

STUDY PLAN NOTES:

- I. THE SITE IS LOCATED ON THE CITY OF NETWON ASSESSOR'S PARCEL NO. 84034 0002D.
- THE SITE IS APPROXIMATELY 8.56± ACRES AND IS ZONED LM.
 THE OWNER OF ASSESSOR'S PARCEL NO. 84034 0002D IS:
 - TCD 234 MA WELLS PROPERTY LLC 2 INTERNATIONAL PLACE STE 2710 BOSTON, MA 02110

40 FT ABUTTING RESIDENTIAL/PUBLIC USE DISTRICT

20 FT NOT ABUTTING RESIDENTIAL DISTRICT

- 4. THIS SITE IS LOCATED IN FEMA FLOOD ZONES X (SHADED AND NON-SHADED) AND ZONE AE (WITH BFE AT 90 FEET). REFERENCE FEMA FLOOD INSURANCE RATE MAP 25017C0562E, MAP REVISED JUNE 4, 2010.
- 5. TOPOGRAPHY WAS OBTAINED FROM LIDAR MAPS. ELEVATIONS ARE APPROXIMATE AND REFERENCED TO THE NAVD '88 US FEET DATUM. PRIOR TO ANY DEVELOPMENT ON THE SITE, THE OWNER SHALL VERIFY

N/A

N/A

25 FT

36 FT

25%

5 FT PARKING SETBACK

6. THE SITE CONTAINS THE FOLLOWING:
 FEMA FLOOD ZONE
 CITY FLOODPLAIN DISTRICT
 NATURAL HERITAGE AREAS
 RIVERS PROTECTION ACT AREA
 WETLAND BUFFER AREA

PR

N/F

CURRENT ZONING:

REQUIRED MINIMUM LOT AREA: MINIMUM FRONTAGE AND LOT WIDTH: MINIMUM FRONT YARD: MINIMUM SIDE AND REAR YARD:

MAXIMUM STRUCTURE HEIGHT: MAXIMUM LOT COVERAGE:

ABBREVIATIONS: EXISTING

PROPOSED ASSESSOR'S PLAT NOW OR FORMERLY

CERTIFICATION NOTE:

THE EXISTING DATA COMPILED ON THIS STUDY PLAN IS FROM EXISTING MAPS AND RECORDED DATA. DUE TO METHODS OF COMPILATION AND ACCURACY OF SOME MAPS USED TO COMPILE THIS PLAN, THERE MAY BE SOME DEVIATIONS FROM SAID MAPS AND/OR DATA AND THIS PLAN. THERE ARE MANY FACTORS WHICH LEAD TO THIS, INCLUDING THE ACCURACY OF SAID MAPS AND DATA, AND KNOWN SITE FEATURES SUCH AS STONE WALLS, ROADWAYS, AND BUILDINGS. THESE DEVIATIONS ARE COMMON WHEN COMPILING MAPS AND DATA FROM VARIOUS SOURCES AND CANNOT BE AVOIDED WITHOUT AN ACTUAL FIELD SURVEY AND DEED RESEARCH. THIS PLAN IS TO BE UTILIZED FOR DISCUSSION PURPOSES ONLY. THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND MAY BE SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE.

<u>DESIGN NOTES:</u>

SYSTEM SUMMARY:	DC PV SIZE:	749.76 KW
	# OF PV MODULES: PV MODULE #:	I562± Q PEAK DUO
	INVERTER MODEL:	12 NOS CHINT INVERTER - 36KW I NOS CHINT INVERTER - 60KW

SYSTEM DESIGN BY OTHERS.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- I. THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE WHICH MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS AND AUTHORITY HAVING JURISDICTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER, THE DIRECTOR OF PUBLIC WORKS, THE TOWN ENGINEER, AND THE CONSERVATION COMMISSION AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- 2. ALL EROSION CONTROL MUST BE INSTALLED PER THE LATEST EDITION OF THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS (MESCG). NOTE THE SOIL EROSION AND SEDIMENT CONTROL SHOWN ON THESE PLANS ARE THE MINIMUM QUANTITY/TYPE OF EROSION CONTROL DEVICES AND MATERIALS DEEMED REQUIRED BY DIPRETE ENGINEERING TO MEET THE OBJECTIVES OF THE MESCG, BUT IS CONSIDERED A GUIDE ONLY. ADDITIONAL MEASURES/ALTERNATE CONFIGURATIONS MAY BE REQUIRED IN ORDER TO MEET THE MESCG BASED ON FACTORS INCLUDING (BUT NOT LIMITED TO) SITE PARAMETERS, WEATHER, INSPECTIONS AND UNIQUE FEATURES.
- 3. THE CONTRACTOR SHALL MAINTAIN ALL TOPSOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER. STOCKPILES AND STAGING AREAS MUST BE PROTECTED WITH SEDIMENT BARRIERS TO PREVENT SEDIMENT TRACKING.
- NOT INLET PROTECTION MUST BE INSTALLED ON ALL EXISTING CATCH BASINS WITHIN THE LIMIT OF WORK OR DOWNSTREAM FROM THE LIMIT OF WORK.
- 5. CONTRACTOR MUST PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON EXTERNAL STREETS.
- 6. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS, INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK, MUST BE RESTORED TO MATCH EXISTING CONDITIONS.

STUDY PLAN - 492KWAC CANOPY III WELLS AVE

ASSESSOR'S PARCEL NO. 84034 0002D CITY OF NEWTON, MA

APPLICANT: PLANKTON ENERGY, LLC 155 WATER STREET BROOKLYN, NY 11201

DiPrete Engineering

Two Stafford Court Cranston, RI 02920 tel 401-943-1000 fax 401-464-6006 www.diprete-eng.com

DATE: 12/13/2022 DRAWN BY: MID

TERMS AND ABBREVIATIONS

ABBRV	TERM
#)	NUMERICAL QUANTITIES WHEN
	ENCLOSED IN PARENTHESES
\E	ARCHITECT/ENGINEER
BC	
RCH	AGGREGATE DASE COURSE ARCHITECT
STM	AMERICAN SOCIETY FOR
	TESTING AND MATERIALS
BC	CALIFORNIA BUILDING CODE
л. ЧГ	
ی, ا	CONSTRUCTION JOINT
-	CONTROL JOINT
L	CENTERLINE
	CONCRETE MASONRY UNIT
) NA	DIAMETER
MIM	DIMENSION
)L	DEAD LOAD
A	
.∟ O	FOUAL
хт	EXTERIOR
W	EACH WAY
=)	
F I R	FINISH FLOOR ELEVATION
T	FEET
TG	FOOTING
6A	GAUGE
SN	GENERAL CONTRACTOR
IORIZ	HORIZONTAL
ISS	HOLLOW STRUCTURAL
	SECTION MOMENT OF INERTIA
50	IN LEKNATIONAL BUILDING CODE
ÍP, K	ONE THOUSAND POUNDS
LF	KIP PER LINEAR FOOT
_	STEEL ANGLE
B	
∟ LBB	LONG LEG BACK TO BACK
LH	LONG LEG HORIZONTAL
LV	LONG LEG VERTICAL
SH	LONG SIDE HORIZONTAL
5V 1C.1	LONG SIDE VERTIGAL MASONRY CONTROL JOINTS
1ECH	MECHANICAL
1FR	MANUFACTURER
A	NOT APPLICABLE
ERP	
 L	PLATE
LF	POUNDS PER LINEAR FOOT
SF	POUNDS PER SQUARE FOOT
	POUNDS PER SQUARE INCH OUALITY ASSURANCE
í C	QUALITY CONTROL
EINF	REINFORCING
EQD	REQUIRED
	REQUEST FOR INFORMATION
чг IM	SQUAKE FUUT SIMILAR
PEC	SPECIFICATION
TD	STANDARD
&B	TOP AND BOTTOM
YP INIO	
/ERT	VERTICAL
	WATER TO CEMENT RATIO
V/O	WITHOUT
/L	WINDLOAD

CODE: 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) **DESIGN LOADS:** 1. ROOF: LIVE LOAD(UNREDUCIBLE) DEAD LOAD 2. WIND LOAD: **RISK CATEGORY** BASIC WIND SPEED, V EXPOSURE CATEGORY IMPORTANCE FACTOR, Iw MEAN ROOF HEIGHT: ENCLOSURE CLASSIFICATION: 3. SEISMIC LOADS: **RISK CATEGORY** IMPORTANCE FACTOR, le SEISMIC SITE CLASS: SEISMIC DESIGN CATEGORY

PROCEDURES

BASE SHEAR, V

GENERAL:

- CONSTRUCTION INDUSTRY. ADDENDUM.
- SIMILAR WORK ON THE PROJECT.
- 6. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.
- DRAWINGS SHALL BE CONSIDERED DESIGN BUILD ITEMS. CONTRACTOR SHALL SUBMIT DESIGN BY OTHERS FOR REVIEW

FOUNDATIONS:

- GEOTECHNICAL CONSULTANT:
- REPORT NUMBER: REPORT DATE:
- DESIGN. IF ACTUAL SOIL CONDITIONS DIFFER NOTIFY THE
- INSPECTED SOIL STRATA. POLE FOUNDATIONS WERE DESIGNED IN
- PRIOR TO PLACEMENT OF CONCRETE.

SHOP DRAWINGS:

- REVIEW.
- FLAGGED UPON CONTRACTORS REVIEW 3. THE CONSTRUCTION DOCUMENTS MAY NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
- 4. ELECTRONIC FILES OF CONSTRUCTION DOCUMENTS WILL NOT BE MADE AVAILABLE FOR USE AS SHOP DRAWINGS.
- 6. THE ENGINEER OF RECORD HAS THE RIGHT TO APPROVE OR BEFORE OR AFTER SHOP DRAWING REVIEW.
- ACCORDING TO THE CONTRACT DOCUMENTS.



BASIC SEISMIC FORCE RESISTING SYSTEM STEEL ORDINARY CANTILEVER COLUMN SYSTEMS 1.25 1.25 0.36 0.36W

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND

2. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS TO THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE

3. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR

4. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND HE SHALL COORDINATE ALL DETAILS. 5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO

7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ACTUAL SITE CONDITIONS AND GENERAL CONTRACTOR PRIOR TO START OF CONSTRUCTION. ALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS ARE TO ASSIST CONTRACTOR IN VERIFICATION. DO NOT SCALE DIMENSIONS FROM DRAWINGS. 8. ITEMS SHOWN BY OTHER DISCIPLINES WITH REFERENCE TO STRUCTURAL DRAWINGS BUT NOT SHOWN ON THESE STRUCTURAL

4. DESIGN SOIL BEARING VALUES WERE ASSUMED IN ACCORDANCE WITH SOIL CLASS 5 AS DEFINED IN IBC/CBC TABLE 1806.2 "PRESUMPTIVE LOAD-BEARING VALUES". DESIGN BEARING VALUE OF 1,500 PSF AND LATERAL BEARING VALUE OF 100 PSF/FT WAS USED IN

STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH WORK 5. SPREAD FOOTINGS SHALL BEAR ON COMPACTED NATIVE SOILS. BOTTOM OF FOOTINGS SHALL BEAR AT A DEPTH NOT LESS THAN 2.0 FT BELOW LOWEST ADJACENT GRADE WITHIN 5 FEET OF STRUCTURE OR FOUNDATION. FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE. 6. DRILLED POLE FOUNDATIONS SHALL BEAR ON MACHINE CLEANED,

ACCORDANCE WITH THE PRESCRIPTIVE METHOD OF IBC/CBC SECTION 1807.3.2. FOR TOP OF POLE FOUNDATION ELEVATIONS, SEE FOUNDATION PLANS AND SECTIONS. IF WATER IS ENCOUNTERED DURING DRILLING, STOP AND CONSULT STRUCTURAL ENGINEER OR GEOTECHNICAL ENGINEER FOR RESOLUTION.

1. SPREAD FOOTINGS SHALL BEAR ON COMPACTED FILL. FOR FILL REQUIREMENTS, SEE SOIL REPORT. DESIGN SOIL BEARING VALUE 1,500 PSF. BOTTOM OF FOOTINGS TO BE 2'-0" MINIMUM BELOW FINISHED GRADE. FINISHED GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOOTINGS AND LOWEST ADJACENT FINISHED GRADE WITHIN 5 FEET FOR PERIMETER FOOTINGS. FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER

2. DRILLED POLE FOUNDATIONS SHALL BEAR ON MACHINE CLEANED, INSPECTED SOIL STRATA. DESIGN LATERAL SOIL BEARING VALUE OF 100 PSF/FT WAS USED IN DESIGN. POLE FOUNDATIONS WERE DESIGNED IN ACCORDANCE WITH THE PRESCRIPTIVE METHOD OF IBC/CBC SECTION 1807.3.2. FOR TOP OF POLE FOUNDATION ELEVATIONS, SEE FOUNDATION PLANS AND SECTIONS. IF WATER IS ENCOUNTERED DURING DRILLING, STOP AND CONSULT STRUCTURAL ENGINEER OR GEOTECHNICAL ENGINEER FOR RESOLUTION.

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS AND ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. UNITED STRUCTURAL DESIGN, LLC. ASSUMES NO RESPONSIBILITY FOR THE FAILURE OF THE CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR

2. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE

5. FIELD VERIFY ALL DIMENSIONS AND FINISHED GRADE PRIOR TO CONSTRUCTION AND PRIOR TO BEGINNING SHOP DRAWINGS.

DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME 7. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY

THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO THE CONTRACT DOCUMENTS. 8. SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS.

REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL ITEMS ARE CONSTRUCTED

CONCRETE:

- 1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
- 2. ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE. IN NO CASE SHALL THE DESIGN WATER TO CEMENTITIOUS MATERIAL RATIO BE EXCEEDED.
- MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND SLAB EDGES, REINFORCING, AND COLUMNS. MECHANICALLY VIBRATE ONLY THE TOP 5 FEET OF DRILLED PIER CONCRETE. REVIBRATE TOP OF DRILLED PIER 15 MINUTES AFTER PLACING CONCRETE.
- 4. TEST DATA FOR CONCRETE SUBMITTALS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE. REFERENCE ACI 318 CHAPTER 5, TABLE R5.3 FOR SPECIFIC REQUIREMENTS.
- 5. DRILLED PIER CONCRETE SHALL BE CHANNELED TO FREE FALL DOWN THE SHAFT WITHOUT STRIKING THE REINFORCING OR THE SIDES OF THE SHAFT. MAXIMUM HEIGHT OF FREE-FALL IS 15'-0". 6. CONCRETE PROPERTIES:

CONCRETE USE STRENGTH

MINIMUM 28 DAY COMPRESSIVE

2,500 PSI

UNLESS NOTED OTHERWISE ALL CONCRETE SHALL BE

PHOTOVOLTAIC PANELS:

- 1. THE PANEL MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE PANELS AND THE DESIGN OF THE PANEL CONNECTIONS TO THE STRUCTURE INCLUDING ALL COMPONENTS REQUIRED TO MAKE THE CONNECTIONS, PHOTOVOLTAIC PANELS, COMPONENTS AND
- CONNECTIONS SHALL BE DESIGNED TO SUPPORT PANEL WEIGHT PLUS SNOW, WIND, OR SEISMIC LOADING, WHICHEVER COMBINATION PRODUCES THE MOST SEVERE CONDITION IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. OWNER TO PROVIDE PANEL CAPABLE OF SUPPORTING IN MANOR IN
- WHICH IS INTENDED BY THESE DRAWINGS (I.E. SUPPORTED BY SHORT END, DUAL SUPPORTS, ETC). SUBMIT PANEL SPEC SHEETS FOR REVIEW PRIOR TO PURCHASING ANY PANELS.
- 3. CONTRACTOR TO VERIFY PV PANELS WITH OWNER PRIOR TO FABRICATION.
- 4. THIS IS A DEFERRED SUBMITTAL ITEM.

STRUCTURAL STEEL:

- 1. LATEST AISC AND AWS CODES APPLY. THE WORD APPROVED INSPECTION 4.4 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES IS REDEFINED AS REVIEWED.
- 2. STEEL SHALL BE FINISHED AT LOCATIONS EXPOSED TO WEATHER WITH A CORROSION RESISTANT COATING APPLICABLE TO WEATHER AND EXPOSURE CONDITIONS OF PROJECT LOCATION.
- WHEN STRUCTURAL STEEL IS FURNISHED TO A SPECIFIED MINIMUM YIELD POINT GREATER THAN 36 KSI, THE ASTM OR OTHER SPECIFICATION DESIGNATION SHALL BE INCLUDED NEAR THE ERECTION MARK ON EACH SHIPPING ASSEMBLY OR IMPORTANT
- CONSTRUCTION COMPONENT OVER ANY SHOP COAT OF PAINT PRIOR TO SHIPMENT FROM THE FABRICATORS PLANT 4. IF IT IS NECESSARY TO SPLICE ANY MEMBER, SPLICE LOCATIONS ARE SUBJECT TO REVIEW BY STRUCTURAL ENGINEER. SPLICES SHALL BE
- FULL PENETRATION WELDED AND TESTED PER THIS SECTION. INDICATE ALL SPLICE LOCATIONS, AND WELDING PROCEDURES ON SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. 5. ALL BEAMS SHALL BE ERECTED WITH THE NATURAL CAMBER
- UPWARDS 6. ALL BOLTS SHALL BE INSTALLED WITH STEEL WASHERS.
- ALL WELDING BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES, CERTIFICATES SHALL BE THOSE ISSUED BY AN INDEPENDENT TESTING AGENCY.
- 8. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS. USE E90 SERIES FOR ASTM A706 REINFORCING BARS. 9. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL
- WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS, CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS. 10. SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE
- WELD AND ADJACENT BASE METAL SHALL BE CLEANED BY BRUSHING OR OTHER SUITABLE MEANS. WELDED JOINTS SHALL NOT BE PAINTED UNTIL AFTER WELDING HAS BEEN COMPLETED AND THE WELD ACCEPTED.
- 11. ALL STRUCTURAL STEEL SHALL BE FABRICATED BY A FABRICATOR WITH ANY ONE OF THE FOLLOWING MINIMUM QUALIFICATIONS. QUALIFICATIONS SHALL BE IN EFFECT AT TIME OF BID. 12. AISC CERTIFIED FABRICATOR (STD).
- 13. STEEL PROPERTIES
- WIDE FLANGE COLUMNS, BEAMS AND TEES: ASTM A992 (Fy = 50 STEEL PLATES: ASTM A572 (Fy = 50 KSI)
- CHANNELS AND ANGLES: ASTM A36 (Fy = 36 KSI) HSS RECTANGULAR STEEL: ASTM A500 Gr. B (Fy = 46 KSI)
- BOLTS: ASTM A325 OR ASTM A F1852 TWIST-OFF TYPE • ANCHOR RODS: ASTM F1554 Gr. 55 (Fy = 55 KSI)
- 14. STEEL BOLTS SHALL BE PRETENSIONED UNLESS OTHERWISE NOTED AS A SNUG-TIGHT CONNECTION ON THE DRAWINGS OR DETAILS. ONE OF THE FOLLOWING METHODS SHALL BE USED TO ASSURE ADEQUATE PRETENSIONING IS ACHIEVED:
- TURN-OF-NUT METHOD DIRECT TENSION INDICATOR WASHERS
- CALIBRATED WRENCH
- TWIST-OFF TYPE BOLT

STEEL REINFORCING:

- 1. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. LATEST ACI CODE AND DETAILING MANUAL APPLY. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. REINFORCING BAR SPACING
- GIVEN ARE MAXIMUM ON CENTERS. 2. ALL REINFORCING TO BE WELDED SHALL BE WELDED IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY STRUCTURAL
- ENGINEER. REINFORCING LAP SPLICES IN CONCRETE SHALL BE PER TYPICAL DETAIL UNLESS NOTED OTHERWISE. ALL SPLICE LOCATIONS ARE
- SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS. 4. TYPICAL REINFORCING BAR STRENGTHS
- REINFORCING (WELDABLE): ASTM A706, DEFORMED, Fy = 60 KSI 6. TYPICAL CLEAR CONCRETE COVERAGE
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" FORMED CONCRETE EXPOSED TO EARTH OR WEATHER: #6 AND LARGER: 2"
- #5 AND SMALLER: 1 1/2"

ALL OTHERS PER LATEST EDITION OF ACI 318.

COLD-FORMED STEEL FRAMING:

- 1. ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE AND THE STEEL STUD MANUFACTURERS ASSOCIATION AND ICC ESR-3064P)
- 2. STEEL FOR ALL MEMBERS AND FOR ALL STRAPS SHALL HAVE A
- MINIMUM YIELD STRENGTH OF 55,000 PSI. 3. STEEL SHALL BE GALVANIZED AT LOCATIONS EXPOSED TO WEATHER
- AND WHENEVER NOTED ON THE DRAWINGS 4. ALL MEMBERS SHALL BE SECURELY SEATED FOR FULL BEARING
- UNLESS NOTED OTHERWISE 5. ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN
- LIGHT GAGE STEEL FRAMING WORK. 6. ALL SCREWS REFERENCED IN THE DRAWINGS FOR LIGHT GAUGE CONNECTIONS SHALL BE DRIL-FLEX BY HILTI OR APPROVED
- EQUIVALENT (ICC ESR-3332). 7. STEEL STUD SIZES ARE AS INDICATED IN PLANS AND KEYNOTES. THICKNESS REFERENCED IN THE DRAWINGS ARE AS FOLLOWS:
- 16 GAUGE MATERIAL 0.059 INCHES • 14 GAUGE MATERIAL - 0.075 INCHES
- 12 GAUGE MATERIAL 0.105 INCHES 10 GAUGE MATERIAL - 0.134 INCHES

NOTE: THE UNCOATED MINIMUM STEEL THICKNESS OF THE COLD-FORMED STEEL PRODUCTS AS DELIVERED TO THE JOB SITE SHALL NOT AT ANY LOCATION BE LESS THAN 95 PERCENT OF THE DESIGN THICKNESS INDICATED ABOVE.

1704.2.5 SPECIAL INSPECTION OF FABRICATORS:

SPECIAL INSPECTION OF FABRICATION OF STRUCTURAL STEEL BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP IS REQUIRED.

EXCEPTION: SPECIAL INSPECTIONS OF FABRICATORS WITH ONE OF THE FOLLOWING QUALIFICATIONS IS NOT REQUIRED: INTERNATIONAL ACCREDITATION SERVICE, INC. (IAS)APPROVED

- FABRICATOR. AISC CERTIFIED FABRICATOR (STD).
- THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES

THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.

SPECIAL STRUCTURAL INSPECTIONS:

PER IBC/CBC SECTION 1704 AND 1705 SPECIAL INSPECTIONS ARE IN ADDITION TO THE REQUIRED INSPECTION CONDUCTED BY THE BUILDING JURISDICTION PER IBC/CBC SECTION 110. THE TYPES OF WORK LISTED BELOW SHALL BE INSPECTED BY A SPECIAL INSPECTOR.

- 1. ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CIVIL OR STRUCTURAL ENGINEER. 2. THE QUALIFICATIONS OF ALL SPECIAL INSPECTORS SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF
- RECORD 3. THE MINIMUM QUALIFICATIONS FOR THE SPECIAL INSPECTORS ARE AS FOLLOWS
- CONCRETE INSPECTION IcC CERTIFICATION IN REINFORCED
- CONCRETE OR E.I.T. CERTIFICATION. STRUCTURAL WELDING INSPECTION
- VISUAL TESTING IcC CERTIFICATION IN STRUCTURAL STEEL AND WELDING OR A.W.S. CERTIFIED WELD INSPECTOR (C.W.I.).
- NON-DESTRUCTIVE TESTING A.W.S. C.W.I. HIGH STRENGTH BOLTING INSPECTION - IcC CERTIFICATION IN
- STRUCTURAL STEEL AND WELDING. SPECIAL CASES - EXPERIENCE ACCEPTABLE TO THE STRUCTURAL ENGINEER OF RECORD.
- 4. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
- THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING
- SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO BE KEPT AT THE SITE FOR USE BY THE BUILDING OFFICIAL, THE CONTRACTOR, THE STRUCTURAL ENGINEER OF RECORD, AND THE
- ARCHITECT OF RECORD. IF SPECIAL INSPECTION IS PROVIDED BY ANYONE OTHER THAN THE STRUCTURAL ENGINEER OF RECORD, INSPECTION REPORTS SHALL BE SUBMITTED TO THE OFFICE OF THE STRUCTURAL ENGINEER ON A WEEKLY BASIS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
- UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
- 5. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
- NOTIFY THE RESPONSIBLE INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
- ALL WORK REQUIRING SPECIAL STRUCTURAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT IS OBSERVED BY THE SPECIAL STRUCTURAL INSPECTOR.
- 6. SPECIAL INSPECTION

INSPECTION OF SOILS

 INSPECTION OF FABRICATORS INSPECTION OF CONCRETE CONSTRUCTION

INSPECTION OF STRUCTURAL STEEL

SEE TABLES ON GSN FOR ADDITIONAL INFORMATION.

1705.6 SPECIAL INSPECTION OF SOILS

SPECIAL INSPECTION FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE AS REQUIRED BY TABLE 1705.6.

TABLE 1705.6: REQUIRED VERIFICATION AND INSPECTION OF SOILS				
VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		x		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		х		
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		х		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	x			
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED		x		

2018 1705.3 SPECIAL INSPECTION OF CONCRETE CONSTRUCTION

SPECIAL INSPECTION AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY TABLE 1705.3.

PROPERLY

- EXCEPTIONS: SPECIAL INSPECTIONS SHALL NOT BE REQUIRED FOR: 1. ISOLATED SPREAD CONCRETE FOOTINGS OF BUILDING THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
- 2. CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE: THE FOOTINGS SUPPORT WALLS OF LIGHT-FRAME CONSTRUCTION;
- 4. THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON A SPECIFIED COMPRESSIVE STRENGTH, f'c. NO GREATER THAN 2,500 PSI REGARDLESS OF THE COMPRESSIVE STRENGTH SPECIFIED
- 5. CONCRETE SLABS ON GRADE. STEEL REINFORCING STILL REQUIRES SPECIAL INSPECTION.

TABLE 1705.3: REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION					
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC/CBC REFERENCE	
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.		х	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	
 2. REINFORCING BAR WELDING. a. VERIFY WELDABILITY OF REINFORCING BARS. b. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM 5/16". 		 X	AWS D1.4 ACI 318: 26.6.4		
c. INSPECTALL OTHER WELDS. 5. VERIFYING USE OF REQUIRED DESIGN MIX.		x	ACI 318: Ch 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3	
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	x		ACI 318: 26.5	1908.6, 1908.7, 1908.8	
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		х	ACI 318: 26.5.3-26.5.5	1908.9	
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		Х	ACI 318:26.11.2 (b)		



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Descriptio

PROJECT NUMBER:

SHEET NAME

GENERAL

STRUCTURAL NOTES

DRAWN BY:

DATE:

CHECKED BY:

22489

10/26/2022

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Sheet	List

Sheet Number	Sheet Name
50.1	GENERAL STRUCTURAL NOTES
51.1	OVERALL LAYOUT
52.5	5 PANEL STRUCTURE PLANS
2.7	7 PANEL STRUCTURE PLANS
64.1	SOLAR CANOPY DETAILS





LOCATIONS.

NOTE:
 THIS IS NOT A SITE PLAN. THIS PLAN IS INTENDED ONLY TO SHOW APPROXIMATE LOCATION OF STRUCTURES ON SITE. REFERENCE PROJECT SITE PLAN FOR EXACT

FOR TOTAL NUMBER OF SOLAR MODULES, REFERENCE ELECTRICAL DRAWINGS.
ALL COLUMN LOCATIONS ARE PRELIMINARY AND BASED ON MAXIMUM COLUMN SPACING SHOWN ON INDIVIDUAL STRUCTURE PLANS. ACTUAL NUMBER AND SPACING OF COLUMNS TO BE DETERMINED BY CONTRACTOR. IN NO CASE SHALL COLUMNS EXCEED MAXIMUM COLUMN SPACING.

EL MODEL	LENGTH	WIDTH	TOTAL PANELS
DUO XL-G10.3	87.24"	41.14"	1562

NUMBER OF COLUMNS COLUMNS 31

	STRUCTURAL DESIGN LLC	2058 S. Dobson Rd. Suite 10 Mesa, AZ 85202 (480) 454-6408 USD #:22489
NOT	KO KR	R-TION







Description

No.

SHEET NAME OVERALL LAYOUT

C1



1 <u>5 PANEL TEE - 7 DEG. FRAMING PLAN</u> 3/16" = 1'-0"











SHEET NOTES

- a. FOR STRUCTURE LOCATIONS REFERENCE PROJECT SITE PLAN. COLUMN SPACING AND LOCATIONS SHALL BE COORDINATED WITH PROJECT ARCHITECT OR PROFESSIONAL RESPONSIBLE FOR SITE PLAN.
- b. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. DIMENSIONS, ELEVATIONS WHERE SHOWN ARE TO BE USED AS AN AID AND SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION.
- c. FOR ADDITIONAL INFORMATION, REFERENCE GENERAL STRUCTURAL NOTES.

PV PANEL INFORMATION

- A. CONTRACTOR TO VERIFY PANEL INFORMATION PRIOR TO FABRICATION
- AND ERECTION. B. THE PANEL INFORMATION BELOW AND IN THE PLANS WAS PROVIDED BY THE OWNER DURING THE DESIGN PHASE AND PRIOR TO THE START OF CONSTRUCTION. ALL PANEL INFORMATION INDICATED IN THESE DRAWINGS IS FOR REFERENCE ONLY AND SHALL BE VERIFIED WITH THE OWNER, THE ELECTRICAL DRAWINGS AND THE GENERAL CONTRACTOR PRIOR TO FABRICATION AND PRIOR TO CONSTRUCTION.
- C. THE OWNER IS TO PROVIDE A PANEL CAPABLE OF SUPPORTING IN MANOR IN WHICH IS INTENDED BY THESE DRAWINGS (I.E. SUPPORTED BY SHORT END, DUAL SUPPORTS, ETC). SUBMIT PANEL SPEC SHEETS FOR REVIEW PRIOR TO PURCHASING ANY PANELS.
- D. THE PANEL MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE PANELS INCLUDING ALL IT'S COMPONENTS. PHOTOVOLTAIC PANELS AND IT'S COMPONENTS SHALL BE DESIGNED TO SUPPORT PANEL WEIGHT PLUS SNOW, WIND, OR SEISMIC LOADING, WHICHEVER COMBINATION PRODUCES THE MOST SEVERE CONDITION IN ACCORDANCE WITH THE BUILDING CODE

PANEL MODEL	LENGTH	WIDTH	
Q.PEAK DUO XL-G10.3	87.24"	41.14"	

KEYNOTES

- 1 DRILLED CONCRETE POLE FOOTING. FOR DIAMETER AND EMBEDMENT OF FOOTING SEE FOUNDATION PLAN AND SECTION ON THIS SHEET. SEE DETAIL 2/S4.1 FOR REINFORCING AND STEEL COLUMN ANCHORAGE.
- 2 C_"x_"x_ GAUGE COLD FORMED STEEL PURLINS, TYPICAL. COORDINATE EXACT LOCATION WITH SOLAR PANEL MANUFACTURER SPECIFICATIONS. SEE DETAIL 9/S4.1 FOR MORE INFORMATION ON SECTION.
- 3 SAG ROD AS SHOWN ON PLANS, (1) MINIMUM AT SPANS LESS THAN 18'-0" AND (2) MINIMUM AT SPANS LESS THAN 27'-0". REFERENCE DETAIL 10/S4.1.
- 4 (1) SAG ROD REQUIRED BETWEEN SUPPORT AND CANTILEVER END AS SHOWN. REFERENCE DETAIL 10/S4.1. SAG ROD NOT REQUIRED WHERE CANTILEVER IS LESS THAN 5'-0".
- 5 DO NOT SPLICE PURLINS AT SUPPORT AT CANTILEVER ENDS.
- 6 16 GAUGE END CAP WITH 2" LEGS EACH END OF STRUCTURE. 7 BEAM FLANGE BRACES AS SHOWN ON PLANS. REFERENCE DETAIL 6/S4.1 FOR MORE INFORMATION.
- 8 PV MODULE BY OTHERS. ATTACH PER DETAILS. 9 FINISHED GRADE. FINISHED GRADE IS DEFINED AS THE LOWEST ADJACENT FINISHED GRADE WITHIN 5 FEET OF THE STRUCTURAL COLUMN.



WELLS AVE CANOPY 111 WELLS AVE NEWTON, MA 02459

Description

No.

PROJECT NUMBER:	22489
DRAWN BY:	KS
CHECKED BY:	JE
DATE:	10/26/2022

SHEET NAME 5 PANEL STRUCTURE PLANS

S2.5



1 7 PANEL TEE - 7 DEG - FRAMING PLAN 3/16" = 1'-0"

















SHEET NOTES

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- PRIOR TO FABRICATION AND PRIOR TO CONSTRUCTION. C. THE OWNER IS TO PROVIDE A PANEL CAPABLE OF SUPPORTING IN MANOR IN WHICH IS INTENDED BY THESE DRAWINGS (I.E. SUPPORTED BY SHORT END, DUAL SUPPORTS, ETC). SUBMIT PANEL SPEC SHEETS FOR REVIEW PRIOR TO PURCHASING ANY PANELS.
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* THIS DETAIL MAY BE USED IN LIEU OF DETAIL 2/S4.1 16 STEEL COLUMN AT RESTRAINED POLE FOOTING CONNECTION

COLUMN CAP FOOTING SCHEDULE						
			MINIMUM R	ESTRAINMENT CAP	LENGTH 'L'	
	FOOTING DIAMETER* 'D'	RESTRAINED EMBEDMENT 'H'	MIN ASPHALT THICKNESS 2"	MIN ASPHALT THICKNESS 2 1/2"	MIN ASPHALT THICKNESS 3"	
6 PANEL 'T'	2'-0" DIA.	SEE PLANS	5'-8"	5'-8"	5'-8"	



14 STEEL SAG ROD AT BOTTOM FLANGE OF STEEL PURLINS NO SCALE



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13 TYPICAL PANEL ATTACHMENT NO SCALE



1. STEEL COLUMN. EMBED IN

AND SECTION ON PLANS.

RESTRAINMENT CAP NOT

5. PROVIDE SLOPPED SURFACE AT

ACCUMULATION OF WATER.

RESTRAINMENT CAP NOT

CONCRETE SLAB ON GRADE

REFERENCE SCHEDULE ON

PLANS AND STRUCTURE

REQUIRED WHERE FOOTING IS RESTRAINED AT TOP BY A

3. REINFORCING PER DETAIL 2/S4.1.

THICKNESS. WHERE CONCRETE

2. CONCRETE POLE FOOTING.

4. ASPHALT, FIELD VERIFY

SLAB IS PRESENT,

TOP TO PREVENT

6. 4" THICK CONCRETE

RESTRAINMENT CAP.

7. COLUMN EMBEDMENT 'H',

REQUIRED.

SECTION.

FOOTING PER OTHER DETAILS

PURLIN.

1. STEEL PURLIN, SEE PLANS

AND FINISH.

MINIMUM).

AND BRACKET

INSTALLATION.

6. END CAP.

AND GSN FOR SIZE, GAUGE

SOLAR PANELS BY OTHERS.

THRU BOLT BY PANEL MFR.

(1/4" OR M6 DIAMETER

. SPACING BETWEEN LONG

SIDE OF PANELS, TYPICAL.

SPACING BETWEEN SHORT

SIDE OF PANELS, TYPICAL.

CONTRACTOR TO VERIFY

PURLIN SPACING WITH PANEL

SPECIFICATIONS PRIOR TO

- ENOUGH SO THAT AT LEAST 3 EXPOSED THREADS EXIST ON THE PROJECTED END.
- DETAIL 10/S4.1 FOR SECTION
- ROD BRACE BOTTOM OF





WIDT



TYPICAL SAG ROD

10 SAG ROD AT STEEL PURLINS ATTACHMENT



11 TYPICAL PURLIN TO STEEL BEAM CONNECTION NO SCALE





*THIS DETAIL MAY BE USED IN LIEU OF DETAIL 2/S4.1

8 STEEL COLUMN AT CONCRETE SPREAD FOOTING) SCAL

- 1. STEEL COLUMN PER PLAN. 2. CONCRETE SPREAD FOOTING SEE SCHEDULE THIS DETAIL
- FOR SIZE AND REINFORCING 3. (3) #9 x 5'-0" BARS AT 6" O.C. VERTICAL WELDED TO EACH
- SIDE OF COLUMN FLANGE (6 TOTAL PER COLUMN). 4. FINISHED GRADE OR SLAB AS
- 5. CENTERLINE OF STEEL COLUMN AND CONCRETE
- 6. CENTERLINE OF FOOTING
- 7. OFFSET COLUMN PER FOOTING SCHEDULE. WHERE FOOTING ECCENTRICITY EXISTS, LONGER FOOTING TOE SHALL OCCUR ON THE SIDE OF
- THE LARGEST CANTILEVER. 8. PROVIDE SLOPPED SURFACE AT COLUMN TO PREVENT ACCUMULATION OF WATER
- AGAINST STEEL 9. PROVIDE 6" EXPOSED PIER AT LOCATIONS OUTSIDE PAVED





Description



