS," WITH A MINIMUM MED STRUCTURA DESCRIPTION OF CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, GGO.         6. ALL FRANKING COMPONENTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS AND FRONT DO STRUCTURE PUNCH OUT ALL FILL CUTTING OF STUDS MUST BE DONE BY SAWING OR SHARING. TORCH CUTTING OF COLD FORMED MEMBERS SINCE A COATING STUDS.	13.	REFERENCE STRUCTURAL STEEL NOTES FOR BOLTS CONNECTING STRUCTURAL STEEL COMPONENTS.	
<ul> <li>The Mathematical Action of the Standard Stan</li></ul>	<ul> <li></li></ul>	L	IGHTWEIGHT STEEL FRAMING (STEEL STUDS)	
<ol> <li>ALL SIUUS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS, STUD MANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY w/ ASTM C 955.</li> <li>ALL STUDS AND JOIST MEMBERS 16 GAUGE AND HEAVIER SHALL BE FORMED FROM STEL CORRESPONDING TO A TYPE LISTED IN THE ALSI. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STELL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STELL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STELL SPECIFICATION FOR THE DESION OF COLD-FORMED STELL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL FRAMING COMPONENTS SHALL BE CORED FROM STELL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, GGO.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALIGNMERT WHEN ASSEMBLING RAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OF CAULT TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT DOTH STRUCTURE EITHER TACK SECTIONS AND FAS</li></ol>	<ol> <li>ALL SIJUS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DERAWINGS. STUD MANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY W/ ASTM C 955.</li> <li>ALL STUD MANUFACTUREING OF ALL MEMBERS, WITH A MINIMUM YIELD STEEDSON DIA TO A TYPE LISTED IN THE ALLSI. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STUDUTURAL MEMBERS.", WITH A MINIMUM YIELD STEENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.", WITH A MINIMUM YIELD STRENGTH OF 53 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, 660.</li> <li>ALL FRAMING PRODUCTS SHALL BE CONE OF Y SAWING OR SHEARING. TORCH CUTING OF COLD FORMED KEQUIRED, FOR AN ANGULAR HT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE CONE BY SAWING OR SHEARING. TORCH CUTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALEONAEDT WHEN ASSEMBLING FRAMING AND FIELD CUTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PROR ENGINEERING REVEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OF CONNE OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHER SPLICING OF WALL TRACK SCHARY BETMED TO THE TRACK FLANGES AT BOTH STUDUTRE CONNECTION AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OF WALL TRACK SCHARY BETMED TO THE TRACK FLANGES AT BOTH STUDUTRE STRUCTURE DATA THE JOINT.</li> <li>FORKED SING DO THE KAND ACCESS SHALL BE DITTED TO THE TRACK FLANGES AND JAMES, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE</li></ol>	1	FRAMING FOREMAN SHALL MEET WITH THE STRUCTURAL ENGINEER PRIOR TO THE START OF LIGHTWEIGHT STEEL FRAMING WORK TO REVIEW PROJECT REQUIREMENTS AND PROCEDURES.	
<ol> <li>ALL STUDS AND JOIST MEMBERS 16 GAUGE AND HEAVER SHALL BE FORMED FROM STELL CORRESPONDING TO A TYPE LISTED IN THE ALSI. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STELL STRUCTURAL MEMBERS.", WITH A MINIMUM YIELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STELL "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STELL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL FRAMING PRODUCTS SHALL BE FORMED FROM STELL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTINO MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTINO MEMBERS.</li> <li>ALL FRED CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED, FOR ANNING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPUCKS IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHERE SPLICING OR WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALL OR THE TRACK SHALL BE BUTTED TIGET THER AND FASTENED TO STRUCTURE ETHER SIDE OF THE DIAMETER AND FASTENED TO THE TRACK FLANGES AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE. NO SPLICING IS PERMITTED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND FASTENED TO THE TRACK FLANGES AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE. NO SPLICING IS PERMITTED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDIC</li></ol>	<ol> <li>ALL STUDS AND JOIST MEMBERS 16 GAUGE AND HEAVER SHALL BE FORMED FROM STELL CORRESPONDING TO A TYPE LISTED IN THE ALSI. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STELL STRUCTURAL MEMBERS", MITH A MINIMUM YELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERMISE."</li> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STELL "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM MED STERMITH OF 30 KSI UNLESS SPECIFICALLY NOTED OTHERMISE.</li> <li>ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 633, G60.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>MIEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT AUCONNETT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO SPLICES IN THE ADJOINNG TRACK SECTIONS AND FASTENDE TO THE TRACK FLANGES AT BOTH SDESS OF THE WALL OR THE TRACK'S SHALL BE DUTTED TORM TUGE(S).</li> <li>NO SPLICES IN THE ADJOINNE TRACK SECTIONS AND FASTENDE TO THE TRACK FLANGES AND SHALL BE PLACED IN THE ADJOINNE TRACK SECTIONS AND SPLICING IS PERIMITED.</li> <li>HWERE SPLICING OF WALL TRACK SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER INDIG ATEND ASSECTIONS AND SPLICING IS SPECIMINES. AND SHALL BE</li></ol>	2	. ALL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS. STUD MANUFACTUREING OF ALL MEMBERS AND ACCESSORIES SHALL COMPLY w/ ASTM C 955.	
<ul> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE PORMED FROM STEEL "SPECIFICATION FOR THE DESIGN OF COLD—FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM MEDIS STRENGTH OF 33 KS UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL FRAMING OMPORENTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, G80.</li> <li>ALL FRAMINC COMPORENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FRED CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALLONMENT WHEN ASSEMBLING FRAMING AND FILED CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS.</li> <li>NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAMING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SCIONS AND FASTENED TO THE TRACK FLANGES AND BATHS INDES OF THE WALLO AT HE TRACKS SHALL BE BUTTED TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE OF THE JOINT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES NOTED OTHERWED AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; NO SPLICING IS PERMITTED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAMINGS, AND SHALL BE THOSE MANUFACTURED AND TESTED BY IT WE BUILDEX OR EQUIVALENT. A MINIMUM &amp; WICH EDDE DISTANCES AND FASTENED TO STRUCTURE INTERMENTS AND AND FOSTED BY THE BURGON SHALL AND FREE STAND THE TRACK</li></ul>	<ul> <li>ALL 18 GAUGE AND LICHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL "SPECIFICATION FOR THE DESIGN OF COLD—FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM MELDI STRENGTH OF 33 KS UNLESS SPECIFICALLY NOTED OTHERWISE.</li> <li>ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, G60.</li> <li>ALL FRAMING COMPORENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALLONMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS.</li> <li>NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAMING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SCIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALLO AT HE TRACKS SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EINER AND FASTENED AND FASTENED TO STRUCTURE EINER AND FASTENED AS A SINGLE PIECE; NO SPLICING IS PERMITTED.</li> <li>ALL SCREWE SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGWA, AND SHALL BE OF THE JOINT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST GE INSTALLED AS A SINGLE PIECE; NO SPLICING IS PERMITTED.</li> <li>ALL SCREWE SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, SOLEW DESING IS REQUIRED, UNLESS NOTED OTHERWISE ON THE DRAWINGS, SOLEW DESING IS ASCED ON A TYPE T'S SCREW. (UNLESS NOTED OTHERWISE)</li> <li>ALL SCREWE PRETRATION THROUGH JO</li></ul>	3	ALL STUDS AND JOIST MEMBERS 16 GAUGE AND HEAVIER SHALL BE FORMED FROM STEEL CORRESPONDING TO A TYPE LISTED IN THE A.I.S.I. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 50 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.	
<ul> <li>ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, G60.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS.</li> <li>ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SUBS OF THE WALL OR THE TRACK SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; NO SPLICING IS PERMITTED.</li> <li>ALL SOREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, AND SHALL BE TRAGK MUNST BE OF THE DIAMETER AND TRICE ON THE DRAWINGS, AND SHALL BE OF THE STEL BY ITY BUILDEX OR EQUIVALENT. A MINIMUM ½ INCH EDGE DISTANCE AND 1/2 INCH SOREW SPACING IS REQUIRED, UNLESS NOTED OTHERMISE)</li> <li>ALL SOREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, SOREW PENERATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN THREE EXPOSED THREADS. SCREW PENERATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN THREE EXPOSED THREADS. SCREW PENERATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN THREE EXPOSED THREADS. SCREW PENERS: THE FOLLOWING MINIMUM EDGE DISTANCES A</li></ul>	<ul> <li>ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM 653, G60.</li> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANCES AND BALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANCES AND BALL BE THOSE MAULTACTURE EITHER SIDE OF THE JOINT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; NO SPLICING IS PERMITED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, AND SHALL BE THOSE MAULTACTURED AND TRSTED BY ITW BUILDEX OR EQUIVALENT. A MINIMUM ½ INCH EDGE DISTANCE AND 1/2 INCH SCREW SPACING IS REQUIRED, UNLESS NOTED OTHERWISE ON THE DRAWINGS, SCREW PERIFRATION IS REQUIRED, UNLESS NOTED OTHERWISES ON THE DRAWINGS, SCREW PERIFRATION IS BASED ON A TYPE 'T3' SCREW. (UNLESS NOTED OTHERWISE)</li> <li>ALL SOREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED TO TENSION SHALL HAVE A 15MM (MINIMUM) DIAMETER STEEL WASHERS. THE FOLLOWING MINIUM EDGED DISTANCES AND FASTENER SPACING APPLY:</li> <li>INDIA</li></ul>	4	<ul> <li>ALL 18 GAUGE AND LIGHTER MEMBERS, TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", WITH A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE</li> </ul>	
<ul> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALL OR THE TRACKS SHALL BE DUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JONNT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; NO SPLICING IS PERMITTED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, AND SHALL BE THOSE MANUFACTURED AND TSETED BY ITW BUILDEX OR EQUIVALENT. A MINIMUM '\$ INCH EDGE DISTANCE AND 17 INCH SCREW SPACING IS REQUIRED, UNLESS NOTED OTHERWISES ON THE DRAWINGS. SCREW PENETRATION THROUGH JOINED MATERIALS SHALL NOT DE LESS THAN THREE EXPOSED THREADS. SCREW SPACING INS BASED ON A TYPE 'T3' SCREW. (UNLESS NOTED OTHERWISE)</li> <li>ALL POWDER ACTUATED FASTENERS (PLAF:) SUBJECTED TO TENSION SHALL HAVE A 15MM (MINIMUM) DIAMETER STEEL WASHERS. THE FOLLOWING MINIMUM EDGE DISTANCES AND FASTENER SPACING APPLY:</li> <li>THE TRACK MUSTER STEEL WASHERS. THE FOLLOWING MINIMUM EDGE DISTANCES AND FASTENER SPACING APPLY:</li> </ul>	<ul> <li>ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR EMBERS, OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.</li> <li>ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OR COPINC OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANCES AT BOTH SDOES OF THE WALL OR THE TRACK SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.</li> <li>FOR ALL TRACK SUSD IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; IN OSPUCING IS PERMITED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, SARD SHALL BE THOSE MANUFACTURED AND TESTED BY ITW BUILDEX OR EQUIVALENT. A MINIMUM ½ INCH EDGE DISTANCE AND 1/2 INCH SOREW SPACING IS REQUIRED, UNLESS NOTED OTHERWSEON THE DRAWINGS, SCREW PENTRATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN THREE EXPOSED THREADS. SCREW DESIGN IS BASED ON A TYPE 'T3' SCREW. (UNLESS NOTED OTHERWSE)</li> <li>ALL POWDER ACTUATED FASTENERS (P.A.F.) SUBJECTED TO TONISON SHALL HAVE A 15MM (MINIMUM) DIAMETER STEEL WASHERS. THE FOLLOWING MINIMUM EDGE DISTANCES AND FASTENER SPACING APPLY:</li> <li>LID PROMERS STEEL (CONCRETE. STEEL CONCRETE. STEEL CONCRETE. STEEL CONCRETE. STEEL CONCRETE.</li> <li>MINIMERER STEEL WASHERS. THE FOLLOWING MINIMUM EDGE DISTANC</li></ul>	5	. ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A COATING CORRESPONDIN TO THE MINIMUM REQUIREMENTS OF ASTM 653. G60.	G
<ul> <li>ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD FORWED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANCES AT BOTH SIDES OF THE WALL OR THE TRACKS SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; NO SPLICING IS PERMITTED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, AND SHALL BE THOSE MANUFACTURED AND TESTED BY ITW BUILDEX OR EQUIVALENT. A MINIMUM ½ INCH EDGE DISTANCE AND I/2 INCH SOREW SPACING IS REQUIRED, UNLESS NOTED OTHERWISE)</li> <li>ALL SOREW SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, NOTED OTHER BOTH SIDES OF THE WALD FASTENED BY ITW BUILDEX OR EQUIVALENT. A MINIMUM ½ INCH EDGE DISTANCE AND I/2 INCH SOREW SPACING IS REQUIRED, UNLESS NOTED OTHERWISE)</li> <li>ALL POWDER ACTUATED FASTENERS (P.A.F.) SUBJECTED TO TENSION SHALL HAVE A 15MM (MINIMUM) DIAMETER STEEL WASHERS. THE FOLLOWING MINIMUM EDGE DISTANCES AND FASTENER SPACING APPLY:</li> <li><u>PIN DIAMETER STEEL CONCRETE. STEEL OL ONTRO. STEEL TATION HERE STEEL CONCRETE. STEEL OL ONTRO. STEEL TATION SHALL HAVE A 15MM (MINIMUM) DIAMETER STEEL WASHERS. THE FOLLOWING MINIMUM </u></li></ul>	<ul> <li>ALL FIELD CUITING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUITING OF COLD FORMED MEMBERS IS UNACCEPTABLE.</li> <li>WHEN REQUIRED FOR BRIDGING PURPOSES, THE FRAMING FABRICATOR IS TO ENSURE PUNCH OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUITING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAILS.</li> <li>NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).</li> <li>NO NOTCHING OR COPING OF STUDS, JOISTS OR RAFTERS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.</li> <li>WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUDS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALL OR THE TRACKS SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.</li> <li>FOR ALL TRACKS USED IN COMPOSITE MEMBERS SUCH AS TRUSSES, POSTS, HEADERS AND JAMBS, THE TRACK MUST BE INSTALLED AS A SINGLE PIECE; NO SPLICING IS PERMITTED.</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, AND SHALL BE THOSE MANUFACTURED AND TSTED BY ITW BUILDEX OR EQUIVALENT. A MINIMUM ½ INCH EDGE DISTANCE AND 1/2 INCH SCREW SPACING IS REQUIRED, UNLESS NOTED OTHERWISE ON THE DRAWINGS. SCREW BESTED BY INFOLUE MATERIALS SHALL NOT BE LESS THAN THREE EXPOSED THREADS. SCREW SPACING IS REQUIRED, UNLESS NOTED OTHERWISE)</li> <li>ALL SCREWS SHALL BE OF THE DIAMETER AND SIZE INDICATED ON THE DRAWINGS, AND SHALL BE THOSE MANUFACTURED AND TSTED BY INFOLUESE ON A TYPE 'TJ' SCREW. (UNLESS NOTED OTHERWISE)</li> <li>ALL POWDER ACTUATED FASTENERS (P.A.F.) SUBJECTED TO TENSION SHALL NOT BE CLESS THAN THREE EXPOSED THREADS. SCREW BESTEN STED BY INFOL 'TJ' SCREW. (UNLESS NOTED OTHERWISE)</li> <li>ALL POWDER ACTUATED FASTENERS (P.A.F.) SUBJECTED TO TENSION SHALL HAVE A 15MM (MINIMUM) DIAMETER STELL WASHERS. THE FOLLOWING MINIMUM EDGE DISTANCES AND FASTENER SPACING APPLY:</li> </ul>	6	ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR	
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P+ = +30 PSF TOWARDS THE SURFACEP- = -40 PSF AWAY FROM THE SURFACE





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June 28, 2019 IDEA Elsa Academy and College Prep Phase II



# ADDENDUM NO. 1

# A. PURPOSE AND INTENT

This addendum is issued for the purpose of modifying the plans and specifications for the project referenced above.

This addendum shall become part of the contract and all contractors shall be bound by its content. All aspects of the specifications and drawings not covered herein shall remain the same. The Contract Conditions and the Special Conditions of the specifications shall severe all parts of the

The General Conditions and the Special Conditions of the specifications shall govern all parts of the work and apply in full force to this addendum.

# **B. SCOPE**

# I. Specifications:

- 1) Section 260519.19 Metal Clad Cable:
  - a) Added specification. See attached sheets.
- 2) Section 265668 Exterior Athletic Lighting:
  - a) Added specification. See attached sheets.

# II. Drawings:

- 1) Sheet E2.01:
  - a) Revised Lutron Control Symbols. See snap shot below.

# LUTRON CONTROL SYMBOLS:

μ 3π	DIMMING WALLSTATION - LUTRON PX-2BRL-GWH-I01	48"AFF
ESN	ENERGI_SAVR_NODE - LUTRON_OSN-4T16-S	AS REQUIRED
S <sub>20b</sub>	2 QTY. 2 — BUTTON CONTROL STATION — LUTRON MODEL #PX-2B-GWH-101(CW-1-WH). REFER TO LUTRON ONE-LINE DIAGRAM.	48"AFF
S <sub>VS</sub>	MACANCA DIMNING WALL SENDOR SWITCH LOTRON MODEL JUSS 2001 AWAL PROVIDE 0-10V SIGNAL WIRE IN RACEWAY FROM SWITCH TO EACH CONTROLLED LIGHT FIXTURE.	48"AFF

- 2) Sheet E5.01:
  - a) Revise Lighting Control Wiring Detail #01: Provide 2 qty. Lutron control stations at each location indicated. Provide a double gang box rough-in.

#### SECTION 260519.19 - METAL CLAD CABLE

#### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. This section includes the following:
  - 1. Metal Clad (Type MC) and Metal-Clad Interlocking Armor Ground Cable (Type MCI-A).
  - 2. Wiring connections and terminations.
  - 3. Installation methods and procedures.

#### 1.2 RELATED SECTIONS

- A. 26 05 19 Low Voltage Electrical Power Conductors and Cables
- B. 26 05 26 Grounding and Bonding for Electrical Systems
- C. 26 08 11 Testing of Electrical System

#### 1.3 **REFERENCES**

- A. UL 83 Thermoplastic Insulated Wires and Cables
- B. UL 1569 Standard for Metal Clad Cables
- C. NEC NFPA 70, National Electrical Code 2014
- D. ASTM B3 ASTM International Standard B3 Standard Specification for Soft or Annealed Copper Wire
- E. ASTM B8 ASTM International Standard B8 Standard Specification for Concentric-Lay- Stranded Copper Conductors, Hard, Medium-Hard, or Soft
- F. ANSI/NETA ATS International Electrical Testing Association Standard for Acceptance Testing Specifications for Electrical Power Equipment and Systems, 2013 edition

#### 1.4 SUBMITTALS

- A. Product Data Submittals: Submit product data for each type of metal clad cable and fitting indicated.
- B. Quality Assurance/Control Submittals: Submit qualification data for testing agency.
- C. Closeout Submittals: Submit field quality-control test reports.

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#### 1.5 QUALIFICATIONS

- A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
- B. Testing Agency's Field Supervisor: Person currently certified by the International Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in unopened cartons or bundles as appropriate, clearly identified with manufacturer's name, Underwriter's or other approved label, grade or identifying number.

#### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

A. AFC Cable Systems, Inc. or approved equivalent.

#### 2.2 ARMORED CABLE ASSEMBLY

- A. Metal clad cable assemblies shall consist of 2 or more insulated current carrying copper conductors and a green insulated copper ground conductor. The metal clad cable (or armored cable assembly) shall be UL classified as a through-penetrating product (XHLY) for use in one, two or three-hour through-penetration firestop systems (XHEZ). The assembly shall be suitable for use in cable trays in accordance with the NEC.
- B. Current-Carrying Conductors: Soft annealed copper in compliance with the latest edition of ASTM B3 and/or B8; size 12 AWG through 6 AWG. A separate neutral conductor shall be supplied with each phase conductor. Neutral conductor shall be oversized where indicated on the plans.
- C. Insulated Equipment Grounding Conductor: The equipment ground shall be a full-sized insulated conductor with a protective cover, sized in accordance with Table 6.1 of UL 1569. The grounding conductor shall be soft-annealed copper in compliance with the latest edition of ASTM B3 and/or B8.
- D. Isolated Grounding Conductor: An additional isolated, insulated grounding conductor shall be provided where specified in section 26 05 26. The isolated ground shall be a full-sized insulated conductor with a protective cover, sized in accordance with Table 6.1 of UL 1569. The isolated grounding conductor shall be soft-annealed copper in compliance with the latest edition of ASTM B3 and/or B8.
- E. Conductor Insulation: The insulated conductors shall be type THHN 90°C DRY with an extruded polypropylene protective covering. The insulated conductors with protective covering shall be manufactured and tested in accordance with UL 83 and UL 1569.
- F. Armor: An aluminum armor shall be applied over the cabled wire assembly with an

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interlock in compliance with Section 13 of UL 1569. Armor shall be colored to identify the voltage and number of conductors.

#### 2.3 FITTINGS

- A. Fittings shall be UL listed and identified as MCI-A for such use with metal clad interlocking armor ground.
- B. Connectors shall be of steel or malleable iron and shall have saddle clamp to insure a tight termination of MC or MCI-A cable to box.

#### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Scope: Provide metal clad cable for lighting and receptacle branch circuits, excluding home runs. Provide metal clad cable for exterior circuits, generator feeders, and cooling tower circuits.
- B. Interior Routing: Route metal clad cable runs parallel with or perpendicular to walls or structural elements. Route horizontal runs level. Route vertical runs plumb. Rack groups together neatly with both straight runs and bends parallel and uniformly spaced.
- C. Supporting: Provide support for MC cable in accordance with NEC Article 330 or the following, whichever is more stringent.
  - 1. Use of cable tray: Basket, ladder rack, or ventilated cable tray may be utilized for support of metal clad cabling. The sum of the cross-sectional areas of cables shall not exceed the maximum allowable cable fill area allowed by NEC Article 392. Ampacity of cables installed in cable tray shall meet the requirements of NEC 392.80.
  - 2. In existing buildings, provide independently supported cable hangers. These hangers are to be suitable for installation of MC cable.
  - 3. In new buildings, provide a combination of cable tray and/or J cable hangers.
  - 4. Individual metal clad cables hung from roof structure or structural ceiling shall be supported by split-ring hangers and wrought-iron hanger rods. Where three or more metal clad cables are suspended from the ceiling in parallel runs, use steel channels, Unistrut or equal, hung from 1/2-inch (13 mm) rods to support the cables. The cables on these channels shall be held in place with metal clad cable clamps designed for the
    - particular channel that is used.
  - 5. Secure metal clad cable support racks to concrete walls and ceilings by means of cast-in-place anchors; die- cast, rustproof alloy expansion shields; or cast flush anchors. Wooden plugs, plastic inserts, or gunpowder driven inserts shall not be used as a base to secure conduit supports.
  - 6. Support metal clad cable immediately on each side of a bend and not more than 1 foot (300 mm) from an enclosure where a run of metal clad cable ends.
- D. Clearances: Maintain clearances described below.
  - 1. Where metal clad cable is installed parallel to framing members, such as studs, joist, or rafters, support the cable so that the nearest outside surface of the cable is at least 1-1/4 inches (31 mm) from the nearest edge of the framing member. Where this distance cannot be maintained, protect the cable by a steel plate, sleeve, or equivalent that is at

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least 1/16-inch thick.

- 2. Maintain at least 6-inch clearance between metal clad cables and other piping systems.
- 3. Maintain 12-inch (300 mm) clearance between metal clad cables and heat sources such as flues, steam pipes, and heating appliances.
- 4. No metal clad cable shall be fastened to other conduits or pipes or installed so as to prevent the ready removal of other pipes or ducts for repairs.
- E. Fittings: Follow manufacturer's instructions for cable preparation for installation of fittings.

Cleanly cut the cable end with metal clad cable rotary cutting tool to ensure flush seating of the cable into the fitting. Properly torque fitting securement screws.

- F. Splices and Terminations: Make splices at junction boxes with an approved, insulated, live spring type connector such as those manufactured by Scotchlock, 3M or Ideal.
- G. Conductors in Enclosures: Provide neat and workmanlike installation with conductors tied with nylon wire ties in terminal cabinets, gutters and similar locations.
- H. Terminating metal clad cables into panelboards:
  - 1. Provide a junction box within plenum space with sweep elbows down to panelboard, or
  - 2. Use a ladder tray mounted vertically above the panelboard. Strap cables to rungs and install cover on cable tray.
- I. Identification: Identify all wiring with permanent wire labels, using alphanumeric designations. Terminations and splices shall be identically labeled for the same wire (i.e. common conductors terminated in multiple locations). Wire labels shall agree with the circuit designations on the Construction Drawings. Identify conductors in outlets, pull boxes and similar locations where conductors are accessible with printed plastic adhesive tapes to show circuit numbers. Wrap tapes at least two turns around conductor. Mark panel identification number with felt tip pen on cloth or plastic tag and attach to entering conductors with nylon string.

#### 3.2 SITE TESTS, INSPECTION

- A. Hire an independent testing agency to perform acceptance testing.
- B. All fittings and locknuts shall be re-examined for tightness. A continuity test is to be performed at each connection as a final means of inspection for tightness of joints.
- C. Perform site tests in accordance with sections 26 08 11 and 26 05 19.
- D. Perform field tests in conformance with the ANSI/NETA ATS.

END OF SECTION 260519.19

#### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. Work covered by this section of the specifications shall conform to the contract documents, engineering plans as well as state and local codes.
- B. The purpose of these specifications is to define the lighting system performance and design standards for IDEA Schools using an LED Lighting source. The manufacturer / contractor shall supply lighting equipment to meet or exceed the standards set forth in these specifications.
- C. The sports lighting will be for the following venues:
  - 1. Soccer
- D. The primary goals of this sports lighting project are:
  - 1. Guaranteed Light Levels: Selection of appropriate light levels impact the safety of the players and the enjoyment of spectators. Therefore light levels are guaranteed to not drop below specified target values for a period of 25 years.
  - 2. Environmental Light Control: It is the primary goal of this project to minimize spill light to adjoining properties and glare to the players, spectators and neighbors.
  - 3. Cost of Ownership: In order to reduce the operating budget, the preferred lighting system shall be energy efficient and cost effective to operate. All maintenance costs shall be eliminated for the duration of the warranty.
  - 4. Control and Monitoring: To allow for optimized use of labor resources and avoid unneeded operation of the facility, customer requires a remote on/off control system for the lighting system. Fields should be proactively monitored to detect luminaire outages over a 25-year life cycle. All communication and monitoring costs for 25-year period shall be included in the bid.

#### 1.2 LIGHTING PERFORMANCE

A. Illumination Levels and Design Factors: Playing surfaces shall be lit to an average target illumination level and uniformity as specified in the chart below. Lighting calculations shall be developed, and field measurements taken on the grid spacing with the minimum number of grid points specified below. Appropriate light loss factors shall be applied and submitted for the basis of design. Average illumination level shall be measured in accordance with the IESNA LM-5-04 (IESNA Guide for Photometric Measurements of Area and Sports Lighting Installations). Illumination levels shall not to drop below desired target values in accordance to IES RP-6-15, Page 2, Maintained Average Illuminance and shall be guaranteed for the full warranty period.

Area of Lighting	Average Target Illumination Levels	Maximum to Minimum Uniformity Ratio	Grid Points	Grid Spacing
Soccer	30FC	2.5:1	60	30' x 30'

B. Color: The lighting system shall have a minimum color temperature of 5700K and a CRI of 75.

#### 1.3 ENVIRONMENTAL LIGHT CONTROL

- A. Light Control Luminaires: All luminaires shall utilize spill light and glare control devices including, but not limited to, internal shields, louvers and external shields. No symmetrical beam patterns are accepted.
- C. Glare Control: Maximum candela values at a distance of 150 feet and a height of 3 feet are defined for typical sports fields below.

Typical Field Type	Maximum Candela at 150 feet
Soccer	<10,000 candela

- D. Spill Scans: Spill scans must be submitted indicating the amount of horizontal and vertical foot candles along the specified lines. Light levels shall be taken at 30-foot intervals along the boundary line. Readings shall be taken with the meter orientation at both horizontal and aimed towards the most intense bank of lights. Illumination level shall be measured in accordance with the IESNA LM-5-04 after 1 hour warm up.
- E. The first page of a photometric report for all luminaire types proposed showing horizontal and vertical axial candle power shall be provided to demonstrate the capability of achieving the specified performance. Reports shall be certified by a qualified testing laboratory with a minimum of five years' experience or by a manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products. A summary of the horizontal and vertical aiming angles for each luminaire shall be included with the photometric report.

#### 1.4 Cost of Ownership

A. Manufacturer shall submit a 25 year Cost of Ownership summary that includes energy consumption, anticipated maintenance costs, and control costs. All costs associated with faulty luminaire replacement - equipment rentals, removal and installation labor, and shipping - are to be included in the maintenance costs.

#### PART 2 – PRODUCT

#### 2.1 SPORTS LIGHTING SYSTEM CONSTRUCTION

- A. Manufacturing Requirements: All components shall be designed and manufactured as a system. All luminaires, wire harnesses, drivers and other enclosures shall be factory assembled, aimed, wired and tested.
- B. Durability: All exposed components shall be constructed of corrosion resistant material and/or coated to help prevent corrosion. All exposed carbon steel shall be hot dip galvanized per ASTM A123. All exposed aluminum shall be powder coated with high performance polyester or anodized. All exterior reflective inserts shall be anodized, coated, and protected from direct environmental exposure to prevent reflective degradation or corrosion. All exposed hardware and fasteners shall be stainless steel of 18-8 grade or better, passivated and coated with aluminum-based thermosetting epoxy resin for protection against corrosion and stress corrosion cracking. Structural fasteners may be carbon steel and galvanized meeting ASTM A153 and ISO/EN 1461 (for hot dipped galvanizing), or ASTM B695 (for mechanical galvanizing). All wiring shall be enclosed within the cross-arms, pole, or electrical components enclosure.

- C. System Description: Lighting system shall consist of the following:
  - 1. Galvanized steel poles and cross-arm assembly.
  - 2. Non-approved pole technology:
    - a. Square static cast concrete poles will not be accepted.
    - b. Direct bury steel poles which utilize the extended portion of the steel shaft for their foundation will not be accepted due to potential for internal and external corrosive reaction to the soils and long term performance concerns.
  - 3. Lighting systems shall use concrete foundations. See Section 2.4 for details.
    - a. For a foundation using a pre-stressed concrete base embedded in concrete backfill the concrete shall be air-entrained and have a minimum compressive design strength at 28 days of 3,000 PSI. 3,000 PSI concrete specified for early pole erection, actual required minimum allowable concrete strength is 1,000 PSI. All piers and concrete backfill must bear on and against firm undisturbed soil.
    - b. For anchor bolt foundations or foundations using a pre-stressed concrete base in a suspended pier or re-inforced pier design pole erection may occur after 7 days. Or after a concrete sample from the same batch achieves a certain strength.
  - 4. Manufacturer will supply all drivers and supporting electrical equipment
    - a. Remote drivers and supporting electrical equipment shall be mounted approximately 10 feet above grade in aluminum enclosures. The enclosures shall be touch-safe and include drivers and fusing with indicator lights on fuses to notify when a fuse is to be replaced for each luminaire. Disconnect per circuit for each pole structure will be located in the enclosure. Integral drivers are not allowed.
    - b. Manufacturer shall provide surge protection at the pole equal to or greater than 40 kA for each line to ground (Common Mode) as recommended by IEEE C62.41.2\_2002.
  - 5. Wire harness complete with an abrasion protection sleeve, strain relief and plug-in connections for fast, trouble-free installation.
  - 6. All luminaires, visors, and cross-arm assemblies shall withstand 150 mph winds and maintain luminaire aiming alignment.
  - 7. Control cabinet to provide remote on-off control, monitoring, and entertainment features of the lighting system. See Section 2.3 for further details.
  - 8. Manufacturer shall provide lightning grounding as defined by NFPA 780 and be UL Listed per UL 96 and UL 96A.
    - a. Integrated grounding via concrete encased electrode grounding system.
    - b. If grounding is not integrated into the structure, the manufacturer shall supply grounding electrodes, copper down conductors, and exothermic weld kits. Electrodes and conductors shall be sized as required by NFPA 780. The grounding electrode shall be minimum size of 5/8 inch diameter and 8 feet long, with a minimum of 10 feet embedment. Grounding electrode shall be connected to the structure by a grounding electrode conductor with a minimum size of 2 AWG for poles with 75 feet mounting height or less, and 2/0 AWG for poles with more than 75 feet mounting height.
- D. Safety: All system components shall be UL listed for the appropriate application.

#### 2.2 ELECTRICAL

- A. Electric Power Requirements for the Sports Lighting Equipment:
  - 1. Electric power: See Plans
  - 2. Maximum total voltage drop: Voltage drop to the disconnect switch located on the poles shall not exceed three (3) percent of the rated voltage.

#### 2.3 CONTROL

- A. Instant On/Off Capabilities: System shall provide for instant on/off of luminaires.
- B. Lighting contactor cabinet(s) constructed of NEMA Type 4 aluminum, designed for easy installation with contactors, labeled to match field diagrams and electrical design. Manual off-on-auto selector switches shall be provided.
- C. Dimming: System shall provide for 3-stage dimming (high-medium-low). Dimming with be set via scheduling options (Website, app, phone, fax, email)
- D. Remote Lighting Control System: System shall allow owner and users with a security code to schedule on/off system operation via a web site, phone, fax or email up to ten years in advance. Manufacturer shall provide and maintain a two-way TCP/IP communication link. Trained staff shall be available 24/7 to provide scheduling support and assist with reporting needs.

The owner may assign various security levels to schedulers by function and/or fields. This function must be flexible to allow a range of privileges such as full scheduling capabilities for all fields to only having permission to execute "early off" commands by phone. Scheduling tool shall be capable of setting curfew limits.

Controller shall accept and store 7-day schedules, be protected against memory loss during power outages, and shall reboot once power is regained and execute any commands that would have occurred during outage.

- E. Remote Monitoring System: System shall monitor lighting performance and notify manufacturer if individual luminaire outage is detected so that appropriate maintenance can be scheduled. The controller shall determine switch position (manual or auto) and contactor status (open or closed).
- F. Management Tools: Manufacturer shall provide a web-based database and dashboard tool of actual field usage and provide reports by facility and user group. Dashboard shall also show current status of luminaire outages, control operation and service. Mobile application will be provided suitable for IOS, Android and Blackberry devices.

Hours of Usage: Manufacturer shall provide a means of tracking actual hours of usage for the field lighting system that is readily accessible to the owner.

- 1. Cumulative hours: shall be tracked to show the total hours used by the facility
- 2. Report hours saved by using early off and push buttons by users.
- G. Communication Costs: Manufacturer shall include communication costs for operating the control and monitoring system for a period of 25 years.

#### 2.4 STRUCTURAL PARAMETERS

- A. Wind Loads: Wind loads shall be based on the 2018 International Building Code. Wind loads to be calculated using ASCE 7-16, an ultimate design wind speed of 150 MPH and exposure category C.
- B. Pole Structural Design: The stress analysis and safety factor of the poles shall conform to 2013 AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (LTS-6).

- C. Foundation Design: The foundation design shall be based on soils that meet or exceed those of a Class 5 material as defined by 2018 IBC Table 1806.2.
- D. Foundation Drawings: Project specific foundation drawings stamped by a registered engineer in the state where the project is located are required. The foundation drawings must list the moment, shear (horizontal) force, and axial (vertical) force at ground level for each pole. These drawings must be submitted at time of bid to allow for accurate pricing.

#### PART 3 – EXECUTION

#### 3.1 SOIL QUALITY CONTROL

- A. It shall be the Contractor's responsibility to notify the Owner if soil conditions exist other than those on which the foundation design is based, or if the soil cannot be readily excavated. Contractor may issue a change order request / estimate for the Owner's approval / payment for additional costs associated with:
  - 1. Providing engineered foundation embedment design by a registered engineer in the State of Texas for soils other than specified soil conditions;
  - 2. Additional materials required to achieve alternate foundation;
  - 3. Excavation and removal of materials other than normal soils, such as rock, caliche, etc.

#### 3.2 DELIVERY TIMING

A. Delivery Timing Equipment On-Site: The equipment must be on-site 6-8 weeks from receipt of approved submittals and receipt of complete order information.

#### 3.3 FIELD QUALITY CONTROL

- A. Illumination Measurements: Upon substantial completion of the project and in the presence of the Contractor, Project Engineer, Owner's Representative, and Manufacturer's Representative, illumination measurements shall be taken and verified. The illumination measurements shall be conducted in accordance with IESNA LM-5-04.
- B. Field Light Level Accountability
  - 1. Light levels are guaranteed not to fall below the target maintained light levels for the entire warranty period of 25 years. These levels will be specifically stated as "guaranteed" on the illumination summary provided by the manufacturer.
  - 2. The contractor/manufacturer shall be responsible for conducting initial light level testing and an additional inspection of the system, in the presence of the owner, one year from the date of commissioning of the lighting.
  - 3. The contractor/manufacturer will be held responsible for any and all changes needed to bring these fields back to compliance for light levels and uniformities. Contractor/Manufacturer will be held responsible for any damage to the fields during these repairs.
- C. Correcting Non-Conformance: If, in the opinion of the Owner or his appointed Representative, the actual performance levels including footcandles and uniformity ratios are not in conformance with the requirements of the performance specifications and submitted information, the Manufacturer shall be required to make adjustments to meet specifications and satisfy Owner.

#### 3.4 WARRANTY AND GUARANTEE

- A. 25-Year Warranty: Each manufacturer shall supply a signed warranty covering the entire system for 25 years from the date of shipment. Warranty shall guarantee specified light levels. Manufacturer shall maintain specifically-funded financial reserves to assure fulfillment of the warranty for the full term. Warranty does not cover weather conditions events such as lightning or hail damage, improper installation, vandalism or abuse, unauthorized repairs or alterations, or product made by other manufacturers.
- B. Maintenance: Manufacturer shall monitor the performance of the lighting system, including on/off status, hours of usage and luminaire outage for 25 years from the date of equipment shipment. Parts and labor shall be covered such that individual luminaire outages will be repaired when the usage of any field is materially impacted. Manufacturer is responsible for removal and replacement of failed luminaires, including all parts, labor, shipping, and equipment rental associated with maintenance. Owner agrees to check fuses in the event of a luminaire outage.

#### PART 4 – DESIGN APPROVAL

#### 4.1 PRE-BID SUBMITTAL REQUIREMENTS (Non-Musco)

- A. Design Approval: The owner / engineer will review pre-bid submittals per section 4.0.B from all the manufacturers to ensure compliance to the specification 10 days prior to bid. If the design meets the design requirements of the specifications, a letter and/or addendum will be issued to the manufacturer indicating approval for the specific design submitted.
- B. Approved Product: Musco's Light-Structure System<sup>TM</sup> with TLC for LED<sup>TM</sup> is the approved product. All substitutions must provide a complete submittal package for approval as outlined in Submittal Information at the end of this section at least 10 days prior to bid. Special manufacturing to meet the standards of this specification may be required. An addendum will be issued prior to bid listing any other approved lighting manufacturers and designs.
- C. All listed manufacturers not pre-approved shall submit the information at the end of this section at least 10 days prior to bid. An addendum will be issued prior to bid; listing approved lighting manufacturers and the design method to be used.
- D. Bidders are required to bid only products that have been approved by this specification or addendum by the owner or owner's representative. Bids received that do not utilize an approved system/design, will be rejected.

# REQUIRED SUBMITTAL INFORMATION FOR ALL MANUFACTURERS (NOT PRE-APPROVED) 10 DAYS PRIOR TO BID

All items listed below are mandatory, shall comply with the specification and be submitted according to pre-bid submittal requirements. Complete the Yes/No column to indicate compliance (Y) or noncompliance (N) for each item. Submit checklist below with submittal.

Yes / No	Tab	Item	Description
	А	Letter/ Checklist	Listing of all information being submitted must be included on the table of contents. List the name of the manufacturer's local representative and his/her phone number. Signed submittal checklist to be included.
	В	Equipment Layout	Drawing(s) showing field layouts with pole locations
	С	On Field Lighting Design	<ul> <li>Lighting design drawing(s) showing:</li> <li>a. Field Name, date, file number, prepared by</li> <li>b. Outline of field(s) being lighted, as well as pole locations referenced to the center of the field (x &amp; y), Illuminance levels at grid spacing specified</li> <li>c. Pole height, number of fixtures per pole, horizontal and vertical aiming angles, as well as luminaire information including wattage, lumens and optics</li> <li>d. Height of light test meter above field surface.</li> <li>e. Summary table showing the number and spacing of grid points; average, minimum and maximum illuminance levels in foot candles (fc); uniformity including maximum to minimum ratio, coefficient of variance (CV), coefficient of utilization (CU) uniformity gradient; number of luminaries, total kilowatts, average tilt factor; light loss factor.</li> </ul>
	D	Off Field Lighting Design	Lighting design drawing showing initial spill light levels along the boundary line (defined on bid drawings) in foot candles. Lighting design showing glare along the boundary line in candela. Light levels shall be taken at 30-foot intervals along the boundary line. Readings shall be taken with the meter orientation at both horizontal and aimed towards the most intense bank of lights.
	Е	Photometric Report	Provide first page of photometric report for all luminaire types being proposed showing candela tabulations as defined by IESNA Publication LM-35-02. Photometric data shall be certified by laboratory with current National Voluntary Laboratory Accreditation Program or an independent testing facility with over 5 years' experience.
	F	Performance Guarantee	Provide performance guarantee including a written commitment to undertake all corrections required to meet the performance requirements noted in these specifications at no expense to the owner. Light levels must be guaranteed to not fall below target levels for warranty period.
	G	Structural Calculations	Pole structural calculations and foundation design showing foundation shape, depth backfill requirements, rebar and anchor bolts (if required). Pole base reaction forces shall be shown on the foundation drawing along with soil bearing pressures. Design must be stamped by a structural engineer in the state of Texas, if required by owner.
	Н	Control & Monitoring System	Manufacturer of the control and monitoring system shall provide written definition and schematics for automated control system and entertainment packages. They will also provide ten (10) references of customers currently using proposed system in the state of Texas.
	Ι	Electrical Distribution Plans	Manufacturer bidding an alternate product must include a revised electrical distribution plan including changes to service entrance, panels and wire sizing, signed by a licensed Electrical Engineer in the state of Texas.
	J	Warranty	Provide written warranty information including all terms and conditions. Provide ten (10) references of customers currently under specified warranty in the state of Texas.

K	Project References	Manufacturer to provide a list of projects where the technology and specific fixture proposed for this project has been installed in the state of Texas. Reference list will include project name, project city, installation date, and if requested, contact name and contact phone number.
L	Product Information	Complete bill of material and current brochures/cut sheets for all product being provided.
Μ	Delivery	Manufacturer shall supply an expected delivery timeframe from receipt of approved submittals and complete order information.
Ν	Non- Compliance	Manufacturer shall list all items that do not comply with the specifications. If in full compliance, tab may be omitted.
0	Cost of Ownership	Document cost of ownership as defined in the specification. Identify energy costs for operating the luminaires. Maintenance cost for the system must be included. All costs should be based on 25 Years
Р	Environmental Light Control Design	Environmental glare impact scans must be submitted showing the maximum candela from the field edge on a map of the surrounding area until 500 candela or less is achieved.