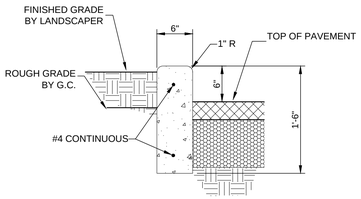
CURB DETAIL NOTE

NOTE : USE 1-1/4" PVC WEEP HOLES AT 10'-0" O.C.(MAX.) IN ALL INTERIOR CURBS.

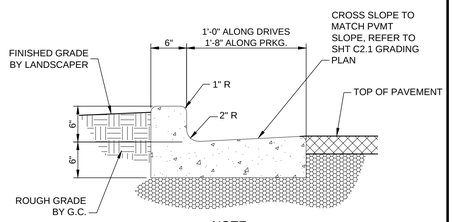


NOTE :
PROVIDE EXPANSION JOINTS @ 20'-0" O.C. (MAX.)
AND CONTROL JOINTS @ 10'-0" O.C. (MAX.)

1 **6"X18" CONCRETE CURB**

CURB DETAIL NOTE

NOTE : USE 1-1/4" PVC WEEP HOLES AT 10'-0" O.C.(MAX.) IN ALL INTERIOR CURBS.

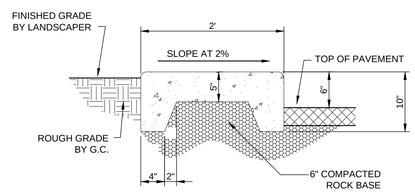


NOTE :
PROVIDE EXPANSION JOINTS @ 20'-0" O.C. (MAX.)
AND CONTROL JOINTS @ 10'-0" O.C. (MAX.)

2 **CONCRETE CURB & GUTTER**

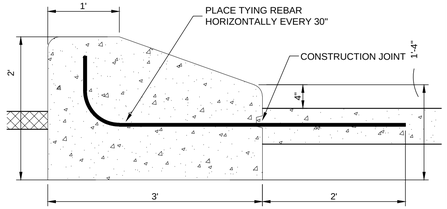
CURB DETAIL NOTE

NOTE : USE 1-1/4" PVC WEEP HOLES AT 10'-0" O.C.(MAX.) IN ALL INTERIOR CURBS.



NOTE :
PROVIDE EXPANSION JOINTS @ 20'-0" O.C. (MAX.)
AND CONTROL JOINTS @ 10'-0" O.C. (MAX.)

3 **10"x24" CONCRETE CURB**

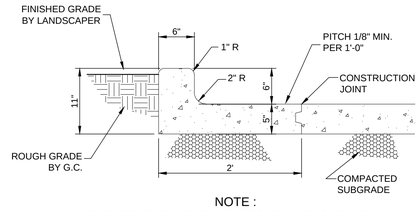


NOTE : CURB SHOWN TO BE USED IN CASES WHERE A TRUCK MIGHT ROLL ON TOP OF IT.

4 **MOUNTABLE CURB**

CURB DETAIL NOTE

NOTE : USE 1-1/4" PVC WEEP HOLES AT 10'-0" O.C.(MAX.) IN ALL INTERIOR CURBS.

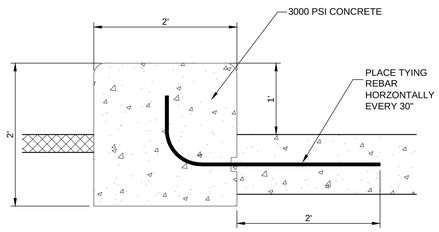


NOTE :
PROVIDE EXPANSION JOINTS @ 16'-0" O.C. (MAX.)
AND CONTROL JOINTS @ 8'-0" O.C. (MAX.)

5 **INTEGRAL CURB FOR CONCRETE LOTS**

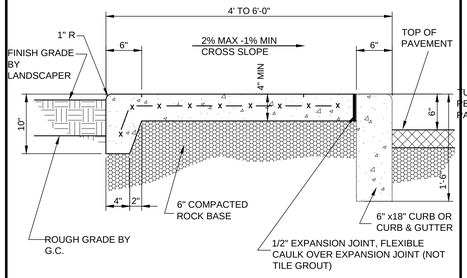
CURB DETAIL NOTE

NOTE : USE 1-1/4" PVC WEEP HOLES AT 10'-0" O.C.(MAX.) IN ALL INTERIOR CURBS.



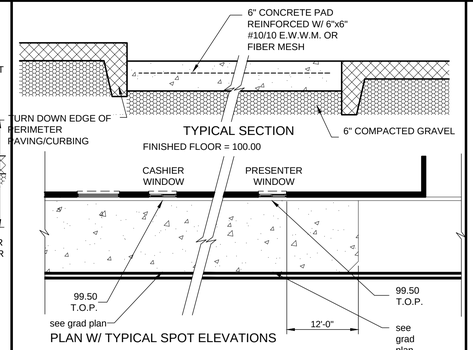
NOTE : CURB SHOWN TO BE USED IN CASES WHERE IT MIGHT ACT AS A WHEEL STOP FOR TRUCKS.

6 **INTEGRAL TRUCK CURBING**

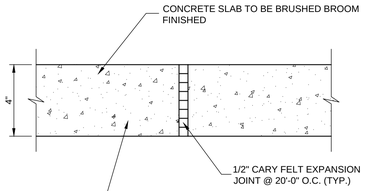


* NOTE : DIMENSION VARIES WITH WALK FINISH
(LANDSCAPE / WALK / PAVEMENT)

7 **4' TO 6' SIDEWALK**

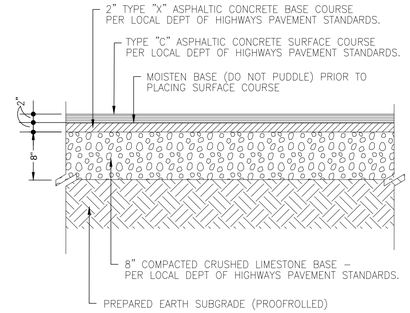


8 **CONCRETE PAD AT DRIVE THRU BOOTH**



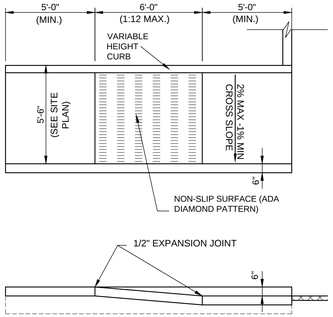
BRUSHED CONCRETE

9 **SIDEWALK TREATMENT DETAILS**

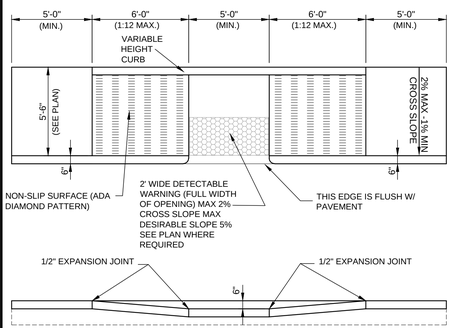


COMPACT SUBGRADE TO 90% OF GREATER OF MAX. DRY DENSITY PER ASTM D-1557
COMPACT BASE TO 90% OF GREATER OF RELATIVE DRY DENSITY PER ASTM D-2049

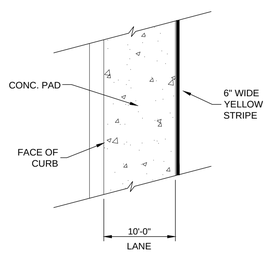
10 **TYPICAL ON SITE ASPHALTIC CONCRETE PAVEMENT DETAIL**



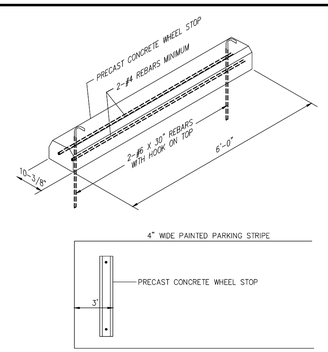
11 **END RAMP CONDITION**



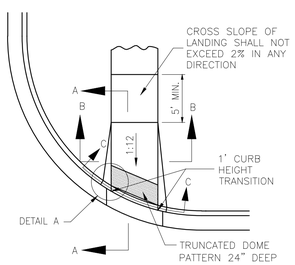
12 **MID WALK RAMP CONDITION**

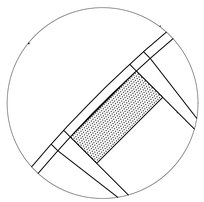


13 **DRIVE-THRU LANE STRIPING**

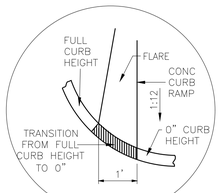


14 **CONCRETE WHEEL STOP**





DETAIL B



DETAIL A

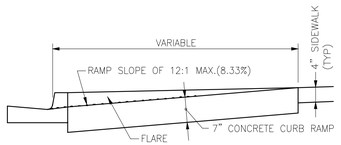
TRUNCATED DOME AND MISC RAMP DETAILS (ON SITE USE ONLY NOT FOR USE IN PUBLIC RIGHT OF WAY)

16

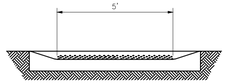
GENERAL NOTES:

1:12 SLOPE ON ALL CONCRETE CURB RAMPS, PROVIDE A LANDING THE SAME WIDTH AS CURB RAMP AND 5' LONG ADJACENT TO CURB RAMP WITH MAXIMUM 2% SLOPE IN ANY DIRECTION.

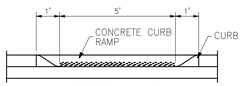
PROVIDE 6" TYPE 1 AGGREGATE BASE UNDER CURB RAMPS



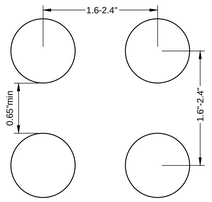
SECTION A–A



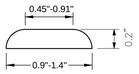
SECTION B–B



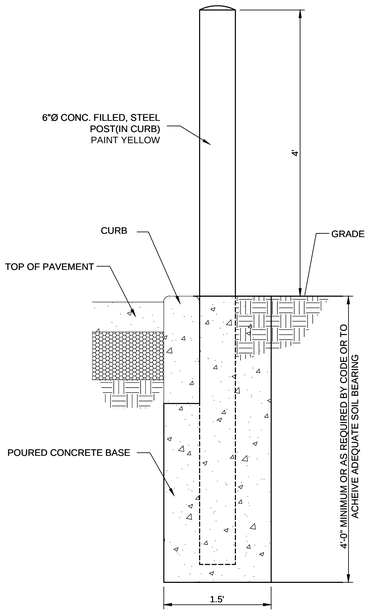
SECTION C–C



TRUNCATED DOMES SPACING



TRUNCATED DOMES CROSS SECTION



NEW CONSTRUCTION
(ON REMODELS GUARD POST LOCATIONS TO BE VERIFIED BY P.M.)

15 **GUARD POST**

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI ROBERT E. POLK NUMBER E-23082 REGISTERED PROFESSIONAL ENGINEER

DATE 1/19/2019
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY:
Farnsworth GROUP
ENGINEERING ARCHITECTURE ENVIRONMENT SCIENCES
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7000 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR:
McDonald's USA, LLC

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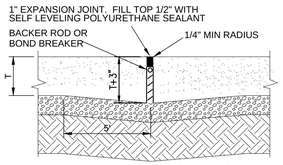
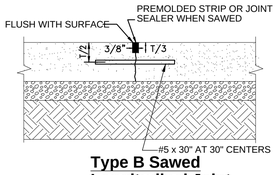
DRAWN BY FP — STD ISSUE DATE JAN 2013
REVIEWED BY FP — DATE ISSUED JAN 2013
SITE ADDRESS: STANDARD SITE DETAILS
SITE ID: JAN 2013

TITLE: STANDARD SITE DETAILS PAVEMENTS AND CURBS
DESCRIPTION

SHEET NO. SD1

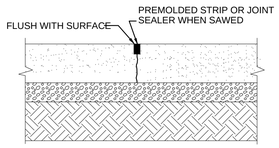


Type A Expansion Joint



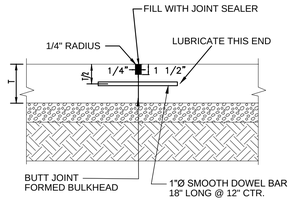
Type B Sawed Longitudinal Joint

LONGITUDINAL CONTRACTION JOINT MAXIMUM SPACING - 15 FEET



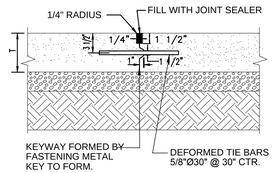
Type C Sawed or Premolded

LONGITUDINAL OR TRANSVERSE CONTRACTION JOINT MAXIMUM SPACING - 15 FEET



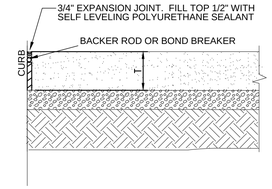
Type D1 Tied Transverse Construction Joint

FOR PLANNED WORK STOPPAGE AT TRANSVERSE CONTRACTION JOINT

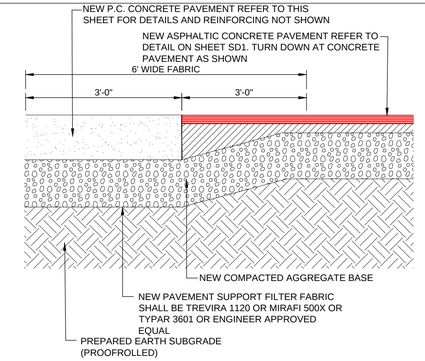


Type D2 Tied Transverse Construction Joint

TO BE USED AT EMERGENCY WORK STOPPAGES



Type E Expansion Joint at Curbs



Type PE Pavement Edge Detail

1 CONCRETE PAVEMENT AND CONCRETE PAVEMENT JOINT DETAILS

R7-8
DIMENSIONS (INCHES)

COLORS

LEGEND AND BORDER – GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND – WHITE

REDUCE SPACING 60%
SEE APPENDIX "E" FOR SYMBOL PROPORTIONS

SIGN SHALL BE MOUNTED 5' ABOVE GRADE TO THE LOWEST PORTION OF THE SIGN

VAN ACCESSIBLE
R7-8P

MOUNT BELOW R7-A WHERE INDICATED

SIGN REQUIRING "$ 250 FINE"
R7-1101

COLOR LEGEND AND BORDER BACKGROUND — GREEN NON REFLECTORIZED
WHITE REFLECTORIZED

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
6X12	12.0	6.0	1.5	4.6	1.1	3.0	5.5	3.0

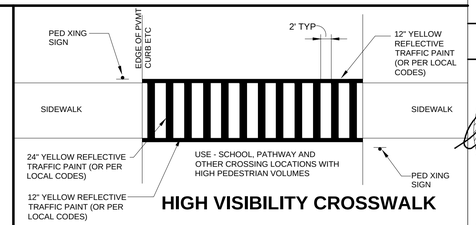
SIGN SIZE	Series Lines	Mar-gin	Bor-der	BLK. Std.
6X12	2C/3B	0.37	0.37	BS-126

All dimensions in inches.
To be used with R7-8.

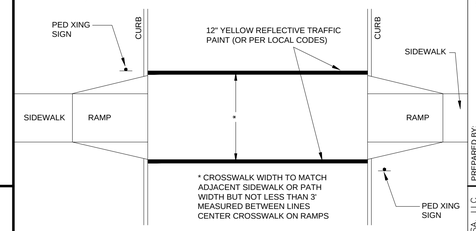
MOUNT BELOW R7-A WHERE REQUIRED BY LOCAL AUTHORITIES

2 TYPICAL HANDICAP PARKING SIGNS

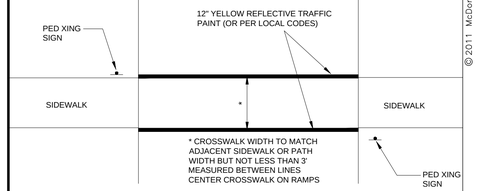
3 NOT USED



HIGH VISIBILITY CROSSWALK

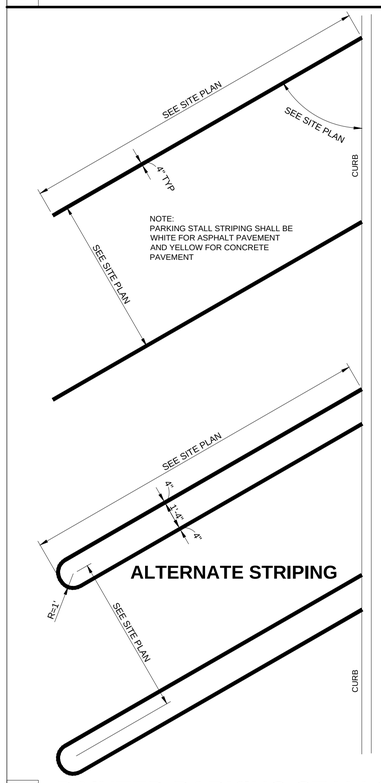


CROSSWALK WITH RAMPS



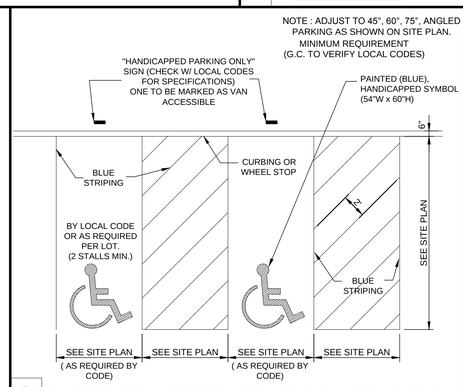
CROSSWALK WITHOUT RAMPS
ALL MoDOT PAINTED CROSSWALKS SHALL BE PAINTED WHITE

7 PAINTED CROSSWALKS

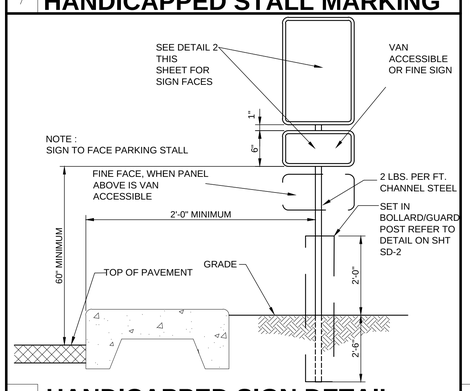


ALTERNATE STRIPING

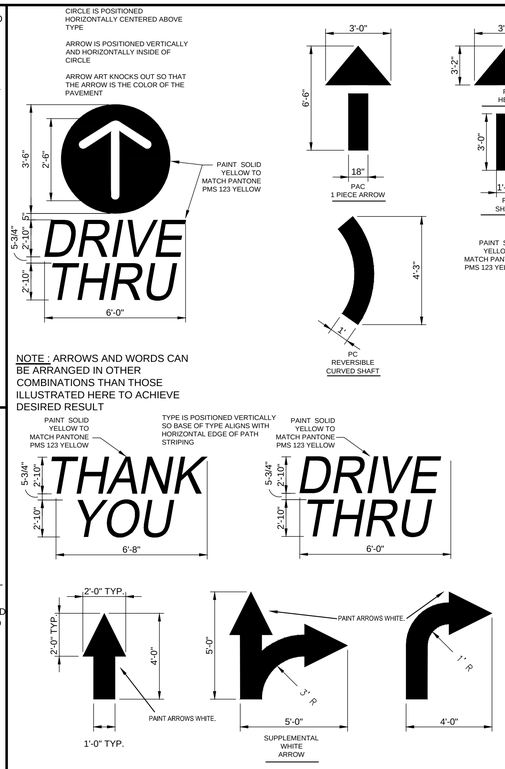
4 PAINTED PARKING STALLS



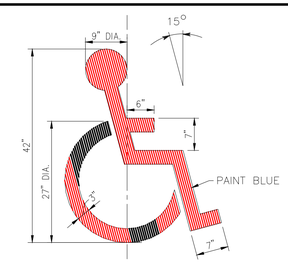
7 HANDICAPPED STALL MARKING



5 HANDICAPPED SIGN DETAIL



6 PAINTED WORDS AND ARROWS



8 PAINTED HANDICAP SYMBOL

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI ROBERT E. POLK NUMBER 28831 REGISTERED PROFESSIONAL ENGINEER

DATE 1-18-19
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY:
Farnsworth GROUP
ENGINEERS ARCHITECTS SCIENTISTS SURVEYORS
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7000 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR:
McDonald's USA, LLC

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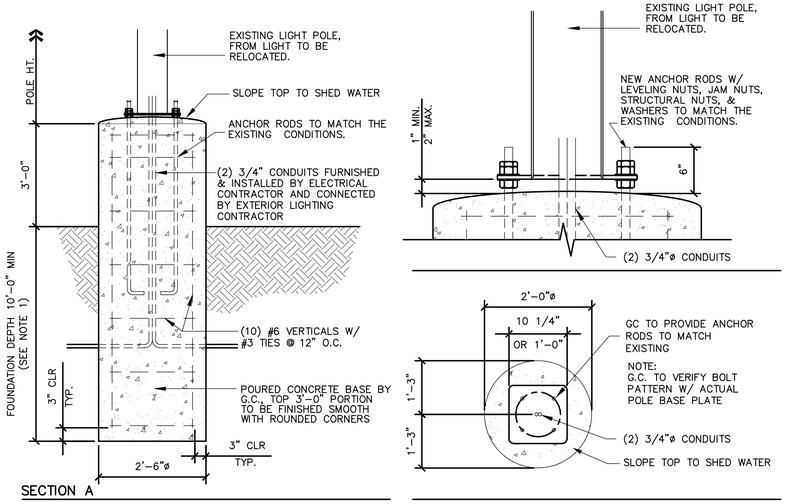
DRAWN BY: FP
STD ISSUE DATE: JAN 2013
REVIEWED BY: FP
DATE ISSUED: JAN 2013

TITLE: STANDARD SITE DETAILS PAVEMENTS, PAVEMENT MARKINGS
DESCRIPTION
SITE ID: JAN 2013
SITE ADDRESS: STANDARD SITE DETAILS

SHEET NO. SD2



NOTES:

1. . IF THE EXISTING EARTH IS NON-VIRGIN FILL MATERIAL OR OTHERWISE UNSUTIABLE CONSULT A LICENSED GEOTECHNICAL ENGINEER. 7'-0"
2. PROVIDE CONCRETE MIXTURE IN ACCORDANCE WITH ACI301.
   - f'c = 4000psi
   - AIR ENTRAINMENT = 6% +/- 1%
   - WATER TO CEMENT RATIO = 0.45 MAX.
3. ANCHOR RODS SHALL BE SET IN ACCORDANCE WITH THE AISC "CODE OF STANDARD PRACTICE."
4. COMPLY WITH THE FOLLOWING ACI GUIDES:
   - ACI304 FOR CONCRETE PLACEMENT
   - ACI306.1 FOR COLD WEATHER PLACEMENT
   - ACI301 FOR HOT WEATHER PLACEMENT
   - ACI308.1 FOR CONCRETE CURING
5. COMPLY WITH CRSI's "MANUAL OF STANDARD PRACTICE" AND ACI318 FOR PLACING REINFORCEMENT.

1 **LIGHT POLE BASE**

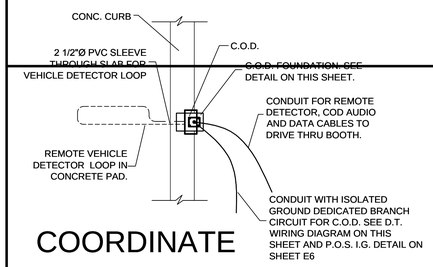
DETECTOR LOOP GENERAL NOTES

DISTRIBUTOR:
W.S. TRAFFIC
562-923-9600 (PHONE)
562-923-7555 (FAX)
MODEL #714 3-0" X 8'-0"

MATERIAL:
POLYVINYLCHLORIDE TUBING 1/2" I.D.
100 PSI LOOP MADE FROM ONE LENGTH OF THIN 14 GAUGE STRANDED WIRE. LEAD-IN IS PRE-TWISTED AT FACTORY.

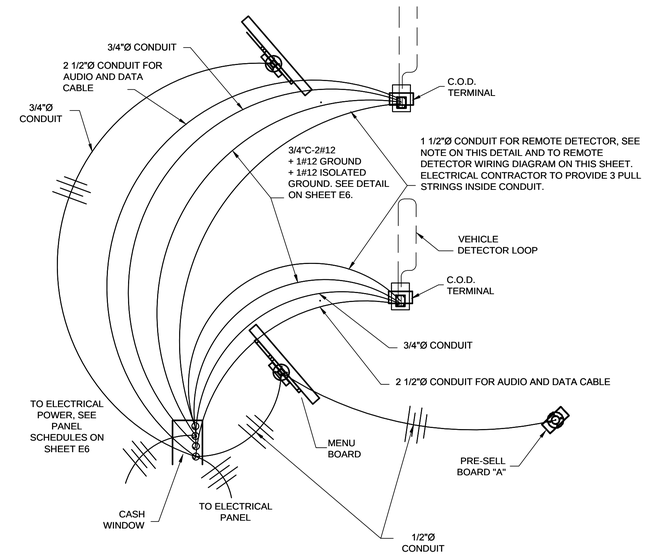
CONSTRUCTION:
FORMED WITH ONE CONTINUOUS LENGTH OF PVC WITH NO SHARP CORNERS AS IN DRAWING ABOVE. WIRE LOOPED, FORMED & PIGTAILED AS ILLUSTRATED ON THIS SHEET.

NOTE:
DO NOT USE REINFORCEMENT RODS BELOW LOOP. KEEP ALL REBARS AND SCREENING AT LEAST 2'-0" AWAY FROM LOOP.



COORDINATE WITH ELECTRICAL UPDATE ON SHEET E-DT

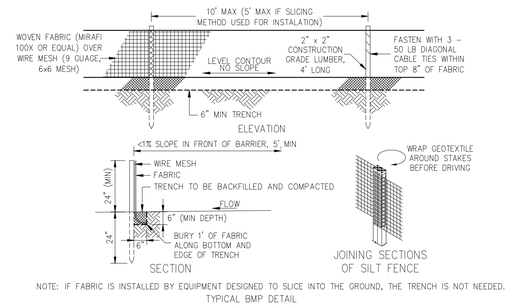
2 **WIRING DIAGRAM**



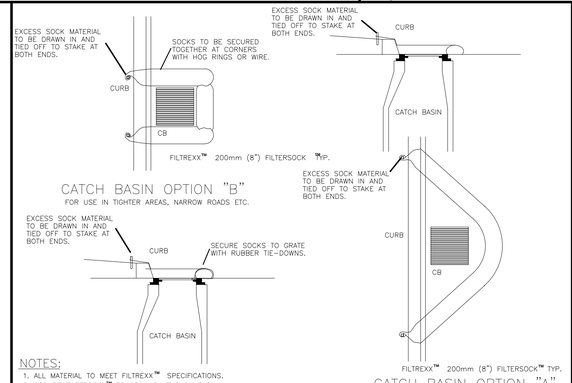
NOTE :
THIS CONDUIT REPLACES THE 3/4" CONDUIT SHOWN ON E1.

COORDINATE WITH ELECTRICAL UPDATE ON SHEET E-DT

3 **DRIVE THRU SITE WIRING DIAGRAM**

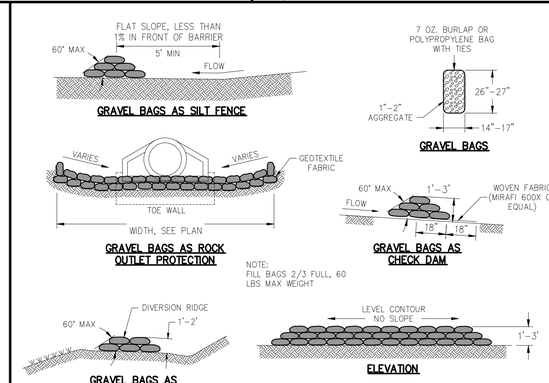


SILT FENCE

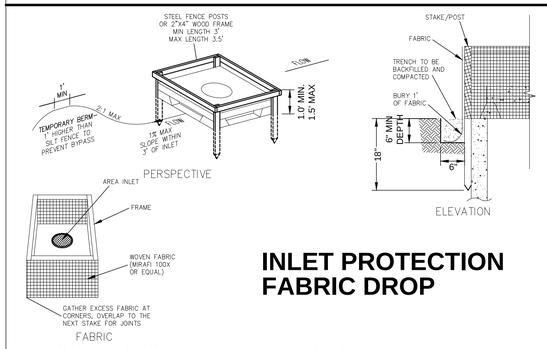


NOTES:
1. ALL MATERIAL TO MEET FILTREXX™ SPECIFICATIONS.
2. SECURE FILTERSOCK™ TO GROUND AT EACH END.

INLET PROTECTION (SOCK)

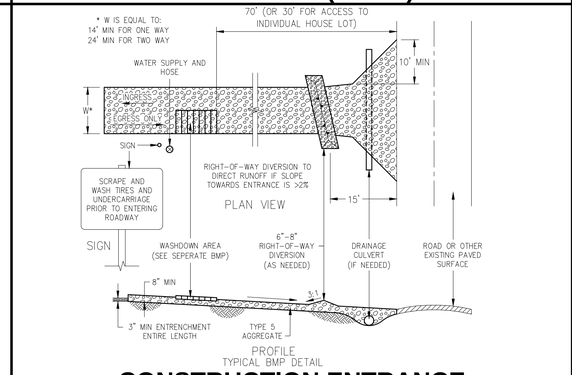


GRAVEL BAGS BMP

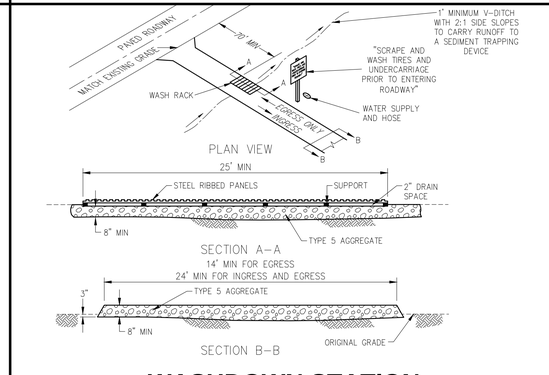


INLET PROTECTION FABRIC DROP

4 **SILTATION AND EROSION CONTROL DETAILS**



CONSTRUCTION ENTRANCE



WASHDOWN STATION

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI ROBERT E. POLK NUMBER PE-2004038082 LICENSED PROFESSIONAL ENGINEER

DATE 1-19-19
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY:
Farnsworth GROUP
ENGINEERS ARCHITECTS PLANNERS SCIENTISTS
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR:
McDonald's USA, LLC

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These drawings and specifications are the confidential and proprietary property of McDonald's USA, LLC and shall not be copied or reproduced without written authorization. The contract documents were prepared for use on this specific site in conjunction with its issue date and may not be suitable for use at a different site or at a later date. Any reuse of these drawings for reference or example on another project requires the services of properly licensed architects and engineers. Reproduction of the contract documents for reuse on another project is not authorized.

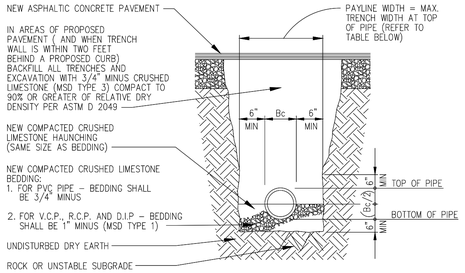
DRAWN BY	REVIEWED BY	SITE ADDRESS
FP	FP	STANDARD SITE DETAILS
STD ISSUE DATE JAN 2013	DATE ISSUED JAN 2013	
SITE ID JAN 2013		

TITLE
STANDARD SITE DETAILS
PAVEMENTS AND CURBS

DESCRIPTION
- -
- -

SHEET NO.
SD3

1 **NOT USED**



1 TRENCHES BEHIND CURBS SHALL BE BACKFILLED WITH ROCK TO WITHIN 12" OF SURFACE. REMAINING TRENCH SHALL BE FILLED w/6" CLEAN TOPSOIL ON 6" CLEAN EARTH BACKFILL.

2. BACKFILL IN TRENCHES WHICH ARE NOT IN AREAS OF (OR NOT WITHIN TWO FEET OF) PAVING SHALL CONSIST OF SELECTED JOB-EXCAVATED EARTH THOROUGHLY COMPACTED BY WATER JETTING OR WITH SUITABLE MECHANICAL TAMPERS.

INSIDE DIAMETER OF PIP (INCHES)	PAYLINE WIDTH OF TRENCH (INCHES)	INSIDE DIAMETER OF PIPE (INCHES)	PAYLINE WIDTH OF TRENCH (INCHES)
4,6,8,12	28		
15	32		
18	35		
21	39		
24			

2 **UTILITY TRENCH DETAIL**

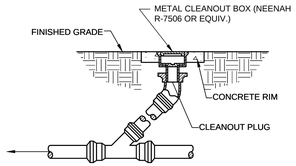
ATTENTION SEWER CONTRACTOR:

FOR SEWER PIPE (STORM, SANITARY AND COMBINED) WITH A DESIGN GRADE LESS THAN ONE PERCENT (1%), VERIFICATION OF THE PIPE GRADE WILL BE REQUIRED FOR EACH INSTALLED REACH OF SEWER, PRIOR TO ANY SURFACE RESTORATION OR INSTALLATION OF ANY SURFACE IMPROVEMENTS. THE CONTRACTORS FIELD SUPERVISOR WILL BE REQUIRED TO PROVIDE DAILY DOCUMENTATION VERIFYING THAT THE AS-BUILT PIPE GRADE MEETS THE DESIGN GRADE THROUGH THE SUBMITTAL OF SIGNED CUT SHEETS TO THE SEWER INSPECTOR UPON REQUEST.

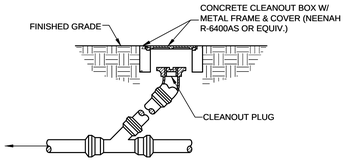
FIELD SURVEYED VERIFICATION MUST BE MADE UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR OR REGISTERED ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE ANY SEWER REACH HAVING AN AS-BUILT GRADE WHICH IS FLATTER THAN THE DESIGN GRADE BY MORE THAN 0.1%. SEWERS WITH GRADES GREATER THAN THE DESIGN SLOPE MAYBE LEFT IN PLACE, PROVIDED NO OTHER SEWER GRADE IS REDUCED BY THIS VARIANCE IN THE AS-BUILT GRADE.

SEWER AUTHORITY ALSO RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE ANY SEWER (AT ANY TIME PRIOR TO CONSTRUCTION APPROVAL) FOR WHICH THE AS-BUILT GRADE DOES NOT COMPLY WITH THE GRADE TOLERANCE STATED IN THE ABOVE PARAGRAPH.

THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES.



CLEANOUT IN UNPAVED AREAS



CLEANOUT IN PAVED AREAS

NOTE : G.C. IS TO INSTAL CLEANOUT AT ANY PIPING ANGLE CHANGES AND AT EVERY 50' IN PIPING RUNS GREATER THAN 100' IN LENGTH.

3 **EXTERIOR CLEANOUT DETAIL**

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI
ROBERT E. POLK
NUMBER
PE-2004038021
REGISTERED PROFESSIONAL ENGINEER

DATE 1-19-19
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY:
Farnsworth GROUP
ENGINEERS ARCHITECTS PLANNERS SCIENTISTS
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR:
McDonald's USA, LLC

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DRAWN BY FP
STD ISSUE DATE JAN 2013
REVIEWED BY FP
DATE ISSUED JAN 2013

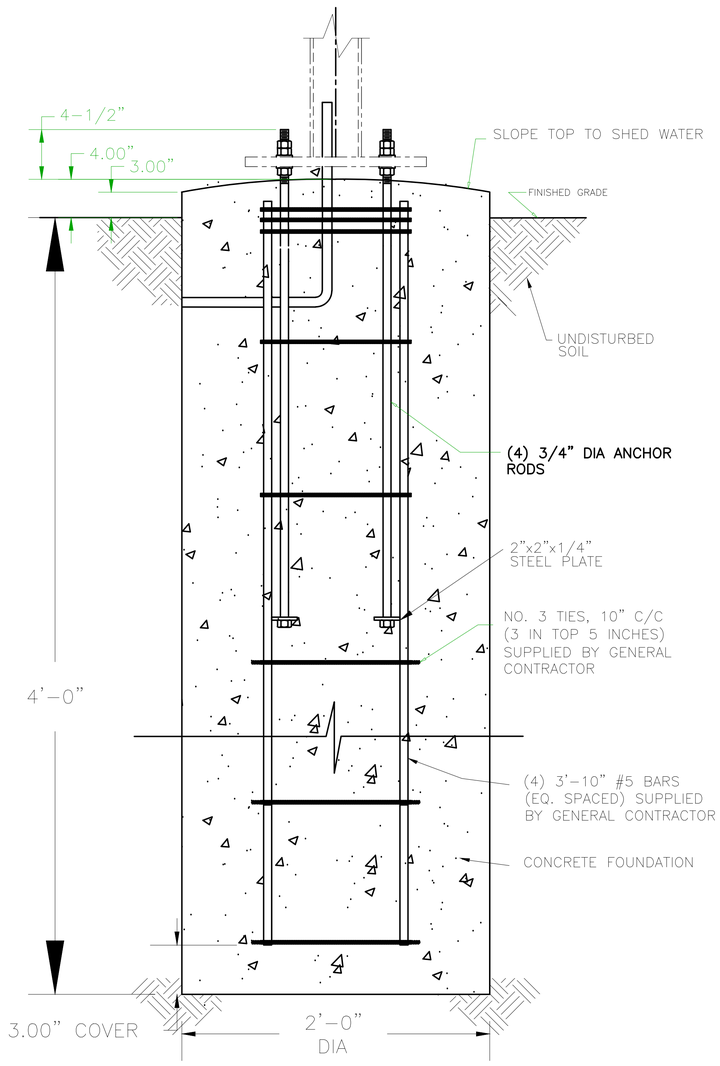
TITLE
STANDARD SITE DETAILS
GREASE INTERCEPTOR & SAN SEWER

DESCRIPTION
.
.
.

SITE ID JAN 2013
SITE ADDRESS STANDARD SITE DETAILS

SHEET NO.
SD4

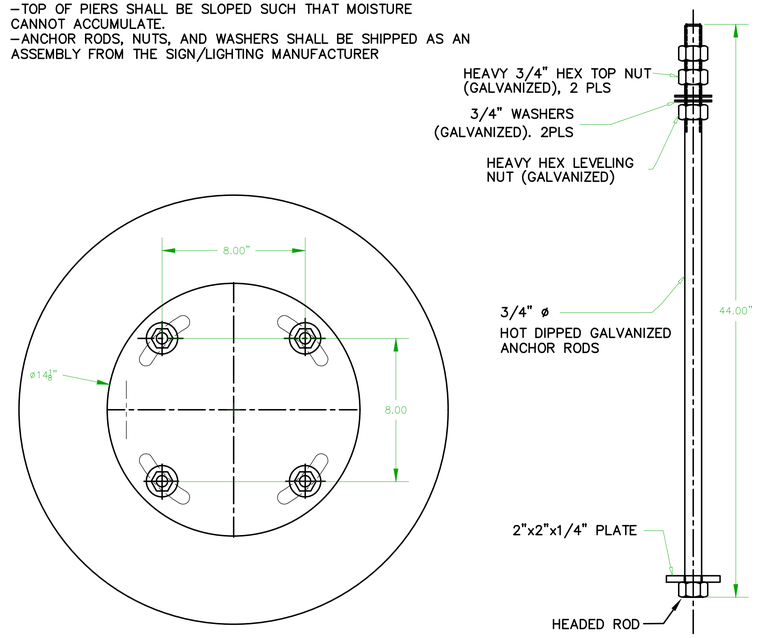
NOTES:
-PIER DEPTHS REQUIRED ARE MINIMUMS. ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE 100 PSF/FT OF DEPTH (x2)
-ALL REINFORCING STEEL BY GENERAL CONTRACTOR



A FOUNDATION

NTS

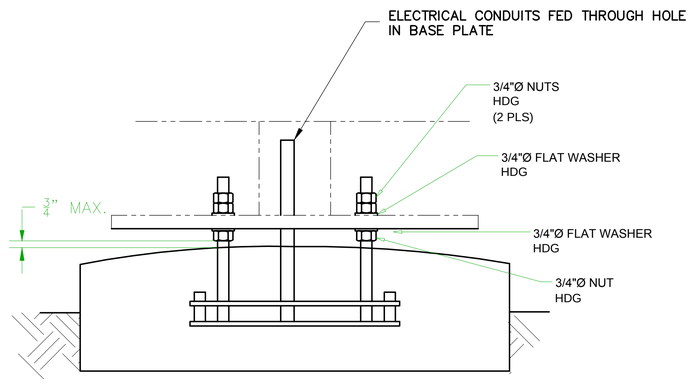
NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER



B ANCHOR BOLT PATTERN

NTS

NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE



C CONNECTION DETAILS

NTS

GENERAL NOTES

-THE FOLLOWING CODES WERE USED IN DESIGN:
- -IBC 2012
- -ASCE 7-10
- -ACI 318-11
- -AISC 360-10
- -AWS D1.3

-WIND SPEED 90 MPH (MPH 3-SEC GUST)
- -EXPOSURE C

-DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
- -AXIAL - 120#
- -SHEAR - 267#
- -MOMENT - 1,219#'

-ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
-SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
-TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE)

-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.

CONCRETE:

-ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
-ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-MINIMUM CONCRETE STRENGTH (f'c=3,000 PSI) SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTION 2.6
-AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTIONS 2.6-A & 2.13-A
-WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 3.14
-PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
-REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
-ANCHOR RODS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
-DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION, SECTION 3.11-E.

STEEL:

-STEEL PIPE SECTION: ASTM A53 OR A252 TYPE E GRADE B (Fy=35ksi)
-HSS ROUND SECTION: ASTM A500 GRADE B (Fy=42ksi)
-HSS SQUARE/RECTANGULAR SECTIONS: ASTM A500 GRADE B (Fy=46ksi)
-HEADED ANCHOR RODS ASTM F1554 GR 55, AN ACCEPTABLE ALTERNATIVE IS ASTM F1554 GR 55, S1 WHEN THE EMBEDDED END OF THE ROD IS THREADED AND THE NUT TACK WELDED PRIOR TO GALVANIZATION.
-STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES AND PLATES: ASTM A36
-REINFORCEMENT: ASTM A615 GRADE 60 - BY GENERAL CONTRACTOR
-NUTS: ASTM A563A, HEAVY HEX
-WASHERS: ASTM F844 A36
-USE ASTM A153 CLASS C HOT DIPPED GALVANIZED BOLTS AND FASTENERS
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-NO FIELD HEATING TO BEND STEEL SHALL BE ALLOWED WITHOUT ENGINEER'S APPROVAL.
-DO NOT CUT ANCHOR RODS AFTER INSTALLATION OF POLE
-AFTER INSTALLATION, ALL EXPOSED STEEL SHALL BE PAINTED WITH AN ENAMEL PAINT TO INHIBIT CORROSION.
-ANY FIELD WELDING SHALL FIRST BE VERIFIED BY ENGINEER AND PERFORMED IN ACCORDANCE WITH AWS D1.1.

-REFER TO SIGN MANUFACTURER DRAWINGS AND INSTRUCTIONS FOR ADDITIONAL INFORMATION.

FOUNDATION NOTE

ATTENTION CONTRACTOR:

VERIFY ALL SIGN FOUNDATIONS REQUIRED WITH SIGN PROVIDER

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI
ROBERT E. OLIVER
NUMBER E-27602
LICENSED PROFESSIONAL ENGINEER

DATE 2-5-19
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

PREPARED BY:
Farnsworth GROUP
20 ALLEN AVENUE, SUITE 200
ST. LOUIS, MISSOURI 63119
(314) 962-7900 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR: McDonald's USA, LLC

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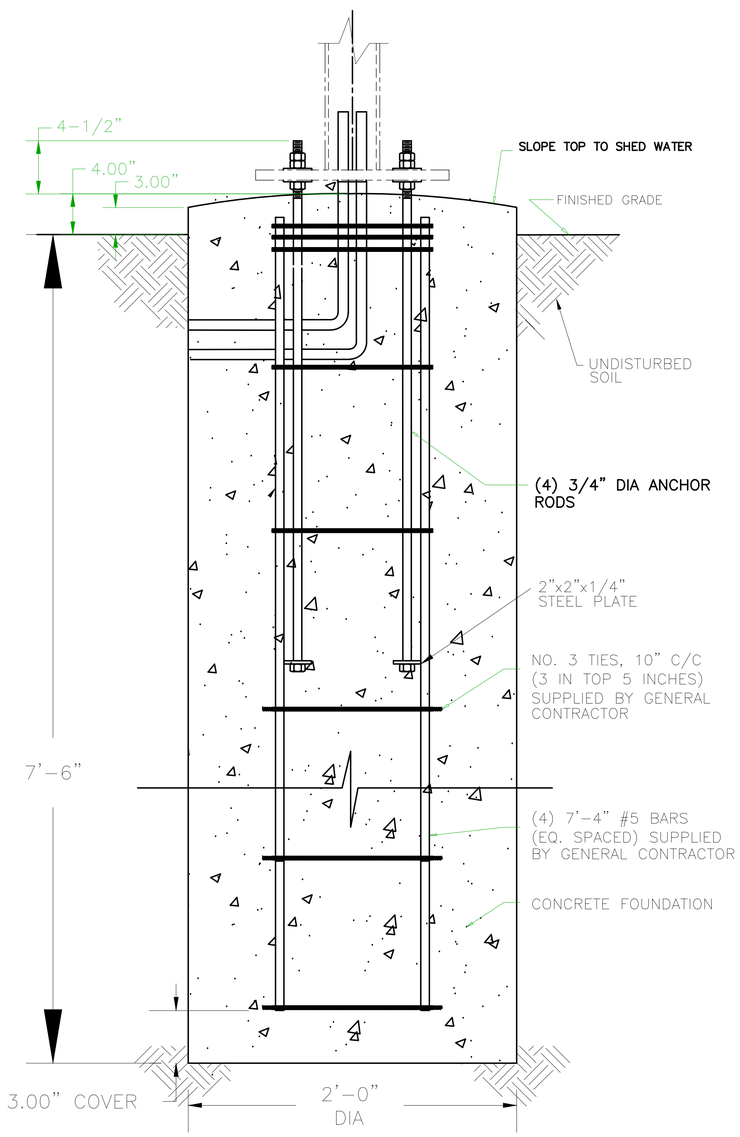
DRAWN BY: FP
STD ISSUE DATE: STDDATE
REVIEWED BY: REVIEWED_BY
DATE ISSUED: ISSUE_DATE

TITLE: STANDARD SITE DETAILS PRESELL-BOARD-DETAIL
DESCRIPTION
DESC1
DESC2
DESC3
SITE ID: SITE_ID
SITE ADDRESS: ADDRESS

SHEET NO.
CODE
SD5

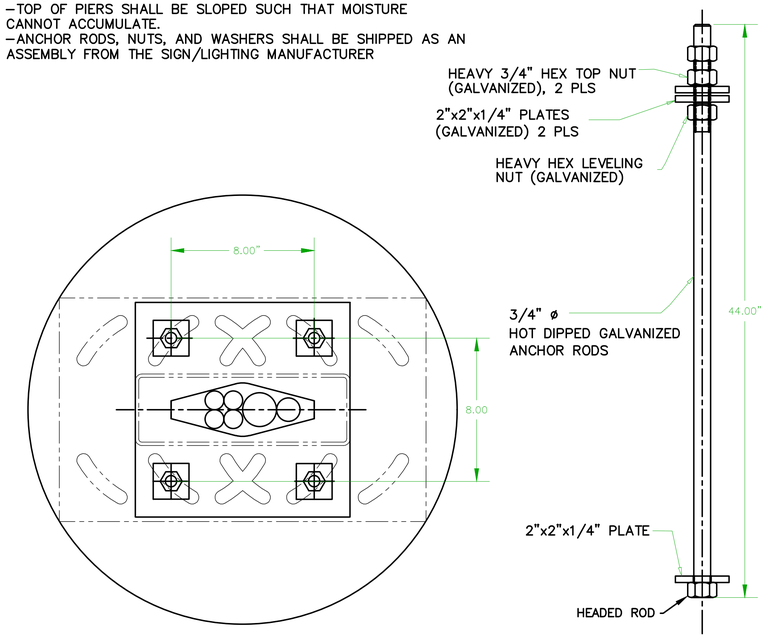
NOTES:
–PIER DEPTHS REQUIRED ARE MINIMUMS. ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
–MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE 100 PSF/FT OF DEPTH (x2)
–ALL REINFORCING STEEL BY GENERAL CONTRACTOR



A FOUNDATION

NTS

NOTES:
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
–ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER



B ANCHOR BOLT PATTERN

NTS

NOTES:
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
–ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
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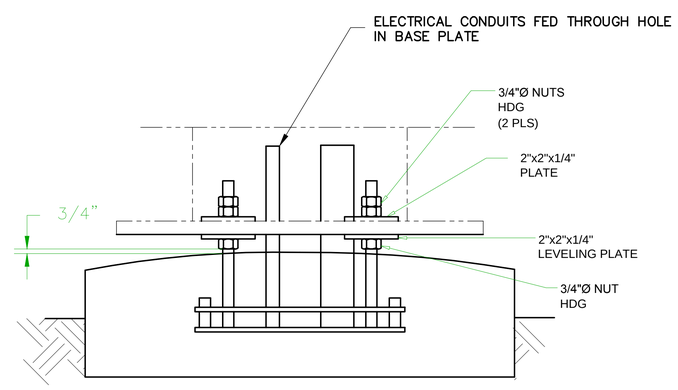

C CONNECTION DETAILS

NTS

GENERAL NOTES

–THE FOLLOWING CODES WERE USED IN DESIGN:
  –IBC 2012
  –ASCE 7–10
  –ACI 318–11
  –AISC 360–10
  –AWS D1.3
–WIND SPEED 115 MPH (MPH 3–SEC GUST)
  –EXPOSURE C
–DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
  –AXIAL – 850#
  –SHEAR – 1,310#
  –MOMENT – 7,294#'

–ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
–MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
–SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
–TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE)

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CONCRETE:

–ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698–70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
–ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
–MINIMUM CONCRETE STRENGTH (f'c=3,000 PSI) SHALL CONFORM WITH MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTION 2.13–A
–USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATION SECTION 2.6
–AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATION SECTIONS 2.6–A & 2.13–A
–WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTION 2.13–A
–FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTION 3.14
–PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
–REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
–ANCHOR RODS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
–DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATION, SECTION 3.11–E.

STEEL:

–STEEL PIPE SECTION: ASTM A53 OR A252 TYPE E GRADE B (Fy=35ksi)
–HSS ROUND SECTION: ASTM A500 GRADE B (Fy=42ksi)
–HSS SQUARE/RECTANGULAR SECTIONS: ASTM A500 GRADE B (Fy=46ksi)
–HEADED ANCHOR RODS ASTM F1554 GR 55, AN ACCEPTABLE ALTERNATIVE IS ASTM F1554 GR 55, S1 WHEN THE EMBEDDED END OF THE ROD IS THREADED AND THE NUT TACK WELDED PRIOR TO GALVANIZATION.
–STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES AND PLATES: ASTM A36
–REINFORCEMENT: ASTM A615 GRADE 60 – BY GENERAL CONTRACTOR
–NUTS: ASTM A563A, HEAVY HEX
–WASHERS: ASTM F844 A36
–USE ASTM A153 CLASS C HOT DIPPED GALVANIZED BOLTS AND FASTENERS
–ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
–NO FIELD HEATING TO BEND STEEL SHALL BE ALLOWED WITHOUT ENGINEER'S APPROVAL.
–DO NOT CUT ANCHOR RODS AFTER INSTALLATION OF POLE
–AFTER INSTALLATION, ALL EXPOSED STEEL SHALL BE PAINTED WITH AN ENAMEL PAINT TO INHIBIT CORROSION.
–ANY FIELD WELDING SHALL FIRST BE VERIFIED BY ENGINEER AND PERFORMED IN ACCORDANCE WITH AWS D1.1.

–REFER TO SIGN MANUFACTURER DRAWINGS AND INSTRUCTIONS FOR ADDITIONAL INFORMATION.

FOUNDATION NOTE

ATTENTION CONTRACTOR:

VERIFY ALL SIGN FOUNDATIONS REQUIRED WITH SIGN PROVIDER

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI
ROBERT E. OLIVER
NUMBER E-23083
LICENSED PROFESSIONAL ENGINEER

DATE 2-5-19
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY:
Farnsworth GROUP
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63110
(314) 962-7900/ (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR:
McDonald's USA, LLC

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DRAWN BY: FP
STD ISSUE DATE: STDDATE
REVIEWED BY: REVIEWED_BY
DATE ISSUED: ISSUE_DATE

TITLE: STANDARD SITE DETAILS MENU-BOARD-FOUNDATION

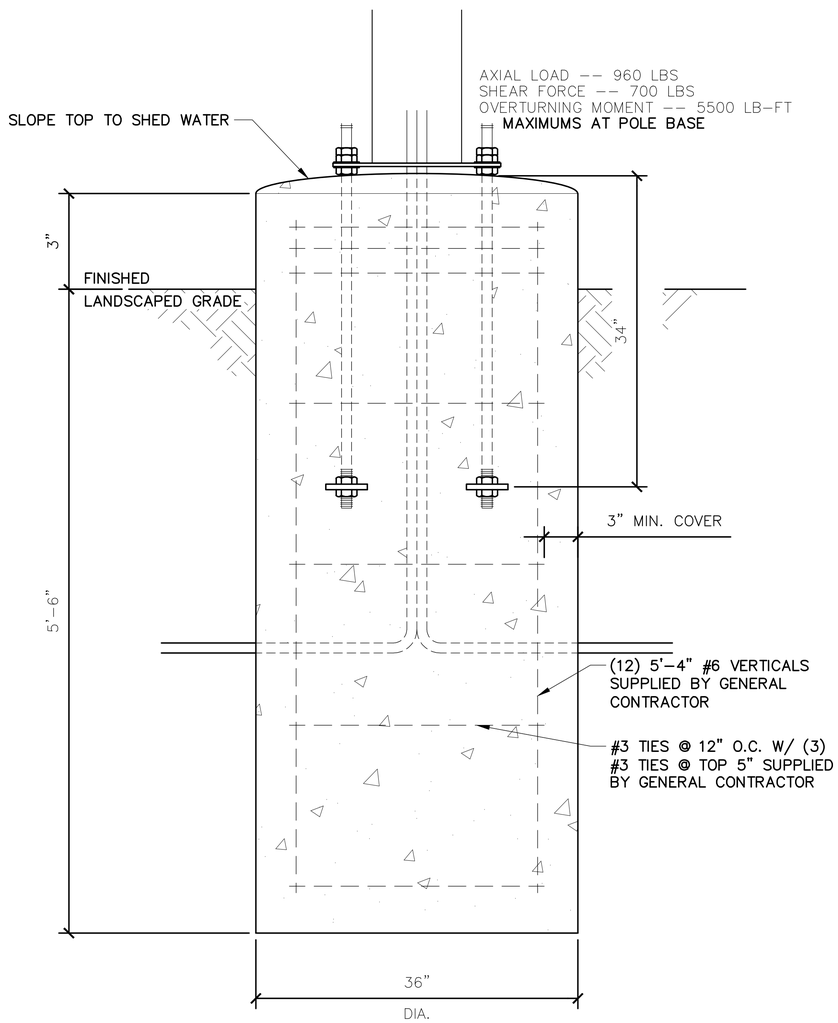
DESCRIPTION: DESC1 DESC2 DESC3
SITE ID: SITE_ID
SITE ADDRESS: ADDRESS

SHEET NO. CODE: SD6

NOTE:

- DESIGN CODES
  - IBC 2012
  - ASCE 7-10
  - ACI 318-11
  - AISC 360-10
  - AWS D1.3

  WIND SPEED -- 115 MPH, 3 SEC GUST
    - EXPOSURE C
- DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
  AXIAL LOAD -- 960 LBS
  SHEAR FORCE -- 700 LBS
  OVERTURNING MOMENT -- 5500 LB-FT
- USE 3000 PSI CONCRETE COMPRESSIVE STRENGTH (f'c)
- PIER DEPTHS REQUIRED ARE MINIMUMS. ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
- TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
- ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.
- MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE 100 PSF/FT OF DEPTH x2.
- TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE)
- 3" MIN. CONCRETE COVER FOR REINFORCEMENT

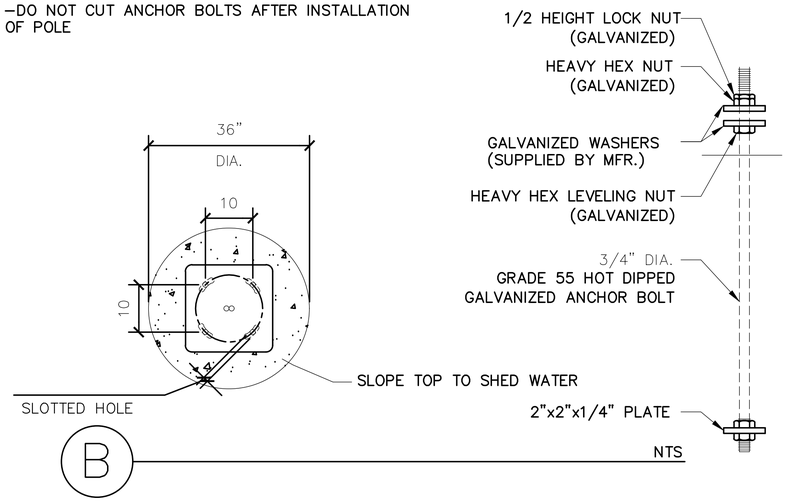


A GATEWAY 115 MPH

NTS

NOTES:

- TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE
  CANNOT ACCUMULATE.
- HOT DIPPED GALVANIZED BOLTS
- F1554 GRADE 36 ANCHOR BOLTS
- ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC
  CODE OF STANDARD PRACTICE
- ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS
  AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
- DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE

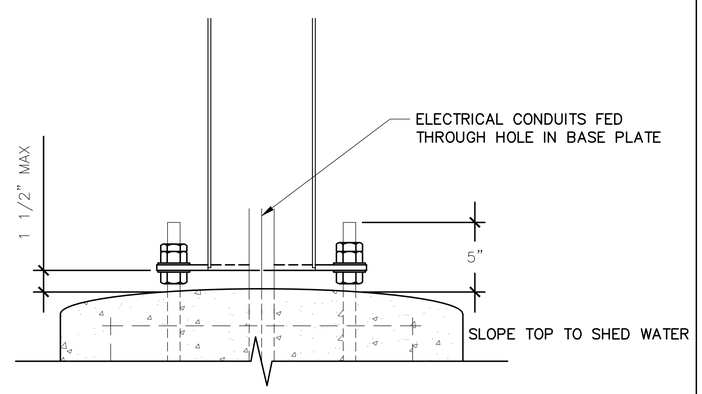


B

NTS

NOTES:

- TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
- ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
- DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE



C

NTS

GENERAL NOTES

- THE FOLLOWING CODES WERE USED IN DESIGN:
  - IBC 2012
  - ASCE 7-10
  - ACI 318-11
  - AISC 360-10
  - AWS D1.3
  - WIND SPEED 115 MPH, 3 SEC GUST
  - EXPOSURE C
  - DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
  - AXIAL - 960 LBS
  - SHEAR - 700 LBS
  - MOMENT - 5500 LB-FT
- ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
- MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
- SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
- TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE)

- ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.

CONCRETE:

- ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
- ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
- TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
- MINIMUM CONCRETE STRENGTH (f'c) SHOULD CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
- USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTION 2.6
- AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTIONS 2.6-A & 2.13-A
- WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
- FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 3.14
- PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
- REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
- ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
- DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION, SECTION 3.11-E.

STEEL:

- STEEL PIPE SECTION: ASTM A53 OR A252 TYPE E GRADE B (Fy = 35ksi)
- HSS ROUND SECTION: ASTM A500 GRADE B (Fy = 42ksi)
- HSS SQUARE/RECTANGULAR SECTIONS: ASTM A500 GRADE B (Fy = 46ksi)
- CONNECTION BOLTS A325
- STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES AND PLATES: ASTM A36
- REINFORCEMENT: GRADE 60 - BY GENERAL CONTRACTOR
- NUTS: A563DH OR A194-2H
- WASHERS: A36
- USE HOT DIPPED GALVANIZED BOLTS AND FASTENERS
- ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI ROBERT E. OLSON NUMBER E-25353 LICENSED PROFESSIONAL ENGINEER

DATE 2-5-19
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY: Farnsworth GROUP
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR: McDonald's USA, LLC

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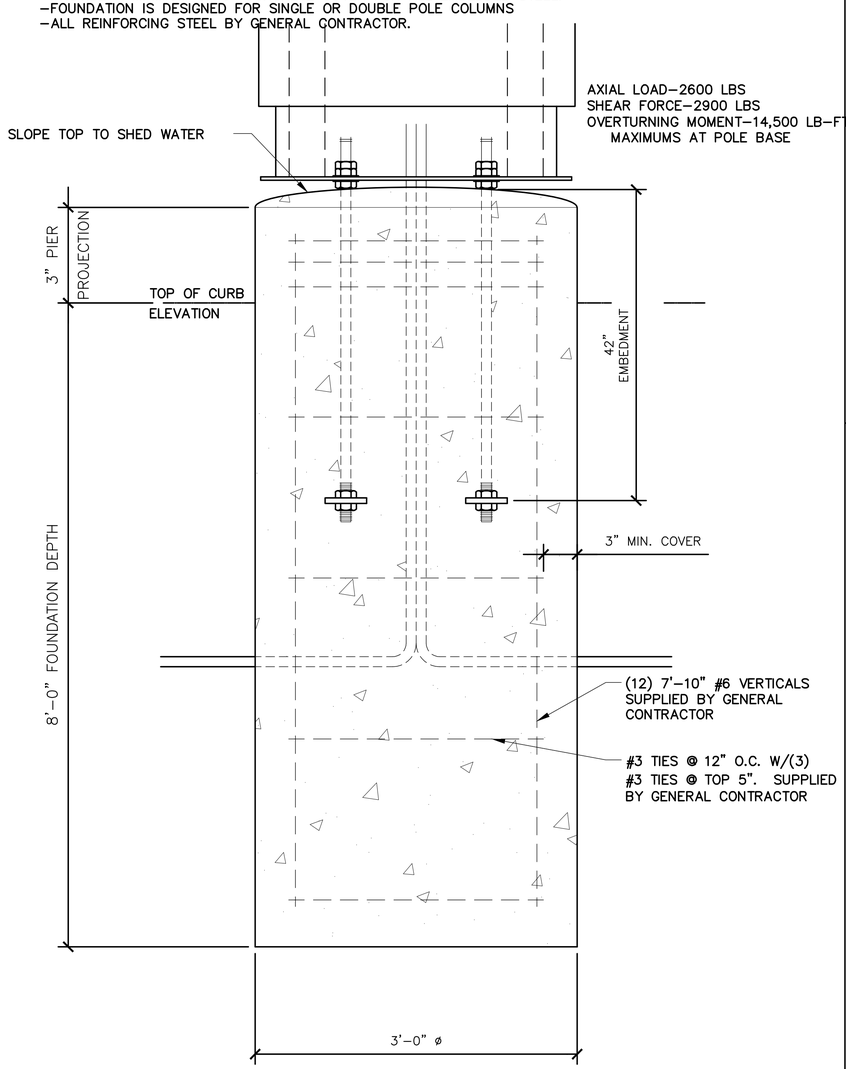
DRAWN BY	PP
STD ISSUE DATE	JAN 2013
REVIEWED BY	PP
DATE ISSUED	JAN 2013
SITE ID	JAN 2013
SITE ADDRESS	STANDARD SITE DETAILS

TITLE: STANDARD SITE DETAILS WELCOME GATEWAY

DESCRIPTION:

SHEET NO. SD7

NOTE:
-DESIGN CODES
  -IBC 2012
  -ASCE 7-10
  -ACI 318-11
  -AISC 360-11
  -AWS D1.3
  -WIND SPEED 115 MPH, 3 SEC GUST
  -EXPOSURE C
-DESIGN LOADS DERIVED FROM THESE CODES AND FORCES (#, #')
  -AXIAL-2600 LBS
  -SHEAR-2900 LBS
  -OVERTURNING MOMENT-14,500 LB-FT
-USE CONCRETE WITH A 3000PSI MINIMUM COMPRESSIVE STRENGTH (f'c).
-PIER DEPTHS REQUIRED ARE MINIMUMS. ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE 100 PSF/FT OF DEPTH (x2)
-TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE).
-PROVIDE A MINIMUM OF 3" CONCRETE COVER FOR ALL EMBEDDED STEEL.
-FOUNDATION IS DESIGNED FOR SINGLE OR DOUBLE POLE COLUMNS
-ALL REINFORCING STEEL BY GENERAL CONTRACTOR.



A ORDER HERE CANOPY 115 MPH

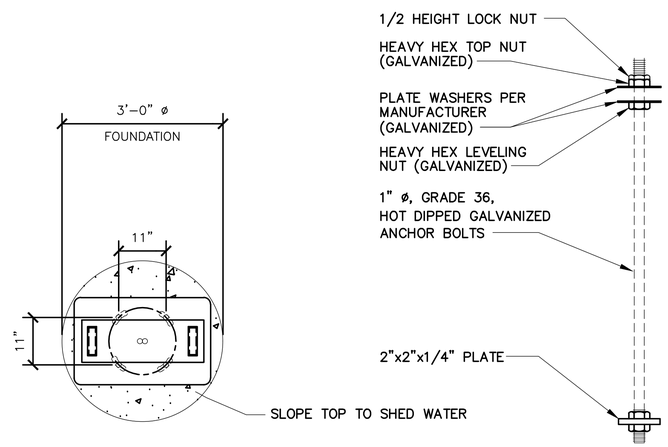
NTS

NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-USE F1554 GRADE 36 BOLTS MINIMUM
-USE HOT DIPPED GALVANIZED BOLTS
-ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE

FOUNDATION NOTE

ATTENTION CONTRACTOR:

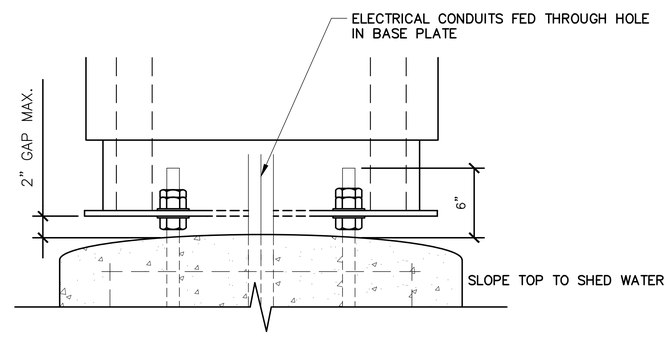
VERIFY ALL SIGN FOUNDATIONS REQUIRED WITH SIGN PROVIDER



B ANCHOR BOLT PATTERN

NTS

NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE



C CONNECTION DETAILS

NTS

GENERAL NOTES

-THE FOLLOWING CODES WERE USED IN DESIGN:
  -IBC 2012
  -ASCE 7-10
  -ACI 318-11
  -AISC 360-11
  -AWS D1.3
  -WIND SPEED 115 MPH, 3 SEC GUST
  -EXPOSURE C
  -DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
  -AXIAL - 2600 LBS
  -SHEAR - 2900 LBS
  -MOMENT - 14,500 LB-FT

-ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
-SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
-TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE)

-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.

CONCRETE:

-ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
-ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-MINIMUM CONCRETE STRENGTH (f'c) SHOULD CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTION 2.6
-AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTIONS 2.6-A & 2.13-A
-WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 3.14
-PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
-REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
-ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
-DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION, SECTION 3.11-E.

STEEL:

-STEEL PIPE SECTION: ASTM A53 OR A252 TYPE E GRADE B (Fy = 35ksi)
-HSS ROUND SECTION: ASTM A500 GRADE B (Fy = 42ksi)
-HSS SQUARE/RECTANGULAR SECTIONS: ASTM A500 GRADE B (Fy = 46ksi)
-CONNECTION BOLTS A325
-STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES AND PLATES: ASTM A36
-REINFORCEMENT: GRADE 60 - BY GENERAL CONTRACTOR
-NUTS: A563DH OR A194-2H
-WASHERS: A36
-USE HOT DIPPED GALVANIZED BOLTS AND FASTENERS
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI ROBERT E. POLK NUMBER OF-2003 LICENSED PROFESSIONAL ENGINEER

DATE 3-5-19
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY:
Farnsworth GROUP
ARCHITECTURE ENGINEERING CONSTRUCTION SUSTAINABILITY
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR:
McDonald's USA, LLC

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DRAWN BY	STD ISSUE DATE	REVIEWED BY	DATE ISSUED
FP	JAN 2013	FP	JAN 2013

TITLE
STANDARD SITE DETAILS
ORDER HERE CANOPY

DESCRIPTION
-
-
-

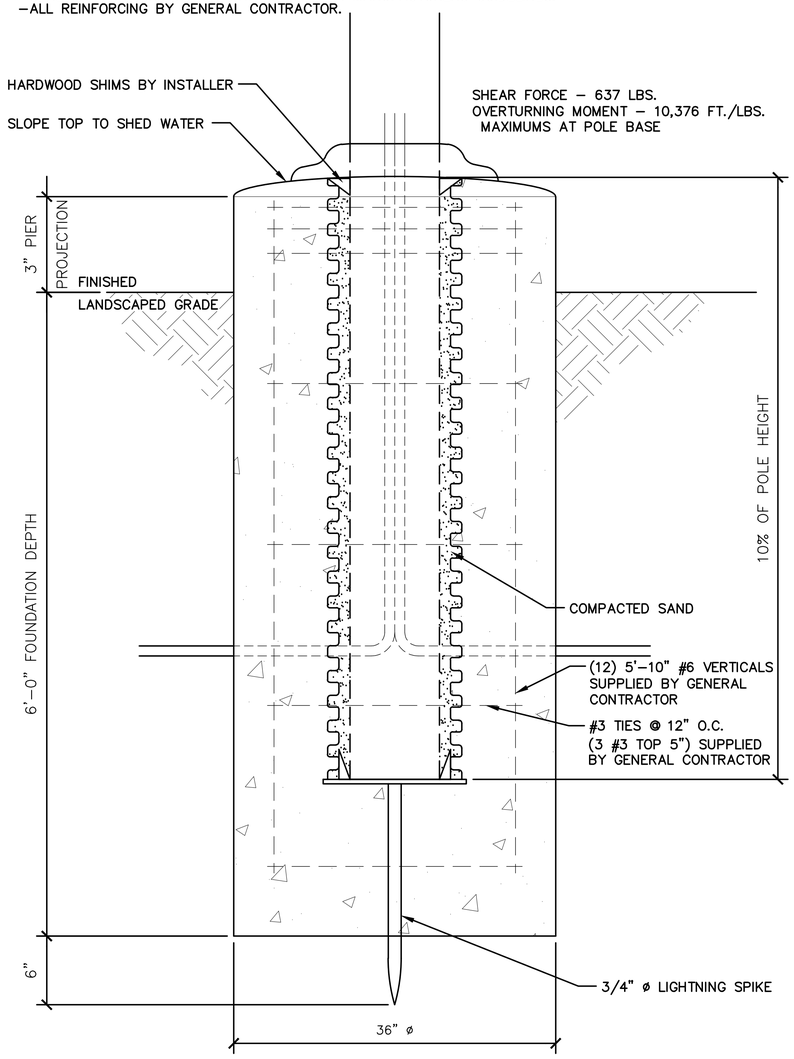
SITE ID
JAN 2013

SITE ADDRESS
STANDARD SITE DETAILS

SHEET NO.
SD8

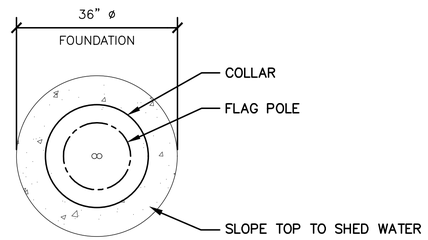
NOTE:
–DESIGN CODES

–IBC 2012
–ASCE 7–10
–ACI 318–11
–AISC 360–11
–AWS D1.3
NAAMM 1001–07
–DESIGN LOADS ARE BASED ON THE WORST CASE OF EITHER OF THE FOLLOWING CONDITIONS:
A. 115 MPH 3–SEC GUST (EXPOSURE C) ACTING ON POLE AND FLAG
B. 120MPH 3–SEC GUST (EXPOSURE C) ACTING ON POLE ONLY
–DESIGN LOADS DERIVED FROM THESE CODES AND FORCES (#, #')
–SHEAR – 637 LBS.
–MOMENT – 10,376 FT./LBS.
–USE CONCRETE WITH A 3000PSI MINIMUM COMPRESSIVE STRENGTH (f'c).
–PIER DEPTHS REQUIRED ARE MINIMUMS. ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
–ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.
–MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE 100 PSF/FT OF DEPTH (x2)
–TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE).
–INSTALL SAND AND POLE PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
–SEAL SAND IN FOUNDATION WITH CAULK PER MANUFACTURERS GUIDELINES.
–ALL REINFORCING BY GENERAL CONTRACTOR.



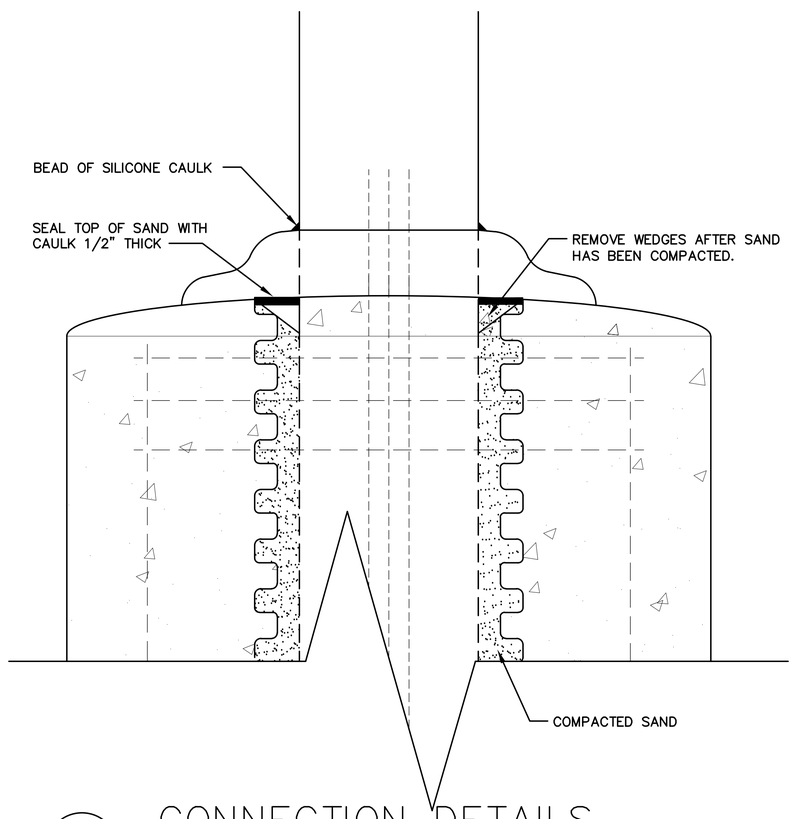
A 25' & 30' FLAG POLE FDN.
NTS

NOTES:
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.



B ANCHOR BOLT PATTERN
NTS

NOTES:
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.



C CONNECTION DETAILS
NTS

GEN. NOTES

–THE FOLLOWING CODES WERE USED IN DESIGN:
–IBC 2012
–ASCE 7–10
–ACI 318–11
–AISC 360–11
–AWS D1.3
–NAAMM 1001–07
–DESIGN LOADS ARE BASED ON THE WORST CASE OF EITHER OF THE FOLLOWING CONDITIONS:
A. 115 MPH 3–SEC GUST (EXPOSURE C) ACTING ON POLE AND FLAG
B. 120MPH 3–SEC GUST (EXPOSURE C) ACTING ON POLE ONLY
–DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
–SHEAR – 637 LBS.
–MOMENT – 10,376 FT./LBS.

–ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
–MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
–SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
–TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE)

–ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.

CONCRETE:

–ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698–70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
–ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
–TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
–MINIMUM CONCRETE STRENGTH (f'c) SHOULD CONFORM WITH MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTION 2.13–A
–USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATION SECTION 2.6
–AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATION SECTIONS 2.6–A & 2.13–A
–WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTION 2.13–A
–FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTION 3.14
–PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
–REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
–ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
–DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST–IN–PLACE CONCRETE SPECIFICATION, SECTION 3.11–E.

–FLAG SIZES SHALL NOT EXCEED THE FOLLOWING AREA LIMITATIONS:

–25'–0" POLE –––> 5'–0" x 8'–0" FLAG
–30'–0" POLE –––> 6'–0" x 10'–0" FLAG
–40'–0" POLE –––> 8'–0" x 12'–0" FLAG
–50'–0" POLE –––> 10'–0" X 15'–0" FLAG

–REFER TO FLAG MANUFACTURER DRAWINGS AND INSTRUCTIONS FOR ADDITIONAL INFORMATION INCLUDING INSTALLATION INSTRUCTIONS.
–CONTRACTOR (INSTALLER) IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION IN REGARDS TO JOBSITE SAFETY.
–DETAILS AND STRUCTURAL MEMBERS NOT SHOWN DESIGNED BY OTHERS
–ANY MODIFICATIONS ARE TO BE VERIFIED BY AN ENGINEER

FOUNDATION NOTE

ATTENTION CONTRACTOR:

VERIFY ALL SIGN FOUNDATIONS REQUIRED WITH SIGN PROVIDER

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI ROBERT E. FOLKERTS NUMBER E-23861 REGISTERED PROFESSIONAL ENGINEER

DATE 2–5–19
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

PREPARED BY: Farnsworth GROUP
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / (314) 962-1253 Fax
www.f-w.com
Farnsworth Group, Inc.
Missouri State Certificate of Authority #001321

PREPARED FOR: McDonald's USA, LLC

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DRAWN BY	STD ISSUE DATE	REVIEWED BY	DATE ISSUED
FP	JAN 2013	FP	JAN 2013

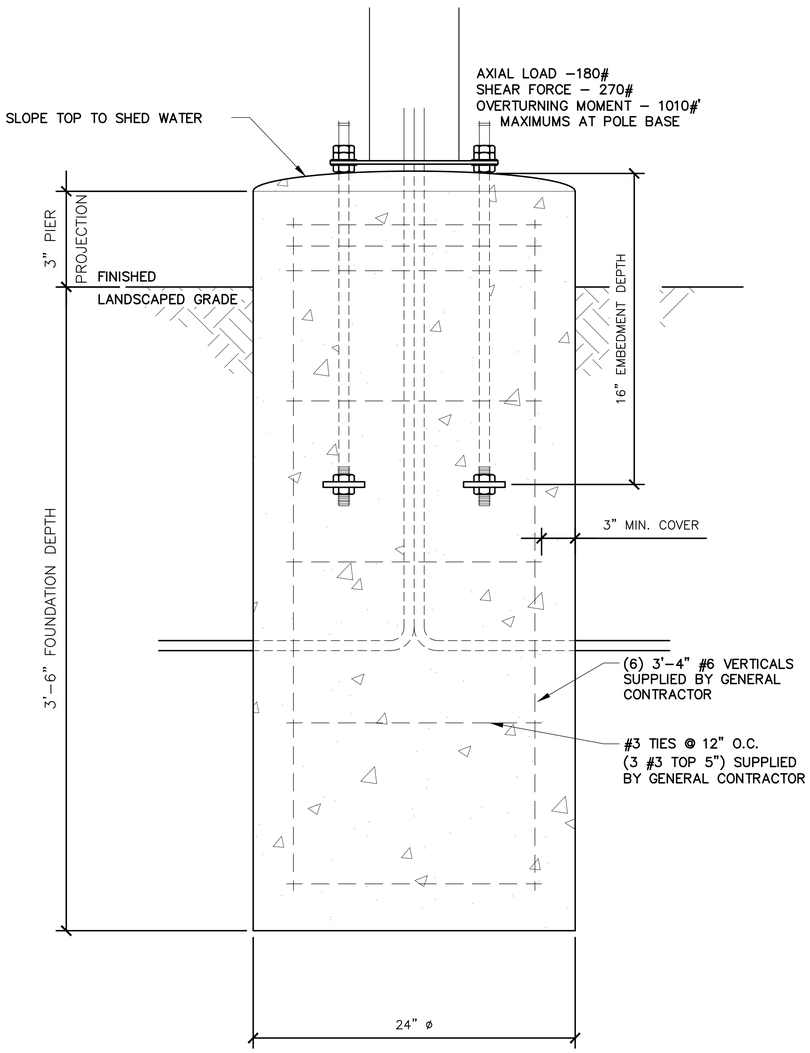
TITLE
STANDARD SITE DETAILS
FLAGPOLE DETAIL

DESCRIPTION

SITE ID JAN 2013
SITE ADDRESS STANDARD SITE DETAILS

SHEET NO. SD9

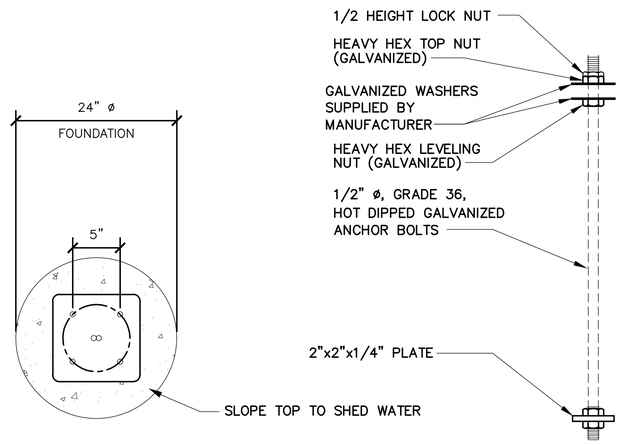
NOTE:
-DESIGN CODES
-IBC 2012
-ASCE 7-10
-ACI 318-11
-AISC 360-11
-AWS D1.3
-WIND SPEED 115 MPH, 3 SEC GUST
-EXPOSURE C
-DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
  -AXIAL - 180#
  -SHEAR - 270#
  -MOMENT - 1010#'
-USE CONCRETE WITH A 3000PSI MINIMUM COMPRESSIVE STRENGTH (f'c).
-PIER DEPTHS REQUIRED ARE MINIMUMS. ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE 100 PSF/FT OF DEPTH (x2)
-TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE).
-PROVIDE A MINIMUM OF 3" CONCRETE COVER FOR ALL EMBEDDED STEEL.
-ALL REINFORCING STEEL BY GENERAL CONTRACTOR.



A DIRECTIONAL 115 MPH

NTS

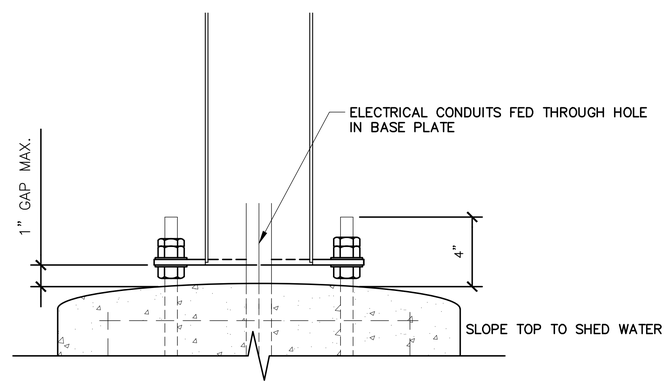
NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-USE F1554 GRADE 36 BOLTS MINIMUM
-USE HOT DIPPED GALVANIZED BOLTS
-ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE



B ANCHOR BOLT PATTERN

NTS

NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE



C CONNECTION DETAILS

NTS

GEN. NOTES

-THE FOLLOWING CODES WERE USED IN DESIGN:
  -IBC 2012
  -ASCE 7-10
  -ACI 318-11
  -AISC 360-11
  -AWS D1.3
  -WIND SPEED 115 MPH, 3 SEC GUST
  -EXPOSURE C
-DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
  -AXIAL - 180#
  -SHEAR - 270#
  -MOMENT - 1010#'

-ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
-SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
-TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE)

-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.

CONCRETE:

-ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
-ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-MINIMUM CONCRETE STRENGTH (f'c) SHOULD CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTION 2.6
-AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTIONS 2.6-A & 2.13-A
-WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 3.14
-PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
-REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
-ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
-DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION, SECTION 3.11-E.

STEEL:

-STEEL PIPE SECTION: ASTM A53 OR A252 TYPE E GRADE B (Fy = 35ksi)
-HSS ROUND SECTION: ASTM A500 GRADE B (Fy = 42ksi)
-HSS SQUARE/RECTANGULAR SECTIONS: ASTM A500 GRADE B (Fy = 46ksi)
-CONNECTION BOLTS A325
-STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES AND PLATES: ASTM A36
-REINFORCEMENT: GRADE 60 - BY GENERAL CONTRACTOR
-NUTS: A563DH OR A194-2H
-WASHERS: ASTM F-436
-USE HOT DIPPED GALVANIZED BOLTS AND FASTENERS
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-NO FIELD HEATING TO BEND STEEL SHALL BE ALLOWED WITHOUT ENGINEER'S APPROVAL.
-DO NOT CUT ANCHOR BOLTS AFTER INSTALLATION OF POLE
-AFTER INSTALLATION, ALL EXPOSED STEEL SHALL BE PAINTED WITH AN ENAMEL PAINT TO INHIBIT CORROSION.
-ANY FIELD WELDING SHALL FIRST BE VERIFIED BY ENGINEER AND PERFORMED IN ACCORDANCE WITH AWS D1.1.

-REFER TO SIGN MANUFACTURER DRAWINGS AND INSTRUCTIONS FOR ADDITIONAL INFORMATION.
-CONTRACTOR (INSTALLER) IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION IN REGARDS TO JOBSITE SAFETY.
-DETAILS AND STRUCTURAL MEMBERS NOT SHOWN DESIGNED BY OTHERS
-ANY MODIFICATIONS ARE TO BE VERIFIED BY AN ENGINEER

REV	DATE	DESCRIPTION	BY

STATE OF MISSOURI
ROBERT E. FOLK
NUMBER PE-2004038083
REGISTERED PROFESSIONAL ENGINEER

DATE 2-5-19
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

PREPARED BY:
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(314) 962-7900 / (314) 962-1253 Fax
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TITLE
STANDARD SITE DETAILS
DIRECTIONAL SIGN DETAIL

DESCRIPTION

SITE ID JAN 2013

SITE ADDRESS
STANDARD SITE DETAILS

SHEET NO.
SD10