

**CONSULTANT TEAM**

PROJECT CONSULTANT: TERRA CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
(847) 698-6400

SURVEYOR:

STRUCTURAL ENGINEER: HUTTER TRANKINA ENGINEERING  
32 W 273 ARMY TRAIL RD,  
SUITE #100  
WAYNE, IL 60184  
(630) 513-6711

**APPROVALS**

REAL ESTATE: \_\_\_\_\_

RF: \_\_\_\_\_

CONSTRUCTION: \_\_\_\_\_

EQUIPMENT ENGINEERING: \_\_\_\_\_

OPERATIONS: \_\_\_\_\_

**PROJECT TYPE**

PROPOSED LESSEE ANTENNAS TO BE MOUNTED ON EXISTING PENTHOUSE WALL WITH PROPOSED EQUIPMENT IN EXISTING ROOM LOCATED AT 7TH FLOOR OF EXISTING BUILDING

**SITE COORDINATES:**

LATITUDE: 40° 25' 32.30" N (1A CERTIFICATION)  
LONGITUDE: 86° 54' 36.56" W (1A CERTIFICATION)  
ELEVATION: ±616' (1A)

**DRIVING DIRECTIONS:**

FROM LESSEE OFFICE: Start out going west on E 96th St toward Parkwood Xing.(0.2 mi). Turn right onto N Meridian St.(0.3 mi). Merge onto I-465 W / US-52 W / USS Indianapolis Memorial Hwy W.(5.6 mi). Keep left to take US-52 W via EXIT 25 toward I-65 N / Chicago.(17.2 mi). Take I-65 N toward Chicago.(30.3 mi). Take the IN-26 exit, EXIT 172, toward Lafayette / Rossville.(0.2 mi). Keep left to take the ramp toward Lafayette / Purdue Univ. (0.03 mi). Turn left onto IN-26 / State Road 26 E.(0.2 mi). IN-26 / State Road 26 E becomes South St.(2.9 mi). Turn slight right onto Main St.(0.08 mi). Turn slight left onto Columbia St.(1.0 mi). Columbia St becomes E State St.(0.4 mi). Turn left onto S River Rd.(0.3 mi). Turn right onto E Williams St.(0.2 mi). Turn left onto S Grant St. 401 S GRANT ST is on the right.



ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

BUILDING CODE 2014 INDIANA BUILDING CODE (IBC 2012)  
STRUCTURAL CODE TIA/EIA-222 - REVISION G  
MECHANICAL CODE 2014 INDIANA MECHANICAL CODE (IMC 2012)  
PLUMBING CODE 2012 INDIANA PLUMBING CODE (IPC 2006)  
ELECTRICAL CODE 2008 NATIONAL ELECTRICAL CODE (NEC) - NFPA 70  
FIRE/LIFE SAFETY CODE 2014 INDIANA FIRE CODE (2012 IFC)  
ENERGY SAFETY CODE 2010 INDIANA ENERGY CODE ASHRAE 90.1-200 (COMMERCIAL)  
GAS CODE 2014 INDIANA FUEL GAS CODE (IFGC 2012)

**ACCESSIBILITY REQUIREMENTS:**  
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2009 IBC BUILDING CODE.

**APPLICABLE CODES**



**SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240**

**LOCATION NUMBER: 286962**

**SITE NAME: PURDUE MEMORIAL UNION  
(GRANT STREET PARKING GARAGE)**

**401 S GRANT STREET  
WEST LAFAYETTE, IN 47907**



**NOTICE TO CONTRACTOR**  
PER INDIANA STATE LAW IC-8-1-26-18, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

**PROJECT INFORMATION**

P.I.N. #: 79-07-19-282-007.000-026  
ADDRESS: 120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

POWER: DUKE ENERGY FIBER: T.B.D.

UTILITIES:

JURISDICTION: CITY OF WEST LAFAYETTE  
OCCUPANCY: UNINHABITED  
ZONING: N/A  
CONSTRUCTION TYPE: TENANT IMPROVEMENT

PROPERTY OWNER: PURDUE UNIV BOARD OF TRUSTEES  
401 S GRANT ST, WEST LAFAYETTE, IN 47907

CONTACT PERSON: PURDUE VP (765) 494-3413  
APPLICANT: VERIZON WIRELESS PERSONAL COMMUNICATIONS LP  
d/b/a VERIZON WIRELESS  
1515 WOODFIELD ROAD, SUITE 1400  
SCHAUMBURG, IL 60173  
(920) 841-1263

SHEET	DRAWING INDEX	REVISION
T-1	TITLE SHEET	D
PS-1	SURVEY	-
TE-1	SITE ELEVATION	-
C-1	SITE PLAN	D
C-2	DETAILED SITE PLAN	-
C-3	DIMENSIONED PLAN	-
C-4	GENERAL SITE CONSTRUCTION NOTES	-
D-1	FENCE DETAILS	-
D-2	EQUIPMENT CABINET	-
ANT-1	ANTENNA INFORMATION	B,C
ANT-2	DETAILS	-
ANT-3	ANTENNA PLAN	C
S-1	STRUCTURAL DETAILS	-
S-2	STRUCTURAL DETAILS	-
S-3	STRUCTURAL DETAILS	-
S-4	STRUCTURAL DETAILS	-
S-5	STRUCTURAL DETAILS	-
S-6	STRUCTURAL DETAILS	-
S-7	STRUCTURAL DETAILS	-
S-8	STRUCTURAL DETAILS	D
E-1	UTILITY SITE PLAN	-
E-2	ONE LINE DIAGRAM	-
E-3	UTILITY DETAILS	-
G-1	GROUNDING PLAN	-
G-2	GROUNDING DETAILS	-

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

**REVISIONS**

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962  
PURDUE  
MEMORIAL UNION  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907**

DRAWN BY: JLR  
CHECKED BY: TAZ  
DATE: 01/28/14  
PROJECT #: 67-051

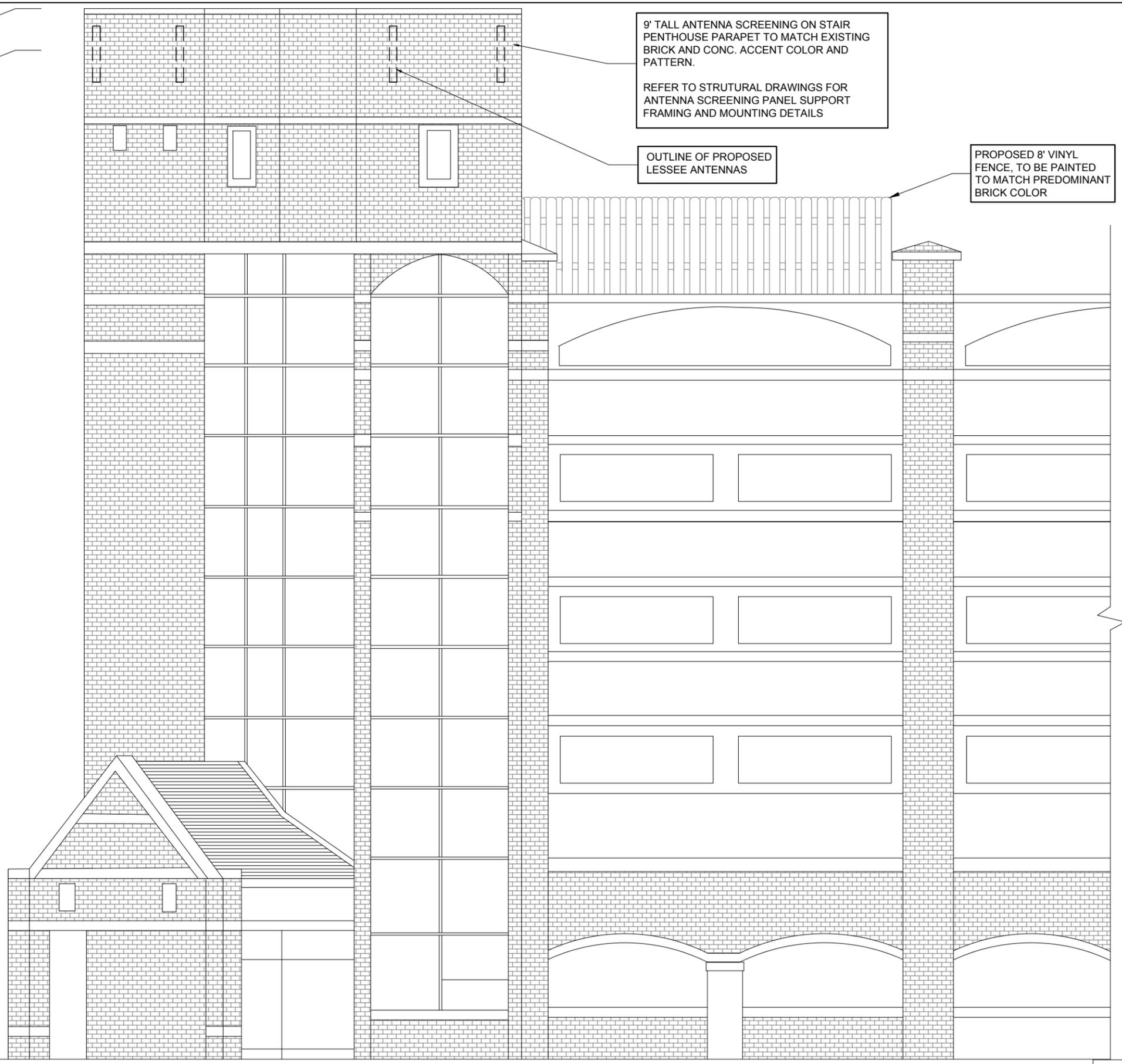
SHEET TITLE  
TITLE SHEET

SHEET NUMBER  
**T-1**

FULL SCALE PRINT IS ON 22"x34" MEDIA



- TOP OF PROPOSED ANTENNA SCREENING  
ELEV: ±79'-0" A.G.L.
- CENTERLINE OF PROPOSED ANTENNAS  
ELEV: ±75'-0" A.G.L.
- TOP OF EXISTING PARAPET  
ELEV: ±70'-0" A.G.L.
- STAIR TOWER ROOF  
ELEV: ±63'-8" A.G.L.
- SIXTH LEVEL PARKING DECK  
ELEV: ±53'-2" A.G.L.
- FIFTH LEVEL PARKING DECK  
ELEV: ±42'-8" A.G.L.
- FOURTH LEVEL PARKING DECK  
ELEV: ±32'-2" A.G.L.
- THIRD LEVEL PARKING DECK  
ELEV: ±21'-8" A.G.L.
- SECOND LEVEL PARKING DECK  
ELEV: ±11'-2" A.G.L.
- GROUND LEVEL  
ELEV: ±0'-0" A.G.L.



1 PARTIAL WEST ELEVATION  
SCALE: 1/4" = 1'-0" ±

24" x 36" PRINT IS THE FULL SCALE  
FORMAT. ANY SIZE OTHER THAN  
THAT IS AT REDUCED SCALE.

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

REVISIONS		DATE	BY
NO.	DESCRIPTION		
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

LOC. #286962  
PURDUE  
MEMORIAL UNION  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
BUILDING ELEVATION

SHEET NUMBER  
**TE-1**

PROPOSED 10' WIDE LESSEE UTILITY EASEMENT

PROPOSED HAND HOLE BY FIBER PROVIDER

24"x36" VEHICLE RATED HAND HOLE FOR VERIZON WIRELESS ONLY FIBER SERVICE

9' TALL ANTENNA SCREENING ON STAIR PENTHOUSE PARAPET TO MATCH EXISTING BRICK AND CONC. ACCENT COLOR AND PATTERN. SEE STRUCTURAL SHEETS FOR DETAILS

PROPOSED HORIZONTAL TRAY FOR COAX ROUTING

EXISTING FIRE HYDRANT

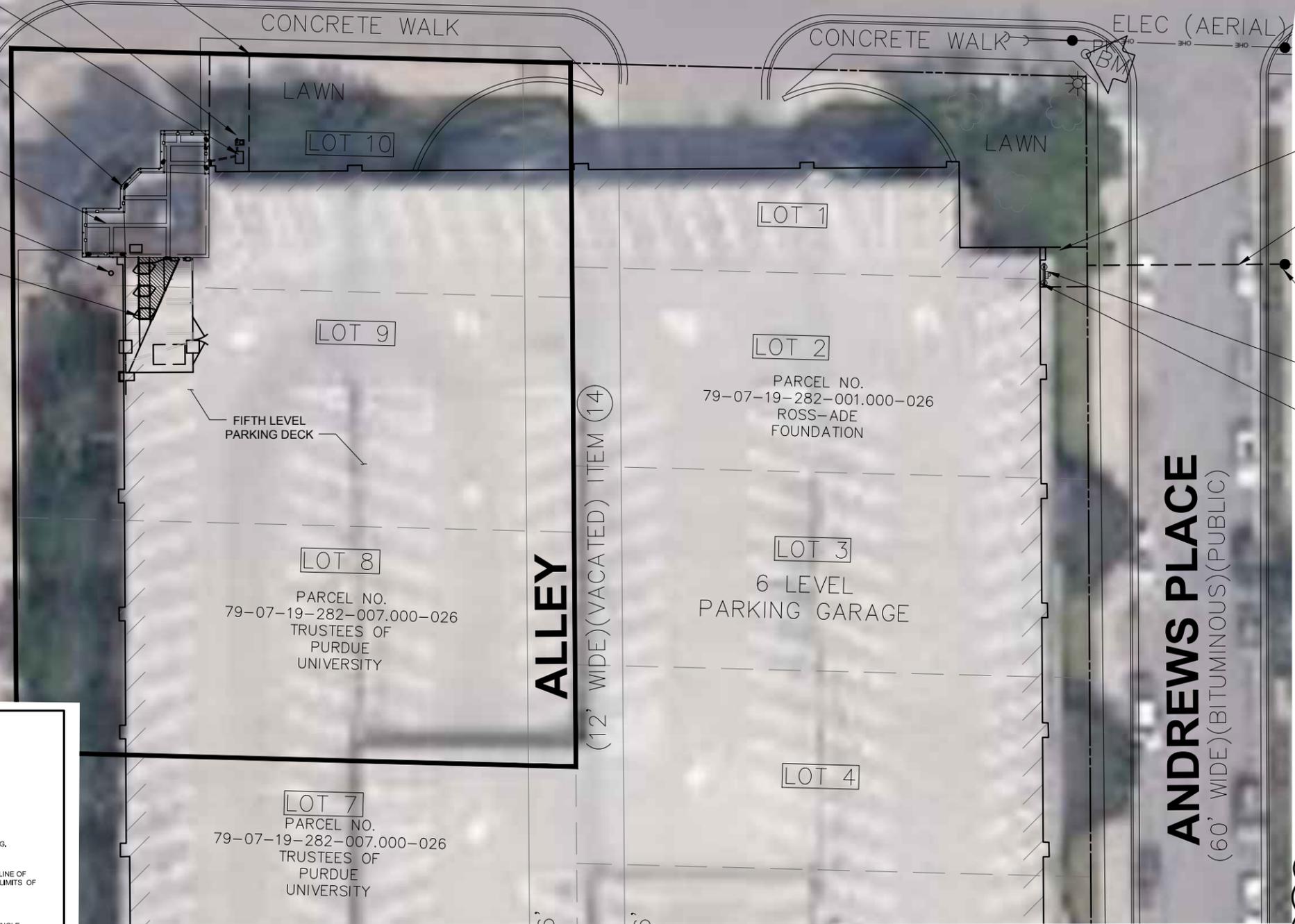
PROPOSED VERIZON WIRELESS EQUIPMENT CABINETS ON PROPOSED PLATFORM

**GRANT STREET**  
(60' WIDE)(BITUMINOUS)(PUBLIC)

**NORTH STREET**  
(60' WIDE)(BITUMINOUS)(PUBLIC)

**ANDREWS PLACE**  
(60' WIDE)(BITUMINOUS)(PUBLIC)

**ALLEY**  
(12' WIDE)(VACATED) ITEM (14)



22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

PROPOSED 10' WIDE LESSEE UTILITY EASEMENT

PROPOSED UNDERGROUND POWER ROUTE BY POWER COMPANY

PROPOSED POWER POLE INSTALLED BY POWER COMPANY

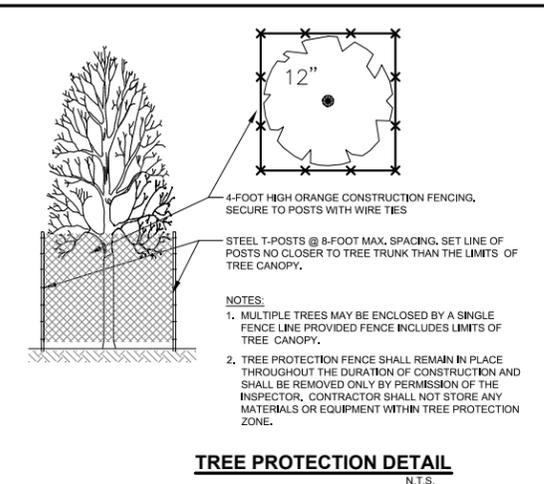
PROPOSED METER BY POWER COMPANY

PROPOSE UTILITY H-FRAME

NOTE:  
THE LOCATION OF PROPOSED ANTENNAS NEED TO BE VERIFIED WITH THE PENDING STRUCTURAL ANALYSIS

LOCATION OF NEW SERVICE TRANSFORMER IS SHOWN ON SHEET E - 4.

PRIOR TO CONSTRUCTION GC TO LOCATE ALL UNDERGROUND UTILITIES IN VICINITY OF PROJECT. ANY BURIED UTILITIES DAMAGED OR DISTURBED SHALL BE REPAIRED OR REPLACED.



ALL DISTURBED LANDSCAPE TO BE REPAIRED TO EQUAL OR BETTER OF EXISTING LANDSCAPE.

1 SITE PLAN  
SCALE: 1/16" = 1'-0" ±

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY: JLR  
CHECKED BY: TAZ  
DATE: 01/28/14  
PROJECT #: 67-051

SHEET TITLE  
SITE PLAN

SHEET NUMBER  
**C-1**

9' TALL ANTENNA SCREENING ON STAIR PENTHOUSE PARAPET TO MATCH EXISTING BRICK AND CONC. ACCENT COLOR AND PATTERN. SEE STRUCTURAL SHEETS FOR DETAILS

PROPOSED HORIZONTAL CABLE TRAY FOR FIBER, GROUNDING AND ELECTRICAL CONDUITS. SEE DETAIL 2 ON SHEET E-3

PROPOSED 10' WIDE LESSEE UTILITY EASEMENT

PROPOSED HAND HOLE BY FIBER PROVIDER

24"x36" VEHICLE RATED HAND HOLE FOR VERIZON WIRELESS ONLY FIBER SERVICE

PROPOSED VERTICAL CABLE TRAY FOR FIBER, GROUNDING AND ELECTRICAL CONDUITS FROM LOWER LEVEL TO TOP OF THE PENTHOUSE VERTICAL CABLE TRAY PAINT TO MATCH PREDOMINANT EXISTING EXTERIOR WALL COLOR. SEE DETAIL 1 ON SHEET E-3

PROPOSED VERTICAL CABLE TRAY FOR FIBER, GROUNDING AND ELECTRICAL CONDUITS FROM TOP OF PENTHOUSE TO PARKING DECK. VERTICAL CABLE TRAY PAINT TO MATCH PREDOMINANT EXISTING EXTERIOR WALL COLOR. SEE DETAIL 1 ON SHEET E-3

PROPOSED 10' WIDE LESSEE UTILITY EASEMENT

PROPOSED AUTOMATIC TRANSFER SWITCH AND GENERATOR PLUG MOUNTED ON THE EXISTING WALL WITH UNISTRUT

PROPOSED 8' VINYL FENCE, TO BE PAINTED TO MATCH PREDOMINANT BRICK COLOR

PROPOSED STEEL LADDER

HASHED AREA SHOWS EXTENT OF GRATING ON PLATFORM

PROPOSED 12'-0" WIDE ACCESS GATE

PROPOSED 5' x 8' TEMPORARY GENERATOR LOCATION

POWER & TELCO METER BOARD STRUCTURE - INSTALLED BY G.C.

PROPOSE UTILITY H-FRAME

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

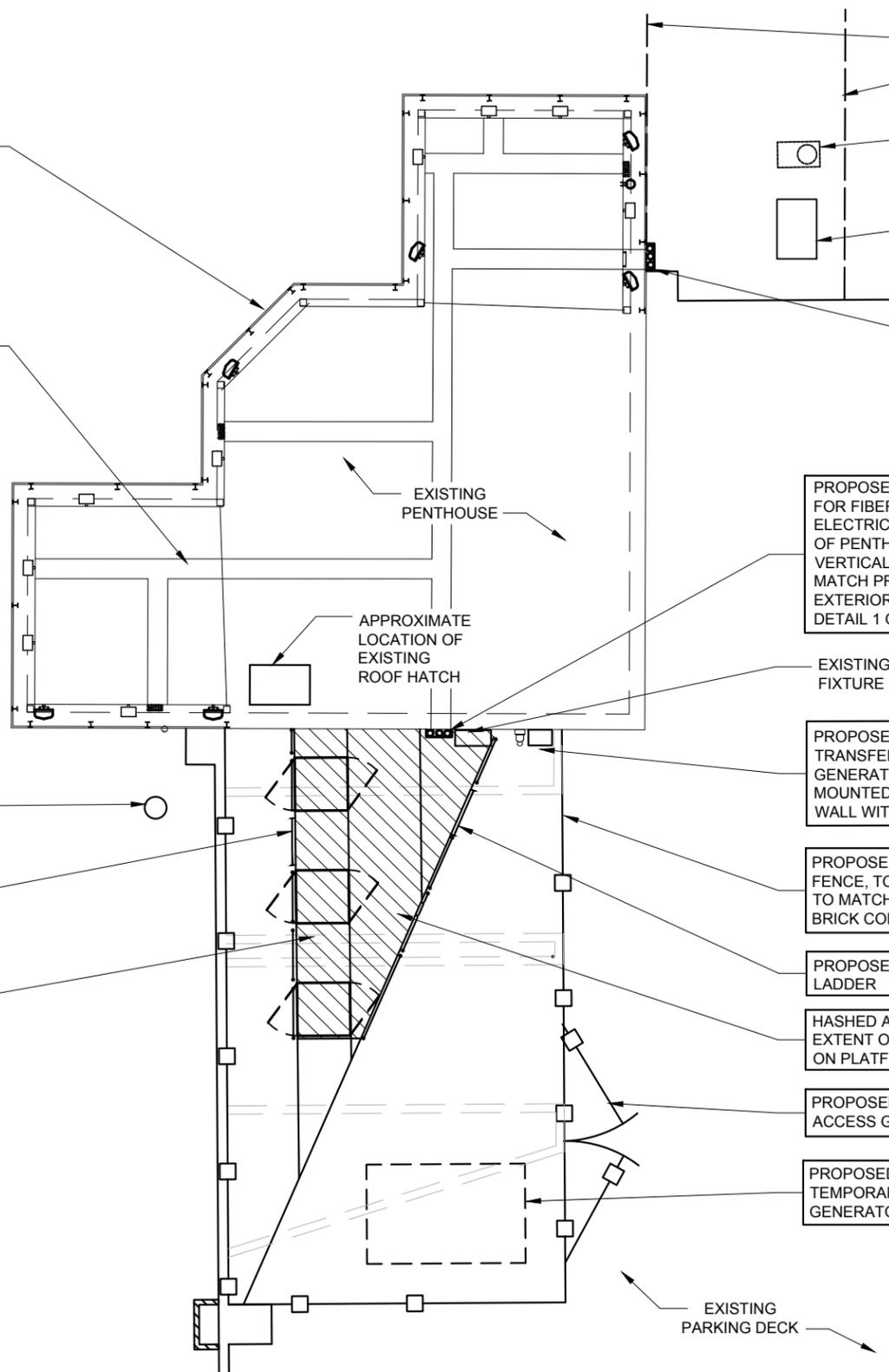
SCALE 1/4" = 1'-0"

ANDREWS PLACE  
(60' WIDE BITUMINOUS PUBLIC)

EXISTING FIRE HYDRANT

PROPOSED STEEL LADDER

PROPOSED VERIZON WIRELESS CABINETS ON PROPOSED EQUIPMENT PLATFORM, SEE DETAIL ON SHEET S-7



1 DETAILED SITE PLAN  
SCALE: 1/4" = 1'-0" ±

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP db/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

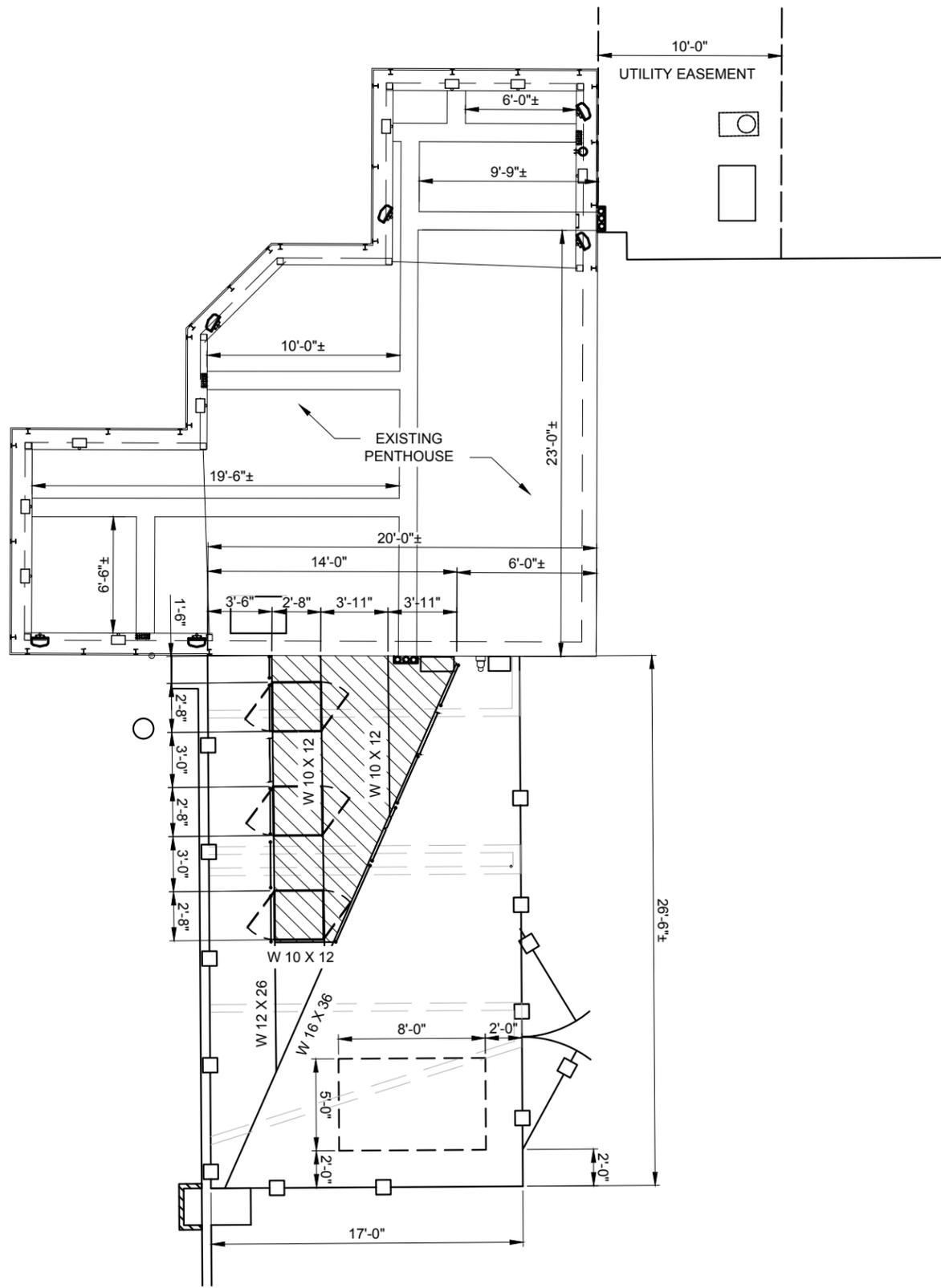
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

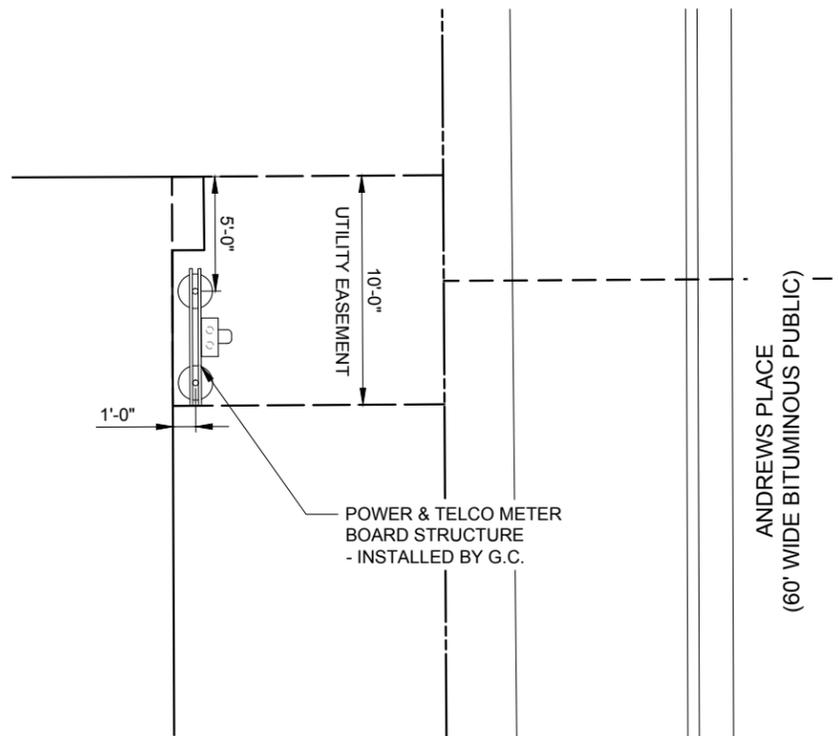
SHEET TITLE  
**DETAILED  
SITE PLAN**

SHEET NUMBER  
**C-2**



1 DIMENSIONED PLAN  
SCALE: 1/4" = 1'-0" ±

22" x 34" PRINT IS THE FULL SCALE  
FORMAT. ANY SIZE OTHER THAN  
THAT IS AT REDUCED SCALE.



ANDREWS PLACE  
(60' WIDE BITUMINOUS PUBLIC)

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**DIMENSIONED  
PLAN**

SHEET NUMBER  
**C-3**

# GENERAL SITE CONSTRUCTION NOTES

## 1. SCHEDULE:

THE CONSTRUCTION OF THE SITE REQUIRES A CERTAIN SEQUENCE OF EVENTS TO MINIMIZE CONSTRUCTION TIME REQUIRED UNTIL AVAILABILITY OF CELLULAR TELEPHONE SERVICE. VERIFY SCHEDULE DURING BID WALK.

## 2. BUILDING OWNER REPRESENTATIVE:

**PURDUE UNIVERSITY BOARD OF TRUSTEES**  
**PURDUE UNIVERSITY**  
**WEST LAFAYETTE, IN 47907**  
**PHONE: 765-494-4600**

## 3. ANTENNA INSTALLATION:

THE VERIZON WIRELESS CONTRACTOR (VZW GC) INSTALLING THE PLATFORM SHALL ENSURE THAT THE PLATFORM IS ALIGNED BASED ON THE VERIZON WIRELESS RF PLAN. DURING THIS WORK, THE GENERAL CONTRACTOR SHALL BE LIMITED TO THE WORK WHICH CAN BE PERFORMED OUTSIDE THE VICINITY OF THE TOWER.

## 4. ACCESS DRIVEWAY:

THE GENERAL CONTRACTOR SHALL CONSTRUCT THE ACCESS DRIVE PER THE ALIGNMENT AS SHOWN ON THESE DRAWINGS. IF ANY AREA OF CONSTRUCTION REQUIRES ADDITIONAL FILL OF AGGREGATE STONE THAN SHOWN ON THE DRAWINGS, THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER FOR APPROVAL OF THE SIZE, TYPE AND QUANTITY OF STONE/FILL NECESSARY AND SHALL NOT BE USED UNTIL APPROVAL BY THE ENGINEER. THE GENERAL CONTRACTOR SHALL ALSO OBTAIN DRIVE PERMIT FOR NEW ACCESS DRIVE.

## 5. PREFABRICATED RADIO EQUIPMENT BUILDING:

THIS VERIZON WIRELESS CONTRACTOR (VZW GC) SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS FOR THE PROPER LIFTING AND TRANSPORTING OF THE PREFABRICATED RADIO EQUIPMENT BUILDING FROM THE TRANSPORT TRUCK BED TO THE FINAL POSITION ON THE CONCRETE FOUNDATION. THE BUILDING SHALL BE LIFTED INTO PLACE BY USING TWO SPREADER BAR ASSEMBLIES. EACH SPREADER BAR SHALL BE A MINIMUM 13' WIDE (RATED TO CARRY 15 TONS). THE BUILDING WEIGHT IS 75,000# WITH TELEPHONE EQUIPMENT. VERIZON WIRELESS CONTRACTOR (VZW GC) SHALL ANCHOR THE BUILDING TO THE CONCRETE SLAB USING STEEL PLATES AND ANCHOR BOLTS PROVIDED BY THE PREFABRICATED RADIO EQUIPMENT BUILDING MANUFACTURER. EXTREME CAUTION SHALL BE TAKEN IN THE INSTALLATION OF THE BUILDING TO AVOID CONTACT WITH EXISTING OVERHEAD UTILITY LINES.

THE VERIZON WIRELESS CONTRACTOR (VZW GC) IS RESPONSIBLE FOR ATTACHING OR SECURING ANY ACCESSORY OR LOOSE ITEMS THAT ARE SHIPPED WITH THE PREFABRICATED RADIO EQUIPMENT BUILDING, I.E. TIE DOWN PLATES, HVAC DRIP HOSES TO BLDG., AND SHALL INCLUDE THIS WORK IN THE BUILDING INSTALLATION PORTION OF THE BID.

## 6. UTILITIES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXCAVATION AND PROPER BACKFILLING OF TRENCHES AND SUPPLY CONDUIT REQUIRED FOR UNDERGROUND TELEPHONE & ELECTRICAL UTILITIES. ALL TRENCHING SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE W/ASTM D-1557.

**THE CONTRACTOR SHALL RUN AN ELECTRICAL 2 1/2" CONDUIT AND DETECTABLE PULL TAPE FROM THE NEW EQUIPMENT PLATFORM AT THE ROOF LEVEL AND END AT THE NEW METER BOARD STRUCTURE AT THE GROUND LEVEL. THE ELECTRICAL PROVIDER WILL THEN RUN UNDERGROUND CONDUIT FROM THE NEW METER TO THE NEW UTILITY POLE, CONTACT CLINT HUDSON @ 765-446-4009, WITH DUKE ENERGY BEFORE BEGINNING CONSTRUCTION TO VERIFY LOCATION. CONDUITS MUST HAVE A MINIMUM DEPTH OF 36". THE ELECTRIC PROVIDER SHALL SUPPLY SERVICE TO THE NEW METER BOARD STRUCTURE. THE CONTRACTOR SHALL CONTACT DUKE ENERGY TO SETUP AN INSPECTION OF THE TRENCHES BEFORE THEY ARE BACKFILLED. THE CONTRACTOR SHALL PROPERLY BACKFILL THE TRENCHES AFTER INSPECTION AND SETTLEMENT. CONTACT ELECTRIC PROVIDER THREE TO FOUR WEEKS PRIOR TO CONSTRUCTION FOR NEW SERVICE AND COORDINATION OF ACCESS TO SITE. THE CONTRACTOR SHALL CONTACT DUKE ENERGY FOR A COPY OF THEIR SPECIFICATIONS BEFORE CONSTRUCTION.**

THE TOWER OWNER SHALL ENSURE PERMANENT ELECTRIC POWER IS AVAILABLE FOR VERIZON WIRELESS AT THE METER BASE PRIOR TO THE SITE BEING RELEASED TO VERIZON WIRELESS AS TENANT READY.

THE VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL RUN ELECTRICAL CONDUCTORS FROM NEW METER CENTER TO NEW PREFABRICATED RADIO EQUIPMENT PLATFORM WITHIN TOWER OWNER INSTALLED 2 1/2" CONDUIT CONTACT **ELECTRIC PROVIDER** TO HAVE NEW METER INSTALLED.

THE VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL RUN ELECTRICAL CONDUCTORS FROM NEW METER CENTER TO NEW PREFABRICATED RADIO EQUIPMENT BUILDING WITHIN TOWER OWNER INSTALLED 4" CONDUIT CONTACT **ELECTRIC PROVIDER** TO HAVE NEW METER INSTALLED.

THE VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL BE RESPONSIBLE FOR THE ORDERING AND COORDINATING THE DELIVERY OF A FIBER OPTIC SERVICE LINE TO THE PREFABRICATED RADIO EQUIPMENT BUILDING. COORDINATE WITH THE FIBER PROVIDER AND THE VERIZON WIRELESS FACILITY ENGINEER.

**1. THE CONTRACTOR SHALL RUN IN THE FIBER OPTIC TRENCH (1) "VERIZON ONLY" 4" PVC CONDUIT WITH PULL TAPE AND TRACER WIRE FROM THE NEW PREFABRICATED RADIO EQUIPMENT BUILDING TO THE NEW HAND HOLE OUTSIDE COMPOUND WITHIN EASEMENT, VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) WILL COORDINATE WITH FIBER PROVIDER (TBD BY VZW) TO VERIFY EXACT LOCATION OF CONDUIT AND HAND HOLE BEFORE CONSTRUCTION STARTS. (VZW GC) WILL THEN COORDINATE WITH THE CONTRACTOR FOR THIS INSTALLATION. THE FIBER PROVIDER WILL PROVIDE SERVICE TO THE TELCO RACK IN VERIZON SHELTER.**

**2. THE CONTRACTOR SHALL RUN IN THE FIBER OPTIC TRENCH (1) "VERIZON ONLY" 4" PVC CONDUIT WITH PULL TAPE FROM THE NEW HAND HOLE LOCATED OUTSIDE COMPOUND TO THE FUTURE FIBER PEDESTAL LOCATION AND STUB-UP. THE CONTRACTOR SHALL COORDINATE WITH THE VERIZON WIRELESS CONSTRUCTION MANAGER AND THE FIBER SERVICE PROVIDER ON THE FUTURE FIBER PEDESTAL LOCATION. THE CONTRACTOR SHALL PROPERLY BACKFILL THE TRENCHES AFTER SETTLEMENT. CONTACT FIBER PROVIDER (TBD BY VERIZON WIRELESS) FOR APPOINTMENT TO VISIT THE SITE, FOUR TO SIX WEEKS PRIOR TO CONSTRUCTION FOR NEW SERVICE.**

ELECTRIC SERVICE PROVIDED BY:

FIBER OPTIC SERVICE PROVIDED BY:

**DUKE ENERGY**  
**ADDRESS: 3395 GREENBUSH STREET**  
**LAFAYETTE, IN 47905**  
**CONTACT: CLINTON M. HUDSON**  
**PHONE: 0765-446-4009**  
**EMAIL: clinton.hudson@duke-energy.com**

**FIBER PROVIDER TO BE DETERMINED BY VERIZON WIRELESS**

## 7. SITE GRADING

**A. UNIFORMLY GRADE AREA TO BE SMOOTH SURFACE FREE FROM IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTION, TOPO LINES AND ELEVATIONS INDICATED.**

**1. COMPOUND SURFACE GRADES ARE TO BE SLOPED TO DIRECT WATER AWAY FROM EQUIPMENT AND SHELTERS TO PREVENT STANDING AND PONDING WATER.**

**2. COMPOUND SURFACE SHALL BE COMPACTED TO A 95% MAXIMUM DRY DENSITY TO ALLOW PROPER STERILIZATION FOR ACCESS TO ALL CUSTOMERS DENSITY TESTING MAY BE REQUIRED AT VERIZON WIRELESS' DISCRETION DUE TO QUESTIONABLE COMPACTION OF FINISH SURFACE GRADE OR SUB-GRADE.**

**3. DITCHES/SWALES AROUND THE COMPOUND AREA AND ALONG ACCESS ROAD SHALL BE CONSTRUCTED SO TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING GRADES/SLOPE AND NEW PROPOSED GRADES.**

**4. SITE GRADING AND DRAINAGE SHOULD BE CONSTRUCTED TO PREVENT WATER FROM ENTERING THE COMPOUND SURFACE OR THE ACCESS ROAD SUB-GRADE.**

**B. MOISTURE CONTROL** - UNIFORMLY MOISTEN OR AERATE SUB-GRADE AND EACH SUBSEQUENT FILL OR BACK FILL LAYER BEFORE COMPACTION TO WITHIN 90% OF OPTIMUM MOISTURE CONTENT. DO NOT PLACE BACK FILL OR FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN OR CONTAIN FROST, SNOW OR ICE.

**C. STOCKPILING MATERIAL (TOP SOIL OR FILL DIRT)** - SHOULD BE PLACED IN AN AREA THAT CAN BE CONTROLLED TO PREVENT WATER, SNOW, OR ICE FROM EFFECTING MOISTURE CONTENT. STOCKPILES MAY HAVE TO BE COVERED TO PREVENT ADDITIONAL MOISTURE FROM ACCUMULATING SO ACCEPTABLE FILL CAN BE USED.

**D. DE-WATERING** - PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUB-GRADE, AND FROM FLOODING PROJECT OR BUILD AREA.

**E. EROSION CONTROL** - MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

**1. ALL INLETS, DRAINS, PIPES, SWELLS, AND ROADS SHALL BE KEPT CLEAN AND FREE OF DIRT AND SILT.**

**F. GEOTEXTILE FABRIC** - AFTER PLACEMENT AND COMPACTION OF FILL WITHIN THE WORK AREA AND BEFORE THE PLACEMENT OF LIMESTONE AGGREGATE, (SEE SITE AREA SURFACING DETAIL ON D-1), THE ENTIRE DISTURBED WORK AREA SHALL BE COVERED WITH A GEOTEXTILE FABRIC. THIS FABRIC SHALL BE "TENCATE (MIRAFI 500X) WOVEN ENGINEERING FABRIC" INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.

## 8. TRASH REMOVAL & SANITATION:

THE GENERAL CONTRACTOR AND VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL REMOVE ALL TRASH AS CREATED BY HIMSELF AND HIS SUBCONTRACTORS. TRASH SHALL BE REMOVED FROM THE SITE IN A TIMELY FASHION TO A LEGAL DISPOSAL AREA. THE GENERAL CONTRACTOR SHALL ALSO REMOVE ALL TRASH CREATED BY OTHER CONTRACTORS INCLUDING CABLE REELS, CARDBOARD BOXES AND PACKING. NO BURNING OR BURYING OF TRASH IS PERMITTED.

THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN A PORTABLE TOILET FOR THE DURATION OF THE CONSTRUCTION PROJECT.

## 9. TOWER:

**A. THE GENERAL CONTRACTOR SHALL VERIFY THE EQUIPMENT BUILDING FOUNDATION IS LOCATED CORRECTLY WITH RESPECT TO THE TOWER FOUNDATION. THE CONTRACTOR MUST NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO POURING CONCRETE.**

**B. TOWER & FOUNDATION DESIGN ARE BY OTHERS FOR TOWER OWNER. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY IN WRITING FROM TOWER OWNER THAT THE TOWER IS STRUCTURALLY SUFFICIENT TO SUPPORT ALL LOADINGS AS OUTLINED IN THESE DOCUMENTS. TOWER AND FOUNDATION DESIGN SHALL BE PERFORMED BY A LICENSED ENGINEER.**

**C. THE GENERAL CONTRACTOR SHALL VERIFY THE TOP OF FOUNDATION MATCHES THE FAA APPROVAL LETTER.**

## 10. EXCAVATION OF UTILITIES:

**A. FIELD VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING IN THE VICINITY OF THE SITE. ALL EXCAVATIONS SHALL BE MADE BY HAND OVER OR UNDER OR IMMEDIATELY ADJACENT TO ANY EXISTING UTILITIES & GROUNDING.**

**B. ALL UTILITY COMPANIES SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ON THIS PROJECT. CONTACT UNDERGROUND UTILITY PROTECTION SERVICE BEFORE YOU DIG AT 1-800-382-5544 OR 811.**

**C. EXISTING UTILITIES ARE SHOWN FROM THE SURVEY AND ARE NOT NECESSARILY COMPLETE AND ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE, EXPOSE AND DETERMINE IF CONFLICTS EXIST WITH THE NEW IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER (A&E FIRM) IN ORDER TO RESOLVE ANY CONFLICTS.**

## 11. CONTRACTOR'S LICENSE:

THE GENERAL CONTRACTOR, VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) AND ALL OF THEIR SUBCONTRACTORS THAT DO ANY WORK ON THIS PROJECT SHALL BE CURRENTLY LICENSED TO PERFORM WORK IN THE LOCATION OF THIS SITE. PROOF OF LICENSES SHALL BE SUPPLIED TO VERIZON WIRELESS PRIOR TO THE COMMENCEMENT OF ANY WORK.

## 12. SEEDING:

ALL DISTURBED AREAS SHALL BE REPAIRED AND SEEDED BY THE GENERAL CONTRACTOR, UNLESS OTHERWISE NOTED. SEED DISTURBED AREAS W/4 POUNDS/1000 SQ. FT. - 60% KENTUCKY BLUEGRASS, 18% CREEPING RED FESCUE, 22% ANNUAL RYEGRASS.

## 13. FINAL CLEAN-UP:

UPON COMPLETION OF ALL WORK BY THE GENERAL CONTRACTOR AND ALL OF THEIR SUBCONTRACTORS ON THIS PROJECT, THE VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL REMOVE EXCESS MATERIALS AND SWEEP/MOP FLOORS. THE VERIZON WIRELESS GENERAL CONTRACTOR IS ALSO RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIAL FROM INSIDE THE SHELTER ALONG WITH SHIPMENT OF NOTED MATERIALS BACK TO THE VERIZON WIRELESS.

## 14. TRAFFIC CONTROL:

THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL REQUIRED TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OR GOVERNING LOCAL AGENCIES.

## 15. CONSTRUCTION STAKING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING NEEDED TO COMPLETE ALL THE CONSTRUCTION SHOWN HEREON. CONTACT DESIGN ENGINEER TO SCHEDULE CONSTRUCTION STAKING.

**16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PROPERTY RESULTING FROM THE CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO PAVEMENT, FINISHED GRADES, LANDSCAPING, BUILDINGS, SURVEY MARKERS, FIELD TILES, CULVERTS, ETC.**

**17. IN THE EVENT ANY DISCREPANCIES OR ERRORS ARE FOUND ON THESE PLANS OR ANY CONFLICT OR PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE GENERAL CONTRACTOR OR VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. NO ADDITIONAL COMPENSATION WILL BE PAID TO THE GENERAL CONTRACTOR OR VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) FOR WORK HAVING TO BE REDONE FOR GRADE OR GEOMETRIC DISCREPANCIES IF NOTICE TO THE ENGINEER HAS NOT BEEN PROVIDED. THE ENGINEER RESERVES THE RIGHT TO MAKE MINOR ADJUSTMENTS AS NECESSARY TO ACCOMPLISH THE INTENT OF THESE PLANS.**

**18. ALL SITE WORK AND CONSTRUCTION SHALL CONFORM TO ANY AND ALL APPLICABLE CODES AND VERIZON WIRELESS STANDARDS AND SPECIFICATIONS.**

**19. ALL ELEVATIONS AND TOPOGRAPHIC INFORMATION WAS TAKEN FROM A SURVEY SUPPLIED TO **TERRA CONSULTING GROUP** BY **SURVEYING FIRM, TERRA CONSULTING GROUP** HAS NOT VERIFIED THIS INFORMATION AND DOES NOT WARRANT ANY INFORMATION SUPPLIED BY OTHERS.**

**20. THE GENERAL CONTRACTOR SHALL MAINTAIN A COMPLETE AS-BUILT SET OF PLANS AND CONDITIONS, AND SUBMIT SAME TO THE ENGINEER WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION. AS-BUILT PLANS SUBMITTED TO THE ENGINEER SHALL INCLUDE A DRAWING WITH DIMENSIONS SHOWING THE LOCATION OF THE UNDERGROUND UTILITIES, GROUNDING GRID, BUILDING, TOWER FOUNDATION, TOWER PLATFORM ORIENTATION, AND FENCE WITHIN THE LEASE AREA OR PROPERTY AND BE CERTIFIED BY A LICENSED PROFESSIONAL SURVEYOR.**

**21. THE GENERAL CONTRACTOR AND VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL BE RESPONSIBLE FOR NOTIFICATION OF ALL GOVERNING AGENCIES THAT REQUIRE SITE INSPECTION OF THE WORK AND/OR SIMPLY NOTIFICATION.**

**22. THE GENERAL CONTRACTOR AND VERIZON WIRELESS GENERAL CONTRACTOR (VZW GC) SHALL BE RESPONSIBLE FOR NOTIFICATION AND COORDINATION OF ALL TESTING AGENCIES THAT REQUIRE SITE INSPECTION OR TESTING OF THE WORK AS DIRECTED IN THESE PLANS, GOVERNING AGENCIES AND ALL APPLICABLE CODES.**

**23. PRIOR TO THE SUBMISSION OF BIDS, THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL VERIFY ALL DETAILS AND SCHEDULES ON THE DRAWINGS AND SPECIFICATIONS PROVIDED BY THE OWNER, FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ALL CONSTRUCTION DOCUMENTS TO INCLUDE, BUT NOT LIMITED TO, GEOTECHNICAL REPORT, STRUCTURAL ANALYSIS, TOWER, MECHANICAL AND ELECTRICAL DRAWINGS, FOR SCALE, SPACE LIMITATIONS, DOOR SWINGS, ADJACENT CARRIER EQUIPMENT COORDINATION AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO THE OWNER BEFORE SUBMITTING BIDS.**

## 24. WORK SITE SAFETY:

**A. CONSTRUCTION WORK PRESENTS UNIQUE THREATS TO HEALTH AND SAFETY. THE CONTRACTOR AND VERIZON WIRELESS CONTRACTOR (VZW GC) ARE RESPONSIBLE TO EDUCATE THEIR WORK FORCE OF THESE DANGERS AND LIMIT THEIR EXPOSURE TO HAZARDS. THIS EDUCATION SHALL INCLUDE BUT NOT BE LIMITED TO APPLICABLE TRAINING COURSES AND CERTIFICATIONS, PROPER PERSONAL PROTECTIVE EQUIPMENT USAGE, DAILY TAILGATE MEETINGS AND ANY OTHER PREVENTATIVE MEASURES WHICH MAY BE REASONABLY EXPECTED. THE CONTRACTOR, VERIZON WIRELESS CONTRACTOR (VZW GC) AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND ANY PROPERTY OCCUPANTS WHO MAY BE AFFECTED BY THE WORK UNDER CONTRACT. ALL CONTRACTORS SHALL REVIEW ALL LANDOWNER, PRIME CONTRACTOR, CARRIER, OSHA, AND LOCAL SAFETY GUIDELINES AND AT ALL TIMES SHALL CONFORM TO THE MOST RESTRICTIVE OF THESE STANDARDS TO ENSURE A SAFE WORKPLACE.**

**B. TOWER WORK PRESENTS ADDITIONAL THREATS TO HEALTH AND SAFETY. ALL TOWER WORKERS WORKING ON A TOWER MUST BE ADEQUATELY TRAINED AND MONITORED TO ENSURE THAT SAFE WORK PRACTICES ARE LEARNED AND FOLLOWED. AS REQUIRED BY OSHA, WHEN WORKING ON EXISTING COMMUNICATION TOWERS, EMPLOYEES MUST BE PROVIDED WITH APPROPRIATE FALL PROTECTION, TRAINED TO USE THIS FALL PROTECTION PROPERLY, AND THE USE OF FALL PROTECTION MUST BE CONSISTENTLY SUPERVISED AND ENFORCED BY THE CONTRACTOR.**

**C. ALL SAFETY EQUIPMENT SHALL BE INSPECTED ACCORDING TO ALL OSHA AND INDUSTRY SCHEDULED INTERVALS AND ALL INSPECTIONS SHALL BE DOCUMENTED PER APPLICABLE CODES AND STANDARDS.**



NO.	DESCRIPTION	DATE	REVISIONS					
			BY	DATE	DESCRIPTION	DATE	BY	DATE
A	ISSUED FOR REVIEW	08/21/15	JLR					
B	REVISED ANTENNA CENTERLINE	09/14/15	IC					
C	REVISED ANTENNA LOCATION	09/29/15	IC					
D	REVISED PER COMMENTS	01/11/16	IC					
E	REVISED PROPERTY ADDRESS	03/02/16	IC					
F	REVISED SITE PLAN	05/18/16	IC					

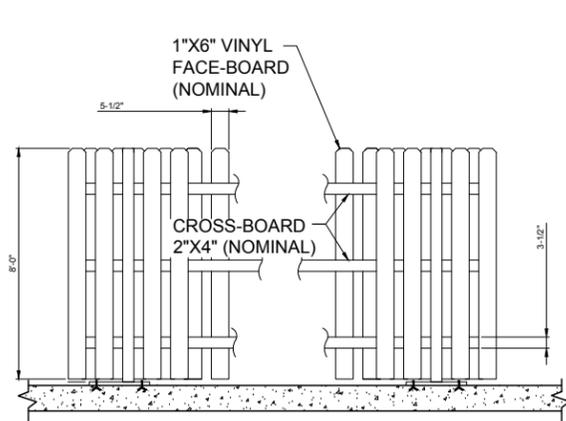
**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
**(GRANT STREET**  
**PARKING GARAGE)**  
**120 N GRANT STREET**  
**WEST LAFAYETTE, IN 47907**

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

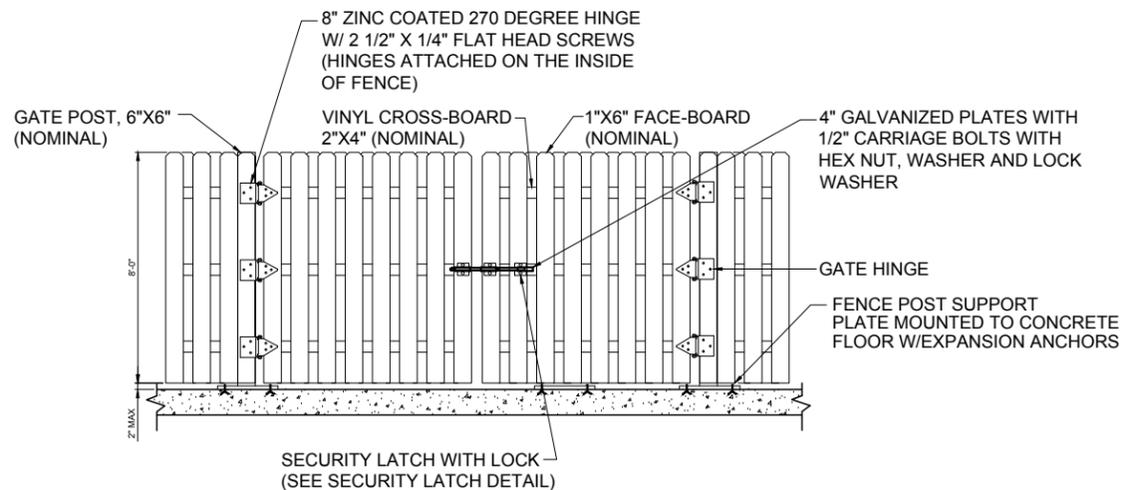
SHEET TITLE  
**GENERAL SITE**  
**CONSTRUCTION NOTES**

SHEET NUMBER

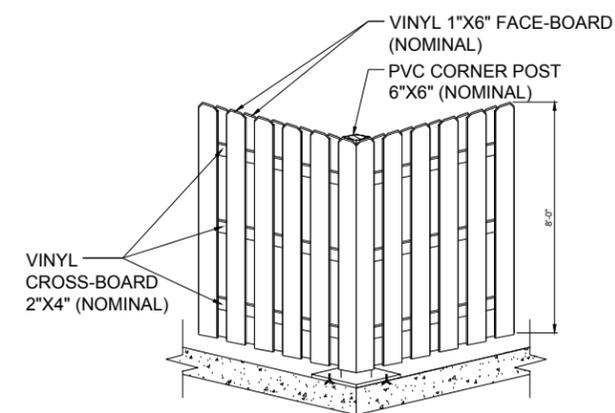
**C-4**



1 PVC POST  
SCALE: N.T.S.

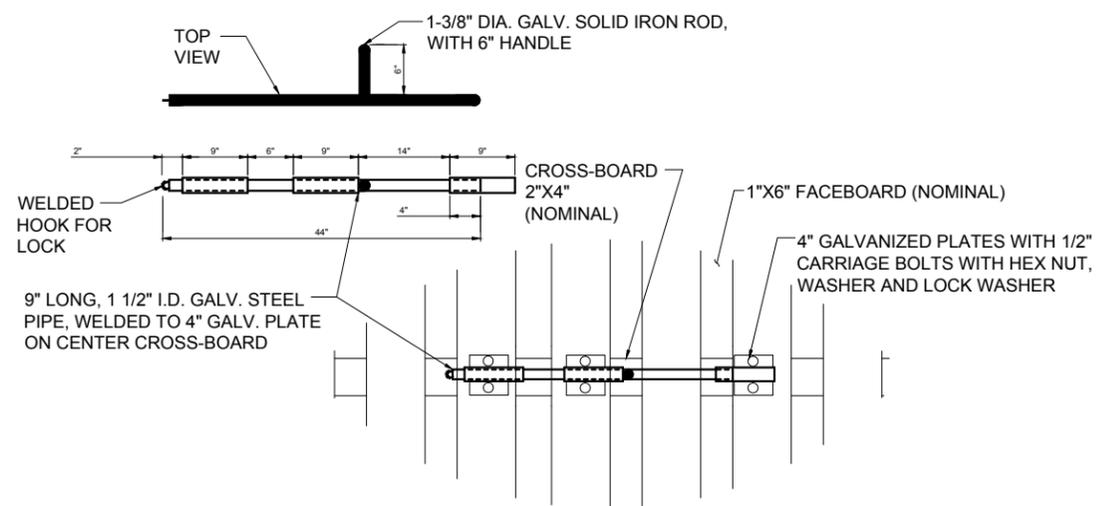


2 12'-0" DOUBLE SWING GATE  
SCALE: N.T.S.



3 SCALE: N.T.S.

FENCING NOTES:  
1. FACE-BOARDS CAN BE NAILED OR SCREWED TO CROSS-BOARDS.  
ALL CROSS-BOARDS WILL BE SCREWED TO POSTS.



4 SECURITY LATCH  
SCALE: N.T.S.

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP db/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSTRUCTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

REVISIONS		NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR		
B	REVISED ANTENNA CENTERLINE	09/14/15	IC		
C	REVISED ANTENNA LOCATION	09/29/15	IC		
D	REVISED PER COMMENTS	01/11/16	IC		
E	REVISED PROPERTY ADDRESS	03/02/16	IC		
F	REVISED SITE PLAN	05/18/16	IC		

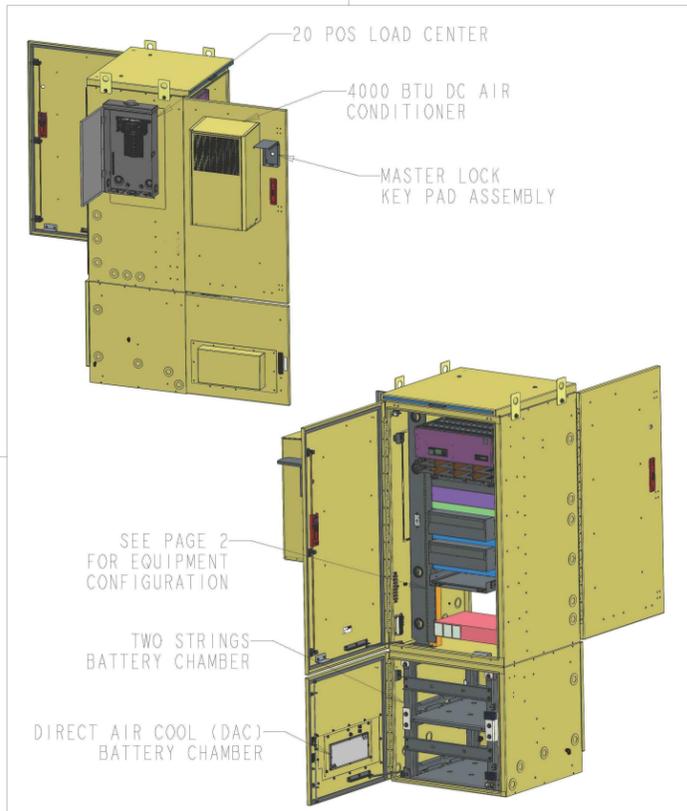
**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
FENCE DETAILS

SHEET NUMBER

**D-1**

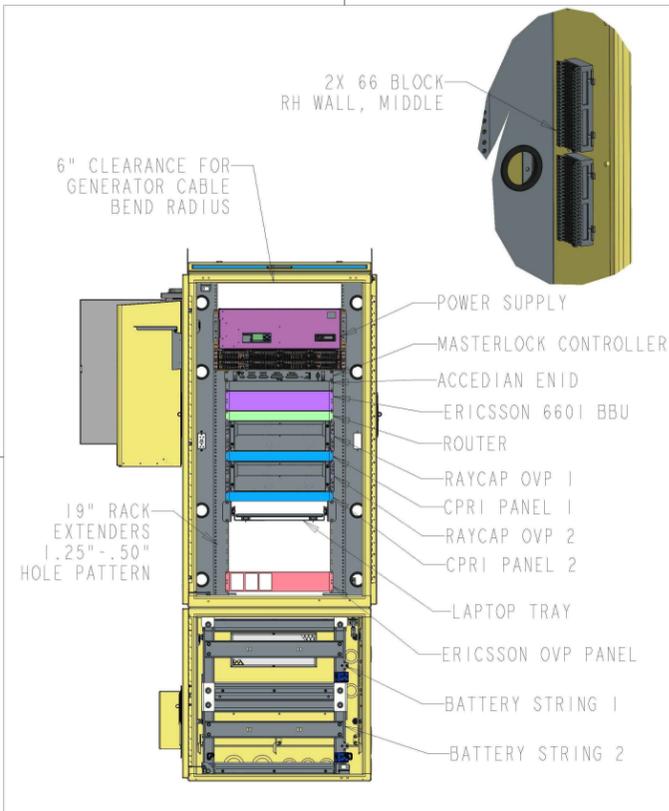


Charles Industries Ltd. Telecommunications Group  
 Charles Center, 1000 Busse Drive  
 Park Ridge, IL 60068  
 Telephone: 847-698-6400

DRAWING NO. CUBE-SS4B231KJ2  
 SCALE 0.012  
 SHEET 1 of 4

THIS IS THE PROPERTY OF CHARLES INDUSTRIES LTD. AND SHALL NOT BE REPRODUCED, COPIED OR USED IN ANY MANNER DETRIMENTAL TO THEIR INTERESTS.

REV 01-08-09 COMPUTER GENERATED DRAWING DO NOT SCALE DRAWING

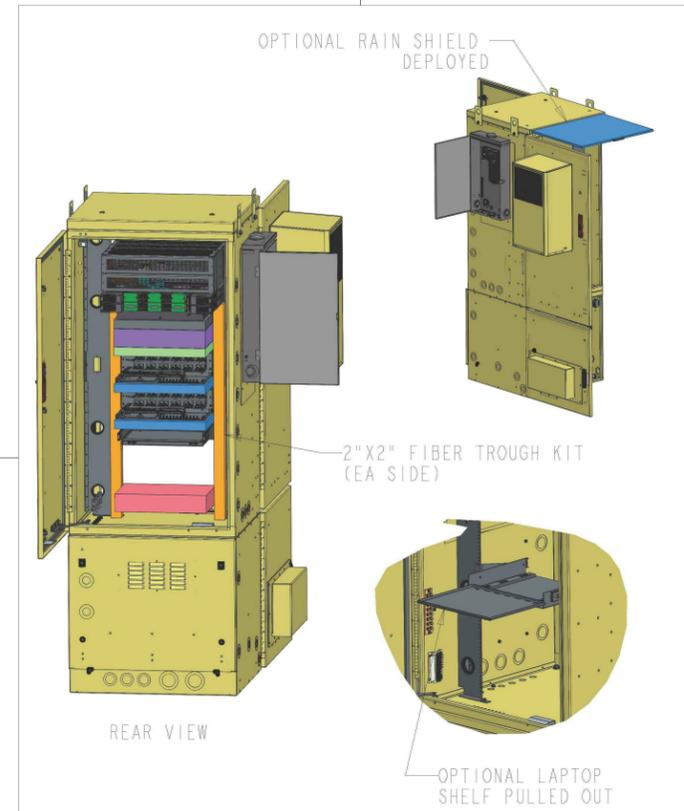


Charles Industries Ltd. Telecommunications Group  
 Charles Center, 1000 Busse Drive  
 Park Ridge, IL 60068  
 Telephone: 847-698-6400

DRAWING NO. CUBE-SS4B231KJ2  
 SCALE 0.012  
 SHEET 2 of 4

THIS IS THE PROPERTY OF CHARLES INDUSTRIES LTD. AND SHALL NOT BE REPRODUCED, COPIED OR USED IN ANY MANNER DETRIMENTAL TO THEIR INTERESTS.

REV 01-08-09 COMPUTER GENERATED DRAWING DO NOT SCALE DRAWING

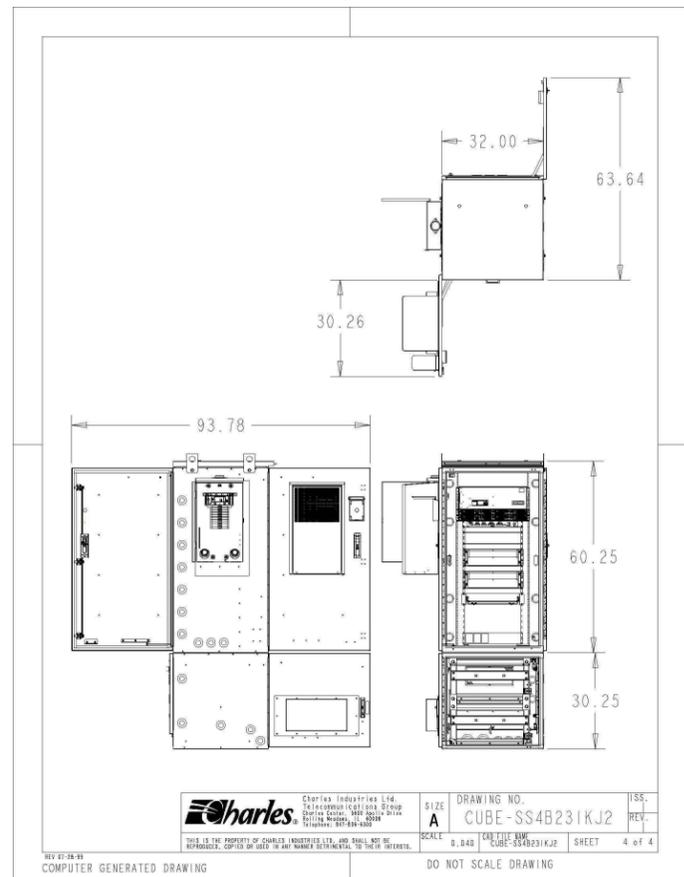


Charles Industries Ltd. Telecommunications Group  
 Charles Center, 1000 Busse Drive  
 Park Ridge, IL 60068  
 Telephone: 847-698-6400

DRAWING NO. CUBE-SS4B231KJ2  
 SCALE 0.060  
 SHEET 3 of 4

THIS IS THE PROPERTY OF CHARLES INDUSTRIES LTD. AND SHALL NOT BE REPRODUCED, COPIED OR USED IN ANY MANNER DETRIMENTAL TO THEIR INTERESTS.

REV 01-08-09 COMPUTER GENERATED DRAWING DO NOT SCALE DRAWING



Charles Industries Ltd. Telecommunications Group  
 Charles Center, 1000 Busse Drive  
 Park Ridge, IL 60068  
 Telephone: 847-698-6400

DRAWING NO. CUBE-SS4B231KJ2  
 SCALE 0.040  
 SHEET 4 of 4

THIS IS THE PROPERTY OF CHARLES INDUSTRIES LTD. AND SHALL NOT BE REPRODUCED, COPIED OR USED IN ANY MANNER DETRIMENTAL TO THEIR INTERESTS.

REV 01-08-09 COMPUTER GENERATED DRAWING DO NOT SCALE DRAWING

1 EQUIPMENT CABINET ELEVATIONS  
 SCALE: N.T.S.

**verizon wireless**  
 SOUTHERN INDIANA RSA LIMITED  
 PARTNERSHIP d/b/a VERIZON WIRELESS  
 250 E. 96TH STREET  
 INDIANAPOLIS, IN 46240

**TERRA**  
 CONSULTING GROUP, LTD.  
 600 BUSSE HIGHWAY  
 PARK RIDGE, IL 60068  
 PH: 847-698-6400  
 FAX: 847-698-6401

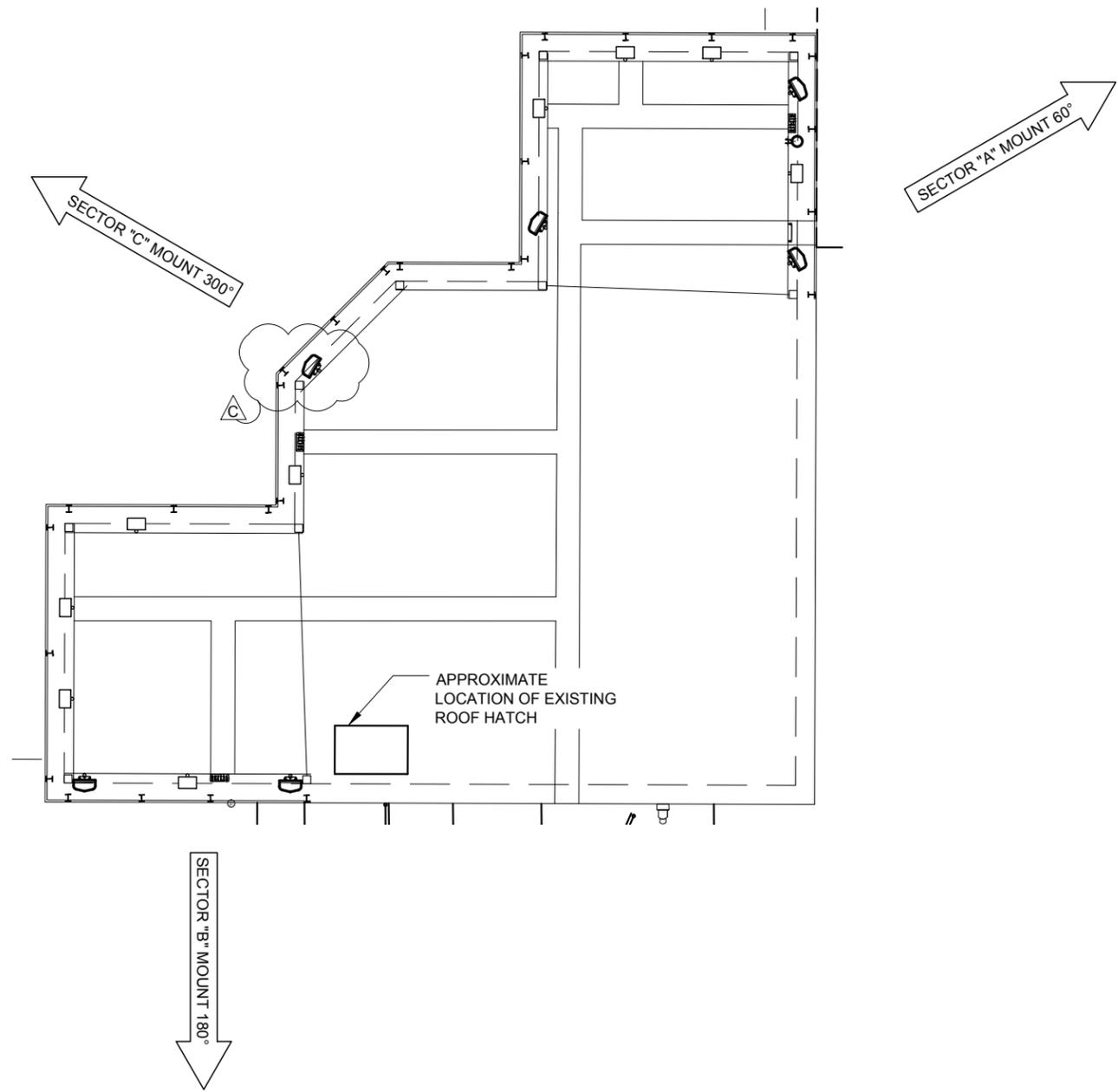
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
 (GRANT STREET  
 PARKING GARAGE)  
 120 N GRANT STREET  
 WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**EQUIPMENT CABINETS**  
 (REFERENCE ONLY)

SHEET NUMBER  
**D-2**



ANTENNA PLAN LEGEND					
SECTOR	ANTENNA POSITION	TECHNOLOGY	SERVICE NUMBER	AZIMUTH	ANTENNA RAD CENTER
ALPHA	A	700/PCS	3,6	60°	75'
ALPHA	B	700/AWS	3,4,5	60°	75'
ALPHA	C				
ALPHA	D				
BETA	G	700/PCS	3,6	180°	75'
BETA	H	700/AWS	3,4,5	180°	75'
BETA	I				
BETA	J				
GAMMA	M	700/PCS	3,6	300°	75'
GAMMA	N	700/AWS	3,4,5	300°	75'
GAMMA	O				
GAMMA	P				

NOTE: ANTENNA INSTALLER SHALL UTILIZE VERIZON WIRELESS SDCO FOR FINAL CONFIGURATION. SEE VERIZON WIRELESS CONSTRUCTION MANAGER.

1 ANTENNA PLAN  
N.T.S.

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

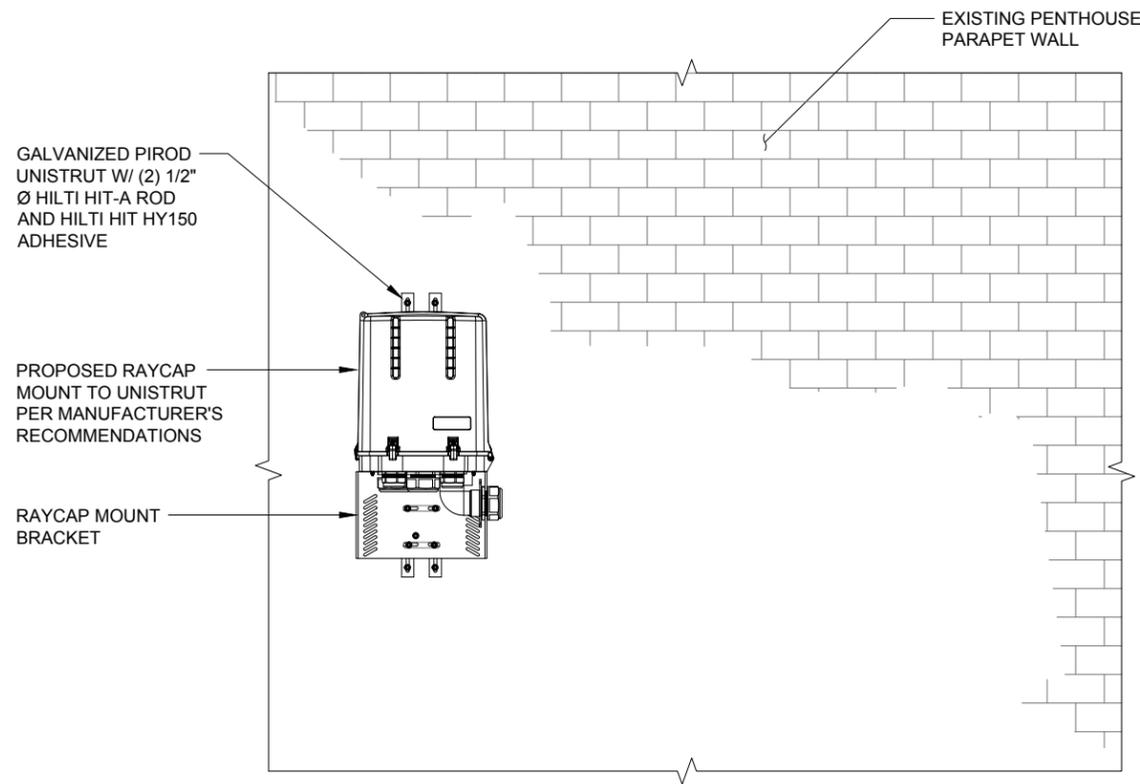
NO.	DESCRIPTION	DATE	BY
		08/21/15	JLR
A	ISSUED FOR REVIEW	09/14/15	IC
B	REVISED ANTENNA CENTERLINE	09/29/15	IC
C	REVISED ANTENNA LOCATION	01/11/16	IC
D	REVISED PER COMMENTS	03/02/16	IC
E	REVISED PROPERTY ADDRESS	05/18/16	IC
F	REVISED SITE PLAN		

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
ANTENNA INFORMATION

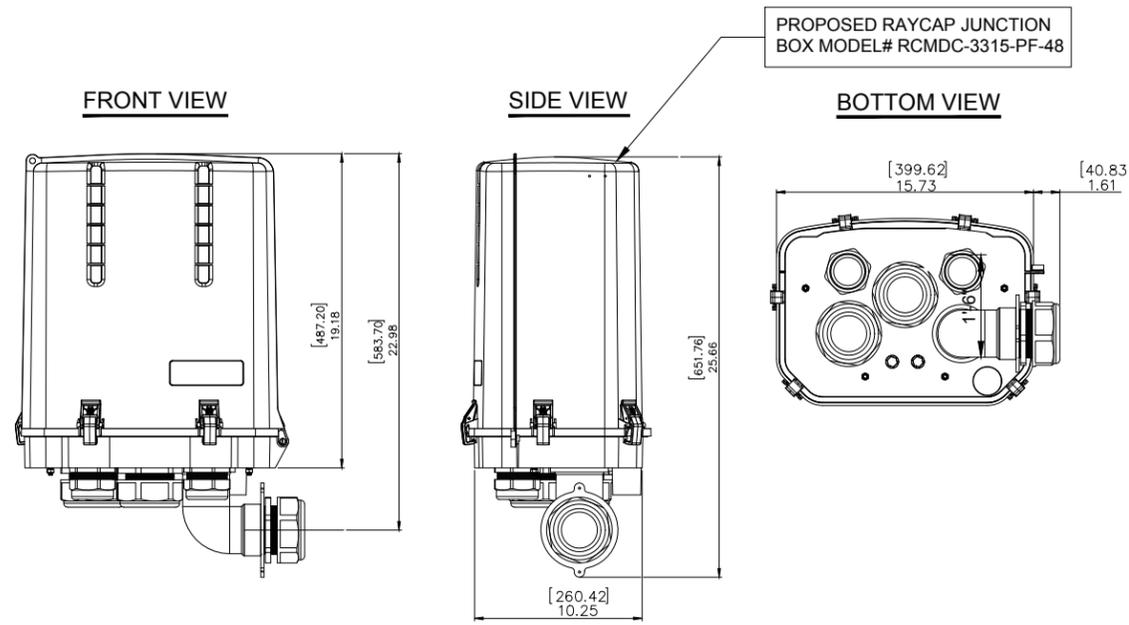
SHEET NUMBER  
**ANT-1**



**3 RAYCAP JUNCTION BOX MOUNTING DETAIL**  
SCALE: N.T.S.

SPECIFICATIONS DC SURGE PROTECTION FOR RRU/INTEGRATED ANTENNA RADIO HEAD  
APPLICATION: TOWER / BASE / ROOFTOP / ROOFTOP DISTRIBUTION MODELS  
WEIGHT: 32LBS (14.51 KG)

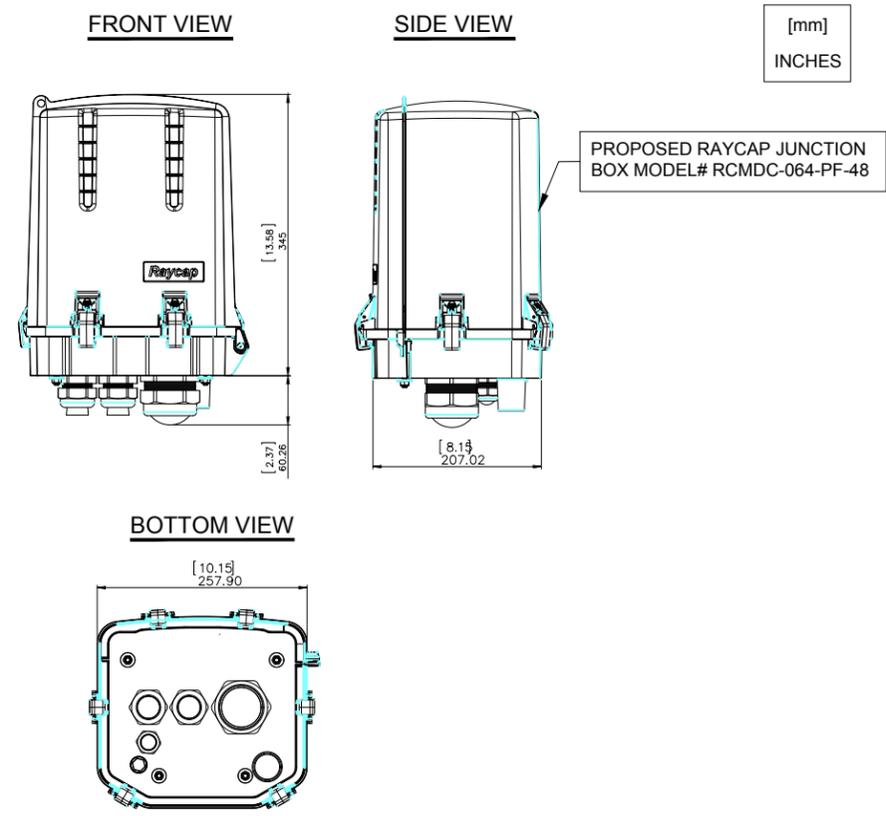
[mm]  
INCHES



**1 MAIN RAYCAP JUNCTION BOX DETAIL**  
SCALE: N.T.S.

SPECIFICATIONS DC SURGE PROTECTION FOR RRU/INTEGRATED ANTENNA RADIO HEAD  
APPLICATION: TOWER / BASE / ROOFTOP / ROOFTOP DISTRIBUTION MODELS  
WEIGHT: 14 LBS (6.35 KG)

[mm]  
INCHES



**2 SATELLITE RAYCAP JUNCTION BOX DETAIL**  
SCALE: N.T.S.

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP db/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

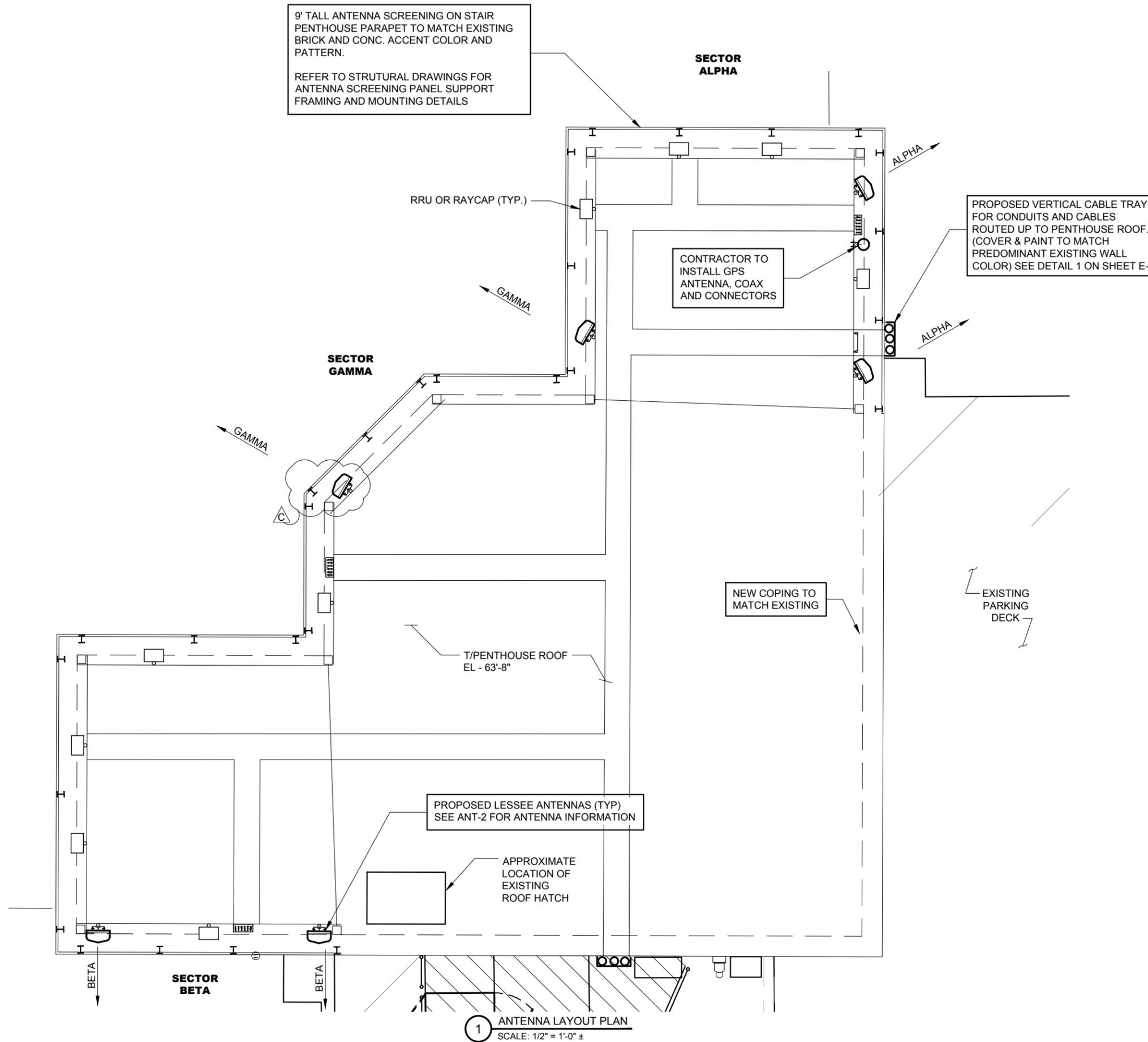
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**DETAILS**

SHEET NUMBER  
**ANT-2**



**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

REVISIONS		NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR		
B	REVISED ANTENNA CENTERLINE	09/14/15	IC		
C	REVISED ANTENNA LOCATION	09/29/15	IC		
D	REVISED PER COMMENTS	01/11/16	IC		
E	REVISED PROPERTY ADDRESS	03/02/16	IC		
F	REVISED SITE PLAN	05/18/16	IC		

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**ANTENNA MOUNTING  
DETAIL**

SHEET NUMBER  
**ANT-3**

**GENERAL STEEL NOTES:**

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION, AND THE AISC " CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES", LATEST EDITION, EXCEPT AS MODIFIED BELOW OR IN THE SPECIFICATIONS.

2. ALL STRUCTURAL STEEL W SHAPES SHALL CONFORM TO THE ASTM A572 OR A992 GRADE 50. ALL OTHER STRUCTURAL STEEL SHAPES, PLATES AND BARS SHALL CONFORM TO ASTM A36 GR 36, UNLESS NOTED OTHERWISE, COLD FORMED TUBING SHALL CONFORM TO ASTM A500 GRADE B. PIPES SHALL CONFORM TO ASTM A53 TYPE E OR S. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36 AND BE COMPATIBLE WITH E70XX ELECTRODES.

3. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE", LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E70XX.

4. THE CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS AND EXISTING CONDITIONS.

5. IF CONDITIONS VARY FROM THOSE ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

6. THE CONTRACTOR SHALL OBSERVE ALL SAFETY RULES DICTATED BY CODE AND GOOD PRACTICE.

7. SHOULD UNFORSEEN CONDITIONS OR OTHER CAUSE NECESSITATE THE CONSTRUCTION DETAILS TO BE MODIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PERFORMING THESE CHANGES.

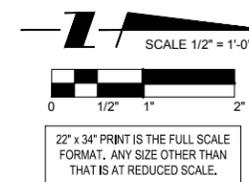
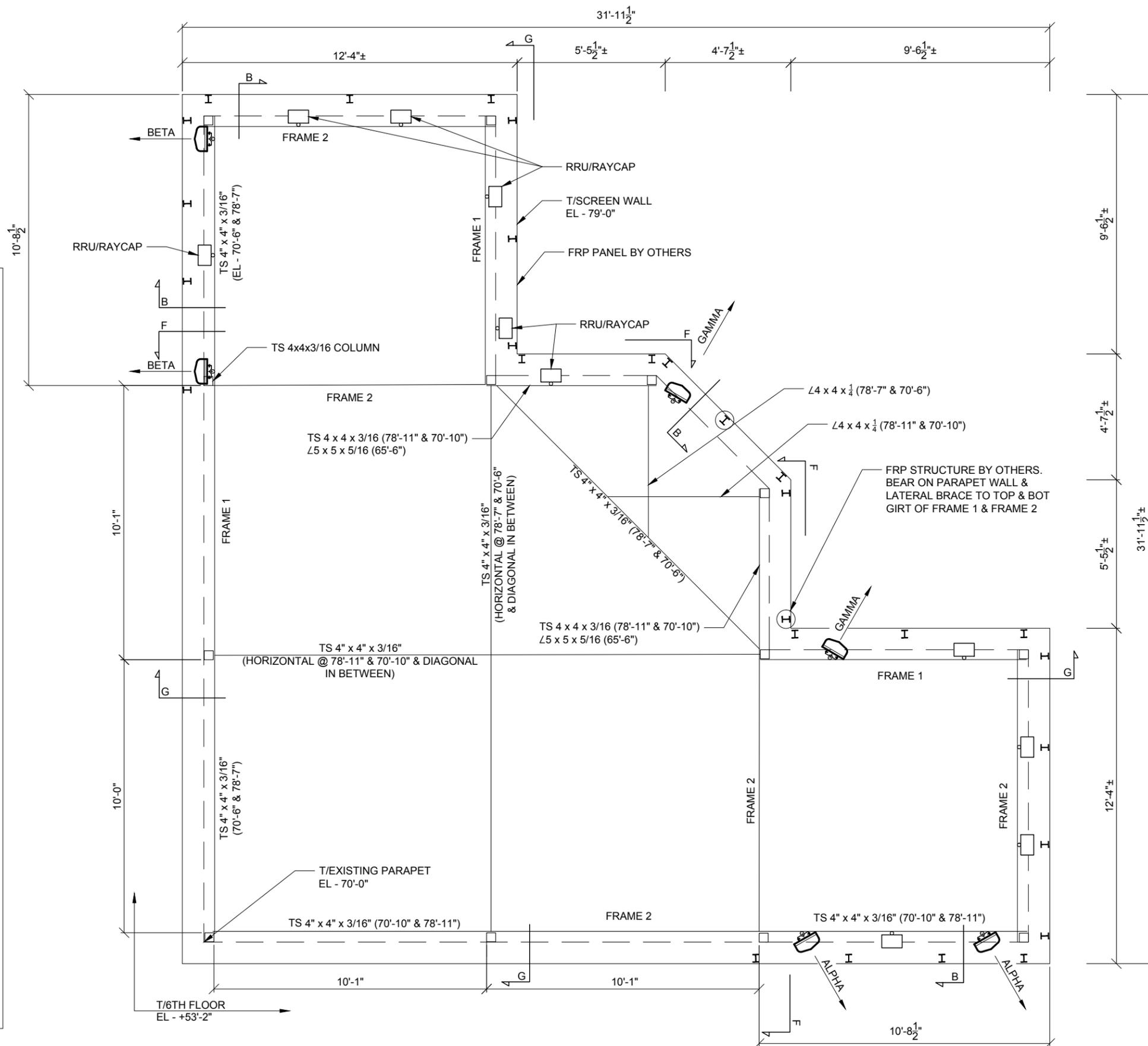
8. ALL STEEL SHALL BE GALVANIZED.

9. ADJUST BOLT LOCATIONS AS NECESSARY TO AVOID CONCRETE REINFORCEMENT.

**LOADING:**

1. ALL ELEMENTS TO BE DESIGNED PER IBC CODE & TIA/EIA REV G.

NOTE:  
ALL DIMENSIONS TO BE VERIFIED IN FIELD BY GENERAL CONTRACTOR.



**A FRP SCREEN PLAN @ STAIR #2**  
SCALE: 1/2" = 1'-0"

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP db/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

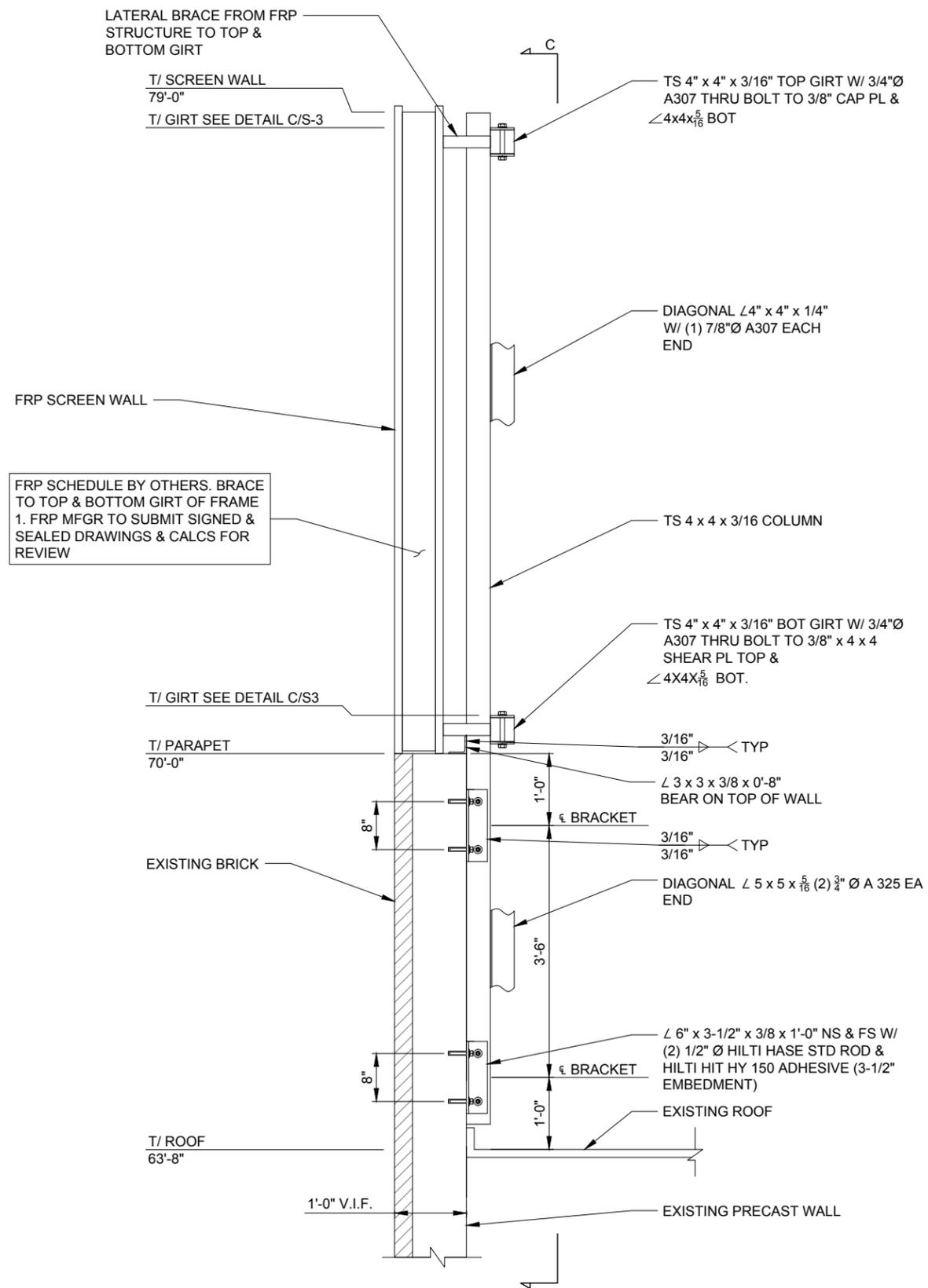
REVISIONS		NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR		
B	REVISED ANTENNA CENTERLINE	09/14/15	IC		
C	REVISED ANTENNA LOCATION	09/29/15	IC		
D	REVISED PER COMMENTS	01/11/16	IC		
E	REVISED PROPERTY ADDRESS	03/02/16	IC		
F	REVISED SITE PLAN	05/18/16	IC		

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**STRUCTURAL DETAILS**

SHEET NUMBER  
**S-1**



FRP SCHEDULE BY OTHERS. BRACE TO TOP & BOTTOM GIRT OF FRAME  
 1. FRP MFR TO SUBMIT SIGNED & SEALED DRAWINGS & CALCS FOR REVIEW

**B** WALL SECTION  
 SCALE: 1" = 1'-0" ±

**verizon wireless**  
 SOUTHERN INDIANA RSA LIMITED  
 PARTNERSHIP db/a VERIZON WIRELESS  
 250 E. 96TH STREET  
 INDIANAPOLIS, IN 46240

**TERRA**  
 CONSULTING GROUP, LTD.  
 600 BUSSE HIGHWAY  
 PARK RIDGE, IL 60068  
 PH: 847-698-6400  
 FAX: 847-698-6401

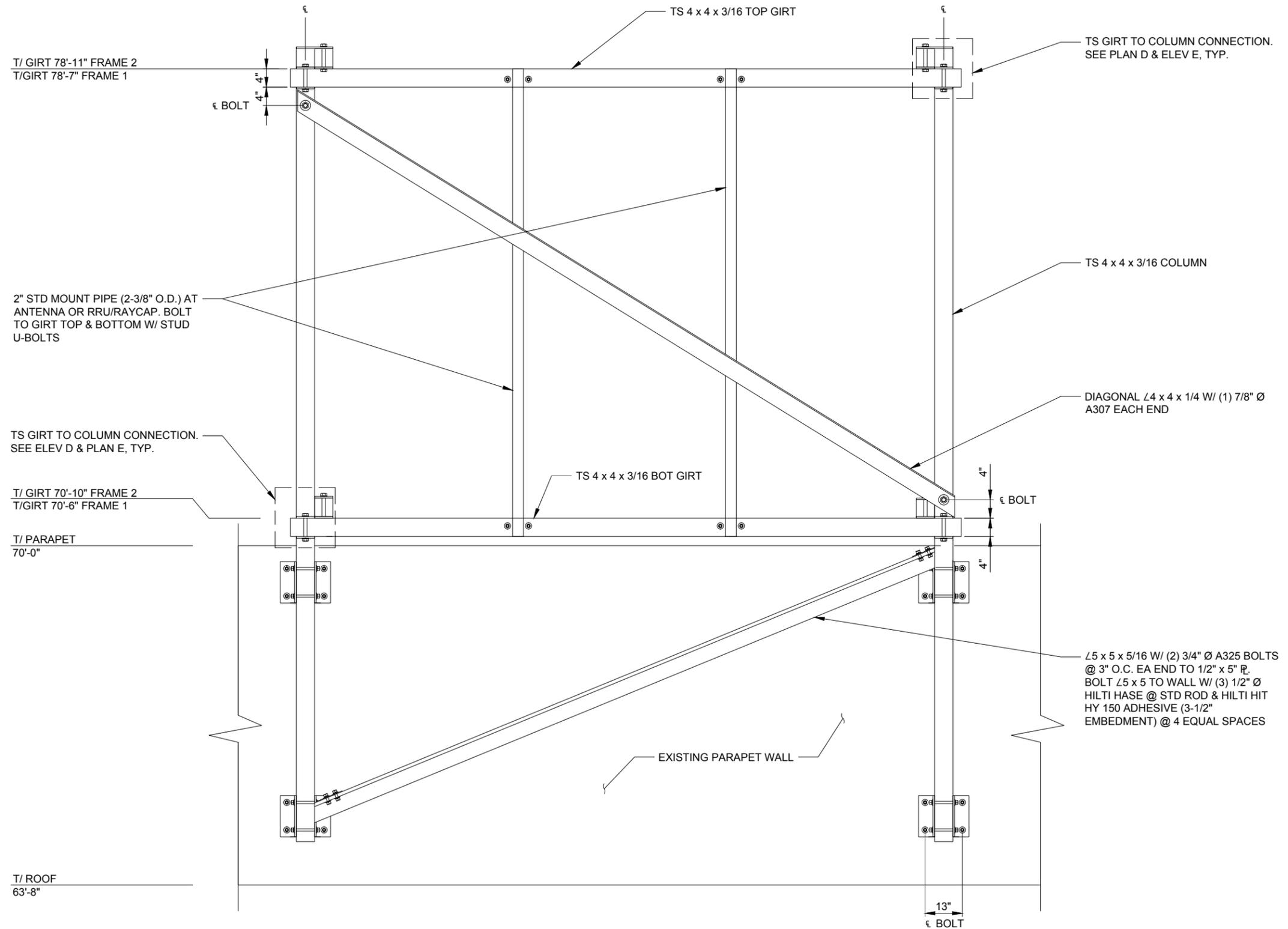
REVISIONS		DATE	BY
NO.	DESCRIPTION		
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
 (GRANT STREET  
 PARKING GARAGE)  
 120 N GRANT STREET  
 WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
 STRUCTURAL DETAILS

SHEET NUMBER  
**S-2**



**verizon wireless**  
 SOUTHERN INDIANA RSA LIMITED  
 PARTNERSHIP db/a VERIZON WIRELESS  
 250 E. 96TH STREET  
 INDIANAPOLIS, IN 46240

**TERRA**  
 CONSULTING GROUP, LTD.  
 600 BUSSE HIGHWAY  
 PARK RIDGE, IL 60068  
 PH: 847-698-6400  
 FAX: 847-698-6401

REVISIONS		NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR		
B	REVISED ANTENNA CENTERLINE	09/14/15	IC		
C	REVISED ANTENNA LOCATION	09/29/15	IC		
D	REVISED PER COMMENTS	01/11/16	IC		
E	REVISED PROPERTY ADDRESS	03/02/16	IC		
F	REVISED SITE PLAN	05/18/16	IC		

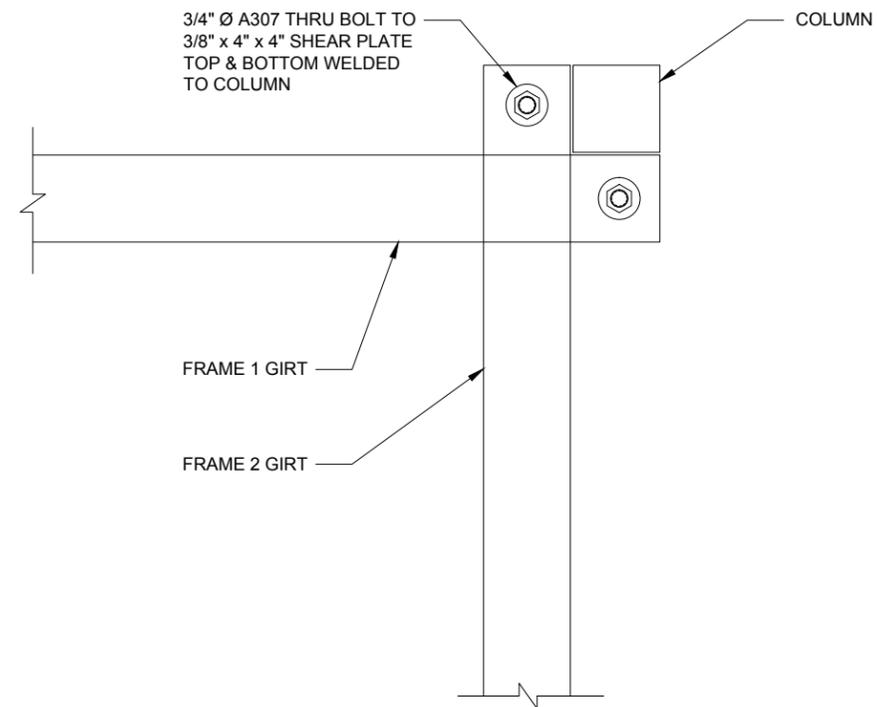
**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
 (GRANT STREET  
 PARKING GARAGE)  
 120 N GRANT STREET  
 WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

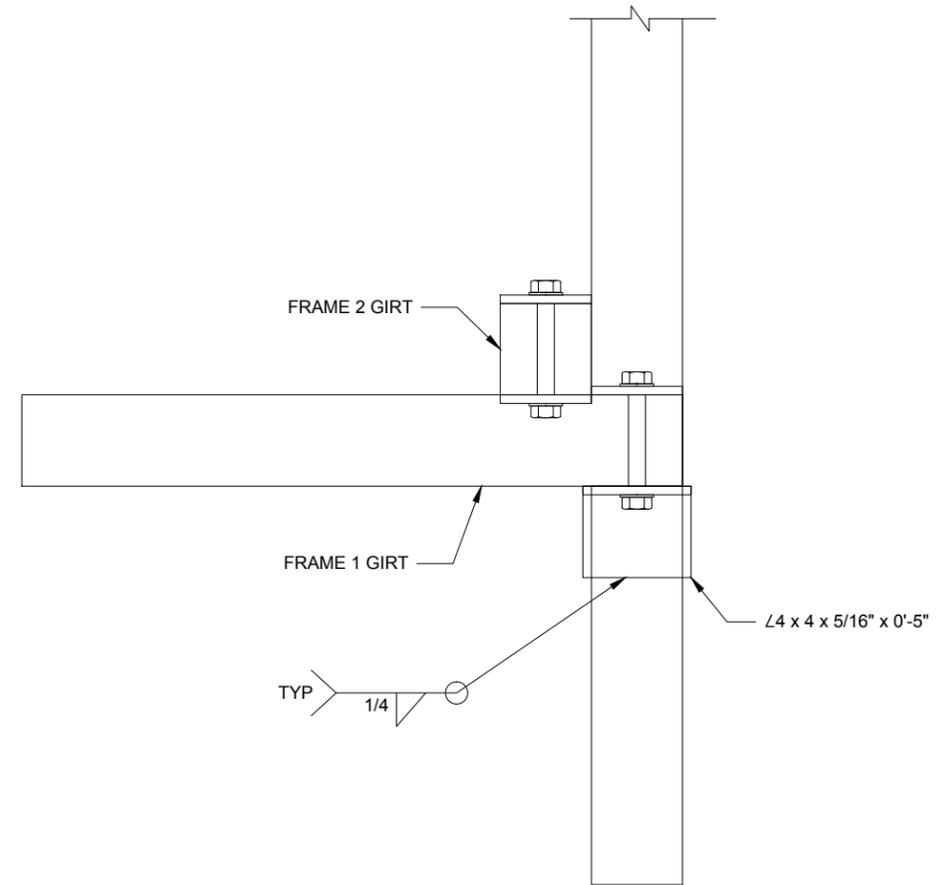
SHEET TITLE  
**STRUCTURAL DETAILS**

SHEET NUMBER  
**S-3**

**C** ELEVATION - FRAME 1 & FRAME 2  
 SCALE: 1" = 1'-0" ±



**D** PLAN OF GIRT TO COLUMN CONNECTION  
SCALE: NTS



**E** ELEVATION OF GIRT TO COLUMN CONNECTION  
SCALE: NTS

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

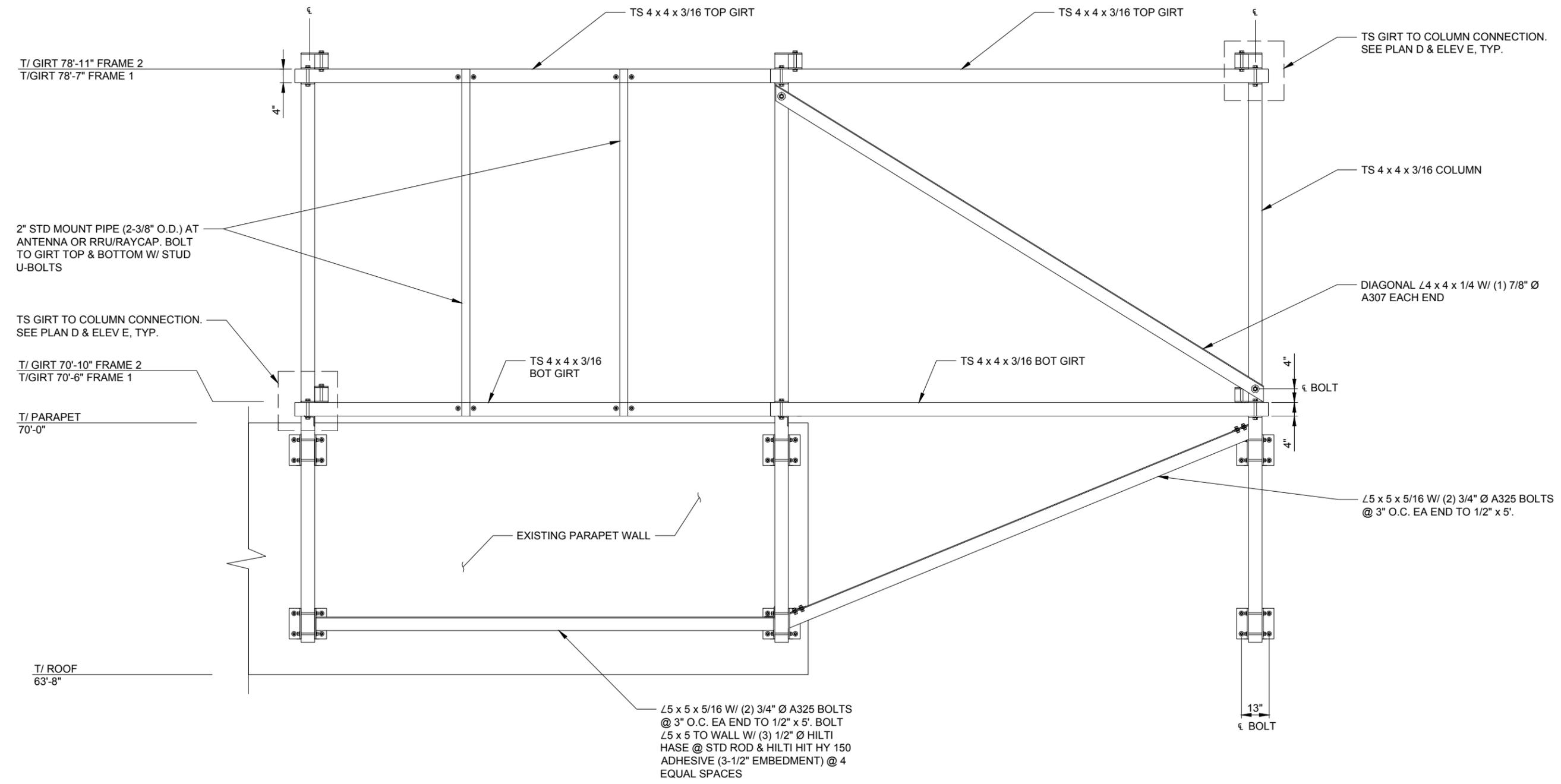
REVISIONS		NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR		
B	REVISED ANTENNA CENTERLINE	09/14/15	IC		
C	REVISED ANTENNA LOCATION	09/29/15	IC		
D	REVISED PER COMMENTS	01/11/16	IC		
E	REVISED PROPERTY ADDRESS	03/02/16	IC		
F	REVISED SITE PLAN	05/18/16	IC		

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
STRUCTURAL DETAILS

SHEET NUMBER  
**S-4**



NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

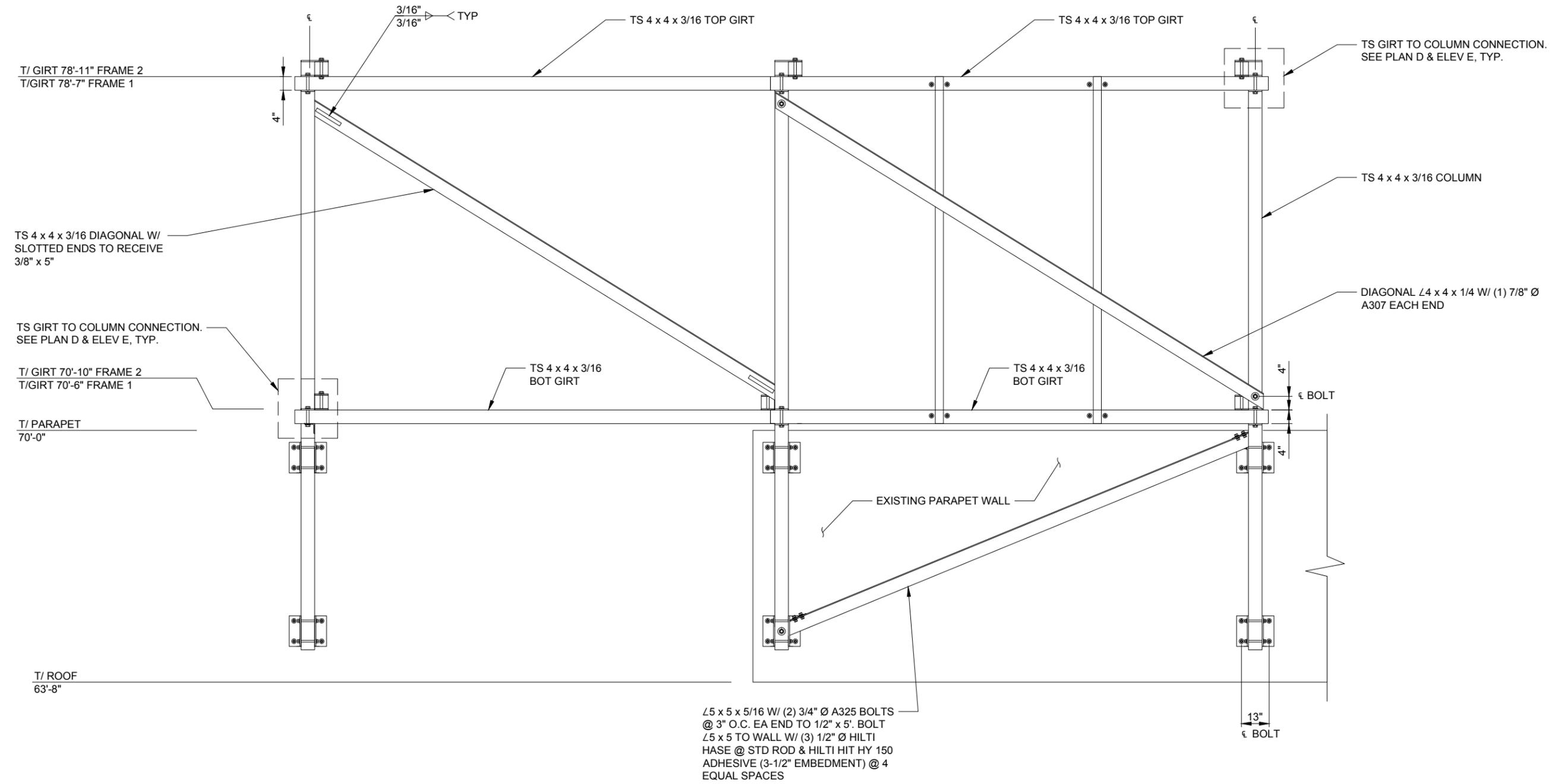
**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
 (GRANT STREET  
 PARKING GARAGE)  
 120 N GRANT STREET  
 WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**STRUCTURAL DETAILS**

SHEET NUMBER  
**S-5**

**F** SECTION  
 SCALE: NTS



L5 x 5 x 5/16 W/ (2) 3/4" Ø A325 BOLTS @ 3" O.C. EA END TO 1/2" x 5' BOLT L5 x 5 TO WALL W/ (3) 1/2" Ø HILTI HASE @ STD ROD & HILTI HIT HY 150 ADHESIVE (3-1/2" EMBEDMENT) @ 4 EQUAL SPACES

**G** SECTION  
 SCALE: NTS

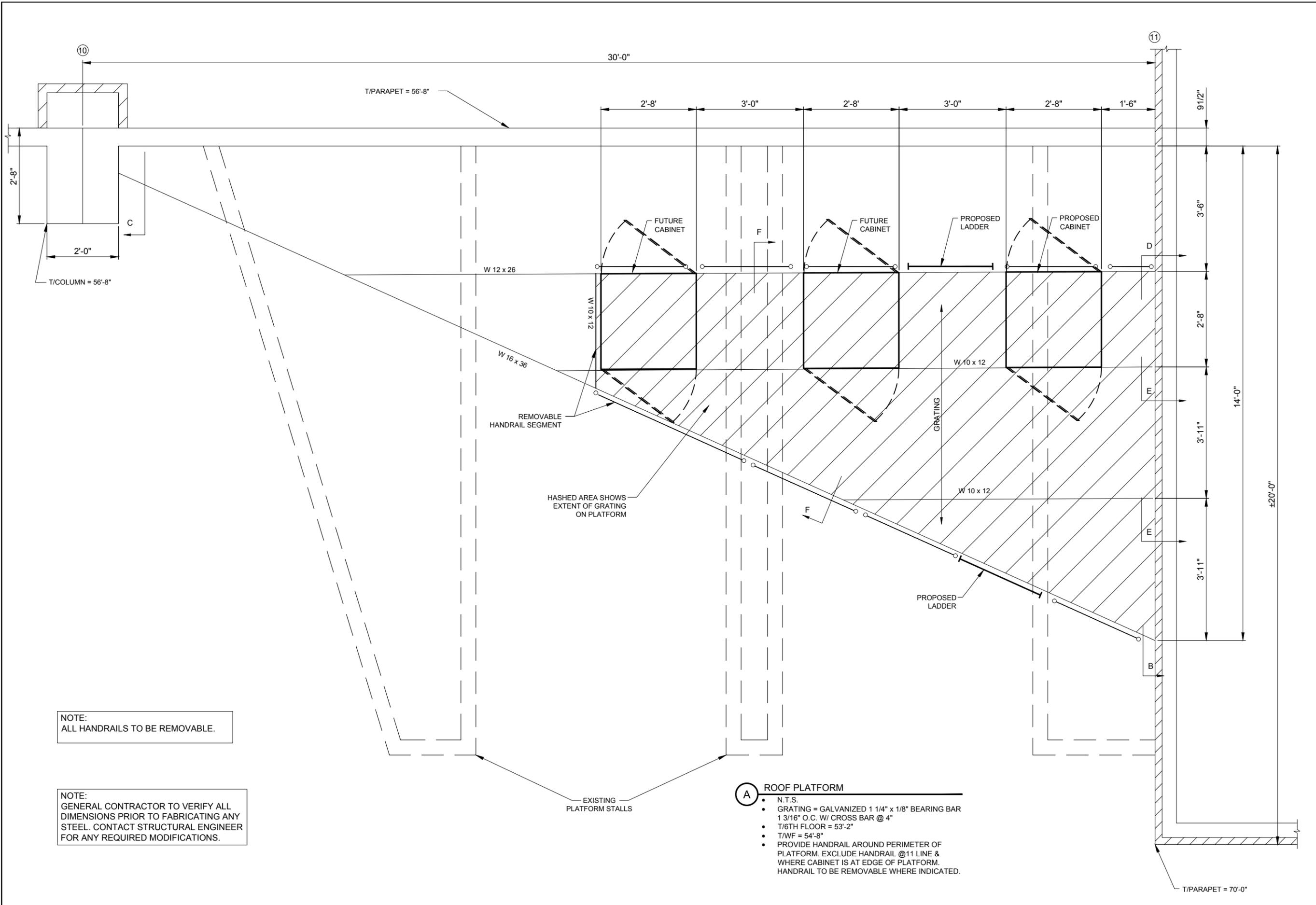
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
 (GRANT STREET  
 PARKING GARAGE)  
 120 N GRANT STREET  
 WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
 STRUCTURAL DETAILS

SHEET NUMBER  
**S-6**



- (A) ROOF PLATFORM**
- N.T.S.
  - GRATING = GALVANIZED 1 1/4" x 1/8" BEARING BAR 1 3/16" O.C. W/ CROSS BAR @ 4"
  - T/6TH FLOOR = 53'-2"
  - T/WF = 54'-8"
  - PROVIDE HANDRAIL AROUND PERIMETER OF PLATFORM. EXCLUDE HANDRAIL @ 11 LINE & WHERE CABINET IS AT EDGE OF PLATFORM. HANDRAIL TO BE REMOVABLE WHERE INDICATED.

**verizon wireless**  
 SOUTHERN INDIANA RSA LIMITED  
 PARTNERSHIP d/b/a VERIZON WIRELESS  
 250 E. 96TH STREET  
 INDIANAPOLIS, IN 46240

**TERRA**  
 CONSULTING GROUP, LTD.  
 600 BUSSE HIGHWAY  
 PARK RIDGE, IL 60068  
 PH: 847-698-6400  
 FAX: 847-698-6401

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
 (GRANT STREET  
 PARKING GARAGE)  
 120 N GRANT STREET  
 WEST LAFAYETTE, IN 47907

DRAWN BY: JLR  
 CHECKED BY: TAZ  
 DATE: 01/28/14  
 PROJECT #: 67-051

SHEET TITLE  
**STRUCTURAL DETAILS**

SHEET NUMBER  
**S-7**

**GENERAL STEEL NOTES**

- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION, AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITION, EXCEPT AS MODIFIED BELOW OR IN THE SPECIFICATIONS.
- ALL STRUCTURAL STEEL W SHAPES SHALL CONFORM TO ASTM A992 GRADE 50. ALL OTHER STRUCTURAL STEEL SHAPES, PLATES, AND BARS SHALL CONFORM TO ASTM A36 GR 36, UNLESS NOTED OTHERWISE. COLD FORMED TUBING SHALL CONFORM TO ASTM A500 GRADE B. PIPES SHALL CONFORM TO ASTM A53 TYPE E OR S. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36 AND BE COMPATIBLE WITH E70XX ELECTRODES.
- ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE", LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E70XX.
- THE CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS AND EXISTING CONDITIONS.
- IF CONDITIONS VARY FROM THOSE ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- THE CONTRACTOR SHALL OBSERVE ALL SAFETY RULES DICTATED BY CODE AND GOOD PRACTICE.
- SHOULD UNFORESEEN CONDITIONS OR OTHER CAUSE NECESSITATE THE CONSTRUCTION DETAILS TO BE MODIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PERFORMING THESE CHANGES.

**MISCELLANEOUS NOTES**

- STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL, MECHANICAL AND SHELTER MANUFACTURER DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS OF ALL DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.
- NO OPENINGS, OTHER THAN THOSE SHOWN ON DESIGN DRAWINGS AND APPROVED SHOP DRAWINGS, SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
- OPENINGS OF 1'-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF THOSE OPENINGS. PROVIDE REINFORCING AROUND OPENINGS PER TYPICAL DETAILS SHOWN ON STRUCTURAL DRAWINGS.
- THE CONTRACTOR IS TO LIMIT THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR SHALL FURNISH ALL TEMPORARY BRACING AND/OR SUPPORTS REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.
- CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS COMPLETE.
- THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECTS APPROVAL OF SHOP DRAWINGS, PRODUCT DATE, ETC., UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS AND AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR A WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BY MADE BY THE ARCHITECT BEFORE THE EFFECTED WORK PROCEEDS.

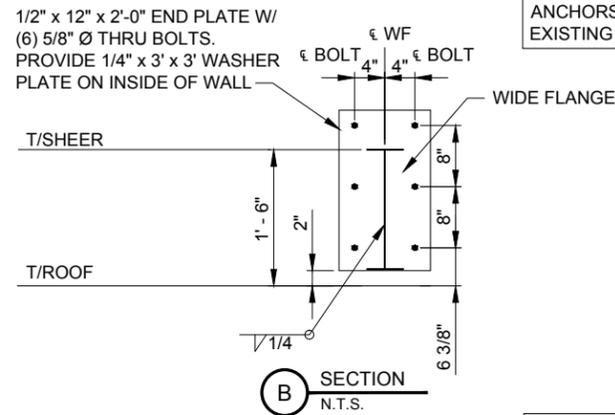
**DESIGN LOADS:**

**ROOF:**

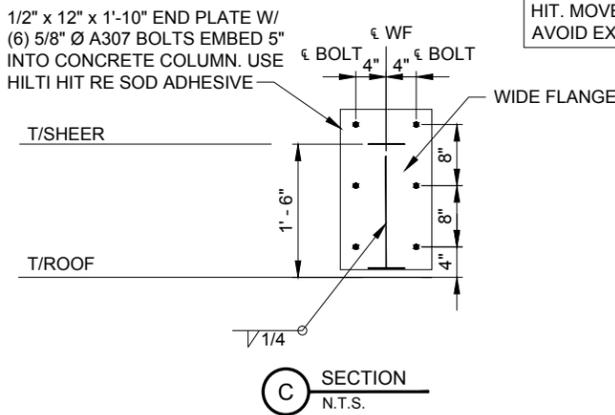
SNOW: 30 PSF + DRIFT

**PLATFORM:**

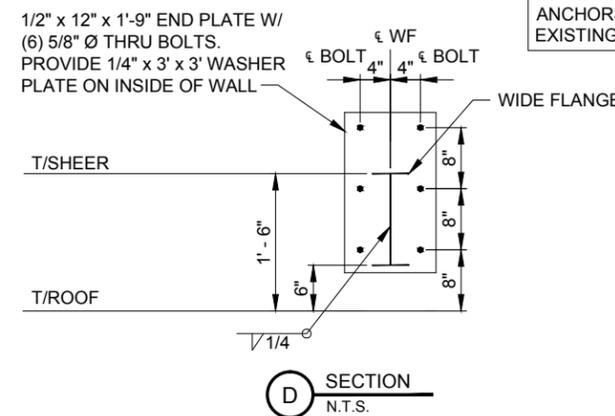
LIVE: 100 PSF  
GRATING: 6 PSF



NOTE:  
X-RAY THE CONCRETE WALL TO ENSURE NO TENSIONED STRANDS ARE HIT. MOVE ANCHORS AS NECESSARY TO AVOID EXISTING STRANDS.

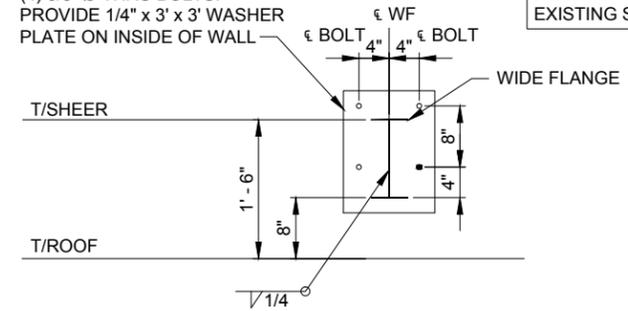


NOTE:  
X-RAY THE CONCRETE COLUMN TO ENSURE NO TENSIONED STRANDS ARE HIT. MOVE ANCHORS AS NECESSARY TO AVOID EXISTING STRANDS.



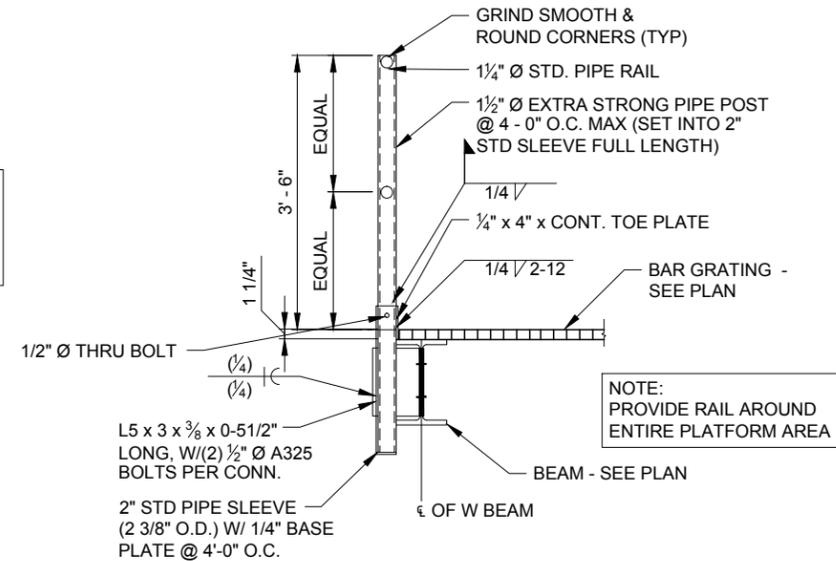
NOTE:  
X-RAY THE CONCRETE WALL TO ENSURE NO TENSIONED STRANDS ARE HIT. MOVE ANCHORS AS NECESSARY TO AVOID EXISTING STRANDS.

1/2" x 12" x 1'-4" END PLATE W/  
(4) 5/8" Ø THRU BOLTS.  
PROVIDE 1/4" x 3' x 3' WASHER  
PLATE ON INSIDE OF WALL



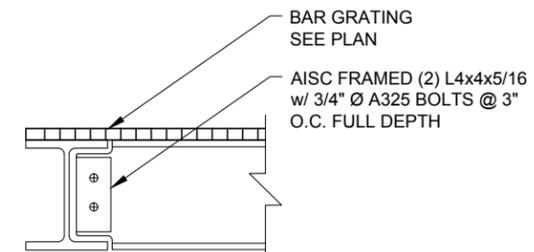
NOTE:  
X-RAY THE CONCRETE WALL TO ENSURE NO TENSIONED STRANDS ARE HIT. MOVE ANCHORS AS NECESSARY TO AVOID EXISTING STRANDS.

**E** SECTION  
N.T.S.



NOTE:  
PROVIDE RAIL AROUND ENTIRE PLATFORM AREA

**F** TYPICAL HANDRAIL DETAIL  
N.T.S.



**G** TYPICAL BEAM TO BEAM CONNECTION  
N.T.S.

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP db/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSTRUCTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

NO.	DESCRIPTION	BY	DATE
		JLR	08/21/15
A	ISSUED FOR REVIEW	JLR	08/21/15
B	REVISED ANTENNA CENTERLINE	IC	09/14/15
C	REVISED ANTENNA LOCATION	IC	09/29/15
D	REVISED PER COMMENTS	IC	01/11/16
E	REVISED PROPERTY ADDRESS	IC	03/02/16
F	REVISED SITE PLAN	IC	05/18/16

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**STRUCTURAL DETAILS**

SHEET NUMBER  
**S-8**

# NORTH STREET

(60' WIDE)(BITUMINOUS)(PUBLIC)

PROPOSED HAND HOLE BY FIBER PROVIDER

4" PVC UNDERGROUND FIBER CONDUIT w/PULL TAPES (±4 L.F.)

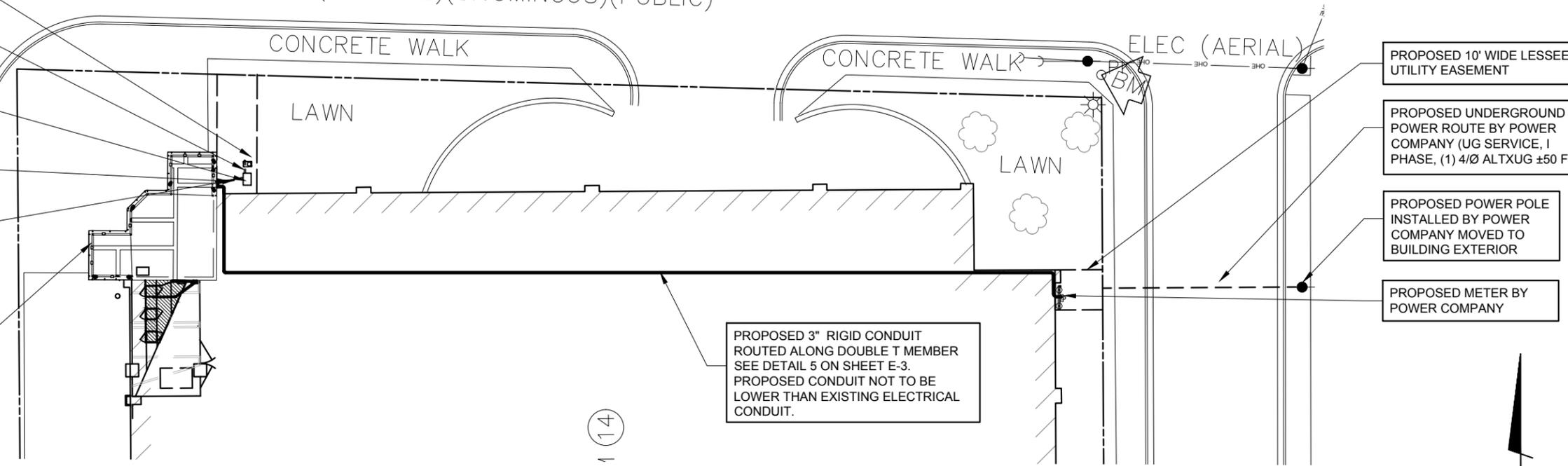
24"x36" VEHICLE RATED HAND HOLE FOR VERIZON WIRELESS ONLY FIBER SERVICE

4" PVC UNDERGROUND FIBER CONDUIT w/PULL TAPES AND TRACER WIRE (± 7 L.F.)

(2) 1 1/4" & (1) 1" INNERDUCTS WITHIN TOWER OWNER INSTALLED 4" PVC CONDUIT

9' TALL ANTENNA SCREENING ON STAIR PENTHOUSE PARAPET TO MATCH EXISTING BRICK AND CONC. ACCENT COLOR AND PATTERN. SEE STRUCTURAL SHEETS FOR DETAILS

\* CONTRACTOR TO X-RAY WALL, PRIOR TO PENETRATIONS. DO NOT CUT REINFORCEMENT.  
 \* FIRE STOP ALL PENETRATIONS.  
 \* CORE DRILL FLOOR, WALL & SEAL AFTER CONDUITS INSTALLATION.  
 \* INSTALL PULL/JUNCTION BOXES AS NECESSARY PER, CODE.



PROPOSED 3" RIGID CONDUIT ROUTED ALONG DOUBLE T MEMBER SEE DETAIL 5 ON SHEET E-3. PROPOSED CONDUIT NOT TO BE LOWER THAN EXISTING ELECTRICAL CONDUIT.

PROPOSED 10' WIDE LESSEE UTILITY EASEMENT

PROPOSED UNDERGROUND POWER ROUTE BY POWER COMPANY (UG SERVICE, 1 PHASE, (1) 4/Ø ALTXUG ±50 FT.)

PROPOSED POWER POLE INSTALLED BY POWER COMPANY MOVED TO BUILDING EXTERIOR

PROPOSED METER BY POWER COMPANY

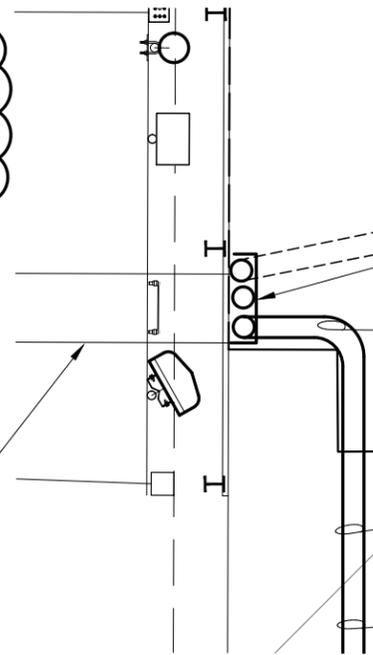
114

**1** UTILITY SITE PLAN  
SCALE: N.T.S.

VERIZON WIRELESS SHALL BE RESPONSIBLE FOR PROTECTION OF ROOF SURFACE DURING CONSTRUCTION AND ANY DAMAGES TO ROOF SURFACE DURING CONSTRUCTION SHALL BE REPAIRED TO AS NEW CONDITION

PRIOR TO CONSTRUCTION GC TO LOCATE ALL UNDERGROUND UTILITIES IN VICINITY OF PROJECT. ANY BURIED UTILITIES DAMAGED OR DISTURBED SHALL BE REPAIRED OR REPLACED.

PROPOSED FORIZONTAL CABLE TRAY FOR FIBER, GROUNDING AND ELECTRICAL CONDUITS. SEE DETAIL 2 ON SHEET E-3



**2** UTILITY SITE PLAN  
SCALE: N.T.S.

4" PVC UNDERGROUND FIBER CONDUIT w/PULL TAPES AND TRACER WIRE (± 7 L.F.)

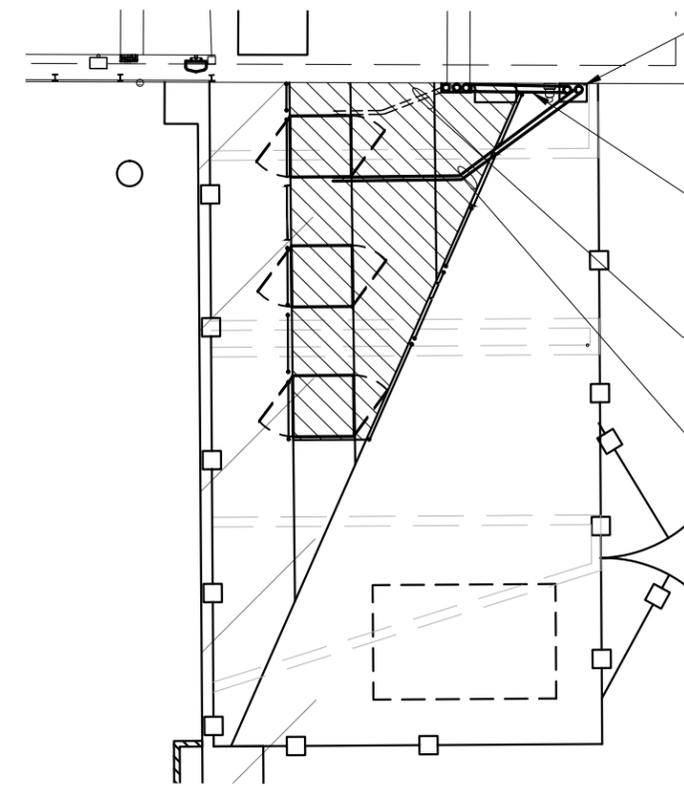
(2) 1 1/4" & (1) 1" INNERDUCTS WITHIN TOWER OWNER INSTALLED 4" PVC CONDUIT

PROPOSED VERTICAL CABLE TRAY FOR FIBER, GROUNDING AND ELECTRICAL CONDUITS FROM LOWER LEVEL TO TOP OF THE PENTHOUSE VERTICAL CABLE TRAY PAINT TO MATCH PREDOMINANT EXISTING EXTERIOR WALL COLOR. SEE DETAIL 1 ON SHEET E-3

PROPOSED 3" RIGID CONDUIT TO BE MOUNTED TO UNISTRUD (PAINTED TO MATCH PREDOMINANT EXISTING WALL COLOR)

PROPOSED 3" RIGID CONDUIT ROUTED ALONG DOUBLE T MEMBER SEE DETAIL 5 ON SHEET E-3. PROPOSED CONDUIT NOT TO BE LOWER THAN EXISTING ELECTRICAL CONDUIT.

(3) 3/0 AWG, (1) 2 AWG WITHIN VERIZON WIRELESS INSTALLED 3" RIGID CONDUIT



**3** PLATFORM UTILITY PLAN  
SCALE: N.T.S.

PROPOSED AUTOMATIC TRANSFER SWITCH AND GENERATOR PLUG MOUNTED ON THE EXISTING WALL WITH UNISTRUT

PROPOSED VERTICAL CABLE TRAY FOR FIBER, GROUNDING AND ELECTRICAL CONDUITS FROM TOP OF PENTHOUSE TO PARKING DECK. VERTICAL CABLE TRAY PAINT TO MATCH PREDOMINANT EXISTING EXTERIOR WALL COLOR. SEE DETAIL 1 ON SHEET E-3

(2) 1 1/4" & (1) 1" INNERDUCTS INSTALLED 4" PVC CONDUIT

(6) 12 AWG, (2) 12 AWG IN 3" RIGID CONDUIT FROM TRANSFER SWITCH TO CABINETS

NOTE: ALL CONDUITS TO BE ROUTED UNDER STEEL PLATFORM.

**verizon wireless**  
 SOUTHERN INDIANA RSA LIMITED  
 PARTNERSHIP db/a VERIZON WIRELESS  
 250 E. 96TH STREET  
 INDIANAPOLIS, IN 46240

**TERRA**  
 CONSULTING GROUP, LTD.  
 600 BUSSE HIGHWAY  
 PARK RIDGE, IL 60068  
 PH: 847-698-6400  
 FAX: 847-698-6401

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
 (GRANT STREET PARKING GARAGE)  
 120 N GRANT STREET  
 WEST LAFAYETTE, IN 47907

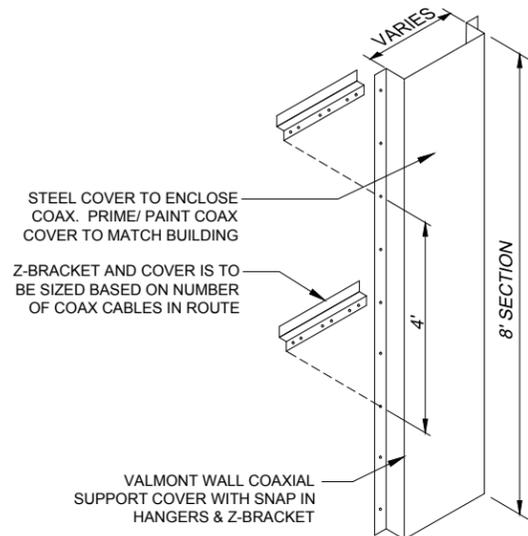
DRAWN BY: JLR  
 CHECKED BY: TAZ  
 DATE: 01/28/14  
 PROJECT #: 67-051

SHEET TITLE  
 UTILITY SITE PLAN

SHEET NUMBER  
**E-1**



COVERED COAX KIT P/N	# OF RUNS	COVER WIDTH
WMC4 WMC4D (STACKABLE)	4	11-1/2"
WMC8 WMC8D (STACKABLE)	8	21 1/2"
WMC12 WMC12D (STACKABLE)	12	31"

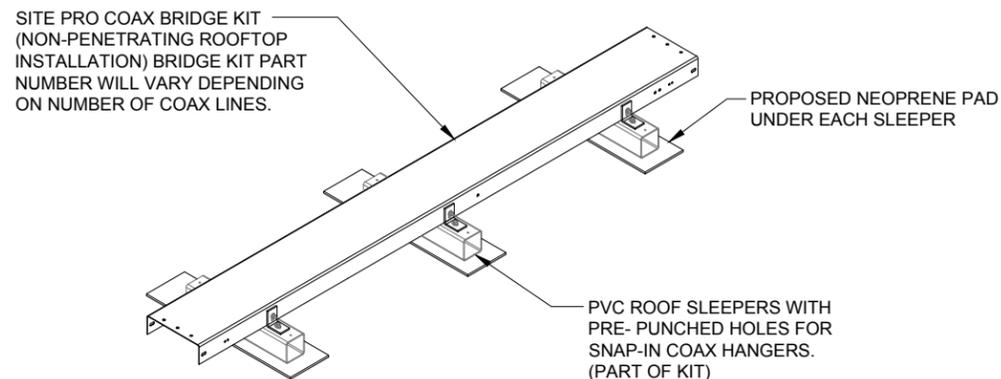


**1 WALL MOUNTED COAX SUPPORT**  
SCALE: N.T.S.

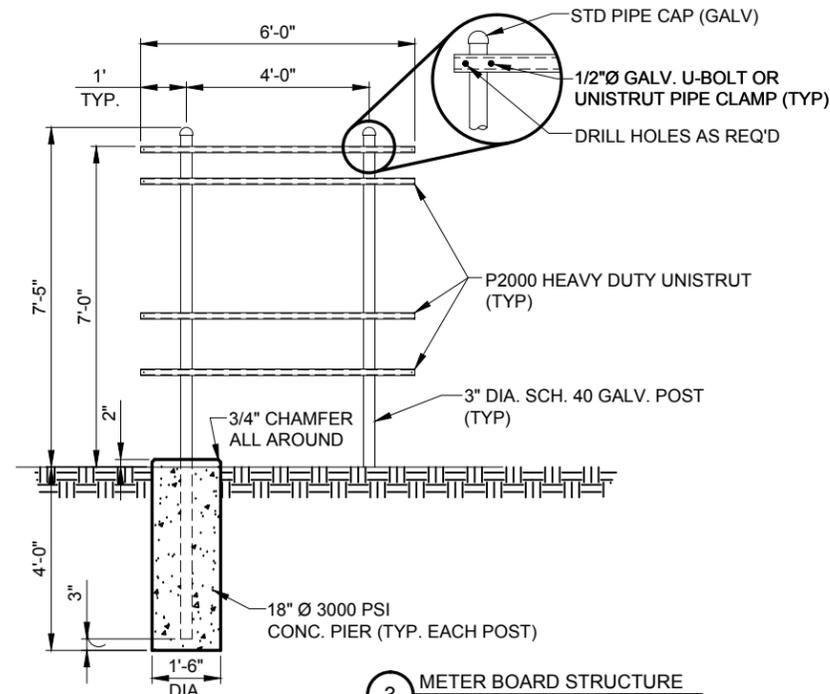
BRIDGE KIT P/N	# OF RUNS	BRIDGE WIDTH
SP1542 SP1542D (STACKABLE)	4	11-1/2"
S1543 SP1542D (STACKABLE)	8	21 1/2"
SP1595 SP1542D (STACKABLE)	12	33"

NOTE:

- AT TURNS USE SITE PRO ADJUSTABLE SPLICES FOR 0° TO 45° BENDS AND 45° TO 90° BENDS
- CONTRACTOR TO SUPPLY SUFFICIENT SLACK AT BOTH ENDS OF CABLE TRAY. CABLE TRAY SHOULD BE ABLE TO BE TEMPORARILY SHIFTED FOR ROOF MAINTENANCE.
- IF CABLE BRIDGE REQUIRES TEMPORARY RELOCATION (DUE TO ROOF MAINTENANCE) REMOVE THE BRIDGE COVER TO EASE THE MOVEMENT OF THE NON-PENETRATING SLEEPERS.

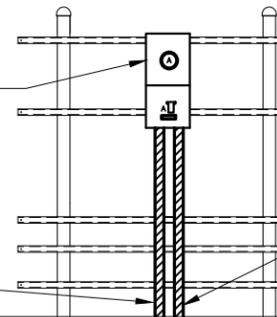


**2 ROOF MOUNTED COAX SUPPORT**  
SCALE: N.T.S.

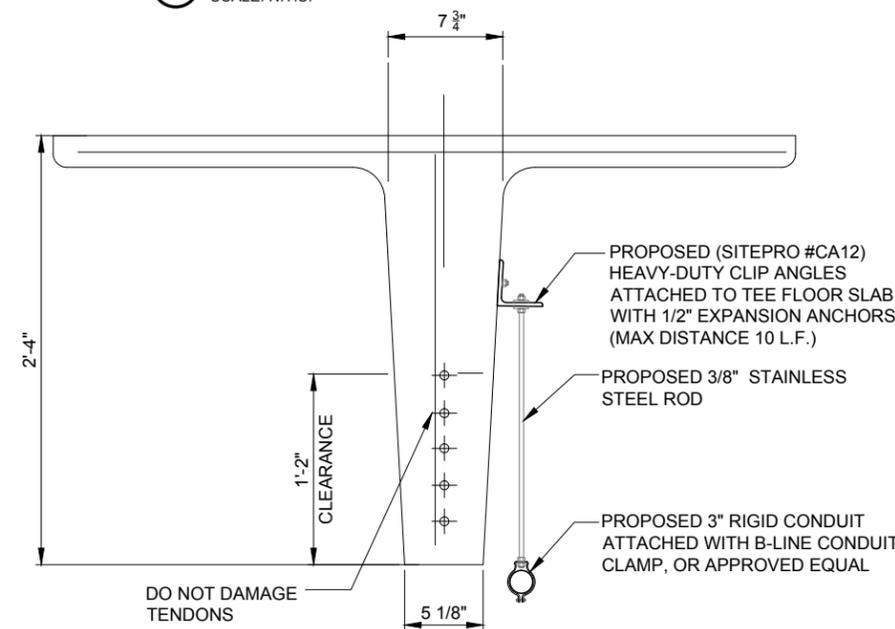


**3 METER BOARD STRUCTURE**  
SCALE: N.T.S.

METER BASE 200 AMP, 120/240 VAC, 1PH, 3W, NEMA 3R WITH 200 AMP CIRCUIT BREAKERS (SEE NOTE 1)



**4 METER BOARD STRUCTURE-ELECTRIC SIDE**  
SCALE: N.T.S.



**5 ROUTING DETAIL AT GARAGE LEVEL**  
SCALE: N.T.S.

**GENERAL ELECTRICAL NOTES**

- UNLESS NOTED AS VERIZON WIRELESS GENERAL CONTRACTOR OR VZW GC, ALL WORK ITEMS ON ELECTRICAL "E" & GROUNDING "G" SHEETS SHALL BE PERFORMED BY THE GENERAL CONTRACTOR'S ELECTRICAL CONTRACTOR. ALL WORK SHOWN AS NEW UNLESS NOTED EXISTING.
- THE GENERAL CONTRACTOR AND VERIZON WIRELESS ELECTRICAL CONTRACTORS SHALL BE LICENSED TO PERFORM WORK IN THE COUNTY OF THIS PROJECT AND SHALL BE RESPONSIBLE FOR OBTAINING AN ELECTRICAL PERMIT FROM THE COUNTY.
- UNDERGROUND CONDUIT SHALL BE SCH. 40 PVC PLASTIC DUCT WITH ALL BENDS MINIMUM 24" RADIUS 90° SWEEP SCH. 80 UNLESS OTHERWISE NOTED ON DRAWINGS. ELECTRICAL AND FIBER UTILITY LATERAL CONDUITS SHALL BE MINIMUM 36" RADIUS 90° SWEEP SCH. 80. ALL PVC SCH80 PIPING AND FITTINGS SHALL USE BELL END WHERE FEASIBLE.
- ALL WORK SHALL BE IN ACCORDANCE WITH N.F.P.A. AND N.E.C. CODES, NEMA STANDARDS AND ALL LOCAL CODES.
- PRIOR TO TRENCHING AND FOR COORDINATING OF THE FIBER AND ELECTRICAL SERVICES, SEE SHEET C-4 GENERAL NOTE #6 FOR UTILITY CONTACT NAMES & PHONE NUMBERS.
- ABOVE GRADE RISER CONDUIT SHALL BE RIGID SCH. 80 PVC WITH MATCHING FITTINGS UNLESS NOTED OTHERWISE.
- ALL WIRE SHALL BE COPPER, 600V THHN-2/THWN-2 OR XHHW-2 90°C UNLESS NOTED OTHERWISE.
- ALL ELECTRICAL CONTRACTORS SHALL ABIDE BY ALL GUIDELINES REQUIRED BY TOWER OWNER AND VERIZON WIRELESS, INCLUDING BUT NOT LIMITED TO, a) STAGE CONSTRUCTION AND REPORT WHEN ON AND OFF THE SITE. b) PROVIDE LOG BOOK RECORDS OF PERSONNEL ON TOWER. c) PROVIDE R.F. MONITORING DEVICES TO TOWER PERSONNEL. d) VERIZON WIRELESS TO INSPECT ALL TRENCHING BEFORE BACKFILLING.
- THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONDUITS SHOWN ON PLANS UNLESS NOTED OTHERWISE. ALL UNDERGROUND CONDUIT SHALL BE STUBBED-UP AND CAPPED AT THE LOCATION INDICATED ON PLANS. VZW CONTRACTOR SHALL COMPLETE ALL CONDUIT TERMINATIONS TO VZW ENCLOSURES.
- THE VZW ELECTRICAL CONTRACTOR SHALL VERIFY ELECTRICAL SERVICE REQUIRED - 120/240V, SINGLE PHASE, 200 AMP BEFORE ROUGH IN.
- GENERAL CONTRACTOR AND VZW ELECTRICAL CONTRACTORS SHALL PROVIDE FIRE WATCH DURING ALL WELDING OPERATIONS. TWO (2) HAND HELD 30 LB. FIRE EXTINGUISHERS & ADEQUATE WATER SUPPLY SHALL BE APPROVED BY THE CLIENT AND THE TOWNSHIP WATER AUTHORITY.
- SEAL ALL PENETRATIONS WITH SILICONE SEALANT.
- ELECTRICAL WORK PRESENTS SPECIFIC THREATS TO THE HEALTH AND SAFETY OF WORKERS ON SITE. SPECIFICALLY ELECTROCUTIONS ARE THE FOURTH LEADING CAUSE OF DEATH ON CONSTRUCTION SITES. ALL ELECTRICAL WORKERS SHALL HAVE CURRENT CERTIFICATIONS WHICH SATISFY ALL TRAINING REQUIREMENTS FOR THE ELECTRICAL WORK THEY ARE PERFORMING PER OSHA STANDARDS. ALL ELECTRICAL WORKERS SHALL ADHERE TO ALL SAFETY RULES AND REGULATIONS FOR WORKER AND PUBLIC SAFETY. ALL WORK SHALL BE PERFORMED BY QUALIFIED ELECTRICIANS TRAINED FOR THE TYPE OF WORK AND THE VOLTAGES PRESENT FOR EACH TASK. THE CONTRACTOR SHALL REVIEW ALL LANDOWNER, PRIME CONTRACTOR, CARRIER, OSHA, NFPA 70E, AND LOCAL SAFETY GUIDELINES AND AT ALL TIMES SHALL CONFORM TO THE MOST RESTRICTIVE OF THESE STANDARDS TO ENSURE A SAFE WORKPLACE.
- CONNECT NEUTRAL TERMINAL IN SERVICE DISCONNECTING DEVICE TO GROUNDING ELECTRODE. (2/0 AWG TINNED STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" PVC CONDUIT). CONNECT FIRST GROUNDING ELECTRODE TO SECOND GROUNDING ELECTRODE WITH 2/0 AWG TINNED STRANDED COPPER CONDUCTOR EXOTHERMICALLY WELDED TO ELECTRODES.
- VZW E.C. SHALL VERIFY SUFFICIENT CAPACITY EXISTS AT EXISTING METER CENTER. NOTIFY ENGINEER IMMEDIATELY IF SERVICE IS NOT ADEQUATE.
- REFER TO ELECTRICAL SITE PLAN FOR CONDUIT AND WIRE EQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT PLACARDS MUST BE ENGRAVED PLASTIC LABELS ONLY, NO P-TOUCH LABELS ARE TO BE USED. PLACARDS SHALL BE 1 1/2" x 5" IN SIZE AND PERMANENTLY AFFIXED TO THE ENCLOSURES EASILY VISIBLE LOCATIONS.
- VERIZON WIRELESS ELECTRICAL PLACARD REQUIREMENTS:
  - AVAILABLE FAULT CURRENT RATING FROM UTILITY PROVIDER WITH DATE.
  - VERIZON WIRELESS SERVICE DISCONNECT AT METER BASE.
  - VERIZON MAIN BREAKER AT INTEGRATED LOAD CENTER "ILC".
  - GENERATOR NEUTRAL CONDUCTOR BONDED TO SERVICE GROUNDING ELECTRODE IN THIS ENCLOSURE AT METER CENTER AND INTEGRATED LOAD CENTER "ILC" NEUTRAL BAR.
  - VERIZON WIRELESS GENERATOR
  - VERIZON WIRELESS FIBER ONLY" AT ALL VERIZON WIRELESS FIBER HANDHOLES FASTENED TO LID.
- ALL EQUIPMENT SHALL BE GROUNDED PER LATEST EDITION OF NEC AND AS INDICATED ON GROUNDING PLAN.
- ELECTRICAL EQUIPMENT SHALL BE MIN 3'-0" FROM ANY STRUCTURE AND AS REQUIRED BY LOCAL UTILITY COMPANIES.
- 2 AWG BARE SOLID TINNED COPPER WIRE LEADS FROM NEW H-FRAME STRUCTURE TO BE BONDED TO EXISTING GROUNDING SYSTEM (TYP)
- ALL METALLIC CABINETS & ENCLOSURES MUST BE GROUNDED WITH 2 AWG TO GROUND RING.
- ALL ABOVE GRADE GROUND VZW CONNECTIONS SHALL BE IN 1/2" FLEXIBLE METAL CONDUIT CRIMPED AT 6" INTERVALS TO COPPER GROUND LEADS. ALL OTHER LEADS SHALL BE IN 1/2" PVC CONDUIT.
- ALL HARDWARE USED MUST BE GALVANIZED OR STAINLESS STEEL, NO ZINC OR OTHER MATERIAL IS TO BE USED.
- VERIZON WIRELESS FURNISH & INSTALL ALL INNER CONNECTING CONDUITS BETWEEN CABINETS AND LAND ALL AC POWER TO VZW EQUIPMENT.
- ALL CONDUIT RUNS SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE METERBOARD SO THAT WATER WILL NOT FLOW FROM THE EQUIPMENT. TRENCHES SHALL BE EXCAVATED ALONG STRAIGHT LINES BEFORE CONDUIT ARE INSTALLED SO THE ELEVATION CAN BE ADJUSTED, IF NECESSARY, TO AVOID UNSEEN OBSTACLES.
- PRIOR TO THE SUBMISSION OF BIDS, THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL VERIFY ALL DETAILS AND SCHEDULES ON THE DRAWINGS AND SPECIFICATIONS PROVIDED BY THE OWNER, FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION, CHECK STRUCTURAL AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, DOOR SWINGS, ADJACENT CARRIER EQUIPMENT COORDINATION AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO THE OWNER BEFORE SUBMITTING BIDS.

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP db/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSTRUCTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

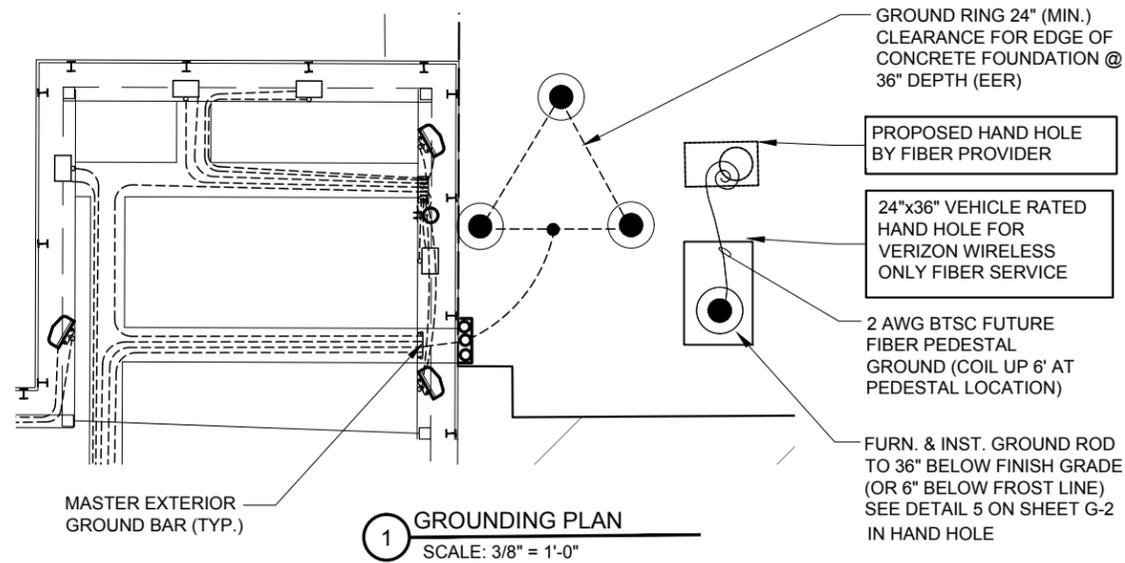
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR
B	REVISED ANTENNA CENTERLINE	09/14/15	IC
C	REVISED ANTENNA LOCATION	09/29/15	IC
D	REVISED PER COMMENTS	01/11/16	IC
E	REVISED PROPERTY ADDRESS	03/02/16	IC
F	REVISED SITE PLAN	05/18/16	IC

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

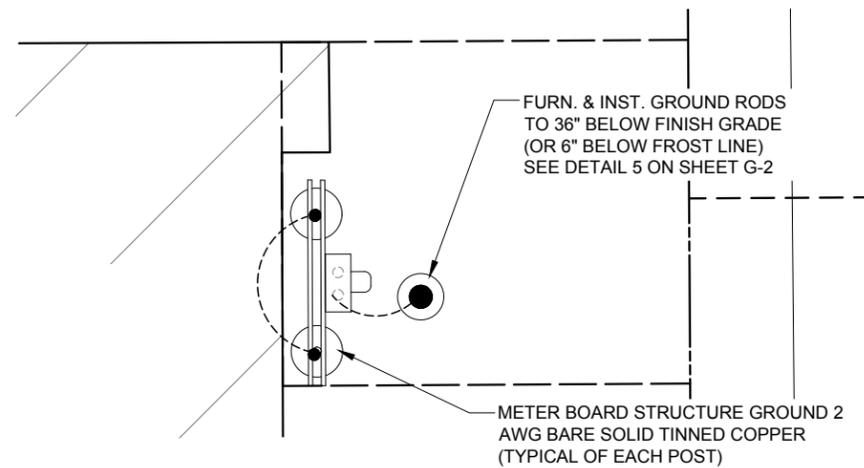
DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
**ELECTRICAL DETAILS**

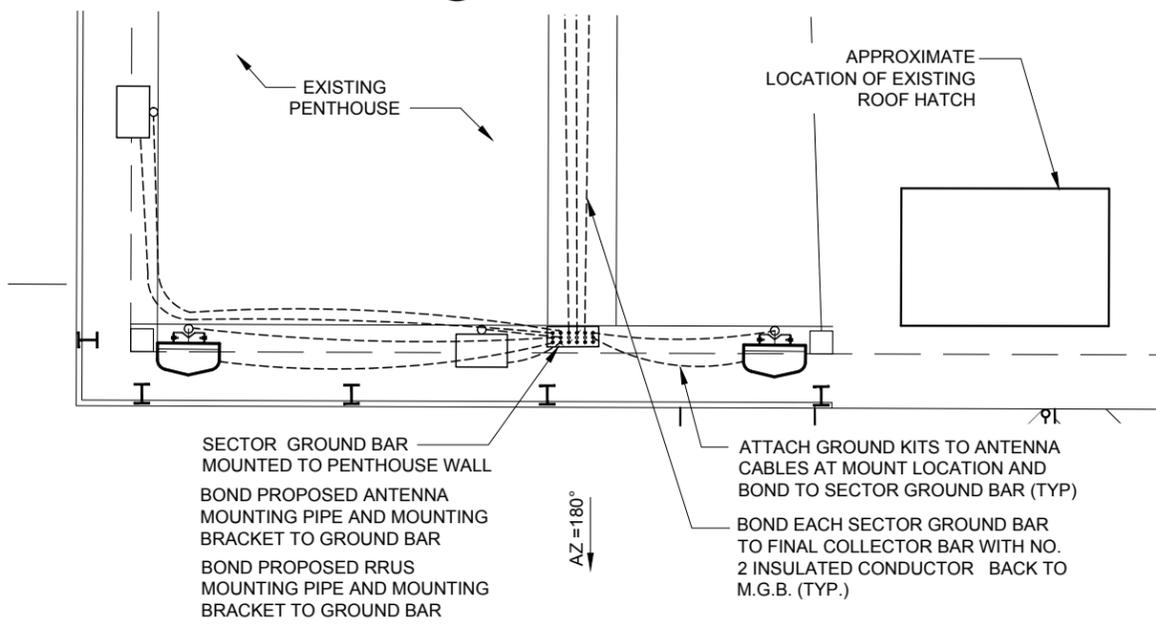
SHEET NUMBER  
**E-3**



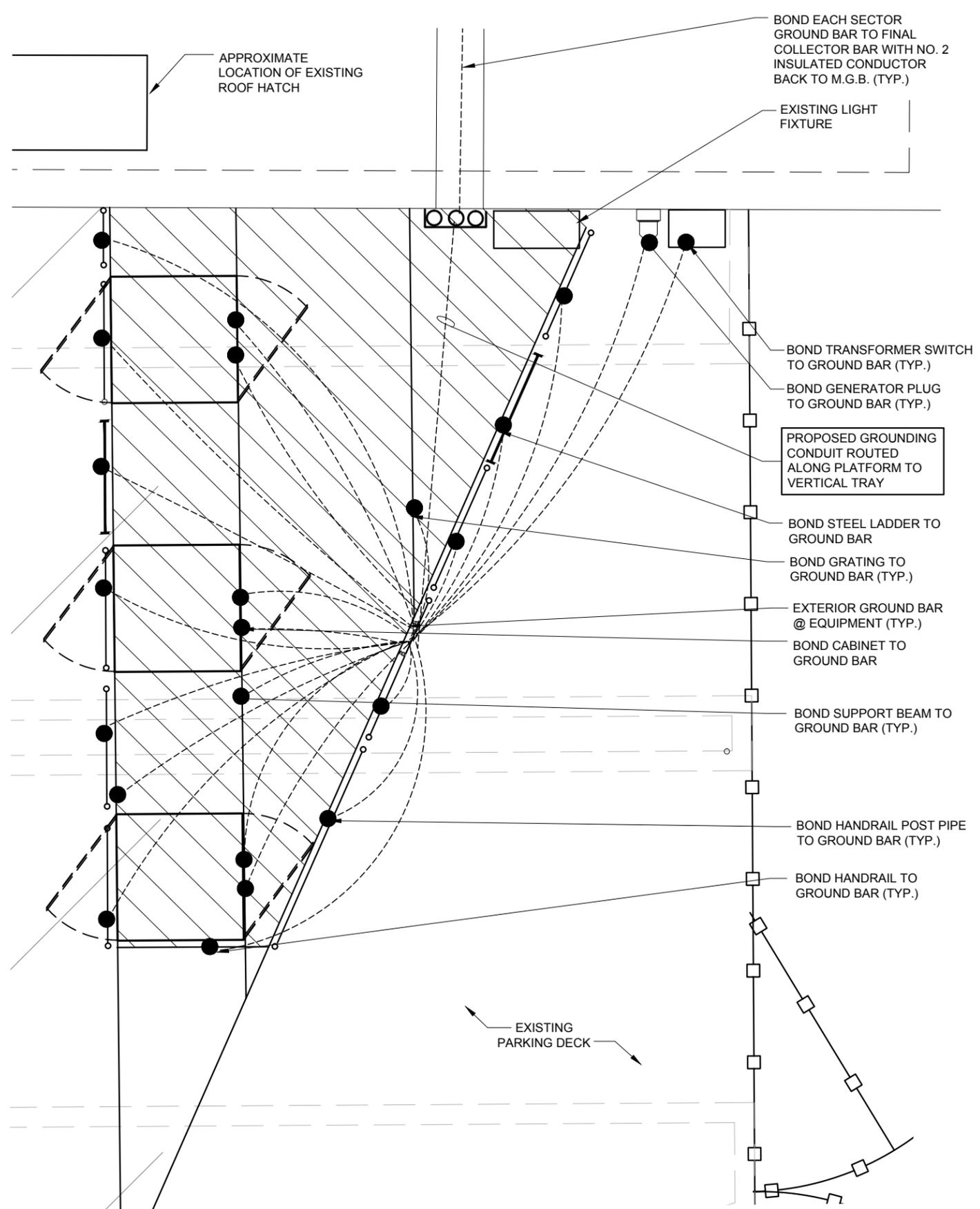
**1 GROUNDING PLAN**  
SCALE: 3/8" = 1'-0"



**2 H-FRAME GROUNDING**  
SCALE: 3/8" = 1'-0"



**3 ANTENNA GROUNDING (ALL SECTORS SIMILAR)**  
SCALE: 3/4" = 1'-0"



**4 PLATFORM GROUNDING**  
SCALE: 3/4" = 1'-0"

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP d/b/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSTRUCTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

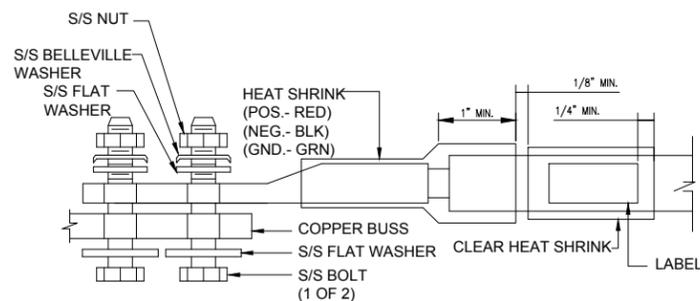
REVISIONS		NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR		
B	REVISED ANTENNA CENTERLINE	09/14/15	IC		
C	REVISED ANTENNA LOCATION	09/29/15	IC		
D	REVISED PER COMMENTS	01/11/16	IC		
E	REVISED PROPERTY ADDRESS	03/02/16	IC		
F	REVISED SITE PLAN	05/18/16	IC		

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY: JLR  
CHECKED BY: TAZ  
DATE: 01/28/14  
PROJECT #: 67-051

SHEET TITLE  
**GROUNDING PLAN**

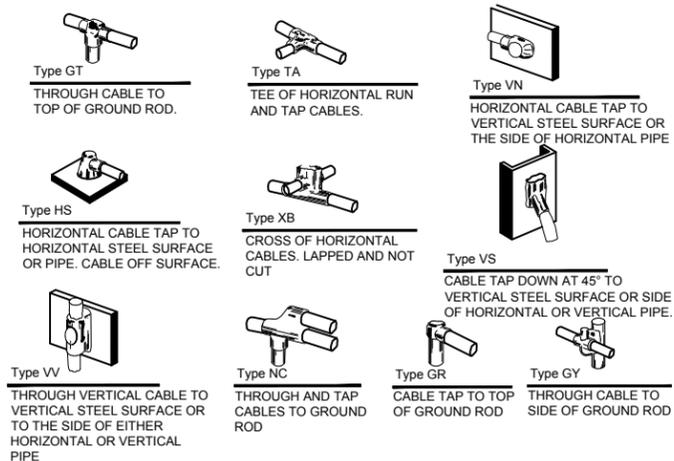
SHEET NUMBER  
**G-1**



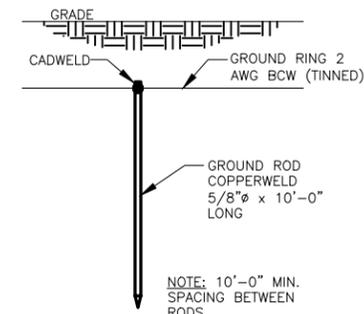
NOTES:

1. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
2. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.

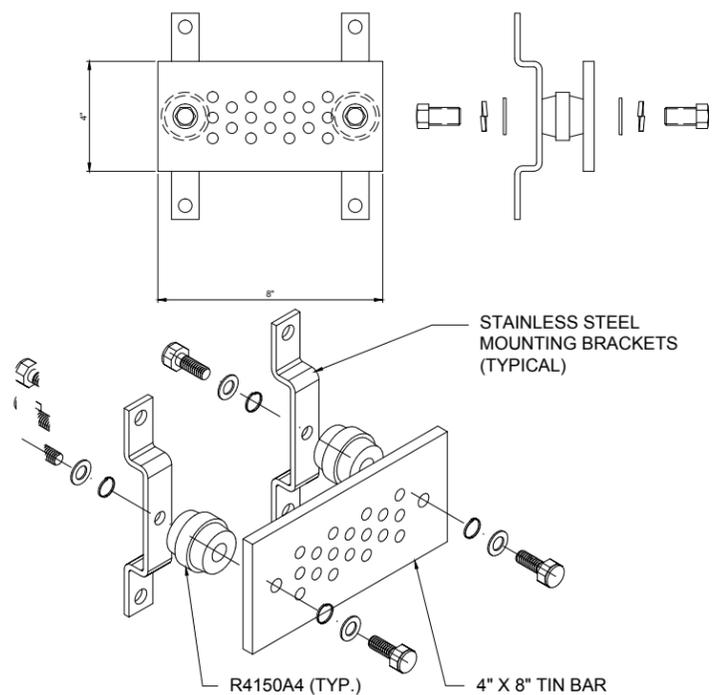
1 LUG DETAIL  
N.T.S.



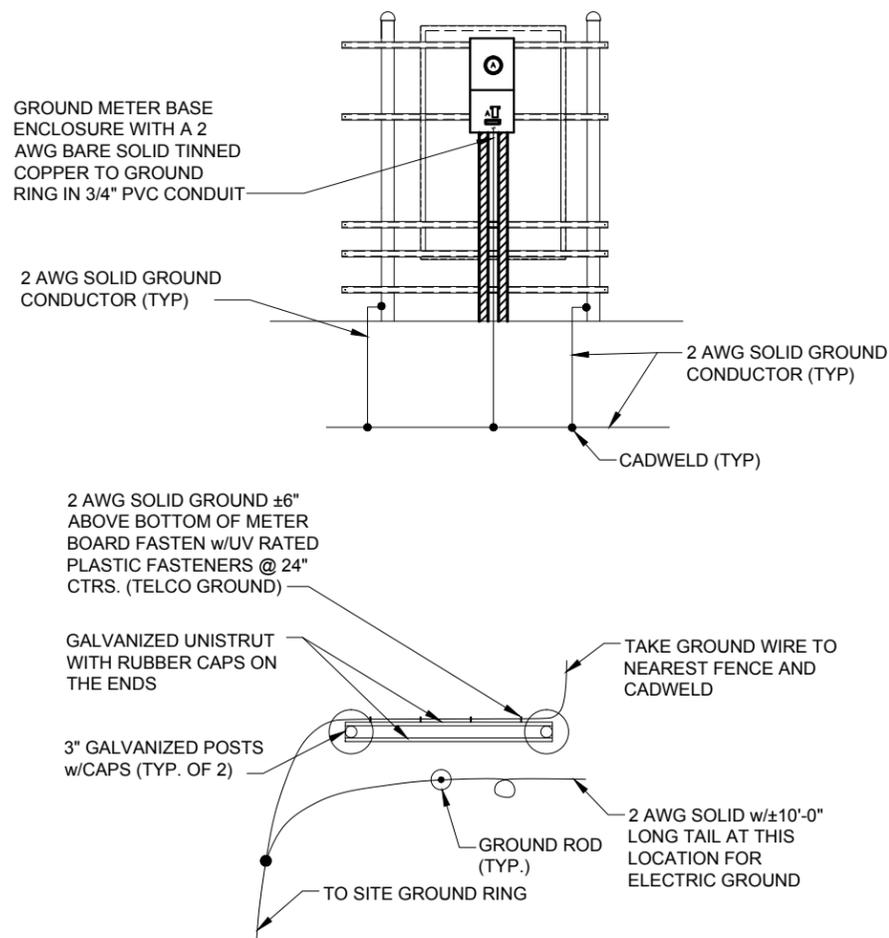
2 EXOTHERMIC WELD DETAILS  
EXOTHERMIC AND HARGER ULTRAWELD APPROVED EQUAL



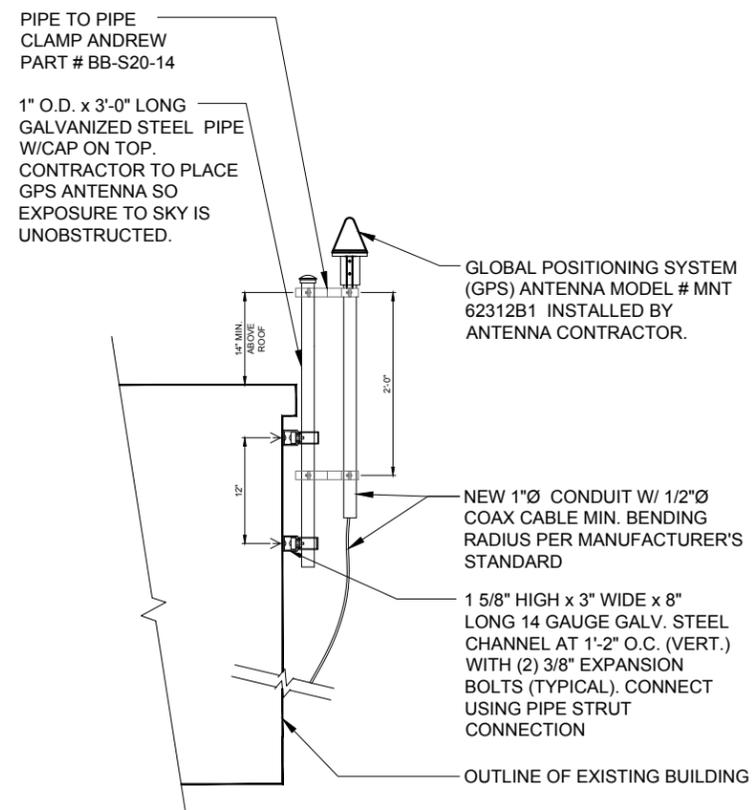
5 GROUND ROD DETAIL  
N.T.S.



2 SECTOR GROUND BAR DETAIL  
N.T.S.



4 METER BOARD STRUCTURE GROUND PLAN  
N.T.S.



6 GPS ANTENNA DETAIL  
SCALE: N.T.S.

**verizon wireless**  
SOUTHERN INDIANA RSA LIMITED  
PARTNERSHIP db/a VERIZON WIRELESS  
250 E. 96TH STREET  
INDIANAPOLIS, IN 46240

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

REVISIONS		NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	08/21/15	JLR		
B	REVISED ANTENNA CENTERLINE	09/14/15	IC		
C	REVISED ANTENNA LOCATION	09/29/15	IC		
D	REVISED PER COMMENTS	01/11/16	IC		
E	REVISED PROPERTY ADDRESS	03/02/16	IC		
F	REVISED SITE PLAN	05/18/16	IC		

**LOC. #286962**  
**PURDUE**  
**MEMORIAL UNION**  
(GRANT STREET  
PARKING GARAGE)  
120 N GRANT STREET  
WEST LAFAYETTE, IN 47907

DRAWN BY:	JLR
CHECKED BY:	TAZ
DATE:	01/28/14
PROJECT #:	67-051

SHEET TITLE  
GROUNDING DETAILS

SHEET NUMBER  
**G-2**